

CASE 2397: Application of READING
& BATES for temporary exception
to Rule 107 (d) - Eddy County.

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2397

plication, Transcript,

and Exhibits, Etc.

September 7, 1961

*File Case
2397*

Mr. M. L. Armstrong
Oil Conservation Commission
Drawer D. D.
Artesia, New Mexico

Dear Sir:

Re: Reading and Bates, Inc.
Simms Federal # 1-North
Benson Queen Pool - Sec.
34, 18S, 30E, Eddy County

Mr. A. L. Porter's letter of July 26, 1961 granted an exception to Commission Rule 107(d) until September 25, 1961 thus permitting production of oil from the subject well without installing tubing.

During the past 6 weeks we have been producing the well at approximately its daily allowable by flowing into the tanks for two to three hours daily on a 20/64" choke. Flowing casing pressure averages 375#-415# and shut-in pressure averages 600#. No water or B.S. is being produced. The well has produced approximately 2,000 barrels to date with an indicated GOR of approximately 1153.

As stated in our original letter requesting the exception, we would still prefer not killing the well with salt water since it might be detrimental to the formation. Therefore it is requested that further extension be granted to permit production without tubing the well. A period of two to six months is proposed during which time we will advise of any marked change in production conditions on the well.

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Mr. M. L. Armstrong
Oil Conservation Commission -- 2

September 7, 1961

May we be advised.

Enclosed please find Gas Oil Ratio Report Form
C 116 - Re: Simms Federal # 1.

Yours very truly,

READING AND BATES, INC.

I. J. Pierce,
Vice President, Exploration

DLP:np
Enclosure

cc: Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

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**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. 2397
Order No. R-2098**

**APPLICATION OF READING & BATES, INC.
FOR A TEMPORARY EXCEPTION TO RULE
107 (d), EDDY COUNTY, NEW MEXICO.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on October 4, 1961, at Santa Fe, New Mexico, before Elvis A. Utz, 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 18th day of October, 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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, Reading & Bates, Inc., seeks a temporary exception to Rule 107 (d) to permit the production of oil from the Simms Federal Well No. 1, located in the NE/4 NW/4 of Section 34, Township 13 South, Range 30 East, NMPM, North Benson Queen Pool, Eddy County, New Mexico, without installing tubing.

(3) That the bottom-hole pressure of the well is too high, at this time, to permit the installation of tubing without killing the well.

(4) That even though there is a danger of waste being caused by inefficient flow in producing the subject well without tubing, there is also a danger that waste might result from killing the well in order to install tubing.

(5) That the applicant should be granted an exception to Rule 107 (d) to permit the production of oil from the said Simms Federal Well No. 1 without installing tubing until April 1, 1962; provided, however, that in the event the bottom-hole pressure of

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CASE No. 2397
Order No. M-2096

said well diminishes to 1537 PSI or in the event the gas-oil ratio of the well exceeds 2000 : 1 prior to April 1, 1962, tubing should be installed in said well at that time.

(6) That during the period of the exception granted by this order the applicant should be required to conduct monthly gas-oil ratio tests and to file the results thereof with the Commission. Said tests should also indicate the 24-hour shut-in casing pressure of the well.

(7) That the applicant should be permitted to obtain administrative approval from the Secretary-Director of the Commission for an extension of the exception to Rule 107 (d) in the event the bottom-hole pressure has not diminished to 1537 PSI by April 1, 1962, provided that the gas-oil ratio has not increased excessively.

IT IS THEREFORE ORDERED:

(1) That the applicant, Reading & Bates, Inc., is hereby granted an exception to Rule 107 (d) until April 1, 1962, to permit the production of oil from the Simms Federal Well No. 1, located in the NE/4 NW/4 of Section 34, Township 18 South, Range 30 East, NMPH, North Benson Queen Pool, Eddy County, New Mexico, without installing tubing.

PROVIDED HOWEVER, That in the event the bottom-hole pressure of said well diminishes to 1537 PSI or in the event the gas-oil ratio of the well exceeds 2000 : 1 prior to April 1, 1962, tubing shall be installed in said well at that time.

PROVIDED FURTHER, That during the period of the exception granted by this order the applicant shall conduct monthly gas-oil ratio tests on said well and shall file the results thereof with the Artesia Office of the Commission. Applicant shall also report each month on said gas-oil ratio tests the casing pressure on said well after a 24-hour shut-in period.

PROVIDED FURTHER, That the applicant shall be permitted to obtain administrative approval from the Secretary-Director of the Commission for an extension of the exception to Rule 107 (d) in the event the bottom-hole pressure has not diminished to 1537 PSI by April 1, 1962, provided that the gas-oil ratio does not exceed 2000 : 1.

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


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CASE No. 2397
Order No. R-2098

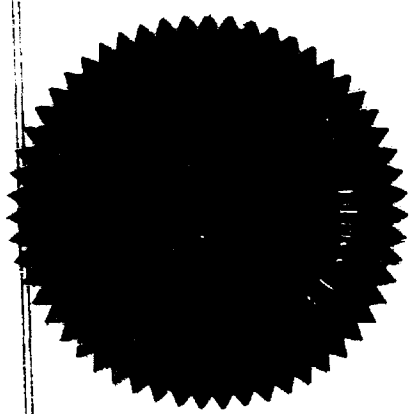
DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


EDWIN L. MEEHAN, Chairman


E. S. WALKER, Member


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



esr/

State of New Mexico
Oil Conservation Commission



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

Re: Case No. 2397
Order No. R-2098
Applicant:
Reading and Bates, 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

Carbon copy of order also sent to:

OTHER _____

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 4, 1961

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

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

CONTINUED CASE

CASE 2367: Application of Skelly Oil Company for an unorthodox gas proration unit in the Jalmat Gas Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 320-acre non-standard gas proration unit in the Jalmat Gas Pool, consisting of the NE/4, NW/4 SE/4, N/2 SW/4 and SW/4 SW/4 of Section 17, Township 23 South, Range 37 East, Lea County, New Mexico; said unit is to be dedicated to the E. L. Steeler Well No. 7, located 1980 feet from the South line and 660 feet from the West line of said Section 17.

NEW CASES

CASE 2388: In the matter of the hearing called by the Oil Conservation Commission to permit Juan J. (John J.) Moya and all interested parties to appear and show cause why the Jones Well No. 1, located 1650 feet from the South line and 990 feet from the East line of Section 7, Township 30 North, Range 11 West, San Juan County, New Mexico, should not be plugged.

CASE 2389: Application of Shell Oil Company for approval of the Cabezon Unit Agreement, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Cabezon Unit Agreement embracing lands in Townships 16 and 17 North, Ranges 2, 3 and 4 West, Rio Arriba County, New Mexico.

CASE 2390: Application of Continental Oil Company for a 320-acre non-Standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 320-acre non-standard gas proration unit in the Jalmat Gas Pool, comprising the S/2 of Section 7, Township 23 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the Stevens B-7 Well No. 1, located 990 feet from the South and West lines of said Section 7.

- CASE 2391: Application of Continental Oil Company for a 320-acre non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 320-acre non-standard gas proration unit in the Jalmat Gas Pool, comprising the S/2 of Section 25, Township 23 South, Range 36 East, Lea County, New Mexico, said unit to be dedicated to the Lynn B-25 Well No. 2, located 990 feet from the South and West lines of said Section 25.
- CASE 2392: Application of Continental Oil Company for a 240-acre non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 240-acre non-standard gas proration unit in the Jalmat Gas Pool, comprising the NW/4 and W/2 NE/4 of Section 23, Township 22 South, Range 36 East, Lea County, New Mexico, said unit to be dedicated to the Meyer B-23 Well No. 3, located 1980 feet from the North line and 660 feet from the West line of said Section 23.
- CASE 2393: Application of Continental Oil Company for a 240-acre non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 240-acre non-standard gas proration unit in the Jalmat Gas Pool, comprising the SE/4 and E/2 NE/4 of Section 23, Township 22 South, Range 36 East, Lea County, New Mexico, said unit to be dedicated to the Meyer B-23 Well No. 2, located 990 feet from the South line and 1650 feet from the East line of said Section 23.
- CASE 2394: Application of Hondo Oil & Gas Company for permission to directionally drill. Eddy County, New Mexico. Applicant, in the above-styled cause, seeks permission to directionally drill a well to be located 2310 feet from the North line and 1980 feet from the East line of Section 26, Township 17 South, Range 28 East, Eddy County, New Mexico.
- CASE 2395: Application of Nash, Windfohr & Brown for the establishment of a limiting gas-oil ratio in the Jackson-Abo Pool, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a limiting gas-oil ratio of 4000: 1 in the Jackson-Abo Pool in Township 17 South, Range 30 East, Eddy County, New Mexico.

CASE 2396: Application of C. W. Trainer for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to locate his Hobbs Well No. 1 at an unorthodox oil well location in the Hobbs Pool, 2545 feet from the North line and 1184 feet from the East line of Section 31, Township 18 South, Range 38 East, Lea County, New Mexico.

CASE 2397: Application of Reading and Bates, Inc. for a temporary exception to Rule 107 (d), Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a temporary exception to Rule 107 (d) to permit the production of oil from its Simms Federal Well No. 1 located in Section 34, Township 18 South, Range 30 East, North Benson Queen Pool, Eddy County, New Mexico, without installing tubing.

CASE 2398: Application of Ford Chapman for a 42.35-acre non-standard oil proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 42.35-acre non-standard oil proration unit in an undesignated Delaware pool comprising Lot 12, Section 34 and Lot 9, Section 35, all in Township 26 South, Range 29 East, Eddy County, New Mexico, said unit to be dedicated to the Curtis Hankamer Gulf-Federal Pipkin No. 1 Well, located 330 feet from the South line and 605 feet from the East line of said Section 34.

CASE 2399: Application of Texaco Inc. for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox oil well location in the Paduca-Delaware Pool for its Cotton Draw Unit Well No. 54, located 1980 feet from the North line and 2339 feet from the East line of Section 28, Township 25 South, Range 32 East, Lea County, New Mexico.

CASE 2400: Application of Texaco Inc. for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its C. H. Weir "A" Well No. 7, located in Unit I, Section 12, Township 20 South, Range 37 East, Lea County, New Mexico, as a triple completion in the Eumont Gas, Skaggs Glorieta, and Skaggs-Drinkard Pools, with production of oil from the Drinkard and Glorieta zones to be through parallel strings of 2 3/8 inch tubing and the production of gas from the Eumont Gas Pool through the tubing-casing annulus.

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

22-3297

September 14, 1961

C
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Y

Reading and Bates, Inc.
Philtower Building
Tulsa 3, Oklahoma

Attention: Mr. I. J. Pierce, Vice President, Exploration

Re: Reading and Bates, Inc.
Simms Federal # 1-North
Benson Queen Pool - Sec.
34, 18S, 30E, Eddy County

Gentlemen:

In reply to your letter of September 7, 1961, addressed to Mr. M. L. Armstrong of our Artesia office, you are hereby granted permission to produce the above-captioned well without tubing until October 15, 1961. In the meantime, we are setting the matter for public hearing in Santa Fe on October 4, 1961. If you elect to install tubing prior to October 15th, the case will be dismissed. If, however, you desire a temporary exception to our tubing requirements beyond that date, it will be necessary for you to appear before the Commission examiner on October 4th and present testimony that would justify the exception from our rule.

A copy of our hearing docket for October 4th will be mailed directly to you.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

[Handwritten signature]
ALP/ir

cc: Mr. M. L. Armstrong



READING AND BATES, INC.

DRILLING CONTRACTORS
GENERAL OFFICE — PHILTOWER BUILDING
TULSA 3, OKLAHOMA

CABLE ADDRESS
REBAT — TULSA
PHONE LU 5-1119

September 7, 1961

RECEIVED
SEP 11 1961
ARTESIA, OFFICE

Mr. M. L. Armstrong
Oil Conservation Commission
Drawer D. D.
Artesia, New Mexico

Dear Sir:

Re: Reading and Bates, Inc.
Simms Federal # 1-North
Benson Queen Pool - Sec.
34, 18S, 30E, Eddy County

Mr. A. L. Porter's letter of July 26, 1961
granted an exception to Commission Rule 107(d) until September
25, 1961 thus permitting production of oil from the subject well
without installing tubing.

During the past 6 weeks we have been producing
the well at approximately its daily allowable by flowing into the
tanks for two to three hours daily on a 20/64" choke. Flowing
casing pressure averages 375#-415# and shut-in pressure averages
600#. No water or B.S. is being produced. The well has produced
approximately 2,000 barrels to date with an indicated GOR of
approximately 1153.

As stated in our original letter requesting the
exception, we would still prefer not killing the well with salt water
since it might be detrimental to the formation. Therefore it is
requested that further extension be granted to permit production
without tubing the well. A period of two to six months is proposed
during which time we will advise of any marked change in production
conditions on the well.

Mr. M. L. Armstrong
Oil Conservation Commission -- 2

September 7, 1961

May we be advised.

Enclosed please find Gas Oil Ratio Report Form
C 116 - Re: Simms Federal # 1.

Yours very truly,

READING AND BATES, INC.



E. J. Pierce,
Vice President, Exploration

DLP:np
Enclosure

cc: Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

READING AND BATES
TULSA 3, OKLAHOMA

Case 23⁹⁷~~87~~

Heard... 10-4-61

Rec. 10-5-61

1. Grant Reading & Bates a six months exception to Rule 107 (d) (+). Also administrative approval ~~to~~ provision to give an extending time in the event the B.H.P. is not down to 1537 psi in six months.
2. This exception is necessitated because a Dowell^{frac} head was used to fracture the formation and tubing could not be stripped thru this head. Tubing was not used to frac well since more volume was needed than tubing would allow.
3. Provide that well must be tubed when B.H.P. is down to 1537 psi

Grant R. Bates

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 4, 1961

EXAMINER HEARING

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

IN THE MATTER OF:

Application of Reading and Bates, Inc. for
a temporary exception to Rule 107 (d), Eddy
County, New Mexico. Applicant, in the
above-styled cause, seeks a temporary
exception to Rule 107 (d) to permit the
production of oil from its Simms Federal
Well No. 1 located in Section 34, Township
18 South, Range 30 East, North Benson Queen
Pool, Eddy County, New Mexico, without
installing tubing.

CASE NO.
2397

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

EXAMINER UTZ: We call Case No. 2397.

MR. MORRIS: Application of Reading and Bates, Inc.
for a temporary exception to Rule 107 (d), Eddy County, New Mexico.

MR. BRATTON: Howard C. Bratton appearing on behalf
of the Applicant.

We have one witness and ask that he be sworn.

(Witness sworn.)

EXAMINER UTZ: Are there other appearances in the
case?

Let the record show there are none.



You may proceed.

D. L. POTTER,

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

DIRECT EXAMINATION

BY MR. BRATTON:

Q Will you state your name, by whom you are employed, and in what capacity?

A D. L. Potter. I am employed by Reading and Bates, Inc. as exploration geologist and also in their field operations with respect to completions and a certain amount of production work.

Q You have previously testified before this Commission?

A No, sir.

Q State very briefly your educational and professional background.

A I have a B.S. degree in geology from the University of Kansas. I was employed approximately eighteen years with Phillips Petroleum Company as superintendent of land and geological operations, and I am now employed by Reading and Bates as of the first of May, 1961.

Q Are you familiar with Reading and Bates' drilling operations, including the operation on the well which is the subject of this hearing?

A Yes, sir.

MR. BRATTON: Are the witness's qualifications

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FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6651



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6591

acceptable?

EXAMINER UTZ: Yes, sir, they are.

Q (By Mr. Bratton) State very briefly, to begin with, Mr. Potter, what is the request in this case.

A The request is a desire on the part of the Applicant to continue production of the Simms No. 1 Well without tubing that is presently producing through the casing, 5 1/2-inch casing, which has affixed to the top a three-way frac head.

Q Mr. Potter, before we get into that, it's basically for a temporary exception to producing the well through the casing?

A Yes, sir.

Q Now, with reference to the plat that's been made Exhibit 1, does that show the location of the subject well?

A Yes, sir, it does.

Q And the surrounding wells?

A Yes.

Q And that well --

A Perhaps the surrounding wells are not on that plat.

May I look at that just a second here?

Yes, the offset wells are there.

Q The location of the subject well is in the northeast, northwest of 34, 18 South, 30 East?

A That's correct, Eddy County.

Q Now, reference next, Mr. Potter, to what has been



marked as Applicant's Exhibit No. 2, which is an outline of the request. Detail the request, if you please, sir.

A Reading and Bates, Inc., are the operators of the Simms Federal Well No. 1 located in Section 34, Township 18 South, Range 30 East, North Benson Queen Pool, Eddy County, New Mexico.

On this plat you will notice that this well is actually adjacent to the present boundaries of the North Benson Pool. However, the proration officer has requested that we file a form to include certain other acreage of which 40 acres in which this well is drilled is a part, and that has been done. However, we have not yet received any notification that the pool boundaries have been changed.

This is Eddy County. Reading and Bates, by letter, has requested an exception to Rule 107(d) of the Rules and Regulations to permit production of oil from Queen Formation in the Simms Well without installing tubing for a temporary period of up to six months. Shut-in pressures average 550 to 600 pounds. This is surface shut-in pressure, indicating the necessity of killing the well with salt water to make it safely and mechanically possible to change from the Dowell 3-way flathead to which the well is now flowing, to a conventional tubing head.

It is contended that subjecting the producing formation to salt water may be detrimental to the well's producing ability and may ultimately bar the oil recovery from the reservoir. On a recent GOR test, the well produced oil through a 20/64 intimeter

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PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 213-6691

at the rate of 17.7 barrels per hour, with a maximum GOR of 1,558 cubic feet per barrel. Flooring casing pressure ranged from 380 to 335 pounds. Maximum bottom hole pressure indicated to be approximately 1,669 pounds, assuming a flow column of 37 degree gravity oil. A hole full of 10.2 pounds circulated salt water will exert a pressure of only 1,537 pounds.

It is our contention that continued production of the well through the casing without installing tubing will not be wasteful of solution gas energy, and by postponing the installation of tubing until pressure declines somewhat, possible reservoir damage may be averted. At such time as it is mechanically feasible to place tubing in the well without subjecting the formation to salt water or other fluids other than oil, the well will be tubed.

Q Mr. Potter, was this the first well that you drilled in New Mexico in this area?

A Yes, sir.

Q How did you get into this situation?

A We accepted a farm-out from Simms and lease operators from Artesia, New Mexico, and an option on additional tracts from three other operators, including Texaco, Inc., to drill this initial well, the Simms, primarily in a request for clean oil, and also for possible Grayburg and Premier production. Our farm-out included only those rights down to the Premier.

Q Well, how come your well -- you need to produce it without installing tubing?



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PHONE 325-1162ALBUQUE, N. M.
PHONE 243-6651

A The circumstances under which the well was completed were as a result of our conversations with other operators in the field service companies, Dowell Well, Cardinal, and Western, the fracture treating companies, which indicated that a high injection rate, a high volume, a high injection rate would be appreciable, and also that high pressures seem to be the rule rather than the exception in the Queen Formation, so that it appeared that a treatment down the casing would be the best method of fracturing this well, and also it appears that the Queen is not notably a high-pressure formation in this area, as there is production approximately three-quarters of a mile southwest, and the hole is approximately three-quarters of a mile northeast. This is on the south edge of the vacuum local hills trend crossing from east to west.

Q So you treated through the casing?

A Yes, sir.

Q And then what?

A Well, after our treatment, the well immediately began to flow back oil and in such an amount that it appeared to be unwise to attempt to change the producing head from a Dowell frac head to a conventional tubing head. To us, at that time, it appeared to be a matter of safety. Also, we had heard in our conversations with other operators that there were other wells which had been produced through the frac head rather than through a tubing head for some period of time.

Q Now, at this point, in order to change the head, you



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PHONE 243-6691

have got to kill the well?

A The well must be killed completely as there is no method of shutting off production by packer or other means through the Dowell head. It is a tri-head or three-way head, and nothing can be entered into the casing without removing that head.

Q And the only way you can kill it is with salt water, and you are afraid that with such treatment it would take pressure to put the salt water back in the formation?

A That is correct. Now, we could say that there is a possibility the well would become inactive with a lesser amount of fluid than a full salt water column. However, pressures do indicate that a salt water column and some displacement of salt water back into the formation would be needed to overbalance the 1,66½ pounds bottom hole pressure indicated.

Q What is your cement program in the well?

A The well was drilled with cable tools. Surface casing was cemented with 50 sacks down to the top of the salt. Approximately 600 feet of 8 5/8-inch casing was run to that 600 foot depth. The hole was then deepened by cable to 3,104 feet, at which point we had a hole full of oil. 5 1/2-inch casing was cemented with 250 sacks, which brought the cement in the annulus space back up to just below the base of the salt.

Q Do you anticipate any corrosion problem during the period of temporary exception requested here?

A No. We don't anticipate any. It's my understanding



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FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

from other operators in the area that the salt section does not present a corrosion problem in this particular area and has not presented one over the general life of the average well in this area.

Q How about your reservoir energy? Do you think you would have excess dissipation during this period of temporary exception?

A The well at the present time is being produced approximately two hours a day through a 20/64ths-inch choke at a rate of about 17 or 18 barrels per hour. The casing stands full of fluid at all times. It does not head during that period of time, so that we feel that production through the casing or production through the tubing would be approximately the same with respect to dissipation of gas energy.

Q Now, referring to what has been marked Exhibit No. 3, are those your computations as to what would be necessary to kill the well?

A Yes. We feel these particular factors would be involved. In other words, the pressure exerted by the 37-degree gravity oil pressure and the water column pressure of 10.2 will be the salt water column. The bottom hole pressure has not been actually taken. As a bottom hole pressure we are assuming a full column of oil plus the measured surface pressure of 600 pounds.

Q Based upon your best indication, it would take salt water to kill the well?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182ALBUQUERQUE, N. M.
PHONE 243-6691

A Yes.

Q And enough to push it back into the formation to some degree?

A That's right.

Q You have been operating this well under a temporary exception by the local office?

A No, sir, by the office in Santa Fe. It was signed by Mr. Porter. It was a temporary exception granted on September 25, and upon application for the extension, it was extended to October 15th, subject to our appearing at this hearing.

Q In the period of six months would you anticipate that you might be able to safely kill the well and put the tubing in?

A It is difficult to predict the performance of this well as to pressure decline. At the present time we have produced approximately 2,800 barrels only, and there is little or no indication of pressure decline as yet. A period of six months, perhaps, would bring pressure down to a point where we could use a salt water column without displacing any water into the formation.

Q You would try to see what the performance is within that time?

A We could determine the pressure decline on the well, and at such time as it has declined or at such time as the gas production appeared to be -- the GOR appeared to be excessive, we would, of course, then take the risk of formation damage and go ahead and tube the well. We have tubing on location.



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FARMINGTON, N. M.
PHONE 325-1182

Q In your opinion, Mr. Potter, would there be a chance of losing the well if you were to kill it at this time with sufficient salt water?

A It is, perhaps, remote; however, it is common knowledge in the oil field that you should never kill a well if it can be averted, particularly one that has been treated or fractured; and, of course, any fluid can be incompatible with the formation at any particular location -- other than oil, that is -- so that it is certainly preferable from any operator's standpoint not to kill a well.

Q Did you prepare Exhibits 1 through 3?

A Yes, sir.

Q Is there anything else you would care to state in connection with this application?

A I believe not.

MR. BRATTON: We offer Applicant's Exhibits 1 through 3.

EXAMINER UTZ: Without objection, Exhibits 1 through 3 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits 1 through 3 entered in evidence.)

MR. BRATTON: We have nothing further at this time.

EXAMINATION

BY EXAMINER UTZ:

Q The condition, then, under which you intend to install



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tubing is when you get the pressure down below 1537?

A Yes, sir.

Q How much below 1537?

A We would, I think, be willing to go ahead and install to 1500 pounds.

Q If it's not down to 1500 pounds in six months, what do you propose?

A We will probably request an extension. The conditions for formation damage would not change in that time if the pressure remains the same.

Q Would you propose that this order, if granted, include administrative procedure whereby you might obtain an extension?

A Yes, sir, I believe that would be the most reasonable approach rather than an additional public hearing.

Q What did you say your GOR was?

A 1538. However, that is maximum. The first two hours of production on this well from tests which have been made, indicates a lower GOR than after the production of approximately 35 to 40 barrels. That ratio increases to roughly 1600, possibly a little higher. That is our primary reason for maintaining a 20/64ths choke and producing only two hours. It seems that by unloading the casing to the production allowable of 35 barrels, 34 barrels, we maintain the lowest GOR and also keep the well alive, maintaining a full column in the casing.

Q Is it normal procedure to use a Dowell head for



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fracking?

A It depends on the service company which you use. Others do have heads through which tubing can be stripped. In this case, we used Cardinal on previous fracture treatments that blow down to 3200, and then we used the Dowell Company on this zone at 2930.

Q You can use tubing with a Dowell head?

A Not this particular head. I assume, I don't know whether they do have, but this is one in which we desire the highest volume and consequently the highest injection rate that we could get in this well at two different zones separated by eight feet, was 2930 and 2938, and subjected to a two-stage fracture treatment.

Q You didn't fracture the tubing?

A No, sir, because of the volume. In other words, on subsequent wells, of which we have built two, we have fraced through the casing and the tubing with a small amount of tubing installed in the surface. In other words, five or six hundred feet of tubing down the hole so that additional tubing can be stripped into the well after the fracture treatment. That's s.o.p. with us now.

Q At any time you use a Dowell head, if you don't install tubing when you frac, then you find yourself in this situation?

A Yes, with that particular head, that's right.

EXAMINER UTZ: Are there any other questions of the witness?



EXAMINATION

BY MR. MORRIS:

Q Mr. Potter, this GOR of roughly 15 or 1600, has that been the GOR that you have experienced in this well since its completion?

A Yes. However, on file you will find one which indicates a lower GOR but which has been recalculated and I am sure has been submitted in error.

Q Do you feel that the GOR is going to increase rapidly?

A No, I don't believe that it will. From its present performance I might explain that this well is perforated in what is apparently a mild clean sand which is not producing nor which is indicated in the surrounding wells. So this, in all probability, is virgin reservoir in spite of production for 10 or 15 years in the adjacent areas.

Q You don't feel that the GOR from the surrounding wells would be analogous to the situation?

A No, sir, because they are not producing from this sand lens.

MR. MORRIS: Thank you.

EXAMINER UTZ: Are there any other questions of the witness?

If not, the witness may be excused.

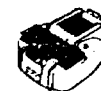
(Witness excused.)

EXAMINER UTZ: Are there any other statements in this

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case?

If not, the case will be taken under advisement.

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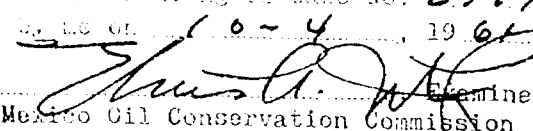
STATE OF NEW MEXICO)
) ss
COUNTY OF SAN JUAN)

I, THOMAS F. HORNE, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

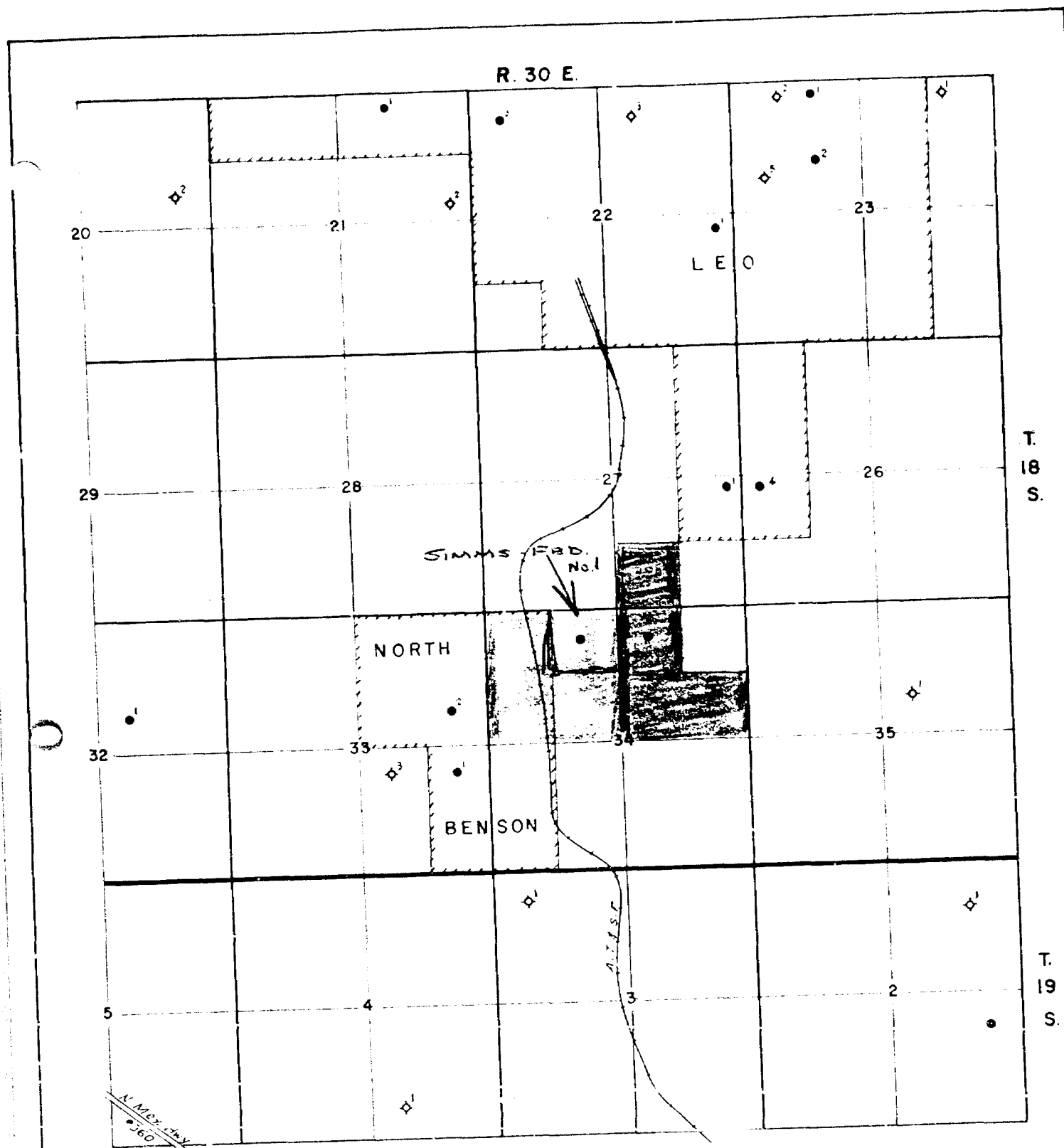

NOTARY PUBLIC

My Commission Expires:

10-2-65

I do hereby certify that the foregoing is a complete record of the proceedings in the New Mexico Oil Conservation Commission Case No. 2387, heard by me on 10-4-65, 1965.

Examiner
New Mexico Oil Conservation Commission





- SIMMS & Reese Tract
- Featherstone Tract
- Jones tract
- Tenaco tract

NORTH BENSON FIELD
 Eddy County, New Mexico
 SCALE 1" = 1 MILE

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	1
CASE NO.	2397



READING AND BATES, INC.

DRILLING CONTRACTORS
GENERAL OFFICE — PHILTOWER BUILDING
TULSA 3, OKLAHOMA

CABLE ADDRESS
REBAT-TULSA
PHONE LU 3-8525

October 3, 1961

New Mexico Oil Conservation Commission
Docket No. 27-61
Examiner Hearing - October 4, 1961

Case 2397

Re: Temporary Exception to Rule 107 (d)

Reading and Bates, Inc. operator of the Simms-Federal Well No. 1 located in Section 34, Township 18 South, Range 30 East, North Benson Queen Pool, Eddy County, by letter has requested an exception to Rule 107 (d) of the Rules and Regulations to permit production of oil from the Queen formation in the Simms Well without installing tubing for a temporary period of up to six months.

Shut-in pressures averaging 550# - 600# indicate the necessity of killing the well with salt water to make it safely and mechanically possible to change from the Dowell three-way frac head through which the well is now flowing, to a conventional tubing head. It is contended that subjecting the producing formation to salt water may be detrimental to the well's producing ability and may ultimately lower the oil recovery from the reservoir.

On a recent Gas Oil Ratio test, the well produced oil through a 20/64" choke at the rate of 17.7 barrels per hour with a maximum gas/oil ratio of 1528 cubic feet per barrel. Flowing casing pressures ranged from 380# to 335#.

Maximum bottom hole pressure is indicated to be approximately 1669 pounds assuming a full column of 37° gravity oil. A hole full of 10.2# saturated salt water will exert a pressure of only 1537 pounds.

It is our contention that continued production of the well through the casing without installing tubing will not be wasteful of solution gas energy, and by postponing the installation of tubing until pressures decline somewhat, possible reservoir damage may be averted.

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	2
CASE NO.	2397

New Mexico Oil Conservation Commission
Docket No. 27-61
Examiner Hearing - October 4, 1961 ---- 2

At such time as it is mechanically feasible to place tubing
in the well without subjecting the formation to salt water or fluids other than
oil the well will be tubed.

Reading and Bates, Inc. Simms No. 1

Well Data

Total Depth to Bottom Perf.	2,938
Oil Gravity	37°
Pressure of 37° Grav. oil exerted per ft.	.364 #/sq. in.
Pressure of fresh water	.433 #/sq. in.
Pressure of 10.2# salt water	.530 #/sq. in.
Maximum surface pressure	600#
2,938 ft. oil column pressure	1069.4#
Bottom hole pressure indicated	1669.4#
Maximum bottom hole pressure - Fresh water load	1272.
Maximum bottom hole pressure - Salt water load	1537.
5 1/2 inch casing capacity - 2938	69.9 bbls.
Daily Allowable	34 bbls.

2938
364
17628
8814
1069.432
600
1669.

BEFORE EXAMINER UTZ
FILE FOR EVIDENCE COLLECTION
EXHIBIT NO. 3
CASE NO. 2937

READING AND BATES
TULSA 3, OKLAHOMA