

OIL CONSERVATION DIVISION
RECEIVED

Chisos Operating, Inc.

'90 SEP 4 AM 10 26

Post Office Box 10865

Midland, Texas 79702

(915) 685-6200

August 31, 1990

DIRECTOR
NEW MEXICO OIL CONSERVATION COMMISSION
Box 2088
Santa Fe, New Mexico 87501

RE: Request for Down Hole
Commingling

Gentlemen:

Chisos Operating Inc. respectfully requests that it be granted an exception to Rule 303-A and be given permission to down hole commingle production from the following fields:

Hightower Lower Penn, East
Hightower Upper Penn, East

This request covers our State 1-30 well bore located B, Sec 30, T-12S, R-34E, of Lea County, New Mexico. The enclosed information is submitted as support for this request.

All offset operators have been notified of this action (copy enclosed) and we respectfully request that such order be granted administratively as allowed under applicable rules after the required waiting period. As the waivers from the offset operators are received they will be forwarded.

The proposed commingling procedure would require the removal of a cast iron bridge plug which is currently in place above the old perforations in the Hightower Lower Penn, East reservoir.

If any additional information is needed to support this request please contact this office. Thank you for your consideration.

Yours truly,



RON GILBREATH
Vice President-Operations

cc: New Mexico OCC
District 1
Box 1980
Hobbs, New Mexico 88240

915 686-9466

CHISOS OPERATING INC.
State 1-30 Well
Hightower Upper Penn, East
Hightower Lower Penn, East
Sec 30B, T-12S, R-34E
Lea County, New Mexico

As allowed under the provisions of paragraph C. 1. SWR 303-A (Segregation of Production From Pools), Chisos Operating Inc. is respectively requesting that the Director of the Oil Conservation Division grant an exception to Rule 303-A to permit the commingling in the well bore of oil-oil zones in the above referenced well bore and fields. In support of this request Chisos submits the enclosed information.

C.1. (a) For wells involving oil zones:

(1) The total combined oil production is expected to be less than 30 BOPD on a sustained basis. Some flush production is expected from the Lower Penn zone, which has been abandoned for almost two (2) years. This is less than the 80 BOPD which is permissible due to the bottom perforation in the lowermost pool.

(2) Prior to the work over, which occurred in December 1988, the Lower Penn production was lifted by pumping unit. Since the work over, the Upper Penn production has also been lifted by pumping unit. The combined production will be pumped.

(3) The current well test for the Upper Penn perforations is 14 BOPD, 8 BWPD, and 40 MCFPD. Prior to its abandonment in December 1988, the Lower Penn produced 11 BOPD, 7 BWPD, and 21 MCFPD. The combined water production will be less than the maximum of 80 BWPD allowed.

(4) There are no fluid analysis' available at this time to determine fluid compatibility, but since both producing sections are within the Penn Series which is Pennsylvanian in Age, the fluids within the individual traps are expected to be similar and compatible. After commingling, a combined sample can be checked for the presence of precipitates.

(5) The total value of the individual streams will not be diminished by commingling. The value of the combined stream will be greater by allowing the current abandoned zone to be produced at this time rather than some 15+ years in the future when the current production is projected to become uneconomical.

(6) The ownership of the two zones to be commingled is common to include working interest, royalty, and overriding royalty interests.

(7) The particular depositional characteristics and recovery mechanisms of these reservoirs do not lend themselves to secondary recovery operations, therefore no jeopardy of future secondary recovery is expected.

C.2. The following additional supportive information is submitted:

(a) Name and address of operator:

Chisos Operating Inc.
P.O. Box 10865
Midland, Texas 79702

(b) State 1-30
Well 1-B
B Sec 30, T-12S, R-34E

Hightower Lower Penn, East - TA'd currently by CIBP
Hightower Upper Penn, East - Active

(c) A plat of the area is included.

(d) A current 24-hour productivity test is submitted on the Upper Penn section which is currently active. The Lower Penn section has been abandoned since late 1988 and it is requested that the production rate of 11 BOPD, 7 BWPD, and 21 MCFPD, which is the average of the last full production month of November 1988, be accepted.

(e) A decline curve is attached showing the production from each zone. The plug back occurred during December 1988, and the respective producing periods are marked on the curve. The well was completed in the Lower Penn in 1959. Both zones are of sufficient maturity so that a steady decline rate can be established for use in allocation of the commingled production. The recommended decline rates for two zones are marked on the curve. They are respectively:

Hightower Lower Penn, East - Exponential decline = 8%
(10218-10258') per year

Hightower Upper Penn, East - Initial hyperbolic decline
(9912-9964') stabilizing at 8% per year

(f) Based on the maturity and length of production history of the Hightower Lower Penn Field in this area, the bottom hole pressure is expected to be less than 500 psi. Although the Hightower Upper Penn Field was perforated in the State 1-30 well bore in 1988, the Field is also considered mature. With the offset production which has occurred in surrounding well, the bottom hole pressure is also expected to be less than 500 psi.

(g) There are no fluid analysis' available at this time to determine fluid compatibility, but since both producing sections are within the Penn Series which is Pennsylvanian in Age, the fluids within the individual traps are expected to be similar. After commingling, a combined sample can be checked for the presence of precipitates.

(h) Computation showing the relative values of producing the zones individually vs. commingled: Due to the length of the remaining economic life in the current Upper Penn Zone, no economics can be calculated on producing the two individually. It will be some 15+ years before computations of current conditions indicate the economic limit will be reached and the upper section is squeezed off and the lower re-opened.

(i) The recommended formula for allocation of production between the individual reservoirs should be based on the decline characteristics of the two production streams and the estimated rates of the two production streams. A comparison of the current producing rate of the Upper Penn and the last reported rates of the Lower Penn yields a 55/45 split between the Upper & Lower at the initial point of commingling. Since the Upper is currently declining at a hyperbolic rate, and the established rate for several years on the Lower Penn was 8% annual decline on an exponential scale, a projection of the respective rates of decline until such time as they merge to a common rate would yield the following recommended split:

<u>YEAR</u>	<u>UPPER</u>	<u>LOWER</u>
1990	55%	45%
1991	55%	45%
1992	55%	45%
1993	50%	50%

After 1993, the production split would remain 50% to each zone throughout the remaining life. The same split would be used on casinghead gas produced in association with the oil.

(j) All offset operators have been notified in writing of this proposed commingling. (List Attached)

LIST OF OFFSET OPERATORS

HIGHTOWER UPPER PENN, EAST FIELD

1. Breck Operating Corporation
P.O. Box 911
Breckenridge, Texas
76024-0911
2. Pacific Enterprises Oil Company
P.O. Box 3083
Midland, Texas
79702
3. Santa Fe Exploration Company
P.O. Box 1136
Roswell, New Mexico
88201

HIGHTOWER LOWER PENN, EAST FIELD

There are no active operators in this Field carried on the Commission Monthly Statistical Report.

LEASED ACREAGE WITH NO ACTIVE WELLS

1. Yates Petroleum Corporation
105 South 4th St.
Artesia, New Mexico
88210

Chisos Operating, Inc.

Post Office Box 10865

Midland, Texas 79702

(915) 685-6200

August 30, 1990

TO: OFFSET OPERATORS
Hightower Lower Penn, East
Hightower Upper Penn, East
Lea County, New Mexico

RE: State 1-30 Lease
B Sec 30, T-12S, R-34E

Gentlemen:

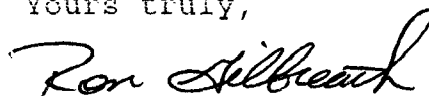
Chisos Operating Inc. has applied for permission to downhole comingle production from the above referenced Fields in its State 1-30 well.

Current records indicate that you are an offset operator to our well and this correspondence is to convey to you our intentions.

Chisos plugged back its well from the Hightower Lower Penn, East Field in December 1988, into the Hightower Upper Penn, East Field. Operating conditions has declined to a point where production from these two reservoirs can be comingled without potential damage to either.

If you have any questions in regards to this matter please feel free to contact me. If you have no objections to our request, please sign and return the enclosed waiver. This would allow the granting of an administrative approval. Thank you for your consideration in this matter.

Yours truly,



RON GILBREATH
Vice President-Operations

DATE _____

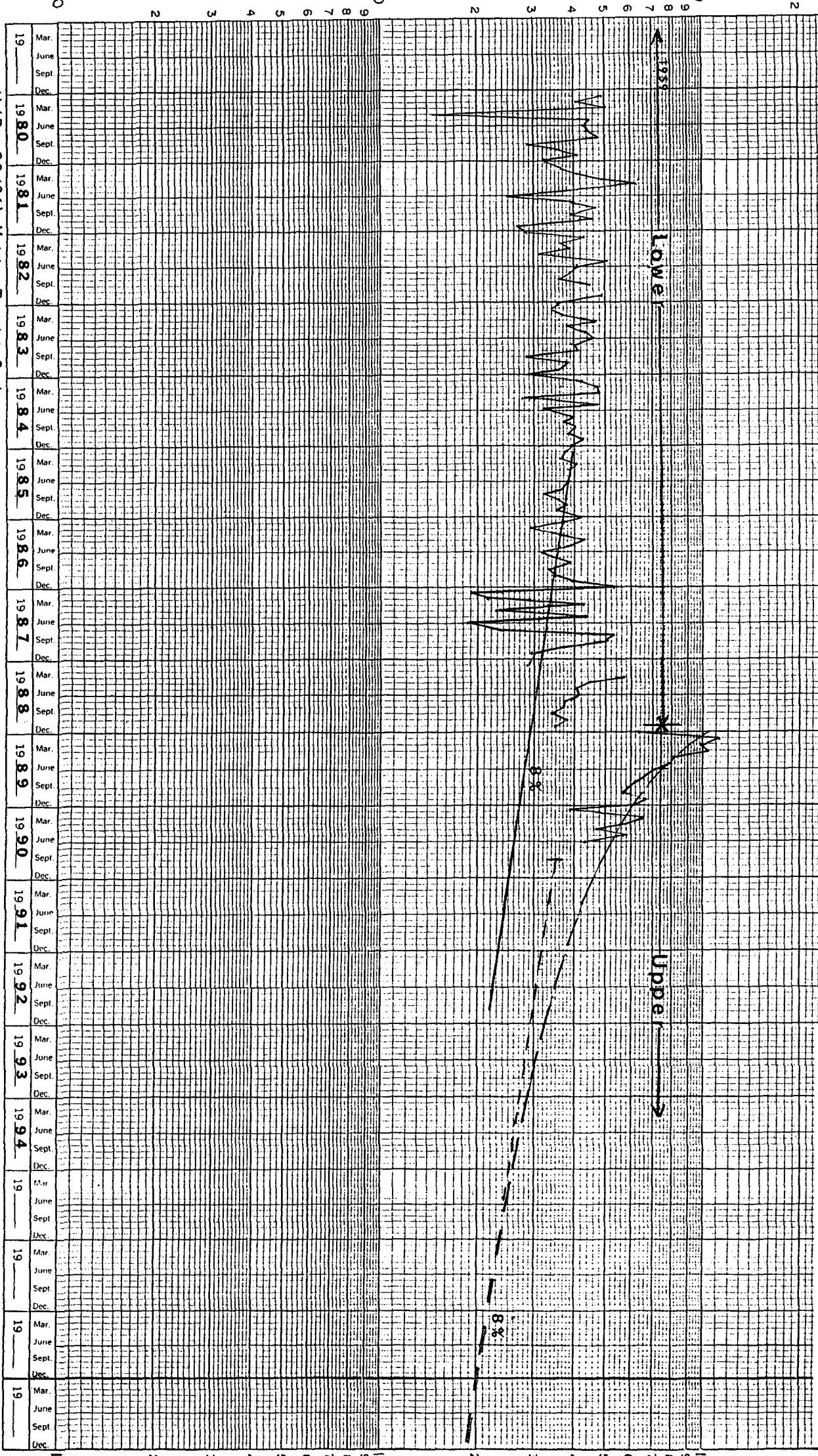
TO WHOM IT MAY CONCERN:

Chisos Operating Inc. has provided notice of its intentions to down hole comingle production from the Hightower Lower Penn, East and the Hightower Upper Penn, East Fields. Their proposed well bore is the State 1-30 well located in B Sec 30, T-12S, R-34E, of Lea County, New Mexico.

As an offset operator to this proposed action, we have no objection to their request and hereby, freely give notice of our waiver of objection to such action.

Yours truly,

FIELD: Hightower (Upper & Lower Penn) E.
OPERATOR: Chisos Operating Inc.
LEASE: State 1-30
LOCATION: 30B-12S-34E DIST: * /
COUNTY: STATE: NM
NO. WELLS: 1 WELL NOS: 1-30
DATE PROD. BEGAN: 1959 ACRES: 80
CHISOS OPERATING INC.





CONSERVATION DIVISION

RECEIVED ENERGY

30 SEP 13 AM 9 30

STATE OF NEW MEXICO

AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

HOBBS DISTRICT OFFICE

9-4-90

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC _____
DHC ☒ _____
NSL _____
NSP _____
SWD _____
WFX _____
PMX _____

Gentlemen:

I have examined the application for the:

Chisos Operating Inc. State 1-30 #1-B 30-12-34
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Jerry Sexton
Supervisor, District 1

/ed