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October 15, 1996

Via Hand Delivery

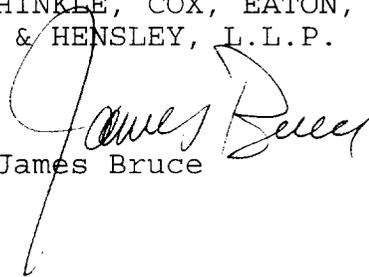
Michael E. Stogner
New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico

Dear Mr. Stogner:

Enclosed is the draft order of Gillespie-Crow, Inc. in Case No. 11599.

Very truly yours,

HINKLE, COX, EATON, COFFIELD
& HENSLEY, L.L.P.


James Bruce

cc: Rand Carroll w/encl.
William F. Carr w/encl.
W. Thomas Kellahin w/encl.
J. Scott Hall w/encl.

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 11599
Order No. R-_____

APPLICATION OF GILLESPIE-CROW, INC.
FOR POOL EXPANSION AND CONTRACTION,
POOL CREATION, AND SPECIAL POOL RULES,
LEA COUNTY, NEW MEXICO

ORDER OF THE DIVISION
(Proposed by Gillespie-Crow, Inc.)

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 3, 1996, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this _____ day of October, 1996, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Gillespie-Crow, Inc., requests that: the West Lovington-Strawn Pool be both contracted in part and expanded in part; the special pool rules currently in effect for said pool remain in effect, except that the depth bracket allowable be reduced to 250 barrels of oil per day for wells within the designated West Lovington-Strawn Pool; a new pool, the South Big Dog-Strawn Pool, be created from acreage eliminated from the West Lovington-Strawn Pool; and the special pool rules currently in effect for the West Lovington-Strawn Pool remain in effect for the new pool.

(3) The West Lovington-Strawn Pool (originally designated the East Big Dog-Strawn Pool) was created by Division Order No. R-9722, on September 23, 1992, and currently contains the following acreage:

CASE NO. 11599

Order No. R-_____

Page 2

Township 15 South, Range 35 East, N.M.P.M.

Section 32: SE $\frac{1}{4}$
Section 33: NE $\frac{1}{4}$, S $\frac{1}{2}$
Section 34: S $\frac{1}{2}$

Township 16 South, Range 35 East, N.M.P.M.

Section 1: Lots 1 through 8
Section 2: Lots 1 through 8

(4) Division Order No. R-9722, as amended, promulgated special pool rules for the West Lovington-Strawn Pool, including 80 acre spacing, well location requirements, and a depth bracket allowable of 445 bopd.

(5) Applicant is the operator of the West Lovington Strawn Unit ("WLSU"), approved by Division Order No. R-10449, which unitized the Strawn formation underlying the following lands:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, N.M.P.M.

Section 33: All
Section 34: W $\frac{1}{2}$

TOWNSHIP 16 SOUTH, RANGE 35 EAST, N.M.P.M.

Section 1: Lots 1 through 8

TOWNSHIP 16 SOUTH, RANGE 36 EAST, N.M.P.M.

Section 6: Lots 3 through 5

The WLSU became effective October 1, 1995. Applicant has instituted a natural gas injection pressure maintenance project for the WLSU, approved by Division Order No. R-10448. Gas injection for the pressure maintenance project began in October 1995.

(6) Applicant requests that the current boundaries of the West Lovington-Strawn Pool be contracted and expanded so that the pool will contain the following acreage:

Township 15 South, Range 35 East, N.M.P.M.

Section 27: S½S½
Section 28: S½S½
Section 29: S½SE¼
Section 32: NE¼, N½SE¼
Section 33: All
Section 34: All

Township 16 South, Range 35 East, N.M.P.M.

Section 1: Lots 1 through 12

Township 16 South, Range 36 East, N.M.P.M.

Section 6: Lots 2 through 7, 11, and 12

(7) Applicant requests that Special Rules and Regulations 1 through 5 for the West Lovington-Strawn Pool remain in effect. Applicant further requests the Division to amend Special Rule and Regulation 6 of the West Lovington-Strawn Pool to reduce the depth bracket allowable to 250 bopd for a standard proration unit, which shall apply only to the acreage described in paragraph (6) above. **However**, as to any well located outside the WLSU, said amended Rule 6 shall terminate and revert to a depth bracket allowable of 445 bopd on the earlier of the following dates: (a) one year after a well's completion unless applicant (or any successor unit operator) applies to the Division on or before that date for expansion of the WLSU to include the acreage in the new well unit; or (b) the date the well's operator proves to the Division that such well is not completed in the same reservoir as wells in the WLSU.

(8) Applicant further requests that a new pool be created, designated the South Big Dog-Strawn Pool, and that the acreage described below be dedicated to the new pool:

Township 15 South, Range 35 East, N.M.P.M.

Section 32: S½SE¼

Township 16 South, Range 35 East, N.M.P.M.

Section 2: Lots 3 through 6

Applicant further requests that Special Rules and Regulations 1 through 6 currently in effect for the West Lovington-Strawn Pool, including 80 acre spacing and a depth bracket allowable of 445 bopd, remain in effect for the new pool.

(9) At the hearing in this matter, Enserch Exploration Inc. entered an appearance in support of the application.

(10) At the hearing in this matter, the following persons entered an appearance and presented evidence in opposition to the application: Yates Petroleum Corporation, Yates Drilling Company, Abo Petroleum Corporation, Myco Industries, Inc., Rio Pecos Corporation, Pathfinder Exploration Company, Cannon Exploration Company, Hollyhock Corporation, Tara-Jon Corporation, Lario Oil and Gas Company, Vierson and Cochran, Hanley Petroleum Inc., and David Petroleum Corp.

(11) The evidence presented in this case shows that:

- (a) The discovery well for the West Lovington Strawn-Pool was the Charles B. Gillespie, Jr. ("Gillespie") Hamilton Federal Well No. 1, located in Unit O of Section 33, Township 15 South, Range 35 East, NMPM;
- (b) During 1992-93, Gillespie drilled an additional eight wells within the subject pool;
- (c) In early 1994, Gillespie determined that the reservoir pressure within the West Lovington-Strawn Pool was declining to the point of nearing critical gas saturation. In an effort to delay the onset of this reservoir condition, Gillespie voluntarily curtailed production from its wells within the pool to 100 bopd per well;
- (d) Since injection for the pressure maintenance project began, applicant has injected 1.4 BCF of gas into the West Lovington-Strawn Pool. The current cost of injected gas is \$2.15/mcf;
- (e) Gas being injected into the WLSU Well No. 7:
 - (i) is being confined to top of the reservoir and is not being recycled to producing wells; and

- (ii) is effectively maintaining reservoir pressure within the West Lovington-Strawn Pool;
- (f) Due to the success of the pressure maintenance project, production from unit wells was increased from 100 bopd to 120 bopd, then to 175 bopd, and subsequently to 200 bopd;
- (g) Strawn oil reservoirs in Lea County typically consist of discrete "porosity pods," each of which is a separate pool. The designated and undesignated West Lovington-Strawn Pool contains at least two separate porosity pods;
- (h) The Strawn formation underlying the unit and adjoining acreage is within one porosity pod, and should be designated as a pool separate from other acreage currently within the West Lovington-Strawn Pool;
- (i) The Strawn reservoir is highly permeable and there is excellent pressure communication across the reservoir;
- (j) The pressure data from wells in the proposed South Big Dog-Strawn Pool shows that this reservoir is separate from the West Lovington-Strawn Pool;
- (k) The State "S" Well No. 1, located in the W $\frac{1}{2}$ SE $\frac{1}{4}$ of Section 34, Township 15 South, Range 35 East, was completed in the Strawn formation in late 1995, and is capable of top allowable production;
- (l) Since the State "S" Well No. began production, it has produced over 57,000 barrels of oil, and its bottom hole pressure has increased by 30 psi. Said well is currently producing at top allowable, and is in pressure communication with the WLSU;
- (m) The Chandler Well No. 1, located in the S $\frac{1}{2}$ SE $\frac{1}{4}$ of Section 28, Township 15 South, Range 35 East, was completed in early 1996, and is producing approximately 125 bopd and 300 bwpd. Said well is completed in the same reservoir as wells within the WLSU;

- (n) The working interest owners of the State "S" Well No. 1 and the Chandler Well No. 1 are not paying any of the costs of the WLSU pressure maintenance project;
- (o) At top allowable producing rates, the State "S" Well No. 1 is producing approximately 5.5 bopd per acre of land in the spacing unit, while the WLSU is currently producing 1 bopd per acre of land in the unit;
- * (p) Due to production from the State "S" Well No. 1 and the Chandler Well No. 1, production from WLSU wells has been reduced from 200 bopd/well to 150 bopd/well in order to maintain reservoir pressure. In addition, the unit operator has added a larger compressor to allow the injection of greater volumes of gas to compensate for the additional production from the reservoir;
- (q) If production is not restricted from wells in the West Lovington-Strawn Pool but outside the WLSU, the producing rates of unit wells will need to be decreased further to maintain reservoir pressure;
- (r) If reservoir pressure is not maintained or increased, critical gas saturation will be reached prematurely, causing damage to the reservoir and causing waste;
- (s) Unitization of the WLSU took over a year to accomplish, even though there was unanimous consent of the working interest owners in the proposed unit. During this period, from May 1994 to October 1995, when gas injection commenced, production from wells within the unit area were restricted to 100 bopd/well to prevent pressure depletion of the reservoir;
- (t) If applicant had not reduced producing rates from wells within the WLSU in May 1994, critical gas saturation would have been reached, greatly reducing the amount of recoverable oil from the West Lovington-Strawn Pool. If that had occurred, by the time the State "S" Well No. 1 was completed, its reserves would have been less than 38,000

barrels of oil, which is less than the well has already produced;

- (u) Negotiations with the interest owners in the State "S" Well No. 1 and the Chandler Well No. 1 regarding unitization have been unsuccessful, and expansion of the unit will take a significant time to accomplish;
- (v) Original tract participations in the WLSU were based on hydrocarbon pore volume underlying a tract, less production through May 1995. The participations for the tracts sought to be added to the WLSU are based solely on hydrocarbon pore volume. Thus, a new tract brought into the unit is not penalized for production from the new well;
- (w) All wells brought into the WLSU are paid out upon unitization, if they have not previously paid out. *WLSU Unit Operating Agreement, Article 10.4*; and
- (x) The proposed 250 bopd allowable for the West Lovington-Strawn Pool is based on anticipated maximum producing rates for wells in the WLSU, and is the maximum rate applicant believes unit wells can be produced without prematurely channeling gas from the from the injection well to the producing wells. In addition, an allowable of 250 bopd will allow an operator to economically drill a producing well in the pool.

(12) The 40-80 acre "buffer zone" outside the WLSU restricts any effect of the reduced allowable, and is reasonable in scope.

(13) The proposed production restriction in the West Lovington-Strawn Pool is reasonable and necessary to prevent reservoir damage, and should be approved.

(14) The proposed production restriction is in accordance with Division Rule 505.E and *Santa Fe Exploration Co. v. Oil Conservation Commission*, 114 N.M. 103, 835 P.2d 819 (1992).

(15) The proposed South Big Dog-Strawn Pool is a separate reservoir from the West Lovington-Strawn Pool. No party at the hearing objected to the creation of the new pool.

IT IS THEREFORE ORDERED THAT:

(1) The application of Gillespie-Crow, Inc. for pool expansion and contraction, special pool rules, and pool creation, is hereby **approved**.

(2) The boundaries of the West Lovington-Strawn Pool are hereby contracted and expanded to include the following acreage:

Township 15 South, Range 35 East, N.M.P.M.

Section 27: S $\frac{1}{2}$ S $\frac{1}{2}$
Section 28: S $\frac{1}{2}$ S $\frac{1}{2}$
Section 29: S $\frac{1}{2}$ SE $\frac{1}{4}$
Section 32: NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$
Section 33: All
Section 34: All

Township 16 South, Range 35 East, N.M.P.M.

Section 1: Lots 1 through 12

Section 16 South, Range 36 East, N.M.P.M.

Section 6: Lots 2 through 7, 11, and 12

(3) Special Rules and Regulations 1 through 5 for the West Lovington-Strawn Pool shall remain in effect. Special Rule and Regulation 6 is hereby amended to read as follows:

Rule 6: A standard proration unit (79 through 81 acres) within the area described in Ordering Paragraph (2) shall be subject to an 80 acre depth-bracket allowable of 250 barrels of oil per day. The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres. **However**, as to any well located outside the boundaries of the West Lovington Strawn Unit, the depth bracket allowable shall revert to 445 barrels of oil per day for a standard proration unit on the earlier of: (a) one year after the well's completion, unless the unit operator applies to the Division on or before that date for expansion of the unit to include said well unit; or (b) the date the well's operator proves to the Division that the well is not completed in the same reservoir as wells in the West Lovington Strawn

Unit.

(4) The South Big Dog-Strawn Pool is hereby created, and it includes the following acreage:

Township 15 South, Range 35 East, N.M.P.M.

Section 32: S $\frac{1}{2}$ SE $\frac{1}{4}$

Township 16 South, Range 35 East, N.M.P.M.

Section 2: Lots 3 through 6

Special Rules and Regulations 1 through 6 currently in effect for the West Lovington-Strawn Pool shall remain in effect for said new pool.

(5) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

(Seal)