

CASE 3686: Application of GULF
OIL CORP. for DOWN-HOLE COMMING-
LING, LEA COUNTY, NEW MEXICO.

10-19-64
10-19-64
10-19-64

Case No.

3686

Application, Transcript,
Small Exhibits, Etc.

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

P. O. BOX 2088
SANTA FE

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

January 9, 1968


Mr. Bill Kastler
Gulf Oil Corporation
Post Office Box 1938
Roswell, New Mexico 88201

Re: Case No. 3686
Order No. R-3363
Applicant:
Gulf Oil Corporation

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

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

Other Mr. Arch Ballou

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. 3686
Order No. R-3363

APPLICATION OF GULF OIL CORPORATION
FOR DOWN-HOLE COMMINGLING, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 8, 1967, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 9th day of January, 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, Gulf Oil Corporation, is the operator of the Federal Mills Well No. 1, located in Unit C of Section 11, Township 9 South, Range 36 East, NMPM, Lea County, New Mexico.

(3) That said well is presently completed and equipped to produce from perforations in the Allison-Abo Pool from 8970 feet to 8990 feet and from the open-hole interval in the Allison-Pennsylvanian Pool from 9670 feet to 9703 feet through parallel strings of tubing, separation of the two pools being achieved by means of a packer set at 9655 feet.

(4) That the applicant proposes to remove said packer and to produce both pools simultaneously into the well-bore of the

-2-

CASE No. 3686

Order No. R-3363

subject well, with the provision that no more than one top allowable could be produced from the well.

(5) That the proposed commingling will not substantially reduce operating costs nor extend the producing life of either zone to any great degree.

(6) That there is insufficient data concerning the reservoir and reservoir fluid characteristics of the two zones to ensure that reservoir damage and waste will not result from the commingling.

(7) That the Abo formation produces considerably more water than the Pennsylvanian formation in the subject well; this larger amount of water, if the two zones are commingled in the well-bore, may have an adverse and detrimental effect on the Pennsylvanian zone in the subject well and nearby wells, thus causing waste and a violation of correlative rights.

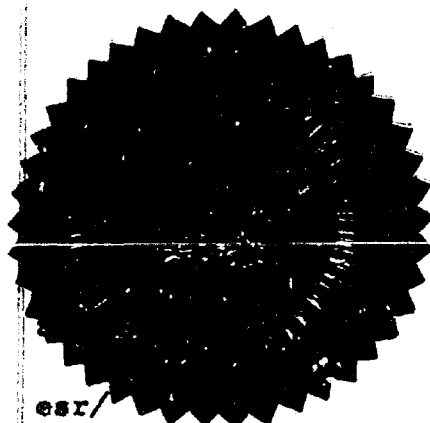
(8) That the subject application should be denied.

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
DAVID F. CARGO, Chairman

Gayton B. Hays
GAYTON B. HAYS, Member

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

esr/

dearnley-meier reporting service, inc.

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1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6491 • ALBUQUERQUE, NEW MEXICO



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 8, 1967

EXAMINER HEARING

IN THE MATTER OF:

Application of Gulf Oil
Corporation for down-hole
commingling, Lea County,
New Mexico.

Case No. 3686

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: We will call Case 3686.

MR. HATCH: Case 3686, application of Gulf Oil Corporation for down-hole commingling, Lea County, New Mexico.

MR. KASTLER: If it please the Examiner, I am Bill Kastler appearing for Gulf Oil Corporation. Our witness in this case will be Mr. John H. Hoover. Do you care to swear him?

MR. NUTTER: Let the record show that Mr. Hoover is still under oath from previous testimony.

JOHN H. HOOVER, called as a witness on behalf of the Applicant, having been previously duly sworn, was examined and testified as follows:

MR. KASTLER: Are Mr. Hoover's qualifications acceptable?

MR. NUTTER: They are.

DIRECT EXAMINATION

BY MR. KASTLER:

Q Will you please testify what Gulf is seeking in this application.

A We are asking for authority to commingle

in the well bore, marginal oil production from the Allison-Abo and Allison-Pennsylvanian Oil Pools in the Federal Mills Well Number 1, located in Unit C of Section 11, Township 9 South, Range 36 East, Lea County, New Mexico.

(Whereupon, Applicant's Exhibit Number 1 was marked for identification.)

Q Do you have a plat showing the Federal Mills lease in Well Number 1?

A Yes, we have marked it Exhibit Number 1 and it shows the Federal Mills lease outlined in red and is described as the northwest quarter of Section 11, Township 9 South, Range 36 East, Lea County, New Mexico.

Well Number 1 is colored in red and is located 1980 feet from the west line and 660 feet from the north line of this Section 11.

Q Is this well now dualled in the Allison-Abo and Allison-Pennsylvanian Oil Pools?

A Yes, it is. The dual completion was approved by Order Number R-1795 in Case Number 2091, dated October 11, 1960. This order also approved commingling of production from the Allison-Abo and Allison-Penn pools after separately metering, and also approved automatic custody of transfer equipment.

MR. NUTTER: What was that order number again?

THE WITNESS: That was Order Number R-1795 in Case Number 2091.

MR. NUTTER: Thank you.

Q (By Mr. Kastler) Mr. Hoover, do you still separately meter the Abo and Pennsylvanian production before commingling it?

A No, we don't. In June of 1963 we made an application to the Commission to commingle the Abo and Pennsylvanian without metering due to the marginal production. We propose to allocate the production on the basis of periodic well tests. And this approval was granted by Administrative Order TC-151, dated July 10, 1963.

Q Then, the Abo and Pennsylvanian production from Well Number 1 is now commingled on the surface, and you simply desire to commingle it in the well bore?

A Yes, that's correct.

Q Referring to Exhibit Number 1, is this lease offset by producing wells in the Allison-Abo and Allison-Penn pools?

A Yes, it is. However, most of them have been plugged and abandoned. Starting on the north of the Federal Mills lease in the southwest quarter, southwest quarter of Section

2, Ada Oil Company, Adams State Well Number 1. We designated that well by a dot with a slant line, and those slant lines represent P and A. That well was plugged and abandoned in 1963. It was an Allison-Penn well.

Moving clockwise, going east from that well, Atlantic's State AD originally was an Allison-Penn well. It was plugged back to the Allison-Abo, and it was plugged and abandoned in the Abo in 1965.

Marathon's State A Well Number 1 and Number 2, which are in the southeast quarter of Section 2, the Number 1 Well was P and A'd in 1967. The Number 2 was P and A'd in 1966. I would like to make one correction there where we show pool designation of the Wolfcamp for the Number 1, that's actually the Allison-Penn.

Coming on down to the east of the Federal Mills lease, the Magnolia or Mobil, the Federal Childer's Wells 1 and 2, the Number 2 Well was P and A'd in 1963, and I do not have the date of the plugging and abandoning of the Number 1 Well, but, however, it does not appear on the schedule any more.

To the southeast of the Federal Mills lease, the Cosden Petroleum Mills Number 1, was P and A'd in 1963. To the south, the Sun Oil Company Mills Number 1 is still

a producer in the Allison-Penn and in August of 1967, taking the information from the New Mexico Oil and Gas Engineering Committee Report, that well produced 480 barrels of oil, 230 barrels of water for the month.

Trice-Merrill Number 1, which is to the west of the Federal Mills lease, is still an Allison-Penn producer, and in August the production was 833 barrels of oil and 3190 barrels of water. Again that information was from the New Mexico Oil and Gas Engineering Committee Report.

Southwest of the Mills lease, the Gordon Cone Kiker Number 1 is P and A'd. I do not have the date on that one.

(Whereupon, Applicant's Exhibit Number 2 was marked for identification.)

Q Will you please explain what is shown on Exhibit Number 2.

A Exhibit Number 2 is a schematic diagram of the down-hole producing equipment now utilized in this well.

Q If Gulf is allowed to commingle --

A I would like to --

Q Oh, pardon me.

A -- explain what it shows here. This well has thirteen and three-eighths "OD" casing, set at 375 feet.

The cement was circulated. Nine and five-eighths-inch "OD" casing set at 4208 feet, the cement was circulated. Seven-inch "OD" casing set at 9670 feet, is cemented with 1653 sacks. The top of the cement was at 4,015 feet.

The Abo perforations are from 8970 to 8990 feet. The Allison-Penn is producing from the open hole interval 9670 feet to 9703 feet. Total depth of the well is 9703 feet. We have a Baker "DA" packer set at 9655 feet.

Now, to get to the tubing, it gets a little confusing, but starting to the left-hand side we have two and seven-eighths-inch "OD" tubing for Abo production and this string has a free kobe pump. We have a one-inch vent tubing which vents the Penn pay, because we are pumping from below the Penn. We have a string of two and three-eighths-inch "OD" tubing for the Penn production, and inside of this tubing we have three-quarter-inch tubing which is used for the kobe pumping of that pay. I believe that covers that exhibit.

Q If Gulf is allowed to commingle in the well bore, what equipment will then be necessary?

A We would only need the existing tubing and pump now used for the Penn production. We could salvage the free kobe pump, the vent string, and we estimate the salvage value to be approximately \$11,300, which this equipment can be used

in other operations. We are not basing our request for down-hole commingling on this \$11,300. This would be one of the benefits that we could realize.

(Whereupon, Applicant's Exhibit Number 3 was marked for identification.)

Q What is shown on Exhibit 3?

A Exhibit Number 3 is a tabulation of the production for the period January '67 through September '67 for the Federal Mills Well Number 1 in the Abo and Pennsylvanian pools. We have listed it by months showing the oil in barrels, the gas in MCF and the water in barrels for both the Abo and the Penn.

At the bottom we have arrived at a daily average which is for the Abo, 28.6 barrels per day, 25 MCF of gas and 16.7 barrels of water. For the Penn the average production is 9.2 barrels per day, 8.3 MCF and the water at 9.2 barrels.

I would like to point out that the last month, September, the average daily production for that month for the Abo was 26.2 barrels per day and the Penn was down to 7 and a half barrels per day.

Q Do economics enter the picture to warrant this request for down-hole commingling?

A We believe the economic life of this well can be extended by this commingling. Pumping only seven to nine

barrels per day from this depth of almost 10,000 feet, 9700 feet, is approaching the economic limit. In my opinion, when the production gets down to five barrels or less, it would not be economical.

Q What production would you anticipate if down-hole commingling is approved and would you expect it to increase any?

A We would anticipate the production to be in the neighborhood of 40 barrels per day for both zones. We would not anticipate any increase from the commingling. We might get a slight increase from the Penn by not pumping below a packer, however, we don't expect any.

These pools are on decline and the Pennsylvanian especially is way down, and we feel that the production will steadily go down.

Q How would you recommend that the allowable be treated if this application were to be approved?

A We would recommend that one allowable be assigned to the well and it would be either to the Abo or the Penn, we would have no objections either way, but since the Abo is the largest production, we would recommend that the allowable be assigned all to the Abo.

Q Because it is the largest production, but not because

it is the largest allowable?

A That's right, the largest production.

(Whereupon, Applicant's
Exhibit Number 4 was marked
for identification.)

Q I notice this is a federal lease. Have you
contacted the U. S. Geological Survey concerning your plans
to commingle this?

A Yes, we did. We gave them a copy of our application
that we furnished to the Commission and we also sent them a
letter requesting, if they had no objections, would they give
us a letter of approval. Exhibit Number 4 is a letter from the
Roswell office of the U. S. G. S. indicating they have no
objections.

Q Do you have anything further to add in this case?

A I would like to add one thing. I believe I left it
out, was where I gave the average Abo production for the period
January through September as being 28.6 barrels per day.
The September top allowable for the Abo was 180 barrels per
day. For the Penn, where I gave the average production was
9.2 barrels per day, the top allowable for the Penn was 287
barrels per day. Getting a little more up-to-date, the
November top allowable for the Abo is still up to 162 barrels
per day and the Penn is 258 barrels per day, so our total
anticipated production from the Abo and Penn combined would

be in the neighborhood of 40 barrels per day compared to the top allowable of the Abo of 162. So, we would be roughly one-fourth of the top allowable.

Q Producing from both zones commingled?

A Yes. I believe that's all I have.

Q I was incorrect in assuming that the Abo allowable was larger than the Penn allowable. The Penn allowable is the largest, isn't it?

A No, the Abo. Well, the top allowable?

Q The allowable, yes, the top allowable.

A The top allowable, the Penn is the largest, yes.

Q But you would ascribe, or request the Commission to ascribe the allowable that is placed on the Allison-Abo Pool to this well?

A Yes, the combined production being carried as the production for the Abo.

Q Mr. Hoover, how is this application in the interest of prevention of waste?

A Well, as I previously stated, the well is at or near the economic limit and I feel that we can definitely extend it and recover additional oil that we may not, if we have to pump that Penn zone by itself at five barrels or less. And also we are utilizing a lot of unnecessary equipment to keep, to pump both zones which are separated in the well bore, that

when you get on the surface they are commingled.

Q Were Exhibits 1,2 and 3 prepared at your direction and under your supervision?

A Yes, they were.

Q And is Exhibit Number 4 a true representation, or true copy of a letter received from the U.S. Geological Survey by Gulf?

A Yes, it is.

MR. KASTLER: I would like to move that these exhibits be admitted into evidence at this time.

MR. NUTTER: Gulf's Exhibits 1 through 4 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 4 were admitted into evidence.)

MR. KASTLER: This concludes our questions on Direct.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Hoover, as I recall the old Allison-Pennsylvanian Pool sat there producing for many years on forty-acre spacing and there were just a limited number of wells, a whole string of wells that were drilled on forty-acre spacing. Would that be these wells right in here, across the bottom of

Section 2 and the north part of Section 11? And then the discovery of the main part of the pool was made to the north and an eighty-acre spacing approved and considerable development went on.

A Mr. Nutter, I don't -- I am not sure whether they are or not. They very well could have been, but I do not know.

Q Do you know when these wells were drilled right here in this neighborhood?

A I can give you when our wells were drilled. I do not have anything on the other wells as to when they were drilled, but we will check our two wells. I don't believe I have the date that well was completed. I have some dates that are workover, but I can get that and furnish it.

Q Well, we have got it in our own file, we can get it and check that out. But, as I recall, for quite a number of years there were maybe eight or ten or twelve wells in the pool that were clustered together on a forty-acre spacing in a long line.

A I think that's right.

Q Then the development up north started occurring and the major part of the field was found to be up north, so I think that these are probably some of the original wells.

Now, apparently your Abo well, or this well is the only Abo producer in the area, is that correct, that is still producing?

A That is correct. It is the only well in the pool and that Atlantic well which was recompleted from the Penn to the Abo only produced I believe 2100 barrels plus before it was P and A'd, and ours still is the only well for the Allison-Abo Pool.

Q Do you have the cumulative production from each zone on this well?

A I have the cumulative production as of 1-1-67, then --

Q O.K. Then you have got ---

A Then I have it for each month. I did not total it, but for the Abo, the cumulative for 1-1-67, for the Federal Mills Number 1 was 90,163 barrels.

Q O.K.

A For the Penn it was 397,322 barrels.

Q Mr. Hoover, are any plans underway at the present time for any kind of secondary recovery project in the Pennsylvanian Zone here?

A No, sir, there are none at the time, and I checked on that point and I am told that at one time, the operators, somebody said, " Well, let's check the Penn for secondary

recovery", and it went as far as appointing an engineering committee and this engineering committee, assessing all the data available, came up with the recovery of primary oil so great, or so good that there was not enough oil left to warrant secondary. So, it was dropped sometime ago, several years ago and nobody is interested.

Q There are no studies being conducted at this time as to the feasibility of flooding it?

A It was dropped after that engineering study and has never been revived.

Q What zone in the Pennsylvanian is producing here, the Bough "C"?

A I can't answer that. I am not sure. I can get that and furnish it to you.

Q Mr. Hoover, I notice here in June and July the production for the Pennsylvanian dropped off quite a bit. What was the problem there?

A Yes, sir, it did, and I attempted to ascertain why, and the only thing that could be attributed to, was something wrong in the pump, maybe it was gas locking or something of that nature.

Q Have you always had this vent tube in there on the Pennsylvanian?

A Yes, sir. That, of course, we wondered how much good that vent tube really does being 90, almost 9,000 feet of one-inch.

Q Now, both zones are being lifted with kobe pumps?

A Yes, sir, both by kobe pumps.

Q What do you have, one pump that is furnishing the power oil for both of the zones up there?

A Yes, in fact it is furnishing it for both zones, plus for Well Number 2, so actually it is three zones that that one power unit furnishes.

Q And it takes so many barrels of power oil to lift a barrel of produced oil, is that correct?

A Yes, sir.

Q So, actually, if you converted ^{to} ~~from~~ a single pump ~~to~~ ^{from} two pumps and you were lifting the same amount of fluid, it is still going to take as much power oil, isn't it? You will still have that power oil pump working out there.

A I don't believe it will. I believe you can --

Q It takes less oil to operate one pump than it does to operate two pumps, to lift the same amount?

A Yes, sir, I believe so.

Q But, you are still going to have to operate your power oil pump?

A Yes, sir.

Q I notice here that the Abo makes approximately twice the amount of water that the Pennsylvanian does. Do you think that it would have any detrimental effect on the Pennsylvanian to expose it to this amount of water from the Abo?

A No, sir, I do not. I believe that that is an insignificant amount of water, really, from the Abo, sixteen barrels a day. Keeping both zones pumped down, I don't see how it could possibly hurt that Penn.

Q What would you do? As I understood your direct testimony, if you were permitted to commingle in the well bore here, you would remove the installation which is presently producing the Abo and continue with the Pennsylvanian installation?

A Yes, sir.

Q I presume you would pull your tubing and drill out that packer, or would you just pull the tubing up out of the packer and leave the packer in there?

A No, sir, we would drill out that packer, that Model "DA".

Q And leave that tubing set at about where it is then?

A Yes, sir. What we would recover there would be

the tubing for the Abo, the pump, and we would take out the vent tubing, that 9,000 feet of one-inch tubing, that Baker Triple L packer would be salvaged and we would have one bottom-hole, kobe bottom-hole cavity equipment that could be salvaged, and then, the packer would, of course couldn't be salvaged. That is drillable; that is not a recoverable packer. So, that would just be drillable. So, then we would wind up with the two and three-eighths-inch tubing with a kobe and the tubing for pumping that kobe.

Q And you would be venting through the casing?

A Through the casing, yes, sir.

Q Have you made any study as to the actual ~~economics~~ ^{economics} of producing the well as it is now versus producing it as a commingled in the well bore installation?

A No, sir, we have not, except that our experience and studies on other wells, for example a single zone well at that depth, we know that pumping five barrels of fluid, or of oil, is stretching the economic limits. Some companies, I believe, set it slightly higher than that. We use five.

Q The GOR's on the two zones are approximately equal, aren't they?

A Yes, they are. It is very small.

Q What about the pressures, Mr. Hoover?

A The last pressure that we have on that well, in fact no bottom hole pressure was taken in the Penn, but the last pressure for the -- I am sorry, in the Abo, the Allison Penn in the Federal Mills Well Number 1 on January 12, 1959, at a pool datum of a minus 5600 feet, was 2343 PSIG. No pressures were run on the Abo.

Q So, you don't have current pressures on either one?

A No current pressures, no, sir. That is seven years ago, over seven years ago, that one pressure, and we know that the production has fallen drastically since then and I believe it is safe to say that the pressure is way down also.

MR. NUTTER: Are there any other questions of Mr. Hoover? You may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Kastler?

MR. KASTLER: Nothing further.

MR. NUTTER: Does anyone have anything they wish to offer in Case 3686.

MR. BALLOU: I would like to make a statement, Mr. Nutter.

MR. NUTTER: Mr. Ballou.

MR. BALLOU: On behalf of --

MR. NUTTER: Identify yourself, please.

MR. BALLOU: My name is A. R. Ballou, B-a-l-l-o-u, I represent Sun Oil Company. Sun Oil Company is an offset operator, although we do not have a dual completion. Sun Oil Company wishes to urge the Commission to grant the request of Gulf here today for the reason that we feel it is a conservation measure to permit the recovery of more oil from this well than can be recovered under a dual operation, and it would be beneficial to the operator in extending the economic life of the well. And Sun would like to attempt this in other areas if this is permitted here.

MR. NUTTER: Mr. Ballou, if Gulf were permitted to do this with this Mills Well Number 1, would you attempt to open some perforations in the Abo in your well?

MR. BALLOU: We would certainly recommend that to our manager, Mr. Nutter.

MR. NUTTER: Is there some Abo on the logs here, do you know?

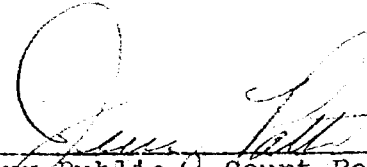
M.R BALLOU: I can't answer that question, but we do expect the, when this is acted on, if it is acted on favorably, we expect to have our geological department make a study for the purpose of attempting perforations in the Abo.

MR. NUTTER: I see. Is there anything else to be offered in Case 3686? If not, we will take the case under advisement.

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

I, JERRY M. POTTS, Court Reporter, do hereby
 certify that the foregoing and attached transcript of
 Proceedings before the New Mexico Oil conservation Commission
 Examiner at Santa Fe, New Mexico, is a true and correct record
 to the best of my knowledge, skill and ability.

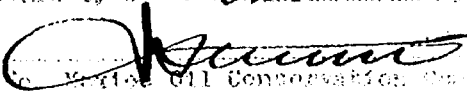
IN WITNESS WHEREOF I have affixed my hand and notarial
 seal this 5th day of December, 1965.


 Notary Public & Court Reporter

My Commission Expires:

July 10, 1970

I do hereby certify that the foregoing is
 complete record of the proceedings of
 the New Mexico Oil Conservation Commission
 held at Santa Fe, New Mexico, on Nov 8 1965 3686


 Secretary
 New Mexico Oil Conservation Commission

Docket No. 34-67

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 8, 1957

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 3681: Application of Burwinkle and Scanlon for a waterflood project, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Mesaverde formation through one well located 330 feet from the North and East lines of Unit C of Section 28, Township 20 North, Range 9 West, McKinley County, New Mexico. Applicant further seeks an administrative procedure for future expansion of said project.
- CASE 3674: Application of Robert N. Enfield for an interpretation of or the amendment of Order No. R-3189, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the interpretation of Order No. R-3189 which pooled all mineral interests in the Chaveroo-San Andres Pool underlying the NW/4 NW/4 of Section 11, Township 8 South, Range 33 East, Chaves County, New Mexico, that paragraph (9) of said order, in fixing \$125.00 per month as the reasonable cost of operating the well to be drilled on the acreage being pooled, should be construed to provide said \$125.00 per month as a reasonable charge for supervision and operational overhead; that applicant should be permitted to withhold from production the proportionate share of said \$125.00 attributable to each non-consenting working interest, and that in addition thereto, applicant should be permitted to withhold from production the proportionate share of actual operating costs of said well attributable to each non-consenting working interest. In the alternative to the aforesaid interpretation of Order No. R-3189, applicant seeks the amendment of paragraph (9) of said order in accordance with the above provisions.
- CASE 3682: Application of Gulf 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 J. N. Carson (NCT-A) Well No. 7 located in Unit B of Section 33, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from the Drinkard and Brunson-Ellenburger Pools through parallel strings of tubing.
- CASE 3683: Application of Gulf Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of the Stuart Langlie Mattix Unit Area comprising 1,120 acres, more or less, of Federal, State and Fee lands in Sections 2, 3, 10, and 11, Township 25 South, Range 37 East, Lea County, New Mexico.
- CASE 3684: Application of Gulf Oil Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Stuart Langlie Mattix Unit by the injection of water in the Langlie Mattix Pool through 12 wells located in Sections 2, 3, 10, and 11, Township 25 South, Range 37 East, Lea County, New Mexico.

CASE 3685: Application of Gulf Oil Corporation for an amendment of Order No. R-3290, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3290, which order authorized an unorthodox oil well location 1075 feet from the South line and 2395 feet from the West line of Section 16, Township 22 South, Range 37 East, Lea County, New Mexico, for its R. E. Cole (NCT-A) Well No. 9, said well being projected to undesignated Silurian and Montoya oil pools. Applicant now seeks the substitution of the Drinkard Pool for the previously authorized pools.

CASE 3686: Application of Gulf Oil Corporation for down-hole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Allison-Abo and Allison-Pennsylvanian Pools in the wellbore of its Federal Mills Well No. 1 located in Unit C of Section 11, Township 9 South, Range 36 East, Lea County, New Mexico, with the provision that no more than one single allowable will be produced from said well.

C-3670

Gulf Oil Corporation

EXPLORATION AND PRODUCTION DEPARTMENT—U. S. OPERATIONS
ROSWELL DISTRICT

W. B. Hopkins
DISTRICT MANAGER
M. I. Taylor
DISTRICT PRODUCTION
MANAGER
F. O. Mortlock
DISTRICT EXPLORATION
MANAGER
H. A. Rankin
DISTRICT SERVICES MANAGER

October 18, 1967

P. O. Drawer 1938
Roswell, New Mexico 88201

Oil Conservation Commission
State of New Mexico
Post Office Box 2088
Santa Fe, New Mexico 87501

OCT 20 AM 11 40

Attention: Mr. A. L. Porter, Jr.

Re: Application of Gulf Oil Corporation for Approval of
Down Hole Commingling of Production in the Federal
Mills Well No. 1, Allison Abo and Allison Pennsylv-
anian Oil Pools, Lea County, New Mexico

Gentlemen:

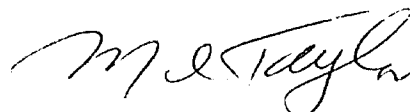
Gulf Oil Corporation respectfully requests an Examiner Hearing to
consider its application for approval of down hole commingling in the well bore
of Allison Abo and Allison Pennsylvanian oil production in the Federal Mills
Well No. 1, located in Unit C of Section 11, Township 9 South, Range 36 East,
Lea County, New Mexico.

In support of this application, the following facts are submitted:

- (1) Applicant is owner and operator of the Federal Mills Lease described as the
NW/4 Section 11, T9S-R36E, Lea County, New Mexico.
- (2) The dual completion of the Federal Mills Well No. 1 in the Allison Abo and
Allison Pennsylvanian Oil Pools was approved by Order R-1795 in Case No. 2091
dated October 11, 1960. This is the only well in the Allison Abo Pool.
- (3) The production from both zones is marginal and the total production is well
below the top allowable for the shallowest zone. The production from the
Pennsylvanian zone is approaching the economic limit.
- (4) Applicant will request one allowable be assigned to the well which will be
considerably below the top allowable for the shallowest zone.

Respectfully submitted,

GULF OIL CORPORATION



M. I. Taylor

JHH:ers
cc: See Page 2



BOCKET MAILED

Date 10-25-67
[Signature]

Oil Conservation Commission

- 2 -

October 18, 1967

cc: New Mexico Oil Conservation Commission
Post Office Box 1980
Hobbs, New Mexico 88240

United States Geological Survey
Post Office Box 1857
Roswell, New Mexico 88201
Attention: Mr. John A. Anderson

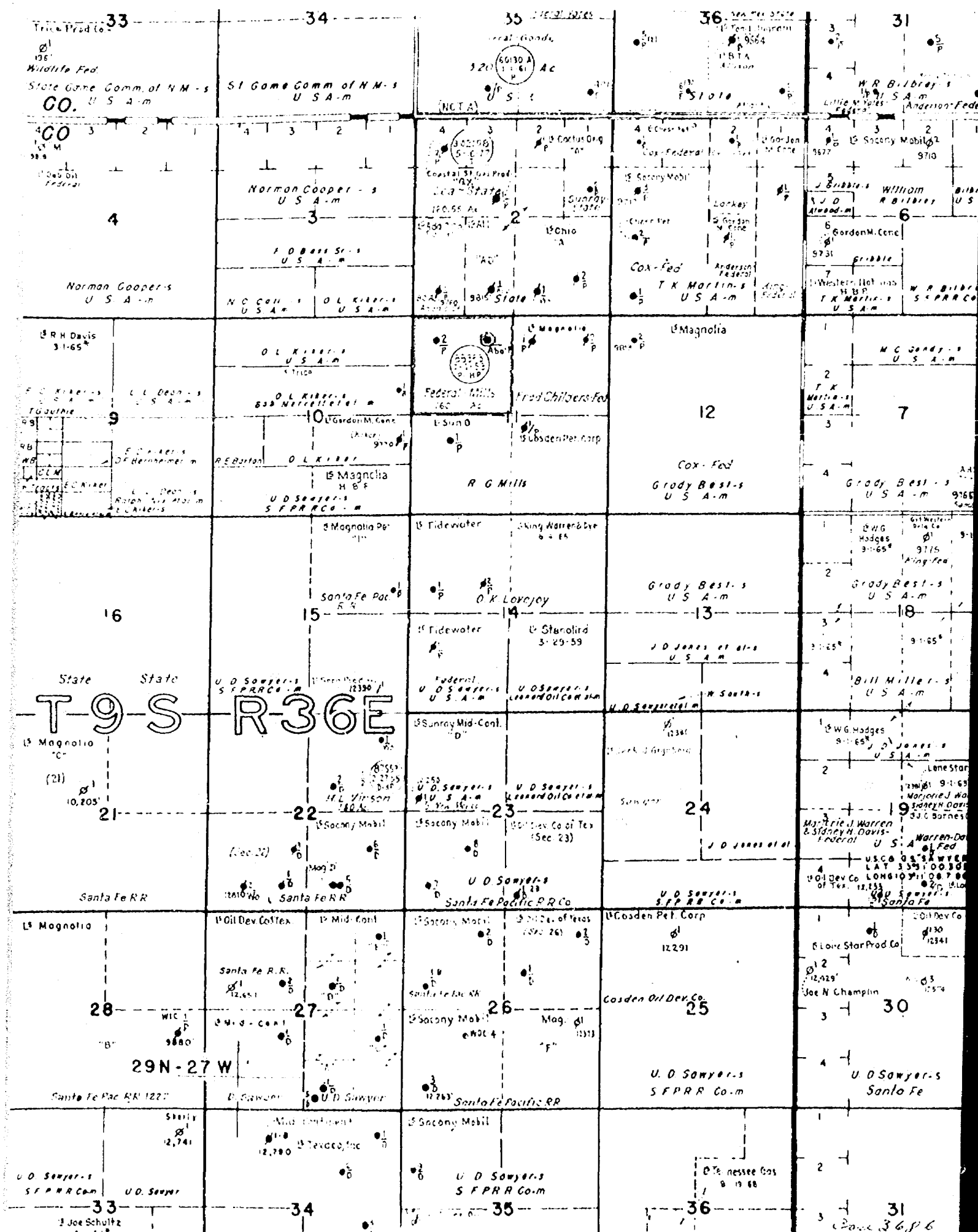
Mobil Oil Corporation
Post Office Box 633
Midland, Texas 79701

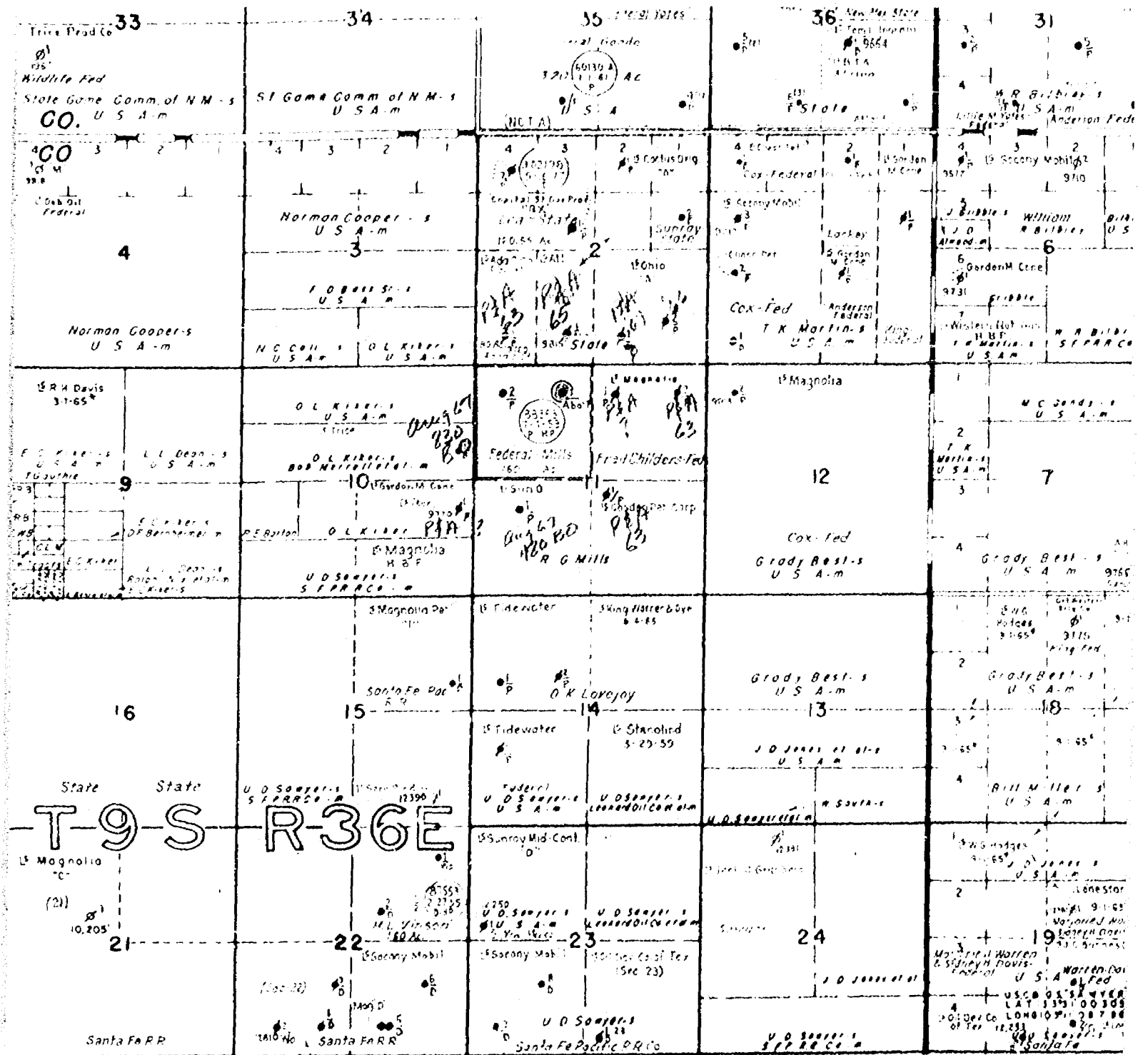
Sun Oil Company
Post Office Box 1861
Midland, Texas 79701

Trice Production Company
3609 Sinclair
Midland, Texas 79701

Atlantic Richfield Company
Post Office Box 1978
Roswell, New Mexico 88201

Gordon M. Cone
Post Office Box 1148
Lovington, New Mexico 88260





PLAT

FEDERAL MILLS LEASE
ALLISON ABO & ALLISON PENN OIL POOLS
LEA COUNTY, NEW MEXICO

- LEGEND -



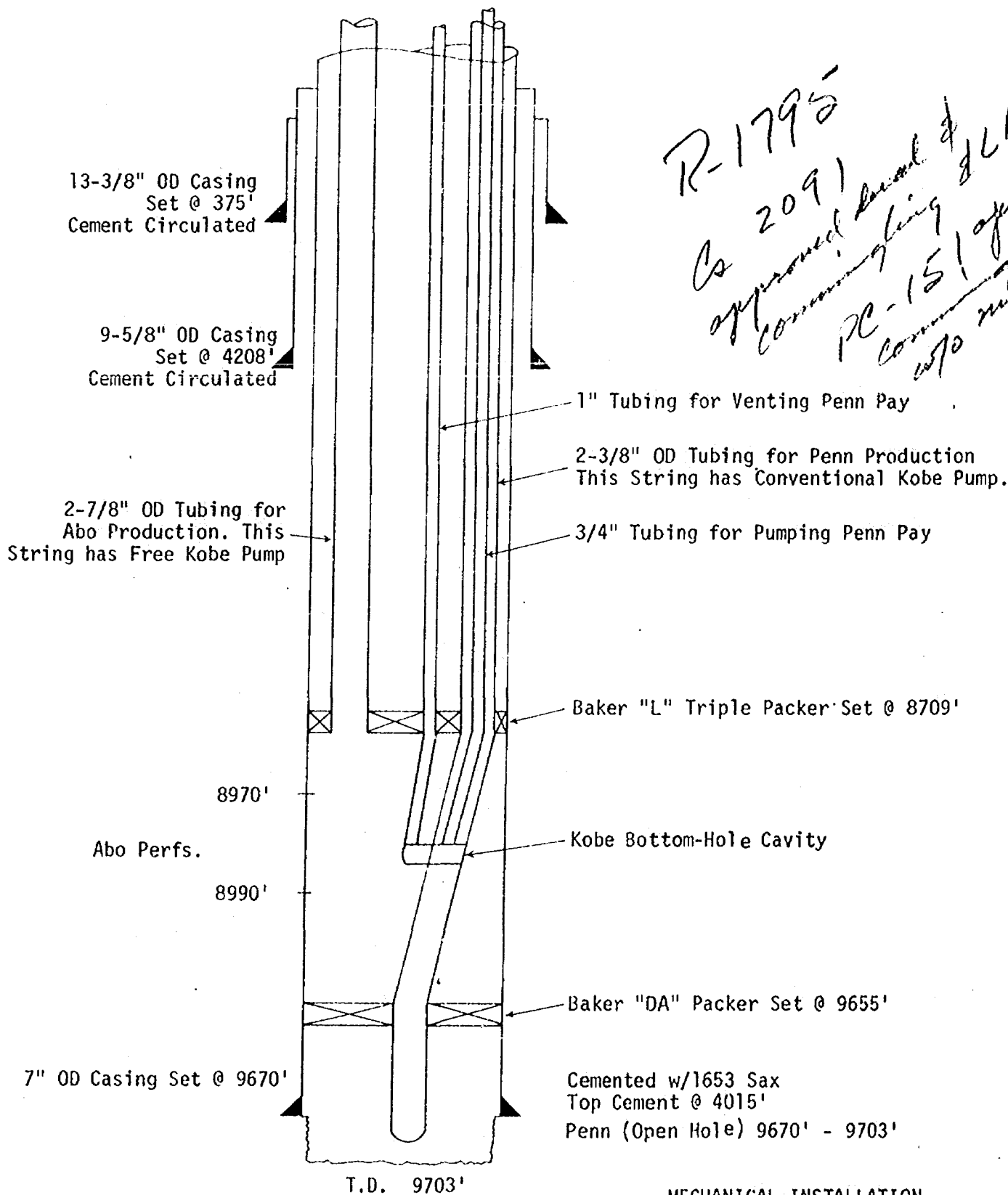
PERTINENT WELL



PERTINENT LEASE

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 1
CASE NO. 3686

CASE NO. 3686
EXHIBIT NO. 7
NOVEMBER 8, 1967



R-1795
Cs 2091
approved Serial & LACT
commencing 8/1/67
PC-151 approved
commencing 8/1/67
w/o metering

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Gulf EXHIBIT NO. 2
CASE NO. 3686

MECHANICAL INSTALLATION
GULF OIL CORPORATION
FEDERAL MILLS WELL NO. 1
ALLISON ABO & ALLISON PENN OIL POOLS
LEA COUNTY, NEW MEXICO

CASE NO. 3686
EXHIBIT NO. 2
NOVEMBER 8, 1967

TABULATION OF PRODUCTION
JANUARY 1967 THROUGH SEPTEMBER 1967
FEDERAL MILLS NO. 1
ALLISON ABO AND ALLISON PENN POOLS
LEA COUNTY, NEW MEXICO

Cumulated

12-31-66 90,163

347,322

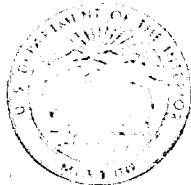
| <u>1967</u> | <u>Abo</u> | | | <u>Penn</u> | | |
|---------------|------------------|----------------|--------------------|------------------|----------------|--------------------|
| | <u>Oil-Bbls.</u> | <u>Gas-MCF</u> | <u>Water-Bbls.</u> | <u>Oil-Bbls.</u> | <u>Gas-MCF</u> | <u>Water-Bbls.</u> |
| January | 964 | 133 | 432 | 371 | 133 | 370 |
| February | 884 | 621 | 398 | 297 | 2 | 297 |
| March | 974 | 883 | 438 | 323 | 329 | 324 |
| April | 900 | 866 | 454 | 336 | 371 | 339 |
| May | 832 | 819 | 424 | 256 | 273 | 261 |
| June | 729 | 749 | 735 | 163 | 205 | 165 |
| July | 738 | 817 | 753 | 161 | 263 | 165 |
| August | 990 | 1057 | 512 | 366 | 402 | 372 |
| September | 788 | 870 | 406 | 226 | 279 | 229 |
| Daily Average | 28.6 Bbls. | 25.0 MCF | 16.7 Bbls. | 9.2 Bbls. | 8.3 MCF | 9.2 Bbls. |

Pressure no pressure

1-12-59 5600 2345

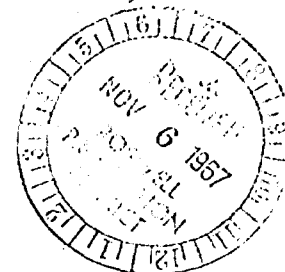
| | |
|-----------------------------|----------------------|
| BEFORE EXAMINER NUTTER | |
| OIL CONSERVATION COMMISSION | |
| <i>Re</i> | EXHIBIT NO. <u>3</u> |
| CASE NO. <u>3686</u> | |

Case No. 3686
Exhibit No. 3
November 8, 1967



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Drawer 1857
Roswell, New Mexico 88201

November 3, 1967



Gulf Oil Corporation
P. O. Drawer 1938
Roswell, New Mexico 88201

Attention: Mr. M. I. Taylor

Gentlemen:

Your letter of October 27 requests approval for down-hole commingling of Allison Abo and Allison Pennsylvanian production in well No. 1 Mills Federal in the NE $\frac{1}{4}$ sec. 11, T. 9 S., R. 36 E., Lea County, New Mexico, lease Las Cruces 067771-A.

Your proposal to commingle the Abo and Pennsylvanian production in well No. 1 Mills Federal is satisfactory to this office.

Sincerely yours,

JOHN A. ANDERSON
Regional Oil and Gas Supervisor

| | |
|-----------------------------|----------------------|
| BEFORE EXAMINER NUTTER | |
| OIL CONSERVATION COMMISSION | |
| <i>Gulf</i> | EXHIBIT NO. <u>4</u> |
| CASE NO. <u>3686</u> | |

CASE NO. 3686
EXHIBIT NO. 4
November 8, 1967

Also-

deal Lea

deal J N Corvoo

NO7-A 7

B 33 21 37

oil Dr

" Brunson Ellen

11 Hg

down-hole communicating
Lea Co.

com in well bore

Allison A60

11 Penn

Fed Mills #1

C 11 9 36 Lea Co.

no more than 1 single allow.
