KELLAHIN & KELLAHIN
Attorney at Law

W. Thomas Kellahin
New Mexico Board of Legal Specialization Recognized Specialist in the area of natural resources-oil and gas law

P.O. Box 2265
Santa Fe, New Mexico 87504
117 North Guadalupe
Santa Fe, New Mexico 87501

Telephone 505-982-4285
Facsimile 505-982-2047
kellahin@earthlink.net

October 9, 2003

HAND DELIVERED

Mr. David R. Catanach
Hearing Examiner
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: NMOCD Case 13105
Application of EGL/Lendreth for
Pool creation or pool expansion,
Lea County, New Mexico

Dear Mr. Catanach:

In behalf of Devon Energy Production Company, and in accordance with your direction at the conclusions of the hearing on October 2, 3003, please find enclosed our proposed order for consideration to you for entry in this case.

Very truly yours,

W. Thomas Kellahin

cc
J. Scott Hall, Esq.
Attorney for EGL/Landreth
James Bruce, Esq.
Attorney for Southwestern Energy Production Company
Devon Energy Production Company, L.P.
Attn: Richard Winchester

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

RECEIVED
OCT 9 2003
Oil Conservation Division

IN THE MATTER OF THE APPLICATION OF EGL RESOURCES, INC. AND ROBERT LANDRETH FOR POOL EXTENSION FOR THE NORTH BELL LAKE-DEVONIAN GAS POOL, OR ALTERNATIVELY, FOR POOL CREATION AND SPECIAL POOL RULES, AND EXPANSION OF A GAS SPACING AND PRORATION UNIT, LEA COUNTY, NEW MEXICO.

CASE NO. 13085
ORDER R-____

DEVON ENERGY PRODUCTION COMPANY, L.P.'S
PROPOSED
ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on October 2, 2003, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this ___day of October, 2003, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

FIND THAT:

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

PARTIES

(2) In Case 13085, EGL Resource, Inc, and Robert E. Landreth (collectively "EGL/Landreth") are the applicants.

(3) Devon Energy Production Company, L.P. ("Devon") and Southwest Energy Production Company ("Southwestern") have appeared in opposition.

CENTRAL ISSUE

(4) The central focus of these proceedings[1] pending before both the Commission and the Division is whether, pursuant to Rule 104, to continue to dedicate the Rio Blanco 4-1 well to a standard 320-acre spacing unit consisting of the N/2 of Section 4 T23S, R34E, Lea County, New Mexico. **See Division Order R-11962, dated May 13, 2003, Cases 13048 and 13049**.

(5) EGL/Landreth seek to have the Division grant an exemption from Division Rule 104 and require that a 640-acre spacing unit be dedicated to this well consisting of all of Section 4. Such an exemption would dilute Devon/Southwestern's interest by 50%, after they each had pre-paid their proportionate share of the costs/risks in the Rio Blanco 4-1 well.

(6) Landreth urges the Division to expedite an order in Case 13085 in an effort to have the Division adopt 640-acre spacing for Section 4 and thereby extend Landreth's term assignment obtained by Landreth on October 25, 1999 in the SE/4 of Section 4 that will expire on October 25, 2003.

(7) In order to provide a meaningful understanding of Case 13085, the Division on this own motion has taken administrative notice of the following Division records:

a. Case 6962, Order R-6424, August 4, 1980, BTA's case for special 640-acre pool rules for the North Bell Lake Devonian Gas Pool (uncontested).

b. Case 10267, Order R-9493, April 30, 1991, Pacific Enterprises compulsory pooling case (uncontested).

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[1] Cases 13048, 13049, 134085

c. Case 2945, Order R-2623, December 4, 1963, Shell Oil Company's case for special 640-acre pool rules for Antelope Ridge Devonian Gas Pool (uncontested).

d. Case 13048, Order R-11962, Application of Devon for a compulsory pooling order for a 320-acre spacing unit to be dedicated to the Rio Blanco 4-1 well located in the N/2 of Section 4 (320-acre spacing granted over EGL/Landreth objection).

e. Case 13049, Order R-11962, Application of EGL for a compulsory pooling order for a 640-acre spacing unit to be dedicated to the Rio Blanco 4-1 well located in the Section 4. (640-acre spacing denied based upon opposition by Devon)

SUMMARY

(8) Case 13085 is but the latest case involving a dispute between EGL/Landreth and Devon/Southwestern over whether the Rio Blanco 4-1 well located in the N/2 of Section 4 should be dedicated to a 320-acre or a 640-acre gas spacing unit. In Case 13048 heard April 10, 2003, Devon sought and the Division approved by Order R-11962 the dedication of the Rio Blanco 4-1 well to a standard 320-acre gas spacing unit consisting of the N/2 of Section 4. In companion Case 13049, Landreth sought and the Division denied Landreth's request to dedicate a 640-acre spacing unit to this same well, but oddly authorized EGL to operate the well despite the fact that EGL and Landreth have both opposed the 320-acre dedication and despite a substantial dispute over reservoir geology and petroleum engineering.[2] Both Devon and Landreth sought and obtained a De Novo hearing before the Commission which has been vacated until the Division enters an order in Case 13085.

[2] The Examiner failed to recognize that he must decide the geologic dispute within the context of the compulsory pooling cases and over Devon's objection declared both Devon's and Landreth's technical evidence irrelevant but then heard more than 4 hours of technical testimony.

(9) In Cases 13048 and 13049, EGL/Landreth argued that Section 4 is subject to 640-acre spacing because it is subject to special rules for the North Bell Lake Devonian Gas Pool. The Division Examiner rejected that claim declaring that, in accordance with Rule 104, Section 4 is subject to 320-acre spacing. However, the Examiner allowed EGL to be the operator of a well dedicated to a 320-acre spacing unit despite the fact that EGL had never proposed a 320-acre spacing unit and continues to dispute it.[3]

(10) In Case 13049, EGL/Landreth also argued before Examiner Brooks that a Devonian gas well in Section 4 should drain 640-acres despite the fact that Landreth presented the Examiner with only a single calculation for a well in Section 6.[4] They further argued that Section 4 is geologically connected to Section 6. **See Landreth Exhibit 7, Case 13049.** EGL/Landreth ignored the undisputed fact that the North Bell Lake-Devonian Gas Pool was never expanded to include Section 4 and Section 5.[5]

(11) In motions filed in Case 13085, EGL/Landreth sought to stop Devon from drilling Devonian wells in Section 33 on the grounds that Devon's wells, which are in full compliance with Division Rule 104 and are not subject to any special pool rules, must be stayed so that EGL/Landreth can pursue their objectives. On August 22, 2003, Examiner Catanach issued an order denying EGL/Landreth's motion. **See case file Case 13085.**

(12) Without waiting for the Commission DeNovo hearing, EGL commenced operations of the re-entry of the Rio Blanco 4-1 despite the fact that the Division had authorized that re-entry for a 320-acre spacing unit that EGL and Landreth continued to dispute.[6] Consequently, Devon and Southwestern elected to participate and pre-paid their proportionate share of the risk costs based upon ownership in a 320-acre spacing unit.

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[3] See Devon Exhibit A, Case 13048

[4] Devon's calculation showed that this same well has drained less than 330 acres. See Devon's Exhibit 15, Case 13085

[5] See Transcript in Cases 6962 and 10267

[6] On July 9, 2003, EGL commenced deepening the Rio Blanco 4-1 well to the Devonian formation, and by September 9, 2003, had drilled the well into the top 92 feet of the Devonian.

(13) Case 13085, filed on May 23, 2003, EGL/Landreth requested that the Division expand the eastern boundary of the North Bell Lake Devonian Gas Pool,[7] so that this pool would include both Section 5 and Section 4. On June 25, 2003, EGL/Landreth filed an amended application to include an additional request to grant a special exception to Division Rule 104 thereby creating a new Devonian gas pool spaced on 640 acres to include the dedication of all of Section 4 to the Rio Blanco 4-1 well.

(14) At the hearing of Case 13085, Landreth further sought, within the context of this case, to have Devon's Rio Blanco "33" Federal Well No. 1 (Unit N of Section 33) made subject to a penalized allowable for being located at a standard location that would become unorthodox if the Division grants Landreth's application for 640-acre spacing for Section 4.

THE GEOLOGIC DISPUTE

(15) The central issue in these cases involves a geologic dispute over the most probable interpretation of the Devonian structure including a petroleum-engineering dispute over the probable drainage area for the Rio Blanco 4-1 well in the N/2 of Section 4.

LANDRETH'S GEOLOGIC ARGUMENT:

(16) Landreth submitted his interpretation of the Devonian structure showing a large sprawling structure covering areas with Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19 & 20, Township 23 South, Range 34 East, and Sections 31, 32, 33, & 34, Township 22 South, Range 34 East, with multiple crests and the absence of a critical north-south trending fault though section 5 that Devon contended is a sealing fault that separated Section 4 from Section 6. **See Landreth Exhibit 7, Case 13085.**

(17) Landreth's geologic interpretation assumed that this huge Devonian structure is homogeneous but he failed to introduce a stratigraphic cross section to support his interpretation.

[7] A pool that last produced gas in March 2003, and that included Section 6 (PI/Dwight's).

(18) Landreth's geological interpretation assumed that Section 6 is connected both to Section 18 to the south and to Section 4 to the east.

(19) Landreth also contended that the Antelope Ridge Devonian Pool is an analogous field despite the fact that he admitted that this pool contains about 800 productive acres that were produced by 4 wells that he testified were necessary in order to protect correlative rights. **See Case 13049, Transcript page 158.**

(20) Landreth contended that the production of 31 Bcf of gas from the Conoco Bell Lake Unit #6 well (Unit O of Section 6) caused the original gas/water contact for this entire structural feature, located at –11,340 feet subsea, to move up structure to –11,250 feet subsea, a distance of 90 feet (**See Landreth Exhibit 17**). In an effort to validate his geological interpretation, Landreth presented evidence that assumed that the current pressure of the Rio Blanco 4-1 well was 6137 psi and argued that because the original reservoir pressure for the Conoco Bell Lake Unit #6 well was 6400 psi then the Rio Blanco 4-1 well had its pressure reduced by production from the Conoco Bell Lake Unit #6 well and therefore Section 4 was in communication with Section 6.

(21) In further support of Landreth's geological interpretation, Landreth's consulting geophysicist testified that after July, 2003 when Landreth licensed only 5 ½ square miles of the extensive 3-D seismic data used by Devon, he reviewed part of the 3-D seismic data and did not see any sealing faults that would preclude Section 4 from being geologically contained to Section 6. During cross-examination, Landreth's geophysicist admitted that he had seen Devon's 3-D interpretation from the prior hearing in Case 13049 but had not studied it. Landreth's geophysicist also admitted that the 3-D data he examined did not include Section 18.

(22) Landreth also contended that the Conoco Bell Lake Unit #6 well in Section 6 had drained the BTA well in Section 18.

(23) Landreth also contended that the gas/water contact in that portion of the Devonian structure in which the Conoco Bell Lake Unit #6 well is now located at the very top of the Devonian formation.

DEVON'S GEOLOGIC ARGUMENT:

(24) Devon submitted geologic and 3-D geophysical evidence that demonstrated the following:

(1) Section 4 is within a Devonian structure that is clearly separated from the North Bell Lake structure by two north-south trending faults and a syncline in Section 5. The presence, position, and offset on these faults are defined by the 3-D seismic data which has information every 110 feet. The analysis of this data confirms the presence of these sealing faults and demonstrates that Section 6 is isolated by a sealing fault located in Section 5 isolating gas production from the Rio Blanco 4-1 well from any other Devonian gas well.

(2) The Brunson and Mcknight Ojo Chiso well in Section 23-T22S-R34E was drilled the top of the Devonian at -11,140 feet in 1974. A DST from -11,150 to -11,239 recovered salt water. This well is at least 200 feet high to the gas water contact in the Conoco Bell Lake Unit #6 well in Section 6 of T23S-R34E. The distance between the wells is about 5 miles. **(See Devon's Exhibit 1, Case 13085).** Without the closing fault on the east side of the North Bell Lake field the Ojo Chiso and the Conoco Bell Lake Unit #6 well would be in communication with one another which is clearly impossible. Therefore, there is a sealing fault on the east side of the North Bell Lake Field separating this field from the Rio Blanco #1 well in Section 4 and the Ojo Chiso well in Section 23-T22S-R34E.

(3) These Devonian reservoirs are heterogeneous with discontinuous porosity development, enhanced by secondary porosity and fracturing.

(4) Existing pools, including the Rio Blanco 4-1 well's pool, are distinct, relatively simple and compact, structural closures associated with north-south trending faults.

(5) Geologically, because the Devonian porosity development within these independent structures is vertically and horizontally discontinuous, a well on 640-acre well density may cause gas reserves to be wasted due to inefficient drainage. Wells on 320-acre spacing unit can more effectively drain these Devonian reservoirs, as evidenced by the Drill Stem Test in the North Bell Lake Unit #3, a 160-acre offset, which tested gas at 4.6 mmcfd, 36 years after production began the Conoco Bell Lake Unit #6 well.

(6) Devon, despite Landreth's contention to the contrary, demonstrated that the 4 wells in the Antelope Ridge Devonian Pool, a comparably sized structural feature, recovered more gas and less water than the single well in the North Bell Lake-Devonian Pool. **See Devon's Exhibit 13, Case 13085.**

(25) Devon, in confirmation of its geological interpretation, submitted petroleum reservoir engineering evidence that demonstrated:

(1) It is impossible for Landreth's geological interpretation to be correct because gas production from the Conoco Bell Lake Unit #6 well cannot cause the gas/water contact to migrate up structure in the manner suggested by Landreth. For Landreth to be correct, the Conoco Bell Lake Unit #6 well would have had to produce 256 Bcf of gas rather than only 31-32 Bcf. **See Devon Exhibit 14, Case 13085.**

(2) Landreth's geological interpretation is contrary to pressure data because the current pressures are different for all of the key wells involved. For Landreth to be correct, all current pressures must be the same given a strong water drive reservoir system. **See Devon Exhibit 12, Case 13085.**

(3) Landreth's geological interpretation is contrary to production data because there is no indication that production from one well affects the production from another well. **See Devon Exhibit 12.**

(4) Devon, despite Landreth's contention to the contrary, demonstrated that the North Bell Lake Devonian Gas Pool (Conoco Bell Lake Unit #6 well) is separate from the Middle Bell Lake Devonian Gas Pool (BTA well). **See Devon's Exhibit 12, Case 13085.**

(5) The most probable recovery factor for the Conoco Bell Lake Unit #6 well is 50-70% **See Devon Exhibit 17, Case 13085** and substantial volumes of formerly recoverable gas were left and thereby wasted. **See Devon Exhibit 16, Case 13085.**

DIVISION CONCLUSIONS:

(26) The Division finds that:

(1) Devon has a superior understanding of the Devonian reservoirs compared to Landreth because all of Devon's evidence is consistent with all of the relevant and available data.

(2) Landreth's interpretation is flawed because, among other things, he failed to submit or attempt any calculations regarding the drainage area or indications of interference among wells.

(3) EGL/Landreth's interpretation linking Section 4 to Section 6 is contrary to all prior cases presented to the Division. Of all the geologic presentations made to the Division about Section 4, only EGL/Landreth link Section 4 to the North Bell Lake-Devonian Gas Pool.[8]

[8] See Transcript Cases 6962, 10267 and 13048

(4) Despite these serious flaws in EGL/Landreth's technical case, and based upon speculation, they attempt to tell the Division that it is a forgone conclusion that the Rio Blanco 4-1well will drain 640-acres.

(5) By contrast, Devon presented geologic evidence, including detailed 3-D seismic data and petroleum engineering evidence that demonstrated that EGL/Landreth's interpretation is wrong. Devon's 3-D seismic interpretation shows that the Rio Blanco 4-1 well is clearly separated from the North Bell Lake Devonian Pool by two north-south trending faults and a syncline. **See Devon's Exhibit 1 and 8-11, Case 13085.**

(6) Devon presented substantial evidence demonstrating that the Devonian reservoir consists of vertically and horizontally discontinuous compartments best suited for development on 320-acre spacing in accordance with Division's Rule 104. **See Devon Exhibit "F" attached.**

(7) Devon's interpretation fits the regional interpretation of Devonian producing structures.[9] Existing Devonian pools are distinct, relatively simple, compact structural closures associated with north-south trending faults. EGL/Landreth's interpretation of a large sprawling structure with multiple crests, and an extensive original gas-water contact clearly does not fit into the regional context. EGL/Landreth has offered no explanation for this anomalous and unreasonable interpretation.

(27) There is sufficient evidence to support creating a new Devonian gas pool for the Rio Blanco 4-1 well located in the N/2 of Section 4.

[9] See Devon's Exhibit 1, Case 13085

DRAINAGE AREA FOR THE RIO BLANCO 4-1 WELL

LANDRETH'S CONTENTIONS:

(28) Landreth contended that a single well in the Rio Blanco 4-1 well's structural feature would drain not only Section 4, but also all other sections contained within the entire structure. However he failed to introduce evidence that the Rio Blanco 4-1 well would be capable of draining even 320 acres.

(29) The only new data from the re-entry of the Rio Blanco 4-1 well are short time pressure tests (Drill Stem Test and 4-point test) that demonstrate a maximum radius of investigation of less that 330 feet from which the Division cannot find that the Rio Blanco 4-1 well is likely to drain 640-acres.

DEVON'S CONTENTIONS:

(30) Devon demonstrated that:

(1) Within each Devonian structural feature the reservoir porosity development is vertically and horizontally discontinuous in such a manner as to require multiple wells with spacing units not greater in size than 320-acres per well.

(2) The only tests from the Rio Blanco 4-1 well were a Drill Stem Test and a 4-point test, from which drainage area cannot be calculated.

(3) This data is not sufficient to allow the Division to require the dedication of a 640-acre spacing unit to the Rio Blanco 4-1 well.

(4) The re-entry of the Rio Blanco 4-1 well by EGL was not drilled deep enough to determine the gas/water contact, and the resulting log data was not valid and provided no data from which to calculate porosity or drainage.

(5) All that has been established is that the Rio Blanco 4-1 well can produce Devonian formation gas from a structural feature that is not in communication with any other.

(6) There are 21 Devonian formation gas pools in Southeast New Mexico. Eighteen of the twenty-one are spaced on 320 acres or less. Only 3 of these pools are spaced on 640 acres. Although Landreth's discussion of Devonian pool spacing in the State of Texas is irrelevant to this case, it is important to note that many of the Texas pools referenced provide for significant down spacing – as small as 40 acres.

DIVISION'S CONCLUSIONS:

(31) Landreth claims that this is a very active water-drive reservoir but then leaps to the conclusion that 2 wells in a section will lead to water-coning and premature abandonment of wells resulting in waste. Landreth makes this claim without technical reference or supporting evidence. Devon submitted substantial technical evidence to the contrary and demonstrated that at least 1 well per 320 acres is required for efficient drainage.

(32) The Amerada Hess North Bell Lake #3 well, drilled in 1996, flowed gas during a drill-stem test at the rate of 4.6 mmcfd along with 1344 bwpd. If Landreth's interpretation is correct, then the Amerada Hess North Bell Lake #3 well, drilled 36 years after initial production in the section, should not have tested gas thus proving that 1 well cannot drain 640-acres. The Amerada Hess North Bell Lake #3 well is a 160-acre offset to the Conoco Bell Lake Unit #6 that Landreth claims drained 843 acres. Clearly a single well per 640-acres will leave gas in place in the reservoir, therefore gas is being wasted in the North Bell Lake Devonian structure.

(33) Further, Landreth claims that the Conoco Bell Lake Unit #6 well has drained the BTA #1 well, completed in 1980, in the N/2 of Section 18.10 It is obvious that it is not possible for the Conoco Bell Lake Unit #6 and the BTA #1 to be in the same reservoir and for the Conoco Bell Lake Unit #6 to have drained the BTA acreage and affected the BTA well as Landreth claims. For Landreth to be correct the Conoco Bell Lake Unit #6's

pressure must be less than the pressure on the BTA #1 so that the gas will flow from the BTA acreage to the Conoco Bell Lake Unit #6 well. Furthermore, Devon's seismic interpretation clearly demonstrates that the Conoco Bell Lake Unit #6 and BTA #1 wells are separated. Landreth's 5.5 square miles of seismic data did not cover section 18 and therefore could not map this area accurately. **See Devon's Exhibit 2, Case 13085**

(34) The Rio Blanco 4-1 well has not been tested in such a way as to obtain sufficient data to make accurate petroleum engineering calculations concerning drainage area for this well upon which to grant an exception to Rule 104 and create a Devonian gas well pool spaced upon 640-acre spacing units.

(35) Section 4 is disconnected from the North Bell Lake-Devonian Gas Pool, and Section 4 should be a new Devonian pool spaced on 320-acre spacing units, in accordance with Division Rule 104.

(36) EGL/Landreth's request for 640-acre spacing for the Rio Blanco 4-1 well, in order to prevail, should have answered the following:

(1) How can Landreth's interpretation of the Devonian structure and original and current gas/water contact be correct when it would require the Conoco Bell Lake Unit #6 well to have produced 256 Bcf of gas instead of the actual production of 31 Bcf.

(2) How can Landreth claim 640-acre spacing when, under cross-examination, he testified that the Antelope Ridge-Devonian Gas Pool, on 640-acre well spacing, but was effectively developed on 200 acre well spacing to protect correlative rights. This pool recovered more gas and less water from a structure comparable in size to the North Bell Lake structure;[10]

(3) How can Landreth claim that the Conoco Bell Lake Unit #6 drained 834 acres (Case 13049) and not be able to identify the 834 acres he said were drained by the Conoco Bell Lake Unit #6 well;[11]

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[10] See Case 13048, Transcript page 158, lines 2-12

[11] See Case 13048, Transcript page 173, lines 23-25

(4) Landreth's drainage calculation assumed 74' of net pay. However, he testified that all of the Devonian formation above the gas/water contact is gas filled. Using the greater thickness substantially decreases the drainage area. **See Devon's Exhibit 15, Case 13085**

(5) Why the Amerada Hess North Bell Lake #3,[12] only 160-acres apart from the Conoco Bell Lake Unit #6 can have a 2000-psi pressure differential from the Conoco Bell Lake Unit #6;

(6) How can Landreth's calculation of 834 acres drained by the Conoco Bell Lake #6 Unit be correct given that the Amerada Hess North Bell Lake #3 flowed gas at 4.6 mmcfd, a rate higher than the test rate of the Rio Blanco 4-1 well.[13];

(7) How can Landreth claim that the Conoco Bell Lake Unit #6 drained the BTA #1 in Section 18 when a comparison of the pressure data shows that the bottom-hole pressure for the BTA #1 had declined to less than 1000 psi while the Conoco Bell Lake Unit #6 had a bottom-hole pressure slightly greater than 6000 psi?

(37) EGL/Landreth contends that waste will occur and that their correlative rights will be impaired by 2 wells per section. To the contrary, Landreth and Devon each provided economic analysis demonstrating the economic benefit of multiple wells. **(See Landreth's Exhibit 14 and Devon's Exhibit 19)**

(38) EGL/Landreth's arguments are little more than excuses precluding Devon from obtaining its share of Devonian gas production in the area. Landreth's geologic map does not support his conclusions and fails to demonstrate how 640-acre spacing prevents waste, and protects correlative rights for the owners in Sections 4, 5, 9 and 33, and fails to justify dilution of Devon/Southwestern's interest in the discovery well by

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[12] The Amerada Hess North Bell Lake #3 is very important because it is located in Section 6 between the Conoco Bell Lake Unit #6 in Section 6 and the Rio Blanco 4-1 in Section 4.

[13] The Conoco Bell Lake Unit #6 has a bottom-hole pressure of 4000 psi at a time when the Amerada Hess North Bell Lake #3 has a bottom-hole pressure of 6000 psi (public data from P.I. Dwight's).

50%, after Devon/Southwestern prepaid their proportionate share of the risk well.

(39) Devon presented evidence in support of 320-acre well spacing, including pressure data, production data, and volumetric reserve calculations separating Section 4 from any other Devonian Pool in this area. Devon demonstrated that two wells per section will increase gas recovery, prevent waste and protect correlative rights. Multiple wells will produce the Devonian more efficiently, obtain higher gas recoveries and yield higher cash flow to all parties involved. **See Devon's Exhibit 19, Case 13085 and Landreth's Exhibit 14.**

(40) The only new data from the re-entry of the Rio Blanco 4-1 well are short time pressure tests (Drill Stem Test and 4-point test) which tested a maximum radius of investigation of 100 feet to 330 feet. This information is insufficient for the Division to conclude that the Rio Blanco 4-1 well is likely to drain 640-acres.

(41) Existing data on the Rio Blanco 4-1 well is sufficient to classify this well for a "new discovery" for Devonian gas production for which the Division should create a new pool to be named the Rio Blanco Devonian Gas Pool.

LANDRETH'S ATTEMPT TO PENALIZE DEVON'S WELL LOCATION IN THE S/2 OF SECTION 33

(42) The Division should deny EGL/Landreth's request to subject Devon's Rio Blanco "33" Federal Well No 1 located in Unit N of Section 33 to a reduced allowable penalty on the grounds that Devon's wells, that are in full compliance with Division Rule 104, are not subject to any special pool rules. The Division should also note that this request was not included in EGL/Landreth's application.

IT IS THEREFORE ORDERED THAT:

(1) That portion of EGL/Landreth's application requesting the North Bell Lake-Devonian Gas Pool be extended to include Sections 5 and 4 is hereby **DENIED.**

(2) That portion of EGL/Landreth's application requesting the creation of a new Devonian gas pool for production from the Rio Blanco 4-1 well located in Unit F of Section 4, T23S, R34E, is hereby **GRANTED** and the Division hereby establishes a new pool named the Rio Blanco Devonian Gas Pool for an area consisting of the N/2 of Section 4, T23S, R34E subject to Rule 104.

(3) EGL/Landreth's request at the hearing to subject Devon's Rio Blanco "33" Federal Well No. 1 to a reduced allowable because of this well location is hereby **DENIED.**

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

LORI WROTENBERY
Director

JAMES BRUCE
ATTORNEY AT LAW

POST OFFICE BOX 1056
SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213
SANTA FE, NEW MEXICO 87501

(505) 982-2043 (PHONE)
(505) 982-2151 (FAX)

jamesbruc@aol.com

RECEIVED

OCT 1 4 2003

OIL CONSERVATION DIVISION

October 9, 2003

Via Fax and U.S. Mail

David Catanach
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Case 13085; Application of E.G.L. Resources, Inc. and Robert Landreth for pool extension, etc., Lea County, New Mexico

Dear Mr. Catanach:

Southwestern Energy Production Company ("Southwestern") entered an appearance in this matter, but presented no witnesses. As a result, it submits this closing statement in lieu of a proposed order.

Southwestern requests that the application of E.G.L. Resources, Inc. and Robert Landreth ("Landreth") be denied, for the following reasons:

1. The Science Does Not Support 640-Acre Spacing.

Devon Energy Production Company, L.P. ("Devon") presented evidence which clearly shows (a) the complexity and heterogeneity of the Devonian reservoir, and (b) the need for additional wells in water-drive Devonian reservoirs to minimize water production and maximize hydrocarbon recovery. Thus, more than one well per section is required.

The data on the Antelope Ridge-Devonian Gas Pool presented by Landreth proves this point. The Antelope Ridge pool, although officially spaced on 640 acres, was essentially developed on 160-200 acre spacing, based on reservoir area and well placement. The net result was recovery of an extra 8-9 BCF of gas more than the North Bell Lake-Devonian Gas Pool, which had an equal area but fewer wells. Moreover, the draw-down of

reservoir pressure in the Antelope Ridge pool, from the first well drilled in the early 1960s to the last well drilled in the mid-1980s, was only about 200 psi, or about 3% of virgin pressure. This data is contrary to an homogeneous reservoir which can be adequately drained by one well per section.

Simply put, there is insufficient data to increase well spacing, and the Division would be acting to contrary to decades of precedent if it increased spacing with no production data.

There are a few Morrow and Devonian pools in southeast New Mexico which are spaced on 640 acres. These pools are relics. The trend over the past decade has been toward infill drilling. See the McMillan-Morrow Gas Pool and White City-Pennsylvanian Gas Pool (640-acre pools with one well now allowed per quarter section). Therefore, increased spacing with later infill drilling is not the answer to this case: Infill drilling will no doubt be allowed in the future if spacing is increased, so why increase spacing now?

2. Increasing Spacing Would Adversely Affect Equities.

The Rio Blanco 4 Fed. Com. Well No. 1 was re-entered and deepened based on 320 acre spacing. As a result, Southwestern and Devon collectively paid for 25% of the cost of the well. To alter spacing now will dilute their interest by one-half, after they've already paid their well costs.[1] While well spacing orders may legally dilute someone's interest, such actions by the Division must be based on clear evidence of the need to prevent the drilling of unnecessary wells. Such a severe impact is not warranted in this case, considering the evidence showing that additional wells are needed.

It is also interesting that the operator of the Rio Blanco 4 Fed. Com. Well No. 1, E.G.L. Resources, Inc., did not present testimony. Perhaps this is because, whether spacing is 320 acres or 640 acres, its interest in the well remains the same. **Landreth Exhibit No. 2**. This further indicates that this case is not about science, but about interests in production.

The evidence does not support an increase in spacing. The only effect of a spacing increase will be to save Landreth's term assignment in the SE¼ of Section 4.[2] This is insufficient justification, and the application must be denied.

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[1] As Mr. Landreth said at the hearing, we wouldn't be here if the well was a dry hole.

[2] Landreth has had the term assignment for four years.

Very truly yours,

James Bruce

Attorney for Southwestern Energy Production Company

cc: Counsel of record (via fax and U.S. mail)

MILLER STRATVERT

PROFESSIONAL ASSOCIATION

Ranne B. Miller
Alice T. Lorenz
Gregory W. Chase
Stephen M. Williams
Stephan M. Vidmar
Seth V. Bingham
Timothy R. Briggs
Rudolph Lucero
Deborah A. Solove
Gary L. Gordon
Lawrence R. White
Sharon P. Gross
Virginia Anderman
Marte D. Lightstone

J. Scott Hall*
Thomas R. Mack
Thomas M. Domme
Ruth O. Pregenzer
Jeffrey E. Jones
Ross B. Perkal
James J. Widland
Bradley D. Tepper**
Robin A. Goble
James R. Wood
Dana M. Kyle
Kirk R. Allen
Ruth Fuess
H. Brook Laskey

Katherine W. Hall
Paula G. Maynes
Michael C. Ross
Carla Prando
Jennifer L. Stone
Gary Risley
M. Dylan O'Reilly
Jennifer D. Hall
Jennifer L. Olson
Todd A. Schwarz
Nell Graham Sale
Scott P. Hatcher
Leonard D. Sanchez

Michelle K. Ostrye
Kelsey D. Green
Marcy Baysinger
David J. Martin
Caroline Blankenship
Matthew S. Rappaport
Karen E. Wootton
Somer K. Chyz

Counsel

William K. Stratvert
James B. Collins

Reply to Santa Fe

150 Washington Ave., Suite 300
Santa Fe, NM 87501

Mailing Address:
P.O. Box 1986
Santa Fe, NM 87504-1986

Telephone: (505) 989-9614
Facsimile: (505) 989-9857

* New Mexico Board of Specialization Recognized Specialist in Natural Resources - Oil & Gas Law
** New Mexico Board of Specialization Recognized Specialist in Real Estate Law

October 10, 2003

RECEIVED
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Oil Conservation Division

HAND-DELIVERED
Mr. David Catanach
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: New Mexico Oil Conservation Case No. 13085; Amended Application of EGL Resources, Inc. and Robert Landreth for Pool Extension for the North Bell Lake-Devonian Gas Pool, or Alternatively, for Pool Creation and Special Pool Rules, and Expansion of Gas Spacing and Proration Unit, Lea County, New Mexico

Dear Mr. Catanach:

On behalf of the EGL Resource, Inc. and Robert Landreth, enclosed is a copy of our draft order pursuant to the October 2, 2003 hearing in the above matter. As discussed during the hearing, the Applicants respectfully request the entry of an expedited order in this matter in order to avoid the possible termination of a term assignment covering a portion of the lands that are the subject of the Amended Application and so that my clients will not be forced to commence additional operations on an unnecessary well. The Division's efforts in this regard would be most appreciated.

Also during the course of the hearing, in connection with the request to extend the pool boundaries of the North Bell Lake-Devonian Gas Pool, the Applicants proposed the modification of those provisions of the Special Rules and Regulations governing the retroactive approvals of resulting unorthodox well locations in order to address the Devon Energy Production Company, LP Rio Blanco "33" Well No. 1 in the S/2 of Section 33, T-22-S, R-34-E, the drilling of which was commenced three weeks ago, significantly after the Amended Application was filed in this matter. As Mr. Bruce pointed out on behalf of Southwestern Energy Production Company, neither the Amended Application, the notice nor the case advertisement addressed a request to amend the pool rules for that pool. For this reason, and in order to avoid the delay necessarily attendant with filing a

second amended application and providing for subsequent notice and advertisement, the Applicants hereby dismiss that portion and only that portion of the Amended Application seeking the extension of the North Bell Lake-Devonian Gas Pool.

Dismissal of the request for pool extensions should greatly simplify the Division's consideration of this matter. In any event, the central issue in this case is not whether the North Bell Lake Devonian Gas Pool should be extended into Sections 5 and 4. The issue is how big an area can be drained by a single Devonian well regardless of what pool it is classified in.

Finally, we have reviewed Mr. Bruce's letter to the Examiner dated October 9, 2003. Since the other parties in this case are taking substantial liberties in impugning Landreth's motives, implying that he seeks 640-acre spacing solely to protect an expiring lease, we wish to set the record straight by stating the obvious: Devon and Southwestern Energy seek to set aside forty years of precedent for 640-acres spacing in this area, determined by specific scientific (engineering) facts presented at special pool rules hearings in the two nearest Devonian Pools, so they can drill two or more corner-shot wells in order to capture gas from EGL/Landreth's acreage in Section 4, thereby violating EGL/Landreth's correlative rights. If this were not so, Devon and Southwestern could achieve effective 320-acre spacing on the sections they control, if they so desire, by drilling a second well on their 640-acre units. Devon claims that all of Section 33 to the north of Section 4 is productive from the Devonian. If the entire Section is productive, as Devon says, it should not need to encroach upon the Section 4 lease line to recover its fair share of reserves.

Very truly yours,

MILLER STRATVERT P.A.

J. Scott Hall

JSH/glb
Enclosure
cc: Gail McQuestan
W. Thomas Kellahin
James A. Bruce
Bob Landreth
Wes Perry

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:

APPLICATION OF EGL RESOURCES, INC. AND ROBERT LANDRETH FOR POOL EXTENSION FOR THE NORTH BELL LAKE-DEVONIAN GAS POOL, OR ALTERNATIVELY, FOR POOL CREATION AND SPECIAL POOL RULES, AND EXPANSION OF GAS SPACING AND PRORATION UNIT LEA COUNTY, NEW MEXICO.

CASE NO. 13085
ORDER NO. _____

ORDER OF THE DIVISION
(EGL Resources, Inc.'s and Robert Landreth's Proposed Order)

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 2, 2003 at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this _____ day of _____, 2003, the Division Director, having considered the testimony, the record and the recommendations of the Examiners, and being fully advised in the premises,

FINDS THAT:

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

(2) EGL Resources, Inc. ("EGL"), and Robert Landreth ("Landreth"), seek an order extending the pool boundaries of the North Bell Lake Devonian Gas Pool (71840) to include Sections 4 and 5, T-23-S, R-34-E, NMPM in Lea County. Alternatively, Applicants seek the creation of a new pool consisting of said Section 4 with a promulgation of special pool rules for the production of gas from the Devonian formation including provisions for 640-acre gas spacing and proration units and designated well location requirements. Applicants also seek the concurrent expansion of the 320-acre gas spacing and proration unit created by Order No. R-11962 issued by the Division on May 13, 2003 in consolidated cases No. 13048 and No. 13049.

The 320-acre gas spacing and proration unit created by Order No. R-11962 presently consists of the N/2 of said Section 4, from the base of the Morrow formation to the base of the Devonian formation to include all of Section 4 (640 acres).

(3) Robert E. Landreth appeared at the hearing on behalf of himself and EGL Resources, Inc. and was represented by counsel.

(4) Devon Energy Production Company LP appeared at the hearing and was represented by counsel in opposition to the application. Southwestern Energy Production also appeared at the hearing represented by counsel in opposition to the application.

(5) EGL is the owner and operator of the Rio Blanco "4" Federal Well No. 1 (API No. 30-025-34515) ("Rio Blanco 4-1 well") located at a standard location (Unit F) 1980 FN&WL of said Section 4. EGL recently re-entered, deepened and completed the Rio Blanco 4-1 well in the Devonian formation as a commercially successful well.

(6) The Section 4 lands dedicated to the Rio Blanco "4" well were the subject of competing compulsory pool applications brought by EGL and Devon. At the specific direction of the Division's engineering bureau, the APD for this well filed by EGL in March 2003 with the BLM, and the application filed on behalf of EGL Resources in Case No. 13049 sought the creation of a 640-acre spacing and proration unit in the Devonian formation in conformance with the special pool rules and regulations for the undesignated North Bell Lake-Devonian Gas Pool. In Case No. 13048 Devon sought the pooling of interests to create a 320-acre gas spacing and proration unit in conformance with the special pool rules and regulations for the Antelope Ridge Devonian Gas Pool, although the special rules applicable to that pool provide for 640-acre gas spacing and proration units. Devon's Application in Case No. 13048 sought the creation of a 320-acre N/2 unit. The Division consolidated the two applications for hearing on April 10, 2003 and subsequently issued Order No. R-11962 on May 13, 2003. In Order No. R-11962, the Division interpreted its well spacing and acreage dedication requirements under Rule 104 and determined that 320-acre "wildcat" well spacing applied. Accordingly, the Order pooled the Devonian formation mineral interests underlying the N/2 of Section 4 to form a 320-acre unit and designated EGL Resources as operator of the Rio Blanco "4" well.

(7) In Order No. R-11962, the Division noted as follows:

"(15) In effect, EGL's application for a 640-acre unit in Case No. 13049 seeks to expand the North Bell Lake-Devonian Pool. Case No. 13049 was not filed or advertised as an application to expand pool boundaries, nor does the evidence establish that notice of the application or the hearing thereof was given to all Division designated operators in the pool as would be required by an application for a special pool order pursuant to Rule 1207.A(4)[19.15.N November .1207 NMAC]

(16) The geologic and engineering testimony concerning the potential drainage radius of the well on the Devonian formation raises matters of which the Division cannot take cognizance in the context of these applications.

(17) Accordingly, EGL's application, to the extent that it ask for creation of a 640-acre unit comprised of all of Section 4 should be dismissed, without prejudice to any subsequent application to expand the unit in the context of a application to expand the limits of the North Bell Lake Devonian Gas Pool."

(8) Pursuant to Order No. R-11962, Applicants filed their Application in this case on May 22, 2003, which was subsequently amended on June 25, 2003 to request the additional alternative relief of pool creation.

(9) On June 26, 2003, the Applicants filed their Motion for Temporary Suspension of Drilling Permits seeking the entry of an order temporarily suspending or holding in abeyance the approval of drilling permits for the Devon Energy Production Company Rio Blanco 33 Federal Well No. 1 and the Rio Blanco 33 Federal Well No. 2, both planned to be drilled in Section 33, T-22-S, R-34-E immediately north of Section 4. On July 11, 2003, applicants amended their motion to include the temporary suspension of the approval of the drilling permit for the Devon Energy Production Company Rio Blanco 9 State Well No. 1 proposed to be drilled at a location 660 FNL and 1575 FEL in the N/2 of Section 9, T-23-S, R-34-E, in Lea County, immediately south of Section 4. Applicants sought the temporary suspension of the approval of the drilling permits for the three Devon wells pending the outcome of the hearing in this matter for the reason that each of the wells were planned for locations inconsistent with 640-acre spacing, and that if permitted to proceed, there would be a reasonable likelihood that Devon's wells would disrupt the permissible development pattern for the reservoir if it were subsequently determined that 640-acre spacing is appropriate for the reservoir. Devon opposed the Applicants' Motion and Amended Motion.

(10) On August 21, 2003, the Division issued the *Decision Of The Examiner Regarding EGL Resources, Inc. And Robert Landreth's Motion To Stay Devon Energy Production Company LP's Operations*. The *Examiner's Decision* noted as follows:

"(14) Devon should be allowed to continue with the development of the Devonian formation in Sections 33 and 9, provided however that: Devon should act in a prudent manner so as not to compound the disagreement regarding the proper well spacing and well density in the Devonian formation in this area;

(15) Both Devon and EGL/Landreth should be further advised that the Division is empowered to protect correlative rights and that if it becomes necessary, will take such action as may be necessary to do so, including, but not limited to, prorating the North Bell Lake Devonian Gas Pool prorating any pool subsequently created within Sections 4, 9 and 33, and imposing production penalties on unorthodox well locations.

(11) On September 15, 2003, Devon commenced the drilling of its Rio Blanco 33 Federal Well No. 1 to the Devonian formation at a well location permissible under the statewide rules for 320-acre spacing units at 1,000 FSL and 1,620 FWL of Section 33, T-22-S, R-34-E.

(12) On August 18, 2003, Devon filed its Motion To Dismiss the Amended Application in this matter for the reasons that: (1) the Applicants waived the right to pursue 640-acre spacing by virtue of their re-entry of the Rio Blanco 4-1 well, and (2) that the Division lacks jurisdiction to accord the relief requested in the Amended Application.

(13) By the successful prosecution of the re-entry operations on the Rio Blanco 4-1 well and by filing the administrative application in this matter in due course, the Applicants have demonstrated an exercise of their rights rather than a waiver of them. Moreover, the Division has the clear statutory authority to grant the relief requested in the Amended Application pursuant to NMSA 1978 § 70-2-12.B, which states:

> *"The Division is authorized to make rules, regulations and orders for the purposes and with respect to the subject matter stated in this subsection. . . . (12) to determine the limits of any pool producing crude oil or natural gas or both and from time to time redetermine the limits."*

As a specific basis for invoking the Division's exercise of jurisdiction, paragraph 12 of the *Amended Application* asserts that the requested relief for pool extension or pool creation to regulate the orderly and efficient development of Devonian formation gas reserves "...will be in the interests of conservation, *the prevention of waste, including avoiding the drilling of unnecessary wells*, and the protection of correlative rights." Such fits squarely within the definitions of the agency's subject matter jurisdiction set forth in the Divisions Rules:

> *"Waste, in addition to its ordinary meaning shall include:*
>
> *Underground Waste as those words are generally understood in the oil and gas business, and in any event to embrace the inefficient, excessive, or improper use or dissipation of the reservoir energy, including gas energy and water drive, or any pool and the locating, spacing, drilling, equipping, operating, or producing, of any well or wells in a manner to reduce or tend to reduce the total quantity of crude petroleum oil or natural gas ultimately recovered from any pool..."* **19 NMAC 15.1.7.W(1)(a)** (emphasis added).

For these reasons, Devon's Motion to Dismiss should be ***denied***.

(14) At the hearing, the Applicants cited to a number of precedents where 640-acre spacing for Devonian formation gas wells has been established or otherwise recognized by the Division and operators, including the two nearest Devonian pools with nearly identical depths and reservoir rock and fluid parameters.

(15) The spacing unit for the Rio Blanco "4" Federal Well No. 1 is one mile from the outer boundary of the North Bell Lake-Devonian Gas Pool, "a defined pool" with special pool rules which require 640-acre spacing for Devonian gas wells.

(16) The North Bell Lake-Devonian Gas Pool was established by the Commission pursuant to Order No. R-2187 issued on March 1, 1962 following the completion of the Continental Oil Company (Continental) Bell Lake Unit No. 6 discovery well located in Unit O of Section 6, T-23-S, R-34-E. The Bell Lake Unit No. 6 discovery well was completed as a producing gas well in the Devonian formation on June 8, 1960 with perforation tops at 14,568'. Subsequently, on August 4, 1980, the Division issued Order No. R-6424 extending the boundaries of the North Bell Lake-Devonian Gas Pool to include the entirety of Section 6, along with Sections 7 and 18, all in T-23-S, R-34-E. Order No. R-6424 also established Special Pool Rules for the North Bell Lake-Devonian Gas Pool which requiring 640-acre spacing for development in that pool and 1650' setbacks from section lines.

(17) The Antelope Ridge Gas Pool (70400) was established on January 1, 1964 pursuant to Order No. R-2623, as amended on June 1, 1986 by Order No. R-8233 (pool extension). Order No. R-2623 established temporary pool rules for the Antelope Ridge Devonian Gas Pool which provided for 640-acre spacing. Those temporary rules were made permanent in 1966 by Order No. R-2623-A. Currently, the horizontal limits of the Antelope Ridge Devonian Gas Pool encompass all of Sections 27, 33 and 34 in T-23-S, R-34-E, as well as all of Section 4 in T-24-S, R-34-E.

(18) In Case No. 10267 which was heard by the Division's Examiner on April 18, 1991 (*Application of Pacific Enterprises Oil Company USA for Compulsory Pooling, Lea County, New Mexico*), the Applicant therein sought an order pooling, among other things, the mineral interests in the Devonian formation underlying Section 4, T-23-S, R-34-E, the same lands that are the subject of this proceeding. On April 30, 1991, the Division issued Order No. R-9493 granting Pacific Enterprises' application to pool "all of Section 4 to form a 639.52-acre gas spacing and proration unit for the undesignated North Bell Lake-Devonian Gas Pool which is spaced on 640 acres".

(19) The applicants presented further evidence that in 1995, Santa Fe Energy Resources, Inc., Devon's predecessor, filed with the Bureau of Land Management its Application for a Permit to Drill its Shamrock 29 Fed. Com. No. 1 well and proposed to dedicate a 640-acre gas spacing and proration unit to the well in conformance with the pool rules for the North Bell Lake Devonian Gas Pool. The lands proposed to be dedicated to the Santa Fe Energy Resources well are located in Section 29, T-22-S, R-34-E, the corner of which is exactly one mile from the boundaries of the North Bell Lake Devonian Gas Pool.

(20) The evidence establishes that 640-acre spacing is the predominant development density for deep-Devonian gas formation reservoirs in the Delaware Basin both in New Mexico and in Texas where pool rules have been promulgated.

(21) Subsequent to the hearing in this matter, EGL and Landreth requested that portion of their application seeking an extension of the North Bell Lake Devonian Gas Pool and the concurrent applicability of the special pool rules and regulations for that pool be dismissed, citing to the objections of Southwestern Production Company that the Amended Application, notice and advertisement in this matter did not include the request made during the hearing to amend the pool rules to address the subsequent drilling by Devon of its well in Section 33, T-22-S, R-34-E.

(22) The applicants and Devon presented conflicting geologic and geophysical evidence and testimony with respect to the location and extent of displacement of faulting in the vicinity of the Section 4 lands as well as with respect to whether the faulting resulted in the separation of the western anomaly from the eastern anomaly as two distinct common sources of supply. The parties also presented conflicting testimony and evidence with respect to the trough in the Devonian formation in Section 5 is low enough to create separate reservoirs. However, the subsequent dismissal by the applicants of that portion of their case seeking the extension of the North Bell Lake Devonian Gas Pool renders any further consideration of such geophysical and geological evidence irrelevant. While the parties are in disagreement about the area which can be efficiently and economically drained by a single well, Devon and EGL/Landreth are in agreement that the geological characteristics of the Devonian formation in the eastern anomaly and the western anomaly are similar.

(23) At the hearing, applicants introduced evidence establishing that the Rio Blanco "4" Federal Well No. 1 was re-entered on July 9, 2003 and that the well was drilled to total depth of 14,597' on September 9, 2003. The well was successfully completed as an open-hole completion in the Devonian formation in the interval from 14,497' to 14,597'.

(24) The above referenced well first produced on September 19, 2003, making 1,870 mcfpd with an indicated condensate yield of 2 barrels per million cubic feet of gas, essentially identical to that experienced by the Continental well in Section 6 over its lifetime. The well is currently shut-in waiting on pipeline connection.

(25) The above referenced well encountered the top of the critical Mississippian lime structural marker on August 17, 2003, indicating that the Devonian would also be structurally high. Shortly after this date, Devon began construction of its location in the S/2 of Section 33 in preparation for commencing drilling operations.

(26) The evidence presented by the Applicants establishes that the Rio Blanco 4 Federal No. 1 well penetrated approximately 100' into the Devonian pay section, approximately 80' short of the estimated gas/water contact.

(27) The Applicants presented testimony based on the July 1980 special pool rules hearing for the North Bell Lake Devonian Gas Pool establishing that BTA Oil Producers 7909 JV-P Well No. 1 located in Section 18, T-23-S, R-34-E, was completed in 1980 in a common source of supply in the Devonian formation with the Continental Bell Lake Unit No. 6 well and

was structurally high enough to have produced a significant reserve of gas. However, while the Continental North Bell Lake Unit No. 6 well produced in excess of 31 Bcf of gas, total recovery for the BTA well in Section 18 was only 0.859 Bcf prior to abandonment, due partly to partial drainage from the Conoco well and partly to an influx of high water production early in its life as a result of the rise in common gas/water contact caused by the substantial reservoir withdrawals from the structurally higher Continental well.

(28) The Applicants further requested the Division's Examiners take administrative notice of Findings 5 and 6 in Order No. R-6424 (NMOCD Case No. 6962; *Application of BTA Oil Producers for Special Pool Rules and Pool Extension, Lea County, New Mexico*). In those findings, the Division found in 1980 that based on bottom hole pressure data, both the Bell Lake Unit Well No. 6 and the BTA 7909 JV-P Well No. 1, one and one-half miles away, were producing from a single common source of supply in the Devonian formation and that one well in the North Bell Lake-Devonian Gas Pool is capable of draining 640 acres.

(29) Order No. R-6424 entered by the Division on August 4, 1980 established special pool rules and regulations for the North Bell Lake Devonian Gas Pool. The findings of that Order noted as follows:

> *"(5) The evidence presently available that said Bell Lake Unit Well No. 6 (in Section 6) and Applicant 7909 JV-P Well No. 1 (in Section 18) are indeed both producing from a single common source of supply in the Devonian formation . . . ."*
>
> *"(6) The evidence further indicates that one well in said North Bell Lake-Devonian Gas Pool is capable of draining 640 acres and that 640-acre spacing and proration units should be established for said pool . . . ."*

(30) The evidence at hearing further established that Devon has begun drilling another Devonian formation gas well in the S/2 of Section 33. The well is located 1000' from the common boundary between Sections 4 and 33 under 320-acre statewide spacing rules. In addition, the evidence establishes that under 320-acre spacing, the Rio Blanco "4" Federal No. 1 Well could be offset by another Devonian well drilled in the S/2 of Section 4. These well densities and well locations would not be permissible under the special pool rules proposed by the Applicant and typical of pools spaced on 640 acres.

(31) The testimony presented by EGL and Landreth establishes that the Devonian formation gas reserves underlying Section 4 can be efficiently and economically produced by the single Rio Blanco "4" Federal Well No. 1.

(32) EGL/Landreth presented testimony showing that the Devonian reservoir underlying Section 6 is a very active water drive reservoir, as evidenced by the minimal reduction in reservoir pressure measured after 42 years of production and recovery of 31 bcf of gas from the Continental well in Section 6. Similar evidence was introduced for the Antelope

Ridge Devonian Pool. There is no reason to suspect that the new Devonian pool underlying Section 4 will be any different.

(33) The evidence established that there is a reasonable likelihood that the greater the well density, the higher the probability that intense competition for the gas reserves in place will result in water coning and the premature abandonment of wells with a resulting waste of otherwise recoverable gas reserves.

(34) The Applicants presented drill stem test and preliminary production data obtained from the Rio Blanco 4-1 well which indicated that one Devonian well is capable of draining an area in excess of 640 acres, let alone the 320 acre gas spacing and proration unit currently assigned to the well.

(35) The Schlumberger drill stem test analysis presented by the Applicants showed a calculated reservoir permeability of 17.6 millidarcies. The transcript of the petroleum engineering testimony from Case No. 2945 upon which the Commission relied to establish the 640-acre spacing for the Antelope Ridge Devonian Gas Pool showed a calculated permeability of 4.5 millidarcies based on drill stem test data.

(36) In further support of their position that Devonian formation wells are capable of draining large areas, the Applicants presented evidence of actual measured bottom-hole pressures for nine wells in the North Bell Lake-Devonian Gas Pool, the Antelope Ridge Devonian Gas Pool, as well as the EGL Resources Rio Blanco "4" Fed. Com. No. 1. The bottom-hole pressure data establishes that wells drilled later in both the North Bell Lake Devonian Gas Pool and the Antelope Ridge Devonian Gas Pool, and located as much as one and one-half miles from a producing well with considerable previous cumulative production, demonstrated significant depletion from the wells that were completed earlier.

(37) Devon's expert petroleum engineering witness provided testimony and exhibits, including pressure data, to support Devon's contention that Devonian formation reservoirs in this area were small, highly compartmentalized units and that wells drilled to the Devonian formation would be capable of draining only relatively small areas. During cross examination of Devon's engineering witness, however, it was determined that the pressure data he relied on to reach his conclusions were shut-in surface pressure data rather than actual bottom-hole pressure data.

(38) Surface pressure data cannot be utilized to calculate bottom-hole pressures in a water drive reservoir where wells produce large volumes of water and, during shut-in conditions, have a long column of water in the wellbore. The observed shut-in surface pressure under these conditions is far lower than if the well had a full column of gas, yet Dwight's is forced to calculate a pseudo-bottom hole pressure on the assumption that a one-hundred percent gas column exists from top to bottom in the wellbore. As a result of the reliance on the incorrect surface pressure data, the conclusions reached by Devon's petroleum engineering witness are erroneous and cannot be used to substantiate a conclusion that Devonian formation wells drain small areas.

(39) Devon's petroleum engineering witness further testified that he calculated a reservoir permeability of 2.5 millidarcies based on the results from the Schlumberger Drill Stem Test which EGL had performed on the Rio Blanco "4" Federal Well No. 1. In making the calculation of permeability, Devon's engineer testified that the 100' of the Devonian formation actually penetrated by the Rio Blanco well was in communication with an additional 100' of the Devonian formation below the total depth and above the gas/water contact but not penetrated by the drill bit. As a result, Devon's engineer assumed that 200' of net pay was in complete vertical communication within the well bore to derive a calculated permeability of 2.5 millidarcies. In effect, this creates a single pay-zone comprising the entire Devonian interval both vertically and horizontally, and dismisses the theory that there could be un-drained lenses of porosity in the individual wells. The two concepts are incompatible. This conclusion is substantiated by the lower bottom-hole pressures documented by the Applicant on virtually all Devonian tests on wells drilled later in the life of both the North Bell Lake and Antelope Ridge Devonian pools. Devon's geologist was unable to point to examples of any wells drilled much later where virgin reservoir pressure was recorded to substantiate the presence of discontinuous porosity zones or lenses. It is further noted that the 17.6 millidarcies of permeability observed in the Rio Blanco 4-1 well is almost four times greater than that testified to in the Antelope Ridge Devonian pool. The Applicant testified that even if all of the 100' of Devonian penetrated in the Rio Blanco 4-1 well was considered pay, the permeability would still calculate to be 7 millidarcies.

(40) In response to cross examination, Devon's engineering witness acknowledged that a significant Devonian gas column and reservoir of gas had to have existed under at least the westerly portion of Section 5, as well as Section 6, before any well was drilled on that structure. He admitted that the gas under Section 5 had to have been produced by the Continental well in Section 6, based on the fact that a drill stem test of the upper Devonian in Amerada's No. 2 Bell Lake Federal well in 1995 recovered 8500' of formation water and no gas, despite being structurally flat to the good Continental well drilled 35 years earlier which had at that time already produced 30 Bcf of gas. These two wells are separated by a distance of 3,500', indicating a drainage area for the Continental well of at least 883 acres, close to the 824 acre drainage area to which the Applicant testified in Case No. 13049 (April 10, 2003 hearing) based on volumetric and material balance methodology.

(41) In water drive reservoirs, material balance calculations after partial depletion cannot be used to calculate drainage areas. Moreover, it is not reasonably possible to base any conclusions on drainage areas from the accumulation of additional production history information without collecting such data to the point of depletion. Devon's engineer testified that it would take years to reach any conclusion as to drainage area based on production data in a water drive reservoir.

(42) Devon's geologist was unable to answer the question why virgin pressure was not observed in the Amerada well in Section 5 despite a lengthy (440 minute; 7 hour) shut-in. (Landreth/EGL Exhibit 10).

(43) Devon's petroleum engineering witness further agreed that decline curve analysis is not useful in calculating drainage areas in water drive reservoirs unless the well were produced to depletion.

(44) The Applicants presented testimony and exhibits comparing various reservoir parameters of the Antelope Ridge Devonian Pool and North Bell Lake Devonian Gas Pool as well as the reservoir underlying the Rio Blanco 4-1 well, including net pay thickness, ratio of net pay to gross pay, original reservoir pressures from drill stem test data, gas gravities and permeabilities. The evidence presented establishes that the reservoir characteristics of the Devonian formation in each of these three areas compare favorably although the reservoir in the vicinity of the Rio Blanco 4-1 well appears to have significantly superior permeability.

(45) Both the Applicants' and Devon's engineering witnesses agreed that of all the types of data typically utilized to determine the drainage areas of the well, the most meaningful is pressure data. The evidence of reservoir pressures presented by the Applicants, along with the drill stem test data, supports the conclusion that the Rio Blanco 4-1 well is by itself capable of efficiently and economically draining the Devonian formation gas reserves underlying Section 4.

(46) The Applicants presented testimony and evidence evaluating the development of the Devonian formation in the area on the basis of one well per section and on two wells per section. Such evidence establishes that the drilling of a second well on each section will result in the accelerated recovery of reserves but that recovery of additional reserves will not result. To the contrary, the evidence establishes that in a water drive reservoir, increased development densities pose a significant risk of accelerated water encroachment through the phenomenon of water coning caused by the more rapid depletion of gas reserves. As a consequence, there is a significant risk that the development of the subject Devonian reservoir by more than one well per section, especially with wells in close proximity to section lines, will result in the waste of otherwise recoverable gas reserves.

(47) The Applicants presented evidence of six Devonian well locations on three immediately adjacent sections consisting of Sections 4 and 9, T-23-S, R-34-E and on Section 33, T-22-S, R-34-E under the current 320-acre spacing. Those six wells are currently or will be located in closer proximity to each other and at a greater density than would otherwise be permitted under the well locational setback requirements under pool rules applicable to 640-acre spacing units.

(48) There is a significant likelihood that the drilling of otherwise unnecessary wells will result if 640-acre spacing requirements are not adopted. There is also a significant likelihood that the drilling of additional wells under 320-acre development densities wells will result in both economic and physical waste.

(49) Amerada Hess Corporation is the operator of the North Bell Lake Federal Well No. 3, currently completed in the Ellenburger formation in Section 6, and the North Bell Lake Federal No. 2, originally completed in the Ellenburger, but recently plugged back to the Morrow,

in Section 5. As the owner of a significant portion of the Devonian rights in these two Sections, Amerada conducted extensive testing of the Devonian in the course of drilling these wells. Although it did not appear as a party of record at the hearing in this proceeding, the applicants introduced into evidence a letter dated July 31, 2003 whereby Amerada Hess stated its support of the Applicants' request for 640-acre spacing as follows:

> *"Amerada Hess Corporation believes, based on its review of wells in the Bell Lake North Devonian Gas Pool, that one Devonian well is capable of draining 640 acres or more, and supports the application of EGL Resources, Inc. and Robert E. Landreth for 640-acre spacing for the Devonian reservoir in Sections 4 and 5, T-23-S, R-34-E, Lea County, New Mexico."*

(50) Robert Landreth testified that he is the owner of a term assignment from OXY USA, Inc. ("OXY") located in the S/2 of Section 4 that is scheduled to expire on October 23, 2003, unless the acreage subject to the term assignment is drilled or otherwise dedicated to a producing well. For this reason, Mr. Landreth has requested the issuance of an order implementing 640 acres for Section 4 on an expedited basis. To otherwise prevent the expiration of the term assignment, Landreth testified that he is prepared, and in fact has an approved APD from the BLM to drill an additional well to the Devonian and Ellenberger formation in the S/2 of Section 4, at a cost exceeding 3.5 million dollars. Landreth testified that he has attempted to obtain an extension of the term assignment from OXY, but without success.

(51) Devon opposed the creation of a new pool and the implementation of special pool rules for Section 4 without availability of additional data. On the other hand, the Applicants cited to the Division's creation of the Antelope Ridge-Devonian Gas Pool covering 4 contiguous sections in T-23-S, R-34-E and T-24-S, R-23-E. In that case, the Division created the new pool and adopted special pool rules based on well data obtained from two wells penetrating the Devonian, only one of which was at that time completed in the Devonian, although there had been no Devonian gas production from either of the wells at the time the pool was created and the rules were adopted. Similarly, BTA's Application for Special Pool Rules for the North Bell Lake-Devonian Gas Pool was approved by the Division despite the fact that BTA had less than thirty-days of production history from its new well.

(52) Sufficient technical evidence has been presented to support the creation of a new pool for the production of gas from the Devonian formation from Section 4, T-23-S, R-35-E, in Lea County.

(53) Temporary special rules and regulations establishing 640-acre spacing and proration units along with commensurate well locational requirements should be promulgated for the proposed pool in order to prevent the possibility of economic loss and physical waste resulting from the drilling of unnecessary wells. Further, said temporary rules should provide for limited well locations in order to assure the orderly development of the pool and to protect correlative rights.

(54) The subject pool should be designated the "*Rio Blanco-Devonian Gas Pool*".

(55) This case should be reopened at an examiners hearing in twenty-four months, at which time the operator(s) in the subject pool should appear and show cause why the Rio Blanco Devonian Gas Pool should not be developed on 640-acre spacing units and the temporary pool rules adopted herein should not be made permanent.

(56) The evidence presented establishes that the Devon Energy Production Company, LP Rio Blanco "33" Federal Well No. 1 currently drilling to the Devonian formation at a resulting unorthodox gas well location 1,000' FSL and 1,620' of Section 33, T-22-S, R-34-E will be able to produce Devonian formation gas reserves at a substantial advantage over a well producing from an otherwise standard location 1,650' from the section line under rules applicable to 640-acre units. There is also a substantial likelihood that unrestricted production from the Rio Blanco "33" Well No. 1 will result in the impairment of the correlative rights of the other interest owners in the common source of supply.

(57) Devon's predecessor, Santa Fe Energy, has owned Devonian rights in Section 33 since 1998. Even though Devon and its predecessor have had the opportunity to develop the Devonian formation underlying Section 33 since 2000, it apparently chose not to do so until after the Rio Blanco 4-1 well encountered the Mississippian limestone structurally higher than had been initially anticipated.

(58) By commencing the Rio Blanco "33" Well No. 1 before the hearing on the Amended Application in this matter, Devon has failed to act in a prudent manner and has compounded the disagreement regarding the proper well spacing and well density in the Devonian formation in this area in disregard for the Examiner's Decision of August 21, 2003 referenced in paragraph 9, above. Under these circumstances, it is appropriate that no allowable should be assigned to the Rio Blanco "33" Well No. 1 until the operator of said well shall have obtained an order from the Division in a separate proceeding authorizing the unorthodox location pursuant to the provisions of Rule 104F of the Division's Rules and Regulations.

(59) The mineral interest owners in the N/2 and S/2 of Section 4 are the same, although the relative size of their participation interest would be affected by the expansion of the existing 320-acre gas spacing and proration unit dedicated to the Rio Blanco 4-1 well to include the entire 640 acres underlying Section 4.

(60) The current ownership of a 640-acre spacing and proration unit consisting of the entirety of Section 4 is summarized as follows:

Robert E. Landreth	62.50%
EGL Resources, Inc.	25.00%
Devon Energy Production Company, L.P.	6.25%
Southwestern Energy Production Company	6.25%.

(61) The current ownership of a 320-acre spacing and proration unit consisting of the N/2 of Section 4 is summarized as follows:

Robert E. Landreth	50.00%
EGL Resources, Inc.	25.00%
Devon Energy Production Company, L.P.	12.50%
Southwestern Energy Production Company	12.50%.

(62) The "adjusted working interest control" (as such term is used by the Oil Conservation Commission in Finding Paragraph (25) of Order No. R-10731-B, entered in Cases No. 11666 and 11677) in the 640-acre unit is:

EGL Resources and Robert E. Landreth	87.50%
Devon Energy Production Company, L.P. and Southwestern Energy Production Company	12.50%.

(63) Aside from its general opposition to the adoption of 640-acre spacing rules, Devon presented no evidence and did not otherwise oppose the Applicants' request to expand the 320-acre spacing and proration unit created under Order No. R-11962 to include all of the Devonian formation underlying Section 4, T-23-S, R-34-E. The Applicant's request should accordingly be granted.

(64) In accordance with the request of the Applicants, that portion of the Amended Application seeking the extension of the pool boundaries of the North Bell Lake Devonian Gas Pool to include Sections 5 and 4, T-23-S, R-34-E, should be dismissed.

IT IS THEREFORE ORDERED THAT:

(1) Pursuant to the Application of EGL Resources, Inc. and Robert Landreth, a new pool in Lea County, New Mexico, classified as a gas pool for production from the Devonian formation is hereby created and designated the "*Rio Blanco-Devonian Gas Pool*" with vertical limits comprising the Devonian formation and horizontal limits described as follows:

TOWNSHIP 23 SOUTH, RANGE 34 EAST, NMPM
Section 4: All

(2) Temporary Special Rules and Regulations for the Rio Blanco-Devonian Gas Pool, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
RIO BLANCO-DEVONIAN GAS POOL

RULE 1. Each well completed in or recompleted in the Rio Blanco-Devonian Gas Pool or in the Devonian formation within one mile thereof, and not nearer to or within the limits of another designated Devonian gas pool shall be spaced, drilled, operated, and produced in accordance with the Special rules hereinafter set forth;

RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, substantially in the form of a square, which is a governmental section being a legal subdivision of the United States Public Lands Survey.

RULE 3. The supervisor of the Hobbs District Office of the Division shall have authority to approve non-standard units without notice when the unorthodox size or shape is due to a variation in the legal subdivision of the United States Public Lands Survey and consists of an entire governmental section and the non-standard unit is no less than 90% nor more than 110% of a standard unit.

RULE 4. The Director of the Oil Conservation Division may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit consisting of less than 640 acres and when the following facts exists and the following provisions are complied with:

(a) the non-standard unit consists of quarter-quarter sections and/or lots that are contiguous by a common bordering side;

(b) the applicant presents written consent in the form of waivers from:

(I) all offset operators to the section in which the non-standard gas unit is located; and,

(II) from all working interest owners in the section in which the non-standard unit is situated and which acreage is not included in the non-standard unit;

(d) in lieu of sub-part (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid parties to be notified were notified by registered or certified mail of his intent to form such non-standard unit, the Division Director may approve the application if no such notified party has entered an objection to the formation of such non-standard unit within 30 days after the Division Director has received the application;

RULE 5. Each well shall be located no closer than 1650 feet to the outer boundary of the proration unit nor closer than 330 feet to any governmental quarter-quarter section line or subdivision inner boundary;

RULE 6. The Division Director may grant an exception to the requirements of Rule 5 without hearing when an application has been filed for an unorthodox location necessitated by

topographical conditions. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Director has received the application.

IT IS FURTHER ORDERED THAT:

(3) No allowable shall be assigned to the Devon Energy Production Company Rio Blanco "33" Federal Well No. 1 (**API No.** _____), currently drilling at a resulting unorthodox gas well location 1,000 feet from the South line and 1,620 feet from the West line of Section 33, Township 23 South, Range 34 East, NMPM, Lea County, or to any other well in the Rio Blanco Devonian Gas Pool or within one mile thereof, the drilling of which commenced at a resulting unorthodox location after the October 2, 2003 hearing in this matter, until the operator of said well or wells shall have obtained an order from the Division authorizing the resulting unorthodox location pursuant to the provisions of Rule 104F of the Division's Rules and Regulations.

FURTHERMORE:

(4) Any other well presently drilling to or completed in the Rio Blanco-Devonian Gas Pool or in the Devonian formation within one mile thereof are hereby approved; the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Division with the name and location of the well within 30 days from the date of this order.

(5) Pursuant to Paragraph A of NMSA 1978 Section 70-2-18, existing gas wells in the Rio Blanco-Devonian Gas Pool shall have dedicated thereto 640 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C of said Section 70-2-18, after notice and hearing, existing wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

(6) Failure to file new Forms C-102 with the Division dedicating 640 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this order shall subject the well to being shut-in.

(7) This case shall be reopened at an examiner hearing in twenty-four months from the date hereof, at which time the operators in the subject pool may appear and show cause why the Temporary Special Rules and Regulations for the Rio Blanco-Devonian Gas Pool promulgated herein should not be made permanent.

IT IS FURTHER ORDERED THAT:

(8) The 320 acre gas spacing and proration unit presently consisting of the N/2 of said Section 4, T-23-S, R-34-E is expanded to include all mineral interests from the base of the Morrow formation to the base of the Devonian formation underlying all of Section 4, Township-23-South, Range-34-East, N.M.P.M., Lea County, New Mexico, to form a standard 640-acre gas spacing and proration unit ("the Unit") for all formation or pools spaced on 640-acres within this vertical extent which presently include but are not necessarily limited to, the Rio Blanco-Devonian Gas Pool. The expansion of the unit shall be effective as of October 2, 2003, the date of the hearing on the Application in this matter.

(9) All proceeds from production from the well that are not disbursed for any reason shall be placed in escrow in Lea County, New Mexico, to be paid to the true owner thereof upon demand and proof of ownership. The operator shall notify the Division of the name and address of the escrow agent within 30 days from the date of first deposit with the escrow agent.

(10) All other provisions of Order No. R-11962 shall be unchanged.

(11) Devon's Motion To Dismiss The Amended Application is hereby ***denied.***

(12) That portion of the Amended Application seeking the extension of the pool boundaries of the North Bell Lake Devonian Gas Pool is hereby ***dismissed.***

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

_____
LORI WROTENBERY
Director