

Case No.

4143

Application, Transcripts,
Small Exhibits, Etc.



dearnley-meier reporting service

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

June 4, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of Amerada
Petroleum Corporation for
downhole commingling and
special gas-oil ratio
limitation, Lea County,
New Mexico.

Case 4143

BEFORE: DANIEL S. NUTTER, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Case 4143.

MR. HATCH: Case 4143, continued from the May 21, 1969, Examiner Hearing, application of Amerada Petroleum Corporation for downhole commingling and special gas-oil ratio limitation, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, Jason Kellahin appearing for the Applicant. I have one witness I would like to have sworn.

(Thereupon, Applicant's Exhibits 1 through 5 were marked for identification.)

JOHN H. SWENDIG

called as a witness by the Applicant, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A John Swendig.

Q By whom are you employed, and in what position?

A With Amerada Petroleum Corporation as District Engineer in Hobbs, New Mexico.

Q Are you located in Hobbs?

A Yes.

Q Have you previously testified before the Oil Conservation Commission, and made your qualifications a matter of record?

A Yes, I have.

MR. KELLAHIN: Are the witness's qualifications acceptable?

MR. NUTTER: Yes, they are.

Q Are you familiar with the application of Amerada in Case 4143?

A Yes, sir.

Q What is proposed by Amerada in this application?

A Amerada proposes to commingle in the wellbore the Eumont gas pool and Skaggs-Grayburg oil zone.

Q Referring to what has been marked as Exhibit No. 1, would you identify that exhibit?

A This a map of the Skaggs area, showing all the wells and completions, with the Skaggs-Grayburg wells shown in red circles, the Eumont gas wells in green.

Q Now, you show the Well No. 2 with an arrow pointing to it. That is the subject well, is it not?

A Yes, this is the Fred Turner Jr., "A" Well No. 2. This well is presently dually completed in the Skaggs-Grayburg and Eumont gas, and this was approved

by Order No. R-2974, in October of 1965. This well was for a dual completion in non-standard gas units, and the non-standard unit is shown in yellow on the map.

Q What is the closest Eumont production to that well?

A Continental has a Eumont gas completion in Section 13, Range 37 East, Township 20 South, and it is their S. E. M. U No. 41, but this is a shut-in gas well. The nearest production is in Section 24, Continental S.E.M.U, No. 69.

Q Do you know how long the Continental well in Section 13 has been shut-in?

A No, sir, I don't. It was completed prior to our Turner "A" No. 2. It has been shut-in at least since prior to 1965.

Q And it has not produced during that period, to your knowledge?

A No, sir.

Q Referring to what has been marked as Exhibit No. 2, would you identify that exhibit?

A Exhibit No. 2 is a schematic of the Fred Turner, Jr. "A" completion, and this is the completion that was approved by Order No. R-2974, and this shows the Eumont completion from 3,145 to 3,494; the Grayburg openhole

from 3,703 to 3,915. The Grayburg was produced through 3 inch tubing set with a Model D packer at 3,690, inch-and-a-half string of tubing run inside the 3 1/2, and the Eumont producing through the annulus.

Q Referring to what has been marked as Exhibit 3, would you identify that exhibit?

A If I might, the reason for our application, before we go to Exhibit No. 3, at the time of the dual completion, the Grayburg was producing 29 barrels of oil and a trace of water, with a gas-oil ratio of 6,800. The physical completion precludes efficient mechanical operation, and we have measured our pumping efficiency on this well of less than 50 percent.

Since the time of the dual completion, well conditions have changed such that the manner in which the well is dually completed is no longer applicable.

This brings up the Exhibit No. 3. One of the well conditions that have changed is the Grayburg capacity has increased as a result of water flooding adjacent to the Fred Turner "A" lease; and Exhibit 3 is a map showing the two active waterfloods in the area, Continental's S.E.M.U. Permian waterflood, and Texaco Skaggs-Grayburg unit, and on this map again the

Fred Turner "A" No. 2 is shown with an arrow. The active injection wells are shown by triangles.

In the course of remedial work on the Turner "A" No. 2, the two zones were allowed to flow together in order to clean the well up, and at that time the production from both zones was 126 barrels of oil, 54 barrels of water, with a GOR of 6,255.

MR. NUTTER: Will you go over those figures again?

A It flowed 126 barrels of oil, 54 barrels of water, and the GOR was 6,255.

MR. NUTTER: That is the combined zones on tests?

A Yes, sir, this is the combined zones. We were flowing the two zones together to clean the well up before putting it back on pump.

MR. NUTTER: What was the date of that test?

A 4-19-68.

Q (By Mr. Kellahin) You would say that this well has had a response from the offsetting flood, would you not?

A Yes. I might mention, too, three days prior to this test, on 4-16-68, the Grayburg zone alone produced 19 barrels of oil, a trace of water, and GOR of 468.

MR. NUTTER: Do you mean 1968 or 1969?

A No, sir, this was in 1968.

MR. NUTTER: More than a year ago?

A Yes, sir, it has been more than a year ago that we have been working at this. This was the first indication was a year ago.

Q Is the Grayburg now on a low GOR?

A Yes, sir, this was our first indication of waterflood response from Continental's flood, was a drastic decrease in our gas-oil ratio. We have a long series of tests that were taken during June and July of 1968, showing the ratio to be around 400 to 500 to one.

Q Do you know whether the offsetting wells operated by Continental have received a response from the injection?

A Yes, sir. In the same section in Section 18, Continental's No. 77, No. 74, and No. 75 have shown response to water injection. I have some indication of the magnitude of these responses, if the Commission would like it.

The most notable response was in their Well No. 77, in January of 1967, it produced 127 barrels of oil; in February of 1968, it produced 909 barrels of oil. This is a little bit out of date, but this as far as I

8

have checked it, but all three wells have all shown responses to injection.

Q Now, referring to what has been marked as Exhibit No. 4, would you discuss that exhibit?

A There again, if I could say something about the Grayburg before we go on. The mechanical problems that we have, the remedial problems that we were working on in May of 1968, we were acidizing the Eumont zones, and since that time the Eumont began making water. Prior to that time, there was no water production from the Eumont production, no fluid production from the Eumont. After acidizing, the well makes eight or ten barrels of water per day, and this loads the well up. The well -- we will talk about the pressures in a minute -- but it is low pressure, and it creates a problem. The well is not capable of flowing the fluids out.

Exhibit 4 is a schematic of our proposed completion, which shows the utilizing the 3 inch tubing in the well now, and unseating the tubing from the packer, allowing the Grayburg production to produce into the annulus, Eumont water production to flow down to the pump, and the gas to flow out the annulus and all the fluids to be pumped through the 3 inch tubing.

Q What is the production from the Eumont at the

present time?

A Eumont production is somewhere -- it will run between 130 to 200 Mcf per day.

Q Do you expect that will continue at that rate?

A I would expect that the production will continue to decline from this point in depletion.

Q Have you made any estimate of the remaining reserves?

A Exhibit No. 5 is a pressure cumulative plot, showing two curves, One, the left curve, was prior -- the production and extrapolation prior to our acidizing the well. The plot on the right is production since acidizing, showing the reserves in the Eumont to be about 65,000 Mcf.

Q What disposition was made of this gas?

A This gas is sold to the Warren McGee unit, which produces by gas lift.

Q Would the fact that you are planning to commingle the production in the wellbore result in any reduction in the amount that would be received for the gas?

A No, sir, the same disposition of the gas will be in the future as it is presently. It will go to the Warren McGee gas systems.

Q Returning to Exhibit No. 4, as I understand it, Eumont gas would be produced through the annulus?

A Yes, sir.

Q And the Grayburg oil would be produced through the tubing?

A Yes, sir.

Q You would have a pump in the tubing?

A Yes, sir.

Q For what reason are you leaving the packer in?

A We have plans in the future to waterflood the Fred Turner, Jr., "A" lease, and the No. 2 will be an injection well eventually, and extension of Continental's pattern to the south and west. And the packer will be utilized when the well is converted to an injection well.

Q While the well is being produced, would there be any contact of the Grayburg fluid with the Eumont perforations?

A We have taken dynamometer tests on the pumping completion of the Grayburg, and show that we are pumping all of the fluid from the Grayburg. We have not been able to establish a bottomhole pressure for the Grayburg, but during the production operations fluid will be below the Eumont perforation. If the well is shut-in, we anticipate

that the fluid will rise above the Eumont perforations.

Q In your opinion, will that cause any damage to the Eumont zone?

A In treating this well in May of 1968, we found it required 2,300 pounds to pump into the formation after 30 minutes. After shutting down the pumps, we still had 500 pounds of pressure on the Eumont. We found in other areas where we have dual completions in the Eumont, that during remedial operations, the well has killed generally with oil, and we have not noticed any loss of fluids to the Eumont zone, and no loss of production when these zones were returned, so we do not anticipate that the Eumont zone will be hurt by having well fluids across --

Q What is the pressure in the Eumont?

A The pressure in the Eumont now is about 400 PSI.

Q What will you do with the Eumont when this well is converted for injection?

A Since the well will not flow on its own when the well is converted to injection, it will be necessary that the Eumont be squeezed off and abandoned.

Q How long do you anticipate the Eumont will

produce?

A If it is allowed to produce as it is now, the production will probably last about a year.

Q Would you consider this a salvage operation, insofar as the Eumont gas is concerned?

A Yes, the Eumont is a salvage operation.

Q Would it be economical to attempt to continue your dual completion as it was originally approved by the Commission?

A No, sir. If we continue to operate as we are now, the Eumont does not produce under the dual completion as set up, and it will remain shut-in if we do not dually complete it in the wellbore.

Q Will the commingling in the wellbore, in your opinion, cause any damage to any production from either the Eumont or the Grayburg?

A No, sir, I don't think so.

Q Either in this well or adjacent wells?

A No, sir.

Q What would the GOR be on the commingled production?

A We estimate the GOR will be about 3,200 to one, commingled.

Q As I understand, the Grayburg has received a

response from the offsetting waterflood. At what rate would you anticipate you would produce that?

A About 50 to 55 barrels a day is the capacity at present. About 50 barrels of water per day.

Q If you are held to the limiting gas-oil ratio under Statewide rules, would that have any effect on your production?

A The 2,000 to one limiting ratio is affected then. Our allowable will be 37 barrels per day.

Q Are you asking, then, in this applicable that you be granted an exception to the GOR limitation?

A Yes, sir.

Q What do you propose in this connection?

A We would like to be exempt from the GOR limitation. And if it is necessary to establish a limiting GOR, we would like to have it set at 4,000 to one.

Q Were Exhibits 1 through 5 prepared by you or under your supervision?

A Yes, sir, they were.

MR. KELLAHIN: At this time I will offer Exhibits 1 through 5, inclusive.

MR. NUTTER: Amerada's Exhibits 1 through 5 will be admitted in evidence.

(Thereupon, Applicant's Exhibits 1 through 5 were admitted in evidence.)

Q Do you have anything to add?

A No, sir, that would be all.

MR. KELIAHIN: That completes the examination of the witness.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Swendig, prior to the workover when you acidized the Eumont, it wasn't making anything, is that it?

A No, sir, it was still producing but it was producing quite weak, and we acidized it attempting to open up some additional zones and increase the flowing tubing pressure.

Q Then it started making eight barrels of water per day?

A Eight to ten barrels, we estimate.

Q What is the status of this well now?

A Well, the Eumont will not produce now. It will load up and die.

Q Have you tried bleeder strings down the annulus between the tubing and the casing.

A No, sir.

Q Isn't it common practice to run a bleeder string

down the well when you load up with the gas zone with liquid?

A Yes, sir, but we have in the present completion, you will notice there is a sliding sleeve arrangement, and we have run the inch-and-a-half and attempted to flow the Eumont through the inch-and-a-half with the sliding sleeve open and the Grayburg blanked off, and it still will load up and die. It doesn't have sufficient pressure to even flow through inch-and-a-half tubing.

Q Now, is this inch-and-a-half tubing in the well at the present time?

A Yes, sir.

Q And you are pumping the Skaggs-Grayburg through this inch-and-a-half?

A Right. Our pumping installation is set up right now with an inch-and-a-quarter pump. It should be a displacement of about 120 barrels per day. We moved about 30 barrels of oil and 25 barrels of water, and this is the maximum we have been able to produce from this. Even with the low ratios we have now, there is gas interference with the pump, and our mechanical efficiency is about 50 percent.

Q Are any of the Eumont gas wells presently being

pumped to relieve water load up?

A Not to my knowledge.

Q This is true down in the Jalmat area.

A There are gas wells pumped to remove water, yes.

Q And you would have room in this 7 inch casing to run another string of tubing, and pump this Eumont, if it was necessary?

A Yes, sir, we probably could. We have looked at the possibility, but we still have the same situation of pumping the Grayburg underneath the packer.

Q Well, the Grayburg GOR has come down?

A Yes, sir.

Q And with additional response from this waterflood, it would be normal to expect the GOR to reduce further, wouldn't it?

A I would expect that the GOR in this area will probably go down to 200, 250, eventually.

Q What is the present rate of production on these Continental wells offsetting?

A I can't answer that. I don't know what their production rates are.

Q The only figure you mentioned was the No. 77,

which in February of 1968 had produced 900 barrels.

A Are you talking about the oil wells?

Q Yes.

A There again, I didn't bring the Continental data completely up-to-date. March of 1968 was the last production that I had on the Continental wells, and I only tabulated this to see if there had been response. As far as I could see, they had responded, so I didn't continue it.

Q Did you have a GOR at that time on the Continental 77?

A I've got the monthly gas volume. It produced 2,017 Mcf, and 900 barrels of oil. This would be about 2,000 to one.

Q Now, you say that eventually you will put some wells on injection in your Turner "A" lease?

A Yes, sir.

Q To fill out Continental's pattern, this No. 2 Well would be an injection well?

A Yes, sir, our plans are to convert our No. 2, No. 5, No. 14, and No. 1 to injection. This would be an extension of Continental's five-spot pattern.

Q This No. 1 down here in Section 19?

A Yes, sir.

Q Now, as the tubing is lifted up out of the packer, you anticipate that the fluids from the Eumont would drop to the bottom, and that the gas would come up the annulus. Do you expect that gas from the Grayburg would also break out and come up the annulus?

A Yes, sir, the gas from the Grayburg would break out and come up the annulus, also.

Q How would you propose that the well be prorated as far as the Eumont gas pool is concerned?

A Since it is a marginal well, it wouldn't be prorated as far as gas.

Q How much of the gas production would be attributed to the Eumont zone?

A It would be based on a well test prior to the commingling of the two zones, and use the subtraction type method.

Q The Commission has authorized the commingling in the wellbore of some marginal production down in southeast New Mexico. Could you name an instance where the Commission has authorized commingling of gas pools and oil pools?

A To my knowledge, there has not been any.

MR. NUTTER: Are there any further questions of

Mr. Swendig? You may be excused.

Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: That is all.

MR. NUTTER: Does anyone have anything to offer in Case 4143? We will take the Case under advisement, and call Case 3796.

I N D E XWITNESSPAGE

JOHN H. SWENDIG

Direct examination by Mr. Kellahin

2

Cross Examination by Mr. Nutter

14

EXHIBITSMARKEDADMITTED IN
EVIDENCEApplicant's Exhibit's
1 through 5

2

14



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

May 21, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of Amerada
Petroleum Corporation for
downhole commingling and
special gas-oil ratio
limitation, Lea County,
New Mexico.

Case 4143

BEFORE: ELVIS A. UTZ, Examiner

TRANSCRIPT OF HEARING

RECEIVED
JUN 12 PM 1 13 '69

MR. UTZ: Case 4143.

MR. HATCH: Application of Amerada Petroleum Corporation for downhole commingling and special gas-oil ratio limitation, Lea County, New Mexico.

If the Examiner please, we have received a request to continue this case, also, to June 4.

MR. UTZ: Without objection, Case 4143, will be continued to June 4.

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

I, CA FENLEY, Court Reporter 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.

Ca Fenley

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 4143
heard by me on *May 24* 19*69*
Thurs. May 24 Examiner
New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMijo
MEMBER

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

September 4, 1969

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Re: Case No. 4143
Order No. R-3821
Applicant: Amerada Petroleum Corp.

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.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

Other

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 4143
Order No. R-3821

APPLICATION OF AMERADA PETROLEUM
CORPORATION FOR DOWNHOLE COMMINGLING
AND SPECIAL GAS-OIL RATIO LIMITATION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 4, 1969,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 4th day of September, 1969, 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, Amerada Petroleum Corporation, is
the operator of the Fred Turner, Jr., "A" Well No. 2, located in
Unit K of Section 18, Township 20 South, Range 38 East, NMPM,
Lea County, New Mexico.

(3) That Order No. R-2974, dated October 4, 1965, authorized
the applicant to dually complete the subject well in such a manner
as to produce gas from the prorated Eumont Gas Pool through the
casing-tubing annulus and to produce oil from the Skaggs Grayburg-
San Andres Oil Pool through 1 1/2-inch tubing, with separation of
zones by a packer set at approximately 3690 feet.

(4) That the applicant proposes to remove the 1 1/2-inch
tubing, set 3 1/2-inch tubing just above the packer, and produce

-2-

CASE No. 4143

Order No. R-3321

both of the subject zones through said tubing and annulus, commingling the production in the well-bore.

(5) That the applicant further seeks the establishment of a special gas-oil ratio limitation of 4000 cubic feet of gas per barrel of oil for the commingled production from said well.

(6) That the Grayburg zone of the subject well as a result of receiving a response from nearby water injection wells to the northwest and southwest produces considerable water.

(7) That if the Eumont and Grayburg zones are commingled in the well-bore, the water produced by the Grayburg zone may have an adverse and detrimental effect on the Eumont zone in the vicinity of the subject well, which already produces some water, thus causing waste.

(8) That commingling in the well-bore of the subject zones would prevent accurate determination, necessary for proration purposes, of the volumes of gas produced by the prorated Eumont zone of the subject well.

(9) That commingling in the well-bore of an oil zone and a gas zone would render ineffective the gas-oil ratio limitation applicable to the oil zone.

(10) That the subject application should be denied.

IT IS THEREFORE ORDERED:

(1) That the subject application is hereby denied.

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

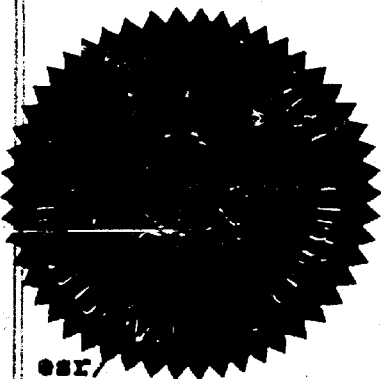
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


ALEX J. ARRIAGA, Member


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



esr

(6) That the ~~subject well~~ Grayburg zone
of the subject well, ^{as a result of receiving} has ~~received~~ a
response from nearby water injection
wells to the Northwest and Southwest
produces considerable water.

(7) That if the Ecomart and Grayburg zones are
commingled in the well-bore, the water produced
by the Grayburg zone may have an adverse and
detrimental effect on the Ecomart zone in the vicinity
of the subject well, thus causing waste.

(8) That commingling in the well-bore of the
subject zones would prevent accurate determination,
^{necessary for production purposes,} of the volume of gas produced by the ^{approximate} Ecomart zone of
the subject well.

(9)

(10) That the subject application should be
denied

Ordered.

(1) That the subject application is
being denied

(2) June

R-
3363

R-3276

Case 4143:

Findings

(11)

(12) That the applicant, Amerasia Petroleum Corporation, is the operator of the Fred Turner, Jr., "A" Well No. 2, located in Unit K of Section 18, Township 20 South, Range 38 East, Lea County, New Mexico.

(13) That Order No. R-2974, dated October 4, 1965, authorized the applicant to finally complete the subject well in such a manner as to produce gas from the isolated Eucumt Gas Pool through the casing - tubing annulus and to produce oil from the Skaggs Grayling - Lee Andrew oil Pool through $1\frac{1}{2}$ -inch tubing, with separation of zones by a packer set at approximately 3690 feet.

(14) That the applicant in testing the ^{subject} well has removed the $1\frac{1}{2}$ -inch tubing, has set $3\frac{1}{2}$ -inch tubing just above the packer, and is producing both of the subject zones through said tubing and annulus, commencing the production in the well bore.

(15) That the applicant seeks authority to continue said commencing of production in the well bore of the subject well and the establishment of a special ~~of~~ gas-oil ratio limit of 4000 cubic feet of gas per barrel of oil for the commenced production.

Case 3306
R-2974

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. 3306
Order No. R-2974

APPLICATION OF AMERADA PETROLEUM CORPORATION
FOR A DUAL COMPLETION AND A NON-STANDARD GAS
PRORATION UNIT, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 22, 1965, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 4th day of October, 1965, 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, Amerada Petroleum Corporation, seeks authority to complete its Fred Turner, Jr., "A" Well No. 2 located in Unit K of Section 18, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce gas from the Eumont Gas Pool through the casing-tubing annulus and to produce oil from the Skaggs Grayburg-San Andres Oil Pool through 1 1/2-inch tubing, with separation of zones by a packer set at approximately 3690 feet.

(3) That the applicant also seeks approval of a 320-acre non-standard gas proration unit in the Eumont Gas Pool comprising the SE/4 NW/4, S/2 NE/4, NE/4 SW/4, N/2 SE/4, and SE/4 SE/4 of Section 18, and the NE/4 NE/4 of Section 19, Township 20 South,

Range 38 East, NMPM, Lea County, New Mexico, to be dedicated to its Fred Turner, Jr., "A" Well No. 2.

(4) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(5) That the proposed non-standard gas proration unit can be efficiently and economically drained and developed by the subject well.

(6) That approval of the proposed dual completion will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste and protect correlative rights.

(7) That approval of the proposed non-standard gas proration unit will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amerada Petroleum Corporation, is hereby authorized to complete its Fred Turner, Jr., "A" Well No. 2 located in Unit K of Section 18, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce gas from the Eumont Gas Pool through the casing-tubing annulus and to produce oil from the Skaggs Grayburg-San Andres Oil Pool through 1 1/2-inch tubing, with separation of zones by a packer set at approximately 3690 feet;

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for the Skaggs Grayburg-San Andres Oil Pool.

(2) That a 320-acre non-standard gas proration unit in the Eumont Gas Pool comprising the SE/4 NW/4, S/2 NE/4, NE/4 SW/4,

-3-

CASE No. 3306

Order No. R-2974

N/2 SE/4, and SE/4 SE/4 of Section 18, and the NE/4 NE/4 of Section 19, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico, is hereby established and dedicated to the Amerada Petroleum Corporation Fred Turner, Jr., "A" Well No. 2.

(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.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JACK M. CAMPBELL, Chairman

GUYTON B. HAYS, Member

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

S E A L

esr/

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 4, 1969

9 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 4121: (Continued from the May 7, 1969, Examiner Hearing)
Application of Roger C. Hanks for special pool rules, Lea County,
New Mexico. Applicant, in the above-styled cause, seeks the
promulgation of special pool rules for the Bar U-Pennsylvanian
Pool, Lea County, New Mexico, including a provision for 160-
acre spacing and proration units and the assignment of 80-acre
allowables.

CASE 4143: (Continued from the May 21, 1969, Examiner Hearing)
Application of Amerada Petroleum Corporation for downhole
commingling and special gas-oil ratio limitation, Lea County,
New Mexico. Applicant, in the above-styled cause, seeks
authority to commingle production from the Eumont Gas Pool and
the Skaggs-Grayburg Pool in the wellbore of its Fred Turner,
Jr., "A" Well No. 2, the Eumont completion of which is presently
classified as a gas completion, located in Unit K of Section 18,
Township 20 South, Range 38 East, Lea County, New Mexico. Appli-
cant, further seeks the establishment of a special gas-oil ratio
limitation for the subject well.

CASE 3796: (Reopened)
In the matter of Case No. 3796 being reopened pursuant to the
provisions of Order No. R-3452, which order established 160-
acre spacing units for the Cerca-Upper Pennsylvanian Pool, Lea
County, New Mexico, for a period of one year. All interested
parties may appear and show cause why said pool should not be
developed on 40-acre or 80-acre spacing units.

CASE 4093: (Reopened)
Application of BTA Oil Producers for salt water disposal, Lea
County, New Mexico. Order No. R-3727, dated April 15, 1969,
authorized the applicant to dispose of produced salt water into
the Devonian formation in the intervals from approximately
12,233 feet to 12,275 feet in its Max Pray State "E" Well No. 1
and from approximately 12,088 to 12,164 feet in its Max Pray
State "E" Well No. 2 located, respectively, in Units F and C of
Section 5, Township 10 South, Range 36 East, adjacent to the
West Crossroads-Devonian Pool, Lea County, New Mexico. Applicant
now seeks authority to extend said Devonian zones of disposal
to 12,233 feet to 12,500 feet in said Well No. 1 and 12,088
feet to such depth as is necessary in said Well No. 2.

CASE 4144: Application of Sam G. Dunn Oil Operations for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from approximately 1910 feet to 1950 feet in its E. Faircloth "C" Well No. 1 located in Unit N of Section 32, Township 7 South, Range 27 East, Arme-San Andres Pool, Chaves County, New Mexico.

CASE 4143: (Continued and readvertised)

Application of Mallard Petroleum Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Seven Rivers formation in the perforated interval from approximately 3700 feet to 3750 feet in its Milner Federal Well No. 4, located in Unit C of the Seven Rivers Pool, 20 South, Range 34 East, Lynch (Vale) Pool, Lea County, New Mexico.

CASE 4145: Application of Tenneco Oil Company for an exception to Order No. R-3221, as amended, Lea and Eddy Counties, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for applicant's Rush Field leases comprising the SW/4 NW/4 of Section 19, Township 18 South, Range 32 East, Lea County, New Mexico, and the NE/4 of Section 24, Township 19 South, Range 31 East, Eddy County, New Mexico. Applicant seeks authority to dispose of salt water produced by wells completed on said leases in unlined surface pits on said leases.

CASE 4146: Application of V. S. Welch for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicants lease comprising the NE/4 of Section 28, Township 18 South, Range 31 East, Shugart Field, Eddy County, New Mexico. Applicant seeks authority to dispose of salt water produced by wells completed or to be completed on said lease in unlined surface pits on said lease.

Examiner Hearing

June 4, 1969

--3--

Docket No. 16-69

- CASE 4147: Application of Mobil Oil Corporation for pool reclassification, Lea County, New Mexico. Applicant, in the above-styled cause, seeks to have the North Vacuum-Morrow Pool, Lea County, New Mexico, reclassified from an oil pool to a gas pool.
- CASE 4148: Application of Fannie Lee Mitchell, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Wolfcamp formation in the perforated interval from approximately 10,450 feet to 10,550 feet in the former Southern Petroleum Exploration Co., Inc. Machris State 36-3 Well No. 1 located in Unit W of Section 3, Township 16 South, Range 35 East, Townsend-Wolfcamp Pool, Lea County, New Mexico.
- CASE 4149: Application of Jack L. McClellan for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for applicant's Harris Well No. 1 located in Unit P, Section 5, Township 16 South, Range 30 East, West Henshaw-Grayburg Pool, Eddy County, New Mexico. Applicant seeks authority to dispose of salt water produced by said well in unlined surface pits in the vicinity of the well.

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 21, 1969

9 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, Alternate Examiner:

CASE 3405: (Reopened) (Continued from the May 7, 1969 Examiner Hearing)

In the matter of Case No. 3405 being reopened pursuant to the provisions of Order No. R-3081, which order established 640-acre spacing for the North Indian Hills-Morrow Gas Pool, Eddy County, New Mexico, for a period of one year after first pipeline connection in the pool. All interested parties may appear and show cause why said pool should or should not be developed on 320-acre spacing units.

CASE 4131: Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Jalmat and South Eunice oil pools, Lea County, New Mexico, in the wellbores of six wells located as follows:

TOWNSHIP 21 SOUTH, RANGE 36 EAST

Arnott Ramsay (NCT-D) Well No. 6 - Unit K - Section 33
Arnott Ramsay (NCT-D) Well No. 7 - Unit M - Section 33
Arnott Ramsay (NCT-D) Well No. 8 - Unit N - Section 33
Arnott Ramsay (NCT-D) Well No. 9 - Unit L - Section 33
J. F. Janda (NCT-B) Well No. 4 - Unit O - Section 32

TOWNSHIP 22 SOUTH, RANGE 36 EAST

J. F. Janda (NCT-F) Well No. 8 - Unit C - Section 4

CASE 4132: Application of Pan American Petroleum Corporation for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for three wells located in Unit D, E, and P of Section 27, Township 18 South, Range 31 East, Shugart Field, Eddy County, New Mexico. Applicant seeks authority to continue to dispose of salt water produced in two unlined surface pits located in the E/2 of said Section 27.

- CASE 4133: Application of Skelly Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the West Dollarhide Drinkard Unit Area comprising 3,533.52 acres, more or less, of Fee, Federal, and State lands in Townships 24 and 25 South, Range 38 East, Lea County, New Mexico.
- CASE 4134: Application of Skelly Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its West Dollarhide Drinkard Unit Area by the injection of water into the Tubb-Drinkard formation through 43 wells located in Townships 24 and 25 South, Range 38 East, Dollarhide Tubb-Drinkard Pool, Lea County, New Mexico. Applicant further seeks a procedure whereby said project may be expanded administratively without a showing of well response.
- CASE 4135: Application of Roy E. Kimsey, Jr. for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil or gas or both, on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the P. R. Bass-Federal Well No. 1 located in Unit F of Section 3, Township 16 South, Range 30 East, West Henshaw Pool, Eddy County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in an unlined surface pit located near said well.
- CASE 4136: Application of Mallard Petroleum, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates formation in the interval from 3606 feet to 3627 feet in its Milner Federal Well No. 4 located in Unit C of Section 35, Township 20 South, Range 34 East, Lynch Pool, Lea County, New Mexico.
- CASE 4137: Application of Atlantic Richfield Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the East Shugart Unit Area comprising 1359.40 acres, more or less, of Federal and State lands in Townships 18 and 19 South, Range 31 East, Eddy County, New Mexico.

- CASE 4138: Application of Atlantic Richfield Company for a waterflood project and unorthodox injection well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Yates-Seven Rivers-Queen formations through 11 wells in Townships 18 and 19 South, Range 31 East, Shugart Pool, Eddy County, New Mexico. Applicant further seeks an exception to permit the drilling of one of said wells at an unorthodox location 100 feet from the South line and 990 feet from the West line of Section 35, Township 18 South, Range 31 East.
- CASE 4139: Application of Allied Chemical Corporation for a unit agreement, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Milnesand (San Andres) Unit Area comprising 5370.18 acres, more or less, of Federal and Fee lands in Township 8 South, Ranges 34 and 35 East, Roosevelt County, New Mexico.
- CASE 4140: Application of Allied Chemical Corporation for a waterflood project, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Milnesand (San Andres) Unit Area by the injection of water into the San Andres formation through 33 wells located in Township 8 South, Ranges 34 and 35 East, Milnesand-San Andres Pool, Roosevelt County, New Mexico. Applicant further seeks a procedure whereby said project may be expanded administratively without a showing of well response.
- CASE 4141: Application of McCasland Disposal System for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Seven Rivers formation in the intervals from approximately 3756 feet to 3851 feet and from approximately 3918 feet to 3939 feet, respectively, in the Getty Oil Company J. H. Day Wells Nos. 1 and 2, both located in the NW/4 of Section 8, Township 22 South, Range 36 East, Jalmat Pool, Lea County, New Mexico.
- CASE 4142: Application of Tamarack Petroleum Corporation, Inc., for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water by injection into the Queen formation in the interval from 4946 feet to 5040 feet in its Cabot 15 State Well No. 2 located in Unit P of Section 15, Township 19 South, Range 35 East, Pearl-Queen Pool, Lea County, New Mexico.

CASE 4143: Application of Amerada Petroleum Corporation for downhole commingling and special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Eumont Gas Pool and the Skaggs-Grayburg Pool in the wellbore of its Fred Turner, Jr., "A" Well No. 2, the Eumont completion of which is presently classified as a gas completion, located in Unit K of Section 18, Township 20 South, Range 38 East, Lea County, New Mexico. Applicant, further seeks the establishment of a special gas-oil ratio limitation for the subject well.

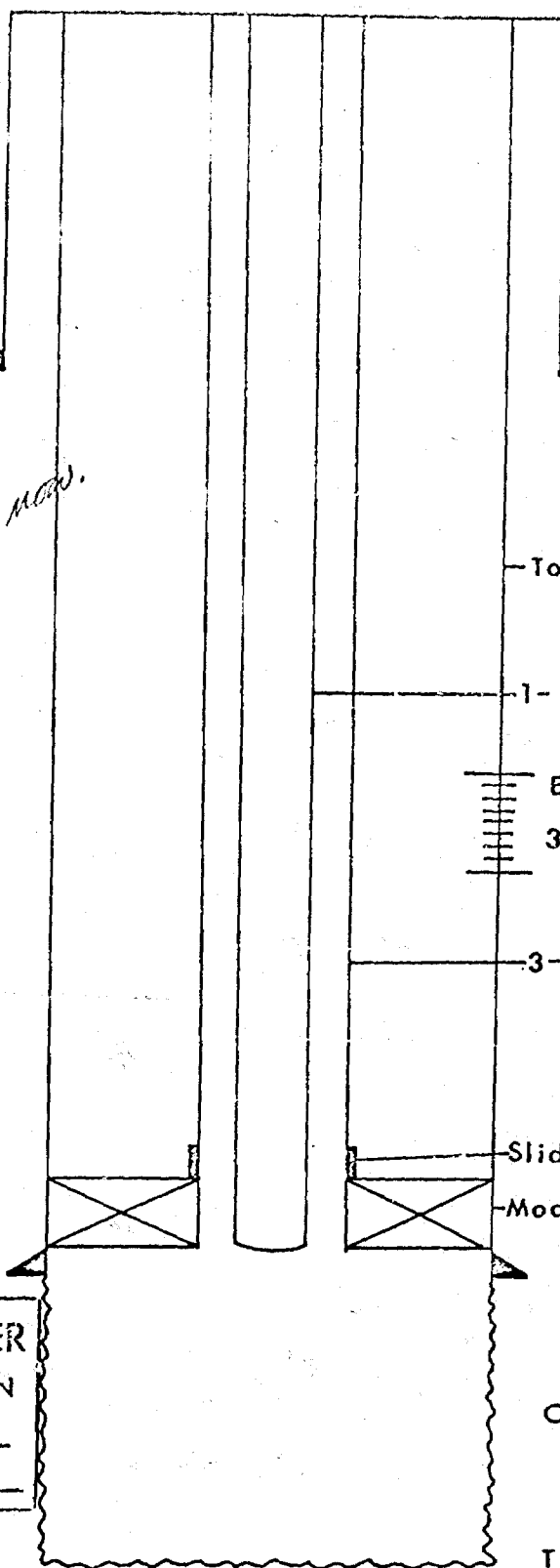
(Continued from the May 7, 1969 Examiner Hearing)

CASE 4121: Application of Roger C. Hanks for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Bar U-Pennsylvanian Pool, Lea County, New Mexico, including a provision for 160-acre spacing and proration units and the assignment of 80-acre allowables.

AMERADA PETROLEUM CORPORATION

FRED TURNER JR. "A" NO 2

UNIT K SECTION 18 T-20-S R-38-E
LEA COUNTY, NEW MEXICO



9-5/8" Csg at 275'
Cement Circulated

Top Cement at 1190'

1-1/2" Tubing

Eumont Perfs:

3145' - 3494'

3-1/2" Tubing

Sliding Sleeve at 3684'

Model D Packer at 3690'

7" Csg. at 3703'

Grayburg

OH 3703' - 3915'

T D 3915'

BEFORE EXAMINER NUTTER

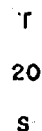
OIL CONSERVATION COMMISSION

APP. EXHIBIT NO. 2

CASE NO. 4143

PRESENT COMPLETION

R 30 6



LEA COUNTY, NEW MEXICO

SCALE: 1" = 2000'

000

BEST AVAILABLE COPY

4-4-66 AJH.

OIL CONSERVATION COMMISSION

EXHIBIT NO. 3
CASE NO. 4143

AMERADA PETROLEUM CORPORATION

FRED TURNER JR. "A" NO. 2

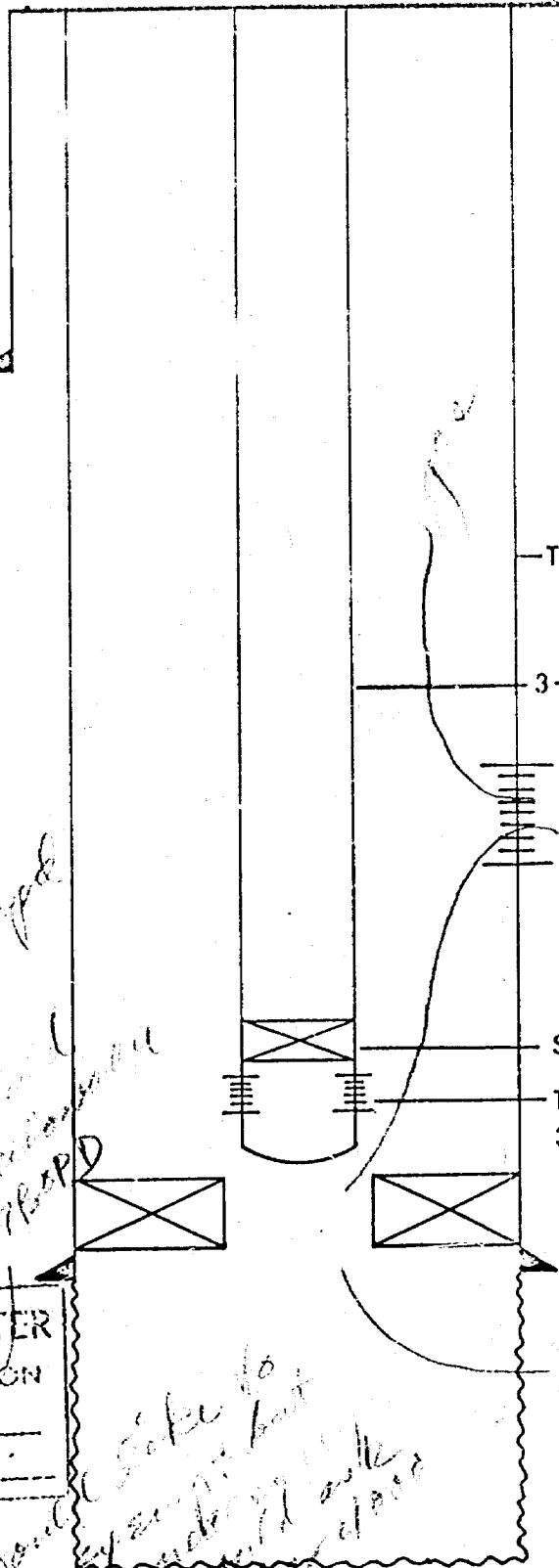
UNIT K

SECTION 18

T-20-S

R-38-E

LEA COUNTY, NEW MEXICO



9-5/8" Csg. at 275'
130-200 msp/100'
circulated

9-5/8" Csg. at 275'
Cement Circulated

Top Cement at 1190'

3-1/2" Tubing

Eumont Perfs:

3145' - 3494'

SN at 3620'

Tubing Perfs:

3621' - 3624'

7" Csg. at 3703'

Groyburg

OH 3703' - 3915'

BEST AVAILABLE COPY

T D 3915'

PROPOSED COMPLETION

2-1/2" tubing
130-200 msp/100'
circulated
Wash - 100'
making water

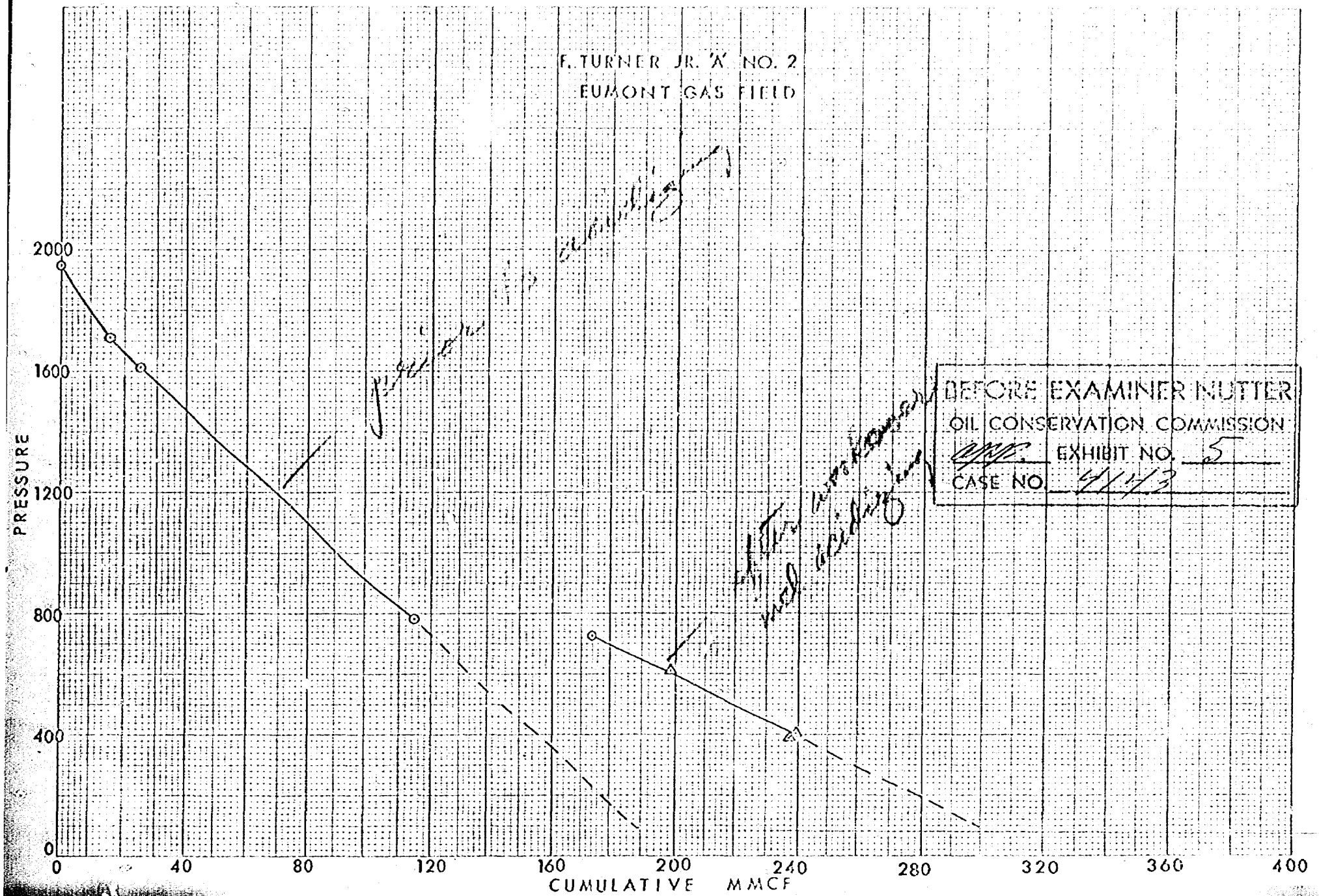
get 3200
comm. 100'
well about 50' high
100' to 1000'
100' to 1000'
100' to 1000'

100' to 1000'
100' to 1000'
100' to 1000'
100' to 1000'
100' to 1000'
100' to 1000'

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4143
CASE NO. 4143

would like to
be in 100' to 1000'
100' to 1000'
100' to 1000'
100' to 1000'
100' to 1000'

F. TURNER JR. 'A' NO. 2
EUMONT GAS FIELD



BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

APPLICATION OF AMERADA PETROLEUM CORPORATION)
FOR AN EXCEPTION TO RULE 303 TO PERMIT)
COMMINGLING OF OIL PRODUCTION OF THE SKAGGS)
GRAYBURG POOL AND GAS PRODUCTION FROM THE)
EUMONT GAS POOL IN THE WELLBORE AND AN)
EXCEPTION TO RULE 301 FOR IT'S FRED TURNER)
JR. "A" NO. 2, LOCATED IN UNIT "K", SECTION)
18, TOWNSHIP 20 SOUTH, RANGE 38 EAST, LEA)
COUNTY, NEW MEXICO.)

CASE NO. 4143

APPLICATION

Applicant Amerada Petroleum Corporation states that:

1) Applicant owns and operates the Fred Turner Jr. "A" No. 2, located in Unit "K", Section 18, Township 20 South, Range 38 East, Lea County, New Mexico.

2) Subject well is dually completed in the Skaggs-Grayburg Oil Pool and the Eumont Gas Pool. The oil completion requires pumping from under a packer; the gas completion requires artificial lift to evacuate fluid due to its depleted state, which precludes efficient operation of the well as a conventional dual completion.

3) Applicant proposes to commingle production from the Skaggs-Grayburg Oil Pool and the Eumont Gas Pool in the wellbore of subject well with the following completions:

(a) Casing and Cement:

9-5/8" casing set at 275' with 200 sacks cement.
Cement did not circulate.

7" casing set at 3703' with 1400 sacks cement, with
top of cement at 1190'.

(b) Completion Intervals:

Grayburg Zone - OH 3703' to 3915'
Eumont Zone - Perfs. 3145' to 3494'

4) On test, the subject well produced 50 barrels of oil, 44 barrels of water and a gas volume of 217 MCFPD, with a GOR of 4340 from both zones. On separate test, the Grayburg Zone produced 19 barrels of oil and 28 barrels of water, with a GOR of 1100. The Eumont Gas completion will not flow in the conventional dual completion.

Applicant requests a single oil allowable for the requested commingled completion and an exception to the GOR limit.

Applicant, therefore, requests that the matter be set for a hearing before an examiner, and that a notice of the hearing be given as required by law, and that upon such hearing, an order be authorized granting this application.

AMERADA PETROLEUM CORPORATION

By

John H. Swendig
John H. Swendig
District Engineer
P. O. Box 668
Hobbs, New Mexico 88240

Resident Counsel:

Jason W. Kallihan by JKF
Jason W. Kallihan, Attorney
Kallihan & Fox
P. O. Box 1769
Santa Fe, New Mexico 87501

DOCKET MARKED

DOCKET MARKED

Date 5-22-69

DRAFT

GMH/esr

July 17, 1969

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. 4143

Order No. R-382/

APPLICATION OF AMERADA PETROLEUM
CORPORATION FOR DOWNHOLE COMMINGLING
AND SPECIAL GAS-OIL RATIO LIMITATION,
LEA COUNTY, NEW MEXICO.

DM
Jan [Signature] 8-28-69
ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 4, 1969, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this Sept day of July, 1969, 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, Amerada Petroleum Corporation, is the operator of the Fred Turner, Jr., "A" Well No. 2, located in Unit K of Section 18, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico.

(3) That Order No. R-2974, dated October 4, 1965, authorized the applicant to dually complete the subject well in such a manner as to produce gas from the prorated Eumont Gas Pool through the casing-tubing annulus and to produce oil from the Skaggs Grayburg-San Andres Oil Pool through 1 1/2-inch tubing, with separation of zones by a packer set at approximately 3690 feet.

(4) That the applicant ^{proposed to} ~~in testing the subject well has removed~~ the 1 1/2-inch tubing, ~~has~~ set 3 1/2-inch tubing just above the

packer, and ~~is~~ ^{produce} producing both of the subject zones through said tubing and annulus, commingling the production in the well-bore.

(5) That the applicant ^{further} seeks ~~authority to continue said~~ ~~commingling of production in the well-bore of the subject well~~ and the establishment of a special gas-oil ratio limitation of 4000 cubic feet of gas per barrel of oil for the commingled production ^{from said well}

(6) That the Grayburg zone of the subject well as a result of receiving a response from nearby water injection wells to the northwest and southwest produces considerable water.

(7) That if the Eumont and Grayburg zones are commingled in the well-bore, the water produced by the Grayburg zone may ^{an} have ~~an~~ adverse and detrimental effect on the Eumont zone in the vicinity of the subject well, ^{which already produces some water,} thus causing waste.

(8) That commingling in the well-bore of the subject zones would prevent accurate determination, necessary for proration purposes, of the volumes of gas produced by the prorated Eumont zone of the subject well.

(9) That ^{an} commingling in the well-bore of an oil zone and a gas zone would render ineffective the gas-oil ratio limitation applicable to the oil zone.

(10) That the subject application should be denied.

IT IS THEREFORE ORDERED:

(1) That the subject application is hereby denied.

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

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

Copy to [illegible]

CASE 4143: Application of AMERADA
CORP. FOR DOWNHOLE COMMINGLING &
SPECIAL GAS-OIL RATIO LIMITATION.