

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. 12289
ORDER NO. R-10864-B

APPLICATION OF GILLESPIE OIL, INC. AND ENERGEN RESOURCES CORPORATION TO AMEND DIVISION ORDER NO. R-10864-A FOR UNIT EXPANSION, STATUTORY UNITIZATION, AND QUALIFICATION OF THE EXPANDED UNIT AREA FOR THE RECOVERED OIL TAX RATE AND CERTIFICATION OF A POSITIVE PRODUCTION RESPONSE PURSUANT TO THE "NEW MEXICO ENHANCED OIL RECOVERY ACT," LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on November 18, 1999, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 20th day of March, 2000, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter.

(2) By Order No. R-10449 entered in Case No. 11195 on August 29, 1995, the Division, upon the application of Gillespie-Crow, Inc. (the predecessor to Gillespie Oil, Inc.), approved the statutory unitization, pursuant to the Statutory Unitization Act, NMSA 1978, Sections 70-7-1 through 70-7-21, of the following described 1458.95 acres, more or less, of state, federal, and fee lands in the West Lovington-Strawn Pool, Lea County, New Mexico:

WEST LOVINGTON STRAWN UNIT AREA
TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 33: All
Section 34: W/2

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
Irregular Section 1: Lots 1 through 8

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM
Irregular Section 6: Lots 3 through 5

(3) The *West Lovington Strawn Unit Agreement* and the *West Lovington Strawn Unit Operating Agreement*, being Exhibits 19 and 11 in Case No. 11195, respectively, were incorporated by reference into Division Order No. R-10449. The West Lovington Strawn Unit (WLSU), as initially proposed, became effective on October 1, 1995.

(4) The vertical extent of the WLSU unitized formation defined by the *West Lovington Strawn Unit Agreement* is that stratigraphic interval underlying the WLSU area between the top of the Strawn formation, found at a correlative depth of 11,420 feet, to the base of the Strawn formation, found at a correlative depth of 11,681 feet, as identified on the Compensated Neutron/Litho-Density Log for the Speight Fee Well No. 1 (API No. 30-025-31646), redesignated the WLSU Well No. 7, located 660 feet from the North line and 2310 feet from the West line (Lot 3/Unit C) of irregular Section 1, Township 16 South, Range 35 East, NMPM, Lea County, New Mexico [see Ordering Paragraph No. (3) of Division Order No. R-10449, issued in Case No. 11195 and dated August 29, 1995].

(5) By Order No. R-10448 entered in Case No. 11194 on August 29, 1995, the Division authorized Gillespie-Crow, Inc. to institute a pressure maintenance project (designated the West Lovington Strawn Unit Pressure Maintenance Project) within the WLSU by the injection of gas into the West Lovington-Strawn Pool through the perforated interval from approximately 11,424 feet to 11,434 feet in the above-described Speight Fee Well No. 1.

(6) By Order No. R-10864 entered in Case No. 11724 on August 27, 1997, the Division, upon the application of Gillespie-Crow, Inc., approved the expansion of the horizontal boundaries of the WLSU by the statutory unitization pursuant to the Statutory Unitization Act of an additional 160 acres, more or less, of state and fee lands in the West Lovington-Strawn Pool, described as follows:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM
Section 28: S/2 SE/4
Section 34: W/2 SE/4

With the first expansion, the WLSU contained 1618.95 acres, more or less. The vertical

limits of the expanded WLSU are defined in Ordering Paragraph No. (3) of Order No. R-10449, which was incorporated in Order No. R-10864 by reference. This first unit expansion became effective on November 1, 1997. In addition, the secondary recovery project for the expanded unit area was approved and the following two wells qualified for the recovered oil tax rate and were certified for a positive production response:

- (a) State "S" Well No. 1 (API No. 30-025-33068), redesignated the WLSU Well No. 12, located 1650 feet from the South and East lines (Unit J) of Section 34, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico; and
- (b) Chandler Well No. 1 (API No. 30-025-33175), redesignated the WLSU Well No. 13, located 330 feet from the South line and 1650 feet from the East line (Unit O) of Section 28, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico.

(7) Division Order No. R-10864 further provided for the revision of the *West Lovington Strawn Unit Agreement* approved in Case No. 11195 by adopting revised Exhibits A, B, and C to the Agreement, being Exhibit 1, the combination of Exhibits 19 and 20, and Exhibit 17, respectively, in Case No. 11724. The following tract participation was established for the expanded WLSU area:

<u>TRACT NUMBER</u>	<u>PARTICIPATION</u>
1 through 11	95.2797924%
12	2.3161519%
13	2.1147842%
14	<u>0.2892715%</u>
	100.0000000%.

(8) The tract participation formula used for the initial area and first expansion of the WLSU is set forth in SECTION 13 of the *West Lovington Strawn Unit Agreement* and is based on hydrocarbon pore volume underlying a tract less production through May 1, 1995.

(9) By Order No. R-10864-A entered in Case No. 12171 on September 28, 1999, the Division, upon application of Gillespie Oil, Inc., approved a second expansion of the horizontal boundaries of the WLSU by the statutory unitization pursuant to the Statutory Unitization Act of an additional 1123.95 acres, more or less, of state and fee lands in the West

Lovington-Strawn Pool, described as follows:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 28: S/2 SW/4
Section 32: E/2 NE/4
Section 34: NE/4 and E/2 SE/4
Section 35: SW/4

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM

Irregular Section 1: Lots 9, 10, 11, and 12

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Irregular Section 5: Lots 3, 4, 5, and 6
Irregular Section 6: Lots 1, 2, 6, 7, and 8.

(10) The vertical limits of this second expansion area covered the same interval as described above in Finding Paragraph No. (4).

(11) After the hearing in Case No. 12171, three additional wells were drilled and completed in the Strawn formation within the WLSU, as expanded. The results of these wells led to a modification of the acreage sought to be included in the second expansion area.

(12) At this time the applicants in this case, Gillespie Oil, Inc. and Energen Resources Corporation, seek to supersede the provisions of Division Order No. R-10864-A and replace the request made in Case No. 12171 with a request to expand the horizontal boundaries of the WLSU by the statutory unitization, pursuant to the Statutory Unitization Act, of an additional 993.17 acres, more or less, of state and fee lands in the West Lovington-Strawn Pool, described as follows:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 28: S/2 SW/4
Section 32: E/2 E/2
Section 34: S/2 NE/4 and E/2 SE/4
Section 35: W/2 SW/4

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM

Irregular Section 1: Lots 9, 10, 11, and the N/2 and SE/4 equivalents of Lot 12

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Irregular Section 5: Lots 3, 4, and 5
Irregular Section 6: Lots 1, 2, 6, 7, and 8.

(13) The applicants requested that SECTION 13 of the *West Lovington Strawn Unit Agreement*, regarding tract participation for the expanded unit area, be revised as described in Attachment A to this order. Hydrocarbon pore volume was calculated based on the map submitted at hearing as Exhibit No. 2. Tract participation for the proposed expanded area is described on Attachment B to this order, which is to be adopted as revised Exhibit C to the *West Lovington Strawn Unit Agreement*.

(14) In addition, the applicants proposed that SECTION 16 of the *West Lovington Strawn Unit Agreement* be revised to include a new paragraph set forth in Attachment C to this order. Such provision, which should be approved, is necessary to ensure that the working interest owners who paid for injected gas recover their proportionate share of such gas that is ultimately produced. As of November 1, 1997, 3,646,566 MCF of gas measured at 14.65 psia (3,739,908 MCF measured at 15.025 psia) had been injected into the unitized formation described in Finding Paragraph No. (4) above.

(15) The applicants further seek to qualify this amended second expanded unit area for the recovered oil tax rate pursuant to the "Enhanced Oil Recovery Act" (NMSA 1978, Sections 7-29A-1 through 7-29A-5), and certify the following five wells, located on the tracts to be added to the WLSU, as having a positive production response:

- (a) Charles B. Gillespie, Jr. Snyder "EC" Com. Well No. 1 (API No. 30-025-33219), located 1346 feet from the North line and 1980 feet from the East line (Lot 2/Unit B) of irregular Section 6, Township 16 South, Range 36 East, NMPM, Lea County, New Mexico;
- (b) Charles B. Gillespie, Jr. Snyder "C" Well No. 4 (API No. 30-025-34282), located 510 feet from the North line and 990 feet from the East line (Lot 1/Unit A) of irregular Section 6;

- (c) Energen Resources Corporation Beadle Well No. 1 (API No. 30-025-34606), located 330 feet from the South and West lines (Unit M) of Section 35, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico;
- (d) Charles B. Gillespie, Jr. Snyder "F" Well No. 3 (API No. 30-025-34645), located 655 feet from the North line and 330 feet from the West line (Lot 4/Unit D) of irregular Section 5, Township 16 South, Range 36 East, NMPM, Lea County, New Mexico; and
- (e) Gillespie Oil, Inc. WLSU Well No. 14 (API No. 30-025-34684), located 1830 feet from the North line and 610 feet from the West line (Unit E) of Section 33, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico.

(16) At the November 18, 1999 hearing Yates Petroleum Corporation and Hanley Petroleum, Inc. entered appearances in support of the proposed amended second unit expansion described in Finding Paragraph No. (12) above. Snyder Ranches, Inc., a royalty interest owner, also entered an appearance in this matter. Mr. Phillip Glenn Adams, a New Mexico resident with an interest in the area in which the WLSU area is located, also appeared to voice an opinion in this matter.

(17) Division Order No. R-10864 was the subject of a *de novo* appeal to the New Mexico Oil Conservation Commission by Hanley Petroleum, Inc. ("Hanley"). The case was subsequently remanded to the Division. At the Division hearing on November 18, 1999 Hanley requested that Unit Tract 15 (S/2 SW/4 of Section 28, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico) be brought into the unit effective November 1, 1997. Evidence was presented that:

- (i) Tract 15 has hydrocarbon pore volume underlying it and should have been brought into the unit in 1997; and
- (ii) in order to protect correlative rights and prevent waste: (A) Tract 15 should be incorporated into the WLSU area

effective November 1, 1997; and (B) for the period November 1, 1997 to April 1, 1999, Tract 14 (S/2 SE/4 of Section 28, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico) should have allocated to it a 0.15504952% tract participation and Tract 15 a 0.13422197% tract participation.

- (18) Further, the evidence presented shows that:
- (a) After the first WLSU expansion the above-described Snyder "C" Well No. 4 was drilled and completed in the West Lovington-Strawn Pool.
 - (b) At a November 1998 working interest owners meeting, additional pressure testing of the reservoir was authorized and a technical committee was formed to consider new reservoir data and unit expansion.
 - (c) The technical committee met five times during the next several months. The committee determined that the Snyder "C" Well No. 4 was in pressure communication with the WLSU reservoir and reconsidered the status of the Snyder "EC" Com. Well No. 1.
 - (d) After the hearing was held in Case No. 12171, the above-described Beadle Well No. 1, Snyder "F" Well No. 3, and WLSU Well No. 14 were drilled. The evidence shows that these wells are in pressure communication with the WLSU Pressure Maintenance Project. The technical committee subsequently proposed a revised second unit expansion as proposed in Exhibit Nos. 1 and 2 in this case.
 - (e) The Strawn formation underlying the second expanded unit area, as proposed by the applicants, has been reasonably defined by development as required by the Statutory Unitization Act.

(f) As of October 1, 1999, the WLSU had produced 4.05 million barrels of oil and injected 7.02 BCF of gas, and pressure decline in the reservoir had been substantially arrested. A highly successful pressure maintenance project has been instituted on the WLSU that has benefited the West Lovington-Strawn Pool and the interest owners therein.

(19) During the course of this hearing disagreement arose over the procedures for operators to recoup their costs of drilling and completing new wells located on expansion acreage being brought into the WLSU. Gillespie Oil, Inc. introduced its Exhibits No. 8 and 9 as proposed alternative amendments to ARTICLE 10.4 of the *West Lovington Strawn Unit Operating Agreement*. Gillespie Oil, Inc.'s Exhibit No. 8 is a draft prepared by Energen Resources Corporation and Exhibit No. 9 is a draft prepared by Gillespie Oil, Inc. According to the evidence, the version presented in Exhibit No. 8 provides that only the operator and working interest owners in a new well would be entitled to recoup payout costs, while under the Exhibit No. 9 version the owners of royalty and overriding royalty interests would also recoup payout costs. Energen Resources Corporation stated that it did not propose that the Division adopt the Exhibit No. 8 version, and indicated its opposition to the Exhibit No. 9 version. It was the position of Energen Resources Corporation that the amendment to Article 10.4 set forth in Attachment D to Division Order No. R-10864-A should remain unchanged.

(20) This application, which was filed jointly by both Gillespie Oil, Inc. and Energen Resources Corporation, did not address this issue or specifically request a revision of ARTICLE 10.4 of the *West Lovington Strawn Unit Operating Agreement* as set forth in Attachment D of Division Order No. R-10864-A. Further, the amendment to ARTICLE 10.4 of the *West Lovington Strawn Unit Operating Agreement* set forth in Attachment D to Division Order No. R-10864-A is fair, reasonable, and equitable; therefore, Attachment D of Division Order No. R-10864-A shall remain in full force and effect.

(21) The unitized management, operation, and further development of the West Lovington-Strawn Pool underlying this revised second expansion area are reasonably necessary to effectively carry on pressure maintenance operations and to substantially increase the ultimate recovery of oil and gas.

(22) The existing pressure maintenance operation, as applied to the West Lovington-Strawn Pool underlying this revised second expansion area, is feasible, will prevent waste, and will result with reasonable probability in the recovery of substantially more oil from the Strawn formation than would otherwise be recovered.

(23) The estimated additional costs, if any, of conducting unitized operations will not exceed the estimated value of the additional oil recovered thereby, plus a reasonable profit.

(24) A good faith effort has been made to secure voluntary unitization of the Strawn formation underlying this revised second expansion area.

(25) The tract participation formula in the *West Lovington Strawn Unit Agreement* allocates produced and saved unitized hydrocarbons to the separate tracts in the expanded unit on a fair, reasonable, and equitable basis.

(26) Unitization and adoption of the current unitized methods of operation will benefit the working, royalty, and overriding royalty interest owners of the oil and gas rights within the expanded WLSU.

(27) The plan of unitization for this second expansion area set forth in the *West Lovington Strawn Unit Agreement* approved by Division Order No. R-10449, and amended by Division Order No. R-10864, should be further modified by the following:

- (a) revised SECTION 13 of the *West Lovington Strawn Unit Agreement* (Attachment A to this order);
- (b) revised tract participation in Exhibit C to the *West Lovington Strawn Unit Agreement* (Attachment B to this order);
- (c) revised Exhibit B to the *West Lovington Strawn Unit Agreement*, which contains ownership schedules within the (i) original unitized area, (ii) first expansion area, and (iii) proposed revised second expansion area, to be re-calculated based on the tract participation set forth in Attachment B (a copy thereof is to be filed with the Division);
- (d) revised SECTION 16 of the *West Lovington Strawn Unit Agreement* (Attachment C to this order); and
- (e) revised Exhibit A to the *West Lovington Strawn Unit Agreement*, which is a land plat identifying the WLSU presented at the hearing as Gillespie Oil, Inc. Exhibit

No. 3.

These revisions are fair, reasonable, and equitable.

(28) The operating plan for the WLSU as expanded, covering the supervision and management of the expansion area and the allocation and payment of costs, is set forth in the ~~West Lovington Strawn Unit Operating Agreement approved by Division Order No. R-10864~~ and amended by Division Order No. R-10864, and should be further modified by revised ARTICLE 10.4 (Attachment D to this order), which is to remain the same as Attachment D to Division Order No. R-10864-A.

(29) The *West Lovington Strawn Unit Agreement*, as amended and applied to the revised second expansion area, provides for unitization of the West Lovington Strawn Unit Area upon terms and conditions that are fair, reasonable, and equitable, and include or shall include:

- (a) an allocation to the separately owned tracts in the expanded unit area of all oil and gas produced and saved from the expanded unit area (*i.e.*, the production that is not used in the conduct of unit operations or not unavoidably lost);
- (b) a provision for credits, charges, and adjustments to be made among the owners in the expanded unit area for their respective investments in wells, tanks, pumps, machinery, materials, and equipment contributed to unit operations;
- (c) a provision governing how the costs of unit operations, including capital investments, shall be determined and charged to the separately owned tracts and how these costs shall be paid, including a provision providing when, how, and by whom the unit production allocated to an owner who does not pay its share of the costs of unit operation shall be credited to such owner, or the interests of such owner, and how its interest may be sold and the proceeds applied to the payment of its costs;

- (d) a provision for carrying any working interest owner on a limited, carried, or net-profits basis, payable out of production, upon terms and conditions that are just and reasonable and that allow an appropriate charge for interest for such service payable out of production, upon such terms and conditions determined by the Division to be just and reasonable, and providing that any non-consenting working interest owner being so carried shall be deemed to have relinquished to the unit operator all of its operating rights and working interest in and to the unit until its share of the costs, service charge, and interest are repaid to the unit operator;
- (e) a provision designating the unit operator and providing **for the supervision and conduct of unit operations, including the selection, removal, or substitution of an operator from among the working interest owners to conduct unit operations;**
- (f) a provision for a voting procedure for decisions on matters to be decided by the working interest owners with each working interest owner having a voting interest equal to its unit participation; and
- (g) the time when unit operations shall commence and the manner in which, and the circumstances under which, unit operations shall terminate and provision for the settlement of accounts upon such termination.

(30) The applicant requested that a 200% penalty be assessed against those working interest owners who do not voluntarily agree to join the proposed unit expansion.

(31) NMSA 1978, Section 70-7-7.F of the Statutory Unitization Act provides that the unit plan of operation shall include a provision for carrying any working interest owner subject to limitations set forth in the statute. Any non-consenting working interest owner so carried shall be deemed to have relinquished to the unit operator all of its operating rights and working interest in and to the unit until its share of costs plus an amount not to exceed 200 percent thereof as a non-consent penalty has been repaid.

(32) The *West Lovington Strawn Unit Operating Agreement*, as amended, contains a provision whereby any working interest owner who elects not to pay its share of unit expense shall be liable for its share of such unit expense plus an additional 200 percent thereof as a non-consent penalty, and whereby such costs and non-consent penalty may be recovered from each non-consenting working interest owner's share of unit production.

(33) A non-consent penalty of 200 percent should be adopted in this case. The applicant should be authorized to recover from unit production each non-consenting working interest owner's share of unit expense plus 200 percent thereof.

(34) The statutory unitization of the expanded WLSU will prevent waste and protect the correlative rights of all interest owners within the proposed unit, as expanded, and should be approved.

(35) The five wells described above in Finding Paragraph No. (15), all located within the WLSU as expanded, qualify for the recovered oil tax rate and should be certified for a positive production response.

(36) This order supersedes Division Order No. R-10864-A.

IT IS THEREFORE ORDERED THAT:

(1) This order hereby supersedes Division Order No. R-10864-A entered in Case No. 12171 on September 28, 1999.

(2) The expanded West Lovington Strawn Unit Area (WLSU), comprising a total of 2612.12 acres, more or less, of state, federal, and fee lands in the West Lovington-Strawn Pool, Lea County, New Mexico, is hereby approved for statutory unitization pursuant to the Statutory Unitization Act, NMSA 1978 Sections 70-7-1 through 70-7-21.

(3) The lands included within this revised second expansion of the WLSU area shall comprise the following described 993.17 acres, more or less, of state and fee lands in Lea County, New Mexico:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 28:	S/2 SW/4
Section 32:	E/2 E/2
Section 34:	S/2 NE/4 and E/2 SE/4
Section 35:	W/2 SW/4

- (iii) revised Exhibit B to the *West Lovington Strawn Unit Agreement*, which contains ownership schedules within the (a) original unitized area, (b) first expansion area, and (c) proposed revised second expansion area, shall be re-calculated based on the tract participation set forth in Attachment B (a copy thereof shall be filed with the Division);
- (iv) revised SECTION 16 of the *West Lovington Strawn Unit Agreement* (Attachment C of this order);
- (v) revised Exhibit A to the *West Lovington Strawn Unit Agreement*, which is a land plat identifying the WLSU presented at this hearing as applicants' Exhibit No. 1; and
- (vi) Attachment D to Division Order No. R-10864-A, being a revised ARTICLE 10.4 of the *West Lovington Strawn Unit Operating Agreement* (Attachment D to this order).

(8) This order shall not become effective unless and until the owners of seventy-five (75) percent of the working interest and seventy-five (75) percent of the royalty interest in the West Lovington Strawn Unit as expanded approve the plan for unit operations.

(9) If the persons owning the required percentage of interest in the West Lovington Strawn Unit Area as expanded do not approve the plan for unit operations within six months from the date of entry of this order, this order shall cease to be of any effect unless the Division extends the time for good cause. Any failure to obtain the required percentage approval shall not affect the validity of Orders No. R-10448, R-10449, and R-10864 as in effect prior to the date of this order.

(10) When persons owning the required percentage of interest in the West Lovington Strawn Unit Area as expanded have approved the plan for unit operations, the interests of all persons in the expanded unit area are unitized whether or not such persons have approved the plan of unitization in writing.

(11) The designated Unit Operator shall notify the Division Director of any removal or substitution of the Unit Operator by any working interest owner within the expanded Unit

Area.

(12) A non-consent penalty of 200 percent is hereby adopted in this case. The applicant shall be authorized to recover from unit production each non-consenting working interest owner's share of unit expense plus 200 percent thereof.

(13) The following five additional wells within the WLSU as expanded are hereby qualified for the recovered oil tax rate and are certified for a positive production response:

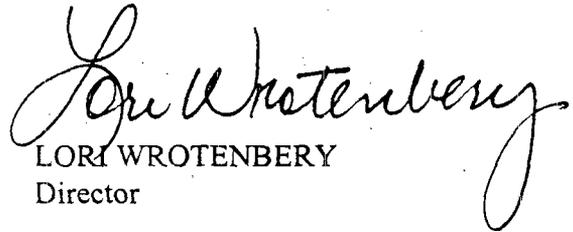
- (a) Charles B. Gillespie, Jr. Snyder "EC" Com. Well No. 1 (API No. 30-025-33219), located 1346 feet from the North line and 1980 feet from the East line (Lot 2/Unit B) of irregular Section 6, Township 16 South, Range 36 East, NMPM, Lea County, New Mexico;
- (b) Charles B. Gillespie, Jr. Snyder "C" Well No. 4 (API No. 30-025-34282), located 510 feet from the North line and 990 feet from the East line (Lot 1/Unit A) of irregular Section 6;
- (c) Energen Resources Corporation Beadle Well No. 1 (API No. 30-025-34606), located 330 feet from the South and West lines (Unit M) of Section 35, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico;
- (d) Charles B. Gillespie, Jr. Snyder "F" Well No. 3 (API No. 30-025-34645), located 655 feet from the North line and 330 feet from the West line (Lot 4/Unit D) of irregular Section 5, Township 16 South, Range 36 East, NMPM, Lea County, New Mexico; and
- (e) Gillespie Oil, Inc. WLSU Well No. 14 (API No. 30-025-34684), located 1830 feet from the North line and 610 feet from the West line (Unit E) of Section 33, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico.

(14) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


LORI WROTENBERY
Director

SEAL

ATTACHMENT A
Case No. 12289
Order No. R-10864-B

UNIT AGREEMENT FOR THE DEVELOPMENT AND
OPERATION OF THE WEST LOVINGTON STRAWN UNIT AREA
LEA COUNTY, NEW MEXICO.

"SECTION 13. TRACT PARTICIPATION (EXPANDED UNIT).

The percentages of Tract Participation for each Tract within the Unit Area have been calculated and determined in accordance with the following formulas:

1. October 1, 1995 - October 31, 1997 (Original Unit).

Tract Participation for Tracts 1-11 (the original Unit Area) are those calculated under the Unit Agreement, as approved and amended by Division Order No. R-10449.

2. November 1, 1997 - March 31, 1999 (First Expansion).

Tract Participation for this period are those approved by Division Order No. R-10864, as amended, as follows:

Tracts 1-11:	95.27979240%
Tract 12:	2.31615190%
Tract 13:	2.11478420%
Tract 14:	0.15504952%
Tract 15:	0.13422197%

Production allocated to Tracts 1-11 was apportioned among those Tracts in the proportions set forth in Division Order No. R-10449.

There shall be no retroactive changes in Tract Participation or in allocation of production of Unitized Substances for any period prior to April 1, 1999.

3. Effective April 1, 1999 (Second Expansion).

(a) Tract Participation Percentage = (80% x HPV) + (20% x WF):

HPV = Hydrocarbon Pore Volume: Determined by volumetric original oil in place in the Unitized Formation under each Tract divided by volumetric original oil in place in the Unitized Formation under the expanded Unit Area.

Original oil in place is calculated from hydrocarbon pore volume using 100% of the density porosity electric log response with a 3% porosity cutoff, with an $R_w = 0.48$.

WF = Wellbore Factor: Determined by (i) the number of wells on a Tract, (ii) multiplied by the maximum average daily producing rate during a consecutive six (6) month producing period divided by the allowable for the West Lovington-Strawn Pool (250 BOPD/well), (iii) divided by the cumulative sum of all Well Factors in the Unit Area.

Tracts 1-11 shall have a cumulative Wellbore Factor of 11 assigned thereto.

- (b) Tract Participation for Tracts 12-15 shall be calculated under the subparagraph (a) formula for the period commencing April 1, 1999.

The participation for each Tract in the expanded Unit Area are set forth in Exhibit C (Second Revision) to the Unit Agreement attached hereto.

The Tract Participation percentages have been calculated upon the basis of all Tracts within the Unit Area, as expanded, being committed to this Agreement as of the effective date of unit expansion (April 1, 1999), and such Tract Participation shall govern the allocation of Unitized Substances produced from the Unit Area after April 1, 1999; subject, however, to any revisions of the Unit Area and Exhibit C (Second Revision) in accordance with the provisions thereof.

If, subsequent to the effective date of unit expansion, any additional tract becomes committed hereto under the provisions of Section 4 (Expansion), the Unit Operator shall revise Exhibits B and C, or the latest revisions thereof, to show the new percentage participation of the then committed tracts, which revised exhibits shall, upon their approval by the Commissioner, Authorized Officer, and Division, supersede, as of their effective dates, the last previously effective Exhibits B and C. In any revision of Exhibit C, the revised percentage participation of the respective tracts listed in the previously effective Exhibit C shall remain in the same ratio one to the other.

ATTACHMENT B
Case No. 12289
Order No. R-10864-B

UNIT AGREEMENT FOR THE DEVELOPMENT AND
OPERATION OF THE WEST LOVINGTON STRAWN UNIT AREA
LEA COUNTY, NEW MEXICO

Revised Exhibit "C"

<u>TRACT NUMBER</u>	<u>PARTICIPATION</u>
1-11	85.08059334%
12	1.69116346%
13	2.86821633%
14	1.65551240%
15	1.59713840%
16A	1.37434967%
16B	0.12544864%
17	2.63287715%
18A	0.14670687%
18B	1.33867162%
19	0.33584307%
20	0.42036722%
21A	0.04141701%
21B	0.02072538%
21C	0.02069163%
22	0.24184715%
23	0.00244717%
24	0.33325506%
25	<u>0.07272844%</u>
	100.00000000%

ATTACHMENT C
Case No. 12289
Order No. R-10864-B

UNIT AGREEMENT FOR THE DEVELOPMENT AND
OPERATION OF THE WEST LOVINGTON STRAWN UNIT AREA
LEA COUNTY, NEW MEXICO.

SECTION 16. OUTSIDE SUBSTANCES.

Paragraph 2 (New): Consistent with Article 11.1 of the Unit Operating Agreement (Basis of Charge to Working Interest Owners), Unit Operator shall allocate and pay the proceeds from the production, recovery, and sale of all volumes of gas purchased or acquired and injected into the Unitized Formation for pressure maintenance operations before the effective date of the first expansion of the Unit (the "Initial Injection Volumes") to the Working Interest Owners in the Unit as then constituted, and according to the Unit Participations in effect at the time the costs of acquisition of the Initial Injection Volumes were incurred (per Exhibit "D" attached to the Unit Operating Agreement in effect before November 1, 1997). At such time as 100% of the Initial Injection Volumes have been produced, recovered, and sold, proceeds from the production, recovery, and sale of subsequently acquired and injected gas volumes shall be allocated and paid to the Working Interest Owners in proportion to their Unit Participations (per Exhibit "D" to the Unit Operating Agreement in effect during the pertinent time period) at the time the costs of acquisition of subsequently injected gas volumes were incurred.

ATTACHMENT D
Case No. 12289
Order No. R-10864-B

UNIT OPERATING AGREEMENT
WEST LOVINGTON STRAWN UNIT AREA
LEA COUNTY, NEW MEXICO.

ARTICLE 10.4. INVESTMENT ADJUSTMENTS.

Paragraph 2 (Revised): All wells completed in the Strawn formation within the Unit Area shall be Unit wells. If a well becoming a Unit well by virtue of expansion of the Unit Area has not reached payout status, the owner or operator of such well shall have the option, on prior written notification to Unit Operator, to (1) receive immediate payment from the Unit sufficient to reimburse one hundred percent of the costs of drilling, completion, and equipping the well ("Payout Costs" or "Payout") or (2) continue as operator of the well and recoup an amount in excess of one hundred percent of Payout Costs proportionate to the ability of the well to produce for six consecutive months as measured against the top pool allowable of 250 BOPD (the "Payout Multiple"). In no event shall the Payout Multiple exceed two hundred percent of actual Payout Costs. For the Snyder "EC" Com. Well No. 1 (API No. 30-025-33219), located 1346 feet from the North line and 1980 feet from the East line (Lot 2/Unit B) of irregular Section 6, Township 16 South, Range 36 East, NMPM, Lea County, New Mexico, the Payout Multiple shall be 116 percent; For the Snyder "C" Well No. 4 (API No. 30-025-34282), located 510 feet from the North line and 990 feet from the East line (Lot 1/Unit A) of irregular Section 6, the Payout Multiple shall be 200 percent. The terms hereof shall be made applicable to the Beadle Well No. 1 (API No. 30-025-34606), located 330 feet from the South and West lines (Unit M) of Section 35, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico, and the Payout Multiple for said well determined accordingly, regardless of the actual effective date of the unit expansion.

From the effective date of unitization or expansion of the Unit Area to the time the well reaches its Payout Multiple, Unitized Substances will be apportioned and allocated to all of the Qualified Tracts in the Unit as then constituted in accordance with the terms of Section 15-A of the Unit Agreement. Provided, however, that the owner or operator of the well which has not reached its Payout Multiple shall be entitled to all of the proceeds from production attributed to such Tract(s) comprising the well's proration unit until the well has reached its Payout Multiple. At such time as the well reaches its Payout Multiple, the Unit Operator shall immediately be designated operator of such well. Each of the parties shall have the right to audit the account for such well for any period, consistent with the terms of Article 5.2.3.

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. 12171
ORDER NO. R-10864-A

**APPLICATION OF GILLESPIE OIL, INC. FOR UNIT EXPANSION, STATUTORY
UNITIZATION, AND QUALIFICATION OF THE EXPANDED UNIT AREA FOR
THE RECOVERED OIL TAX RATE AND CERTIFICATION OF A POSITIVE
PRODUCTION RESPONSE PURSUANT TO THE "NEW MEXICO ENHANCED
OIL RECOVERY ACT," LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on May 27, 1999 at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 28th day of September, 1999, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter.

(2) By Order No. R-10449 entered in Case No. 11195 on August 29, 1995, the Division, upon the application of Gillespie-Crow, Inc. (the predecessor to Gillespie Oil, Inc.), approved the statutory unitization, pursuant to the Statutory Unitization Act, NMSA 1978 Sections 70-7-1 through 70-7-21, of the following described 1458.95 acres, more or less, of State, Federal, and Fee lands in the West Lovington-Strawn Pool, Lea County, New Mexico:

WEST LOVINGTON STRAWN UNIT AREA
TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 33:	All
Section 34:	W/2

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM

Irregular Section 1: Lots 1 through 8

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Irregular Section 6: Lots 3 through 5

(3) The *West Lovington Strawn Unit Agreement* and the *West Lovington Strawn Unit Operating Agreement*, being Exhibits 19 and 11 in Case No. 11195, respectively, were incorporated by reference into Division Order No. R-10449. The West Lovington Strawn Unit (WLSU), as initially proposed, became effective on October 1, 1995.

(4) The vertical extent of the WLSU unitized formation defined by the *West Lovington Strawn Unit Agreement* is that stratigraphic interval underlying the WLSU area between the top of the Strawn formation, found at a correlative depth of 11,420 feet, to the base of the Strawn formation, found at a correlative depth of 11,681 feet, as identified on the Compensated Neutron/Liho-Density Log for the Speight Fee Well No. 1 (API No. 30-025-31646), redesignated the WLSU Well No. 7, located 660 feet from the North line and 2310 feet from the West line (Lot 3/Unit C) of irregular Section 1, Township 16 South, Range 35 East, NMPM, Lea County, New Mexico.

(5) By Order No. R-10448 entered in Case No. 11194 on August 29, 1995, the Division authorized Gillespie-Crow, Inc. to institute a pressure maintenance project (designated the West Lovington Strawn Unit Pressure Maintenance Project) within the WLSU by the injection of gas into the West Lovington-Strawn Pool through the perforated interval from approximately 11,424 feet to 11,434 feet in the above-described Speight Fee Well No. 1.

(6) By Order No. R-10864 entered in Case No. 11724 on August 27, 1997, the Division, upon the application of Gillespie-Crow, Inc., approved the expansion of the horizontal boundaries of the WLSU by the statutory unitization pursuant to the Statutory Unitization Act of an additional 160 acres, more or less, of State and Fee lands in the West Lovington-Strawn Pool, described as follows:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 28: S/2 SE/4
Section 34: W/2 SE/4

With the first expansion, the WLSU contained 1618.95 acres, more or less. The vertical limits of the expanded WLSU are defined in Ordering Paragraph No. (3) of Order No. R-10449, which was incorporated in Order No. R-10864 by reference. This first unit expansion

became effective on November 1, 1997. In addition, the secondary recovery project for the expanded unit area was approved and the following two wells qualified for the recovered oil tax rate and were certified for a positive production response:

- (a) State "S" Well No. 1 (API No. 30-025-33068), redesignated the WLSU Well No. 12, located 1650 feet from the South and East lines (Unit J) of Section 34, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico; and
- (b) Chandler Well No. 1 (API No. 30-025-33175), redesignated the WLSU Well No. 13, located 330 feet from the South line and 1650 feet from the East line (Unit O) of Section 28, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico.

(7) Division Order No. R-10864 further provided for the revision of the *West Lovington Strawn Unit Agreement* approved in Case No. 11195 by adopting revised Exhibits A, B, and C to the Agreement, being Exhibits 1, 19 and 20, and 17, respectively, in Case No. 11724. The following tract participation was established for the expanded WLSU area:

<u>TRACT NUMBER</u>	<u>PARTICIPATION</u>
1 through 11	95.2797924%
12	2.3161519%
13	2.1147842%
14	<u>0.2892715%</u>
	100.0000000%.

(8) The tract participation formula used for the initial area and first expansion of the WLSU is set forth in SECTION 13 of the *West Lovington Strawn Unit Agreement* and is based on hydrocarbon pore volume underlying a tract less production through May 1, 1995.

(9) The applicant in this case, Gillespie Oil, Inc., seeks to again expand the horizontal boundaries of the WLSU by the statutory unitization, pursuant to the Statutory Unitization Act, of an additional 1123.95 acres, more or less, of State and Fee lands in the West Lovington-Strawn Pool, described as follows:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 28:	S/2 SW/4
Section 32:	E/2 NE/4
Section 34:	NE/4 and E/2 SE/4
Section 35:	SW/4

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM

Irregular Section 1:	Lots 9, 10, 11, and 12
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TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Irregular Section 5:	Lots 3, 4, 5, and 6
Irregular Section 6:	Lots 1, 2, 6, 7, and 8.

(10) The applicant requested that SECTION 13 of the *West Lovington Strawn Unit Agreement*, regarding tract participation for the expanded unit area, be revised as described in Attachment A to this order. Hydrocarbon pore volume was calculated based on the map submitted at hearing as Gillespie Oil, Inc. Exhibit No. 3. Tract participation for the proposed expanded area is described on Attachment B to this order, which is to be adopted as revised Exhibit C to the *West Lovington Strawn Unit Agreement*.

(11) In addition, the applicant proposed that SECTION 16 of the *West Lovington Strawn Unit Agreement* be revised to include a new paragraph set forth in Attachment C to this order. Such provision, which should be approved, is necessary to ensure that the working interest owners who paid for injected gas recover their proportionate share of such gas that is ultimately produced. As of November 1, 1997, 3,646,566 MCF of gas had been injected into the unitized formation described in Finding Paragraph No. (4) above.

(12) The applicant further seeks to qualify this second expanded unit area for the recovered oil tax rate pursuant to the "Enhanced Oil Recovery Act" (NMSA, Sections 7-29A-1 through 7-29A-5), and certify the following two wells, located on the tracts to be added to the WLSU, as having a positive production response:

- (a) Snyder "EC" Com. Well No. 1 (API No. 30-025-33219), located 1346 feet from the North line and 1980 feet from the East line (Lot 2/Unit B) of irregular Section 6, Township 16 South, Range 36 East, NMPM, Lea County, New Mexico; and

- (b) Snyder "C" Well No. 4 (API No. 30-025-34282), located 510 feet from the North line and 990 feet from the East line (Lot 1/Unit A) of irregular Section 6.

(13) At the hearing, Energen Resources Corporation, Yates Petroleum Corporation, and Hanley Petroleum, Inc. entered appearances in support of the proposed second unit expansion. David H. Arrington Oil & Gas, Inc. entered an appearance in opposition to the inclusion of proposed Unit Tract 24 (E/2 SW/4 of Section 35, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico) in the WLSU. Charles B. Gillespie, Jr., as an interest owner in the WLSU, entered an appearance in support of this second unit expansion, but proposed a smaller expansion and an amendment to Article 10.4 of the *West Lovington Strawn Unit Agreement*. Snyder Ranches, Inc., a royalty owner, also entered an appearance in this matter. Mr. Phillip Glenn Adams, a New Mexico resident with an interest in the area in which the WLSU area is located, appeared at the hearing to voice an opinion in this matter.

(14) The evidence presented at the hearing shows that:

- (a) Division Order No. R-10864 was the subject of a *de novo* appeal to the New Mexico Oil Conservation Commission, remanded on April 22, 1999, and the record in that case is incorporated herein by reference. The record in that proceeding shows that:
- (i) Hanley requested that Unit Tract 15 (S/2 SW/4 of Section 28, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico) be brought into the unit effective November 1, 1997.
 - (ii) Tract 15 has hydrocarbon pore volume underlying it and should have been brought into the unit in 1997.
 - (iii) In order to protect correlative rights and prevent waste: (A) Tract 15 should be incorporated into the WLSU area effective November 1, 1997, and (B) for the period November 1, 1997 to April 1, 1999, Tract 14 (S/2 SE/4 of

Section 28, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico) should have allocated to it a 0.15504952% tract participation and Tract 15 a 0.13422197% tract participation.

- (b) After the first WLSU expansion the above-described Snyder "C" Well No. 4 was drilled and completed in the West Lovington-Strawn Pool.
- (c) At a November 1998 working interest owners meeting, additional pressure testing of the reservoir was authorized and a technical committee was formed to consider new reservoir data and unit expansion.
- (d) The technical committee met five times during the next several months. The committee determined that the Snyder "C" Well No. 4 was in pressure communication with the WLSU reservoir and reconsidered the status of the Snyder "EC" Com. Well No. 1. The committee subsequently proposed unit expansion as proposed on Gillespie Oil, Inc.'s Exhibit No. 3 in this case.
- (e) The Strawn formation underlying the second expanded unit area, as proposed by the applicant, has been reasonably defined by development as required by the Statutory Unitization Act.
- (f) As of May 1, 1999, the WLSU had produced 3.85 million barrels of oil and injected 6.51 BCF of gas and pressure decline in the reservoir had been substantially arrested. A highly successful pressure maintenance project has been instituted on the WLSU that has benefited the West Lovington-Strawn Pool and the interest owners therein.

(15) Evidence presented at this hearing further showed disagreement over the procedures for operators to recoup their costs of drilling and completing new wells located on expansion acreage being brought into the WLSU.

(16) Following the hearing, representatives for Energen Resources Corporation and Gillespie Oil, Inc. met to discuss a proposed amendment to ARTICLE 10.4 of the *West Lovington Strawn Unit Operating Agreement* that would resolve the well payout issue by allowing the owner of a well located on expansion acreage which has not reached payout to either: (i) receive immediate reimbursement from the WLSU for 100% of payout costs; or (ii) recoup an amount in excess of 100% of payout costs under a formula establishing a "payout multiple" according to a well's ability to produce for six consecutive months against the top allowable for the pool, up to a maximum of 200%. The proposed amendment further makes specific provisions for the recoupment of 200% of the costs of the Snyder "C" Well No. 4 and 116% of the costs of the Snyder "EC" Com. Well No. 1.

(17) The provisions of this amendment are set forth in Attachment D to this order, and are fair, reasonable, and equitable and should therefore be approved.

(18) The unitized management, operation, and further development of the West Lovington-Strawn Pool underlying this second expansion area are reasonably necessary to effectively carry on pressure maintenance operations and to substantially increase the ultimate recovery of oil and gas.

(19) The existing pressure maintenance operation, as applied to the West Lovington-Strawn Pool underlying this second expansion area, is feasible, will prevent waste, and will result with reasonable probability in the recovery of substantially more oil from the Strawn formation than would otherwise be recovered.

(20) The estimated additional costs, if any, of conducting unitized operations will not exceed the estimated value of the additional oil recovered thereby, plus a reasonable profit.

(21) A good faith effort has been made to secure voluntary unitization of the Strawn formation underlying this second expansion area.

(22) The tract participation formula in the *West Lovington Strawn Unit Agreement* allocates produced and saved unitized hydrocarbons to the separate tracts in the expanded unit on a fair, reasonable, and equitable basis.

(23) Unitization and adoption of the current unitized methods of operation will benefit the working, royalty, and overriding royalty interest owners of the oil and gas rights within the expanded WLSU.

(24) The plan of unitization for this second expansion area set forth in the *West*

Lovington Strawn Unit Agreement approved by Division Order No. R-10449, as amended by Division Order No. R-10846, should be further modified by the following:

- (i) revised SECTION 13 of the *West Lovington Strawn Unit Agreement* (See Attachment A to this order);
- (ii) revised tract participation in Exhibit C to the *West Lovington Strawn Unit Agreement* (See Attachment B to this order);
- (iii) revised SECTION 16 of the *West Lovington Strawn Unit Agreement* (See Attachment C to this order);
- (iv) revised Exhibit A to the *West Lovington Strawn Unit Agreement*, which is a land plat identifying the WLSU presented at the hearing as Gillespie Oil, Inc. Exhibit No. 3; and
- (v) revised Exhibit B to the *West Lovington Strawn Unit Agreement*, which contains ownership schedules within the (a) original unitized area, (b) first expansion area, and (c) proposed second expansion area, which were presented at the hearing as Gillespie Oil, Inc. Exhibit Nos. 7A, 7B, and 7C, respectively;

These revisions are fair, reasonable, and equitable.

(25) The operating plan for the expanded WLSU area, covering the supervision and management of the expansion area and the allocation and payment of costs, is set forth in the *West Lovington Strawn Unit Operating Agreement* approved by Division Order No. R-10449, as amended by Division Order No. R-10846, and should be further modified by revised ARTICLE 10.4 (See Attachment D to this order).

(26) The *West Lovington Strawn Unit Agreement*, as amended and applied to the second expansion area, provides for unitization of the West Lovington Strawn Unit Area upon terms and conditions that are fair, reasonable, and equitable, and include or shall include:

- (a) an allocation to the separately owned tracts in the expanded unit area of all oil and gas produced and saved from the expanded unit area (i.e. the production that is not used in the conduct of unit operations or not

unavoidably lost);

- (b) a provision for credits, charges, and adjustments to be made among the owners in the expanded unit area for their respective investments in wells, tanks, pumps, machinery, materials, and equipment contributed to unit operations;
- (c) a provision governing how the costs of unit operations, including capital investments, shall be determined and charged to the separately owned tracts and how these costs shall be paid, including a provision providing when, how, and by whom the unit production allocated to an owner who does not pay its share of the costs of unit operation shall be credited to such owner, or the interests of such owner, and how its interest may be sold and the proceeds applied to the payment of its costs;
- (d) a provision for carrying any working interest owner on a limited, carried, or net-profits basis, payable out of production, upon terms and conditions that are just and reasonable and that allow an appropriate charge for interest for such service payable out of production, upon such terms and conditions determined by the Division to be just and reasonable, and providing that any non-consenting working interest owner being so carried shall be deemed to have relinquished to the unit operator all of its operating rights and working interest in and to the unit until its share of the costs, service charge, and interest are repaid to the unit operator;
- (e) a provision designating the unit operator and providing for the supervision and conduct of unit operations, including the selection, removal, or substitution of an operator from among the working interest owners to conduct unit operations;
- (f) a provision for a voting procedure for decisions on matters to be decided by the working interest owners

with each working interest owner having a voting interest equal to its unit participation; and

- (g) the time when unit operations shall commence and the manner in which, and the circumstances under which, unit operations shall terminate and provision for the settlement of accounts upon such termination.

(27) The applicant requested that a 200% penalty be assessed against those working interest owners who do not voluntarily agree to join the proposed unit expansion.

(28) Section 70-7-7.F of the Statutory Unitization Act provides that the unit plan of operation shall include a provision for carrying any working interest owner subject to limitations set forth in the statute. Any non-consenting working interest owner so carried shall be deemed to have relinquished to the unit operator all of its operating rights and working interest in and to the unit until its share of costs plus an amount not to exceed 200 percent thereof as a non-consent penalty has been repaid.

(29) The West Lovington Strawn Unit Operating Agreement, as amended, contains a provision whereby any working interest owner who elects not to pay its share of unit expense shall be liable for its share of such unit expense plus an additional 200 percent thereof as a non-consent penalty, and whereby such costs and non-consent penalty may be recovered from each non-consenting working interest owner's share of unit production.

(30) A non-consent penalty of 200 percent should be adopted in this case. The applicant should be authorized to recover from unit production each non-consenting working interest owner's share of unit expense plus 200 percent thereof.

(31) The statutory unitization of the expanded WLSU will prevent waste and protect the correlative rights of all interest owners within the proposed unit, as expanded, and should be approved.

(32) The following two additional wells within the proposed second expansion unit area are entitled to qualify for the EOR tax rate and should be certified for a positive production response:

- (a) State "S" Well No. 1 (**API No. 30-025-33068**), redesignated the WLSU Well No. 12, located 1650 feet from the South and East lines (Unit J) of Section 34, Township 15 South, Range 35 East, NMPM, Lea

County, New Mexico; and

- (b) Chandler Well No. 1 (API No. 30-025-33175), redesignated the WLSU Well No. 13, located 330 feet from the South line and 1650 feet from the East line (Unit O) of Section 28, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico.

IT IS THEREFORE ORDERED THAT:

(1) The expanded West Lovington Strawn Unit Area (WLSU), comprising a total of 2742.90 acres, more or less, of State, Federal, and Fee lands in the West Lovington-Strawn Pool, Lea County, New Mexico, is hereby approved for statutory unitization pursuant to the Statutory Unitization Act, Sections 70-7-1 through 70-7-21, NMSA 1978.

(2) The lands included within the second expansion of the WLSU area shall comprise the following described 1123.95 acres, more or less, of State and Fee lands in Lea County, New Mexico:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 28:	S/2 SW/4
Section 32:	E/2 NE/4
Section 34:	NE/4 and E/2 SE/4
Section 35:	SW/4

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM

Irregular Section 1:	Lots 9, 10, 11, and 12
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TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Irregular Section 5:	Lots 3, 4, 5, and 6
Irregular Section 6:	Lots 1, 2, 6, 7, and 8.

(3) The vertical limits of this second expansion area are described in Ordering Paragraph No. (3) of Division Order No. R-10449, issued in Case No. 11195 and dated August 29, 1995, which is incorporated herein by reference.

(4) The secondary recovery project for the expanded WLSU is hereby approved. The transfer of allowable between wells in the expanded unit and pressure maintenance project area should be permitted.

(5) Tract 15, comprising the S/2 SW/4 of Section 28, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico shall be incorporated into the WLSU area effective November 1, 1997, and for the period November 1, 1997 to April 1, 1999, Tract 14, comprising the S/2 SE/4 of Section 28, shall have allocated to it a 0.15504952% tract participation and Tract 15 a 0.13422197% tract participation. This second unit expansion shall be effective April 1, 1999.

(6) The *West Lovington Strawn Unit Agreement* and the *West Lovington Strawn Unit Operating Agreement* approved by Division Order No. R-10449 and amended by Division Order No. R-10864 are incorporated by reference into this order and further amended by the following:

- (i) revised SECTION 13 of the *West Lovington Strawn Unit Agreement* (See Attachment A to this order);
 - (ii) revised tract participation in Exhibit C to the *West Lovington Strawn Unit Agreement* (See Attachment B to this order);
 - (iii) revised SECTION 16 of the *West Lovington Strawn Unit Agreement* (See Attachment C of this order);
 - (iv) revised Exhibit A to the *West Lovington Strawn Unit Agreement*, which is a land plat identifying the WLSU presented at the hearing as Gillespie Oil, Inc. Exhibit No. 3;
 - (v) revised Exhibit B to the *West Lovington Strawn Unit Agreement*, which contains ownership schedules for the (a) original unitized area, (b) first expansion area, and (c) proposed second expansion area. These schedules were presented at the hearing as Gillespie Oil, Inc. Exhibit Nos. 7A, 7B, and 7C, respectively; and
 - (vi) revised ARTICLE 10.4 of the *West Lovington Strawn Unit Operating Agreement* (See Attachment D to this order).
- (7) This order shall not become effective unless and until the owners of seventy-

five (75) percent of the working interest and seventy-five percent (75) of the royalty interest in the expanded West Lovington Strawn Unit approve the plan for unit operations.

(8) If the persons owning the required percentage of interest in the expanded West Lovington Strawn Unit Area do not approve the plan for unit operations within 6 months from the date of entry of this order, this order shall cease to be of any effect unless the Division extends the time for good cause. Any failure to obtain the required percentage approval shall not affect the validity of Order Nos. R-10448, R-10449, and R-10864 as in effect prior to the date of this order.

(9) When persons owning the required percentage of interest in the expanded West Lovington Strawn Unit Area have approved the plan for unit operations, the interests of all persons in the expanded unit area are unitized whether or not such persons have approved the plan of unitization in writing.

(10) The applicant, as Unit Operator, shall notify the Division Director of any removal or substitution of the Unit Operator by any working interest owner within the expanded Unit Area.

(11) A non-consent penalty of 200 percent is hereby adopted in this case. The applicant shall be authorized to recover from unit production each non-consenting working interest owner's share of unit expense plus 200 percent thereof.

(12) The following two additional wells within the proposed second expansion unit area are hereby qualified for the recovered oil tax rate and are both certified for a positive production response:

- (a) State "S" Well No. 1 (**API No. 30-025-33068**), redesignated the WLSU Well No. 12, located 1650 feet from the South and East lines (Unit J) of Section 34, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico; and
- (b) Chandler Well No. 1 (**API No. 30-025-33175**), redesignated the WLSU Well No. 13, located 330 feet from the South line and 1650 feet from the East line (Unit O) of Section 28, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico.

(13) Jurisdiction of this case is retained for the entry of such further orders as the

Case No. 12171
Order No. R-10864-A
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Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


LORI WROTENBERY
Director

SEAL

ATTACHMENT A
Case No. 12171
Order No. R-10864-A

**UNIT AGREEMENT FOR THE DEVELOPMENT AND
OPERATION OF THE WEST LOVINGTON STRAWN UNIT AREA
LEA COUNTY, NEW MEXICO.**

“SECTION 13. TRACT PARTICIPATION (EXPANDED UNIT).”

The Tract Participation percentages for each Tract within the Unit Area have been calculated and determined in accordance with the following formulas:

1. October 1, 1995 - October 31, 1997 (Original Unit).

Tract Participation for Tracts 1-11 (the original Unit Area) are those calculated under the Unit Agreement, as approved and amended by Division Order No. R-10449.

2. November 1, 1997 - March 31, 1999 (First Expansion).

Tract Participation for this period are those approved by Division Order No. R-10864, and are as follows:

Tracts 1-11:	95.2797924%
Tract 12:	2.3161519%
Tract 13:	2.1147842%
Tract 14:	0.2892715%

Production allocated to Tracts 1-11 was apportioned among those Tracts in the proportions set forth in Division Order No. R-10449.

There shall be no retroactive changes in Tract Participation or allocation of production of Unitized Substances for any period prior to April 1, 1999.

3. Effective April 1, 1999 (Second Expansion).

(a) Tract Participation Percentage = $(80\% \times \text{HPV}) + (20\% \times \text{WF})$, where:

HPV = Hydrocarbon Pore Volume: Determined by volumetric original oil in place in the Unitized Formation under each Tract divided by volumetric original oil in place in the Unitized Formation under the expanded Unit Area.

Original oil in place is calculated from hydrocarbon pore volume using 100% of the density porosity electric log response with a 3% porosity cutoff, with an $R_{wy} = 0.48$.

WF =

Wellbore Factor: Determined by (i) the number of wells on a Tract, (ii) multiplied by the maximum average daily producing rate during a consecutive six (6) month producing period divided by the allowable for the West Lovington-Strawn Pool (250 BOPD/well), (iii) divided by the cumulative sum of all Well Factors in the Unit Area.

Tracts 1-11 shall have a cumulative Wellbore Factor of 11.

(b) Tract Participation for Tracts 12-14 shall be calculated under the subparagraph (a) formula for the period commencing April 1, 1999.

The participation for each Tract in the expanded Unit Area are set forth in Exhibit C (Second Revision) to the Unit Agreement.

The Tract Participation percentages have been calculated based upon all Tracts within the Unit Area, as expanded, being committed to this Agreement as of the effective date of unit expansion (April 1, 1999), and such Tract Participation shall govern the allocation of Unitized Substances produced from the Unit Area after April 1, 1999; subject, however, to any revisions of the Unit Area and Exhibit C (Second Revision) in accordance with the provisions hereof.

If, subsequent to the effective date of unit expansion, any additional tract becomes committed under the provisions of Section 4 (Expansion), the Unit Operator shall revise Exhibits B and C, or the latest revisions thereof, to show the new percentage participation of the then committed tracts, which revised exhibits shall, upon their approval by the Commissioner, Authorized Officer, and Division, supersede, as of their effective date, the last previously effective Exhibits B and C. In any revision of Exhibit C, the revised percentage participation of the respective tracts listed in the previously effective Exhibit C shall remain in the same ratio.

ATTACHMENT B
Case No. 12171
Order No. R-10864-A

<u>TRACT NUMBER</u>	<u>PARTICIPATION</u>
Tracts 1-11:	82.32717578%
Tract 12:	1.94876739%
Tract 13:	2.20668140%
Tract 14:	1.59651829%
Tract 15:	1.38011413%
Tract 16A:	0.93524424%
Tract 16B:	0.00318158%
Tract 17:	2.92221146%
Tract 18A:	0.68203761%
Tract 18B:	2.19884747%
Tract 19:	0.50798636%
Tract 20:	0.28117699%
Tract 21A:	0.22480684%
Tract 21B:	0.37490265%
Tract 21C:	0.58041413%
Tract 22A:	0.99302789%
Tract 22B:	0.10845452%
Tract 23A:	0.13516109%
Tract 23B:	0.00467880%
Tract 24:	0.22141939%
Tract 25A:	0.00772937%
Tract 25B:	0.14139325%
Tract 26:	0.19235471%
Tract 27:	<u>0.02571467%</u>
	100.00000000%

ATTACHMENT C
Case No. 12171
Order No. R-10864-A

UNIT AGREEMENT FOR THE DEVELOPMENT AND
OPERATION OF THE WEST LOVINGTON STRAWN UNIT AREA
LEA COUNTY, NEW MEXICO.

SECTION 16. OUTSIDE SUBSTANCES.

Paragraph 2 (New): Consistent with Article 11.1 of the Unit Operating Agreement (Basis of Charge to Working interest Owners), Unit Operator shall allocate and pay the proceeds from the production, recovery, and sale of all volumes of gas purchased or acquired and injected into the Unitized Formation for pressure maintenance operations before the effective date of the first expansion of the Unit (the "Initial Injection Volumes") to the Working Interest Owners in the Unit as then constituted, and according to the Unit Participations in effect at the time the costs of acquisition of the Initial Injection Volumes were incurred (per Exhibit "D" attached to the Unit Operating Agreement in effect before November 1, 1997). At such time as 100% of the Initial Injection Volumes have been produced, recovered, and sold, proceeds from the production, recovery, and sale of subsequently acquired and injected gas volumes shall be allocated and paid to the Working Interest Owners in proportion to their Unit Participations (per Exhibit "D" to the Unit Operating Agreement in effect during the pertinent time period) at the time the costs of acquisition of subsequently injected gas volumes were incurred.

ATTACHMENT D
Case No. 12171
Order No. R-10864-A

UNIT OPERATING AGREEMENT
WEST LOVINGTON STRAWN UNIT AREA
LEA COUNTY, NEW MEXICO.

ARTICLE 10.4. INVESTMENT ADJUSTMENTS.

Paragraph 2 (Revised): All wells completed in the Strawn formation within the Unit Area shall be Unit wells. If a well becoming a Unit well by virtue of expansion of the Unit Area has not reached payout status, the owner or operator of such well shall have the option, on prior written notification to Unit Operator, to (1) receive immediate payment from the Unit sufficient to reimburse one hundred percent of the costs of drilling, completion, and equipping the well ("Payout Costs" or "Payout") or (2) continue as operator of the well and recoup an amount in excess of one hundred percent of Payout Costs proportionate to the ability of the well to produce for six consecutive months as measured against the top pool allowable of 250 BOPD (the "Payout Multiple"). In no event shall the Payout Multiple exceed two hundred percent of actual Payout Costs. For the Snyder "EC" Com. Well No. 1 (API No. 30-025-33219), located 1346 feet from the North line and 1980 feet from the East line (Lot 2/Unit B) of irregular Section 6, Township 16 South, Range 36 East, NMPM, Lea County, New Mexico, the Payout Multiple shall be 116 percent; For the Snyder "C" Well No. 4 (API No. 30-025-34282), located 510 feet from the North line and 990 feet from the East line (Lot 1/Unit A) of irregular Section 6, the Payout Multiple shall be 200 percent. The terms hereof shall be made applicable to the Beadle Well No. 1 (API No. 30-025-34606), located 330 feet from the South and West lines (Unit M) of Section 35, Township 15 South, Range 35 East, NMPM, Lea County, New Mexico, and the Payout Multiple for said well determined accordingly, regardless of the actual effective date of the unit expansion.

From the effective date of unitization or expansion of the Unit Area to the time the well reaches its Payout Multiple, Unitized Substances will be apportioned and allocated to all of the Qualified Tracts in the Unit as then constituted in accordance with the terms of Section 15-A of the Unit Agreement. Provided, however, that the owner or operator of the well which has not reached its Payout Multiple shall be entitled to all of the proceeds from production attributed to such Tract(s) comprising the well's proration unit until the well has reached its Payout Multiple. At such time as the well reaches its Payout Multiple, the Unit Operator shall immediately be designated operator of such well. Each of the parties shall have the right to audit the account for such well for any period, consistent with the terms of Article 5.2.3.

**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. 11724
Order No. R-10864**

**APPLICATION OF GILLESPIE-CROW,
INC. FOR UNIT EXPANSION,
STATUTORY UNITIZATION, AND
QUALIFICATION OF THE EXPANDED
UNIT AREA FOR THE RECOVERED
OIL TAX RATE AND CERTIFICATION
OF A POSITIVE PRODUCTION
RESPONSE PURSUANT TO THE "NEW
MEXICO ENHANCED OIL RECOVERY
ACT", LEA COUNTY NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 15, 1997, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 27th day of August, 1997, 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) By Order No. R-10449 entered in Case No. 11195 on August 29, 1995, the Division, upon application of Gillespie-Crow, Inc., approved the statutory unitization, pursuant to the Statutory Unitization Act, Sections 70-7-1 through 70-7-21, NMSA, (1978), of the following described 1,458.95 acres, more or less, of State, Federal and Fee lands in the West Lovington-Strawn Pool, Lea County, New Mexico:

WEST LOVINGTON STRAWN UNIT AREA

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 33: All
Section 34: W/2

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM

Section 1: Lots 1 through 8

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Section 6: Lots 3 through 5

(3) By Order No. R-10448 entered in Case No. 11194 on August 29, 1995, the Division authorized Gillespie-Crow, Inc., to institute a pressure maintenance project within the West Lovington Strawn Unit, hereinafter referred to as WLSU, by the injection of gas into the Strawn formation, West Lovington-Strawn Pool, through the perforated interval from approximately 11,424 feet to 11,434 feet in its Speight Fee Well No. 1 located 660 feet from the North line and 2310 feet from the West line (Unit C) of Section 1, Township 16 South, Range 35 East, NMPM.

(4) The applicant, Gillespie-Crow, Inc. (Gillespie-Crow), seeks to expand the horizontal boundaries of the WLSU by statutory unitizing, pursuant to the Statutory Unitization Act, Sections 70-7-1 through 70-7-21, NMSA, (1978), an additional 160 acres, more or less, of State and Fee lands located in Township 15 South, Range 35 East, NMPM, described as follows:

the S/2 SE/4 of Section 28 (designated by the applicant as Tract No. 14), said tract currently dedicated to the Hanley Petroleum Inc. Chandler Well No. 1 located 330 feet from the South line and 1650 feet from the East line (Unit O), which is currently completed in and producing from the West Lovington-Strawn Pool; and,

the NW/4 SE/4 and SW/4 SE/4 (designated by the applicant as Tract Nos. 12 and 13, respectively) of Section 34, said tracts currently dedicated to the Gillespie-Crow, Inc. State "S" Well No. 1 located 1650 feet from the South and East lines (Unit J), which is currently completed in and producing from the West Lovington-Strawn Pool.

(5) The applicant further seeks to qualify the expanded unit area for the recovered oil tax rate pursuant to the "New Mexico Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5), and to certify the aforesaid Hanley Petroleum Inc. Chandler Well No. 1 and Gillespie-Crow, Inc. State "S" Well No. 1 for a positive production response.

(6) The applicant further seeks the adoption of a revised tract participation, necessitated by the proposed expansion of the WLSU, described as follows:

<u>Tract Number</u>	<u>Unit Participation</u>
Tracts 1-11 (WLSU)	95.2797924%
Tract 12 (NW/4 SE/4, Section 34)	2.3161519%
Tract 13 (SW/4 SE/4, Section 34)	2.1147842%
Tract 14 (S/2 SE/4, Section 28)	0.2892715%

(7) Entries of appearance in this case were made on behalf of David Petroleum Corporation, Snyder Ranches, Inc., Larry Squires, Leonardo S. Anderson, Jr., Laura Geraldine Anderson-Hill (Hurst, Chenello and Mandell), Yates Petroleum Corporation, Hanley Petroleum, Inc, Enserch Exploration Inc., and Phillips Petroleum Company

(8) Enserch Exploration Inc. (Enserch), an interest owner within the WLSU, presented evidence and testimony in support of the application.

(9) Phillips Petroleum Company (Phillips), an interest owner within the WLSU, presented a statement of support for the application.

(10) Yates Petroleum Corporation (Yates) and Hanley Petroleum, Inc. (Hanley), both interest owners within the 160 acres proposed to be included within the WLSU, presented evidence and testimony in opposition to Gillespie-Crow's application. In addition, Yates and Hanley (hereinafter referred to as Yates-Hanley) presented evidence and testimony in support of its proposal to:

- a) expand the horizontal boundaries of the WLSU to include all of the following described acreage, which acreage it contends contains hydrocarbon pore volume (HPV) within the West Lovington-Strawn Pool:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 27: S/2 SW/4, NW/4 SW/4, SW/4 SE/4
Section 28: W/2, SE/4, SW/4 NE/4
Section 34: E/2
Section 35: W/2 SW/4

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM

Section 1: Lots 9 through 11, NE/4 of Lot 12
Section 2: Lot 1

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Section 6: Lots 2, 6, 7 and 12

Comprising some 1,428.32-acres, more or less.

- b) revise the tract participation formula utilized to allocate production within the WLSU to include a current (September, 1996 through February, 1997) oil producing rate factor, described as follows:

"Amended Participation Formula"

$$\text{Unit Participation} = (50\%)(\text{OOIP}) + (50\%)(\text{Current Oil Rate}\%)$$

- c) utilize the HPV map generated by Yates-Hanley in its proposed "Amended Participation Formula".

(11) In support of its proposed unit expansion, Gillespie-Crow presented the following described geologic evidence and testimony:

- a) Gillespie-Crow's geologic interpretation of the Strawn reservoir at the time initial unitization maps were generated was based upon existing well control and 2-D and 3-D seismic data. Gillespie-Crow's HPV map was based upon its geologic interpretation of the reservoir and porosity and thickness data obtained from well logs (See Finding No. (15), Order No. R-10449);
- b) in determining tract participation within the WLSU, the Division adopted the HPV map generated by Snyder Ranches, Inc. (Snyder) which was presented as evidence in Case No. 11195. In doing so, the Division acknowledged that Snyder's HPV map more accurately honored the sub-surface well data and consequently more accurately depicted the configuration of the Strawn reservoir underlying the WLSU (See Finding No. (26), Order No. R-10449);
- c) additional well control data obtained from post-unitization drilling, described as follows, necessitates redefining the geologic interpretation of the West Lovington-Strawn Pool and consequently the boundaries of the WLSU:

- i) in August through October, 1995, Gillespie-Crow drilled the State "S" Well No. 1 (described in Finding No. (4) above). The well was completed in the Strawn formation through the perforated interval from 11,526 feet to 11,550 feet. The well IP'd at a rate of 505 BOPD, 0 BWPD and 720 MCFGD;
 - ii) in December, 1995, through February, 1996, Gillespie-Crow drilled its Snyder "EC" Com Well No. 1 located 1346 feet from the North line and 1980 feet from the East line (Lot 2) of Section 6, Township 16 South, Range 36 East. The well was completed in the Strawn formation through the perforated interval from 11,540 feet to 11,548 feet. The well IP'd at a rate of 52 BOPD, 0 BWPD and 45 MCFGD;
 - iii) in January through March, 1996, Hanley drilled the Chandler Well No. 1 (described in Finding No. (4) above). The well was completed in the Strawn formation through the perforated interval from 11,581 feet to 11,593 feet. The well IP'd at a rate of 133 BOPD, 280 BWPD and 478 MCFGD.
- d) in re-defining the configuration of the West Lovington-Strawn Pool and the boundaries of the WLSU, the applicant utilized the Snyder HPV map presented in Case No. 11195, integrated the above-described new well data, and took into account the following geologic and engineering factors:
- i) bottomhole pressure data and producing characteristics of the Chandler Well No. 1 and the State "S" Well No. 1 indicate that these wells are in pressure communication with wells in the WLSU;
 - ii) there exists an oil-water contact within the Strawn reservoir at a depth of -7617 feet subsea, as evidenced by the WLSU Well Nos. 10 and 11, and the Chandler Well No. 1. As a result, there is very little Strawn reservoir north of the existing WLSU boundaries;

- iii) the Amerind Oil Company West State Well No. 1, located in Lot 1 of Section 2, Township 16 South, Range 35 East, on the western boundary of the WLSU, which is dry in the Strawn;
 - iv) the Gillespie State "D" Well No. 8, located in Lot 12 of Section 1, Township 16 South, Range 35 East, on the southwest boundary of the WLSU, which is completed in a separate Strawn reservoir;
 - v) the Gillespie-Crow Snyder "EC" Com Well No. 1, located in Lot 2 of Section 6, Township 16 South, Range 36 East, on the southeastern boundary of the WLSU, which is a poor producer from the Strawn;
 - vi) the Bridge Oil Company, L.P. Julia Culp Com Well No. 2, located in the SE/4 NE/4 of Section 34, Township 15 South, Range 35 East, on the eastern boundary of the WLSU, which is dry in the Strawn; and,
 - vii) the Yates Petroleum Corporation Chambers "AQI" State Well No. 1, located in the NE/4 SE/4 of Section 27, Township 15 South, Range 35 East, on the northeastern boundary of the WLSU, which is dry in the Strawn.
- e) the addition of Tract Nos. 12, 13 and 14, as proposed by the applicant pursuant to its revised geologic interpretation of the reservoir, will only add approximately five percent to the reservoir volume within the WLSU.
- (12) The applicant also presented engineering evidence and testimony to support the proposed WLSU expansion. This evidence and testimony indicates that:
- a) in early 1994, Charles B. Gillespie, Jr. (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 nine wells within the pool to 100 BOPD;

- b) unitization occurred in August, 1995, and pressure maintenance operations within the WLSU commenced in October, 1995 with gas injection into the WLSU Well No. 7. To date, 2.4 BCFG has been injected into the West Lovington-Strawn Pool within the WLSU;
- c) the pressure maintenance project within the WLSU is effectively maintaining reservoir pressure within the West Lovington-Strawn Pool;
- d) by Order No. R-10608 entered in Case No. 11531 on June 12, 1996, the Division certified that a positive production response had occurred within the WLSU Pressure Maintenance Project;
- e) due to the success of the pressure maintenance project, Gillespie-Crow, in 1996, increased production from unit wells from 100 BOPD/well to over 200 BOPD/well;
- f) to date, the State "S" Well No. 1 and the Chandler Well No. 1 have cumulatively produced approximately 140,000 and 68,000 barrels of oil, respectively. The bottomhole pressure within the State "S" Well No. 1 has remained constant, indicating pressure support from the pressure maintenance project. This well is currently producing at the current top unit allowable rate of 250 BOPD. In addition, the Chandler Well No. 1 initially produced at a rate of approximately 133 BOPD and is now producing at a rate of approximately 175 BOPD, also indicating pressure support from the pressure maintenance project;
- g) due to off-unit production from the State "S" Well No. 1 and the Chandler Well No. 1, Gillespie-Crow reduced production from unit wells to a maximum of 150 BOPD in an effort to better balance reservoir injection/withdrawal rates and maintain reservoir pressure;

- h) in addition, in August, 1996, Gillespie-Crow appeared before the Division as the applicant in Case No. 11599 in an effort to, among other things, amend Rule No. (6) of the Special Rules and Regulations for the West Lovington-Strawn Pool to provide for an 80-acre oil allowable of 250 BOPD. By Order No. R-9722-C and R-10448-A, the Division approved the application, thereby effectively reducing the oil allowable for the West Lovington-Strawn Pool from 445 BOPD to 250 BOPD. Gillespie-Crow's effort in this regard was to effectively limit production from the State "S" Well No. 1 which, at the time, was capable of top unit allowable production of 445 BOPD.
- (13) The applicant presented land evidence and testimony which indicates that:
- a) unitization of the WLSU originally took over a year to accomplish, even though there was unanimous consent of the working interest owners in the proposed unit;
 - b) negotiations with the interest owners in the State "S" Well No. 1, including Yates, regarding expansion of the WLSU have been unsuccessful, even though they have continued for approximately fifteen months;
 - c) the interest owners within the WLSU have essentially agreed that due to the poor producing characteristics of the Gillespie-Crow Snyder "EC" Com Well No. 1, it should not be included in the proposed expanded unit area;
 - d) the proposed expansion of the WLSU has been approved by the Commissioner of Public Lands for the State of New Mexico, and the United States Bureau of Land Management, the two largest royalty interest owners within the unit;
 - e) the proposed expanded WLSU contains fourteen (14) tracts. At the time of the hearing, 98.05 % of the working interest owners and 74.36 % of the royalty interest owners had voluntarily agreed to join in the unit; and,
 - f) it has notified all interest owners within the WLSU and within the proposed expanded area of the application and hearing in this matter in conformance with Division Rules and Regulations.

(14) In support of its position that the WLSU should be expanded to include all acreage containing HPV within the West Lovington-Strawn Pool, Yates-Hanley presented geologic evidence and testimony which indicates that:

- a) utilizing 2-D and 3-D seismic data, as well as well control, it has generated structure, isopach and HPV maps of the West Lovington-Strawn Pool. Its data indicates that the reservoir which comprises the West Lovington-Strawn Pool extends beyond the current boundaries of the WLSU, and beyond the area which is proposed to be included within the WLSU by the applicant;
- b) Hanley interprets the reservoir to be comprised of four distinct algal reef mounds which are in communication with one another. Such an interpretation supports Yates-Hanley's contention that there are multiple oil/water contacts within the reservoir and discounts applicant's contention that there is no HPV above the oil-water contact north of the WLSU boundaries, as proposed;
- c) the area containing HPV within the West Lovington-Strawn Pool comprises all or portions of the tracts it proposes to be included within the WLSU;
- d) Hanley has staked its State "28" Well No. 1 in the SE/4 SW/4 of Section 28 due to the fact that it is confident that this acreage will prove to be productive within the West Lovington-Strawn Pool.

(15) Yates-Hanley also presented engineering evidence and testimony which indicates that:

- a) utilizing its geologic interpretation of the reservoir, it has calculated original oil in place (OOIP) within the West Lovington-Strawn Pool by volumetric methods. Utilizing the same data as the applicant, it has also calculated OOIP within the reservoir by the material balance method;
- b) its volumetric calculation of OOIP more closely matches OOIP material balance calculations than Gillespie-Crow's;
- c) utilizing its HPV map, it has determined HPV attributable to each of the tracts it proposes to include within the WLSU.

(16) Utilizing the "Amended Participation Formula" within the area proposed to be included within the WLSU by Yates-Hanley would result in the following tract participation:

<u>Tract Number</u>	<u>Unit Participation</u>
WLSU	79.0964%
Tracts 12 & 13	8.8285%
Tract 14	6.0557%
Tract 15	2.5337%
Tract 16	.0723%
Tract 17	.5803%
Tract 18	.0038%
Tract 19	.0964%
Tract 20	.0205%
Tract 21	.9145%
Tract 22	.0230%
Tract 23	.0004%
Tract 24	.9543%
Tract 25	.0342%
Tract 26	.0429%
Tract 27	.0016%
Tract 28	.4950%
Tract 29	.2349%
Tract 30	.0116%

(17) Yates-Hanley presented additional evidence and testimony as follows:

- a) Yates-Hanley provided notice in this case to all operators in the area of its intention to recommend additional acreage be included within the WLSU;
- b) neither Yates nor Hanley own an interest within the WLSU as currently configured, and as such, have not had the opportunity to participate in unitization negotiations, especially with regards to tract participation;
- c) utilizing the WLSU boundaries and tract participation formula proposed by Gillespie-Crow would result in the following:
 - i) Yates' share of production allocated to its interest in the acreage dedicated to the State "S" Well No. 1 (Tract Nos. 12 & 13) would decrease by 59%;

- ii) Hanley's share of production allocated to its interest in the Chandler Well No. 1 (Tract No. 14) would decrease by 96%; and,
 - iii) the share of production allocated to the interest of Gillespie-Crow and the other original owners in the WLSU would increase by 14%;
- d) the impact of adopting the Yates-Hanley proposed WLSU expansion and "Amended Participation Formula" would be as follows:
- i) Yates' share of production allocated to its interest in the acreage dedicated to the State "S" Well No. 1 would decrease by 21%;
 - ii) Hanley's share of production allocated to its interest in the acreage dedicated to the Chandler Well No. 1 would decrease by 17%;
 - iii) the share of production allocated to the interest of Gillespie-Crow and the other original owners within the WLSU would decrease by 3%; and,
 - iv) the share of production allocated to owners other than Yates in Tract Nos. 12 and 13 and Tracts 15 through 30, much of which are owned by Gillespie-Crow and the other current owners in the WLSU, would increase by 31%.

(18) In summary, Yates-Hanley contends that Gillespie-Crow's proposed expansion of the WLSU does not include acreage that, according to its geophysical data, contains HPV within the West Lovington-Strawn Pool, and therefore will contribute oil and gas reserves to the unit. Additionally, Yates-Hanley contend that Gillespie-Crow's tract participation formula does not allocate production to each of the tracts in the WLSU and proposed expanded area on a fair and equitable basis.

(19) The Division, after consideration of the geologic and engineering evidence and testimony presented by all parties in this case, finds that:

- a) the southwestern portion of the WLSU has reasonably been defined by development by the Amerind Oil Company West State Well No. 1, described in Finding No. (11) above, which is a dry hole in the Strawn;

- b) the southern portion of the WLSU has been reasonably defined by development by the Gillespie State "D" Well No. 8, described in Finding No. (11) above, which is located within a separate producing reservoir in the Strawn;
- c) the extent of the Strawn reservoir and location of the zero HPV line within the area Yates-Hanley proposes to be included in the southern and southeastern portion of the WLSU, being Lots 9 through 11 and the NE/4 of Lot 12 in Section 1, and Lot 1 in Section 2, both in Township 16 South, Range 35 East, and Lots 6, 7 and 12 in Section 6, Township 16 South, Range 36 East, is subject to geologic interpretation and cannot be accurately ascertained with existing geologic data, especially in the absence of well control in this area. Although both parties' geologic interpretation indicates the presence of minimal HPV within the Strawn reservoir on portions of this acreage, there is no geologic or engineering evidence to indicate that this acreage will benefit from pressure maintenance operations or will otherwise contribute oil and gas reserves to the WLSU;
- d) the Gillespie-Crow Snyder "EC" Com Well No. 1 is located in a portion of the Strawn reservoir, which, due to its geologic properties, will not enable the well to receive any benefit from pressure maintenance operations within the WLSU;
- e) the interest owners within the WLSU are in agreement that the Snyder "EC" Com Well No. 1 should not be included in the WLSU. Although it has now changed its position, by letter dated July 2, 1996, Yates informed Gillespie-Crow that the data indicated that the Snyder "EC" Com Well No. 1 should remain out of the WLSU;
- f) the State "S" Well No. 1 is in pressure communication with wells within the WLSU, is benefitting from pressure maintenance operations, and should be included, as proposed by the applicant, within the WLSU;
- g) Yates-Hanley's proposed eastern expansion of the WLSU to include the E/2 SE/4 of Section 34 and the W/2 SW/4 of Section 35 is based upon its contention that Gillespie-Crow drilled the State "S" Well No. 1 as close to the eastern boundary of its proration unit (W/2 SE/4) as possible upon its belief that the reservoir extends further to the east;

- h) there is no geologic evidence to support Yates-Hanley's contention that the Strawn reservoir extends into the E/2 SE/4 of Section 34 and the W/2 SW/4 of Section 35;
- i) the northeast boundary of the WLSU has reasonably been defined by development by the Bridge Oil Company, L.P. Julia Culp Well No. 2 located in the SE/4 NE/4 of Section 34, which is a dry hole in the Strawn;
- j) even though Gillespie-Crow plans to drill an additional well to test the Strawn formation within the SW/4 NE/4 of Section 34 (being its proposed Culp Well No. 1), there is no geologic or engineering evidence currently available to indicate that this acreage will be productive from the Strawn, will benefit from pressure maintenance operations, or will otherwise contribute oil and gas reserves to the WLSU;
- k) Yates-Hanley's proposed northern expansion of the WLSU to include the SW/4 SE/4, SE/4 SW/4 and the W/2 SW/4 of Section 27, and the W/2, SW/4 NE/4 and N/2 SE/4 of Section 28, both in Township 15 South, Range 35 East, is based upon its geologic interpretation of 3-D seismic data which indicates the presence of a Strawn structure within the W/2 of Section 28;
- l) the geologic and engineering data currently available is insufficient to determine whether the Strawn structure in the W/2 of Section 28 is:
 - i) productive from the Strawn formation;
 - ii) in pressure communication or otherwise a part of the West Lovington-Strawn Pool;
 - iii) has a distinct oil-water contact apart and separate from the oil-water contact applicant estimates occurs at a sub-sea depth of -7617 feet in the West Lovington-Strawn Pool.
- m) the geologic and engineering data currently available is insufficient to determine whether the additional acreage Yates-Hanley proposes to be included in the WLSU in the E/2 of Section 28 and the S/2 of Section 27 is:

- i) productive from the Strawn formation; and,
 - ii) located above the oil-water contact within the West Lovington-Strawn Pool.
- n) the Chandler Well No. 1 is in pressure communication with wells within the WLSU, is benefitting from pressure maintenance operations, and should be included, as proposed by the applicant, within the WLSU;
- o) the geologic and engineering data, as well as the producing characteristics of the Chandler Well No. 1 support applicant's estimation as to the depth and location of the oil-water contact within the West Lovington-Strawn Pool.

(20) The geologic and engineering evidence currently available indicate that the West Lovington Strawn Unit should be expanded only to include therein the S/2 SE/4 of Section 28 and the W/2 SE/4 of Section 34, both in Township 15 South, Range 35 East.

(21) Yates-Hanley's proposed expansion of the WLSU to include an additional 1,268.32-acres (as described in Finding No. (10) above) should be denied.

(22) The unitized management, operation, and further development of the Strawn formation underlying the expanded unit area is reasonably necessary in order to effectively carry on pressure maintenance operations and to substantially increase the ultimate recovery of oil and gas therefrom.

(23) The existing pressure maintenance operation, as applied to the Strawn formation underlying the expanded unit area, is feasible, will prevent waste, and will result with reasonable probability in the increased recovery of substantially more oil from the Strawn formation than would otherwise be recovered.

(24) The estimated additional costs, if any, of conducting unitized operations within the expanded unit area will not exceed the estimated value of the additional oil recovered thereby, plus a reasonable profit.

(25) Applicant has made a good faith effort to secure voluntary unitization of the Strawn formation underlying the expanded unit area.

(26) The tract participation formula in the Unit Agreement for the WLSU allocates produced and saved unitized hydrocarbons to the separate tracts in the expanded unit area on a fair, reasonable, and equitable basis.

(27) Unitization, as proposed by the applicant, and adoption of the current unitized methods of operation will benefit the working, royalty, and overriding royalty interest owners of the oil and gas rights within the expanded WLSU.

(28) The plan of unitization for the expanded unit area, embodied in the Unit Agreement approved by the Division in Case No. 11195 (Order No. R-10449), as modified by revised Exhibits "A", "B", and "C" (the applicant's Exhibits 1, 19 & 20, and 17, respectively), which agreement is incorporated herein by reference, is fair, reasonable, and equitable.

(29) The operating plan for the expanded unit area, covering the manner in which the expanded unit area will be supervised and managed, and costs allocated and paid, is embodied in the Unit Operating Agreement approved by the Division in Case No. 11195 (Order No. R-10449), which agreement is incorporated herein by reference.

(30) The West Lovington Strawn Unit Agreement, as applied to the expanded unit area provides for unitization of the West Lovington Strawn Unit Area upon terms and conditions that are fair, reasonable, equitable, and which include:

- (a) an allocation to the separately owned tracts in the expanded unit area of all oil and gas that is produced from the expanded unit area and which is saved, being the production that is not used in the conduct of unit operations or not unavoidably lost;
- (b) a provision for the credits and charges to be made and the adjustment among the owners in the expanded unit area for their respective investments in wells, tanks, pumps, machinery, materials and equipment contributed to the unit operations;
- (c) a provision governing how the costs of unit operations, including capital investments, shall be determined and charged to the separately owned tracts and how said costs shall be paid, including a provision providing when, how, and by whom the unit production allocated to an owner who does not pay his share of the costs of unit operations shall be credited to such owner, or the interest of such owner, and how his interest may be sold and the proceeds applied to the payment of his costs;

- (d) a provision for carrying any working owner on a limited, carried or net-profits basis, payable out of production, upon terms and conditions which are just and reasonable, and which allow an appropriate charge for interest for such service payable out of production, upon such terms and conditions determined by the Division to be just and reasonable, and providing that any non-consenting working interest owner being so carried shall be deemed to have relinquished to the unit operator all of his operating rights and working interest in and to the unit until his share of the costs, service charge and interest are repaid to the unit operator;
- (e) a provision designating the unit operator and providing for the supervision and conduct of the unit operations, including the selection, removal or substitution of an operator from among the working interest owners to conduct the unit operations;
- (f) a provision for a voting procedure for the decision of matters to be decided by the working interest owners in respect to which each working interest owner shall have a voting interest equal to his unit participation; and
- (g) the time when the unit operations shall commence and the manner in which, and the circumstances under which, the unit operations shall terminate and for the settlement of accounts upon such termination.

(31) The applicant requested that a 200 percent penalty be assessed against those working interest owners who do not voluntarily agree to join the proposed unit.

(32) Section 70-7-7.F. NMSA of said "Statutory Unitization Act" provides that the unit plan of operation shall include a provision for carrying any working interest owner subject to limitations set forth in the statute, and any non-consenting working interest owner so carried shall be deemed to have relinquished to the unit operator all of his operating rights and working interest in and to the unit until his share of the costs has been repaid plus an amount not to exceed 200 percent thereof as a non-consent penalty.

(33) Applicant's Unit Operating Agreement contains a provision whereby any working interest owner who elects not to pay his share of unit expense shall be liable for his share of such unit expense plus an additional 200 percent thereof as a non-consent penalty, and that such costs and non-consent penalty may be recovered from each non-consenting working interest owner's share of unit production.

(34) A non-consent penalty of 200 percent should be adopted in this case. The applicant should be authorized to recover from unit production each non-consenting working interest owner's share of unit expense plus 200 percent thereof.

(35) The statutory unitization of the expanded West Lovington Strawn Unit, as proposed by Gillespie-Crow, Inc., is in conformity with the above findings, and will prevent waste and will protect the correlative rights of all owners of interest within the proposed Unit Area, and should be approved.

(36) The State "S" Well No. 1 and the Chandler Well No. 1 are entitled to be qualified for the recovered oil tax rate and certified for a positive production response. These wells, and the acreage dedicated thereto, are as follows:

<u>WELL NAME</u>	<u>WELL UNIT</u>
State "S" Well No. 1 (WLSU No. 12)	WLSU Tracts 12 and 13
Chandler Well No. 1 (WLSU No. 13)	WLSU Tract 14

(37) Yates-Hanley's proposed revision of the WLSU's tract participation formula should be denied.

IT IS THEREFORE ORDERED THAT:

(1) The expanded West Lovington Strawn Unit Area comprising 1618.95 acres, more or less, of State, Federal, and Fee lands in the West Lovington-Strawn Pool, Lea County, New Mexico, is hereby approved for statutory unitization pursuant to the Statutory Unitization Act, Sections 70-7-1 through 70-7-21, NMSA, (1978).

(2) The lands included within the expanded West Lovington Strawn Unit Area shall comprise:

EXPANDED WEST LOVINGTON STRAWN UNIT AREA

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 28: S/2 SE/4
Section 33: All
Section 34: W/2, W/2 SE/4

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM

Section 1: Lots 1 through 8

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Section 6: Lots 3 through 5

(3) The vertical limits of the expanded West Lovington Strawn Unit Area are hereby adopted as described in Decretory Paragraph No. (3) of Division Order No. R-10449, which is incorporated herein by reference.

(4) The secondary recovery project for the expanded unit area is hereby approved. The transfer of allowables between wells in the expanded project area should be permitted.

(5) The West Lovington Strawn Unit Agreement and the West Lovington Strawn Unit Operating Agreement, approved by Division Order No. R-10449, as modified by the new Exhibits "A", "B", and "C" thereto, are incorporated by reference into this order.

(6) The tract participations for the expanded West Lovington Strawn Unit Area are hereby established as follows:

<u>TRACT NUMBER</u>	<u>TRACT PARTICIPATION</u>
1-11	95.2797924%
12	2.3161519%
13	2.1147842%
14	0.2892715%

(7) The Unit Agreement approved by Division Order No. R-10449, as amended by revised Exhibits "A", "B", and "C" thereto, and the Unit Operating Agreement for the West Lovington Strawn Unit provide for unitization and unit operation of the expanded unit area upon terms and conditions that are fair, reasonable, and equitable and which include the provisions described in Finding No. (30) above.

(8) This order shall not become effective unless and until the owners of seventy-five (75) percent of the working interest and seventy-five percent (75) of the royalty interest in the expanded West Lovington Strawn Unit have approved the plan for unit operations as required by N.M. Stat. Ann. (1995 Repl. Pamp.) §70-7-8.

(9) If the persons owning the required percentage of interest in the expanded West Lovington Strawn Unit Area as set out in N.M. Stat. Ann. (1995 Repl. Pamp.) §70-7-8 do not approve the plan for unit operations within 6 months from the date of entry of this order, this order shall cease to be of any further force and effect and shall be revoked by the Division, unless the Division shall extend the time for good cause shown. Any failure to obtain the required percentage approval shall not affect the validity of Order Nos. R-10449 and R-10448, as they are in effect prior to the date of this order.

(10) When the persons owning the required percentage of interest in the expanded West Lovington Strawn Unit Area have approved the plan for unit operations, the interests of all persons in the expanded unit area are unitized whether or not such persons have approved the plan of unitization in writing.

(11) The applicant as Unit Operator shall notify the Division Director of any removal or substitution of said Unit Operator by any working interest owner within the expanded unit area.

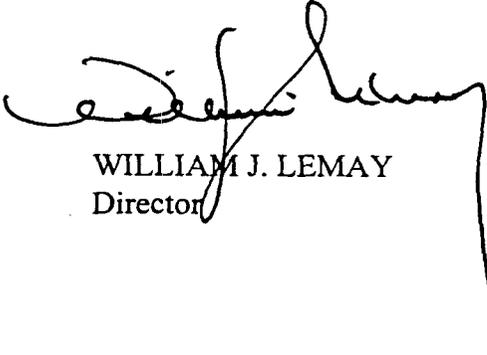
(12) A non-consent penalty of 200 percent is hereby adopted in this case. The applicant shall be authorized to recover from unit production each non-consenting working interest owner's share of unit expense plus 200 percent thereof.

(13) The expansion of the West Lovington Strawn Unit and the revision of the tract participation formula proposed by Yates and Hanley are hereby denied.

(14) Jurisdiction of this cause is 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

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