RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 06-0262000

THE APPLICATION OF DEVON ENERGY PRODUCTION CO., LP FOR A NEW FIELD DISCOVERY AND TO ADOPT FIELD RULES FOR THE PROPOSED CARTHAGE (HAYNESVILLE) FIELD, PANOLA COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner
Marshall F. Enquist - Legal Examiner

HEARING DATES: July 28 and September 1, 2009

APPEARANCES:	**REPRESENTING:**
APPLICANT:	
Brian R. Sullivan Sandra Buch Dale Greenfeather Ben Wilson Brad Hall Douglas Dahmann Daniel W. Higdon	Devon Energy Production Co., LP
INTERESTED PARTIES:	
Ana Maria Marsland-Griffith Frank A. Davis Scott Crump	Anadarko E & P Company, LP
George Neale	El Paso E & P Company, LP Energen Resources Corporation Tanos Exploration, LLC
Bill G. Spencer	Chesapeake Operating, Inc.
Carroll Martin Randall Davis Richard Rhodes	EOG Resources, Inc.

Carroll Martin	R. Lacy, Inc.
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OBSERVERS:

David Gross	XTO Energy, Inc.
Rick Johnston	
Mickey Olmstead	Samson Lone Star, LLC
James M. Clark	
Tim George	ExxonMobil Corporation

PROCEDURAL HISTORY

Application Filed:	June 1, 2009
Notice of Hearing:	June 8, 2009
Hearing Held:	July 28, 2009
Re-convened Hearing Held:	September 1, 2009
Transcript Received:	September 10, 2009
Proposal for Decision Issued:	November 6, 2009

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

Devon Energy Production Co., LP ("Devon") requests that a new field designation called the Carthage (Haynesville) Field be approved for its Hull Unit A Lease, Well No. 102 (API No. 42-365-36749), and include the entirety of Panola County. Devon also requests that the following permanent Field Rules be adopted for the new field:

1. Designation of the field as the correlative interval which includes both the Bossier and Haynesville Shales;

2. 330' lease line spacing and no between well spacing with special provisions for "take points" and an off-lease penetration point for horizontal wells with an included "box rule" stating that the as-drilled location of a well will be considered in compliance with spacing rules if it falls within a rectangle of which two sides are parallel to the permitted drainhole and 50 feet on either side of the drainhole;

3. 640 acre gas proration units with 10% tolerance and optional 40 acre density;

4. Allocation based on 95% acres and 5% per well with AOF status;

5. Special provisions for stacked lateral wells;

6. An "allocation rule" for horizontal wells drilled and completed in more than one existing lease or pooled unit.

Based on evidence received at the hearing, the examiners re-convened the hearing to consider the consolidation of numerous other Haynesville/Bossier Shale fields into the Carthage (Haynesville) Field. There was no objection by any party to inclusion of the Shelbyville Deep (Haynesville), Center (Haynesville), Carthage, E. (Bossier), Waskom (Haynesville), Naconiche Creek (Haynesville), Naconiche Creek (Bossier), Bossierville (Bossier Shale), Beckville (Haynesville) and Carthage, North (Bossier Shale) Fields into the Carthage (Haynesville Shale) Field. The examiners recommend that the nine Bossier and Haynesville Shale fields listed above be consolidated into the Carthage (Haynesville Shale) Field.

Commission staff reviewed the P-7 submitted for the new field and recommended that the field name be changed to Carthage (Haynesville Shale) Field. Staff felt that this would highlight the fact that this field is producing from a shale formation. Devon did not consider this to be an adverse recommendation.

The application was unprotested. The examiners recommend approval of the new field designation and Field Rules for the Carthage (Haynesville Shale) Field, with the exception of proposed Rule 8 ("allocation rule"), the included "box rule" in proposed Rule 2 and the calculation of additional acreage assignments pursuant to Statewide Rule 86 in proposed Rule 2. The examiners also recommend expansion of paragraph 1 of the proposed Rule 6 ("Stacked Lateral Rule") to include language ensuring each point of a stacked lateral drainhole is no further than 300 feet away horizontally from any point along any other horizontal drainhole of the same Stacked Lateral Well. In addition, the examiners recommend that for purposes of assigning additional acreage to a horizontal wellbore pursuant to Statewide Rule 86, any "no-perf" zones between the first and last take points in excess of 330 feet be excluded from the calculation of horizontal drainhole displacement. Finally, the examiners recommend adoption of 320 acre density with optional 20 acre units and that these rules be adopted on a temporary basis for review in eighteen months.

DISCUSSION OF THE EVIDENCE

Devon completed its Hull Unit A Lease, Well No. 102, in July 2008 with perforations in the Haynesville Shale between 10,529 feet and 11,024 feet. On initial test, the well produced at a maximum rate of 474 MCFGPD and 0.1 BCPD and 38 BWPD.

Devon submitted a structure map, cross sections and two geological papers that show that the proposed Carthage (Haynesville Shale) Field produces from the Bossier and Haynesville Shale formations which extend from the State of Louisiana through several counties in East Texas, including all or portions of Harrison, Nacogdoches, Panola, Rusk and Shelby Counties. Devon does not consider the examiners recommendation that the Shelbyville Deep (Haynesville), Center (Haynesville), Carthage, E. (Bossier), Waskom (Haynesville), Naconiche Creek (Haynesville), Naconiche Creek (Bossier), Bossierville (Bossier Shale), Beckville (Haynesville) and Carthage, North (Bossier Shale) Fields be consolidated into the Carthage (Haynesville Shale) Field to be adverse.

Devon asserts that the Haynesville Shale formation has relatively uniform petrophysical properties and is homogeneous and isotropic over the length of any horizontal well drilled and completed in the field. Consequently, over the length of any given horizontal well, Devon opines that the amount of gas present in the rock and contributing to production into the wellbore is expected to be the same for one linear foot of rock as for any other linear foot of rock completed.

Devon requests that the entire correlative interval from 9,568 feet to 11,089 feet as shown on the log of the Devon Energy Production Co., LP - Hull Unit A Lease, Well No. 102 (API No. 42-365-36749), Panola County, Texas, be considered a single field known as the Carthage (Haynesville Shale) Field. This interval includes the entire Bossier and Haynesville Shales and is located stratigraphically between the base of the Cotton Valley and the top of the Louann Salt formations.

Devon requests that the Carthage (Haynesville Shale) Field be classified as non-associated and that field rules similar to those that currently exist for shallower fields in the area be adopted for the new field. In addition, Devon requests adoption of some of the field rules that currently exist in the Newark, East (Barnett Shale) Field. Devon proposes field rules that provide for 330' lease line spacing and no between well spacing with special provisions for "take points" and an off-lease penetration point for horizontal wells. Devon also requests 640 acre gas proration units with 10% tolerance and optional 40 acre density. Devon feels that adopting a density rule similar to other shallower fields in the area will provide consistency in developing the Carthage (Haynesville Shale) Field and will allow greater flexibility in selecting future drilling locations.

Wells in the area covered by the proposed Carthage (Haynesville Shale) Field have been producing oil and gas since the 1930s and there are numerous oil and gas producing zones above the field. Over 11,000 wells have been drilled in Panola County. Well spacing of 330 feet is used in the State of Louisiana, located immediately to the east, and has already been adopted for the Wascom (Haynesville Shale) Field which will be included in the Carthage (Haynesville Shale) Field.

The historic unit size for gas wells in the Haynesville trend is 640 acres and most of the acreage is held by production from existing units that are approximately 640 acres in size. Where field rules have been adopted for gas fields producing above the Carthage (Haynesville Shale) Field, 640 acres plus 10% tolerance has been the predominant

standard unit size and most of the fields have adopted optional 40 acre density. In addition, the standard development unit size for Haynesville wells in the State of Louisiana is 640 acres and the density field rules for the Waskom (Haynesville Shale) Field, proposed to be included in the Carthage (Haynesville Shale) Field, are 640-acre units plus 10% tolerance with an optional 40-acre unit size.

Devon felt that the Haynesville Shale could not be commercially developed with vertical wells and that conventional drainage area calculations did not apply. Devon submitted decline curves for two horizontal wells located in Panola County and four horizontal wells located across the Texas state line in Louisiana. The two Panola County wells had limited production data of less than six months and the decline curve data indicated gas recoveries between 4.0 and 6.0 BCFG. The four Louisiana wells also had limited production data of less than one year, but the decline curve data indicated gas recoveries between 12.0 and 20.0 BCFG. Based on these gas recovery estimates, Devon believes that the fracture stimulated horizontal wells are impacting a drainage area of greater than 320 acres.

Operators are currently developing the field with horizontal wellbores. Devon requests that a field rule be adopted which includes language relevant to measurement of distances to lease lines for horizontal drainhole wells. Devon's proposed rule specifies that, for purposes of lease line spacing, the nearest "take point" in a horizontal well be used. This take-point could be a perforation, if a horizontal well is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased well. Similar rules have been adopted in other tight reservoirs, including the Barnett Shale, Cotton Valley and Granite Wash Fields.

The proposed rule would allow operators to drill horizontal wells with penetration points, as defined by Rule 86, at distances closer than 330 feet to a lease line, as long as no take-point is closer than 330 feet to any lease line. Horizontal drainhole length on a lease is then maximized, resulting in additional recovery of gas. For purposes of assignment of additional acreage pursuant to Rule 86, it is proposed that the distance between the first and last take-point in a horizontal well be used. In addition, Devon proposes a fifty (50) foot "box rule" for horizontal drainhole wells that would allow drainholes to deviate 50 feet from their permitted track without the necessity of obtaining a Statewide Rule 37 exception.

In some cases, it is beneficial to penetrate the reservoir off lease, while still having "take points" no closer to lease lines than allowed under the field rules. Devon requests that field rules for the subject field provide for off-lease penetration points. Statewide Rule 86 requires that the penetration point of a horizontal drainhole be on the lease. In this field, a well generally requires 500-600 feet of horizontal displacement to make the 90 degree turn from vertical to horizontal. If the penetration point is required to be on the lease, then the first point of production would be about 600 feet from the lease line. The proposed rules will allow approximately 250 feet of additional producing drainhole, resulting in the recovery of 316 MMCF to 437 MMCF of additional gas reserves. Similar rules

allowing offsite penetration points have been adopted in other fields, after notice to the mineral owners of the off-lease tract on which the penetration point is to be located and if no protest is received.

Devon also requests that spacing rules for the field be adopted to accommodate the drilling of stacked horizontal lateral wells. The gross thickness of the Bossier and Haynesville shale interval is over 2,000 feet. Devon believes that several separate laterals may be necessary to effectively develop the reservoir with horizontal wells. Similar stacked lateral rules have already been adopted in Granite Wash and Cotton Valley Fields, as well as in the Newark, East (Barnett Shale) Field. The rule would allow stacked horizontal laterals within the Bossier and Haynesville correlative interval that are drilled from different wellbores to be considered a single well for regulatory purposes. It is proposed that a stacked lateral be defined to be multiple horizontal drainholes which are drilled (1) from different surface locations on the same lease unit no more than 250 feet from each other at the surface.

Devon requests that a two factor allocation formula based on 95% acres and 5% per well be adopted for the field. Devon also requests that the allocation formula be suspended, as there is a 100% market for all the gas produced and that the filing of P-15's and plats not be required.

Due to the shape of the existing 640 acre units in the field area, Devon argues that many horizontal wells will not be drilled. Devon proposes an "allocation rule" be placed in the field rules which will allow drilling wells across unit boundaries and allocating the production from those wells to the separate units on a per foot pro rata basis for royalty payment purposes. Devon supplied a plat in its Exhibit No. 35 demonstrating how acreage would be taken from each of three fictional units and assigned to an "allocation well". (see Attachment I) In the supplied example, Devon proposes to take 10 acres from the Dell Unit, 22 acres from the Jones Gas Unit and 48 acres from the Smith Lease, thereby creating an 80 acre unit for the Smith-Dell-Jones Allocation Well No. 1H.

Devon proposes to drill across units and submit forms to the Commission similar to those used in the Newark East (Barnett Shale) Field for Production Sharing Agreement wells. The wells drilled across unit boundaries would not respect the proposed 330 foot leaseline spacing rule, but the operators of each unit with a boundary crossed would grant waivers to each other. Devon proposes that the field rule for the proposed Carthage (Haynesville Shale) Field include an "allocation rule" which states:

> Operators shall be permitted to drill and complete horizontal wells that traverse one or more units and/or leases as long as that operator has a lease or other mineral ownership right to produce from each such unit or lease. If such a well is not already subject to an agreement regarding the allocation of proceeds (commonly referred to as a Production Sharing Agreement), then the following allocation formula will be presumed to constitute a fair and reasonable allocation of production from a well in this field: an allocation of

production to each of the units and/or leases traversed by and completed in the horizontal well based on the percent of said horizontal well from first take point to last take point that lies under each unit or lease.

Devon argues that the Railroad Commission has the authority to include its proposed "allocation rule" in a field rule and refers to the provisions in Texas Natural Resources Code §§88.001(3); 88.011(a)(1); 88.115; 85.053, 85.054; 85.055, 85.059; 85.046(3),(6),(7)&(11); 85.042; 85.201; 85.202(3)(7)&(8); 85.203; 86.012(5)&(13); 86.041; 86.042(1),(4), (7)&(9); 86.081; 86.083; 86.084; 86.085; 86.086; 86.087; 86.088; and 86.089 as support for its proposition.

It is Devon's assertion that a problem is created by the existing pooled units in the Haynesville trend which have been in place since the 1930s through 1950s and held by production from fields shallower than the proposed Carthage (Haynesville Shale) Field. The existing units were developed before the advent of horizontal drilling and are not optimally shaped for horizontal drilling. It is Devon's position that the field can only be economically developed by drilling and completing horizontal wells approximately 5,000 feet long. Devon also believes that, due to regional stresses, the wells must be oriented 10 degrees west of north. (see Attachment II)

Devon looks east to Louisiana and notes the square 640 acre sections available for development, as opposed to the less uniform property lines in East Texas. Louisiana uses the township and section method of surveying, at least in the portion of the state adjacent to Panola County, resulting in neat rows of 640 acre sections. This is convenient for the type of development Devon envisions and it is also convenient to Devon that Louisiana is a compulsory pooling state. A square 640 acre drilling unit can be obtained by application to the Louisiana Office of Conservation. Texas, on the other hand, uses a metes and bounds hybrid surveying system based partially on old Spanish land grants and partially on the township and section method. This gives rise to oddly shaped tracts which in turn give rise to less uniform tracts and units. Unlike Louisiana, Texas is not a compulsory pooling state, except in very limited circumstances under the Mineral Interest Pooling Act (Texas Natural Resources Code, Chapter 102).

Devon states that it is not possible to unpool and repool the existing Texas units without the royalty owners' consent and complains that the number of owners has multiplied due to the passage of time and inheritance of interests. Devon has argued that for many of the old units, hundreds of owners would need to sign off on any effort to repool (VI, p. 54, l. 2-5). Devon argues that, due to the high number of interest owners and the fact that many cannot be located, it is not feasible to amend the old leases to allow the type of pooling suitable for horizontal well technology. Devon also argued that it is not feasible to obtain the signatures of enough interest owners to enter into a Production Sharing Agreement. Devon believes the only way to develop these old units effectively is to drill horizontally from one unit across the unit boundary and into another unit. Devon proposes its "allocation rule" as the means of doing so. Devon asserts that if its proposed plan is not approved, "...the Haynesville will just not be developed." (Transcript, July 28, 2009, V. I,

p.15, line 24).

EXAMINERS' OPINION

The examiners recommend that most, but not all, of the field rules proposed by Devon be approved as temporary field rules. Designation of the field as the correlative interval that includes both the Bossier and Haynesville Shales, 330 foot leaseline spacing with no between-well spacing and a provision for an off-lease penetration point should be approved.

Devon has requested permanent field rules prescribing standard units of 640 acres with optional 40 acre units. Devon presented very little evidence directly from wells in the proposed field. The evidence for the proposed "standard" density of 640 acres is particularly tenuous. The standard unit size is supposed to indicate the acreage that a typical vertical well in the specific field at issue can effectively drain. The Commission's informal guide to oil and gas practice and procedure provides,

> At field rule hearings where density provisions are requested, reservoir pressure and production performance data are presented to indicate whether the wells are capable of draining the requested proration unit size. The supporting data for a density request should include pressure interference testing or material balance calculations based on production history or a pressure decline versus production curve.

Texas Oil & Gas - Discussions of Law, Practice and Procedure, p. 5 (Railroad Commission of Texas)

No such data was submitted by Devon. In fact, Devon candidly admitted that vertical wells could not be economically produced from the proposed field which indicates extremely small drainage areas for vertical wells. In addition, in the information Devon put on at the hearing regarding its planned development of the field, 640 acre existing units were typically shown with four or more proposed horizontal wellbores. This indicates that Devon believes the drainage area for horizontal wells will be 160 acres or less per well. Of the nine fields proposed to be consolidated into the new Carthage (Haynesville Shale) Field, there are two fields with prescribed 640 acre density. However, those fields both have optional 40 acre units. The other seven fields to be consolidated into the proposed Carthage (Haynesville Shale) Field are all governed by 40 acre standard density. The examiners do not find the Louisiana orders submitted by Devon persuasive with regard to drainage areas. First and foremost, those orders obviously involve wells that are not located in the proposed field area in Texas. In addition, neither the standard employed nor the evidence relied on regarding drainage area were shown.

The examiners recognize that shale fields are different from more traditional reservoirs and that size and effectiveness of fracture stimulation are more important than

the more traditional methods of determining the productivity and drainage area of a well. However, Devon also did not put on any evidence of typical fracture size or other data to support the 640 acre density it proposes. Devon's own development plans showing multiple horizontal wellbores on 640 acre units indicate that it believes multiple wells are necessary to adequately develop 640 acre units.

The examiners recommend adoption of 320 acre density with optional 20 acre units. This recommended density is identical to the rules governing the Newark, East (Barnett Shale) Field, the only shale field in Texas which has been significantly developed.[1] This recommendation is also consistent with the 330 foot lease line spacing proposed by Devon for the field. Under Commission rules, lease line spacing of 330 feet is generally associated with optional 20 acre units, not 40 acre units. *See* Statewide Rule 38(b)(2)(A).

Permanent rules are established for a field only where there is sufficient evidence to determine the drainage abilities of wells in the field. See *Texas Oil & Gas - Discussions of Law, Practice and Procedure*, p. 3 (Railroad Commission of Texas). Based on the extremely limited evidence regarding wells within the proposed field, the examiners recommend that the Commission adopt field rules on a temporary basis to be reviewed in eighteen months.

The examiners recommend adoption of Devon's two-factor allocation formula based on 95% acres and 5% per well with AOF status. The examiners also recommend approval of the proposed Rule 6 ("Stacked Lateral Rule") after expansion of paragraph 1 to include language ensuring each point of a stacked lateral drainhole is no farther than 300 feet away horizontally from any point along any other horizontal drainhole of the same Stacked Lateral Well. The additional language would make the Carthage (Haynesville Shale) Field Stacked Lateral Rule identical to the one currently in place for the Newark, East (Barnett Shale) Field. Devon does not object to this and states the missing language was inadvertently left out of its proposed rule when the application was made.

There has been no objection to the examiners' proposal that the field be named the Carthage (Haynesville Shale) Field and that it consist of a consolidation of the Shelbyville Deep (Haynesville), Center (Haynesville), Carthage, E. (Bossier), Waskom (Haynesville), Naconiche Creek (Haynesville), Naconiche Creek (Bossier), Bossierville (Bossier Shale), Beckville (Haynesville) and Carthage, North (Bossier Shale) Fields in Harrison, Nacogdoches, Panola, Rusk, and Shelby Counties.

The examiners do not recommend approval of Devon's proposed Rule 8 ("allocation rule") or the included "box rule" in proposed Rule 2 and recommend revisions to the proposed rule for the calculation of additional horizontal well acreage assignments in proposed Rule 2.

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[1] The Toyah, NW (Shale) Field, the only other shale field in the state with more than a negligible number of wells also is governed by 320 acre standard units.

Proposed Rule 8 "allocation rule"

Devon proposes that the field rule for the proposed Carthage (Haynesville Shale) Field include an "allocation rule" which states:

> Operators shall be permitted to drill and complete horizontal wells that traverse one or more units and/or leases as long as that operator has a lease or other mineral ownership right to produce from each such unit or lease. If such a well is not already subject to an agreement regarding the allocation of proceeds (commonly referred to as a Production Sharing Agreement), then the following allocation formula will be presumed to constitute a fair and reasonable allocation of production from a well in this field: an allocation of production to each of the units and/or leases traversed by and completed in the horizontal well based on the percent of said horizontal well from first take point to last take point that lies under each unit or lease.

This proposed "allocation rule" exceeds the boundaries of normal field rule provisions. No similar field rule has ever been adopted. "Field rules are special rules that modify the Railroad Commission's well spacing, density, prorationing and casing requirements for designated fields to deal with differences in reservoir conditions. See 2 Smith & Weaver, supra, §10.2; Robert E. Hardwicke, *Oil Well Spacing Regulations and Protection of Property Rights in Texas*, 31 Tex. L. Review 103 (1952)." Footnote 5 in Browning Oil Co., Inc. v. Luecke, 38 S.W.3d 625, 633 (Tex. App. - Austin, 2000, writ denied). The proposed rule does not address well spacing, density, or prorationing but, instead, addresses lease interpretation and royalty apportionment issues.

Devon's proposed "allocation rule" allocates production between units as opposed to allocation of gas allowables to individual wells. In the quote above from the Luecke case, prorationing refers to allocation . Devon has already proposed an allocation formula based on 95% acres and 5% per well. The examiners have recommended approval of the 95/5 rule, thus the true allocation formula issue is already resolved.

The "allocation rule" proposed by Devon does not allocate authorized production among different wells in the field. Instead, the proposed rule purports to authorize drilling across unit and/or lease lines without the agreement of any royalty or working interest owners. In addition, the proposed rule would direct, by Railroad Commission rule, how production and thus royalty payments could reasonably be divided among different royalty owners.

The first sentence of the proposed "allocation rule" states "Operators shall be permitted to drill and complete horizontal wells that traverse one or more units and/or leases as long as that operator has a lease or other mineral ownership right to produce from each such unit or lease." This sentence, in a field rule, would purport to give operators Commission-granted authority to override lease or unit provisions (such as limitations on unit size or other anti-dilution clauses) that would otherwise prohibit the drilling of such a well. "It is thought to be fundamental that the rules and regulations of the Railroad Commission cannot have the result of effecting a change or transference of

property rights" Whelan v. Placid Oil, 274 S.W.2d 125, 130, (Tex. Civ. App.-Texarkana,1954, writ ref'd n.r.e.), citing Mueller v. Sutherland, 179 S.W.2d 801, 808, (Tex. Civ. App. - El Paso 1943, writ ref'd w.o.m.). "...the acts of the Railroad Commission cannot be said to operate effectively to extend the restrictive terms of a lease. The orders of the Railroad Commission cannot compel pooling agreements that the parties themselves do not agree upon. The Railroad Commission has no power to determine property rights." Jones v. Killingsworth, 403 S.W.2d 325, 328, (Tex. 1966) (emphasis added). Also see Ryan Consolidated Petroleum Corp. v. Pickens, 285 S.W.2d 201, (Tex. 1955); Magnolia Petroleum Co. v. Railroad Commission, 170 S.W.2d 189, (Tex. 1943); Nale v. Carroll, 289 S.W.2d 743, (Tex. 1956).

The language in Jones v. Killingsworth stating that the orders of the Commission cannot compel pooling agreements that the parties themselves do not agree on is subject to the limited exception of the Mineral Interest Pooling Act ("MIPA"). Devon is not seeking to invoke the MIPA in this proceeding.

The restrictive lease terms that would be affected by the proposed allocation rule are those that have led to the presently existing 640 acre units. Leases from the 1940s introduced into evidence by Devon commonly contain a grant of pooling authority subject to the following restriction or one substantially similar:

> "Each such drilling or production unit shall not exceed 40 acres plus an acreage tolerance not to exceed ten percent (10%) of 40 acres, when created for the purpose of drilling for or producing oil therefrom and 640 acres, plus an acreage tolerance not to exceed ten percent (10%) of 640 acres, when created for the purpose of drilling for or producing gas, distillate or condensate...."

Brumble Lease, Panola County, May 29, 1947.

Devon argues that the Railroad Commission is authorized to adopt its proposed "allocation rule" under the provisions of Texas Natural Resources Code §§88.001(3); 88.011(a)(1); 88.115; 85.053, 85.054; 85.055, 85.059; 85.046(3),(6),(7)&(11); 85.042; 85.201; 85.202(3)(7)&(8); 85.203; 86.012(5)&(13); 86.041; 86.042(1),(4), (7)&(9); 86.081; 86.083; 86.084; 86.085; 86.086; 86.087; 86.088; and 86.089. A review of these statutes indicates they give the Commission broad powers to prevent waste and confiscation in its role as a conservation agency, and to require accurate measurement of produced hydrocarbons to meet reporting requirements. The examiners find nothing in the referenced statutes that grant the Commission the authority to override lease provisions or determine property rights, such as the proper apportionment of royalties.

> [T]he Commission does not have power to determine title to land or property rights. It is invested with broad powers to determine where, or whether wells may be drilled, and how much oil or gas may be produced. But it does not have authority to determine the ownership of oil or gas, or how the proceeds from the sale of oil or gas should be apportioned among people who contend that it was, or is, actually being produced from beneath their land." Railroad Commission of Texas v. City of Austin, 524 S.W.2d 262, 267-

268 (Tex. 1975).

The Railroad Commission has no authority to interpret leases and determine that they authorize the drilling of a well as contemplated in the first sentence of the proposed "allocation rule". The effect of Devon's proposed language would essentially be the authorization of a 0% sign-up Production Sharing Agreement, contrary to the Commission's current policy of requiring at least a 65% sign-up for a Production Sharing Agreement. Devon's proposal amounts to compulsory pooling by field rule.

Although Devon may argue that it is not pooling portions of existing units, this is, in fact, what it is doing. In the hypothetical example provided by Devon, it proposes to take acreage from each of three units (10 acres from the Dell Unit, 22 acres from the Jones Gas Unit and 48 acres from the Smith Lease) and combine them into 80 acres for the drilling of a horizontal well. "Pooling occurs when tracts from two or more leases are combined for the purpose of drilling a single well" 1 Smith & Weaver, Texas Law of Oil and Gas, §4.8. That is precisely what Devon proposes - combining multiple tracts for purposes of drilling a horizontal well. Devon has admitted that it does not have pooling authority

> Examiner: The proposed form you have shown us, the allocation of well tract description, which is somewhat like a P-12, is different in that it does not make any representation that you have pooling authority. I suppose that is because of the lease problems.
> Attorney for Devon: And that is also true of the production sharing agreement description form. It intentionally does not make that representation because it wouldn't be true.

Transcript, Re-opened Hearing, September 1, 2009, p. 41, lines 11-20. (Emphasis added)

"A lessee's authority to pool is derived solely from the terms of the lease; a lessee has no power to pool absent express authority." Browning Oil Co., Inc. v. Luecke, 38 S.W.3d 625, 634 (Tex. App. - Austin, 2000, pet. denied). See also Southeastern Pipe Line Co. v. Tichacek, 997 S.W.2d 166, 170 (Tex. 1999); Jones v. Killingsworth, 403 S.W.2d 325, 328 (Tex. 1965).

As support for its proposed "allocation rule", Devon relies heavily on the opinion letter from its retained expert, Professor Ernest Smith (see Attachment III, consisting of Devon's Request for Opinion and Professor Smith's Reply), and the court's opinion in Browning Oil Co., Inc. v. Luecke, 38 S.W.3d 625 (Tex. App. - Austin, pet. denied). Curiously, neither directly addresses Railroad Commission rules or provides any substantial support for Devon's position.

In his opinion letter, Professor Smith responded to very specific questions based on a specified hypothetical situation involving drilling a horizontal well across existing units denominated as A, B and C. Interestingly, although Professor Smith was asked whether Devon was authorized to drill a horizontal well across the boundaries of the three existing

units, he declined to answer that question. Instead, Professor Smith chose to break the question into two parts and answer whether such drilling would "constitute an actionable trespass." Professor Smith opined, "The answer...is susceptible to reasonable disagreement, but my considered response to it is No, i.e. that Devon will not commit an actionable trespass by drilling [the hypothesized horizontal well]." This is clearly not an unequivocal opinion that Devon has the legal authority to drill as it proposes even under its carefully constructed hypothetical.

Similarly, in response to the question of whether a production sharing agreement is necessary, Professor Smith responded "Without a production sharing agreement, a lessee that drills a horizontal well such as the one proposed unquestionably exposes itself to litigation by the royalty owners in the various units; however, uncertainty over how production should be allocated does not override a lessee's right to drill." (Smith Opinion, pp. 7-8). Again, this is hardly an unequivocal statement of support.

Perhaps most interesting is the response to the question, "...would an allocation based on the percent of the wellbore within each tract between the first and last takepoint represent a fair and reasonable allocation to each tract?" Professor Smith states:

> The method of allocation described above would appear to be both fair and reasonable, if supported by appropriate geological studies. ...It should be noted, however, that even though it is fair and reasonable, this method of accounting can be attacked on the ground that it fails to comply with the ruling in *Browning v. Luecke*. Each of the three units is the equivalent of each of plaintiff's tracts in *Browning*. It can thus be argued that the case requires Devon to establish the amount of gas that is actually produced from each specific unit and allocate that amount to each unit in making payments to the royalty owners in that unit. (Smith Opinion, pages 10-11)

Again, in spite of the carefully worded question and hypothetical facts, Professor Smith is unable to conclude that the proposed procedure is unambiguously authorized. Perhaps most pertinent to the issues before the Commission is the fact that Devon's request for an opinion from Professor Smith does not mention that either its proposal to drill across unit boundaries or its proposal for allocation of production are contemplated for inclusion in a field rule. No question was asked and no opinion is given by Professor Smith regarding the legality or advisability of inserting Devon's proposals into a Commission field rule. Professor Smith's opinion is written in terms of what Devon, on its own, may or may not be entitled to do under Texas law and the possible consequences. Professor Smith does not indicate any endorsement of Devon's proposals being placed in a field rule.

Browning Oil Co., Inc. v. Luecke provides even less support for Devon's proposed rule. In that case, Browning Oil Co., as Devon proposes here, ignored the terms of its leases and drilled a horizontal well across multiple tracts it operated. Luecke, one of the mineral owners, sued. The Luecke court noted the need to restrain operators while not discouraging the use of new technology. "Moreover, in considering public policy, we must attempt to balance two competing interests. First, we recognize that Lessees should not

be allowed to ignore anti-dilution provisions and exceed their pooling authority with impunity. A reasonably prudent operator may conclude that horizontal drilling in the Austin Chalk formation will benefit a lessor, and the operator may correctly opine that reasonable prudence dictates the drilling of a horizontal well that exceeds the authority granted under the applicable lease. Nevertheless, rather than ignore the written lease, the prudent operator must seek to negotiate a solution mutually beneficial to both the lessee and the lessor or else forego drilling." Luecke, 38 S.W.3d 625, 646-7(Tex. App. - Austin, 2000, writ denied)(emphasis added). Far from upholding the operator's actions, the court found Browning had breached its leases and remanded the case for a determination of damages.

Devon is not the owner of the minerals under the various tracts it operates in the area of the proposed Carthage (Haynesville Shale) Field. It is the lessee and its rights are controlled by the terms of the leases it took from the owners of the minerals. Devon itself acknowledges that those lease terms do not authorize it to pool the tracts as it desires. Devon is seeking a Commission field rule that would endorse its desires to effectively amend the terms of its agreements with the mineral owners, authorize it to combine the tracts and direct that the mineral owners be paid in a manner different than is provided in the lease contracts. Such a field rule would be unprecedented in Commission practice and would far exceed the Commission's statutory authority. (see Railroad Commission v. City of Austin, 524 S.W.2d 262, 267-268 (Tex. 1975). The Commission's own website, under "Frequently Asked Questions", states, "The Railroad Commission does not have jurisdiction over ...leases, pipeline easements or royalty payments."

Devon is not without alternatives. First, it could negotiate amendments to the leases with the mineral owners. Devon claims this would be burdensome. Undoubtedly, it would be more burdensome than ignoring the lease terms it previously agreed to and drilling and paying royalties as it proposes without obtaining the agreement of any of the mineral owners whose rights are being affected. However, inconvenience or burden is not a legally permissible reason for ignoring property rights. Further, Devon clearly overstates the difficulty involved. These are currently active leases and units on which Devon is (presumably) paying royalties monthly to the mineral owners. The mineral owners currently receiving monthly checks are the very property owners Devon must negotiate lease amendments with.

As another alternative, Devon has the option under current Commission practice to enter into production sharing agreements. Production Sharing agreements (PSAs) have the advantage that the Commission only requires agreement of 65% of mineral owners rather than the 100% that may be required for lease amendment.

Devon's proposed Rule 8 addresses lease interpretation, property rights, and royalty apportionment issues over which the Commission does not have jurisdiction. The examiners recommend that the Commission not approve the proposed Rule 8 "allocation rule".

Box Rule

Devon proposes an unusual "box rule" providing that a properly permitted horizontal drainhole will be considered to be in compliance with spacing rules if the as-drilled location falls within two sides of a rectangle whose sides are parallel to the permitted drainhole and 50 feet on either side of the drainhole. Devon notes that a box rule has been approved in the Brookeland (Austin Chalk 8800) Field. VI, p. 73, l. 16-17.

The proposed rule would authorize an operator drilling a well along the lease line to deviate 50 feet closer to an offset than the stated regular distance of 330 feet without notifying the offset or obtaining a Rule 37 exception. Devon asserts that this "box" rule would allow operators to avoid having to seek "unnecessary" Rule 37 exceptions. Why Devon considers Rule 37 exceptions for any and all encroachments of 50 feet or less as unnecessary is not clear. As proposed, the rule would allow an operator to permit a horizontal well running parallel to its lease line 330 feet from an offset operator or unleased mineral owner. Because the well would be permitted at a regular location, no notice to offsets would be required. The operator could then drill the well with an actual location parallel to the lease line but only 280 feet from the offsetting tract along its entire length from penetration point to terminus. Under the proposed rule, the wellbore would be within the "box" and no Rule 37 exception (or notice to the offset being encroached on) would be required. In practical effect, the box rule changes the lease line spacing to 280 feet from offset tracts rather than the 330 feet spacing distance expressly stated in the rule. No evidence was presented to support 280 foot lease line spacing.

Although a handful of fields in the state have a so-called box rule[2], those instances are significantly different than the circumstances presented in this field. First, in the few existing instances where a box rule has been adopted, the regular spacing distance is 1200 feet or more and the authorized deviation box is 10% of the spacing distance. In this instance, the regular spacing distance is only 330 feet and the proposed authorized deviation is nearly 15% of the regular distance. Under the proposed rule, the regular distance is less than a third of the regular distance in the only other fields in which a box rule has been adopted. However, the proposed deviation is proportionately even greater (15% versus 10%). More importantly, none of the few fields that currently have a box rule have rules dictating that spacing be determined by where the wellbore is open to the formation. In other words, in those fields there is no way to "cure" a minor deviation from the permitted wellbore path.

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[2] Of the more than 50,000 fields in the state, the examiners are only aware of three that have a "box rule" and all are in the Austin Chalk formation. The Brookeland (Austin Chalk 8800) Field has prescribed leaseline spacing of 1500 feet and a box rule authorizing 150 foot deviations. The Magnolia Springs (Austin Chalk) Field and Double A Wells, N (Austin Chalk) Field both have 1,200 foot leaseline spacing and a box rule authorizing 120 foot deviations.

Under the recommended Carthage (Haynesville Shale) Field rules the need for a Rule 37 exception is determined by take points. An operator that inadvertently drills closer than allowed by its permit and the field rules to an offset can cure the problem (and, in Devon's parlance, avoid an unnecessary Rule 37 exception application) by simply not perforating that portion of the wellbore that encroaches on an offset. Further, the Commission has long recognized that it is not practically possible to drill a perfectly straight hole and, even under existing rules and procedures, a Rule 37 exception is not required where an operator has attempted in good faith to drill the well as permitted when minor deviations (usually understood to be less than 10%) from the permitted path have occurred. This existing policy requires an operator to have made a good faith attempt to comply with its permit and, unlike the proposed rule, does not grant an absolute right to deviate from the wellbore track that was permitted.

Acreage Assignment under Statewide Rule 86

With regard to additional acreage assignment under Rule 86 based on the length of the horizontal wellbore, the examiners agree with Devon that generally the length of the wellbore should be measured from first to last take point (rather than penetration point to terminus) as proposed by Devon. However, experience in the Newark, East (Barnett Shale) Field has shown that operators frequently permit horizontal wells with long interim unperforated intervals (usually to avoid having to prove the right to a Rule 37 exception as to an unleased or partially unleased tract). These unperforated intervals are frequently hundreds of feet, and sometimes thousands of feet in length, and clearly do not contribute to production. These non-contributing intervals should not be counted for purposes of determining the amount of additional acreage that can be added to a standard proration unit. Accordingly, the examiners recommend that the proposed rule authorizing additional acreage for horizontal wells based on wellbore length be amended to exclude any interim unperforated portions of a wellbore that are more than 330 feet in length.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.

2. Devon completed its Hull Unit A Lease, Well No. 102, in July 2008 with perforations in the Haynesville Shale between 10,529 feet and 11,024 feet. On initial test, the well produced at a maximum rate of 474 MCFGPD and 0.1 BCPD and 38 BWPD.

3. The Hull Unit A Lease, Well No. 102 is entitled to a new field designation.

    a. A structure map, cross sections and several geological articles show that the Carthage (Haynesville Shale) Field produces from the Bossier and Haynesville Shale formations which extend from the State of Louisiana through several counties in East Texas, including all or portions of Harrison,

Nacogdoches, Panola, Rusk and Shelby Counties.

b. The Haynesville Shale formation has relatively uniform petrophysical properties. The field can only be economically developed by drilling and completing horizontal wells.

c. The Haynesville Shale formation is similar throughout East Texas and should be governed by one set of field rules.

d. The Shelbyville Deep (Haynesville), Center (Haynesville), Carthage, E. (Bossier), Waskom (Haynesville), Naconiche Creek (Haynesville), Naconiche Creek (Bossier), Bossierville (Bossier Shale), Beckville (Haynesville) and Carthage, North (Bossier Shale) Fields should be consolidated into the Carthage (Haynesville Shale) Field.

4. The correlative interval from 9,568 feet to 11,089 feet as shown on the log of the Devon Energy Production Co., LP - Hull Unit A Lease, Well No. 102 (API No. 42-365-36749), Panola County, Texas, should be considered a single field known as the Carthage (Haynesville Shale) Field. This interval includes the entire Bossier and Haynesville Shales and is located stratigraphically between the base of the Cotton Valley and the top of the Louann Salt formations.

5. Field Rules that provide for 330' lease line spacing and no between well spacing with special provisions for "take points" and an off-lease penetration point for horizontal wells will provide consistency in developing the field and will allow greater flexibility in selecting future drilling locations.

6. Well spacing of 330 feet from lease lines is used to space wells in the State of Louisiana, located immediately to the east, and has already been adopted for the Carthage, N. (Bossier Shale) Field which will be consolidated into the Carthage (Haynesville Shale) Field.

7. Devon did not present sufficient evidence to demonstrate that a density of 640 acres with optional 40 acre density should be adopted on a permanent basis in the proposed Carthage (Haynesville Shale) Field. A density of 320 acres with optional 20 acre units should be adopted on a temporary basis.

a. The only shale field in Texas that has been significantly developed is the Newark, East (Barnett Shale) Field. The Newark, East (Barnett Shale) Field is governed by 320 acre standard units with optional 20 acre units.

b. The Toyah, NW (Shale) Field is governed by 320 acre standard units.

c. The proposed 640 acre density for the Carthage (Haynesville Shale) Field

is not based on evidence of actual drainage areas, but simply mimics the density rules in effect for the shallower, non-shale fields in the area.

d. Devon's own development plans show multiple horizontal wellbores on 640 acre units indicating that multiple wells are necessary to adequately develop 640 acre units.

e. Based on limited gas recovery estimates from six wells, Devon only opines that fracture stimulated horizontal wells are impacting a drainage area of greater than 320 acres.

f. Of the nine fields proposed to be consolidated in the Carthage (Haynesville Shale) Field, two have prescribed 640 acre density with optional 40 acre units. The other seven fields to be consolidated are governed by 40 acre standard density.

g. Lease line spacing of 330 feet is associated with 20 acre units.

8. A spacing rule which utilizes "take-points" in a horizontal well for the determination of distances to lease lines will prevent waste and will not harm correlative rights.

a. The Bossier and Haynesville are shale formations and are not commercially productive unless fracture-stimulated.

b. A take-point in a horizontal well in this field may be a perforation, if a horizontal well is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased portion of the wellbore.

c. Adoption of the proposed rule would allow operators to drill horizontal wells with penetration points, as defined by Rule 86, at distances closer than 330 feet to a lease line, as long as no take-point is closer than 330 feet to any lease line.

d. Adoption of the proposed rule will allow the horizontal drainhole length on a lease to be maximized.

9. For purposes of assignment of additional acreage pursuant to Rule 86, the distance between the first and last take-point in a horizontal well should be used. Unperforated intervals between the first and last take points of a horizontal well do not contribute to the production of the well. Unperforated intervals greater than 330 feet should be excluded as wellbore length for purposes of assignment of additional acreage to a horizontal well pursuant to Statewide Rule 86.

10. Allowing off-lease penetration points will result in maximum producing drainhole

length, thereby increasing ultimate recovery from horizontal drainhole wells. The proposed rules will allow an additional approximately 250 feet of producing drainhole, resulting in the recovery of 316 MMCF to 437 MMCF of additional gas reserves. To protect correlative rights, prior notice and opportunity to object should be given to the mineral owners of offsite surface locations.

11. The proposed "stacked lateral" rule, as revised, will allow stacked horizontal laterals within the Bossier and Haynesville shale correlative interval that are drilled from different wellbores to be considered a single well for regulatory purposes and facilitate additional recovery of gas.

12. Allocation based on 95% acres and 5% per well will protect correlative rights.

13. Continued suspension of the allocation formula is appropriate, as there is a 100% market for all the gas produced. Elimination of the requirement to file P-15's and plats when the field has 100% AOF status will eliminate unnecessary paperwork.

14. Devon's proposed Rule 8, the "allocation rule," purports to allow drilling of horizontal wells across unit and/or lease boundaries without the agreement of any royalty or working interest owners under the authority of a Railroad Commission field rule.

15. Devon's proposed "allocation rule" purports to apportion production and thus royalty payments between units and/or leases under the authority of a Railroad Commission field rule.

16. Compliance with existing lease terms will not cause the physical waste of oil or gas. Existing gas within the proposed field that is not recovered now will remain in place in the formation and will be recovered when an operator negotiates amended lease terms, enters into a production sharing agreement, or negotiates new leases.

17. The "box rule" proposed by Devon would authorize an operator drilling a horizontal well along a leaseline to deviate 50 feet closer to an offset than the stated regular leaseline spacing distance of 330 feet without notifying the offset or obtaining a Statewide Rule 37 exception.

18. The proposed "box rule" would effectively reduce the lease line spacing rule for the Carthage (Haynesville Shale) Field to 280 feet.

19. No drainage calculations or other geological evidence was submitted to support 280 foot lease line spacing.

20. The proposed box rule is not necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.

21. With regard to optional additional acreage assignment under Statewide Rule 86 based on the length of a horizontal wellbore, generally the length of the wellbore should be measured from first take point to last take point.

    a. Operators frequently permit horizontal wellbores with long unperforated intervals, usually to avoid the need for a Statewide Rule 37 exception hearing due to an unleased or partially unleased tract.

    b. Unperforated intervals do not contribute to production from the wellbore and should not be counted as wellbore length for purposes of assigning additional acreage to a horizontal well pursuant to Statewide Rule 86.

22. Devon's proposed rule language authorizing additional acreage for horizontal wells based on wellbore length should be amended to exclude any unperfed portions of a wellbore that are more than 330 feet in length.

CONCLUSIONS OF LAW

1. Proper notice of this hearing was issued.

2. All things have been accomplished or have occurred to give the Commission jurisdiction in this matter.

3. Approval of the requested new field designation and adoption of field rules prescribing 330 foot lease line spacing, no minimum between well spacing, and standard density of 320 acres with optional 20 acre units will prevent waste, protect correlative rights and promote the orderly development of the field.

4. Consolidation of the Shelbyville Deep (Haynesville), Center (Haynesville), Carthage, E. (Bossier), Waskom (Haynesville), Naconiche Creek (Haynesville), Naconiche Creek (Bossier), Bossierville (Bossier Shale), Beckville (Haynesville) and Carthage, North (Bossier Shale) Fields into the Carthage (Haynesville Shale) Field will prevent waste, foster conservation and protect correlative rights.

5. The Railroad Commission has no authority to extend or modify the terms of a lease by its acts or orders.

6. The Railroad Commission has no authority to determine the ownership of oil or gas or how the proceeds from the sale of oil or gas should be apportioned.

7. Railroad Commission rules cannot extend the restrictive terms of leases. Jones v. Killingsworth, 403 S.W.2d 325, 328 (Tex. 1965); Browning Oil Co. v. Luecke, 38 S.W.3d 624, 642 (Tex. App. – Austin 2000, writ denied).

8. The Railroad Commission has no jurisdiction to adopt the proposed allocation rule and adopting the rule is not necessary to prevent waste and could harm correlative rights.

9. Sufficient evidence of well performance and drainage areas within the proposed field area does not exist to warrant permanent field rules for its proposed Carthage (Haynesville Shale) Field.

10. The proposed "box rule" will not prevent waste and will harm correlative rights.

11. No-perf zones 330 feet or longer do not contribute to the production from a well and should be excluded from the calculation of addition assignment of acreage to a horizontal wellbore pursuant to Statewide Rule 86.

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission approve the new field designation and Field Rules for the Carthage (Haynesville Shale) Field prescribing 330 foot lease line spacing, no minimum between well spacing, and standard density of 320 acres with optional 20 acre units, with the exception of the "allocation rule" and the "box rule". The examiners also recommend that temporary rules be assigned to the Carthage (Haynesville Shale) Field. In addition, the examiners recommend that no-perf zones be excluded from the calculation of additional acreage assigned to horizontal wellbores in the Carthage (Haynesville Shale) Field. Finally, the examiners recommend that the nine subject Bossier and Haynesville Shale fields be consolidated into the Carthage (Haynesville Shale) Field.

Respectfully submitted,

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