

CASE 3874: Application of GULF  
OIL CO. - U.S. FOR DOWNHOLE  
COMMINGLING, LEA COUNTY, N. M.

Case Number

3874

Application

Transcripts.

Small Exhibits

ETC.

State of New Mexico  
Oil Conservation Commission



P. O. BOX 2088  
SANTA FE

October 22, 1968

Re: Case No. 3874  
Order No. R-3527  
Applicant:  
Gulf Oil Corporation

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

*A. L. Porter, Jr.*  
A. L. PORTER, Jr.  
Secretary-Director

Carbon 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. 3874  
Order No. R-3527

APPLICATION OF GULF OIL CORPORATION  
FOR DOWNHOLE COMMINGLING, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 9, 1968,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 22nd day of October, 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 owner  
and operator of the C. L. Hardy Well No. 2, located in Unit N of  
Section 20, Township 21 South, Range 37 East, NMPM, Lea County,  
New Mexico.

(3) That by Administrative Order MC-1156, the subject well  
was authorized as a dual completion for the production of oil from  
the Paddock and Blinbry formations through parallel strings of  
tubing.

(4) That the subject well is presently shut in as to the  
Blinbry formation; that just prior to said shutting in, the

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CASE No. 3874

Order No. R-3527

Blinebry formation was producing approximately one barrel of oil per day.

(5) That the subject well is presently producing approximately five barrels of oil per day by pump from the Paddock formation.

(6) That the applicant proposes to remove the packer and one string of tubing from said well and to produce the low marginal production from the subject zones through a single string of tubing.

(7) That the proposed commingling may substantially extend the productive lives of the subject zones in the aforesaid well.

(8) That the reservoir characteristics of each of the two zones are such that underground waste would not be caused by the proposed commingling in the well-bore.

(9) That the proposed commingling may result in the recovery of additional oil from both of the subject pools, thereby preventing waste, and will not violate correlative rights.

(10) That production tests should be conducted, prior to commingling, to determine the production from each zone.

IT IS THEREFORE ORDERED:

(1) That the applicant, Gulf Oil Corporation, is hereby authorized to complete its C. L. Hardy Well No. 2, located in Unit N of Section 20, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner as to produce oil from the Paddock Oil Pool through perforations from 5148 feet to 5155 feet and from the Blinebry Oil Pool through perforations from 5770 feet to 5909 feet, commingling the production from each of said zones in the well-bore;

PROVIDED HOWEVER, that the production of each zone shall be established and future production allocated to the Paddock and Blinebry zones of the subject well in the proportion that the production from each zone bears to the combined production from both zones until further order of the Commission;

PROVIDED FURTHER, that commingling in the well-bore shall continue only so long as the commingled production does not

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CASE No. 3874

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exceed the top unit allowable for either of the zones in the subject well.

(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



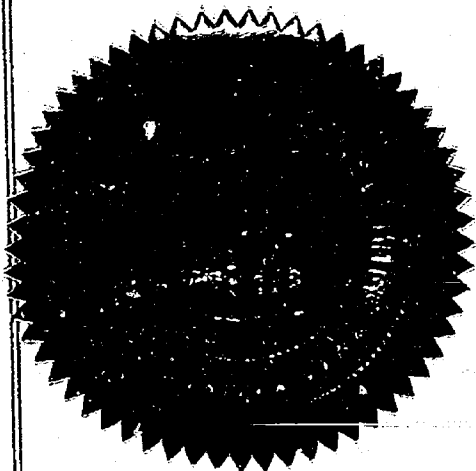
DAVID F. CARGO, Chairman



GUYTON B. HAYS, Member



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



esr/

Docket No. 29-68

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 9, 1968

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 3872: Application of Union Oil Company of California for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to finally complete its Federal "A" Well No. 1 located in Unit P of Section 12, Township 15 South, Range 34 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Morton-Wolfcamp Pool and the disposal of produced salt water through the intermediate casing-production casing annulus into the San Andres and such other formations as may occur in the open-hole interval from approximately 4620 to 7350 feet.
- CASE 3873: Application of R. G. McPherson for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the open-hole interval from approximately 5250 feet to 5854 feet in his S. P. Johnson Well No. 1 located 990 feet from the West line and 1650 feet from the South line of Section 5, Township 18 South, Range 39 East, South Carter-San Andres Pool, Lea County, New Mexico.
- CASE 3874: Application of Gulf Oil Company - U. S. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Paddock and Blinbry Oil Pools in the well-bore of its C. L. Hardy Well No. 2 located in Unit N of Section 20, Township 21 South, Range 37 East, Lea County, New Mexico, with the provision that no more than one single allowable will be produced from said well.
- CASE 3875: Application of Pan American Petroleum Corporation for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well in exception to the Fowler-Ellenburger Rules at an unorthodox location 910 feet from the North line and 1980 feet from the West line of Section 13, Township 24 South, Range 37 East, Lea County, New Mexico.

- CASE 3876: Application of Newmont Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Young (Queen) Unit Area comprising 1320 acres, more or less, of federal and state lands in Township 18 South, Range 32 East, Young (Queen) Pool, Lea County, New Mexico.
- CASE 3877: Application of Newmont 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 Young (Queen) Unit Area by the injection of water into the Queen formation through 17 wells located in Sections 9, 16, 17, 19, 20, 21, and 29, Township 18 South, Range 32 East, Young (Queen) Pool, Lea County, New Mexico.
- CASE 3878: Application of General American Oil Company of Texas for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Premier sand through two injection wells located in Unit M of Section 8, and Unit G of Section 17, Township 16 South, Range 30 East, West Henshaw-Grayburg Pool, Eddy County, New Mexico.
- CASE 3879: Application of Walter Duncan Oil Properties for an unorthodox oil well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well at an unorthodox oil well location 1000 feet from the North line and 1242 feet from the East line of Section 36, Township 32 North, Range 18 West, San Juan County, New Mexico. Said well would be projected to the Dakota formation.
- CASE 3880: Application of Anne Burnett Windfohr, dba Windfohr Oil Company, for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation in the perforated interval from approximately 6970 feet to 7028 feet in the Windfohr Oil Company Jackson "B" Well No. 23 located in Unit J of Section 24, Township 17 South, Range 30 East, Jackson-Abo Pool, Eddy County, New Mexico.
- CASE 3881: Application of J. M. Huber Corporation for the creation of a new oil pool and for special pool rules, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Devonian oil pool for its Lone Star Federal Well No. 1 located in the NE/4 NE/4 of Section 20, Township 8 South, Range 36 East, Roosevelt County, New Mexico, and for the promulgation of special rules therefor including a provision for 80-acre proration units.



- CASE 3882: Application of Solar Oil Company for a special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio of 6,000 cubic feet of gas per barrel of oil in the Teague Blinbry Pool, Lea County, New Mexico.
- CASE 3883: Application of Solar Oil Company for a special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio of 6,000 cubic feet of gas per barrel of oil in the Imperial Tubb-Drinkard Pool, Lea County, New Mexico.
- CASE 3884: Application of Marathon Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Miller Ranch Unit Area comprising 5,276 acres, more or less, of State, Federal and Fee lands in Townships 21 and 22 South, Range 25 East, Eddy County, New Mexico.
- CASE 3885: Application of Sinclair Oil & Gas Company for a waterflood expansion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Turner "B" Grayburg-Jackson Waterflood Project, Grayburg-Jackson Pool, by the conversion to water injection of 12 additional injection wells located in Sections 20, 29, and 30, Township 17 South, Range 31 East, Eddy County, New Mexico.
- CASE 3886: Application of Sinclair Oil & Gas Company for the amendment of a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks amendment of its Guadalupe Ridge Unit Agreement, unitizing certain lands in Eddy County, New Mexico, and approved by Order No. R-3471, to conform to certain requirements of the Director of the United States Geological Survey. In the absence of objection, the case will be submitted and an order issued upon the basis of the application and exhibits attached thereto.
- CASE 3887: Application of Kersey & Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Premier sand of the Grayburg formation through two wells to be located in Units E and K of Section 12, Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico. Applicant further proposes to produce oil from the Upper Grayburg through parallel strings of tubing, if said zones are productive in the subject wells.

- CASE 3888: Application of Amerada Petroleum Corporation for a dual completion, salt water disposal and tubing exception, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its State E "B" Well No. 1 located in Unit E of Section 27, Township 10 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the North Echols-Devonian Pool, and the disposal of produced salt water through the tubing-casing annulus into the San Andres formation through perforations in said casing from approximately 5220 feet to 5250 feet. Applicant also seeks an exception to the tubing requirements of Commission Rule 107 in that said tubing would be set more than 250 feet above the upper most Devonian perforation.
- CASE 3889: Application of BTA Oil Producers for the creation of a new pool and special pool rules, Lea and Roosevelt Counties, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new pool for the production of oil from the Bough C zone of the Pennsylvanian formation for its well located in Section 5, Township 9 South, Range 36 East, Lea County, New Mexico, and for the promulgation of special rules therefor including a provision for 160-acre proration units and for the assignment of an 80-acre allowable factor of 4.77.
- CASE 3890: Application of Pan American Petroleum Corporation for special pool rules and a non-standard gas proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Empire-Pennsylvanian Gas Pool, Eddy County, New Mexico, including a provision for 320-acre spacing units with wells to be located in either the northwest quarter or the southeast quarter of the section. Applicant further seeks approval of a 280-acre non-standard gas proration unit comprising the SE/4, S/2 SW/4, and the NW/4 SW/4 of Section 30, Township 17 South, Range 28 East, Empire-Pennsylvanian Gas Pool, to be dedicated to its State V Com Well No. 1 located 990 feet from the South and East lines of said Section 30.

Case 3874

Heard 10-8-68

Res. 10-10-68

Grant Gulf permission to coordinate  
the Paddock & Blinby pools in  
their <sup>C. L. Hardy</sup> #2, N-20-215-37E.

The Blinby is now S.P. & was  
capable of only 1 B.O.P.D. The  
Paddock is now capable of 5 B.O.P.D.

One Mary allowable shall be  
assigned to both zones.

The well is to be pumped thru  
 tubing from 5-204!

If at any time either zone  
should become capable of producing  
substantially more oil the com-  
mission shall be advised so that  
it can reconsider this permit.

Thos G. W.

dearnley-meier reporting service, inc.

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

October 9, 1968

EXAMINER HEARING

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IN THE MATTER OF: )

Application of Gulf Oil Company - )

U. S. for downhole commingling, )

Lea County, New Mexico. )

) Case 3874  
)  
)  
)  
)  
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BEFORE: Elvis Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 3874.

MR. HATCH: Case 3874, Application of Gulf Oil Company. That should be Gulf Oil Corporation, U.S. --

MR. KASTLER: Yes, if you please.

MR. HATCH: -- for downhole commingling, Lea County, New Mexico.

MR. KASTLER: I'm Bill Kastler.

MR. UTZ: We'll just call it Gulf, all right?

MR. KASTLER: It's all right, if we call it Gulf. I am Bill Kastler from Roswell, New Mexico, employed by and appearing on behalf of Gulf Oil Corporation. I'd like to point out that the order or application was made by Gulf Oil Company, U.S., which is a division of Gulf Oil Corporation and it was made in the name of Gulf Oil Corporation.

Our witness is Mr. Hoover.

(Witness sworn)

MR. UTZ: Are there any other appearances? You may proceed.

(Whereupon, Applicant's Exhibits Numbers 1, 2 and 3 were marked for identification.)

JOHN H. HOOVER,

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

DIRECT EXAMINATION

BY MR. KASTLER:

Q Mr. Hoover, will you please state your name, by whom you are employed and in what position?

A John Hoover, employed by Gulf Oil Corporation as District Production Engineer in Roswell, New Mexico.

Q Are you familiar with Gulf's application in Case 3874?

A Yes, sir.

Q Had you previously appeared before the New Mexico Oil Commission and qualified as an expert petroleum engineer?

A Yes, sir.

MR. KASTLER: Mr. Utz, are Mr. Hoover's qualifications satisfactory?

MR. UTZ: Yes, sir, they are.

Q (By Mr. Kastler) Will you please state what Gulf is seeking in this application?

A We are asking for approval to commingle oil and gas production from the Paddock and Blainebry oil pools in the wellbore of our C. L. Hardy Well No. 2. The reason for this request is a matter of economics.

Q What is Exhibit Number 1? Referring to Exhibit Number 1, will you please explain what is shown there?

A Exhibit Number 1 is a plat showing our C. L. Hardy Lease which is outlined in orange and it's described as the southwest quarter of Section 20, Township 21 South, Range 37 East, Lea County, New Mexico. The pertinent well in this case is our C. L. Hardy No. 2 and it is located 554 feet from the south line and 2,086 feet from the west line of this section 20.

Q That's in Unit N?

A That's in Unit N.

Q It's not otherwise designed by separate circles or anything else?

A No, it isn't. Also shown on the plat are the Blinebry and Paddock wells, which are circled and colored according to the pools as the legend on the plat indicates. The Blinebry oil wells are colored in red, the Blinebry gas wells in brown, and the Paddock oil wells in green.

I would like to just point out one thing here that you might note, that the Paddock and the Blinebry portion of this pool is on the edge, that is, the edge of the pool.

Q Have you designated dual completed wells by showing two colors inside the circle?

A Yes.

Q When was the C.L. Hardy Well No. 2 completed?

A This well was originally completed in the Drinkard Pool in October of 1947 at a total depth of 6657 feet.

In January of 1960, the well was dually-completed in the Paddock oil pool. It was recompleted as a Blinebry oil, Paddock oil dual in February, 1962. In October, 1966, the Blinebry ceased to flow and the zone was shut in because it was uneconomical to restore it to production.

The total production for the entire month of October, 1966, from the Blinebry was only 9 barrels of oil and 476 mcf of gas. The economics did not justify remedial work considering the small production.

The Paddock zone has continued to produce and the well, today, is a pumping Paddock oil well with the Blinebry shut in.

Q What is shown on Exhibit No. 2?

A Exhibit No. 2 is a log of the C. L. Hardy Well No. 2. On this log, we have marked the top of the Paddock or Glorieta as 5120 feet, the top of the Blinebry, 5447 feet and the top of the Tubb at 6110 feet.

The perforated intervals are also shown. They are not marked, but they are set out. I'll read them off. The Paddock is perforated at 5148 to 5155. That is the producing interval. The intervals 5162 to 5170 and 5182 to 5226 are perforations which have been squeezed.

The Blinebry perforations are 5770 to 5774 feet, 5788 to 5790 feet, 5842 to 5844 feet, and 5862 to 5864 feet, 5907 to 5909 feet.



Q These perforations are also shown and are more comprehensively depicted on Exhibit Number 3, is that correct?

A Yes, sir, they are.

Q Will you now refer to Exhibit No. 3 and explain what is shown?

A Exhibit No. 3 is a schematic diagram of the C. L. Hardy Well No. 2 and it shows the existing dual completion as it now exists. We have thirteen and three-eighths O.D. casing set at 303 feet. The cement was circulated. Nine and five-eighths O.D. casing was set at 2913 feet, cemented with 1300 sacks. Top of the cement, by temperature survey, at 1315 feet. Seven-inch O.D. casing was set at 6603 feet, cemented with 700 sacks.

We have two strings of tubing. We have a short string which produces the Paddock. It is latched into a Baker parallel string anchor at 5178 feet. We have a Baker Model D packer at 5705 feet, and the bottom of the long string is set at approximately 5904 feet.

The Drinkard zone is shown here as plugged off with a Baker Model D packer set at 6542 feet. We have a cast iron pull plug set at 6486 feet and the calculated cement to about 6431 feet. I believe that covers it.

Q How would you recomplete this well if downhole commingling were granted?

A Well, if we were granted downhole commingling approval, we would drill out the Baker Model D packer, pull both strings of tubing and then we would have one single string of two and three-eighths-inch tubing set at approximately 5904 feet.

Q That would be in the Blinebry?

A That would be in the Blinebry.

Q And where would the Paddock and Blinebry production pump be located?

A It would be set in the bottom of the tubing.

Q Why is Gulf asking to downhole commingle at this time since the Blinebry has already been shut in for two years?

A The 1968 annual packer leakage test indicates that we have developed communication. We believe there is a hole in the long string of tubing, and since it is necessary to repair this communication and since we have to go into the well, now is the time to downhole commingle, if possible. In the event that the commingling is not allowed, we plan to temporarily abandon the Blinebry at the time we go in the well to repair this communication. The economics just do not justify returning the well to a dual status.

Q When you said, "now is the time to downhole commingle, if possible," you mean if legally possible, don't you? You don't

have any question about the technology of it?

A I don't follow you.

Q Well, you say, now is the time to downhole commingle, if it is possible to do so, you mean if your application is granted, do you not?

A Yes, that is right. In other words, what I'm saying, now is the time is that we have to go into the well as soon as possible to repair the communication, so it has to be done now.

Q You stated earlier that this downhole commingling request was a matter of economics. Will you please elaborate on that?

A Yes, sir. The most recent test for the Paddock zone on this well was taken on June the 18th, 1968, and it was 4 barrels of oil per day, one barrel of water, 31 mcf of gas.

The last Blinebry test was taken on November the 10th, 1966, and it was one barrel of oil per day, 49 mcf of gas, no water. Using these rates for the oil and gas production and our average monthly production expenses which we have taken in our operating estimates, we come up with the economics as follows: On the Paddock, the average monthly net income after royalty, but before deducting expenses, is \$360. The average

monthly production expense is \$185. Therefore, the average monthly income, after expenses, is \$175.

The Blinebry average monthly net income after royalty, but before deduction for expenses, is \$195. The average monthly production expense is \$287. Therefore, the average monthly income after expenses is loss of \$92. Summarizing these figures and adding them together, the average monthly net income as a dual is \$555. The average monthly production expense as a dual would be \$472, leaving an average monthly income after expenses of \$83 per month. This revenue does not justify the additional expense of returning the well to a dual status.

Therefore, as previously mentioned, the only alternative, if downhole commingling is not approved, would be to abandon the Blinebry.

Q Assuming downhole commingling is granted, then how does that affect the economic and operating costs?

A Using the same well test that we have, the most recent information of 5 barrels of oil per day, 80 mcf of gas, would give an average monthly net income of \$550 per month. The average production expense is \$185 per month; therefore, our average income after expenses would be \$370 per month. The production expense to produce both zones, commingle in the wellbore, would be approximately the same as the production

expense for the Paddock zone as it is now. Therefore, the gain is by virtue of eliminating the production expense of the Blinebry.

Q If the Paddock and the Blinebry oil is commingled in the well bore, would this reduce the value of the oil produced, if so?

A No, it wouldn't. The gravities of the oil are approximately the same. The gravity of the Paddock oil from this well during the June 18, 1968 test, was 36.7 degrees, corrected. As a comparison, the Paddock oil from our Hardy No. 4 was 36.5 degrees, corrected, from tests taken June 12, 1968.

The Blinebry oil production from our Hardy #5 from tests on May the 26th, 1968 was 36.9 degrees. This gravity range brings the same price for the crude. I would point out here that we have Blinebry, Paddock, Penrose, Skelly and Drinkard production on the Hardy Lease and it's commingled at the surface by Commission approval, and the production is marginal from all zones, all wells, and the production is allocated by well tests.

Q If downhole commingling should be allowed, would there be any migration of oil or any other damage to the reservoir that you could foresee?

A In my opinion, there would not. We have not run any

bottomhole pressures on this well, but the fact that the Paddock is pumping and the Blinebry won't flow, the bottomhole pressures are bound to be approximately the same and have very little differential.

Q Will additional oil be recovered by downhole commingling?

A Well, I believe that it will. At least, we will recover additional oil now. If we can downhole commingle, we will produce the one barrel of oil per day from the Blinebry. If the proposal is not approved, we will abandon that zone. And I doubt that if that zone would ever be opened up again unless future secondary recovery operations justify the work, and from Exhibit Number 1, the Blinebry wells in that area are more or less isolated, and I question that there would ever be any secondary recovery; but if there was, it would dictate opening up the well again.

We believe that the 5 barrels of oil per day might be increased slightly, maybe, to 8 or 9 barrels and this, if it happened, would be accomplished by virtue of the fact that we would be cleaning up the well bore.

Now, we're not basing this case on any hope for increase, but we're basing the case on the test data of 5 barrels of oil per day.

Q The production of 5 barrels of oil per day would be considered marginal and well below the top allowable for the shallow zone, would it not?

A Yes. In fact, the 5 barrels of oil per day could be considered sub-marginal since we're approaching the economic limit. The estimated economic limit for the Paddock is 2.6 barrels of oil per day, and the one barrel of oil per day for the Blinebry is below the economic limit.

Now, the top allowable for the Paddock is 78 barrels of oil per day. Therefore, our total production of 5 barrels of oil per day is only a fraction of the top allowable for the shallow zone.

Q Mr. Hoover, has the Blinebry and Paddock well offsetting this to the west, the Hardy #5, what's the present production from that well?

A Well, are you referring to #4 or to #5?

Q I said #5. I meant #4.

A #4.

Q That would be in unit N?

A This is the July, 1968 production. The Blinebry and the Hardy #4 is shut in. The Paddock produced 389 -- this is from #4 -- produced 389 barrels of oil, 3249 barrels of water, 272 mcf of gas by pump.

MR. UTZ: What month was that?

THE WITNESS: July of 1968.

Q So although you've seen this as a Blinebry-Paddock, it's actually now only a Paddock well?

A Well, it's still a dual. The Blinebry is shut in.

Q It's temporarily abandoned?

A No. It's shut in.

Q All right. I follow you. Have you given notice of this application to all offset operators?

A Yes, we did.

Q And have you had any objections, to your knowledge?

A No, sir. I've heard nothing from any of them.

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

A No, sir.

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

A Yes, sir.

MR. KASTLER: This concludes our questions and answers on direct, and I would like, at this time, to move that Exhibits 1, 2 and 3 be admitted into evidence.

MR. UTZ: Without objection, Exhibits 1, 2, 3 will be entered into the record in this case.

(Whereupon, Applicant's Exhibits Numbers 1, 2, 3 were admitted in evidence.)



CROSS EXAMINATION

BY MR. UTZ:

Q Did I understand you to say that you were going to pump this with a downhole pump?

A Yes, sir. It would be just a rod pump.

Q And that pump will be set at 5904 down into the Blinebry perforation?

A Yes, sir.

Q So then, the expenses you would have in this regard would be whatever expenses you have to pump the Blinebry?

A To pump the Paddock. We figure the production expense would be \$185, which is what the Paddock production expenses are running now.

Q That would still be true, even though you are drilling your pumping a little deeper more than --

A Yes, sir, because if you have any remedial work on a dual well like this, you've got two strings of tubing to pull, and it costs more, so even though we're pumping deeper, we'll have one string. If you had to pull the tubing, you're only pulling one string instead of two.

Q Do you have any record, or do you recall why the two series of perforations in the Paddock were squeezed?

A Yes, sir, to shut off water.

Q Shut off water?

A Yes, sir.

Q So you have no intention of reopening those?

A No, sir. We would not reopen up any new zone that would be produced from the existing perforations as we show here on Exhibit No. 3 which would be the Paddock, 5148 to 5155. That's the open zone now and that would remain. The Blinebry, all those perforations are open. Those would remain the same with no additional perforations.

MR. UTZ: Are there any other questions of the witness? You may be excused. Any statements in this case?

MR. SWENDIG: John Swendig, Amerada Petroleum Corporation. It's Amerada's position that in these marginal areas, that downhole commingling become an economic necessity and, therefore, we'll support Gulf's application for downhole commingling with the provision that one single allowable be assigned.

MR. PORTER: Mr. Hoover, before you leave the stand, did you ask for waivers on these notices that you sent, or did you just notify the offsets?

MR. HOOVER: We just notified them.

MR. PORTER: Thank you.

RECROSS EXAMINATION

BY MR. UTZ:

Q Mr. Hoover, the allowable that would be assigned, in answer to Mr. Swendig's request, would be only the testing allowable of 5 barrels per day, correct?

A We might, as I mentioned in our testimony, that we possibly would get a slight increase in cleaning up the well bore.

Q No more than two or three more barrels per day?

A No, sir, but in our application, we intended that we would certainly ask for no more than one allowable, and it would be a sub-marginal allowable that we would expect to get.

Q It will be a marginal allowable?

A Yes, sir.

MR. UTZ: Are there any other questions? Statements?

MR. KASTLER: I move the case be granted so we can all go quail shooting.

MR. UTZ: The case will be taken under advisement.

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
JOHN H. HOOVER	
Direct Examination by Mr. Kastler	2
Cross Examination by Mr. Utz	14
Recross Examination by Mr. Utz	16

EXHIBITMARKEDOFFERED  
AND ADMITTED

Applicant's  
1, 2 and 3

2

13

I, CHARLOTTE J. MACIAS, 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.

Charlotte Mossing  
COURT REPORTER

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the hearing of Case No. 3824  
heard by me on 1-2-9 1965.  
New Mexico Oil Conservation Commission

# Gulf Oil Company - U.S.

EXPLORATION AND PRODUCTION DEPARTMENT  
ROSWELL DISTRICT

T. W. Kidd  
DISTRICT MANAGER  
M. I. Taylor  
DISTRICT PRODUCTION  
MANAGER  
P. E. Wyche  
DISTRICT EXPLORATION  
MANAGER  
H. A. Rankin  
DISTRICT SERVICES MANAGER

September 11, 1968

P. O. Drawer 1938  
Roswell, New Mexico 88201

*Case 3874*

*Int*

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

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

Re: Application of Gulf Oil Corporation for  
Approval of Down Hole Commingling of Production  
in the C. L. Hardy Well No. 2, Paddock and  
Blinebry 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 Paddock and Blinebry oil production in the C. L. Hardy Well No. 2, located  
in Unit N of Section 20, T-21-S, R-37-E, Lea County, New Mexico.

In support of this application the following facts are submitted:

- (1) Applicant is owner and operator of the C. L. Hardy Lease described as  
the SW/4 Section 20, T-21-S, R-37-E, Lea County, New Mexico.
- (2) The production from the Paddock zone is marginal and the Blinebry zone  
is not only marginal but not economical to produce.
- (3) 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*

M. I. Taylor

DOCKET MAILED

Date 9-26-68



JHH:sz

A DIVISION OF GULF OIL CORPORATION

September 11, 1968

-2-  
Oil Conservation Commission

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

Guarney Oil Company  
Post Office Box 1416  
Roswell, New Mexico 88201

Amerada Petroleum Corporation  
Post Office Box 668  
Hobbs, New Mexico 88240

Marathon Oil Company  
Post Office Box 220  
Hobbs, New Mexico 88240

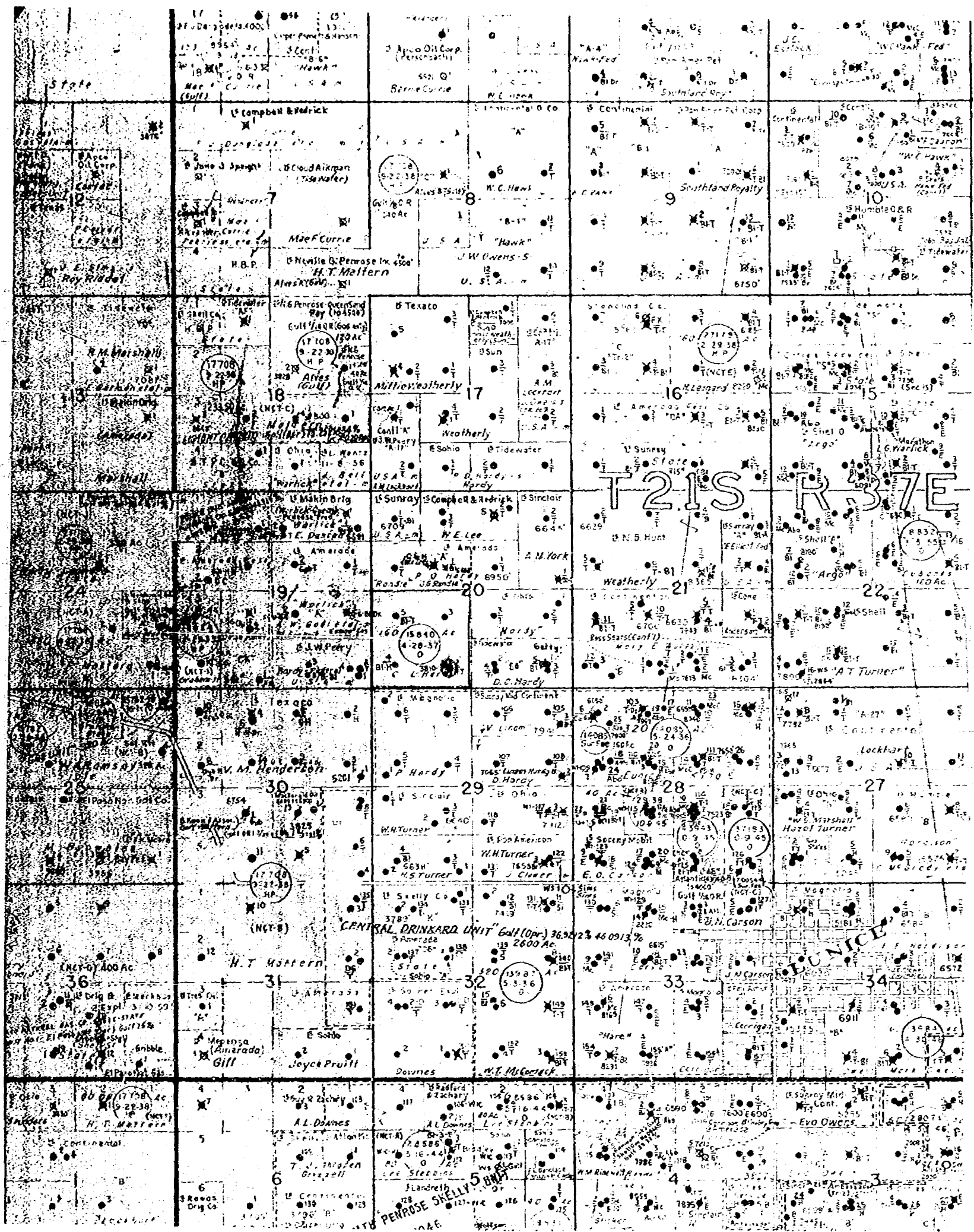
Getty Oil Company  
Post Office Box 547  
Hobbs, New Mexico 88240

Mobil Oil Corporation  
Post Office Box 633  
Midland, Texas 79701

Texaco Inc.  
Post Office Box 728  
Hobbs, New Mexico 88240

J. W. Peery  
Post Office Box 401  
Midland, Texas 79701

Case 3874





DRAFT

GMH/esr  
10-14-68

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. 3874  
Order No. R- 3527

APPLICATION OF GULF OIL CORPORATION  
FOR DOWNHOLE COMMINGLING, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 9, 1968,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this \_\_\_\_\_ day of October, 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 owner  
and operator of the C. L. Hardy Well No. 2, located in Unit N of  
Section 20, Township 21 South, Range 37 East, NMPM, Lea County,  
New Mexico.

(3) That by Administrative Order MC-1156, the subject well  
was authorized as a dual completion for the production of oil from  
the Paddock and Blinebry formations through parallel strings of  
tubing.

(4) That the subject well is presently shut in as to the  
Blinebry formation; that just prior to said shutting in, the  
Blinebry formation was producing approximately one barrel of oil

(5) That the subject well is presently producing approximately five barrels of oil per day by pump from the Paddock formation.

(6) That the applicant proposes to remove the packer and one string of tubing from said well and to produce the low marginal production from the subject zones through a single string of tubing.

(7) That the proposed commingling may substantially extend the productive <sup>lives</sup> ~~life~~ of the subject ~~formation~~ <sup>zone</sup> in the aforesaid well.

(8) That the reservoir characteristics of each of the two zones are such that underground waste would not be caused by the proposed commingling in the well-bore.

(9) That the proposed commingling may result in the recovery of additional oil from both of the subject pools, thereby preventing waste, and will not violate correlative rights.

(10) That production tests should be conducted, prior to commingling, to determine the production from each zone.

IT IS THEREFORE ORDERED:

(1) That the applicant, Gulf Oil Corporation, is hereby authorized to complete its C. L. Hardy Well No. 2, located in Unit N of Section 20, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner as to produce oil from the Paddock Oil Pool through perforations from 5148 feet to 5155 feet and from the Blinebry Oil Pool through perforations from 5770 feet to 5909 feet, commingling the production from each of said zones in the well-bore;

PROVIDED HOWEVER, that the production of each zone shall be established and future production allocated to the Paddock and the Blinebry zones of the subject well in/proportion that the

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CASE No. 3874

production from each zone bears to the combined production from both zones until further order of the Commission;

PROVIDED FURTHER, that commingling in the well-bore shall continue only so long as the commingled production does not exceed the top unit allowable for either of the zones in the subject well.

(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.