No. 105, ORIGINAL

In The

SUPREME COURT OF THE UNITED STATES
October Term, 1994

STATE OF KANSAS,
Plaintiff,

v.

STATE OF COLORADO,
Defendant,

and

UNITED STATES OF AMERICA,
Defendant-Intervenor.

ON EXCEPTIONS TO THE 1994 REPORT OF THE SPECIAL MASTER

KANSAS' REPLY BRIEF OPPOSING COLORADO'S EXCEPTIONS

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RESTATEMENT OF QUESTION PRESENTED

Colorado states the first of its Questions Presented as follows:

> 1. Whether the defense of laches is applicable against a state in a controversy between states in this Court.

The question should be stated as follows:

> 1. Whether the defense of laches is applicable against a state seeking to enforce an interstate compact in this Court.

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OBJECTIONS TO COLORADO'S STATEMENT OF THE CASE

There are several incorrect statements or implications in Colorado's Statement of the Case (Colo. Brief at 2-24).[1] The most significant mistakes are noted below.

In the opening paragraphs of Colorado's Statement of the Case, Colorado asserts that "the Master found that Kansas knew or should have known of the effects of post-compact well pumping in Colorado by 1968 . . . ." Colo. Brief at 3. This statement is not true. The critical distinction is between knowledge of the

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[1] Colorado's Brief In Support of Colorado's Exceptions, filed November 17, 1994 in this proceeding, will be referred to as "Colo. Brief at __."

existence of postcompact well pumping and knowledge of the *effects of pumping on usable stateline flows*. The Master's conclusion on this point was as follows: "The extent of postcompact well pumping in Colorado was not generally known until approximately 1968, and there is no substantial evidence that Kansas knew or should have known about the effect of such well development before that time." Rep. vol. I at 169.[2] The Master went on to state: "By the 1970s the extent of pumping in Colorado was a matter of common knowledge, but that is not to say that the impact of such pumping on usable Stateline flows was generally known or understood. Indeed, it appears not to have been, even in Colorado." *Id.* This statement refutes the Colorado assertion. Under Article IV-D of the Compact, postcompact wells and pumping and increased pumping by precompact wells are not prohibited per se; rather, such pumping is prohibited only to the extent that the *effect* of such pumping is to materially deplete the waters of the Arkansas River in usable quantity or availability for use to the water users in Colorado and Kansas. Arkansas River Compact ("Compact"), Art. IV-D, Rep. App., Ex. 1 at App. 5.

Colorado asserts that "According to a careful study made by Colorado, Report at 204, there are 717 large-capacity . . . wells in Colorado . . . with appropriation dates earlier than 1950." Colo. Brief at 8. On the contrary, Colorado did not do a careful study of pre-1950 wells. The cited reference in the Master's Report does not refer to pre-1950 wells. That statement appears in the "Postcompact Pumping in Colorado" section of the Master's Report. *See* Rep. vol. II at 201. The assignment of priority dates was not carefully done by Colorado. In fact, Colorado simply accepted the priority dates claimed by the well owners themselves in uncontested Colorado water court filings, some of which admittedly contain false claims. Rep. vol. II at 191 & n.64. R. vol. 131 at 22, Pl. Reply App., Item 19; vol. 84 at 24-26, Pl. Reply App., Item 16. Finally, "pre-1950" is not the same as "precom-

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[2] The Master's Report, ordered filed October 3, 1994, 115 S.Ct. 48 (1994), will be referred to as "Rep. vol. _____ at _____."

pact". The Compact was concluded by the negotiators on December 14, 1948. It was ratified by the states and consented to by Congress in the spring of 1949. Act of Congress of May 31, 1949, 63 State. 145; 1949 Kan. Sess. Laws 829; 1949 Colo. Sess. Laws 485. The approvals by the state legislatures and Congress ratified the agreement of the negotiators, which included the agreement to protect users existing at the time of the agreement, December 14, 1948. *See* Rep. vol. I at 99-102, 107.

Colorado also implies in its Statement of the Case that the increase in irrigated acreage in Kansas by virtue of increased pumping of the Ogallala Aquifer in Kansas should absolve Colorado of responsibility for its violations of the Arkansas River Compact. *See* Colo. Brief at 9-13. On the contrary, pumping in Kansas is relevant only if it affects Colorado water users, and there is no evidence that the declining levels in the Ogallala Aquifer have caused Colorado to be deprived of any Arkansas River Water; rather, the reductions of stateline flows by Colorado has hastened groundwater declines in Kansas. Jt. Ex. 139 at 55 (R. vol. 30 at 35, 75, 76), Pl. Reply App., Item 10.

Colorado attempts to conceal the apportionment of the Arkansas River accomplished by the Arkansas River Compact, saying:

> The Compact does not apportion the waters of the Arkansas River between Colorado and Kansas based on beneficial consumptive use or a Stateline delivery obligation, as in some other interstate water compacts, but instead gives both states the right to make demands for releases from John Martin Reservoir at the times and at the rates specified in the Compact. Colo. Brief at 15.

Colorado would like to limit the Compact to "the right to make demands for releases from John Martin Reservoir." The truth is that the Compact sought to and did achieve much more than that. Article I-B of the Compact makes this clear:

The major purposes of this Compact are to:

* * * *

> B. *Equitably divide and apportion between the States of Colorado and Kansas the waters of the Arkansas River* and their utilization *as well as* the benefits arising from the construction, operation and maintenance by the United States of John Martin Reservoir Project for water conservation purposes. Rep. App., Ex. 1 at App. 2 (emphasis added).

The Master found that this purpose had been achieved. Rep. vol. I at 107. He said, "The apportionment in the compact includes the normal flows of the river, as well as a division of the benefits associated with the conservation pool in John Martin Reservoir." *Id.* The apportionment of the normal flows of the river was accomplished by including the critical proviso in Article IV-D concerning future development or construction:

> Provided, that the waters of the Arkansas River, as defined in Article III, shall not be materially depleted in usable quantity or availability for use to the water users in Colorado and Kansas under this Compact by such future development or construction.

Thus, the apportionment achieved by the Compact was not limited to division of the benefits of John Martin Reservoir.

In the same vein, Colorado maintains that the philosophy of "live and let live" should apply to future developments in the basin under the Compact. Colo. Brief at 15-16 & n.17. If accepted, this phrase could reduce the Compact to a useless gesture. The Master rejected the Colorado position. *See* Rep. vol. I at 106. Colorado's position is based on two documents, both of which are dated some years after the adoption of the Compact.

They report the use by Hans Kramer [3] of the phrase "live and let live." Gen. Kramer made no mention, so far as we are aware, of "live and let live" during the negotiation of the Compact or in the hearings before Congress in 1949 concerning congressional consent to the Compact.

After-the-fact statements by a person involved in the legislative process, as Gen. Kramer was in the drafting of the Compact, are accorded no probative weight in ascertaining the intent of the legislation. *Bread Political Action Comm. v. Federal Election Comm'n*, 455 U.S. 577, 582 n.3 (1982); *Petry v. Block*, 697 F.2d 1169, 1171 (CADC 1983). Moreover, even legislative history should not be resorted to if the wording of the legislation is itself plain. *See, e.g., Negonsott v. Samuels*, 113 S. Ct. 1119, 1122-23 (1993), *Reves v. Ernst & Young*, 113 S. Ct. 1163, 1169 (1993). The language of Article IV-D is plain. Therefore, these after-the-fact statements cited by Colorado to weaken that language are not admissible.

The first document referred to by Colorado is a letter of April 10, 1951 from Gen. Kramer to the Corps of Engineers explaining why no engineering reports were finalized and released to the public in the course of the negotiations of the Compact:

> However, even before the date of the Second Interim [Engineering] Report, the trend of the negotiations took a decided turn away from the concept of fixed operating conditions based on firm interstate allocations toward the more flexible philosophy, best described as "live and let live," which became the basis of the ultimate Compact. That principle, which was an outgrowth of the Interim Executive Agreement be-

[3] Kramer was the federal representative and chairman of the commission that negotiated the Arkansas River Compact and later served in the same capacities on the Arkansas River Compact Administration. He was a retired Brigadier General with the U.S. Army Corps of Engineers. Rep. vol. I at 91.

> tween Colorado and Kansas governing the operation of John Martin Reservoir during the period of compact negotiations, permitted either State to obtain water from John Martin Reservoir (when stored water was available) without regard to the other State and without the need for keeping books to balance hypothetical debits and credits. Def. Ex. 57 at 2 (R. vol. 12 at 7), Pl. Reply App., Item 3.

The Master concluded that these remarks related only to the conservation pool in John Martin and the ability of both states to draw upon it according to need, not to the Compact as a whole. Rep. vol. I at 106. The language quoted clearly supports the Master's conclusion. The language in Gen. Kramer's letter also expresses the purpose of the negotiators to maintain the status quo. *See* Kansas' Brief In Support of Exceptions at 5; Rep. vol. I at 107. If specific inflow-outflow requirements with index gages had been adopted, engineering studies would have been necessary, and there was the possibility that some existing uses might occasionally have been curtailed. Instead, the Compact negotiators adopted the Article IV-D proviso protecting existing uses from material depletions of usable flow. This compacting approach left to later enforcement actions, such as this one, the necessity of quantifying any departure from the status quo in 1948.

The second document to which Colorado refers for Gen. Kramer's use of the phrase "live and let live" is a set of minutes of the Arkansas River Compact Administration. The phrase occurs in the context of a discussion of materiality. Both state delegations to the Compact Administration, including persons who had earlier represented the states in the Compact negotiations,[4] having heard

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[4] The members of the Compact Administration who had served on the Compact Commission which negotiated the Compact were Mendenhall from Colorado and Leavitt and Tate from Kansas. *See* Rep. vol. I at 91-92; Jt. Ex. 19, Minutes of Dec. 14, 1954 meeting, at 11-14 (R. vol. 17, at 87, 88), Pl. Reply App., Item 6.

Gen. Kramer's presentation on materiality, including his use of the phrase "live and let live," voted to reject the General's position. Jt. Ex. 19, Minutes of Dec. 14, 1954 meeting at 11-14 (R. vol. 17 at 87, 89), Pl. Reply App., Item 6.

For all of the foregoing reasons, Colorado's suggestion that the mandatory terms of the Compact be relaxed based on after-the-fact statements by Gen. Kramer should be rejected in favor of the primary source for determining the intent of Article IV-D, the language of Article IV-D itself.

SUMMARY OF ARGUMENT [5]

It is important to note at the outset that nowhere in its exceptions or supporting brief does Colorado deny that it has violated the Arkansas River Compact by virtue of increased postcompact pumping in Colorado over the period 1950-85. Colorado's arguments on laches, precompact pumping, the 1980 Operating Plan and the burden of proof do not question the existence of that violation.

I. Laches.

Even if the facts of this case would support the defense of laches, which they do not, the defense of laches is generally inapplicable against a state in an interstate controversy, as a matter of law. *Illinois v. Kentucky*, 500 U.S. 380, 388 (1991). Moreover, because equitable doctrines such as laches are particularly inconsistent with the precedents of the Court in interstate compact enforcement proceedings, Kansas has restated Colorado's first question presented accordingly. Colorado insists that there should be essentially no remedy for past breaches of the Compact because it had no reason to believe it would be sued. Colorado relies

[5] This brief is organized to track as closely as possible the Brief in Support of Colorado's Exceptions. Parts III and IV of the Argument in this brief correspond, however, to Parts IV and V of the Colorado Brief because there is no Part III in the Colorado Brief.

in this regard on the specialized rules tailored for equitable apportionment cases such as *Colorado v. Kansas*, 320 U.S. 383 (1943). While equitable considerations are central in equitable apportionment cases, they are out of place in compact enforcement cases. *See, e.g., Texas v. New Mexico*, 462 U.S. 554 (1983); 482 U.S. 124 (1987); *Oklahoma v. New Mexico*, 501 U.S. 221 (1991).

If, *arguendo*, laches is available as a matter of legal theory to Colorado, the facts in this case do not show inexcusable delay that would give rise to laches. In fact, there was no delay at all. Colorado claims that Kansas knew or should have known of well development in Colorado. The existence of well development in Colorado is not the question, however. The question is whether Kansas as a state can be charged with knowledge of the *effects* of postcompact well pumping on usable stateline flows as governed by Article IV-D of the Arkansas River Compact. There is no evidence that Kansas was aware of Compact violations. Indeed, Colorado steadfastly denied that there could be any such effects as late as the eve of the filing of this litigation. In addition, Colorado asserted that there was not even any need to investigate such effects. *See* Jt. Ex. 32 at 23 (R. vol. 14 at 12, 22, 26), Pl. Reply App., Item 7.[6] If Colorado believed there was no need to investigate such effects, it is hard to understand how Colorado can now assert that Kansas had for many years a duty to investigate those same effects.

II. Precompact Pumping.

The Master correctly rejected Colorado's excessive claim for a right to almost 50,000 acre-feet per year of pumping by precompact wells. This figure was not based on estimates of actual precompact pumping but on calculations assuming that uncontested filings in Colorado water court were correct and that Col-

[6] "Pl. Reply App., Item _____" refers to material in the Appendix to this brief.

orado had a right to expand the use of precompact wells up to their claimed capacities. Rep. vol. II at 182-83. The Master determined that the highest annual amount pumped during the Compact negotiations would be the limit of Colorado's precompact entitlement. Rep. vol. I at 190-200. The U.S. Geological Survey (USGS) reported that the highest amount actually pumped during the negotiations of the Compact was 15,000 acre-feet per year. Kansas, which relied in part on the USGS findings, found that the highest amount actually pumped in the study area for this case during the Compact negotiations was 11,000 acre-feet per year.

The fundamental issues are (1) whether Article IV-D limits the Colorado entitlement to the amount actually pumped at the time of the Compact negotiations and (2), if so, what that amount was. Article IV-D permits Colorado to continue the actual groundwater pumping that was occurring at the time of the negotiation of the Compact, but does not allow Colorado to "improve or prolong the functioning"[7] of those precompact wells if to do so would violate the proviso of Article IV-D. The Master embraced the Kansas legal position on precompact pumping. The Master did not accept the Kansas figures for the maximum precompact pumping of 11,000 acre-feet per year, however. Instead, he endorsed the figure of 15,000 acre-feet per year determined by the USGS and accepted over the last several decades by the USGS and by all three branches of the Colorado State government.

[7] The exact words of Article IV-D, "the improved or prolonged functioning of existing works" includes any increase in the pumping of precompact wells beyond the precompact volumes pumped. Rep. vol. I at 108, vol. II at 194.

III. The 1980 Operating Plan.

The Master rejected Colorado's claim that benefits received by Kansas, under a resolution of the Compact Administration known as the 1980 Operating Plan for John Martin Reservoir, should offset violations of the Compact by Colorado. The Master found that the benefits accruing to both states from the 1980 Operating Plan were separately bargained for and should not be offset against compact violations. The 1980 Operating Plan was not intended to have the effect claimed by Colorado, as shown by its own provisions and the fact that long afterward Colorado was still denying that there were any depletions caused by postcompact well pumping in Colorado. Colorado was not admitting that there were Compact violations due to postcompact well pumping in Colorado in 1980, nor even in 1985 on the eve of the filing of this litigation.

IV. Standard of Proof.

Colorado claims that Kansas should be required to prove a breach of the Compact by clear and convincing evidence. This position was carefully analyzed by the Master and correctly rejected. Colorado's position relies on the misconception that this case is an equitable apportionment case. The Court recently stated in *Nebraska v. Wyoming*, 113 S. Ct. 1689, 1694-96 (1993), that the clear and convincing standard applies only to the initial establishment of an equitable apportionment and not to the enforcement thereof. Colorado does not claim that Kansas is seeking a new equitable apportionment in this case. It must admit that this is indeed a compact enforcement case.

An unusually high burden of proof thwarts the enforcement of a federal statute, namely, the Compact, and would promote irresponsibility on Colorado's part. Colorado consistently cites equitable apportionment cases in making its argument. It also suggests that a higher burden of proof is required because of the seriousness of the issues involved in interstate cases. Kansas

agrees that the issues are serious, but raising the burden of proof is not a proper response to that fact. Placing an unusually high burden of proof on the plaintiff makes it more likely that a defendant state can violate a compact with impunity. The higher burden of proof is inconsistent with the purposes of the Compact Clause and with the Court's recommendation to Kansas and Colorado in its 1943 decision, of the compacting process under Article I, Section 10, Clause 3 of the Constitution as the preferred alternative to equitable apportionment litigation. *See Colorado v. Kansas*, 320 U.S. 383, 392 (1943).

ARGUMENT [8]

I. Laches Should Not Bar Kansas' Claim for Damages.

Colorado asserts in its Exceptions a position that it has not asserted previously in this litigation. *See* Colo. Brief at 24-64. In fact, this is the third distinct position Colorado has taken on laches since the close of trial. Colorado initially took the position that Kansas should not be entitled to relief for well development which took place prior to 1965. *See* Colorado's Closing Brief re Kansas' Well Claim at 44, 48, Pleading Index Tab No. 383,[9] Pl. Reply App., Item 20. Colorado's position was that Kansas should be barred from all relief, both past damages and future remedies, for Compact violations caused by wells drilled prior to 1965 (later changed to 1966). Colorado was asking the Court to forever "grandfather" over 90% of all postcompact wells in Colorado.[10]

When the Master indicated that he intended to reject Colorado's position on laches, Colorado limited its position to a claim

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[8] Kansas does not concede any argument made in support of Colorado's exceptions even if not specifically addressed in this brief.

[9] "Pleading Index Tab No. _____" refers to the Pleading Index enclosed with Special Master Littleworth's letter of August 2, 1994 to Francis J. Lorson, Chief Deputy Clerk.

[10] Table 1, Pl. Ex. 30 (R. vol. 21, at 117, vol. 22, at 21, 30), Pl. App., Item 1 shows 849 wells in 1948, 2,377 wells in 1965 and 2,543 wells in 1985.

that laches should bar Kansas' well claim only as to damages for pumping which occurred up to 1975. Colorado's Memorandum Re Matters to Be Raised at Oral Argument at 2, 4-5, 52, Pleading Index Tab No. 421, Pl. Reply App., Item 21. The Master, however, rejected both positions:

> I conclude, therefore, that Kansas has not been guilty of inexcusable delay in making its well claim, and that Colorado has not been prejudiced by Kansas' failure to press its claim earlier. Kansas should not be barred by laches or any other equitable defense, including acquiescence, from obtaining relief based on its well claim. In reaching these conclusions, I have fully considered the Court's statement in *Colorado v. Kansas*, 320 U.S. 383 at 394, that unjustified delay must "gravely add" to the plaintiff's burden and be weighed in considering the equities of the case. Rep. vol. I at 170.

Now Colorado has taken yet a third, more expansive position, namely, that Kansas should be barred from all relief for Compact violations by Colorado up to the year in which this litigation was initiated. Colo. Brief at 23, 63. The new Colorado position would essentially deny Kansas any remedy for past breaches of the Compact by Colorado. In *Texas v. New Mexico*, 482 U.S. 124 (1987), this Court rejected a similar argument:

> We find no merit in [New Mexico's] submission that we may order only prospective relief, that is, requiring future performance of compact obligations without a remedy for past breaches. If that were the case, New Mexico's defaults could never be remedied. . . . There is nothing in the nature of compacts generally or of this Compact in particular that counsels against rectifying a failure to perform in the past as well as

> ordering future performance called for by the Compact. 482 U.S. at 128.

Acceptance of Colorado's position would also encourage states such as Colorado to violate interstate compacts because there would be no disadvantage to doing so.

A. Laches Should Rarely, if Ever, Be Applied Against A State Seeking To Enforce an Interstate Compact.

Colorado begins its argument on laches by arguing that states appearing before the U.S. Supreme Court under its original jurisdiction should be treated like foreign sovereigns and thus denied the normal protection a state enjoys against laches. Colo. Brief at 27-29. This is a novel argument indeed, especially in light of the Court's recent statement in an original-jurisdiction case (relying on the case cited by Colorado) that "the laches defense is generally inapplicable against a State." *Illinois v. Kentucky*, 500 U.S. 380, 388 (1991), *citing Guaranty Trust Co. v. United States*, 304 U.S. 126 (1938). The very case upon which Colorado relies for its argument, *Guaranty Trust*, makes clear that the ruling in that case—that the statute of limitations runs against a foreign government—does not apply to state governments appearing in federal court. In *Guaranty Trust*, the United States had brought suit against Guaranty Trust to recover a deposit of the Russian government of which the United States was the assignee. Guaranty Trust asserted the statute of limitations as a defense. The Court analyzed the underlying policies as follows:

> The rule quod nullum tempus occurrit regi—that the sovereign is exempt from the consequences of its laches, and from the operation of statutes of limitations—appears to be a vestigial survival of the prerogative of the Crown. But whether or not that alone accounts for its origin, ... it is . . . *equally applicable to all governments.*" . . . So complete has been

> its acceptance that the implied immunity of the *domestic "sovereign," state or national*, has been universally deemed to be an exception to local statutes of limitations where *the government, state or national*, is not expressly included . . . . 304 U.S. at 132-33 (emphasis added) (citations omitted).

Thus, the Court makes clear, in the very opinion upon which Colorado relies, that domestic sovereigns, including states, enjoy the protection of the rule of *nullum tempus*.

The Colorado argument misses much of the Kansas position on laches. It is not only the status of the parties as states that bars laches, but also the type of proceeding in which Kansas and Colorado are currently involved, namely the enforcement of a federal statute, the Arkansas River Compact. Colorado cites only one interstate water allocation case to support its argument—*Colorado v. Kansas*, 320 U.S. 383, 394 (1943). That case was an equitable apportionment case in which equitable doctrines were generally appropriate. Colorado could not cite a compact enforcement case recognizing laches, because there is none. Colorado is thus asking this Court to apply for the first time the doctrine of laches to absolve a compacting state of violating an interstate compact. *See* Rep. vol. I at 150.

Traditionally, equitable considerations have played no role in determining violations or liability for past damages in compact enforcement proceedings. *See Texas v. New Mexico*, 462 U.S. 554 (1983); 482 U.S. 124 (1987). This Court recently said in *Nebraska v. Wyoming*, 113 S.Ct. 1689 (1993):

> The two types of proceeding [enforcement action versus modification of a prior equitable apportionment decree] are markedly different. In an enforcement action, the plaintiff need not show injury. When the alleged conduct is admitted, the only question is whether that conduct violates a right established by the decree. To be sure, the right need not be stated explicitly in the

> decree . . . . But the underlying issue primarily remains one of interpretation. In a modification proceeding, by contrast, there is by definition no pre-existing right to interpret or enforce. At least where the case concerns the impact of new development [requiring a new or modified equitable apportionment], the inquiry may well entail the same sort of *balancing of equities* that occurs in an initial proceeding to establish an equitable apportionment. 113 S.Ct. at 1695 (emphasis added) (citations omitted).

Even though the equitable apportionment of the Arkansas River was already achieved in the Compact, Colorado is essentially asking the Court to once again "balance the equities" when it asks that an admitted violation of the Compact be overlooked for equitable reasons outside the Compact. Colorado is asserting that, for the 36-year period 1950-85, equitable considerations should defeat the apportionment of waters adopted by its own General Assembly and by Congress pursuant to Article I, Section 10, Clause 3 of the Constitution. To do so would, in effect, amount to a reapportionment of the waters of the Arkansas River for the period 1950-85. The Court has addressed its ability to alter the terms of an interstate compact:

> Under the Compact Clause, two States may not conclude an agreement such as the Pecos River Compact without the consent of the United States Congress. However, once given, "congressional consent transforms an interstate compact within this Clause into a law of the United States." One consequence of this metamorphosis is that, unless the compact to which Congress has consented is somehow unconstitutional, *no court may order relief inconsistent with its express terms. Texas v. New Mexico*, 462 U.S. 554, 564 (1983), (emphasis added) (citations omitted).

Colorado is asking this Court for nothing less than to order relief inconsistent with the express terms of the Arkansas River Compact. Those express terms, found in Article IV-D, prohibit future beneficial developments of the Arkansas River Basin in Colorado that involve the improved or prolonged functioning[11] of existing works and that materially deplete the waters of the Arkansas River in usable quantity or availability for use to the water users in Kansas and Colorado.

Colorado cites a number of non-compact enforcement cases to support its contention that laches should apply in a compact enforcement case such as the present one. Colo. Brief at 29-30. This approach fails to recognize the considerable difference between entering an injunction based on equitable principles and enforcing a federal statute in the form of an interstate compact.

Colorado cites *Missouri v. Illinois*, 200 U.S. 496, 520 (1906) for the proposition that "[i]t would be contradicting a fundamental principle of human nature to allow no effect to the lapse of time, however long." Colo. Brief at 30. Contrary to the truncation of the quotation by Colorado, the sentence quoted continues, after a citation, as follows: "yet the fixing of a definite time usually belongs to the legislature rather than the courts." 200 U.S. at 520. The sentence appears in the midst of a discussion by Justice Holmes of the difficulties of establishing a system of law applicable to interstate disputes which does not fall within the power of Congress to regulate. The implication that arises by the truncation of the quotation in the Colorado Brief—that this Court will step in at some point and impose a time limit—does not exist in the opinion when read as a whole.[12] The point of the discussion

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[11] For the meaning of "improved or prolonged functioning," *see* note 7, *supra*.

[12] A fuller quotation from the opinion is as follows:

> The Constitution extends the judicial power of the United States to controversies between two or more States and between a State and citizens of another State, and gives this court original jurisdiction in cases in which a State shall be

is that, except in unusual circumstances, the Court will not impose a time limit for the bringing of interstate actions if Congress has not seen fit to impose one.

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a party. Therefore, if one state raises a controversy with another, this court must determine whether there is any principle of law, and, if any, what, on which the plaintiff can recover. But the fact that this court must decide does not mean, of course, that it takes the place of a legislature. Some principles it must have power to declare. For instance, when a dispute arises about boundaries, this court must determine the line and in doing so must be governed by rules explicitly or implicitly recognized. It must follow and apply those rules, even if legislation of one or both of the States seems to stand in the way. But the words of the Constitution would be a narrow ground upon which to construct and apply to the relations between States the same system of municipal law in all its details which would be applied between individuals. If we suppose a case which did not fall within the power of Congress to regulate, the result of a declaration of rights by this court would be the establishment of a rule which would be irrevocable by any power except that of this court to reverse its own decision, an amendment of the Constitution, or possibly an agreement between the States sanctioned by the legislature of the United States.

The difficulties in the way of establishing such a system of law might not be insuperable, but they would be great and new. Take the question of prescription in a case like the present. The reasons on which prescription for a public nuisance is denied or may be granted to an individual as against the sovereign power to which he is subject have no application to an independent state. *It would be contradicting a fundamental principle of human nature to allow no effect to the lapse of time, however long, yet the fixing of a definite time usually belongs to the legislature rather than the courts.* The courts did fix a time in the rule against perpetuities, but the usual course, as in the instances of statutes of limitation, the duration of patents, the age of majority, etc., is to depend upon the lawmaking power. *Missouri v. Illinois*, 200 U.S. at 519-20 (emphasis added) (citations omitted).

Colorado suggests that allowing laches to be asserted against Kansas in this case would ease the Court's burden. Colo. Brief at 31. The result of accepting the Colorado position is actually the opposite, as the Master recognized. He said, "Moreover, equitable defenses should not be applied in ways to encourage or force early litigation between states, particularly when a state is implementing efforts to address the problem." Rep. vol. I at 170. If Colorado's position is accepted, early litigation will be encouraged between states; no efforts to resolve disputes prior to litigation will be undertaken because informal complaints short of bringing suit are insufficient according to the cases cited by Colorado. *See, e.g., A.C. Aukerman Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020 (CA Fed 1992); *Potash Co. of America v. International Minerals & Chem. Corp.*, 213 F.2d 153 (CA10, 1954); *Jensen v. Western Irrigation & Mfg.*, 650 F.2d 165 (CA9, 1980). Thus, application of the doctrine of laches will only increase litigation because any action short of filing suit may become a bar to later recovery.

Colorado contends that laches should be applied because Colorado "had no reason to believe it would be sued." Colo. Brief at 31 n.27. By this assertion, Colorado seeks to distinguish its position from New Mexico's position in *Texas v. New Mexico*, 482 U.S. at 129, that it should have been absolved of its compact violations because it believed in good faith that it was complying with the Pecos River Compact. The Court answered New Mexico's argument as follows:

> But good-faith differences about the scope of contractual undertakings do not relieve either party from performance. A court should provide a remedy if the parties intended to make a contract and the contract's terms provide a sufficiently certain basis for determining both that a breach has in fact occurred and the nature of the remedy called for. There is often a retroactive impact when courts resolve contract disputes about the scope of a promisor's undertaking; parties

> must perform today or pay damages for what a court decides they promised to do yesterday and did not. In our view, New Mexico cannot escape liability for what has been adjudicated to be past failures to perform its duties under the Compact. *Id.* (citations omitted).

Colorado's contention that it differs from New Mexico because it had no reason to believe that it would be sued is unpersuasive. In the dispute over the Pecos River, New Mexico asserted various reasons why it should not be sued or be required to pay damages in water or money for violations of the Pecos River Compact—a position consistently rejected by this Court. *See Texas v. New Mexico*, 462 U.S. 554 (1983), 482 U.S. 124 (1987). Likewise, Colorado's similar position should be rejected.

B. Kansas Was Not Guilty of Laches in Making Its Well Claim.

Notwithstanding this Court's statements that laches generally does not apply in interstate controversies, and the fact that laches has never been applied in any compact enforcement case, Colorado devotes much of its argument to asserting facts that it believes would support the defense of laches. Colo. Brief at 32-64 and *passim*. Contrary to Colorado's argument, those facts would not support the defense of laches even if it were applicable. Laches requires an inexcusable delay. Here, there was no delay at all. Kansas brought the well-pumping issue to the Compact Administration without delay after it received a report from its consultants, Simons, Li & Associates, indicating a Compact violation. Rep. vol. I at 153. This was done in compliance with Article VIII-H of the Compact, Rep. App., Ex. 1 at App. 15. Even then Colorado opposed such an investigation on the ground that it was not justified. Jt. Ex. 32 at 22-23 (R. vol. 14 at 12, 22, 26), Pl. Reply App., Item 7. Kansas had no knowledge nor reason to know that Colorado pumping was violating the Compact before being informed by its consultants in 1984. That report was initiated,

after the Trinidad dispute arose, in order to determine whether Trinidad operations or any other activity in Colorado constituted a violation of the Compact. Jt. Ex. 88 at 1.1, Pl. Reply App., Item 8.

Colorado consistently intermingles references to alleged knowledge on the part of Kansas concerning the effect of postcompact well pumping and knowledge merely of the extent of postcompact well pumping. Colo. Brief at 32 & n.28.[13] Knowledge of the existence of wells and extent of pumping in Colorado is insufficient to support a claim of laches. Colorado has not shown that Kansas knew or should have known of the *effects* of pumping on usable stateline flows.

1. Kansas Did Not Know Nor Should It Have Known of the Facts Giving Rise To Its Claim by 1956.

Colorado makes the extreme claim that "Kansas knew or should have known of the facts giving rise to its claim by 1956." Colo. Brief at 36. This extreme position is based on a 1956 USGS Report which discusses the recent increase in irrigation wells in Colorado. *See* Colo. Brief at 37. Colorado has failed to distinguish between knowledge of the existence of wells and knowledge of the effects of their pumping on usable flows at the stateline—the critical factor for determining compliance with the Compact. This failure on Colorado's part infects its whole discussion of this critical factual issue. *See* Colo. Brief at 36-48.

Colorado claims that Kansas has relinquished its right to relief because of certain deposition testimony of Howard Corrigan, a former water commissioner in the Garden City field office of the Kansas Division of Water Resources. Colo. Brief at 39-41. Mr. Corrigan was never a member of the Kansas delegation to

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[13] Colorado suggests that "the Master apparently found that Kansas knew or should have known about the extent of post-compact well pumping in Colorado in 1968 . . . . " Colo. Brief at 32 n.28. There is no finding to this effect in the Master's Report.

the Arkansas River Compact Administration. *See* Colo. Brief at 39 n.33. Yet Colorado asserts that his state of knowledge, coupled with lack of complaint by the Kansas delegation, whose state of knowledge is unknown, should result in the loss of Kansas' compact rights. Not only is the knowledge of a water commissioner of the Garden City field office of the Kansas Division of Water Resources insufficient to cause a loss of Kansas' Compact rights, but also the extent of the local official's knowledge was itself insufficient to cause such a loss of rights. The deposition testimony established at most that the local water official was aware of well development in Colorado in the 1950s and that at some *unspecified* point in time he became aware that wells indirectly took water out of the river increasing transit loss.[14] However, this knowledge still falls well short of the knowledge of effects of pumping on usable flows at the state line needed to assess whether Colorado was violating Article IV-D of the Compact because of the numerous factors involved. This critical shortcoming was recognized by the Master.[15] It has also been recognized by the Colorado Supreme Court. *See Kuiper v. Atchison, Topeka & Santa Fe Ry.*, 581 P.2d 293 (Colo. 1978) (discussed *infra* at 22-23).

Nevertheless, Colorado claims that "[t]he Master misconceives the issue." Colo. Brief at 42. Colorado asserts that the issue is "whether Kansas knew or, in the exercise of reasonable diligence, should have known of facts giving rise to its claim before 1968." *Id.* This question is answered by the fact that Colorado itself did not know of a Compact violation prior to 1985 and did not believe any investigation of the possibility of a violation was

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[14] The deposition took place Feb. 9, 1990, some six years after the Simons, Li Report was completed.

[15] "[T]he evidence is sketchy and does not demonstrate that these officials were aware of the number of wells, the extent of Colorado's pumping, or the impact or even potential impact of pumping on usable Stateline flows. Colorado frequently refers to 'well development,' but that alone does not violate the compact." Rep. vol. I at 164.

warranted. In 1975, for example, the Colorado State Engineer's office issued a report entitled "Stream Depletion By Wells in the Arkansas River Basin." In that report the Colorado State Engineer (the chief water official of Colorado) concluded that the "increasing use of ground water for irrigation in the Arkansas River basin since 1950 has affected stream flows in such a way as to deprive senior water users of a portion of their lawful water supply." Jt. Ex. 94 at 53 (R. vol. 16 at 25, 34), Pl. Reply App., Item 9. The study area for the report stretched from Canon City, above Pueblo, to the Colorado-Kansas state line. *Id.* Counsel for Colorado asked the State Engineer of Colorado in testimony in this case whether the effects on stream flows in the report "translate into a reduction in state line flows in your opinion." The State Engineer answered: "No, not in the evaluation that we did in this report." R. vol. 78 at 85, Pl. Reply App., Item 15. *See* Rep. vol. I at 161. Thus, it was not clear to the Colorado State Engineer that depletions of streamflows upstream in Colorado would result in reductions in flows at the state line, much less material depletions of usable stateline flows in violation of Article IV-D.

When the litigation in which the State Engineer submitted the 1975 Report reached the Colorado Supreme Court in 1978, that court assessed Colorado's knowledge as follows:

> When water in the aquifer is brought to the surface by a well and there is a consumptive use of that water by evaporation and evapotranspiration of phreatophytes, generally the surface supply is depleted by the amount of such consumptive use. The evidence and findings in this case demonstrate, however, that the restriction of wells does not necessarily result in a comparable increase in the supply of surface water. There are countereffects which offset or modify the depletive use of well water. Some of these are: variations in the amount of river flow; winter irrigation; reduction in evaporation and phreatophyte losses as a result of lowering of water tables; changes in ground water storage;

> extent of alluvium recharge occurring during wet cycles or as a result of widespread winter irrigation practices; and increased irrigation efficiencies. Other factors which may also be involved are increased ground water storage, stock ponds, municipal sewage lagoons, potholes, changes in side channel inflows, and cyclical fluctuations through wet and dry periods. *Kuiper v. Atchison, Topeka & Santa Fe Ry.*, 581 P.2d at 295-96 (Colo. 1978).

The Colorado Supreme Court's reasoning amply demonstrates why knowledge of increased pumping is not tantamount to knowledge of depletions at the state line. In addition to the considerations noted by the Colorado Supreme Court, there are additional considerations involved in determining whether Compact violations are likely to occur. The existence, amount and timing of transmountain imports from the Colorado River Basin and the return flows from such waters must be determined.[16] Whether flows being depleted are usable or not must be determined, which, in turn, requires that a definition of usability be determined, something that is still pending in the present litigation. Thus, many considerations come into play, and the rudimentary information that was elicited by Colorado regarding the knowledge of a local water official in Kansas falls far short of the information needed to establish knowledge of a material depletion of usable stateline flows.

Colorado strenuously maintains that it is not just what Kansas knew, but what it should have known, that is determinative for purposes of laches. Colo. Brief at 42. Colorado asserts in effect that Kansas should have made an investigation of the effects of

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[16] Article III-B limits the waters apportioned by the Compact to "waters originating in the natural drainage basin of the Arkansas River, including its tributaries, upstream from the state line, and excluding water brought into the Arkansas River Basin from other river basins." Rep. App., Ex. 1 at App. 2-3.

well pumping on usable flows at the state line in 1956. However at the October 4, 1985 meeting of the Compact Administration, Colorado's delegation rejected the demand of the Kansas delegation for an investigation of the effects of well pumping on usable stateline flows. Mr. J. William McDonald, Director of the Colorado Water Conservation Board and chief of the Colorado delegation to the Compact Administration submitted a memorandum on the subject which concluded as follows:

> [A]t this time, I cannot agree to undertake an investigation into well development in Colorado when the single and double-mass diagrams do not suggest that well development in Colorado has had an impact on usable stateline flows. Jt. Ex. 32 at 23 (R. vol. 14 at 12, 22, 26), Pl. Reply App., Item 7.

In addition, Mr. McDonald refused to accept the previous investigations of well pumping in Colorado. *Id.* at 15. Colorado obviously believed strongly that there was no reason to suspect that well pumping in Colorado could be causing violations of the Compact. It is therefore unreasonable to conclude that Kansas, the downstream state, should nevertheless have initiated its own investigation to determine those effects and should have done so many years before.

Colorado has the burden of proof on all elements of the defense of laches. *See, e.g., Costello v. United States*, 365 U.S. 265, 282 (1961); *White v. Daniel*, 909 F.2d 99, 102 (CA Fed 1990), *cert. denied*, 501 U.S. 1260 (1991); *A.C. Aukerman Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 1032 (CA Fed. 1992). Colorado has failed in the most essential part of this burden—namely, to show that there was a delay before the filing of this action during which Kansas knew or should have known that it had a claim against Colorado under the Compact based on increased postcompact well pumping in Colorado. In fact, Kansas has affirmatively shown that when Kansas ultimately became aware of the probable existence of a Compact violation through

the Simons, Li Report, Jt. Ex. 88 at iv-v (R. vol. 13 at 117, 121, 127), Pl. Reply App., Item 8, in 1984, it made the conclusions available to Colorado without delay and requested a Compact investigation. Rep. vol. I at 153. That Compact investigation was declined by Colorado on the basis of assurances by Colorado that an investigation was not called for.[17] Jt. Ex. 32 at 22-23 (R. vol. 14 at 12, 22, 26), Pl. Reply App., Item 7.

2. Kansas Did Not Delay in Filing This Suit.

Colorado claims that "Kansas has no valid excuse for its lengthy delay." Colo. Brief at 48. The problem with Colorado's position is that there was no "lengthy delay" by Kansas. In fact, there was no delay at all. The period of delay for purposes of laches begins when the plaintiff knew or should have known of his claim against the defendant. *Studiengesellschaft Kohle v. Eastman Kodak Co.*, 616 F.2d 1315, 1326 (CA5 1980), *cert. denied*, 449 U.S. 1014 (1980); *Jensen v. Western Irrigation & Mfg.*, 650 F.2d 165, 168 (CA9 1980). Yet we have seen that in late 1985, only weeks before the filing of this action, Colorado itself was not aware of impacts on stateline flows that could be violations of the Arkansas River Compact, nor even the need to investigate such impacts. Therefore, there was no delay on Kansas' part and no reason to look for excuses for any delay.

[17] In the early 1980s, the Colorado State Engineer went to the Colorado Supreme Court seeking reversal of a finding by the Water Court that postcompact wells in the Arkansas Valley in Colorado were depleting usable flows. *See People ex rel. Danielson v. Amity Mut. Irrigation Co.*, 668 P.2d 1368, 1370 & n.3 (Colo. 1983). This is a further indication that the Colorado State Engineer believed there were no compact violations in the early 1980s.

3. Colorado Was Not Prejudiced by Kansas' Alleged Delay.

Assuming, *arguendo*, that laches is a defense available to Colorado in this litigation and that there was an unexcused delay by Kansas in bringing this litigation, laches would nevertheless be inapplicable because there was no prejudice to Colorado as a matter of fact, as shown below.

a. There Was No Evidentiary Prejudice to Colorado.

Colorado complains that evidence on electric power records, on nonelectric power sources, from Kansas witnesses and on the Garden City streamflow gage, is missing, but could have been obtained if Kansas had complained earlier about the postcompact well pumping. Colo. Brief at 55-61.

The implication of the Colorado argument is that Colorado is bearing the risk of the lack of data with respect to a postcompact development initiated without obtaining sufficient information beforehand. This is as it should be. Colorado allowed the installation of many hundreds of wells without requiring those wells to have flow meters installed and without gaining the kind of pre-approval exemplified by the Trinidad Reservoir Operating Principles. Under these circumstances, it is Colorado that should bear the risk that later analysis will show that insufficient information was collected before going ahead. The risk should not be on the downstream state, which only suffered from this development and received no benefits and which did not have the access necessary to collect the data or the jurisdiction to require the collection of data. *Cf.* Kansas Brief in Support of Exceptions at 28-32.

Kansas has nevertheless suffered from the lack of data kept by Colorado. For instance, the Master has rejected the Kansas quantification of precompact pumping entitlement at 11,000 acre-feet per year in favor of the 15,000 acre-feet per year figure developed by the USGS. This increases the precompact pumping

entitlement by 144,000 acre-feet above the Kansas estimate for the 36-year study period (4,000 acre-feet per year × 36 years = 144,000 acre-feet). Colorado's failure to collect data has allowed Colorado to claim as much as 36,000 acre-feet per year of precompact pumping. Rep. vol. I at 62. If this extreme figure were accepted, Colorado's precompact pumping entitlement would be 756,000 acre-feet above the Master's recommended level (21,000 acre-feet per year × 36 years = 756,000 acre-feet).

The Master rejected Colorado's assertion that Kansas' alleged failure to complain in a timely fashion had made it difficult for Colorado to defend itself and determine key factual issues because of a lack of data:

> However, I doubt that complaints from Kansas realistically would have made any difference in Colorado's data collection system. I note that the 1968 W. W. Wheeler Report which was authorized by the Colorado legislature recommended that 'Accurate and continuous discharge records be obtained of major tributary inflow,' and that 'Recorders be installed on all wells.' Jt. Exh. 92 at vii. Yet nothing substantial was done. Indeed, these recommendations still have not been implemented. Rep. vol. I at 148.

Colorado continued to do nothing substantial to collect additional data after the complaint was made by Kansas or even after this litigation was initiated by Kansas. Even after Colorado became aware as a result of its own calculations which are in evidence that its postcompact wells were violating the Compact, Colorado took no substantial steps to curtail the pumping. Colorado claims that it did respond to the W. W. Wheeler Report and that the Master's statement quoted above is "inaccurate and unfair." Colo. Brief at 59. Colorado supports this statement by citing to streamflow gages. *Id.* at 60. No mention is made of the failure to meter wells, nor of the fact that the operation of the Big Sandy gage

(on the biggest tributary below John Martin Reservoir) was terminated in 1982. *See* Colo. Brief at 60.

Colorado also purports to have been prejudiced by the lack of witnesses who could have established the knowledge that Colorado needed to establish its laches defense. Colo. Brief at 60-61. Aside from the circularity of reasoning involved in this position, Colorado has not established that the persons it claims had knowledge of Compact violations were persons whose knowledge would have the legal effect of precluding a claim of the State of Kansas under the Compact.

b. There Was No Economic Prejudice to Colorado.

In *Costello v. United States*, 365 U.S. 265 (1961) the Court noted that one element of laches is proof of prejudice to the party asserting the defense. *Id.* at 282. As in that case, the passage of time since Colorado began violating the Compact seems "plainly to have worked to [Colorado's] benefit, not to [its] detriment." *Id.* The Court pointed out that Congress had not seen fit to enact a time bar applicable to that proceeding and determined that depriving the petitioner of his citizenship after 27 years was not unreasonable because he had never been entitled to that citizenship. *Id.* at 283-84. Likewise, as the Master pointed out, Rep. vol. I at 156-59, Colorado farmers obtained economic value from their wells over a period that began some 45 years ago in 1949. The passage of time has "permitted the benefits of those wells to be increasingly enjoyed and such investments amortized." *Id.* at 157. Moreover, the Colorado testimony is that not much was invested in the wells and that they were not maintained at high levels of efficiency. *See* R. vol. 63 at 188-90, Pl. Reply App., Item 12; vol. 65 at 69-70, Pl. Reply App., Item 13.

Colorado states, "Economic prejudice may arise where the defendant will suffer the loss of monetary investments or incur damages which likely would have been prevented by earlier suit." Colo. Brief at 54. This could be the case where an equivalent

alternative water supply had been rejected in favor of the wells that have now been found to be illegal by the Master. However, there was no cheaper alternative. The fact that the farmers found it preferable to throw the switch on their wells rather than procure additional water supplies from another source is evidence that it was the cheapest alternative available. Indeed, the farmers in Colorado turned on their wells rather than buy water from the Fryingpan-Arkansas Project.[18] As stated by Colorado, the expectation had been that transmountain imports from the Colorado Basin would average 196,000 acre-feet per year. Colo. Brief at 7. However, the expected demand for transmountain water did not materialize as expected from the farmers who now had the opportunity to obtain water by well pumping.[19] Thus, Colorado did not give up an equal opportunity to obtain water from another source in favor of wells, but rather has enjoyed the cheaper source of water in increasing amounts.

The Colorado contention is essentially that it would have been cheaper to have had no postcompact wells at all than to have pumped them as they did. Nothing in the record supports such an implausible contention. In response to the Master's conclusion that the passage of time permitted the benefits of wells to be increasingly enjoyed and such investments amortized, Colorado says, "This analysis confuses benefits of wells to well owners with prejudice to Colorado." Colo. Brief at 62. The confusion, however, rests not with the Master but with Colorado. Article VII-A of the Arkansas River Compact provides as follows:

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[18] The Fryingpan-Arkansas Project is a project of the U.S. Bureau of Reclamation. The Project was authorized by Congress in 1962. Act of Aug. 16, 1962, P.L. 87-590, 76 Stat. 389. One purpose of the Project was to import water from the Colorado River Basin for use in the Arkansas River Basin. *See id.*

[19] On average, transmountain imports have amounted to only 120,000 acre-feet annually since 1972. Rep. vol. II at 49; Colo. Brief at 8 n.8.

> A. Each State shall be subject to the terms of this Compact. Where the name of the State or the term "State" is used in this Compact these shall be construed to include any person or entity of any nature whatsoever using, claiming or in any manner asserting any right to the use of the waters of the Arkansas River under the authority of that State. Rep. App. Ex. 1 at App. 10-11.

This provision of the Compact removes any doubt that the benefits of individual well owners in Colorado are imputed to Colorado under the Compact. It is therefore nonsensical to try to draw a distinction between benefits to Colorado water users and benefits to the State of Colorado.

4. Laches Should Not Bar a Claim for Damages Before 1985.

Colorado would essentially bar all retrospective remedies that Kansas has under the Compact and the decisions of this Court. This suggestion by New Mexico in the Pecos River litigation was rejected by the Court, as discussed *supra* at 12.

II. Article IV-D Limits Well Pumping in Colorado to 15,000 Acre-Feet Per Year.

A. Precompact Wells Should At Least Be Limited to Pumping the Highest Amount Pumped in the Years During Which the Compact Was Negotiated.

Colorado begins its discussion of the Colorado position that it is entitled to pump 50,000 acre-feet per year based on precompact pumping, by criticizing the Master for relying on "what he believed the Compact negotiators had intended." Colo. Brief at 66. Colorado's contention is that the Master erred in ignoring

the subsequent practice of the parties to the Compact.[20] In essence, Colorado would like the Court to change the Compact based on Colorado's view of the actions of the parties since the adoption of the Compact. The Court, however, has made abundantly clear in the past that this cannot be done. *See, e.g., Texas v. New Mexico*, 462 U.S. 554, 564 (1983)("[U]nless the compact to which Congress has consented is somehow unconstitutional, no court may order relief inconsistent with its express terms."). Much of the Colorado argument is based on Colorado's allegation that Kansas made no objection to well development in Colorado nor prevented such development in Kansas. This argument assumes that Kansas knew or should have known of the effects of pumping on Colorado's Compact obligations to Kansas. As has been shown, this position by Colorado is untenable as a matter of fact. *See supra* at 19-24. Also, what Kansas was doing with regard to the administration of wells in Kansas is an issue that might be of relevance in an equitable apportionment proceeding, but not in a compact enforcement proceeding such as the present one.

Colorado contends that its wells should be allowed to pump to the full extent of their rights as recognized by Colorado state law. As part of this argument, Article VI-A(2) of the Compact is put forward by Colorado as a protection against the Master's interpretation of the Compact. Colo. Brief at 68-69. Article VI-A(2) provides as follows:

> *Except as otherwise provided*, nothing in this Compact shall be construed as supplanting the administration by Colorado of the rights of appropriators of waters of the Arkansas River in said State as decreed to said appropriators by the courts of Colorado, nor as interfering with the distribution among said appropriators by Colorado, nor as curtailing the diversion and

[20] Colorado's reference to "subsequent practice" is essentially a reassertion of its laches argument that Kansas delayed too long in filing the litigation. Colo. Brief at 66-67.

> use for irrigation and other beneficial purposes in Colorado of the waters of the Arkansas River. Rep. App., Ex. 1 at App. 10 (emphasis added).

Colorado tends to overlook the introductory emphasized phrase of Article VI-A(2). "Except as otherwise provided" refers at least to Article IV-D of the Compact and its proviso that the waters of the Arkansas River must not be materially depleted in usable quantity or availability. In other words, Article IV-D cannot be circumvented by reliance on Article VI-A(2). The supremacy of Article IV-D is assured by the concessive introductory phrase of Article VI-A(2).

Colorado claims that "nothing in Article IV-D states that pre-compact wells in Colorado are limited to pumping the amounts that were pumped during the pre-compact period." Colo. Brief at 69. Colorado claims that the Master "has read into Article IV-D" this limitation. *Id.* This argument, however, fails to take account of the plain meaning of the language that is included in Article IV-D. That Article prohibits "future beneficial development . . . which may involve construction of dams, reservoir, and other works for the purposes of water utilization and control, as well as the *improved or prolonged functioning of existing works*" if such development materially depletes the waters of the Arkansas River in usable quantity or availability. Rep. App., Ex. 1 at App. 5. The increases in pumping were certainly "future" at the time of the Compact. The increase in pumping of precompact wells could only be achieved through prolonging the functioning of those wells or improving the functioning of those wells. Colorado is asking this Court to accord Colorado the right to continue to enjoy the improved and prolonged functioning of its precompact wells. To do so would be to order relief inconsistent with the terms of the Compact, which this Court has refused to do. *Texas v. New Mexico*, 462 U.S. 554, 564.

Colorado bases its argument on precompact entitlement in part on the fact that the provisions of Article V-H refer to the transfer of "ditch diversion *rights*." Colo. Brief at 69 (emphasis

in Colo. Brief). This Article places special requirements on transfers of surface water rights from below John Martin Reservoir to above the reservoir. *See* Rep. App., Ex. 1 at App. 9. Colorado argues that the reference to "rights" in Article V-H means that Article IV-D must also be similarly interpreted. This argument does not make sense, however, because the subject matter of the two articles is different. Article IV-D is directed at future developments, while Article V-H is directed at the transfer or increase of existing surface water rights.

Colorado seems to believe that the use of the word "rights" is significant. The use of the word "rights" in Article V-H *is* significant, but not for the reason that Colorado asserts. Its use in Article V-H shows that the negotiators intentionally refrained from using "rights" in Article IV-D. Its obvious absence from Article IV-D shows that their purpose was to prevent further depletions of usable flow regardless of whether someone then or later could make a claim of "right" under Colorado law. The same word was not used in Article IV-D because the purpose of IV-D was different, namely, to allow future development, including the improved or prolonged functioning of existing works, provided that such development did not materially deplete the waters of the Arkansas River in usable quantity or availability for use. *See* Rep. vol. II at 190-95. The Master makes the fundamental point that to accept the Colorado position is to reallocate the waters of the Arkansas River in a massive amount, contrary to the intentions of the negotiators of the Compact. *Id.*

Colorado continues to argue that its "pre-compact wells should be permitted to pump in accordance with Colorado law." Colo. Brief at 72. This is a restatement of the Colorado position that "the rights of the precompact well appropriators, as decreed by the Colorado courts, are 'binding on Kansas'." Rep. vol. II at 193.

In *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92 (1938), another case in which Colorado appropriators claimed that their decreed Colorado water rights superseded an interstate compact (the La Plata River Compact between Colo-

rado and New Mexico), the Court, after first assuming that the decreed water right involved was a property right indefeasible so far as Colorado was concerned, stated:

> But *the Colorado decree could not confer upon the Ditch Company rights in excess of Colorado's share of the water of the stream*; and its share was only an equitable portion thereof.
>
> The claim that on interstate streams the upper State has such ownership or control of the whole stream as entitles it to divert all the water, regardless of any injury or prejudice to the lower State, has been made by Colorado in litigation concerning other interstate streams, but has been consistently denied by this Court. The rule of equitable apportionment was settled by *State of Kansas v. Colorado*. It was discussed again in *Wyoming v. Colorado*, where the Court said: "The contention of Colorado that she as a state rightfully may divert and use, as she may choose, the waters flowing within her boundaries in this interstate stream, regardless of any prejudice that this may work to others having rights in the stream below her boundary, cannot be maintained. The river throughout its course in both states is but a single stream, wherein each state has an interest which should be respected by the other. A like contention was set up by Colorado in her answer in *Kansas v. Colorado* and was adjudged untenable. Further consideration satisfies us that the ruling was right." 304 U.S. at 102-03 (citations omitted).

Later in the same opinion the Court stated that an apportionment of an interstate stream by compact or decree of the Court "is binding upon the citizens of each State and all water claimants, even where the State had granted the water rights before it entered into the compact." *Id.* at 106. Thus, the fact that certain water rights might be sanctioned by Colorado decrees (most of

which were issued in unopposed proceedings long after the claimed initiation of use, Rep. vol. II at 191), is of no consequence to the Compact allocation between Colorado and Kansas of the waters of the Arkansas River. The Colorado argument, based on the discredited notion that Kansas is bound by the Colorado water court decrees, should be rejected by the Court as it was by the Master.

B. The USGS Estimates for the 1940s Are Reasonable.

1. Both Colorado and Kansas Experts Relied on the 1970 USGS Report.[21]

As Colorado recognizes, both states relied on the United States Geological Survey 1970 Report for power coefficients to estimate use during the 1964-68 period. Colo. Brief at 75. The use of power coefficients was made necessary because Colorado has not required the use of flow meters to measure the amounts of water pumped by wells. However, Colorado claims that "experts for neither state relied on the USGS pumping estimates for the period 1940-63 in the report." Colo. Brief at 75. This is not true. Mr. Book testified that he relied on the figures determined by the USGS for the earlier years as a check against the work that he did based directly on power records. This comparison confirmed for him that the study area for the USGS figures was somewhat larger than the study area for this case and confirmed the validity of the 11,000 acre-foot figure that he had determined. Tr. vol. 125 at 59-61, Pl. Reply App. Item 17. Just as importantly, Kansas relied on the USGS figures to conclude that the pumping

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[21] T.J. Major, R.T. Hurr, and John E. Moore, 1970, "Hydrogeologic Data for the Lower Arkansas River Valley, Colorado," Colorado Water Conservation Board, Ground Water Basic Data Release No. 21, Jt. Ex. 66 (R. vol. 15 at 21, 25, 30). For a description of this report, see Rep. vol. I at 158. As the title of the report reveals, the report was done by the USGS in cooperation with Colorado.

in 1948 was equal to or greater than all previous years back through 1940. *Id.*

2. Colorado's Witness Defended the USGS Pumping Estimates Before the Special Master.

Colorado called as its witness the lead author of the 1970 USGS Report, BDR-21, Thomas J. Major, for purposes of testifying on that report. As the Master points out, Mr. Major, a 26-year USGS employee, "staunchly defended the accuracy of the USGS's pumping estimates." Rep. vol. II at 187. Mr. Major was surprised to learn during his testimony that, although Colorado accepted some of the results of the report, Colorado was claiming nevertheless that the precompact pumping figures in the report were unreliable. In particular, he was not aware that Colorado was claiming that the highest pumping during the 1940s was 15 times greater than the USGS figure for the same year. R. vol 129 at 34, 61-62, Pl. Reply App., Item 18. Nevertheless, he defended the accuracy of the report's figures. *Id.* Thus, Colorado's position amounts to a refusal to accept verification by its own witness and lead author of the USGS Report of the USGS precompact pumping figures. Moreover, Colorado claims that Mr. Major was not qualified as an expert in making pumping estimates. It is technically true that Colorado did not present Mr. Major as an expert in making pumping estimates. However, he was called by Colorado to testify on the report and he was sufficiently expert to be appointed lead author of the study by the U.S. Geological Survey. Colorado asserts that the "basis, and the only basis, for Mr. Major's defense of the accuracy of the USGS pumping estimates was that those figures were subject to the normal USGS peer review and checking and he had no reason to doubt Mr. Hurr's work." Colo. Brief at 76-77. It would seem that there is hardly a higher recommendation for the accuracy of figures than that contained in the Colorado statement. It was subject to "normal USGS peer review and checking" and it was done by an independent federal agency without the pressure of litigation. It

is hard to see how such information could come more highly recommended.

3. The Supreme Court of Colorado Adopted Estimates Equivalent to the USGS Estimates.

Colorado not only criticizes the USGS, but its own Supreme Court for concurring with the USGS figures for precompact pumping. Colo. Brief at 77. Colorado claims that the Colorado Supreme Court's use of the precompact figures was an uncritical use and does not establish that they were reasonable. Colo. Brief at 77. On the contrary, it is best to rely on figures accepted by Colorado when there was no pressure of trial advocacy as there is in this case.

In *Fellhauer v. People*, 447 P.2d 986 (Colo. 1968), the Colorado Supreme Court said, "In 1940 only 2,000 acre feet were being pumped from wells in the Arkansas Valley." *Id.* at 991. In the present case, Colorado claims the pumping in 1940 was 36,837 acre-feet. Rep. vol. II at 187. The USGS figure was 2,000 acre-feet for 1940. *Id.* at 185.

4. The Colorado State Engineer Relied on the USGS Estimates in His 1975 Report.

Colorado admits that the Colorado State Engineer, in a report prepared in 1975 for purposes of presentation to the Colorado Water Court in support of regulations, relied on the USGS pumping figures. Colo. Brief at 78. The former State Engineer testified in support of his report under oath in the 1975 proceeding in Colorado water court. Pl. Ex. 514, vol. I at 213-14 (R. vol. 17 at 5, 7), Pl. Reply App., Item 2. Even in the present proceeding he testified that the estimates were the best his staff could achieve at the time of the report. R. vol. 77 at 30-31, Pl. Reply App., Item 14. The USGS pumping figures relied upon by the Colorado State Engineer himself and other state and federal agencies for years, have become inconvenient under the present

circumstances and Colorado is marshalling all of its powers to repudiate these figures, which up to now it has always considered acceptable.

5. Mr. Book Relied in Part on the USGS Estimates.

Colorado states that Dale Book, one of Kansas' expert witnesses, "did not rely on the USGS estimates in making the Kansas estimates" for 1948. Colo. Brief at 79-80. While it is true that Mr. Book developed estimates for 1948 independently based on power records and pumping coefficients, since no water meters were required by Colorado, Mr. Book relied on the USGS figures for the conclusion he drew that 1948 pumping was equal to or greater than previous pumping back through 1940. R. vol. 125 at 59-61, Pl. Reply App. Item 17.

6. The Colorado Precompact Pumping Estimates Are Not Reasonable.

Colorado's highest actual precompact pumping amount is fifteen times larger than the USGS figure for the same year (1940). *See* Rep. vol. II at 182, 185. If the USGS figures for precompact pumping are reasonable, the Colorado figures are not.

Colorado insists that there is a problem with the USGS pumping estimates because they are inconsistent with power records from the same period. Colo. Brief at 80-81. What Colorado fails to point out is that in the 1975 Colorado State Engineer report, the Colorado State Engineer published his own precompact pumping figures, which agreed in most respects with the USGS precompact pumping figures, and side-by-side published the power use data to which Colorado now refers as the basis for challenging the pumping figures of the Colorado State Engineer and the USGS. *See* Jt. Ex. 94, Table 7 at 22 (R. vol. 16 at 25, 34), Pl. Reply App., Item 9. This shows that the Colorado State Engineer was fully aware of the alleged discrepancies between

the power records and the USGS pumping figures. Nevertheless, he published the pumping figures without qualification. The power figures that Colorado claims are inconsistent are thus not an item of newly discovered evidence, but have been available throughout the several decades over which the USGS figures have been accepted. There is no reason to begin to doubt those figures in this proceeding.

7. Virtually Nothing Is Known About the Power Figures, but the Pumpage Estimates Have Been Accepted by Colorado and the U.S. Government for Many Years.

Colorado has been unable to explain the errors claimed to exist in the USGS estimates. Colorado has accepted the alleged discrepancies between the power figures and the pumping figures until now. In 1975, the former Colorado State Engineer, in his sworn testimony, explicitly discussed both the power figures and the pumping figures without suggesting that there was any reason to doubt the pumping figures. *See* Pl. Ex. 514, vol. I at 213-14, (R. vol. 17 at 5, 7), Pl. Reply App., Item 2.

8. Lack of Discussion of Pumping During the Compact Negotiations Suggests That Pumping Could Not Have Been Large.

Colorado contests the following statement by the Master:

> Current well pumping in Colorado appears simply not to have been a matter of concern to the compact commissioners. Had pumping been of any appreciable magnitude, I cannot believe that such use of water would not have surfaced in the engineering committee report and the compact negotiations. Absence of such discussion leads to the conclusion that pumping at that time was not large, a conclusion which is supported by

> other evidence in the case. Certainly, the compact commissioners did not foresee the technological breakthrough of the turbine pump and other conditions that led to the great increase in pumping which began in the 1950s. That is not to say that the compact language is not broad enough to cover depletions caused by pumping. I believe that it is, and the intent of the commissioners was to protect against material depletions from any cause. However, during the compact negotiations the specific threat appeared to be from future construction of dams and reservoirs, not from pumping. Rep. vol. I at 101-02.

Colorado begins its attempt at refutation by stating that "the Compact Commissioners clearly knew that there was well pumping in both states." Colo. Brief at 83. First, it is pumping in Colorado that is important for this case, not pumping in Kansas. Yet almost all the citations given by Colorado refer to pumping in Kansas. Second, the statements regarding well development in Colorado are scanty and completely unquantified. *See* Def. Ex. 623 at 29-30 (R. vol. 10 at 42, 48), Pl. Reply App., Item 4. Nor is significant pumping generally indicated. *See, e.g.*, Pl. Ex. 205A (R. vol. 4 at 30), Pl. Reply App., Item 1, and other sources cited by Colorado. Colo. Brief at 83. Further, as to individual statements cited, there is no evidence that they were disseminated. *See* R. vol. 10 at 42-43, Pl. Reply App., Item 11.

Colorado then argues that the Engineering Committee Report from the Compact negotiations does not show, by its exclusion of pumping, that the Colorado estimates of pumping for that time are unreasonable. Colo. Brief at 83. In the paragraph in the "Interim Report of Committee on Engineering Data and Studies to Colorado-Kansas Arkansas River Compact Commission," to which Colorado refers (*id.*), which is a paragraph that separates "necessary data" that would be tabulated from "unnecessary data" that would not be tabulated, it is stated, "Irrigation supplies derived from pumps in both states are not included in the tabulated

diversions." Jt. Ex. 5 at 3, (R. vol. 15 at 12), Pl. Reply App., Item 5. The Engineering Committee was thus aware that pumping was occurring in Colorado at that time, but considered it so insignificant as to be unnecessary to include in its work. The Master's conclusion that pumping was small enough in amount to disregard during the time of the Compact negotiations seems to be convincingly borne out by the report of the Engineering Committee.

Colorado also argues that "the absence of discussion of pumping indicates that the Compact Commissioners assumed that rights of pre-compact well owners would be administered in accordance with state law." Colo. Brief at 83-84. On the contrary, there was great uncertainty as to what the Colorado groundwater law was at that time and as to how Colorado would administer its wells. Colorado elicited this conclusion from Dr. Littlefield during cross-examination. R. vol. 10 at 46-47, Pl. Reply App., Item 11. In short, there seems to be no basis at all for Colorado's suggestion that silence on pumping indicated that the Compact Commissioners assumed that rights of precompact well owners would be administered in accordance with state law. Moreover, that conclusion has little to do with the Master's point, which is that the lack of discussion indicates an understanding on the part of the Commissioners that pumping was small enough that it could be ignored.

9. Colorado's Estimates Are Inconsistent With All Prior Determinations of Pumping for the 1940s.

Colorado's estimates of pumping in the 1940s in the Arkansas Valley in Colorado in this case are inconsistent with all prior federal and state agency, legislative and court determinations of that pumping. The division of the foregoing argument into small subsections in order to match the Colorado brief tends to obscure the overriding fact that the Colorado figures for precompact pumping are inherently unreasonable. According to Colorado, pumping tends to increase as one goes back toward the beginning of the 1940s, reaching a maximum amount in 1940 some fifteen

times larger than the USGS figure for that year and fifteen times higher than the figure adopted by the Colorado Supreme Court, the Colorado Water Conservation Board and the Colorado State Engineer. *See*, Rep. vol. II at 186-88. In order to achieve this outlandish result, Colorado asserted that well efficiencies were higher in the early 1940s than they were in the late 1940s, despite the fact that more efficient turbine pumps began to replace centrifugal pumps in the late 1940s. *Id.* at 189. The Master described this dubious Colorado effort as follows:

> For whatever reason, the result of the Colorado approach is to make pumping in 1940 the highest amount in the whole decade of the 1940s. This result seems questionable in light of all the earlier studies showing increasing pumping throughout the 1940s, and the new wells which continued to be drilled throughout the decade. Colorado's own report puts the number of additional wells drilled between 1941 and 1949 at 122. Jt. Ex. 94 at 19. A lower rather than higher estimate of early 1940s pumping is also supported by the fact that during the compact negotiations the engineering committee made no effort to include pumping as part of the diversion data, or indeed at all. Jt. Ex. 5 at 3. The historic division of flow between the two states was considered on the basis of surface diversions alone. Rep. vol. II at 190 (footnote omitted).

There is thus no viable basis on which to reject the Master's recommendation with respect to the precompact pumping entitlement of Colorado.

III. Increases in Stateline Flows Resulting From the 1980 Operating Plan Were Separately Bargained For and Should Not Offset Compact Violations.

Colorado challenges the Master's conclusion that the 1980 Operating Plan[22] provided both states with benefits bargained for separately from the Compact and was not intended to offset Compact violations by Colorado. Colo. Brief at 85-91.

One does not have to rely on inferences from the 1980 Operating Plan to ascertain that its intent was not to offset violations of the Compact. This intent is stated directly in Article VI:

> Adoption of this resolution does not prejudice the ability of Kansas or of any Colorado ditch to object or to otherwise represent its interest in present or future cases or controversies before the Administration or in a court of competent jurisdiction. Rep. App., Ex. 10 at App. 116.

It is hard to imagine a stronger expression of intent not to interfere with the claim of Kansas in a proceeding such as the present one. Although the Master quotes this provision in his decision, Colorado says not a word about it in its brief. *See* Colo. Brief at 85-91. Indeed, there is little that can be said to refute this unequivocal expression of intent. Likewise, neither of the other two "whereas" clauses of the 1980 Operating Plan refers even indirectly to the existence of Compact violations or to the effect of wells. *See* Rep. App., Ex. 10 at App. 116.

Colorado's suggestion that the purpose of the 1980 Operating Plan was to offset well effects is inherently implausible. Colorado alleges in the same brief in support of its exceptions that Kansas never complained about wells in Colorado until 1984. Colo. Brief at 32-63. The Colorado position has all the earmarks of a position

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[22] The 1980 Operating Plan is contained in the Appendix of the Master's Report as Exhibit 10 at App. 107.

developed after-the-fact for purposes of litigation. One can ask how the purpose now claimed for the 1980 Resolution was never even uttered by the parties in the course of their negotiation and adoption of that resolution or for years afterward. When Kansas finally became aware of the effects of the wells by virtue of the Simons, Li Report and brought that realization to the Compact Administration, Colorado denied the existence of well effects on Colorado's Compact obligations. Jt. Ex. 32 at 15, 22-23, (R. vol. 14 at 12, 22, 26), Pl. Reply App., Item 7. In fact, the 1980 Operating Plan itself was suggested by Colorado as a possible reason for the admitted decline in usable stateline flows. *Id.* at 22.

Colorado claims that general principles of contract law support its position. Colo. Brief at 90. This assertion is incorrect. Colorado claims that general principles of contract law provide that "the injured party is not entitled to recover damages which it in fact avoided." *Id.* The fundamental point that Colorado overlooks and fails to explain is that the 1980 Operating Plan is a separate agreement between the states, subject to cancellation each year, which provided independent benefits to both states.

Colorado puts much emphasis on the first "whereas" clause of the 1980 Operating Plan, which reads as follows:

> WHEREAS, the Arkansas River Compact Administration, hereinafter referred to as the Administration, recognizes that, because of changes in the regime of the Arkansas River, the present operation of the conservation features of John Martin Reservoir does not result in the most efficient utilization possible of the water under its control. Rep. App., Ex. 10 at App. 107.

Although the Colorado claim seems to be that the phrase "changes in the regime of the Arkansas River" refers to depletions by Colorado wells in violation of the Compact, the reference here would seem to be simply to the drought conditions that the Arkansas Valley was experiencing at the time. In fact, Colorado as-

sured Kansas that this was the case. Jt. Ex. 32 at 22 (R. vol. 14 at 12, 22, 26), Pl. Reply App., Item 7. As a result, as Colorado admits, "releases from John Martin for Kansas did not produce an equivalent in Stateline flow." Colo. Brief at 88. In addition to referring to the current drought conditions, the first whereas clause also refers to "efficient utilization" of the conservation features of John Martin Reservoir. This is addressed by the account system set up by the 1980 Operating Plan. Thus, the references contained in the whereas clause cited by Colorado are completely consistent with the express provisions of the 1980 Operating Plan and provide no plausible basis for Colorado's claimed, unspoken purpose asserted for the first time in this litigation. The Master concluded as follows:

> The 1980 Operating Plan provided benefits to both Kansas and Colorado which were separately bargained for. There is no evidence to support the claim that the benefits to Kansas were in settlement of its well claims. Colorado received ample consideration under the agreement for the 1980 plan without a waiver of Kansas' well claims. The benefits received by Kansas under the plan should not be offset against compact violations, and should not be a bar to any of the Kansas claims in this case. Rep. vol. II at 180-181.

Colorado has offered no persuasive reason to show that the Master is not completely correct.

IV. Kansas Should Not Be Required to Prove a Breach of the Compact by Clear and Convincing Evidence.

The Master premises his conclusion that the preponderance of the evidence burden of proof applies to the enforcement of Article IV-D in this case on the recent case of *Nebraska v. Wyoming*, 113 S. Ct. 1689 (1993). Rep. vol. I at 65-70. Colorado

challenges the Master's conclusion but curiously neglects to address the Master's reliance on that case.

In *Nebraska v. Wyoming*, the Court articulated a theretofore implicit distinction in its previous cases. A "clear and convincing" standard had developed for use in equitable apportionment cases in other interstate cases requesting injunctive relief not based on a compact. *See, e.g. Missouri v. Illinois*, 200 U.S. 496 (1906), *Colorado v. Kansas*, 320 U.S. 383 (1943). On the other hand, no such higher standard had ever been articulated or even intimated in the previous compact enforcement cases. *See, e.g., Texas v. New Mexico*, 462 U.S. 554 (1983); 482 U.S. 124 (1987); *Oklahoma v. New Mexico*, 501 U.S. 221 (1991). The Master recognized that to establish a burden of proof that was unusually high would tend to favor one state over another and violate the ideal of federalism that each state is on an equal footing with all other states. *See* Rep. vol. I at 68-69.

In *Nebraska v. Wyoming*, the Court established a clear distinction between "an application for *enforcement* of rights already recognized in the decree" and an application for "*modification* of the decree." 113 S. Ct. at 1694 (emphasis in original). Thus, if an interstate compact is at least equivalent under these circumstances to a decree of this Court, the burden of proof question would seem to be resolved in favor of the preponderance standard. The Master believed that it was. Rep. vol. I at 69-70. This would also seem to be consistent with the Court's decision in *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92 (1938) in which the Court said:

> Whether the apportionment of the water of an interstate stream be made by compact between the upper and lower States with the consent of Congress or by a decree of this Court, the apportionment is binding upon the citizens of each State and all water claimants, even where the State had granted the water rights before it entered into the compact. 304 U.S. at 106.

Thus, compacts adopted pursuant to Article I, Section 10, Clause 3 of the Constitution are not inferior to decrees of this Court with respect to their binding nature. This would suggest that they are at least equal with respect to the closely related issue of the standard of proof necessary to show a violation. Colorado seeks to draw a distinction between a decree and a compact, however. The basis for Colorado's distinction is, essentially, that a judicial decree is created by a court proceeding and a compact is not. However, this Court in *Hinderlider* refused to make that very distinction.

Colorado cites several grounds for its position that the standard of proof should be clear and convincing. It first cites the "quality of the parties." Colo. Brief at 95. There is language in the cases as Colorado suggests; however, none of those cases involve requests for compact enforcement; rather, they involve requests for equitable apportionment or other injunctive relief in the first instance. *See*, Colo. Brief at 94-95, *quoting, e.g.*, *Colorado v. Kansas*, 320 U.S. 383 (1943); *Washington v. Oregon*, 297 U.S. 517 (1936). Although these cases did have states as parties, the states were appearing for a very different purpose. The purpose in those cases was to consider whether there should be intervention in the rights of other states for the very first time.

Second, Colorado claims a need for the clear and convincing standard because of "the importance of a just resolution of controversies between states." Colo. Brief at 95. On the contrary, placing a higher burden on one state would eliminate the level playing field contemplated by the framers of the Constitution.

Third, Colorado claims that the clear and convincing standard is necessary "to guard against erroneous factual conclusions."*Id.* On the contrary, that standard would promote erroneous factual conclusions. The policy in favor of higher burdens in other cases is to guard against erroneous factual conclusions *against the defendant*, a policy not appropriate here in view of the equal status of states before the Court. "A preponderance-of-the-evidence standard allows both parties to 'share the risk of error in roughly equal fashion.' Any other standard expresses a

preference for one side's interests." *Herman & MacLean v. Huddleston*, 459 U.S. 375, 390 (1983) (citations omitted).

Colorado also argues that a compact can be more flexible than a decree because it can address matters which are not the subject of a present controversy, including future developments. Colo. Brief at 97. Here again, the purported distinction is not helpful. Whereas Colorado compares a decree with a compact with regard to their creation, the comparison that should be made is between the enforcement of a decree and the enforcement of a compact. Once the question is properly phrased, the Colorado distinction disappears.

Colorado criticizes the Master, saying, "[T]he Master stated the higher standard penalizes downstream states which will invariably be the party which is required to carry the burden . . . . This is not correct." Colo. Brief at 98. But Colorado has misquoted the Master. The Master's statement was actually, "Second, on an interstate stream, the downstream state will *normally* be the complaining party." Rep. vol. I at 68 (emphasis added). Not only is this generally true of interstate water controversies, *see, e.g., Kansas v. Colorado*, 185 U.S. 125 (1902); *Missouri v. Illinois*, 200 U.S. 496 (1906); *North Dakota v. Minnesota*, 263 U.S. 365 (1923); *but see Colorado v. New Mexico*, 459 U.S. 176 (1982); *Colorado v. Kansas*, 320 U.S. 383 (1943), but it is especially true of compact or decree enforcement cases. *See Texas v. New Mexico*, 462 U.S. 554 (1983); *Oklahoma v. New Mexico*, 501 U.S. 221 (1991); *Wyoming v. Colorado*, 309 U.S. 572 (1940).

Colorado cites an equitable apportionment case, *Colorado v. New Mexico*, 459 U.S. 176 (1982); 467 U.S. 310 (1984), as the basis for its criticism. Colo. Brief at 98. But the issue here is not what the burden of proof should be in a suit seeking to establish an equitable apportionment of an interstate stream, as in *Colorado v. New Mexico*. Rather, this case seeks to enforce an equitable apportionment already effected by the Arkansas River Compact. Colorado can cite no reported case in which the downstream state was not the complaining party in a suit seeking to enforce a compact. *See, e.g. Texas v. New Mexico*, 462 U.S. 554 (1983); *Okla-*

homa v. New Mexico, 501 U.S. 221 (1991). This is also true of suits to enforce interstate decrees entered by this Court. *See, e.g., Nebraska v. Wyoming*, 113 S. Ct. 1689 (1993); *Wyoming v. Colorado*, 309 U.S. 572 (1940). The downstream state will normally be the complaining state in a compact or decree enforcement action simply because of the temptation for the upstream state to withhold water that it is not entitled to. The Colorado position, if adopted, would strengthen that temptation and thereby encourage states to violate compacts—an undesirable result indeed.

CONCLUSION

Based on the foregoing, Kansas requests that Colorado's Exceptions to the Report of the Special Master be denied.

Respectfully submitted,

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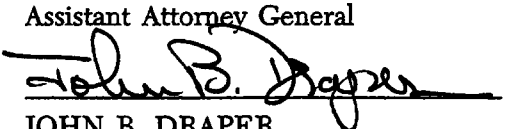
Attorney General of Kansas
JOHN W. CAMPBELL
Deputy Attorney General
LELAND E. ROLFS
Assistant Attorney General
MARY ANN HECKMAN
Assistant Attorney General



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APPENDIX

A-1

APPENDIX

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Reply Appendix Item 1

Excerpt from Pl. Ex. 205A

George S. Knapp Letter to W. E. Stanley,
July 13, 1940,
folders 1-3, Governor Payne Ratner Papers
Kansas State Historical Society, Topeka, Kansas
[08-15-00285] (Certified Copy)

A-7

KANSAS STATE BOARD OF AGRICULTURE

J.C. MOHLER • SECRETARY
STATE HOUSE • TOPEKA

July 13, 1940

Mr. W. E. Stanley,
830 First National Bank Building,
Wichita, Kansas.

RE: Colorado vs. Kansas

Dear Gene:-

* * * * *

I am wondering what purpose would be served by putting into a proposed consent decree a provision that no additional acreage should be put under irrigation in Colorado in the Arkansas River valley. Would it be proposed that all water above the amount needed for that acreage should be allotted to Kansas or be considered as surplus to be divided in some manner between Colorado and Kansas? While Colorado might refrain from constructing additional ditches for new projects yet there are many ways in which their people could increase their use of water, and even the actual number of acres irrigated, without Kansas being able to show that that was done unless an examination of the acreage actually irrigated was made each year. Many of the farmers in the Arkansas River basin do not have sufficient water to irrigate all of the farm each year and, consequently, one field is watered one year and another the next. If water could be obtained, the user could materially increase the acreage actually irrigated without the state engineer's and census reports showing any increase

in irrigated acreage. In addition to that many water users can, and in recent years have, materially increase their use of water without increasing ditch diversions by the construction of pumping plants which pump water from wells on individual farms or even pump into some of the ditches and thus they use more water on the land than head-gate deliveries show. Pumping depletes the ground water reservior and intercepts return flow which would become stream flow if not intercepted. Where extensive pumping lowers the reservoir below stream bed, stream flow sinks into the bed to recharge it, thus pumping imposes an additional but unmeasured burden on the water supply.

* * * * *

Reply Appendix Item 2

Excerpt from Pl. Ex. 514

**Supreme Court of Colorado,
Case No. 27738, *Kuiper v. AT&SF Railway*,
Amendments to the Rules and Regulations on the
Arkansas River, Transcript of
Testimony March 1975, District Ct.,
Water Div. No. 2, Cases Nos. W-4079 et al., 1011 pp.**

* * * * *

[Vol. I, pp 213-14]

[Direct Testimony of Dr. Danielson]
[S]o that if you will look at page 22 [Pl. Reply App., Item 9] of exhibit I [the 1975 Colorado State Engineer Report, Jt. Ex. 94 in No. 105, Orig.] you will find there listed by year, first the year and then the total electric power consumed and these records were taken both from the U.S.G.S. and from Colorado State University which more or less collects and correlates these power records, and, then, the estimate of total water pumped in terms of thousands of acre feet, and the footnote explains what I just went through, ...

* * * * *

Q. In 1972 on page 22 it appears that the total water pumped exceeds 200,000 acre feet.

A. Yes, that is correct.

* * * * *

Reply Appendix Item 3

Colo. Ex. 57

Letter dated April 10, 1951, from Hans Kramer, Chairman and Representative of the United States, Arkansas River Compact Administration, to Col. Charles H. McNutt, District Engineer, U.S. Army Corps of Engineers.

COPY

220 Bush Street
San Francisco 4, California
ARKANSAS RIVER COMPACT ADMINISTRATION
Lamar, Colorado

April 10, 1951

Colonel Charles H. McNutt, C.E.
District Engineer
Corps of Engineers, U.S. Army
P.O. Box 1538
Albuquerque, New Mexico

My Dear Colonel:

This will acknowledge receipt of letter from your office dated 5 April 1951, File SWKGC, regarding the availability of the final operation studies of John Martin Reservoir which were made for the consummation of the Colorado-Kansas-Arkansas River Compact. Your communication is the result of previous correspondence with Judge Stone, he having furnished me a copy of his letter to you dated March 29, 1951.

I appreciate fully the policy of your office to coordinate basic criteria used in studies for new project planning with those used in the formulation of existing compacts. However, in the case of the Arkansas River Compact no final operation studies of John Martin Reservoir were actually made, nor did any of the engineering compilations that were made during the negotiation of the Compact enter into the ultimate wording. Hence, strictly speaking, "the final operation studies" referred to in your letter are non-existent.

Perhaps it would help toward understanding the preceding statement, if I were to trace just what was done in the way of

engineering studies during the negotiation of the Arkansas River Compact. The Commission's Committee on Engineering Data and Studies (of which I was chairman) undertook initially (1) to assemble pertinent engineering data upon which the engineers would be in full agreement and (2) to make engineering analyses upon which the Commission could rely in formulating a compact. This assignment, on which work was started in 1946, was predicated on the initial assumption that some fixed criteria for operating John Martin Reservoir would have to be agreed upon as a basis for the Compact, it being the initial objective of the Engineering Committee to analyze and evaluate the results obtained from various hypotheses. In organizing the work of the Engineering Committee, it was contemplated that its final report would consist of three main parts, viz. I—Engineering Data; II—Analysis of Historic Flow; III—Operation Studies.

In the execution of that program the Committee submitted its First Interim Report on June 26, 1947. This report, dealing only with Part I, consisted principally of a series of tables of pertinent stream flow and diversion data compiled from various sources (e.g., U.S.G.S., State Engineers) for

convenient reference. It also included engineering data on John Martin Reservoir from which some evapo-transpiration and siltation estimates were computed.

A Second Interim Report, also on Part I, was submitted on November 24, 1947. This report merely rounded out the First Interim Report with respect to stream flow, diversion and storage records by including the period 1943-1946 during which the then partially completed John Martin Reservoir had operated. It also presented some calculated data on accretions for the periods 1908-1942 and 1943-1946.

ies that were mentioned in Judge Stone's letter. These studies had no bearing or subsequent formulation of the Compact.

Neither of the two Interim Reports was ever released for public use nor were they included in the Official Record of the Commission, it having been the prevailing thought that publication would be in the form of a final report which would include operation studies, if and when such a final report were made.

However, even before the date of the Second Interim Report, the trend of the negotiations took a decided turn away from the concept of fixed operating conditions based on firm interstate allocations toward the more flexible philosophy, best described as "live and let live," which became the basis of the ultimate-Compact. That principle, which was an outgrowth of the Interim Executive Agreement between Colorado and Kansas governing the operation of John Martin Reservoir during the period of compact negotiations, permitted either State to obtain water from John Martin Reservoir (when stored water was available) without regard to the other State and without the need for keeping books to balance hypothetical debits and credits. Further background details of this evolution are obtainable from careful study of the Official Record of the Colorado-Kansas-Arkansas River Compact Commission, particularly the 7th, 8th, 9th and 10th meetings. A copy of this Record was furnished to your office on February 14, 1950.

With agreement upon a flexible and indeterminate basis of interstate apportionment, it was obvious that operation studies of John Martin Reservoir could serve no useful purpose in spelling out the terms of the compact, if indeed such studies were practicable under the circumstances. Accordingly, operating studies were dispensed with then and there and that phase of the work of the Engineering Committee was suspended after the rendition of its Second Interim Report. No "Final Report" was ever made. Thus, as stated earlier in this letter, no final operation studies were authored by the Compact Commission. By the same token, such studies and/or analyses as were undertaken in the earlier stages of compact negotiation (when fixed allocations were pre-

supposed) are manifestly worthless for current consideration in relation to the terms of the Compact that was actually consummated.

Colonel Charles H. McNutt - 3 - April 10, 1951

Let me assure you that the above explanation, lengthy and detailed though it is, is not intended in any way to deny your office access to any available material that may be helpful to you. My explanation is intended merely to support the warning in Judge Stone's letter that unoriented and injudicious use of such material might be not only a waste of effort but could lead to erroneous or confused results. On the other hand, it may well be that some of the tabulations of existing data which were compiled in the Interim Reports could be useful in your current studies if brought up to date by your office.

It occurs to me that the most satisfactory way to arrive at a clear and complete mutual understanding of this matter is for the principal parties to get their feet under and their heads together over the same table. To that end I would suggest a get-together, preferably in Judge Stone's office in Denver where the Interim Reports and other material are on file. In addition to representatives of your office and myself such a conference should include Mr. R. M. Gildersleeve, who worked closely with the Commission's Engineering Committee and Mr. D.C. Bondurant, formerly of your office and now in the Missouri River Division, who actively assisted me on the Committee and who is not only well acquainted with the evolution of the Compact, but had intimate knowledge, in his former capacity, of its impact on studies for new projects in the Arkansas Basin. From my viewpoint such a huddle is the best procedure toward obtaining the desired coordination of studies.

I expect to be in Denver in connection with other business on Monday, April 30, 1951, and would be glad to reserve my time from 10:00 a.m. to 2:00 p.m. for a conference as suggested above.

If you deem such a meeting advisable please have your office issue invitations to those concerned.

Sincerely yours,

Hans Kramer
Chairman and Representative of the United States
Arkansas River Compact Administration

cc: Judge Clifford H. Stone
Mr. Robert V. Smrha

Reply Appendix Item 4

Excerpt from Def. Ex. 623

Patterson, C.L. Program for the Improvement of Irrigated Agriculture in the Arkansas Valley in Colorado (Feb. 1932)

[29-30]

* * * * *

Ground Waters.

As has been explained, surface water and ground water are so intimately and directly related, that it is wrong to consider them separately. But because it is customary, that plan has been pursued.

Many of the recent irrigation developments have involved the use of ground waters, some projects being of the drainage type, and many of them involving pumping plants. In the Arkansas Valley there are dozens and perhaps hundreds of irrigation pumping plants, few of which have observed the existing regulations regarding the filing of maps and statements of claim or have rights established by adjudication, or which operate with any administrative recognition. New projects are being promoted and constructed, and as water values increase, the confusion will be multiplied still further. The uncertainty as to the future status of stream flow rights is increasing. The negative public policy is promoting conflict and litigation. Other unfortunate features are the fact that investments have been and are being made some of which may be destroyed, and that no proper legal status is being established under which these possibilities of reclamation may attain the value and permanence they may deserve.

* * * * *

Reply Appendix Item 5

Excerpt from Jt. Ex. 5

Interim Report of Committee on Engineering Data and Studies to Colorado-Kansas Arkansas River Compact Commission (June 26, 1947)

[3]

* * * * *

To evaluate the resulting effects of operations of John Martin Reservoir, determinations and definitions of the water supply and diversion conditions and relations that historically prevailed along the Arkansas River in Colorado Water Districts 14, 17 and 67, and in Kansas between the Stateline and Garden City, are necessary. Unnecessary data not included in the attached tabulations are streamflow at stations on the Arkansas River upstream from Canon City in Colorado, and downstream from Garden City, in Kansas, and at stations on all tributary streams other than the Purgatoire River near its mouth. Also not included are the diversions by ditches from the Arkansas River in Colorado Water Districts 11 and 12, upstream from the western boundary of Pueblo County, and by ditches from all tributaries of the Arkansas River. Irrigation supplies derived from pumps in both States are not included in the tabulated diversions.

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Reply Appendix Item 6

Excerpt from Jt. Ex. 19

Minutes of meetings of the Arkansas River Compact Administration from 1949 through December, 1984

MINUTES OF
ARKANSAS RIVER COMPACT ADMINISTRATION
ANNUAL MEETING
December 14, 1954
LAMAR, COLORADO

Attendance -
For Colorado:

Ivan C. Crawford, Denver; Director Colorado Water Conservation Board
Harry B. Mendenhall, Rocky Ford; Chairman of Colorado Representatives
Harry C. Nevius, Lamar; Administration Secretary and Treasurer

For Kansas:

Wm. E. Leavitt, Garden City.
R. V. Smrha, Topeka.
Roland H. Tate, Garden City, Vice Chairman & Chairman of Kansas Representatives

For the United States:

Brig. Gen. Hans Kramer, San Francisco, Calif.; Chairman of the Administration

* * * * *

[13-14]

General Kramer said that the basic motivating principle in formulation of the Compact was, "Live and Let Live". In December 1948 the final discussion on Article IV-D was held. At that time Commissioner Mendenhall suggested a review and asked for a

change in wording. The word "material" was inserted after that discussion and the decision to insert the word was to eliminate too rigid interpretation.

General Kramer quoted pertinent passages from the Record (pp 17- 32,33).

General Kramer said, after listening to all the discussion and studying the matter from the viewpoint of the intent of those who wrote the Compact, that he considers the amount of depletion to be not material. However, if, for the sake of discussion, it should be presumed that the 530 Acre Feet average depletion is material, then too, the amount of 65 Acre Feet average sediment reduction must likewise be considered material. This would mean to the United States that the life of the Reservoir, from this point of view, will be 50 years longer or an equivalent of 1 to 2 percent. The whole question resolves itself to, "Is the amount material?" The suggestion that the Golden Rule and the principle of "Live and Let Live" be adhered to was stressed by General Kramer as his closing remark.

General Kramer then resumed the Chair.

Judge Tate said he would like to make a statement on behalf of the Kansas position. He and his co-workers on the Administration as the Kansas delegation concur fully with Governor Arn and they have no desire to deviate from his views as expressed in his letter of August 8, 1954 to the Chief of Engineers. With reference to the averages spoken of, they may be relatively unimportant, however, there are times when they may become material. Kansas thinks that there may be ways to relieve the depletion by operation in District 67 and other upstream users. He believes that the depletion should be absorbed entirely by Colorado's portion of the river—not District 67 and Kansas alone.

* * * * *

Mr. Smrha moved: The Administration does not approve, at this time, the Project as proposed by the Corps of Engineers on the Purgatoire River.

Mr. Nevius seconded the motion remarking that his main concern was the plan of operation and the effect that it might have on the area below the Project.

Mr. Crawford stated that he was emphatically opposed to the motion. He felt that its passage would be, in effect, closing the door on future development of the Arkansas basin above John Martin Reservoir. He said he believed that action today might save life and property in upstream communities.

Chairman Kramer stated that it was not incumbent upon the Administration to make comments either way, and that the matter could be tabled, if desired.

Mr. Tate reviewed the action taken by the Administration in past meetings. He agreed with General Kramer that the U. S. Representative should make a report to the Government and that the Corps of Engineers should be advised of the Administration's views.

A brief discussion on a parlimentary matter ensued followed by a short recess.

* * * * *

Upon reconvening, Chairman Kramer asked if further discussion was desired on Mr. Smrha's motion.

On vote, Colorado voted Aye with Mr. Crawford dissenting. Kansas voted Aye, and the motion was declared passed.

Chairman Kramer again reminded the Administration of the next scheduled regular meeting of March 22, 1955.

The meeting adjourned at 2:45 P. M.

* * * * *

The above minutes were approved by action of the Administration March 22, 1955.

Hans Kramer (Brig. Gen. U.S.A.-Ret.)
Administration Chairman

Harry C. Nevius,
Administration Secretary

Reply Appendix Item 7

Excerpt from Jt. Ex. 32

McDonald, J. William, Memorandum to Arkansas River Compact Administration re ARCA Investigation (October 4, 1985)

[15]

* * * * *

c. Previous Well Studies.

Third, the Kansas' engineering consultants stated that previous investigations of well pumping in Colorado demonstrated that well diversions had depleted surface streamflows. The problem with the previous studies cited by the Kansas engineering consultants is that the theoretical depletions from well depletions are not reflected in actual streamflow records. For example, the single and double-mass diagrams involving the flows of the Arkansas River at Las Animas and usable stateline flows prepared for this investigation do not show a gradual change in slope that would reflect depletions caused by well pumping. Instead, the curves of the Arkansas River at Las Animas have fairly constant slopes. The curves involving usable stateline flows show a sharp break downward beginning in 1974 and continuing through 1979 and then a break upward beginning in 1980. This corresponds to the decline in tributary inflow, rather than to well development in Colorado.

* * * * *

[22-23]

D. Pre- and Post-Compact Flows of the Arkansas River at Las Animas.

Mr. Pope also concluded that the flow of the Arkansas River at Las Animas had declined during the period 1949-1973 as compared to the precompact period. (Pope Report, p. 22, §5). However, I believe that Mr. Pope and I are in agreement that this decline is explained by the change in water rights administration

in Colorado when there is water in the conservation pool in John Martin Reservoir. (p. 10).

II. Matters for Further Investigation

As noted above, both reports are in general agreement that the changes in relationship shown by the double-mass curves occurring since 1974 have been below the Las Animas gage on the Arkansas River. This isolates the reach appropriate for further investigation.

In my opinion, plains precipitation during the period 1974-1982 is a matter that warrants further investigation. In addition, tributary inflow from plains drainage areas may have declined during the period 1974-1979 as the result of soil conservation measures. Such conservation measures were found to have had a substantial effect on streamflow in the Republican River Basin. If, after an investigation of the factors which appear most likely to have caused the decline in usable stateline flows during the period 1974-1982, including: 1) reduced diversions by ditches in Colorado Water District 67; 2) the operating plan for John Martin Reservoir; 3) decreased plains precipitation; and 4) soil conservation measures, it does not appear that this decline can be entirely attributed to such factors, then a further investigation of possible causes may be justified. However, at this time, I cannot agree to undertake an investigation into well development in Colorado when the single and double-mass diagrams do not suggest that well development in Colorado has had an impact on usable stateline flows.

Reply Appendix Item 8

Excerpt from Jt. Ex. 88

Simons, Li and Associates, Inc., 1984.
Preliminary Assessment, Development
and Administration
of Water Resources in the Arkansas River Valley

[iv-v]

* * * * *

V. Conclusions and Recommendations

Major conclusions from this investigation are:

1. The Arkansas River Compact entitles Kansas to the pre-compact usable stateline flows and a 40 percent share of the conservation benefits resulting from the construction and operation of John Martin Reservoir.

2. Usable stateline flows *increased* slightly after the compact until about 1973. Since 1974, however, usable flows have *declined* to about 45 percent of pre-compact values. This has resulted in *material depletion* of Kansas ditch diversions.

3. Post-compact well development in Colorado has caused approximately 150,000 acre-feet per year of depletions to the Arkansas River. It is likely that depletion associated with Colorado well development is a major cause of *decline* in usable stateline flows.

4. Operation of the Trinidad Project since 1979 has caused 26,000 to 35,000 acre-feet of depletions in excess of those which would have resulted from the operation approved by the Compact Administration.

5. Kansas' entitlement to usable quantities of water under the Arkansas River Compact has been *materially depleted* by post-compact development in Colorado. A conservatively low estimate of this depletion for the period of 1974 to 1981 is 40,000 to 50,000 acre-feet per year.

The major recommendations for further study are:

1. The findings of this preliminary assessment should be verified, including additional comparisons of pre- and post-compact use in Colorado.

2. The operation of the Trinidad Project should be analyzed in more detail.

3. Colorado well development and its effect on Kansas should be further documented and analyzed.

4. The operation of the Pueblo Reservoir winter water storage program should be reviewed and studied to determine if the program has or is causing an adverse impact to the State of Kansas.

5. The operation of John Martin Reservoir should be evaluated to determine the long term effect of the 1980 Storage Resolution.

6. Potential mechanisms to mitigate material depletion to the compact entitlement of the State of Kansas should be developed.

* * * * *

[1.1]

I. INTRODUCTION

1.1 *Scope and Nature of Study*

Simons, Li & Associates, Inc. (SLA) was authorized to conduct a water resources investigation of the Arkansas River basin by the State of Kansas, Office of the Attorney General in September 1983. This report describes the preliminary study of flow conditions of the Arkansas River basin since the signing of the Ar-

kansas River Compact by the States of Colorado and Kansas in late 1948. The purpose of this study was to compile and evaluate information necessary to determine if the State of Kansas has sustained material injury under the terms and conditions of the compact.

The scope of work for this study is summarized below as excerpted from the contract for professional services between SLA (Second Party) and the State of Kansas (First Party) dated September 26, 1983:

1. Second Party hereby agrees to perform a study and provide a written report via First Party to the Kansas Legislature. Such report shall contain the opinion of a qualified expert as to whether there is probable cause to believe that since the year 1949 the development of the Arkansas River basin in Colorado by federal and/or state agencies, by private enterprise, or by combinations thereof, which may involve construction of dams, reservoirs, or other works for the purpose of water irrigation and control, as well as the improvement and prolonged functioning of work already existing, has materially depleted in usable quantity or availability water for the water users in Colorado and Kansas. In addition, Second Party hereby agrees to include in said report an evaluation of the current and past operating procedures utilized at the Trinidad Dam and Reservoir project in Trinidad, Colorado. In addition, Second Party hereby agrees to include in the above-mentioned report a statement concerning whether any said depletion has resulted in material injury to the State of Kansas.

2. Second Party hereby agrees to provide a summary of the factual basis for any opinion expressed by any expert in the above-mentioned report.

* * * * *

Reply Appendix Item 9

Excerpt from Jt. Ex. 94

Stream Depletion by Wells in the Arkansas River Basin — Colorado, 1975, Office of the State Engineer

Year	Total Electric Power Consumed (M.KWH.)	Total Water Pumped (1000 AF)	Year	Total Electric Power Consumed (M. KWH.)	Total Water Pumped (1000 AF)
1940	1.243	2.5	1957	5.788	84
1941	0.6	5	1958	7.024	79
1942	0.358	6.5	1959	11.223	153.5
1943	0.831	7	1960	11.486	146
1944	0.459	9	1961	9.627	121
1945	0.590	9.5	1962	11.070	132
1946	1.749	15	1963	20.781	177.9
1947	1.207	15	1964	23.252	192.9
1948	1.234	15	1965	12.990	120.1
1949	2.193	23.5	1966	16.733	138.8
1950	3.492	31	1967	16.734	140.3
1951	3.483	31	1968	18.287	161.1
1952	4.518	46	1969	13.962	119
1953	6.090	58	1970	15.576	132
1954	9.336	94	1971	22.008	183.7
1955	9.382	97.5	1972	25.080	208.3
1956	11.925	152			

TABLE 7. Ground Water Withdrawal by Irrigation Wells—Arkansas River (Canon City to State Line)

Source:

1940-1962 From USGS basic data release no. 21

1963-1968 From USGS basic data release no. 21 plus estimates for San Isabel elec. co. using regression equation $Y = 8.0322E + 6.897$, Y = GW withdrawal (1000 AF) E = elec. power consumed (M.KW)

1969-1973 Estimated using regression equation. This eqn. is based on USGS data (Basic data release 21) and power data (CSU)

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[53]

CONCLUSIONS

The increasing use of ground water for irrigation in the Arkansas River basin since 1950 has affected stream flows in such a way as to deprive senior water users of a portion of their lawful water supply. This study has conclusively shown by means of a water budget analysis and mass diagrams that excessive pumping from the Arkansas River alluvium has resulted in the following:

1) Decrease in stream flows below Canon City;
2) Decrease in the quantity of water diverted from the main stem of the Arkansas River;
3) Reduction in return flows as indicated by a decrease in the river gain between Canon City and the State line.

The "Net River Gain" section of this report indicates that the decrease in diversions and return flows is equivalent to the consumptive use of well water, which from 1965 through 1972 average 112,800 Ac-Ft per year. This amount is obviously significant and of such a magnitude that the restoration of the value of the senior water right to its pre-well development level is warranted. This does not necessarily spell doom for the well users in that water management schemes can be devised that will prevent injury to senior surface water users while at the same time allowing continued ground water withdrawals.

* * * * *

Reply Appendix Item 10

Excerpt from Jt. Ex. 139

**Barker, R.A., L.E. Dunlap, and C.G. Sauer, 1983.
Analysis and Computer Simulation of
Stream Aquifer Hydrology,
Arkansas River Valley, Southwestern Kansas.
U.S. Geological Survey, Water-Supply Paper 2200.**

* * * * *

[55]

Results of model experimentation with hypothetical 1970-79 conditions show that water levels and streamflow within the study area were more directly affected by the reductions in incoming streamflow (compared to 1951-69 average conditions) than by either the smaller than average amounts of annual precipitation or the increased pumpage during the 1970's. Simulation indicates that: (1) The effects of less recharge during periods of smaller than average amounts of precipitation were offset by more recharge during brief periods when precipitation was much greater than the mean monthly amount and (2) the effects of the increased pumpage were partly offset by increased recharge resulting from increased irrigation.

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Reply Appendix Item 11

Excerpt from Transcript vol. 10

(Cross-examination of Douglas Littlefield)

[42-43]

* * * * *

Q. DO YOU KNOW IF MR. PATTERSON PREPARED A REPORT THAT DEALT WITH GROUND WATER IN THE ARKANSAS RIVER VALLEY IN THE EARLY 1930S?
A. I'M UNFAMILIAR WITH THE REPORT.
Q. I WOULD LIKE TO HAND YOU WHAT HAS BEEN MARKED AS DEFENDANT'S EXHIBIT 623 AND ASK YOU IF YOU CAN IDENTIFY IT.
A. THIS IS A REPORT BY C.L. PATTERSON, CONSULTING ENGINEER, ENTITLED "PROGRAM FOR THE IMPROVEMENT OF IRRIGATED AGRICULTURE IN THE ARKANSAS VALLEY IN COLORADO." IT IS DATED FEBRUARY, 1932. AND APPARENTLY YOU OBTAINED A COPY OF THIS FROM MY FILES DURING MY DEPOSITION, BECAUSE THE FRONT PAGE HAS A COPY OF MY FILE FOLDER HEADINGS.
Q. DO YOU RECALL REVIEWING THIS REPORT?
A. I DON'T RECALL REVIEWING IT. I'M CERTAIN THAT I LOOKED THROUGH IT AT SOME POINT.
Q. IS THIS ONE OF THE DOCUMENTS YOU HAD COPIED AT THE COLORADO STATE HISTORICAL SOCIETY?
A. YES. THIS APPARENTLY IS FROM THE ARKANSAS VALLEY DITCH ASSOCIATION PAPERS.

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[46-47]

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Q. DOESN'T IT APPEAR FROM THIS REPORT THAT THERE WAS A GREAT DEAL OF CONFUSION ABOUT THE NATURE OF RIGHTS TO GROUND WATER AMONG COLORADO WATERS USERS AT THIS TIME?

A. THAT CERTAINLY WOULD BE A FAIR CONCLUSION, YES.

Q. DO YOU HAVE ANY REASON TO BELIEVE THAT THIS CONFUSION WAS ANY LESS IN THE 1940S?

A. I DON'T — HAVE NO WAY OF KNOWING.

* * * * *

Reply Appendix Item 12

Excerpt from R. vol. 63

April 16, 1991
(Direct Examination of Robert Longenbaugh)

[189-90]

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Q. ARE YOU FAMILIAR WITH THE PRACTICES OF FARMERS IN THE ARKANSAS VALLEY RELATED TO OPERATION OF IRRIGATION PUMPING PLANTS?
A. YES, I AM.
Q. WHAT IS THE BASIS OF YOUR KNOWLEDGE?
A. MY BASIS IS SERVING AS EXTENSION IRRIGATION SPECIALIST THROUGHOUT THE '70S, AND ALSO THE FACT THAT I MEASURED OBSERVATION WELL NETWORK THROUGHOUT THE VALLEY IN THE '60S. AND IN ADDITION, THE STUDIES THAT WERE DONE WITH COLORADO STATE UNIVERSITY AND THE U.S.G.S. IN THE PERIOD 1962 THROUGH '64 AND '65.
Q. I ASKED YOU ABOUT THIS PREVIOUSLY, BUT WHAT IS YOUR OPINION CONCERNING THE AVERAGE EFFICIENCY OF PUMPING PLANTS IN THE ARKANSAS VALLEY?
A. I WOULD SAY THAT I WOULD EXPECT A VALLEY WIDE AVERAGE TO BE 40 TO 45 PERCENT.
Q. HAVE THEY CHANGED —
A. THAT WOULD BE 1985 CONDITIONS.
Q. HAVE THEY CHANGED OVER TIME?
A. YES, THEY HAVE.
Q. WHAT CHANGES HAVE OCCURRED?
A. THEY HAVE DECREASED IN EFFICIENCY OVER TIME BECAUSE OF THE WEAR OF THE PUMP AND THAT THEY DON'T CHANGE OUT THE PUMPS. SO THE AGE OF THE PUMPS IN MY OPINION IS OLDER EVERY YEAR, AVERAGE AGE OF THE PUMPS IN THE VALLEY.

* * * * *

Reply Appendix Item 13

Excerpt from R. vol. 65

April 18, 1991
(Cross-examination of Robert Longenbaugh)

[69-70]

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Q. BUT AT SOME POINT IT WILL HAVE TO BE CHANGED; IS THAT RIGHT?

A. I DON'T KNOW. WE HAVE GOT PUMPS DOWN THERE NOW, MR. DRAPER, THAT ARE — WHEN THEY ARE SERVICED, I SAW AND OBSERVED PUMPS IN MY FIELD TRIP IN JUNE WHEN THE DISCHARGE PIPE HERE JUST SPEWING WATER EVERYWHERE, COMPLETELY RUSTED OUT. HOW A FARMER CAN NOT BE DOING WHAT HE SHOULD BE DOING AND WASTING THAT MUCH WATER, I DON'T UNDERSTAND.

WHEN YOU PULL PUMPS AND COLUMN PIPE OUT, IT IS NOT UNCOMMON TO FIND COLUMN PIPE HAVING HOLES IN THE SIDES. THE WATER SQUIRTS OUT THROUGH THE BOTTOM OF THE PUMP, GOES DOWN THE WELL CASING. I HAVE MADE PUMP EFFICIENCY TESTS OF 5 PERCENT, 5 PERCENT EFFICIENCY, 10 PERCENT EFFICIENCY. AND, YES, I CAN HOPE WE GET THE FARMERS INTERESTED IN CHANGING IT OUT. I CAN'T GUARANTEE YOU THAT, EITHER.

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Reply Appendix Item 14

Excerpts from Transcript vol. 77

(Direct Examination of Jeris Danielson)

[30-31]

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Q. IS YOUR ANALYSIS HERE, WITH RESPECT TO THE EFFECTS OF PUMPING, WAS THAT BASED ON THE ACTUAL PUMPING AMOUNTS OR ON THE DECREED AMOUNTS FOR WELLS?
A. I BELIEVE THE CALCULATION WAS BASED ON THE PUMPING AMOUNTS SHOWN IN TABLE 7 AT PAGE 22 [of Jt. Ex. 94, Reply App., Item 9.]
Q. IN OTHER WORDS, THE ACTUAL PUMPING AMOUNTS?
A. WELL, I CAN'T SAY "ACTUAL." I AM NOT SURE WE KNOW THE ACTUAL. I THINK THE VALUES THERE — IF YOU LOOK AT THE FOOTNOTE IN THE TABLE — INDICATES SOURCES AND TECHNIQUES OF ESTIMATES. SO I WOULD NOT REPRESENT TO YOU THAT THESE ARE THE ACTUAL PUMPING. THESE WERE THE BEST THAT MY STAFF COULD DETERMINE IN 1972.
Q. OF ACTUAL PUMPING?
A. OF ESTIMATED PUMPING, YES.
Q. THESE ARE NOT THE DECREED AMOUNTS FOR THE WELLS IN THE VALLEY; IS THAT RIGHT?
A. I DON'T BELIEVE SO, NO.

* * * * *

Reply Appendix Item 15

Excerpt from R. vol. 78

May 16, 1991
(Cross-examination of Jeris Danielson)

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[85]

Q. OKAY. ON PAGE 53 [of Jt. Ex. 94, Reply App. Item 9], MR. DRAPER ASKED YOU SEVERAL QUESTIONS ABOUT THE THREE CONCLUSIONS SET FORTH ON PAGE 53. DO YOU STILL AGREE WITH THOSE CONCLUSIONS?

A. YES.

Q. LOOKING AT THE SENTENCE WHICH FOLLOWS THE THREE CONCLUSIONS, "THE REPORT INDICATES THAT THE DECREASE IN DIVERSIONS AND RETURN FLOWS IS EQUIVALENT TO THE CONSUMPTIVE USE OF WELL WATER, WHICH FROM 1965 THROUGH 1972 WAS SAID TO AVERAGE 112,800 ACRE FEET PLUS PHREATOPHYTE LOSSES."

DOES THE DECREASE IN DIVERSIONS AND RETURN FLOWS TRANSLATE INTO A REDUCTION IN STATE LINE FLOWS IN YOUR OPINION?

A. NO, NOT IN THE EVALUATION THAT WE DID IN THIS REPORT.

Q. WHY NOT?

A. BECAUSE THE EVALUATION WAS COMPLETED IN '72, WE WERE LOOKING AT LOSS OF RETURN FLOW — OR THE DIMINISHMENT IN NET RIVER GAIN, IT'S A LUMP TERM — IN THE REACH AND NOT EXAMINED AT THE STATE LINE. AGAIN, INSOFAR AS THERE MAY HAVE BEEN WELLS IN 1972 PRODUCING BELOW THE BUFFALO HEADGATE, IT IS CONCEIVABLE THAT THOSE WELLS COULD HAVE AT TIMES CAUSED A DECREASE IN STATE LINE FLOW. WE DID NOT MAKE THAT DETERMINATION.

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Reply Appendix Item 16

Excerpt from R. vol. 84

May 24, 1991
(Direct Examination of Duane Helton)

[24-26]

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MR. DRAPER: LET ME JUST MAKE ONE POINT IN THAT REGARD, YOUR HONOR. I THINK THE REFERENCE THAT MR. ROBBINS MAKES TO THE ESTABLISHED RIGHTS UNDER THE COLORADO COURTS THAT WERE ENTERED MANY, MANY YEARS AFTER THESE RIGHTS MAY HAVE BEEN FIRST USED. WHEN THEY WERE ENTERED WITH A CERTAIN PRIORITY DATE, THEY WERE NOT GRANTED THE RIGHT TO PUMP OUT OF PRIORITY, WHICH IS WHAT THEY'VE BEEN DOING. IF THEY HAD, LET'S SAY, A 1947 PRIORITY DATE, THOSE WELLS HAVE NOT BEEN KEPT IN THAT NITCH IN THE PRIORITY SYSTEM. THEY HAVE BEEN LIKE A FIRST PRIORITY ON THE SYSTEMS THAT CAN TAKE OUT EVEN THE ROCKY FORD DITCH BECAUSE THEY PUMP UNREGULATED. AND I THINK IN THIS DISCUSSION OF LEGAL POINTS, IT'S APPROPRIATE FOR THE COURT TO KEEP THAT IN MIND.

SPECIAL MASTER: ALL RIGHT.

MR. ROBBINS: YOU'VE HEARD DR. DANIELSON'S TESTIMONY AND YOU'LL CERTAINLY HEAR MORE LEGAL ARGUMENT FROM ME ON THAT POINT, BUT AT THE BOTTOM LINE, THE COMPACT ALLOCATED THE RESOURCE BETWEEN TWO STATES ON A CERTAIN DATE AND COLORADO CITIZENS WHO HAPPENED TO BE TAKING FROM THE GROUND WATER SYSTEM AT THAT TIME, WHO HAPPENED TO HAVE BEEN PUMPING AT THAT TIME AND WHO WEREN'T AT THAT TIME ABLE EVEN TO GET A DECREE FOR THEIR GROUND WATER RESOURCES, THE FACT THAT THEIR OPPORTUNITY DIDN'T ARISE UNTIL

LATER SHOULDN'T BE TO THEIR DETRIMENT OR TO THEIR PREJUDICE.

AND THE QUESTION OF HOW COLORADO'S DITCHES AFFECT ONE ANOTHER, THE PRE-1900 DITCHES AND THE POST COMPACT 1900 WELLS, IS PROBABLY — IS AN ISSUE THAT COLORADO HAS BEEN WRESTLING WITH FOR 30 YEARS AND IS NOT AN ISSUE THAT ACCRUES TO KANSAS'S BENEFIT.

THEY ARE VERY MUCH LIKE, AT THE BANQUET, THE ANIMALS THAT GET AROUND THE TABLE, AND THEY WANT THE SCRAPS THAT FALL OFF, AND I DON'T THINK THAT THAT'S THE PURPOSE OF THIS PROCEDURE. I THINK THAT COLORADO WATER USERS WHO HAVE PRE-COMPACT WATER RIGHTS ARE ENTITLED TO THEIR PROTECTION.

SPECIAL MASTER: LET'S GIVE MR. DRAPER ONE COMMENT AND THEN LET'S NOT HAVE ANYMORE ARGUMENT AT THIS POINT.

IT IS CLEAR THAT INVOLVED IN THE PUMPING ANALYSIS, THAT THE WHAT IF PUMPING ANALYSIS IS A CERTAIN APPROACH WITH RESPECT TO THE PRE-COMPACT WELLS, AND THAT'S ONE OF THE THINGS THAT I WILL ULTIMATELY HAVE TO APPLY THE LAW TO AND TO ANALYZE AND TO REACH A DETERMINATION ON, AND SO I THINK THIS POINT, I DON'T REALLY NEED TO HAVE A LOT OF ARGUMENT ON IT. I SIMPLY NEED TO UNDERSTAND WHAT HAS BEEN DONE AND I THINK I DO THAT.

BUT YOU GET ONE LAST COMMENT, MR. DRAPER.

MR. DRAPER: THANK YOU, YOUR HONOR, I'LL KEEP IT SHORT.

WHEN WE PASS OVER TO WHAT AMOUNT OF PUMPING OUGHT TO BE GRANDFATHERED UNDER THE COMPACT, OUR POSITION IS THAT IT'S WHAT PUMPING WAS AFFECTING THE RIVER AT THE TIME

OF THE COMPACT. AND COLORADO, UNDER THE GUISE OF THESE DECREES, MOST OF WHICH WERE ENTERED WITHOUT OPPOSITION MANY YEARS LATER, THEIR POSITION IS THEY CAN INCREASE BEYOND THAT, INCREASE THE EFFECTS ON THE RIVER, AND I DON'T THINK THAT WAS THE INTENTION OF THE FRAMEWORK OF THE COMPACT.

SPECIAL MASTER: I THINK I UNDERSTAND KANSAS'S ARGUMENTS AND COLORADO'S.

MR. ROBBINS: BEFORE THINGS GET TOO FAR DOWN THE ROAD, THOUGH, I WANT MAKE IT CLEAR THAT THE INSINUATION THAT SOMEHOW SOMETHING IMPROPER WAS DONE IN A COURT OF LAW IN COLORADO ISN'T APPROPRIATE, YOUR HONOR, BECAUSE THE SUGGESTION IS THERE HAS BEEN A FRAUD PERPETRATED UPON THE COMPACT.

* * * * *

Reply Appendix Item 17

Excerpts from Transcript vol. 125

(Direct Examination of Dale Book)

[59-61]

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SPECIAL MASTER: YOU DID NOT ESTIMATE PUMPING FIGURES FOR THE 1940 TO '49 PERIOD, DID YOU?

THE WITNESS: 1940 THROUGH 1947, I DID NOT, 1948 AND 1949, I DID.

SPECIAL MASTER: ALL RIGHT. ONE OF THE CRITICISMS THAT COLORADO EXPERTS MADE IN USING THE 11,000 FIGURE FOR 1948 WAS THAT THAT WAS A WET YEAR, AND THEREFORE, YOU WOULD BE LOOKING AT SURFACE DIVERSIONS WHEN PUMPING WAS DOWN.

DO YOU AGREE WITH THAT?

THE WITNESS: COLORADO'S ESTIMATES OF PUMPING SHOWN IN 165* INDICATE, BASED ON THEIR ESTIMATES, THAT THEY BELIEVE THAT THERE WAS PUMPING HIGHER THAN THE 1948 LEVEL FOR YEARS PRIOR TO [1948]. THE U.S.G.S. IN JOINT EXHIBIT 66, THEIR ESTIMATES WERE THAT 1948 WAS THE HIGHEST LEVEL OF PUMPING THAT HAD BEEN ACHIEVED UP UNTIL THAT TIME.

* * * * *

SPECIAL MASTER: SO, MR. BOOK, YOU ARE SAYING THEN THAT THE U.S.G.S. CALCULATED 1948 AS THE HIGHEST AMOUNT OF PUMPING THAT HAD OCCURRED UP UNTIL THAT TIME, DURING THE '40'S.

THE WITNESS: THEY HAD AN ESTIMATE OF 15,000 ACRE FEET FOR 1946, '47, AND 1948.

SPECIAL MASTER: 15,000?

THE WITNESS: YES, FOR EACH OF THOSE YEARS.

BY MR. DRAPER:

* * * * *

SPECIAL MASTER: THAT IS FROM 1946 THROUGH '48?

THE WITNESS: THOSE ARE THE THREE YEARS THAT THEY HAVE THAT. THEIR TABULATION GOES BACK TO 1940.

SPECIAL MASTER: AND FROM YOUR CALCULATIONS, USING POWER RECORDS, YOU CONCLUDED THAT THAT WAS HIGH, THE 15,000?

THE WITNESS: FOR 1948?

SPECIAL MASTER: YES.

THE WITNESS: YES. THE REASON FOR THAT, WE ARE CONSISTENTLY BELOW THE U.S.G.S. VALUES FOR THE PERIOD 1948 THROUGH 1963. THEY USED A DIFFERENT METHOD OF CALCULATING OR REPORTING PUMPING IN BASIC DATA RELEASE 21 FOR THOSE YEARS. IT WAS NOT BASED ON THE FIELD INVESTIGATIONS OF THE WELLS. WE DON'T KNOW EXACTLY HOW IT WAS DETERMINED, BUT IT WAS BASED ON POWER RECORDS, GROSS POWER RECORDS FROM POWER COMPANIES.

AND IT APPEARS TO ME THAT THEY MAY HAVE SIMPLY TAKEN POWER DATA, TOTAL POWER DATA FROM THE COMPANIES AND APPLIED THE POWER COEFFICIENTS THAT THEY HAD DETERMINED IN THE FIELD IN THE 1960'S AND APPLIED IT TO ALL OF THE POWER WITHOUT ANY REDUCTION FOR THE AREA. BECAUSE WE MAKE THE REDUCTION FOR THE STUDY AREA, WE END UP WITH SLIGHTLY LOWER NUMBERS THAN THE U.S.G.S. FOR THE ENTIRE PERIOD OF 1948 THROUGH 1963.

I MIGHT POINT OUT THAT COLORADO, I GUESS WOULD TEND TO AGREE WITH THAT INTERPRETA-

TION BACK UNTIL ABOUT 1953. FROM 1953 THROUGH 1963, THE TWO STATES ARE VERY CLOSE IN THEIR ESTIMATES AND BOTH ARE BELOW THE U.S.G.S. TABULATION.

SPECIAL MASTER: ALL RIGHT.

* * * * *

Reply Appendix Item 18

Excerpt from R. vol. 129

September 25, 1992
(Cross-examination of Thomas Major)

[34]

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Q. NOW, YOU HAVE SAID THAT YOU AND THOSE IN YOUR OFFICE OF THE G.S. TOOK FIERCE PRIDE IN THE ACCURACY OF THE REPORTS THAT YOU ISSUED; IS THAT A FAIR STATEMENT?
A. YES, SIR.
Q. AND THESE REPORTS WERE CAREFULLY CHECKED AND PEER REVIEWED BEFORE THEY ARE RELEASED TO THE PUBLIC?
A. YES, SIR.
Q. WHAT LENGTH OF TIME ELAPSED FROM THE END OF THE STUDY PERIOD TO THE PUBLICATION OF THIS REPORT DURING WHICH YOU AND OTHERS CARRIED OUT THAT CHECKING?
A. APPROXIMATELY TWO YEARS.
Q. ARE YOU AWARE THAT THE STATE OF COLORADO IN THIS CASE IS ATTEMPTING TO DISCREDIT CERTAIN INFORMATION IN THIS REPORT?
A. NO, SIR.

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[61-62]

Q. NOW, I WOULD LIKE TO CONFIRM MY STATEMENT THAT I THINK YOU HAVE MADE, AND THAT IS THAT YOU HAVE NO REASON TO DOUBT THE ACCURACY OF THE PUMPING FIGURES THAT ARE SHOWN IN BDR 21?
A. I DIDN'T DEVELOP THEM, AND I HAVE NO REASON TO BELIEVE THAT ANYONE WOULD DO ANYTHING THAT WOULDN'T BE ACCURATE.

Q. AND THOSE FIGURES WERE SUBJECT TO THE NORMAL PEER REVIEW AND CAREFUL CHECKING OF THE UNITED STATES GEOLOGICAL SURVEY?

A. YES, SIR.

Q. AND THAT WOULD INCLUDE IN PARTICULAR THE GROUND WATER WITHDRAWAL SHOWN IN FIGURE 3 OF THE REPORT?

A. WOULD YOU PLEASE REPHRASE IT, BECAUSE THERE ARE PORTIONS OF THIS THAT I CAN'T VERIFY AT ALL?

Q. THE QUESTION WAS WHETHER YOU HAD ANY REASON TO DOUBT, GIVEN THE PEER REVIEW AND CAREFUL CHECKING THAT YOU HAVE DESCRIBED, ANY REASON TO DOUBT THE ACCURACY OF THE GROUND WATER WITHDRAWAL FIGURES, THE PUMPING FIGURES SHOWN IN FIGURE 3.

A. KNOWING THE INTEGRITY OF TED HURR, I DON'T DOUBT IT AT ALL.

Q. WOULD YOU BE SURPRISED IF SOMEONE CLAIMED THAT THE FIGURES FOR 1940 WAS ACTUALLY 15 TIMES HIGHER THAN WHAT MR. HURR DETERMINED?

A. WITH THE BEST INFORMATION AVAILABLE, I'M SURE THAT'S WHAT HE THOUGHT WAS CORRECT.

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Reply Appendix Item 19

Excerpt from R. vol. 131

October 27, 1992
(Cross-examination of Harold Simpson)

[22]

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Q. WELL, THIS IS A DECREE OF THE WATER COURT, IS IT NOT?
A. YES, IT IS. BUT IT IS BASED ON INFORMATION PROVIDED BY THE APPLICANT.
Q. WELL, YOU ARE NOT SUGGESTING THAT PEOPLE FILED FALSE INFORMATION WITH THE WATER COURT, ARE YOU?
A. YES, I AM.
Q. WOULD THAT BE WHAT MR. ROBBINS HAS CALLED A FRAUD ON THE WATER COURT?
A. I DON'T KNOW WHAT HE CALLED IT. BUT I DO KNOW THAT IT HAPPENED. AND IT HAPPENED ESPECIALLY IN THIS TIME FRAME WHEN THERE WERE SO MANY APPLICATIONS FILED WITH THE COURT.
Q. NOW, YOUR OFFICE RELIES ON THE WATER RIGHTS DECREES, DOESN'T IT?
A. YES.

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Reply Appendix Item 20

Excerpt from

Colorado's Closing Brief Re Kansas' Well Claim

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D. KANSAS IS NOT ENTITLED TO RELIEF FOR WELL DEVELOPMENT WHICH TOOK PLACE PRIOR TO 1965

[44]

Colorado raised various affirmative defenses in its answer to the complaint; however, in cases between States, the Supreme Court has not paid attention to labels, *Washington v. Oregon*, 297 U.S. at 528, but has focused on the equities of the case. *Colorado v. Kansas*, 320 U.S. at 394. As Justice Cardozo said in *Washington v. Oregon*, it is "high equity that moves the conscience of the court in giving judgment between states." 297 U.S. at 523. Therefore, in addressing the reasons that Kansas' complaint about post-compact well development in Colorado which took place in the 1950s and early 1960s should be denied; Colorado will not try to pigeonhole Kansas' actions as laches, estoppel, etc. but will focus on those factors which courts of equity have traditionally considered in deciding whether to give judgment.

* * * * *

[48]

Given the fact Kansas failed to complain about post-compact well development in Colorado for many years, at least twenty years in the case of wells drilled in 1965, thirty five years in the case of wells drilled in 1950, Kansas should be barred from complaining about the effects of well development which occurred in Colorado prior to 1965. *Washington v. Oregon*, 297 U.S. at 528-29.

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Reply Appendix Item 21

Excerpt from

Colorado's Memorandum Re Matters to Be Raised at Oral Argument

[2]

* * * * *

A. *LACHES*

Although the Special Master agrees that Kansas made no complaint about well pumping in Colorado until 1984 at the earliest, the Special Master may have felt constrained to reject the defense of laches because otherwise Kansas' delay would have barred relief against almost all of the wells in existence in 1985. Colorado suggests an alternate way to view Kansas' well claim and a method to apply laches which would produce a fairer result.

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[4-5]

The Special Master may have felt constrained to reach this conclusion because otherwise Kansas' delay would have barred relief against 1,842 out of 2,062 large capacity irrigation wells drilled before 1965. Draft Report at 165. There is, however, another way to view Kansas' claim. . . . Rather than view Kansas' claim as one based on well construction *per se*, the claim can be viewed as one based on well *pumping* and treated in the nature of a continuing nuisance, in which each year's well pumping gives rise to a new cause of action. . . . Viewed in this light, Kansas' delay might bar relief against post-compact well pumping through the mid-1970s which occurred without complaint by Kansas, but not the increased well pumping which occurred in later years. . . . Viewing Kansas' claim in this light would also allow the Special Master to acknowledge the substantial prejudice that Kansas' delay has worked on Colorado in trying to quantify depletions to usable Stateline flows which allegedly occurred up through the mid-1970s.

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[52]

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VI. CONCLUSION

Colorado believes that the draft report should be modified as follows:

1. Laches should bar Kansas' well claim for pumping which occurred up to at least 1975, ten years before Kansas complained about post-compact well pumping in Colorado.

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