

After issuing an opinion in this case on December 21, 2000,¹ we granted petitioners' motion for rehearing² and entertained oral argument a second time.³ We now withdraw our earlier opinion and judgment and issue the following as the opinion of the Court.

The State and a private landowner dispute the location of the shoreline boundary of two early nineteenth century land grants, one by Spain and the other by Mexico. In *Luttet v. State*,⁴ we determined that the law of those two sovereigns governing such grants was that a shoreline is to be found where the mean daily higher high water level — that is, the average of daily highest water levels — reaches the mainland. Now we are asked to decide whether and how the civil law determined in *Luttet* applies to the present shoreline boundary dispute. The lower courts agreed with the State that the shoreline should be located without reference to mean daily high water levels because of the problems in measuring those levels in the Laguna Madre near the land at issue and instead placed roughly as far inland as water ever reaches in ordinary storms, based on the historical record.⁵ We disagree and hold instead that the civil law as determined in *Luttet* applies here and requires that the shoreline boundary in this case, like all others governed by civil law, be set at measured mean daily higher high water levels. We therefore reverse the

¹ 44 Tex. Sup. Ct. J. 268 (Dec. 21, 2000).

² 44 Tex. Sup. Ct. J. 455 (March 1, 2001).

³ *Id.* at 456.

⁴ 324 S.W.2d 167 (Tex. 1958).

⁵ 994 S.W.2d 285.

judgment of the court of appeals and remand the case to the trial court for rendition of judgment in accordance with this opinion.

I

The John G. and Marie Stella Kenedy Memorial Foundation and the Corpus Christi Diocese of the Roman Catholic Church (collectively, “the Foundation”) jointly own property which, as shown by the appended maps, comprises two tracts lying just west of Padre Island roughly halfway between Corpus Christi and Port Isabel. One tract, called La Barreta or the “Big Barreta”, was originally conveyed by King Charles IV of Spain in 1804 and 1809 to Lieutenant Jose Francisco Balli (who, as an historical aside, was a nephew of Padre Nicolas Balli, the grantee of Padre Island). The other tract, called Las Motas de la Barreta or the “Little Barreta”, is adjacent the Big Barreta to the north and was originally conveyed by the Mexican State of Tamaulipas in 1834 to Leonardo Salinas. The 1804 grant was lost, but a later patent from the State of Texas confirming the conveyance described the Big Barreta’s eastern boundary in the same words used to describe the Little Barreta’s eastern boundary in the 1834 grant — “the waters of the Laguna Madre”.⁶ The State, of course, owns the submerged land and the shore between the Foundation’s property and Padre Island. The Foundation and the State dispute the location of the shoreline boundary along nine miles of the eastern edge of the Foundation’s property. Locating that boundary is made difficult by the nature of the seawater inundation of this part of the Laguna Madre. The parties’ respective positions conflict starkly. The Foundation claims that the boundary is the west bank of the Intracoastal Waterway,

⁶ See *State v. Spohn*, 83 S.W. 1135 (Tex. Civ. App.—Austin 1904, writ ref’d).

where water has always been present since it was dredged in 1949. The State claims that the boundary is about six miles to the west at a bluff line marked by a slight rise in elevation and changes in terrain and vegetation, where water is present at most once or twice a year for a few days. What has brought the present controversy to a head is not any local change in conditions in the Laguna Madre, which has remained the same in this vicinity for two hundred years, but rather the increased importance of oil and gas production in the area. The disputed area totals about 35,000 acres.

The Laguna Madre, translated “Mother Lagoon”, whose waters were prescribed by Spain and Mexico to mark the disputed boundary, is a narrow estuary on the west side of Padre Island extending some 130 miles from Corpus Christi to Port Isabel. The Laguna Madre is open to the Gulf of Mexico at both ends but sheltered from the Gulf along its length by Padre Island. In many areas, including adjacent the Foundation’s property, it is slightly above sea level. The presence and depth of water in most of the Laguna Madre is governed not by astronomic tidal forces from which it is insulated, like those exerted by the moon and sun, but by meteorological forces to which it remains open, like the wind and barometric air pressure. In much of the Laguna Madre, including the area in dispute, variations in water levels due to daily tidal forces are minuscule, masked almost entirely by variations caused by atmospheric forces. The water does not advance and subside daily, as one thinks of a shore facing the open sea. The wind can actually blow water uphill so that it is sometimes deeper at higher elevations than at lower ones. At places, the Laguna Madre is constantly inundated with seawater several feet deep, deep enough for waves and boats. One such place, “the Hole”, is near the northeast corner of the Foundation’s property; another, “the Hook”, is at the southeast corner of the property. At other places, however, including the area east of the

Foundation's property, inundation is — and it is important to understand these precise characteristics — *regular*, that is, periodic in the sense of continually recurrent, as opposed to sporadic; *shallow*, usually no deeper than a few inches; and *infrequent*, occurring only several days, weeks, or months a year, depending on the area. The rest of the time the area is a dry, boggy, barren mud-flat, devoid of vegetation except for a leathery algae. The perimeter of the mud-flats, which is as far as water ever gets in ordinary storms, is a “bluff” marked more or less by a small but distinct rise of a foot or more in elevation and a distinct change in vegetation and ground conditions.

The State offered, and the lower courts relied on, historical evidence regarding the treatment of the Big Barreta and Little Barreta grants. An 1809 survey of the Big Barreta by Antonio Margil Cano showed an eastern boundary approximately at the same bluff line that the State now argues should mark the eastern boundary of the Foundation's property. Grantee Balli immediately petitioned for conveyance of an elevated area east of the bluff line that was seldom inundated and was suitable for grazing. This area, now called the Mesquite Rincon, was rather like an island in the Laguna Madre and is nearly surrounded by the area now in dispute. Because it could often be reached only by a narrow isthmus from the Big Barreta through the mud flats, it was useless to anyone else and was therefore granted to Balli. (Again, for visualization, we refer the reader to the appended maps.) The 1809 survey and Balli's petition, which was granted, may indicate — we will discuss this in due course — either that Balli did not think or was at least unsure that the 1804 grant conveyed anything east of the bluff line, or that he cared most about measuring what land was suitable for grazing. As for the Little Barreta, an 1834 survey by Domingo de la Fuente omitted a triangle of land on the southeast corner of the rectangular tract which extended into the Laguna

Madre and was unsuitable for grazing, and added to the northeast corner a triangle of land of approximately the same size that was not inundated, so that the grantee Salinas would have the full amount of grazing land that he had requested. Another survey of the Big Barreta in 1882 and the Little Barreta in 1879 by J. J. Cocke, and a survey of the Big Barreta around 1907 by F. M. Maddox — all done when grazing was all that mattered — never included any area east of the bluff line in the landowners' property, and the owners at those times do not appear to have objected. The exact boundary never appears to have been at issue.

The State also offered evidence that the Foundation's predecessors in interest affirmatively treated the bluff line as the boundary of their property until the mid-twentieth century, and that the Foundation did not render the mud flats for ad valorem taxation until 1987. The trial court excluded this evidence on the theory that later owners' actions were irrelevant in determining the original intent of the sovereigns expressed in the grants. The Foundation contends that the evidence shows only that its predecessors in interest cared mostly about land usable for grazing while maintaining their claim to the waters of the Laguna Madre.

In 1949, Sun Oil Co., to whom the State had leased the minerals in part of the now disputed area, sued the Foundations' predecessors in interest and Humble Oil & Refining Co., to whom they had leased the minerals in the same area, to determine whose lease was valid. Humble's position was not that the mud flats had originally been conveyed to the landowners, but that they had since accreted to the mainland. The federal district court rejected Humble's contention, and the Fifth Circuit affirmed in *Humble Oil & Refining*

*Co. v. Sun Oil Co.*⁷ Regarding the location of the shoreline, the Fifth Circuit acknowledged that it was required to apply Texas courts' understanding of civil law, which it believed — mistakenly, as it turned out several years later when we decided the matter — to be that the shoreline is the highest level reached by the water in winter. In 1958, we held in *Luttet v. State* that a civil law shoreline is the mean daily higher high water level, not the highest water level.⁸ We will have much more to say about both these cases, but for now it is important merely to note their place in the sequence of events leading up to the present litigation.

A mean daily higher high tide — which the parties agree in this case is synonymous with mean daily higher high *water* — is calculated by averaging the highest elevations reached by water each day over a tidal epoch of 18.6 years. Of course, as we recognized in *Luttet*, water level data is not available at all locations on the coast, and where it is available it may cover only part of the lengthy epochal cycle. But averages may nevertheless be obtained by extrapolation from data that is available, adjusting for known, cyclical variations. At times on the Texas coast there are two daily high tides and two daily low tides. Mean higher high tide is an average of only the higher of the daily levels. Mean high tide is an average of both high levels. This distinction is immaterial in areas of the Laguna Madre where tidal influences and daily fluctuations in water levels are ordinarily quite small. Thus, for purposes of this case, daily higher high water is indistinguishable from daily high water.

⁷ 190 F.2d 191 (5th Cir.), *on reh'g*, 191 F.2d 705 (1951), *cert. denied*, 342 U.S. 920 (1952).

⁸ 324 S.W.2d 167 (Tex. 1958).

Prior to 1995, surveying regulations promulgated by the General Land Office called for coastal shorelines to be determined with reference to mean high water levels, consistent with our opinion in *Luttet*.⁹ Nevertheless, in 1993, the Commissioner of the General Land Office hired Darrell Shine to survey the eastern boundary of the Foundation's property based on ground conditions, not water levels. Shine had never been an advocate of using mean high water levels to locate the shoreline as prescribed by *Luttet*, and he did not use that method to locate the boundary of the Foundation's property. Instead, Shine located the boundary where he found the terrain to change in elevation and condition. After the survey was completed, the Commissioner changed state surveying regulations to allow shoreline boundaries to be placed at vegetation lines rather than mean higher high water levels.¹⁰ This litigation began about the same time.

The Foundation has relied on a survey begun in 1984 by Matt Claunch and Bill Lothrop. They used high water measurements, but instead of picking a particular mean level shown by the data, which they feared the State might later contest on accuracy as opposed to methodology, thereby necessitating another expensive survey, they used a level higher than any the State could ever prove. The higher the level, of course, the better for the State. They surveyed the area on the assumption that the mean high water level was one foot above the National Geodetic Vertical Datum of 1929 (NGVD). All of the area on the east side of the Foundation's property, from the upland to the west bank of the Intracoastal Waterway, is

⁹ 20 Tex. Reg. 3320, 3320-3321 (May 5, 1995) (proposing amendment to 31 TEX. ADMIN. CODE § 7.2); *id.* at 4349 (June 13, 1995) (adopting proposed amendment).

¹⁰ 20 Tex. Reg. 3320, 3320-3321 (May 5, 1995) (proposing amendment to 31 TEX. ADMIN. CODE § 7.2); *id.* at 4349 (June 13, 1995) (adopting proposed amendment).

undisputedly above that level. After this litigation commenced, the Foundation commissioned an oceanologist, Dr. Reinhard Flick, to determine the actual mean daily high water level adjacent its property. Using data from several tidal gauges in the Laguna Madre, he calculated a mean and then adjusted it for the standard 18.6-year tidal epoch. By Flick's calculations, the mean daily high water level adjacent the Foundation's property is between 0.60 and 0.75 foot above the NGVD.

At trial, the State challenged Flick's "simultaneous comparison" methodology for comparing readings from tidal gauges, but the focus of the State's position was on the feasibility of using water levels to find a shoreline boundary in this area of the Laguna Madre. Shine testified that he had determined the boundary of the Foundations's property based on his observation of changes in the terrain and on the historical record. He conceded that the bluff line where he placed the boundary was not "regularly covered and uncovered on a daily basis by the waters of the Laguna Madre." Indeed, another of the State's principal witnesses testified that water reaches the bluff line no more than once or twice a year and then only for a few hours or days. But there was also uncontroverted evidence that some areas between the bluff and the Intracoastal Waterway were inundated as much as forty percent of the year.

The jury found that the Claunch/Lothrop line is at or above mean daily higher high tide, as the State concedes it is. Yet in answer to the question whether mean higher high tide could be determined with reasonable accuracy in this area of the Laguna Madre, the jury answered "no". The jury also found that the Shine survey accurately marked the boundary of the Foundation's property and failed to find that the Claunch/Lothrop line did so. After the verdict, the trial court issued two opinions explaining that while he had come to believe that the Foundation's claims were precluded by *Humble*, even though he had denied

the State's motion for summary judgment urging preclusion, he would render judgment on the verdict for the State.

The court of appeals affirmed.¹¹ In essence, the court concluded that *Luttet* does not preclude a determination of shoreline boundaries without reference to water levels, and that there was evidence, historic and current, to support the jury's finding that the Shine line was accurate.

We granted the Foundation's petition for review.¹² In extensive briefing, the parties have raised two principal issues: whether and how *Luttet* applies here, and whether the Foundation's claim is precluded by *Humble*. We turn first to *Luttet*.

II

The Foundation and the State agree that the result in the present case depends heavily on how we read our decision in *Luttet*, and they have accordingly focused their attentions on this issue. They vigorously disagree over whether *Luttet* was correctly decided, whether it applies, and what it means. In fairness to all of these arguments, we first explain our understanding of *Luttet* with a far more excursive recitation of its text than we would ordinarily use so that what we think is its clear import will emerge from the words themselves. Then we will examine the parties' arguments about its application to their dispute.

¹¹ 994 S.W.2d 285 (Tex. App.—Austin 1999).

¹² 43 Tex. Sup. Ct. J. 301-302 (Jan. 13, 2000).

A

In 1953, J. W. Luttes successfully petitioned the Legislature to allow him to sue the State to determine title to some 3,400 acres of mud flats in the Laguna Madre on the east side of his property in Cameron County,¹³ about forty miles south of the Foundation’s property in the present case.¹⁴ His predecessor’s original 1829 grant, known as Potrero de Buena Vista, was to the westerly “shore” of the Laguna Madre.¹⁵ Luttes contended that while the shoreline boundary had originally and for many years been a bluff beyond which the mud flats were then completely submerged, more recently the area to the east had risen in elevation because of accretion due to deposits of silt over the years, and therefore he was entitled to the additional property.¹⁶ The trial court made two important determinations, one of law and one of fact. The court concluded as a matter of law that under the applicable civil law of Mexico, Luttes’s shoreline boundary ended at the highest level water ever reached. The court found as a matter of fact, after a bench trial, that Luttes had not proved that any elevation in the area was due to accretion. On appeal, Luttes complained that the trial court had misconstrued the civil law and that its failure to find accretion was against the great weight and preponderance of the evidence.¹⁷ The court of appeals affirmed.¹⁸

¹³ 289 S.W.2d 357, 357 (Tex. App.—Waco 1956), *rev’d and remanded*, 324 S.W.2d 167 (Tex. 1958), *on remand*, 328 S.W.2d 920 (Tex. App.—Waco 1959, no writ).

¹⁴ *See* 324 S.W.2d at 168.

¹⁵ *Id.* at 169.

¹⁶ *Id.*

¹⁷ 289 S.W.2d 357, 374-375 (Tex. App.—Waco 1956), *rev’d and remanded*, 324 S.W.2d 167 (Tex. 1958), *on remand*, 328 S.W.2d 920 (Tex. App.—Waco 1959, no writ).

¹⁸ *Id.*

This Court reversed and remanded, concluding that the court of appeals had indeed misconstrued the civil law and that that error may have affected its assessment of the evidence of accretion.¹⁹ In a lengthy opinion, Justice St. John Garwood began by describing the area of the Laguna Madre in dispute.

The surface of the area in question, including the disputed 3,400 acres, has the characteristics of a basin, or, more accurately, a series of small basins running roughly from a point half a mile or so off the northerly portion of the base line of the triangle in a southeasterly direction across the middle of it. The lower levels of these basins are between 0.25 and 0.40 feet above mean sea level (slightly below “mean high tide”) and cover a substantial part of the acreage claimed by the petitioners-plaintiff; but the bulk of the latter and of the whole 4,000-acre triangle lies above the 0.40 foot contour, rising generally toward the sides, along which, including the mainland side, it is largely between 0.80 feet and 1 foot above mean sea level, or about 0.50 feet above the level of “mean high tide”.

[On the flats,] there is no vegetation except algae, which does not have the appearance of normal vegetation and forms a sort of thin darkish mat over the surface, drying up and cracking in the frequent periods when the flats are free of water. . . . The soil of the flats is evidently of a darker and muddier appearance and character than the sand which comprises the flats and beaches of Padre Island several miles across the Laguna to the eastward. At least when the area is free of water, fairly heavy motor vehicles can be driven over most of it without difficulty. At the same time, and apart from the matter of the algae, it has many characteristics of land that is periodically covered by sea water, including a perennial dampness, presence of numerous salt crystals, sea shells, remnants of fish and so on, while water can evidently always be reached by digging a foot or two below the surface.

Where the flats join the mainland and the islands there is an abrupt change in the angle of elevation and the character and appearance of the soil, including a well-marked beginning line of sand, followed by grass and vegetation. This line, so far as it lies along the established mainland, is consistently referred to by the petitioners-plaintiff themselves as a “bluff” or “bluff line”, and evidently is considered by them to have been the undoubted

¹⁹ 324 S.W.2d at 187, 191.

seaward limit of the Buena Vista grant at least up until the early part of the present century.²⁰

Regarding the nature of the seawater inundation of the Laguna Madre, the Court explained:

As found by the trial court, and admitted by the parties to the suit, there is in the Laguna Madre relatively little tide in the true sense, although there are undoubtedly substantial and frequent, but irregular, variations in water levels during each day or longer period due to the influence of nonastronomical forces and conditions, sometimes in combination with astronomical tide conditions in the Gulf of Mexico. One of the factors causing, or substantially contributing to, higher water levels in the general area in suit is the presence of northerly winds in the period from early Fall to Spring, although, on the other hand, there have been recent instances of sea water overrunning the flats in midsummer. There is also present, and due in at least some part to astronomical forces, a progressive, slow rise over the years of the general (“mean”) sea level at an average rate of about 0.02 feet per year.²¹

Against this backdrop, the Court began:

We granted the writ of error largely in the hope of being able to eliminate the confusion that appears to exist at the Bar and otherwise as to what, in details of practical application to cases like the present, is the correct definition of the shore — the matter being obviously one of considerable public importance. We shall accordingly discuss that question first.

We harbor no doubt that the Mexican (Spanish) law, whatever it may be, in effect at the date of the grant, is what must furnish the applicable rule, and that such is the effect of every decision, observation or assumption that has ever been made by this Court on the subject²²

Turning to the body of civil law, we stated:

²⁰ *Id.* at 171.

²¹ *Id.* at 173.

²² *Id.* at 175-176.

The basic definition [of shore], of course, is that of the celebrated body of Spanish law known as *Las Siete Partidas*, which was evidently written in the 13th century and promulgated some three centuries later, and of which the critical portion of Partida 3, Title 28, Law 4 (from the so-called Lopez edition published at that time under governmental auspices at Salamanca) reads as follows:

“* * * e todo aquel lugar es llamado ribera de la mar quanto se cubre el agua della, quanto mas crece en todo el año, quier en tiempo del invierno o del verano.”²³

After surveying the several different interpretations of this passage over the centuries and noting the expert testimony offered by Luttet and the State on its meaning, we reasoned that both the *Partidas* and common sense contemplated a shoreline where water was, on the average:

Now whether the language confines the shore to that area regularly covered and uncovered by “tide” in the astronomical sense or permits it to be that highest “swell”, wave or rise that may occur at this or that one particular hour or minute from whatever force other than storm conditions, the phrase, “in all the year” (en todo el año), undoubtedly leaves a question as to *what year* is meant. Does it mean the last calendar year expiring before the litigation or other effort to fix the boundary on the ground, or some earlier year with a higher water level, or the kind of average of single highest annual levels over several years, on which the trial court alternatively relied in the instant case, or does it mean that where the *daily* highest levels over a period of years are of record and in evidence, these hundreds or thousands of highest levels should be averaged, and the average taken to be “however most it grows *in all the year*”?

Pretermitted for the moment the matter of interpretive authority, we think the language of the *partidas* of itself permits, and common sense suggests, a line based on a long term average of daily highest water levels, rather than a line based on some theory of occasional or sporadic highest waters. Indeed, such appears to us to be consistent with one of the primary arguments of the State itself to the effect that the true line should be one evidenced by more or less permanent markings on the ground of the kind ordinarily associated with the upper line of a shore. Whatever the aspect of the ground in the instant case, ordinarily a “shore line” is one characteristic of regular and frequent coverage by the

²³ *Id.* at 177.

sea, which in turn is much more closely related to an average of daily highest waters than to one, or an average of merely a few, highest annual readings.

While obviously the word, “average”, or its equivalent, “mean”, does not occur, both are suggested by the language as a whole, as the learned trial judge evidently recognized. No particular year being indicated as that from which the so-called highest tide or water “in all the year” is to be taken, the inference is that a condition regularly prevailing over a number of years is what was intended, and this in turn suggests a mean taken over such a period. If, for example, the single highest water for each of the five years immediately prior to the litigation were in no instance higher than one foot above mean sea level, but were somehow shown to be three feet in one particular year long prior to the latest five years, it would hardly appear within the reasonable intendment of the law that we should forget the later years and fix the line at three feet according to the one more remote year. Conversely if the single highest reading for the year just preceding the trial were two feet, while those for each of nine or more years preceding the latest were not over one foot, it would seem unreasonable to require fixing the line at the two-foot level of the latest year, disregarding the lower “highest” levels of all the preceding years. And if we are to use some kind of “mean”, as evidently we should, what is there in principle, or in the words of the basic law itself, to require such an average to be that of single highest annual readings for each of the several years in question, rather than one of daily highest readings for all of the days of such years? Both are averages of *highest water readings*. The only difference lies in the number of highest readings averaged.²⁴

That difference might be trivial on a shore exposed to the open sea and astronomic tidal forces.

There the mean high water level is not likely to vary much whether readings are taken daily, weekly, or monthly. But the difference due to the interval over which readings are taken can be substantial in an area like the Laguna Madre which is inundated and dry for days at a time. For several days the water at a given spot may be a foot deep, while on other days the place is completely dry. To locate the shoreline at the highest annual water level in this area of the Laguna Madre, we reasoned, would mean that most of the time no water was present there at all.

²⁴ *Id.* at 179.

Thus should we base the line, as did the court, on these few exceptional levels, we are likely to have a line of shore which is not shore in the commonly accepted sense of being *regularly* covered and uncovered by water. It is difficult to believe that the ancient writers of the *partidas* had in mind a shore which was different from the commonly accepted idea thereof. One thinks of shore more in terms of the water's edge than in terms of land which is only occasionally and irregularly inundated.²⁵

But how to obtain the water level data to be averaged when tidal gauges, though scattered along the Texas coast, were often far apart? One way would be to obtain evidence from sources less reliable than tidal gauges. Another would be to abandon the mean high water level measurement altogether and simply rely on eyewitness testimony to establish high water levels. We rejected both.²⁶ Instead, we explained:

A third and much more reliable alternative, however, is that of following the system of “mean high tide (water)”, which in effect is but the average of highest water of each day rather than each year. If that rule is adopted, we can have, by installing a tide gauge for as little as one year near the area in question, the benefit of 365 highest readings upon which to base an average, that is, upon which to determine “mean high tide (water)” at that point for that one year. This mean level will obviously vary less from a corresponding level for earlier (or later) years than would a single highest annual level for one year vary from the respective highest annual levels of other years. Indeed, as before stated, upon the further and quite simple step of correction against the nearest tide gauge which has been in operation for the full 19-year tidal cycle, the one-year “mean high tide (water)” figure of the local gauge will reflect with reasonably close exactness the “mean high tide (water)” for the whole 19-year cycle. In other words, so far as most of the Texas coast is concerned, the only reliable way in which to obtain any sort of average of highest water levels is by use of the standard of “mean high tide (water)”.

While this involves a delay of a year, it appears more practical than waiting several years in order to get an average of single highest annual waters over the longer period. In either event, the local tide gauge is necessary because, as stated, water levels vary

²⁵ *Id.* at 180.

²⁶ *Id.*

considerably from place to place in the Laguna, particularly on account of varying exposures to meteorological forces, whereas, by adopting the “mean high tide (water)” standard, the period of tide gauge operation may be reduced to one year.²⁷

* * *

Once we elect for an average, as the practicalities seem to require, and the texts of neither the Roman Civil Law nor the *partidas* appear to forbid, the sounder course is to take the average of *daily* tide gauge readings of daily highest water, be it tide or a wind-driven wave.²⁸

We rejected the highest water level rule announced in *Humble* as being an incorrect interpretation of the civil law, and we found nothing in the law of other states to contradict our reading of the *Partidas*. Finally, we rejected the argument that fixing the shore at the level of mean daily high water was unfair to the State and instead stressed the importance of actually ascertaining water levels as opposed to relying on testimony adduced for litigation.

Theoretically, the rule of mean high tide is less favorable to the State in its capacity as a landowner than a rule based on a single instance of highest annual water or a mean of several such instances. But that is not a reason for our interpreting the law differently than we would if only private interests were involved. Moreover, we are far from sure that in actual practice the rule of mean high water is less favorable than a rule calling for a higher shore line that will always be vague and difficult of ascertainment until finally fixed on the ground after extended and complicated litigation. A result of the latter kind of rule may well be to give the abutting private landowner (and his mineral lessee) an advantage over the State in the inevitable litigation, because he has longer and better access to the kind of proof that will necessarily be involved in demonstrating whether on such and such an occasion in such and such a year or years one or more “highest waves” actually reached this or that irregular line on the ground. Another result may be to discourage the mineral

²⁷ *Id.* at 181.

²⁸ *Id.* at 182 (emphasis added).

leasing of tidal areas from the State by smaller operators who cannot run the risk of complicated boundary litigation in addition to the other risks of mineral exploration.²⁹

Concluding our analysis of the civil law, we specifically held “that the applicable rule of Mexican (Spanish) law [in determining a shoreline] is that of the average of highest daily water computed over or corrected to the regular tidal cycle of 18.6 years.”³⁰ Concerned that the court of appeals’ mistaken interpretation of the civil law might have influenced its assessment of the evidence of accretion, we remanded the case for a factual sufficiency review in light of the announced rule of law.³¹

On rehearing, we acknowledged that a mean daily high water level might be determined otherwise than by tidal gauges, but we did not retreat from our conclusion that the civil law placed the shoreline at that level, and we specifically rejected the argument that the shoreline could be located at an “obvious” bluff line, which we had already remarked was not really very obvious.

Whatever may be the case as to that part of our shores governed by the Anglo-American rule of mean high tide, we do think it correct to say that the Spanish (Mexican) law concept of the shore is the area in which land is regularly covered and uncovered by the sea over a long period. If it be shown in a given case that the upper level of the shore, as actually covered and uncovered by the sea, is higher (or lower) than the level of mean higher high tide as determined by tide gauges, and if it also appears that an upper median line of the shore, as actually so regularly covered and uncovered, can be determined with reasonable accuracy otherwise than by exclusive resort to tide gauges, we do not by our opinion intend to foreclose such a case.

In the instant case, it is quite plain to us that the area in suit is not regularly covered and uncovered by the Laguna waters and has not been for a long time. To say that merely

²⁹ *Id.* at 186-187.

³⁰ *Id.* at 187.

³¹ *Id.* at 191.

because there exists, at the western edge, a “bluff line” or a “vegetation line”, marking where the waters at some undisclosed period in the past evidently did reach with regularity, the latter line is the line of mean higher high tide, would, in our opinion, be much less reasonable than to fix a line of mean higher high tide by exclusive resort to tide gauges.³²

To eliminate any dispute over what we had determined to be the civil law rule for determining shorelines, the dissent articulated what the Court had rejected:

The shoreline should be determined according to the civil law. This line cannot, under any circumstances, be accurately determined by the use of the tide gauge. According to the provisions of Las Siete Partidas, the seashore is the land that is covered with water from time to time. The Spanish verb “cubrir” is used, which means “to cover”. The seashore, then, is that portion that is alternately covered and uncovered by the sea. The height of the water on the tide gauge is not the same as the height of the water that rolls up or is blown up on the shore. The tide gauge might be used to establish prima facie the location of the shoreline, but it should always be held to only be prima facie evidence of the true line. Such presumptive evidence may be destroyed by the facts. In other words, the question of the location of the shoreline is one of fact and not one of law. There is nothing in the Partidas definition dealing with tide gauge. . . . The tide gauge would be wholly inaccurate to establish the true seashore line.³³

* * *

It seems to be unassailable that the civil law contemplated [“shore” to mean] the area actually reached by the sea, though only a single swell. If the tide gauge is accepted as the absolute determinate in placing or locating the shoreline, then we are establishing a rather artificial line.³⁴

From *Luttés*, the following propositions may fairly be said to be established:

³² *Id.* at 192.

³³ *Id.* at 196-197 (Smith, J., dissenting).

³⁴ *Id.* at 197 (Smith, J., dissenting).

First: Luttet purports to, and does, generally determine shoreline boundaries under the civil law. It is not limited to the facts of Mr. Luttet's case. As the Court said: "We granted the writ of error largely in the hope of being able to eliminate the confusion that appears to exist at the Bar and otherwise as to what, in details of practical application to cases like the present, is the correct definition of the shore — the matter being obviously one of considerable public importance."³⁵

Second: The general conditions in the Laguna Madre east of Luttet's property in the 1950's are no different from those east of the Foundation's property now, only forty miles away: seawater inundation is regular, shallow, and somewhat infrequent, and it is caused mostly by seasonal meteorological forces but nevertheless affected slightly by daily astronomic forces.

Third: The boundary of original civil law grants must be determined by that law, not subsequent surveys or the conduct of the grantees or their successors.

Fourth: A shoreline boundary cannot be determined without water level measurements, even if no tidal gauges have historically been placed adjacent the property, and even if those measurements are made for no reason but to determine a boundary over as short a time as a year. An historic bluff line does not mark a civil law boundary.

Fifth: The relevant water level measurement is not the highest level that water ever reaches but a mean level.

³⁵ *Id.* at 175-176.

Sixth: The mean should be calculated on a daily basis, even if the daily change in water levels caused by atmospheric tidal forces is very small.

This is our understanding of *Luttet*, and with it we turn to the parties' arguments in this case.

B

We consider first the State's arguments.

1

The State argues that *Luttet* misconstrued the *Partidas*. Properly interpreted, the State says, the civil law placed shorelines at the highest water levels reached in ordinary storms, not at mean daily high water levels. The State tells us that while “[t]he proper construction of [the *Partidas*] was extensively briefed by the parties in *Luttet*, by some of the best lawyers then practicing in this state”, the evidentiary record on the subject was limited. In this case, the State says,

the parties retained some of the foremost experts on ancient Spanish law to give their own reports on the proper construction of the *Partidas*: Professor Saul Litvinoff, of Louisiana State University, and Professor Jose Luis Soberanes Fernandez, of the Universidad Nacional Autonoma de Mexico, for the State, and Professors Hans Baade and Guillermo F. Margadant, both of the University of Texas, for the Petitioners.

Based on this evidence, the State argues, the Court should reexamine *Luttet*'s interpretation of the civil law.

We accept all of the State's premises. The meaning of the civil law was in fact extensively briefed in *Luttet* by some of the best lawyers in Texas, and we hasten to add that the subject has been given an even more thorough treatment in the present case by lawyers every bit the equals of counsel in *Luttet*. In both cases the Court has had benefit of the views of a truly formidable array of scholars on the civil law,

although in *Luttés* reference was to texts unaided by the kind of expert testimony adduced in the present case. But nothing in the record and argument now before us convinces us that we should reconsider the rule determined in *Luttés*. On the contrary, the record in this case makes even more apparent the uncertainty in interpreting the *Partidas*; the State's evidence and arguments for a different rule are persuasive, but so are the Foundation's evidence and arguments for the rule of *Luttés*. It is simply impossible to know for certain how eighteenth-century Spain and Mexico would have applied their thirteenth-century law for determining shorelines in the difficult context of the Laguna Madre.

The Court's interpretation of the civil law in *Luttés* is reasonable and workable, and it has provided a rule for determining boundaries for more than forty years. While we recognize that the subject is not beyond reconsideration, *stare decisis* is never stronger than in protecting land titles, as to which there is great virtue in certainty.³⁶ We would be very reluctant to discard a rule determining seashore boundaries that has served as long and satisfactorily as the rule in *Luttés*, thereby upsetting long-settled expectations, and we could not do so absent far more compelling evidence than can be offered here.

Accordingly, we reaffirm that shoreline boundaries in civil law land grants must be determined with reference to measured mean daily high water levels.

2

The State argues that the rule of *Luttés* applies only when the shoreline is claimed to have moved over time because of accretion or reliction. It is true, of course, that *Luttés* himself made such a claim. It

³⁶ *Marmon v. Mustang Aviation, Inc.*, 430 S.W.2d 182, 193 n.3 (Tex. 1968); *Cross v. Wilkinson*, 234 S.W. 68, 70 (Tex. 1921).

is not true, however, that the civil law determined in *Luttet* was in any way dependent on the occurrence of accretion or reliction. What *Luttet* established was nothing less than “the applicable rule of Mexican (Spanish) law” for determining seashore boundaries.³⁷ An interpretation of the civil law, we held, was necessary to understanding *Luttet*’s claim of accretion, not vice versa. The rule of *Luttet* applies whenever a civil law shoreline boundary is in question.

3

The State next argues that the rule of *Luttet* should not be applied in this case because its result is contrary to the surveys of the grants at the time they were made and for a century afterward, and to the uniform understanding of the Foundation’s predecessors in interest until at most the past few decades. For two reasons, we do not agree.

First, it is firmly established that

[t]he rules for the construction of grants, and for ascertaining their boundaries, which have from time to time been announced by the court and have been acted on in establishing their lines, are all designed for the purpose of carrying out the intention of the grantor. When this intention is once made manifest, all else must yield to and be governed by it.³⁸

The intent of Spain and Mexico in granting land to the Foundation’s predecessors must be determined by reference to those sovereigns’ policies and laws at the time of the grants.³⁹ A survey may, of course, give

³⁷ *Luttet*, 324 S.W.2d at 187.

³⁸ *Woods v. Robinson*, 58 Tex. 655, 660-61 (1883); accord, *Wheeler v. Stanolind Oil & Gas Co.*, 252 S.W.2d 149, 152 (Tex. 1952).

³⁹ See *State v. Balli*, 190 S.W.2d 71, 86 (Tex. 1944).

some indication of a grantor’s intent,⁴⁰ but when the grant calls for a natural monument as a boundary — here, “the waters of the Laguna Madre” — that monument controls over courses and distances determined by survey.⁴¹ Generally, a surveyor’s meander lines along a water line do not mark the boundary.⁴² We have determined what the intent of Spain and Mexico was by interpreting their law, the *Partidas*, in *Luttet*. That their grantees and surveyors may have had a different understanding must be, and has been, considered in interpreting the civil law. In other words, an interpretation of controlling eighteenth century civil law must take into account how it was understood by those who applied it at the time, including the original grantees and surveyors of the property at issue here and those who succeeded them. But having determined what the applicable civil law was, as we have in *Luttet*, after taking all such considerations into account, we cannot then refuse its application where there happens to be evidence that particular grantees and surveyors had a different understanding of the law. Their misunderstanding of the applicable law cannot diminish the grantors’ grants any more than it could enlarge them. The civil law does not locate “the waters of the Laguna Madre” at one place when there is no evidence of any contrary understanding by owners and surveyors and at another place when there is such evidence. The civil law, as we have interpreted it, defines the monument without regard to private understanding.

Second, the historical record is ambiguous because of the different motives of the actors over time. We noted in *State v. Balli*, regarding the title to Padre Island, that surveys were often made to determine

⁴⁰ See *Fulton v. Frandolig*, 63 Tex. 330 (1885).

⁴¹ See *Howland v. Hough*, 570 S.W.2d 876, 882 (Tex. 1978).

⁴² *Stover v. Gilbert*, 247 S.W. 841, 843 (Tex. 1923).

what dues were to be paid the sovereign or what land was usable for grazing rather than to ascertain boundaries for title purposes.⁴³ Unquestionably, the first grantees' principal concern was land suitable for grazing. That explains Balli's petition for the Mesquite Rincon adjacent the Big Barreta and de la Fuente's adjustment to the survey of the Little Barreta. Both were to ensure that the owners possessed grazing land. The State argues that because the Mesquite Rincon lies wholly within the area now in dispute, if Balli owned it by virtue of his grants, as the Foundation claims, he had no need to petition for it; therefore it must not have been included in the grants any more than any other area east of the bluff line. Whatever Balli's intent may have been by his petition — whether to acquire the Mesquite Rincon that he did not own, or merely to confirm his ownership of grazing land in an area he already owned where grazing was for the most part impossible — we cannot regard his intent as limiting the Spanish grant. Nor can we determine the sovereign's intent in granting Balli's petition for the Mesquite Rincon, apart from the governing civil law, other than to confirm his ownership of its grazing land.

In sum, the Foundation's eastern boundary — “the waters of the Laguna Madre” — is fixed by the civil law in effect when the original grants were made and can neither be enlarged nor reduced by the parties' misunderstanding of that law at that time or since. This is not, of course, a case in which an owner is claimed to have abandoned property or in which a challenger claims adverse possession; this is a case construing a call for a natural monument in an original grant. The relevance of the historic record offered

⁴³ *State v. Balli*, 190 S.W.2d at 97.

by the State is in determining the applicable law. Once that law has been determined, however, as it has been in *Luttet*, it can neither be enlarged nor diminished by private understanding.

4

The State argues that the rule determined in *Luttet* cannot practically or sensibly be applied in the area of the Laguna Madre east of the Foundation's property because of the conditions there. As the State points out, the jury found that mean higher high tide could not be determined with reasonable accuracy there. But it is plain from our opinion in *Luttet*, as well as from the trial court's findings of fact in that case extensively recited in the court of appeals' opinion,⁴⁴ that the only appreciable difference in the Laguna Madre at the two locations is that water "always" or "completely" covered the area east of Luttet's property⁴⁵ while inundation east of the Foundation's property may have been less frequent or less complete. Otherwise, the nature of seawater inundation in the disputed area in *Luttet* appears to have been essentially identical to inundation in the disputed area here. Given that mean higher high water could be determined in *Luttet* and that the evidence in the present case establishes that the conditions in both cases are essentially the same, as a matter of law mean higher high water can be determined in the present case.

The State argues here that the shoreline east of the Foundation's property is marked by an obvious "bluff" — a slight rise in elevation — and a change in vegetation and terrain. But the State made the

⁴⁴ *Luttet v. State*, 289 S.W.2d 357, 361-374 (Tex. App.—Waco 1956), *rev'd and remanded*, 324 S.W.2d 167 (Tex. 1958), *on remand*, 328 S.W.2d 920 (Tex. App.—Waco 1959, no writ).

⁴⁵ *See* 324 S.W.2d at 169 ("At the date of the grant, and, indeed, for well over half a century thereafter, the area in suit was always covered by the waters of the Laguna"); *cf.* 289 S.W.2d at 373 ("in 1829 the waters of the Laguna Madre completely covered the lands in controversy at the time of the original Mexican grant involved in this suit, or at least if not completely covered at all times, such area was a part of the bed or shores of the Laguna Madre").

identical argument in *Luttet*. The evidence in the present case is that water reaches the bluff line at most once or twice a year. The evidence in *Luttet* was comparable. Evidence of the number of days of any inundation of the mud flats, even east of the bluff line, is also comparable in both cases.⁴⁶ Daily astronomic forces were no stronger in the Laguna Madre near Luttet's property than they are near the Foundation's property. There were no tidal gauges in the immediate vicinity of Luttet's property, just as there are none near the Foundation's property.

The State argues that under such conditions, when inundation is regular but shallow and infrequent, it makes no more sense to determine the presence of water using mean water levels measured on a daily basis than it does to describe the climate of Corpus Christi by saying that its mean daily temperature is 72^N F. But the State made this same argument in *Luttet*, and we expressly rejected it there. It makes less sense to determine a shoreline based on the highest level water ever reaches in a year, just as it does not accurately describe the Corpus Christi climate to say that it was 109^N F there on September 5, 2000. The infrequency of seawater inundation in areas of the Laguna Madre, like those adjacent Luttet's and the Foundation's properties, makes any shoreline determination a difficult exercise. But here, as in *Luttet*, the exercise is made no easier by basing the boundary determination on a surveyor's subjective observations of the terrain. For certainty in land titles, it is important to have a rule, and the civil law as interpreted in *Luttet* provides one.

⁴⁶ See *Luttet*, 289 S.W.2d at 367.

The State argues that mean daily high water level measurements should not be used to determine a “shoreline” in the Laguna Madre adjacent the Foundation’s property because such measurements are so difficult and meaningless that after 1995 the National Oceanic and Atmospheric Administration abandoned any effort to make them. But the civil law rule determined in *Luttet* predated NOAA and its predecessor, the United States Coast and Geodetic Survey, by more than a century, and the Survey was mentioned in *Luttet* only in passing. Application of the rule of *Luttet* is not dependent on NOAA or its policies or the nearby installation of tidal gauges, whether private (as one was in *Luttet*)⁴⁷ or governmental.

The State argues that the impossibility of measuring mean daily high water levels in the Laguna Madre is demonstrated by the Foundation’s efforts to do so and its retreat to the position it has taken in this litigation that the applicable level is not a measured one but an arbitrary one — one foot above the National Geodetic Vertical Datum of 1929 — that is higher than any that could be measured and which conveniently (for the Foundation) intersects the west bank of the Intracoastal Waterway. But the evidence is undisputed that high water levels *can* be measured daily wherever in the Laguna Madre one chooses to do so, that those measurements can be averaged to obtain a mean, that the Foundation’s experts have performed such measurements and calculations, and that the mean level obtained by that process is below — and therefore more favorable to the Foundation — the level it claims. The jury’s failure to find that mean daily high water levels can be determined with reasonable accuracy does not detract from the established fact that such levels, even if inaccurate, are below any level that would locate the Foundation’s

⁴⁷ *Luttet*, 324 S.W.2d at 173.

boundary on the west bank of the Intracoastal Waterway. The Foundation explains that it has advocated a mean daily high water level that is several inches above the calculated level and therefore favorable to the State in order to avoid disputes over the accuracy of the measurements that were made. Whether this explanation is true or not, the evidence is that the Foundation has measured mean daily high water levels, and the State concedes that those measurements would place the boundary at the same place — the west bank of the Intracoastal Waterway.

The State urges, however, that but for the presence of the Intracoastal Waterway, the Foundation's measurements could not be used to locate an eastern boundary to its property west of Padre Island, and therefore it would own all the land eastward to the Gulf of Mexico. This is simply incorrect. It is true that the dredging of the Intracoastal Waterway in 1949, so that water is always present there, did not create an eastern boundary for the Foundation's property. But it is also true that seawater inundated the Laguna Madre east of the Foundation's property long before the Waterway existed, at least to the time of the original grants. The grants themselves called for a boundary at "the waters of the Laguna Madre". As long as water was sometimes present at some level between the Foundation's property and Padre Island, the reach of mean high water level on the upland — which is the boundary line under civil law — was somewhere west of the Island. The Foundation concedes that it cannot say now where that boundary was many decades ago, but it need not do so. The State's argument is that mean daily high water level measurements cannot be used to locate a viable boundary west of Padre Island in the absence of the Intracoastal Waterway, and that argument is simply incorrect.

Finally, the State argues that the Court’s opinion on rehearing in *Luttes* itself recognized that circumstances might exist in the Laguna Madre where shoreline boundaries could *better* be determined without reference to mean daily high water level measurements. We do not share this reading of our opinion. All we said on rehearing was that

[i]f it be shown in a given case that the upper level of the shore, as actually covered and uncovered by the sea, is higher (or lower) than the level of mean higher high tide as determined by tide gauges, and if it also appears that an upper median line of the shore, as actually so regularly covered and uncovered, can be determined with reasonable accuracy otherwise than by exclusive resort to tide gauges, we do not by our opinion intend to foreclose such a case.⁴⁸

But in so doing we did not create an exception to the rule we had determined under the civil law that a “median line” must be determined. Indeed, it would have made no sense for us to have held that a civil law shoreline must be determined by daily water level measurements and then stated on rehearing that any other method was acceptable, too. Had that been our intent, we would have withdrawn our rejection of the bluff line boundary. Moreover, in the two sentences immediately following the sentence just quoted, we reiterated our rejection of a rule that would locate a water-line boundary at a bluff water rarely reached:

In the instant case, it is quite plain to us that the area in suit is not regularly covered and uncovered by the Laguna waters and has not been for a long time. To say that merely because there exists, at the western edge, a “bluff line” or a “vegetation line”, marking where the waters at some undisclosed period in the past evidently did reach with regularity, the latter line is the line of mean higher high tide, would, in our opinion, be much less reasonable than to fix a line of mean higher high tide by exclusive resort to tide gauges.⁴⁹

⁴⁸ *Id.* at 192.

⁴⁹ *Id.*

The bluff line boundary the State urges in the present case is indistinguishable from the bluff line boundary it urged in *Luttet*, and its argument is therefore foreclosed by our decision in that case.

C

Having rejected the State's arguments regarding the application of *Luttet* in this case, we turn briefly to the Foundation's position. The evidence establishes, and the State concedes, that the Claunch/Lothrop line on which the Foundation relies was at or above mean daily high water levels. The evidence also establishes that those levels were susceptible of being determined in the Laguna Madre east of the Foundation's property. Thus, the jury's findings are superfluous and the boundary can be located as a matter of law using the rule of *Luttet* at the Claunch/Lothrop line, which has the same effect as using a mean daily high water line of one foot above the NGVD..

III

The State also argues that the Foundation's claims in this case are barred by res judicata and collateral estoppel — often more usefully referred to, respectively, as claim preclusion and issue preclusion — based on the federal trial court's findings and the Fifth Circuit's holdings in *Humble Oil & Refining Co. v. Sun Oil Co.*, decided in 1951.⁵⁰ In *Humble*, as we have already said, Sun Oil, the State's mineral lessee in a part of the mud flats at issue in the present case, sued the Foundation's predecessors in interest and their mineral lessee, Humble Oil, to determine whose lease was valid. The district court permitted the

⁵⁰ *Sun Oil Co. v. Humble Oil & Refining Co.*, 88 F. Supp. 658 (S.D. Tex. 1950), *modified and aff'd sub nom. Humble Oil & Refining Co. v. Sun Oil Co.*, 190 F.2d 191 (5th Cir.), *reh'g denied*, 191 F.2d 705 (1951), *cert. denied*, 342 U.S. 920 (1952).

State to intervene in the litigation as the competing owner to title to the land at issue,⁵¹ but the Fifth Circuit reversed this ruling because the presence of the State as a party would defeat diversity jurisdiction on which the case was based.⁵² The Fifth Circuit held that “[t]he trial court could not and did not acquire jurisdiction over the controversy between the State of Texas and the defendants”⁵³ and modified the judgment “so as not to be binding upon the State”.⁵⁴ The federal district court concluded that Sun Oil’s lease was valid, and the Fifth Circuit affirmed.

Not only were the leaseholds at issue in the federal case only about one-fifth of the land in dispute in the present case, the actual location of the boundary was not litigated. According to the Fifth Circuit, “[t]he defendants conceded that the land in controversy was a part of the bed of the Laguna Madre when their grants were issued, but claimed that its elevation had been increased” by accretion.⁵⁵

The crucial question for determination is whether land, which admittedly was a part of the original bed of Laguna Madre and outside of appellants’ mainland grants, has become a part of the mainland under the doctrine of accretion. The burden of proving this was on appellants; and we think, upon the undisputed facts, that they failed to meet this burden.⁵⁶

Thus, the parties in the federal case did not seek a determination of the original eastern boundaries of the Big Barreta and Little Barreta, and the federal trial and appellate courts did not adjudicate the issue.

⁵¹ *Sun Oil Co. v. Humble Oil & Refining Co.*, 88 F. Supp. 658 (S.D. Tex. 1950).

⁵² *Humble*, 190 F.2d at 197-198.

⁵³ *Id.* at 197.

⁵⁴ *Id.* at 199.

⁵⁵ *Id.* at 193.

⁵⁶ *Id.* at 199.

The federal courts reasoned, however, much as this Court later reasoned in *Luttet*, that a determination of whether additional land had accreted to the property necessitated in part an understanding of what increase in elevation would be required for accretion, which in turn required some understanding of the concept of shoreline under the civil law. Recognizing that it was bound to follow Texas law on the subject, the Fifth Circuit held that “[b]y the civil law, the shore extends to the line of the highest tide in winter.”⁵⁷ Texas law interpreting civil law shoreline boundaries was not settled at the time of the federal litigation and was not authoritatively determined until about six years later when this Court decided *Luttet*.⁵⁸ *Luttet* rejected the Fifth Circuit’s interpretation of the civil law in *Humble*.⁵⁹

We first consider whether the Foundation’s claims in the present case are precluded by res judicata. In Texas, the preclusive effect of a federal judgment is determined by federal law.⁶⁰ Federal res judicata rules have been described by Professors Wright, Miller, and Cooper as “intricate”.⁶¹ Generally, however, the United States Supreme Court has explained that

[t]he rule provides that when a court of competent jurisdiction has entered a final judgment on the merits of a cause of action, the parties to the suit and their privies are thereafter bound “not only as to every matter which was offered and received to sustain or defeat the

⁵⁷ *Id.* at 195.

⁵⁸ 324 S.W.2d at 185-186.

⁵⁹ *Id.*

⁶⁰ *Eagle Properties, Ltd. v. Scharbauer*, 807 S.W.2d 714, 718 (Tex. 1990) (“federal law controls the determination of whether res judicata will bar a later state court proceeding”).

⁶¹ 18 CHARLES ALAN WRIGHT, ARTHUR R. MILLER, & EDWARD H. COOPER, FEDERAL PRACTICE AND PROCEDURE § 4401, at 4 (2d ed. 2002).

claim or demand, but as to any other admissible matter which might have been offered for that purpose.”⁶²

Under this rule, the *Humble* litigation does not preclude the Foundation’s claims in the present case. The federal district court in *Humble* did not determine the eastern boundary of the Foundation’s property and could not have done so. Not all of the area was involved in the case. The parties’s dispute in *Humble* over the validity of competing mineral leases covered only a small part of the area in dispute in the present case. Sun Oil, the State’s lessee, did not claim an interest in most of the land along the east side of the Foundation’s property, and therefore could not litigate the boundary. The State, as we have said, was not a party to *Humble* because its intervention would have defeated diversity jurisdiction on which the action was predicated.⁶³ For this reason, the *Humble* litigation cannot be held to preclude the claims made in the present case.

As for whether collateral estoppel — the preclusive effect of the federal case on litigation of issues in the present case — is governed by federal or state law, we have previously concluded that both are the same.⁶⁴ Under both federal and Texas law:

A party seeking to assert the bar of collateral estoppel must establish that (1) the facts sought to be litigated in the second action were fully and fairly litigated in the first action;

⁶² *Commissioner v. Sunnen*, 333 U.S. 591, 597 (1948) (quoting *Cromwell v. County of Sac*, 94 U.S. (4 Otto) 351, 352 (1876)); accord, *Allen v. McCurry*, 449 U.S. 90, 94 (1980) (“Under res judicata, a final judgment on the merits of an action precludes the parties or their privies from relitigating issues that were or could have been raised in that action.”); see WRIGHT, *supra* note 61, § 4406, at 140.

⁶³ 190 F.2d at 197-198.

⁶⁴ *Eagle Properties, Ltd. v. Scharbauer*, 807 S.W.2d 714, 721 (Tex. 1990).

(2) those facts were essential to the judgment in the first action; and (3) the parties were cast as adversaries in the first action.⁶⁵

For the reason we have just explained, the facts concerning the Foundation's eastern boundary were not fully and fairly litigated in the *Humble* case. Only a fraction of the area on the east side of the Foundation's property was in issue. The central dispute was not over the civil law boundary in the original grants but over whether there had been accretion in the intervening years.

The importance of stability in land titles that moves us to adhere to the rule stated in *Luttles* does not require that we give the *Humble* litigation preclusive effect in this case. The facts regarding the Foundation's boundary were not determined in *Humble* and could not have been. The federal courts' interpretation of the civil law governing the original grants is not binding on us, and we rejected it in *Luttles*. Determinations of law are not generally given preclusive effect.⁶⁶

Furthermore, to give the *Humble* case preclusive effect here would not serve the principles that preclusion serves.⁶⁷ In *Parklane Hosiery Co. v. Shore*, the United States Supreme Court stated that res judicata and collateral estoppel both serve "the dual purpose of protecting litigants from the burden of relitigating an identical issue with the same party or his privy and of promoting judicial economy by

⁶⁵ *Sysco Food Servs., Inc. v. Trapnell*, 890 S.W.2d 796, 801 (Tex. 1994) (citing *Allen v. McCurry*, 449 U.S. 90, 94-95 (1980); *Hicks v. Quaker Oats Co.*, 662 F.2d 1158, 1166 (5th Cir. 1981); *Eagle Properties, Ltd. v. Scharbauer*, 807 S.W.2d 714, 721 (Tex. 1990); *Tarter v. Metropolitan Sav. & Loan Ass'n*, 744 S.W.2d 926, 927 (Tex. 1988); and *Bonniwell v. Beech Aircraft Corp.*, 663 S.W.2d 816, 818 (Tex. 1984)).

⁶⁶ See WRIGHT, *supra* note 61, § 4425.

⁶⁷ See *Sysco*, 890 S.W.2d at 803.

preventing needless litigation.’⁶⁸ Even if we were to hold that *Humble* determined title to part of the area now in dispute, it could not preclude litigation over the remainder of the area.

We therefore conclude that the *Humble* case does not preclude litigation of the title issues involved in the present case.

IV

The last issue we must address is whether the Foundation is entitled to recover its attorney fees. The only basis the Foundation claims for such recovery is the Declaratory Judgments Act, which authorizes an award of reasonable and necessary attorney fees when just and equitable.⁶⁹ We allowed attorney fees to be awarded against the State in *Texas Education Agency v. Leeper*,⁷⁰ which involved a challenge to legislative enactments, and the Foundation argues that we should also award fees here. But the dispute in the present case is over title, not an enactment, and the Foundation’s claim for declaratory relief is merely incidental to the title issues. In such circumstances, the Act does not authorize an award of attorney fees against the State. Moreover, the provisions of the Natural Resources Code which permit the Foundation to sue the State in this case do not provide for recovery of attorney fees.⁷¹

V

Finally, we add a brief word in response to the dissent.

⁶⁸ 439 U.S. 322, 326 (1979).

⁶⁹ TEX. CIV. PRAC. & REM. CODE § 37.009.

⁷⁰ 839 S.W.2d 432, 446 (Tex. 1994).

⁷¹ See TEX. NAT. RES. CODE §§ 33.171-.176.

The dissent's principal argument is that *Luttet* assumes that tide in the Laguna Madre can be measured, and “that assumption is no longer viable because we now have the undisputed fact that, as concluded by the federal government, the tide, at least in this part of the Laguna Madre, cannot be measured.”⁷² Without trying to put too fine a point on it, what we actually know from the federal government is that in 1995, thirty-seven years after *Luttet* was decided and shortly after this present litigation began, the National Oceanic and Atmospheric Administration, a bureau of the U.S. Department of Commerce, issued a report developed in cooperation with the Texas General Land Office, a party to the present case, in which it concluded, for purposes of commercial navigation and not for determining land titles, that regions of the Laguna Madre, including the area adjacent the Foundation's property “should be classified as . . . non-tidal for tidal datum computation purposes according to operational criteria established by [the National Ocean Service] for tabulation of the tide”⁷³ because atmospheric forces too greatly affect water levels in the region for astronomic tides to be measured. The report was based not on any changes in conditions in the Laguna Madre — no one contends that there have been any changes in the region near the Foundation's property in two hundred years — but on what the report says is “the latest in a series of NOS efforts to understand the tidal characteristics of Laguna Madre, Texas”.⁷⁴ The governing criteria of the report were not the provisions of early nineteenth century Spanish and Mexican civil law but recent

⁷² Post at ____.

⁷³ National Oceanic and Atmospheric Administration, Tidal Characteristics and Datums of Laguna Madre, Texas 1, 53 (July 1995).

⁷⁴ Id. at 53.

NOS policies. The purpose of the report was not to fix land titles but to guide NOAA’s tide tabulations. Yet the dissent argues that this report, written after this litigation began, in cooperation with one of the parties, using different criteria than those which determine this case and for different purposes supersedes *Luttet* and the civil law. Had the present litigation been concluded before the report issued, or had the report been withdrawn before this litigation concluded, the dissenting JUSTICES would presumably favor the Foundation’s position. The dissent’s position is that early nineteenth century Spanish and Mexican civil law and Texas land titles along the seashore fluctuate depending on NOAA’s evolving understandings of tidal characteristics in the region. Because “[t]he federal government has declared as a matter of law that the tide cannot be measured,”⁷⁵ according to the dissent, the civil law regarding shorelines applied to these land grants from 1804 to 1995 and then stopped, shifting 35,000 acres from the Foundation to the State. With great respect for the power of the federal government, we do not agree that an agency’s understanding of nature can alter history.

The conditions in the Laguna Madre in the region involved in the present case are the same as those in the region involved in *Luttet*. What the Foundation has measured — what NOAA has sometimes called “tide” and sometimes not — is precisely the mean daily high water level that *Luttet* says the civil law requires to be measured. Whether NOAA chooses to call such levels “tidal” as it did for many years, or to call them “non-tidal” as it has in its 1995 report, high water levels can be measured in the disputed area just as they could be measured in *Luttet*, and daily measurements can be averaged to get a mean, and that

⁷⁵ Post at ____.

mean can be adjusted with actual and extrapolated data over a tidal epoch of 18.6 years. The Foundation's oceanologist did that and determined that mean daily high water was 0.60 to 0.75 foot above the NGVD over the disputed area. There is a *regular* flow of water in the disputed area, but not like an open beach. Water flow is *regular* in both places over different periods of time. NOAA and the dissent might not consider this flow "tidal", but their understandings do not fix the Foundation's boundary. The civil law does. The issue in the case, stripped of obscuring rhetoric, is whether the regular movement of water over the disputed area makes it a "shore" within the meaning of the original land grants and the governing civil law at the time as construed in *Luttet*. That depends on whether the conditions *Luttet* considered were materially different from those in this case, and the answer to that is no, as the extensive passages we have quoted from *Luttet* demonstrate.

The dissent argues that using mean daily high water levels to mark the shoreline in an area like this "is simply junk science."⁷⁶ But the determination of where to mark a shoreline is a matter of law, not science. The law might place the shoreline at the highest level reached by water annually, as for example the court in *Humble Oil* concluded the civil law did. Or the law might locate shorelines at changes in vegetation and elevation, as the State argues should be done here. In fact, however, according to *Luttet*, eighteenth century civil law did neither but instead marked shorelines where mean daily high water levels intersected the upland. The civil law rule was based on the policy of the cultures it served, not "junk science". To reject that rule two hundred years later because this Court now thinks it was unsound would

⁷⁶ Post at ____.

be junk law. The dissent argues that *Luttet* was ill-advised to adopt a single rule for all circumstances, but *Luttet* did not adopt a rule; *Luttet* interpreted the rule that Spain and Mexico had adopted. Whether that rule was well- or ill-considered is irrelevant. The grants in this case and in *Luttet* are governed by the civil law rule, whatever it was, and *Luttet* expressly determined what it was.

The dissent suggests that the boundary line determined by using a mean high water level one foot above the NGVD is different from the boundary that would be determined using actual water level measurements, but this is simply not true. Whether mean high water is as low as seven inches or as high as twelve inches above the NGVD, the boundary line is exactly the same: the west bank of the Intracoastal Waterway. The evidence does not, and need not, show where the boundary was before the Intracoastal Waterway was dredged.

The dissent argues that historical evidence better shows the location of the boundary line, even though it concedes that surveys were not intended to establish boundaries. Historical evidence is important in trying to understand what the civil law meant by a shoreline, but once that law has been interpreted, it cannot be defeated by the views of individual surveyors and others. *Luttet* held that what Spain and Mexico meant when they granted land to a shoreline was mean daily high water level. That said, the historical record in a particular case no longer matters. No surveyor or grantee could either expand or contract the meaning of the sovereign's grant.

Finally, the dissent studiously ignores one very important fact: that water reaches the bluff line the State claims as a boundary at most once or twice a year. It is odd to think of a shore as the place where water almost never is.

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For the reasons we have explained, we reverse the judgment of the court of appeals and remand the case to the trial court for rendition of judgment in accordance with this opinion.

Nathan L. Hecht
Justice

Opinion delivered: August 29, 2002