

CASE 3970: Application of SUPERIOR  
OIL COMPANY FOR A DUAL COMPLETION,  
LEA COUNTY, NEW MEXICO.

Case Number

3970

Application

Transcripts.

Small Exhibits

ETC.



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

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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

December 2, 1968

EXAMINER HEARING

IN THE MATTER OF:

Application of Superior  
Oil Company for a dual  
completion, Lea County,  
New Mexico.

Case No. 3970

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

## NEW MEXICO OIL CONSERVATION COMMISSION

## EXAMINER HEARING

SANTA FE, \_\_\_\_\_, NEW MEXICO

Hearing Date DECEMBER 2, 1968TIME: 9 A.M.

NAME	REPRESENTING	LOCATION
E. F. Karmann	The Superior Oil Co.	Albuquerque, N.M.
L. D. Lyle	" " "	Midland, Texas
Paul Latham	North, Bendmont, Ch. Co.	Roswell
Frank Smith	Franklin, Easton & Fair Inc.	Roswell
Roger Clinton	Franklin, Easton & Fair	Roswell
Jack McGraw	Coastal Steps	Midland, Tex
Boyer Kell	White-bellied Kell & Kell	S.F.
Jason W. Kellah	Kellah & Fox	Santa Fe
Wayne Rogers	Consolidated Oil & Gas	Denver
Nina Daldaimie	RW Byram	Santa Fe
Ed Mayo	Sunset Ind. Pet. Corp.	Midland, Tex
Richard S. Morrison	Montgomery et al	Santa Fe
<del>James Morrison</del>	Howard & Malone	Roswell
W. B. McCay	Consolidated	Roswell
John J. Russell	" " "	Roswell
John V. Walter	T.P.	Midland
Ron Freels	Texas Pacific Oil Co.	Dallas

## NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARINGSANTA FE, NEW MEXICOHearing Date DECEMBER 2, 1968 TIME: 9 A.M.

NAME	REPRESENTING	LOCATION
CL Whigham Jr. J Leser	Texaco	Midland Tex Artesia N.M.
Hermon J. L. Helter	Newmont	Artesia, N.M.

MR. NUTTER: Case No. 3970.

MR. HATCH: Case 3970, application of Superior Oil Company for a dual completion, Lea County, New Mexico.

MR. KELLY: Booker Kelly, of White, Gilbert, Koch and Kelly, on behalf of the applicant. Mr. Elmer Patton is associated with me, and he will put on the testimony.

(Whereupon, Applicant's Exhibits Numbers 1 through 10, inclusive, were marked for identification.)

TERRY CLAY

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

DIRECT EXAMINATION

BY MR. PATTON:

Q Will you state your name, sir?

A My name is Terry Clay.

Q Have you been sworn, Mr. Clay?

A Yes, I have.

Q By whom are you employed?

A I am employed by Superior Oil Company as petroleum engineer in Midland, Texas.

Q Have you testified for the New Mexico Oil Conservation Commission to the end that your qualifications as a petroleum engineer are of record?

A Yes, I have.

MR. PATTON: Will his qualifications be accepted, if the Examiner please?

MR. NUTTER: They are.

Q What is Superior Oil seeking pursuant to Case No. 3970, Mr. Clay?

A Superior is seeking approval to do a complete State "K" No. 1 Well, with the dual completion to be in the Upper Penn Zone and the Lower Wolfcamp Zone.

Q Mr. Clay, this is the State "K" No. 1 Well?

A That is correct.

Q What is the location on the ground with reference to the well about which you've testified and upon which the Commission granted a new fill designation in June of this year?

A The location of the State "K" Well is 2,130 feet from the south line, and 1,980 feet from the east line of Section 4, Township 14 South, Range 34 East, of Lea County, New Mexico.

Q Now, have you prepared a series of exhibits which have been identified here as Applicant's Exhibits 1 through 10, in connection with this application?

A That is correct.

Q In your opinion, Mr. Clay, are the two zones that you

seek to dually complete and produce here, are they separate sources of supply?

A In my opinion, the Lower Wolfcamp and the Upper Penn Zone constitute separate sources of supply.

Q What evidence do you have of that?

A It will be noted on Exhibits 8 and 9, which are both open-hole pressures taken in the Lower Wolfcamp and the Upper Penn Zone, the Lower Wolfcamp has a bottom-hole pressure of 3,326 pounds at a depth of 10,338 feet, whereas the Upper Penn Zone has a bottom-hole pressure of 1,985 pounds recorded at a depth of 10,426 feet. There is approximately 150 pounds difference in the bottom-hole pressure between the two zones.

Q In your opinion, if they were in communication, would there be 1,400 pounds pressure differential across the two zones?

A In my opinion, there would not be any pressure differential across the zones.

Q Now, do you have any evidence from a paleontology standpoint that would indicate that these are separate geological structures?

A Yes, we do. In the State D well, which is the north offset to the State "K", paleontology was run indicating that the Wolfcamp Zone and the State "K" Well extends from a depth of



9,637 to 10,342 feet, whereas the paleontology indicates that the Penn Zone top is at a depth of 10,414 feet, and extending below the total depth of the State "K" Well.

Q According to your testimony, as I understand it, you have approximately 90 feet barrier from the base of the Wolfcamp to the top of the Upper Pennsylvanian, is that correct?

A That is correct.

Q Is that an impervious barrier, in your opinion?

A Yes, it is.

Q Mr. Clay, have you executed the New Mexico Oil Conservation Form No. C-107, to direct notice to other interested operators in the area?

A Yes, sir, we have. Form C-107, Application for Multiple Completion. along with the transmittal letter, was submitted to all offset operators on November 4, 1968.

Q Now, I understand from information on this Form C-107, that that well has actually and physically been dually completed?

A That is correct.

Q Are mechanical devices available, in your opinion, that would permit a seal between the two zones if properly used, to permit the mingling of the fluid from the two?

A Yes, sir, there are mechanical devices available.

Q Have you employed those mechanical devices?

A Yes, we have.

Q Is the upper zone of the Lower Wolfcamp, is it flowing or being produced by artificial means?

A The Lower Wolfcamp Zone at present is shut in.

Q In your opinion, will it flow?

A Yes, it will.

Q And you are not producing it, and have not produced it?

A We have only produced it during completion tests, and during packer leakage tests, and since that time the zone has been shut in.

Q It is closed off?

A That is correct.

Q Have you had a packer leakage test made to test the mechanical devices that are in the well that are calculated to form a seal between the two zones?

A Yes, sir, we have. On November 5, 1968, a packer leakage test was conducted at the State "K" Well with flow test number one, consisting of the Upper Penn Zone flowing while the Lower Wolfcamp Zone was shut in, and flow test number two consisted of the Lower Wolfcamp Zone flowing while the Upper Penn Zone was shut in. Based on these tests, the Model D packer

between the Upper Penn and the Lower Wolfcamp has effectively separated the zones.

Q The well is producing at the moment from the Upper Pennsylvanian?

A That's correct.

Q Which is the lower of the two horizons that you seek to produce here as a dual well.

A That's correct.

Q Have you prepared a diagrammatic sketch showing the physical mechanics of the equipment that has been placed in the well that would perform a seal as between the two zones?

A Yes, we have.

Q That is Number 3?

A Exhibit Number 3. Briefly, seventeen and a half-inch hole was drilled, and thirteen and three-eighths-inch surface pipe was set at 404 feet, circulated cement amounting to 450 sacks. Cement was circulated to the surface. Twelve and a quarter-inch hole was drilled at 4,500 feet, and nine and five-eighths-inch casing was run to a total depth of 4,500 feet, and cemented with 665 sacks of cement.

Top of the cement by temperature survey outside of the nine and five-eighths-inch casing was at 1,700 feet. An eight and three-quarter-inch hole was drilled to a total depth

of 10,550 feet, and seven-inch casing was run to this depth, and cemented with 330 sacks of cement, with the top of the cement outside of the seven-inch casing, by temperature survey, is at 9,200 feet.

Q Does that bring the cement back up above the Lower Wolfcamp?

A Yes, it does.

Q Go ahead.

A After running seven-inch casing, the Upper Penn Zone was perforated at 10,421 to 10,430, with four jet shots per foot.

The Lower Wolfcamp was then perforated from 10,335 to 10,340, with four jet shots per foot.

Seven-inch Model D packer was run on wire line and set at a depth of 10,416 feet, which is immediately above the Upper Penn Zone and below the Lower Wolfcamp Zone.

Two and three-eighths-inch tubing was run and landed in the Model D packer with a production tube extending below the Model D packer at a depth of 10,444 feet. In conjunction with the two and three-eighths-inch tubing, a dual Model K packer was run and set at a depth of 10,316 feet.

Q That is a hundred feet above your packer, that is just above the Upper Pennsylvanian?

A That is correct.

Q All right.

A And later two and three-eighths inch tubing was run and landed in the Model K packer at a depth of 10,316 feet, and the latter of this tubing will be used to produce the Lower Wolfcamp Zone through, whereas the lower tubing string set at 10,444 will be used to produce the Upper Penn Zone through.

Q Now, in the method pursuant to which you have actually and physically completed the well, and in accordance with the diagrammatic sketch, is there any doubt in your mind as to whether you have performed an effective separation as between these two separate sources of supply?

A No, sir, there isn't. Based on the packer leakage test, the two zones are effectively separated.

Q Now, did you prepare this diagrammatic sketch, or was it prepared under your supervision?

A Yes, sir, this sketch was prepared by myself.

Q Now, the next exhibit in your series is a map, and it shows the location of the subject well in relation to the

State "D" No. 1?

A That's correct.

Q And immediately to the north of it?

A That is correct.

Q Where is the State "D" No. 1 producing from?

A The State "D" Well, which is immediately north of the State "K" Well, is producing from the Upper Penn Zone only, completed as a single completed well.

Q Now, what is the subject well potential with reference to the Lower Pennsylvanian and also the Wolfcamp?

A In Exhibit 6, pertinent data sheet, the Lower Wolfcamp was completed on October 26, 1968, through perforations at 10,335 and 10,340.

Q Which is five feet?

A Which is five feet. And after a stimulation treatment of 500 gallons of acid, this zone flowed 464 barrels of oil per day through 2 1/64's-inch choke; flowing, tube, and pressure of 400 pounds; the gas-oil ratio of 1114; gravity of oil corrected is 44.5 degrees.

The Upper Penn Zone was completed October 25, 1968, through perforations from 10,421 to 10,430; and after 500 gallons of acid stimulation, this zone flowed 424 barrels of oil per day through a three-quarter-inch choke; with flowing, tube,

and pressure of 75 pounds; gas-oil ratio of 943; corrected gravity of oil is 43.2 degrees, API.

Q Now, your Exhibit 5 in this series of exhibits is a letter notice to Shell, Tenneco, Atlantic Richfield, Union Oil, Sinclair, and Southern Minerals. Was that mailed to them giving them that information? Is it shown on there?

A That is correct. This was mailed along with the copy of the C107 Form, Application for Multiple Completion.

Q You had no adverse reply to any of those letters, did you?

A No, we have not.

Q Now, going back to Exhibit Number 6, in the completion data, the pertinent data with reference to the two completions, you have a gravity difference of something over one degree, and you have a different gas-oil ratio, and you have 1,400 pounds pressure differential between the two zones?

A That is correct. The Lower Wolfcamp Zone, the GOR is indicated to be higher than the Upper Penn Zone. And on the completion test, GOR was approximately 150 higher in the Lower Wolfcamp than in the Upper Penn. The subsea pressure in the Lower Wolfcamp is considerably higher than the subsea pressure in the Upper Penn Zone, as measured from bottom-hole pressure.

Q Let's go to Number 7 now. What is the utility and

function of paleontology in relation to determining the material and quality of rocks in the bowels of the earth? Why do you use paleontology, how does it help you?

A Paleontology is, of course, derived from the fauna that is in the drill cutting samples; and through analysis of the fauna and the age of the fauna, it can be determined what age of zone has been penetrated.

In Exhibit 7, in the State "D" well, which is the offset well to the "K," this paleontology was run, and it was found that the Wolfcamp Zone in the State "D" well is located at 9,620 to 10,320, from the fauna data, and this correlates into the State "K" well by log correlation to be the equivalent of 9,673 to 10,342 in the State "K" well.

MR. NUTTER: Give me those numbers again?

THE WITNESS: 9,620 to 10,320 in the State "D" well is equal to 9,637 to 10,342 in the State "K" well.

The Cisco fauna in the State "D" Well is at 10,390 to 10,990, which is equal to 10,414 to question mark, which is below the total depth of the State "K" Well, the bottom of the Cisco is below the State "K" Well.

Q In other words, the total depth of this hole has not gone through the entire geological section of the --

A The Cisco, which is a part of the Pennsylvanian.



Q This is the rocks of the Pennsylvanian Age?

A That is correct.

Q Now, this paleontological report that you have, was that run by Superior or by an independent laboratory?

A This was run by the Paleontological Laboratory, Inc., located in Midland. The brief summary of the paleontological report is as described here in Exhibit 7.

Q Who is Mr. Stewart Martin with Superior?

A Mr. Stewart Martin is a geologist with Superior Oil Company.

Q And that was furnished to you?

A That is correct.

Q Now, you talked about the pressure differential between these two separate sources of supply that you have indicated exists, and now we go to Exhibit Number 8, and tell us what that shows and what it means to you.

A Exhibit Number 8 is a chart of the static bottom-hole pressure taken in the Lower Wolfcamp Zone after this zone was shut in for twenty-one hours. And as shown on the graph, the bottom-hole pressure at a depth of 10,338 feet is 3,326 PSIG, in the Lower Wolfcamp Zone, or which represents the perforated interval from 10,335 to 10,340.

Q Let's go back to the one behind that for just a moment.

This laboratory that did the paleontological work on these, are they in your opinion a competent laboratory?

A Yes, they are.

Q Now, the next is Number 9. Tell us what that is and what it means to you in relation to Number 8.

A Exhibit Number 9 is a shut-in bottom-hole pressure after the Upper Penn was shut in for twenty-eight hours, which indicates that the bottom-hole pressure at a depth of 10,426 feet is 1,985 PSIG. In comparing the bottom-hole pressure in the Upper Penn of 1,985 with that in the Lower Wolfcamp of 3,326 PSIG, there is a difference of some 1,350 PSIG of pressure between the Lower Wolfcamp and the Upper Penn Zone, which indicates that these two zones constitute separate sources of supply.

Q These pressure charts, pressure records, graphs, appear to have been made by Mr. Allen Dorsey. Is he an independent consultant?

A Yes, he is. He is an independent petroleum service, provides petroleum service, which is primarily dealings in running bottom-hole pressures.

Q Is he competent, in your opinion?

A Yes, he is.

Q Now, the last exhibit that you have, Mr. Clay, is the

log of the well, Schlumberger of the well. Do you have that marked with reference to the two separate sources of supply about which you have testified?

A Yes. Exhibit 10, which is the primary log, open-hole log that was run in the State "K" Well, a copy of the borehole sonic log, it will be noted at the bottom of the log a depth of 10,332 feet. The top of the Wolfcamp Zone is indicated. The base of the Lower Wolfcamp Zone is indicated at 10,342, with perforated interval shown on the log. The top of the Upper Penn Zone is indicated at 10,418, with the base of the Upper Penn at 10,444, and the perforated interval shown on the log along with the completion data in this well. There is other pertinent data provided on the log, DST data in the Lower Wolfcamp Zone, and also the paleontological data.

Q Mr. Clay, in the event that the Commission sees fit to permit you to produce this well as a dually completed well in the manner about which you have testified, in your opinion, can the hydrocarbons from the two separate sources of supply be produced under the method you have described without producing waste?

A Yes, sir, in my opinion, the hydrocarbons from the Lower Wolfcamp and the Upper Penn Zone can be produced without causing waste.

Q Would it destroy the correlative rights of any offset operators?

A Not to my knowledge.

Q Both of these wells, and particularly the subject well, is in a unit in which other companies have an interest?

A It is in a drilling unit which Superior and Tenneco are apparent interested parties.

Q In the event that you are not permitted to produce this well as a dually completed well, and in order to recover the hydrocarbons, what would you have to do in order to get the hydrocarbons that are known to exist in the Upper Wolfcamp or in the Wolfcamp? Would you have to drill another hole?

A In order to get the hydrocarbons from the Lower Wolfcamp, if a single completion was the procedure, then additional holes would have to be drilled, or the Lower Wolfcamp production would have to be deferred until a later date.

Q Would this be prudent and reasonable, in your opinion?

A It would not, in my opinion. It is felt like with the lower reserves we have in the field, that in order to justify additional drilling, the Lower Wolfcamp Zone will provide this incentive from an economic standpoint.

Q Then the twin well would be an unnecessary well?

A That is correct.

Q To produce the well as you have described here as it is completed, would it be efficient and prudent to the end that greater ultimate recovery would not be adversely affected to dual completion as opposed to comingling?

A In my opinion, in view of the difference in pressure, greater pressure will result from the dual completion as compared with comingling.

Q Do you have anything else that we might have overlooked?

A No, sir.

MR. PATTON: I offer this set of ten exhibits, if the Examiner please.

MR. NUTTER: Applicant's Exhibits 1 through 10 will be admitted in evidence.

(Whereupon, Applicant's Exhibits  
Numbers 1 through 10, inclusive,  
were admitted in evidence.)

MR. PATTON: I believe that is all I have on direct examination.

MR. NUTTER: Does anyone have any questions of the witness?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Clay, we apparently have a separation here, but to what do you attribute that separation, referring to your log, Exhibit Number 10?

A It is my feeling that the separation is a result of the shale barrier, impermeable barrier. It will be noted on the log that immediately below the Lower Wolfcamp, here is a small four-foot barrier at 10,350 to 10,354. There is another barrier at 10,362 to 10,372. There is another barrier at 10,391 to 10,401. And one other barrier immediately above the Upper Penn Zone at 10,414 to 10,418.

Q So, although you only have -- let's see, what is the actual distance there? You have only got eighty feet separating them, you do have four separate and distinct shale barriers existing there to separate the two zones?

A That's right.

Q And you do have a substantial pressure differential?

A Yes, the pressure differential is substantial for this eighty to ninety feet of separation.

MR. NUTTER: Any further questions of Mr. Clay?  
You may be excused.

Do you have anything further, Mr. Patton?

MR. PATTON: I think that is all.

MR. NUTTER: Does anyone have anything they wish to

offer in Case No. 3970? We will take the case under advisement.

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
TERRY CLAY	
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<u>EXHIBITS</u>	<u>MARKED</u>	<u>OFFERED AND ADMITTED</u>
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STATE OF NEW MEXICO     )  
                                   )     ss  
 COUNTY OF BERNALILLO    )

I, SAM MORTELETTE, 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.

*Sam Mortelette*  
 COURT REPORTER

I do hereby certify that the foregoing is  
 a complete record of the hearing  
 the transcript of the hearing of the  
 heard by me on 12/2 1968  
*Sam Mortelette*  
 New Mexico Oil Conservation Commission

dearnley-meier

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

December 2, 1968

EXAMINER HEARING

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IN THE MATTER OF: )

Application of Superior )  
Oil Company for a dual )  
completion, Lea County, )  
New Mexico. )  
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Case No. 3970

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We wish to reopen Case No. 3970, which is the application of Superior Oil Company for a dual completion.

MR. PATMAN: Mr. Examiner, there were two exhibits that were not marked or entered in the case. These would be -- well, I mean one is a copy. I would mark this as an Exhibit Number 11, which is the packer leaker test.

MR. NUTTER: Rather than mark it as an exhibit, why don't you just introduce it as an addenda to the record.

MR. PATMAN: I ask that it be included in the record.

MR. NUTTER: Because everybody that would challenge this is gone. This will be admitted as an exhibit in Case 3970.

STATE OF NEW MEXICO    )  
                                   )    ss  
 COUNTY OF BERNALILLO   )

I, SAMUEL MORTELETTE, 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.

*Samuel Mortelette*  
 COURT REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the hearing of Case No. 3970 heard by me on 12/2, 1968.

*Josephine*  
 Secretary  
 New Mexico Oil Conservation Commission

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
GUYTON B. HAYS  
MEMBER

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

P. O. BOX 2088  
SANTA FE

December 9, 1968

Mr. Booker Kelly  
White, Gilbert, Koch & Kelly  
Attorneys at Law  
Post Office Box 787  
Santa Fe, New Mexico

Re: Case No. 3970  
Order No. R-3614  
Applicant:  
Superior 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

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC X

Artesia OCC       

Aztec OCC       

Other Mr. Elmer Patman, Superior Oil Company, Austin, Texas

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. 3970  
Order No. R-3614

APPLICATION OF SUPERIOR OIL COMPANY  
FOR A DUAL COMPLETION, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on December 2, 1968, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 9th day of December, 1968, 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, Superior Oil Company, seeks authority to complete its State "K" Well No. 1, located in Unit J of Section 4, Township 14 South, Range 34 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce oil from an undesignated Lower Wolfcamp pool and from the Cerca-Upper Pennsylvanian Pool through parallel strings of 2 3/8-inch tubing, with separation of the zones by a packer set at approximately 10,416 feet.

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

(4) That approval of the subject application will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Superior Oil Company, is hereby authorized to complete its State "K" Well No. 1, located in Unit

-2-

CASE No. 3970

Order No. R-3614

J of Section 4, Township 14 South, Range 34 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce oil from an undesignated Lower Wolfcamp pool and from the Cerca-Upper Pennsylvanian Pool through parallel strings of 2 3/8-inch tubing, with separation of the zones by a packer set at approximately 10,416 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 Cerca-Upper Pennsylvanian Pool.

(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 E. CARGO, Chairman

  
GUYTON B. HAYS, Member

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



esr/

DOCKET: EXAMINER HEARING - MONDAY - DECEMBER 2, 1968

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

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

- CASE 3968: Application of Texaco, 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 Devonian formation in the open-hole interval from approximately 12,400 feet to 12,550 feet in its U. D. Sawyer Well No. 4 located in Unit O of Section 34, Township 9 South, Range 36 East, Crossroads-Devonian Pool, Lea County, New Mexico.
- CASE 3969: Application of Sinclair Oil Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Lea 878 State Well No. 1 located in Unit K of Section 4, Township 14 South, Range 34 East, Lea County, New Mexico, in such a manner as to permit the production of oil from an undesignated Wolfcamp pool and oil from the Cerca-Upper Pennsylvanian Pool through parallel strings of tubing.
- CASE 3970: Application of Superior Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its State "K" Well No. 1 located in Unit J of Section 4, Township 14 South, Range 34 East, Lea County, New Mexico, in such a manner as to permit the production of oil from an undesignated Wolfcamp pool and oil from the Cerca-Upper Pennsylvanian Pool through parallel strings of tubing.
- CASE 3971: Application of Southern Minerals Corporation 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 4239 feet to 4416 feet in its State "C" Well No. 5 located in the NE/4 NW/4 of Section 1, Township 8 South, Range 33 East, Chaveroo-San Andres Pool, Chaves County, New Mexico.
- CASE 3972: Application of Sunset International Petroleum Corporation for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Bough "C" zone of the Pennsylvanian formation in the perforated interval from approximately 9679 feet to 9685 feet in its O'Neill State Well No. 1 located in Unit L of Section 16, Township 8 South, Range 36 East, South Prairie-Cisco Pool, Roosevelt County, New Mexico.



OIL CONSERVATION COMMISSION  
I DISTRICT

NOV 15 AM 8 31  
1968

OIL CONSERVATION COMMISSION  
BOX 871  
SANTA FE, NEW MEXICO

DATE Nov. 13, 1968

Re: Proposed NSP  
Proposed Triple  
Proposed NSL  
Proposed NFO  
Proposed DC X

Gentlemen:

I have examined the application dated 11/5/68  
for the The Superior Oil Co. State "K" #1-J 4-14-34  
Operator Lease and Well No. S-T-R

and my recommendations are as follows:

O.K. Need hearing for first well---J.D.R.

Geologically O.K.----J.W.R.

Yours very truly,

*John W. Rungan*

# THE SUPERIOR OIL COMPANY

P. O. BOX 1900  
MIDLAND, TEXAS 79701  
November 1, 1968

Mr. Dan Nutter, Examiner  
New Mexico Oil Conservation Commission  
State Land Office Building  
Santa Fe, New Mexico 87501

BEFORE EXAMINER	
OIL CONSERVATION	EXAMINER
<i>app</i>	EX <i>1</i>
CASE NO.	<i>3970</i>

Re: Dual Completion  
Lower Wolfcamp and  
Upper Pennsylvanian Zones  
Superior State "K" No. 1  
2130' FSL & 1980' FEL  
Section 4, T-14-S, R-34-E  
Cerca (Upper Penn) Field  
Lea County, New Mexico

Gentlemen:

Attached are three copies of an Application For Multiple Completion (Form C-107) along with appropriate exhibits required under Rule Nos. 1107 and 112-A. Since this is the first multiple completion in the Cerca (Upper Penn) Field, we respectfully request that a hearing date be set to approve the above captioned dual completion.

Attached are three copies of each exhibit as follows:

1. Diagrammatic sketch of Multiple Completion.
2. Ownership map with scale 1" = 2000' showing location of all wells in the near vicinity of Superior State "K" No. 1 Well.
3. A copy of letter attached to Form C-107 which was mailed individually to each offset operator.
4. Schlumberger Gamma Ray-Sonic log of State "K" No. 1 Well with accompanying formation tops, drill stem test data, and completion data plotted on log.
5. Pertinent data including pressure information and completion data from the Lower Wolfcamp and Upper Pennsylvanian Zones, and a copy of the Paleontology Report from the nearby Superior State "D" COM No. 1 Well.

The Superior State "K" No. 1 Well was completed in the Upper Pennsylvanian Zone on October 25, 1968, and the Lower Wolfcamp on October 26, 1968. These zones were completed through separate tubing strings with isolating packers as shown on the well bore sketch. Based on initial potentials, reservoir pressure, and Paleontological data, the completions described in this application constitute separate sources of supply; and, we respectfully submit Form C-107 with accompanying exhibits and data to support our request for a dual completion in the State "K" No. 1 Well.

Yours very truly,

THE SUPERIOR OIL COMPANY

*T. D. Clay*  
T. D. Clay  
Petroleum Engineer

TDC/js

cc: Mr. Joe Ramey (2)

NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
APPLICATION FOR MULTIPLE COMPLETION

Form C-107  
5-1-61

Operator <b>The Superior Oil Company</b>		County <b>Lea</b>	Date <b>October 30, 1968</b>
Address <b>P. O. Box 1900, Midland, Texas 79701</b>		Lease <b>State "K"</b>	Well No. <b>1</b>
Location of Well	Unit <b>J</b>	Section <b>4</b>	Township <b>14-S</b>
			Range <b>34-E</b>

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES \_\_\_\_\_ NO X
2. If answer is yes, identify one such instance: Order No. \_\_\_\_\_ ; Operator Lease, and Well No.: \_\_\_\_\_

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	<b>Lower Wolfcamp</b>		<b>Upper Pennsylvanian</b>
b. Top and Bottom of Pay Section (Perforations)	<b>10,335-10,340</b>		<b>10,421-10,430</b>
c. Type of production (Oil or Gas)	<b>Oil</b>		<b>Oil</b>
d. Method of Production (Flowing or Artificial Lift)	<b>Flowing</b>		<b>Flowing</b>

4. The following are attached. (Please check YES or NO)

- |                                     |                          |   |
|-------------------------------------|--------------------------|---|
| Yes                                 | No                       |   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112A.)  |

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

<b>Shell Oil Company</b>	<b>P. O. Box 1509, Midland, Texas 79701</b> <b>Attention: Mr. R. C. Knecht</b>
<b>Union Oil Company</b>	<b>Union Oil Building, Midland, Texas 79701</b> <b>Attention: Mr. C. H. Glidden</b>
<b>Tenneco Oil Company</b>	<b>P. O. Box 1031, Midland, Texas 79701</b> <b>Attention: Mr. J. J. Lacey</b>
<b>Sinclair Oil Company</b>	<b>P. O. Box 1470, Midland, Texas 79701</b> <b>Attention: Mr. D. E. Daugherty</b>
<b>Hondo Oil &amp; Gas (Atlantic Richfield)</b>	<b>P. O. Box 1978, Roswell, New Mexico 88201</b> <b>Attention: Mr. S. L. Smith</b>
<b>Southern Minerals Corporation</b>	<b>P. O. Box 1816, Midland, Texas 79701</b> <b>Attention: Mr. Jack Samples</b>

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO \_\_\_\_\_. If answer is yes, give date of such notification November 4, 1968.

CERTIFICATE: I, the undersigned, state that I am the Petroleum Engineer of the The Superior Oil Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

*L. D. L. Lacy*  
Signature

\*Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard perforation unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

# CENTRALIZERS & HYDROCONDERS

(DEPTH ON 7" CASING)

10,543	10,460
10,533	10,451
10,518	10,442
10,484	10,433
10,460	10,424
10,415	10,415
10,371	10,406
10,327	10,397
10,285	10,388
	10,379
	10,370
	10,361
	10,352
	10,343
	10,334
	10,325
	10,316
	10,307
	10,298
	10,289

SAN ANDRES 4323'  
(-169')

ABO 7906'  
(-3752')

WOLFCAMP 9639'  
(-5485')

TOP LOWER WOLFCAMP ZONE 10,332'  
(-6178')

BASE LOWER WOLFCAMP ZONE 10,342'  
(-6188')

TOP UPPER PENNSYLVANIAN ZONE  
10,418' (-6264')

BASE UPPER PENNSYLVANIAN ZONE  
10,444' (-6290')

PBTD 10,465'

Total Depth 10,550'

13-3/8", 48#, ST&C, H-40 csg  
set at 404' w/450 sacks reg.  
cement containing 2% CaCl.  
Cement circulated to surface

Top cement at 1700' outside  
9-5/8" casing

9-5/8", 36#, ST&C, H-40 & J55  
casing set at 4500' and  
cemented w/665 sacks INCOR-  
DIAMIX

Top cement outside 7" casing  
at 9200'

2-3/8" N-80 tubing landed  
at 10,316'

7" Baker Model "K" Double Grip  
Packer set at 10,316'

Lower Wolfcamp Perfs: 10,335-40'  
w/4 jet shots per foot

*will flow*

2-3/8" N-80 Tubing set in Model  
"D" packer at 10,416'

7" Baker Model "D" Packer set  
at 10,416'

Upper Penn Perfs 10,421-30'  
w/4 jet shots per foot

2-3/8" N-80 perforated tubing  
tail at 10,444'

7", 23# S-95, 23# plus 26# N-80  
casing set at 10,550'. Cem w/330  
sacks consisting of 30 sacks reg  
plus 300 sacks class "C" DIAMIX

DIAGRAMATIC SKETCH OF DUAL COMPLETION INSTALLATION

The Superior Oil Company  
State "K" No. 1  
2130' FSL & 1980' FEL Section 4, 14S - 34E  
Cerca Field Area  
Lea County, New Mexico



# THE SUPERIOR OIL COMPANY

P. O. BOX 1900

MIDLAND, TEXAS 79701

November 1, 1968

Shell Oil Company  
P. O. Box 1509  
Midland, Texas 79701  
Attention: Mr. R. C. Knecht

Tenneco Oil Company  
P. O. Box 1031  
Midland, Texas 79701  
Attention: Mr. J. J. Lacey

Atlantic Richfield Company  
P. O. Box 1978  
Roswell, New Mexico 88201

Union Oil Company  
Union Oil Building  
Midland, Texas 79701  
Attention: Mr. C. H. Glidden

Sinclair Oil Company  
P. O. Box 1470  
Midland, Texas 79701  
Attention: Mr. D. E. Daugherty

Southern Minerals Corporation  
P. O. Box 1816  
Midland, Texas 79701

Re: Dual Completion  
Lower Wolfcamp and  
Upper Pennsylvanian Zones  
Superior State "K" No. 1  
2130' FSL & 1980' FEL  
Section 4, T-14-S, R-34-E  
Cerca (Upper Penn) Field  
Lea County, New Mexico

Gentlemen:

Attached is a copy of Form C-107, Application For Multiple Completion, for your review. We have made application to the New Mexico Oil Conservation Commission for a dual completion in the above captioned well. The Upper Pennsylvanian Zone was completed October 25, 1968, through perforations 10,421-30 feet, and on initial potential, this well flowed 424 BOPD through 3/4" choke, FTP = 75 psig, GOR = 943, 43.2° API. The Lower Wolfcamp Zone was completed October 26, 1968, through perforations 10,335-40 feet. On initial potential, the Lower Wolfcamp flowed 464 BOPD through 21/64" choke, FTP = 400 psig, GOR = 1114, 44.5° API.

Based on completion potentials, reservoir pressure, and Paleontological data, the completions as described in this application constitute separate sources of supply. Form C-107 with required exhibits have been forwarded to the New Mexico Oil Conservation Commission for approval to dual complete the State "K" No. 1 Well.

Yours very truly,

THE SUPERIOR OIL COMPANY

*T. D. Clay*  
T. D. Clay  
Petroleum Engineer

EX 5

TDC/js

THE SUPERIOR OIL COMPANY  
STATE "K" NO. 1  
2130' FSL & 1980' FEL  
SECTION 4, T-14-S, R-34-E  
CERCA (UPPER PENN) FIELD  
LEA COUNTY, NEW MEXICO

PERTINENT DATA - LOWER WOLFCAMP ZONE

Wolfcamp Fusulines in Superior State "D" COM No. 1 at 9620-10,320 =  
9637-10,342 in Superior State "K" No. 1

Completion Date: October 26, 1968  
Top of Zone: 10,332 (-6178)  
Bottom Zone: 10,342 (-6188)  
Perforations & Interval: 10,335-40 w/4 jet shots per foot  
Stimulation Treatment: 500 gals. Halliburton MCA acid  
Initial Potential: Flow 464 BOPD, 21/64" choke,  
FTP = 400 psig, GOR = 1114,  
44.5° API

Measured Bottom Hole

Pressure & Subsea Depth: 3326 psig at 10,338' (-6184) after 21 hr shut in period

PERTINENT DATA - UPPER PENNSYLVANIAN ZONE

Cisco Fusulines in Superior State "D" COM No. 1 at 10,390-990 =  
10,414 - ? in Superior State "K" No. 1

Completion Date: October 25, 1968  
Top of Zone: 10,418 (-6264)  
Bottom of Zone: 10,444 (-6290)  
Perforations & Interval: 10,421-30 w/4 jet shots per foot  
Stimulation Treatment: 500 gals. Halliburton MCA acid  
Initial Potential: Flow 424 BOPD, 3/4" choke,  
FTP = 75 psig, GOR = 943,  
43.2° API

Measured Bottom Hole

Pressure & Subsea Depth: 1985 psig at 10,426' (-6272) after 28 hr shut in period

TDC/js  
11-1-68

EXE

## PALEONTOLOGICAL LABORATORY

INCORPORATED

P. O. BOX 51

915 MU 2-4521

MIDLAND, TEXAS 79701

October 15, 1968

Mr. J. Stewart Martin  
The Superior Oil Company  
P. O. Box 1900  
Midland, Texas 79701

Dear Sir:

We report as follows on the samples which you kindly permitted us to use:

PALEONTOLOGICAL REPORTLEA COUNTY, NEW MEXICO

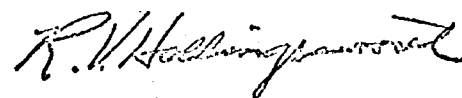
Superior Oil Company  
State Commission No. 1-D Elev: 4154 DF  
Sec. 4, T 14 S, R 34 E  
1980 F&N&E lines of sec.  
(15 miles NW of Lovington)  
Comp: 5-27-68 TD: 11,031 PB: 10,943 Oil discovery

Summary and Suggested "Markers"

9610: Top Wolfcamp limestone, by lithology  
9620-10,320: Wolfcamp fusulines  
9620-10,100: Hueco types  
9620-9990: Nondescript Hueco types  
9990-10,100: Lower Hueco types  
10,220-10,320: Bursum types  
10,350: Top Cisco series, by lithology  
10,390-10,990: Cisco fusulines  
11,029 LSA: In Cisco sandstone, by lithology

Samples examined from 9500 to 11,029 feet, TD: 11,031 feet.

Respectfully submitted,



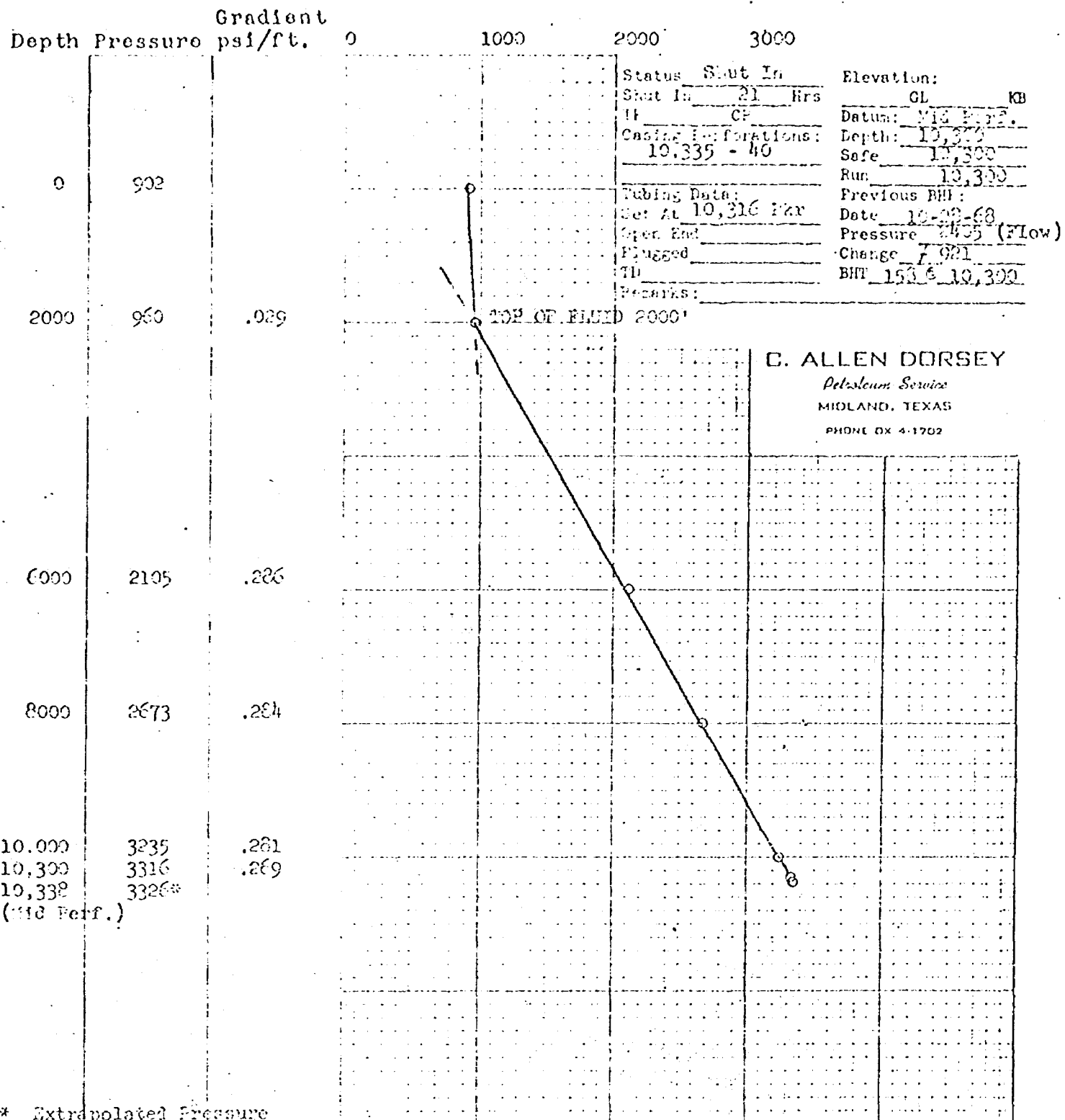
R. V. Hollingsworth

RVH:jdf

6



**BOTTOM HOLE PRESSURE RECORD**  
**PRESSURE POUNDS PER SQUARE INCH GAUGE**

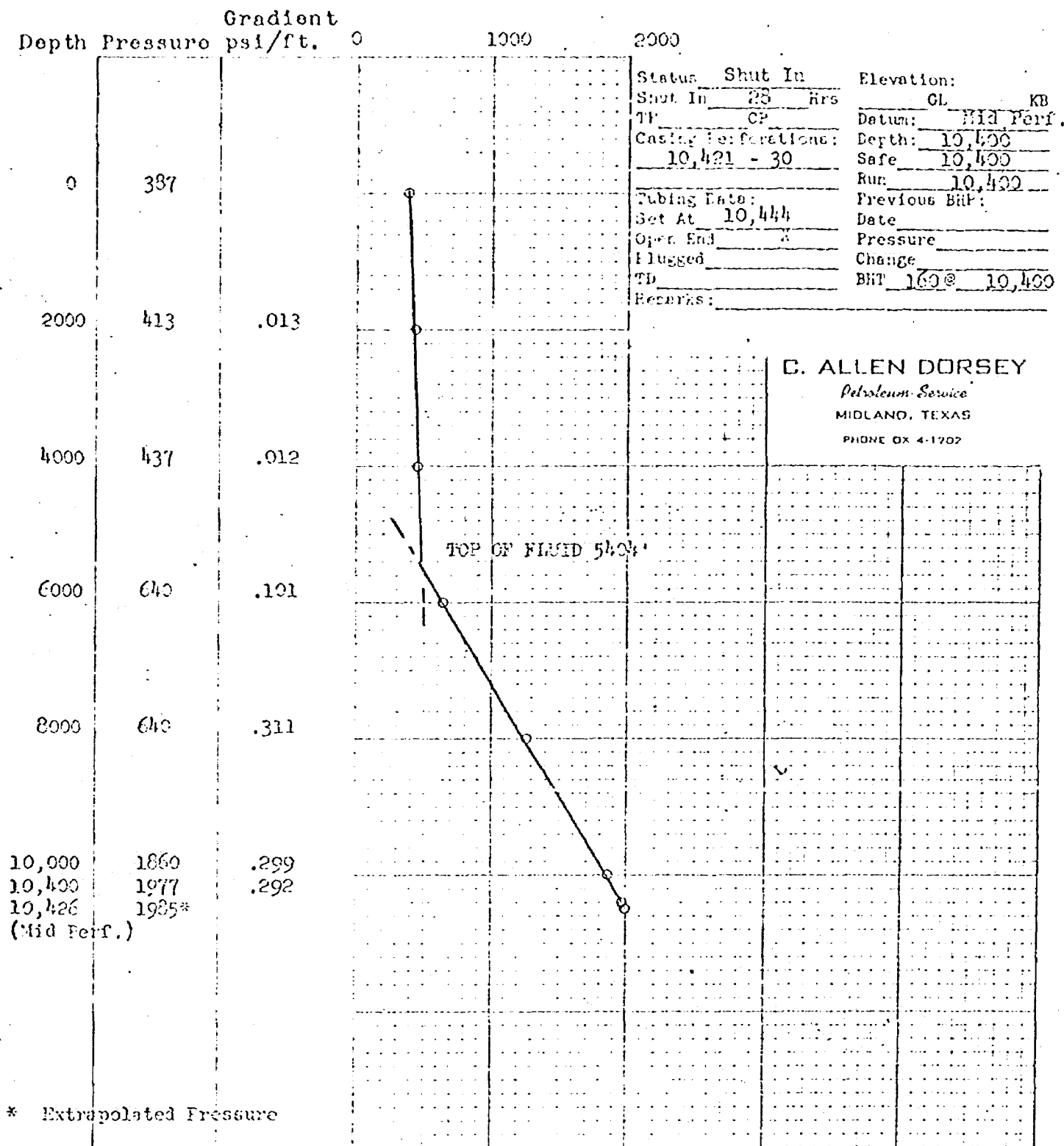


COMPANY THE SUPERIOR OIL CO., LEASE STATE "K" CON. WELL NO 1

FIELD OTCA WOLF CAMP COUNTY LEA STATE NM MEXICO

ORDERED BY G. V. STACE DATE TESTED 10-8-68

BOTTOM HOLE PRESSURE RECORD  
PRESSURE POUNDS PER SQUARE INCH GAUGE



COMPANY THE SUPERIOR OIL CO., LEASE STATE "K" CON. WELL NO 1  
FIELD CINCA JEFFER PERM. COUNTY LEA STATE NEW MEXICO  
ORDERED BY O. V. SIVAGE DATE TESTED 10-28-66

NEW MEXICO OIL CONSERVATION COMMISSION  
SOUTHEAST NEW MEXICO PACKER LEAKAGE TEST

Operator The Superior Oil Company			Lease State "K"			Well No. 1	
Location of Well	Unit J	Sec 4	Twp 14-S	Rgc 34-E	County Lea		
Name of Reservoir or Pool			Type of Prod (Oil or Gas)	Method of Prod Flow, Art Lift	Prod. Medium (Tbg or Csg)	Choke Size	
Upper Compl	Undesignated Lower Wolfcamp Zone		Oil	Flowing	Tbg - 2-3/8"	22/64"	
Lower Compl	Cerca Upper Penn.		Oil	Flowing	Tbg - 2-3/8"	3/4"	

FLOW TEST NO. 1

Lower Wolfcamp shut in at 6:40 PM on October 28, 1968

Both zones shut-in at (hour, date): Upper Penn. shut in at 4:45 PM on November 5, 1968

Well opened at (hour, date): 6:45 PM on November 5, 1968

Indicate by ( X ) the zone producing..... X

Pressure at beginning of test..... 900 psig 60 psig

Stabilized? (Yes or No)..... Yes Yes

Maximum pressure during test..... 900 psig 65 psig

Minimum pressure during test..... 890 psig 60 psig

Pressure at conclusion of test..... 890 psig 60 psig

Pressure change during test (Maximum minus Minimum)..... 10 psig 5 psig

Was pressure change an increase or a decrease?..... decrease decrease

Well closed at (hour, date): 4:45 PM on November 6, 1968

Oil Production During Test: 354 bbls; Grav. 45.4 ; Gas Production During Test: 223 MCF; GOR 630

Remarks Upper Penn (Lower Compl.) was not shut in for an extended period prior to flow test

No. 1, since it is necessary to swab this zone to kick off flowing.

FLOW TEST NO. 2

Well opened at (hour, date): 4:15 PM on November 7, 1968

Indicate by ( X ) the zone producing..... X

Pressure at beginning of test..... 300 psig 360 psig

Stabilized? (Yes or No)..... Stabilized approximately 16 hrs. after opened Yes Yes

Maximum pressure during test..... 465 psig 364 psig

Minimum pressure during test..... 385 psig 360 psig

Pressure at conclusion of test..... 385 psig 360 psig

Pressure change during test (Maximum minus Minimum)..... 80 psig 4 psig

Was pressure change an increase or a decrease?..... decrease decrease

Well closed at (hour, date) 4:00 PM on November 8, 1968

Oil Production During Test: 472 bbls; Grav. 43.6 ; Gas Production During Test: 577 MCF; GOR 1222

Remarks Following packer leakage test, Lower Wolfcamp (upper completion) was shut in and Upper Penn. (lower completion) was opened up on 3/4" ch. but failed to flow. Upper Penn. Zone was swabbed in flowing at 11:30 AM on November 10, 1968.

I hereby certify that the information herein contained is true and complete to the best of my knowledge.

Approved \_\_\_\_\_ 19 \_\_\_\_\_  
New Mexico Oil Conservation Commission

Operator THE SUPERIOR OIL COMPANY

By T. D. Clay

By \_\_\_\_\_  
Title \_\_\_\_\_

Title Production Engineer

Date November 12, 1968

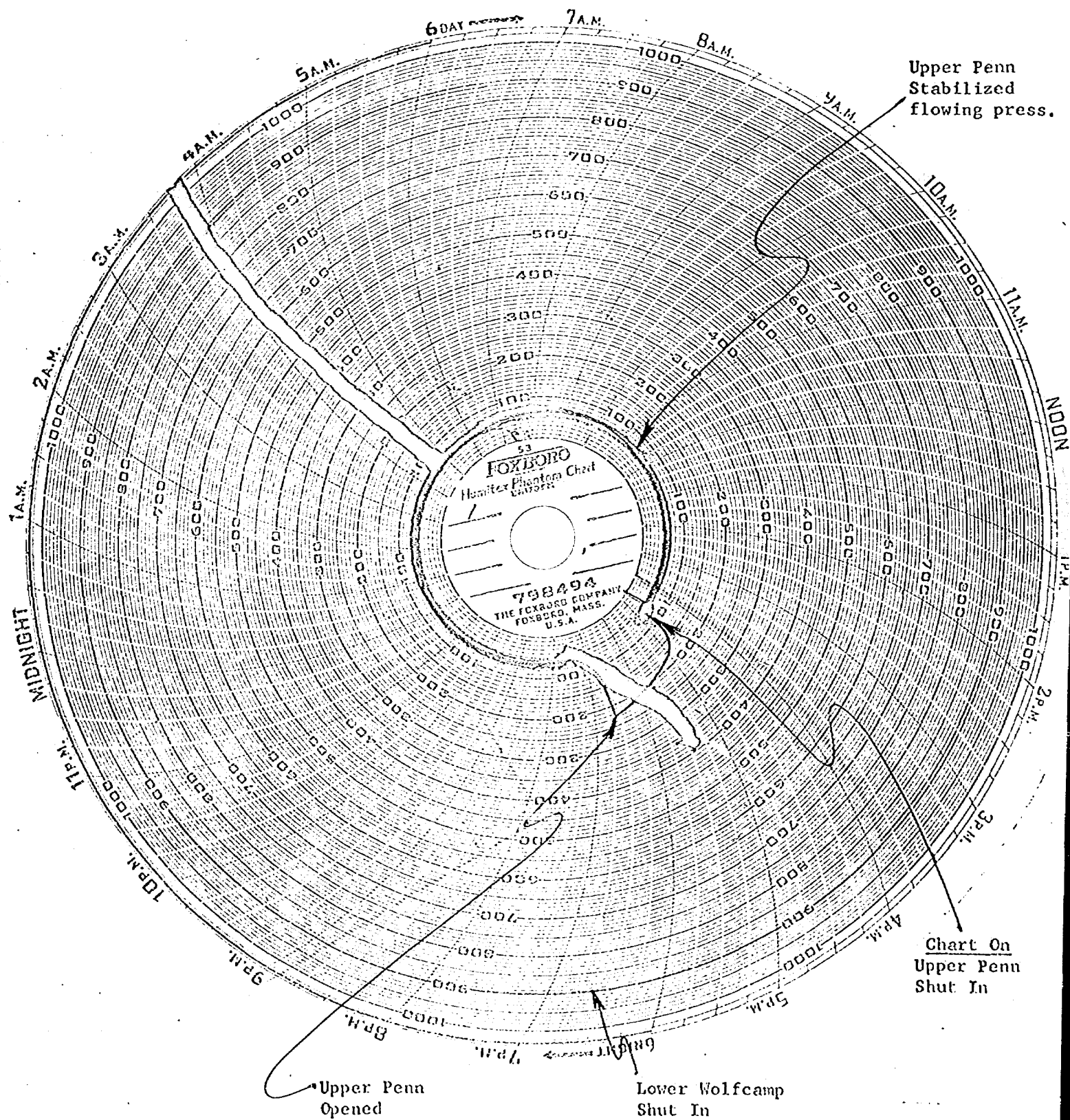
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I

Superior -State "K" No.1  
CERCA (UPPER PENN)FIELD  
Lea County, New Mexico

RED: Upper penn(Lower Compl)  
BLUE: Lower Wolfcamp (Upper Compl)

Chart on: 4:45 pm 11/5/68 Off: 4:45 pm 11/6/68

Upper Penn-- Producing  
Lower Wolfcamp-- Shut In



### PACKER LEAKAGE TEST

Superior -State "K" No.1  
CERCA (UPPER PENN) FIELD  
Lea County, New Mexico

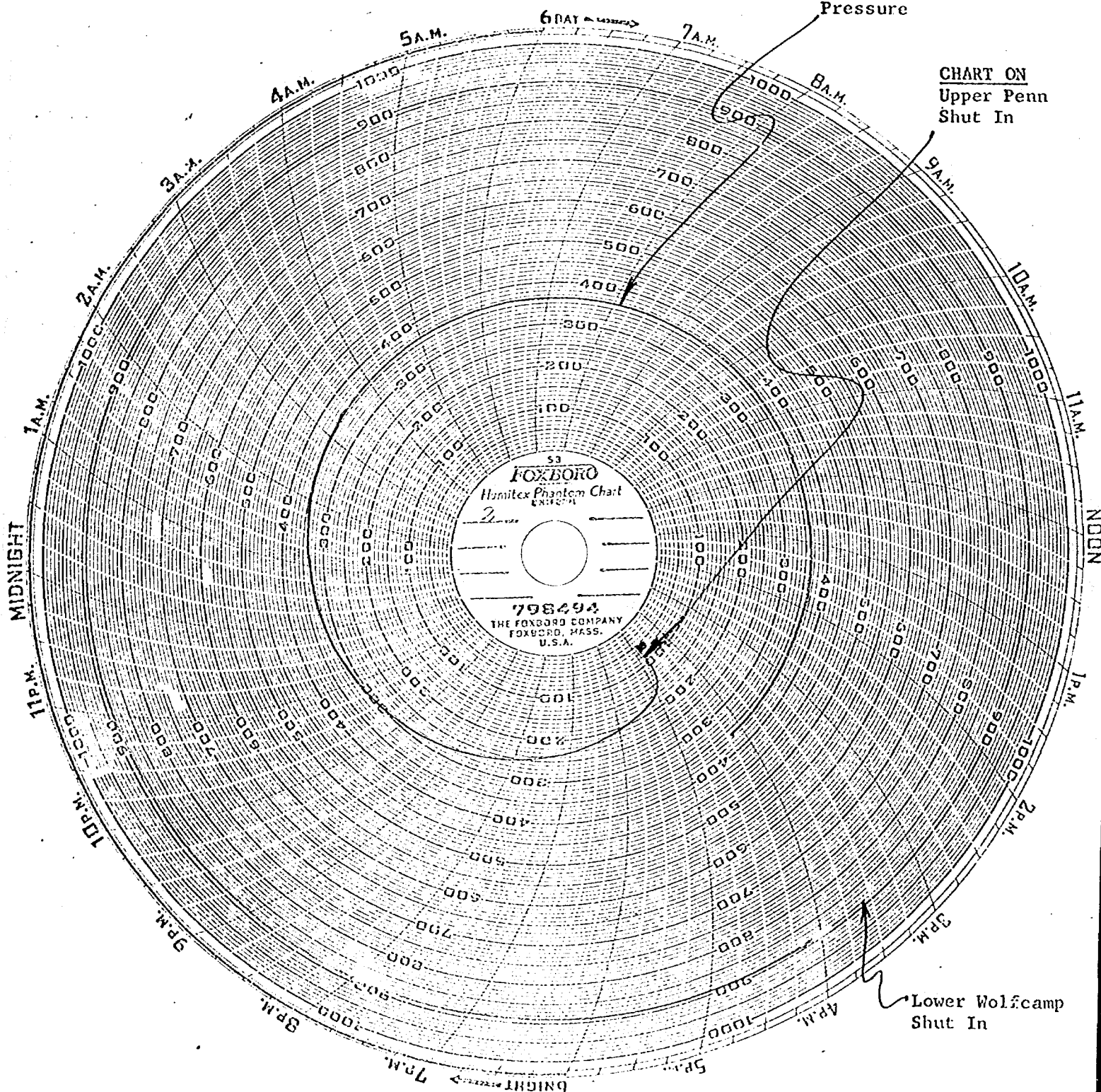
RED: Upper penn(Lower Compl)  
BLUE: Lower Wolfcamp (Upper Compl)

Chart on: 4:45 pm 11/6/68 Off: 4:15 pm 11/7/68

Upper Penn-- Shut In  
Lower Wolfcamp-- Shut In

Upper Penn  
Stabilized Shut In  
Pressure

CHART ON  
Upper Penn  
Shut In



## Lower Wolfcamp Shut In

## FLOW TEST No. 2

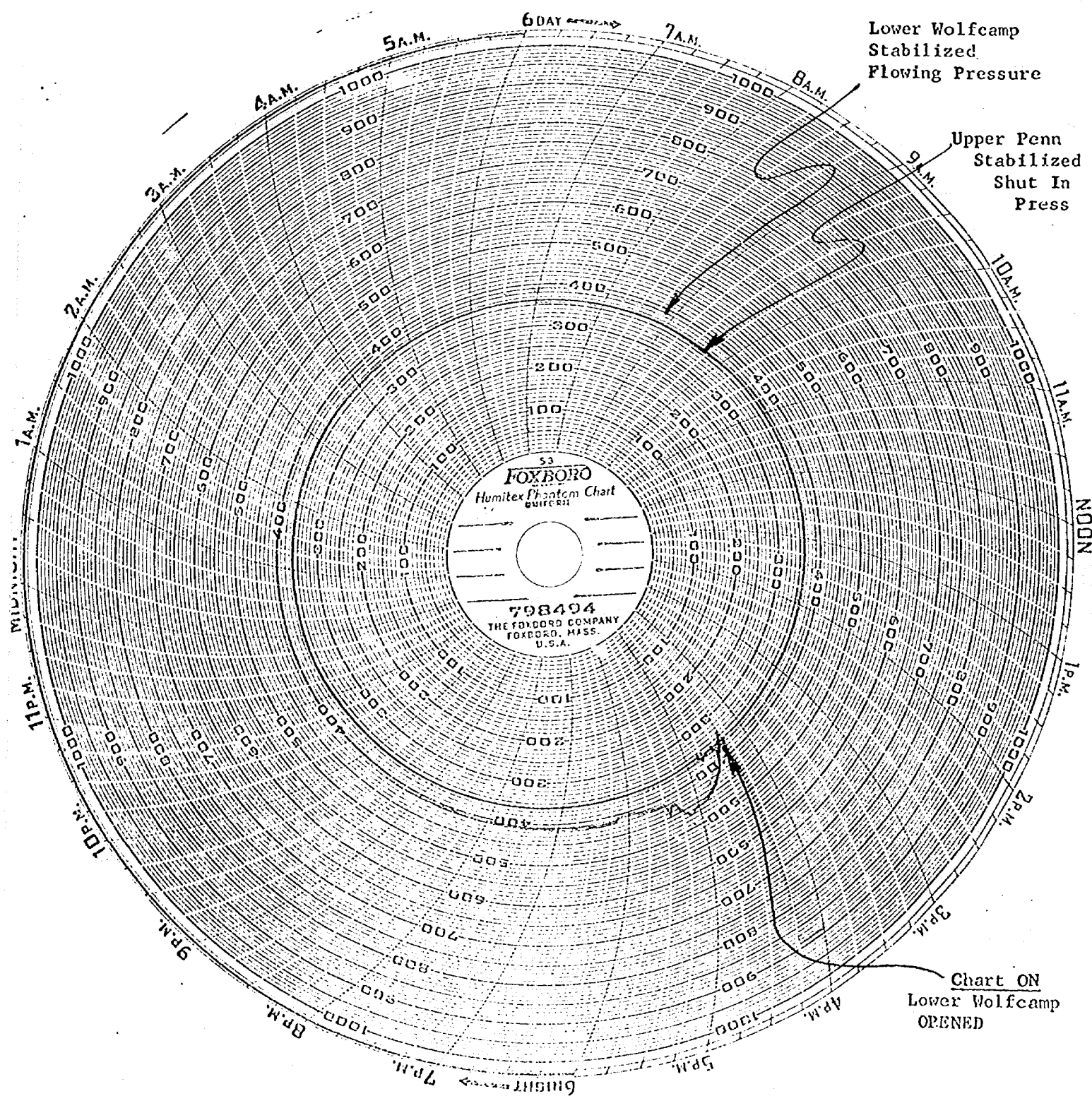
## PACKER LEAKAGE TEST

Superior -State "K" No.1  
 CERCA (UPPER PENN) FIELD  
 Lea County, New Mexico

RED: Upper penn(Lower Compl)  
 BLUE: Lower Wolfcamp (Upper Compl)

Chart on: 4:15 pm 11/7/68 Off: 4:00 pm 11/8/68

Upper Penn-- Shut In  
 Lower Wolfcamp-- Producing





DRAFT

GMH/esr

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. 3970

Order No. R- 3614

APPLICATION OF SUPERIOR OIL COMPANY  
FOR A DUAL COMPLETION, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on  
December 2, 1968, at Santa Fe, New Mexico, before Examiner  
Daniel S. Nutter.

NOW, on this \_\_\_\_\_ day of December, 1968, 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, Superior Oil Company,  
seeks authority to complete its State "K"  
Well No. 1, located in Unit J of Section 4, Township  
14 ~~North~~ South, Range 34 ~~West~~ East, NMPM, Lea County, New  
Mexico, as a dual completion ~~(conventional)~~ oil  
~~(combination)~~ to produce gas/  
~~(tubingless)~~  
~~from the~~ Lower ~~Pool~~ through  
from an undesignated Wolfcamp pool and from the Cerca-Upper  
Pennsylvanian Pool through parallel strings of 2 3/8-inch  
tubing, with separation of the zones by a packer set at approxi-  
mately 10 4/16 feet.

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

(4) That approval of the subject application will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Superior Oil Company, is hereby authorized to complete its State "K" Well No. 1, located in Unit J of Section 4, Township 14 ~~South~~ <sup>North</sup>, Range 34 ~~East~~ <sup>West</sup>, NMPM, Lea County, New Mexico, as a dual completion (conventional) oil ~~(combination)~~ to produce ~~gas~~ ~~(tubingless)~~ <sup>oil</sup> ~~from the~~ ~~Pool through~~ <sup>from an undesignated *lower* Wolfcamp pool and from the Cerca-Upper Pennsylvanian Pool through parallel strings of 2 3/8 -inch tubing, with separation of the zones by a packer set at approximately 10,416 feet;</sup>

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 ~~zone-segregation~~ packer-leakage tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for the Cerca-Upper Pennsylvanian Pool. ~~Deliverability~~

(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.