CASE 2986: Application of SHELL OIL CO. to establish GOR LIMIT, LEA COUNTY, NEW MEXICO.

CASE NO. 2986

Application,
Transcripts,
Small Exhibits
ETC.

DRAFT
JMD/esr
April 13, 1964

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. 2986

Order No. R-2691

APPLICATION OF SHELL OIL COMPANY
TO ESTABLISH A GOR LIMIT, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on February 5, 1964, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter. ~~Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.~~

NOW, on this _____ day of April, 1964, the Commission, a quorum being present, having considered the ~~application~~ testimony, the record, ~~evidence admitted~~ and the recommendations of the Examiner, _____, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Shell Oil Company, seeks the establishment of a special gas-oil ratio limitation of 5,000 cubic feet of gas for each barrel of oil produced in the Mesa-Queen Pool, Lea County, New Mexico.

(3) That approval of the subject application will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the oil and gas and for this purpose to use his just and equitable share of the reservoir energy.

(4) That ~~the establishment of a gas-oil ratio limitation of 5,000 cubic feet of gas for each barrel of oil produced in the Mesa-Queen Pool, Lea County, New Mexico,~~ approval of the subject application will prevent waste and protect correlative rights, provided the flaring or venting of gas in the Mesa-Queen Pool is prohibited.

~~(5) That this order should be effective May 1, 1964; and~~

(5) That in order to assure the protection of correlative rights ~~that~~ the operator of each well in the Mesa-Queen Pool should file a new gas-oil ratio test with the Commission's Hobbs District Office on or before May 31, 1964.

IT IS THEREFORE ORDERED:

(1) That, effective May 1, 1964, the limiting gas-oil ratio in the Mesa-Queen Pool, Lea County, New Mexico, shall be 5,000 cubic feet of gas for each barrel of oil produced; ~~and that~~ that effective May 1, 1964, each proration unit in the Mesa-Queen Pool shall produce only that volume of gas equivalent to 5,000 multiplied by top unit oil allowable for the pool.

(2) That the operator of each well in the Mesa-Queen Pool shall file a new gas-oil ratio test with the Commission's Hobbs District Office on or before May 31, 1964, and shall furnish a schedule of test dates to the Commission's Hobbs District Office in order that the tests may be witnessed.

~~(3) That this order shall be effective May 1, 1964.~~

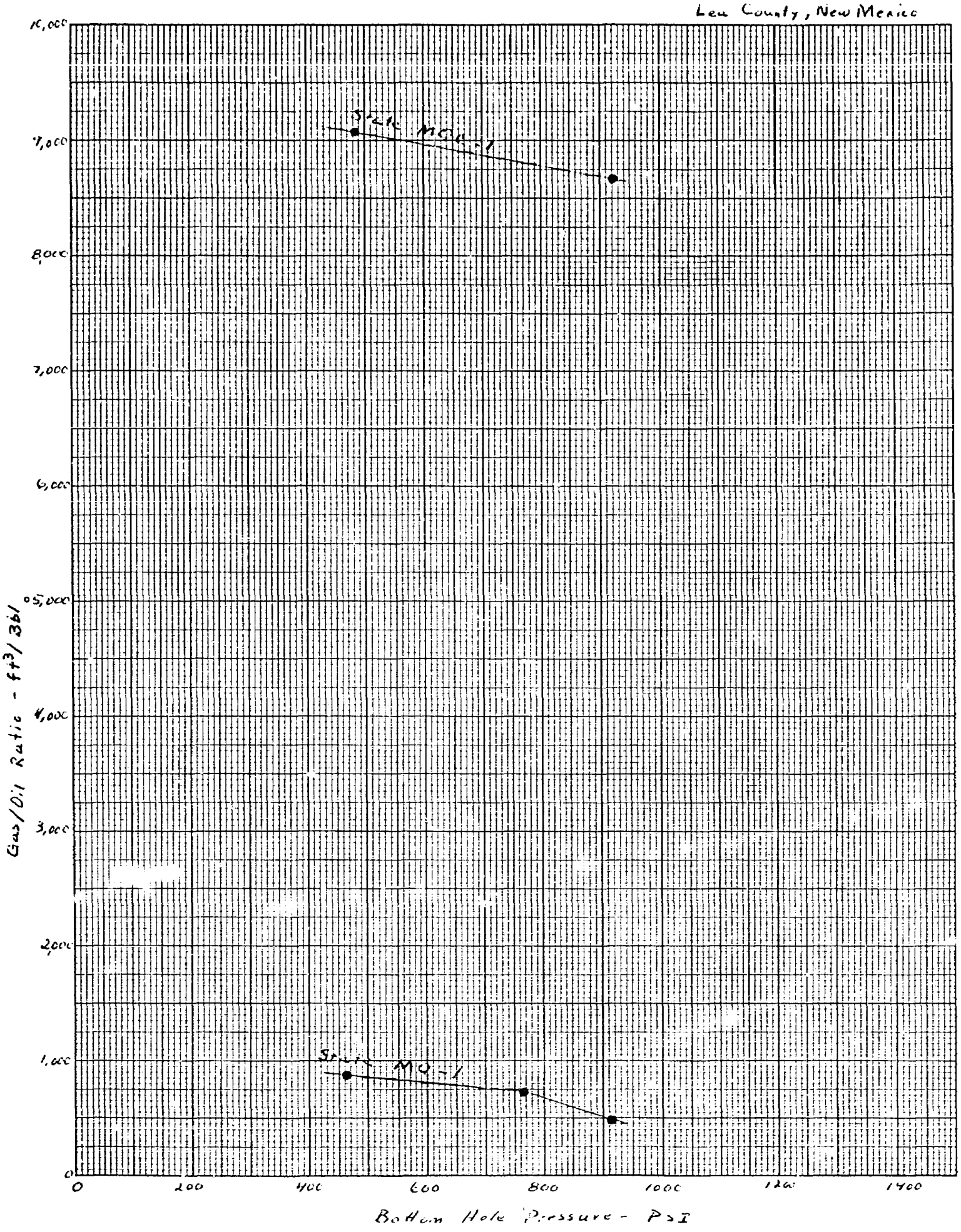
(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

(3) That ~~no~~ gas shall be flared or vented in the Mesa-Queen Pool ~~from any well classified as an oil well~~ more than 60 days after ~~the~~ a well begins to produce or 60 days after the effective date of this order, whichever is later. Any operator ~~that desires~~ to obtain an exception to ~~the foregoing~~ provisions ~~for a well classified as an oil well~~ shall submit to the Secretary-Director of the Commission an application for such exception with a statement setting forth the facts and circumstances justifying it. The Secretary-Director is hereby authorized to approve ~~grant~~ such an application ~~exception~~ if he determines that the ~~granting of it is reasonably necessary~~. If the Secretary-Director declines to grant administrative approval of the requested exception, the matter shall be set for hearing if the operator so requests.

Exception is necessary to prevent waste ~~and protect correlative rights~~.

MESA QUEEN FIELD
Lea County, New Mexico



Memo

4/10/6x

From

A. L. PORTER, JR.
SECRETARY-DIRECTOR

To Jim,

Write an order approving the application. The order should contain the following provisions

1. Effective May 1, 196x
2. G.O.R tests to be filed with Hobbs office on gas wells in pool by May 31st. Hobbs office to be notified as to test schedule, so that tests may be witnessed.

Memo

From

A. L. PORTER, JR.
SECRETARY-DIRECTOR

To

3. Strict limitation of Gas production to G.O.R limit times top allowable for pool for all wells in pool.

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 4/3/64

CASE 2986 Hearing Date 9am 4/5/64
JSN @ SK

My recommendations for an order in the above numbered cases are as follows:

Enter an order denying the request of Shell Oil Company for a limiting ratio of 5000 to 1 for the Mesa Queen Pool. The pool itself has a low solution gas oil ratio (somewhere in the neighborhood of 400 to 1). Although there are several wells in the pool with a high ratio which would benefit from the 5000 to 1 limit requested, their high ratio results either from the manner in which they were completed or from mechanical ~~failures~~ or formation failure in the well bore.

To authorize a high limiting ratio under circumstances such as these establishes a precedent which would probably give trouble later on.

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. 2986
Order No. R-2691

APPLICATION OF SHELL OIL COMPANY
TO ESTABLISH A GOR LIMIT, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m., on February 5, 1964, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 15th day of April, 1964, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Shell Oil Company, seeks the establishment of a special gas-oil ratio limitation of 5,000 cubic feet of gas for each barrel of oil produced in the Mesa-Queen Pool, Lea County, New Mexico.

(3) That approval of the subject application will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the oil and gas and for this purpose to use his just and equitable share of the reservoir energy.

(4) That approval of the subject application will prevent waste and protact correlative rights provided the flaring or venting of gas in the Mesa-Queen Pool is prohibited.

(5) That in order to assure the protection of correlative rights, the operator of each well in the Mesa-Queen Pool should file a new gas-oil ratio test with the Commission's Hobbs District Office on or before May 31, 1964.

IT IS THEREFORE ORDERED:

(1) That, effective May 1, 1964, the limiting gas-oil ratio in the Mesa-Queen Pool, Lea County, New Mexico, shall be 5,000 cubic feet of gas for each barrel of oil produced; that, effective May 1, 1964, each proration unit in the Mesa-Queen Pool shall produce only that volume of gas equivalent to 5,000 multiplied by top unit oil allowable for the pool.

(2) That the operator of each well in the Mesa-Queen Pool shall file a new gas-oil ratio test with the Commission's Hobbs District Office on or before May 31, 1964, and shall furnish a schedule of test dates to the Commission's Hobbs District Office in order that the tests may be witnessed.

(3) That no gas shall be flared or vented in the Mesa-Queen Pool more than 60 days after a well begins to produce or 60 days after the effective date of this order, whichever is later. Any operator desiring to obtain an exception to this provision shall submit to the Secretary-Director of the Commission an application for such exception with a statement setting forth the facts and circumstances justifying it. The Secretary-Director is hereby authorized to approve such an application if he determines that the exception is necessary to prevent waste. If the Secretary-Director declines to grant administrative approval of the requested exception, the matter shall be set for hearing if the operator so requests.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JACK M. CAMPBELL, Chairman

E. S. WALKER, Member

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

esr/

North, Range 13 West, and authorizing the drilling of a well for said unit at an unorthodox location 1625 feet from the South line and 1250 feet from the West line of said Section 15, Town of Farmington, San Juan County, New Mexico.

CASE 2981: Application of Gulf Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Northwest Eumont Unit Area comprising 2,760 acres, more or less, of State and fee lands in Township 19 South, Range 36 East, Lea County, New Mexico.

CASE 2982: Application of Gulf Oil Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Eumont Gas Pool by the injection of water into the Queen formation through 15 wells in Sections 11, 14, 15, 22 and 23, Township 19 South, Range 36 East, Lea County, New Mexico.

CASE 2983: Application of The Pure Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Brinninstool Unit Area comprising 17,237 acres, more or less, of Federal and State Lands in Townships 23 and 24 South, Ranges 32 and 33 East, Lea County, New Mexico.

CASE 2984: Application of The Pure Oil Company and Continental Carbon Company to utilize natural gas in a carbon black plant, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to utilize approximately 7 MCF of Devonian gas per day in the Continental Carbon Company carbon black plant near Eunice, New Mexico, said gas to be produced from The Pure Oil Company Wilson Deep Unit Well No. 1, located in the SE/4 NW/4 of Section 13, Township 21 South, Range 34 East, Lea County, New Mexico.

CASE 2985: Application of Shell Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Bootleg Ridge Unit Area comprising 10,818 acres,more or less, of State and Federal lands in Townships 22 and 23 South, Ranges 32 and 33 East, Lea County, New Mexico.

DOCKET NO. 4-64

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 5, 1964

9:00 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM, STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

CASE 2976: Application of Midland Production Corporation for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Hill & Meeker Phillips Cryer Well No. 34-2 located 2310 feet from the South and West lines of Section 34, Township 10 South, Range 36 East, to bottom in the Devonian formation 1980 feet from the North and West lines of said Section 34, Lea County, New Mexico.

CASE 2977: Application of Cities Service Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its Brunson C Well No. 4, located in Unit J of Section 3, Township 22 South, Range 37 East, Lea County, New Mexico, to produce oil from the Blinebry and Drinkard Oil Pools through parallel strings of 1 1/2 inch and 2 1/16 inch tubing, respectively.

CASE 2978: Application of Union Oil Company of California for a waterflood expansion, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its South Caprock Queen Unit Waterflood Project, Caprock Queen Pool, Chaves County, New Mexico, by the conversion of nine additional wells located in Sections 28, 29, and 33, Township 14 South, Range 31 East, and Sections 3 and 4, Township 15 South, Range 31 East, to water injection.

CASE 2979: Application of Pan American Petroleum Corporation for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation through its U. S. A. Malco Refineries 'G' Well No. 13, located 2302 feet from the South line and 1650 feet from the West line of Section 10, Township 18 South, Range 27 East, Empire Abo Pool, Eddy County, New Mexico.

CASE 2980: Application of Pioneer Production Corporation for force-pooling and an unorthodox location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin-Dakota Pool underlying the W/2 of Section 15, Township 29

CASE 2986: Application of Shell Oil Company to establish a GOR limit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a special gas-oil ratio limitation of 5,000 cubic feet of gas for each barrel of oil produced in the Mesa-Queen Pool, Lea County, New Mexico.

CASE 2987: Application of Shell Oil Company for a waterflood project, Chaves County, New Mexico. Applicant,in the above-styled cause, seeks authority to institute a pilot waterflood project in the South Bitter Lake-San Andres Pool, by the injection of water into the San Andres formation through three wells at unorthodox locations in Sections 27 and 34, Township 10 South, Range 25 East, Chaves County, New Mexico.

CASE 2480 (Reopened):

In the matter of Case No. 2480 being reopened pursuant to the provisions of Order No. R-2182-A which continued for a period of one year the temporary 80-acre proration units established by Order No. R-2182, Henshaw-Wolfcamp Pool, Eddy County, New Mexico. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2988: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit George E. Willett and all other interested parties to appear and show cause why the SDD Hare Well No. 7,located 600 feet from the South line and 1360 feet from the East line of Section 14, Township 29 North, Range 11 West, San Juan County, New Mexico, should not be plugged in accordance with a Commission-approved plugging program.

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GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico

Oil Conservation Commission

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER

P. O. BOX 871
SANTA FE

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

April 15, 1964

Mr. Richard S. Morris
Seth, Montgomery, Federici & Andrews
P. O. Box 2307
Santa Fe, New Mexico

Re: Case No. 2986
Order No. R-2691
Applicant:
Shell Oil Company

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

ix/

Carbon copy of order also sent to:

~~Hobbs~~ OCC X
Artesia OCC
Aztec OCC
~~Other~~

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 5, 1964

EXAMINER HEARING

IN THE MATTER OF:

Application of Shell Oil Company to establish a GOR limit, Lea County, New Mexico.

Case No. 2986

BEFORE: DANIEL S. NUTTER, EXAMINER

TRANSCRIPT OF HEARING

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 5, 1964

EXAMINER HEARING

IN THE MATTER OF:

Application of Shell Oil Company to establish a GOR limit, Lea County, New Mexico.

CASE NO. 2986

BEFORE: DANIEL S. NUTTER, EXAMINER

TRANSCRIPT OF HEARING

MR. NUTTER: Call Case 2986.

MR. DURRETT: Application of Shell Oil Company to establish a GOR limit, Lea County, New Mexico.

MR. MORRIS: If the Examiner please, I am Richard Morris, of Seth, Montgomery, Federici and Andrews, Santa Fe, appearing on behalf of the applicant.

(Witness sworn)

DANA D. STOKES,

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

DIRECT EXAMINATION

BY MR. MORRIS:

Q Will you please state your name, by whom you are employed and in what capacity and where you are located, Mr. Stokes?

A I am Dana D. Stokes, employed by Shell Oil Company as Staff Reservoir Engineer, Roswell, New Mexico.

Q Mr. Stokes, are you familiar with Shell's application in Case 2986?

A Yes, sir, I am.

Q What is it that Shell seeks by this application?

A We are requesting an order establishing a limiting gas-oil ratio of five thousand to one in the Mesa-Queen Pool, Lea County, New Mexico.

Q In order to present the Examiner with a background for this pool, would you first refer to what has been marked as Exhibit One, which is a location plat of this pool?

A Exhibit One shows the location of the wells drilled to date in the Mesa Queen Pool. There have been 17 wells completed with which Shell operates seven. 16 of these wells are still producing, one has been abandoned. The plat also shows our interpretation of the structure on the top of the Queen. The red line running from west to east across the exhibit, across Sections 17 and 16, shows the line of sections- -

Q Would you go on to Exhibit Two and show that cross

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General Court Reporting Service
Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

section?

A Exhibit Two is a cross section running from Shell's State MQD No. Two on the west to Shell's MQA No. One on the east. The purpose of this cross section is to show the formation that we are producing from, and the character of that formation. We have three zones in the pool. The first zone is a thin zone averaging about four feet in thickness that is gas bearing throughout the field, so far as we know. This is separated from the next zone, by a thin non-poreous, non-permeable interval about two feet thick. Then, we have a main oil producing zone, which averages about 10 to 12 feet thick. The third zone is of relatively minor importance, produces only one well, Shell State MQA One.

Q Mr. Stokes, actually, this impermeable stringer between what you call Zones One and Two is really the pertinent feature of this pool insofar as the application today is concerned; is that about the size of it?

A That's correct. This thin impermeable zone gives us a considerable amount of difficulty on completing wells. These wells require some stimulation on completion, because of formation damage from drilling and cementing. We found frequently when we treat them, the pressures we use are sufficient to break down the cement bond in this thin impermeable streak, and give us communication with the gas cap. A good example of where this happens is the State MQD No. Two, the highest well on this cross section and it is a normal ratio well being completed with a GOR

of 413.

Q The next well is slightly lower?

A The next well is slightly lower structurally, but we had completion trouble there and we wound up a - - with a high ratio well with a GOR of 4,313.

Q Because of the thin impermeable barrier between this gas and oil zone, is it a correct summarization of your testimony that you attempted to perforate only in the oil zone, but in your completion practices, you feel that you may be breaking down that impermeable barrier so that you actually are producing gas from the upper zones?

A That's right. All of the wells have been preforated below the impermeable stringer, but in several cases, we appear to have communication with the gas bearing zone during completion operations.

Q Do you have some core data on these wells, Mr. Stokes that would more or less bear out your interpretation of the location of these two zones?

A Yes, Exhibit Three shows coregraphs from two wells in the field. MQB No. One, which is a normal ratio well; looking over on the far right at a depth of about 3500 feet, we have the gas bearing zone, which is about three feet in thickness here, and you can see in the oil saturation column, the oil saturation in the core is very low. We then have this impermeable streak, which is about two feet thick in this well. We go in the main oil pays, and

looking at the oil saturation data again, you can see that saturation is about three times that in the gas bearing zone. I think this confirms that the upper zone is gas bearing and also shows the thin separation that we were discussing on the cross section. The other cores from MQD No. One, which is a high ratio well, shows essentially the same thing. We have an impermeable zone about two feet thick with low oil saturation above it, and high oil saturation below it.

Q Do you have a gas analysis which would tend to confirm the fact that the produced gas is from the gas bearing zone rather than being solution gas?

A I think the nitrogen content of samples we have taken from various wells in the field is significant in that respect. We took a sample from normal ratio wells, State MQ No. One, and that sample had a nitrogen content of 51 percent. We also took one from a high ratio well, MQC No. One, the nitrogen content there was 66 percent. We then got a sample from a gas well located about three quarters of a mile north and west of the pool, and had that analyzed and had a nitrogen content of 70 percent. I believe that this shows that the high ratio wells are producing gas from another source with much higher nitrogen content. I might also add that the nitrogen content in this gas makes it almost valueless, certainly to be sold to any transmission line.

Q Are you at the present time selling the gas from this well, or do you have a committment by some purchaser to take the

gas?

A We are selling all the gas from our wells to Phillips Petroleum Company for processing in their Vacuum plant.

Q Does Exhibit Number Five have a bearing on this?

A Yes. We requested a letter from Phillips Petroleum Company regarding their ability to take more gas from the Mesa-Queen Pool, and they replied in the letter we present as Exhibit Five, stating that they would be willing totake 200 to 250 MCF per day per well;on the present unit allowable of five thousand to one limiting ratio would give each well 195 MCF which is well below what Phillips says they can handle.

Q Mr. Stokes, would you summarize your testimony stating to the Examiner the reasons why you feel that a five thousand to one ratio would be appropriate in this pool?

A Well, it is my opinion that the data shown here proves that the high gas-oil ratio wells in the Mesa-Queen Pool are the result of communication with gas bearing zones and not the results of proximity to the gas cap in the oil bearing zone. We feel it would be difficulty and probably impossible to separate this gas bearing zone successfully in all wells; that the cost of trying to work the wells over to shut off gas, once we have established communication, would be prohibitive. We feel that penalizing this high ratio well would create inequity because formation permeability unpenalized would- - wells would be draining oil from beneath the wells that were penalized. We don't

feel this gas has very much value with the high nitrogen content running as high as 70 percent in the gas cap, but we do recognize that we are selling it, therefore, it has some value. For that reason, we requested a limiting ratio at this time of 5,000 to one, which our purchaser has said he can handle. We feel that if he can handle some larger volume at some later date, we would like to request the limit of the ratio be increased at that time.

Q Mr. Stokes, in the normal situation, where you would have only one zone, of course, you have a limiting ratio in order to prevent waste, you don't want to produce too much of your solution gas?

A Only source of energy, and if you deplete it, you leave oil in the ground.

Q That is not the situation here?

A No. Here the gas is extraneous gas coming from another zone containing no oil.

Q So, from that sense, your application would not be causing waste?

A No, it would not cause waste. Recoveries would be the same whether the wells were penalized, or not penalized.

Q Were Exhibits One and Two prepared by you or under your direction?

A Yes, sir, they were.

Q Exhibits Three and Four are lab reports; is that correct?

A That's correct.

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Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

Q Exhibit Five is the letter from Phillips Petroleum Company?

A Yes, sir.

MR. MORRIS: At this time, we offer Exhibits One through Five in evidence.

MR. NUTTER: Shell's Exhibits One through Five will be admitted in evidence. Do you have anything further to add?

MR. MORRIS: Do you have anything further to add to your testimony, Mr. Stokes?

A No, sir.

MR. MORRIS: I believe that is all we have, Mr. Examiner.

MR. NUTTER: Are there any questions of Mr. Stokes?

MR. DURRETT: Yes, sir, I have one question.

CROSS EXAMINATION

BY MR. DURRETT:

Q Mr. Stokes, what is the energy for your oil zone, is that solution gas drive?

A We believe so, yes, sir. This is a very new pool, and we don't know of - - have too much performance history to date, but we believe it will be solution gas.

Q Do you definitely think that the gas that you are speaking of here today is coming from a different zone?

A Yes, sir, we have high structural wells that are producing what- - with a normal ratio and low structural wells that are

producing high gas-oil ratios. We know that the upper zone is gas bearing throughout the field without regard to structural position.

Q All right.

MR. DURRETT: Thank you. I think that is all I have.

* * *

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Stokes, I understand that you have a thin pay section here, which you have identified in red on your cross section?

A Yes, sir.

Q And you believe this to be an isolated gas sand?

A Yes, sir.

Q And also, from your analysis of the gas, you believe that the gas contains about 70 percent nitrogen?

A Yes, sir.

Q Now, is that well way up in the Northwest-Northwest of Section 17, completed in that sand only?

A Well, you cant' tell from the correlation for that distance. We can't really tell whether the upper sand is present or not, or whether the gas in that well actually comes from the zone we are producing oil from, or whether there is separation in between the two areas. The correlation is not as good between that well and the rest of the field as it is between all of the

wells within the field.

Q Because it is separated by three quarters of a mile?

A Well, running either to the west across this section, cross section, which goes from one end of the field to the other, a distance of probably two miles, the correlation is quite good, but going northwest toward that well, it is not good. I think possibly there is a limiting permeability zone between the two. We have a dry hole to the north that is shown on Exhibit Number One, structurally high enough to be oil bearing, but without permeability and porosity.

Q Then, below this gas bearing sand, which you have identified in the red, you find a two foot impermeable layer of rock; is that correct?

A Yes, sir.

Q What is that rock?

A It appears to be a hard tight sandstone.

Q Hard sandstone?

A We have cored every well that we have drilled in the field, and this zone is present in every well that we have cored. Every well that we have drilled it is present. We also recognize it on the logs of all of the other wells in the field.

Q And then, below that you have your oil producing sand?

A Yes, sir. The separation caused by that impermeable barrier is evidently effective, otherwise the gas bearing zone would be oil bearing at lower structural positions that it is not.

Q All of your perforations have been kept down in the zone Number Two?

A Yes, sir.

Q But, you feel that your frac jobs or acidi.ing- -

A Acid treatment.

Q - -that you have broken down the cement barrier between the two pays, and communication is present- -

A In some cases.

Q - -in some cases into the oil producing sand? How many wells in this pool are actually producing with penalized GORs?

A Of the seven wells that we have, we have two high ratio wells and five low ratio wells.

Q Which are your- -

A The MQC No. One which is located in the Northwest of the Southeast of 17.

Q That has a ratio of 4318?

A Yes, sir.

Q And the - -

A The MQD No. One which is located in the Southeast of the Southwest of 17, diagonal offset to C-1. Those are both lower structurally than the MQD No. Two, which is normal ratio, and they are - - the DeClave State well further to the southwest, which is also normal, a normal ratio well.

Q Is Cactus still the only other operator in the pool besides Shell?

A Humble had a well over in the east end of the pool, but they have now plugged it.

Q How are the ratios on the Cactus wells?

A I don't know on an individual basis. I know that for the month of November, their average ratio was 5,000 to one.

Q They have got one well in the Northeast-Northwest of 16 that you have indicated to be a gas well.

A That's correct.

Q Is it an extremely high ratio or what is that?

A Well, it has made some oil.

Q What is that symbol here, that it made two and a half?

A Two and a half million.

Q Two and a half million?

A On 16/64ths choke. We think that well is producing only from the Upper member. This is our opinion. We think their completion was bad, that they are not getting anything out of the lower zone to speak of. They have recovered some oil; so evidently they are communicating with it to some extent.

Q What do you estimate the solution gas-oil ratio to be in the green zone here, Zone Number Two?

A It would average about 400 to one. The values run from 279 as a minimum, to about 418.

Q Well, in effect, Mr. Stokes, isn't what Shell is requesting here, doesn't it amount to this, that you are asking for a five thousand to one limiting GOR for a 400 to one solution

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gas-oil ratio because of mechanical failure in completion?

A That's correct. But, we feel that with only two feet separating our oil zone from this gas zone, that it can't be economically repaired, so that any well that is penalized by a GOR limit is going to be drained by offsetting wells that aren't penalized. I don't believe this four foot thick gas sand is commercial. The gas can't be sold to a transmission line. The only way it can be sold is to blend it with enough gas to get the BTU content up to a thousand. It is about 300. It won't even burn.

Q Is that BTU content noted on these exhibits here?

A Yes, sir, it is on an analysis of three wells from the Wolf Hydrocarbon Lab.

Q Where is the BTU on here?

A Over on the right-hand side down at the bottom, on the data.

Q Yes, I see it.

A The gas well had 373 BTU content. The high ratio oil well had 438, and the low ratio well 804. The gas from the gas zone is mostly air.

Q There is actually not a great deal of difference in the Methane content from one to the other, from 25 to 29 percent, not nearly the change that you have in nitrogen content?

A That is correct. I think the nitrogen content is the significant thing, showing that the samples are actually, or that

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Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

the gas is actually coming from the gas zone and not from the oil zone. I believe that were it coming from the oil zone, you could possibly increase the nitrogen content that much by simply gas coming out as solution at a higher pressure.

Q Now, this gas that you had the analysis made on, or the analysis that you made of the gas well up there, the DeClava Tidewater State Number One, it says it was vented gas. Are they producing that well?

A Yes, sir, they are selling a million cubic feet of gas a day to Phillips, processing it in that Vacuum plant.

Q It is blended with something else?

A It is being blended into residue stream, and they sell about 40 million a day with a BTU of about 1200. They can mix quite a bit to it before they can bring it down to the thousand.

Q In other words, blending doesn't have to occur before it is sold to Phillips, Phillips can blend it after it is received it the line?

A I am saying it can't be sold to a transmission line in its present state, it has to be sold to someone that can blend it. In other words, if we just put that, say, the El Paso line, we will have a slug of nitrogen, and when it hits something, somebody stove, wouldn't burn.

Q Were analyses run on any other wells besides these three?

A I don't know. We asked Cactus Drilling Company for an analysis from some of their wells. I talked with their engineer

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General Court Reporting Service
Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

Friday and he said that they had run them,he thought we had been furnished with the information, but I didn't receive it.

Q Well, now, in their letter here, Phillips indicates that the high GOR of some of the wells already are loading their system, and that would limit takes to about 200 to 250 MCF per day.

A Yes, sir.

Q What are they presently taking?

A Well, that 200 to 250 MCF per day per well.

Q What are they presently taking?

A Total volume, I don't know. From our wells, five of them, they are taking about 400 times 40, 16,000 a day.

Q In other words, 16,000 MCF a day?

A Yes, sir, on five of them. On the two, probably up close to 200. Well, I had better amend that a little bit, hadn't I. Close to 80.

Q All right.

MR. MORRIS: If you had five thousand, you indicated previously, didn't you, Mr. Stokes, that the gas that would be produced would be within the limits set by Phillips?

A Yes, sir. The maximum would be 195 and Phillips said they could take 200 to 250.

Q (By Mr. Nutter) Now, this zone Seven that you have depicted on this cross section is productive in a few of the wells and perforated in a few also; is that correct?

A I believe only in one, so far as I know. Our MQA Number One, which is at the far east end of the cross section. You can see that it produced in a lower perforation, perforated in a lower zone, the symbol on the left being the perforation symbol. This zone is pretty thin, produces both oil and water. However, we think we are pretty close to water in the main oil producing zone. We will deplete this well in this lower zone before we make any effort to complete it in Zone Two.

Q I see. It is not perforated in Zone Two at all?

A No, sir.

MR. NUTTER: Are there any other questions of Mr. Stokes?

MR. DURRETT: Yes, sir, I have a question.

RECROSS EXAMINATION

BY MR. DURRETT:

Q Mr. Stokes, it is possible to complete a well, or recomplete one of these so that it is producing from your oil zone and not from the gas zone, isn't it?

A Well, we have been successful in five of our completions. We are very careful. We put the acid on the formation, let it soak for quite sometime before we bring it in in order to avoid high pressures. This technique has been successful in most cases for us. Other operators, namely Cactus, have had more trouble. I am only familiar with one attempt to recomplete where they cemented a well to get rid of the high ratio of communication that had been

established. Cactus did cement one of their wells which they had not completed, but were tested in the Southwest of the Southeast of 17, had an extremely high gas-oil ratio. They squeezed and cemented this well and at the last report, I heard they shut off the gas, but they also shut off the oil, and after they reperforated, were not recovering anything. That is why I say it is going to be difficult and costly to try to separate this zone, which really has no value on its own anyway.

Q But, if separated, Mr. Stokes, and you have a situation with an operator that is completing only in the gas zone, I mean in the oil zone, and not in the gas zone, then, the ratio on him would still be five thousand to one, the same as the ratio on everyone else?

A Yes, sir.

Q Wouldn't he be drained more than his fair share of this oil?

A Not of oil. If everyone whose wells are capable of making top allowable were given top allowable, then, they are all draining the same. So far as the gas is concerned, I realize we are selling it because Phillips can blend it, but actually, it doesn't have any value. I think over the long haul, that will tend to balance out, because I think everybody is probably going to have about the same ratio of unfortunate experiences with their completions.

MR. NUTTER: When were these wells drilled, Mr. Stokes?

A I believe the first one was in 1962. Most of them have been drilled during the last part of '63. We are still drilling.

MR. NUTTER: What are Shell's symbols, little Roman numerals, is it the month followed by the year the well was completed?

A Yes, sir. Let's see, there was one completed in 8-62 up in Section 16, Southwest of the Northwest.

MR. NUTTER: And there have been wells completed already in 1964, too?

A Yes, sir.

MR. NUTTER: How many of these wells are top allowable wells?

A Without regard to gas-oil ratio penalties, all of them.

MR. NUTTER: They are all capable of making top allowable without the ratio penalties?

A Well, except for one that we have designated as a gas well up there.

MR. NUTTER: Do you think there is any possibility, since you do have communication between this dry gas sand and the oil bearing sand, that there is a possibility for oil to migrate into the gas sand and be lost, if the communication is not corrected?

A I think if we depleted them together, the pressure will stay together in the two. There is no way of producing the gas faster than you produce the oil, so that your pressure will stay the same, and there will be a balance and no migration back and

forth to either zone.

MR. NUTTER: Well, that depends on the relative porosity of the two zones, and what the saturation of the two zones is, comparatively speaking, wouldn't it, which would be depleted first?

A Well, if they are in communication at the same rate from pressure standpoint, you couldn't have any migration from one zone to another.

Q (By Mr. Durrett) How many barrels a day approximately on an average of oil are you making now with the penalty, what is it averaging out to?

A Well, we have got one well that would be penalized to about 18 barrels a day. We have another well that would be penalized to 1/5th, which would be seven and a half barrels a day.

Q That is about your lowest one, seven and a half barrels?

A I believe that's correct.

MR. DURRETT: Thank you.

* * * *

MR. NUTTER: If there is no further question, the witness may be excused. Do you have anything further, Mr. Morris?

MR. MORRIS: No, I don't.

MR. NUTTER: Does anyone have anything they wish to offer in Case 2986?

MR. DURRETT: If the Examiner please, we have received a telegram from Cactus Drilling Company stating that they are in agreement with Shell's application.

MR. NUTTER: Thank you. We will take the case under advisement.

* * *

STATE OF NEW MEXICO }
COUNTY OF BERNALILLO }

I, ROY D. WILKINS, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill, and ability.

WITNESS my Hand and Seal of Office, this 22nd day of February, 1964.

NOTARY PUBLIC

My Commission Expires:

September 6, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2986 heard by me on Feb 5, 1964.

Examiner
New Mexico Oil Conservation Commission

DEARNLEY, MEIER, WILKINS and CROWNOVER
General Court Reporting Service
Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

NMOCC Case No. 2986
Exhibit No. 5.
Date: February 5, 1964

PHILLIPS PETROLEUM COMPANY
BARTLESVILLE, OKLAHOMA

NATURAL GAS AND GASOLINE DEPARTMENT

December 11, 1963

Lee Plant - Mesa Queen

File: 3-Co-239-63-NGG

Shell Oil Company
Shell Building
Midland, Texas

Attention: Mr. James R. Luttrell

Dear Sir:

This refers to our conversation on December 9 regarding Phillips furnishing a gas market for your wells in the Mesa Queen Field, Lea County, New Mexico. We originally extended our Lee Plant gathering system to this area to take only a limited volume of this high nitrogen content gas.

The high GOR of some of the wells in the field is loading our system; however, we are agreeable to taking gas ratably from all wells to the capacity of our facilities. We believe this would limit our takes to about 200 or 250 Mcfd per well, depending somewhat on the number of wells and total gas volume to be handled.

We trust this will provide the information you need.

Yours very truly,

Frank A. Cowell

Frank A. Cowell

FAC:em

RECEIVED
DEC 13 1963
GAS DEPARTMENT

CLASS OF SERVICE
This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION
TELEGRAM

W. P. MARSHALL, PRESIDENT

1964 FEB 3 AM 9 55

SYMBOLS
DL = Day Letter
NL = Night Letter
LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination

LA024 SSL011

1964 FEB 3 AM 9 31

L HBA012 PD=HOBBS NMEX 3 937A MST=

A L PORTER JR=

SECTY DIRECTOR NEW MEXICO OIL CONSERVATION COMM

PO BOX 2088 SANTA FE NMEX=

YOU ARE ADVISED THAT CACTUS DRILLING COMPANY AN OPERATOR IN THE MESA QUEEN FIELD LEA COUNTY NEW MEXICO IS IN AGREEMENT WITH SHELL OIL COMPANY APPLICATION FOR SPECIAL GAS AND OIL LIMITATION OF 5000 CUBIC FEET GAS FOR EACH BARREL OF OIL PRODUCED AS SET FORTH IN THEIR APPLICATION AND DESIGINATED ON DOCKET 4-64 AS CASE #2986 SCHEDULED FOR FEBRUARY 5 1964=

GEORGE W BAKER VICE PRESIDENT CACTUS DRILLING CO==

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION OF SHELL OIL COMPANY FOR THE ESTABLISHMENT OF A GAS OIL RATIO LIMIT IN THE MESA-QUEEN POOL, LEA COUNTY, NEW MEXICO

No. 2986

A P P L I C A T I O N

COMES NOW Shell Oil Company and applies to the New Mexico Oil Conservation Commission, pursuant to Rule 506(d) for the establishment of a gas/oil ratio limitation in the Mesa-Queen Pool, Lea County, New Mexico, at 5,000 cubic feet of gas for each barrel of oil produced from said pool. The granting of this application will not cause physical waste, but will prevent economic waste and will protect the correlative rights of all operators in the pool.

WHEREFORE, Applicant requests that this matter be set for hearing before the Commission, or one of its examiners, and that the Commission ~~in~~ enter its Order establishing a 5,000-to-1 gas/oil ratio limitation in the Mesa-Queen Pool.

SETH, MONTGOMERY, FEDERICI & ANDREWS

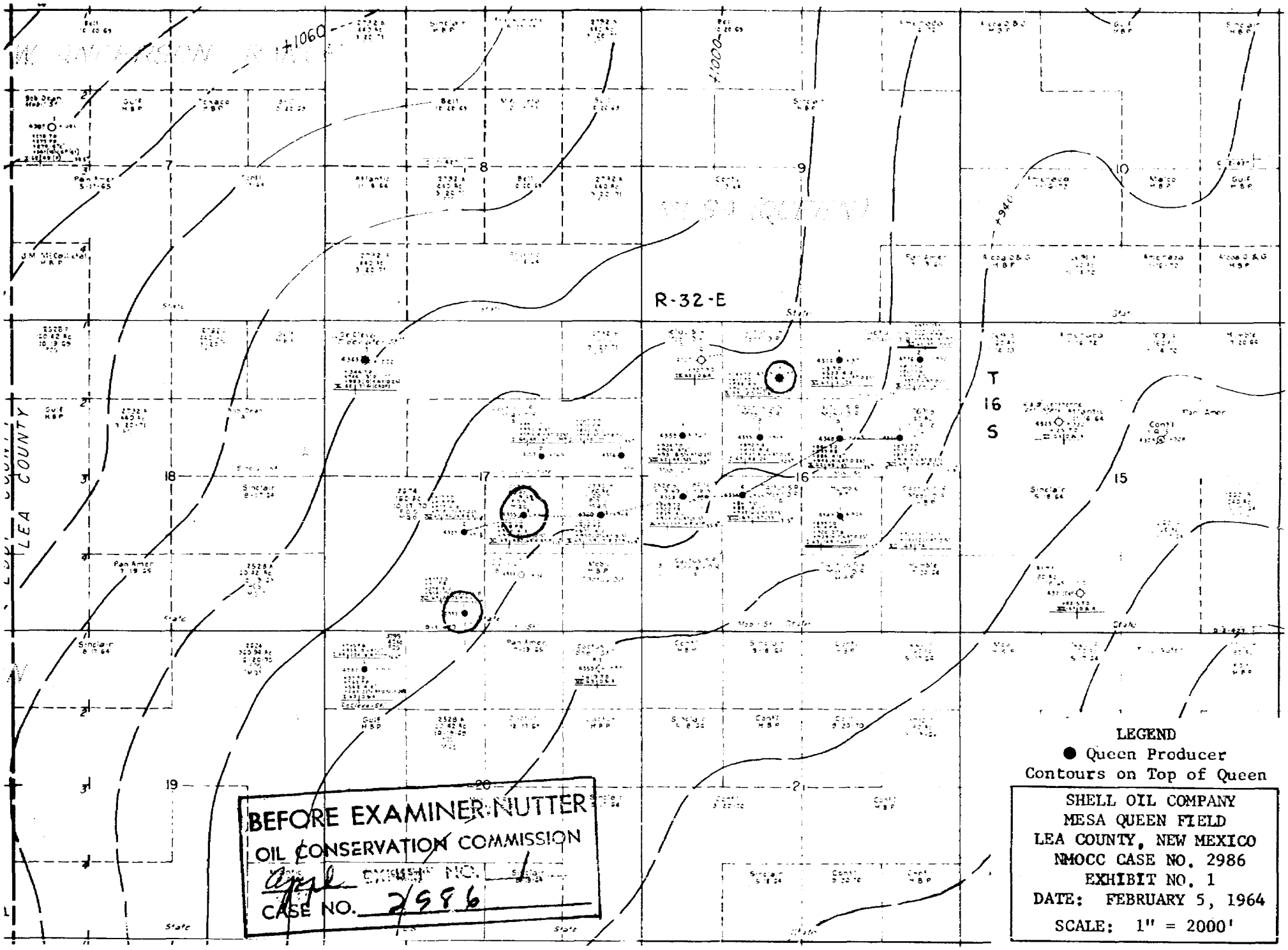
By Richard S. Morris

P. O. Box 828
Santa Fe, New Mexico

Attorneys for Shell Oil Company

DOCKET MAILED

Date 1-24-64


+1060
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16
S
LEA COUNTY
LEGEND
● Queen Producer
Contours on Top of Queen
SHELL OIL COMPANY
MESA QUEEN FIELD
LEA COUNTY, NEW MEXICO
NMOCC CASE NO. 2986
EXHIBIT NO. 1
DATE: FEBRUARY 5, 1964
SCALE: 1" = 2000'
BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
CASE NO. 2986

CORE LABORATORIES, INC. *Petroleum Reservoir Engineering*

COMPANY [illegible] OIL COMPANY FIELD [illegible] MESA QUEEN FILE [illegible]

WELL STATE "MQR" NO. 1 COUNTY LEA DATE [illegible]

LOCATION 1980 FS & 660 FEL STATE NEW MEXICO ELEV. [illegible]

SEC 17-T16[illegible]-R31E

CORE-GAMMA CORRELATION

VERTICAL SCALE: 5" = 100'

CORE-GAMMA SURFACE LOG
(PATENT APPLIED FOR)

GAMMA RAY
RADIATION INCREASE →

CORE GRAPH

TOTAL WATER
PERCENT TOTAL WATER
80 60 40 20 0

PERMEABILITY
MILLIDARCYS
100 50 10 5 1 0.5 0.1

POROSITY
PERCENT
20 10

OIL SATURATION
PERCENT PORE SPACE
0 20 40 60 80

3384

3400

COUNTY

STATE

ELEV.

VERTICAL SCALE: 5" = 100'

CORE-GAMMA SURFACE LOG

(PATENT APPLIED FOR)

CASING DAY

RADIATION INCREASE

PERMEABILITY

MILLIDARCYS

100 30 10 3 1 0.3 0.1

POROSITY

PERCENT

20 10

OIL SATURATION

PERCENT PORE SPACE

0 20 40 60 80

3362

3400

3407

WOLF PETRO LAB, INC.
DIAL EMERSON 6-9701
DIAL EMERSON 6-7171
2411 WEST 42ND STREET
P. O. BOX 643
ODESSA, TEXAS

HYDROCARBON ANALYSIS

LABORATORY REPORT

Charge Shell Oil Company
Test No NML-63-1167
Date of Run 11-19-63
Date Received 11-19-63

A Sample of Vented Gas from MQ #1

Secured from Mesa Queen Field

At _____ Secured by A. L. Ellerd

Purpose _____ Time _____ Date 11-18-63

Sampling Conditions: Source Pressure 28 psig

LOW-TEMPERATURE ANALYSIS

	Gas Vol. or Mol %	Liquid Vol. %	GPM
Hydrogen Sulfide			
Carbon Dioxide			
Air			
Nitrogen	51.01		
Oxygen			
Methane	29.14		
Ethane	7.27		
Propane	6.77		1.86
Iso-Butane	1.26		.41
N-Butane	2.72		.86
Iso-Pentane	.65		.23
N-Pentane	.55		.20
Iso-Hexane			
N-Hexane			
Pentanes (2)			
Hexanes (2)	.63		.27
Heptane (2)			
TOTAL	100.00		3.83

(1) and lighter
(2) and heavier

ANALYSIS INFORMATION

Volume of Sample _____ cc. @ _____ ° F
Sp. Gr. Residue _____ Vol. of Residue _____ cc.
Molecular Wgt. of Residue _____

VAPOR PRESSURE

_____ lbs. @ 100° F
Calculated _____ lbs. @ 100° F

GASOLINE CONTENT

26/70 Gasoline 1.05 G. P. M.
100.00 Propane 1.86 G. P. M.
Excess Butanes .92 G. P. M.
TOTAL 3.83 G. P. M.

SULPHUR DETERMINATION

Hydrogen Sulfide H_2S _____ grs/100 SCF
Mercaptans _____ RSH _____ grs/100 SCF
Sulfides _____ RSR _____ grs/100 SCF
Residual Sulphur RSSR _____ grs/100 SCF
Total Sulphur _____ grs/100 SCF

OTHER DATA

BTU Content (Actual) Dry Basis (Calc.) 804
Sp. Gravity (Actual) _____ (Calc.) .9627
A.P.I. Gr. (Actual) _____ (Calc.) _____

Run by: J. Wolf Checked by: J. Wolf Approved: J. Wolf

Additional Data and Remarks

NMOCC Case No. 2986
Exhibit No. 4
Date: February 5, 1964

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 2986

COPIES
6 - Mr. J. R. Luttrell
Shell Oil Company
Box 1509 - Midland, Texas
2 - Mr. A. L. Ellerd
Shell Oil Company
Box 1150 - Hobbs, New Mexico
1 - File

WC F PETRO LAB, INC.

DIAL EMERSON 6-9701
DIAL EMERSON 6-7171
2411 WEST 42ND STREET
P. O. BOX 643
ODESSA, TEXAS

HYDROCARBON ANALYSIS

LABORATORY REPORT

Charge Shell Oil Company
Test No. [illegible]
Date of Run 11-6-63
Date Received 11-7-63

A Sample of Casing Gas from H. C. Hall No. 1

Secured from Hoca Queen Field

At Lea County, New Mexico Secured by A. L. Ellerd

Purpose _____ Time _____ Date 11-6-63

Sampling Conditions: 25 psig & 86° F

LOW-TEMPERATURE ANALYSIS

	Gas Vol. or Mol %	Liquid Vol. %	GPM
Hydrogen Sulfide			
Carbon Dioxide			
Air			
Nitrogen	66.44		
Oxygen			
Methane	26.66		
Ethane	3.50		
Propane	1.97		.54
Iso-Butane	.23		.08
N-Butane	.53		.17
Iso-Pentane	.12		.04
N-Pentane	.11		.04
Iso-Hexane			
N-Hexane			
Pentanes (2)			
Hexanes (2)	.44		.19
Heptane (2)			
TOTAL	100.00		1.06

(1) and lighter
(2) and heavier

ANALYSIS INFORMATION

Volume of Sample _____ cc. @ _____ ° F
Sp. Gr. Residue _____ Vol. of Residue _____ cc.
Molecular Wgt. of Residue _____

VAPOR PRESSURE

_____ lbs. @ 100° F
Calculated _____ lbs. @ 100° F

GASOLINE CONTENT

26/70 Gasoline .405 G. P. M.
100.00 Propane .540 G. P. M.
Excess Butanes .115 G. P. M.
TOTAL 1.060 G. P. M.

SULPHUR DETERMINATION

Hydrogen Sulfide H_2S _____ grs/100 SCF
Mercaptans _____ RSH _____ grs/100 SCF
Sulfides _____ RSR _____ grs/100 SCF
Residual Sulphur RSSR _____ grs/100 SCF
Total Sulphur _____ grs/100 SCF

OTHER DATA

BTU Content (Actual) Dry Basis (Calc.) 438
Sp. Gravity (Actual) _____ (Calc.) .8911
A. P. I. Gr. (Actual) _____ (Calc.) _____

Run by: J. Wolf Checked by: J. Wolf Approved: J Waly

Additional Data and Remarks

COPIES

6 - Mr. J. M. Luttrell
Shell Oil Company
Box 1509
Midland, Texas

2 - Mr. A. L. Ellerd
Shell Oil Company
Box 1950
Hobbs, New Mexico

1 - File

WOLF PETRO LAB, INC.

DIAL EMERSON 6-9701
DIAL EMERSON 6-7171
2411 WEST 42ND STREET
P. O. BOX 643
ODESSA, TEXAS

HYDROCARBON ANALYSIS

LABORATORY REPORT

Charge [illegible]
Test No. [illegible]
Date of Run 11-[illegible]-63
Date Received 11-7-63

A Sample of Vented Gas from Tidewater State #1 - Paul Eoclava

Secured from Loco Queen Field

At Lea County, New Mexico Secured by A. L. Ellard

Purpose _____ Time _____ Date 11-5-63

Sampling Conditions: 46 psig & 84° F

LOW-TEMPERATURE ANALYSIS

	Gas Vol. or Mol %	Liquid Vol. %	GPM
Hydrogen Sulfide			
Carbon Dioxide			
Air			
Nitrogen	69.80		
Oxygen			
Methane	24.76		
Ethane	3.13		
Propane	1.53		.42
Iso-Butane	.19		.05
N-Butane	.36		.11
Iso-Pentane	.07		.03
N-Pentane	.07		.03
Iso-Hexane			
N-Hexane			
Pentanes (2)			
Hexanes (2)	.09		.04
Heptane (2)			
TOTAL	100.00		.69

(1) and lighter
(2) and heavier

ANALYSIS INFORMATION

Volume of Sample _____ cc. @ _____ ° F
Sp. Gr. Residue _____ Vol. of Residue _____ cc.
Molecular Wgt. of Residue _____

VAPOR PRESSURE

_____ lbs. @ 100° F
Calculated _____ lbs. @ 100° F

GASOLINE CONTENT

26/70 Gasoline .15 G. P. M.
100.00 Propane .42 G. P. M.
Excess Butanes .12 G. P. M.
TOTAL .69 G. P. M.

SULPHUR DETERMINATION

Hydrogen Sulfide H_2S _____ grs/100 SCF
Mercaptans RSH _____ grs/100 SCF
Sulfides RSR _____ grs/100 SCF
Residual Sulphur RSSR _____ grs/100 SCF
Total Sulphur _____ grs/100 SCF

OTHER DATA

BTU Content (Actual) Dry Basis (Calc.) 373
Sp. Gravity (Actual) _____ (Calc.) .8052
A.P.I. Gr. (Actual) _____ (Calc.) _____

Run by: J. Wolf Checked by: J. Wolf Approved: J. Wolf

Additional Data and Remarks

COPIES

6 - Mr. J. R. Luttrell
Shell Oil Company
Box 1509 - Midland, Texas

2 - Mr. A. L. Ellard
Shell Oil Company
Box 1950 - Hobbs, New Mexico

1 - File

NMOCC Case No. 2986
Exhibit No. 5
Date: February 5, 1964

3 NG
RAN
DLS

PHILLIPS PETROLEUM COMPANY
BARTLESVILLE, OKLAHOMA

NATURAL GAS AND GASOLINE DEPARTMENT

December 11, 1963

Lee Plant - Mesa Queen

File: 3-Co-239-63-NGG

Shell Oil Company
Shell Building
Midland, Texas

Attention: Mr. James R. Luttrell

Dear Sir:

This refers to our conversation on December 9 regarding Phillips furnishing a gas market for your wells in the Mesa Queen Field, Lea County, New Mexico. We originally extended our Lee Plant gathering system to this area to take only a limited volume of this high nitrogen content gas.

The high GOR of some of the wells in the field is loading our system; however, we are agreeable to taking gas ratably from all wells to the capacity of our facilities. We believe this would limit our takes to about 200 or 250 Mcfd per well, depending somewhat on the number of wells and total gas volume to be handled.

We trust this will provide the information you need.

Yours very truly,

Frank A. Cowell

Frank A. Cowell

FAC:em

RECEIVED
DEC 13 1963
GAS DEPARTMENT

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5
CASE NO. 2986