

R-1636  
Suzuki, Majors  
R-1636-A all over  
top and all over for my work.

request amendment of  
Rule 4 and Rule 5  
of R-1638

998

Ethel - please bring out  
R.W. Byram's copy  
of this order when you  
type it.

CASE 2348: Application of THE  
BRITISH-AMERICAN Oil Co. for an  
amendment of ORDER NO. R-1638.

-asa // o.

2348

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plication, Transcript,

all Exhibits, Etc.

GOVERNOR  
EDWIN L. MECHEM  
CHAIRMAN

State of New Mexico  
Oil Conservation Commission



LAND COMMISSIONER  
E. S. JOHNNY WALKER  
MEMBER

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

P. O. BOX 871  
SANTA FE

August 29, 1961

Mr. Burns Errebo  
Box 466  
Simms Building  
Albuquerque, New Mexico

Re: Case No. 2348  
Order No. R-1638-A  
Applicant:  
The British-American Oil Producing  
Company

Dear Sir:

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

Very truly yours,

A handwritten signature in cursive script, reading "A. L. Porter, Jr.", is written over the typed name.

A. L. PORTER, Jr.  
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC   x  

Artesia OCC           

Aztec OCC   x  

OTHER                                 

A handwritten signature in cursive script, reading "Mr. Burns Errebo", is written over the "OTHER" line.

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. 1867  
Order No. R-1638

APPLICATION OF THE BRITISH-AMERICAN  
OIL PRODUCING COMPANY FOR A PRESSURE  
MAINTENANCE PROJECT IN ITS WEST BISTI-  
LOWER GALLUP SAND UNIT, BISTI-LOWER  
GALLUP OIL POOL, SAN JUAN COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on January 27, 1960, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 24th day of March, 1960, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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 British-American Oil Producing Company is the operator of the West Bisti Lower Gallup Sand Unit, the initial participation area of which comprises the proposed West Bisti Pressure Maintenance Project Area, described as follows:

TOWNSHIP 25 NORTH, RANGE 13 WEST, NMPM

Section 1: E/2, N/2 NW/4  
Section 12: E/2 NE/4

TOWNSHIP 26 NORTH, RANGE 13 WEST, NMPM

Section 18: SW/4, S/2 SE/4  
Section 19: N/2, N/2 SE/4, SE SE/4  
Section 20: W/2, S/2 SE/4, SE/4  
Section 21: SW/4  
Section 26: SW/4, S/2 SE/4

CASE No. 1867  
Order No. R-1638

Section 27:	S/2, S/2 N/2
Section 28:	All
Section 29:	N/2 N/2
Section 30:	N/2 NE/4
Section 33:	N/2 NE/4
Section 34:	N/2 NW/4, NE/4
Section 35:	N/2, N/2 SW/4, SE/4
Section 36:	W/2, SE/4

TOWNSHIP 26 NORTH, RANGE 14 WEST, NMPM

Section 13: S/2 NE/4, SE/4

(3) That the applicant proposes to institute a pressure maintenance project in the above-described area by the injection of water into the Gallup formation through seventeen wells.

(4) That the applicant proposes that each month an allowable be established for the West Bisti Pressure Maintenance Project, said allowable to be determined by multiplying the current Northwest New Mexico normal unit allowable for an 80-acre proration unit times the number of 80-acre proration units in the pressure maintenance project, including in such computation those proration units having wells which are shut-in or wells which are used as injection wells, and further including those proration units or portions thereof which have no well located on them.

(5) That only acreage which has been developed and proven productive by the drilling of a well should receive allowable credit.

(6) That the allowable assigned to any well in the project area should be no greater than the demonstrated ability of such well to produce, subject to top unit allowable for the pool. In the case of injection wells or curtailed or shut-in producing wells, the allowable should be no greater than the demonstrated capacity of the well to produce, as reflected by a 24-hour test at a stabilized rate of production immediately prior to such conversion or shut-in or curtailment. In no event should such allowable be greater than the current normal unit allowable for the Bisti-Lower Gallup Oil Pool during the month of transfer multiplied by the well's acreage factor.

(7) That special rules and regulations for the operation of the West Bisti Pressure Maintenance Project should be promulgated and for operational convenience, such rules should provide certain flexibility in authorizing the production of the project allowable from any well or wells in the Project. Such flexibility will not, in this case, impair correlative rights.

(8) That Order Nos. R-1316 and R-1416 shall be superseded.

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CASE No. 1867  
Order No. R-1638

IT IS THEREFORE ORDERED:

(1) That Commission Order Nos. R-1316 and R-1416 be and the same are hereby superseded.

(2) That the applicant, The British-American Oil Producing Company, be and the same is hereby authorized to institute a pressure maintenance project by the injection of water into the Gallup formation through the following-described wells:

British-American Marye Well No. 2, NE/4 NE/4 of Section 12, T-25-N, R-13-W.

British-American Marye Well No. 5, NE/4 SE/4 of Section 1, T-25-N, R-13-W.

Honolulu State "D" Well No. 1, NW/4 NW/4 of Section 36, T-26-N, R-13-W.

British-American Marye "B" Well No. 1, SW/4 NE/4 of Section 35, T-26-N, R-13-W.

British-American Marye "B" Well No. 4, NE/4 SW/4 of Section 35, T-26-N, R-13-W.

British-American Douthit "B" Well No. 4, SW/4 NE/4 of Section 27, T-26-N, R-13-W.

British-American Douthit "B" Well No. 8, NE/4 SW/4 of Section 27, T-26-N, R-13-W.

British-American Douthit "B" Well No. 12, SW/4 SW/4 of Section 27, T-26-N, R-13-W.

British-American Salge "B" Well No. 5, NE/4 NE/4 of Section 33, T-26-N, R-13-W.

BMG-Foster Well No. 1, NE/4 SW/4 of Section 21, T-26-N, R-13-W.

BMG-Foster Well No. 5, SW/4 SW/4 of Section 21, T-26-N, R-13-W.

British-American Douthit "B" Well No. 11, NE/4 NE/4 of Section 29, T-26-N, R-13-W.

Skelly Duff Well No. 9, NW/4 NW/4 of Section 20, T-26-N, R-13-W.

Skelly Duff Well No. 8, SE/4 NE/4 of Section 19, T-26-N, R-13-W.

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Skelly Duff Well No. 11, NW/4 SE/4 of Section 19,  
T-26-N, R-13-W.

British-American Navajo Well No. 2, SW/4 SE/4 of  
Section 13, T-26-N, R-14-W.

British-American Navajo Well No. 3, NE/4 SE/4 of  
Section 13, T-26-N, R-14-W.

(3) That special rules and regulations governing the operation of the West Bisti Pressure Maintenance project, Bisti-Lower Gallup Oil Pool, San Juan County, New Mexico, be and the same are hereby promulgated as follows, effective April 1, 1960.

SPECIAL RULES AND REGULATIONS FOR THE  
BRITISH-AMERICAN OIL PRODUCING COMPANY'S  
WEST BISTI PRESSURE MAINTENANCE PROJECT

RULE 1. That the project area of The British-American Oil Producing Company's West Bisti Pressure Maintenance Project shall comprise the following-described acreage:

TOWNSHIP 25 NORTH, RANGE 13 WEST, NMPM

Section 1: E/2, N/2 NW/4  
Section 12: E/2 NE/4

TOWNSHIP 26 NORTH, RANGE 13 WEST, NMPM

Section 18: SW/4, S/2 SE/4  
Section 19: N/2, N/2 SE/4, SE SE/4  
Section 20: W/2, S/2 NE/4, SE/4  
Section 21: SW/4  
Section 26: SW/4, S/2 SE/4  
Section 27: S/2, S/2 N/2  
Section 28: All  
Section 29: N/2 N/2  
Section 30: N/2 NE/4  
Section 33: N/2 NE/4  
Section 34: N/2 NW/4, NE/4  
Section 35: N/2, N/2 SW/4, SE/4  
Section 36: W/2, SE/4

TOWNSHIP 26 NORTH, RANGE 14 WEST, NMPM

Section 13: S/2 NE/4, SE/4

RULE 2. The allowable for the Project shall be the sum of the allowables of the several wells within the project area, including those wells which are shut-in, curtailed, or used as

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injection wells. Allowables for all wells shall be determined in a manner hereinafter prescribed.

RULE 3. Allowables for injection wells may be transferred to producing wells within the project area, as may the allowables for producing wells which, in the interest of more efficient operation of the Project, are shut-in or curtailed because of high gas-oil ratio or are shut-in for any of the following reasons: Pressure regulation, control of pattern or sweep efficiencies, or to observe changes in pressures or changes in characteristics of reservoir liquids or progress of sweep.

RULE 4. The allowable assigned to any injection well or any well which is shut-in or is curtailed in accordance with the provisions of Rule 3, which allowable is to be transferred to any well or wells in the project area for production shall in no event be greater than its ability to produce during the test prescribed by Rule 5, below, or greater than the current top unit allowable for the pool during the month of transfer, multiplied by the well's acreage factor, whichever is less.

RULE 5. The allowable assigned to any well which is used for the purpose of injection, or which is shut-in or curtailed in accordance with Rule 3, shall be determined by a 24-hour test at a stabilized rate of production, which shall be the final 24-hour period of a 72-hour test throughout which the well shall be produced in the same manner and at constant rate. The daily tolerance limitation set forth in Commission Rule 502 I (a) and the limiting gas-oil ratio (2000 to 1) for the Bisti-Lower Gallup Oil Pool shall be waived during such tests. The project operator shall notify all operators offsetting the proposed injection well, as well as the Commission, of the exact time such tests are to be conducted. Tests may be witnessed by representatives of the offsetting operators and the Commission, if they so desire. In the event a well is drilled and placed on injection prior to establishing its ability to produce, the allowable for said well shall be determined by the arithmetic average for the producing abilities of the offsetting producing wells at the time said well is placed on injection.

RULE 6. The allowable assigned to each producing well in the Project shall be equal to the well's ability to produce or to top unit allowable for the Bisti-Lower Gallup Oil Pool, whichever is less. Each such producing well shall be subject to the limiting gas-oil ratio (2,000 to 1) for the Bisti-Lower Gallup Oil Pool, except that any well or wells within the project area producing with a gas-ratio in excess of 2,000 cubic feet of gas per barrel of oil may be produced on a "net" gas-oil ratio basis, which net gas-oil ratio shall be determined by applying credit for daily average gas injected into the Bisti-Lower Gallup Oil Pool within the project area

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to such high gas-oil ratio well. The daily adjusted oil allowable for any such well receiving gas injection credit shall be determined in accordance with the following formula:

$$A_{adj} = \frac{TUA \times F_a \times 2,000}{\frac{P_g - I_g}{P_o}}$$

where:

- $A_{adj}$  = the well's daily adjusted allowable
- $TUA$  = top unit allowable for the pool
- $F_a$  = the well's acreage factor
- $P_g$  = average daily volume of gas produced by the well during the preceding month, cubic feet
- $I_g$  = the well's allocated share of the daily average gas injected during the preceding month, cubic feet
- $P_o$  = average daily volume of oil produced by the well during the preceding month, barrels

In no event shall the amount of injected gas being credited to a well be such as to cause the net gas-oil ratio,  $\frac{P_g - I_g}{P_o}$ , to

be less than 2,000 cubic feet of gas per barrel of oil produced.

**RULE 7.** Credit for daily average net water injected into the Bisti-Lower Gallup Oil Pool through any injection well located within the project area may be converted to its gas equivalent and applied to any well producing with a gas-oil ratio in excess of two thousand cubic feet of gas per barrel of oil. Total credit for net water injected in the project area shall be the gas equivalent volume of the daily average net water injected during a one-month period. The daily average gas equivalent of net water injected shall be computed in accordance with the following formula:

$$E_g = (V_{w \text{ inj}} - V_{w \text{ prod}}) \times 5.61 \times \frac{P}{15.025^a} \times \frac{520^o}{T_s} \times \frac{1}{Z}$$

where:

- $E_g$  = Average daily gas equivalent of net water injected, cubic feet

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$V_w \text{ inj}$  = Average daily volume of water injected, barrels  
 $V_w \text{ prod}$  = Average daily volume of water produced, barrels  
5.61 = Cubic foot equivalent of one barrel of water  
 $P_a$  = Average reservoir pressure at mid-point of upper pay-zone of Bisti-Lower Gallup Oil Pool in project area, psig + 11.5, as determined from most recent survey  
15.025 = Pressure base, psi  
 $520^\circ$  = Temperature base of  $60^\circ\text{F}$  expressed as absolute temperature  
 $T_s$  = Reservoir temperature of  $145^\circ\text{F}$  expressed as absolute temperature  
 $Z$  = Compressibility factor from analysis of Bisti-Lower Gallup gas at average reservoir pressure,  $P_a$ , interpolated from compressibility tabulation below:

Reservoir Pressure	Z	Reservoir Pressure	Z
50	.9950	800	.9000
100	.9900	850	.8938
150	.9825	900	.8875
200	.9775	950	.8825
250	.9725	1000	.8775
300	.9625	1050	.8713
350	.9563	1100	.8663
400	.9500	1150	.8600
450	.9425	1200	.8550
500	.9363	1250	.8500
550	.9300	1300	.8450
600	.9238	1350	.8400
650	.9175	1400	.8360
700	.9115	1450	.8325
750	.9050		

**RULE 8.** Each month the project operator shall, within three days after the normal unit allowable for Northwest New Mexico has been established, submit to the Commission a Pressure Maintenance Project Operator's Report, on a form prescribed by the Commission, outlining thereon the data required, and requesting allowables for each of the several

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Order No. R-1638

wells in the Project as well as the total Project allowable. The aforesaid Pressure Maintenance Project Operator's Report shall be in lieu of Form C-120 for the Project.

RULE 9. The Commission shall, upon review of the report and after any adjustments deemed necessary, calculate the allowable for each well in the Project for the next succeeding month in accordance with these rules. The sum of the allowables so calculated shall be assigned to the project and may be produced from the wells in the Project in any proportion.

RULE 10. The conversion of producing wells to injection, or the drilling of additional wells for injection, shall be done only after approval of same by the Secretary-Director of the Commission. To obtain such approval, the Project operator shall file proper application with the Commission, which application shall include the following:

(1) A plat showing location of proposed injection well, all wells within the project area, and offset operators, locating wells which offset the project area.

(2) A schematic drawing of the proposed injection well which fully describes the casing, tubing, perforated interval, and depths and showing that injection of gas will be confined into the Bisti-Lower Gallup formation.

(3) A letter stating that all offset operators to the proposed injection well have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed injection well if, within 20 days after receiving the application, no objection to the proposal is received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

JOHN BURROUGHS, Chairman

MURRAY E. MORGAN, Member

S E A L

esr/

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

**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. 2348  
Order No. R-1638-A**

**APPLICATION OF THE BRITISH-AMERICAN  
OIL PRODUCING COMPANY FOR AN AMEND-  
MENT OF ORDER NO. R-1638.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on August 9, 1961, at Santa Fe, New Mexico, before Daniel S. Muttter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 29th day of August, 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Muttter, 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 by Order No. R-1638, entered in Case No. 1867 on March 24, 1960, The British-American Oil Producing Company was authorized to institute the West Bisti Pressure Maintenance Project in the Bisti-Lower Gallup Oil Pool, San Juan County, New Mexico.

(3) That the applicant, The British-American Oil Producing Company, seeks an amendment of said Order No. R-1638 to grant top unit allowables to injection wells in said pressure maintenance project.

(4) That the subject application should be granted to conform the Special Rules and Regulations for the subject pressure maintenance project to more recent orders of the Commission entered in similar cases granting top unit allowables to injection wells.

(5) That the allowable assigned to any well in the project area should be no greater than the demonstrated ability of such well to produce, subject to top unit allowable for the pool. In

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CASE No. 2348

Order No. R-1638-A

the case of curtailed or shut-in producing wells, the allowable should be no greater than the demonstrated capacity of the well to produce, as reflected by a 24-hour test at a stabilized rate of production immediately prior to such conversion or shut-in or curtailment. In no event should such allowable be greater than the current normal unit allowable for the Bisti-Lower Gallup Oil Pool during the month of transfer multiplied by the well's acreage factor. The allowable assigned to any injection well on an 80-acre proration unit should be top unit allowable for the pool; the allowable assigned to any injection well on a 40-acre proration unit should be one-half the top unit allowable for the pool.

IT IS THEREFORE ORDERED:

That Order No. R-1638 is hereby amended by the substitution of the following Rules 4 and 5 for Rules 4 and 5 contained in the Special Rules and Regulations in said order:

RULE 4. The allowable assigned to any injection well on an 80-acre proration unit shall be top unit allowable for the pool. The allowable assigned to any injection well on a 40-acre proration unit shall be one-half the top unit allowable for the pool.

RULE 5. The allowable assigned to any well which is shut-in or curtailed in accordance with Rule 3, which allowable is to be transferred to any well or wells in the project area for production shall in no event be greater than its ability to produce as determined hereinafter, or greater than the current top unit allowable for the pool during the month of transfer, multiplied by the well's acreage factor, whichever is less. The well's ability to produce shall be determined by a 24-hour test at a stabilized rate of production, which shall be the final 24-hour period of a 72-hour test throughout which the well shall be produced in the same manner and at a constant rate. The daily tolerance limitation set forth in Commission Rule 502 I (a) and the limiting gas-oil ratio (2000 to 1) for the Bisti-Lower Gallup Oil Pool shall be waived during such tests. The project operator shall notify all operators offsetting the proposed injection well, as well as the Commission, of the exact time such tests are to be conducted. Tests may be witnessed by representatives of the offsetting operators and the Commission, if they so desire. [In the event a well is drilled and placed on injection prior to establishing its ability to produce, the allowable for said well shall be determined by the arithmetic average for the producing abilities of the offsetting producing wells at the time said well is placed on injection.]

*Leah*

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CASE No. 2348  
Order No. R-1638-A

DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



*E L Mechem*

EDWIN L. MECHEM, Chairman

*E S Walker*

E. S. WALKER, Member

*A L Porter, Jr.*

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

ESR/

~~any well which is shut-in or is curtailed in accordance with the provisions of Rule 3, (which allowable is to be transferred to any well or wells in the project area for production shall in no event be greater than its ability to produce during the test prescribed by Rule 5, below, or greater than the current top unit allowable for the pool during the month of transfer, multiplied by the well's acreage factor, whichever is less.)~~

*as determined hereinafter,*

*the well's ability to produce*

RULE 5. The allowable assigned to any well which is used for the purpose of injection, or which is shut-in or curtailed in accordance with Rule 3, shall be determined by a 24-hour test at a stabilized rate of production, which shall be the final 24-hour period of a 72-hour test throughout which the well shall be produced in the same manner and at constant rate. The daily tolerance limitation set forth in Commission Rule 502 I (a) and the limiting gas-oil ratio (2000 to 1) for the Bisti-Lower Gallup Oil Pool shall be waived during such tests. The project operator shall notify all operators offsetting the proposed injection well, as well as the Commission, of the exact time such tests are to be conducted. Tests may be witnessed by representatives of the offsetting operators and the Commission, if they so desire. In the event a well is drilled and placed on injection prior to establishing its ability to produce, the allowable for said well shall be determined by the arithmetic average for the producing abilities of the offsetting producing wells at the time said well is placed on injection.

*see under*

$A_{adj}$  = the well's daily adjusted allowable  
 TUA = top unit allowable for the pool  
 $F_a$  = the well's acreage factor  
 $P_g$  = average daily volume of gas produced by the well during the preceding month, cubic feet  
 $I_g$  = the well's allocated share of the daily average gas injected during the preceding month, cubic feet  
 $P_o$  = average daily volume of oil produced by the well during the preceding month, barrels

In no event shall the amount of injected gas being credited to a well be such as to cause the net gas-oil ratio,  $\frac{P_g - I_g}{P_o}$  to

be less than 2,000 cubic feet of gas per barrel of oil produced.

**RULE 7.** Credit for daily average net water injected into the Bisti-Lower Gallup Oil Pool through any injection well located within the project area may be converted to its gas equivalent and applied to any well producing with a gas-oil ratio in excess of two thousand cubic feet of gas per barrel of oil. Total credit for net water injected in the project area shall be the gas equivalent.

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 8/14/61

CASE 2348

Hearing Date 9am 8/9/61  
SEN @ SF

My recommendations for an order in the above numbered cases are as follows:

Enter an order (No. R-1638-A) amending  
R-1638 as follows.

Substitute the following for Rule 4:

"The acreage assigned to any injection well on an  
80-acre <sup>proportion</sup> unit shall be top <sup>unit</sup> allowance for the pool. The  
allowance assigned to any injection well on a 40-  
acre proportion unit shall be one-half the top <sup>unit</sup> allowance  
for the pool.

Substitute the following for Rule 5

also write an appropriate finding  
which will be able to supersede  
finding #6 in Order R-1638.

Sam Rutter  
SANTA FE, N.M.

No. 22-61

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 9, 1961

9:00 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, as Alternate Examiner:

- CASE 2345: Application of Continental Oil Company for the establishment of Special Rules and Regulations for the Rattlesnake-Pennsylvanian Pool, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of special Rules and Regulations for the Rattlesnake-Pennsylvanian Pool in San Juan County, New Mexico, including a provision establishing 80-acre proration units for said pool.
- CASE 2346: Application of Pan American Petroleum Corporation for an order pooling all mineral interests in the Basin-Dakota Gas Pool in the S/2 of Section 24, Township 29 North, Range 12 West, San Juan County, New Mexico.
- CASE 2347: Application of Pan American Petroleum Corporation for two non-standard oil proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of two non-standard oil proration units in the Totah-Gallup Oil Pool, San Juan County, New Mexico, one unit consisting of the East 82.56 acres and one unit consisting of the West 82.56 acres of that portion of the N/2 of Section 14, Township 29 North, Range 14 West, lying South of the mid-channel of the San Juan River, to be dedicated to applicant's Navajo Tribal "H" Well No. 11, located 2090' from the North line and 1840' from the East line of said Section 14, and to applicant's Navajo Tribal "H" Well No. 12, located 1830' from the North line and 810' from the West line of said Section 14, respectively.
- CASE 2348: Application of The British-American Oil Producing Company for an amendment of Order No. R-1638. Applicant, in the above-styled cause, seeks an amendment of Order No. R-1638, which order established special rules and regulations for the operation of the West Bisti Pressure Maintenance Project, in the Bisti-Lower Gallup Oil Pool, San Juan County, New Mexico, to grant top unit allowables to injection wells in said pressure maintenance project.

- CASE 2349: Application of Socony Mobil Oil Co., Inc. for an exception to Rule 303 (a), Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 303 (a) to permit commingling of the production from the Blinebry Gas, Tubb Gas, Brunson, Drinkard, Hare, Wantz Abo, Paddock, Penrose-Skelly, McCormick and undesignated San Andres Pools on its E. O. Carson lease in Township 21 South, Range 37 East, Lea County, New Mexico. Applicant proposes to allocate production on the basis of quarterly well tests and to meter top allowable wells.
- CASE 2350: Application of Socony Mobil Oil Co., Inc. for an exception to Rule 303 (a), Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 303 (a) to permit commingling of the production from the Terry-Blinebry and Wantz Abo Pools, and from other zones which may become productive on its Stephens Estate lease, comprising the SW/4 of Section 24, Township 21 South, Range 37 East, Lea County, New Mexico. Applicant proposes to allocate production on the basis of quarterly well tests and to meter top allowable wells.
- CASE 2351: Application of Socony Mobil Oil Co., Inc. for an exception to Rule 303 (a), Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 303 (a) to permit commingling of the production from the Blinebry Gas, Tubb Gas and Drinkard Pools on its S. E. Long lease comprising the SE/4 of Section 11, Township 22 South, Range 37 East, Lea County, New Mexico. Applicant proposes to allocate production on the basis of quarterly well tests.
- CASE 2352: Application of Socony Mobil Oil Co., Inc. for an exception to Rule 303 (a), Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 303 (a) to permit commingling of the production from the Blinebry Gas, Tubb Gas, Drinkard, Paddock and Penrose-Skelly Pools on its Cordelia-Hardy lease, comprising the NW/4 of Section 29, Township 21 South, Range 37 East, Lea County, New Mexico. Applicant proposes to allocate production on the basis of quarterly well tests and to meter top allowable wells.
- CASE-2353: Application of Socony Mobil Oil Co., Inc. for an exception to Rule 303 (a), Lea County, New Mexico. Applicant, in the

CASE 2353: (Cont.)

above-styled cause, seeks an exception to Rule 303 (a) to permit commingling of the production from the Blinebry Gas, Tubb Gas, Brunson, Drinkard, Penrose-Skelly and Paddock Pools on its Brunson-Argo lease, comprising the NE/4 of Section 9 and the NW/4 of Section 10, all in Township 22 South, Range 37 East, Lea County, New Mexico. Applicant proposes to allocate production on the basis of quarterly well tests and to meter top allowable wells.

CASE 2354:

Application of Socony Mobil Oil Co., Inc. for permission to dispose of produced formation water, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to dispose of produced formation water into the Pennsylvanian Bough "C" formation through its Santa Fe "B" Well No. 1, located in the SW/4 of Section 28, and through its Santa Fe "E" Well No. 1, located in the NE/4 of Section 29, all in Township 9 South, Range 36 East, Lea County, New Mexico.

CASE 2355:

Application of H. L. Brown, Jr. and Clem E. George for establishment of special rules and regulations in the Bluitt-Wolfcamp Gas Pool, Roosevelt County, New Mexico. Applicants, in the above-styled cause, seek the establishment of special rules and regulations in the Bluitt-Wolfcamp Gas Pool, Roosevelt County, New Mexico, including a provision for 320-acre units in said pool.

Case 2348

LAW OFFICES OF  
MODRALL, SEYMOUR, SPERLING, ROEHL & HARRIS

J. R. MODRALL  
AUGUSTUS T. SEYMOUR  
JAMES E. SPERLING  
JOSEPH E. ROEHL  
GEORGE T. HARRIS  
DANIEL A. SISK  
LELAND S. SEDBERRY  
BURNS H. ERREBO  
ALLEN C. DEWEY  
FRANK H. ALLEN

SIMMS BUILDING  
P. O. BOX 466  
ALBUQUERQUE, NEW MEXICO  
TELEPHONE CHAPEL 3-4511

JOHN F. SIMMS (1885-1954)

July 19, 1961

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Re: Application of The British-American  
Oil Producing Company for Amendment  
of Rule No. 5 of Special Rules and  
Regulations for West Bisti Pressure  
Maintenance Project.

Gentlemen:

Enclosed herewith, in triplicate, is the above Application which we  
would appreciate your setting for hearing on your next docket, if  
possible.

Very truly yours,

MODRALL SEYMOUR SPERLING ROEHL & HARRIS

By Burns H. Errebo  
BURNS H. ERREBO

BHE/ba  
Encl.

cc: Mr. Frank Renard  
The British-American Oil Producing Company  
P. O. Box 330  
Farmington, New Mexico (w/copy of Application)

Mr. Thomas M. Hogan  
The British-American Oil Producing Company  
P. O. Box 180  
Denver, Colorado (w/copy of Application)

*Handwritten:*  
27  
7/28/61

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION  
OF THE BRITISH-AMERICAN OIL  
PRODUCING COMPANY FOR AMENDMENT  
OF THE SPECIAL RULES AND REGULA-  
TIONS FOR THE WEST-BISTI PRESSURE  
MAINTENANCE PROJECT, BISTI-LOWER  
GALLUP OIL POOL, SAN JUAN COUNTY,  
NEW MEXICO

Case No. 2348

A P P L I C A T I O N

Applicant states:

1. That Applicant is the operator of the West-Bisti Pressure Maintenance Project of the Bisti-Lower Gallup Oil Pool, San Juan County, New Mexico, and is the owner of leases therein.
2. That on March 24, 1960, by Order No. R-1638 in Case No. 1867 this Commission adopted Special Rules and Regulations for the operation of said project.
3. That said Special Rules and Regulations provide, among other things, for the determination and assignment of allowables to injection wells as set forth therein.
4. That said Rules and Regulations should be amended and modified to grant top unit allowables to injection wells in said pressure maintenance project.
5. That the granting of this Application will not cause waste and is necessary for the protection of the correlative rights of the parties interested in the West Bisti-Lower Gallup Sand Unit.

WHEREFORE, Applicant prays that this matter be set for hearing, that notice thereof be given as required by law, and that upon the evidence adduced at said hearing this Commission issue an order amending the Special Rules and Regulations applicable to the West Bisti Pressure Maintenance Project as herein requested and for such other and further relief as this Commission may deem necessary and proper.

THE BRITISH-AMERICAN OIL PRODUCING COMPANY

By MODRALL SEYMOUR SPERLING ROEHL & HARRIS

By 

BURNS H. ERREBO  
Attorneys for Applicant  
1200 Simms Building  
Post Office Box 466  
Albuquerque, New Mexico

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

PAGE

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
AUGUST 9, 1961

EXAMINER HEARING

IN THE MATTER OF:  
CASE 2348

TRANSCRIPT OF HEARING



BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
AUGUST 9, 1961

IN THE MATTER OF:

Application of The British-American Oil  
Producing Company for an amendment of  
Order No. R-1638. Applicant, in the  
above-styled cause, seeks an amendment  
of Order No. R-1638, which order establish- : Case 2348  
ed special rules and regulations for the  
operation of the West Bisti Pressure  
Maintenance Project, in the Bisti-Lower  
Gallup Oil Pool, San Juan County, New  
Mexico, to grant top unit allowables to  
inject wells in said pressure maintenance  
project.

BEFORE:

Daniel S. Nutter, Examiner

EXAMINER HEARING

MR. NUTTER: Call Case 2348.

MR. MORRIS: Application of The British-American Oil  
Producing Company for an amendment of Order No. R-1638.

MR. ERREBO: I am Burns H. Errebo of Albuquerque, and  
the Firm of Modrall, Seymour, Sperling, Roehl & Harris, and  
appearing on behalf of the Applicant The British-American Oil  
Producing Company. We will have one witness.

(Witness sworn.)

(Whereupon British American's  
Exhibits 1, 2, 3, marked for  
identification.)

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ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691

FRANK L. LEONARD, JR.,

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

DIRECT EXAMINATION

BY MR. ERREBO:

Q State your name, please, where you live, and by whom  
you are employed, and in what capacity.

A Frank L. <sup>Leonard</sup> Leonard, Jr., employed by British-American Oil  
Producing Company as a Field Engineer at Farmington, New Mexico.

Q Mr. Leonard, do your duties with The British-American  
in Farmington involve any work with the West Bisti Pressure  
Maintenance Project, which has been heretofore authorized by order  
of this Commission?

A Yes, sir.

Q What is the nature of your duties in connection with  
that?

A Watching, the observing, the performance, and making  
plans for any changes necessary in operations.

Q You are the Project Engineer, you might say, then, on  
the project; is that correct?

A Yes, sir.

Q Have you previously testified before this Commission as  
an Engineer?

A Yes, sir.

Q Would you refer to your Exhibit 1 and state what is



represented by that Exhibit?

A Exhibit 1 is a monthly report, prepared, showing the statistical data on giving production data for the West Bisti Unit.

Q That is submitted to this Commission, is that correct, each month?

A Yes, sir.

Q And that report shows production for what month?

A This particular report is for June 1961.

Q And it is used as a basis for assigning allowables for what month?

A It covers allowables for August.

Q Then, if you will refer, please, to your next Exhibit, which is No. 2, and state what that represents.

A Exhibit 2 points out the relationship between the allowable assigned to injection wells under existing field orders as compared to the producing capacity of some of the wells in excess of 140 barrels of oil per day.

Q Did you use the information on Exhibit 1 in preparing Exhibit 2?

A Yes, sir. The only exception I made there on those, in looking back over Exhibit 2 for August, the lower curve, the point I used there is not taken directly off of Exhibit 1. More recent well test data was used in preparation of Exhibit 2.

Q British-American is the operator, is it not, of the West

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Bisti-Lower Gallup Project?

A Yes, sir.

Q And how many wells are there now producing in this project?

A There are now 45 producing wells and 16 injection wells.

Q How many of the 45 producing wells will now make in excess of the top unit allowable?

A I believe that is 9.

Q Now, will you refer to your Exhibit 3 and state what that shows?

A Exhibit 3 is a performance curve showing monthly oil production, total fluid production, gas-oil ratio, and water injection by the West Bisti Unit.

Q Is there anything in particular that you desire to call the Examiner's attention to in connection with that Exhibit?

A Well, since April of 1961, the production has shown an overall increase. By "overall", I mean some of the wells are showing an increase in production, whereas some of the producing wells are still on primary decline. Some of the wells have not yet been effected by water injections.

Q When did you commence your injection program?

A There were two separate phases. We had a barrier project with the Central Bisti Unit. We had started injecting water in August of 1959. The full-scale pressure maintenance program started in October of 1960.

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Q That is when your water injection curve shoots unusually high?

A That's right.

Q That is also shown by the lower curve on Exhibit 2. That is the taking effect, really, of the water injection program?

A Yes, sir; it starting more noticeably in May, we start showing requirements for high transfer allowable.

Q Have you calculated approximately what additional allowable could be granted were the Commission to grant your Application today for the project?

A The current allowable which can be transferred from injection wells is 108 barrels of oil per day. That is based on special tests which were taken on injection wells prior to conversion. We are now asking for top unit allowables for all wells which have been converted to injection wells based on a top unit allowable of 140 barrels per day, or 14 injection wells. This would give allowable for transfer of 240 barrels per day as compared to 998 barrels per day under present rules.

Q Do you feel, or do you anticipate that based upon your present rate of increase in production that you will have the need for this additional allowable in the near future?

A Yes, sir. We anticipate need in the very near future. As shown for August, there, our transfer requirements are only approximately 100 barrels below what we have available for transfer.

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Q Are you familiar with Order No. R-1636 which was issued on March 24, 1960 by the Commission, in connection with the Sunray Bisti Project?

A Yes, sir.

Q And does that order provide for a top unit allowable for injection wells?

A I believe Order R-1636 did not. There has been a revision, but Order R-1636A for the Central Bisti Unit does allow top unit allowable for all wells which have been converted to injection wells.

Q The Central Bisti Unit, of course, is immediately to the east of this project?

A Yes, sir; it is adjacent to the east.

Q Are you familiar with any other pressure maintenance projects which have been approved by the Commission since this time that had granted a top unit allowable for injection wells such as you are asking for here?

A I didn't know that they have been granted. I am familiar with the order number covering such allowable provisions.

Q And then all you are asking here today of the Commission is that they grant you an injection well allowable on the same basis that other recent projects have been granted allowables?

A Yes, sir.

Q Do you then suggest modification of Order No. R-1638 as to any particular rules?



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A The rule directly in question is Rule 5, Special Rule No. 5.

Q That would also involve, probably, Rule 4; would it not?

A Yes, sir. It would require a moderate amount of modification of Rule 4.

Q You don't have any specific wording that you propose to the Commission today, do you, with regard to change in those rules?

A I do not have definite wording.

Q Would you suggest that they be somewhat in line with the Sunray Order No. R-1636A?

A Yes, sir. I believe after that Rule 5 change, I believe the Order No. R-1636A from Rule 6 on through would be the wording required for the West Bisti Unit.

Q Since the Order of the Commission sets definite sales on the amount of oil that can be produced, do you feel that the increase in production from this unit, which you are now experiencing, can be kept within such allowable as might result from the modification which you are asking for here today?

A Yes. I believe topping that allowable for all injection wells would fulfill the requirements.

Q Do you have anything further to offer at this time?

A No, sir.

MR. ERREBO: I believe that is all we have, Mr. Nutter.



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Q (By Mr. Nutter) Mr. Leonard, as I understand it, you have 16 wells on injection?

A Yes, sir.

Q And the total allowable which is available for those 16 wells is 998 barrels --

A That is correct.

Q -- which is reflected by the horizontal line on Exhibit 2?

A Yes, sir.

Q Now, what do you mean by the other line, the barrels per day required for transfer?

A Going back to Exhibit 1, using, for example, using Well 7 as shown in column 6, has a capacity of 183 barrels per day, top unit allowable of 140 barrels. We have 43 barrels excess capacity above the top unit allowable, but we need allowable to assign to bring that so we can produce that well to the 183 barrels, as reflected by the well test. The 998 barrels is the total of such capacity above 140 barrels per day for all the other wells in the unit.

Q In other words, this lower line on Exhibit 2 represents the producing capacity of those producing wells which have received a response?

A It represents their producing capacity above top allowable; yes, sir.

Q And you expect for this line to intersect and pass the



horizontal line in the near future?

A Yes, sir.

Q Now, on Exhibit 3, for total fluid production in the last several months, I note two lines there. It was the second of the two lines.

A Well, the dashed line, the upper line of the two is a total fluid production, whereas the other line is oil production. At the time the curve was first prepared, there was very little water production. That is the reason there is just one line back to the certain point, there.

Q I see. And, the difference between the two lines is the water that is produced --

A Yes, sir.

Q -- of your injection of your ultimate injection well pattern? How many of the wells have been put on? Does this 16 represent all of them?

A That represents everything that we plan to convert under present, from what we know about the project so far.

Q So far as you can tell at this time, the 998 barrels would be the maximum that you will be able to receive?

A Yes, sir. I would point out that the reason for the change between July and August, there, on the upper curve of the Exhibit, we did convert one more well, but that is the last of the wells to be converted under present plans.

MR. NUTTER: Are there any further questions of Mr.

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Leonard? He may be excused.

MR. ERREBO: I would like to offer, if I might, Exhibits 1, 2, and 3 in evidence at this time.

MR. NUTTER: British-American's Exhibits 1, 2, and 3 will be entered into evidence.

(Whereupon British-American's Exhibits 1, 2, 3 received in evidence.)

MR. NUTTER: Have you anything further?

MR. ERREBO: Nothing further.

MR. NUTTER: Does anyone have anything they wish to offer in Case 2348? We will take the case under advisement and recess the Hearing until 1:15 P.M.

(Whereupon the Hearing of Case 2348 was concluded.)

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PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss.

I, MICHAEL P. HALL, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission 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 notary seal this 9th day of August, 1961.

*Michael P. Hall*  
Court Reporter - Notary Public

My Commission expires:

June 20, 1965.

I do hereby certify that the foregoing is a complete and correct transcript of the proceedings in the Examiner hearing of Case No. 2348 heard by me on 8/9, 1961.

*[Signature]*, Examiner  
New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



Exhibit #1

Exhibit #1

Well No.					Next Recent Test (Last Month for Producing Wells)					Production and Injection Last Month					June, 1961					Supercompressibility Factor Gas Equivalent, Net Water Injected, MCF/24 HRS				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
	Location	Inf. Meth of Prod	Date of Test	24-hr Oil Prod, bbls.	24-hr Gas Prod, cu ft	24-hr Water Prod, bbls.	Gas-Oil Ratio, ft/bbl	Ave. Daily Oil Prod, bbls.	Ave. Daily Gas Prod, cu ft	Ave. Daily Gas Inf., cu ft	Ave. Daily Water Prod, bbls.	Ave. Daily Water Inf., bbls.	Ave. Daily Press Inf. psi	Cum. Gas or Water Inf.	Est. Non Penal Allow	Penal-Used Allow For Ft. COR	Gas Inf. Credit Assigned To Well	Adj. Allow Each Well	Allow Trans From Other Wells	Allow Trans To Other Wells	Final Allow: (Col 20 Plus 21 Minus Col 22)			
1	U S T R	Prod	6-13	22	6,600	74	300	22	1,400		74				22				22			22		
2	"	"	6-5	114	58,400	5	512	107	52,700		5				114				114			114		
3	"	"	6-25	56	16,800	40	300	36	7,000		37				56				56			56		
4	"	"	6-23	24	18,200	0	758	23	14,300		1				24				24			24		
5	"	"	5-30	5	10,000	1	2,000	5	9,500		1				5				5			5		
6	"	"	6-5	103	23,300	0	1,274	178	21,850		0				103				103			103		
7	"	"	6-7	60	30,800	1	513	49	24,300		1				60				60			60		
8	"	"	6-6	190	84,100	0	443	181	77,400		0				190				190			190		
9	"	"	5-19	7	2,100	0	300	7	2,000		85				7				7			7		
10	"	"	6-20	215	54,000	0	251	189	56,400		0				140				140			140		
11	"	"	5-14	187	32,200	0	122	178	36,400		0				140				140			140		
12	"	"	7-11	363	87,000	0	240	201	29,000		0				140				140			140		
13	"	"	6-26	115	27,200	5	243	86	21,300		5				112				112			112		
14	"	"	5-24	11	5,500	0	500	10	10,500		0				11				11			11		
15	"	"	5-26	12	19,100	0	1,591	12	39,200		0				12				12			12		
16	"	"	5-25	12	4,300	0	358	11	8,400		0				12				12			12		
17	"	"	7-1	115	23,200	0	2072	109	29,500		0				115				115			115		
18	"	"	7-4	75	7,574	210	7,574	12	2,600		200				5				5			5		
19	"	"	7-2	75	10,200	2	1,427	71	13,200		2				75				75			75		
20	"	"	6-13	20	6,690	0	743	81	6,510		0				90				90			90		
21	"	"	6-17	13	20,500	0	1,577	13	21,700		0				13				13			13		
22	"	"	7-10	395	197,500	0	500	211	108,200		0				140				140			140		
23	"	"	6-5	4	5,500	0	1,375	5	8,200		0				4				4			4		
24	"	"	7-10	138	49,400	0	358	102	45,400		0				138				138			138		
25	"	"	7-11	140	21,100	0	151	110	19,300		0				140				140			140		
26	"	"	6-7	20	12,800	0	6100	20	120,300		0				20				20			20		
27	"	"	7-7	195	39,800	0	204	172	25,000		0				140				140			140		
28	"	"	7-8	82	15,500	0	1895	89	23,950		0				82				82			82		

**PRESSURE MAINTENANCE PROJECT OPERATOR'S MONTHLY REPORT**  
**THE BRITISH-AMERICAN OIL PRODUCING COMPANY**  
**WEST BISTI UNIT**

Date JULY 14, 1961 PAGE 2 of 3  
 Top Unit Allowable for Pool Next Month, BPD 140  
 Average Reservoir Pressure 712  
 Supercompressibility Factor 0.908  
 Gas Equivalent, Net Water Injected, MCF/D 3451

Most Recent Test (Last Month for Producing Wells)										Production and Injection Last Month										Supercompressibility Factor Gas Equivalent, Net Water Injected, MCF/D									
										JUNE, 1961										0.908 34.51									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23							
				Date of Test	24-hr Oil Prod, bbls.	24-hr Gas Prod, cu ft	24-hr Water Prod, bbls.	Gas-Oil Ratio, ft/bbl	Ave. Daily Oil Prod, bbls.	Ave. Daily Gas Prod, cu ft	Ave. Daily Gas Inj., cu ft	Ave. Daily Water Prod, bbls.	Ave. Daily Water Inj., bbls.	Ave. Inj. Press, psi	Cum. Gas-Water Inj.	Est. Non Penal Used Allow	Penal-Used Allow For R/COR	Gas Inj. Credit Assigned To Well	Adj. Allow Each Well	Allow Trans From Other Wells	Allow Trans To Other Wells	Final Allow: (Col 20 Plus 21 Minus Col 22)							
1	Location	Inj. Meth of Prod																											
no.	U S T R Prod Prod																												
36	W28-26N-13W	Prod Pump		6-1	12	8,400	1	646	13	6,900		1				13			13			13							
37	0	"		7-9	93	18,600	0	200	75	39,900		1				93			93			93							
41	C29-26N-13W	"		7-4	16	757M	0	757M	11	10,400		0				16			16			16							
43	P20-26N-13W	"		6-1	105	21,000	0	200	94	31,300		0				105			105			105							
44	H	"		5-5	4	4,000	1	1000	1	1,000		1				4			4			4							
45	J	"		7-3	100	67,300	1	873	80	59,000		0				100			100			100							
46	L	"		2	143	31,400	0	230	101	31,300		0				140			140	3		143							
47	N	"		7-8	24	30,800	0	1283	27	47,500		0				24			24			24							
48	P	"		"	387	72,400	1	300	191	40,100		4				140			140	247		387							
49	B19-26N-13W	"		7-11	121	36,300	0	300	72	49,000		0				121			121			121							
50	D	"		"	42	66,200	0	1576	28	43,000		0				42			42			42							
51	F	"		6-3	10	757M	0	757M	6	7,800		0				10			10			10							
54	L18-26N-13W	"		6-13	43	78,400	0	1823	41	73,400		0				43			43			43							
55	N	"		6-16	74	209,500	0	2831	74	204,400		0				74			74			74							
57	P	"		5-4	3	757M	0	757M	4	1,800		0				3			3			3							
59	G13-26N-13W	"		6-30	18	48,700	0	216	59	41,100		0				18			18			18							
	0	"		4-6	2	757M	0	757M	2	2,100		0				2			2			2							
INJECTION WELLS:																													
1-WI	A12-25N-13W	Inj	WI												251	655	304,317	22	22		22	0							
2-WI	I 1-25N-13W	"	"												322	640	374,980	140	140		140	0							
3-WI	D36-26N-13W	"	"												831	960	219,633	8	8		8	0							
4-WI	G35-26N-13W	"	"												1555	910	330,463	123	123		123	0							
5-WI	K	"	"												1668	900	313,879	127	127		127	0							
6-WI	G27-26N-13W	"	"												652	1025	215,772	10	10		10	0							
7-WI	K	"	"												1017	1005	320,085	87	87		87	0							
8-WI	N	"	"												1410	765	282,860	140	140		140	0							
9-WI	K33-26N-13W	"	"												1023	860	229,273	0	0		0	0							

**PRESSURE MAINTENANCE PROJECT OPERATOR'S MONTHLY REPORT**

**De:**

### Average Reservoir Pressure

Gas Equivalent, Hot Water Injected, McF/D 3451

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