

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:

See Also Order No.
R-10864
R-10564-B

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.

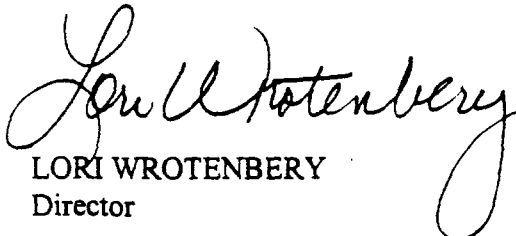
(13) Jurisdiction of this case is retained for the entry of such further orders as the

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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
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<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.