ORAL ARGUMENT — 2/10/99
98-0578
E.H. BRAINARD, II V. STATE OF TEXAS

POWERS: Mr. Harrell, Mr. Sheets and I represent approximately 30 citizens who own private lands along the Canadian river in Roberts and Hutcheson Counties in the Panhandle. As we see this case it turns on extremely well-established principles of property law, which I would like to mention very briefly. First, our clients' lands were patented out of the State of Texas as riparian lands. They are, and they are entitled to remain adjacent to the river, which is the essence and very most valuable feature of riparianness(?). Second, what the State owns is the bed of the river. No one disputes that.

GONZALEZ: When you say adjacent to the river, do you mean it must have actual contact with the water?

POWERS: What we means is that the boundary line is marked along a bank, which is a bank that contains the flowing water of the river. So we don't contend, as the state has asserted, that the waterline itself marks the boundary. We contend and we understand from *Oklahoma v. Texas*, and Colonel Stiles writings, that the line is along a bank. But that bank is the water-wash bank. That bank is the bank that confines the river to its normal course or confines the river during its normal flow during the course of a year.

I think one of the best ways to visualize that is to consider the one occasion on which Colonel Stiles said that the gradient boundary is at the waterline.

Let me talk about the gradient boundary. I would like to try to make that simple if possible. It's somewhat of a mystifying concept. Essentially, one _____ of the boundary bank, which has been described in the literature in *Oklahoma v. Texas* opinion as the water-wash bank does confines the river. Then on that bank, the gradient boundary surveyor, a State licensed land surveyor, will find a key bank - a qualified bank. The purpose of finding that bank is to mark the height, the elevation of the boundary on the bank. So one finds a bank and one looks at the toe of the bank and the top of the bank just before the water overflows the bank, and one marks a midpoint on that bank. And that is a benchmark. That is a height of the gradient boundary. And then one imagines a plain formed by the surface of the flowing water that's attached right at that point, and one takes that plain down the river and where that plain intersects the banks whether they be slopes, whether they be accretion banks or whether they erosion banks, that's where the boundary lies.

Colonel Stiles said the one time in which the gradient boundary will lie right on the feather edge of the water, as he put it, is when the river is flowing at precisely the depth of that benchmark. When the river is flowing at precisely that depth, then the water in the river as it intersects the land up and down the river will mark the gradient boundary. Now that's a rare occasion

when that exact point happens, so there has to be a way to do it otherwise.

Well what that tells you is that the bank on which that gradient boundary is marked can't be ½ mile, ¼ mile away from the flowing water. Because that's what marks the boundary along the bank after you pass your qualified bank. That's why we say and where we get right to the nub of this case, Can you mark the gradient boundary on a bank that is ¼ mile away from where the flowing water has been for 3 decades?

HANKINSON: The parties don't debate where the gradient boundaries was before the Sanford Dam was completed in 1965 do they?

POWERS: We do.

HANKINSON: What is the argument there?

POWERS: On that issue, there was no gradient boundary done before 1965, no gradient boundary marked. The state has gone out and marked what they say the gradient boundary was.

HANKINSON: And you disagree with that. But in any event, the landowners and the state do agree that the gradient boundary was perhaps at a point that indicated a larger bed than what you say it is now?

POWERS: I suspect that's true, but I'm not prepared to concede that, and here is why. I think what they marked are old flood banks. They marked the gradient boundary prior to 1965 at banks that were carved out as floods went down that river. We don't know where the normal flow of that river was at that point in time. They started with flood banks, and today there are flood banks.

HANKINSON: Is it the landowner's position then that there was no change in the gradient boundary as the result of the completion of the Sanford dam?

POWERS: We suspect there was because the land was dramatically changed out there. We just can't tell you what it is because nobody did a gradient boundary survey before 1965 on this property.

HANKINSON: If we assume that there was a change between the gradient boundary before the dam was completed and after, what is the legal effect of the completion of the Sanford dam on the ownership rights of the riverbed?

POWERS: We say there's no effect. The normal rules of riparian ownership apply: reliction; accretion; erosion. Those normal rules continue to apply when the normal rule of the great in boundary still applies. You go out and do a gradient boundary survey today, just like you would have done it in 1960.

HANKINSON: Now do the normal riparian landowner rules actually apply usually as a result of natural events as opposed to manmade events, or are there cases in which a manmade event has caused a change in the course of a river and riparian ownership right rules have been applied?

POWERS: Our view is, and I think the cases are consistent, even to the point where there is an ALR annotation on this point on our side saying that the normal rule from the beginning of time down to the present is that manmade influences on the course of the river do not affect the operation of the normal property rules that I have described. That's the artificial change theory. That's the state's artificial change theory. When you get right down to it, the only thing the state has to support that artificial change theory is their AG's opinion from about 1970.

If you look at the best authority the point at which it's discussed in the most detail is in the US SC opinion in *Bonelli Cattle Co.*. They discussed the artificial change theory in great detail. And a lot of writing since then citing *Bonelli*. There's a really good article in the Arizona Law Review, which we have cited that talks about that particular theory. Here's the distinction that I think is important here. If a man goes on to the river and directly affects the riverbed, fills the riverbed is the most common case, that's the *Ellis Island* case which they have cited, then that does not change the ownership of that particular field land. That is not a riparian rights issue. But if you go 15 to 20 miles up the river and do something to influence the water, and the water is the only connection between your land down here where we're looking at something and this change way up here, which we did not do - had we done it it might have been different, but we did not do it, then the normal rules of riparian ownership apply.

I've always been mystified at this artificial change theory. There are two dams on this river in New Mexico that were there before this dam was there. Those dams cut this river off from its headwaters. Those dams cut this river off from his snow melt flow. But the State doesn't want to talk about those two dams. This quest for a river in its natural state, which is what this case is really...

ENOCH: I can't tell by your argument. Are you talking about as a matter of law their survey that they did estimated pre-building of the dam is not the right one because it didn't measure the water-flow then, or are you saying it's not the right one because the water flow has to be measured as of today?

POWERS: As of today, if you're going to do a survey on the river, you have to survey the river as it exist today.

ENOCH: I don't have a lot of help on what really was the interests of the state and the parties historically in riparian issues. Is it an over-simplification to say that the state's ownership of a riverbed was simply where the river flowed?

POWERS: No it is not an oversimplification.

ENOCH: So if the river changes its flow for whatever reason, the state has no residual interest in the dry land, it simply has its interest changes with wherever the river flows?

POWERS: Absolutely correct.

ENOCH: When does that interest change? At what point when you have a river that through the seasonal changes spreads out over ½ mile, not flood stage but seasons changes, and then in the dry season is down to a trickle, where does the change occur - 3 years from now, five years from now, 6 years ago, where we have an ultimate determination that the river has in fact changed its course?

POWERS: The rules apply to the normal stages of a river through years. So if you have a normal stage of river it's going to be run a little higher in certain parts of the year than it does in other parts of the year.

ENOCH: I'm excepting the gradient flow theory as this level you've determined. But I'm just saying at what point in the historical movement of the river - do we have to go out there everyday and measure or every six months and measure, or can we measure 30 years ago based on how slow the river moves?

POWERS: I think all of the authorities agree that a gradient boundary survey is good on the day the gradient boundary survey is done. And in fact, the decrees in *Oklahoma v. Texas* and the decree by the TC in this case decrees the boundaries subject to future accretion, reliction and erosion. So you're right, the river can change on a day-to-day basis. Normally it doesn't.

ENOCH: So your point would be that the only good survey is the one that was done yesterday because the one done three days ago or the one guesstimating 30 years ago is not the way you do a gradient...

POWERS: One does not go do a gradient survey trying to recapture conditions that existed 20 years ago.

ENOCH: And so we don't have to address whether it was a dam or not a dam. The fact of the matter is it's what happened yesterday is the way you run a survey?

POWERS: I agree.

OWEN: What about situations where you have a river and there's a dam placed there and 2, 3, 4 times a year water is let out of the dam, and the river is used basically to swing(?), a section of river to take the excess water. For example, the Colorado where you have certain fixed level lakes but there are portions of the Colorado that change dramatically. What do you do in those situations?

POWERS: That is not the situation we have. But I understand. In those situations you have a normal flow of the river and then you have floods that come down the river. And there are cases about that. Normally there is a normal flow of the Colorado. And I think the situation is that the people who let the water out of the dams do let the water out in such a way as to have a relatively normal flow.

OWEN: Knowing that they are going to flood, or knowing that it is going to rise quite a bit?

POWERS: Knowing that it is going to rise, but not knowing that it is going to flood. You do have cases involving those very kinds of situations where something is perceived to have been done negligently, which there's a tort of immunity for, or where in fact a big decision was made just to take over some more land to flood it, to make a new lake. And those are different kinds of cass. But I don't think that that's a big problem. That's what goes on on rivers all around where a normal release is made. In this case, the river authority has said that when Lake Merdith gets up to a certain level they will start releasing water.

OWEN: Well what's going to be the effect of that on the boundaries?

POWERS: Then I think as the normal flow of the river increases and widens, then the boundary widens. There's no question about that.

ABBOTT: Why is that not problematic? It just seems as though if that were the case, the state would be sitting on a petition that they would have ready prepared to file and on that day when the riverbanks are wider because of letting the water out they are going to run down to the courthouse and say, ok this is the new boundary today give us back our land.

POWERS: I don't think they would have to go down to the courthouse. If the river permanently occupies more land, then because of what Justice Enoch said...

ABBOTT: But your definition of permanent changes from day to day is the problem. The way I heard you a second ago, you said the most recent survey is the one that counts.

POWERS: The most recent survey marks the boundary as of that date, that's right. It's always subject to change.

ABBOTT: And if between today and the day we issue our opinion, the state changes its policy and decides to start letting a whole lot more water go through that dam, why would your position not be mooted?

POWERS: My position wouldn't be mooted. My position is one still goes down and

marks the river boundary in accordance with where the flowing water is, not ½ mile up...

HANKINSON: Don't we have other interests though that are affected by this? I take it the state has always owned this riverbed, this is sovereign land?

POWERS: The state owns the riverbed, whatever the riverbed is.

HANKINSON: I understand. But no one else has ever owned that riverbed, whatever it may be but the state?

POWERS: That's right.

HANKINSON: And there's never been any severance of like the mineral estate from the surface?

POWERS: Correct.

HANKINSON: And as the boundary changes, then I take the ownership of the minerals would change?

POWERS: That's correct.

HANKINSON: So one day the state might own the minerals and the next day the landowners may own the minerals?

POWERS: That's the nature of riparian ownership.

HANKINSON: What then is the effect though if the state owns that land in the riverbed, pre-dam, and it was a larger area than what you say it is right now, if the state having built the dam changed the gradient boundary, and I guess effectively abandoned the minerals, is there any effect under Texas law with the state having taken that action with respect to the ownership of that land?

POWERS: Forty-five miles down the river, no, I don't think there is any effect in Texas law. It doesn't make any difference why the river moved. The state's ownership of the fee(?) under the river is a determinable fee(?), it's a base fee(?). It's subject to divestment by the movement of the water. If the river moves over here a little bit, the river of the state's ownership moves. And the reason for that, and there's some wonderful old cases about this, the reason why the sovereign always owns the land under a river, the same reason that today the sovereign always owns the land under a highway. Back in the days these laws were created, the rivers were the commerce ways, and the sovereign needed to own the water, the land under the water to preserve the river. And that's why this just applies to navigable rivers.

ENOCH: Riparian rights, again this is a historical perspective about this, it's easy to imagine that the river itself was not habitable, you lived on the land, the river was only used for transportation. So the state owns that and wherever it goes that's where the highway goes. But now you've got a permanent interest, the minerals underneath. And it's one thing to say the state's property is only what's under the water, but the river meanders, and where the river goes it's no longer private property - it's state property. So it moves today, and the landowner now owns the land where the river no longer is, and they put up a permanent structure there, and the structure is to retrieve the minerals, the water flows back and goes over the gas well or the oil well. Now is there a takings problem?

POWERS: I don't think there is.

ENOCH: So the state just now owns that oil well?

POWERS: I think that's probably right.

ENOCH: Do your clients agree with that?

POWERS: I don't know. I think you can still get to the well, but that's an issue - we don't have any wells in the ground in this area.

ENOCH: But it seems to me that that's one of the issues that didn't exist historically when riparian interests were talked about. That is an issue now with the value of really what's under the water not the fact that the water is a highway?

POWERS: That's exactly what gave rise to *Oklahoma v. Texas*, that very problem - discovery of oil up in Wichita county. They start off the opinion. This was of no concern to anybody until there were oil wells drilled in the Red River in Wichita county. And the SC dealt with that problem, which is the way I think the law has dealt with it over the decades, and that is to say while it's interesting it has no affect on the boundary. The value of the minerals underneath the land whether they are over here under the state's land or they are over here under the riparian's land, it has no affect on where the boundary is. That specific issue is dealt with in *Oklahoma v. Texas*.

HECHT: Why isn't the necessary implication of your position that the land immediately below the dam, the riverbed immediately below the dam is no longer the state's?

POWERS: We have never looked at that land up there. It may be that that land was condemned I don't know what the state did immediately below the dam.

HECHT: Well I mean 5, 6, 7 or 8 miles?

POWERS: There is water running there. It is not running in the same kind of a stream

that the water runs in our area. I don't know what one would do if you were to set out to make a gradient boundary survey up there. But there is flowing water. It runs in small rivulus. And it is interrupted frequently by roads that have been _____ and culverts that have been put under the road, and pipelines and dams and dikes created around oil wells, gas wells. But it seems to me that the state flirts with the idea you know that we've got the 30 ft. wide rule in this state. This is not a navigably _____. This is a navigable and _____. Because from it's headwaters under the statute to the time it passes out of the state it has an average of 30 ft. wide. There is an argument that could be made, that there is no 30 foot wide river in that area anymore. And I don't think this court's ever dealt with the question of whether that 30 foot wide means right there, or in some sort of an average.

There is an interesting question about that land up there, but I don't think that question is in this case. I think that's another case.

HECHT: If the estate is right in its legal position, is there anything wrong with its survey? Should it get summary judgment on its survey?

POWERS: No. Its survey is not a proper gradient boundary survey.

HECHT: And you have summary judgment evidence raising fact issues to that?

POWERS: Yes we do.

* * * * * * * * * *

RESPONDENT

KEENEY: The state seeks in this case rendition on its summary judgment motion that it has established as a matter of law the boundary of the Canadian river along the 40 mile stretch of the riverbed that's in dispute in this case.

We would also request whether this court renders or remands that the court address the two critical questions that are presented here. The first is whether the state is correct in its contention that the accretion bank formed by the sediment deposits from the water flow of the Canadian river constitute the proper banks on which to establish the gradient boundary. The second, is whether the sate is correct in its assertion that the decrease in the river's water flow resulting from the closing of Sanford Dam in 1965 cannot be used as a basis for defeating the state's ownership of its riverbed. An affirmative answer to either of these questions eliminates the real disputes in this lawsuit.

The answer to the first question turns on what this court finds are the important and controlling aspects of the gradient boundary methodology that the US SC established in *Oklahoma v. Texas*, and this court adopted in *Motl v. Boyd*. Those two decisions firmly establish

that it is the bank of the river rather than the water in the river that determines the location of the riverbank. Both of those decisions also recognized that the rivers in the Western parts of the US have expansive beds with extensive areas of dryness. In fact in the *Oklahoma* decision, the SC recognized that the Red River, that dryness was the prevailing conditions. There is not water up against that bank all the time.

BAKER: Do you agree or disagree with his demonstration of how to determine the gradient boundary?

KEENEY: I agreed until we got to the point of the flowing water. The notion of locating the bank, although from a standpoint of the kind of bank that they would locate, it has to be - the key bank needs to be an accretion bank, because that's basically a permanent bank. And in fact, I think that solves one of the problems that the courts talking about how the rivers change all the time. You don't look for a bank that's adjacent that abuts the flowing water. That's what the TC held, that's what the TC said their survey showed, and that's why the TC granted them summary judgment.

ENOCH: But you agree that at some point in the seasonal flow of the water, that bank would be touching the water at some point?

KEENEY: Yes, that under the standard gradient boundary methodology that was contemplated in *Oklahoma v. Texas*, and *Motl v. Boyd*.

ENOCH: And if the water never touched that boundary, then that's not the right boundary?

KEENEY: Not necessarily. That presents a different question. First of all, we submit that the summary judgment evidence in this case shows that the water does reach our banks.

HECHT: How often?

KEENEY: We have expert testimony that says on a regular basis. We have statistical studies that show when it rains about 1-½ inches a year it will reach certain places on that bank. And so it won't flow bank to bank probably more than a few times a year.

GONZALES: In your briefing you described this river as a braided(?) river. Is there disagreement or agreement as to that characterization of the river? Is it a braided river?

KEENEY: We consider it to be a braided river. Their surveyor disagreed. Because he considers the river to be the 20-50 ft. channel that he defined as the river.

GONZALES: And are you able to reach the outer-banks as the state defines it because of the fact that it is a braided river, or because of higher water conditions generally, because of flooding?

KEENEY: It's not because of flooding. It's basically because of the tributaries that do feed into this river all along this disputed area. What the record evidence will show is that Sanford Dam cut off 92% of the water flow through this riverbed from everything up stream to the dam. We have 18 tributaries that feed into, not their channel, but the state's bed as we've defined it. And if you will look on our surveying maps you will see where those tributaries flow in. We have 18 tributaries there, we have ½ to 1 dozen between Sanford Dam and the disputed area, because the disputed area begins about 15 miles down stream of the dam.

ENOCH: When you talk about tributaries, and you're talking about the effect that tributaries have, are you talking about the state takes the outer banks being on the opposite sides of the tributaries all the way through the riverbed? What are you saying about the tributaries?

KEENEY: I'm saying that they basically feed water into the bed, and put water in that bed basically every time it rains.

HECHT: I'm puzzled that after all of this work, we don't know with greater certainty whether the water ever washes up against these banks or not. How can there be a dispute about that after all of the effort that has gone into this case? It looks like somebody can stand out there with a camera and see whether it does or it doesn't, and how often, and under what circumstances, and then we would know the answer to that.

KEENEY: What we have is our summary judgment evidence, and really all we have is what the state has put on. We had two hydrologist out there who studied the water conditions and both of them concluded that water would still reach the state banks. We've had our state surveyor who was out there. He was out there in a flood situation and observed it, but he was also out there after just a substantial rainfall.

HECHT: And floods don't count, you agree with that?

KEENEY: Floods do not count under a standard gradient boundary...

OWEN: What about their single gauge? They put in that one gauge saying it never got that high. Is that accurate or not?

KEENEY: I don't think that they ever had a gauge that they set actually on the disputed area. I think maybe their surveyor had looked at some gauges, but I think the studies that we had made of the rainfall of the area are the only studies done by any qualified experts on the inundation of the area.

HANKINSON: I'm a little bit confused by the state survey. Some data was used that was pre-Sanford Dam, 30 year old data or more, and some was current data. Correct?

KEENEY: Yes.

HANKINSON: How, if you're trying to establish the gradient boundary as of this point in time, why are you using data from two different periods of time, and how does that fit with the *Oklahoma v. Texas* gradient boundary theory?

KEENEY: First of all, the reason we take the position that these are not historical banks is because the surveyor went out there and physically located the bank. That's the first part of the gradient boundary methodology, which plaintiff's counsel explained is that you go out and you find these accretion banks, and he found one, the lowest accretion banks along the bank of the riverbed. And those banks were created pre-dam, but they still exist today. They haven't gone away.

ENOCH: Do you agree that in riparian interests it's really where the river flows that determines the boundaries?

KEENEY: I agree that the riparian interest deals with the flow of the water, but what you need to look at...

ENOCH: So if the water doesn't flow there anymore, then it's no longer a boundary?

KEENEY: If the water never flows there anymore, there's a question of whether the state's boundary necessarily moves...

ENOCH: I guess my point is, you couldn't say we're going to go 3 decades ago and say if that was the boundary 3 decades ago, then it must be the boundary today. I mean you can't do that.

KEENEY: Under *Ray v. State*, we submit that we could if that changed from 3 decades ago is the result of Sanford dam. We think there's still inundation. There is still water. That bed still serves a purpose. That bed still contains water.

ENOCH: Under riparian interest, the state owns this highway of water, is it your position that the state could rechannel this water, could take this water and create another channel, send it down into another riverbed, and now claim the state owns ½ mile of real estate that it could sell to a developer and do whatever it wants to, because it just artificially changed the boundary of the water?

KEENEY: Under *Ray v. State* that is precisely what happened to the Trinity River as it ran through Dallas. That's what all those city and county levy district cases are about is that there was a project involving the river, *Barakis*, the federal case that we cite discusses exactly the same that thing happened in Ft. Worth.

ENOCH: And you're saying that where the water no longer flowed didn't amount to an

abandonment of that and the state still owned that property?

KEENEY: In those cases, that's exactly what the courts held. Actually the *Ray v. State* case does rely on a SC authority. I guess we've always struggled with the fact that we don't have precise SC authority. But on page 663 of that decision, they rely on *Anderson v. Poke*, which is a very old SC decision that deals with the river running through San Antonio, and under an old statute, the city itself had control over the river there. They rechanneled it. It was a mandamus case where a party was trying to force the state to sell this as unappropriated public domain, the abandoned riverbed. They really didn't question that the state continued to own it, which is a basic proposition that we have here that if you do cut off the water flow, the state still owns the bed if you cut if off with a dam project or a rechanneling project. And the discussion is not very extensive in *Anderson*. But the court refused to issue the mandamus. And the reason it did is because it said that wasn't established as unappropriated public domain. Well it's not unappropriated public domain because riverbeds are not even after they are made dry unappropriated public domain. They are considered submerged lands that the commissioner of the General Land office is not permitted to sell unless the legislature specifically authorizes that.

HECHT: So your position would be if the dam cut off all the water, the state would still own the dam?

KEENEY: Yes.

HECHT: But if the river just dried up of its own, would you still own the bed?

KEENEY: If the river completely, naturally abandoned this area, I think the state but for the minerals would lose its interest in this bed.

HECHT: But for the minerals. That's what we're talking about here.

KEENEY: That's part of what we're talking about. And I guess that would have to be an _____ proposition that we would have some basis for maintaining ownership in the minerals.

HECHT: You would still keep the minerals below the bed even if the river dried up of its own?

KEENEY: Quite frankly, if we don't have a basis for owning the surface, we don't have existing legal authority to justify ownership of the bed if it naturally changes.

HECHT: You were about to say you disagreed with plaintiff's counsel about, and it sounded like you were going to talk about the change, but maybe you weren't.

KEENEY: What we disagree with is about the water flow. Because again if you look at

the *Oklahoma v. Texas* decision, there's a problem. You've got well-defined banks on these rivers, these prairie rivers that are braided streams, and you can recognize those banks. I think if you look at some of the photographs, particularly when Sanford Dam was being constructed, you can see that bed. It is obvious that the state survey tracks the bed of the Canadian river. And the bank has an essential permanence. It can shift. It can change if you have waters rush through that can cause erosion. There can be some accretion.

HECHT: If it changes naturally, do you agree with the plaintiffs that the ownership rights change as well?

KEENEY: Yes, and in fact that's why we say we found the current banks because our surveyor went out there and located the banks as they existed in the late 1980s and early 1990s. So, yes, that's why we say found the current banks. And they do have a permanence to them.

OWEN: I get the sense that you want some of both. You want us to say that the law of dams basically allows you to keep the riverbed whether there is any water or not, but then you say is it in the alternative that there is water in this riverbed on a frequent enough basis to allow you to maintain?

KEENEY: We think it's a frequent basis. And I think that's the critical first question that we have.

OWEN: Do you lose? If we decide with the landowners and say the Dam doesn't affect the analysis, do you lose or not?

KEENEY: We do not think we necessarily lose.

O'NEAL: Would the boundaries be the same if we made that legal determination? Would your survey boundaries be accurate?

KEENEY: We think they would continue to be accurate. What we have is, we have basically one problem with not meeting the *Oklahoma v. Texas* case. We still have water inundation. We don't have the kind of water inundation that the SC contemplated in *Oklahoma* or that this court contemplated in *Motl v. Boyd*, where it scoured clear. We don't get enough inundation to scour all of that hydrophilic floor that we've got growing in that soggy sand bed that still exists today. We don't have enough to scour that clear. And so what they have used is the absence of that kind of inundation and they have gone out and found a 30 foot channel that doesn't exist for the first 7 or 8 miles of the river, and said, this is where our river is.

OWEN: Well they say in their briefs that at one point your survey has the river being 7,000 ft. wide.

KEENEY: I think there is one point at which it is. It averages about 3,400 feet.

OWEN: And how often does water touch the banks on that 7,000 foot wide stretch?

KEENEY: I don't know if we have a precise calculation on that particular stretch.

OWEN: Is there any evidence that water has ever touched the banks on that 7,000 foot wide stretch?

KEENEY: I don't think there's any evidence one way or the other on that particular...

OWEN: In 7 or 8 places, the river is 4,500 feet wide?

KEENEY: I would have to go back and look at the Brandis where he had the actual locations of those particular degradation lines where he actually did the calculations. And I think they are still on the wider parts of the river.

OWEN: And what evidence is there in the summary judgment record that there was water flowing in any point in time through those wider places of your riverbed?

KEENEY: What we have are two hydrologists who examined the river. One of them has a study that found in fairly general terms that there would be some inundation. The other had a detailed study that found whenever we had say 1-1/2 inches of rain per a 24-hour period it would reach these banks.

OWEN: And has that happened in the last 30 years?

KEENEY: That happens virtually every year. And the other thing I think is important to note is that while the water may not go to our banks, more than once or twice, three times a year, it's going to be out of their banks on a regular basis. They talk about the little rivulets of water that are up there in the 7 to 8 mile area. Those are all over that bed. Our surveyor has found those, and basically that was one of his criticisms of their survey is that they ignore all of those little bitty braided channels that you will find all over that riverbed. And really the evidence and the common sense will tell you every time it rains in that part of the country, that whole watershed feeds into there with all those 20 to 30 tributaries. And you've got water all over that bed because that's where it goes. Those tributaries stop at the state's boundary. They don't stop at that 30 foot channel, which basically came into existence because we've got a sewage treatment plant in Border and we've got a couple of industrial plants that send of affluent and have created essentially a permanent flowing stream that runs through their property.

HECHT: If the natural flow of the river above the dam were diminishing, then it would not be justified to use pre-1965 data below the dam?

KEENEY: Well I'm not sure I would agree with that, because the point to using the 1960 water data was just to get the plain of the water. And that's where we disagree is that it's not where the water is flowing. What you need the water flow for, why we use the 1960 data is you need to know the gradient, and that's the rate of fall.

HECHT: But your theory presumes that the water level will stay the same in the Canadian river from 1960 to eternity, and it might not from natural causes.

KEENEY: I think that's true. I think if natural conditions change enough to change those banks, then the boundary would change. But under the gradient boundary method, you do still have the banks that establish it. So that you have the ability to deal with the kind of rivers that we have in Texas, not all rivers. Rivers really up in the plains and the semi-arid areas where they are basically not navigable in fact. They are navigable in law because they are 30 feet wide from the mouth up. They average that. And they are essentially non-perennial streams where you have your seasonal rains and that's when those beds get water in them.

ABBOTT: What is your response to the opposing side's position that it is the most recent survey that counts? To put that into some perspective even you concede that over time the boundaries may change, and how recent and what kind of time interval between...

KEENEY: I think they can change. We are not seeking a fixed boundary, although I think *Ray v. State* does justify that. We have found banks that existed in the 1980s and early 1990s. And under basic concept of riparian ownership, the riverbanks can change over time and shift.

ABBOTT: I'm talking about the frequency or recency of survey requirement.

KEENEY: I think that there's a relative permanence to the state's boundaries at this point. They are subject to change if those banks change. We've got to go ahead and have a boundary. If we get judgment for the state that doesn't necessarily mean that that boundary can't change 10 years from now.

O'NEAL: So the construction of the dam did not change the banks of this river, is that the state's position?

KEENEY: That's correct.

GONZALES: Let me follow-up on Justice Abbott's question. Let's presume that we hold for the landowners, and then next week the decision is made to tear the down the dam. So now we have water flowing over property that belongs to the landowners according to their survey. At what point does the state acquire title to those properties again? Are we stuck with that survey and for how long is that survey binding in determining the ownership of these properties?

KEENEY: I think that's the very problem with the plaintiff's claim of ownership in this case, is that we are faced with the problem: what if we do have inundation? And I think their suggestion that if the state floods it - if it's declared to be theirs and the state floods it tomorrow, they have suggested there is a taking, because they've said well there is official immunity for negligence. There's not official immunity for intentional flooding of lands. And so I think that that shows the one crux of the policy problems of judgment on their behalf.

They said there's a dispute about our pre-dam survey. We disagree with that. Their own surveying expert said, that as a pre-dam survey our survey is accurate. And as I was going through the orders, one of the things that occurred to me is that even the TC recognized that. He found that what's in dispute, and this is in his amended order on plaintiff's second motion for partial summary judgment under our Tab B, that what's in dispute is what was covered by the gradient boundary that was established prior to 1965 when Sanford Dam was closed, and what he considered the gradient boundary today. And so even the TC recognized there was never any legitimate dispute about the accuracy of that survey as a pre-dam survey.

* * * * * * * * * *

REBUTTAL

POWERS: There is a sort of an emperor's new clothes type quality to the state's banks. Let me make sure what our belief about the state's banks is. The state surveyor looked at aerial photographs to start with. He's testified to this. It's in the record. He looked to see where the old sand bed was. What the state surveyor did was to find the flood plain that existed before the dam was there. When the floods used to come down the river, their geomorphologist said, one that was big enough to create these banks came down 9 times in recorded history. And he has essentially then gone out into the flood plain today, which has grown up with grasses up to here, and trees, cattle are down in there, and he's found these vestiges of these old banks that are still there. They haven't been touched by water except raindrops on top of it for a long period of time.

We didn't move to strike Dr. Brandes' affidavit because I thought that was one of the best pieces of evidence there was in the record for the landowners. Dr. Brandes, who was one of their hydrologists, went up there and did some calculations to determine what it would take to reach the state's boundaries? What kind of a rainfall would it take in the entire watershed feeding the river at that point? All these tributaries that counsel has spoken of. The one on the East side of the bank, range line 15.9, it takes about a 2-1/2 to 3 inch rain for the water over a 24-hour period all over the flood plain, not just a cloud burst. This requires a massive rainfall. They have a rain gauge that Dr. Brandes measured in Border, which is the closest City to this point of the gradient boundary. Once every 4 to 5 years it comes a big enough rain in Border to reach those banks. Now a rain at Border once every 4 to 5 years is not big enough. It's got to rain in Spearman, 30 some miles up the road.

OWEN: Again, you're talking about one isolated point. What about her assertion in the

briefs and just now in open court, that at least 1 to 2 times a year there is a 1-1/2 inch rain?

POWERS: There's no proof of that in the record, and I don't think that's true. There is evidence in the record that about once a year in Border there is a 1-1/2 inch rain. That's not good enough. There's got to be a 1-1/2 inch rain in Spearman and all points in-between and almost down to Canadian. In Spearman there's a 1-1/2 inch rain according to the record about once every 1-1/2 years. And there's no showing of how often the 1-1/2 inch rain came at Border on the same day it came in Spearman. These banks, you have to go on an archeological dig to find them.

O'NEAL: How do you respond to the state's position that if we were to adopt the landowner's proposition in the case, it would discourage public work's projects?

POWERS: I don't think it has ever discouraged public work's projects before. All up and down this river they have put dams on them And if in fact the effect of a public work's project is to take the riparian nature is just to take it away of the landowner's land, then they have to pay for it. The SC in *Bonelli Cattle Co.* spoke to this. The state can't just put in a public work's project and take people's property rights and not pay for them. If that's what they want to do, then that's what they have to do. And that's just part of the costs of the public work's project.

O'NEAL: But you agree it would have a chilling effect on public work's projects?

POWERS: I don't think it would. It seems to me that you've got the federal government building the dam up there, the state running the dam for its flood control purposes. This fight has turned into one big fight. There's no question about that. But this amount of land out there that they are talking about is not that significant in terms of the state's ownership down that river.

OWEN: And the state when they operate the dam they not only give up title to their land, but anytime that they want to flood it they have to pay for the land?

POWERS: We've never said that. I think we have to distinguish between a permanent change in the flow of the river as opposed to some big flood where they let water out of the river and it rushes down through the river, and then three days it's gone. That's one situation. Where I think the boundary changes is that if something happens, if they decide to open Sanford dam and discontinue that dam, or if they decide that every month we'll let out so many hundreds of acre feet of water, and you have a permanent over the course of a year change in the character of the river, the river will cut some new channels, the river will likely be wider in places, it will be shallower in places, all those things will happen. If that becomes the permanent nature of the river, then automatically, I think under the rules of riparian ownership, the state's boundary moves, and the state owns the land under the flowing water, and the riparians have to give up ____ river, that's right. We are a victim of that. And that could happen anytime. As the SC said in *Bonelli Cattle*, the riparian is not only subject to losing the land and subject to gaining land by the natural forces, but he's subject to losing land and gaining land by what people do way up the river.

BAKER: What prompts a gradient boundary survey? If I understand the record, these two are the only ones that have been done on this river. Is it somebody gets unhappy and there's a dispute, and that's when you do a survey? There was some comment about you could do them every other day because water changes.

POWERS: You don't need to do it every other day. We had an issue in this case and it prompted a dispute up there. And the issue essentially was, is the boundary ½ mile up there or is it down here?

BAKER: So basically then, somebody disputes the boundary, which gives rise to the litigation and the appointment of surveyors for both sides, and the TC looks at it?

POWERS: That's what happened in this case.

BAKER: What's the _____ point that you have to look at what's current and not what happened 30 years ago?

POWERS: If you read the gradient boundary literature, *Oklahoma v. Texas* and Colonel Stiles' argument, well Colonel Stiles starts his description of the boundary by saying: if you want to get a good idea of what it's going to look like walk along the flowing river and watch where the river touches the land. And you can do that with our survey, but you sure can't do it with their survey. You can walk along their banks and you just kind of widen your way through the trees.

BAKER: Did I understand you to say that even Colonel Stiles says there is one time when some kind of evolution, the water will touch the actual gradient boundary?

POWERS: That's what he calls the boundary at the feather edge of the water.

ENOCH: A dam unlike rechanneling a river or something arguably often means the same, the water flowing into the lake leaves through the dam at the same rate, otherwise you would overflow the top of the dam.

POWERS: It's never happened at this dam. Theoretically that's correct.

ENOCH: But that can only mean that the either the evaporation off the top of the lake or the absorption by the ground must be at a greater rate than the water coming into the lake from above it, right?

POWERS: They use the water. They take the water out and it's used.

ENOCH: Is there some discussion - the state says by building this dam, you don't get the benefit of a change in the _____. Is there some evidence in the record regarding the

use of the water that is because of the dam that's greater than the water flow coming into the dam and so there really is a change in the water flow below the dam that is as a result of water being taken out of the dam?

POWERS: The water is used to provide municipal water to Amarillo and about 10 to 12 other cities up there, including Lubbock. Two main purposes of the dam: 1) flood control; and 2) providing municipal water to the cities up in the panhandle. So that most of the water I think goes out for that purpose.