CASE 5705: GULF OIL CORP. FOR DOWNHOLE COMMINGLING, LEA COUNTY, NEW MEXICO

CASE NO.

5 705

APPlication, Transcripts, Small Exhibits,

ETC.

Dockets Nos. 21-76 and 22-76 are tentatively set for hearing on August 4 and August 18, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEAPING - VETWESDAY - JULY 7, 1976 9 A.M. - OIL COMSERVATION COLUMNICA W CONSERVACE WORLD STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

CASE 1704: Application of Guif Cil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Drinkard and Blinebry production in the wellbore of its H. T. Mattern (NCT-B) Well No. 16 located in Unit D of Section 31, Township 21 South, Hange 37 East, Lea County, New Mexico. Applicant further seeks an administrative procedure for approval of additional commingling authority on this lease.

CASE 5705:

Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Drinkard and Blinebry production in the wellbore of its H. T. Mattern (NCT-C) Wells Nos. 5 and 3, located, respectively, in Units I and A of Section 18, Township 21 South, Range 37 East, Lea County, New Mexico. Applicant further seeks an administrative procedure for approval of additional commingling authority on this lease.

CASE 5706: Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Drinkard and Blinebry production in the wellbore of its William A. Ramsay (NCT-B) Well No. 6 in Unit H of Section 25, Township 21 South, Range 36 East, Lea County, New Mexico. Applicant further seeks an administrative procedure for approval of additional commingling authority on this lease.

CASE 5707: Application of Harrington Transportation Inc. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox gas well location of its Llano Inc. Terry Well No. 1, to be drilled at a point 1650 feet from the North line and 1930 feet from the East line of Section 14, Township 18 South, Range 26 East, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico.

CASE 5708: Application of Roger C. Hanks for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation through the approximate interval from 10,300 feet to 10,550 feet in his King Disposal Well No. 1 located in Unit C of Section 9, Township 20 South, Range 25 East, Eddy County, New Mexico.

CASE 5709: Application of Tahoe Oil and Cattle Company for an exception to the provisions of Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the provisions of Commission Order No. R-3221, permission to construct and operate an earthen salt water disposal pit in the NW/4 SW/4 of Section 2, Township 20 South, Range 30 East, Eddy County, New Mexico.

CASE 5710: Application of Benson-Montin-Greer Drilling Corporation for two non-standard gas proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the two following described non-standard gas proration units in Township 32 North, Rarge 13 West, Ute Dome-Dakota Gas Pool, San Juan County, New Mexico:

a 250.64-acre unit comprising the N/2 of Section 30 to be dedicated to applicant's La Plata F-30 Well No. 2, located 900 feet from the North line and 827 feet from the West line of said Section 30;

a 250.80-acre unit comprising the S/2 of Section 30 to be dedicated to applicant's La Plata K-30 Well No. 1 located 1508 feet from the South line and 825 feet from the West line of said Section 30.

CASE 5691: (Readvertised and Reopened)

Application of Manson Oil Corporation for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 990 feet from the North line and 2600 feet from the West line of Section 25, Township 26 South, Range 31 East, North Mason-Delaware Pool, Eddy County, New Mexico.

Application of Cities Service Cil Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Tubb Gas Pool and Drinkard Cil Pool production in the wellbore of its Brunson "B" Well No. 7 located in Unit N of Section 3, Township 22 South, Range 37 East, Lea County, New Mexico.

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. 5705 Order No. R-5274

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 July 7, 1976, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 31st day of August, 1976, 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 H. T. Mattern (NCT-C) Well No. 5, located in Unit T of Section 18, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico.
- (3) That the applicant seeks authority to commingle Blinebry and Drinkard production within the wellbore of the above-described well.
- (4) That from the Drinkard zone, the subject well is capable of low marginal production only.
- (5) That from the Blinebry zone, the subject well is capable of low marginal production only.
- (6) That the applicant is also the owner and operator of the H. T. Mattern (NCT-C) Well No. 8, located in Unit A of said Section 18,
- (7) That said well is presently completed in and producing from the Drinkard formation only.

-2-Case No. 5705 Order No. R-5274

- (8) That the applicant proposes to perforate said well to also produce from the Blinebry formation, and to commingle said Blinebry production with the Drinkard production in the wellbore of said well.
- (9) That from the Drinkard formation, said well is capable of marginal production only.
- (10) That it is expected that the Blinebry formation will be capable of marginal production only upon completion of said well in said formation.
- (11) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.
- (12) That the reservoir characteristics of each of the subject zones in the aforesaid wells is expected to be such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.
- (13) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Hobbs district office of the Commission any time any of the subject wells are shut-in for 7 consecutive days.
- (14) That in order to allocate the commingled production to each of the commingled zones in each of the subject wells, the operator, upon completion of the wells, should consult with the supervisor of the Hobbs district office of the Commission to determine an allocation formula.
- (15) That an administrative procedure should be established whereby additional wells may be completed in the manner described above on applicant's H. T. Mattern (NCT-C) Lease.
- (16) That the authority for downhole commingling of production in the wellbores of the subject wells or in wells approved by administrative procedure should be subject to rescission by the Secretary-Director of the Commission and the requirement for down-hole separation equipment in the event that high marginal or top allowable production is obtained or if reservoir pressures or other reservoir conditions are encountered which render downhole commingling inadvisable.

IT IS THEREFORE ORDERED:

(1) That the applicant, Gulf Oil Corporation, is hereby authorized to commingle Blinebry and Drinkard production within the wellbore of its H. T. Mattern (NCT-C) Wells Nos. 5 and 8, located, respectively, in Units I and A of Section 18, Township 21 South, Range 37 East, NHPM, Lea County, New Mexico.

-3-Case No. 5705 Order No. R-5274

- (2) That upon completion of each of said wells to produce from both the Blinebry and Drinkard formations, the applicant shall consult with the supervisor of the Hobbs district office of the Commission to determine the proper formula for allocation of oil and gas production to each zone open in the wells.
- (3) That the operator of the subject wells shall immediately notify the Commission's Hobbs district office any time either of said wells have been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.
- (4) That the Secretary-Director of the Commission may authorize the completion of other wells on applicant's H. T. Mattern (NCT-C) Lease in Sections 7, 8, and 18, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, in the manner described in Order No. (1) above and subject to the provisions of this order when the application for such commingling is filed in accordance with the applicable provisions of Rule 303 C 2 of the Commission Rules and Regulations.
- (5) That the Secretary-Director of the Commission shall have authority to rescind downhole commingling authority for any well approved for such commingling by this order or pursuant to the provisions of Order No. (4) above in the event that high marginal or top allowable production is obtained or if reservoir pressures or other reservoir conditions are encountered which in his opinion render downhole commingling inadvisable.
- (6) 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

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OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

EHERY C. ARNOLD, Member

JOE D. RAMEY, Member & Secretary

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JOE D. RAMEY

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 1980 - HOBLS

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LAND COMMISSIONER PHIL R. LUCERO April 8, 1977



STATE GEOLOGIST EMERY C. ARNOLD

Care ks 5705

Gulf Oil Corporation P. 0. Box 670 Hobbs, New Mexico

Attention Mr. C. D. Borland

Re: Downhole Commingling Order No. R-5274 H. T. Mattern (NCT-C) No. 5-I Section 18, T-21-S, R-37-E

Gentlemen:

This is to advise that the allocation formula for downhole commingled production from the Blinebry and Drinkard Pools from the subject well is satisfactory with this office.

Yours very truly,

OIL CONSERVATION COMMISSION

Jerry Sexton Supervisor, District 1

cc-OCC, Santa Fe

Gulf Energy and Minerals Company-U.S.

PRODUCTION DEPARTMENT HOBBS AREA

C. D. Borland

April 7, 1977

P. O. Box 670 Hobbs, New Mexico 88240

H. T. Mattern (NCT-C) No. 5 Downhole Commingling Order No. R-5274

Mr. Jerry Sexton
District Supervisor
N.M. Oil Conservation Commission
P. O. Box 1980
Hobbs, NM 88240

Dear Sir:

In accordance with the provisions of Downhole Commingling Order No. R-5274, Gulf Oil Corporation recuests an allocation formula for the Blinebry and Drinkard Pools in the subject well.

In support of this allocation recuest, we are submitting recent stabilized well test data on attached Forms C-116 for the Drinkard zone and for the commingled Drinkard - Blinebry production.

It is our recommendation, based on the attached data, that the following allocation be made on the commingled production:

Blinebry Oil 64% Blinebry Gas 16% Drinkard Oil 36% Drinkard Gas 84%

Please advise if you are in agreement with this proposed allocation formula.

Yours very truly,

C. D. BORLAND

CRK:ec Att'd.

Gulf

A DIVISION OF GULF OIL CORPORATION



DIRECTOR JOE D. RAMEY

Other

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE

87501

LAND COMMISSIONER PHIL R. LUCERO September 1, 1976



5705 Re: CASE NO. Mr. Robert H. Thomas R-5274 ORDER NO. Attorney at Law Gulf Oil Corporation Box 1150 Applicant: Midland, Texas 79701 Gulf 011 Corporation Dear Sir: Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case. Yours very truly, JOE D. RAMEY Director JDR/fd Copy of order also sent to: Hobbs OCC Artesia OCC Aztec OCC_

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BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico July 7, 1976

EXAMINER HEARING

IN THE MATTER OF:

Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico.

CASES 5704 5705 5706

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

APPEARANCES

For the New Mexico Oil

William F. Carr, Esq.

Conservation Commission:

Legal Counsel for the Commission State Land Office Building

Santa Fe, New Mexico

For the Applicant:

Robert H. Thomas, Esq.

Attorney at Law Midland, Texas

James E. Sperling, Esq.

MODRALL, SPERLING, ROUHL, HARRIS,

& Sisk

Attorneys at Law

Public Service Building Albuquerque, New Mexico

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MR. NUTTER: We will now call Case Number 5704.

MR. CARR: Case 5704, application of Gulf Oil Corporation for downhole commingling, Les County, New Mexico.

MR. THOMAS: Mr. Examiner, I'm Robert H. Thomas for Gulf Oil in Midland.

We would ask that Case 5704, Case 5705 and Case 5706 be presented as a consolidation, consolidate the three cases for presentation purposes.

MR. NUTTER: We will call now Case Number 5705.

MR. CARR: Case 5705, application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico.

MR. NUTTER: And we will call Case Number 5706.

MR. CARR: Case 5706, application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico.

MR. NUTTER: Cases Numbers 5704, 5705 and 5706 will be consolidated for purpose of hearing. You may proceed.

MR. THOMAS: Mr. Examiner, I have one witness to be sworn, please.

(THEREUPON, the witness was duly sworn.)

CHARLES P. KALTEYER

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

DIRECT EXAMINATION

BY MR. THOMAS:

Would you please give us your name, employer and your present position?

A My name is Charles P. Kaltover, K-a-l-t-e-y-e-r.

I'm employed by Gulf Oil Corporation as District Proration

Engineer in the Midland District.

- Q. And have you previously testified before this Commission in that capacity?
 - A. Yes, sir, I have.

MR. THOMAS: Mr. Examiner, is the witness qualified?
MR. NUTTER: Yes, he is.

- Q (Mr. Thomas continuing.) What is Gulf seeking in this application, Mr. Kalteyer?
- A. In this application Gulf is seeking to downhole commingle Blinebry and Drinkard production in the wellbore of the H. T. Mattern (NCT-B) Well 16, the H. T. Mattern (NCT-C) Well Nos. 5 and 8 and the William A. Ramsay (NCT-B) Well No. 6 located respectively in Unit D, Section 31, Township 21 South, Range 37 East; Unit I, Section 18, Township 21 South, Range 37 East; Unit A, Section 18, Township 21 South, Range 37 East; and Unit H, Section 25, Township 21 South, Range 36 East, all in Lea County, New Mexico and to establish a procedure for administrative approval of future applications for similar downhole commingling authority on these three leases.

MR. THOMAS: Mr. Examiner, we have some exhibits on these three, one being marked.

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Mr. Examiner, may the record show that we are associated with James E. Sperling. Has that letter been received?

MR. NUTTER: We have the letter in the record.

- A (Mr. Thomas continuing.) Mr. Kalteyer, do you have a plat showing the H. T. Mattern and William A. Ramsay tracts involved in this application?
- A. Yes, sir, Exhibit One is a plat of the area and you will note that the H. T. Mattern (NCT-B) Lease is outlined in blue, the H. T. Mattern (NCT-C) Lease is outlined in red and the William A. Ramsay (NCT-B) Lease is outlined in green. The wells presently completed in the Drinkard Pool are circled in red and the wells completed in the Blinebry Pool are circled in green. Other wells on the leases are completed in either the Arrowhead, Eumont, Paddock or Penrose Skelly Pools.
- Do you have exhibits depicting the downhole particulars of these wells?
- A. Yes, sir. Exhibits Two of Case 5704, Two-A and Two-B of 5705 and Two of 5706 are schematic diagrams of the present downhole particulars of the wells together with the proposed completions after downhole commingling.
- 0. Please give us the history of the wells for which you are requesting this downhole commingling authority?
- A. The Mattern B-16 which is enclosed in a green square on Exhibit One was completed through selective perforations

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fifty-five thirty-two to lifty-seven, thirty-one on May 27th, 1972. On initial potential was a hundred and fifty-five barrels of oil per day. It was necessary to equip the well to pump three months later and by November of '75 production had declined to twelve barrels of oil per day and eleven barrels of water, after which the Blinebry perforations were squeezed off and the well deepened to sixty-eight, ten.

MR. NUTTER: When was that?

A. It was deepened after December and the completion in the Drinkard was on January 8th, 1976 through a perforated interval sixty-five, oh, one to sixty-seven, thirty-five in a four-inch liner.

On potential on January 21st, the well flowed a hundred and ten barrels of oil per day and a hundred and twenty-five barrels of water, load water, per day. Within three weeks it was necessary to equip the well to pump. On latest test, May 25th of '76, it pumped at the daily rate of forty-three barrels of oil and eighteen barrels of water, with a twenty-three hundred, sixty-two to one ratio.

The H. T. Mattern C No. 5 on Exhibit Two-A of 5705, also enclosed in a green square on Exhibit One, was drilled to a total depth of sixty-eight hundred feet and dual completed under Order No. MC-2199 in seven-inch casing in the Blinebry through selective perforations from fifty-five, oh, two to fifty-seven, twenty-six and the Drinkard through selective

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perforations from sixty-live, twenty-three to sixty-six, forty-eight.

On initial potential in July of '75 the Drinkard completion flowed sixty barrels of oil per day and twenty barrels of load water.

on initial potential the Blinebry flowed sixteen barrels of oil per day and twenty barrels of water per day. On latest test on May 21st of '76 the Drinkard flowed at the rate of seven barrels of oil per day, zero water with a forty-three thousand, two hundred and eighty-one to one ratio and the latest test on the Blinebry dated May 19th of '76 flowed five barrels of oil per day, nine barrels of water and forty-two thousand, six hundred to one ratio.

also enclosed in a green square on Exhibit One, was drilled to a total depth of sixty-seven, ninety-five and completed

December 2nd, 1975 in the Drinkard through selective perforations and five-and-a-half-inch casing from sixty-four,

sixty-four to sixty-seven, oh, eight and potentialed for a hundred and thirty-eight barrels of oil per day and forty-three barrels of load water. On latest test on May 22nd the well flowed thirty barrels of oil per day and zero barrels of water with a ratio of six thousand, three hundred and sixty-seven to one gas-oil ratio.

The W. A. Ramsay (NCT-B) Well No. 6 also enclosed

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in a green square on Exhibit One was drilled to a total depth of fifty-nine, fifty and completed April 13th, 1972, five-and-a-half-inch casing in the Blinebry through selective perforations from fifty-five, thirteen to fifty-six, ninety-three. On the initial potential on April 14th of '72 the well flowed at the rate of two hundred and fourteen barrels of oil per day. It was necessary to equip the well to pump within two weeks when it tested at the rate of a hundred and fourteen barrels of oil and a hundred and twenty-seven barrels of water per day.

In March of '76 production had declined to fifteen barrels of oil per day and a hundred and twenty-four barrels of water per day.

In April of this year the Blinebry perforations were squeezed off and the well deepened to sixty-eight, twenty-two and the well completed through selective perforations from sixty-five, forty-five to sixty-seven, fifty-four and four-inch liner in the Drinkard zone. On potential on May 15th of this year the well pumped sixty barrels of oil per day and thirty-four barrels of water per day. On latest test on May 24th it pumped at the rate of forty-three barrels of oil and twenty-seven barrels of water with twenty-three hundred and forty-nine to one gas-oil ratio.

- 0. Okay. Do you have any exhibits which set out the monthly production from each of these wells?
 - A Yes, sir, Exhibits Three-A and Three-B of Case 5704,

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Three-A and Three-B of Case 5706 are tables which list monthly oil, gas and water production through May of this year from each of the completions as well as cumulative oil production up to June 1st of '76.

Mave precedents been set in the immediate area to
downhole commingle the Blinebry and Drinkard Pools?

A Yes, under Order No. R-4492 on March 16th, 1973,
Order R-4824 on July 16th, 1974 and Order R-4914 on November 12th
of '74 the Commission authorized Continental Oil Company to
downhole commingle their Lockhart B-1 Wells 7, 8 and 9 in
Section 1, Township 22 South, Range 36 East noted in the
lower left-hand corner of Exhibit One.

MR. NUTTER: Would you give us those order numbers again, please, Mr. Kalteyer?

A. R-4492, R-4824 and R-4914.

MR. NUTTER: Thank you.

A. These wells offset Gulf's H. T. Mattern (NCT-D) and (NCT-F) leases. Also under Order No. R-5114 on November 17th, 1975 the Commission authorized to downhole commingle Gulf's H. T. Mattern (NCT-D) Well No. 8 in Unit E, Section 6, Township 22 South, Range 37 East; also the H. T. Mattern (HCT-F) Well No. 4 in Unit B in Section 1, Township 22 South, Range 37 East; and the Harry Leonard (NCT-C) Well No 17 in Unit C of Section 36, Township 21 South, Range 36 East. Also under

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Order No. DHC-196, the Commission administratively approved the downhole commingling of Gulf's Harry Leonard (NCT-C) Well No. 12 in Unit A, Section 36, Township 21 South, Range 36 East and this is an offset to our H. T. Mattern (NCT-B) No. 16 which we are requesting in Case No. 5704.

Q (Mr. Thomas continuing.) Mr. Kalteyer, is it physically possible to dual complete the four Gulf wells which are the subject of this hearing?

A. Three of the wells that are completed in five-and-a-half-inch casing would barely allow two-and-a-sixteenth inch

IJ tubing to be run. Fishing of parting tubing would be most difficult.

We anticipate that both zones in all of the wells will ultimately be pumped. We found that attempts to pump the gassey Drinkard zone from under packer are difficult and inefficient.

In order to rod pump from this depth API grade "D" three-quarter inch rods with slim hole couplings would be required in the two-and-sixteenths-inch tubing. Rod string failures in couplings would be impossible to fish and would necessitate a tubing stripping job.

The use of AFI Grade "D" rods is not very success-ful without treating for corrosion and it would not be possible to satisfactorily treat the Drinkard side for corrosion.

Dual completion of each of these wells would require replacement of present downhole equipment with two strings of tubing and rods as well as adding another pumping unit for an additional outlay of some eighty-five thousand, two hundred dollars less salvage for a net of approximately sixty-six thousand.

The one exception to this mechanical condition is the H. T. Mattern (NCT-C) Well No. 5 which is equipped with seven-inch casing and is now a dual completion in the Blinebry and the Drinkard. Commingling of both low oil volume pays in this wellbore would release one string of tubing for use elsewhere in our operations and eliminate the necessity of duplicate pumping equipment at such time as both zones require artificial lifting.

- Q Could you give us some bottom-hole pressure data on these wells?
- A. Yes, sir, we have some pressure in the area and we have Drinkard pressures at a subsea depth of three thousand and fifty based on fluid level soundings as well as a pressure bomb measurement after twenty-four hour shut-in.

In the H. T. Mattern C-6 on June 2nd of this year we had a pressure of one thousand and twenty-four psi. The H. T. Mattern F-4 on October 4th of '75 had a pressure of one thousand and sixteen psi. The Harry Leonard (NCT-C) No. 17 on October 4th of '75 had a pressure of one thousand and

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sixty-nine psi and we have one Blinebry pressure measured by bottom-hole bomb taken in our Mattern C Well No. 5 in Unit I of Section 18, Township 21, Range 37 East taken June 2nd of '76 of twelve hundred and thirty-seven psi after extrapolation to the same data.

MR. NUTTER: That's extrapolation to that minus thirty, fifty?

- A Yes, sir.
- Q (Mr. Thomas continuing.) Are you currently surface commingling Blinebry and Drinkard production on these leases?
- A. Yes, on the H. T. Mattern (NCT-C) and the William A. Ramsay (NCT-B) leases.
 - Q. You are commingling both of them?
 - A. Yes, sir, we are commingling, surface commingling.
- Q. How do you propose to make allocation of production between the Blinebry and Drinkard Pools?
- A. We will submit production data to the Hobbs District Office and Supervisor in order that a split may be established based on the projected recovery from the two zones.
- 0. What do you propose in the event that secondary recovery operations take place in the area?
- A. We will recommend separation of zones as deemed necessary for efficient secondary recovery operations.
 - MR. NUTTER: As being necessary or unnecessary?
 - A. No, as deemed necessary.

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MR. NUTTER: As deemed necessary? Okay.

- Q (Mr. Thomas continuing.) What is your opinion regarding possible cross flows between these zones?
- A. We believe that we will be able to keep the wells pumped down sufficiently to prevent possible cross flows where they are on artificial lift.
- Q. What do you anticipate regarding the production capabilities of these wells when commingled?
- A. Well, they are currently marginal producers now and with the rapid fall off of the capabilities of both zones we believe the wells will not be capable of producing top allowables of the Blinebry Pool of a hundred and seven barrels of oil and four hundred and twenty-eight MCF of gas and we would recommend that the wells be allowed to produce at their ability up to the top allowable of the Blinebry Pool.
- Will you once again state for the record what Gulf
 is seeking in this application?
- A In order to protect correlative rights, prevent waste and obtain maximum oil recovery in the most efficient and feasible manner we request the authority to downhole commingle the Blinebry and Drinkard zones in our H. T. Mattern (NCT-B) Well No. 16, our H. T. Mattern (NCT-C) Wells No. 5 and 8 and the William A. Ramsay (NCT-B) Well No. 6 and to establish a procedure for administrative approval for future applications for similar downhole commingling authority on

these three leases.

Were these exhibits presented to the Examiner prepared by you or under your supervision?

A Yes, they were.

MR. THOMAS: Mr. Examiner, we move that these exhibits be admitted into evidence and that's all that we have at this time, we would close.

MR. NUTTER: What was the last exhibit, the Three series?

MR. KALTEYER: Yes. Exhibit Four was the production performance.

MR. THOMAS: We have Exhibits One, Two-A, Two-B, Three and Four.

MR. KALTEYER: Right.

MR. NUTTER: Okay, Gulf Exhibits One, Two, some extra Two's, Three and some extra Three's and Four will be admitted into evidence.

(THEREUPON, Gulf's Exhibits One through Four were admitted into evidence.)

CROSS EXAMINATION

BY MR. NUTTER:

Mr. Kalteyer, of these four wells we are talking about this morning, only one of them is currently producing from both of the zones, is that correct?

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- And a couple of the others have produced from the Blinebry but aren't any longer?
- A That is correct. One has not been tested in the Blinebry.
- Now, do you think you have sufficient information on the Mattern No. 5 to make a determination now as to the future split of production in that well or will the producing characteristics change enough when you commingle production in the wellbore that these figures wouldn't be applicable?
- A. I would believe that the production history that we have on them now would probably be sufficient for that.
- Q And that is covered by Exhibit Number Three-A and Three-B, I believe, the production history from the two zones in that well?
 - A Yes, sir, that is correct.
- Q Now, the only bottom-hole pressure that you have for the Blinebry in this area is from that C No. 5 in Unit I of Section 18, is that correct?
 - A Yes, sir.
 - And that is not one of these wells, is it?
- A. No, sir, that is not.
 - Q. Is this a typical Blinebry pressure in this area, if so, how do you know?
 - A Well, we at our last hearing that we had for

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commingling of these other cases we were unable to establish any Blinebry in the area and we did come up with this one test to give us a feel for the Blinebry pressure.

- Q Is this C-5 Well up here in Section 18 on the north end of your Exhibit Number One, is that the --
 - A. Yes, sir.
- Q That's the well that has a little green square around it then, it's in Unit I of Section 18?
 - A. Yes, sir.
 - Q. And was previously commingled or what?
- A They show that as having been completed. All right, yes, this is one of the wells that we are applying for.
 - Q This is one of the subject wells?
 - A Yes, sir. I stand corrected there.
 - Q Is this a typical Blinebry pressure in this area?
- A. Well, we don't really know. We believe that it probably is but we don't have other Blinebry, we were unable to establish any in the literature in this immediate area.
- Are these wells of yours which you previously had gotten approval for in the Continental's wells down here, in the south end of Exhibit Number One, the only Blinebry producers in this portion of the field?
- A No, sir, I did not attempt to check out the other Blinebry completions in all of the other tracts as far as indicating them on this plat but there are other Blinebry

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completions in this area.

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Q But there are still no Blinebry bottom-hole pressures?

A We have no data, we could find none in the literature.

Now, I notice that there seems to be a rather wide diversity of gas-oil ratios in the area. Each of these proposed downhole comminglings would be subject to a gas-oil ratio limitation for that pool, would it not?

A Yes, sir, with the Blinebry limitation of four hundred and twenty-eight MCF per day which is the lesser of the two.

MR. NUTTER: Are there any further questions of Mr. Kalteyer? He may be excused.

(THEREUPON, the witness was excused.)

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

Thomas?

MR. THOMAS: Mi, Examiner, we have nothing further.

MR. NUTTER: Does anyone have anything they wish to offer in Cases Number 5704, 5705 and 5706?

We will take these cases under advisement.

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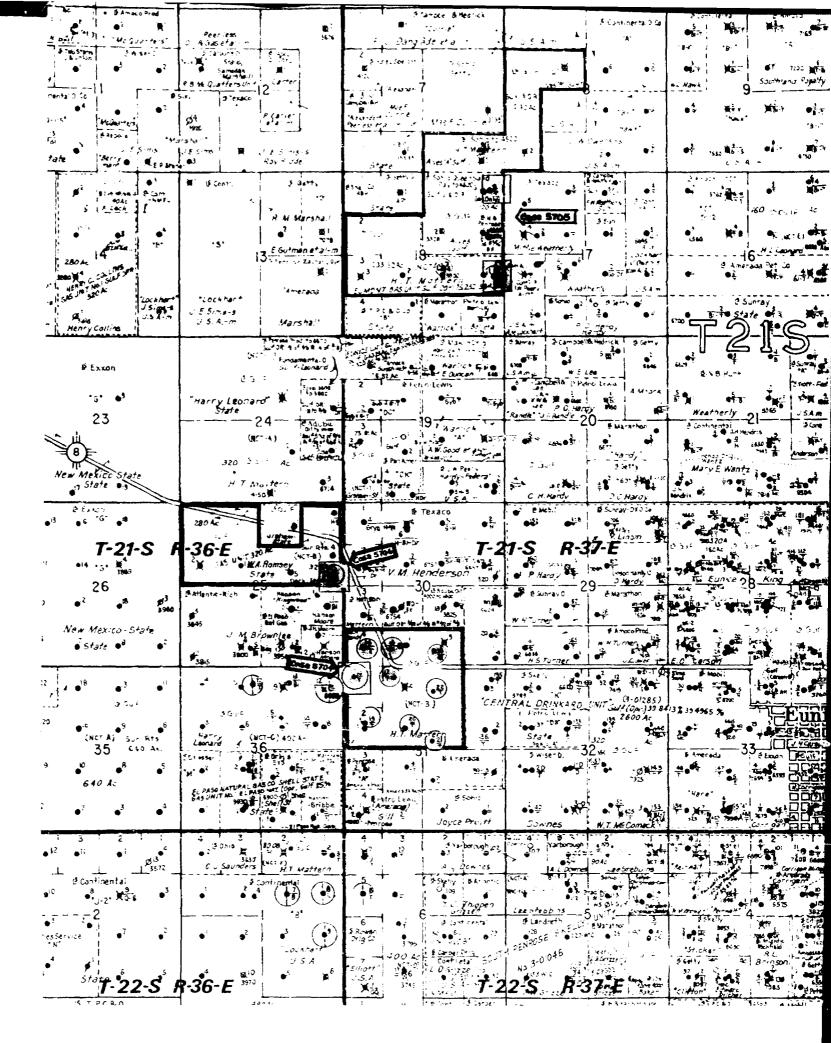
REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Sidney F. Morrish, C.S.R.

I do hereby certify that the foregoing is a complete with the foregoing in the Emuration March & ed tase No. 5707-05-06 heard by me on 7/7 1976

New Mexico Oil Conservation Commission



GULF OIL CORPORATION LEA COUNTY, NEW MEXICO 1" - 3000'

LEGEND

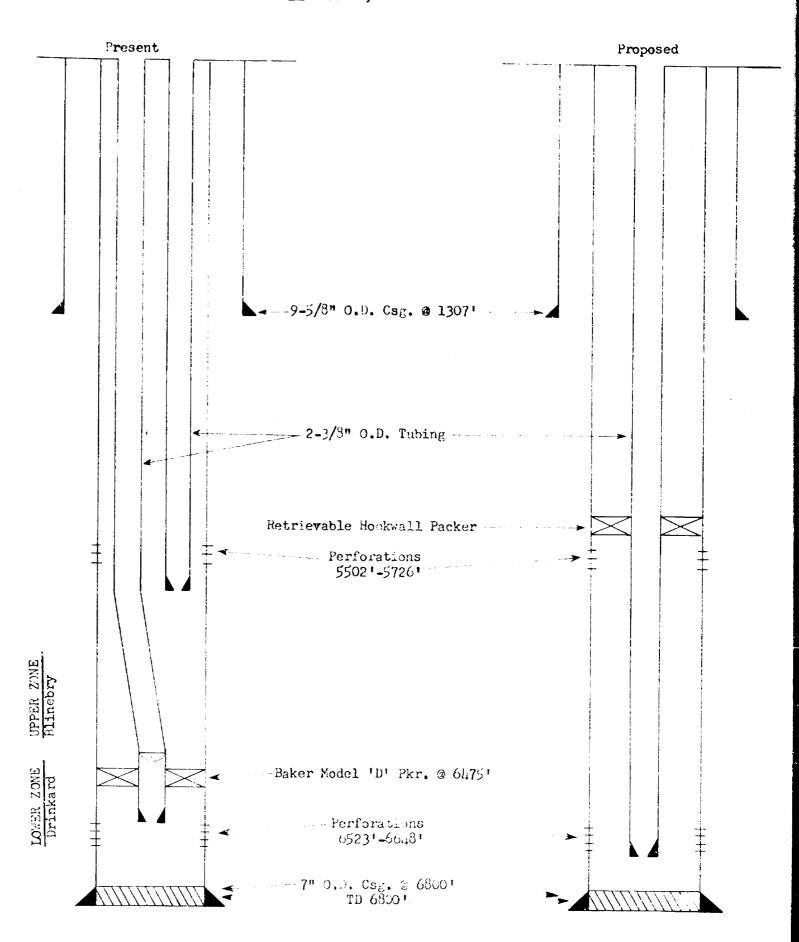
Exhibito Co 5705 DRINKARD POOL

BLINEBRY POOL

PROPOSED BLINEBRY-DRINKARD COMMINGLING

SCHEMATIC DIAGRAM

UNIT 1, 1990' FSL 4 330' FEL SEC 19, T-21-S, R-37-E



DEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2 A

CASE NO. 5 705

EXHIBIT 2A CASE 5705

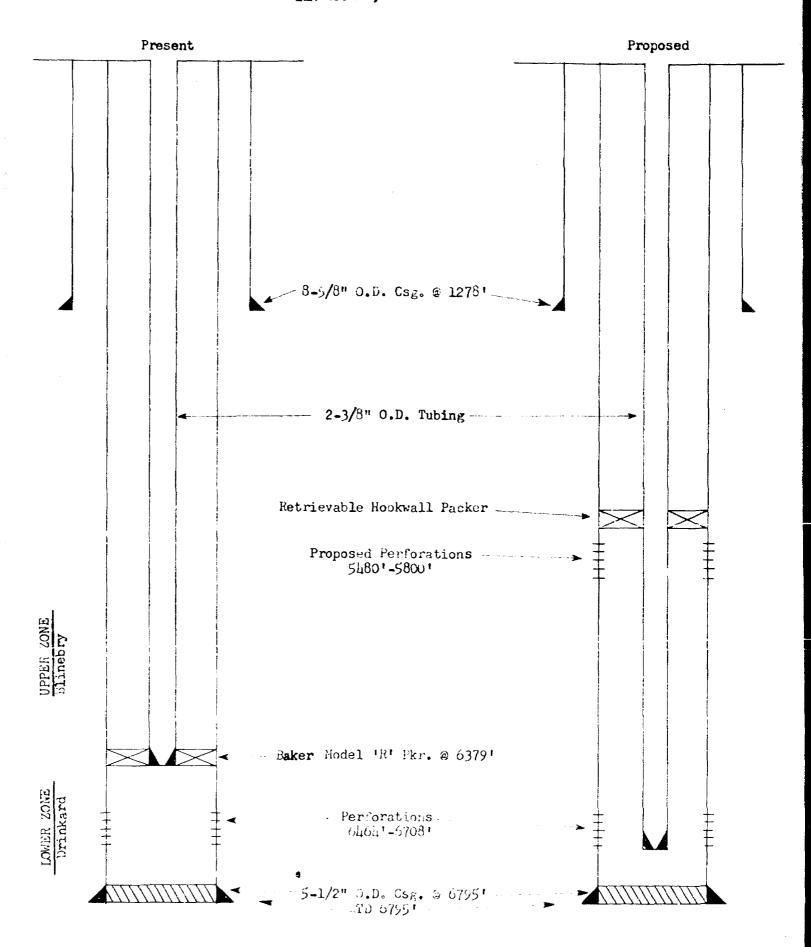
SCHEMATIC DIAGRAM

CULF OIL CORPOLATION

H.T. MATTERS (NCT-C) WELL No. 8.

UNIT A, 660' FNL & 447' FEL, SEC 18, T-21-S, R-37-E

LEA COUNTY, NEW MEXICO



BEFORE ENAMINED MUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. 28

CASE NO. 5705

EXHIBIT 2B CASE 5705

TABULATION OF PRODUCTION GULF OIL CORPORATION

H. T. MATTERN (NCT-C) WELL NO. 5
BLINEBRY OIL AND GAS POOL
LEA COUNTY, NEW MEXICO

MONTH	OIL (BBLS)	GAS (MCF)	WATER (BBLS)
	19	<u>75</u>	
August September October November December	261 220 224 268 257	8,420 13,889 9,422 9,971 9,056	130 390 280 240 205
	. 19	76	
January February March April May	255 230 223 166 142	10,400 10,000 10,439 7,855 4,982	205 319 300 330 279
CUMULATIVE (OIL PRODUCTION	6-1-76	2,296

EXHIBIT 3A CASE 5705

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3/7
CASE NO. 5705

TABULATION OF PRODUCTION GULF OIL CORPORATION

H. T. MATTERN (NCT-C) WELL NO. 5 DRINKARD POOL LEA COUNTY, NEW MEXICO

MONTH	OIL (BBLS)	GAS (MCF)	WATER (BBLS)
	1975		
June	-	-	-
July	668	10,675	-
August	523	18,230	-
September `	304	13,245	•
October	668	676	-
November	565	368	-
December	314	201	•
	1976		
January	311	163	-
February	439	277	-
March	133	73	-
April	120	70	-
May	204	533	-

CUMULATIVE OIL PRODUCTION 6-1-76

EXHIBIT 3B CASE 5705

BEFORE EXAMINER NUTTER
OIL CONSEINATION ECAMISSION
FRINGIT NO. 38
CASE NO. 5705

8,630

TABULATION OF PRODUCTION GULF OIL CORPORATION

H. T. MATTERN (NCT-C) WELL NO. 8 DRINKARD POOL LEA COUNTY, NEW MEXICO

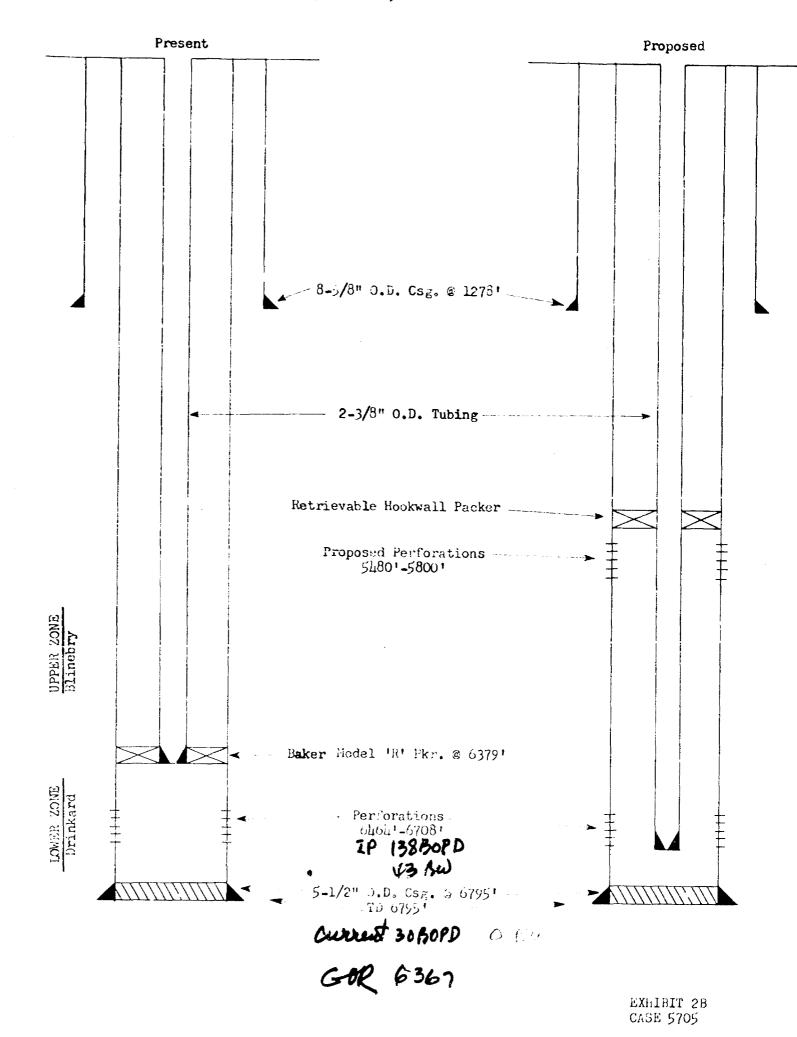
MONTH	OIL (BBLS)	GAS (MCF)	WATER (BBLS)		
	<u>1975</u>				
November December	2,357	27,983	155		
	1976				
January February March April May	1,603 1,270 1,319 1,220 861	30,366 28,875 26,520 26,419 11,947	-		
CUMULATIVE	OIL PRODUCTION	6- i- 76	8,630		

EXHIBIT 4
CASE 5705

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2/
CASE NO. 5705

SCHEMATIC DIAGRAM

CULE OIL COMPOSATION
H.T. MATTERS (NCT-C) WELL No. 8
UNIT A, 660' FNL & LLT' FEL, SEC 18, T-21-S, R-37-E
LEA COUNTY, NEW MEXICO



SCHEMATIC DIAGRAM

CULF OIL CORPORATION H.T. MATTERN (NCT-C) WELL No. 5 UNIT I, 1980' FSL & 330' FEL SEC 18, T-21-S, R-37-E LEA COUNTY, NEW MEXICO

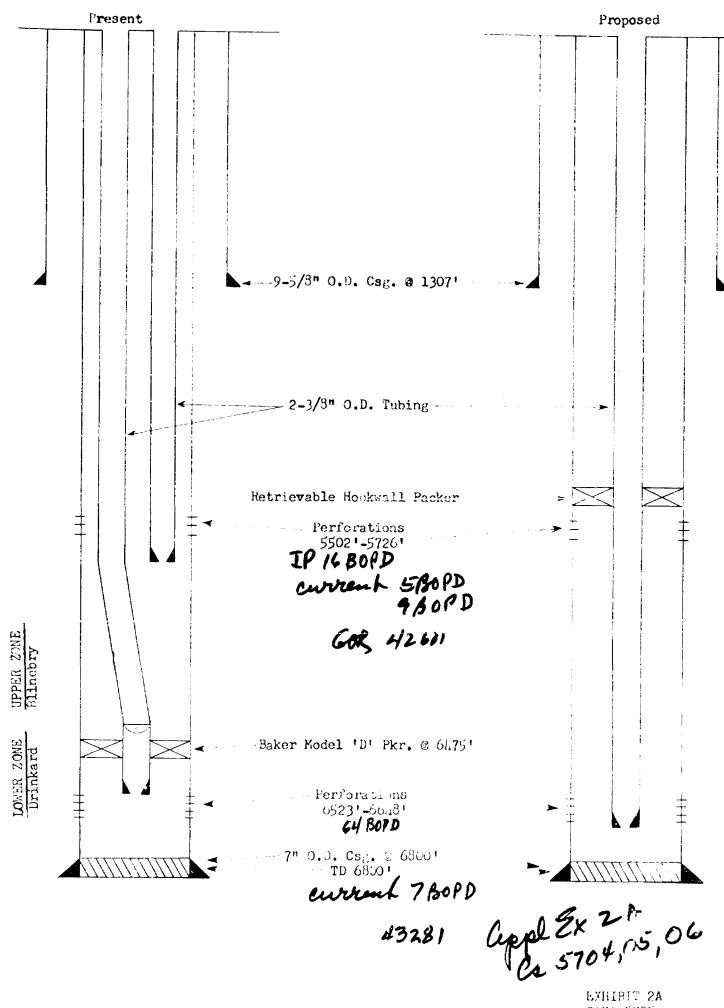


EXHIBIT 2A CASE 5705

TABULATION OF PRODUCTION GULF OIL CORPORATION

H. T. MATTERN (NCT-C) WELL NO. 8 DRINKARD POOL LEA COUNTY, NEW MEXICO

MONTH	OIL (BBLS)	GAS (MCF)	WATER (BBLS)
	1975	<u>.</u>	
November December	2,357	27,983	155
	1976	5	
January February March April May	1,603 1,270 1,319 1,220 861	30,366 28,875 26,520 26,419 11,947	-
CUMULATIVE OI	L PRODUCTION	6-1 -7 6	8,630

EXHIBIT 4
CASE 5705

TABULATION OF PRODUCTION GULF OIL CORPORATION

H. T. MATTERN (NCT-C) WELL NC. 5
DRINKARD POOL
LEA COUNTY, NEW MEXICO

MONTH	OIL (BBLS)	GAS (MCF)	Water (BBLS)
	<u>19</u>	75	
June July August September October November December	668 523 304 668 565 314	10,675 18,230 13,245 676 368 201	-
	19	276	
January February March April May	311 439 133 120 204	163 277 73 70 533	- - -
CUMULATIVE OI	L PRODUCTION	6-1-76	8,630

EXHIBIT 3B CASE 5705

TABULATION OF PRODUCTION GULF OIL CORPORATION

H. T. MATTERN (NCT-C) WELL NO. 5
BLINEBRY OIL AND GAS POOL
LEA COUNTY, NEW MEXICO

MONTH	OIL	GAS	WATER
	(BBLS)	(MCF)	(BBLS)
	<u>19</u>	<u>75</u>	
August	261	8,420	130
September	220	13,889	390
October	224	9,422	280
November	268	9,971	240
December	257	9,056	205
	<u>19</u>	<u>76</u>	
January	255	10,400	205
February	230	10,000	319
March	223	10,439	300
April	166	7,855	330
May	142	4,982	279
CUMULATIVE OI	L PRODUCTION	6-1-76	2,296

EXHIBIT 3A CASE 5705

TABULATION OF PRODUCTION GULF OIL CORPORATION

H. T. MATTERN (NCT-C) WELL NO. 8

DRINKARD POOL

LEA COUNTY, NEW MEXICO

MONTH	OIL (BBLS)	GAS (MCF)	WATER (BBLS)
	19	<u>75</u>	
November December	2,357	27,983	- 155
<u>1976</u>			
January February March April May	1,603 1,270 1,319 1,220 861	30,366 28,875 26,520 26,419 11,947	- - - -
CUMULATIVE	OIL PRODUCTION	6-1-76	8,630

EXHIBIT 4
CASE 5705

TABULATION OF PRODUCTION GULF OIL CORPORATION

H. T. MATTERN (NCT-C) WELL NO. 5
DRINKARD POOL
LEA COUNTY, NEW MEXICO

MONTH	OIL (BBLS)	GAS (MCF)	WATER (BBLS)
	<u>19</u>	<u>75</u>	
June July August September October November December	- 668 523 304 668 565 314	10,675 18,230 13,245 676 368 201	- - - - -
	19	<u>76</u>	
January February March April May	311 439 133 120 204	163 277 73 70 533	-
CUMULATIVE OIL	PRODUCTION	6-1-76	8,630

EXHIBIT 3B CASE 5705

TABULATION OF PRODUCTION GULF OIL CORPORATION

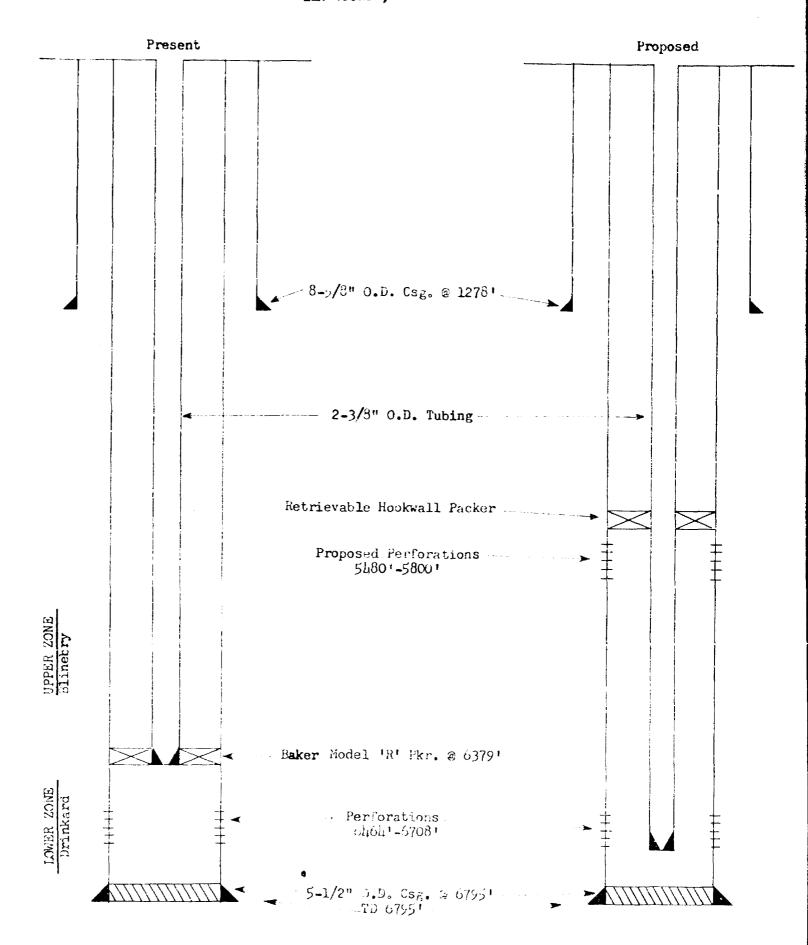
H. T. MATTERN (NCT-C) WELL NO. 5
BLINEBRY OIL AND GAS POOL
LEA COUNTY, NEW MEXICO

MONTH	OIL (BBLS)	GAS (MCF)	WATER (BBLS)
	<u>19</u>	975	
August September October November December	261 220 224 268 257	8,420 13,889 9,422 9,971 9,056	130 390 280 240 205
_	<u>19</u>	<u> </u>	
January February March April May	255 230 223 166 142	10,400 10,000 10,439 7,855 4,982	205 319 300 330 279
CUMULATIVE OII	PRODUCTION	6-1-76	2,296

EXHIBIT 3A CASE 5705

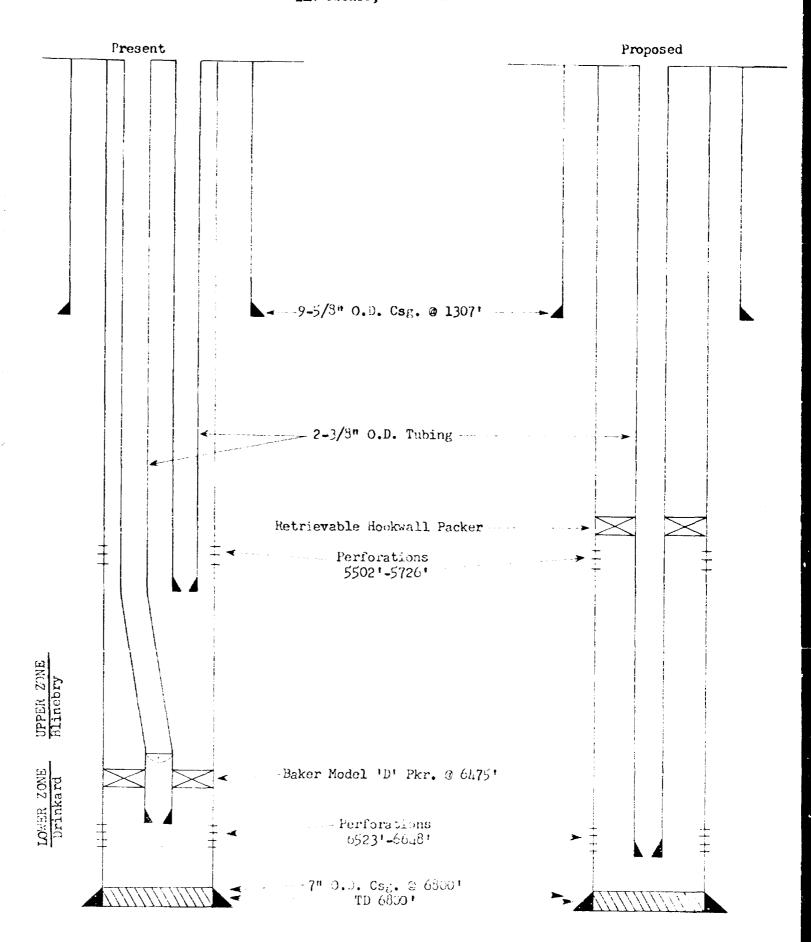
SCHEMATIC DIAGRAM

CULF OIL COMPONATION
H.T. MATTERN (NCT-C) WELL No. 8
UNIT A, 660' FNL & 447' FEL, SEC 18, T-21-S, R-37-E
LEA COUNTY, NEW MEXICO



SCHEMATIC DIAGRAM

GULF DIL COMPORATION
H.T. MATTERN (NOT-C) WELL No. 5
UNIT I, 1980' PSL & 330' FSL SEC 18, T-21-S, R-37-E
LEA COUNTY, NEW MEXICO



Care 2705

Gulf Energy and Minerals Company-U.S.

PRODUCTION DEPARTMENT

MIDLAND DISTRICT

P. C. Drawer 1150 Midland, Texas 79701

B. L. Choate
 DISTRICT PRODUCTION MANAGER
R. F. Ward, Ur.
 DISTRICT CRERATIONS MANAGER
C. E. Fields

CISTR CT SERVICES MANAGER

A. J. Evans, Jr.
DISTRICT ENVIRONMENTAL, SAFETY,
AND JOINT OPERATIONS MANAGER

J. C. Howard GISTRICT EMPLOYEE RELATIONS MANAGER June 10, 1976

011 Conservation Commission Post Office Box 2088 Santa Fe, New Mexico 87501

ATTN: Mr. Joe D. Ramey

Application of Gulf Oil Corporation for Exception to Rule 303 to Allow Down-Hole Commingling, Iea County, New Nexico

Gentlemen:

Gulf Oil Corporation respectfully requests that a hearing be scheduled on your Examiner's Hearing Docket of July 7, 1976 to consider Gulf's application for down-hole commingling of the below listed wells in the Drinkard and Blinebry Pools.

H. T. Mattern (NCT-B) Well No. 16 "Unit D, Section 31, T-21-S, R-37-E H. T. Mattern (NCT-C) Well No. 5 Unit I, Section 18, T-21-S, R-37-E H. T. Mattern (NCT-C) Well No. 8 Unit A, Section 18, T-21-S, R-37-E

William A. Ramsay (NCT-B) Well No. 6 Unit H, Section 25, T-2, , R-36-E

Gulf will request that the combiner allowable of the two zones in each well be assigned at the wells commingled ability to produce, but not to exceed one top oil and gas allowable as established for the Blinebry Oil and Gas Pool, i. e., 107 barrels of oil and 428 MCF per day of gas. Culf



A DIVISION OF GULF OIL CORPORATION

OIL CONSERVATION COMMISSION PAGE 2 June 10, 1976

will further seek authority to establish a procedure for administrative approval of future applications for similar down-hole commingling authority on these three leases.

Yours very truly,

R. F. WARD, JR.

CFK:mw

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

James E. Sperling
Post Office Box 2168
Albuquerque, New Mexico 87100

J. R. MODRALL
JAMES E. SPERLING
JOSEPH E. ROEHL
GEORGE T. HARRIS. JR.
DANIEL A. SISK
LELAND S. SEDBERRY. JR
ALLEN C. DEWEY, JR
FRANK H. ALLEN, JR.
JAMES A. PARKER
JOHN R. COONEY
KENNETH L. HARRIGAN
PETER J. ADANG
DALE W. EK
DENNIS J. FALK
JOE R. G. FULCHER
ARTHUR D. MELENDRES
JAMES P. HOUGHTON
GEORGE J. HOPKINS
PAUL M. FISH
JUDY A. FRY

LAW OFFICES OF

MODRALL, SPERLING, ROEHL, HARRIS & SISK

PUBLIC SERVICE BUILDING

P. O. BOX 2168

ALBUQUERQUE, NEW MEXICO 87103

TELEPHONE 243-45H AREA CODE 505

JOHN F. SINMS(1885-1954) AUGUSTUS T SEYMOUR

June 14, 1976

Mr. Joe D. Ramey Secretary-Director Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501

Application of Gulf Oil Corporation for Exception to Rule 303 to Allow Down-Hole Commingling, Lea County, New Mexico

Dear Mr. Ramey:

Enclosed is Entry of Appearance on behalf of the Applicant, Gulf Oil Corporation, in the above-captioned application, which has been requested for docketing at the Examiner's Hearing on July 7, 1976.

Very truly yours,

James E. Sperling

/jev

Enclosure

Mr. Charles C. Hairston, w/encl. Divisional Attorney Gulf Energy and Minerals Company-U.S.

> Mr. R. F. Ward, Jr., w/encl. District Operations Manager Gulf Energy and Minerals Company-U.S.

BEFORE THE OIL CONSERVATION COMMISSION STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF GULF OIL CORPORATION FOR EXCEPTION TO RULE 303 TO ALLOW DOWN-HOLE COMMINGLING, LEA COUNTY, NEW MEXICO

Case No.

ENTRY OF APPEARANCE

The undersigned, Modrall, Sperling, Roehl, Harris & Sisk, of Albuquerque, New Mexico, hereby enter their appearance for the Applicant, Gulf Oil Corporation, with its house counsel of Midland, Texas.

MODRALL SPERLING ROEHL HARRIS & SISK

James E. Sperling, Attorneys For

Gulf Oil Corporation

P. O. Box 2168
Albuquerque, New Mexico 87103
Telephone: (505) 243-4511

IL CONSELIVATION COMM Culf Energy and Minerals Company-U.S. 1000 Street

PRODUCTION DEPARTMENT MIDLAND DISTRICT

B. L. Choate DISTRICT PRODUCTION MANAGER
R. F. Ward, Ur.
DISTRICT OPERATIONS MANAGER C. E. Fields

June 10, 1976

P. O. Drawer 1150

DISTRICT SERVICES MANAGER A. J. EVANS, Jr.
DISTRICT ENVIRONMENTAL, SAFETY,
AND JOINT OPERATIONS MANAGER J. C. Howard DISTRICT EMPLOYEE RELATIONS MANAGER

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

ATTN: Mr. Joe D. Ramey

RE: Application of Gulf Oil Corporation for Exception to Rule 303 to Allow Down-Hole Commingling, Lea County, New Mexico

Gentlemen:

Gulf Oil Corporation respectfully requests that a hearing be scheduled on your Examiner's Hearing Docket of July 7, 1976 to consider Gulf's application for down-hole commingling of the below listed wells in the Drinkard and Blinebry Pools.

> H. T. Mattern (NCT-B) Well No. 16 Unit D, Section 31, T-21-S, R-37-E

> H. T. Mattern (NCT-C) Well No. 5 Unit I, Section 18, T-21-S, R-37-E

> H. T. Mattern (NCT-C) Well No. 8 Unit A, Section 18, T-21-S, R-37-E

William A. Ramsay (NCT-B) Well No. 6 Unit H, Section 25, T-21-S, R-36-E

Gulf will request that the combined allowable of the two zones in each well be assigned at the wells' commingled ability to produce, but not to exceed one top oil and gas allowable as established for the Rlinebry Oil and Gas Pool, i. c., 107 barrels of oil and 428 MCF per day of gas. Gulf



A DIVISION OF GUEF OIL CORPORATION

Care 5705

OIL CONSERVATION COMMISSION PAGE 2
June 10, 1976



will further seek authority to establish a procedure for administrative approval of future applications for similar down-hole commingling authority on these three leases.

Yours very truly,

R. F. WARD, JR.

CFK: mw

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

James E. Sperling
Post Office Box 2168
Albuquerque, New Mexico 87100

- That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.
- That the reservoir characteristics of each of the subject zones in the aforesaid wells is expected to be such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.
- That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Hobbs district office of the Commission any time any of the subject wells are shut-in for 7 consecutive days.
- (14) That in order to allocate the commingled production to each of the commingled zones in each of the subject wells, the operator, upon completion of the wells, should consult with the supervisor of the Hobbs district office of the Commission to determine an allocation formula.
- (15) That an administrative procedure should be established whereby additional wells may be completed in the manner described above on applicant's H. T. Mattern and Harry Lognard Logses.
- (16) That the authority for downhole commingling of production in the wellbores of the subject wells or in wells approved by administrative procedure should be subject to rescission by the Secretary-Director of the Commission and the requirement for down-hole separation equipment in the event that high marginal or top allowable production is obtained or if reservoir pressures or other reservoir conditions are encountered which render down-hole commingling inadvisable.

IT IS THEREFORE ORDERED:

(NCT-C)

- (1) That the applicant, Gulf Oil Corporation, is hereby authorized to commingle Blinebry and Drinkard production within the wellbore of its H. T. Mattern Wells Nos. 3 and 8, and it is represented Well Ho. 17 located, respectively, in Units I and A of Section 18. Township 21 South, Range 37 East, and Unit 8 of Section 36, Township 21 South, Range 36 East, and Unit 8 of Section 36, Township 21 South, Range 36 East, all in Lea County, New Mexico.
- (2) That upon completion of each of said wells to produce from both the Blinebry and Drinkard formations, the applicant shall consult with the supervisor of the Hobbs district office of the Commission to determine the proper formula for allocation of oil and gas production to each zone open in the wells.
- (3) That the operator of the subject wells shall immediately notify the Commission's Hobbs district office any time and of said wells have been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.

(NCT-C)

,7,8, and 18,

- (4) That the Secretary-Director of the commission may authorize the completion of other wells on applicant's H. T. Mattern and Warry because Leases in Sections 2. Township 21 South, Range 36 East, NMPM, and Sections 6 and 7. When his 22 South, Range 37 East, NMPM, and Sections 6 and 7. When his 22 South, Page 25 and NMPM, Lea County, New Mexico, in the manner described in Order No. (1) above and subject to the provisions of this order when the application for such commingling is filed in accordance with the applicable provisions of Rule 303 C 2 of the Commission Rules and Regulations.
- (5) That the Secretary-Director of the Commission shall have authority to rescind downhole commingling authority for any well approved for such commingling by this order or pursuant to the provisions of Order No. (4) above in the event that high marginal or top allowable production is obtained or if reservoir pressures or other reservoir conditions are encountered which in his opinion render downhole commingling inadvisable.
- (6) 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 herein-above designated.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

EMERY CARNOLD Member

JOE D. RAMEY, Member & Secretary

SEAL