IN THE SUPREME COURT OF THE STATE OF NEW MEXICO

Cases to be Submitted

Monday
April 15, 1974
9:00 A. M.

No. 9845

Richard L. Pribble, Appellant	J. Victor Pongetti, Jr.
vs.	
Aetna Life Insurance Company, et al., Appellees	Irving E. Moore

No. 9789

State, ex rel. Mrs. Harry Bell, et al., Appellees	Jones, Gallegos, Snead & Wertheim J. E. Gallegos Byron L. Treaster
vs.	
Hansen Lumber Company, Inc., Appellant	White, Koch, Kelly & McCarthy S. S. Koch

THE CALL OF THE DOCKET FOR THE FOLLOWING CASES WILL BE AT 1:30 O'CLOCK P.M. AND COUNSEL NEED NOT BE PRESENT UNTIL THAT TIME:

No. 9872

Seasons, Inc., Appellee	Williams, Johnson, Houston, Reagan & Porter Robert L. Love
vs.	
William W. Atwell & Elizabeth S. Atwell, Appellants	Atwood, Malone, Mann & Cooter Rufus E. Thompson

No. 9828

Alice Mayes Ballard, et al., Appellants	Burr & Cooley
vs.	
J. W. Miller, et al., Appellees	Hinkle, Bondurant, Cox & Eaton Harold L. Hensley, Jr.

IN THE SUPREME COURT OF THE STATE OF NEW MEXICO

Cases to be Submitted

Tuesday
April 16, 1974
9:00 A.M.

No. 9875

State of New Mexico, Appellee	David L. Norvell, Attorney General George A. Morrison, Spec Asst. Atty General
vs.	
Flora Romero, Appellant	Elvin Kanter

No. 9801

Juan J. Garcia, et ux, Appellants	Catron, Catron & Sawtell Fletcher R. Catron
vs.	
Nazario Garcia, et al., Appellees	Ruben Rodriguez

THE CALL OF THE DOCKET FOR THE FOLLOWING CASES WILL BE AT 1:30 O'CLOCK P.M. AND COUNSEL NEED NOT BE PRESENT UNTIL THAT TIME:

No. 9821

Michael P. Grace II, et ux, Appellants	Marchiondo & Berry
vs.	
Oil Conservation Commission, Appellee Cities Service Oil Company, et al, Intervenors	Losee & Carson; William F. Carr Jason Kellahin

No. 9869

State, ex rel. N.M. Water Quality Constrol Commission, Appellee	David L. Norvell, Atty General Douglas W. Fraser, Agency Asst Atty Gen
vs.	
City of Hobbs, Appellant	L. George Schubert

LAW OFFICES
LOSEE & CARSON, P.A.
A. J. LOSEE
JOEL M. CARSON
300 AMERICAN HOME BUILDING
P. O. DRAWER 239
ARTESIA, NEW MEXICO 88210
AREA CODE 505
746-3508

27 March 1974

The Honorable John B. McManus
Chief Justice
Supreme Court of New Mexico
P. O. Box 848
Santa Fe, New Mexico 87501

Re: Michael P. Grace II et ux vs. Oil Conservation Commission of New Mexico et al, Supreme Court of New Mexico No. 9821

Dear Judge McManus:

Appellee and intervenor Cities Service Oil Company hereby request permission to correct by interlineation, the hereinafter mentioned transcript references in their answer brief.

In the last paragraph on page 21 of the answer brief, some transcript references were incorrectly made to pages of the original Oil Conservation Commission hearing rather than to pages of the transcript filed with the Supreme Court. The references to transcript pages 167, 190, 192, 194 and 195 should actually be transcript pages 229, 252, 254, 256 and 257, respectively. The references to transscript pages 58, 72, 87, 129 and 189 should actually be transcript pages 120, 134, 149, 191 and 251, respectively.

The last complete sentance at page 29 of the answer brief, with respect to testimony of appellants' witness, Charles Miller, incorrectly cites transcript 92, when it should have cited transcript 292. A reference to this same testimony was correctly made in the first sentence on page 9 of the answer brief.

If the Court sees fit to grant this request, please ask the Clerk of the Supreme Court to make the above corrections by interlineation in our answer brief.

Respectfully submitted,

LOSEE & CARSON, P.A.

A. J. Losee

AJL:jw

cc: Marchiondo & Berry, P.A.
Mr. Jason Kellahin
Mr. William F. Carr

IN THE SUPREME COURT OF THE STATE OF NEW MEXICO

MICHAEL P. GRACE II and
CORINNE GRACE,

Petitioners-Appellants,

vs.

OIL CONSERVATION COMMISSION
OF NEW MEXICO,

Respondent-Appellee,

and
CITIES SERVICE OIL COMPANY
and the CITY OF CARLSBAD,

Intervenors.

NO. 9821

CERTIFICATE OF SERVICE

This will certify that on this date I served a true copy of Answer Brief Intervenor-Appellee Cities Service Oil Co. by mailing such copy to:

Marchiondo & Berry
William C. Marchiondo
Attorney at Law
P. O. Box 568
Albuquerque, N. M. 87103

by first class mail with postage thereon fully prepaid.

Dated at Santa Fe, New Mexico, this 14th day of February, 1974

ROSE MARIE ALDERETE
Clerk of the Supreme Court
of the State of New Mexico

By: Deputy Clerk

LAW OFFICES
LOSEE & CARSON, P.A.
300 AMERICAN HOME BUILDING
P. O. DRAWER 239
ARTESIA, NEW MEXICO 88210

A. J. LOSEE
JOEL M. CARSON

AREA CODE 505
746-3508

11 February 1974

Mr. William F. Carr, Attorney
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Mr. Jason W. Kellahin
Kellahin & Fox
P. O. Box 1769
Santa Fe, New Mexico 87501

Dear Bill and Jason:

Enclosed is our Answer Brief with the changes we discussed on the telephone last Friday.

We have through Wednesday, February 13, to file the brief. If satisfactory, please sign and file with the Clerk. I would appreciate one of you advancing the appropriate reproduction costs, and if desired, I will let you have my check to reimburse you for the same.

If either of you have any questions or suggestions, please call me on the phone.

Very truly yours,

LOSEE & CARSON, P.A.

Jerry

A. J. Losee

AJL:jw
Enclosures

IN THE SUPREME COURT OF THE

STATE OF NEW MEXICO

MICHAEL P. GRACE II and CORINNE GRACE,	)	
Petitioners-Appellants,	)	
vs.	)	
OIL CONSERVATION COMMISSION OF NEW MEXICO,	)	No. 9821
Respondent-Appellee,	)	
and	)	
CITIES SERVICE OIL COMPANY and CITY OF CARLSBAD, NEW MEXICO,	)	
Intervenors.	)	

ANSWER BRIEF OF APPELLEE AND
INTERVENOR CITIES SERVICE OIL COMPANY

JASON W. KELLAHIN
KELLAHIN & FOX
P. O. Box 1769
Santa Fe, New Mexico 87501

Attorneys for Intervenor
Cities Service Oil Company

WILLIAM F. CARR
Special Assistant Attorney General
P. O. Box 2088
Santa Fe, New Mexico 87501

A. J. LOSEE
Special Assistant Attorney General
P. O. Drawer 239
Artesia, New Mexico 88210

Attorneys for Oil Conservation
Commission

I N D E X

TABLE OF CASES AND OTHER AUTHORITIES

NEW MEXICO CASES CITED

OTHER CASES CITED

STATUTES CITED

OTHER TEXTS CITED

SUPPLEMENTARY STATEMENT OF PROCEEDINGS

Oil Conservation Commission Cases 4693, involving prorationing in the South Carlsbad Morrow Pool, and 4694, involving prorationing in the South Carlsbad Strawn Pool, were consolidated for hearing only and two separate orders were proposed to be issued and actually were issued affecting the separate pools (Tr. 64-68).

Appellee objected to the amended petition for review on the grounds that it enlarged upon the matters presented to the Oil Conservation Commission on the application of appellants for rehearing (Tr. 387-393). Judge Snead overruled the objection (Tr. 393).

RESPONSE TO POINT ONE

THE ORDER OF THE OIL CONSERVATION COMMISSION WAS NOT ARBITRARY, UNREASONABLE, UNLAWFUL OR CAPRICIOUS, AND THE JUDGMENT OF THE TRIAL COURT SHOULD BE AFFIRMED.

In Continental Oil Company vs. Oil Conservation Commission, 70 N.M. 310, 373 P.2d 809 (1962), and in El Paso Natural Gas Co. vs. Oil Conservation Commission, 76 N.M. 268, 414 P.2d 496 (1966), the Commission was concerned with applications to change an existing prorationing formula. In the instant case the Commission was concerned with establishing a new formula in a relatively new pool that was not completely developed (Tr. 73).

The Commission, to prevent waste, may allocate production among the producers in a pool, upon a reasonable basis and recognizing correlative rights. § 65-3-13(a), N.M.S.A., 1953 Comp., as amended. In protecting correlative rights, the Commission may consider acreage, pressure, open flow, porosity, permeability, deliverability and quality of the gas and such other pertinent factors as may from time to time exist. § 65-3-13(c), N.M.S.A., 1953 Comp., as amended.

In the April 19 and 20, 1972, hearing, the Commission was concerned with the necessity of allocating production in the South Carlsbad Strawn and Morrow pools. The two separate cases were consolidated for hearing purposes only and two separate orders were proposed to be issued and actually were issued affecting the separate horizons (Tr. 64, 68). The

Strawn and Morrow horizons are both included within the Pennsylvanian Formation, but they are vastly dissimilar in composition and pay quality (Tr. 91, 241, 263). This appeal is only concerned with a review of the order prorating the South Carlsbad Morrow pool, and it is not concerned with any evidence in the record relating solely to the Strawn horizon.

The Pennsylvanian formation is common throughout Southeastern New Mexico, and its Morrow member is one of the most prevalent gas-producing horizons in that area (Cities Service Exhibits 8 and 9). Substantially all of the prorated gas pools in Southeastern New Mexico are prorated on a straight acreage formula (Tr. 121 and 185).

The South Carlsbad Morrow pool, in common with other Morrow pools in Southeastern New Mexico, has a number of producing zones. These zones are not sufficiently continuous to be economically drilled and the Commission, recognizing this, has generally treated the Morrow formation as a single producing zone when it was encountered in Southeastern New Mexico. These Morrow sands show a considerable amount of thickening and thinning and discontinuity over short distances. Porosities and water saturation vary greatly between wells in the same zone. The Morrow is easily damaged by drilling, even to the extent of destroying the capability of an indicated gas zone to produce commercial oil or gas (Tr. 79, 166, 167). The calculated open flow or deliverability of a Morrow gas well is greatly affected by the water saturation, manner in

which open flow test is taken, and the method in which the well is stimulated or treated for completion (Tr. 178).

The Commission, based upon its administrative experience in Southeastern New Mexico, and the evidence of these characteristics of the Morrow, determined that recoverable reserves could not be practically determined by data (effective feet of pay, porosity, water saturation and deliverability) obtained at the well bore (Commission Findings 72, 74 and 75, Tr. 11).

The only reasonably accurate tool in determining reserves in the Morrow formation is a pressure decline curve based upon substantial withdrawals of gas from the reservoir. Commission Exhibit 9 sets forth the dates each Morrow well was connected to a pipeline and commenced to produce gas. The first well started producing in September, 1969, but the great majority of wells were not connected until the fall of 1971, about six months before the April, 1972, Commission hearing. There had not been enough gas production from the field to expect reasonably accurate results from a pressure decline curve (Tr. 95).

(A)1 THERE IS SUBSTANTIAL EVIDENCE THAT THE WELLS WERE PRODUCING FROM THE SAME POOL.

"Substantial evidence" is "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." Ft. Sumner Municipal School Board vs. Parsons, 82 N.M. 610, 485 P.2d 366 (1971); Wickersham vs. New Mexico State Board of Education, 81 N.M. 188, 464 P.2d 918, Ct. of App. (1970). In deciding whether a finding has substantial support, the court must view the evidence in the most favorable light to support the finding and will reverse only if convinced that the evidence thus viewed, together with all reasonable inferences to be drawn therefrom, cannot sustain the finding. Any evidence unfavorable to the finding will not be considered. Martinez vs. Sears, Roebuck & Company, 81 N.M. 371, 467 P.2d 37, Ct. of App. (1970), United Veterans Organization vs. New Mexico Property Appraisal Department, 84 N.M. 114, 500 P.2d 199 (1972 Ct. of App.).

Appellants point out that the horizontal limits of the pool had not yet been determined and imply that this is evidence that the wells were not all producing from the same pool (Brief-in-Chief p. 16). If this were a valid argument, the Commission would not have the authority to allocate production in a field until full development of the pool had been accomplished. After complete pool development, it is probably too late to prevent waste of reservoir energy and protect correlative rights. § 65-3-11(12), among other things, empowers the

Commission, from time to time, to redetermine the limits of a pool. The remainder of appellants' argument on Point One (A) is concerned principally with the vertical limits of the pool, namely the Morrow horizon.

The summarization of evidence with respect to whether the wells were producing from the same pool in Point One(A) is incomplete and to some extent misleading. For example, Commission geologist R. L. Stamets, using a completely comprehensible chart he prepared (Exhibit 4 entitled Carlsbad-Morrow Gas Pool Completion Map), testified that "there is no one pay zone common to every well in the pool," but "there is no one well producing from a zone wholly isolated from every other producing well in the field" (Tr. 75). An examination of this map will show that, although the Pennzoil Federal No. 1 Well was producing from a different zone than the Grace No. 1, and the Pan American No. 1 was producing from a different zone than the Grace well, yet other wells in the pool were producing from the same zones as each of these three wells, and as Mr. Stamets again opined, no well was producing from a wholly isolated zone (Tr. 79).

On Commission Exhibit 4, the perforations in the pipe are noted by the short horizontal lines (Tr. 75), and although there are no perforations common to every well in the field, it can readily be seen that there is no one well producing from a wholly isolated pay zone, and this was quite typical of the Morrow in Eddy County (Tr. 78).

Mr. Stamets summarized his testimony on direct examination:

> Q Mr. Stamets, considering the Exhibits you have presented and your studies have you formed any opinion as to whether the South Carlsbad Morrow Pool -- rather the wells that you have shown here as producing from the South Carlsbad Morrow formation are all producing from one pool?
>
> A Yes. As the Morrow Pools have been described they are quite common to a number of zones producing in the Morrow. In general these zones are not sufficiently continuous to be economically drilled and quite often they are not even economically feasible to make full completions out of, so the Commission has recognized this and the Morrow is generally treated as a single producing zone when it is encountered.
>
> Q Are all of the wells on your Exhibit Number 3 connected throughout the formation?
>
> A I believe I have so testified. (Tr. 79)

Mr. Stamets, a geologist (Tr. 69), did not consider pressures in determining that the wells were producing from the same fields because that data was to be presented by Commission Engineer Elvis Utz (Tr. 94). Mr. Stamets discussed vertical communication between the various producing Morrow sand intervals, viz. fracturing of the formation (Tr. 99), the effect of a poor cement job behind the pipe (Tr. 96), and communication in the well bore (Tr. 101), all showing vertical communication in the Morrow.

Mr. Stamets pointed out that the original pressure would likely not vary too much for similarly developed Morrow zones (Tr. 95). He did testify that no cores were taken and as a result you could not positively testify that vertical

fracturing was occurring in the formation, but this did not rule out vertical fracturing in the formation and certainly did not rule out communication in the well bore (Tr. 101). Mr. Stamets' testimony on cross examination (incompletely summarized Brief-in-Chief p. 17), was that, "I think my testimony was that you cannot find any well in there that is producing from a wholly isolated pool" Tr 97).

Oil Conservation Commission engineer Elvis Utz did testify that geology was used by the Commission in nomenclature hearings to determine pool limits (Tr. 125), contrary to the statement by appellant (Brief-in-Chief p. 18). Mr. Utz did state there was only one bottom-hole pressure reading available (Tr. 126) but as noted by Mr. Stamets, the original pressure would not vary too much for similarly developed zones and pressure differentials would not be noted until after the wells had been on production for a period of time (Tr. 95).

Cities Service regional geologist, F. E. Taylor, testified to a minor fault running between the Gulf Federal and the Superior No. 1 State Well, in the neighborhood of 100 to 125 feet, which did not affect or interrupt the Morrow formation (Tr. 164). He opined that this fault will allow gas to migrate between the various Morrow zones in its vicinity and there could be fracturing of the formation in that particular area which would interconnect the zones in the Morrow (Tr. 171). Pennzoil Engineer, J. C. Raney personally had no reason to believe that the wells were not connected (Tr. 248).

Appellants' witness, Charles Miller, consulting geologist, admitted vertical connection of the numerous Morrow wells at the well bore (Tr. 292). Appellants' witness, R. W. Decker, a consulting geologist, testified that there is poor communication throughout the Morrow (Tr. 309), but poor communication is communication.

Not a single witness denied that the wells were interconnected. The fact that the pool was in the early stages of development and horizontal limits had not been established (Tr. 73), was no evidence that the wells were not producing from the same pool.

The treatment by the Commission of all Morrow gas pools in Southeastern New Mexico as a common source of supply, was based not on a mere assumption, but was based on experience. One of the purposes which led to the creation of administrative commissions was to have decisions based on evidentiary facts made by experienced officials with an adequate appreciation of the complexities of the subject which was entrusted to their administration. It is permissible for such commissions to draw on experience in factual inquiries. Radio Officers Union vs. N.L.R.B., 347 U.S. 17, 98 L.Ed. 455 (1954).

The facts that (1) a fault existed which would allow gas to migrate vertically in its vicinity (Tr. 164), (2) there was communication in the well bores (Tr. 101, 292), and (3) no well was producing from a wholly isolated zone (Tr. 75, 79 and

Commission Exhibit 4), is substantial evidence that the wells in the South Carlsbad Morrow Pool were interconnected.

(A)2 APPELLANTS MAY NOT COLLATERALLY ATTACK IN THIS PROCEEDING A PRIOR VALID ORDER OF THE COMMISSION THAT THE WELLS WERE PRODUCING FROM THE SAME POOL.

The Commission, on numerous occasions, correctly sustained objections to questions as to whether the wells were producing from the same pool, on the ground that the Commission had already determined by prior valid order the vertical and horizontal limits of the South Carlsbad Morrow gas pool (Tr. 246, 248, 281, 283 and 311).

§ 65-3-11(12), N.M.S.A., 1953 Comp., empowers the Commission to determine the limits of any pool or pools producing natural gas and from time to time to redetermine such limits. The Commission, by Order R-3731 dated April 18, 1969, created the South Carlsbad Morrow pool for the production of gas from the Morrow formation. The horizontal limits of the pool had been extended from time to time and at the time of hearing they contained approximately eight and one-half sections of land in Eddy County, New Mexico (Commission Findings 2, 3 and 4, Tr. 4). These findings were not challenged by appellants.

The procedure for such hearings was testified to by Mr. Stamets (Tr. 75-79). This testimony clearly reflects that due process was had in these hearings, establishing pools and defining their vertical and horizontal limits. The Commission, in issuing its order (R-3731) defining the vertical and horizontal limits in the South Carlsbad Morrow pool, was acting in its quasi judicial capacity. As a general rule orders of

an administrative body are presumptively correct and valid. 73 C.J.S. Public Administrative Bodies and Procedures § 145, page 478; 2 Am.Jur.2d Administrative Law § 495, page 305. Attempts to question in a subsequent proceeding the conclusiveness of a prior decision of an administrative agency have often been rejected on the grounds that like the judgment of a court a determination made by the administrative agency in its judicial or quasi judicial capacity is not subject to collateral attack. 2 Am.Jur.2d Administrative Law § 493, p. 299; 73 C.J.S., Public Administrative Bodies and Procedures, § 146, p.479.

The New Mexico case is Jackman vs. A. T. & S. F. Ry. Co., 24 N.M. 278, 170 Pac. 1036 (1918). There a decision of the Secretary of the Interior and the exercise of the powers conferred upon him by the acts of Congress that a designated railroad company is entitled to a right-of-way over public lands was held not subject to collateral attack in a separate quiet title proceeding.

§ 65-3-22, N.M.S.A., 1953 Comp., establishes the procedure for review of orders of the Oil Conservation Commission. Appellants, in this prorationing proceeding, may not collaterally question the prior order of the Commission determining the vertical and horizontal limits of the South Carlsbad Morrow pool. Such questions must be raised in appeals from the order pursuant to § 65-3-22, supra, or where the Commission has retained jurisdiction for making further orders in the case (Tr. 127-128), by a motion for rehearing.

Appellants actually contested the horizontal boundaries of the South Carlsbad Morrow gas pool by filing an application with the Commission which held a hearing thereon; and by filing an appeal from the adverse ruling of the Commission to the District Court of Eddy County, Case No. 4795 (Tr. 55), which was dismissed with prejudice by appellants. How many times can appellants question the ruling of the Commission that the wells were producing from the same pool?

(B) IF IT IS IMPRACTICABLE TO DO SO, THE COMMISSION IS NOT REQUIRED TO DETERMINE THE RESERVES UNDER EACH TRACT OR IN THE POOL.

The Legislature, possibly recognizing the unknowns and inherent difficulty in making the requisite geologic and engineering determinations in new pools and in certain hydrocarbon reservoirs (such as the Morrow), liberally sprinkled the words "practically" and "practicable" throughout the oil and gas conservation statutes dealing with allocation of production. In protecting correlative rights under the prorationing statute, § 65-3-13(c), N.M.S.A., 1953 Comp., the Commission may give equitable consideration to certain factors as may from time to time exist, and insofar as is practicable, shall prevent drainage between producing tracts in a pool which is not equalized by counterdrainage. In the pooling statute, § 65-3-14(a), N.M.S.A., 1953 Comp., the rules, regulations or orders shall, so far as it is practicable to do so, being an amount, so far as can be practically determined and so far as can be practicably obtained without waste. Similar use of "practicable" is made in the statutory definition of correlative rights at § 65-3-29(H), N.M.S.A., 1953 Comp.

The opinion in Continental, supra, does not reveal any evidence that it was not practicable to determine the amount of gas under the various tracts or in the pools. In Continental, supra, the Jalmat Pool was first prorated in 1954, the application to change the formula was heard in 1958, so production in

the pool had existed for at least four years at the time of hearing. In these two areas, Continental, supra, is distinguishable from the facts in this case. In El Paso, supra, the Commission did determine recoverable gas under the tracts and under the Basin-Dakota gas pool, so it was not impractical to do so.

In Continental and El Paso, supra, the Court was primarily concerned with the definition of correlative rights, § 65-3-29(H), N.M.S.A., 1953 Comp., noting its similarity to § 65-3-14(a), N.M.S.A., 1953 Comp. Under this statute, correlative rights is the opportunity afforded to the owner of a property to produce, without waste, his just and equitable share of gas in the pool. This share is an amount, so far as can be practically determined, substantially in the proportion that recoverable gas under the property bears to the recoverable gas in the pool.

In a non-homogeneous reservoir characteristic of the Morrow formation (Tr. 79 and 166), and in a new field without bottom-hole pressure and production history (Tr. 123), it is impracticable to reasonably determine the reserves under each tract and in the pool. Whether a thing is practicable depends on the actualities, the very facts and circumstances of the case, and an act is practicable if conditions and circumstances are such as to permit its performance or to render it feasible; but a thing is not practicable if some element essential to its accomplishment is lacking. 72 C.J.S. Practicable, p. 467,

"Reasonably possible" would mean substantially the same as "practicable." Woody vs. South Carolina Power Co., 24 S.E.2d 121. But the word "practicable," is not synonymous with "possible," but means "feasible, fair and convenient." In re Northern Redwood Lumber Co., D.C.Cal., 43 F.Supp. 15 and 17.

It is our position that it was not practicable or reasonably possible, under the circumstances existing in the South Carlsbad pool on April 19 and 20, 1972, to determine the reserves under each tract and in the pool. The testimony of witnesses Stamets, Utz, Taylor and Motter confirm this impracticability. The only contrary testimony was offered by witness Raney.

Geologist R. L. Stamets testified with respect to the impracticability of determining reserves in the Morrow.

> Q Have you formed any opinion as to the difficulty in determining the quantity of recoverable gas under each tract?
>
> A I have arrived at a number of conclusions. I can conclude that the Morrow sands in the South Carlsbad Pool are really rather typical of the Morrow sands in Eddy County. They show a considerable amount of thickening and thinning and discontinued unity (discontinuity) over short distances. The porosities are very wide between wells in the same zones and water saturation varies from twenty percent to eighty percent. Further, the Morrow is notorious for being damaged by drilling, even to the point of furiously (seriously) affecting the producibility of the zone or the well. It is possible to have indicated gas pays without the capability of producing in part or in whole because of this damage.
>
> All of the factors which I have cited here tend to confuse the reserve calculations in the Morrow formation. (Tr. 79, 80). (Parenthetical words added for clarification.)

On cross examination:

Q As a practicable matter can the Commission comply with the directive of our New Mexico Supreme Court?

A You have asked quite a difficult question.

Q I am aware of that.

A Comply absolutely? Mr. Kellahin, I do not feel that we can do that as a practicable matter . . . (Tr. 87)

Q . . . Can the Commission do this in these two pools bearing in mind it must be a practicable matter.

A Considering the practicability I am going to have to answer at this time, no. After the presentation of the Exhibits and the testimony by the other people who are interested I may be forced to change my answer, but from my own investigation and my own observations at this time, because of the lack of cores, and with all of the problems that exist in this reservoir, I am going to have to answer no right now. (Tr. 88)

Cities Service geologist E. E. Taylor, on practicability of determining reserves in the Morrow:

Q Based on your geological studies, have you arrived at any conclusion in reference to the geology in this field, the Morrow?

A Yes, sir. For one thing these cross sections show we are dealing with -- we are not dealing with a simple homogeneous formation, but we are rather dealing with 600 feet of Morrow and it is very difficult, if not impossible to determine the Morrow members.

Also, as determined from the electric logs, visual examination of the wells, cuttings and sedimentation, it would be very difficult to determine the exact net feet of pay for an individual well especially when you try to project that net feet of pay over a 320 acre productive unit.

Q To paraphrase your opinion, and correct me if I am wrong, you cannot predict from location to location

what part of the Morrow formation will be productive nor how thick the productive interval will be until you drill it and perforate it; is that correct?

A In essence, that is correct.

Q Would it follow that if you do not have perforated intervals, that you cannot predict the productivity until there is perforation?

A Yes, sir.

Q You have not presented an isopach, a net pay isopach, would you tell us why not?

A The reason I haven't presented one is because after I went to all of the trouble of making it it wouldn't allow me to, in my opinion, make a very good determination of the recoverable reserves. Therefore, I didn't prepare an isopach.

Q Would you say that as many geologists who prepare isopachs you would have as many difference interpretations of the isopachs as there are geologists?

A Very likely. (Tr. 166)

An isopach map represents the thickness of a formation by contour lines drawn through points of equal thickness. Williams & Meyers, Manual of Oil and Gas Terms, p. 231. Mr. Taylor felt it was impracticable to prepare an isopach map of the Morrow formation because it would not be a very good tool to reasonably determine reserves.

Cities Service regional engineer, E. F. Motter, testified with respect to the impracticability of utilizing acreage productivity, acreage reserves, wellhead pressure and bottomhole pressure (mentioned in § 65-3-13(c), N.M.S.A., 1953 Comp., as proper considerations) to allocate production in the South Carlsbad Morrow pool. This witness disregarded these factors

due to the complexity of the reservoir and because they are based upon interpretation (Tr. 173-174). Mr. Motter then studied the practicability of using deliverability and opined that deliverability in itself indicates the producing capacity of the wells but not necessarily recoverability of reserves; and based on his engineering study rejected deliverability or open flows and recommended straight acreage (Tr. 182-183).

Commission engineer, Elvis Utz (Tr 123), testified that without production history in the new field he could not make a valid computation of the pressure production decline.

On the other hand, Pennzoil engineer, J. C. Raney, offered a proposal to determine the reserves in each tract and in the pool by determining the hydrocarbon pore volume (Tr. 235-237). However, at the time of hearing, the witness had only computed the reserves under three of the wells in the pool (Tr. 240).

We point out numerous references in the transcript to hydrocarbon core volume, when in fact the proper term is hydrocarbon pore volume. We mention this matter, not to correct the transcript, but to clarify the language in this argument and in any possible language in the opinion of this Court. Williams & Meyers Manual of Oil and Gas Terms, page 404, under Saturated hydrocarbon pore space, defines pore space.

Mr. Raney confirmed that there was not sufficient production history to determine reserves (Tr. 261). The witness admitted that the proposed formula contained "gray

areas which are subject to refinement" and also he would not say that his proposed formula was the best way to do it, but it was one equitable way to do it" (Tr. 244).

None of appellants' witnesses, Charles P. Miller, Richard Steenholz, R. W. Decker or Corinne Grace, offered any practicable method of determining recoverable reserves. A review of their entire testimony will reflect that they all felt further data must be developed with history of the pool before a formula could be devised to practically determine the reserves.

Under the substantial evidence rule, the testimony of witnesses Stamets, Taylor, Motter and Utz was sufficient to sustain Commission Findings 70, 72, 74 and 75 (Tr. 10-11). The substance of these findings is that it was impracticable, at the time of hearing and considering the nature of the formation, to determine the reserves under each tract and in the pool.

Obviously, it is possible to determine the reserves because Witness Raney did it for three wells. In Pittsburg, C., C. & St. L. R. Co. vs. Indianapolis, Columbus & S. Traction Co., 169 Ind. 634, 81 N.E. 487 (1907), and Miller vs. State, 440 P.2d 840 (1968 Wash.), the word "practicable," as used in statutes under consideration, was not, as the modern dictionary would have it, synonymous with "possible" for the reason that, in dealing with an engineering project, "A thing practicable must necessarily be possible, but a thing may be possible that is not practicable."

To regard possible as synonymous with practicable in our prorationing statutes, would create a redundancy. Obviously the Legislature did not intend to rule out a determination of reserves when it was only impossible, but rather when it was impracticable as well.

Where, as in this case, the Commission found waste and also that it was impracticable to determine reserves under each tract and in the pool, may a valid prorationing order still be issued? Surely the Legislature did not intend to discriminate against new pools without production history or non-homogeneous reservoirs by refusing to set up the mechanism to prorate those pools when it was not reasonably possible to determine the reserves under each tract and under the pool.

The substance of § 65-3-13(c), N.M.S.A., 1953 Comp., is that the total allowable natural gas production from any pool may be fixed by the Commission in an amount less than that which the pool could produce if no restrictions were imposed, when such prorationing is instituted to prevent waste and is made upon a reasonable basis and recognizes correlative rights. The Commission was presented with substantial evidence that waste of reservoir energy was occurring (Tr. 167, 190, 192, 194 and 195), straight acreage was a reasonable basis (Tr. 183, 188 and 189), and correlative rights were being violated (Tr. 51, 58, 72, 87, 129, 189, 273, O.C.C. Exhibits 9 and 10). Even amicus curiae admits that correlative rights are protected under the straight acreage formula (Amicus Curiae Brief-in-Chief, p. 9).

Under all of the circumstances of this case, the Commission was not required, before instituting prorationing, to determine recoverable reserves under each tract and under the pool when it was impracticable to do so.

(C) THE ORDER OF THE COMMISSION AFFORDS THE OPPORTUNITY, SO FAR AS IT IS PRACTICABLE TO DO SO, TO THE OWNER OF EACH PROPERTY IN THE POOL, TO PRODUCE WITHOUT WASTE HIS JUST AND EQUITABLE SHARE OF THE GAS IN THE POOL

The argument advanced by appellant in Point One (C) is a combination of the arguments advanced in One (A) and (B). (A) is erroneous because there is substantial evidence that the wells in the South Carlsbad Morrow pool were all producing from the same pool, and also for the reason that this is a collateral attack on a prior valid order of the Commission. (B) is also erroneous because the Commission is not required to determine the reserves under each tract or in the pool when it is not practicable to do so.

Commission witness Stamets testified that it was impractical to determine reserves (Tr. 80, 88). On cross examination, the witness admitted that he could come up with a figure for reserves, but the majority of operators in the field would not accept the figure (Tr. 89, 90). Mr. Stamets was a geologist (Tr. 69) and the Commission's testimony was to the effect that the testimony on available pressure data was properly developed by its engineer, Elvis Utz (Tr. 94-97). Mr. Stamets testified that because there were no cores taken on the wells he could not affirmatively say that there was vertical fracturing in the Morrow, but this did not rule out vertical fracturing (Tr. 99-100), nor did it rule out communication behind the pipe in the wells because of a poor cement job (Tr. 96) and

communication through perforation in the well bores (Tr. 101).

Commission witness Utz testified that there was not sufficient production history to make a valid computation of the pressure production decline (Tr. 123). Mr. Utz testified that geological information was used by the Commission staff in recommending establishment of pool extensions in New Mexico (Tr. 124-125).

Cities Service geologist, E. E. Taylor, admitted that you could not determine from location to location (1/2 mile apart) what zone of the Morrow will be productive, nor how thick the productive interval will be until you drill it and perforate it (Tr. 167), but prorationing does not affect the undrilled locations. Mr. Taylor admitted that he did not prepare a net pay isopach map because, in his opinion, it would not be a very good determination of recoverable reserves (Tr. 168). The witness admitted there might be means other than a net pay map (probably cores and sufficient production pressure history) for determining reserves if you had sufficient data (Tr. 170).

Cities Service engineer, E. F. Motter, testified that "acreage is as good a way as we have available to prorate a field until further geological data is developed" (Tr. 189). Pennzoil Engineer, J. C. Raney, in espousing his formula for determining reserves based upon the hydrocarbon pore volume, included testimony that in the absence of cores, a set of logs available on all wells could be used (Tr. 234-237). Mr. Raney

testified that he did not have a bottom-hole sample to determine the pressure point in the reservoir, which gas would change to a liquid, but considering his technical background, this would occur at some pressure point in the reservoir (Tr. 252). Appellants' geologist, Charles Miller, was inclined to think that we did not have all the information we need to make the determination of reserves in the pool (Tr. 285).

A pressure decline curve, based upon substantial production history, is a valuable tool in calculating reserves in a Morrow gas field. However, there was only about six months' production from most of the wells in the field at the time of hearing (Commission Exhibit 9). Cores are also helpful in determining effective feet of pay, but none of the operators in the field had cored the Morrow sand (Tr. 99). There is nothing in § 65-3-13 N.M.S.A., 1953 Comp. which requires the Commission, in protecting correlative rights and allocating production, to solely consider a pressure decline curve or data obtained from cores. The Commission did consider effective feet of pay and rejected it (Commission Finding 74) because of the nature of the Morrow reservoir. The Commission also considered deliverability and rejected it (Commission Finding 75) because of the effect of water saturation, lack of perforation of all possible producing zones, manner in which test is taken, and effect of well stimulation.

Cities Service engineer, E. F. Motter's, entire testimony (Tr. 172-192) concerned the use of deliverability as a tool

in prorating the South Carlsbad Morrow field, including testimony (Tr. 175-177) of the wide disparity in deliverability among the wells. The witness testified that deliverability was not necessarily indicative of the recoverable reserves underlying a particular tract (Tr. 176), open flows or deliverability are always dependent in some way on several other factors (Tr. 177), such as the manner in which the open flow or deliverability test is taken or the well is stimulated (Tr. 178). The witness testified with respect to the wide effects of stimulation (Tr. 178-181), including the investigation of the effect of stimulation or treatment of 50 to 75 Morrow wells in Southeastern New Mexico (Cities Service Exhibit 7). Based on such studies, the witness testified that although deliverability may indicate the producing capacity of the well, it does not necessarily relate to recoverable reserves (Tr. 182). After the exhaustive study of deliverability, the witness was asked the following question:

> Q Considering all of the information available, and even the lack of information available, is it your opinion insofar as is practicable, that surface acreage allocation would be indicative of the recoverable reserves underlying the three hundred twenty acre units?
>
> A I think it is one of the best factors we have available to us (Tr. 183).

On cross examination Mr. Motter testified with respect to the use of acreage in a proration formula:

> Q As I gather from your testimony, you didn't feel that deliverability has any direct relationship to recoverable reserves?

A In the Morrow formation, I feel it is not a reliable factor whatsoever.

Q So you rejected it as a measure?

A Yes, I would think I would have to do that.

Q The only thing you have left, according to your testimony, is acreage?

A Yes.

Q Because you can measure it?

A Right.

Q Will acreage give you an accurate measure, even a reasonably accurate measure, of the reserves underlying any tracts?

A I think it's as good as anything we have available for proration purposes. As far as reserve information I don't believe we have information for use, it is very difficult to interpret this from electric logs, whether you have pay or not, until you actually have perforation to know whether that zone is productive.

It might look good on the log, but it might not produce one MCF. (Tr. 186)

It was not the Cities Service geologist who described the deliverability of some of the wells as excellent and others as stinkers, but the testimony of Commission engineer Elvis Utz (Tr. 109). Mr. Utz testified that deliverability was affected by liquids in the well bore (Tr. 111), and Mr. Motter subsequently testified that it was also dependent upon the manner in which the deliverability test was taken (Tr. 178) and the manner in which the well was treated or stimulated (Tr. 178-181).

The conclusion reached by appellants (Brief-in-Chief p. 27) is erroneous. Although some wells have excellent

deliverability, others are stinkers, yet deliverability does not necessarily relate to recoverable reserves. Actually the Commission's general rule on proration, R-1670, as amended, does not limit production of good wells by stinkers. The stinkers are classified as marginal wells and allowed to produce at capacity. The good wells are classified as non-marginal wells and allowed to produce their proportionate shares of the remaining purchaser nominations. When the field is depleted the stinkers and good wells will have produced their just and equitable shares of gas in the pool, substantially in the proportion that the recoverable gas under each well bears to the total recoverable gas in the pool.

Pennzoil engineer J. C. Raney testified at Oil Commission Transcript Page 209 (Tr. 271) with respect to the reservoir quality (not recoverable reserves) under the Humble-Grace well. A reading of the entire transcript will reveal that this was the only witness who proposed a formula for prorating the South Carlsbad Morrow field other than on a straight acreage basis. The additional factor in this witness's formula was hydrocarbon pore volume (Tr. 234). Witness Raney admitted that the subject of gas in place (hydrocarbon pore volume) under a unit in relation to recovery of hydrocarbons (recoverable reserves) is the subject of wide controversy and there was not sufficient production pressure history on the Morrow pool to determine the effect (Tr. 261). Correlative rights are determined by recoverable gas (§ 65-3-29[H], N.M.S.A., 1953 Comp.), not gas in place.

At Brief-in-Chief 26, appellants contend the Commission relied on past treatment of the field as well as a five- or six-year-old order establishing the pool. The order establishing the South Carlsbad Morrow Field was three years old at time of hearing. Actually, the testimony of Mr. Stamets (Tr. 79, 97) is to the effect that the Commission had generally treated the Morrow formation in Southeastern New Mexico, with its separate stringers, as a single producing zone; Mr. Utz (Tr. 110) was referring to the prior order of the Commission (Tr. 4), establishing the vertical and horizontal limits of the South Carlsbad Morrow pool; and Mr. Stamets (Tr. 97-99) was testifying with respect to the five- or six-year-old order prorating the Indian Basin Morrow gas pool, where the interested parties were protesting and not standing in line to accept what the witness had to say. The Commission did not assume that all wells were being produced from the same pool, but instead relied upon the substantial evidence shown in our Response to Point One (A), and valid Commission Order R-3731 creating the horizontal and vertical limits of the pool. Even appellants' witness, Charles Miller, admitted communication of the Morrow at the well bore (Tr. 92) and appellants' witness, R. W. Decker, admitted poor communication in the Morrow but he did not deny communication (Tr. 309). The testimony of Cities Service witness Motter that you cannot predict what part of the Morrow formation will be productive or how thick the productive interval will be until you drill it, should not affect the validity of a

prorationing order which does not extend to undrilled locations. Mobil Oil Corporation, not a year earlier but on the date of the Commission hearing, April 19 and 20, 1972, recommended by letter a formula which included, in addition to acreage, operating deliverability. Mobil did not present any evidence to support such allocation.

The Commission, in adopting a 100% surface acreage formula, was acting to protect the correlative rights of the owners of each property in the pool by affording to them the opportunity to produce their just and equitable share of the gas in the pool. Finding 81, adopting a 100% surface acreage, was the most reasonable basis for allocating allowable production among the wells (Tr. 183, 186, 189). In the two-day hearing no one expert witness opined that a 100% surface acreage formula was not a reasonable basis for allocating production. Appellees submit that a 100% surface acreage formula in the South Carlsbad Morrow Pool was adopted by experienced officials with an adequate appreciation of the complexities of the subject matter which was entrusted to their administration.

RESPONSE TO POINT TWO

THE APPELLANTS WERE NOT ENTITLED TO A STAY OF JUDGMENT, BUT THE QUESTION IS NOW MOOT

This case should not be remanded for further proceedings. Judicial review of orders of the State Corporation Commission, State vs. Transcontinental Bus Service, 53 N.M. 367, 208 P.2d 1073 (1949), Transcontinental Bus Service vs. State Corporation Commission, 56 N.M. 158, 241 P.2d 829 (1952), National Trailer Convoy vs. State Corporation Commission, 64 N.M. 97, 324 P.2d 1023 (1958), and of the Public Service Commission, New Mexico Electric Service Company vs. Lea County Electric Cooperative, 76 N.M. 434, 415 P.2d 556 (1966), have been limited to affirming or reversing the order.

Four motions have been filed in this Court to stay the judgment of the District Court upholding the order of the Commission. Four times, September 17, November 1, December 12 and December 28, 1973, twice after hearing and argument, this Court has denied appellants' motion for stay of judgment.

If this Court, as appellees and intervenor Cities Service Oil Company, urge, affirms the judgment of the trial court, appellants are clearly not entitled to a stay of judgment. If this Court overturns the judgment of the trial court, then clearly there will be no judgment to stay.

In this point, appellants urge they were entitled to a stay of the District Court judgment (upholding the order of the Commission) as a matter of right, because of Rule 62 of the

Rules of Civil Procedure. However, Rule 62 does not govern suspension of the operation of an order of the Oil Conservation Commission. Rule 1 of the Rules of Civil Procedure provides that the rules (including Rule 62) govern the procedure in the district courts of New Mexico, except in special statutory and summary proceedings where existing rules are inconsistent herewith. § 65-3-22, N.M.S.A., 1953 Comp., deals with rehearings and appeals from orders of the Oil Conservation Commission and provides in part:

> (c) The pendency of proceedings to review shall not of itself stay or suspend operation of the order or decision being reviewed, but during the pendency of such proceedings, the District Court in its discretion may, upon its own motion or upon proper application of any party thereto, stay or suspend, in whole or in part, operation of said order or decision pending review thereof . . .
>
> (d) The applicable rules of practice and procedure in civil cases for the courts of this State shall govern the proceedings for review and any appeal therefrom to the Supreme Court of this State, to the extent such rules are inconsistent with the provisions of this act. (Underlineation added.)

To the extent that Rule 62 may authorize, except in special cases, a stay of judgment as a matter of right, it is inconsistent with § 65-3-22, supra, to the extent that such stay is a matter of discretion.

The trial court had the discretion to deny the motion to stay the Commission's order, which Judge Snead did after a one-day hearing on the matter.

RESPONSE TO AMICUS CURIAE BRIEF

To the extent that amicus curiae proposes abandonment of correlative rights, it is a return to the law of capture, and contrary to § 65-3-10, 11, 13, 14, 15 and 29, N.M.S.A., 1953 Comp., as amended. Appellee and intervenor do not believe that the other matters raised in this brief are applicable to this appeal.

CONCLUSION

In the early stage of development of the South Carlsbad Morrow Field, it was impracticable to reasonably determine the reserves under each tract and in the pool. The Oil Conservation Commission, in adopting a straight acreage formula, selected the only reasonable basis for prorationing which would afford the opportunity for each owner in the pool to produce, without waste, his just and equitable share of gas in the pool. The order is lawful and was supported by substantial evidence.

We respectfully submit that the judgment of the trial court upholding the order of the Oil Conservation Commission should be affirmed.

Respectfully submitted,

KELLAHIN & FOX

By: _____
Jason W. Kellahin
P. O. Box 1769
Santa Fe, New Mexico 87501

Attorneys for Intervenor
Cities Service Oil Company

William F. Carr

William F. Carr, Special
Assistant Attorney General
P. O. Box 2088
Santa Fe, New Mexico 87501

LOSEE & CARSON, P.A.

By: A. J. Losee

A. J. Losee, Special
Assistant Attorney General
P. O. Drawer 239
Artesia, New Mexico 88210

Attorneys for Oil Conservation Commission

LAW OFFICES
LOSEE & CARSON, P.A.
A. J. LOSEE
JOEL M. CARSON
300 AMERICAN HOME BUILDING
P. O. DRAWER 239
ARTESIA, NEW MEXICO 88210
AREA CODE 505
746-3508

24 January 1974

Mr. Jason Kellahin
Kellahin & Fox
P. O. Box 1769
Santa Fe, New Mexico 87501

Mr. William F. Carr, Attorney
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Michael P. Grace II et al, Appellants,
Oil Conservation Commission, Appellee,
Cities Service Oil Company, Intervenor,
No. 9821

COPY

Dear Jason and Bill:

Enclosed, you will each find a proposed draft of our Answer Brief. I have no pride of authorship. The brief is on Mag cards, so please take the liberty of editing it at will.

Four matters have not been included in this brief. I did not urge that appellants were limited by their application for a rehearing to arguing on appeal only lack of jurisdiction. Joel did some work on this point and tentatively concluded that jurisdiction in administrative hearings was a broad area. If such be the case, I do not see the need for the proviso in § 65-3-22(b). If either of you can do some research on this point and conclude to the contrary, I wish you would prepare the argument thereon.

I was unable to make a valid argument that the Commission, in establishing a straight-acreage formula, had determined reserves under each tract and in the pool. I realize that if we cannot successfully argue such matter, the case will stand or fall on our response to Point One (D). If either of you would like to try the argument that the Commission did actually determine reserves, in the language of Continental, as modified by El Paso, please do so.

I have not yet drafted a conclusion to the brief, and thought it would be best to wait until its format had been definitely established. In addition, I have not responded to the Amicus Curiae Brief-in-Chief, because I did not get excited about the points raised nor could I determine if such response should be included in our answer to appellants' Brief-in-Chief.

I will be out of town from January 26 to February 2. During this period, please take all practicable liberties with our brief. Upon my return, we can determine if it is necessary for me to come to Santa Fe for a day or two to work with the two of you on the final draft of the brief.

Very truly yours,

LOSEE & CARSON, P.A.

A. J. Losee

AJL:jw
Enclosure

DRAFT 1/24/74

IN THE SUPREME COURT OF THE

STATE OF NEW MEXICO

MICHAEL P. GRACE II and
CORINNE GRACE,

Petitioners-Appellants,

vs.

OIL CONSERVATION COMMISSION
OF NEW MEXICO,

No. 9821

Respondent-Appellee,

and

CITIES SERVICE OIL COMPANY and
CITY OF CARLSBAD, NEW MEXICO,

Intervenors.

ANSWER BRIEF OF APPELLEE AND
INTERVENOR CITIES SERVICE OIL COMPANY

JASON W. KELLAHIN
KELLAHIN & FOX
P. O. Box 1769
Santa Fe, New Mexico 87501

Attorneys for Intervenor
Cities Service Oil Company

WILLIAM F. CARR
Special Assistant Attorney General
P. O. Box 2088
Santa Fe, New Mexico 87501

A. J. LOSEE
Special Assistant Attorney General
P. O. Drawer 239
Artesia, New Mexico 88210

Attorney for Oil Conservation
Commission

I N D E X

SUPPLEMENTARY STATEMENT OF PROCEEDINGS

Oil Conservation Commission Cases 4693, involving prorationing in the South Carlsbad Morrow Pool, and 4694, involving prorationing in the South Carlsbad Strawn Pool, were consolidated for hearing only and two separate orders were proposed to be issued and actually were issued affecting the separate pools (Tr. 64-68).

Appellee objected to the amended petition for review on the grounds that it enlarged upon the matters presented to the Oil Conservation Commission on the application of appellants for rehearing (Tr. 387-393). Judge Snead overruled the objection (Tr. 393).

RESPONSE TO POINT ONE

THE ORDER OF THE OIL CONSERVATION COMMISSION WAS NOT ARBITRARY, UNREASONABLE, UNLAWFUL OR CAPRICIOUS, AND THE JUDGMENT OF THE TRIAL COURT SHOULD BE AFFIRMED.

In Continental Oil Company vs. Oil Conservation Commission, 70 N.M. 310, 373 P.2d 809 (1962), and in El Paso Natural Gas Co. vs. Oil Conservation Commission, 76 N.M. 268, 414 P.2d 496 (1966), the Commission was concerned with applications to change an existing prorationing formula. In the instant case the Commission was concerned with establishing a new formula in a relatively new pool that was not completely developed (Tr. 73).

The Commission, to prevent waste, may allocate production among the producers in a pool, upon a reasonable basis and recognizing correlative rights. § 65-3-13(A), N.M.S.A., 1953 Comp., as amended. In protecting correlative rights, the Commission may consider acreage, pressure, open flow, porosity, permeability, deliverability and quality of the gas and such other pertinent factors as may from time to time exist. § 65-3-13(C), N.M.S.A., 1953 Comp., as amended.

In the April 19 and 20, 1972, hearing, the Commission was concerned with the necessity of allocating production in the South Carlsbad Strawn and Morrow pools. The two separate cases were consolidated for hearing purposes only and two separate orders were proposed to be issued and actually were issued affecting the separate horizons (Tr. 64, 68). The

Strawn and Morrow horizons are both included within the Pennsylvanian Formation, but they are vastly dissimilar in composition and pay quality (Tr. 91, 241, 263). This appeal is only concerned with a review of the order prorating the South Carlsbad Morrow pool, and it is not concerned with any evidence in the record relating solely to the Strawn horizon.

The Pennsylvanian formation is common throughout Southeastern New Mexico, and its Morrow member is one of the most prevalent gas-producing horizons in that area (Cities Service Exhibits 8 and 9). Substantially all of the prorated gas pools in Southeastern New Mexico are prorated on a straight acreage formula (Tr. 121 and 185).

The South Carlsbad Morrow pool, ~~is quite common to a~~ number of ~~zones producing in the Morrow formation~~ in Southeastern New Mexico. These zones are not sufficiently continuous to be economically drilled and the Commission, recognizing this, has generally treated the Morrow formation as a single producing zone when it was encountered in Southeastern New Mexico. These Morrow sands show a considerable amount of thickening and thinning and discontinued unity over short distances. Porosities and water saturation vary greatly between wells in the same zone. The Morrow is easily damaged by drilling, even to the extent of destroying the capability of an indicated gas zone to produce commercial oil or gas (Tr. 79, 166, 167). The calculated open flow or deliverability of a Morrow gas well is greatly affected by the water saturation,

manner in which open flow test is taken, and the method in which the well is stimulated or treated for completion (Tr. 178).

The Commission, based upon its administrative experience in Southeastern New Mexico, and the evidence of these characteristics of the Morrow, determined that recoverable reserves could not be practically determined by data (effective feet of pay, porosity, water saturation and deliverability) obtained at the well bore (Commission Findings 72, 74 and 75, Tr. 11).

The only reasonably accurate tool in determining reserves in the Morrow formation is a pressure decline curve based upon substantial withdrawals of gas from the reservoir. Commission Exhibit 9 sets forth the dates each Morrow well was connected to a pipeline and commenced to produce gas. The first well started producing in September, 1969, but the great majority of wells were not connected until the fall of 1971, about six months before the April, 1972, Commission hearing. There had not been enough gas production from the field to expect reasonably accurate results from a pressure decline curve (Tr. 95).

(A)1 THERE IS SUBSTANTIAL EVIDENCE THAT THE WELLS WERE PRODUCING FROM THE SAME POOL.

"Substantial evidence" is "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." Ft. Sumner School Board vs. Parsons, 82 N.M. 610, 485 P.2d 366 (1971); Wickersham vs. New Mexico State Board of Education, 81 N.M. 188, 464 P.2d 918, Ct. of App. (1970). In deciding whether a finding has substantial support, the court must view the evidence in the most favorable light to support the finding and will reverse only if convinced that the evidence thus viewed, together with all reasonable inferences to be drawn therefrom, cannot sustain the finding. Any evidence unfavorable to the finding will not be considered. Martinez vs. Sears Roebuck & Company, 81 N.M. 371, 467 P.2d 37, Ct. of App. (1970), United Veterans Organization vs. New Mexico Property Appraisal Department, 84 N.M. 114, 500 P.2d 199 (1972 Ct. of App.).

Appellants point out that the horizontal limits of the pool had not yet been determined and imply that this is evidence that the wells were not all producing from the same pool (Brief-in-Chief p. 16). If this were a valid argument, the Commission would not have the authority to allocate production in a field until full development of the pool had been accomplished. After complete pool development, it is probably too late to prevent waste of reservoir energy and protect correlative rights. § 65-3-11(12), among other things, empowers the Commission, from time to time, to redetermine the limits of a

pool. The remainder of appellants' argument on Point One (A) is concerned principally with the vertical limits of the pool, namely the Morrow horizon.

The summarization of evidence with respect to whether the wells were producing from the same pool in Point One(A) of appellant's Brief in Chief is incomplete and to some extent misleading. For example, Commission geologist R. L. Stamets, using a completely comprehensible chart he prepared (Exhibit 4 entitled Carlsbad-Morrow Gas Pool Completion Map), testified that "there is no one pay zone common to every well in the pool," but "there is no one well producing from a zone wholly isolated from every other producing well in the field" (Tr. 75). An examination of this map will show that, although the Pennzoil Federal No. 1 Well was producing from a different zone than the Grace No. 1, and the Pan American No. 1 was producing from a different zone than the Grace well, yet other wells in the pool were producing from the same zones as each of these three wells, and as Mr. Stamets again opined, no well was producing from a wholly isolated zone (Tr. 79).

On Commission Exhibit 4, the perforations in the pipe are noted by the short horizontal lines (Tr. 75), and although there are no perforations common to every well in the field, it can readily be seen that there is no one well producing from a wholly isolated pay zone, and this was quite typical of the Morrow in Eddy County (Tr. 78).

Mr. Stamets summarized his testimony on direct examination:

Q Mr. Stamets, considering the Exhibits you have presented and your studies have you formed any opinion as to whether the South Carlsbad Morrow Pool -- rather the wells that you have shown here as producing from the South Carlsbad Morrow formation are all producing from one pool?

A Yes. As the Morrow Pools have been described they are quite common to a number of zones producing in the Morrow. In general these zones are not sufficiently continuous to be economically drilled and quite often they are not even economically feasible to make full completions out of, so the Commission has recognized this and the Morrow is generally treated as a single producing zone when it is encountered.

Q Are all of the wells on your Exhibit Number 3 connected throughout the formation?

A I believe I have so testified. (Tr. 79)

Mr. Stamets, a geologist (Tr. 69), did not consider pressures in determining that the wells were producing from the same fields as that data was to be presented by Commission Engineer Elvis Utz (Tr. 94). Mr. Stamets discussed vertical communication between the various producing Morrow sand intervals, viz. fracturing of the formation (Tr. 99), the effect of a poor cement job behind the pipe (Tr. 96), and communication in the well bore (Tr. 101), all showing vertical communication in the Morrow.

Mr. Stamets pointed out that the original pressure would likely not vary too much for similarly developed Morrow zones (Tr. 95). He did testify that no cores were taken and as a result you could not positively testify that vertical fracturing was occurring in the formation, but this did not rule out vertical fracturing in the formation and certainly did not rule out communication in the well bore (Tr. 101).

Mr. Stamets' testimony on cross examination (incompletely summarized Brief-in-Chief p. 17), was that, "I think my testimony was that you cannot find any well in there that is producing from a wholly isolated pool" Tr 97).

Oil Conservation Commission engineer Elvis Utz did testify that geology was used by the Commission in nomenclature hearings to determine pool limits (Tr. 125), contrary to the statement by appellant (Brief-in-Chief p. 18). Mr. Utz did state there was only one bottom-hole pressure reading available (Tr. 126) but as noted by Mr. Stamets, the original pressure would not vary too much for similarly developed zones and pressure differentials would not be noted until after the wells had been on production for a period of time (Tr. 95).

Cities Service regional geologist, E. E. Taylor, testified to a mine or fault running between the Gulf Federal and the Superior No. 1 State Well, in the neighborhood of 100 to 125 feet, which did not affect or interrupt the Morrow formation (Tr. 164). He opined that this fault will allow gas to migrate between the various Morrow zones in its vicinity and there could be fracturing of the formation in that particular area which would interconnect the zones in the Morrow (Tr. 171). Pennzoil Engineer, J. C. Raney personally had no reason to believe that the wells were not connected (Tr. 248).

Appellants' witness, Charles Miller, consulting geologist, admitted vertical connection of the numerous Morrow wells at the well bore (Tr. 292). Appellants' witness, R. W.

Decker, a consulting geologist, testified that there is poor communication throughout the Morrow (Tr. 309), but poor communication is communication.

Not a single witness denied that the wells were interconnected. The fact that the pool was in the early stages of development and horizontal limits had not been established (Tr. 73), was no evidence that the wells were not producing from the same pool.

The treatment by the Commission of all Morrow gas pools in Southeastern New Mexico as a common source of supply, was based not on a mere assumption, but was based on experience. One of the purposes which led to the creation of administrative commissions was to have decisions based on evidentiary facts made by experienced officials with an adequate appreciation of the complexities of the subject which was entrusted to their administration. It is permissible for such commissions to draw on experience in factual inquiries. Radio Officers Union vs. N.L.R.B., 347 U.S. 17, 98 L.Ed. 455 (1954).

The facts that (1) a fault existed which would allow gas to migrate vertically in its vicinity (Tr. 164), (2) there was communication in the well bores (Tr. 101, 292), and (3) no well was producing from a wholly isolated zone (Tr. 75, 79 and Commission Exhibit 4), is substantial evidence that the wells in the South Carlsbad Morrow Pool were interconnected.

(A)2 APPELLANTS MAY NOT COLLATERALLY ATTACK IN THIS PROCEEDING A PRIOR VALID ORDER OF THE COMMISSION THAT THE WELLS WERE PRODUCING FROM THE SAME POOL.

The Commission, on numerous occasions, correctly sustained objections to questions as to whether the wells were producing from the same pool, on the ground that the Commission had already determined by prior valid order the vertical and horizontal limits of the South Carlsbad Morrow gas pool (Tr. 246, 248, 281, 283 and 311).

§ 65-3-11(12), N.M.S.A., 1953 Comp., empowers the Commission to determine the limits of any pool or pools producing natural gas and from time to time to redetermine such limits. The Commission, by Order R-3731 dated April 18, 1969, created the South Carlsbad Morrow pool for the production of gas from the Morrow formation. The horizontal limits of the pool had been extended from time to time and at the time of hearing they contained approximately eight and one-half sections of land in Eddy County, New Mexico (Commission Findings 2, 3 and 4, Tr. 4). These findings were not challenged by appellants.

The procedure for such hearings was testified to by Mr. Stamets (Tr. 75-79). There can be no question but that due process was had. The Commission, in issuing its order (R-3731) defining the vertical and horizontal limits in the South Carlsbad Morrow pool, was acting in its judicial capacity. As a general rule orders of an administrative body are presumptively correct and valid. 73 C.J.S. Public Administrative

Bodies and Procedures, § 145, page 478; 2 Am.Jur.2d Administrative Law, § 495, page 305. Attempts to question in a subsequent proceeding the conclusiveness of a prior decision of an administrative agency have often been rejected on the grounds that like the judgment of a court a determination made by the administrative agency in its judicial or quasi judicial capacity is not subject to collateral attack. 2 Am.Jur.2d Administrative Law, § 493, p. 299; 73 C.J.S., Public Administrative Bodies and Procedures, § 146, p.479.

The New Mexico case is Jackman vs. A. T. & S. F. Ry. Co.,24 N.M. 278, 170 Pac. 1036 (1918). There a decision of the Secretary of the Interior and the exercise of the powers conferred upon him by the acts of Congress that a designated railroad company is entitled to a right-of-way over public lands was held not subject to collateral attack in a separate quiet title proceeding.

§ 65-3-22, N.M.S.A., 1953 Comp., establishes the procedure for review of orders of the Oil Conservation Commission. Appellants, in this prorationing proceeding, may not collaterally question the prior order of the Commission determining the vertical and horizontal limits of the South Carlsbad Morrow pool. Such questions must be raised in appeals from that order pursuant to § 65-3-22, or motions for rehearing where the jurisdiction of the Commission has been retained for making further orders in the case (Tr. 127-128).

Appellants actually contested the horizontal boundaries of the South Carlsbad Morrow gas pool by filing an appli-

cation with the Commission which held a hearing thereon; and by filing an appeal from the adverse ruling of the Commission to the District Court of Eddy County, Case No. 4795 (Tr. 55), which was dismissed with prejudice by appellants. How many times can appellants question the ruling of the Commission that the wells were producing from the same pool?

(B) IF IT IS IMPRACTICABLE TO DO SO, THE COMMISSION IS NOT REQUIRED TO DETERMINE THE RESERVES UNDER EACH TRACT OR IN THE POOL.

The Legislature, possibly recognizing the unknowns and inherent difficulty in making the requisite geologic and engineering determinations in new pools and in certain hydrocarbon reservoirs (such as the Morrow), liberally sprinkled the words "practically" and "practicable" throughout the oil and gas conservation statutes dealing with allocation of production. In protecting correlative rights under the prorationing statute, § 65-3-13(c), N.M.S.A., 1953 Comp., the Commission may give equitable consideration to certain factors as may from time to time exist, and insofar as is practicable, shall prevent drainage between producing tracts in a pool which is not equalized by counterdrainage. In the pooling statute, § 65-3-14(a), N.M.S.A., 1953 Comp., the rules, regulations or orders shall, so far as it is practicable to do so, being an amount, so far as can be practically determined and so far as can be practicably obtained without waste. Similar use of "practicable" is made in the statutory definition of correlative rights at § 65-3-29(H), N.M.S.A., 1953 Comp.

The opinion in Continental, supra., does not reveal any evidence that it was not practicable to determine the amount of gas under the various tracts or in the pools. In Continental, supra, the Jalmat Pool was first prorated in 1954, the application to change the formula was heard in 1958, so production in the pool had existed for at least four years at the time of

hearing. In these two areas, Continental, supra, is distinguishable from the facts in this case. In El Paso, supra, the Commission did determine recoverable gas under the tracts and under the Basin-Dakota gas pool, so it was not impractical to do so.

In Continental and El Paso, supra, the Court was primarily concerned with the definition of correlative rights, § 63-3-14(H), N.M.S.A., 1953 Comp., noting its similarity to § 63-3-14(a), N.M.S.A., 1953 Comp. Under this statute, correlative rights is the opportunity afforded to the owner of a property to produce, without waste, his just and equitable share of gas in the pool. This share is an amount, so far as can be practically determined, substantially in the proportion that recoverable gas under the property bears to the recoverable gas [redacted] the pool.

In a non-homogeneous reservoir characteristic of the Morrow formation (Tr. 79 and 166), and in a new field without bottom-hole pressure and production history (Tr. 123), it is impracticable to reasonably determine the reserves under each tract and in the pool. Whether a thing is practicable depends on the actualities, the very facts and circumstances of the case, and an act is practicable if conditions and circumstances are such as to permit its performance or to render it feasible; but a thing is not practicable if some element essential to its accomplishment is lacking. 72 C.J.S. Practicable, p. 467, "Reasonably possible" would mean substantially the same as

"practicable." Woody vs. Southern California Power Company, 24 S.E.2d 121. But the word "practicable," is not synonymous with "possible," but means "feasible, fair and convenient." In re Northern Redwood Lumber Co., D.C.Cal. 43 Fed.Supp. 15 and 17.

It is our position that it was not practicable or reasonably possible, under the circumstances existing in the South Carlsbad pool on April 19 and 20, 1972, to determine the reserves under each tract and in the pool. The testimony of witnesses Stamets, Utz, Taylor and Motter confirm this impracticability. The only contrary testimony was offered by witness Raney.

R. L. Stamets testified with respect to the impracticability of determining reserves in the Morrow.

> Q Have you formed any opinion as to the difficulty in determining the quantity of recoverable gas under each tract?
>
> A I have arrived at a number of conclusions. I can conclude that the Morrow sands in the South Carlsbad Pool are really rather typical of the Morrow sands in Eddy County. They show a considerable amount of thickening and thinning and discontinued unity over short distances. The porosities are very wide between wells in the same zones and water saturation varies from twenty percent to eighty percent. Further, the Morrow is notorious for being damaged by drilling, even to the point of furiously affecting the producibility of the zone or the well. It is possible to have indicated gas pays without the capability of producing in part or in whole because of this damage.
>
> All of the factors which I have cited here tend to confuse the reserve calculations in the Morrow formation. (Tr. 79).

On cross examination:

Q As a practicable matter can the Commission comply with the directive of our New Mexico Supreme Court?

A You have asked quite a difficult question.

Q I am aware of that.

A Comply absolutely? Mr. Kellahin, I do not feel that we can do that as a practicable matter . . . (Tr. 87)

Q . . . Can the Commission do this in these two pools bearing in mind it must be a practicable matter.

A Considering the practicability I am going to have to answer at this time, no. After the presentation of the Exhibits and the testimony by the other people who are interested I may be forced to change my answer, but from my own investigation and my own observations at this time, because of the lack of cores, and with all of the problems that exist in this reservoir, I am going to have to answer no right now. (Tr. 88)

Cities Service geologist E. E. Taylor, on practicability of determining reserves in the Morrow:

Q Based on your geological studies, have you arrived at any conclusion in reference to the geology in this field, the Morrow?

A Yes, sir. For one thing these cross section show we are dealing with -- we are not dealing with a simple homogeneous formation, but we are rather dealing with 600 feet of Morrow and it is very difficult, if not impossible to determine the Morrow members.

Also, as determined from the electric logs, visual examination of the wells, cuttings and sedimentation, it would be very difficult to determine the exact net feet of pay for an individual well especially when you try to protect that net feet of pay over a 320 acre productive unit.

Q To paraphrase your opinion, and correct me if I am wrong, you cannot predict from location to location what part of the Morrow formation will be productive nor how thick the productive interval will be until you drill it and perforate it; is that correct?

A In essence, that is correct.

Q Would it follow that if you do not have perforated intervals, that you cannot predict the productivity until there is perforation?

A Yes, sir.

Q You have not presented an isopach, a net pay isopach, would you tell us why not?

A The reason I haven't presented one is because after I went to all of the trouble of making it it wouldn't allow me to, in my opinion, make a very good determination of the recoverable reserves. Therefore, I didn't prepare an isopach.

Q Would you say that as many geologists who prepare isopachs you would have as many difference interpretations of the isopachs as there are geologists?

A Very likely. (Tr. 166)

Cities Service regional engineer, E. F. Motter, testified with respect to the impracticability of utilizing acreage productivity, acreage reserves, wellhead pressure and bottomhole pressure (mentioned in § 65-3-13(c), N.M.S.A., 1953 Comp.) as proper considerations. This witness disregarded these factors due to the complexity of the reservoir and because they are based upon interpretation (Tr. 173-174). Mr. Motter then studied the practicability of using deliverability and opined that deliverability in itself indicates the producing capacity of the wells but not necessarily recoverability of reserves; and based on his engineering study rejected deliverability or open flows and recommended straight acreage (Tr. 182-183).

Commission engineer, Elvis Utz (Tr 123), testified that without production history in the new field he could not make a valid computation of the pressure production decline.

On the other hand, Pennzoil engineer, J. C. Raney, offered a proposal to determine the reservoirs in each tract and in the pool by determining the hydrocarbon pore volume (Tr. 235-237). However, at the time of hearing, the witness had only computed the reserves under three of the wells in the pool (Tr. 240).

We point out numerous references in the transcript to hydrocarbon core volume, when in fact the proper term is hydrocarbon pore volume. We mention this matter, not to correct the transcript, but to clarify the language in this argument and in any possible language in the opinion of this Court. William & Myers Manual of Oil and Gas Terms, page 404 under Saturated Hydrocarbon Pore Space, defines pore space.

Mr. Raney confirmed that there was not sufficient production history to determine reserves (Tr. 261). The witness admitted that the proposed formula contained "gray areas which are subject to refinement" and also he would not say that his proposed formula was the best way to do it, but it was one equitable way to do it" (Tr. 244).

None of appellants' witnesses, Charles P. Miller, Richard Steenholz, R. W. Decker or Corinne Grace, offered any practicable method of determining recoverable reserves. A review of their entire testimony will reflect that they all felt further data must be developed with history of the pool before a formula could be devised to practically determine the reserves.

Under the substantial evidence rule, the testimony of witnesses Stamets, Taylor, Motter and Utz was sufficient to sustain Commission Findings 70, 72, 74 and 75 (Tr. 10-11). The substance of these findings is that it was impracticable, at the time of hearing and considering the nature of the formation, to determine the reserves under each tract and in the pool.

Obviously, it is possible to determine the reserves because Witness Raney did it for one tract. In Pittsburg, C., C. & St. L. R. Co. vs. Indianapolis, Columbus & S. Traction Co., 169 Ind. 634, 81 N.E. 487 (1907), and Miller vs. State, 440 P.2d 840 (1968 Wash.), the word "practicable," as used in statutes under consideration, was not, as the modern dictionary would have it, synonymous with "possible" for the reason that, in dealing with an engineering project, "A thing practicable must necessarily be possible, but a thing may be possible that is not practicable."

To regard possible as synonymous with practicable in our prorationing statutes, would create a redundancy. Obviously the Legislature did not intend to rule out a determination of reserves when it was only impossible, but rather when it was impracticable as well.

Where, as in this case, the Commission found waste and also that it was impracticable to determine reserves under each tract and in the pool, may a valid prorationing order still be issued? Surely the Legislature did not intend to discriminate against new pools without production history or non-

homogeneous reservoirs by refusing to set up the mechanism to prorate those pools when it was not reasonably possible to determine the reserves under each tract and under the pool.

The substance of § 65-3-13(c), N.M.S.A., 1953 Comp., is that the total allowable natural gas production from any pool may be fixed by the Commission in an amount less than that which the pool could produce if no restrictions were imposed, when such prorationing is instituted to prevent waste and is made upon a reasonable basis and recognizes correlative rights. The Commission was presented with substantial evidence that waste of reservoir energy was occurring (Tr. 167, 190, 192, 194 and 195), straight acreage was a reasonable basis (Tr. 183, 188 and 189), and correlative rights were being violated (Tr. 51, 58, 72, 87, 129, 189, 273, O.C.C. Exhibits 9 and 10). Even amicus curiae admits that correlative rights are protected under the straight acreage formula (Amicus Curiae Brief-in-Chief, p. 9). Under all of the circumstances of this case, the Commission was not required, before instituting prorationing, to determine recoverable reserves under each tract and under the pool when it was impracticable to do so.

(C) THE ORDER OF THE COMMISSION AFFORDS THE OPPORTUNITY, SO FAR AS IT IS PRACTICABLE TO DO SO, TO THE OWNER OF EACH PROPERTY IN THE POOL, TO PRODUCE WITHOUT WASTE HIS JUST AND EQUITABLE SHARE OF THE GAS IN THE POOL

The argument advanced by appellant in Point One (C) is a combination of the arguments advanced in One (A) and (B). (A) is erroneous because there is substantial evidence that the wells in the South Carlsbad Morrow pool were all producing from the same pool, and also for the reason that this is a collateral attack on a prior valid order of the Commission. B is also erroneous because the Commission is not required to determine the reserves under each tract or in the pool when it is not practicable to do so.

Commission witness Stamets testified that it was impractical to determine reserves (Tr. 80, 88). On cross examination, the witness admitted that he could come up with a figure for reserves, but the majority of operators in the field would not accept the figure (Tr. 89, 90). Mr. Stamets ~~was~~ is a geologist (Tr. 69) and the Commission's testimony was to the effect that the testimony on available pressure data was properly developed by its engineer, Elvis Utz (Tr. 94-97). Mr. Stamets testified that because there were no cores taken on the wells he could not affirmatively say that there was vertical fracturing in the Morrow, but this did not rule out vertical fracturing (Tr. 99-100), nor did it rule out communication behind the pipe in the wells because of a poor cement job (Tr. 96) and communication through perforation in the well bores (Tr. 101).

Commission witness Utz testified that there was not sufficient production history to make a valid computation of the pressure production decline (Tr. 123). Mr. Utz testified that geological information was used by the Commission staff in recommending establishment of pool extensions in New Mexico (Tr. 124-125).

Cities Service geologist, E. E. Taylor, admitted that you could not determine from location to location (1/2 mile apart) what zone of the Morrow will be productive, nor how thick the productive interval will be until you drill it and perforate it (Tr. 167), but prorationing does not affect the undrilled locations. Mr. Taylor admitted that he did not prepare a net pay isopach map because, in his opinion, it would not be a very good determination of recoverable reserves (Tr. 168). The witness admitted there might be means other than a net pay map (probably cores and sufficient production pressure history) for determining reserves if you had sufficient data (Tr. 170).

Cities Service engineer, E. F. Motter, testified that "acreage is as good a way as we have available to prorate a field until further geological data is developed" (Tr. 189). Pennzoil Engineer, J. C. Raney, in espousing his formula for determining reserves based upon the hydrocarbon pore volume, included testimony that in the absence of cores, a set of logs available on all wells could be used (Tr. 234-237). Mr. Raney

testified that he did not have a bottom-hole sample to determine the pressure point in the reservoir, which gas would change to a liquid, but considering his technical background, this would occur at some pressure point in the reservoir (Tr. 252). Appellants' geologist, Charles Miller, was inclined to think that we did not have all the information we need to make the determination of reserves in the pool (Tr. 285).

A pressure decline curve, based upon substantial production history, is a valuable tool in calculating reserves in a Morrow gas field. However, there was only about six months' production from most of the wells in the field at the time of hearing (Commission Exhibit 9). Cores are also helpful in determining effective feet of pay, but none of the operators in the field had cored the Morrow sand (Tr. 99). There is nothing in § 65-3-13 N.M.S.A., 1953 Comp. which requires the Commission, in protecting correlative rights and allocating production, to solely consider a pressure decline curve or data obtained from cores. The Commission did consider effective feet of pay and rejected it (Commission Finding 74) because of the nature of the Morrow reservoir. The Commission also considered deliverability and rejected it (Commission Finding 75) because of the effect of water saturation, lack of perforation of all possible producing zones, manner in which test is taken, and effect of well stimulation.

Cities Service engineer, E. F. Motter's, entire testimony (Tr. 172-192) concerned the use of deliverability as a tool

in prorating the South Carlsbad Morrow field, including testimony (Tr. 175-177) of the wide disparity in deliverability among the wells. The witness testified that deliverability was not necessarily indicative of the recoverable reserves underlying a particular tract (Tr. 176), open flows or deliverability are always dependent in some way on several other factors (Tr. 177), such as the manner in which the open flow or deliverability test is taken or the well is stimulated (Tr. 178). The witness testified with respect to the wide effects of stimulation (Tr. 178-181), including the investigation of the effect of stimulation or treatment of 50 to 75 Morrow wells in Southeastern New Mexico (Cities Service Exhibit 7). Based on such studies, the witness testified that although deliverability may indicate the producing capacity of the well, it does not necessarily relate to recoverable reserves (Tr. 182). After the exhaustive study of deliverability, the witness was asked the following question:

> Q Considering all of the information available, and even the lack of information available, is it your opinion insofar as is practicable, that surface acreage allocation would be indicative of the recoverable reserves underlying the three hundred twenty acre units?
>
> A I think it is one of the best factors we have available to us (Tr. 183).

On cross examination Mr. Motter testified with respect to the use of acreage in a proration formula:

> Q As I gather from your testimony, you didn't feel that deliverability has any direct relationship to recoverable reserves?

A In the Morrow formation, I feel it is not a reliable factor whatsoever.

Q So you rejected it as a measure?

A Yes, I would think I would have to do that.

Q The only thing you have left, according to your testimony, is acreage?

A Yes.

Q Because you can measure it?

A Right.

Q Will acreage give you an accurate measure, even a reasonably accurate measure, of the reserves underlying any tracts?

A I think it's as good as anything we have available for proration purposes. As far as reserve information I don't believe we have information for use, it is very difficult to interpret this from electric logs, whether you have pay or not, until you actually have perforation to know whether that zone is productive.

It might look good on the log, but it might not produce one MCF. (Tr. 186)

It was not the Cities Service geologist who described the deliverability of some of the wells as excellent and others as stinkers, but the testimony of Commission engineer Elvis Utz (Tr. 109). Mr. Utz testified that deliverability was affected by liquids in the well bore (Tr. 111), and Mr. Motter subsequently testified that it was also dependent upon the manner in which the deliverability test was taken (Tr. 178) and the manner in which the well was treated or stimulated (Tr. 178-181).

The conclusion reached by appellants (Brief-in-Chief p. 27) is erroneous. Although some wells have excellent deliverability, others are stinkers, yet deliverability does not neces-

sarily relate to recoverable reserves. Actually the Commission's general rule on proration, R-1670, as amended, does not limit production of good wells by stinkers. The stinkers are classified as marginal wells and allowed to produce at capacity. The good wells are classified as non-marginal wells and allowed to produce their proportionate shares of the remaining purchaser nominations. When the field is depleted the stinkers and good wells will have produced their just and equitable shares of gas in the pool, substantially in the proportion that the recoverable gas under each well bears to the total recoverable gas in the pool.

Pennzoil engineer J. C. Raney testified at Oil Commission Transcript Page 209 (Tr. 271) with respect to the reservoir quality (not recoverable reserves) under the Humble-Grace well. A reading of the entire transcript will reveal that this was the only witness who proposed a formula for prorating the South Carlsbad Morrow field other than on a straight acreage basis. The additional factor in this witness's formula was hydrocarbon pore volume (Tr. 234). Witness Raney admitted that the subject of gas in place (hydrocarbon pore volume) under a unit in relation to recovery of hydrocarbons (recoverable reserves) is the subject of wide controversy and there was not sufficient production pressure history on the Morrow pool to determine the effect (Tr. 261). Correlative rights are determined by recoverable gas (§ 65-3-29[H], N.M.S.A., 1953 Comp.), not gas in place. At Brief-in-Chief 26, appellants contend the Commission relied on

past treatment of the field as well as a five- or six-year-old order establishing the pool. The order establishing the South Carlsbad Morrow Field was three years old at time of hearing. Actually, the testimony of Mr. Stamets (Tr. 79, 97) is to the effect that the Commission had generally treated the Morrow formation in Southeastern New Mexico, with its separate stringers, as a single producing zone; Mr. Utz (Tr. 110) was referring to the prior order of the Commission (Tr. 4), establishing the vertical and horizontal limits of the South Carlsbad Morrow pool; and Mr. Stamets (Tr. 97-99) was testifying with respect to the five- or six-year-old order prorating the Indian Basin Morrow gas pool, where the interested parties were protesting and not standing in line to accept what the witness had to say. The Commission did not assume that all wells were being produced from the same pool, but instead relied upon the substantial evidence shown in our Response to Point One (A), and valid Commission Order R-3731 creating the horizontal and vertical limits of the pool. Even appellants' witness, Charles Miller, admitted communication of the Morrow at the well bore (Tr. 92) and appellants' witness, R. W. Decker, admitted pool communication in the Morrow but did not deny communication. The testimony of Cities Service witness Motter that you cannot predict what part of the Morrow formation will be productive or how thick the productive interval will be until you drill it, should not affect the validity of a prorationing order which does not extend to undrilled locations. Mobil Oil Corporation, not a

year earlier but on the date of the Commission hearing, April 19 and 20, 1972, recommended by letter a formula which included, in addition to acreage, operating deliverability. Mobil did not present any evidence to support such allocation.

The Commission, in adopting a 100% surface acreage formula, was acting to protect the correlative rights of the owners of each property in the pool by affording to them the opportunity to produce their just and equitable share of the gas in the pool. Finding 81, adopting a 100% surface acreage, was the most reasonable basis for allocating allowable production among the wells (Tr. 183, 186, 189). In the two-day hearing no one expert witness opined that a 100% surface acreage formula was not a reasonable basis for allocating production. Appellees submit that a 100% surface acreage formula in the South Carlsbad Morrow Pool was adopted by experienced officials with an adequate appreciation of the complexities of the subject matter which was entrusted to their administration.

RESPONSE TO POINT TWO

THE APPELLANTS WERE NOT ENTITLED TO A STAY OF JUDGMENT, BUT THE QUESTION IS NOW MOOT

This case should not be remanded for further proceedings. Judicial review of orders of the State Corporation Commission, State vs. Transcontinental Bus Service, 53 N.M. 367, 28 P.2d 1073 (1949), Transcontinental Bus Service vs. State Corporation Commission, 56 N.M. 158, 241 P.2d 829 (1952), National Trailer vs. State Corporation Commission, 64 N.M. 97, 324 P.2d 1023 (1958), and of the Public Service Commission, New Mexico Electric Company vs. Lea County Cooperative, 76 N.M. 434, 415 P.2d 556 (1966), have been limited to affirming or reversing the order.

Four motions have been filed in this Court to stay the judgment of the District Court upholding the order of the Commission. Four times, September 17, November 1, December 12 and December 28, 1973, twice after hearing and argument, this Court has denied appellants' motion for stay of judgment.

If this Court, as appellees and intervenors Cities Service Oil Company, urge, affirms the judgment of the trial court, appellants are clearly not entitled to a stay of judgment. If this Court overturns the judgment of the trial court, then clearly there will be no judgment to stay.

In this point, appellants urge they were entitled to a stay of the District Court judgment (upholding the order of the Commission) as a matter of right, because of Rule 62 of the

Rules of Civil Procedure. However, Rule 62 does not govern suspension of the operation of an order of the Oil Conservation Commission. Rule 1 of the Rules of Civil Procedure provides that the rules (including Rule 62) govern the procedure in the district courts of New Mexico, except in special statutory and summary proceedings where existing rules are inconsistent herewith. § 65-3-22, N.M.S.A., 1953 Comp., deals with rehearings and appeals from orders of the Oil Conservation Commission and provides in part:

> C. The pendency of proceedings to review shall not of itself stay or suspend operation of the order of decision being reviewed, but during the pendency of such proceedings, the District Court in its discretion may, upon its own motion or upon proper application of any party thereto, stay or suspend, in whole or in part, operation of said order or decision pending review thereof . . .
>
> D. The applicable rules of practice and procedure in civil cases for the courts of this State shall govern the proceedings for review and any appeal therefrom to the Supreme Court of this State, to the extent such rules are inconsistent with the provisions of this act. (Underlineation added.)

To the extent that Rule 62 may authorize, except in special cases, a stay of judgment as a matter of right, it is inconsistent with § 65-3-22, supra, to the extent that such stay is a matter of discretion.

The trial court had the discretion to deny the motion to stay the Commission's order, which Judge Snead did after a one-day hearing on the matter.