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Granville Dutton

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COMMENTS

PRORATION IN TEXAS:
CONSERVATION OR CONFISCATION?*

This paper is predicated upon the doctrine of ownership in place of oil and gas. It recognizes that the Legislature has the right to delegate authority to the Railroad Commission of Texas to prevent waste. Under such authority, the Commission has the power to restrict the production of hydrocarbons to the reasonable market demand and to prorate that production among all wells in the state. As property rights are affected by proration, it must meet the due process requirement of being just and reasonable. To fulfill this requirement, each land owner must be given a reasonable opportunity to recover his fair share of the recoverable hydrocarbons under his land or their equivalent. Although the Commission has admirably met this duty in the vast majority of instances, there remain several situations in which current proration practices are fostering confiscation. It is concluded that the dual proration requirements of preventing waste and protecting correlative rights can be universally achieved only by providing the Commission with statutory authority to require unitization and pooling. In addition, it is believed that statutory revisions relative to the substantial evidence rule and the Marginal Well Act would further the protection of correlative rights.

PROCEDURAL ASPECTS OF PRORATION

Proration procedures for oil and gas differ significantly in Texas. These differences make it desirable to consider the procedures involved in each separately.

Oil Proration

Section 5 of Article 6049(c) provides that the Railroad Commission "... shall have the power, and it shall be its duty, from time to time to inquire into the production ... of crude petroleum oil and natural gas, and the reasonable market demand therefor ..." The Commission has chosen the monthly statewide hearing as its vehicle for carrying out this duty. This hearing has for

*Ed. Note:
The author of this Comment, a member of the Student Editorial Board, is also a Registered Professional Engineer, Petroleum and Natural Gas Branch, in Texas.

1 For a detailed description and criticism, see Davis and Willbern, Administrative Control of Oil Production in Texas, 22 Texas L. Rev. 149 (1944).

its primary purpose the establishing of the market demand for the following month. However, any matter of general interest to the oil industry may be considered and the notice of this meeting so states. These statewide hearings are characterized by an easy informality which provides an opportunity for anyone to speak out on any related subject. Ordinarily such speakers are not witnesses, are not under oath and are not subject to cross-examination.

Although other general subjects are discussed, the principal function of the statewide hearing is to determine the market demand upon which the adoption of proration schedules depends. By the tenth day of the month prior to the month during which the purchases will be made, each purchaser of crude oil in Texas must file Form C-1, stating how much he is willing to buy in each field in which he purchases. From these nominations, the Commission prepares a schedule showing the totals nominated. In addition, allowables for each field during the preceding month, Bureau of Mines estimates of market demand, allowables and actual production are included on the schedule. The discussion of proration problems and the proration orders finally issued are primarily based upon the information in the schedule.

Proration orders, however, are hardly decisions based upon the scheduled information and the forum-type discussion. They more closely represent the views of the Railroad Commissioners as to the amount of production that will best serve the interests of the Texas oil industry. But then, the determination of the statewide allowable oil production does not involve questions of law or fact so much as judgment and discretion. Proration is an intricate task — possibly too intricate to be resolved into a stereotyped procedure of fact finding and allocation upon the basis of such facts. Yet the discretion given to the Commission coupled with the dominant oil-producing position of Texas probably makes the Commission the most powerful administrative body in the United States today. The exercise of this relatively unfettered discretion with no concerted effort to impose more stringent statutory controls upon the Commission is both a tribute to the Commission's judgment in these affairs and an indication that the good of the Texas oil industry has been paramount in all regulatory considerations.

The statewide allowable is generally promulgated in two orders. The "Special Order Fixing the Allowable Production of Crude Oil in the Various Districts and Fields in Texas" contains the barrels of production allowed from each field, and sums these fields by dis-
tricts. The second order, the "General Shut-Down Order," contains the number of days oil wells must be shut down and the number of producing days for the month in question. The significance of these producing days is best considered in connection with the determination of field and well allowables.

**Field Allowables:** Statutory authority for allocating the statewide allowable "... production of crude oil upon a fair and reasonable basis among the various pools in the state ..." is found in Section 6 of Article 6049(d). Within the individual pool, the Commission is charged by Section 7 of Article 6049(c) with the duty to "... distribute, prorate or otherwise apportion or allocate, the allowable production among the various producers on a reasonable basis."

In carrying out these statutory duties, the Commission sets up maximum efficient rates, generally spoken of as M. E. R.'s, for each pool in the state. These rates should represent the maximum production the pools can sustain continuously without incurring waste. Before an M. E. R. can be determined for a field, it is necessary that sufficient producing wells be completed within that field to provide the data required for such a determination.

If a new well is the first to be completed in a particular oil pool, it is assigned a "discovery" allowable. This allowable is set on a per-well basis according to the depth of the producing formation discovered by the well. Such allowables are continued for eighteen months or until six wells are completed within the new field. Upon discontinuance of the discovery allowables, the new wells are assigned depth bracket, or "yardstick," allowables pending the determination of M. E. R. allowables.¹

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¹ Special Order No. 20 — 29,540 effective June 1, 1954, Railroad Commission of Texas established the following scales of allowables: (The current "yardstick" depth bracket allowable is also shown by way of comparison)

<table>
<thead>
<tr>
<th>Interval of Depth</th>
<th>Daily Well Allowable</th>
<th>Depth Bracket Allowable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000</td>
<td>20 barrels</td>
<td>28</td>
</tr>
<tr>
<td>1,000-2,000</td>
<td>40</td>
<td>37-46</td>
</tr>
<tr>
<td>2,000-3,000</td>
<td>60</td>
<td>55</td>
</tr>
<tr>
<td>3,000-4,000</td>
<td>80</td>
<td>64</td>
</tr>
<tr>
<td>4,000-5,000</td>
<td>100</td>
<td>73</td>
</tr>
<tr>
<td>5,000-6,000</td>
<td>120</td>
<td>82</td>
</tr>
<tr>
<td>6,000-7,000</td>
<td>140</td>
<td>91</td>
</tr>
<tr>
<td>7,000-8,000</td>
<td>160</td>
<td>101</td>
</tr>
<tr>
<td>8,000-9,000</td>
<td>180</td>
<td>113-122</td>
</tr>
<tr>
<td>9,000-10,000</td>
<td>200</td>
<td>137-162</td>
</tr>
<tr>
<td>10,000-10,500</td>
<td>210</td>
<td>210</td>
</tr>
<tr>
<td>10,500-11,000</td>
<td>225</td>
<td>225</td>
</tr>
<tr>
<td>11,000-11,500</td>
<td>235</td>
<td>235</td>
</tr>
<tr>
<td>11,500-12,000</td>
<td>290</td>
<td>290</td>
</tr>
<tr>
<td>12,000-12,500</td>
<td>330</td>
<td>330</td>
</tr>
</tbody>
</table>
Not only does this allowable exceed the average per-well allowable for older reservoirs, but it is not subject to shut-down days. In periods of depressed market demand — such as those existing during 1956¹ — the latter exemption permits the discovery wells to produce approximately twice the oil to which wells completed at similar depths in previously discovered fields are limited. During periods of high market demand — such as during 1948² — discovery wells have the lesser but still substantial advantage of the discovery allowable being generally higher than the depth bracket and average M. E. R. allowable for similar depths.

After enough wells have been completed to provide sufficient data, an M. E. R. hearing is called. Notice is given to all operators in the new field of the time, place and purpose of the hearing. On the basis of the data compiled, the maximum rate at which the reservoir can be produced without causing waste is determined. The operators of the wells normally make this calculation and submit it to an Examiner on the Commission’s Staff who conducts the M. E. R. Hearing. Documents and testimony under oath are offered to support the rate submitted, and very liberal admission policies allow comment on any phase of the problem by any interested party. The Examiner — a technically trained member of the Engineering Department of the Commission — after consultation with other members of the Department, submits a report on the hearing for use of the Commission only. In a group meeting with the Commissioners themselves, the order determining the M. E. R. is issued.

Although the allocation may, and these days usually does, involve acreage or other considerations, the actual order is in the form of a daily allowable for each well in the field. Where acreage enters the determination, the order states the number of producing acres assigned each well. In addition, allowables decreased because of high gas-oil ratios or low well capacities are designated by symbols within the order.

<table>
<thead>
<tr>
<th>Depth Range</th>
<th>Allowable Oil</th>
<th>Allowable Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,500-13,000</td>
<td>375</td>
<td>375</td>
</tr>
<tr>
<td>13,000-13,500</td>
<td>425</td>
<td>425</td>
</tr>
<tr>
<td>13,500-14,000</td>
<td>480</td>
<td>480</td>
</tr>
<tr>
<td>14,000-14,500</td>
<td>540</td>
<td>540</td>
</tr>
</tbody>
</table>

Paragraph 2 provides, in part, that the well may receive “…its discovery oil allowable, exempt from shut-down days for a period of 18 months from the date of the assignment of the oil allowable…or until the sixth oil well shall have been completed…” in the new field.

¹ Average number of producing days per average month of 30.5 days.

1948—30.5 1954—16.2
1950—19.2 1955—16.2
1952—21.6 1956—15.8

² See note 4 supra.
Determination of Scheduled Producing Days: After daily M. E. R. allowables are established in the major fields throughout the state, the Commission has the total daily producing capacity compiled. In addition the producing capacity of fields exempted from shutdown are totaled. By subtracting the exempted production from the "market demand" determined in the monthly statewide hearing and dividing the remainder by the daily producing capacity, the number of producing days necessary to obtain the desired production is ascertained. This number of producing days for a particular month — called "scheduled allowable days" — multiplied by the M. E. R. allowable for a given well gives the volume of oil that may be produced from that well during the month.

M. E. R. allowables are subject to periodic review upon initiation by the Commission. In addition, interested parties may request a hearing for the purpose of revising the M. E. R. assigned to a field. Requests for downward revision are not uncommon, particularly with a rising market demand or maximum producing days. With falling market demand and fewer producing days, requests to increase the M. E. R. are more prevalent.

Gas Proration

Statutes relating to the conservation of gas are characterized by a more enlightened attitude brought about by greater understanding of the proration problem at the time they were written. In addition, the statutory directives have been fairly well consolidated in Article 6008.

Section 1 of this article states that the law "... is enacted for the protection of public and private interests... by prohibiting waste and compelling ratable production." Section 10 states that the Commission "... shall prorate and regulate [gas] production for the protection of public and private interests: (a) In the prevention of waste... (b) In the adjustment of correlative rights..."

Proration of Gas Reservoirs: Section 11 of Article 6008 states that the Commission "... shall exercise authority to adjust correlative rights... when evidence introduced at a hearing to be held as herein provided will support a finding that the... daily potential capacity..."
to produce of all gas wells located in a common reservoir is in excess of the daily market demand for gas ... from such common reservoir.” Section 12 stipulates that it shall be

... the duty of the Commission to determine the status of gas production from all reservoirs in this state. If and when the Commission finds that waste exists or is imminent ... or that the capacity of the wells to produce gas from any reservoir exceeds the market demand for gas from such reservoir, the Commission shall proceed by proper order to prorate the gas production from such reservoir on a reasonable basis. On or before the 20th day of each month, the Commission, after notice and hearing shall determine (1) the lawful market demand for gas to be produced from each such reservoir during the following month; and (2) the volume of gas that can be produced from such reservoir and each well therein during the following month, without waste. The Commission shall then fix the monthly reservoir allowables of gas to be produced from such reservoir at the lawful market demand therefor or at the volume that can be produced without waste, whichever is the smaller quantity. The monthly reservoir allowable shall be allocated among all wells entitled to produce gas therefrom so as to give each well its fair share ... provided that each well shall be restricted to the amount of gas that can be produced from it without waste.

In carrying out the mandate of this section, the Commission requires the submission of two forms to provide the basis for the determination of market demand. Form GN, “Nominations for the Purchase of Gas,” is required monthly from purchasers, and indicates the amount of gas which the purchaser wishes to buy from each field in which he purchases gas. Form PF, “Forecast for the Production and Disposition of Gas Well Gas in Prorated Gas Fields,” is also required monthly but is submitted by the producer. The form contains estimates of prospective gas production and disposition by fields and reservoirs. Both of these forms must be submitted by the ninth of the month prior to the month forecasted.

With regard to the determination of waste, the usual criterion is Rule 25, which generally restricts a gas well to 25% of its open flow potential. However, it is becoming the practice for field rules similar to those prescribed for oil fields to be promulgated after hearings to establish proper rates. This is particularly true with respect to gas reservoirs being “cycled” — a process in which the reservoir gas is produced, stripped of its liquids, and then reinjected into another part of the reservoir to maintain reservoir pressure at an efficient producing level.

Associated-Gas Proration: The proration of associated gas, i.e., gas occurring in the form of a gas cap associated with an oil zone,
is governed generally by Statewide Rule 6(b). As noted, this rule permits only that gas production from a gas well which has the same volume within the reservoir as that reservoir volume voided by a full allowable oil well producing at its maximum non-penalized gas-oil ratio.

Modifications of Rule 6(b) may be applied for at a hearing requested for that purpose. The usual qualification petitioned for involves an adjustment for the normal condition that the spacing of wells in the associated gas cap is wider than in the oil zone.

Judicial Review

Section 8 of Article 6049(c) provides:

Any interested person affected by any rule promulgated by the Commission... shall have the right to file a suit in a Court of competent jurisdiction in Travis County... against the Commission to test the validity of said rules... In all such trials, the burden of proof shall be upon the party complaining of such rules, regulations or orders and such rules, regulations, or orders so complained of shall be deemed prima facie valid.

In Wrather v. Humble Oil and Refining Co.,8 upholding the right of one other than an operator adjacent to the tract affected by the order to bring suit, it was held that the statutory requirement of "any interested person" would be given a liberal, but sensible, construction. The court also pointed out that "... it is not necessary that the plaintiff show legal injury and damages... for the reason that... the primary issue is the validity of the Commission's order." In Standard Oil of Texas v. Railroad Commission,10 the court held that the statutory language "to test the validity of said rules" made the suit essentially one for a declaratory judgment. It went on to hold that the answer of the Commission praying that the contested order be sustained was a prayer for affirmative relief and that the plaintiff's request for a non-suit would not be allowed to prejudice that relief.

The meaning of "trial" was stated to contemplate "... a judicial examination of all the issues of law and fact" in Marrs v. Railroad Commission.11 Four years later, however, the Texas Supreme Court in Hawkins v. Texas Co.12 held that the statutory requirement of a

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7 Statewide Rule 6(b), Railroad Commission of Texas. See note 32 infra.
8 147 Tex. 144, 214 S.W.2d 112 (1948).
9 214 S.W.2d at 111.
10 215 S.W.2d 633 (Tex. Civ. App. 1948) error ref. w.o.m.
11 142 Tex. 293, 177 S.W.2d 941 (1944).
12 146 Tex. 511, 209 S.W.2d 338, 340 (1948).
trial "... does not mean a trial as of the ordinary civil suit in which the court makes its own findings based upon a preponderance of the evidence before it. Nevertheless, it means that... the court determines from all of the evidence before it, the entire record, whether the Commission's action is or is not reasonably supported by substantial evidence." Under this holding, judicial review becomes a matter of applying the substantial evidence rule.

The Substantial Evidence Rule: The application of the substantial evidence rules to Railroad Commission actions was given a thorough analysis by the Texas Supreme Court in 1942 in Railroad Commission (and Trem Carr) v. Shell Oil Co. In pointing out that the act providing for judicial review contemplated a trial de novo, the court stated that:

... there would have been no necessity for the placing of the burden of proof if proof were not to be heard. The Act in question clearly contemplates that the evidence shall be taken anew in the district court. If the matter covered by the order is one committed to the agency by the Legislature, and involves the exercise of its sound judgment and discretion in the administration of the matter so committed to it, the court will not undertake to... determine the wisdom or the advisability of the particular ruling, but will sustain the actions of the agency so long as its conclusions are reasonably supported by substantial evidence... the issue is not whether or not the agency came to the proper fact conclusion... but whether or not it acted arbitrarily and without regard to the facts.

The logic of the above seems clear. However, the issue begins to cloud when the opinion goes on to state that "... the trial is not for the purpose of determining whether the agency actually heard sufficient evidence to support its orders, but whether at the time such order was entered there then existed sufficient facts to justify the same." This peculiar choice of language would seem to uphold a decision made without hearing any evidence if it could be established upon review that justifying facts did exist.

Trapp v. Shell Oil Co. followed the Trem Carr case in holding that the substantial evidence rule does not limit the parties to the evidence taken by the Commission. The case then went on to reaffirm that the Commission's action should be sustained when reasonably supported by substantial evidence. In so doing, however, the court was careful to point out that the "... trial court does not have to
consider incredible, perjured or unreasonable testimony since such evidence is not substantial.\textsuperscript{17}

The Hawkins case contained additional qualifying language relating to the rule. There the court stated that the rule “... does not mean that a mere scintilla of evidence will suffice nor does it mean that the court is bound to select the testimony on one side with absolute blindness to that introduced by the other ... The Substantial Evidence Rule does not contemplate that the testimony of a single witness supporting the Railroad Commission’s action requires sustaining the Commission regardless of evidence to the contrary.” The opinion went on to hold that the rule in essence was that the “... court is not to substitute discretion for that committed to the Agency by the Legislature ...”\textsuperscript{18} Considering the interpretation placed on the substantial evidence rule in the Trapp and Hawkins cases, it seems to be a quite reasonable approach to determining the legality of complex regulations affecting the highly technical oil industry.

The substantial evidence rule is neither unfair nor unwieldy. Used within the area of delegated matters requiring sound judgment and discretion it is probably the best method of judicial review. But it is submitted that the basis of the rule lies within the judicial framework of deciding facts in the trial forum and reviewing such fact findings on appeal only to the extent of determining if they are based upon sufficient evidence. To maintain that the validity of an administrative action is to be based upon the facts existing rather than the evidence presented might be suitable for “Star Chamber” proceedings, but it is foreign to the American system of justice. Not only is such a system unjust, but it is inherently unwieldy. Litigants must not only prepare their case for the Railroad Commission hearing, but if the validity of the resulting order is contested they must go to the expense of re-assembling and re-presenting witnesses and evidence to the trial court. The foundation of the substantial evidence rule is to let those qualified decide the action to be taken under a given set of facts. If their action is to be sustained if reasonably supported by evidence, surely their determination of the facts upon which their action is based should be susceptible to the same rule.

It is therefore submitted that with regard to those matters requiring the exercise of the Commission’s discretion, it would contribute to the economy and fairness of the judicial process to have the Commission determine and report the facts upon which its action is founded. Such a revision should be by legislative amendment and

\textsuperscript{17} 198 S.W.2d at 440.
\textsuperscript{18} 209 S.W.2d at 140.
could stipulate that review would be limited to questions of law and the determination as to whether the fact findings were based upon substantial evidence.\footnote{Alternate plans for improving the fairness and utility of the substantial evidence rule are pointed out by Harris in \textit{A Reappraisal of the Substantial Evidence Rule}, 3 Sw.L.J. 416 (1949).}

\textit{Codification}

A minor but annoying defect that might be classed as procedural is the poor arrangement of the statutory and regulatory material relative to the conservation of oil and gas. A consolidation and topical rearrangement of the statutory material should be easily accomplished in view of the excellent guide provided by the Interstate Oil Compact Commission.\footnote{A \textit{Form for an Oil and Gas Conservation Statute} by a Drafting Subcommittee of the Legal Committee of the Interstate Oil Compact Commission.}

The regulatory material promulgated by the Railroad Commission would be more difficult to rearrange. In general, it is arranged under two broad headings.\footnote{\textit{Rules and Regulations of the Texas Railroad Commission, Oil and Gas}.} First appear the "Statewide Rules" having application to all fields within the state not specifically excepted. This requires 100 pages. The second heading contains the specific field rules applicable to each of the 1800 fields in Texas. These rules are separate and — in conjunction with the statewide rules — complete for each field. They are set out in 2600 pages. To search such a mass of material to determine the number of different proration systems and the number of fields to which each is applied is too formidable a task to be within the scope of this paper.\footnote{Such a compilation up to 1948 was made in a paper by H. H. Baker at the Spring Meeting of the Southwestern District A.P.I. Division of Production, Galveston, Texas. It indicated a trend in allocation toward less emphasis on per well allocation formulas. However, as of that date, 17\% of all fields reported were upon a per well basis only, 35\% upon 50\% acreage and 25\% well, and 26\% upon 75\% acreage and 25\% well. Less than 7\% were upon acreage alone.} However, such information should be available both for the purposes of acquainting new operators with the policies and possibilities of proration orders and for providing comparison information to indicate that the statewide allowable is allocated upon "... a fair and reasonable basis among the various pools in the State."

\textbf{Substantive Areas of Controversy}

With the procedural aspects as background, the substantive aspects of proration might best be discussed in relation to the controversies they have fostered. Prior to such a discussion, it is necessary to con-
sider two subjects pertinent to all phases of conservation by regulation — waste and correlative rights.

**Waste**

Statutory provisions define waste to include oil well operation with inefficient gas-oil ratios, underground waste, physical waste, and production in excess of reasonable market demand. Although these definitions involve broad adjectives, the courts have found it desirable to extend further the scope of the term. In *Corzelius v. Railroad Commission*,\(^3\) it was held that conservation laws are intended to prevent waste whether specifically defined therein or not. In determining waste, *Railroad Commission v. Shell Oil Co.*\(^4\) laid down the expansive test that "[w]hatever dictates of reason, fairness and good judgment under all facts leads to the conclusion of waste, is denounced by the Legislature as unlawful." This case also held that the " . . . Railroad Commission has the power to define what constitutes waste so long as the definition is reasonable, non-discriminatory and non-confiscatory."

More precise stipulations as to waste are presented in the statutes with reference to certain prohibited uses of gas. In addition, the Marginal Well Act,\(^5\) states that " . . . to curtail production below marginal limit . . . is hereby declared to be waste." A concise definition of waste was also given in *Hawkins v. Texas Co.* This simply states that " . . . waste means the ultimate loss of oil."

Regardless of the manner in which waste is determined to exist, once determined, it is the most powerful force known in the field of conservation. Wells are drilled, shut-in, granted larger allowables, assigned smaller allowables and permitted special operating rules on the basis of preventing waste. This is as it should be, for the motivating purpose of conservation measures is the prevention of waste.

**Correlative Rights**

The principle of ownership in place of oil and gas in Texas was firmly established in 1915 by the Texas Supreme Court in *Texas Co. v. Daugherty.*\(^6\) Such ownership is often said to be subject to the law of capture and valid Railroad Commission orders.

The first limitation has arisen from language such as that used

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\(^3\) 182 S.W.2d 412 (Tex. Civ. App. 1944).
\(^4\) 146 Tex. 286, 206 S.W.2d 233, 240 (1947).
\(^5\) TEX. REV. CIV. STAT. ANN. art. 6049(b) § 2 (1949).
\(^6\) 209 S.W.2d at 343.
\(^6\) 107 Tex. 234, 176 S.W. 717 (1915).
in *Brown v. Humble Oil & Refining Co.*, wherein the court stated that the “... rule of ownership of oil and gas in place should be considered in connection with the law of capture.” The court referred to the law of capture as a property right “... limited only by the possibility of the ... exercise of the same right of capture ...” by adjoining landowners. It is this limitation that establishes the correlative defense against the law of capture. This correlative right of defense to “go and do likewise” was promulgated in the landmark case on the law of capture — *Bernard v. Monogahela.* All of the principal cases dealing with the law of capture since the *Bernard* case was decided in 1907 have reiterated the right to the defense.

But what have proration and regulation done to this defense? No longer can the adjacent owner “go and do likewise,” but he must comply with the Commission orders which often prevent his doing anything. When the *Brown* case was decided in 1935, proration was in its infancy. The court could not know — and did not consider — the widespread destruction of the defense to the law of capture which would result from the efficient regulation of oil and gas production.

A later decision of the Texas Supreme Court, *Elliff v. Texon Drilling Co.*, notes that the rule of capture “... would seem to conflict with the view of absolute ownership of the minerals in place . . . .” They resolve the conflict by rephrasing the rule to be one of “... no liability for reasonable and legitimate drainage from the common pool . . . .” and point out that regulations should afford each landowner “... the opportunity to produce his fair share of the recoverable oil and gas beneath his land . . . .” Under these conditions, the court concludes that “... if all operators exercise the same degree of skill and diligence . . . .” each will generally recover that which he owns — the oil and gas in place under his land . . . .” Under these conditions, the court concludes that “... if all operators exercise the same degree of skill and diligence . . . .” each will generally recover that which he owns — the oil and gas in place under his land. This enlightened view of the function of the law of capture in today’s closely regulated oil producing operations is to free the diligent from liability for accepting the benefits of his neighbor’s failure to exercise diligence. Herein lies the validity of the law of capture today. No longer can it be fairly referred to as a “property right,” for it seems clear that the law of capture is predicated upon the solid foundation of the neighbor’s correlative right to utilize the defense to “go and do likewise.”

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28 126 Tex. 296, 83 S.W.2d 935, 940 (1935).
29 216 Pa. 362, 65 Atl. 801 (1907).
31 146 Tex. 575, 210 S.W.2d 558 (1948).
Our regulatory scheme has cut away the foundation, and the old rule should not be propped up by classifying it as a property right — the rule should fall with the defense.

There is no question as to the ownership of in-place hydrocarbons being subject to valid Railroad Commission orders. This property right — like all property rights — is subject to the valid exercise of the police power. The Commission has been designated by the Legislature to exercise the police power with relation to conservation of oil and gas.

Such exercise must of course meet the due process requirements when private property rights are involved. If the debris of the now unfounded law of capture is cleared away, it can be seen that certain proration practices have led to undue discrimination tantamount to confiscation.

**Confiscation as Related to Associated Gas Proration**

One of the more common situations in which proration practices have given rise to confiscatory conditions has been in those reservoirs having a gas cap owned primarily by those having only a small interest in the associated oil zone. A major reason for confiscation in these situations is that associated gas proration is generally accomplished by Statewide Rule 6(b).

*The Effect of the Rule:* The rule, in limiting production from a gas well to the same reservoir volume as that allowed from an oil well, fails to take into account the greater expansibility of the gas. Consider equal initial reservoir volumes of oil and associated gas which are drilled to the same density. As the expansibility of the gas is two to five times that of the saturated oil, gas expansion will supply from two-thirds to five-sixths of the total producing energy. However, Rule 6(b) limits the production to equal reservoir volumes. Therefore, from one-sixth to one-third of the volume produced from the oil zone will be replaced by gas migrating from the associated gas cap. Where ownership differs in the two zones, such migration represents uncompensated drainage.

A number of other factors contribute to these drainage conditions being even more confiscatory as concerns the associated gas owner. First, the language of the rule restricts the gas well to the hydrocarbon displacement from the oil well which withdraws the maxi-

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22 "Any gas well producing from the same reservoir in which oil wells are completed and producing shall be allowed to produce daily only that amount of gas which is the volumetric equivalent in reservoir displacement of the gas and oil produced from that oil well in the reservoir which withdraws the maximum amount of gas in the production of its daily oil allowable."
mum amount of gas in the production of its oil allowable. As gas has much greater mobility (i.e., the property of flowing at higher volumetric rates for a given pressure differential) than oil, a gas well can easily drain eight to sixteen times the area that an oil well in the same formation can drain efficiently. Therefore, prudent operators are not likely to drill wells to the same density in the gas cap as in the oil zone of the reservoir. Indeed they could not afford to do so for the small gas allowable obtainable under Rule 6(b). Therefore, if the rule is applied literally to a reservoir having a per-well allowable, the gas cap production would likely be only one-eighth or less of the amount necessary for equivalent volumetric displacement assumed in the above discussion.

In the general discussion, equal reservoir volumes of oil and gas were assumed. In countless reservoirs producing under gas-expansion drive the gas volume will substantially exceed that of the oil, often by a factor or two or more. Generally, the better definition of these larger gas caps results in much wider spacing in their gas caps than in reservoirs having smaller proportionate gas caps. Without a corresponding increase in volumetric withdrawals the loss occurring to the gas interests is increased directly as the size of the gas cap relative to the oil zone increases.

But the most basic confiscatory result of Rule 6(b) is that it has greatly reduced — in fact, more often eliminated — the markability of gas. The economics of pipe line operation demand large rates of flow to justify construction of such lines. Rule 6(b) generally restricts gas production to but a few percent of the gas well’s potential. Economics prevent the development of the associated gas cap to the same density as the oil zone so that few wells are available to receive the small 6(b) allowable. Therefore, there is no incentive for the laying of a pipe line to the associated gas field even though the gas reserve available for dedication is substantial. Without a pipe line outlet, even the meager 6(b) allowable is lost except for relatively insignificant uses within the field. Therefore, what appears to be a mildly discriminatory measure designed to increase ultimate oil recovery becomes a completely confiscatory measure in the great majority of associated gas reservoirs in which the gas ownership differs significantly from the oil.

The Reason for the Rule: Rule 6(b) was formulated for two reasons. First was the desire to maintain the more expansible and less valuable gas in the ground as a source of producing energy for the more valuable oil. The second reason was to prevent the over pro-
duction of gas and an invasion of the gas sand by oil which would result in a loss of oil. Both of these reasons are based upon the high and compelling purpose of preventing underground waste. At the time the rule was promulgated the market for gas was limited primarily to huge non-associated gas fields. The discrimination against the associated gas owner was so insignificant it could be passed off as merely a misfortune similar to that of the mineral owner having no minerals beneath his property.

The waste-prevention reasons for the rule continue to exist. But no longer is the gas in these associated caps of little market value. The forty billion MCF of associated gas reserves in Texas are now worth more than four billion dollars. Compared to the less than two hundred million dollar value of the seven billion MCF of associated gas reserves in 1933, the year Rule 6(b) was made effective, it can be seen that the nature of the discrimination has been drastically altered. As substantive due process demands reasonableness, it is submitted that literal application of Rule 6(b) is now so unreasonable as to result in confiscation.

To permit regulatory discrimination not amounting to confiscation to persist under changed conditions where such discrimination does amount to confiscation is to admit that the constitutional protection of due process will be extinguished by the mere passage of time. Such an admission must be rejected.

Possible Remedies: An acceptable substitute for Rule 6(b) must continue to prevent the waste resulting from the invasion of the associated gas cap by oil. Although the engineering soundness of conserving the gas expansion energy to produce the oil more efficiently is unquestioned, this alone would seem to be insufficient to require one person to leave his property unrecovered in order to allow others to recover not only more of their property but to appropriate the property of those restricted by Rule 6(b).

Uncompensated migration of both oil and gas can be averted by the practical application of current reservoir engineering principles. These principles permit the calculation of the relative productions required from the oil and gas zones in order to prevent the movement of the boundary between these zones. The prevention of such movement would eliminate uncompensated drainage. In the larger reservoirs where confiscation is a serious problem, the relative gas rate would usually be sufficient to support a pipe line connection. The gas

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3 Henshaw, Natural-Gas Statistics (1955), published by Bureau of Business Research, The University of Texas.
production could be permitted to be taken from a relatively small number of selected gas cap wells without causing localized migration, thereby making the method economically feasible for the gas owners and operators.

However, there is a major drawback to this remedy. As the more expansible gas is produced in greater volumes, the rate of pressure decline increases. Excessive pressure decline gives rise to a physical phenomenon known as a relative permeability effect. This effect causes gas to flow preferentially to the oil and large volumes of oil are bypassed and left unrecovered.

A more desirable remedy would be to produce an underground hydrocarbon reservoir as such, and not with regard to surface property lines having no physical significance within the reservoir. It is uniformly recognized that the production of a reservoir as a pool results in the greatest recovery of oil. It is recognized that unitization of property interests is usually necessary to this production method. It is also recognized that the public has an interest in increasing the recovery of the state's natural resources. In Railroad Commission v. Rowan Oil Co., it was pointed out that the prevention of waste and the protection of correlative rights are established public policies of this state. There is no better way to carry out these dual policies than to foster unitization—the recognized method of increasing recovery and the best method of protecting correlative rights while preventing waste.

The objective advantages of unitization are so overwhelming that it would seem that any serious objection would be precluded. However, the subjective aspects under Rule 6 (b) are a serious deterrent to realizing the twin goals of waste prevention and protection of correlative rights under unitization. By operating essentially to prevent the associated gas owners from marketing their gas, Rule 6 (b) has created a situation in which income is realized only by the oil owners. Therefore, the oil owners are currently receiving payment for all their oil plus the gas migrating from the associated gas cap to their wells. As unitization would result in their receiving only their proportionate share of the total production, the current income of the oil owners would decline. So long as Rule 6 (b) operates to benefit the oil owners

34 For a general discussion of unitization, see Hoffman, Voluntary Pooling and Unitization (1954).
35 132 Tex. 439, 219 S.W.2d 173, 175 (1953).
36 For an excellent discussion disposing of the alleged constitutional, anti-trust, and non-protection of small property owners objections to unitization, see Jacobs, Unit Operation of Oil and Gas Fields, 57 Yale L. J. 1207 (1948).
at the expense of the gas owners, there will be little incentive for voluntary unitization.

Losses occurring from the failure to unitize are not confined to those holding title to the associated gas. Waste is not confined to inefficient uses of hydrocarbons, faulty production practices and poor well completions. *Waste has reference to the ultimate loss of oil.* Oil unrecovered because of the refusal of a common owner of the reservoir to relinquish his unfair advantage constitutes waste. The advantage itself is legal only by a misapplication of the law of capture. If the gas owners were free to "go and do likewise," they could, with their vastly superior production potential, easily seize the advantage by reversing the direction of flow. This would cause a decreased recovery from what would otherwise be recovered and has been justly branded as "waste." The refusal to unitize where it is clear that unitization would result in greater recovery also causes a decreased recovery from what would otherwise be recovered. Is this not also waste?

If the gas owner is to be restricted in the interest of preventing waste, why should not the oil owner also be restricted to prevent waste? In addition, "[e]very land owner is entitled to a fair chance to recover the oil or gas under his land, or their equivalent, and any denial of such chance amounts to confiscation." It is submitted that Rule 6(b) is currently such a denial to the gas owners and that unitization would provide an opportunity for each landowner to recover the oil or gas under his land or their equivalent.

**Equitable Unitization**

The reluctance of the Texas Legislature to require unit operation of a reservoir centers around a national antipathy toward compulsory actions with relation to one's private property. However, with relation to mineral interests in Texas it is believed that the failure to provide such authority is providing at best only lip service to the sanctity of property rights.

The arguments against the granting of such authority to the Railroad Commission might be classified in two rather broad categories. First is the view that such a statute is an unauthorized invasion of private property rights. The second argument is that there is already too much governmental control and bureaucracy.

The first argument is incongruous with existing circumstances. Property rights have not merely been invaded by conservation regulations; they have been subdued. Upon holding that conservation was

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a valid exercise of the police power, property rights became subject to all fair statutory enactments which have a reasonable relationship to conservation. Proration is accepted as having a reasonable relationship to conservation. Authority to require pooling would be no further invasion of oil and gas property rights; it would simply allow that proration meet the due process requirement of being fair without sacrificing the primary conservation purpose of preventing waste.

The viewpoint that governmental control and bureaucracy are already excessive is too well founded to incite argument. But it does not follow that the existence of excessive regulation is reason to deprive regulatory agencies of the authority to discharge their duties with complete fairness to all involved. The Railroad Commission has the duty of preventing the waste of oil and gas. With relation to hydrocarbon reservoirs having large associated gas caps supplying the bulk of the producing energy for the oil, waste cannot be prevented without disregarding the property rights of associated gas owners except by unitization. If voluntary unitization is prevented by the refusal of the oil owners to give up their unfair advantage, the Commission should have the power to require unitization.

Section 8 of *A Form for an Oil and Gas Conservation Statute,* contains a compulsory unitization provision. The important features of this section provide that a hearing may be held upon the motion of the Commission or any interested person to consider the need for unitization. If the Commission finds unit operation "...reasonably necessary to prevent waste, to increase substantially the recovery of oil or gas, and to protect correlative rights, and the value of the estimated additional recovery will exceed the estimated additional cost incident to conducting such operation, it shall issue an order requiring unit operation. The order shall be fair and reasonable..." The suggested form also contains a provision for vacating or amending the order upon the written objections of a stipulated percentage of the owners involved.

Such a statute in conjunction with the judicial review provided for all orders is quite fair. When compared with current ineffective attempts to protect correlative rights in associated gas reservoirs, it is not only desirable but essential to insure maximum recovery coincident with proper regard for Texas' long-standing principle of absolute ownership in place of oil and gas. Unitization—voluntary or required—is the one method by which the public policies of waste

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28 Published by The Interstate Oil Compact Commission, Approved as Amended, May 5, 1950.
prevention and protection of correlative rights can be realized. The Commission is charged with effecting these dual policies and it should be provided with the necessary means of carrying out these duties.

**Equitable Pooling**

Two cases illustrate the manner in which proration by spacing has resulted in establishing confiscatory conditions. The earlier case, *Mueller v. Sutherland,* 3 involved the following facts. The appellees owned 24 acres in the Wade City Field. The Commission established a 20 acre spacing within the field. Appellees applied for and received permits to drill two wells upon the 24 acres, including 16 acres belonging to appellants in order to meet the spacing requirements. The wells were given allowables on the basis of the twenty acre spacings. Appellants contended that appellees were entitled to only 24/40 of the production royalties from the wells and that the remainder belonged to appellants by virtue of their 16 acres being included in the area assigned to the two wells by the drilling permit.

The majority of the court clung to the legal nicety that "... property rights... are unaffected by the valid rules and regulations of the Commission respecting the development of an oil field" in holding the appellants had no right to any portion of the royalties. But regardless of legal theories, the effect of the Commission's order was to increase appellees' mineral interest by 16/40 and to reduce appellant's interest in the same amount. The dissenting justice 5 points out that the appellant's mineral interest was "rendered worthless" by the decision and that it was "... clearly the taking of one man's property and the giving of it to another." The dissent also points out that majority's reliance on the holding of *Japhet v. McRae,* 6 decided in 1925, that the royalties "... belong to the owner of the particular tract upon which the well is located ..." is unfounded. The reason the *Japhet* case is not in point is that it "... antedates the spacing and proration statutes and regulations applied to the field here."

The second case illustrating the unjust results arising out of proration by spacing is that of *Ryan v. Pickens,* 7 decided in 1955. The facts involved were as follows: Appellant and appellees each owned the mineral lease upon one-half of a tract voluntarily sub-divided after Rule 37, the spacing rule, became applicable. Appellees secured a permit and drilled a well upon their one-half. Appellant was denied

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39 179 S.W.2d 801 (Tex. Civ. App. 1943) error ref. w.o.m.
40 179 S.W.2d at 809.
42 —Tex.—, 285 S.W.2d 201 (1955).
a permit and sought to obtain an equitable share of the oil produced from the tract. Appellees won a take nothing judgment which was affirmed by the Court of Civil Appeals. The Texas Supreme Court first reversed and remanded but later withdrew the initial opinion and affirmed the judgment of the trial court.

In the substituted opinion, the majority rely on the law of capture, "... which is a well-settled rule of property in this jurisdiction." They also state that the "... Commission cannot change the laws of Texas." The Japhet case is again relied upon to show that "... the only safe rule is the one which gives the oil to the man who owns the land upon which the well is located...."

The dissent points out that the law of capture is inapplicable under spacing rules denying the equal right to drill. Stephens County v. Mid-Kansas Oil & Gas Co. is cited in support of this contention as follows: "Drainage of adjoining property under the law of capture [is] rationalized with ownership in place... on the basis of equal rights to drill."

The patent injustices involved in both the Mueller and Ryan cases could be avoided if statutory authority were given the Commission to require pooling of individual surface acreages too small to qualify under the spacing area adopted for the field in question.

It is difficult to understand the reluctance of Texas legislatures to pass such legislation. Texas and Kansas are the only significant oil producing states to be without provision for equitable pooling. Equitable pooling statutes are effective in at least seventeen other states and in none have they given rise to the wholesale litigation or inequities of Rule 37.

Another situation in which proration orders having a substantial dependence upon a per-well allowable give rise to confiscatory conditions is illustrated by Railroad Commission v. Humble Oil & Refining Co. Here, a proration order allocating one-half the daily allowable on a per-well basis and the other half upon a surface acreage basis resulted in wells upon .1 acre townsites receiving one-half the allow-

43 285 S.W.2d 201 at 210.
44 113 Tex. 160, 254 S.W. 290 (1923).
45 An example of such a statute is provided in MICH. COMP. LAWS § 319.13 (1948): "The pooling of properties or parts thereof shall be permitted, and, if not agreed upon, the supervisor [of wells] after conference with and recommendation by the [advisory] board, may require such pooling in any case when and to the extent that the smallness or shape of a separately owned tract or tracts would, under the enforcement of a uniform spacing plan or proration or drilling unit, otherwise deprive or tend to deprive the owner of such tract of the opportunity to recover or receive his just and equitable share of the oil and gas and gas energy in the pool."
46 193 S.W.2d 824 (Tex. Civ. App. 1946) error ref. n.r.e.
able of wells drilled upon the twenty acres specified by the spacing rule. Under such a proration order and the exceptions to the spacing rule, the densely drilled townsites would drain thirty million barrels of oil from the larger tracts drilled upon the specified spacing.

The court, in holding the proration order to be neither unreasonable nor confiscatory, stated that there are "... certain natural advantages which the small tracts have over large tracts in unrestricted production; and these natural advantages may properly be taken into consideration in administering the conservation laws." Although practical considerations may give this statement a semblance of fact, it is not scientifically accurate. Under unrestricted producing and drilling conditions, drainage from any given tract in a reasonably uniform reservoir can be prevented. Small tract owners, although they have been the favorite of the exception to the spacing rule permitting at least one well on each tract no matter how small, own only that which the larger tract owners have — the oil and gas in place beneath their property. Certainly they should have a fair chance to recover the oil or gas under their land. But there is no more right to discriminate unduly against large tract owners than against small tract owners. Our system of justice is predicated on equality of judgment for all. Separate standards are not provided for determining what constitutes due process according to the assets of the person claiming unwarranted deprivation. A compulsory pooling statute would provide equality for all under the basic Texas property law recognizing ownership in place of oil and gas.

The Marginal Well Act

The Marginal Well Act\textsuperscript{47} deems as a marginal well "... any oil well which is incapable of producing its maximum capacity of oil except by pumping, gas lift, or other means of artificial lift... and having a maximum daily capacity for production of..." a specified rate based upon producing depth.\textsuperscript{48} Section 2 states that "to artificially curtail production below the marginal limit... is hereby declared to be waste, and no rule or order... shall be entered re-

\begin{tabular}{|c|c|} 
\hline
\textbf{Maximum Rate} & \textbf{Producing Interval} \\
\hline
10 barrels per day & 0-2000' \\
20 & 2001'-4000' \\
25 & 4001'-6000' \\
30 & 6001'-8000' \\
35 & Over 8000' \\
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\textsuperscript{47} 193 S.W.2d at 832.
\textsuperscript{48} See note 25 supra.

\textsuperscript{47} Maximum daily capacity for classification as a marginal well for various producing depth increments:
quiring restriction of the production of any 'Marginal Well' as herein defined."

The first paragraph of the act contains an apparent limitation that a marginal well must be one which "... would be damaged, or result in a loss of production ultimately recoverable, or cause the premature abandonment of same, if its maximum daily production were artificially curtailed." However, these provisions are disregarded as the act goes on to define marginal wells merely in terms of artificial lift, producing capacity, and depth.

The motivating purpose of the act is clear; it was designed to prevent the waste of oil as a result of the abandonment of pumping wells because proration rules had reduced their allowable production to the point where they could not be operated profitably. There can be no quarrel with this motive to prevent waste. However, the application of the act often results in inequities.

An excellent example of the discrimination brought about by the application of the marginal well act is provided by the vast East Texas Field. As of December 15, 1956, 2300 of the 19,900 wells in the field had been qualified as marginal under the statutory definition. The 17,600 non-marginal wells had an average scheduled daily allowable of 21 barrels per day per well. However, they were restricted to produce only 16 days during the month. Therefore the non-marginal wells, the majority of which had producing potentials of hundreds of barrels per day, produced an average of 12 barrels per day per well. Nine hundred of the marginal wells, producing thirty-one days during the month, averaged more than 12 barrels per day per well.

Such a penalizing of efficient producing wells in order to permit less efficient wells to produce more oil is inequitable. One excuse sometimes heard in justification of this situation is that the marginal wells are located near the oil-water contact and that unless they are allowed to continue producing at relatively high rates the oil will migrate before it can be produced. As the natural water influx is being augmented in East Texas by returning produced water to the reservoir below the oil-water contact, this argument has some merit where it is applicable. But it is submitted that the Marginal Well Act was not intended to suppress production of efficient wells to allow marginal wells to obtain their fair share of the production. Real protection of correlative rights where extraneous fluids are injected into hydrocarbon reservoirs is obtained through a just and reasonable unitization — not through marginal well provisions which
do not refer in any way to the well owner's property right in the oil and gas in place.

The Marginal Well Act has a definite place in the conservation laws of Texas. But its current statutory form does not give the Commission sufficient discretion. A simple amendment would provide the Commission with such discretion. Such an amendment need only prescribe that, in addition to the depth-capacity definition of marginal wells, the well must also be one which "... would be damaged, or result in a loss of production ultimately recoverable, or cause the premature abandonment of same, if its maximum daily production were artificially curtailed." In addition, a requirement that notice and an opportunity for a hearing be given to all interested parties prior to classifying a well as marginal would provide for self-protection of correlative rights.

**CONCLUSION**

The principal conclusion to be drawn from a review of Texas proration is that it has been an outstandingly successful conservation measure. Considering the multitude of interlocking and detailed factors involved in proration, the fact that there have been so few discriminatory orders is a tribute to both the Commission and the legislation creating the Commission's authority.

The major defect in current proration practices is the failure to protect correlative rights. This failure is often camouflaged by reference to the rule of capture — a rule found sound only to free one operator from liability for his neighbor's lack of diligence in view of regulatory restrictions upon the use of the correlative right of defense. As Texas property law includes the principles of ownership of oil and gas in place, it is concluded that this failure to protect correlative rights results in confiscation in several situations.

The most prevalent confiscatory situation occurs in those reservoirs having a large associated gas cap owned by persons having substantially smaller interests in the contiguous oil zone. In the majority of these reservoirs, Rule 6(b) governing the proration of associated gas results in undue discrimination tantamount to confiscation of the gas owners interest. A revision of Rule 6(b) would eliminate such confiscation but would result in waste.

Unitization of all interests on a fair and reasonable basis would not only eliminate confiscation but would also prevent waste, in that waste is the loss of otherwise recoverable oil and unitization universally increases the amount of recoverable hydrocarbons. A statute
authorizing the Commission to require unitization to prevent waste and to protect correlative rights under a profitable plan of production would act to protect rather than restrict property rights.

A second confiscatory situation prevails in the older fields where proration is essentially on a per-well basis and numerous exceptions have been made to the spacing rule. Better waste prevention resulting from fewer wells and protection of correlative rights could be realized from a statute giving the Commission authority to compel the pooling of these interests in order to preserve the spacing pattern. Such statutes are being successfully administered in all but two of the oil producing states; in none has it resulted in the wholesale litigation and numerous inequities brought about by the complex spacing and exceptions rule of Texas.

The Marginal Well Act has permitted confiscatory conditions where production has been restricted to a market demand less than the efficient productive capacity of the reservoir. In such instances the act has actually resulted in inefficient wells having higher allowableables than the efficient wells. This situation could be eliminated by minor amendments to the act. One such amendment would restrict a marginal well to the maximum production for which the well would qualify if it were not marginal. The second amendment would add the requirement that classification of a well as marginal include a showing that loss of oil would occur by the restriction of the well below its "maximum capacity."

Granville Dutton