

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1968

No. 9, ORIGINAL

UNITED STATES OF AMERICA, PLAINTIFF

v.

STATE OF LOUISIANA, ET AL.

SUPPLEMENTAL DECREE

[May 5, 1969.]

For the purpose of giving effect to the conclusions of this Court as stated in its opinions announced December 4, 1967, and March 3, 1969, supplementing the decree entered herein on December 12, 1960, it is ordered, adjudged and decreed as follows:

1. As against the State of Texas, the United States is entitled to—

(a) All the lands, minerals and other natural resources underlying the Gulf of Mexico that are more than three marine leagues gulfward from the present or future coast line as referred to in § 2 (c) of the Submerged Lands Act, 43 U. S. C. § 1301 (c); and

(b) All the lands, minerals and other natural resources underlying the Gulf of Mexico, more than three geographical miles gulfward from the present or future coast line as referred to in § 2 (c) of the Submerged Lands Act, 43 U. S. C. § 1301 (c), that are gulfward of the following line:

Beginning at a point on the international boundary with Mexico (wherever that boundary may be located), three marine leagues gulfward from the point $x=2,447,033$,

(1)

y=105,994 (Texas Plane Coordinate System, South Zone), latitude 25°57'05.90" N., longitude 97°08'22.85" W., and proceeding thence northwardly and eastwardly as follows:

Course	South Zone		Latitude	Longitude
	x	y		
1. By arc centered at.....	2,447,033	105,994	25°57'05.90"	97°08'22.85"
to.....	2,498,223	125,226	26°00'10.59"	96°58'59.59"
2. By straight line to.....	2,498,008	126,760	26°00'25.89"	96°59'01.09"
3. By arc centered at.....	2,443,661	121,256	25°59'37.4"	97°08'58.0"
to.....	2,497,383	131,474	26°01'12.56"	96°59'07.98"
4. By straight line to.....	2,497,076	135,704	26°01'54.49"	96°59'10.78"
5. By straight line to.....	2,497,119	137,947	26°02'16.70"	96°59'10.02"
6. By straight line to.....	2,497,240	139,652	26°02'33.58"	96°59'08.47"
7. By arc centered at.....	2,442,693	143,530	26°03'18.1"	97°09'08.0"
to.....	2,496,942	150,421	26°04'20.26"	96°59'10.32"
8. By straight line to.....	2,496,723	152,145	26°04'37.36"	96°59'12.50"
9. By arc centered at.....	2,442,474	145,254	26°03'35.2"	97°09'08.2"
to.....	2,496,370	154,510	26°05'00.83"	96°59'16.05"
10. By straight line to.....	2,495,553	159,267	26°05'48.04"	96°59'24.39"
11. By arc centered at.....	2,441,657	150,011	26°04'22.4"	97°09'15.6"
to.....	2,495,161	161,316	26°06'08.37"	96°59'28.42"
12. By straight line to.....	2,494,875	162,668	26°06'21.79"	96°59'31.33"
13. By straight line to.....	2,494,746	163,636	26°06'31.39"	96°59'32.67"
14. By straight line to.....	2,492,451	182,957	26°09'43.61"	96°59'55.32"
15. By arc centered at.....	2,438,148	176,509	26°08'45.2"	97°09'52.0"
to.....	2,492,330	183,907	26°09'52.44"	96°59'56.52"
16. By straight line to.....	2,490,612	196,490	26°11'57.26"	97°09'13.74"
17. By arc centered at.....	2,436,430	189,092	26°10'50.0"	97°10'09.4"
to.....	2,490,574	196,764	26°11'59.99"	97°09'14.12"
18. By straight line to.....	2,488,714	200,890	26°14'10.20"	97°09'32.84"
19. By arc centered at.....	2,434,570	202,218	26°13'00.2"	97°10'28.3"
to.....	2,488,423	211,722	26°14'28.37"	97°09'35.80"
20. By straight line to.....	2,486,399	223,191	26°16'22.20"	97°09'58.54"
21. By arc centered at.....	2,432,546	213,687	26°14'54.0"	97°10'49.2"
to.....	2,486,322	223,615	26°16'26.49"	97°09'57.23"
22. By straight line to.....	2,484,034	235,738	26°18'26.73"	97°01'29.38"
23. By arc centered at.....	2,430,308	225,810	26°16'54.3"	97°11'12.4"
to.....	2,483,535	238,353	26°18'52.68"	97°01'26.05"
24. By straight line to.....	2,478,947	257,823	26°22'06.05"	97°02'13.99"
25. By arc centered at.....	2,425,720	245,280	26°20'07.6"	97°12'00.6"
to.....	2,478,775	258,531	26°22'13.00"	97°02'15.79"
26. By straight line to.....	2,475,739	270,687	26°24'13.83"	97°03'47.63"
27. By arc centered at.....	2,422,684	257,436	26°22'08.3"	97°12'32.5"
to.....	2,475,708	270,811	26°24'15.06"	97°02'47.96"
28. By straight line to.....	2,472,116	285,051	26°26'36.50"	97°03'25.67"
29. By arc centered at.....	2,419,092	271,676	26°24'29.7"	97°13'10.5"
to.....	2,471,287	287,990	26°27'05.71"	97°03'34.42"
30. By straight line to.....	2,466,585	303,033	26°29'35.22"	97°04'24.28"
31. By straight line to.....	2,461,419	319,706	26°32'20.92"	97°05'19.08"
32. By arc centered at.....	2,409,181	303,522	26°29'46.1"	97°14'55.0"
to.....	2,461,209	320,309	26°32'27.52"	97°05'21.31"
33. By straight line to.....	2,450,926	352,124	26°37'43.15"	97°07'10.71"
34. By arc centered at.....	2,398,901	335,277	26°35'01.6"	97°16'45.8"
to.....	2,449,710	355,498	26°38'16.70"	97°07'23.71"

Course	South Zone		Latitude	Longitude
	x	y		
35. By straight line to.....	2, 447, 122	362, 000	26°39'21.38"	97°07'51.45"
36. By straight line to.....	2, 445, 524	366, 527	26°40'06.38"	97°08'04.52"
37. By straight line to.....	2, 442, 103	376, 994	26°41'50.42"	97°08'44.95"
38. By straight line to.....	2, 437, 787	392, 060	26°44'20.04"	97°09'30.83"
39. By straight line to.....	2, 437, 079	394, 740	26°44'46.70"	97°09'34.32"
40. By arc centered at.....	2, 384, 205	389, 784	26°42'33.7"	97°10'23.0"
to.....	2, 435, 953	398, 463	26°45'23.70"	97°09'50.30"
41. By straight line to.....	2, 435, 511	399, 759	26°45'36.57"	97°09'55.03"
42. By straight line to.....	2, 432, 474	410, 567	26°47'23.94"	97°10'27.28"
43. By straight line to.....	2, 427, 617	431, 540	26°50'52.15"	97°11'18.47"
44. By straight line to.....	2, 424, 278	447, 618	26°53'31.73"	97°11'53.51"
45. By straight line to.....	2, 422, 538	459, 199	26°55'25.72"	97°12'11.42"
46. By arc centered at.....	2, 368, 469	450, 923	26°54'06.8"	97°22'01.6"
to.....	2, 422, 177	461, 213	26°55'46.59"	97°12'15.17"
47. By straight line to.....	2, 421, 519	468, 580	26°56'11.42"	97°12'22.18"
48. By arc centered at.....	2, 367, 051	463, 714	26°56'16.6"	97°22'24.0"
to.....	2, 421, 383	469, 914	26°57'12.85"	97°12'22.95"
49. By straight line to.....	2, 420, 872	474, 392	26°57'57.25"	97°12'28.09"
50. By arc centered at.....	2, 366, 540	468, 192	26°57'01.0"	97°22'26.2"
to.....	2, 420, 613	476, 347	26°58'16.64"	97°12'30.73"
51. By straight line to.....	2, 419, 889	487, 832	27°00'10.46"	97°12'37.44"
52. By straight line to.....	2, 419, 593	493, 822	27°01'09.82"	97°12'40.04"
53. By straight line to.....	2, 419, 571	493, 661	27°01'57.74"	97°12'39.73"
54. By arc centered at.....	2, 364, 887	493, 418	27°02'00.5"	97°22'44.5"
to.....	2, 419, 564	499, 351	27°02'04.57"	97°12'39.74"
55. By straight line to.....	2, 419, 442	506, 501	27°03'15.40"	97°12'46.28"
56. By straight line to.....	2, 419, 750	514, 947	27°04'30.10"	97°12'36.02"
57. By straight line to.....	2, 419, 951	517, 831	27°05'07.56"	97°12'33.36"
58. By straight line to.....	2, 420, 165	521, 009	27°05'39.01"	97°12'30.64"
59. By arc centered at.....	2, 365, 603	524, 676	27°05'20.5"	97°22'34.0"
to.....	2, 420, 260	522, 916	27°05'57.83"	97°12'29.33"
60. By straight line to.....	2, 420, 367	526, 247	27°06'30.86"	97°12'27.81"
61. By straight line to.....	2, 421, 336	538, 406	27°08'31.18"	97°12'15.70"
62. By arc centered at.....	2, 366, 824	542, 751	27°09'19.4"	97°22'18.7"
to.....	2, 421, 429	539, 789	27°08'44.87"	97°12'14.52"
63. By straight line to.....	2, 421, 449	540, 167	27°08'48.61"	97°12'14.25"
64. By straight line to.....	2, 421, 591	540, 986	27°08'56.71"	97°12'12.59"
65. By arc centered at.....	2, 367, 705	550, 391	27°10'34.1"	97°22'08.2"
to.....	2, 422, 109	544, 769	27°09'34.13"	97°12'06.42"
66. By straight line to.....	2, 422, 522	548, 828	27°10'14.28"	97°12'01.39"
67. By straight line to.....	2, 422, 909	550, 953	27°10'35.28"	97°11'56.83"
68. By arc centered at.....	2, 369, 110	560, 755	27°12'17.5"	97°21'51.6"
to.....	2, 423, 074	551, 906	27°10'44.71"	97°11'54.92"
69. By straight line to.....	2, 423, 600	555, 114	27°11'16.42"	97°11'48.73"
70. By straight line to.....	2, 425, 604	565, 501	27°12'59.0"	97°11'25.35"
71. By straight line to.....	2, 425, 955	567, 201	27°13'15.88"	97°11'21.27"
72. By straight line to.....	2, 430, 188	583, 297	27°16'15.65"	97°10'32.26"
73. By straight line to.....	2, 435, 271	602, 898	27°19'08.44"	97°09'38.57"
74. By straight line to.....	2, 437, 860	611, 265	27°20'31.02"	97°09'04.17"
75. By straight line to.....	2, 440, 773	619, 882	27°21'56.05"	97°08'30.84"
76. By straight line to.....	2, 443, 622	627, 687	27°23'13.04"	97°07'58.31"
77. By straight line to.....	2, 449, 412	641, 292	27°25'27.14"	97°06'52.41"
78. By straight line to.....	2, 455, 945	656, 139	27°27'53.45"	97°05'36.68"
79. By straight line to.....	2, 459, 158	662, 847	27°28'59.52"	97°05'01.59"
80. By straight line to.....	2, 400, 858	666, 343	27°29'33.99"	97°04'42.27"
81. By arc centered at.....	2, 419, 058	701, 665	27°35'27.6"	97°12'23.4"
to.....	2, 463, 926	679, 163	27°31'49.01"	97°03'11.65"

2,460,858

Course	South Zone		Latitude	Longitude
	x	y		
82. By straight line to.	2,473,113	688,467	27°33'11.66"	97°02'23.35"
83. By arc centered at.	2,423,245	710,909	27°36'59.3"	97°11'34.8"
to	2,477,118	701,518	27°35'20.43"	97°01'37.17"
84. By straight line to.	2,477,226	701,744	27°35'22.70"	97°01'35.93"
85. By straight line to.	2,484,830	715,433	27°37'37.53"	97°00'09.62"
86. By straight line to.	2,492,830	728,654	27°36'47.36"	96°58'38.51"
87. By straight line to.	2,503,176	741,739	27°42'25.23"	96°56'11.63"
88. By straight line to.	2,511,491	757,057	27°44'25.25"	96°55'07.44"
89. By straight line to.	2,515,272	762,240	27°45'17.11"	96°54'29.63"
90. By arc centered at.	2,471,062	734,467	27°50'41.5"	97°02'32.2"
to	2,522,630	776,327	27°47'35.66"	96°53'00.17"
91. By straight line to.	2,523,498	778,651	27°47'58.57"	96°52'50.74"
92. By straight line to.	2,523,956	779,631	27°48'08.21"	96°52'45.16"
93. By straight line to.	2,526,031	782,992	27°48'41.29"	96°52'22.00"
94. By straight line to.	2,535,804	796,133		

Course	South Central Zone		Latitude	Longitude
	x	y		
(Repeating two courses)				
93. By straight line to.	2,687,786	-1,695		
94. By straight line to.	2,697,492	11,495	27°50'50.13"	96°50'31.25"
95. By straight line to.	2,705,230	21,472	27°52'27.43"	96°49'03.01"
96. By straight line to.	2,710,958	28,692	27°53'31.00"	96°47'57.84"
97. By arc centered at.	2,660,548	64,033	27°56'35.4"	96°55'28.7"
to	2,712,719	30,115	27°53'51.59"	96°47'37.77"
98. By straight line to.	2,714,852	32,807	27°54'17.84"	96°47'13.45"
99. By straight line to.	2,720,377	38,910	27°55'17.21"	96°46'10.59"
100. By straight line to.	2,724,705	43,579	27°56'02.60"	96°45'21.36"
101. By straight line to.	2,727,377	46,418	27°56'30.29"	96°44'59.97"
102. By arc centered at.	2,691,713	87,873	28°03'27.2"	96°51'20.0"
to	2,733,517	52,619	27°57'30.40"	96°43'41.20"
103. By straight line to.	2,745,287	64,045	27°59'21.23"	96°41'27.48"
104. By straight line to.	2,759,114	76,842	28°01'23.17"	96°38'50.43"
105. By straight line to.	2,760,917	78,432	28°01'40.55"	96°38'29.96"
106. By straight line to.	2,775,278	90,137	28°03'33.53"	96°35'47.09"
107. By straight line to.	2,780,827	94,573	28°04'16.30"	96°34'44.15"
108. By arc centered at.	2,746,635	137,290	28°11'26.0"	96°40'55.7"
to	2,782,550	96,009	28°04'30.16"	96°34'24.59"
109. By straight line to.	2,783,852	97,140	28°04'41.08"	96°34'09.80"
110. By straight line to.	2,791,476	102,789	28°05'35.43"	96°32'43.40"
111. By straight line to.	2,800,074	109,137	28°06'36.47"	96°31'53.92"
112. By straight line to.	2,807,482	114,250	28°07'25.32"	96°29'42.01"
113. By straight line to.	2,814,292	118,283	28°08'04.00"	96°28'26.00"
114. By arc centered at.	2,785,963	165,112	28°15'53.5"	96°33'30.4"
to	2,815,384	119,016	28°08'11.01"	96°28'12.63"
115. By straight line to.	2,824,561	124,874	28°09'07.01"	96°26'28.73"
116. By straight line to.	2,831,319	128,676	28°09'43.18"	96°25'12.32"
117. By straight line to.	2,836,670	131,276	28°10'07.75"	96°24'11.92"
118. By straight line to.	2,859,197	132,254	28°16'16.87"	96°23'43.45"
119. By arc centered at.	2,810,460	153,253	28°18'46.0"	96°27'11.5"
to	2,840,053	132,594	28°10'20.04"	96°23'53.80"
120. By straight line to.	2,844,554	134,428	28°16'37.20"	96°22'42.95"
121. By straight line to.	2,845,278	135,087	28°16'43.34"	96°22'23.64"

Course	South Central Zone		Latitude	Longitude
	<i>r</i>	<i>v</i>		
122. By arc centered at .. to ..	2,833,368 2,864,032	188,226 142,947	28°19'32.2'' 28°11'57.16''	96°24'34.7'' 96°19'03.31''
123. By straight line to.	2,865,389	143,866	28°12'05.95''	96°18'47.92''
124. By arc centered at .. to ..	2,834,725 2,879,517	189,145 157,775	28°19'41.0'' 28°14'26.38''	96°24'19.3'' 96°16'06.44''
125. By straight line to	2,889,106	158,616	28°14'28.57''	96°15'59.64''
126. By arc centered at .. to ..	2,835,314 2,883,104	189,936 163,466	28°19'49.2'' 28°15'15.29''	96°24'12.5'' 96°15'24.87''
127. By straight line to.	2,885,158	167,099	28°15'51.36''	96°15'00.91''
128. By arc centered at .. to ..	2,837,368 2,886,819	183,679 170,332	28°20'25.3'' 28°16'22.99''	96°23'48.6'' 96°14'41.53''
129. By straight line to	2,890,783	177,022	28°17'28.27''	96°13'55.43''
130. By arc centered at .. to ..	2,843,740 2,893,218	201,903 181,614	28°22'15.0'' 28°18'13.16''	96°22'34.5'' 96°13'26.99''
131. By straight line to.	2,899,305	186,971	28°19'04.75''	96°12'17.45''
131a. By straight line to.	2,899,402	187,052	28°19'05.53''	96°12'16.38''
132. By straight line to.	2,908,291	193,515	28°20'07.38''	96°10'35.21''
133. By straight line to.	2,912,716	196,355	28°20'34.41''	96°09'44.93''
134. By straight line to.	2,927,833	205,781	28°22'04.08''	96°06'53.21''
135. By straight line to.	2,936,858	211,198	28°22'55.48''	96°05'10.38''
136. By straight line to.	2,950,836	219,194	28°24'11.14''	96°02'51.45''
137. By straight line to.	2,961,311	224,721	28°25'03.23''	96°00'33.13''
138. By straight line to.	2,978,776	233,372	28°26'24.39''	95°57'15.13''
139. By straight line to.	2,987,582	237,367	28°27'01.65''	95°55'35.35''
140. By arc centered at .. to ..	2,964,991 2,988,795	287,167 237,935	28°35'20.4'' 28°27'06.96''	95°59'34.0'' 95°55'21.60''
141. By straight line to.	2,998,740	242,743	28°27'51.95''	95°53'28.80''
142. By straight line to.	3,002,406	244,493	28°28'08.31''	95°52'47.22''
143. By straight line to.	3,005,833	246,002	28°28'22.33''	95°52'06.38''
144. By arc centered at .. to ..	2,983,797 3,007,526	266,051 246,783	28°36'43.5'' 28°28'29.61''	95°56'00.5'' 95°51'49.18''
145. By straight line to.	3,026,115	255,831	28°29'54.60''	95°48'14.81''
146. By arc centered at .. to ..	3,002,687 3,028,326	305,149 256,847	28°38'08.6'' 28°30'03.64''	95°52'25.9'' 95°47'53.12''
147. By straight line to.	3,047,657	267,108	28°31'39.01''	95°44'13.33''
148. By arc centered at .. to ..	3,022,018 3,048,406	315,410 267,563	28°39'45.0'' 28°31'44.18''	95°48'45.9'' 95°41'03.79''
149. By straight line to.	3,059,106	273,431	28°32'39.31''	95°42'03.10''
150. By arc centered at .. to ..	3,032,622 3,060,936	321,278 274,494	28°40'40.2'' 28°32'49.32''	95°46'45.1'' 95°41'42.19''
151. By straight line to.	3,078,889	285,339	28°34'31.79''	95°38'17.46''
152. By arc centered at .. to ..	3,050,575 3,080,687	332,143 286,496	28°42'22.8'' 28°34'42.53''	95°43'20.2'' 95°37'56.93''
153. By straight line to.	3,084,317	288,890	28°35'05.20''	95°37'15.45''
154. By straight line to.	3,092,292	293,735	28°35'50.86''	95°35'44.46''
155. By arc centered at .. to ..	3,063,896 3,092,642	340,470 293,950	28°43'41.5'' 28°35'52.89''	95°40'43.0'' 95°35'40.46''
156. By straight line to	3,110,764	305,148	28°37'38.45''	95°32'13.53''
157. By arc centered at .. to ..	3,082,018 3,111,027	351,668 305,312	28°45'27.2'' 28°37'39.99''	95°37'20.9'' 95°32'10.52''
158. By straight line to.	3,128,977	316,545	28°39'25.86''	95°28'45.39''
159. By arc centered at .. to ..	3,099,965 3,129,951	362,901 317,169	28°47'13.2'' 28°39'31.75''	95°33'55.6'' 95°28'34.25''
160. By straight line to.	3,152,031	331,678	28°41'48.68''	95°24'20.95''
161. By arc centered at .. to ..	3,122,098 3,153,769	377,410 332,830	28°49'30.3'' 28°41'59.57''	95°29'42.1'' 95°24'01.60''
162. By straight line to.	3,158,904	336,478	28°42'34.10''	95°23'02.71''

Course	South Central Zone		Latitude	Longitude
	x	y		
163 By straight line to.	3, 168, 694	342, 866	28°43'34.32"	95°21'10.91"
164 By arc centered at.	3, 138, 717	388, 622	28°51'16.3"	95°26'31.5"
to .	3, 172, 539	345, 644	28°44'00.62"	95°26'26.53"
165 By straight line to.	3, 177, 771	349, 049	28°41'32.69"	95°19'26.48"
166 By arc centered at.	3, 147, 981	394, 967	28°52'15.7"	95°24'45.2"
to .	3, 178, 426	349, 481	28°44'36.76"	95°19'18.93"
167 By straight line to.	3, 184, 351	353, 452	28°45'14.21"	95°18'11.04"
168 By arc centered at.	3, 153, 909	398, 878	28°52'53.2"	95°23'37.2"
to .	3, 185, 298	354, 101	28°45'20.34"	95°18'00.17"
169 By straight line to.	3, 196, 291	361, 803	28°46'33.16"	95°15'53.95"
170 By arc centered at.	3, 164, 896	403, 585	28°54'06.1"	95°21'30.9"
to .	3, 197, 099	362, 386	28°46'28.51"	95°15'44.67"
171 By straight line to.	3, 203, 245	366, 865	28°47'21.00"	95°14'33.99"
171a By straight line to.	3, 203, 445	334, 993	28°47'22.22"	95°14'31.73"
172 By straight line to.	3, 205, 264	368, 199	28°47'33.46"	95°14'10.87"
173 By arc centered at.	3, 182, 950	418, 115	28°55'54.6"	95°18'03.8"
to .	3, 213, 259	372, 598	28°48'14.53"	95°12'39.45"
174 By straight line to.	3, 214, 103	373, 160	28°48'19.82"	95°12'29.76"
175 By arc centered at.	3, 183, 794	418, 677	28°55'59.9"	95°17'54.1"
to .	3, 230, 736	390, 625	28°51'07.29"	95°09'16.44"
176 By straight line to.	3, 240, 421	399, 593	28°52'31.59"	95°07'24.26"
177 By straight line to.	3, 258, 176	414, 679	28°54'56.39"	95°03'58.91"
178 By straight line to.	3, 262, 578	418, 206	28°55'29.73"	95°03'08.07"
179 By straight line to.	3, 268, 484	420, 949	28°55'55.57"	95°02'23.08"
180 By arc centered at.	3, 239, 892	468, 683	29°03'56.8"	95°07'05.4"
to .	3, 282, 040	433, 549	28°57'58.97"	94°59'23.19"
181 By straight line to.	3, 282, 364	431, 343	28°58'02.76"	94°59'19.30"
182 By arc centered at.	3, 240, 126	469, 077	29°04'09.6"	95°07'01.6"
to .	3, 290, 005	446, 661	29°00'02.05"	94°57'48.53"
183 By straight line to.	3, 296, 652	452, 104	29°00'53.63"	94°56'31.59"
184 By straight line to.	3, 302, 419	456, 606	29°01'36.20"	94°55'24.90"
185 By straight line to.	3, 315, 160	498, 352	29°03'08.22"	94°52'57.60"
186 By straight line to.	3, 320, 930	470, 364	29°03'47.89"	94°51'50.94"
187 By straight line to.	3, 328, 195	475, 692	29°04'35.19"	94°50'27.11"
188 By straight line to.	3, 342, 587	484, 679	29°05'59.91"	94°47'41.32"
189 By arc centered at.	3, 313, 417	530, 934	29°13'47.9"	94°52'51.6"
to .	3, 345, 594	486, 717	29°06'19.02"	94°47'06.62"
190 By straight line to.	3, 350, 192	490, 063	29°06'50.48"	94°46'13.45"
191 By arc centered at.	3, 318, 015	534, 280	29°14'19.4"	94°51'53.4"
to .	3, 351, 664	491, 173	29°07'00.94"	94°45'56.41"
192 By straight line to.	3, 366, 438	502, 706	29°08'49.73"	94°43'05.18"
193 By straight line to.	3, 373, 759	508, 167	29°09'41.10"	94°41'40.41"
194 By arc centered at.	3, 341, 062	552, 000	29°17'06.6"	94°47'31.2"
to .	3, 376, 113	510, 625	29°09'58.63"	94°41'13.09"
195 By straight line to.	3, 379, 502	512, 855	29°10'25.49"	94°40'33.71"
196 By arc centered at.	3, 344, 451	554, 830	29°17'33.4"	94°46'51.8"
to .	3, 382, 465	515, 517	29°10'50.64"	94°39'59.22"
197 By straight line to.	3, 385, 938	518, 877	29°11'22.61"	94°39'18.63"
198 By arc centered at.	3, 347, 926	558, 190	29°18'05.4"	94°46'01.6"
to .	3, 395, 316	527, 691	29°12'47.10"	94°37'51.73"
199 By straight line to.	3, 394, 123	528, 892	29°12'58.69"	94°37'42.12"
200 By arc centered at.	3, 348, 733	559, 291	29°18'17.0"	94°46'01.6"
to .	3, 399, 047	537, 969	29°14'26.68"	94°36'42.74"
201 By straight line to.	3, 399, 847	539, 848	29°14'44.97"	94°36'32.92"
202 By arc centered at.	3, 349, 533	561, 270	29°18'35.3"	94°45'51.8"
to .	3, 401, 544	544, 379	29°15'29.17"	94°36'11.86"
203 By straight line to.	3, 402, 301	546, 710	29°15'51.86"	94°36'02.32"

Course	South Central Zone		Latitude	Longitude
	<i>r</i>	<i>y</i>		
204. By are centered at.	3,350,290	563,601	29°18'58.1"	94°35'42.3"
to	3,401,498	556,395	29°17'26.97"	94°35'33.41"
205. By straight line to	3,401,679	557,758	29°17'40.38"	94°35'30.79"
206. By straight line to	3,405,393	558,363	29°17'46.13"	94°35'23.49"
207. By straight line to	3,497,156	559,931	29°18'01.16"	94°35'02.12"
208. By straight line to	3,499,314	561,570	29°18'16.36"	94°34'29.85"
209. By straight line to	3,413,751	564,517	29°18'43.86"	94°33'45.50"
210. By straight line to	3,421,690	569,297	29°19'26.16"	94°32'13.83"
211. By straight line to	3,429,293	573,476	29°20'06.63"	94°30'46.17"
212. By straight line to	3,447,430	582,437	29°21'28.35"	94°27'17.47"
213. By straight line to	3,466,717	591,592	29°22'51.47"	94°23'35.55"
214. By are centered at.	3,443,267	640,994	29°31'09.3"	94°27'33.8"
to	3,467,072	591,762	29°22'52.01"	94°23'31.50"
215. By straight line to	3,480,531	598,270	29°23'52.12"	94°20'56.55"
216. By straight line to	3,497,178	605,998	29°25'01.98"	94°17'44.98"
217. By are centered at.	3,474,153	655,599	29°33'21.8"	94°21'42.9"
to	3,497,492	606,145	29°25'03.31"	94°17'41.36"
218. By straight line to	3,512,863	612,399	29°26'08.92"	94°14'44.35"
219. By are centered at.	3,489,524	662,853	29°34'27.5"	94°18'45.7"
to	3,513,624	613,765	29°26'12.24"	94°14'35.58"
220. By straight line to	3,530,375	621,950	29°27'26.82"	94°11'22.44"
221. By straight line to	3,554,689	633,780	29°29'13.49"	94°06'42.17"
222. By are centered at	3,530,811	682,981	29°37'39.0"	94°10'49.1"
to	3,555,470	634,171	29°29'17.06"	94°06'33.05"
223. By straight line to	3,571,673	642,357	29°30'31.26"	94°03'25.94"
224. By straight line to	3,579,924	648,355	29°31'07.35"	94°01'50.72"
225. By are centered at.	3,564,669	693,809	29°38'53.2"	94°04'18.2"
to	3,583,947	647,605	29°31'18.61"	94°01'04.58"
226. By are centered at.	3,570,760	700,751	29°40'09.3"	94°03'09.0"
to	3,583,971	647,701	29°31'18.96"	94°01'04.31"
227. By are centered at.	3,553,541	702,363	29°40'19.0"	94°00'20.1"
to	3,587,641	647,718	29°31'17.55"	94°00'22.79"
228. By are centered at.	3,583,155	702,397	29°40'18.1"	93°59'47.0"
to	3,597,166	648,499	29°31'20.37"	93°58'34.73"
229. By are centered at.	3,598,268	703,082	29°40'20.7"	93°57'55.3"
to	3,611,182	649,935	29°31'29.50"	93°55'55.45"
230. By are centered at.	3,616,758	704,387	29°40'25.2"	93°54'25.6"
to	3,617,980	649,666	29°31'23.90"	93°54'38.73"
231. By straight line to	3,622,052	649,757	29°31'23.04"	93°53'52.02"
232. By straight line to	3,628,621	649,651	29°31'21.11"	93°52'37.85"
233. By are centered at.	3,627,584	704,536	29°40'22.3"	93°52'19.5"
to	3,632,598	650,641	29°31'21.32"	93°51'54.24"
234. By straight line to	3,634,871	650,256	29°31'22.32"	93°51'26.29"
235. By are centered at.	3,630,317	704,739	29°40'23.3"	93°51'51.5"
to	3,651,268	654,256	29°31'54.77"	93°48'18.84"
236. By straight line to	3,653,430	653,115	29°32'02.36"	93°47'55.01"
237. By are centered at.	3,632,410	705,598	29°40'30.9"	93°51'27.7"
to	3,653,602	660,681	29°32'52.93"	93°45'57.22"
238. By straight line to	3,664,862	661,555	29°33'01.02"	93°45'42.53"
239. By are centered at.	3,633,670	706,473	29°40'39.0"	93°51'12.0"
to	3,677,669	674,000	29°34'56.43"	93°43'11.20"
240. By straight line to	3,678,810	675,546	29°35'13.18"	93°42'57.60"
241. By are centered at.	3,634,811	708,019	29°40'58.8"	93°50'59.3"
to	3,650,595	678,115	29°35'37.80"	93°42'36.98"
242. By straight line to	3,686,069	686,436	29°36'58.24"	93°41'29.83"

The State of Texas is not entitled to any interest in such lands, minerals or resources, and said State, its privies, assigns, lessees and other persons claiming under it are hereby enjoined from interfering with the rights of the United States in such lands, minerals and resources.

2. As against the United States, with the exceptions provided by § 5 of the Submerged Lands Act, 43 U. S. C. § 1313, the State of Texas is entitled to--

(a) All the lands, minerals and other natural resources underlying the Gulf of Mexico, bounded on the south by the international boundary with Mexico and on the east by the western boundary of Louisiana and an extension thereof, that are within three geographical miles from the present or future coast line as referred to in § 2 (c) of the Submerged Lands Act, 43 U. S. C. § 1301 (c); and

(b) All the lands, minerals and other natural resources underlying the Gulf of Mexico, bounded on the south by the international boundary with Mexico and on the east by the western boundary of Louisiana and an extension thereof, less than three marine leagues gulfward from the present or future coast line as referred to in § 2 (c) of the Submerged Lands Act, 43 U. S. C. § 1301 (c), that are landward of the line described in paragraph 1 (b) hereof.

3. As used herein--

(a) "Geographical mile" means a distance of 1852 meters (6076.10333 . . . U. S. Survey Feet or approximately 6076.11549 International Feet);

(b) "Marine league" means a distance of three geographical miles;

(c) Plane coordinates refer to the Texas Coordinate Systems, South Zone or South Central Zone, as indicated.

(d) Latitudes and longitudes refer to the North American 1927 Datum.

(e) All distances referred to herein are expressed at grid scale, Texas Plane Coordinate Systems.

4. The Court retains jurisdiction to entertain such further proceedings, enter such orders, and issue such writs as may from time to time be deemed necessary or advisable to give proper force and effect to this decree, or to the decree of December 12, 1960, herein, or to effectuate the rights of the parties in the premises.

THE CHIEF JUSTICE and MR. JUSTICE MARSHALL took no part in the consideration or formulation of this Supplemental Decree.

"Marine or Maritime League: the twentieth part of the lineal extension of one degree of terrestrial meridian, which therefore amounts to 6,650 Castilian varas, or approximately 20,000 feet; and divided into three parts or miles, it serves as a unit for dead reckoning in all navigation measurements."

(Translation of definition in Gaspar y Roig's Dictionary of the Spanish Language, 1867)

"The Legal Spanish league, according to the Royal Order of 1801, contains twenty thousand feet, and twenty of this kind of league make a degree."

(Spanish Academy, Dictionary of the Castilian Language, 11th ed., 1869)

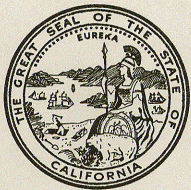
CURRENT MISCELLANEOUS INFORMATION

Definition of Marine or Maritime League

Filed - April 9, 1956

In sketch file and Boundary Line Cabinet

MMS shade = 54,684.931 = 10,356.99 miles st 4 1/2478



State of California
Department of Justice
George Deukmejian
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February 10, 1982

Mr. J. E. McCarty
Assistant Director
Surveying Division
Texas General Land Office

Austin, Texas

Dear Mr. McCarty:

For your information and possible use, enclosed are two reproductions of my article on the law of the coast in Texas published in the October 1981 issue of Shore and Beach, the journal of the American Shore and Beach Preservation Association, and a correction of a typographical error. As you can tell, I had to boil down a lot of material, but I hope that the article presents an accurate and fair summary of a complex subject.

Please note that I assert copyright protection for the article.

Once again, I wish to thank you for your assistance.

Best wishes.

Very truly yours,

PETER H. F. GRABER
Deputy Attorney General

PHFG:sfb
Enclosure

74079

The Law of the Coast in a Clamshell*

Part V: The Texas Approach

BY PETER H. F. GRABER
*Office of the Attorney General,
State of California
San Francisco, California*

AS THE ONLY STATE to have been an independent republic,¹ Texas occupies a unique niche in the pantheon of American states. And as the leading mineral-producing state,² with extensive offshore production of oil and gas, Texas is vitally important in today's energy-hungry nation.

Texans remain an independent breed. Witness their recent rejection of the Federal Government's carrot: funding under the Coastal Zone Management Act of 1972 (CZMA).³ The state's CZMA grant terminated April 30, 1981, when Texas elected not to seek federal approval of its proposed Texas Coastal Program.⁴

But, unlike some other states, such as California, Texas is eager to develop the petroleum resources off its coast.⁵ That coast already boasts one of the greatest concentrations of energy-related facilities in the nation: 39 petroleum refineries, 54 petrochemical installations, 73 gas-producing plants, and a large network of oil and gas pipelines.⁶ And it is Texas' clear policy to encourage additional energy facilities in its coastal zone⁷ in order to serve oil and gas production from both the state-owned tide and submerged lands and the federally managed Outer Continental Shelf.⁸

Nevertheless, Texas also has been a forerunner in encouraging and protecting public access to its seashore. In 1959, years before some other states even recognized that beach access was a problem, the Lone Star State's Legislature passed the Texas Open Beaches Act,⁹ emphasizing the state's public policy of encouraging recreational use of its beaches and tidal waters.

TITLE TO LANDS WITHIN THE COASTAL ZONE

Texas' coastal lands may be divided conveniently into uplands, tidelands and submerged lands.¹⁰

The 1980 State Hearing Draft of the proposed comprehensive Texas Coastal Program defined the state's coastal zone as including the first tier of counties along the coast as well as tide and submerged lands seaward to the 3-statute-mile limit of the U.S. territorial sea.¹¹

A. Uplands

Most of the state's coastal uplands are privately owned,¹² but some of these littoral lands are subject to public rights under Texas law.¹³

Due to the state's unique history, the original source of title to any given parcel of uplands may be either (1) an

early Spanish or Mexican grant, or (2) a conveyance from the Republic of Texas or the state.¹⁴ Unlike some other jurisdictions, the Federal Government never had title to any Texas uplands.

The source of upland title is important because it determines the seaward limit of the parcel. As will be explained later,¹⁵ there are two distinct tidal boundary rules in Texas, one for pre-1840 grants of littoral lands, and a second for later upland patents. Preexisting Spanish or Mexican private titles were protected under the 1848 Treaty of Guadalupe Hidalgo,¹⁶ ending the Mexican War.

B. Tidelands

Except for some tidelands granted to local entities, navigation districts and private parties,¹⁷ the state owns the lands lying between (1) either the line of mean high water or the line of mean higher high water¹⁸ and (2) the line of mean low water.

In addition, a 1977 Texas law provides that "[t]he water of the ordinary flow, underflow, and tides of every bay or arm of the Gulf of Mexico, . . . is the property of the state."¹⁹

The School Land Board,²⁰ with the assistance of the staff of the General Land Office,²¹ is charged with managing state-owned tidelands under the Texas Coastal Public Lands Management Act of 1973.²²

C. Submerged Lands

In 1836 the First Congress of the Republic of Texas fixed the seaward boundary of the new nation at 3 marine leagues from the Gulf of Mexico's shore.²³

Significantly, even though the Republic later adopted the common law, it expressly retained the Mexican, or civil-law, system with respect to the sovereign's reservation of minerals under all its lands.²⁴

When Texas joined the Union in 1845, the U.S. Congress passed, and the president approved, a joint resolu-

*This is the fifth in a series of articles presenting a capsule version of the contemporary law of the coast for non-attorneys. The article briefly summarizes aspects of the constitutional, statutory and case law of the State of Texas concerning the coastal zone, with emphasis on the state's rules of law for tidal boundary determination. Space limitations preclude an in-depth analysis of many of these topics or any discussion of related matters. The views expressed in this and the other articles in the series do not necessarily reflect those of the Office of the Attorney General, State of California, or of any other agency of the State of California. © 1981 by Peter H. F. Graber. The author also asserts copyright protection for the first four articles in the series, which were published in Vol. 48, No. 4, October 1980, pp. 14-20; Vol. 49, No. 1, January 1981, pp. 16-30; Vol. 49, No. 2, April 1981, pp. 20-25; and Vol. 49, No. 3, July 1981, pp. 13-20.

tion²⁶ accepting the fledgling state's new Constitution, which provided that

"[the] rights of property. . . which have been acquired under the [prior] Constitution and laws of the Republic shall not be divested . . . but . . . shall remain precisely in the situation which they were before the adoption of this Constitution."²⁸

In its post-World War II legal battle with the United States over submerged lands, Texas argued, unsuccessfully, that Congress' action had the effect of ratifying Texas' decision, reflected in its 1845 Constitution, to continue reserving minerals under all its lands, including submerged lands in the Gulf.²⁷

The 1848 Treaty of Guadalupe Hidalgo between the United States and Mexico expressly recognized Texas' 3-league Gulfward boundary.²⁸ The limit was further confirmed by the Gadsen Treaty, signed in 1853.²⁹

Price Daniel, then Texas' attorney general, wrote in 1949:

"Texas' 3-league boundary in the Gulf and its ownership of the lands and minerals within such boundaries have never been challenged until the recent claim of the Federal Government against all the coastal states."³⁰

Daniel was referring to a series of lawsuits known as the *Submerged Lands Cases*,³¹ one of which involved Texas.³²

In 1950 the U.S. Supreme Court said the Federal Government has paramount power over these submerged lands, including dominion over such natural resources as oil. However, Congress then passed the Submerged Lands Act of 1953,³³ nullifying the court's ruling and confirming Texas' title to the 3-league-wide strip in the Gulf of Mexico. In 1960 the U.S. Supreme Court expressly

"recognized that Texas has jurisdiction over submerged land to a distance of three marine leagues, or approximately 10.35 statute miles. . . ."³⁴

DETERMINATION OF TIDAL BOUNDARIES

A. Upland/Tideland Boundary

Texas has two distinct legal boundaries between privately owned uplands and sovereign lands beneath tidal waters: (1) the *line of mean higher high water* [tide] when the littoral parcel's title stems from a Spanish or Mexican grant or a conveyance by the Republic of Texas before January 20, 1840,³⁵ and (2) the *line of mean high water* [tide] if the source of title to the uplands was a post-1840 grant by the Republic or the State of Texas.³⁶ Consequently, in general,³⁷ the base instrument in a chain of title to littoral lands determines whether the upland/tideland boundary is ascertained under the Spanish/Mexican version of the civil-law rule³⁸ or under the common-law test.³⁹

Unlike Florida, where upland/tideland boundary questions were recently resolved by new constitutional and statutory provisions,⁴⁰ Texas' courts settled these increasingly important issues.

In the 1958 case of *Luttes v. State*⁴¹ the state's Supreme Court held that pre-1840 Spanish, Mexican and Republic littoral grants extend only to the line of mean *higher* high water [tide] instead of to the more seaward line of mean high water [tide]. Two years earlier, in *Rudder v. Ponder*,⁴² the Texas court had embraced the U.S. Su-

preme Court's landmark 1935 decision in *Borax, Ltd. v. City of Los Angeles*,⁴³ equating the line of mean high water [tide] with the common-law term "ordinary high-water mark."

To the credit of the Texas Supreme Court, both the *Luttes* and *Rudder* decisions clarify a previously murky area of the state's coastal law by applying modern scientific and technical data to set forth workable, precise definitions of both the Spanish/Mexican and common-law tidal boundary rules.

1. *The Spanish/Mexican Rule*: Before *Luttes*, "[e]xactly what the appropriate civil law rule should be became a subject for much discussion by Texas courts."⁴⁴ For example, an 1859 state Supreme Court case said that under the civil law, "the shore [extends] to the line of highest tide in winter."⁴⁵

In 1944, in *State v. Balli*,⁴⁶ the Texas Supreme Court "for the first time" faced "the question of the seaward boundary of a Mexican or Spanish grant."⁴⁷ The court held the line of *mean high tide* was the boundary, rejecting the state's contention that the shoreline should be based on the *highest tide in winter*. However, *Balli* is "limited strictly to the particular case and therefore to Padre Island, where the grant was located."⁴⁸

Later, the U.S. Fifth Circuit Court of Appeals, applying Texas law, considered the seaward extent of Spanish and Mexican grants in *Humble Oil & Ref. Co. v. Sun Oil Co.*⁴⁹ But the court avoided deciding the civil-law boundary of a large mud flat in Laguna Madre by affirming the trial court's holding that the mud flat had accreted to a state-owned island rather than to the mainland grants leased by Humble.

In *Luttes*, which involved an 1829 upland grant adjoining Laguna Madre by the Mexican State of Tamaulipas, the Texas Supreme Court elected to apply the Spanish and Mexican seashore boundary law set forth in *Las Siete Partidas*,⁵⁰ instead of that defined in the early Roman scholar Justinian's *Institutes*.⁵¹ The court, utilizing modern scientific knowledge about tidal epochs, held in a 1958 decision that "the applicable rule of the Mexican (Spanish) law is that of the average of *highest* daily water computed over or a corrected to the regular tidal cycle of 18.6 years."⁵² However, the court then ambiguously said: "This means in substance mean high water."⁵³

Later, the court conceded that this part of its original opinion had "been criticized, and no doubt justly so, for some confusion as to whether the landward line of the shore as regards abutting Spanish or Mexican grants is that of mean high tide or mean *higher* high tide, since along the Texas coast there are generally two daily high tides and two daily low tides."⁵⁴

The court, recognizing the use of a mean-higher-high-water datum instead of a mean-high-water datum "conceivably could, in a given case, be substantial from the standpoint of acreage involved," clarified its earlier decision:

"... It was our intention to hold, and we do hold, that the line under the Spanish (Mexican) law is that of *mean higher high tide*, as distinguished from the *mean high tide* of the Anglo-American law."⁵⁵

In general, there is actually only a small difference between the datums of mean high water and mean higher high water along much of the Texas coast, a

point emphasized by some legal writers.⁶⁶ Nevertheless, *Luttes* is significant because it "established a littoral boundary for Spanish [and other pre-1840] grants in Texas which is *practical, certain and stable*. Consequently, it is now possible for two surveyors, each working independently, to locate a particular littoral boundary in substantially the same position."⁶⁷

2. *The Common-Law Rule*: As opposed to the long uncertainty over the seaward boundary of Spanish/Mexican grants,

"In Texas there does not seem to have been any real controversy over locating the boundary of common law grants. The [state's] General Land Office and the Attorney General's Office traditionally accepted the *line of mean high tide* as being applicable to all Texas common law surveys . . . [T]he Supreme Court of the United States put all problems concerning the common law to rest in [the *Borax* case in 1935] . . ."⁶⁸

The principles of the scientific and practical *Borax* rule were followed in *Rudder v. Ponder*,⁶⁹ decided by the Texas Supreme Court in 1956. In *Rudder*, claimant's predecessors had been issued patents to land adjoining Copano Bay on the Gulf Coast by the Republic in 1841. Consequently, the court applied the common-law upland/tideland boundary, which it interpreted to be "the mean high tide [line] of the sea waters," noting that this line "gives these [patent] holders more land than they would have received if the civil law shore line applied."⁷⁰

Therefore, in Texas the mean of *all* high waters over a 19-year tidal epoch is used in determining the seaward limit of littoral lands originally granted *after* January 20, 1840.

B. Legal Effect of Physical Changes in the Location of the Shoreline

Texas law, in general, follows the usual rule that the legal boundary between uplands and tidelands shifts as a consequence of those gradual, imperceptible physical changes in the shoreline known as accretion and erosion.⁶¹

But the Texas courts have apparently qualified this general rule by holding that private littoral owners are entitled to the accreted land only when it is created *entirely* by *natural* means.⁶² This "artificial accretion" qualification appears to be somewhat similar to that in California.⁶³ However, in the landmark *Luttes* decision, the court failed to decide the matter, stating:

"The law question of whether accretions resulting from human agency may or may not belong to the abutting landowner is . . . not in the case, and our original opinion is . . . to be construed as not ruling on that point."⁶⁴

Earlier, in 1943, the Texas Supreme Court had held that when accretion resulted from artificial additions by a private upland owner, the state would not lose title to the newly exposed land that formerly had been beneath tidal waters.⁶⁵ In this case, an "oysterhouse was built on a narrow strip of land, and a pier extended from it into the water. Shells thrown from the pier caused the current of the bay to deposit sand gradually so that the strip . . . eventually became . . . dry land."⁶⁶

Another question faces Texas courts: What is the legal effect of the point of beginning of the accretion in

determining who is entitled to the accreted land? A 1955 decision indicated that if the process starts at an island or creates a high point in the sea bottom and then moves toward the older upland or mainland, the new dry land belongs to the state.⁶⁷ But one critic asserts that "[a]ll accretion necessarily builds up from the bottom [*sic*] of the sea," and "that a rule to the effect that a landowner is not entitled to [such] accretion . . . does not take into account [that] rather fundamental fact."⁶⁸

Erosion is widespread in Texas. The 1980 State Hearing Draft of the proposed but rejected Texas Coastal Program concluded:

"Long-term erosion has subjected 13 percent of the Texas Gulf shoreline to severe erosion and shoreline retreat and 42 percent to moderate long-term erosion and shoreline retreat. Continuing erosion along the Gulf coast intensifies vulnerability to storm waves and hurricane flooding, . . .

" . . . Of the 1100 miles of bay and estuarine shoreline in Texas, 37 percent is undergoing varying rates of shoreline erosion. Generally, these rates appear to be lower, and more localized, than on the Gulf shoreline. . . ."⁶⁹

To protect life and property against the serious risks of such erosion, especially when coupled with storm waves and hurricanes, the U.S. Army Corps of Engineers and others have constructed seawalls, bulkheads and revetments. In Galveston, for instance, a concrete curved-faced seawall (Fig. 1) helps safeguard the city from the inevitable hurricanes. In the wake of the 1900 Galveston hurricane, which virtually leveled the city, "[a]n estimated 6000 to 8000 people were dead or missing and North America had experienced its worst recorded natural disaster. Galveston rebuilt and protected itself with its famous seawall. . . . In 1915 a hurricane again struck Galveston. . . . But this time only 12 died."⁷⁰

The state legislative response to Texas' erosion problem has ranged from enacting laws providing for Gulf shore seawall construction by cities and counties⁷¹ and requiring the School Land Board's approval of projects that could contribute to erosion on state-owned lands,⁷² to appropriating funds for "the historical monitoring of the Texas Gulf shoreline to measure the rate of erosion."⁷³

Subsidence is another critical physical hazard along the Texas coast,⁷⁴ although a recent state report said that "the trend toward increased subsidence rates has been reversed."⁷⁵ Texas law has been slow to respond to title and legal boundary problems resulting from subsidence.

For example, in a case involving ownership of 3,353 acres of land submerged beneath the Houston Ship Channel primarily because of subsidence, the intermediate appellate court held that the private littoral owner was not deprived of "title to the land as long as the boundaries can be reasonably identified."⁷⁶ But the Texas Supreme Court appeared to limit that decision, the writer of the opinion stating that the rule would *not* apply to a subsided area within tidewater limits.⁷⁷ One legal commentator has sharply criticized this limitation, asserting that the condition "goes a long way toward rendering the announced principal [*sic*] a nullity."⁷⁸

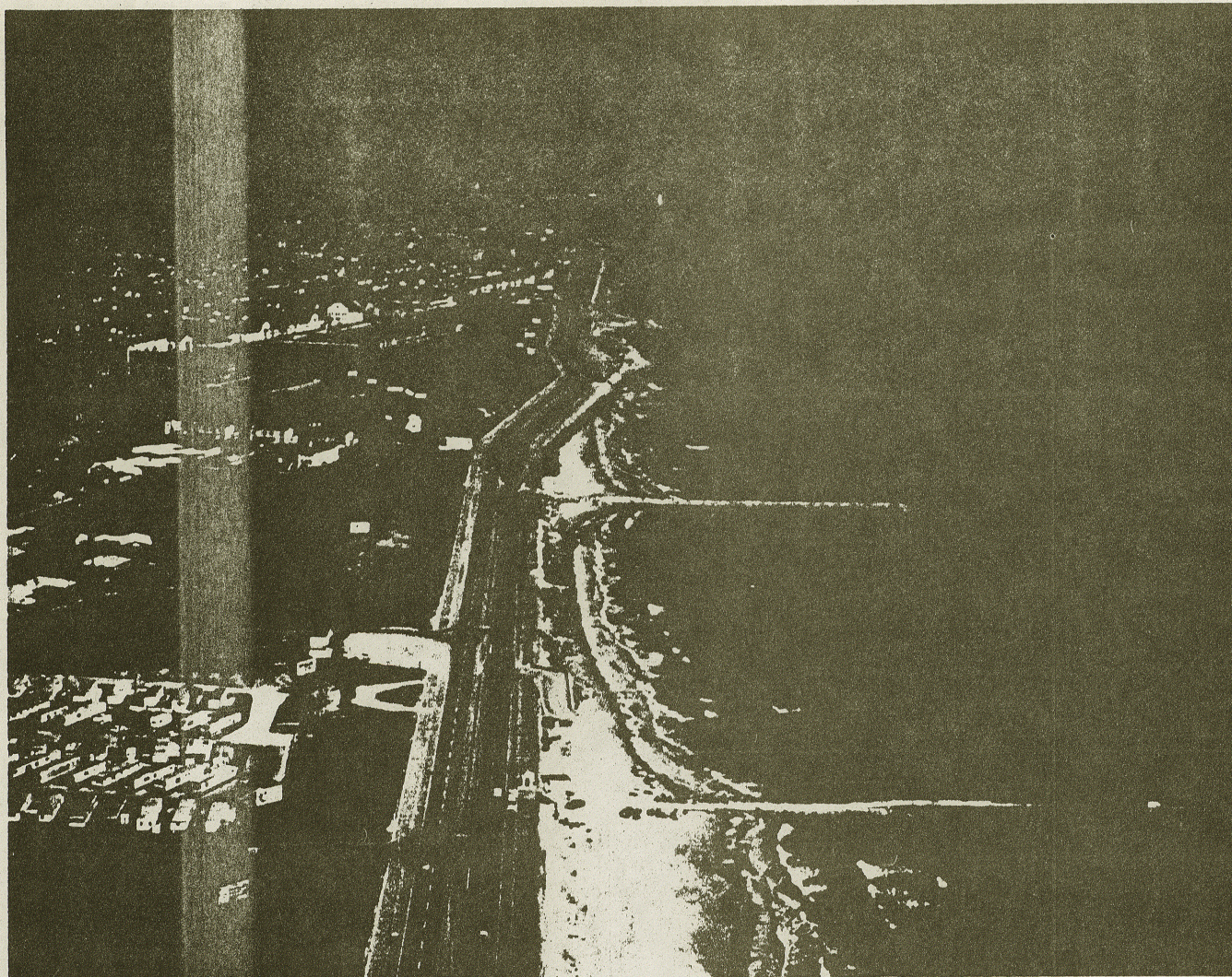


Fig. 1. Aerial view of Galveston Seawall and groin field, looking northeast. The seawall was constructed by the Corps of Engineers at various time intervals between 1902 and 1963.

TEXAS' PUBLIC TRUST DOCTRINE

The public trust doctrine—a common-law principle with antecedents in the Roman civil law⁷⁹—is recognized and applied in Texas, although few appellate cases specifically discuss it in any detail.

With Texas' dual heritage of both the civil law (Spanish/Mexican and pre-1840 Republic) and the common law (post-1840), it is not surprising that an 1859 Texas Supreme Court decision embraced the public trust concept. Distinguishing between coastal land and the rest of the state's public domain, the court stated:

"From the very nature of the property, which the government possesses in its navigable water, and bays, and bayshores, it can be ordinarily best appropriated, by devoting it to public use; and by not granting away exclusive right to it to any one."⁸⁰

Later cases reiterated the state's public policy that lands beneath tidal waters are held in trust for the use and benefit of all the public.⁸¹

The proposed but rejected Texas Coastal Program would have recognized the compatibility of a wide spectrum of public uses of the lands and waters within the coastal zone. In the 1980 State Hearing Draft of the proposed plan it was implicit that the public trust doctrine

is flexible enough for the coastal zone to provide "recreational areas . . . [a]nd access to bay and Gulf waters" and to serve as "important wildlife habitats" while also meeting "the needs of navigation and industry, including commercial . . . fisheries, . . ."⁸²

Although the proposed Texas Coastal Program has been turned down, the state's Legislature has enacted various statutes based on the public trust doctrine.⁸³

PUBLIC ACCESS RIGHTS

Texas legislators and courts have vigorously protected the public's rights of access to the state's sandy beaches and to tidal waters of the Gulf of Mexico, bays and estuaries.

In 1959 the Legislature enacted the Texas Open Beaches Act,⁸⁴ characterized as "the fundamental Legislative statement of the rights of the public on the beaches of Texas",⁸⁵ but criticized, "[i]n terms of pure substantive law," as having created "no rights in the public which did not previously exist under the common law."⁸⁶

Some legal commentators conclude this act was passed because the 1958 *Luttes* Spanish/Mexican tidal

boundary decision⁸⁷ had precipitated the erection of fences, barricades, wooden pilings and other barriers across many of the state's beaches.⁸⁸ In the act, the Legislature ratified the application to beach access disputes of various legal theories that had evolved under the common law: prescription, dedication and custom.⁸⁹ More significantly, the act empowers the Texas attorney general and other public attorneys to file lawsuits protecting these public rights and seeking the removal of obstructions or barriers.⁹⁰

The act clearly declares the public policy of Texas to be

"... that the public . . . shall have the free and unrestricted right of ingress and egress to and from the state-owned beaches bordering on the seaward shore of the Gulf of Mexico, or if the public has acquired a right of use or easement to or over an area by prescription, dedication, or has retained a right by virtue of continuous right in the public, the public shall have the free and unrestricted right of ingress and egress to the larger area extending from the line of mean low tide to the line of vegetation bordering on the Gulf of Mexico."⁹¹

Another provision⁹² states that in lawsuits under this act there are *prima facie* legal presumptions that, "in the area [landward] from mean low tide to the line of vegetation,"⁹³ the private littoral owner's "title . . . does not include the right to prevent the public from using the area for ingress and egress to the sea," and, "subject to proof of easement," there is "a prescriptive right or [public access] easement. . . ." As of this writing, no reported Texas Supreme Court case has squarely decided whether this provision is constitutional, but an intermediate appellate court has ruled the act is constitutional.⁹⁴

not be construed as affecting in any way the title of the owners of land adjacent to any state-owned beach⁹⁵ bordering on the seaward shore of the Gulf of Mexico. . . ." The act does not apply to such protective structures as groins, seawalls and jetties erected or maintained by federal or state agencies.⁹⁷

Texas appellate courts' recent decisions on beach access have favored the public over private littoral owners. In the 1964 case of *Seaway Co. v. Attorney General*,⁹⁸ the Houston Court of Civil Appeals held that there was sufficient evidence of nonpermissive public use of the West Beach of Galveston Island over a 200-year period to establish an implied dedication to the public by Seaway's predecessors in interest.⁹⁹

In 1973 the same court approved a temporary injunction against a campground franchise holder that had built a fence obstructing public access to a beach on San Luis Island.¹⁰⁰ One commentator believes this decision "may prefigure a rather liberal judicial construction of just which waters constitute the Gulf of Mexico for purposes of" applying the Open Beaches Act.¹⁰¹

PRIVATE LITTORAL RIGHTS

In general, Texas' private upland owners have rights of access to adjacent lands underlying the Gulf of Mexico and other tidal waters,¹⁰² subject to the public rights protected under the Open Beaches Act¹⁰³ and the provisions of the Coastal Public Lands Management Act of 1973.¹⁰⁴

The Open Beaches Act does *not* apply to (1) beaches not bordering on the open waters of the Gulf, (2) remote beaches on islands or peninsulas not accessible by public road or ferry, and (3) beaches over which no prescriptive or presumptive right has been established.¹⁰⁵ However, one legal commentator claims that the act "has created numerous problems for the littoral landowners and land developers" of uplands subject to the law.¹⁰⁶ Title policies for these upland owners are alleged to specifically exclude insurance against whatever rights the public may have under the act.¹⁰⁷

The Coastal Public Lands Management Act of 1973 contains some language similar to that in the Open Beaches Act with respect to public rights.¹⁰⁸ To date, the appellate courts have not determined the Coastal Public Lands Management Act's impact on littoral owners' rights.

Private upland owners appear to have certain rights to build wharves and piers extending into tidal waters,¹⁰⁹ but the question of the state's power to regulate these structures remains clouded.¹¹⁰ Indeed, although "[p]rivate use of coastal land has increased considerably . . .," uncertainty surrounds such questions as "the extent to which a landowner may use and develop the public beach for his private purposes [and] . . . the littoral rights of an owner of coastal property to use the State-owned land under tidal waters adjacent to his property."¹¹¹

LEASING AND REGULATION OF COASTAL ZONE LANDS AND WATERS

A. Leasing

Texas law empowers the School Land Board to lease "the portion of the Gulf of Mexico within the jurisdiction of the state" and "islands, saltwater lakes, bays, inlets, marshes, and reefs owned by the state within tide-water limits" for oil and gas production.¹¹² The board may also lease these lands for the production of coal, lignite, sulphur, salt and potash.¹¹³

B. Regulatory Functions

Numerous statutes embody a wide variety of regulatory schemes controlling and limiting the use of lands and waters within Texas' coastal zone. More than a dozen independent state agencies manage coastal resources.¹¹⁴ Two of the management and regulatory functions of these agencies are particularly noteworthy.

The Coastal Public Lands Management Act of 1973¹¹⁵ contains much of the law relating to the state's coastal public land management. The act articulates public policy goals (e.g., preservation of natural resources, prevention of unauthorized use of coastal public lands).¹¹⁶ Under the act, however, the School Land Board, with the assistance of the General Land Office's staff, "may issue permits authorizing limited continued use of previously unauthorized structures on coastal public land" under certain circumstances.¹¹⁷

Dune preservation along much of the Texas coast is the objective of one key regulatory package. Finding that sand dunes "provide a protective barrier for adja-

cent land and inland water and land against the action of sand, wind, and water",¹¹⁸ the Legislature has authorized the commissioners courts in certain Gulf counties to "establish a *dune protection line* on the [barrier] island or peninsula for the purpose of preserving sand dunes that offer a defense against storm water and erosion . . ."¹¹⁹ Unless a permit is obtained, the damaging, destruction or removal of a sand dune on a barrier island or peninsula seaward of an established dune protection line is prohibited.¹²⁰

ACKNOWLEDGMENTS

The author is grateful to William Mark Thompson, legal counsel, Natural Resources Division, Texas Energy and Natural Resources Advisory Council, State of Texas, for providing some of the source materials cited in this article. The author also appreciates the special assistance of J. E. McCarty, assistant director, Surveying Division, General Land Office, State of Texas.

REFERENCES

- History has helped shape the law of the coast in Texas, perhaps more than in most other states. After being colonists under the Mexican government that had succeeded earlier French and Spanish rulers, Texans revolted in 1835. In 1836 the insurgents formally declared their independence and ratified a Constitution for the newly proclaimed Republic of Texas. See 3 Tex. Const. Ann. 503-537 (Vernon 1955). The independent Republic followed the Spanish/Mexican version of the civil law until January 20, 1840, when the English common law was generally accepted as the rule of decision. 2 Laws, Rep. Tex. 177 (1840). On December 29, 1845, Texas, relinquishing its full independence, was annexed to the United States. Joint Resolution No. 1, 9 Stat. 108. But even after entering the Union, Texas continued to adhere to the Mexican system of mineral reservations in the sovereign. Legal principles from both the civil law and the common law are melded into Texas' current rules controlling tidal boundary determination, public access to the sea, and use of coastal lands and waters.
- State Hearing Draft, Texas Coastal Program* [hereinafter cited as SHD], 1, II-16-18, III-69-71, V-22-24 (September 1980). Much of Texas' oil and gas exploration and production takes place in the tide and submerged lands lying off its coast.
- 86 Stat. 1280, 16 U.S.C. § 1451 *et seq.* For a brief discussion of CZMA, see *Shore and Beach*, Vol. 49, No. 1, January 1981, p. 18. CZMA was amended October 17, 1980, by the Coastal Zone Management Improvement Act of 1980, Pub. L. No. 96-464, 94 Stat. 2060 (1980).
- Although the proposed Texas Coastal Program, as set forth in the well-prepared September 1980 State Hearing Draft (SHD, *supra*, note 2), will not be implemented, "Texas will continue to manage its coast in accordance with the responsibilities of the various state agencies having concerns in this area." Letter dated July 1, 1981, from William Mark Thompson, legal counsel, Natural Resources Division, Texas Energy and Natural Resources Advisory Council, to the author.
- "The Texas coast extends 373 miles along the Gulf of Mexico from Louisiana to the border of Mexico. The shoreline continues 2,500 miles along islands, peninsulas, marshes, bays and estuaries." SHD, *supra*, note 2, at 1.
- SHD, *supra*, note 2, at V-23.
- In its proposed Texas Coastal Program, the state indicated its willingness to "refrain from placing additional special restrictions on energy facilities proposed for the coastal area" and "to encourage and accommodate installations and facilities related to exploration, development and production of energy resources; including offshore oil and gas, . . ." SHD, *supra*, note 2, at V-23.
- Under the Submerged Lands Act, 67 Stat. 29, 43 U.S.C. § 1301 *et seq.*, the State of Texas has title to lands, including mineral deposits therein, beneath navigable waters seaward to 3 marine leagues (9 geographical miles) in the Gulf of Mexico; under the Outer Continental Shelf Lands (OCS) Act, 67 Stat. 462, 43 U.S.C. § 1331 *et seq.*, the United States may enter into mineral leases of OCS areas beyond the 3-marine-league limit. Texas has managed mineral interests in lands beneath its tidal water since 1913. SHD, *supra*, note 2, at 1.
- Tex. Nat. Resources Code § 61.011 *et seq.* (formerly Tex. Rev. Civ. Stat. art. 5415d, §§ 1-6).
- This classification is used for convenience and consistency with other articles in this series. However, the term *submerged lands* is often used in Texas statutes and case law and by Texas legal writers to mean both those two classes of land defined in this series as tidelands (lands lying between the lines of mean high and mean low water) and submerged lands (lands lying seaward of the line of mean low water).
- SHD, *supra*, note 2, at V-4. Under the federal Coastal Zone Management Act of 1972 (CZMA), 86 Stat. 1280, 16 U.S.C. § 1453(a), the seaward limit of the coastal zone for CZMA funding purposes is not necessarily related to a state's legal seaward boundary. See note 32, *infra*, and accompanying text. The State of Texas is "no longer attempting to implement the proposals contained in the state hearing draft, (and) the federal grant for development of a Texas coastal program has been terminated." Letter dated July 1, 1981, *supra*, note 4.
- Less than one-quarter, or about 100 miles, of Texas' Gulf Coast beach land is set aside as public park land; the rest is in private ownership. Comment, *The Texas Open Beaches Act: Public Rights to Beach Access*, 28 Baylor L. Rev. 383, 384 n. 4 (1976).
- See note 84 *et seq.*, *infra*, and accompanying text regarding the Texas Open Beaches Act.
- About one-half of Texas' coastal uplands was patented into private ownership before 1840, when the common law was adopted as the rule of decision for most purposes in Texas. W. Winters, *The Shoreline for Spanish and Mexican Grants in Texas*, 38 Tex. L. Rev. 523, 525 (1960). See also *Footprints on the Sands of Time: An Evaluation of the Texas Seashore*, Report of the Interim Beach Study Committee of the Texas Senate and House of Representatives [hereinafter cited as *Footprints*], 21 (2d printing 1970).
- See "Determination of Tidal Boundaries," *infra*.
- 9 Stat. 922, T.S. No. 207. This is similar to the effect of the treaty in California. For a brief discussion of California's Spanish and Mexican rancho grants and the issuance of confirmatory patents, see *Shore and Beach*, Vol. 49, No. 2, April 1981, p. 20.
- The State of Texas, as successor to the Kingdom of Spain, the Republic of Mexico and the Republic of Texas, is the owner of most of the tidelands within its borders. *Rosborough v. Picton*, 34 S.W. 791, 792 (Tex. Civ. App. 1896, *no writ*). When admitted to the Union, Texas retained "... all the vacant and unappropriated public lands lying within its limits. . . ." 2 Gammel, *Laws of Texas* 1225 (1898); 1 Sayles, *Early Laws of Texas* 568 (1888); Joint Resolution No. 8, March 1, 1845, 5 Stat. 797. Although Texas had been an independent nation, the Joint Resolution for the Admission of Texas into the Union expressly provided that the new state was admitted "on an equal footing with the original States in all respects whatever." Joint Resolution No. 1, Dec. 29, 1845, 9 Stat. 108. Arguably, this provides Texas with another, though seemingly unnecessary, basis for asserting title to tidelands. See P. Daniel, *Texas' Title to Submerged Lands*, 1 Baylor L. Rev. 237, 241-247 (1949). (For a brief discussion of the equal-footing doctrine, see *Shore and Beach*, Vol. 48, No. 4, October 1980, pp. 15-16.) However, under a state law, Texas' title to certain tidelands was conveyed to some municipalities with more than 40,000 residents in 1920. *Maufray v. State*, 142 Tex. 559, 180 S.W. 2d 144 (1944); Tex. Rev. Civ. Stat. art. 7467(a) (1925). Another law enables cities bordering on the Gulf of Mexico and having a population of more than 60,000 to use and occupy tidelands for park purposes. Tex. Rev. Civ. Stat. art. 6081g. In addition, special laws have relinquished the state's title to some local entities, e.g., Tex. Rev. Civ. Stat. art. 5421j (filled-in land in Corpus Christi). Formerly, navigation districts could purchase tidelands from the state and then resell them to private parties. See *Footprints*, *supra*, note 14, at 43. Other tidelands have been conveyed into private ownership by the Texas Legislature, but until early in this century the executive branch of both the Republic and the state did not grant such lands although the Texas General Land Office had begun disposing of other public lands in 1837. *Footprints*, *supra*, note 14, at 7. Later, the land commissioner was authorized

- "to sell . . . coastal lands to private interests for specific purposes." *Id.* at 9.
18. See "Determination of Tidal Boundaries," *infra*.
 19. Tex. Water Code § 11.021(a) (1980 supp.).
 20. Tex. Nat. Resources Code §§ 32.001, 32.011 *et seq.*, 32.061, 32.062, 33.011, 33.051, 33.052 *et seq.* The commissioner of the General Land Office is chairman of the School Land Board, and the governor and the attorney general each appoint one member to the board. Tex. Nat. Resources Code §§ 32.012(a), (b), 32.014.
 21. Tex. Nat. Resources Code §§ 32.001, 33.012.
 22. Tex. Nat. Resources Code § 33.001 *et seq.*; SHD, *supra*, note 2, at 1-8-9.
 23. 1 Laws, Rep. Tex. 133 (1838).
 24. Daniel, *supra*, note 17, 1 Baylor L. Rev. at 243.
 25. Joint Resolution No. 1, Dec. 29, 1845, 9 Stat. 108. See also Daniel, *supra*, note 17, 1 Baylor L. Rev. at 245.
 26. Tex. 1845 Const., art. VII, § 20.
 27. However, the U.S. Supreme Court ruled in 1950 that under the "equal-footing clause" in the Dec. 29, 1845, Joint Resolution, *supra*, notes 1 and 17, Texas had relinquished to the United States the new state's mineral rights in submerged lands. See case cited in note 32, *infra*, and accompanying text.
 28. 9 Stat. 922, T.S. No. 207.
 29. 10 Stat. 1031, T.S. No. 208.
 30. Daniel, *supra*, note 17, 1 Baylor L. Rev. at 246.
 31. For a brief discussion of these cases, see *Shore and Beach*, Vol. 49, No. 1, January 1981, p. 17.
 32. *United States v. Texas*, 339 U.S. 707, 712-720 (1950).
 33. 67 Stat. 29, 43 U.S.C. § 1301 *et seq.* The act's constitutionality was subsequently upheld in *Alabama v. Texas*, 347 U.S. 272 (1954).
 34. SHD, *supra*, note 2, at V-4. See *United States v. Louisiana*, 364 U.S. 502 (1960). See also Tex. Nat. Resources Code § 11.012.
 35. *Luttes v. State*, 159 Tex. 500, 324 S.W.2d 167 (1958), *aff'd on rehearing*, 328 S.W.2d 920 (Tex.Civ.App.—Waco 1959). For detailed discussions of *Luttes*, see, e.g., *Footprints*, *supra*, note 14, at 22-23; C. Dinkins, *Texas Seashore Boundary Law: The Effect of Natural and Artificial Modifications*, 10 Houston L. Rev. 43, 44-45, 48-49 (1972); K. Roberts, *The Luttes Case—Locating the Boundary of the Seashore*, 12 Baylor L. Rev. 141-143, 146, 151-152, 156-158, 161-168 (1960); W. Winters, Jr., *The Shoreline for Spanish and Mexican Grants in Texas*, 38 Tex. L. Rev. 523, 525, 527-531, 534-537 (1960); Recent Decisions, *Navigable Waters — Most Reliable System in Shoreline Determination Is the Use of 'Mean High Tide'*, 5 S. Tex. L.J. 213-214 (1960).
 36. *Rudder v. Ponder*, 156 Tex. 185, 293 S.W.2d 736 (1956). For detailed discussions of *Rudder* and other Texas case law concerning the seaward boundary of post-1840 upland grants, see, e.g., *Footprints*, *supra*, note 14, at 22-23; Dinkins, *supra*, note 35, 10 Houston L. Rev. at 43-46; Roberts, *supra*, note 35, 12 Baylor L. Rev. at 143, 153-156, 158-159, 163; Winters, *supra*, note 35, 38 Tex. L. Rev. at 525, 527; Recent Decisions, *supra*, note 35, 5 S. Tex. L.J. at 213.
 37. Before the 1958 *Luttes* decision, the Texas Supreme Court had held that private ownership of Padre Island, even though derived from a Spanish grant, was bounded by the line of "mean high tide." *State v. Balli*, 144 Tex. 195, 190 S.W.2d 71 (1944), *cert. denied*, 328 U.S. 852 (1946). Because of *Balli* and other pre-*Luttes* cases, one prominent legal writer states: "The Texas coast line as such should be distinguished from the Gulf of Mexico beaches. . . . Litigation previously established the line of mean high tide for Padre Island, a Spanish land grant. Thus, treating the boundary [sic] of Padre Island as being previously established, it appears that no more than approximately 20% of the Gulf beaches are bordered by Mexican and Spanish grants affected by the *Luttes* decision." Roberts, *supra*, note 35, 12 Baylor L. Rev. at 141 n.2. But the same author points out that the court in the *Luttes* opinion "stated that while the *Balli* case was controlling for Padre Island, it could not be controlling on the general boundary question since the proper location of the boundary line under Spanish law was not the real issue before the court in the *Balli* case." *Id.* at 160. Another authority believes that *Luttes* was the first Texas case to hold directly and expressly "that the boundaries of tracts granted prior to the Republic [or, more precisely, before January 20, 1840, when Texas adopted the common law] were determined by civil law." Dinkins, *supra*, note 35, 10 Houston L. Rev. at 44 (note omitted; bracketed matter added). In any event, the effect of *Luttes* is widespread, ranging from Roberts' estimate of 20% of the Gulf shore to an assertion that "[a]pproximately one-half of the Texas littoral was titled" before the 1840 adoption of the common law, and thus presumably governed by civil-law principles. Winters, *supra*, note 35, 38 Tex. L. Rev. at 525, 528-530.
 38. For a brief discussion of the civil-law rule, see *Shore and Beach*, Vol. 48, No. 4, October 1980, p. 17.
 39. For a brief discussion of the English common-law rule, see *Shore and Beach*, Vol. 48, No. 4, October 1980, p. 17.
 40. For an explanation of the relevant Florida Constitution and Coastal Mapping Act language, see *Shore and Beach*, Vol. 49, No. 3, July 1981, pp. 13-14, and accompanying references.
 41. 159 Tex. 500, 324 S.W.2d 167 (1958), *aff'd on rehearing*, 328 S.W.2d 920 (Tex.Civ.App.—Waco 1959).
 42. 156 Tex. 185, 293 S.W. 2d 736 (1956).
 43. 296 U.S. 10 (1935). For a brief discussion of *Borax*, see *Shore and Beach*, Vol. 48, No. 4, October 1980, pp. 17-18.
 44. *Footprints*, *supra*, note 14, at 21.
 45. *City of Galveston v. Menard*, 23 Tex. 349, 398 (1859). This language was unnecessary to the decision (*i.e.*, dictum), but "became recognized as the rule in Texas, and . . . was repeated — again as dicta — in a number of cases." *Footprints*, *supra*, note 14, at 22.
 46. 144 Tex. 195, 190 S.W.2d 71 (1944), *cert. denied*, 328 U.S. 852 (1946).
 47. *Footprints*, *supra*, note 14, at 22.
 48. *Ibid.* See also legal commentators' views on *Balli*, *supra*, note 37.
 49. 190 F.2d 191 (5th Cir. 1951), *cert. denied*, 342 U.S. 920 (1952).
 50. The *Partidas*, compiled in Spain circa 1263, "acquired the force of law . . . at Toledo in A.D. 1505. . . . [T]he *Partidas*, except as modified by the King, was the basic law of Spain and Mexico" until adoption of the 19th-century civil codes. Winters, *supra*, note 35, 38 Tex. L. Rev. at 528 n. 37. A scholar translates the definition of the seashore in Partida 3, Title 28, Law 4 (López ed.) as "all that space . . . covered by the water of the sea at its highest tide during the entire year, be it in winter or in summer." *Id.* at 528 (emphasis in original). See also other translations cited at 528 n. 40.
 51. One case translates the ancient Justinian definition as follows: " . . . the shore of the sea in the fourth quarter or winter is where the highest wave extends." Winters, *supra*, note 35, 38 Tex. L. Rev. at 528 n. 34.
 52. 159 Tex. at 531, 324 S.W.2d at 187 (emphasis added).
 53. *Ibid.*
 54. 159 Tex. at 537, 324 S.W.2d at 191 (emphasis added).
 55. *Ibid.* (emphasis added).
 56. See, e.g., *Footprints*, *supra*, note 14, at 22-23 (*Luttes* "virtually eliminated the distinction between the common law rule . . . and the Mexican or Spanish rule," because the "vertical difference between the [datums of mean higher high water and mean high water] along the Texas coast varies from zero to 0.1 foot"); Roberts, *supra*, note 35, 12 Baylor L. Rev. at 151 ("The difference between [the datums of] mean high tide and mean higher high tide in Texas is generally small, and in many inland bays they are identical"); Winters, *supra*, note 35, 38 Tex. L. Rev. at 530.
 57. Winters, *supra*, note 35, 38 Tex. L. Rev. at 530 (emphasis added).
 58. *Footprints*, *supra*, note 14, at 22 (emphasis added). See also Roberts, *supra*, note 35, 12 Baylor L. Rev. at 156.
 59. 156 Tex. 185, 293 S.W.2d 736 (1956). The court, however, did not expressly cite the *Borax* decision in its majority opinion, although *Borax* was referred to in the dissenting opinion.
 60. 156 Tex. at 193, 293 S.W.2d at 741.
 61. See *Footprints*, *supra*, note 14, at 23-24; Dinkins, *supra*, note 35, 10 Houston L. Rev. at 46-52; Roberts, *supra*, note 35, 12 Baylor L. Rev. at 169-172; Winters, *supra*, note 35, 38 Tex. L. Rev. at 532-536.
 62. See *Footprints*, *supra*, note 14, at 23-24; Dinkins, *supra*, note 35, 10 Houston L. Rev. at 47-48; Roberts, *supra*, note 35, 12 Baylor L. Rev. at 169-172; Winters, *supra*, note 35, 38 Tex. L. Rev. at 530-536.
 63. For a brief discussion of California's artificial accretion doctrine, see *Shore and Beach*, Vol. 49, No. 2, April 1981, p. 22.
 64. 159 Tex. at 540, 324 S.W. 2d at 193.
 65. *Lorino v. Crawford Packing Co.*, 142 Tex. 51, 175 S.W. 2d 410 (1943).
 66. Dinkins, *supra*, note 35, 10 Houston L. Rev. at 47.
 67. *Giles v. Basore*, 154 Tex. 366, 278 S.W.2d 830 (1955).
 68. Roberts, *supra*, note 35, 12 Baylor L. Rev. at 171 (emphasis in original). See also *Footprints*, *supra*, note 14, at 23-24.
 69. SHD, *supra*, note 2, at II-14.
 70. N. E. Parker, "Barrier Islands, Beaches, and Coastal Engineers," *Shore and Beach*, Vol. 48, No. 4, October 1980, pp. 4, 6 (reference omitted).

71. Tex. Rev. Civ. Stat. art. 6830.
72. Tex. Nat. Resources Code §§ 33.051, 33.056(b); see also agency rules cited in SHD, *supra*, note 2, at III-68, App. C-8.
73. SHD, *supra*, note 2, at III-67.
74. "Significant subsidence (greater than one or two feet) now affects a large area of the upper Texas coastal plain centered in the Greater Houston region. . . . [L]ess significant subsidence has been documented in six oil and gas fields in Harris County and has been suspected in others in Harris and Galveston Counties." SHD, *supra*, note 2, at II-11.
75. SHD, *supra*, note 2, at II-13.
76. *Coastal Industrial Water Authority v. York*, 520 S.W.2d 494, 502 (Tex. Civ. App.—Houston 1975), *aff'd*, 532 S.W.2d 949 (Tex. 1976).
77. 532 S.W.2d at 951 n. 1.
78. Comment, *Subsidence: Settling Down Within the Laws of Accretion, Reliction, Erosion, and Submergence*, 28 Baylor L. Rev. 319, 335 (1976). The commentator also said "it is questionable whether this condition was in fact satisfied in the *York* case." *Id.* at 336. It was pointed out that the disputed "land was located at the confluence of the San Jacinto River and the Houston Ship Channel," that a trial witness had testified that the Gulf tide affected the area and that the appellate court had "addressed itself to land bounded by water 'within tidewater limits.'" *Ibid.* Nevertheless, the Supreme Court "treated the case as one outside tidewater limits," and the commentator interpreted the opinion as clearly indicating that "land beneath tidewater limits, which has become submerged . . . by non-avulsive [i.e., gradual] subsidence, belongs to the state." *Id.* at 337 (emphasis in original). See also Note, *Subsidence: An Emerging Area of the Law*, 22 *Ariz. L. Rev.* 891 (1980), discussing *Friendswood Development Co. v. Smith-Southwest Industries*, 576 S.W.2d 21 (Tex. 1978) (negligence liability may arise for pumping of groundwater which causes future subsidence in Houston-Galveston region of Texas Gulf Coast). The Texas legislative response to subsidence has been "through creation of a special purpose district . . . , the Harris-Galveston Coastal Subsidence District. . . ." SHD, *supra*, note 2, at III-66. The district may "limit groundwater pumping, the major cause of subsidence, . . . [and regulate] well-spacing. . . ." *Ibid.*
79. For a brief discussion of the public trust doctrine, the concept that the public has the right to use navigable waters regardless of who owns the underlying lands, see *Shore and Beach*, Vol. 48, No. 4, October 1980, pp. 18-19.
80. *City of Galveston v. Menard*, 23 Tex. 349, 392-393 (1859).
81. See, e.g., *Lorino v. Crawford Packing Co.*, 142 Tex. 51, 175 S.W.2d 410 (1943); *City of Galveston v. Mann*, 135 Tex. 319, 143 S.W.2d 1028 (1940); *State v. Bradford*, 121 Tex. 515, 50 S.W.2d 1065 (1932); *Landry v. Robison*, 110 Tex. 295, 219 S.W. 819 (1920).
82. SHD, *supra*, note 2, at II-21.
83. See, e.g., Coastal Coordination Act of 1977, Tex. Nat. Resources Code § 33.201 *et seq.* (1980 Supp.), enunciating the state's policy "to make more effective and efficient use of public funds and public facilities in coastal natural resource areas, and to better serve the people of Texas" (§ 33.202(a)), and providing that the Texas Natural Resources Council, created by the Natural Resources Council Act of 1977 (Tex. Rev. Civ. Stat. art. 4413(48), repealed; see now Tex. Rev. Civ. Stat. art. 4413(47c)) (1980 Supp.), shall study "problems and issues affecting the coastal natural resource areas of the state that are in the public interest" (§ 33.204(a)) and submit biannual reports, including recommended actions to resolve these problems (§ 33.204(b)).
84. Tex. Nat. Resources Code § 61.001 *et seq.*
85. *Footprints*, *supra*, note 14, at 17.
86. Comment, *supra*, note 12, 28 Baylor L. Rev. at 392. However, the critic points out that "[f]rom a practical viewpoint," the act "makes at least three important contributions to Texas beaches remaining 'open' in fact," including the likelihood that the law's popular title ("Open Beaches Act") itself gives "some pause to private beach front landowners contemplating a curtailment of public access to the beach." *Ibid.*
87. 159 Tex. 500, 324 S.W.2d 167. See "Determination of Tidal Boundaries," *supra*.
88. See, e.g., Comment, *Public Access to Receding Beaches*, 13 Houston L. Rev. 984, 994 (1976); R. Eckhardt, "The Texas Open Beaches Act," Texas Law Institute of Coastal and Marine Resources, *The Beaches: Public Rights and Private Use* 2 (1972); *Footprints*, *supra*, note 14, at 22.
89. See Comment, *supra*, note 88, 13 Houston L. Rev. at 995.
90. Tex. Nat. Resources Code § 61.018.
91. Tex. Nat. Resources Code § 61.011 (emphasis added).
92. Tex. Nat. Resources Code § 61.020.
93. "Line of vegetation" is defined as "the extreme boundary of natural vegetation which spreads continuously inland." Tex. Nat. Resources Code § 61.001(2). See also Tex. Nat. Resources Code §§ 61.016, 61.017 (boundaries for areas with no marked vegetation line, and where the vegetation line is unaffected by certain artificial conditions).
94. In *Seaway Co. v. Attorney General*, 375 S.W.2d 923 (Tex. Civ. App.—Houston 1964, *writ ref'd n.r.e.*), the Court of Civil Appeals found it unnecessary to determine the constitutionality of the presumption that the littoral owner's title does not include the right to prevent public access to the sea. However, the constitutionality of the act on another point was upheld in a later case. See *Moody v. White*, 593 S.W.2d 372, 379-380 (Tex. Civ. App.—Corpus Christi 1979).
95. Tex. Nat. Resources Code § 61.023.
96. "State-owned beach" is not defined in the act, but in the subchapter of the Texas Natural Resources Code containing these provisions, the terms "public beach" (§§ 61.001(5), 61.014(a)) and "beach" (§ 61.012) are defined as including, but not limited to, state-owned or other publicly owned beaches.
97. Tex. Nat. Resources Code § 61.022.
98. 375 S.W.2d 923. See discussion, *supra*, note 94.
99. Interestingly, the *Seaway* approach was not followed in a second case involving the nearby *East* (rather than *West*) Beach of Galveston Island. Although the trial in this suit ultimately upheld public access rights, there was insufficient evidence to establish a prescriptive easement. Instead, the trial court held there was "a rolling or shifting easement which followed the shoreline as sand accreted to the beach." See *Footprints*, *supra*, note 14, at 18, and case cited there.
100. *Gulf Holding Corporation v. Brazoria County*, 497 S.W.2d 614 (Tex. Civ. App.—Houston 1973, *writ ref'd n.r.e.*).
101. Comment, *supra*, note 12, 28 Baylor L. Rev. at 391.
102. See, e.g., *City of Galveston v. Menard*, 23 Tex. 349 (1859); *Gibson v. Carroll*, 180 S.W. 630 (Tex. Civ. App.—San Antonio 1915, *no writ*).
103. See "Public Access Rights," *supra*.
104. Tex. Nat. Resources Code § 33.001 *et seq.*
105. *Footprints*, *supra*, note 14, at 41.
106. Comment, *supra*, note 88, 13 Houston L. Rev. at 999.
107. *Ibid.*
108. See e.g., Tex. Nat. Resources Code §§ 33.061 (receipt and evaluation of complaints "concerning instances of unauthorized construction, maintenance, use, or assertion of control of any structure on coastal public land"), 33.108 (" . . . the public may not be excluded from coastal public land leased for public recreational purposes or from an estuarine preserve").
109. See *Lorino v. Crawford Packing Co.*, *supra*, 142 Tex. 51, 175 S.W.2d 410; *Gibson v. Carroll*, *supra*, 180 S.W. 630. See also Tex. Nat. Resources Code §§ 33.001(f), (g), (h), 33.004(3), (4), (5), (6), (10), (11), (12), 33.101, 33.102, 33.103, 33.107, 33.108, 33.111, 33.112, 33.113, 33.114, 33.115 (piers), 33.116, 33.117, 33.118, 33.122, 33.127. There are also several special laws permitting pier and wharf construction. See, e.g., Tex. Laws 1911, ch. 45, § 4, p. 70, which, although repealed (Tex. Laws 1961, ch. 377, § 14, p. 841), remains the authority for some channel and dock companies' structures. *State v. Aransas Dock & Channel Co.*, 365 S.W. 2d 220 (Tex. Civ. App.—San Antonio 1963, *writ ref'd*).
110. *Dinkins*, *supra*, note 35, 10 Houston L. Rev. at 74-77.
111. *Footprints*, *supra*, note 14, at 25.
112. Tex. Nat. Resources Code §§ 52.001(3), 52.011(1), (2).
113. Tex. Nat. Resources Code § 53.151(1), (2), added in 1979.
114. The responsibilities of these agencies are too diverse to summarize in this brief article. For such a summary, see SHD, *supra*, note 2, at I-6-15.
115. Tex. Nat. Resources Code § 33.001 *et seq.*
116. Tex. Nat. Resources Code § 33.001(b), (e).
117. Tex. Nat. Resources Code § 33.119. See also Tex. Nat. Resources Code §§ 33.002, 33.004(1), (3), (6), (10), 33.011, 33.012, 33.051, 33.056, 33.063, 33.101, 33.103(3), 33.124.
118. Tex. Nat. Resources Code § 63.001(2).
119. Tex. Nat. Resources Code § 63.011 (emphasis added). The line must "not be located further landward than a line drawn parallel to and 1,000 feet landward of the line of mean high tide of the Gulf of Mexico." Tex. Nat. Resources Code § 63.012.
120. Tex. Nat. Resources Code §§ 63.051, 63.091, 63.092, 63.093. For laws pertaining to "critical dune areas," see Tex. Nat. Resources Code §§ 63.121, 63.122.

Erratum in "Part V: The Texas Approach"

A line was inadvertently omitted in the last article in this series, "The Law of the Coast in a Clamshell: Part V: The Texas Approach," *Shore & Beach*, Vol. 49, No. 4, October 1981, pp. 24-31.

Page 28, 6th paragraph under "Public Access Rights" should read as follows:

Moreover, the act expressly provides⁹⁶ that it "shall not be construed as affecting in any way the title of the owners of land adjacent to any state-owned beach⁹⁶ bordering on the seaward shore of the Gulf of Mexico" The act does not apply to such protective structures as groins, seawalls and jetties erected or maintained by federal or state agencies.⁹⁷

In 1974 the Massachusetts court's justices were asked for an advisory opinion⁴⁷ by the state's House of Representatives as to the constitutionality of a bill recognizing "a public on-foot free right-of-passage" along the shore.⁴⁸ All but one of the justices on the court concluded that the proposed law would violate both federal and state constitutional provisions requiring payment of fair compensation when private property is taken for a public purpose.⁴⁹

The justices stated that an "'on-foot right-of-passage' is not . . . related" to the rights of fishing, fowling and navigation reserved to the public by the colonial ordinance.⁵⁰ They flatly said: "We are unable to find any authority that the rights of the public include the right to walk on the beach."⁵¹

Rejecting the argument that public uses of the seashore "change with time and now must be deemed to include the important public interest in recreation," the justices stated:

"... [T]he grant to private parties effected by the colonial ordinance has never been interpreted to provide the littoral owners only such uncertain and ephemeral rights as would result from such an interpretation. The rights of the public . . . have . . . been strictly confined to these well defined areas"⁵²

The Massachusetts justices thus declined to expand the public trust doctrine to encompass beach recreational use, contrary to the position taken by the courts in California⁵³ and New Jersey.⁵⁴

As one legal commentator who analyzed the opinion says, it "indicates that there is no easy way to increase public access to beaches in Massachusetts."⁵⁵ Among approaches he suggests are "outright purchase of selected beach sites," the encouragement of "[g]ifts or dedications of private beaches to the public . . . by offering . . . tax incentives" and "[c]ompulsory dedications [by subdividers] of beaches or access to existing public beaches."⁵⁶

The Massachusetts Coastal Zone Management Program expressly calls for improving public access to coastal recreation facilities and providing "technical assistance to developers of private recreational facilities and sites that increase public access to the shoreline."⁵⁷

PRIVATE LITTORAL RIGHTS

The colonial ordinance of 1647, granting title to tidelands to private upland owners, has had a great influence on Massachusetts law relating to private littoral rights. The commonwealth's highest tribunal has repeatedly stressed the purpose of the ordinance, saying, for example, that it was "designed to encourage the development of private means of access to the sea."⁵⁸

Nevertheless, the court has upheld the state's authority to cut off a littoral owner's exclusive right of access to tidal waters where the public project is directly in aid of navigation,⁵⁹ as distinguished from a project only incidentally related to navigation.⁶⁰

Since at least 1866, filling activities by private owners of uplands and adjoining flats have been regulated by the state.⁶¹ Similarly, wharfing-out rights are subject to governmental restrictions.⁶²

LEASING AND REGULATION OF COASTAL ZONE LANDS AND WATERS

A. Leasing

Massachusetts law authorizes the director of the division of mineral resources within the Department of Environmental Quality Engineering to (1) license the "orderly exploration" for oil, gas and other mineral resources⁶³ within the state's "coastal waters"⁶⁴ and underlying lands, and (2) "lease exclusive rights for extraction of such mineral resources as have been discovered."⁶⁵

B. Regulatory Functions

"[I]n 1963, Massachusetts became the first state in the nation to protect wetlands by statute."⁶⁶ The present Wetlands Protection Act⁶⁷ prohibits the filling, dredging or other altering of wetlands, beaches, dunes and flats unless a permit is obtained from the local conservation commission. Regulations issued by the state's Department of Environmental Quality Engineering "define key [statutory] terms and establish a framework for local decision making and appeals to the state agency."⁶⁸

Various other Massachusetts statutes and regulations govern use of tide and submerged lands. Under the Coastal Wetlands Restriction Act, the commissioner of environmental management may "adopt, amend, modify or repeal orders regulating, restricting or prohibiting dredging, filling, removing or other altering, or polluting, coastal wetlands."⁶⁹ The Department of Environmental Quality Engineering administers the Waterways Permit and License Program, which requires licenses for such work as "the construction or extension of a wharf, pier, dam, sea wall . . . or other structure, or for the filling of land or flats."⁷⁰ The commissioner of the department has issued regulations governing the granting of waterways licenses and permits.

In addition to these state-level statutes and regulations, many coastal municipalities exercise local control under zoning laws and bylaws. In 1979 the state's highest court decided that a town is not preempted by state law from enacting a wetlands protection bylaw.⁷¹

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UNITED STATES *v.* LOUISIANA ET AL.
(TEXAS BOUNDARY CASE).

No. 9, Orig. Decided May 31, 1960, December 4, 1967, and March 3, 1969.—Decree Entered December 12, 1960.—Supplemental Decree Entered May 5, 1969.

Opinions reported: 363 U. S. 1; 389 U. S. 155; and *ante*, p. 1.
Decree reported: 364 U. S. 502.

For the purpose of giving effect to the conclusions of this Court as stated in its opinions announced December 4, 1967, and March 3, 1969, supplementing the decree entered herein on December 12, 1960, it is ordered, adjudged and decreed as follows:

1. As against the State of Texas, the United States is entitled to—

(a) All the lands, minerals and other natural resources underlying the Gulf of Mexico that are more than three marine leagues gulfward from the present or future coastline as referred to in § 2 (c) of the Submerged Lands Act, 67 Stat. 29, 43 U. S. C. § 1301 (c); and

(b) All the lands, minerals and other natural resources underlying the Gulf of Mexico, more than three geographical miles gulfward from the present or future coastline as referred to in § 2 (c) of the Submerged Lands Act, 43 U. S. C. § 1301 (c), that are gulfward of the following line:

Beginning at a point on the international boundary with Mexico (wherever that boundary may be located), three marine leagues gulfward from the point $x=2,447,033$, $y=105,994$ (Texas Plane Coordinate System, South Zone), latitude $25^{\circ}57'05.90''$ N., longitude $97^{\circ}08'22.85''$ W., and proceeding thence northwardly and eastwardly as follows:

Course	South Zone		Latitude	Longitude
	x	y		
1. By arc centered at.....	2,447,033	105,994	$25^{\circ}57'05.90''$	$97^{\circ}08'22.85''$
to.....	2,498,223	125,226	$26^{\circ}00'10.59''$	$96^{\circ}58'59.59''$
2. By straight line to.....	2,498,068	126,760	$26^{\circ}00'25.80''$	$96^{\circ}59'01.09''$

Course	South Zone		Latitude	Longitude
	x	y		
3. By arc centered at.....	2,443,661	121,256	$25^{\circ}59'37.4''$	$97^{\circ}08'58.0''$
to.....	2,497,383	131,474	$26^{\circ}01'12.56''$	$96^{\circ}59'07.98''$
4. By straight line to.....	2,497,076	135,704	$26^{\circ}01'54.49''$	$96^{\circ}59'10.78''$
5. By straight line to.....	2,497,119	137,947	$26^{\circ}02'16.70''$	$96^{\circ}59'10.02''$
6. By straight line to.....	2,497,240	139,652	$26^{\circ}02'33.58''$	$96^{\circ}59'08.47''$
7. By arc centered at.....	2,442,693	143,530	$26^{\circ}03'18.1''$	$97^{\circ}09'06.0''$
to.....	2,496,942	150,421	$26^{\circ}04'20.28''$	$96^{\circ}59'10.32''$
8. By straight line to.....	2,496,723	152,145	$26^{\circ}04'37.36''$	$96^{\circ}59'12.50''$
9. By arc centered at.....	2,442,474	145,254	$26^{\circ}03'35.2''$	$97^{\circ}09'08.2''$
to.....	2,496,370	154,510	$26^{\circ}05'00.63''$	$96^{\circ}59'16.06''$
10. By straight line to.....	2,495,553	159,267	$26^{\circ}05'48.04''$	$96^{\circ}59'24.39''$
11. By arc centered at.....	2,441,657	150,011	$26^{\circ}04'22.4''$	$97^{\circ}09'16.6''$
to.....	2,495,161	161,316	$26^{\circ}06'08.37''$	$96^{\circ}59'28.42''$
12. By straight line to.....	2,494,875	162,668	$26^{\circ}06'21.79''$	$96^{\circ}59'31.38''$
13. By straight line to.....	2,494,746	163,636	$26^{\circ}06'31.39''$	$96^{\circ}59'32.67''$
14. By straight line to.....	2,492,451	182,957	$26^{\circ}09'43.01''$	$96^{\circ}59'55.32''$
15. By arc centered at.....	2,438,148	176,509	$26^{\circ}08'45.2''$	$97^{\circ}09'52.0''$
to.....	2,492,330	183,907	$26^{\circ}09'52.44''$	$96^{\circ}59'56.52''$
16. By straight line to.....	2,490,612	196,490	$26^{\circ}11'57.26''$	$97^{\circ}00'13.74''$
17. By arc centered at.....	2,436,430	189,092	$26^{\circ}10'50.0''$	$97^{\circ}10'09.4''$
to.....	2,490,574	196,764	$26^{\circ}11'59.99''$	$97^{\circ}00'14.12''$
18. By straight line to.....	2,488,714	209,890	$26^{\circ}14'10.20''$	$97^{\circ}00'32.84''$
19. By arc centered at.....	2,434,570	202,218	$26^{\circ}13'00.2''$	$97^{\circ}10'28.3''$
to.....	2,488,423	211,722	$26^{\circ}14'28.37''$	$97^{\circ}00'35.80''$
20. By straight line to.....	2,486,399	223,191	$26^{\circ}16'22.20''$	$97^{\circ}00'56.54''$
21. By arc centered at.....	2,432,546	213,687	$26^{\circ}14'54.0''$	$97^{\circ}10'49.2''$
to.....	2,486,322	223,615	$26^{\circ}16'26.40''$	$97^{\circ}00'57.33''$
22. By straight line to.....	2,484,084	235,738	$26^{\circ}18'26.73''$	$97^{\circ}01'20.36''$
23. By arc centered at.....	2,430,308	225,810	$26^{\circ}16'54.3''$	$97^{\circ}11'12.4''$
to.....	2,483,535	238,353	$26^{\circ}18'52.69''$	$97^{\circ}01'26.05''$
24. By straight line to.....	2,478,947	257,823	$26^{\circ}22'06.05''$	$97^{\circ}02'13.99''$
25. By arc centered at.....	2,425,720	245,280	$26^{\circ}20'07.6''$	$97^{\circ}12'00.6''$
to.....	2,478,775	258,531	$26^{\circ}22'13.09''$	$97^{\circ}02'15.79''$
26. By straight line to.....	2,475,739	270,687	$26^{\circ}24'13.83''$	$97^{\circ}02'47.63''$
27. By arc centered at.....	2,422,684	257,436	$26^{\circ}22'08.3''$	$97^{\circ}12'32.6''$
to.....	2,475,708	270,811	$26^{\circ}24'15.06''$	$97^{\circ}02'47.96''$
28. By straight line to.....	2,472,116	285,051	$26^{\circ}26'36.50''$	$97^{\circ}03'25.67''$
29. By arc centered at.....	2,419,092	271,676	$26^{\circ}24'29.7''$	$97^{\circ}13'10.5''$
to.....	2,471,287	287,990	$26^{\circ}27'05.71''$	$97^{\circ}03'34.42''$
30. By straight line to.....	2,466,585	303,033	$26^{\circ}29'35.22''$	$97^{\circ}04'24.28''$
31. By straight line to.....	2,461,419	319,706	$26^{\circ}32'20.92''$	$97^{\circ}05'19.08''$
32. By arc centered at.....	2,409,184	303,522	$26^{\circ}29'46.1''$	$97^{\circ}14'56.0''$
to.....	2,461,209	320,369	$26^{\circ}32'27.52''$	$97^{\circ}05'21.31''$
33. By straight line to.....	2,450,926	352,124	$26^{\circ}37'43.15''$	$97^{\circ}07'10.71''$
34. By arc centered at.....	2,398,901	335,277	$26^{\circ}35'01.6''$	$97^{\circ}16'45.8''$
to.....	2,449,710	355,498	$26^{\circ}38'16.70''$	$97^{\circ}07'23.71''$
35. By straight line to.....	2,447,122	362,000	$26^{\circ}39'21.38''$	$97^{\circ}07'51.45''$
36. By straight line to.....	2,445,524	366,527	$26^{\circ}40'06.38''$	$97^{\circ}08'08.52''$
37. By straight line to.....	2,442,108	376,994	$26^{\circ}41'50.42''$	$97^{\circ}08'44.95''$
38. By straight line to.....	2,437,787	392,060	$26^{\circ}44'20.08''$	$97^{\circ}09'30.83''$
39. By straight line to.....	2,437,079	394,740	$26^{\circ}44'46.07''$	$97^{\circ}09'38.32''$
40. By arc centered at.....	2,384,205	380,784	$26^{\circ}42'33.7''$	$97^{\circ}19'23.0''$
to.....	2,435,953	398,463	$26^{\circ}45'23.70''$	$97^{\circ}09'50.30''$

Supplemental Decree.

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Course	South Zone		Latitude	Longitude
	x	y		
41. By straight line to.....	2, 435, 511	399, 759	26°45'36.57"	97°09'55.03"
42. By straight line to.....	2, 432, 474	410, 567	26°47'23.94"	97°10'27.28"
43. By straight line to.....	2, 427, 617	431, 540	26°50'52.15"	97°11'18.47"
44. By straight line to.....	2, 424, 278	447, 618	26°53'31.73"	97°11'53.51"
45. By straight line to.....	2, 422, 538	459, 109	26°55'25.72"	97°12'11.42"
46. By arc centered at.....	2, 368, 469	450, 923	26°54'09.8"	97°22'09.6"
to.....	2, 422, 177	461, 213	26°55'46.59"	97°12'15.17"
47. By straight line to.....	2, 421, 519	468, 580	26°56'11.43"	97°12'22.16"
48. By arc centered at.....	2, 367, 051	463, 714	26°56'16.6"	97°22'24.0"
to.....	2, 421, 383	469, 914	26°57'12.85"	97°12'22.95"
49. By straight line to.....	2, 420, 872	474, 392	26°57'57.25"	97°12'28.09"
50. By arc centered at.....	2, 366, 540	468, 192	26°57'01.0"	97°22'29.2"
to.....	2, 420, 613	476, 347	26°58'16.64"	97°12'30.73"
51. By straight line to.....	2, 419, 889	487, 832	27°00'10.46"	97°12'37.44"
52. By straight line to.....	2, 419, 593	493, 822	27°01'09.82"	97°12'40.04"
53. By straight line to.....	2, 419, 571	498, 661	27°01'57.74"	97°12'39.73"
54. By arc centered at.....	2, 364, 887	498, 418	27°02'00.5"	97°22'44.5"
to.....	2, 419, 564	499, 351	27°02'04.57"	97°12'39.74"
55. By straight line to.....	2, 419, 442	506, 501	27°03'15.40"	97°12'40.28"
56. By straight line to.....	2, 419, 750	514, 047	27°04'30.10"	97°12'36.02"
57. By straight line to.....	2, 419, 951	517, 831	27°05'07.56"	97°12'33.36"
58. By straight line to.....	2, 420, 165	521, 009	27°05'39.01"	97°12'30.64"
59. By arc centered at.....	2, 365, 603	524, 676	27°06'20.5"	97°22'34.0"
to.....	2, 420, 260	522, 916	27°05'57.88"	97°12'29.38"
60. By straight line to.....	2, 420, 367	526, 247	27°06'30.86"	97°12'27.81"
61. By straight line to.....	2, 421, 336	538, 406	27°08'31.18"	97°12'15.70"
62. By arc centered at.....	2, 366, 824	542, 751	27°09'19.4"	97°22'18.7"
to.....	2, 421, 429	539, 789	27°08'44.87"	97°12'14.52"
63. By straight line to.....	2, 421, 449	540, 167	27°08'48.61"	97°12'14.25"
64. By straight line to.....	2, 421, 591	540, 986	27°08'56.71"	97°12'12.59"
65. By arc centered at.....	2, 367, 705	550, 301	27°10'34.1"	97°22'08.2"
to.....	2, 422, 109	544, 769	27°09'34.13"	97°12'06.42"
66. By straight line to.....	2, 422, 522	548, 828	27°10'14.28"	97°12'01.39"
67. By straight line to.....	2, 422, 909	550, 953	27°10'35.28"	97°11'56.86"
68. By arc centered at.....	2, 369, 110	560, 755	27°12'17.5"	97°21'51.6"
to.....	2, 423, 074	551, 906	27°10'44.71"	97°11'54.92"
69. By straight line to.....	2, 423, 600	555, 114	27°11'16.42"	97°11'48.73"
70. By straight line to.....	2, 425, 604	565, 501	27°12'59.09"	97°11'25.35"
71. By straight line to.....	2, 425, 955	567, 201	27°13'15.88"	97°11'21.27"
72. By straight line to.....	2, 430, 188	585, 397	27°16'15.65"	97°10'32.26"
73. By straight line to.....	2, 435, 271	602, 898	27°19'08.44"	97°09'33.87"
74. By straight line to.....	2, 437, 860	611, 265	27°20'31.02"	97°09'04.17"
75. By straight line to.....	2, 440, 773	619, 882	27°21'56.05"	97°08'30.84"
76. By straight line to.....	2, 443, 622	627, 687	27°23'13.04"	97°07'58.31"
77. By straight line to.....	2, 449, 412	641, 292	27°25'27.14"	97°06'52.41"
78. By straight line to.....	2, 455, 945	656, 139	27°27'53.45"	97°05'38.08"
79. By straight line to.....	2, 459, 158	662, 847	27°28'59.52"	97°05'01.59"
80. By straight line to.....	2, 400, 858	666, 346	27°29'33.99"	97°04'42.27"
81. By arc centered at.....	2, 419, 058	701, 605	27°35'27.6"	97°12'22.4"
to.....	2, 468, 926	679, 163	27°31'40.01"	97°03'11.05"
82. By straight line to.....	2, 473, 113	688, 467	27°33'11.66"	97°02'23.35"
83. By arc centered at.....	2, 423, 245	710, 909	27°36'59.3"	97°11'34.8"
to.....	2, 477, 118	701, 518	27°35'20.43"	97°01'37.17"

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Course	South Zone		Latitude	Longitude
	x	y		
84. By straight line to.....	2, 477, 226	701, 748	27°35'22.70"	97°01'35.93"
85. By straight line to.....	2, 484, 830	715, 453	27°37'37.53"	97°00'09.62"
86. By straight line to.....	2, 492, 830	728, 654	27°39'47.30"	96°58'38.91"
87. By straight line to.....	2, 503, 178	744, 730	27°42'25.23"	96°56'41.63"
88. By straight line to.....	2, 511, 491	757, 057	27°44'26.26"	96°55'07.44"
89. By straight line to.....	2, 515, 272	762, 240	27°45'17.11"	96°54'24.63"
90. By arc centered at.....	2, 471, 092	794, 467	27°50'41.5"	97°02'32.2"
to.....	2, 522, 680	776, 327	27°47'35.66"	96°53'00.17"
91. By straight line to.....	2, 523, 498	778, 651	27°47'58.57"	96°52'50.74"
92. By straight line to.....	2, 523, 986	779, 631	27°48'08.21"	96°52'45.16"
93. By straight line to.....	2, 526, 031	782, 992	27°48'41.29"	96°52'22.00"
94. By straight line to.....	2, 535, 804	796, 133	-----	-----

Course	South Central Zone		Latitude	Longitude
	x	y		
(Repeating two courses)				
93. By straight line to.....	2, 687, 786	-1, 695	-----	-----
94. By straight line to.....	2, 697, 492	11, 498	27°50'50.13"	96°50'31.25"
95. By straight line to.....	2, 705, 230	21, 472	27°52'27.43"	96°49'03.01"
96. By straight line to.....	2, 710, 958	28, 002	27°53'31.00"	96°47'57.84"
97. By arc centered at.....	2, 669, 848	64, 063	27°59'35.4"	96°55'28.7"
to.....	2, 712, 719	30, 115	27°53'51.59"	96°47'37.77"
98. By straight line to.....	2, 714, 852	32, 807	27°54'17.84"	96°47'13.45"
99. By straight line to.....	2, 720, 377	38, 910	27°55'17.21"	96°46'10.59"
100. By straight line to.....	2, 724, 705	43, 579	27°56'02.60"	96°45'21.36"
101. By straight line to.....	2, 727, 377	46, 418	27°56'30.20"	96°44'50.97"
102. By arc centered at.....	2, 691, 713	87, 873	28°03'27.2"	96°51'20.0"
to.....	2, 733, 517	52, 619	27°57'30.40"	96°43'41.20"
103. By straight line to.....	2, 745, 287	64, 045	27°59'21.23"	96°41'27.48"
104. By straight line to.....	2, 759, 114	76, 842	28°01'25.17"	96°38'50.43"
105. By straight line to.....	2, 760, 917	78, 432	28°01'40.55"	96°38'29.96"
106. By straight line to.....	2, 775, 278	90, 137	28°03'33.53"	96°35'47.09"
107. By straight line to.....	2, 780, 827	94, 573	28°04'16.30"	96°34'44.15"
108. By arc centered at.....	2, 746, 685	137, 290	28°11'26.0"	96°40'55.7"
to.....	2, 782, 550	96, 009	28°04'30.16"	96°34'24.59"
109. By straight line to.....	2, 783, 852	97, 140	28°04'41.08"	96°34'09.80"
110. By straight line to.....	2, 791, 476	102, 789	28°05'35.43"	96°32'43.40"
111. By straight line to.....	2, 800, 074	109, 137	28°06'36.47"	96°31'05.92"
112. By straight line to.....	2, 807, 482	114, 230	28°07'25.32"	96°29'42.01"
113. By straight line to.....	2, 814, 202	118, 283	28°08'04.00"	96°28'26.00"
114. By arc centered at.....	2, 785, 963	165, 112	28°15'53.5"	96°33'30.4"
to.....	2, 815, 384	119, 016	28°08'11.01"	96°28'12.63"
115. By straight line to.....	2, 824, 561	124, 874	28°09'07.01"	96°26'28.73"
116. By straight line to.....	2, 831, 319	128, 676	28°09'43.18"	96°25'12.32"
117. By straight line to.....	2, 836, 670	131, 276	28°10'07.75"	96°24'11.92"
118. By straight line to.....	2, 839, 197	132, 254	28°10'16.87"	96°23'43.45"
119. By arc centered at.....	2, 819, 460	183, 253	28°18'46.0"	96°27'11.5"
to.....	2, 840, 053	132, 594	28°10'20.04"	96°23'33.80"
120. By straight line to.....	2, 844, 564	134, 428	28°10'37.20"	96°22'42.95"
121. By straight line to.....	2, 846, 278	135, 087	28°10'43.34"	96°22'23.64"

Course	South Central Zone		Latitude	Longitude
	x	y		
122. By arc centered at.....	2,833,368	188,226	28°19'32.2"	96°24'34.7"
to.....	2,864,032	142,947	28°11'57.16"	96°19'03.31"
123. By straight line to.....	2,865,389	143,866	28°12'05.95"	96°18'47.92"
124. By arc centered at.....	2,834,725	189,145	28°19'41.0"	96°24'19.3"
to.....	2,879,517	187,775	28°14'20.38"	96°16'06.44"
125. By straight line to.....	2,880,106	158,616	28°14'28.57"	96°15'59.64"
126. By arc centered at.....	2,835,314	189,986	28°19'49.2"	96°24'12.5"
to.....	2,883,104	163,406	28°15'15.29"	96°15'24.87"
127. By straight line to.....	2,885,158	167,099	28°15'51.36"	96°15'00.94"
128. By arc centered at.....	2,837,368	193,679	28°20'25.3"	96°23'48.6"
to.....	2,886,819	170,332	28°16'22.99"	96°14'41.53"
129. By straight line to.....	2,890,783	177,022	28°17'28.27"	96°13'55.43"
130. By arc centered at.....	2,843,740	204,903	28°22'15.0"	96°22'34.5"
to.....	2,893,218	181,614	28°18'13.16"	96°13'26.99"
131. By straight line to.....	2,899,305	186,971	28°19'04.75"	96°12'17.48"
131a. By straight line to.....	2,899,402	187,052	28°19'05.53"	96°12'16.38"
132. By straight line to.....	2,908,291	193,515	28°20'07.38"	96°10'35.21"
133. By straight line to.....	2,912,716	196,355	28°20'34.44"	96°09'44.93"
134. By straight line to.....	2,927,833	205,781	28°22'04.08"	96°06'53.21"
135. By straight line to.....	2,936,888	211,198	28°22'55.48"	96°05'10.38"
136. By straight line to.....	2,950,886	219,194	28°24'11.14"	96°02'31.45"
137. By straight line to.....	2,961,311	224,721	28°25'03.23"	96°00'33.18"
138. By straight line to.....	2,978,776	233,372	28°26'24.39"	95°57'15.13"
139. By straight line to.....	2,987,582	237,367	28°27'01.65"	95°55'35.35"
140. By arc centered at.....	2,964,991	287,167	28°35'20.4"	95°59'34.0"
to.....	2,988,795	237,935	28°27'06.96"	95°55'21.60"
141. By straight line to.....	2,998,740	242,743	28°27'51.95"	95°53'28.80"
142. By straight line to.....	3,002,406	244,493	28°28'08.31"	95°52'47.22"
143. By straight line to.....	3,005,833	246,002	28°28'22.33"	95°52'06.38"
144. By arc centered at.....	2,983,797	296,051	28°36'43.5"	95°56'00.5"
to.....	3,007,526	246,783	28°28'29.61"	95°51'49.18"
145. By straight line to.....	3,026,416	255,881	28°29'54.60"	95°48'14.81"
146. By arc centered at.....	3,002,687	305,149	28°38'08.6"	95°52'25.9"
to.....	3,028,326	256,847	28°30'03.64"	95°47'53.12"
147. By straight line to.....	3,047,657	267,108	28°31'39.91"	95°44'13.33"
148. By arc centered at.....	3,022,018	315,410	28°39'45.0"	95°48'45.9"
to.....	3,048,496	267,563	28°31'44.18"	95°44'03.79"
149. By straight line to.....	3,059,100	273,431	28°32'39.31"	95°42'03.10"
150. By arc centered at.....	3,032,622	321,278	28°40'40.2"	95°46'45.1"
to.....	3,060,936	274,494	28°32'49.32"	95°41'42.19"
151. By straight line to.....	3,078,889	285,359	28°34'31.79"	95°38'17.46"
152. By arc centered at.....	3,050,575	332,143	28°42'22.8"	95°43'20.2"
to.....	3,080,687	286,496	28°34'42.53"	95°37'56.93"
153. By straight line to.....	3,084,317	288,890	28°35'05.20"	95°37'15.45"
154. By straight line to.....	3,092,292	293,735	28°35'50.86"	95°35'44.46"
155. By arc centered at.....	3,063,896	340,470	28°43'41.5"	95°40'48.0"
to.....	3,092,642	293,950	28°35'52.89"	95°35'40.46"
156. By straight line to.....	3,110,764	305,148	28°37'38.45"	95°32'13.53"
157. By arc centered at.....	3,082,018	351,668	28°45'27.2"	95°37'20.9"
to.....	3,111,027	305,312	28°37'39.99"	95°32'10.52"
158. By straight line to.....	3,128,977	316,545	28°39'25.86"	95°28'45.39"
159. By arc centered at.....	3,099,968	362,901	28°47'13.2"	95°33'55.6"
to.....	3,129,951	317,169	28°39'31.75"	95°28'34.25"

Course	South Central Zone		Latitude	Longitude
	x	y		
160. By straight line to.....	3,152,081	331,678	28°41'48.68"	95°24'20.95"
161. By arc centered at.....	3,122,098	377,410	28°49'30.3"	95°29'42.1"
to.....	3,153,769	332,830	28°41'59.57"	95°24'01.60"
162. By straight line to.....	3,158,904	336,478	28°42'34.10"	95°23'02.71"
163. By straight line to.....	3,168,664	342,866	28°43'34.32"	95°21'10.91"
164. By arc centered at.....	3,138,717	388,622	28°51'16.3"	95°26'31.5"
to.....	3,172,530	345,644	28°44'00.62"	95°20'26.53"
165. By straight line to.....	3,177,771	349,049	28°44'32.69"	95°19'26.48"
166. By arc centered at.....	3,147,981	394,907	28°52'15.7"	95°24'45.2"
to.....	3,178,426	349,481	28°44'36.76"	95°19'18.98"
167. By straight line to.....	3,184,351	353,452	28°45'14.21"	95°18'11.04"
168. By arc centered at.....	3,153,906	398,878	28°52'53.2"	95°23'37.2"
to.....	3,185,298	354,101	28°45'20.34"	95°18'00.17"
169. By straight line to.....	3,196,291	361,808	28°46'33.16"	95°15'53.96"
170. By arc centered at.....	3,164,899	406,585	28°54'06.1"	95°21'30.9"
to.....	3,197,099	362,386	28°46'38.61"	95°15'44.67"
171. By straight line to.....	3,203,248	366,865	28°47'21.00"	95°14'33.99"
171a. By straight line to.....	3,203,445	366,995	28°47'22.22"	95°14'31.73"
172. By straight line to.....	3,205,264	368,190	28°47'33.46"	95°14'10.87"
173. By arc centered at.....	3,182,950	418,115	28°55'54.6"	95°18'03.8"
to.....	3,213,259	372,598	28°45'14.53"	95°12'39.45"
174. By straight line to.....	3,214,103	373,160	28°48'19.82"	95°12'29.76"
175. By arc centered at.....	3,183,794	418,677	28°55'59.9"	95°17'54.1"
to.....	3,230,736	390,625	28°51'07.29"	95°09'16.44"
176. By straight line to.....	3,240,421	399,503	28°52'31.99"	95°07'24.26"
177. By straight line to.....	3,258,176	414,679	28°54'56.30"	95°03'58.91"
178. By straight line to.....	3,262,578	418,206	28°55'29.73"	95°03'08.07"
179. By straight line to.....	3,266,484	420,949	28°55'55.57"	95°02'23.08"
180. By arc centered at.....	3,239,802	468,683	29°03'56.8"	95°07'05.4"
to.....	3,282,040	433,949	28°57'58.97"	94°59'23.10"
181. By straight line to.....	3,282,364	434,343	28°58'02.76"	94°59'19.30"
182. By arc centered at.....	3,240,126	469,077	29°04'00.6"	95°07'01.6"
to.....	3,290,005	446,661	29°00'02.05"	94°57'48.53"
183. By straight line to.....	3,296,652	452,104	29°00'53.63"	94°56'31.59"
184. By straight line to.....	3,302,419	456,606	29°01'36.20"	94°55'24.90"
185. By straight line to.....	3,315,160	466,352	29°03'08.22"	94°52'57.60"
186. By straight line to.....	3,320,930	470,564	29°03'47.89"	94°51'50.94"
187. By straight line to.....	3,328,195	475,602	29°04'35.19"	94°50'27.11"
188. By straight line to.....	3,342,587	484,679	29°05'59.91"	94°47'41.32"
189. By arc centered at.....	3,313,417	530,934	29°13'47.9"	94°52'51.6"
to.....	3,345,594	486,717	29°06'19.02"	94°47'06.62"
190. By straight line to.....	3,350,192	490,063	29°06'50.48"	94°46'13.45"
191. By arc centered at.....	3,318,015	534,280	29°14'19.4"	94°51'58.4"
to.....	3,351,664	491,173	29°07'00.94"	94°45'56.41"
192. By straight line to.....	3,366,438	502,706	29°08'49.73"	94°43'05.18"
193. By straight line to.....	3,373,759	508,167	29°09'41.10"	94°41'40.41"
194. By arc centered at.....	3,341,062	552,000	29°17'06.6"	94°47'31.2"
to.....	3,376,113	510,025	29°09'58.63"	94°41'13.09"
195. By straight line to.....	3,379,502	512,855	29°10'25.40"	94°40'33.71"
196. By arc centered at.....	3,344,451	554,830	29°17'33.4"	94°46'51.8"
to.....	3,382,463	515,517	29°10'50.64"	94°39'59.22"
197. By straight line to.....	3,385,938	518,877	29°11'22.61"	94°39'18.63"

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Course	South Central Zone		Latitude	Longitude
	x	y		
198. By arc centered at.....	3,347,926	558,190	29°18'05.4"	94°46'11.2"
to.....	3,393,316	527,691	29°12'47.10"	94°37'51.73"
199. By straight line to.....	3,394,123	528,892	29°12'58.69"	94°37'42.12"
200. By arc centered at.....	3,348,733	559,391	29°18'17.0"	94°46'01.6"
to.....	3,399,047	537,969	29°14'26.68"	94°36'42.74"
201. By straight line to.....	3,399,847	539,848	29°14'44.97"	94°36'32.92"
202. By arc centered at.....	3,349,533	561,270	29°18'35.3"	94°45'51.8"
to.....	3,401,544	544,379	29°15'29.17"	94°36'11.86"
203. By straight line to.....	3,402,301	546,710	29°15'51.96"	94°36'02.32"
204. By arc centered at.....	3,350,290	563,601	29°18'58.1"	94°45'42.3"
to.....	3,404,498	556,395	29°17'26.97"	94°35'33.41"
205. By straight line to.....	3,404,679	557,758	29°17'40.38"	94°35'30.79"
206. By straight line to.....	3,405,303	558,363	29°17'46.13"	94°35'23.49"
207. By straight line to.....	3,407,136	559,951	29°18'01.16"	94°35'02.12"
208. By straight line to.....	3,409,314	561,570	29°18'16.36"	94°34'36.85"
209. By straight line to.....	3,413,751	564,517	29°18'43.86"	94°33'45.50"
210. By straight line to.....	3,421,690	569,297	29°19'28.16"	94°32'13.83"
211. By straight line to.....	3,429,293	573,476	29°20'06.63"	94°30'46.17"
212. By straight line to.....	3,447,430	582,437	29°21'28.35"	94°27'17.47"
213. By straight line to.....	3,466,717	591,592	29°22'51.47"	94°23'35.58"
214. By arc centered at.....	3,443,267	640,994	29°31'09.3"	94°27'38.8"
to.....	3,467,072	591,762	29°22'53.01"	94°23'31.50"
215. By straight line to.....	3,480,531	598,270	29°23'52.12"	94°20'56.55"
216. By straight line to.....	3,497,178	605,998	29°25'01.98"	94°17'44.98"
217. By arc centered at.....	3,474,153	655,599	29°33'21.8"	94°21'42.9"
to.....	3,497,492	606,145	29°25'03.31"	94°17'41.36"
218. By straight line to.....	3,512,863	613,399	29°26'08.92"	94°14'44.35"
219. By arc centered at.....	3,489,524	662,853	29°34'27.5"	94°18'45.7"
to.....	3,513,624	613,765	29°26'12.24"	94°14'35.58"
220. By straight line to.....	3,530,376	621,990	29°27'26.82"	94°11'22.44"
221. By straight line to.....	3,554,680	633,780	29°29'13.49"	94°06'42.17"
222. By arc centered at.....	3,530,811	682,981	29°37'30.0"	94°10'49.1"
to.....	3,555,470	634,171	29°29'17.03"	94°06'33.05"
223. By straight line to.....	3,571,673	642,357	29°30'31.26"	94°03'25.94"
224. By straight line to.....	3,579,924	646,355	29°31'07.35"	94°01'50.72"
225. By arc centered at.....	3,564,669	698,869	29°39'53.2"	94°04'18.2"
to.....	3,583,947	647,695	29°31'18.91"	94°01'04.58"
226. By arc centered at.....	3,570,700	700,761	29°40'09.3"	94°03'09.0"
to.....	3,583,971	647,701	29°31'18.96"	94°01'04.31"
227. By arc centered at.....	3,585,544	702,363	29°40'19.0"	94°00'20.1"
to.....	3,587,641	647,718	29°31'17.58"	94°00'22.79"
228. By arc centered at.....	3,588,465	702,397	29°40'18.1"	93°59'47.0"
to.....	3,597,166	648,409	29°31'20.37"	93°58'34.73"
229. By arc centered at.....	3,598,298	703,082	29°40'20.7"	93°57'55.3"
to.....	3,611,182	649,936	29°31'29.50"	93°55'55.45"
230. By arc centered at.....	3,616,758	704,337	29°40'25.2"	93°54'25.6"
to.....	3,617,980	649,666	29°31'23.90"	93°54'38.73"
231. By straight line to.....	3,622,052	649,757	29°31'23.04"	93°53'52.62"
232. By straight line to.....	3,628,661	649,851	29°31'21.11"	93°52'37.85"
233. By arc centered at.....	3,627,884	704,530	29°40'22.3"	93°52'19.5"
to.....	3,632,508	650,041	29°31'21.32"	93°51'54.24"
234. By straight line to.....	3,634,971	650,250	29°31'22.32"	93°51'26.29"

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Course	South Central Zone		Latitude	Longitude
	x	y		
235. By arc centered at.....	3,630,347	704,739	29°40'23.3"	93°51'51.5"
to.....	3,651,368	654,256	29°31'54.77"	93°48'18.84"
236. By straight line to.....	3,653,430	655,115	29°32'02.36"	93°47'55.06"
237. By arc centered at.....	3,632,410	705,598	29°40'30.9"	93°51'27.7"
to.....	3,663,602	660,681	29°32'52.93"	93°45'57.22"
238. By straight line to.....	3,664,862	661,556	29°33'01.02"	93°45'42.53"
239. By arc centered at.....	3,633,670	706,473	29°40'39.0"	93°51'13.0"
to.....	3,677,669	674,000	29°34'58.40"	93°43'11.30"
240. By straight line to.....	3,678,810	675,546	29°35'13.18"	93°42'57.60"
241. By arc centered at.....	3,634,811	708,019	29°40'53.8"	93°50'59.3"
to.....	3,680,595	678,115	29°35'37.80"	93°42'36.06"
242. By straight line to.....	3,686,069	686,496	29°36'58.24"	93°41'29.83"

The State of Texas is not entitled to any interest in such lands, minerals or resources, and said State, its privies, assigns, lessees and other persons claiming under it are hereby enjoined from interfering with the rights of the United States in such lands, minerals and resources.

2. As against the United States, with the exceptions provided by § 5 of the Submerged Lands Act, 43 U. S. C. § 1313, the State of Texas is entitled to—

(a) All the lands, minerals and other natural resources underlying the Gulf of Mexico, bounded on the south by the international boundary with Mexico and on the east by the western boundary of Louisiana and an extension thereof, that are within three geographical miles from the present or future coastline as referred to in § 2 (c) of the Submerged Lands Act, 43 U. S. C. § 1301 (c); and

(b) All the lands, minerals and other natural resources underlying the Gulf of Mexico, bounded on the south by the international boundary with Mexico and on the east by the western boundary of Louisiana and an extension thereof, less than three marine leagues gulfward from the present or future coastline as referred to in § 2 (c) of the Submerged Lands Act, 43 U. S. C. § 1301 (c), that are landward of the line described in paragraph 1 (b) hereof.

3. As used herein—

(a) "Geographical mile" means a distance of 1852 meters (6076.10333 . . . U. S. Survey Feet or approximately 6076.11549 International Feet);

(b) "Marine league" means a distance of three geographical miles;

(c) Plane coordinates refer to the Texas Coordinate Systems, South Zone or South Central Zone, as indicated.

(d) Latitudes and longitudes refer to the North American 1927 Datum.

(e) All distances referred to herein are expressed at grid scale, Texas Plane Coordinate Systems.

4. The Court retains jurisdiction to entertain such further proceedings, enter such orders, and issue such writs as may from time to time be deemed necessary or advisable to give proper force and effect to this decree, or to the decree of December 12, 1960, herein, or to effectuate the rights of the parties in the premises.

THE CHIEF JUSTICE and MR. JUSTICE MARSHALL took no part in the consideration or formulation of this Supplemental Decree.

UNITED STATES *v.* LOUISIANA ET AL.
(TEXAS BOUNDARY CASE).

No. 9, Orig. Decided May 31, 1960, December 4, 1967, and March 3, 1969.—Decree Entered December 12, 1960.—Supplemental Decree Entered May 5, 1969.

Opinions reported: 363 U. S. 1; 389 U. S. 155; and *ante*, p. 1.
Decree reported: 364 U. S. 502.

For the purpose of giving effect to the conclusions of this Court as stated in its opinions announced December 4, 1967, and March 3, 1969, supplementing the decree entered herein on December 12, 1960, it is ordered, adjudged and decreed as follows:

1. As against the State of Texas, the United States is entitled to—

(a) All the lands, minerals and other natural resources underlying the Gulf of Mexico that are more than three marine leagues gulfward from the present or future coastline as referred to in § 2 (c) of the Submerged Lands Act, 67 Stat. 29, 43 U. S. C. § 1301 (c); and

(b) All the lands, minerals and other natural resources underlying the Gulf of Mexico, more than three geographical miles gulfward from the present or future coastline as referred to in § 2 (c) of the Submerged Lands Act, 43 U. S. C. § 1301 (c), that are gulfward of the following line:

Beginning at a point on the international boundary with Mexico (wherever that boundary may be located), three marine leagues gulfward from the point $x=2,447,033$, $y=105,994$ (Texas Plane Coordinate System, South Zone), latitude $25^{\circ}57'05.90''$ N., longitude $97^{\circ}08'22.85''$ W., and proceeding thence northwardly and eastwardly as follows:

Course	South Zone		Latitude	Longitude
	x	y		
1. By arc centered at.....	2,447,033	105,994	$25^{\circ}57'05.90''$	$97^{\circ}08'22.85''$
to.....	2,498,223	125,226	$26^{\circ}00'10.59''$	$96^{\circ}58'59.59''$
2. By straight line to.....	2,498,068	126,760	$26^{\circ}00'25.80''$	$96^{\circ}59'01.09''$

Course	South Zone		Latitude	Longitude
	x	y		
3. By arc centered at.....	2,443,661	121,256	$25^{\circ}59'37.4''$	$97^{\circ}08'58.0''$
to.....	2,497,383	131,474	$26^{\circ}01'12.56''$	$96^{\circ}59'07.98''$
4. By straight line to.....	2,497,076	135,704	$26^{\circ}01'54.49''$	$96^{\circ}59'10.78''$
5. By straight line to.....	2,497,119	137,947	$26^{\circ}02'16.70''$	$96^{\circ}59'10.02''$
6. By straight line to.....	2,497,240	139,652	$26^{\circ}02'33.58''$	$96^{\circ}59'08.47''$
7. By arc centered at.....	2,442,693	143,530	$26^{\circ}03'18.1''$	$97^{\circ}09'06.0''$
to.....	2,496,942	150,421	$26^{\circ}04'20.26''$	$96^{\circ}59'10.32''$
8. By straight line to.....	2,496,723	152,145	$26^{\circ}04'37.36''$	$96^{\circ}59'12.50''$
9. By arc centered at.....	2,442,474	145,254	$26^{\circ}03'35.2''$	$97^{\circ}09'08.2''$
to.....	2,496,370	154,510	$26^{\circ}05'00.83''$	$96^{\circ}59'16.06''$
10. By straight line to.....	2,495,553	159,267	$26^{\circ}05'48.04''$	$96^{\circ}59'24.39''$
11. By arc centered at.....	2,441,657	150,011	$26^{\circ}04'22.4''$	$97^{\circ}09'16.6''$
to.....	2,495,161	161,316	$26^{\circ}06'08.37''$	$96^{\circ}59'28.42''$
12. By straight line to.....	2,494,875	162,668	$26^{\circ}06'21.79''$	$96^{\circ}59'31.38''$
13. By straight line to.....	2,494,746	163,636	$26^{\circ}06'31.39''$	$96^{\circ}59'32.67''$
14. By straight line to.....	2,492,451	182,957	$26^{\circ}09'43.01''$	$96^{\circ}59'55.32''$
15. By arc centered at.....	2,438,148	176,509	$26^{\circ}08'45.2''$	$97^{\circ}09'52.0''$
to.....	2,492,330	183,907	$26^{\circ}09'52.44''$	$96^{\circ}59'56.52''$
16. By straight line to.....	2,490,612	196,490	$26^{\circ}11'57.26''$	$97^{\circ}00'13.74''$
17. By arc centered at.....	2,436,430	189,092	$26^{\circ}10'50.0''$	$97^{\circ}10'09.4''$
to.....	2,490,574	196,764	$26^{\circ}11'59.99''$	$97^{\circ}00'14.12''$
18. By straight line to.....	2,488,714	209,890	$26^{\circ}14'10.20''$	$97^{\circ}00'32.84''$
19. By arc centered at.....	2,434,570	202,218	$26^{\circ}13'00.2''$	$97^{\circ}10'28.3''$
to.....	2,488,423	211,722	$26^{\circ}14'28.37''$	$97^{\circ}00'35.80''$
20. By straight line to.....	2,486,399	223,191	$26^{\circ}16'22.20''$	$97^{\circ}00'56.54''$
21. By arc centered at.....	2,432,546	213,687	$26^{\circ}14'54.0''$	$97^{\circ}10'49.2''$
to.....	2,486,322	223,615	$26^{\circ}16'26.40''$	$97^{\circ}00'57.33''$
22. By straight line to.....	2,484,084	235,738	$26^{\circ}18'26.73''$	$97^{\circ}01'20.36''$
23. By arc centered at.....	2,430,308	225,810	$26^{\circ}16'54.3''$	$97^{\circ}11'12.4''$
to.....	2,483,535	238,353	$26^{\circ}18'52.69''$	$97^{\circ}01'26.05''$
24. By straight line to.....	2,478,947	257,823	$26^{\circ}22'06.05''$	$97^{\circ}02'13.99''$
25. By arc centered at.....	2,425,720	245,280	$26^{\circ}20'07.6''$	$97^{\circ}12'00.6''$
to.....	2,478,775	258,531	$26^{\circ}22'13.09''$	$97^{\circ}02'15.79''$
26. By straight line to.....	2,475,739	270,687	$26^{\circ}24'13.83''$	$97^{\circ}02'47.63''$
27. By arc centered at.....	2,422,684	257,436	$26^{\circ}22'08.3''$	$97^{\circ}12'32.6''$
to.....	2,475,708	270,811	$26^{\circ}24'15.06''$	$97^{\circ}02'47.96''$
28. By straight line to.....	2,472,116	285,051	$26^{\circ}26'36.50''$	$97^{\circ}03'25.67''$
29. By arc centered at.....	2,419,092	271,676	$26^{\circ}24'29.7''$	$97^{\circ}13'10.5''$
to.....	2,471,287	287,990	$26^{\circ}27'05.71''$	$97^{\circ}03'34.42''$
30. By straight line to.....	2,466,585	303,033	$26^{\circ}29'35.22''$	$97^{\circ}04'24.28''$
31. By straight line to.....	2,461,419	319,706	$26^{\circ}32'20.92''$	$97^{\circ}05'19.08''$
32. By arc centered at.....	2,409,184	303,522	$26^{\circ}29'46.1''$	$97^{\circ}14'56.0''$
to.....	2,461,209	320,369	$26^{\circ}32'27.52''$	$97^{\circ}05'21.31''$
33. By straight line to.....	2,450,926	352,124	$26^{\circ}37'43.15''$	$97^{\circ}07'10.71''$
34. By arc centered at.....	2,398,901	335,277	$26^{\circ}35'01.6''$	$97^{\circ}16'45.8''$
to.....	2,449,710	355,498	$26^{\circ}38'16.70''$	$97^{\circ}07'23.71''$
35. By straight line to.....	2,447,122	362,000	$26^{\circ}39'21.38''$	$97^{\circ}07'51.45''$
36. By straight line to.....	2,445,524	366,527	$26^{\circ}40'06.38''$	$97^{\circ}08'06.52''$
37. By straight line to.....	2,442,108	376,994	$26^{\circ}41'50.42''$	$97^{\circ}08'44.95''$
38. By straight line to.....	2,437,787	392,060	$26^{\circ}44'20.08''$	$97^{\circ}09'30.83''$
39. By straight line to.....	2,437,079	394,740	$26^{\circ}44'46.70''$	$97^{\circ}09'38.32''$
40. By arc centered at.....	2,384,205	380,784	$26^{\circ}42'33.7''$	$97^{\circ}19'23.0''$
to.....	2,435,953	398,463	$26^{\circ}45'23.70''$	$97^{\circ}09'50.30''$

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Course	South Zone		Latitude	Longitude
	x	y		
41. By straight line to.....	2, 435, 511	399, 759	26°45'36.57"	97°09'55.03"
42. By straight line to.....	2, 432, 474	410, 567	26°47'23.94"	97°10'27.28"
43. By straight line to.....	2, 427, 617	431, 540	26°50'52.15"	97°11'18.47"
44. By straight line to.....	2, 424, 278	447, 618	26°53'31.73"	97°11'53.51"
45. By straight line to.....	2, 422, 538	459, 109	26°55'25.72"	97°12'11.42"
46. By arc centered at.....	2, 368, 469	450, 923	26°54'09.8"	97°22'09.6"
to.....	2, 422, 177	461, 213	26°55'46.59"	97°12'15.17"
47. By straight line to.....	2, 421, 519	468, 580	26°56'11.43"	97°12'22.16"
48. By arc centered at.....	2, 367, 051	463, 714	26°56'16.6"	97°22'24.0"
to.....	2, 421, 383	469, 914	26°57'12.85"	97°12'22.95"
49. By straight line to.....	2, 420, 872	474, 392	26°57'57.25"	97°12'28.09"
50. By arc centered at.....	2, 366, 540	468, 192	26°57'01.0"	97°22'29.2"
to.....	2, 420, 613	476, 347	26°58'16.64"	97°12'30.73"
51. By straight line to.....	2, 419, 889	487, 832	27°00'10.46"	97°12'37.44"
52. By straight line to.....	2, 419, 593	493, 822	27°01'09.82"	97°12'40.04"
53. By straight line to.....	2, 419, 571	498, 661	27°01'57.74"	97°12'39.73"
54. By arc centered at.....	2, 364, 887	498, 418	27°02'00.5"	97°22'44.5"
to.....	2, 419, 564	499, 351	27°02'04.57"	97°12'39.74"
55. By straight line to.....	2, 419, 442	506, 501	27°03'15.40"	97°12'40.28"
56. By straight line to.....	2, 419, 750	514, 047	27°04'30.10"	97°12'36.02"
57. By straight line to.....	2, 419, 951	517, 831	27°05'07.56"	97°12'33.36"
58. By straight line to.....	2, 420, 165	521, 009	27°05'39.01"	97°12'30.64"
59. By arc centered at.....	2, 365, 603	524, 676	27°06'20.5"	97°22'34.0"
to.....	2, 420, 260	522, 916	27°05'57.88"	97°12'29.38"
60. By straight line to.....	2, 420, 367	526, 247	27°06'30.86"	97°12'27.81"
61. By straight line to.....	2, 421, 336	538, 406	27°08'31.18"	97°12'15.70"
62. By arc centered at.....	2, 366, 824	542, 751	27°09'19.4"	97°22'18.7"
to.....	2, 421, 429	539, 789	27°08'44.87"	97°12'14.52"
63. By straight line to.....	2, 421, 449	540, 167	27°08'48.61"	97°12'14.25"
64. By straight line to.....	2, 421, 591	540, 986	27°08'56.71"	97°12'12.59"
65. By arc centered at.....	2, 367, 705	550, 301	27°10'34.1"	97°22'08.2"
to.....	2, 422, 109	544, 769	27°09'34.13"	97°12'06.42"
66. By straight line to.....	2, 422, 522	548, 828	27°10'14.28"	97°12'01.39"
67. By straight line to.....	2, 422, 909	550, 953	27°10'35.28"	97°11'56.86"
68. By arc centered at.....	2, 369, 110	560, 755	27°12'17.5"	97°21'51.6"
to.....	2, 423, 074	551, 906	27°10'44.71"	97°11'54.92"
69. By straight line to.....	2, 423, 600	555, 114	27°11'16.42"	97°11'48.73"
70. By straight line to.....	2, 425, 604	565, 501	27°12'59.09"	97°11'25.35"
71. By straight line to.....	2, 425, 955	567, 201	27°13'15.88"	97°11'21.27"
72. By straight line to.....	2, 430, 188	585, 397	27°16'15.65"	97°10'32.26"
73. By straight line to.....	2, 435, 271	602, 898	27°19'08.44"	97°09'33.87"
74. By straight line to.....	2, 437, 860	611, 265	27°20'31.02"	97°09'04.17"
75. By straight line to.....	2, 440, 773	619, 882	27°21'56.05"	97°08'30.84"
76. By straight line to.....	2, 443, 622	627, 687	27°23'13.04"	97°07'58.31"
77. By straight line to.....	2, 449, 412	641, 292	27°25'27.14"	97°06'52.41"
78. By straight line to.....	2, 455, 945	656, 139	27°27'53.45"	97°05'38.08"
79. By straight line to.....	2, 459, 158	662, 847	27°28'59.52"	97°05'01.59"
80. By straight line to.....	2, 400, 858	666, 346	27°29'33.99"	97°04'42.27"
81. By arc centered at.....	2, 419, 058	701, 605	27°35'27.6"	97°12'22.4"
to.....	2, 468, 926	679, 163	27°31'40.01"	97°03'11.05"
82. By straight line to.....	2, 473, 113	688, 467	27°33'11.66"	97°02'23.35"
83. By arc centered at.....	2, 423, 245	710, 909	27°36'59.3"	97°11'34.8"
to.....	2, 477, 118	701, 518	27°35'20.43"	97°01'37.17"

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or
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Course	South Zone		Latitude	Longitude
	<i>x</i>	<i>y</i>		
84. By straight line to.....	2, 477, 226	701, 748	27°35'22.70"	97°01'35.93"
85. By straight line to.....	2, 484, 830	715, 453	27°37'37.53"	97°00'09.62"
86. By straight line to.....	2, 492, 830	728, 654	27°39'47.30"	96°58'38.91"
87. By straight line to.....	2, 503, 178	744, 730	27°42'25.23"	96°56'41.63"
88. By straight line to.....	2, 511, 491	757, 057	27°44'26.26"	96°55'07.44"
89. By straight line to.....	2, 515, 272	762, 240	27°45'17.11"	96°54'24.63"
90. By arc centered at.....	2, 471, 092	794, 467	27°50'41.5"	97°02'32.2"
to.....	2, 522, 680	776, 327	27°47'35.66"	96°53'00.17"
91. By straight line to.....	2, 523, 498	778, 651	27°47'58.57"	96°52'50.74"
92. By straight line to.....	2, 523, 986	779, 631	27°48'08.21"	96°52'45.16"
93. By straight line to.....	2, 526, 031	782, 992	27°48'41.29"	96°52'22.00"
94. By straight line to.....	2, 535, 804	796, 133	-----	-----

Course	South Central Zone		Latitude	Longitude
	<i>x</i>	<i>y</i>		
(Repeating two courses)				
93. By straight line to.....	2, 687, 786	—1, 695	-----	-----
94. By straight line to.....	2, 697, 492	11, 498	27°50'50.13"	96°50'31.25"
95. By straight line to.....	2, 705, 230	21, 472	27°52'27.43"	96°49'03.01"
96. By straight line to.....	2, 710, 958	28, 002	27°53'31.00"	96°47'57.84"
97. By arc centered at.....	2, 669, 848	64, 063	27°59'35.4"	96°55'28.7"
to.....	2, 712, 719	30, 115	27°53'51.59"	96°47'37.77"
98. By straight line to.....	2, 714, 852	32, 807	27°54'17.84"	96°47'13.45"
99. By straight line to.....	2, 720, 377	38, 910	27°55'17.21"	96°46'10.59"
100. By straight line to.....	2, 724, 705	43, 579	27°56'02.60"	96°45'21.36"
101. By straight line to.....	2, 727, 377	46, 418	27°56'30.20"	96°44'50.97"
102. By arc centered at.....	2, 691, 713	87, 873	28°03'27.2"	96°51'20.0"
to.....	2, 733, 517	52, 619	27°57'30.40"	96°43'41.20"
103. By straight line to.....	2, 745, 287	64, 045	27°59'21.23"	96°41'27.48"
104. By straight line to.....	2, 759, 114	76, 842	28°01'25.17"	96°38'50.43"
105. By straight line to.....	2, 760, 917	78, 432	28°01'40.55"	96°38'29.96"
106. By straight line to.....	2, 775, 278	90, 137	28°03'33.53"	96°35'47.09"
107. By straight line to.....	2, 780, 827	94, 573	28°04'16.30"	96°34'44.15"
108. By arc centered at.....	2, 746, 685	137, 290	28°11'26.0"	96°40'55.7"
to.....	2, 782, 550	96, 009	28°04'30.16"	96°34'24.59"
109. By straight line to.....	2, 783, 852	97, 140	28°04'41.08"	96°34'09.80"
110. By straight line to.....	2, 791, 476	102, 789	28°05'35.43"	96°32'43.40"
111. By straight line to.....	2, 800, 074	109, 137	28°06'36.47"	96°31'05.92"
112. By straight line to.....	2, 807, 482	114, 230	28°07'25.32"	96°29'42.01"
113. By straight line to.....	2, 814, 202	118, 283	28°08'04.00"	96°28'26.00"
114. By arc centered at.....	2, 785, 963	165, 112	28°15'53.5"	96°33'30.4"
to.....	2, 815, 384	119, 016	28°08'11.01"	96°28'12.63"
115. By straight line to.....	2, 824, 561	124, 874	28°09'07.01"	96°26'28.73"
116. By straight line to.....	2, 831, 319	128, 676	28°09'43.18"	96°25'12.32"
117. By straight line to.....	2, 836, 670	131, 276	28°10'07.75"	96°24'11.92"
118. By straight line to.....	2, 839, 197	132, 254	28°10'16.87"	96°23'43.45"
119. By arc centered at.....	2, 819, 460	183, 253	28°18'46.0"	96°27'11.5"
to.....	2, 840, 053	132, 594	28°10'20.04"	96°23'33.80"
120. By straight line to.....	2, 844, 564	134, 428	28°10'37.20"	96°22'42.95"
121. By straight line to.....	2, 846, 278	135, 087	28°10'43.34"	96°22'23.64"

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Course	South Central Zone		Latitude	Longitude
	x	y		
122. By arc centered at.....	2,833,368	188,226	28°19'32.2"	96°24'34.7"
to.....	2,864,032	142,947	28°11'57.16"	96°19'03.31"
123. By straight line to.....	2,865,389	143,866	28°12'05.95"	96°18'47.92"
124. By arc centered at.....	2,834,725	189,145	28°19'41.0"	96°24'19.3"
to.....	2,879,517	157,775	28°14'20.38"	96°16'06.44"
125. By straight line to.....	2,880,106	158,616	28°14'28.57"	96°15'59.64"
126. By arc centered at.....	2,835,314	189,986	28°19'49.2"	96°24'12.5"
to.....	2,883,104	163,406	28°15'15.29"	96°15'24.87"
127. By straight line to.....	2,885,158	167,099	28°15'51.36"	96°15'00.94"
128. By arc centered at.....	2,837,368	193,679	28°20'25.3"	96°23'48.6"
to.....	2,886,819	170,332	28°16'22.99"	96°14'41.53"
129. By straight line to.....	2,890,783	177,022	28°17'28.27"	96°13'55.43"
130. By arc centered at.....	2,843,740	204,903	28°22'15.0"	96°22'34.5"
to.....	2,893,218	181,614	28°18'13.16"	96°13'26.99"
131. By straight line to.....	2,899,305	186,971	28°19'04.75"	96°12'17.48"
131a. By straight line to.....	2,899,402	187,052	28°19'05.53"	96°12'16.38"
132. By straight line to.....	2,908,291	193,515	28°20'07.38"	96°10'35.21"
133. By straight line to.....	2,912,716	196,355	28°20'34.44"	96°09'44.93"
134. By straight line to.....	2,927,833	205,781	28°22'04.06"	96°06'53.21"
135. By straight line to.....	2,936,888	211,198	28°22'55.48"	96°05'10.38"
136. By straight line to.....	2,950,886	219,194	28°24'11.14"	96°02'31.45"
137. By straight line to.....	2,961,311	224,721	28°25'03.23"	96°00'33.18"
138. By straight line to.....	2,978,776	233,372	28°26'24.39"	95°57'15.13"
139. By straight line to.....	2,987,582	237,367	28°27'01.65"	95°55'35.35"
140. By arc centered at.....	2,964,991	287,167	28°35'20.4"	95°59'34.0"
to.....	2,988,795	237,935	28°27'06.96"	95°55'21.60"
141. By straight line to.....	2,998,740	242,743	28°27'51.95"	95°53'28.80"
142. By straight line to.....	3,002,406	244,493	28°28'08.31"	95°52'47.22"
143. By straight line to.....	3,005,833	246,002	28°28'22.33"	95°52'08.38"
144. By arc centered at.....	2,983,797	296,051	28°36'43.5"	95°56'00.5"
to.....	3,007,526	246,783	28°28'29.61"	95°51'49.18"
145. By straight line to.....	3,026,416	255,881	28°29'54.60"	95°48'14.81"
146. By arc centered at.....	3,002,687	305,149	28°38'08.6"	95°52'25.9"
to.....	3,028,326	256,847	28°30'03.64"	95°47'53.12"
147. By straight line to.....	3,047,657	267,108	28°31'39.91"	95°44'13.33"
148. By arc centered at.....	3,022,018	315,410	28°39'45.0"	95°48'45.9"
to.....	3,048,496	267,563	28°31'44.18"	95°44'03.79"
149. By straight line to.....	3,059,100	273,431	28°32'39.31"	95°42'03.10"
150. By arc centered at.....	3,032,622	321,278	28°40'40.2"	95°46'45.1"
to.....	3,060,936	274,494	28°32'49.32"	95°41'42.19"
151. By straight line to.....	3,078,889	285,359	28°34'31.79"	95°38'17.46"
152. By arc centered at.....	3,050,575	332,143	28°42'22.8"	95°43'20.2"
to.....	3,080,687	286,496	28°34'42.53"	95°37'56.93"
153. By straight line to.....	3,064,317	288,890	28°35'05.20"	95°37'15.45"
154. By straight line to.....	3,092,292	293,735	28°35'50.86"	95°35'44.46"
155. By arc centered at.....	3,063,896	340,470	28°43'41.5"	95°40'48.0"
to.....	3,092,642	293,950	28°35'52.89"	95°35'40.46"
156. By straight line to.....	3,110,764	305,148	28°37'38.45"	95°32'13.53"
157. By arc centered at.....	3,082,018	351,668	28°45'27.2"	95°37'20.9"
to.....	3,111,027	305,312	28°37'39.99"	95°32'10.52"
158. By straight line to.....	3,128,977	316,545	28°39'25.86"	95°28'45.39"
159. By arc centered at.....	3,099,968	362,901	28°47'13.2"	95°33'55.6"
to.....	3,129,951	317,169	28°39'31.75"	95°28'34.25"

Course	South Central Zone		Latitude	Longitude
	x	y		
160. By straight line to.....	3,152,081	331,678	28°41'48.68"	95°24'20.95"
161. By arc centered at.....	3,122,098	377,410	28°49'30.3"	95°20'42.1"
to.....	3,153,769	332,830	28°41'59.57"	95°24'01.60"
162. By straight line to.....	3,158,904	336,478	28°42'34.10"	95°23'02.71"
163. By straight line to.....	3,168,664	342,866	28°43'34.32"	95°21'10.91"
164. By arc centered at.....	3,138,717	388,622	28°51'16.3"	95°26'31.5"
to.....	3,172,530	345,644	28°44'00.62"	95°20'26.53"
165. By straight line to.....	3,177,771	349,049	28°44'32.69"	95°19'26.48"
166. By arc centered at.....	3,147,981	394,907	28°52'15.7"	95°24'45.2"
to.....	3,178,426	349,481	28°44'36.76"	95°19'18.98"
167. By straight line to.....	3,184,351	353,452	28°45'14.21"	95°18'11.04"
168. By arc centered at.....	3,153,906	398,878	28°52'53.2"	95°23'37.2"
to.....	3,185,298	354,101	28°45'20.34"	95°18'00.17"
169. By straight line to.....	3,196,291	361,808	28°46'33.16"	95°15'53.96"
170. By arc centered at.....	3,164,899	406,585	28°54'06.1"	95°21'30.9"
to.....	3,197,099	362,386	28°46'38.61"	95°15'44.67"
171. By straight line to.....	3,203,248	366,865	28°47'21.00"	95°14'33.99"
171a. By straight line to.....	3,203,445	366,995	28°47'22.22"	95°14'31.73"
172. By straight line to.....	3,205,264	368,190	28°47'33.46"	95°14'10.87"
173. By arc centered at.....	3,182,950	418,115	28°55'54.6"	95°18'03.8"
to.....	3,213,259	372,598	28°48'14.53"	95°12'39.45"
174. By straight line to.....	3,214,103	373,160	28°48'19.82"	95°12'29.76"
175. By arc centered at.....	3,183,794	418,677	28°55'59.9"	95°17'54.1"
to.....	3,230,736	390,625	28°51'07.29"	95°09'16.44"
176. By straight line to.....	3,240,421	399,503	28°52'31.99"	95°07'24.28"
177. By straight line to.....	3,258,176	414,679	28°54'56.30"	95°03'58.91"
178. By straight line to.....	3,262,578	418,206	28°55'29.73"	95°03'08.07"
179. By straight line to.....	3,266,484	420,949	28°55'55.57"	95°02'23.08"
180. By arc centered at.....	3,239,802	468,683	29°03'56.8"	95°07'05.4"
to.....	3,282,040	433,949	28°57'58.97"	94°59'23.10"
181. By straight line to.....	3,282,364	434,343	28°58'02.76"	94°59'19.30"
182. By arc centered at.....	3,240,126	469,077	29°04'00.6"	95°07'01.6"
to.....	3,290,005	446,661	29°00'02.05"	94°57'48.53"
183. By straight line to.....	3,296,652	452,104	29°00'53.63"	94°56'31.59"
184. By straight line to.....	3,302,419	456,606	29°01'36.20"	94°55'24.90"
185. By straight line to.....	3,315,160	466,352	29°03'08.22"	94°52'57.60"
186. By straight line to.....	3,320,930	470,564	29°03'47.89"	94°51'50.94"
187. By straight line to.....	3,328,195	475,602	29°04'35.19"	94°50'27.11"
188. By straight line to.....	3,342,587	484,679	29°05'59.91"	94°47'41.32"
189. By arc centered at.....	3,313,417	530,934	29°13'47.9"	94°52'51.6"
to.....	3,345,594	486,717	29°06'19.02"	94°47'06.62"
190. By straight line to.....	3,350,192	490,063	29°06'50.48"	94°46'13.45"
191. By arc centered at.....	3,318,015	534,280	29°14'19.4"	94°51'58.4"
to.....	3,351,664	491,173	29°07'00.94"	94°45'56.41"
192. By straight line to.....	3,366,438	502,706	29°08'49.73"	94°43'05.18"
193. By straight line to.....	3,373,759	508,167	29°09'41.10"	94°41'40.41"
194. By arc centered at.....	3,341,062	552,000	29°17'06.6"	94°47'31.2"
to.....	3,376,113	510,025	29°09'58.63"	94°41'13.09"
195. By straight line to.....	3,379,502	512,855	29°10'25.40"	94°40'33.71"
196. By arc centered at.....	3,344,451	554,830	29°17'33.4"	94°46'51.8"
to.....	3,382,463	515,517	29°10'50.64"	94°39'59.22"
197. By straight line to.....	3,385,938	518,877	29°11'22.61"	94°39'18.63"

Course	South Central Zone		Latitude	Longitude
	x	y		
198. By arc centered at.....	3,347,926	558,190	29°18'05.4"	94°46'11.2"
to	3,393,316	527,691	29°12'47.10"	94°37'51.73"
199. By straight line to.....	3,394,123	528,892	29°12'58.69"	94°37'42.12"
200. By arc centered at.....	3,348,733	559,391	29°18'17.0"	94°46'01.6"
to	3,399,047	537,969	29°14'26.68"	94°36'42.74"
201. By straight line to.....	3,399,847	539,848	29°14'44.97"	94°36'32.92"
202. By arc centered at.....	3,349,533	561,270	29°18'35.3"	94°45'51.8"
to	3,401,544	544,379	29°15'29.17"	94°36'11.86"
203. By straight line to.....	3,402,301	546,710	29°15'51.96"	94°36'02.32"
204. By arc centered at.....	3,350,290	563,601	29°18'58.1"	94°45'42.3"
to	3,404,498	556,395	29°17'26.97"	94°35'33.41"
205. By straight line to.....	3,404,670	557,758	29°17'40.38"	94°35'30.79"
206. By straight line to.....	3,405,303	558,363	29°17'46.13"	94°35'23.49"
207. By straight line to.....	3,407,136	559,951	29°18'01.16"	94°35'02.12"
208. By straight line to.....	3,409,314	561,570	29°18'16.36"	94°34'36.85"
209. By straight line to.....	3,413,751	564,517	29°18'43.86"	94°33'45.50"
210. By straight line to.....	3,421,690	569,297	29°19'28.16"	94°32'13.83"
211. By straight line to.....	3,429,293	573,476	29°20'06.63"	94°30'46.17"
212. By straight line to.....	3,447,430	582,437	29°21'28.35"	94°27'17.47"
213. By straight line to.....	3,466,717	591,592	29°22'51.47"	94°23'35.58"
214. By arc centered at.....	3,443,267	640,994	29°31'09.3"	94°27'38.8"
to	3,467,072	591,762	29°22'53.01"	94°23'31.50"
215. By straight line to.....	3,480,531	598,270	29°23'52.12"	94°20'56.55"
216. By straight line to.....	3,497,178	605,998	29°25'01.98"	94°17'44.98"
217. By arc centered at.....	3,474,153	655,599	29°33'21.8"	94°21'42.9"
to	3,497,492	606,145	29°25'03.31"	94°17'41.36"
218. By straight line to.....	3,512,863	613,399	29°26'08.92"	94°14'44.35"
219. By arc centered at.....	3,489,524	662,853	29°34'27.5"	94°18'45.7"
to	3,513,624	613,765	29°26'12.24"	94°14'35.58"
220. By straight line to.....	3,530,376	621,990	29°27'26.82"	94°11'22.44"
221. By straight line to.....	3,554,680	633,780	29°29'13.49"	94°06'42.17"
222. By arc centered at.....	3,530,811	682,981	29°37'30.0"	94°10'49.1"
to	3,555,470	634,171	29°29'17.03"	94°06'33.05"
223. By straight line to.....	3,571,673	642,357	29°30'31.26"	94°03'25.94"
224. By straight line to.....	3,579,924	646,355	29°31'07.35"	94°01'50.72"
225. By arc centered at.....	3,564,669	698,869	29°39'53.2"	94°04'18.2"
to	3,583,947	647,695	29°31'18.91"	94°01'04.58"
226. By arc centered at.....	3,570,700	700,751	29°40'09.3"	94°03'09.0"
to	3,583,971	647,701	29°31'18.96"	94°01'04.31"
227. By arc centered at.....	3,585,544	702,363	29°40'19.0"	94°00'20.1"
to	3,587,641	647,718	29°31'17.55"	94°00'22.79"
228. By arc centered at.....	3,588,465	702,397	29°40'18.1"	93°59'47.0"
to	3,597,166	648,409	29°31'20.37"	93°58'34.73"
229. By arc centered at.....	3,598,298	703,082	29°40'20.7"	93°57'55.3"
to	3,611,182	649,936	29°31'29.50"	93°55'55.45"
230. By arc centered at.....	3,616,758	704,337	29°40'25.2"	93°54'25.6"
to	3,617,980	649,666	29°31'23.90"	93°54'38.73"
231. By straight line to.....	3,622,052	649,757	29°31'23.04"	93°53'52.62"
232. By straight line to.....	3,628,661	649,851	29°31'21.11"	93°52'37.85"
233. By arc centered at.....	3,627,884	704,530	29°40'22.3"	93°52'19.5"
to	3,632,508	650,041	29°31'21.32"	93°51'54.24"
234. By straight line to.....	3,634,971	650,250	29°31'22.32"	93°51'26.29"

Course	South Central Zone		Latitude	Longitude
	x	y		
235. By arc centered at.....	3,630,347	704,739	29°40'23.3"	93°51'51.5"
to	3,651,368	654,256	29°31'54.77"	93°48'18.84"
236. By straight line to.....	3,653,430	655,115	29°32'02.36"	93°47'55.08"
237. By arc centered at.....	3,632,410	705,598	29°40'30.9"	93°51'27.7"
to	3,663,602	660,681	29°32'52.93"	93°45'57.22"
238. By straight line to.....	3,664,862	661,556	29°33'01.02"	93°45'42.53"
239. By arc centered at.....	3,633,670	706,473	29°40'39.0"	93°51'13.0"
to	3,677,669	674,000	29°34'58.40"	93°43'11.30"
240. By straight line to.....	3,678,810	675,546	29°35'13.18"	93°42'57.60"
241. By arc centered at.....	3,634,811	708,019	29°40'53.8"	93°50'59.3"
to	3,680,595	678,115	29°35'37.80"	93°42'36.06"
242. By straight line to.....	3,686,069	686,496	29°36'58.24"	93°41'29.83"

The State of Texas is not entitled to any interest in such lands, minerals or resources, and said State, its privies, assigns, lessees and other persons claiming under it are hereby enjoined from interfering with the rights of the United States in such lands, minerals and resources.

2. As against the United States, with the exceptions provided by § 5 of the Submerged Lands Act, 43 U. S. C. § 1313, the State of Texas is entitled to—

(a) All the lands, minerals and other natural resources underlying the Gulf of Mexico, bounded on the south by the international boundary with Mexico and on the east by the western boundary of Louisiana and an extension thereof, that are within three geographical miles from the present or future coastline as referred to in § 2 (c) of the Submerged Lands Act, 43 U. S. C. § 1301 (c); and

(b) All the lands, minerals and other natural resources underlying the Gulf of Mexico, bounded on the south by the international boundary with Mexico and on the east by the western boundary of Louisiana and an extension thereof, less than three marine leagues gulfward from the present or future coastline as referred to in § 2 (c) of the Submerged Lands Act, 43 U. S. C. § 1301 (c), that are landward of the line described in paragraph 1 (b) hereof.

3. As used herein—

(a) "Geographical mile" means a distance of 1852 meters (6076.10333 . . . U. S. Survey Feet or approximately 6076.11549 International Feet);

(b) "Marine league" means a distance of three geographical miles;

(c) Plane coordinates refer to the Texas Coordinate Systems, South Zone or South Central Zone, as indicated.

(d) Latitudes and longitudes refer to the North American 1927 Datum.

(e) All distances referred to herein are expressed at grid scale, Texas Plane Coordinate Systems.

4. The Court retains jurisdiction to entertain such further proceedings, enter such orders, and issue such writs as may from time to time be deemed necessary or advisable to give proper force and effect to this decree, or to the decree of December 12, 1960, herein, or to effectuate the rights of the parties in the premises.

THE CHIEF JUSTICE and MR. JUSTICE MARSHALL took no part in the consideration or formulation of this Supplemental Decree.