THE ECONOMIC DEVELOPMENT OF THE RIO GRANDE PLAIN

Thesis

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CHAPTER I

PHYSICAL ASPECTS

Introduction

The study of the economic development of the Rio Grande Plain has been divided into the following seven chapters:

In each chapter except Chapters I and VII, effort has been made to locate the origin of that particular industry and trace its development.

In order to understand the development in the raising of livestock, farming, transportation, natural resources, and the growth of major cities of the region, it would be well to understand the physical aspects of the region.

Boundaries of the Region

The Rio Grande Plain is bordered on the southwest by the Rio Grande, starting near the mouth of Devil's River and following the Rio Grande to the Gulf of Mexico below the present city of Brownsville. On the north one can follow the Balcones Escarpment to a point north of the present city of San Antonio. From that point north of San Antonio one may
RIO GRANDE PLAIN

KEY

- Denotes Cities
--- Northeastern Boundary

Scale: 50 miles to the inch

0 50 100 150
go in a northeastward direction to the east fork of the San Antonio River and down that stream to the northern county line of Wilson County. From this point the boundary of the Rio Grande Plain follows a southeastward direction to the Guadalupe River at the DeWitt and Victoria County lines. At this point the line turns southwest through Goliad County to the San Antonio River, continuing southwest until it meets the Bee County line on the northeast. From the Bee County line the boundary stretches southeast to the Refugio County line and turns east, cutting across the northeast portion of Refugio County, which is in the Coastal Prairies Region. This direction leads again to the San Antonio River just north of its juncture with the Guadalupe River. To complete the southeast boundary of the region one follows these two rivers to San Antonio Bay. On the east the region is bordered by the Gulf of Mexico. (See Map I on page 2)

The Texas Almanac 1949-1950 defines the boundaries of the region in a more concise manner:

The Rio Grande Plain, sometimes called the Rio Grande Embayment, is that portion of the Coastal Plains lying between tidewater and the Balcones Escarpment from southeast to northwest, and between the San Antonio River and the Rio Grande from northeast to southwest.1

Another brief description of the boundaries of the region states:

The Rio Grande forms the entire southern and western boundaries of the region, and the limestone highland known as the Edwards Plateau forms the northern boundary. On the

1Texas Almanac 1949-1950, p. 155.
northeast this region meets the Blackland Prairies, the East Texas Agriculture Region, and the Gulf of Mexico.\textsuperscript{2}

General Description of the Region

From the Gulf of Mexico inland the land gradually becomes higher until it reaches an elevation of approximately 800 to 900 feet at the base of the Edwards Plateau. All the central and much of the northern part of the region is gently rolling, but in the southeast a broad belt of almost level land extends along the shore. The most rugged section is in the southwest and west, where the land slopes down to the Rio Grande. The general slope of the region is eastward; however, farther down the Rio Grande the land is of delta origin and has been built up higher near the river than elsewhere. There are a few escarpments in the region, but not so prominent or numerous as some of those in other regions of Texas.

The Rio Grande Plain Region has an area of approximately "22,000,000 acres included in 34 counties, some of which are wholly and others partly within the plain."\textsuperscript{3}

The native trees consist of mesquite, scrub oak, pecan, hackberry, elm, and many other types of trees. The larger varieties of trees are found in the river bottoms; the mesquite and scrub oaks are found nearly all over the region, widely scattered in places but in some sections very thick. "Various

\textsuperscript{2}W. T. Chambers, \textit{The Geography of Texas}, p. 111.

\textsuperscript{3}W. T. Carter, \textit{The Soils of Texas}, p. 88.
thorny shrubs of many species grow abundantly in all sections, and are commonly included in the general term 'Chaparral.'\(^4\)

Because the region is generally covered with these scrub oak and shrubs it has been given the name "Brush Country."\(^5\)

There are many different species of grasses, including "Andropogons, needle grass, grama grass, and many others on the lighter soils, while buffalo, mesquite, and some species of grama and others abound on the heavy soils."\(^6\)

**Climate and Soils**

The climate is mild, almost tropical, and seldom is there a snow or blizzard, though occasionally a norther will sweep down across the region, dropping the temperature to the freezing point. The winters as a rule are pleasant. During the summer months the days are usually hot, but the nights are usually cool, because of the Gulf breeze.

"The average annual temperature in the northern part is about 68° F. and in the extreme southern part 74° F."\(^7\) Computation based on figures from the thirty-four counties in the region shows the average temperature is 70.26° for the region. (See Table 1)

---


\(^7\)Carter, *op. cit.*, p. 88.
Occasional thunderstorms travel across the region and from many of them the rainfall is very great. Creeks that have been dry for months thus come to contain for a few hours roaring and impassable streams. Computation based on figures from the thirty-four counties shows the average rainfall is about 25.64 inches. (See Table 1)

The prevailing wind throughout the region is from the southeast. This wind, which is of the monsoon type, is as persistent in the winter as in the summer. During the autumn, winter, and spring months there are occasional north winds, which are generally called "northerns."

There are several different types of soils in the Rio Grande Plain with many different characteristics. These soils on the basis of soil characteristics have been grouped as follows:

(1) dark-colored soils (Victoria-Goliad-Orelia group); (2) light-brown soils (Maverick-Zapata group); (3) light-colored soils (Brennan-Nueces group); (4) red soils (Duval-Webb group); (5) semi-marshy soils (Lomaita-Point Isabel group); and (6) alluvial soils comprising the Frio-Leona, Rio Grande-Laredo and Harlingen-Gila sub-groups. 8

The dark-colored soils "probably occupy around 8,500,000 acres of land in this region," 9 and produce such crops as cotton, corn, feed crops, truck crops, and citrus fruits. The light brown soils in the region "aggregate approximately 3,000,000 acres," 10 producing some crops but mostly range forage.

8 Carter, op. cit., pp. 91-92.
9 Ibid., p. 95.
10 Ibid., p. 101.
The light-colored soils "occupy about 5,200,000 acres,"\textsuperscript{11} producing crops of cotton, truck crops, vine crops, feed crops, and some citrus fruits. The red-soils region "occupies approximately 5,000,000 acres,"\textsuperscript{12} and produces about the same crops as the light-colored soils. The semi-marshy soils probably cover about 300,000 acres in the region,\textsuperscript{13} and are used partly for range land.

In regard to the characteristics of soils of the plain region, it is to be noted that:

the prevailing warmer and drier climate of the Rio Grande Plain, with a different character of vegetative growth, gives rise to soil developing processes which differ from those of the humid region, and the resulting soils differ in some of their chief characteristics.\textsuperscript{14}

The region has large areas of soils well suited to many different crops, as has been mentioned, but the crop yield is in proportion to the amount of moisture. Where irrigation is in use the yield is very great, as in the Lower Rio Grande Valley where irrigation is practiced extensively. There is much being done in the way of conservation to improve the soils of the region, which will increase agricultural yield.

Water Resources

The water resources of the region, as compared with other regions, are scanty. There are three main rivers of the Rio Grande Plain, the Rio Grande, the Nueces, and the San Antonio.

\textsuperscript{11}Ibid., p. 102. \textsuperscript{12}Ibid., p. 104. \textsuperscript{13}Ibid., p. 106. \textsuperscript{14}Ibid., p. 91.
Two of these, the Nueces and the San Antonio, are spring-fed streams. The Rio Grande near its source has the appearance of a snow-fed or spring-fed stream, but after it reaches the Rio Grande Plain area it has the appearance of a desert stream. These three streams drain an area of approximately 61,946 square miles within the Rio Grande Plain.

There are many smaller rivers within the Rio Grande Plain, but most of them are tributaries of the Rio Grande, the Nueces, and the San Antonio.

The Rio Grande, one of the longest rivers of North America, has its source in San Luis Valley, Colorado, from where it courses its way through the arid regions of New Mexico and from the northwest corner forms the Texas boundary, thus becoming an international stream. "Its flow is very erratic, varying from slight flow to floods in excess of 600,000 cubic feet a second."15 At the present time the Rio Grande is sometimes dry in its lower course and sometimes flooded by large quantities of water flowing into the sea. It is believed that if this water that flows into the sea could be impounded, "it might irrigate 2,000,000 acres in the lower Rio Grande Valley, where now only about 500,000 acres are irrigated."16 However, any project of this type would have to be worked out between the United States and Mexico. In the last few years

15J. R. Smith, Men and Resources, p. 233.
16Ibid., p. 233.
there has been considerable effort to work out a plan between the two governments concerning the impounding and use of the water of the "fickle" Rio Grande.

There are dams along the Rio Grande now, but not so many as there should be, because there are water shortages during the times of low flow of the Rio Grande in the Lower Valley. On May 18, 1950, citizens of the Lower Rio Grande made demands on Mexico for more water. The following extract bears out this fact:

The Rio Grande Valley Water Conservation Association Thursday made its third appeal to Mexico for a release of 500 second feet per day of water from Marte R. Gomez Reservoir.

The contribution from Marte Gomez Reservoir to the dwindling Rio Grande was stopped after last week-end's rains. The shortage had developed anew, however, and added supply from Mexico is needed, C. B. Cramer, president of the association, said.

Meanwhile the association rationing committee set 4½ second feet a 1,000 acres irrigated as the daily allotment of pumping stations along the river.¹⁷

The water from the Rio Grande is the "life blood of the multi-million dollar Valley agricultural industry."¹⁸ If there were more water impounded along the Lower Rio Grande, another "400,000 acres in the area could be made magically productive."¹⁹

When the Rio Grande is properly harnessed for irrigation and all the other problems of water are solved, much more land in the Rio Grande Plain will be made suitable for agriculture.

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¹⁷ Corpus Christi Caller Times, May 19, 1950.
¹⁸ Corpus Christi Caller Times, November 6, 1949.
¹⁹ Ibid.
The Lower Rio Grande Valley is not the only section in the Rio Grande Plain that is utilizing the water of the Rio Grande. For instance:

Eagle Pass has one of the largest water-power plants in Texas. It is also the most unique because of the fact the surplus waters of a large irrigation project are returned over the crest of a hill to the Rio Grande. This has been in operation for a number of years.\(^{20}\)

Laredo is another community within the Rio Grande Plain that utilizes the water from the Rio Grande. Here, "water is pumped from the Rio Grande to water onion crops."\(^{21}\)

The Rio Grande is being utilized for power and irrigation at the present, but further utilization can best be brought about by cooperative planning in the future.

The Nueces River "rises in Edwards county; flows 315 miles to Corpus Christi Bay,"\(^ {22}\) and is a spring fed stream. The word **nueces** is a Spanish word meaning "nuts." The Nueces drains a basin of 16,805 square miles,\(^ {23}\) and its flow in the lower part of the channel is irregular. It flows a continuous surface stream only during and after heavy rains.

The principal reservoir for the Nueces River is Lake Corpus Christi, with 64,000 acre-feet.\(^ {24}\) Other reservoirs which will serve in the industrial development of communities along the stream have been planned for the Nueces River. "The entire water-shed is covered by the Nueces River Conservation and Reclamation District."\(^ {25}\)

\(^{21}\)Ibid.  \(^{22}\)Texas Almanac 1947-1948, p. 180.
\(^{23}\)Ibid.  \(^{24}\)Ibid., p. 181  \(^{25}\)Ibid.
The San Antonio River "rises in a cluster of springs in the City of San Antonio and flows 180 miles to San Antonio Bay."\(^{26}\) The San Antonio River flows through six South Texas counties:

Bexar, Wilson, Karnes, Goliad Counties then cuts a boundary between Counties Refugio and Victoria. In Wilson, next to Bexar the river skirts around a corner of Floresville, the County-seat. Farther down stream, it passes within two miles of Karnes City before breaking away into open country in its search for the town of Goliad. Leaving Goliad, the river meanders on its free and easy way to join the Guadalupe a few miles inland from San Antonio Bay.\(^{27}\)

"The principal reservoir is the Medina Lake, which has 254,000 acre-feet capacity."\(^{28}\)

It has been estimated that the San Antonio River can be canalized from the San Antonio Bay on the Gulf of Mexico to a point about six miles below the city of San Antonio for around thirty million dollars.\(^{29}\) One of these ambitious plans for altering the river is being advanced by the San Antonio River Canal and Conservancy District, which proposes that the stream can be turned into a navigable canal for commercial shipping, from San Antonio Bay on the Gulf of Mexico to Bergs' Mill, six miles south of San Antonio city limits. This plan has been figuring in the news since 1937 when the Forty-fifth Texas Legislature created the canal and conservancy district.\(^{30}\)

Even if the river is not made adaptable to commercial shipping it has great possibilities in serving the communities through which it flows. If the river is further harnessed it can produce power, control flood waters, and be used for irrigation.

\(^{26}\)Ibid., p. 180. \(^{27}\)Louise Lomax, *San Antonio's River*, pp. 7-8.


\(^{30}\)Ibid., p. 11.
Lake Corpus Christi is the largest lake on the Nueces River and is located in Live Oak and San Patricio counties.\textsuperscript{31} "It has a total of 1,576,943 acre-feet of water appropriations, permits for storage of 1,734,429 acre-feet granted."\textsuperscript{32} At the present time the lake serves the Corpus Christi area by producing power, allowing some irrigation, and providing recreational facilities.

There are numerous other lakes in the Rio Grande Plain that are being used for irrigation, power production, flood control, recreation, manufacturing, and conservation. Some of the principal ones and the purposes which they serve are as follows: "Olmos Dam, located in Bexar County, has a capacity of 1,000 acre-feet, and is used for flood control;"\textsuperscript{33} "Rancho Viejo Resaca, located in Cameron County, has a capacity of 1,900 acre-feet, and is used for flood control;"\textsuperscript{34} "Lake Medina, located in Medina County, has a capacity of 254,200 acre-feet, and is used for irrigation;"\textsuperscript{35} and "Falcon Dam, located in Starr and Zapata Counties, has a capacity of 3,300,000 acre-feet, and is used for irrigation and manufacturing purposes."\textsuperscript{36}

There are many smaller lakes throughout the region, and some of those along the Rio Grande are called horseshoe lakes, or resacas.

\begin{flushleft}
\textsuperscript{31} Texas Almanac 1947-1948, p. 181.  \\
\textsuperscript{32} Ibid.  \\
\textsuperscript{33} Texas Almanac 1949-1950, p. 185.  \\
\textsuperscript{34} Ibid.  \\
\textsuperscript{35} Ibid., p. 186.  \\
\textsuperscript{36} Ibid., p. 187.
\end{flushleft}
TABLE 1

RIO GRANDE PLAIN: RAINFALL, GROWING SEASON, TEMPERATURE, BY COUNTIES

<table>
<thead>
<tr>
<th>County</th>
<th>Rainfall</th>
<th>Growing Season</th>
<th>Annual Mean Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inches</td>
<td>Days</td>
<td>Degrees</td>
</tr>
<tr>
<td>Aransas</td>
<td>31.32</td>
<td>326</td>
<td>69</td>
</tr>
<tr>
<td>Atascosa</td>
<td>26.88</td>
<td>260</td>
<td>69</td>
</tr>
<tr>
<td>Bee*</td>
<td>30.65</td>
<td>287</td>
<td>70</td>
</tr>
<tr>
<td>Bexar</td>
<td>21.18</td>
<td>279</td>
<td>68</td>
</tr>
<tr>
<td>Brooks</td>
<td>24.15</td>
<td>294</td>
<td>72</td>
</tr>
<tr>
<td>Cameron</td>
<td>31.05</td>
<td>336</td>
<td>72</td>
</tr>
<tr>
<td>DeWitt*</td>
<td>34.21</td>
<td>278</td>
<td>70</td>
</tr>
<tr>
<td>Dimmitt</td>
<td>21.69</td>
<td>255</td>
<td>70</td>
</tr>
<tr>
<td>Duval</td>
<td>24.10</td>
<td>289</td>
<td>72</td>
</tr>
<tr>
<td>Frio</td>
<td>21.81</td>
<td>286</td>
<td>69</td>
</tr>
<tr>
<td>Goliad*</td>
<td>31.94</td>
<td>276</td>
<td>70</td>
</tr>
<tr>
<td>Hidalgo</td>
<td>24.39</td>
<td>329</td>
<td>72</td>
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<tr>
<td>Jim Hogg</td>
<td>20.79</td>
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<td>73</td>
</tr>
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<td>Jim Wells</td>
<td>26.17</td>
<td>294</td>
<td>70</td>
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<tr>
<td>Karnes</td>
<td>29.84</td>
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<td>69</td>
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<td>Kenedy</td>
<td>27.26</td>
<td>290</td>
<td>72</td>
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<td>Kleberg</td>
<td>26.59</td>
<td>272</td>
<td>70</td>
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<tr>
<td>La Salle</td>
<td>21.30</td>
<td>294</td>
<td>71</td>
</tr>
<tr>
<td>Live Oak</td>
<td>25.70</td>
<td>283</td>
<td>70</td>
</tr>
<tr>
<td>Maverick</td>
<td>20.94</td>
<td>267</td>
<td>70</td>
</tr>
<tr>
<td>McMullen</td>
<td>26.68</td>
<td>294</td>
<td>70</td>
</tr>
<tr>
<td>Medina*</td>
<td>28.61</td>
<td>253</td>
<td>69</td>
</tr>
<tr>
<td>Nueces</td>
<td>26.43</td>
<td>334</td>
<td>68</td>
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<td>Refugio*</td>
<td>33.84</td>
<td>279</td>
<td>70</td>
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<tr>
<td>San Patricio</td>
<td>30.67</td>
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<td>70</td>
</tr>
<tr>
<td>Starr</td>
<td>17.69</td>
<td>297</td>
<td>72</td>
</tr>
<tr>
<td>Uvalde*</td>
<td>25.49</td>
<td>248</td>
<td>69</td>
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<tr>
<td>Val Verde*</td>
<td>19.90</td>
<td>282</td>
<td>69</td>
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<tr>
<td>Webb</td>
<td>19.17</td>
<td>293</td>
<td>70</td>
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<td>Willacy</td>
<td>27.39</td>
<td>316</td>
<td>72</td>
</tr>
<tr>
<td>Wilson</td>
<td>26.91</td>
<td>285</td>
<td>69</td>
</tr>
<tr>
<td>Zapata</td>
<td>22.00</td>
<td>288</td>
<td>74</td>
</tr>
<tr>
<td>Zavala</td>
<td>22.01</td>
<td>295</td>
<td>69</td>
</tr>
<tr>
<td><strong>Annual Average for Region</strong></td>
<td>25.64</td>
<td>286</td>
<td>70.26</td>
</tr>
</tbody>
</table>

*Denotes counties having only a portion within the Rio Grande Plain.
Table 1, which was compiled from information in various sections of the Texas Almanac 1949-1950, shows average annual rainfall, average annual growing season, and annual mean temperature of the Rio Grande Plain region. The reader will find Table 1 helpful in a study of the climate of the region.
CHAPTER II

GRAZING

Grazing of cattle, sheep, and goats has been a very important vocation in the economic development of man since the New Stone Age. It has been especially prominent in the economic development of the Rio Grande Plain, which was a natural setting for the early Spanish herds that roamed there long before the coming of the Anglo-Americans. The Spaniard, with his long-horned cattle and hard-riding vaquero, who was the forerunner of the American cowboy, moved northward from the interior of Mexico. The livestock industry was the first to develop in the Rio Grande Plain region.

Grazing Before 1860

In tracing the origin of cattle, sheep, goats, and horses on the Rio Grande Plain, one finds that prior to the Spanish settlements in Texas there were large numbers of livestock being raised in Mexico. The government in Mexico was very favorable to the industry, which prospered greatly under such favorable conditions. Evidence that there were large numbers of livestock in Mexico by 1541 is found in this passage:
Coronado seems to have had no trouble in gathering at least 500 head of cattle, besides thousands of sheep, goats, and hogs to supply food for his great expedition in search of the golden Seven Cities of Cibola.\(^1\)

It is not known just how many of these cattle that Coronado took along on his journey might have strayed, but later explorers noted that they saw great herds of cattle and horses roaming the Texas plains. There is no evidence that any of the cattle gathered together by Coronado in 1542 were predecessors of the cattle that were found in the Rio Grande Plain. Some of the wild herds that roamed Texas and the Rio Grande Plain may have been strays from the De Leon expedition in 1690 or strays from the Marquis de Aguayo expedition. There is an unfounded story that Aguayo left two animals at every river crossing in his journey to East Texas. In all probability the cattle that roamed in the Rio Grande Plain were descendants of livestock brought across the Rio Grande by the early Spaniards in the region. J. Frank Dobie gives the following information:

Excepting those non-propagating cattle that, leaving not even a trail, Coronado drove over the Staked Plains in 1541, probably the first cattle to enter what is now Texas, and certainly the first cattle of any consequence, came with the establishment of the first Missions. The date was 1690.\(^2\)

---

\(^1\)J. F. Dobie, The First Cattle in Texas and the Southwest, Progenitors of the Longhorns, p. 1.

\(^2\)Ibid., p. 7.
Cattle raising is the oldest industry in Texas. Its beginning is placed at the San Antonio Missions from 1718-25 in the vast terrain to the South known as the Brush Country where wild cattle attracted settlers who found the animals theirs for the taking.  

The Spanish, in and around the missions, took to stock-raising and shunned farming in their early settlements.

The real cradle of the cattle industry and livestock raising was in the Rio Grande Plain, which has been described as follows:

For the sake of clarity we may describe the territory in question as a diamond-shaped area, elongated north and south. The southern point of the diamond (southern tip of Texas) is formed by the convergence of the Gulf Coast and the Rio Grande. San Antonio forms the apex of the northern angle, and lines drawn from San Antonio to the Gulf Coast and to Laredo on the Rio Grande on the west form the upper side of the diamond. San Antonio, old Indianola, Brownsville, and Laredo form the four points of the diamond. This restricted area was the cradle of the western cattle business, an incubator in which thrived and multiplied Mexican longhorns, Indian horses, and American cowboys.

The biggest portion of the area just described lies in what is called the Rio Grande Plain; however, a small portion of it lies in the Coastal Prairies to the east.

The Rio Grande was the early heart of the livestock industry:

From San Antonio to the Rio Grande at Laredo the country had been occupied after a fashion by Spaniards. Laredo was founded in 1755, and after that date the country between the Rio Grande and the Nueces was given over to herds of cattle.

---

horses and sheep. The Nueces Valley which passes through the region in a southwesterly direction was the center of this early Spanish industry in Texas. The region was very suitable for raising large numbers of livestock, as W. P. Webb has pointed out:

This diamond-shaped region offered almost perfect conditions for the raising of cattle. The country was open with mottes of timber offering shade and protection. Grass was plentiful, and in parts remained green throughout the year. The climate was mild, almost tropical, and there was neither snow nor blizzard, though an occasional norther swept down, only to fade and fail under the benign influences of the southern sun and the warm Gulf. The region was fairly well watered, particularly in the beautiful Nueces Valley, through which ran a living stream bordered by natural parks; but what was more important, it was sheltered from the inroads of the Plains Indians.

By 1755 the longhorns and other Spanish livestock were grazing as far into the region as the Nueces River.

North of the Rio Grande there were the Villa de Laredo, with thirteen families, the población of Dolores, with twenty-five families, and further down the river a string of ranches. The district fast became a stock-raising country, where thousands of cattle, sheep, and goats grazed on either side of the stream. Under José de Escondón's encouragement, ranching gradually extended northward and within a few years had reached the Nueces.

"By the time the Canary Islanders reached San Antonio in 1731, the mission ranches already had numerous cattle."

However, these people brought with them from Mexico various types of livestock:

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5Ibid., p. 208.  
6Ibid., p. 209.  
7H. E. Bolton, Texas in the Middle Eighteenth Century, p. 59.  
8Dobie, op. cit, p. 8.
Each family came provided with a pair of broken oxen, ten nanny goats and a buck, ten ewes, and a ram, five sows and a boar, five mares and a stallion and five cows and a bull.\footnote{C. E. Casteneda, \textit{Our Catholic Heritage in Texas}, Vol. II, p. 299.}

Showing further the development of grazing in the early history of the region, one author discusses the ranching activity around the Goliad Mission.

Having been established on the Guadalupe River early in the 1720's, the mission of Espiritu Santo (Holy Ghost) was moved to the San Antonio River at Goliad, about 1733. In 1759 the mission had 4,000 branded cattle; in 1774, 15,000. At the same time it claimed more unbranded cattle than branded. These unbranded cattle, more or less under control, for they could be rounded up and worked with branded animals, were called mestenas (mustangs) and were distinguished from the ownerless and outlaw cimarrones that ranged on unclaimed territory beyond all control. Around 1770 the Espiritu Santo claimed 40,000 head of cattle, branded and unbranded, that ranged between the Guadalupe and San Antonio Rivers, while the neighboring Missions of Rosario claimed 10,000 branded cattle and 20,000 unbranded cattle ranging westward.\footnote{Dobie, op. cit., p. 9, quoting C. M. Ramsdell, Jr., \textit{Spanish Ranching}, in a pamphlet at Goliad Mission.}

Evidence thus far has pointed out that, with the establishment of the missions, both on the Rio Grande Plain and in other sections of Texas, the padres brought along cattle, sheep, goats, horses, and mules. It is easy to understand why the founders of these missions brought animals, for the settlers needed meat, tallow, and hides for their needs. During the mission period, cattle were valuable to the settlers for practical purposes and not for the money one could make by selling them. It was very noticeable that mission founders and their settlers were
more interested in stock-raising than in farming as a civilian occupation, despite the government's attempt to enforce farming.

Some years after the founding of the missions there were numerous wild cattle and mustangs to be had, and the monetary value of the animals was not great. But about 1750, the value of a longhorn ranged from one peso to four pesos. In the Spanish period "two dollars and a half a head was a fair price,"\textsuperscript{11} for a mustang. Sometimes the owners could not realize that much for an animal. All that they had to do to gain possession of unbranded wild animals was to round them up and place a brand on them. "Throughout the long eighteenth century in Texas, cattle were worth very little--sometimes not four pesos a head, no buyer at any price."\textsuperscript{12} Not until the Anglo-American came to the region did the price of cattle rise, and not until after the Civil War was there a great demand for cattle.

Spanish Rancheros

The ranching families in the "Brush Country" during the middle eighteenth century included such ranching families

\textsuperscript{11}Dobie, Mustangs and Cow Horses, p. 7.

\textsuperscript{12}Dobie, The First Cattle in Texas and the Southwest, Progenitors of the Longhorns, p. 11.
as the "Hinojosa, Balli, Barrego, Sanchez, De la Garza, and other families of the lower Rio Grande."\textsuperscript{13}

The early Spanish cattle were headed by \textit{vaqueros}. W. C. Holden states that

\begin{quote}
\ldots these fellows, hard riders and as tough as the wiry ponies they rode, acquired a skill which was uncanny in the use of their lasso, the training of their mounts, and the management of the cattle.\textsuperscript{14}
\end{quote}

When the early Texans came into the region, they were given larger land grants by the Mexican Government if they planned to go into the stock-raising business than if they planned to engage in some other type of enterprise. For cattle raisers the grant was a league of land (4,428 acres). This region belonged to Mexico and was not to become independent until after the Texans' victory at San Jacinto, April 21, 1836. Furthermore, the region between the Nueces and the Rio Grande was in question until after the Mexican War, which ended in 1848, when the Rio Grande was established as a boundary of Texas.

After the Texas Revolution the Texans went into the region.

They found many cattle along the Guadalupe and San Antonio Rivers--some of them the property of Mexicans who had fought loyally on the Texas side.

\textsuperscript{13}Texas Almanac, 1947-1948, p. 242.

\textsuperscript{14}W. C. Holden, Alkali Trail, p. 21.
But to the raiders all Mexicans had the same color. Their hunting rounds were between the Nueces River and the Rio Grande.15

Of these cattle that the Americans were rounding up, it was said:

The longhorn cattle brought to the Gulf Coast in the sixteenth century had returned to a wild state through Spanish neglect of the area in the century that followed and it was only gradually that they were brought to a semi-domestic state in the early nineteenth century.16

When these Texans went into the region hunting cattle, it was "open season" on any unbranded cattle. The following extract will illustrate the point:

Settlement between the Nueces and the Rio Grande were overthrown following San Jacinto. An early Texas Congress enacted laws that horses and cattle of men who supported the Mexicans in 1836 and abandoned the country became the property of the Texas Republic. This had the effect of a declaration of 'open season,' on the livestock of ranchmen even suspected of sympathy with the enemy. It gave impetus to the stray roundups or 'cow hunts' marking the origin of some well-known early cattle families.17

The Spanish rancheros usually branded their horses but not their cattle, as cattle on the range were an accepted item of food to be taken at will regardless of the brand. When the Anglo-Americans came to the region, they "took up"

15 Dobie, The Longhorns, p. 28.
where the Spanish rancheros "left off" in the matter of branding animals. The Anglo-Americans would round up their cattle and brand all the calves with the same brand as the mother had. Many was the time when arguments arose over the branding of animals, and some man would be murdered because of an argument over a cow. In some instances after one had been murdered over a steer, that steer would be branded with the word murder.

One might term this era from 1840 to 1860 in the Rio Grande region the "fusion era," for the domestic animals of the Anglo-Americans were mixing with the longhorn; the Anglo-Americans themselves, in the process of moving into the region, branding unbranded animals. This does not imply that there were not already some Anglo-Americans in the region, for there were some who had obtained early land grants from the Mexican government before the Revolution.

Before the Civil War there had been some drives to distant markets, but not on a very large scale. Nevertheless, it may be said that Texas cattle had found their way to New Orleans and St. Louis by 1842, up the Mississippi to beyond the Ohio soon afterward, to New Mexico by 1847, to California in 1849 and to Chicago in the middle fifties.18

It might be well to note some of the ranchers in the region at this point.

18 Texas Almanac, 1945-1946, p. 228.
Joseph H. Polley was a big operator in Guadalupe and Wilson counties in 1859-1860, ranging from the San Antonio River to the Rio Grande. John H. Wood in San Patricio and Refugio counties, W. B. Grimes of the Tres Palacios, and J. A. McFaddin of Refugio and Victoria counties traded far and wide. W. A. Pattus was branding out around Goliad. Dillard H. Faut at Goliad, William and Robert Adams at Alice, Texas, Jerry and Robert Driscoll in Refugio, A. C. Jones in Bee County. 19

These are just a few of the great cattlemen in the region in the early days of the cattle industry.

Thomas O'Connor in Refugio County was one of the early 'Cattle Kings.' By 1850 his tally book showed thousands of head, from a start on land he received as a colonist and later for his services at San Jacinto. His descendants at Victoria are today among Texas' great ranch owners. 20

"Coleman and Fulton Mathis at one time owned ranching country from Rockport to Sinton." 21 These are the men who helped to lay the foundation for the great cattle industry. These ranchers' holdings and cattle overlapped in some instances into bordering regions, but the largest portion of their holdings was located in the Rio Grande Plain.

In this era of livestock raising in the region there was not a great deal of value placed on horses, cattle, or any other animal. A good fat steer would bring about three to five dollars. It might be concluded that in this era that there were plenty of animals to be had and that the prices were low.


21 Ibid., p. 243.
Ranching After 1860

During the Civil War there were a few drives to get cattle to markets, but they were on a small scale, as some of the cattlemen left their herds and joined the army. However, Jesse Chisholm was driving Texas cattle to places designated by the Confederate Army. After the war cattlemen of the region returned and began to say, "If Chisholm can do it, we can too." 22

During the Civil War a "man's poverty was estimated by the number of cattle he possessed." 23 The price of cattle in the time of the war ranged from one to two dollars per head. 24 And probably the best customers the stockmen had were the "Mexican thieves who would round up their stock and drive them across the Rio Grande" 25 into Old Mexico.

After the Civil War there was a demand for meat such as there had never been before in the eastern part of the United States. In the East there were not enough domestic animals to take care of the demand.

In 1866, when Jesse Chisholm drove a herd from San Antonio to Abilene, Kansas, 26 the idea of driving herds to

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24 Ibid.
26 Ibid., p. 61.
railheads became a reality. This reality at times through this period was a very profitable one for the ranchers in the region.

Richard King and Mifflin Kenedy were linked together in the steamboat business on the Rio Grande, and during the Mexican War Richard King had made and saved enough money to go into the ranching business. He took the advice "... of his great and good friend Robert E. Lee, then a Lieutenant Colonel of Engineers," and bought 54,000 acres along Santa Gertrudis Creek. "In 1860, Captain Kenedy joined King in the ranch business." Within a few years these two enterprising men

... owned a cattle kingdom that spread over a goodly portion of the land lying between Corpus Christi and Brownsville. They were not only owners of cattle on a thousand hills, but they owned the hills themselves. It was estimated that their herd totaled 90,000 to 100,000 cattle and 5,000 head of horses.

However, in 1866, the two men divided their holdings in order to avoid any complication in case of the death of either partner.

King and Kenedy were typical of the ranchers of the region in their attitude toward the long drives. They thought

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28J. L. Allhands, Uriah Lott, p. 86.

29Ibid.
it was a venture involving little risk. The cattle themselves had cost practically nothing, a dollar a head covered the expense of driving them to Kansas where they sold for ten dollars. Within two years the two ex-pilots had made so much money that they couldn't agree on how to use it.

For a time after the Civil War the markets on the Gulf were the places for a number of cattle from the region. McCoy states:

For the first five years after the close of the Civil War New Orleans and Old Mexico afforded a market for a limited number of cattle, but points in western Kansas afforded a field for much larger operation.

When the ranchers in the region began to see that there was a profit in driving their cattle to western Kansas, the region really began to gain from the growth of the cattle industry. When the market in the North opened after the Civil War, many ranchers in the region found an answer to their financial problems by selling cattle in the North.

The ranchmen allowed their cattle to roam at large over the region. Each man identified his own animals by means of a brand which was burned into the flesh with a branding iron. Each year there was a round-up where the cattle were collected on the range and the calves were branded. The calf had the brand of his mother. After the round-up the cattle were driven northward to the railheads.

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30 White, op. cit., p. 61.
31 McCoy, op. cit., p. 13.
This era in the development of the cattle industry in the region is probably the most romantic and was a very profitable one, at times.

In 1873 came the great panic; Texas cattle were selling at a very low price on the Kansas market, and "Cattlemen of Southwest Texas were warned that they could save money by selling their stock at home. As a result of the low price of cattle during the depression years, packing houses sprang up all along the Gulf Coast, and Corpus Christi became the principal packing house center in the Rio Grande Plain region. Prior to the seventies Corpus Christi had been a center for hides and tallow.

In 1868 Corpus Christi sent out 1,402,000 pounds of wool and 85,713 pounds of skins. Despite the fact that the year of 1871 was a drought year and there was lack of grass and water between Corpus Christi and the Rio Grande, enough wool poured into Corpus Christi that year to make it a three million-pound-wool year. A portion of this wool was from northern Mexico, which had been transported to Corpus Christi.

Since cattle were being sold at a low price it was more economical to the rancher during the depression years to sell them for their hides and tallow. As a result, the "Skinning War" came to be fought. Lawless men would go out and kill

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33 J. L. Allhands, op. cit., p. 10.
34 Dobie, op. cit., p. 24.
cattle on the open range for their hides, and leave the carcasses for buzzards and coyotes. The ranch owners became alarmed over this situation, and for a year or two there existed a war between the lawful owners and lawless men who killed branded cattle for their hides.

These packeries along the coast rendered the tallow and packed meat in salt to be shipped. The waste was often dumped into the bay at Rockport and Corpus Christi.

Men like King and Kenedy and Coleman and Fulton Mathis had their own packeries.

Captain Richard King "attempted to preserve meat for shipment by infusing brine into veins of cattle immediately after they were slaughtered." The experiment proved unsuccessful, however, and thereafter he had his Mexicans pour the tallow into barrels, hang the hides on fences, and cast the meat to some six or seven thousand hogs.35

Mifflin Kenedy, between Corpus and Brownsville, had his own packery and was using salt from his own ranch to pack around the meat.36

By 1875 the price of cattle was up again and beef was much too high to slaughter for hides and tallow alone.

The killing of cattle for their hides and tallow and discarding of carcasses gave rise to the hog industry. In the region there were large numbers of hogs, but they were of the wild variety. J. F. Dobie states:

35Dobie, A Vaquero of the Brush Country, p. 27.
36Ibid.
A few men made the raising, capturing, and selling of hogs a business, but ranch people generally paid the razorbacks little attention except in winter time, when the animals would be as fat on acorns as they were capable of getting. That was the season for cutting and marking pigs and, with dogs, ropes and guns, for catching a year's supply of lard and bacon.37

The value of hogs was always low until after the region was well populated, because all one had to do was go out and kill a wild hog for his needs.

The sheep industry did not parallel the growth of the cattle industry, but at times and periods the sheep business was very profitable. In the early eighties it gained importance as a vocation in the region. The growth in various counties in the region is indicated in the following report. "In 1882 the County of Zapata had 7,318 cattle, 6,659 horses and mules, 87,325 sheep, and 11,625 goats."38 In Nueces County, which had been a cattle county, statistics show that "in 1881 there were nearly 200,000 sheep, 85,000 cattle, and 25,000 horses and mules."39 McMullen County showed on the assessment rolls in "1881, 3,243 horses and mules, 16,185 cattle, 152,329 sheep, and 15,590 goats."40 Bexar County, in the extreme northern portion of the region, had in "1882, 14,000 cattle, about 10,000 horses and mules and 20,000

37Ibid., p. 30.
39Ibid., p. 638. 40Ibid., p. 621.
sheep and other livestock. Another example of a periodical boom in the sheep industry occurred in 1878:

The assessment rolls of Webb County—an extreme case—for 1878 showed only 8,000 cattle against 239,000 sheep and 19,000 Mexican goats.

Many men made fortunes in the sheep business, but many also went broke in it. There were probably two reasons why the sheep business began declining in the region in 1883. In that year a drought hit, burning up the grass and drying up the water holes, and during 1884 the removal of the tariff on wool put many sheep raisers out of business.

The raising of cattle and livestock in the region in the latter part of the eighties began to change with the coming of the railroads, barbed wire, and the ending of the long cattle drives. The longhorn passed on, and in his place came better breeds of cattle.

This period from 1866 to 1888, which had its effect on the economic development of the Rio Grande Plain, was a prosperous era, led to other developments in the region, and was a romantic era in the history of the development of the region. The raising of livestock in this period laid the foundation for present day grazing in the region.

During the 1890's the cattle of the Rio Grande Plain were infected with the Texas fever which was caused by ticks

41Ibid., p. 999.
42Dobie, A Vaquero of the Brush Country, p. 205.
and which caused a great deal of damage to the cattlemen in the region at the time.

The tick of the South, which was responsible for the spread of the deadly Texas fever among cattle, was not recognized until the year 1889, although the history of its destructiveness goes back to the period immediately following the close of the Civil War.⁴³

The beginning of tick control was undertaken by the Federal Government, which cooperated with the ranchmen by placing Federal agents in the tick-infested district and making a substantial appropriation of $82,000 in 1906 to help start the control of the Texas fever caused by ticks. According to the Texas Almanac of 1936,

In 1906 tick eradication work was begun in Texas by State Livestock Sanitary Commission in cooperation with the U. S. Bureau of Animal Industry, but due to the newness of the work and inadequate law system was not injected into the work until about the year 1917.⁴⁴

Most of the counties in the region at one time or another were restricted in their shipment of cattle outside the county.

"In 1910 the County of Zapata had 27,410 cattle, 3,600 horses and mules, and about 3,811 sheep, and 12,781 goats."⁴⁵ From 1882 to 1910 the cattle increased by 20,092. The number of horses and mules had dropped to 3,097 during the twenty-eight year period. The number of sheep had declined and

⁴³L. W. Smith, Saddles Up, p. 12.
⁴⁴Texas Almanac, 1936, p. 262.
⁴⁵Johnson, op. cit., p. 647.
showed a drop of 83,514 in a period of twenty-eight years. The number of goats had decreased in the county. In the County of Webb the number of cattle had increased from 8,000 in 1878 to 44,035 in 1910.\(^{46}\) It is interesting to note that in 1878 in Webb County there were 239,000 sheep and in 1910, only 2,629.\(^{47}\) The number of goats had also decreased in Webb County by 1910. In 1910 the County of Bexar had 42,043 head of cattle although in 1882 it had only 11,000, showing a gain of 28,043 over a period of twenty-eight years.\(^{48}\) The above facts illustrate the growth and decline of different kinds of livestock in the region over a twenty-eight year period.

In Bee County in 1910 there were "42,923 head of cattle, 9,200 horses and mules, 4,007 hogs and 2,055 goats,"\(^{49}\) in Karnes County, "33,415 cattle, 10,900 horses and mules, 10,449 hogs,"\(^{50}\) in Wilson County, "24,854 cattle, 9,000 horses and mules, and about 9,000 hogs,"\(^{51}\) in Frio County, "34,213 cattle, about 6,400 horses and mules, 5,666 sheep, and 2,911 goats."\(^{52}\) Figures are not available for all the counties in the region in 1910.

\(^{46}\)Ibid., p. 633. \(^{47}\)Ibid. \(^{48}\)Ibid., p. 1000. \\
\(^{49}\)Ibid., p. 625. \(^{50}\)Ibid., p. 617. \\
\(^{51}\)Ibid., p. 619. \(^{52}\)Ibid.
There was continued growth in the livestock industry on the Rio Grande, but some of the counties were still quarantined from shipping their cattle. However, there was progress in all phases of livestock raising, new breeds were being developed, and scientific methods were being used. To illustrate the progress the industry was making between 1923 and 1927 in the region, this selection will bear quoting:

Southern Texas is an important breeding area and extensive grazing section. Approximately 19 per cent of the total number of cattle in the state are located in this district. The annual movement has averaged 347,423 head during this period. More than 63 per cent of the cattle were sent to other Texas districts.

In this particular case the region is referred to as Southern Texas.

Recent Developments

Ranching is a major phase of the economic development of the Rio Grande Plain. Beef cattle, dairying, horses, poultry, goats, sheep, and hogs, respectively, are the order of livestock production as to importance in the region.

Almost gone now is the old-fashioned longhorn, at least in its pure state. Now Brahma blood is crossed with other breeds, mainly those of English origin, often at the ratio of twenty to forty per cent of the Indian-type blood. The

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53 G. M. Lewis, A Market Analysis of the Cattle Industry of Texas, No. 2836, p. 112.
experiment stations in the area are trying to discover what breed is best for South Texas and are crossing breeds and working to develop new breeds.

The cattle industry in all its ramifications is and has been for many years the backbone of the economy and has been the origin of some of the greatest fortunes to be made in the area.

Shipments of South Texas steers to Oklahoma and Kansas grazing lands for summer fattening comprise, each year, one of the largest animal movements in the nation.54

The King and Kenedy Ranches have been leaders in the development of the cattle industry in the region, and in all probability the King Ranch is one of the foremost ranches in the country.

Prominent in the development in the King Ranch was Robert J. Kleberg, a young lawyer who had once opposed Richard King in a lawsuit. He had so impressed King that King engaged him to serve him. Captain King died in 1885. Kleberg, who had already demonstrated unusual executive ability, took over the administration of the ranch.55

His first great feat was the breeding of the King Ranch's Santa Gertrudis Cattle, the only new breed of U. S. cattle that has had any commercial value. Economic necessity mothered the new breed.56


At this time the ranch's cattle--English shorthorns and Herefords--were doing poorly. They sickened and did not develop well in the blazing South Texas sun. At this point Kleberg decided to try Brahma bulls, which he knew thrived well in India's hot climate.

Other cattlemen thought light of Kleberg's idea, as they knew that the crossing of the Brahmas with other breeds had not worked out well. "About 1910 Tom O'Connor gave the King Ranch a half-breed Shorthorn Brahma bull."57

Kleberg bred the Brahmas and Shorthorns together till he evolved what he wanted, a cross-breed bull named Monkey.58

Monkey sired well and now most of the cattle on the King Ranch are descended from him. The Santa Gertrudis breed is now widely sought, for it does especially well in the South Texas regions.

Bob Kleberg worked just as hard in developing fine horses and has developed a breed of Quarterhorses. "One of them was good enough recently to sell for $26,000."59

Kleberg took the same interest in developing racehorses and has been very successful in doing so. Assault has been the most famous of these race-horses.


59 Ibid., p. 92.
One of the first things that Robert J. Kleberg did to improve the ranch was to drill water wells at various points over the ranch in order to relieve the water shortage during the summer months. He was instrumental, also, in bringing the railroad. Robert Kleberg died in 1932, and his son was named to run the ranch. In 1935 the ranch was divided among the heirs. "The Klebergs got 431,000 acres and formed the King Ranch Corporation." 60 Robert Kleberg, Jr., was selected president and manager.

While the evolution of the ranch may have proceeded slowly from the 50's when steers traveled five or six miles a day along the trails, until now, when blooded bulls and cows are sent to distant points by airplanes, its improvement has been steady and constant. Every known method and device has been added to bring it up to date, and the modern ranch house, Santa Gertrudis Mansion is one of the show places of Texas. 61

The King Ranch ships about 25,000 head of beef cattle annually.

After the break with Richard King in 1866, Mifflin Kenedy fenced in his range lands, which now constitute Kenedy County. Today Mifflin Kenedy's grandson, John G. Kenedy, has charge of the Kenedy Ranch. The Kenedy Ranch is almost the same as it was when Mifflin Kenedy first fenced the land except for the breed of cattle and the beautiful home in which John Kenedy lives. It is a remote place, and few visitors are allowed to travel about the "Walled Kingdom," as it is sometimes called.

60 Ibid., p. 94. 61 Dawson, op. cit., p. 85.
The Lower Rio Grande Valley, primarily a fruit and garden center, shows improvement and growth in the livestock industry.

The number of cattle and calves on farms in the Valley has increased substantially more than the State of Texas as a whole or for the United States. Between 1930 and 1945, the increase in cattle and calves in the Valley was 96 per cent.

The productivity of dairy herds is increasing—rising about 11 per cent between 1939 and 1944—but the number of dairy cattle has not kept pace with the growth of the population.62

Livestock raising in the region now is done mostly by the small stock farmer who devotes a portion of his time to farming. This does not imply that the large ranches are breaking up and forming smaller ranches. In fact, there are now in the region a number of large ranches that have contributed much to the development of the cattle raising and other livestock raising.

There has been great development in breeds, economic value of the animals is very high, and there is a demand elsewhere for the livestock produced in the region. Since new methods are being employed, the future seems bright for the livestock industry in the Rio Grande Plain.

CHAPTER III

FARMING

Farming in the Rio Grande Plain had its beginning along with the grazing of livestock in the early Spanish settlements in the region. Farming in the Spanish Era was not highly developed, but the settlers practiced raising crops for their needs. The growth of farming in the region did not parallel the growth of livestock raising until after the turn of the nineteenth century. Since 1900 the growth of farming in the Lower Rio Grande Valley has in a sense been spectacular. The Lower Rio Grande is the principal farming section of the Rio Grande Plain, although farming is practiced in every section of the region.

Farming in the Upper Portion of the Rio Grande Plain

The Spanish Era, from 1718 to 1821, was characterized by the development of the livestock industry, but at the same time the settlers did practice some farming. Nearly all the missions that were located near streams in the region had some irrigation for their crops. After the arrival of the English-speaking settlers, who were "farmers and stock-farmers,"

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1J. F. Dobie, *The First Cattle in Texas and the Southwest; Progenitors of the Longhorns*, p. 22.
there was more emphasis placed on farming than there had been during the earlier period.

The upper section of the Rio Grande Plain consists of thirty counties, some having only a portion within the plain. This section raises many different types of crops, such as cotton, corn, grain sorghums, peanuts, flax, onions, alfalfa, carrots, lettuce, and spinach.

There are a few counties within this section that have the distinction of being first in the production of certain crops or the distinction of being the point of origin for certain crops.

La Salle County has the distinction of having been the first point of production for the Texas Bermuda onion. T. C. Nye, in 1895, used a windmill to pump water from the Nueces River to a small patch of onions, and his success with the business led to his concentrating his attention on onion growing rather than cattle raising, and several years later he transferred his operation to the vicinity of Laredo. In 1896 George Copp followed the example of Mr. Nye, and in the following spring shipped the first onions in carlots from this vicinity. The business thus introduced has been greatly developed, and onion growing has been probably the chief single factor in the upbuilding of the prosperous city of Cotulla, the county seat and metropolis of La Salle County.  

Maverick County has the distinction of being the leading county in the production of spinach, with 750 carlots being shipped from that county in 1948. San Patricio County shipped in the same year 122 carlots of cucumbers, leading all other counties.

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2 Johnson, op. cit., p. 621.
4 Ibid.
counties in the state. In recent years there has been great interest on the part of the farmers in the region concerning the raising of grain sorghums.

One of the factors in the crop's rise is its adaptability for industrial use. A $17,000,000 processing plant on the outskirts of Corpus Christi extracts industrial and food starches, dextrose syrup and sugar for candies and flavoring, salad and cooking oils, and gluten feed for animals from sorghums. 5

Counties in the Corpus Christi area are outstanding in the production of grain sorghums, but sorghums are raised in many of the counties of Texas.

Agriculturally, the Coastal Bend was a sprawling, raw frontier at the turn of the century fifty years ago.

In those early days, the coastal Bend was primarily a ranching country. Cattle were replacing the vast flocks of sheep that had been built up by early English settlers and some of the big Spanish landholders. 6

Field crops were limited—chiefly because the land was used for grazing and because the great ranchers were not particularly interested in them.

Actual development of the Coastal Bend into a diversified agricultural section began with the coming of the land promoters—men from older established areas who saw opportunities in the soil and climate of this area and at the same time sensed a chance to make modest fortunes on the crest of land booms. 7

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5 Ibid., p. 222.

6 The Corpus Christi Caller Times, 50 Years of Progress, January 1, 1950.

7 Ibid.
After the St. Louis and Brownsville and Mexico Railroad was opened to Brownsville in 1904, great tracts of land were opened up to farming. Most of these farms were carved out of the large ranches in the area.

But in those early days farming was crude, compared to present day methods. The patient mule was the chief source of motive power; farm implements left much to be desired and were limited in their capacity. Land clearing, a tedious and slow process, was done by hand labor. The machine age had not reached the farms.

In the new era cotton was the principal crop, and the soils in the area produced bumper crops.

Cotton was the undisputed King, except for winter vegetables. It was about the only crop that farmers considered seriously. There were small acreages of row grain crops planted for roughage for livestock, but they were minor. By the end of the second decade of the century, most of the cultivated acreage in the Coastal Bend was devoted to cotton production.

The following passage gives an example of cotton production in this area in 1928:

Jim Wells county farmers planted 81,400 acres in cotton; Live Oak, 59,800; Duval, 61,000, Nueces 270,000; and San Patricio, 165,000. The Coastal Bend was becoming the biggest cotton producing area in the state. In 1929, Nueces County alone produced 129,000 bales of cotton to take its place as the major cotton producing county in the state.

During the 1930's, after farmers had recovered from the hard years of the depression, rapid changes were made in farming methods. Mechanization was coming to the farms; mules and mule-drawn equipment were being replaced by tractors.
This section of the Rio Grande is good farming country and has great possibilities for the future.

Farming in the Lower Rio Grande Valley

The Lower Rio Grande Valley is not a valley in the true sense of the word, but a delta built up by the dirt from the Rio Grande. The four counties within the section termed the Lower Rio Grande Valley are Cameron, Hidalgo, Starr, and Willacy.

It is in the form of a rough triangle, beginning at a sharp point just west of Mission, 75 miles above the mouth of the Rio Grande (where river valley comes to an end), and widening to 35 or 40 miles near the coast of the Gulf of Mexico. The strip near the coast, however, is too "young" for cultivation, much of it is cut up by lakes and marshes.11

The soils of the Lower Rio Grande are rich and produce a variety of crops.

This soil is an alluvial deposit of river silt, which has been carried here by the actions of the river from mountains of Mexico and hills of Texas. The waters of the Rio Grande are always silt laden and the "Magic Valley" delta has been made in the same manner.12

This section has been made productive because water has been brought from the river to supply the moisture needed for this rich soil.

Farmed the year around, the soil can—and does—produce three crops every twelve months, and yet back

12 A. E. Menn, Texas As It Is Today, p. 65.
before 1904 it was a barren plain of scrubby mesquite, ebony, and cactus. This was before irrigation came.  

Efforts were made before 1900 to make the Valley a productive region, but it seems that the early settlers were not able to pick the right crops and utilize the river properly.  

    Last century farmers tried unsuccessfully to raise rice. Salt water seeped in and ruined their ground. Louisiana planters tried to introduce sugar cane and this too, was a failure. So the land worth $1 to $2 an acre was devoted principally to cattle raising.  

The traditional plantings prior to 1904 had been sugar cane, rice, corn, cotton, and flax. After that date new crops were introduced, which brought some degree of success.  

    The first large scale success came with Bermuda onions, shortly after the railroad reached the Valley in 1904 and opened up northern markets for semi-perishables. Onions and cabbage carried the Valley for many years.  

The transformation in the Valley has been amazing from barren waste land used for grazing to productive land that now has the appearance of a beautiful garden.  

    Its multi-million-dollar citrus and vegetable industries are the handiwork of such men as John Shary, John McAllen, Colonel B. Y. Yoakum, Colonel Sam Fordyce, Colonel Sam Robertson and Lon C. Hill, Sr.  

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14Ibid.  
16Corpus Christi Caller Times, January 1, 1950.
These men visualized that the rich delta soil could be made productive if fed the life-giving waters of the Rio Grande, and they risked their fortunes on this venture.

With the coming of the railroad in 1904, there opened up a new era in the development of agricultural pursuits in the Valley.

In 1904 a railroad was built into the warm spot near the mouth of the Rio Grande. The farmers could then make quick shipments to northern markets, and an agricultural boom started.17

From 1904 to 1925, "the valley proper has made a gain of over $250,000,000 in marketable wealth."18

The Valley needs irrigation, as one writer notes, for greatest productivity:

Most of the Valley needs irrigation to grow anything more than pasture grass and mesquite--yet too much irrigation will raise the salty water table which underlines the delta soil and put the affected land out of production for years.19

For the early irrigation ditches constructed, credit is due John H. Shary, a Nebraskan, to whom probably more than anyone else the success of this "uphill" undertaking is due.20

He formed a company, which has already spent $1,500,000 in the construction of pumps, canals and roads, and is now preparing to spend $1,900,000 more.21

17Smith, op. cit., p. 230. 18Menn, op. cit., p. 179.
19Thruelsen, op. cit., p. 100.
21Ibid.
These first irrigation ditches were crude affairs, but they served very well the purpose for which they were intended.

Viewed by today's standards, those first irrigation systems were somewhat crude affairs. Their diggings were limited by expediency and funds, and even their operation was haphazard in some cases. But they pointed the way; they showed what the Valley farmer, assisted by water of the Rio Grande could produce upon his land, and they made up a nucleus from which today's fine set of canals was developed.22

The water in these canals has been "lifted from twenty-eight to eighty-four feet, and then it flows through about twenty-five hundred miles of smaller canals."23

The control of irrigation in the Valley water districts began with landowners' organizations.

Donna's irrigation district was the first organization of its kind. The landowners banded together to pump and distribute Rio Grande River waters to their farms in that area. Others followed in the next few years and today there are some 30 such political entities, though not all are active.24

Operation of the canals is described in the following passage:

These are now operated by local government and supported by a special tax authorized by the state. Each county is divided into Improvement Districts and each district supports its own set of canals. The water is pumped from the river into the main canal, from which it flows by gravity into the lateral canals.

22Miriam Chatelle, For We Love Our Valley, p. 18.
24Corpus Christi Caller Times, January 1, 1950.
which serve the landowners. Many of the main canals have two "lifts"—that is, pumping stations—one at the river and another inland to carry the waters to higher ground. 25

Here in the semi-tropical frontier Valley there was work to be done, much of it before the land could be put to use, for the land was covered with a dense tangle of virgin jungle growth that still covers parts of the region. It took energy and effort to peel off this brush to get to the rich soil beneath. At first the brush was removed by hand with cheap Mexican labor, but today they have machines that clear the brush. This involves an apparatus with a series of prongs mounted on a tractor that pulls up the brush by the roots.

Rich land of the areas, the coming of the railroads in 1904, and the development of an irrigation system to water the rich soil had their effect on the development of agriculture in the Valley. Yet, there was a fourth factor in the development of agriculture in the Valley, and that was the people. The Valley needed people to settle there and till the fertile soil; in order to attract more settlers, or "snowdippers" 26 as they were called by the Valley citizens, the residents of the region organized companies.

25 Chatelle, op. cit., p. 18.
26 Ibid., p. 19.
The "home seekers" were brought to the Valley in special trains and automobile caravans. Closely guarded by salesmen, they were guided to the right spots and told well-censored facts about the land they were destined to buy.27

Many of the earlier buyers paid too much. But their land was taken over later by more practical men who made the land pay for itself. The farmers there now use scientific methods in producing the many different crops.

Farming in the Valley is conducted according to carefully compounded formulas--sun plus water plus chemical fertilizers and protectants plus machinery--yet for years the area's economy has depended upon an almost feudal system of illegally imported Mexican labor.28

The value of the land in the Lower Rio Grande Valley has steadily increased since the coming of the St. Louis Browns-ville Railroad in 1904. The Texas Almanac of 1914 states: "Lands in the irrigated section vary in price from $90 to $300 per acre. Unimproved lands outside of the irrigated district are quoted from $10 to $50 per acre."29 Even during the depression years the land was sold for $200 per acre,30 and during World War II sold for as much as $1000 per acre.

Truck farming the year around is the rule in the "Magic Valley." New crops are added each year, and now about 40 different crops are grown in the Valley profitably.

27Corpus Christi Caller Times, January 1, 1950.
28Thruelsen, op. cit., p. 32.
29Texas Almanac, 1914, p. 254.
30Thruelsen, op. cit., p. 106.
Some of the newer crops are broccoli, lettuce, and a new type of melon. A letter from Frank C. Brunnemann, County Agricultural Agent of Cameron County, states that farming is a gamble in the Valley:

Because of the Rio Grande Valley's tropical climate, we are able to grow two vegetable crops, one citrus crop, one cotton crop, and also small grains. Practically all varieties and kinds of vegetables are grown and because low-priced Mexican labor has been available, the farmers have been able to make a profit on truck crops even though they knew the prices would probably drop and freight rates would be high. However, the past year, due to labor not being so plentiful and the market not being as stable, the farmers have not been able to make a profit on their vegetables. The cost of labor, irrigation water, high taxes and poison—the constant fight against insects and diseases, and the uncertainty of an early freeze or drop in prices makes farming a gamble. The lack of agreement on Mexican labor has kept many farmers from planting.\(^3\)

The Valley has had some setbacks along with its growth, but has overcome each in turn.

The 1922 Rio Grande River flood inundated several towns and caused extensive damage. Within four years, though, Hidalgo and Cameron Counties had mobilized men and mules to pile up earthwork dams that are the backbone of the federal government's $20 million floodway system today. Floods no longer hold any terror for Valleyites.\(^3\)

Again the Valley was hard hit in 1933 with the hurricane that wiped out the citrus industry. But again the Valley erased the ravages of this disaster. There have been a number of

\(^3\)Letter from Frank C. Brunnemann, County Agricultural Agent of Cameron County, May 26, 1950.

\(^3\)Corpus Christi Caller Times, January 1, 1950.
freezes that have set back the citrus and vegetable growers. Most recent was that one in January, 1949. But again the Valleyites are overcoming this setback.

Comparison indicates continuous growth:

By 1912, 2,000 carloads of truck crops were shipped, in 1928, 17,600 cars. In 1934-35, 12,000 carloads of vegetable and citrus fruit were shipped from the Lower Rio Grande Valley, but the next season the number rose to 32,000, the record to that date.33

Another source states:

From the season of November, 1923, to May, 1924, witnessed the shipment of over 12,000 cars of fruit and vegetables from productive acres of the Lower Rio Grande Valley.34

Here is an interesting comparison for the period from 1909 to 1924 in the number of acres under cultivation and irrigation:

The combined capacity of the irrigation districts and privately owned canals in the Valley will exceed 500,000 acres annually, about 60 per cent of which was under cultivation and irrigation during the past year, as compared to an irrigation capacity of about 75,000 in the year 1909, with approximately 40,000 acres under cultivation and irrigation.35

The banks in the Lower Rio Grande Valley had on deposit July 13, 1928, $25,784,710.9436 and on July 2, 1948, "the Lower Rio Grande Valley's twenty-four banks reported a total of $108,185,756.30 on deposit."37

33Smith, op. cit., p. 230. 34Menn, op. cit., p. 64.
37Ibid.
Cotton was produced in the Civil War period and caused a minor boom again in the 1880's, "But cotton didn't become a major money crop until the 1920's." 38

In 1920, the Valley turned out 29,258 bales. During the next decade, the total had reached a peak of 169,289 in 1926, but by 1930 had fallen off to 88,214 bales. The peak production year in the 30's was 1937, a big year all over the country, when 145,809 bales were ginned in the four Valley counties. 39

A cotton production record that probably will stand for many years to come was made in 1949, for the four counties of the Lower Rio Grande showed a record of 542,740 bales. 40

The total bettered by more than 200,000 the 1948 production of 322,541 bales, the earlier record which stood for only one year. Actually a record has been smashed each year since 1946. 41

Cotton has always been the Valley's stand-by in producing a stable income. It is the biggest money crop produced in the Valley. However, the cotton allotment program has cut the acreage and farmers are now seeking other crops to plant on their unused acreage.

The growing of citrus fruits is an important crop in the Valley's agricultural economy and probably ranks third in the Valley's income.

First commercial grove of grapefruit was planted in 1904, but it was not until ten years later that substantial development occurred. It was found that

38 Corpus Christi Caller Times, October 18, 1949.
39 Ibid.
40 Ibid.
41 Ibid.
budding oranges and grapefruit on the native sour orange stock resulted in a tree adaptable to Valley soil. John H. Shary of Mission started large-scale planting shortly after.\(^{42}\)

In 1909 there were not more than "10 acres planted to citrus fruits in the Valley, barely 1,000 trees."\(^{43}\) And in 1924 there were "28,000 acres set out to citrus fruits, or approximately 3,000,000 trees, consisting of oranges, grapefruit, and lemons."\(^{44}\) By 1925 the Valley growers were carrying on an active trade with Florida growers, who sold them orange and grapefruit nursery stock.

The "Ruby" and the Red Blush grapefruits were developed in the Valley from the Thompson Pinks from Florida. The experiment on these two fruits started in 1929, and by 1937 there developed two fine fruits known the world over.

A modern grove "eats up $100,000 an acre in loving care, taxes, water, fertilizer, and insecticides each growing season."\(^{45}\)

In July, 1949, a commission composed of twenty-eight was organized by the state to help promote the Valley's citrus industry.

The Citrus Commission can use half of the funds it collects from a levy on fruit and its by-products on advertising and publicizing Texas citrus.


\(^{43}\)*Menn, op. cit.*, p. 184.

\(^{44}\)Ibid.

\(^{45}\)*Thruelsen, op. cit.*, p. 106.*
The commission can adopt and register its own brands under which any citrus grower or co-operative can market its fruit and by-products so long as they conform to the standards set by the commission.46

This new law creating the commission placed stringent control measures on the citrus industry and the Texas citrus fruits may become as popular as those from California and Florida.

The Valley's citrus growers were hard hit by the freeze in January of 1949; some 3,000,000 of the Valley's 11,000,00047 citrus trees were ruined. Some of the larger growers lost as much as "$50,000 worth of fruit and stock in a night."48 Because of this freeze in 1949,

... Red Blush was selling for six dollars a box (there are between forty-six and ninety-six fruit per box, depending on size), F. C. B. the Valley. Pinks were selling at $5.50 a box. The Valley's 11,000,000 box annual crop is apportioned just about evenly among the Red Blush, the Pink and the white fruits.49

The shipment of citrus fruits and the canning of such fruits dropped in 1948-1949 because of the freeze in 1949.

For the 1948-49 season, estimated equivalent boxes of fruit used for juice and segments include 5,281,000 boxes of grapefruit and 407,000 of oranges. Texas canner's Association estimated 1948-grapefruit juice processed at 4,944,258 cases; grapefruit sections 189,421; grapefruit and orange juice blend, 228,890 and orange juice, 296,067.50

47Thruelsen, op. cit., p. 106. 48Ibid.
The biggest production year in the citrus fruit industry occurred in 1945-46, with 28,300,000 boxes produced.\textsuperscript{51}

The future for the industry looks bright, although the average grower has many problems to face.

\textsuperscript{51}Exhibit No. 5, Lower Rio Grande Valley Chamber of Commerce, Weslaco, Texas.
CHAPTER IV

TRANSPORTATION

The development of transportation in any land is the key to the future, for without adequate transportation the country is likely to remain retarded and undeveloped. The Spanish did little to develop transportation in the Rio Grande Plain, and we know of their slow progress in the region. The Spanish living in the region depended upon pack trains and ox-carts to haul their freight from place to place. They developed no roads in the regions except a few clearings in the brush, which were more like trails than roads. The Anglo-Americans coming into the region started off, as did the Spanish, with crude modes of transportation, but in a decade or so they had well defined trails and had cleared ox-cart trails. Realizing the need for transportation, the Anglo-Americans put their shoulder to the task, and slowly progress was made. Initiation of freight and stage lines, surveying of crude roads, building of railroads, improvement of ports, building of roads and highways, and now development of air-transportation have marked the growth of transportation facilities in the area.
Early Means of Transportation

The early Anglo-Americans depended on the ship lines to carry freight to distant ports. Before 1860, Captain Richard King and Captain Mifflin Kenedy operated a steamboat on the Rio Grande as far up the river as Roma. But the majority of the freight was brought to ports on the coast by ox-carts. The section of the region to the south and west of San Antonio was served by ox-carts and, later, wagons until the coming of the railroads.

In 1849 in Corpus Christi there was a freight line organized to haul freight to the interior and back to the port.

J. H. Blood, a commission merchant of New Orleans; E. Fitzgerald, Attorney at Law, Corpus Christi; H. Clay Davis, a commission merchant of Rio Grande City, and Benjamine F. Neal, Attorney of San Antonio, became impressed with the belief that a great portion of the trade for Rio Grande City, Mier, Laredo, and other river points together with that of San Antonio would permanently pass through Corpus Christi. They felt the prospects for a growing traffic were such as to warrant the establishing of a regular line of transportation of the handling of freight and passengers, not only from Corpus Christi, but from New Orleans via Corpus to the above points.¹

The above is an example of one of the early companies organized to serve the region in transporting freight and passengers. It is interesting to note the charges that the company made for freight.

¹J. L. Allhands, Gringo Builders, pp. 56-57.
From Corpus Christi to Laredo, Mier and Rio Grande City, per 100 pounds... $2.00
Return freight... 1.00
From New Orleans to Corpus Christi, per barrel... 1.25
From New Orleans to any of above mentioned points, per 100 pounds... 3.75
Back freight to New Orleans... 2.25
From Corpus Christi to San Antonio de Bexar, per 100 pounds... 1.00
Back freight... 0.75

The company dispatched their first wagons to San Antonio in 1849; the citizens of Corpus Christi had no idea that the wagons would reach the Alamo City safely, but they did.

Here is an interesting extract that explains the type of transportation before the coming of railroads to the south and west of San Antonio:

Before the age of railroads all over-land transportation in Texas and Mexico was done by carts and wagons. For many years ox-teams were generally used for hauling to and from the coast country to the interior, but later, mules were substituted, to some extent, in the business, especially in the West, where the country was rough and mountainous and on account of the scarcity of water.

The early stagecoaches in the region were much like those in any other frontier section in the United States. There were several stage lines that had connection with San Antonio. One line was that running from Indianola to San Antonio. There was mail service and stage service to


Eagle Pass before the Civil War. After the Civil War, August Santleben and Captain Adolph Muenzenberger established the first stage line between the United States and Mexico, in August, 1867, under the firm name of Santleben & Company. The corporation was organized on August 1, as a private enterprise, for the purpose of transporting passengers, and incidentally, to convey letters, money, and other packages suitable for the capacity of the stage.\textsuperscript{4}

There was a stage that made round trips from San Antonio to Laredo. E. F. Hall operated a stage line from Rio Grande City to Laredo and from that point his stages met the two on-coming railroads, the International & Great Northern Railroad and the Lott's Narrow Guage line from Corpus Christi. There was also a stagecoach line from Alice to Brownsville.

With speed ranging from five to eight miles per hour, the little jaunt from Alice to Brownsville required two long days and a night of hard continuous travel, and the trip was something of a horror, with the passengers, sitting up, snatching their forty winks as best they could. The one-way fare for adults was fifteen dollars.\textsuperscript{5}

Most of the towns in the region with population enough to warrant a stage route had one.

But with the coming of the railroads the curtain was run down on stagecoach transportation.

\textsuperscript{4} Ibid., p. 60.

\textsuperscript{5} Allhands, \textit{op. cit.}, p. 142.
The Coming of the Railroads

Railroads have been a major factor in the development of the Rio Grande Plain. In early days, lack of facilities for travel and transport retarded the settlement and economic growth of the region. Ox-carts and stagecoaches creaked slowly over muddy roads, and longhorn cattle were sent to distant markets under their own motive power.

There were several notable efforts to build railroads into the region before 1860. In 1850 there was organized a company for the purpose of building a railroad from one of the Gulf ports.

On September 5, 1850, The San Antonio & Mexican Gulf Railroad Company was chartered with permission to build a line from some point on the Gulf between Corpus Christi and Galveston to San Antonio. It was decided to build from Port Lavaca via Victoria. The incorporators were:

S. A. Maverick, J. A. Paschal, B. Callahan, Thomas J. F. Perriman, John Twoling, Thomas J. Devine, Valney B. Howard and Enoch Jones of San Antonio; W. J. Clark and Gustavus Shiecher of DeWitt County and J. J. Linn of Victoria County. This road, like many others in the region, had its share of troubles, as its charter was granted before the land grant policy of the state was put into effect. The road was started at Port Lavaca and built only as far as Victoria by 1861.

6 Chris Emmett, Texas Camel Tales, p. 35.
7 S. G. Reed, A History of Texas Railroads, p. 90.
Other attempts that lapsed into oblivion were the Aransas Railroad Company, which was granted a charter in 1852; Texas Western Railroad Company, which received its charter in 1852 to build from Corpus Christi to the Rio Grande; the Brownsville and Rio Grande Railroad which was chartered to build a railroad and turnpikes from "Brownsville to other towns above it on the Rio Grande."\(^8\) It is possible that some of these might have been built if the Civil War had not intervened.

The Port Isabel & Rio Grande Railway connected Brownsville and Port Isabel and after a time put the ox-carts and wagons out of business. This little line of twenty-six miles was constructed after three attempts by its incorporators to build a railway from Point Isabel to Brownsville had failed. Point Isabel, or Brazos de Santiago, was one of the leading ports of Texas before the Civil War and was doing a prosperous business in the handling of freight. This situation gave birth to a project for building a railway into Brownsville and other points in the Valley. In 1850 the first charter was secured for this line, with incorporators "P. C. Shannon, Felix Mason, Richard Kirkpatrick and others of the new town of Brownsville."\(^9\) It was the fourth charter granted by the State of Texas for building a railroad. But the railroad was not built.

\(^8\)Ibid., p. 108. \(^9\)Ibid., p. 466.
Another project of the same kind was undertaken three years later by another group of Brownsville people among whom were Charles Stillman, J. A. Thompson, William P. Converse and Samuel A. Belden. The name chosen was The Brownsville and Rio Grande Railway Company. The charter was granted on February 7, 1853.10 This attempt failed also.

Again in 1866 an attempt to build this line was launched by such men as

Mifflin Kenedy, J. B. Thomas, Richard King, Edward Downey, E. F. Parker, R. B. Kingsbury, Stephen Powers, and Franklin Cummings, for a projected line from Brazos de Santiago or Point Isabel to Brownsville with the right to further extend to any place on the Rio Grande or other interior points not higher than Laredo.11

The charter also stated that for each mile of railway constructed the company should receive sixteen sections of land. "The charter ran for ninety years and was subsequently twice amended."12 Again there was reorganization:


Construction was started in 1870 by the Celaya Brothers, and the road was put into operation between Brownsville and Point Isabel in February, 1871. This was the first railroad in the Rio Grande Plain. The road was seriously damaged in

10Ibid. 11Allhands, op. cit., p. 110. 12Ibid. 13Ibid.
1873 and 1875 by storms and was practically thrown into the hands of receivership. "In 1909 it was acquired by interests allied with the St. Louis, Brownsville and Mexico Railway Company." It was rumored that this interest was going to abandon the road; the rumored abandonment aroused the ire of the Brownsville citizens. Then the road was acquired by Port Isabel interests, reorganized and recharted under the name of Port Isabel and Rio Grande Valley Railway, and rebuilt. W. T. Eldridge acquired the road in 1925 but later sold it to "Bayview Industries, owners of extensive acreage devoted to citrus, adjacent to the line." Prospects for the railway looked bright in 1935 when the Port Isabel channel was dredged, but the opening of Port Brownsville in 1936 limited its importance.

Before the coming of Uriah Lott to Corpus Christi there had been much talk concerning the building of a railroad to the Rio Grande. The citizens of Corpus Christi deemed rail service necessary to sustain their economy, as at that time the town was one of the leading centers for hides and wool brought from the section of the region below and west of the Nueces River. As early as 1856 citizens of Corpus Christi had been making attempts to organize a group to begin a rail project:

14 Reed, op. cit., p. 467.
15 Ibid., p. 468.
Perry Doddridge was the granddaddy of the plan to build such a line. Far antedating Uriah Lott, in 1856, N. Gussett, John W. Moore, Charles Lovenskiold, and William Headen teamed up with leader Doddridge in a movement to build the Corpus Christi & Rio Grande Railroad.\(^{16}\)

For a period of over thirty years Perry Doddridge fathered the movement for building such a line, but nothing came of this first effort.

In the early seventies Corpus Christi became alarmed because San Antonio was about to obtain a railroad, and as there was already a railroad from Brownsville to Point Isabel, they thought that they might lose their trade with Mexico to these two cities. So the old plans were again brought before the citizenry, somewhat revised.

The plan was to ask Nueces and Duval Counties to issue bonds to the amount of $300,000, which with the proceeds from the sale of the sixteen sections of state land to the mile would pay for the road, estimated to cost $15,000 to $18,000 per mile.\(^{17}\)

There was great opposition to this plan of financing the road, and so the amount of the bond was reduced to $200,000 and the election set to be held in August, 1874. There were two newspapers in Corpus Christi at the time, each taking a different side of the issue. One of the newspapers denounced the plan and asked what would happen to the wagon trade that

\(^{16}\)J. L. Allhands, *Uriah Lott*, p. 11.

\(^{17}\)Reed, *op. cit.*, p. 473.
had been built up. The opposition against the railroad became so well organized that the promoters withdrew the plan. However, this failure did not daunt the courage of Uriah Lott, who was looking into the future and was determined to have a railroad to the Rio Grande.

Uriah Lott brought the stockholders together in "Corpus Christi on August 10, 1875, and the following is an excerpt from their report as recorded in the Corpus Christi Weekly Gazette."\(^\text{18}\)

Mr. Lott took charge of its affairs when confidence was at the lowest ebb, and with scarcely a dollar in the treasury began the work of grading. Our people have responded nobly, but we hazard nothing in saying that had the work not been in actual progress it would have been far more difficult if not impossible to raise the necessary $200,000 capital stock.\(^\text{19}\)

Uriah Lott started grading and building the road with very little capital, and by coaxing money out of Mifflin Kenedy, Captain Hines Clark, and Richard King, he was able to purchase necessary equipment to start his actual construction. There was a reorganization of the stockholders and in September, 1875,

... there was duly born the Corpus Christi, San Diego & Rio Grande Narrow Gauge Railroad Company, with officers as follows: U. Lott, president, Wm. L. Rogers, vice-president, J. B. Mitchell, secretary, George F. Evan, treasurer.\(^\text{20}\)

\(^{18}\)Allhands, Uriah Lott, p. 13.

\(^{19}\)Ibid., pp. 13-14.

\(^{20}\)Ibid., p. 15.
The venture began to gain attention, "when with Capt. King and Kenedy putting their shoulders to the wheel, finally the road began to creep out into the wilderness." On New Year's Day, 1877, the road had reached a point twenty-five miles west of Corpus Christi. "Lott pushed his little railroad into San Diego in September, 1879," but it was still short of its goal. Through these years of building Lott was in desperate circumstances as far as financing his road; it was held together only by King and Kenedy.

Despite the fact that for five years he had held the road together with bailing wire, by September, 1880, he had succeeded in carrying its rail ends into Mesquite, ninety-five miles west of Corpus Christi.

Here Lott tried to induce the town of Laredo to contribute to the completion of the road, but Laredo was in a favorable position to refuse to aid Lott, for at that time the International and Great Northern Railroad was within 15 or 20 miles of that town. The I. & G. N. had reached San Antonio in 1881 and had extended its lines toward Mexico.

In 1881 Lott and Kenedy went to New York and sold the Corpus Christi, San Diego & Rio Grande Narrow Gauge Railroad to the Mexican National Railway, a company largely financed with New York capital. This company secured a new charter

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21 Ibid.
22 Ibid., p. 18.
23 Ibid., p. 19.
"providing for completing the line to Laredo and extending it to El Paso," and adding numerous branches to the new Texas-Mexican Railroad, as it is now called. "It was completed to Laredo, a distance of 162 miles from Corpus Christi, in November 1881." None of the branches was completed.

In 1902 the line was changed from a narrow-gauge line to the standard gauge.

Several attempts have been made to purchase this line from the Mexican National Railway, but this company still owns the Texas-Mexican Railroad. Headquarters for the company are now located in Laredo. The line is doing a good business, hauling cattle, vegetables, oil, sulphur, and other products. It does not have the passenger service it once had, hauling only freight now.

After Uriah Lott had sold out his little railroad running from Corpus Christi to a point near Laredo, he went into the sheep business and took a financial beating in 1883 because of the drought that year; he then moved to San Antonio. The Alamo City had been desirous of an outlet to the Gulf for many years and prior to 1884 had several groups organized for that purpose. On August 7, 1884, a group organized and received a charter to build The San Antonio & Aransas Pass

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24 Reed, op. cit., p. 474.
25 Ibid.
Railroad to Aransas Pass. Uriah Lott worked his way into this group, became the promoter for the road, and started work in 1885.

President Lott awarded a contract for grading the first twenty-five miles to Thomas Johnson, an experienced earth mover. His outfit moved in over the Sunset Route, and it required eight freight and stock cars to handle his mules, wagons, scrapers, plows, etc. The outfit was unloaded on wagons and went into camp down the river on May 15, 1885.20

Lott had the same experiences in the building the S. A. & A. P. Railroad that he had had in building the little narrow-gauge railroad from Corpus Christi to the Rio Grande. He again depended upon his old friend, Mifflin Kenedy, who was doing prospering business at this time on his ranch. Kenedy furnished the money for rails and spikes to build the first ninety miles of the line. Within thirty days after the project was launched, Lott had secured a fund of $150,000 for bridge timbers in addition to the Kenedy aid.

By 1886 Lott was running excursion trips on his line to Floresville in Wilson County. In June of 1886 he had reached the town of Beeville, and from there his line was stretched out to the present city of Alice, which at that time was called Collins Branch. "Lott finished his S. A. & A. P. into Corpus Christi October 28, 1886."27

26 Allhands, Uriah Lott, p. 28.
27 Ibid., p. 43.
The Rockport Branch was opened in 1888,

... and at that time Lott was holding out his hands to the Rio Grande Valley, with an offer to extend his rails from Alice to Brownsville for a bonus of $150,000, and free right of way and depot.28

The San Antonio & Aransas Pass Railroad created a number of new towns on the way to the Gulf from San Antonio: Kenedy, Karnes City, Skidmore, Sinton, and Alice.

It was remarkable that Lott could promote these railroads without any capital of his own and that he could complete roads where others had failed to build. Here is an interesting extract that tells how Lott built the S. A. & A. P.:

South Texas is full of strange things. From South Texas came a man who built 600 miles of railroad from a five dollar bill and faith, and the bill was a borrowed one. He moved up from Corpus Christi with all his possessions heaped on a two wheeled cart. He got a charter to build a railroad from San Antonio to Aransas Pass. He graded a mile of it, throwing a great deal more than one shovel full of dirt with his own hands. The Receiver of another railroad loaned this indefatigable builder enough old rails for a mile of track. In a distant part of the State was purchased an engine which had been condemned six years before and sent to the shop to be wrecked for scrap iron. Two old cars were picked up somewhere at a bargain, and that old engine, drawing these old cars, steamed into San Antonio. On this engine and cars, in bold lettering, was printed in lamp black "S. A. & A. P." With one mile of old rail track and with the equipment of the old engine and the two old cars, Uriah Lott started the Aransas Pass System.

There has been some tall financing in the history of railroad building in this country, but there isn't anything which, for dazzling pluck, could approach the story of the building of this 600 miles of road in South Texas. To the one mile of track there was added three miles by a dicker for some second hand rails which a street car company had bought from a narrow gauge company. On this basis a credit

28 Ibid.
trade was made with a Pennsylvania Rolling Mill for ten miles of rails. When they arrived there was not money enough in the Treasury to pay the freight, but it was got somehow. Ten miles more and so on the system grew, into its present proportions. The man who built the Aransas Pass system rode from San Antonio to Chicago at one critical period in his enterprise without a cent in his pocket. He had transportation but he hadn't anything to buy food, and he went through hungry.  

The S. A. & A. P. was extended to Kerrville in 1887, Yoakum in 1887, Houston in 1889, and Waco in 1891. The Southern Pacific, now in possession of the San Antonio & Aransas Pass, has owned this road for some time. The S. A. & A. P. was first a part of the Galveston Houston & San Antonio Railway, which was actually the property of the Southern Pacific. The S. A. & A. P. is a valuable asset to the region, since it has good outlets to the east and north.

Thus stretching strong arms into the fertile plains that lay between the mountains and the sea, the San Antonio & Aransas Pass Railroad became a potent factor in pouring a stream of wealth into the coffers of commerce by the development of Southwest Texas.

The Southern Pacific made the S. A. & A. P. a part of the Galveston Houston and San Antonio road in 1925, . . . and there-after the road was as a part of G. H. & S. A. until 1927, when the G. H. & S. A. & S. A. and A. P. and all other Texas rail lines were by virtue of authority of the Interstate Commerce Commission leased to the Texas and New Orleans Railroad Company.

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29 Allhands, Gringo Builders, pp. 253-4, quoting extract from Traveler in Globe Democrat.

30 J. E. Grinstead, Southwest Texas, pp. 7-8.

31 Reed, op. cit., p. 249.
Uriah Lott, who had once held out his hand for a bonus of $150,000 to build a railroad to the Valley in 1902 was again looking to that section to build a railroad. He had returned to his old home town, Corpus Christi, and immediately started trying to interest the citizens of that town in a railroad to the Valley, but to no avail. He realized that there was a possibility in building the road to Brownsville, because that town had been trying to get a major rail outlet for fifty years. He knew that the Brownsville citizens and people along the proposed route of the Southern Pacific from Alice to the Valley were greatly disappointed because the Southern Pacific had not built through the Valley. Lott had a survey made of a route from Corpus Christi to Brownsville. Then he began to look around for outside help in launching his road to the Valley. During his building of the San Antonio and Aransas Pass Railroad there had been an extremely progressive young man on his staff, B. Y. Yoakum, who was now a railroad promoter for the Frisco Lines in St. Louis. Lott turned to Yoakum for this outside help in building his line to Brownsville. At first Yoakum was reluctant to consider the proposition. But after Lott's persuasive arguments and statement that "such fellows as Kleberg, Major John Armstrong, Driscoll, Kenedy, and Yturria," would come in on the project and that a bonus could be counted upon, Yoakum consented. This company was chartered.

32Allhands, Uriah Lott, p. 80.

It called for a line of road to start at a convenient point within one mile of the County Court House at Sinton in San Patricio County, continuing through the counties of San Patricio, Nueces, Hidalgo, and Cameron to the Rio Grand River at or in the city of Brownsville, with a branch line from said main line at some point not less than 25 miles nor more than 35 miles north of Brownsville, through the said county of Hidalgo to the southeast corner of the County of Starr. This company's officers were: U. Lott, president; R. J. Kleberg, vice-president; John G. Kenedy, secretary and treasurer.

The support for Lott's road came from several sources:

They secured from the city of Brownsville 12,000 acres of land within four miles of the city, $40,000 in cash and sixty acres in the corporate limits. Substantial bonuses of money and land were given by other localities.

In 1903 Robstown was selected as the site for the beginning of construction of the Gulf Coast line, or the St. Louis Brownsville & Mexico Railway. It is sometimes referred to as Yoakum's road or Lott's road; it now belongs to the Missouri Pacific. The Johnson Brothers agreed to construct the road from Robstown to Brownsville, and a branch to Hidalgo County on the Rio Grande. "In 1904 the St. L. B. & M. R. was finished to Brownsville, and was set for the development of the Valley." The coming of the Gulf Coast line to the

33Allhands, op. cit., p. 92.
34Reed, op. cit., p. 331.
35Chatelle, op. cit., p. 17.
Lower Rio Grande Valley certainly paved the way for economic development.

William Doherty, who was the first General Passenger Agent of the Gulf Coast Lines, estimated that the land within ten miles of the road increased in value from $5.00 to $15.00 per acre, that these lands aggregated about 5,000,000 acres and yielded their owners a profit of $50,000,000 within a few years.36

Another important Railroad in the development of transportation was the International & Great Northern, which reached San Antonio February 16, 1881.37 This railroad was controlled by Jay Gould, who was interested in extending his road to Mexico from San Antonio. It reached Laredo on December 31, 1881.38 This line is now controlled by the Missouri & Pacific Railroad. The Rio Grande & Eagle Pass Railway was completed between Laredo and Eagle Pass in 1882.

By 1904 the Southern Pacific had control of the S. A. & A. P. and had built a line from Alice to Falfurrias, and efforts were made at this time to extend the line on into the Valley, but this was delayed for twenty years.

In 1925 the Southern Pacific began an extension of its line into the Rio Grande Valley. While this extension was not made as a part of the G. H. & S. A., but of the San Antonio and Aransas Ry. Co., the latter road was at the time under lease to the G. H. and S. A. and the extension was upon completion, operated by the latter.39

As early as 1888 the Southern Pacific had planned to build a road to the Valley, and this section of the country

36 Reed, op. cit., p. 33.  
38 Ibid., p. 203.  
39 Ibid., p. 249.
was generally thought of as Southern Pacific territory. However, the Gulf Coast lines built into the Valley in 1904, and the S. P. was having trouble with the Railroad Commission at the time and did not build into that part of the state until 1925.

Work began on July 30, 1926. Edinburg was reached January 11, 1927, and a golden spike was driven there by H. M. Lull, Executive Vice-President of the Southern Pacific Lines. McAllen was reached on January 22, 1927, the Interstate Commerce Commission granted authority to extend the line to Brownsville. On October 22, 1927, the extension from Harlingen to that city was completed.  

The Valley now has two main lines or major railroads, the Missouri Pacific and the Southern Pacific. Missouri Pacific owns the Gulf Coast Lines. The competition between these two lines has been very active, but harmony has prevailed and both are reaping their reward on their investments. Example of the freight they are hauling from the Valley is stated in the following passage:

In the season 1926-27, the one in which the Southern Pacific reached there, the Missouri Pacific handled 15,725 cars of fruits and vegetables. During the season 1937-38, it handled 24,299. During the first season the Southern Pacific handled 600 cars; during the 1937-38 season it handled 7,172 cars.  

The Port Isabel & Rio Grande Railway was the first rail line to serve the Lower Rio Grande Valley. The first railroad to reach into the Lower Rio Grande Valley from the north was the St. Louis, Brownsville, and Mexican Railroad, reaching  

40Ibid., p. 250. 41Ibid., p. 251.
the Valley in 1904. The St. Louis, Brownsville, and Mexican Railroad built a branch line into Starr County, which was completed in 1909. The Southern Pacific completed its line into Brownsville from Falfurrias in 1927, giving the Valley two main outlets by rail.

Highways

The Rio Grande Plain inherited little from Spain and Mexico in the way of roads. During the Spanish and Mexican era there were roads staked out, but they were not adequate for the needs of the Anglo-Americans. The Spanish had used the Old San Antonio Road from San Juan Bautista through San Antonio on to Nacogdoches. They had staked out the Goliad Road. They had other roads that were well used in the region, but these roads were only clearings through the brush.

The Anglo-Americans did little in the way of constructing roads in the region until after 1900. Here is an interesting extract concerning the roads in 1849:

No broad highway led out of Corpus Christi in those days and the first step in that direction was a survey made by a Mr. Manning of Corpus Christi for a road 145 miles in length, between his town and the river, forking about twenty-five miles north of the Rio Grande, the upper branch going to Mier, while the lower one led to Rio Grande City, the better to keep open to them the Mexican lane for commerce. This highway penetrated a
roadless region, where thousands of square miles of this great territory were totally unknown.\textsuperscript{42}

This road was marked by Henry L. Kinney.

He had a plow share attached to one of those old wagons and, as it jogged along over that desert country, a furrow was turned the entire distance between Corpus Christi and the River, thus marking out a clear and practical artery way to guide future caravans until such time as a permanent road, which was being advocated, could be cut through.\textsuperscript{43}

After 1900 there began in the region considerable improvement in the way of roads. There had been a few good dirt roads before 1900, but after 1900 the progress in the way of roads was noticeable. A. E. Menn, comparing the roads of 1925 with 1909, states:

In 1909 there were but few roads in the Valley and what few there were were built mainly by the land companies operating in their respective sections or localities. The only road that the Rio Grande region could point to with pride was the Old Military Road leading up the Rio Grande from Brownsville to Roma, which at best was a mere tract fairly good in dry weather, but impassable with rains since the road was never graded nor provided with any drainage.

The old stage route, leading to Alice, and another road to Point Isabel with a few cross-country trails about sum totaled the highway system of the Valley, while today marks the contrast of more than 1,000 miles of well graded and drained country roads and one of the highest class paved highways in the entire South under construction at a cost of a million dollars.\textsuperscript{44}

Yet during World War I the Government of the United States was concerned over the lack of roads along the coast and the border.

\textsuperscript{42}Allhands, \textit{Gringo Builders}, pp. 59. \textsuperscript{43}\textit{Ibid.}

\textsuperscript{44}\textit{Menn, op. cit.}, p. 182.
Today the region is served by some fine two-lane highways coming into the region from various sections of the state. United States Highway 77 enters the region at Refugio and passes through Robstown, Kingsville, and Harlingen, terminating at Brownsville. United States Highway 281 enters the region at San Antonio and completely traverses the region in a north and south direction, passing through Alice and Edinburg and connecting with U. S. No. 83. United States Highway 83 enters the region at Uvalde and connects that city with Laredo. From this point U. S. 83 goes along the Rio Grande into the heart of the Valley. United States Highway 81 enters the region at San Antonio and goes in a southwest direction to Laredo. At Beeville U. S. Highway 59 enters the region, passing through Alice and continuing to Laredo. All of the above highways connect the region and Texas with Mexico, and all are excellent roads. Corpus Christi has connection with all of these in addition to having some fine state highways leading into it. These highways serve the region well. Modern trucks and buses use these highways. There are some fine farm-to-market roads in the region.

Improvement of Water Transportation

It took the city of Corpus Christi seventy-four years to get the type of port facilities that she desired. Many attempts were made before the dream of adequate port facilities was realized.
The first step to make this dream for a good port a reality was taken in February, 1852, when

... a charter was taken out by James K. McCreay, Ebenezer Allen, Henry L. Kinney, Forbes Britton, Frederick Belden, William Mann, William H. Jones and Walter Merrian, all historic names, for the Corpus Christi Navigation Company.45

This group planned to deepen the channel through the mud flats, to a depth of five feet. Bonds were issued, and a toll was to be charged for ships using the channel. Nothing was done before 1854.

On May 15 of that year a city ordinance provided for the issuance of $50,000 in bonds for the financing of the channel between Corpus Christi and Aransas Pass, whereupon Sommers Kinney made a proposition to take such bonds at twenty cents on the dollar, agreeing to take immediate steps to start the work.46

But Kinney was unsuccessful in carrying out the work, and by 1856 he had had three extensions of time. It became evident that further inducements were necessary to carry out the project. The state of Texas offered land, sixteen sections for each mile completed, and for a while it looked as if Corpus Christi would have a channel through the mud flats to Aransas Pass. This project failed. The next attempt was made by P. A. Luckett, Sam Fullerton, Charles Worthington, William O. Dorherty and Thomas W. Dwyer.47 Their company

45Allhands, Gringo Builders, p. 60.
46Ibid.
47Ibid., p. 61.
was called the Corpus Christi & Brazos St. Iago Canal Company. They intended to dig a canal to a point on Padre Island. But the Civil War broke out and this project was put aside.

Another channel project was launched in 1871 and 1872; this plan had the approval of the citizens of Nueces County, but the project again failed. The Corpus Christi paper, The Nueces Valley, stated:

Our ship channel seemed to have had another apoplectic fit. We trust it will recover in the course of another seventeen years, that being about the length of its periodic terms. We fully expect to see another channel revived in 1889, and to have the channel made in A. D. 2071. We invite the city fathers, "Board of Directors" and the tax payers to attend that celebration at that time.48

In 1890 Colonel E. H. Ropes attempted to dig a thirty-foot channel across Mustang Island to the deep water of the Gulf. Ropes made noticeable progress, but money became scarce and his plans had to be dropped.

In 1898 the Federal government stepped in and dug an eight-foot channel extending into the Gulf of Aransas. In 1926 the dreams of citizens of Corpus Christi were fully realized; they had an adequate port.

The Federal Government, up to June 30, 1938, has spent, on the Corpus Christi-Aransas Channel, for construction $6,286,586, and for maintenance $5,586,838.49

48 Allhands, Gringo Builders, p. 64, quoting The Nueces Valley.

49 Reed, op. cit., p. 761.
"The channel is now 22 miles long with a controlling depth of 34 feet."\(^5\)

In 1927 the port of Corpus Christi shipped 6,170 tons.\(^1\) In 1948 the shipment was 10,883,083 tons.\(^2\) The Port Commissioners are Richard King, Chairman; R. E. Salles, Vice-Chairman; and Jerome Jalufka, Secretary.

Before the Civil War Port Isabel did a thriving business. "In 1859 almost $4,000,000 in imports passed through Point Isabel, of which something over three-fourths was in silver bullion."\(^3\) During the Mexican War, American troops and supplies were hauled through Point Isabel. The Port continued to be used, but finally the Federal government took a hand, deepening and protecting the channel.

After the expenditure of $2,000,000, Isabel was opened in October, 1934, for vessels drawing 25 feet. Port facilities were constructed and financed by the Port Isabel-San Benito Navigation District.\(^4\) The turning basin "is 1.5 miles, controlling depth 30 feet; project depth 32 feet."\(^5\) The port does a good business, but a considerable amount of this business was lost to Port Brownsville when that port was opened in 1936.

\(^5\)Texas Almanac 1949-1950, p. 347.
\(^1\)Corpus Christi Port Book, p. 25.  \(^2\)Ibid.
\(^3\)Reed, op. cit., p. 761.
\(^4\)Texas Almanac 1949-1950, p. 348
\(^5\)Reed, op. cit., p. 762.
As early as 1830 steamboats were ascending the Rio Grande, but Brownsville was not a port of importance because most of the commerce above that city was hauled in ox-carts and wagons through Brownsville to Point Isabel. It was not until 1936 that Brownsville became a port of considerable importance.

The Brownsville Navigation District was formed in 1928. The Government appropriated $2,700,000 for the project, which provides a channel 100 feet wide at the bottom and 25 feet deep and 17 miles in length, which was completed in 1936.56

"The turning basin is thirteen hundred feet square."57 The leading commodities shipped through Port Brownsville are citrus fruits, cement, petroleum, cotton, and vegetables. This port is of extreme importance to the Lower Rio Grande Valley.

The Intracoastal Canal of Louisiana and Texas is a very live artery to the Rio Grande Plain. The Galveston-to-Corpus Christi link was completed in 1942 and since that time has been very valuable to the Corpus Christi area. In 1943, the first full year of operation, "four hundred and ninety-seven barges moved out of Corpus Christi."58 In 1944 business was better; "nine hundred and eight barges in 333 tows moved in and out of the Port."59 During the year 1948 "1,588 barges in 651 tows moved in and out of Corpus Christi."60

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"The last segment completed was from Corpus Christi to Brownsville through the Laguna Madre."\(^6\) This important work was completed "on June 19, 1949, when the final link of the Texas-Louisiana Intracoastal Canal, between Corpus Christi and Brownsville, was officially opened."\(^6\) "The new link, 12 feet deep and 125 feet wide at the bottom makes possible inland water passage from the Mississippi to the Rio Grande."\(^6\)

The completion of the canal permits barges from Brownsville, Port Isabel, and other Valley ports to join in the trek toward the Mississippi, Missouri, and Ohio River Valleys. "More than seven million dollars and two years of patient dredging were spent in providing the slender stream through the shallows and mud flats in Laguna Madre.\(^6\) The additional Port of Brownsville and Port Isabel will certainly increase the traffic up and down the canal, and increase the economical advantages of the Rio Grande Plain.

The Rio Grande Plain is now served by several commercial airlines.

The transition from chaparral and sage in the Rio Grande to an industrial frontier has been motivated by the development of transportation in the region.

\(^{61}\) Ibid.
\(^{62}\) Ibid.
\(^{63}\) Ibid., p. 18.
\(^{64}\) Ibid.
CHAPTER V

GROWTH OF MAJOR URBAN CENTERS

The growth of urban centers in the Rio Grande Plain has not been so rapid as in other sections of the state. It is true that San Antonio is the third largest city in the state, but the majority of the cities and towns in the region were small towns before 1910, and the rapid growth of towns in the area has been in the last twenty years. Many different factors have prompted the rapid growth of these cities, but diversified agriculture, development of transportation, and the rise of the oil and gas industry have been outstanding elements in the development of urban centers.

Brownsville, originally a border defense post, was set up across the river from Matamoros in 1846; it was given the name of "Fort Taylor" in honor of General Zachary Taylor; the name was changed to "Fort Brown" on May 17, 1846, "in honor of gallant Major Jacob Brown of the Seventh United States Infantry, who was killed directing its defense."¹

The city of Brownsville was incorporated by the state legislature in 1850.

¹Allhands, Gringo Builders, p. 104.
From 1850 to 1904, the economy of Brownsville largely depended on the raising of cattle in the vicinity of the city. It had a boom during the Civil War days, but the most spectacular growth of the city has taken place since the coming of the St. Louis, Brownsville & Mexico Railroad in 1904. Before the arrival of the railroad Brownsville had not been a desirable place of residence.

Visualize Brownsville, if you please, without city water supply, street gutters its only sewers, all streets innocent of pavement save block-paved Elizabeth Street, with chuck holes and deep puddles of other days; dark at night; a crude volunteer fire department, with the sweating brigade carrying their water in buckets. Turkey buzzards, those white billed, naked red headed carrion-eating birds, guarding (as they would a cow in a bog) a hog wallow, of rather unpleasant odor and filled with croaking frogs, in the street, partly concealed by weeds, in front of what is now the Travelers Hotel. Some on the ground, some perched on roof tops, while others soared on motionless wings above, and yet they seemed to fit perfectly into their surroundings, in that city where they performed the necessary sanitary service.2

The city had no water system and water was brought from the river in barrels. The merchants even closed their stores for their afternoon siesta hours through the week from noon to five o'clock.

The real growth and development of Brownsville started with the coming of the railroads, and has paralleled the growth of agriculture in the Valley. In recent years industry has begun to move into the city and it is becoming more diversified.

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2Ibid., pp. 32-33.
In 1900 Brownsville had a population of 6,306, in 1910 a population of 10,517,\(^3\) and today, according to the latest census, a population of 36,176.\(^4\) This great increase in population is due to the agricultural economy and the important international position which sustain the city.

Since the port was completed in 1936 there has been a steady increase in shipping from the city. In 1947

\[\ldots\] 900 deep-sea vessels docked in Brownsville's harbor. They came from all over the world -- Russia excepted. Last year the port handled 893,927 tons of cargo, this year it looks for a million.\(^5\)

Another reason that the citizens of this fast-going town have confidence in the future is explained as follows:

Air traffic too explains why Brownsville hopes are flying high. The International Airport was started 20 years ago. Today four lines make scheduled flights there.\(^6\)

Four oil companies operate tank farms there and one of these has a 4,000 barrel-a-day refinery. There is also a shipside compress, located at the port in Brownsville, that is doing a tremendous business.

\(^3\)Texas Almanac 1914, p. 253.
\(^6\)Ibid.
Carthage Hydrocol has built a $21,000,000 plant, the first in the country to make synthetic gasoline from natural gas. Also, Standard Oil and Gas Company has a plant in Brownsville. The U. S. Industrial Chemicals, Inc., built a $25,000,000 plant in Brownsville which was completed in 1949.

There are now in the Brownsville area a total of twenty-one major industries, with a considerable number of smaller associated servicing activities. Products include gasoline, diesel oil, commercial alcohol, chemicals, quick frozen foods, canned fruits and vegetables, bags, bagging and sacks, beverages, mill work, garments, cotton processing, oil mills, mattresses, hats, metal fabrication, oxygen, carbide, acetylene, aviation overhaul and rebuilding ships, importing and exporting, and other commercial activities.

The tourist trade is good and aids the retail merchants considerably, even if a great deal of the tourist money is spent in Matamoros, because the Mexicans in turn spend in Brownsville the money they take in from tourists.

The economy of the city is sound, and in all probability Brownsville will become large and prosperous.

Corpus Christi was founded in 1839 by Colonel Henry L. Kinney. The settlement was first known as Kinney's Trading Post. Its name was changed to Corpus Christi in 1846. The trading post was an obscure settlement until July, 1845, when United States Troops under General Zachary Taylor arrived there. During this time H. L. Kinney did a thriving business with the troops of General Taylor's army. However, General Taylor moved his troops from the Corpus Christi area to march

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Brownsville Chamber of Commerce Folder, 1950.
southward to the Rio Grande, as the beginning of the Mexican War was near. After the Mexican War was over Kinney was somewhat discouraged over the few settlers remaining at his trading post, and, being a man of action, proceeded to advertise in eastern United States and European newspapers. Immigrants began to arrive and settle at the trading post. After the town began to grow with permanent settlers, it "became a prosperous depot for the trade of the Rio Grande country and beyond."\(^8\) It also became an important expedition center.

In 1849 the city was an important junction for assembling numerous expeditions of parties from the South and East to journey overland to California for the gold rush.\(^9\)

During the 1850's Kinney had revived his trade with the Rio Grande country and beyond, and Corpus Christi streets at times were filled with ox-carts and oxen that had made the long trip from the Rio Grande country. In the 1850's efforts were made to deepen the channel in order to have a deep sea port.

During the Civil War the progress of Corpus Christi was brought to a stand still.

\(^8\)Allhands, Gringo Builders, p. 55.
\(^9\)Coleman McCampbell, Saga of a Frontier Seaport, p. 3.
When the clouds of the Civil War broke in their fury, this town, like most southern cities, was shut up and everything went flat, leaving it almost as dead as a burial ground.¹⁰

In the 1870's the town began to recover from the effects of the Civil War.

"In the seventies over a million sheep grazed in Nueces and Duval counties; for a few years Corpus Christi, it is said, was the largest wool market in America."¹¹ It became an important gateway trading post:

Up from the South came traders, and from its early days the city became the gateway for such a growing trade with northern Mexico that it was supreme in Texas as a market for wool, hides and skins. In the early seventies it was not uncommon to see a train of thirty ox-carts, six oxen leaning in the yoke and dragging behind a single huge cart.¹²

In this period Corpus Christi was doing a prosperous business, but the town was a crude place to see; miserable-looking little shanties, not wholly confined to the Mexican quarters, were common sights. Most business houses were one-story frame structures, which were much in keeping with the ox-cart trade.

In the eighties the city depended upon the cattle industry for its economic life, since the sheep industry had declined.

¹⁰Allhands, Uriah Lott, p. 10.
¹¹McCampbell, op. cit., p. 3.
¹²Allhands, Uriah Lott, p. 10.
A boom was started in Corpus Christi in 1890 when Colonel E. H. Ropes, the promoter and financier, hit town; he planned to do very much for Corpus Christi, but his dreams did not completely materialize. He started building homes and hotels, improving the beach, dredging a deep channel, and finally in his grandiose plan building a railroad to Brownsville. But when money became scarce in 1893, his great plans, which were probably twenty years ahead of the times, failed.

To add to the town's distress in 1893, "the bank of Doddridge & Davis closed its doors. The news came like a thunderclap and the old town awoke with a bound."13 Not all the happenings in the 1890's were bad. Many improvements took place, such as the building of a water works, the installation of electric lights, and other civic improvements.

Progress of the city began to gain momentum about the turn of the nineteenth century. The business section, though not modern, was enlarged, population began to increase, and probably most important, the farmers in the Corpus Christi area began to diversify.

In this setting some 4,700 people lived and worked and played and dreamed of a city with a deep water port, with varied industry, with extensive farm lands.14

13 Mary A. Southerland, The Story of Corpus Christi, p. 56.
14 Corpus Christi Caller Times, 50 Years of Progress, January 1, 1950.
The economic life of the city in 1900 was just beginning to recover from the disastrous Ropes' Boom. The town was coming back, and the first decade of the new century saw the town return to much of its old life. Farmers had learned that cabbages could grow in South Texas soil, and the pungent odor of the vegetables added to the smell of fish and hides in the city.

By 1910 the city—and the citizenry—were ready to begin civic improvements. The first electric trolley began running that year, but nothing was done about street paving until 1913.15

After 1900 the north beach began to blossom into a tourist resort, hotels were built and a pavilion constructed. "The tourist population alone contributes a revenue sufficient to support the activities of a larger town,"16 so stated one writer referring to the period from 1900 to 1910.

In 1915 natural gas was discovered, and in 1923 an oil well was brought in, which were to prove a big factor in the economic development of the city. Today there are 355 oil and gas fields in the Corpus Christi area. They contain over 13,000 wells.17 Nueces County alone has 1,300 wells, ten per cent of the total.18

15 Corpus Christi Caller Times, op. cit.
16 Johnson, op. cit., p. 639.
17 Corpus Christi Chamber of Commerce, Pamphlet.
18 Ibid.
Corpus Christi has become one of the three major centers of oil refining on the Texas Coast, with 12 refineries in the vicinity and four large plants situated on the Port of Corpus Christi. These refining companies are the Taylor Refining Company, which located in Corpus Christi in 1934; American Mineral Spirits, which opened in 1936; Pontiac Refining Company, which went into operation in 1937; and the Sinclair Refining Company. The last company, which is . . . newest of the local plants, is also the largest, employing about 300 persons. It has been in production since 1944, turning out aviation and domestic gasoline, fuel oils, gas, propane and solvents.

Corpus Christi has made substantial progress in its industrial development. Its great industrial history really began in a depression year, 1931, when the city was chosen as the site of Southern Alkali Corporation. This is the largest plant in Corpus Christi.

Jointly owned by Pittsburgh Plate Glass Co., of Pittsburgh, Pa., and the American Cyanamide and Chemical Corp., of New York City, the Southern Alkali Corp. employs approximately 600 persons and has several times expanded its physical facilities and production since it went into operation in 1934.

This plant processes basic alkali products that are used in glass, soap refined oil, chemicals, and other products that are used industrially.

19 Corpus Christi Caller Times, October 30, 1949.
20 Ibid.
21 Ibid.
Brimer Paint Manufacturing Company has been making many kinds of paints for the last ten years and distributes its products in the South Texas area. The Gustafson Manufacturing Company began manufacturing a "mobile dusting machine for agriculture use, and allied tools, in 1941."

The American Smelting and Refining Company opened in 1942. It located in Corpus Christi because of the deep sea port. The Celanese Corporation of America plant at Bishop is the largest plant in the immediate area. It was originally a defense plant, producing synthetic chemicals to be used in plastic and textile industries.

Celanese employs approximately 900 persons, including those at the Clarkwood laboratory, which was opened two years ago. Cheap fuel was a principal attraction for locating the plant here. The corporation purchases dry natural gas for fuel, and buys propane and butane, the chief raw materials, for "feeder stock."

Other important plants in the city are the Caldwell plant, which manufactures giant brush cutters, cotton stalk cutters, road discs, and other farm equipment; the Thomas Concrete Pipe Company, which makes the largest concrete sewer pipes in the Southwest, and other concrete products; a branch fabrication plant of the Western Steel Company which has been in operation since 1943, fashioning steel for residential and industrial markets; the Haliburton Portland Cement Company; and the Bluebonnet Plant of Corn Products Refining Company.

\[\text{\textsuperscript{22}}\text{Ibid.} \quad \text{\textsuperscript{23}}\text{Ibid.}\]
Another valuable asset that the city has is noted:

The Corpus Christi Naval Air Training Center is an installation built by the United States Navy at a cost of $125,000,000. The number of the Center's enlisted personnel has been greatly reduced since the War's end. Training activities are still at a high level. The Navy's advanced Training Command is now located here. Authorities have announced that the current payroll aggregates approximately $24,000,000 a year, still a potent factor in the retail trade picture.24

The grand total of fish caught and processed by commercial fishermen in the Aransas and Corpus Christi area in the 1948-1949 season was 6,415,810 pounds, including all types of fish, crabs, and shrimp. The commercial fishing industry adds to the economic life of the city, as the fish and shrimp are processed here and shipped to distant markets.

The population of Corpus Christi in 1920 was 27,741 and the 1950 census shows a population of 108,051.27

The economic fibre of the city and of the rich territory which sustains it is so strong, so diversified that there is no foreseeable reason that the city of Corpus Christi should not become one of the truly great cities of the United States.

24 Corpus Christi Chamber of Commerce, Pamphlet.


When the St. Louis, Brownsville, & Mexican Railroad was being built into the Valley, there was to be a town-site located at a spot 117 miles south from Robstown. Lon C. Hill owned the land at this particular point, and after consulting with Colonel Uriah Lott in 1904, he decided to name this town-site Harlingen. Hill had the town laid out and started selling lots. When the branch line of the St. Louis, Brownsville & Mexican Railroad was being built to Starr County, Harlingen was dubbed by the working crews as "Rattlesnake Junction" because of the rattlers there.

At first Harlingen gave little promise of the substantial progress that lay before it. It was but a mere village as late as 1915, but in the twenties its population began to increase. In 1920 the population was 1,743,28 but by 1930 it had grown to 12,124.29 The economy of the city is sustained by the agricultural activities surrounding the city. The city's growth parallels the growth of agriculture in the Valley.

In recent years emphasis is being placed on manufacturing, and the city has within its bounds cotton mills, compress, quick freezing plants, citrus and vegetable packing and canning plant,30 and a factory producing irrigation equipment. There are 3,000 employed in these factories.31

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28Harlingen Chamber of Commerce Folder, 1950.
29Ibid. 
31Harlingen Chamber of Commerce Folder, 1950.
This town has been outstanding in its zealous ambition to develop and grow in every phase of its many enviable characteristics. It occupies a central geographic location in the home, being known as the "Hub of the Valley." The town is the junction of two railroads, the Missouri Pacific and the Southern Pacific. Many highways converge and lead to all parts of the Valley. It is also the very heart of the cotton production in the Valley. There are six major truck lines operating out of the city at present. Furthermore, Harlingen has one of the finest airports in the United States, located three miles from the heart of the city, with five concrete runways, each over a mile in length; this is the leading commercial air field in the Valley. The field was built by the United States Government at a cost of $20,000,000 during the war. Harlingen's population of 1940 has grown and by the census report of 1950 is "23,202, an increase of 9,896 from 13,302 in 1940." Laredo was founded as early as 1755, with three or four families. Thomas Sanchez formally founded the Villa de Laredo. This was a part of José de Escandón's project of settling the northern states of Mexico. "The settlement prospered and by 1757 included 11 families, numbering 85 persons." In this same year the village was granted a

32 Chatelle, op. cit., p. 28.
33 Harlingen Chamber of Commerce Folder, 1950. 34 Ibid.
35 Fort Worth Star Telegram, June 21, 1950.
liberal charter from the Spanish Government, making land
grants to the settlers, and grants of land to be used in
making public plazas. By 1880 there was a "prosperous
village here with a population of several thousand people." In the Spanish period and early American period the economy
of Laredo was sustained by the trade with Mexico. The trade
of hides, skins, and tallow was important to the economic
life of the town. It was a principal port of entry for the
heavy-laden ox-carts that came from Mexico on their way to
Corpus Christi. The raising of livestock was and is a prin-
cipal resource of Laredo and the surrounding area.

Laredo was incorporated under the laws of the State of
Texas in 1852. At this time there were not over fifty Amer-
icans in the town, and no buildings representing the American
type; all were of the Mexican type.

It has been previously stated that in the early part
of the year 1881 the Texas-Mexican railroad was extended to
Laredo from Corpus Christi, while in the latter part of the
same year the International & Great Northern road entered
Laredo from San Antonio. At that time the only modes of
transportation were the ox-carts, and the wool and hide
industry was the principal money-making factor. But the
coming of the railroads brought about a boom in the town and
the new Laredo was born.

37 Laredo Times, Laredo, May 1, 1925.
About this time also the coal mines at Minera and thereabouts had become a valuable adjunct to Laredo and the Rio Grande & Eagle Pass Ry. was built in 1882. The export and import trade and general trading with Mexico became an important factor in the commercial life of Laredo and American families in large numbers began to pour into the city with the entrance of the railroads. Laredo was growing at leaps and bounds, the old stone and concrete flat-top buildings began to give way to modern structures, and Laredo had its first brick building constructed in 1882, it being the two-story county courthouse building which was later destroyed by fire.38

In the late 1880's utilities came to Laredo. The electric street railways, water service, and other improvements began to make their appearance in the city. By 1921 a large program was under way for paving the streets of the town.

In the 1890's irrigation was started in the vicinity of the city of Laredo, which added to the economic life of the city tremendously. In 1898 Thomas Nye started raising Bermuda onions four miles from the city, and now there are large numbers of growers of onions in this section, shipping in a good year as many as 2,000 carloads of onions.

In 1910, when natural gas was first brought to the city, Laredo had a population slightly over 14,000. Ten years later this population had increased to more than 24,000.39

Laredo is the greatest inland port between the United States and Mexico. Since the days of the ox-carts there has been an increase in the exports and imports passing through Laredo between the two countries.

38 Ibid. 39 Ibid.
Among Laredo's principal imports from across the border are grain, cottonseed, vegetables and other raw products; but the most distinctive item is the annual shipment of approximately 25,000 quail. These birds are trapped in Mexico and shipped throughout the United States for restocking game preserves. The principal exports are mining and agricultural machinery, electrical appliances, and large quantities of shoes and clothing.40

In Laredo there is found one of the few antimony smelters in the world. Ore is shipped to this plant from Mexico in train-load lots to be refined and sent all over the world for commercial use. Also in the city there are many other processing and manufacturing plants producing a multitude of items such as straw hats, brick and tile, wax candles, clothing, lead products, leather goods, vegetable canning, rugs, and cotton ginning.

The two most important industries are oil refining and shipping. Oil is rapidly becoming one of the chief industries around Laredo.

Since 1921 more than 40 fields have been discovered and more than 10,000 wells drilled. Last year the area produced approximately 80,000,000 barrels of oil. Oil leasing has helped many of the large ranches to become empires to be reckoned with in the financial world.41

The city of Laredo in 1950 has a population of 51,964 people.42 It is served by all types of modern transportation facilities including bus, train, truck, and airlines. All

41Laredo Facts, 1949, p. 4.
facts indicate that Laredo will become a large city in the future. The merchants of Laredo realize about a quarter-million dollar business each year from the tourist trade.

San Antonio is the oldest of Texas cities, the third largest, and the most diversified in past history and present color. Much has been written about the early history of San Antonio, which is a cosmopolitan city belonging to all Texas and not just to the Rio Grande Plain. It was first occupied by the Indians.

After the Indians came the Spaniards, the French, the Mexicans and the American pioneers in turn followed later by the German and Irish colonists. The few thousand population before the Civil War included every race and nation, which had made San Antonio one of the most cosmopolitan of cities.43

The economy of San Antonio is sustained by

... oil and natural gas from the Coastal Plain, cotton from black acres extending beyond the city, wool and mohair from the encroaching hills, cattle from wide prairies spanning the distances south and west, citrus fruits, berries and winter vegetables from nearby artesian belts, pecans—all supply its economic life together with more than a thousand factories, this commercial activity contrasting sharply with an always apparent past.44

San Antonio began as a military center; it still is a military center. Established as a Spanish presidio in the wilderness, it now holds within the city limits Fort Sam Houston, one of the largest army posts in the United States,

43F. H. Bushick, Glamorous Days, p. 15.

44Federal Writers’ Program, San Antonio, An Authoritative Guide to the City and Its Environ, p. 5.
while encircling its outskirts are military aviation fields such as Brooks, Kelly, and Randolph, which are important in the economic life of the city.

In 1726 "the population of San Antonio totaled 200, including forty-five military and four civilian settlers, with their families."\textsuperscript{45} The economic livelihood was derived from farming and the raising of livestock throughout the Spanish era. By 1823 "the population of San Antonio had now increased to about 5,000."\textsuperscript{46}

Back in 1778 San Antonio had water piped into the city, but the people were not quite ready for running water, as they preferred to dip it.

Here is an extract that well describes the town in 1833:

\begin{quote}
\ldots Bexar was pictured as a town still exposed to the depredations of her ancient enemies, the insolent, vindictive and faithless Comanches...Her schools are neglected, her churches desolate, the sounds of human industry almost hushed. Yet while the leaders of the community, with few exceptions, remained loyal to the indifferent and distant government of Mexico, the newer residents comprised a dissatisfied, restless group in which were many younger sons of the dons and a few of the dons themselves.\textsuperscript{47}
\end{quote}

After the Texans had won their independence the city began to grow with the rest of the surrounding country.

\textsuperscript{46}\textit{Ibid.}, p. 11.
\textsuperscript{47}V. L. James, \textit{Frontier and Pioneer}, p. 92.
Before the Civil War San Antonio was fast becoming a prosperous city, which was supported by a rapidly developing country that was stocked with vast herds of cattle and many sheep.48

Some of the city's prosperous citizens before the Civil War were merchants.

Among the prosperous merchants of ante bellum days were James R. Sweet, who came to Texas in 1842, the Vance Brothers, Samuel Bell & Sons, Groesbeck & French, and Wilson Biddle.49

Evidences of city improvement before 1860 are given in the following passage:

In 1859 the San Antonio Gas Works, located on West Houston Street, was inaugurated by Mr. Torry. The Casino German Club had a grand opening on Market Street on its completion in 1858. The Menger Hotel on Alamo Plaza did a flourishing business and was enlarged in 1859. The U. S. Arsenal, on South Flores Street, was completed and in operation in 1859.50

The beginning of the cattle drives, immediately after the Civil War, and the coming of the first railroad in 1877, when the Southern Pacific built westward, brought great changes. Other railroads soon followed. Immigrants poured in. The lusty business of the open range boomed in the late 1870's and early 1880's and made San Antonio, a veritable cattle capital, experience a lurid period.

The rapid growth of San Antonio dates from 1876, when the first railway (Sunset Route) entered the city. From 1879-1880 to 1887, the population increased from 14,894 to 42,570; from 1900 to 1910 the population increased from 53,321 to 96,614.51

48Ibid., p. 93. 49Ibid. 50Ibid. 51Chabot, op. cit., p. 16.
In 1890 electricity and streetcars were introduced. The river turned the stones for flour mills. There were a number of breweries located in the city. The first cement factory west of the Mississippi raised its smokestack in the city. Stone and gravel were quarried. Foundries became machine shops. The Union Stockyards became a concentration point for livestock. In 1939 San Antonio had 310 major manufacturing plants, producing goods valued at $40,000,000.52

The various phases of petroleum development are responsible for a larger part of the city's income than any other single industry. "In 1939 there were 4,000 persons directly employed by the four refineries, 15 supply firms and more than a hundred operators; this payroll, royalties, and other income from oil were estimated to total at least $125,000,000."53

During the year 1939 over $10,000,000 worth of livestock was handled by the stockmen of the city.

In 1948 the Chamber of Commerce of San Antonio estimated that there were 700 manufacturing establishments; that there were 19,000 employees working in these factories; and that the value of these manufactured products was worth about $120,000,000.55 The city derives much of its income from

53 Ibid., p. 330.
54 Ibid.
55 San Antonio Facts, San Antonio Chamber of Commerce.
tourist business, an estimated amount of $30,000,000 annually. San Antonio is a great city and is fast becoming more industrialized.

Recent figures show that San Antonio has a gain in population of 60 per cent since 1940.

San Antonio has a population of 406,811, according to figures released Thursday by James W. Stroud, regional census director.

It compares with 253,854 in 1940, and is a gain of 152,957 or 60 per cent. Stroud said the percentage increase was largest of the state's major cities. 56

There are many other towns in the Rio Grande Plain that are progressing along with the larger ones in the region. Edinburg had a population of 8,718 in 1940 and today has a population of 12,340. 57 Its economic life is sustained by the agriculture in its area. San Benito, another Valley town which is sustained by agriculture, had a population of 9,501 in 1940 and today has a population of 13,264. 58 Edcouch, almost centrally located in the Valley, is a center of the raising of vegetables and citrus fruits which promote its economic life. It had a population of 1,758 in 1940 and today has a population of 2,925. 59 Mission, also located in the Valley, is the center for citrus fruits; it has increased in population. Pharr-San Juan-Alamo, three towns

56The Houston Chronicle, July 13, 1950.
57Fort Worth Star Telegram, June 21, 1950.
58Ibid.
59Ibid.
that have been incorporated as one, has shown steady growth in the last few years, and its economy is sustained by agriculture. McAllen has shown rapid growth since the thirties. Alice, located in Jim Wells County, was primarily a cattle town before 1933, but now it owes its rapid growth to the oil industry that has been developed there. There are many other towns in the region that have progressed rapidly in the last few years and owe their growth to varied economic factors, but space does not permit detailed discussion of each. Some of these towns are Kingsville, Sinton, Aransas Pass, Three Rivers, George West, Eagle Pass, and Pearsall.
CHAPTER VI

NATURAL RESOURCES

Without question, mineral resources in the Rio Grande Plain have attained a commanding position in the present stage of economic development in the region. Problems of economic importance and of the commercial aspects of the diversified minerals of the region can be only briefly stated here.

It has been within the last three decades that the people of the region have become fully aware of their natural resources, and only during the last twenty years has rapid progress been made in developing these to a capacity that has been beneficial to its inhabitants and people elsewhere. Oil and natural gas have been the two major resources that have been developed, but there are other resources in the region that probably will be developed more fully in the future. In the region there can be found the following resources: oil and gas, oyster shells, bleaching clay, burning clay, glass, sand, gravel, sandstone, volcanic ash, caliche, cement, gypsum, lignite, sulphur, salt, barite, drilling clay, coal, greensand, and asphalt. Few of these have been developed, and none completely developed.
Oil and Natural Gas

The geological background of the region has been defined as follows:

The embayment is the site of a very deep post-Paleozoic sedimentary basin, and is estimated to contain near 20,000 feet of Cretaceous and Eocene sediments, and may contain Jurassic deposits. The Cretaceous sediments so far as known are limestones, marls and shales, and the Eocene sediments are almost wholly clastics, alternating from sands to shales with changing sedimentary conditions. Apparently the Eocene sea underwent many fluctuations in comparative level, establishing coast line conditions at various horizons around the sides of the embayment. This gave opportunity for the deposition of strand line sands at many sites. Some of those strand line sands, when covered by impervious shales in an advancing sea, became excellent reservoirs for gas and oil.¹

There are two types of reservoir traps in the Rio Grande Plain region. These traps are

... the strand line sands which may become the site of oil accumulation due to their position on a monoclinal side of the embayment, and the sands on the tops and side of deformational structures.²

Prior to 1900 it was known that oil was present in the region, but little was done until after 1900 to develop oil or gas. Freighter plying their trade from Corpus Christi and San Antonio to Laredo and Mexico greased their wagons from seepage of oil in Duval County, and of course oil was encountered in the digging of water wells. However, "the

²Ibid.
first statistical records of the production of oil and gas in the state refer to Bexar County in 1889."³

Some of the early efforts to secure oil and gas were successful before 1910 in the region.

The test of Randolph Roberts at White Point in San Patricio County secured some gas at 425 feet in 1904; and Piedras Pintas in Duval County and Mission in Bexar County were new oil discoveries in 1907, although neither of them accounted for any appreciable production for many years.⁴

In 1908 a test well was being drilled on C. R. Byrne's ranch in McMullen County, and when a depth of 741 feet had been reached there was a blow-out, which was not controlled for several years. This was a major showing and added to the interest of the oil and gas activity in the region. Another important development was made when a rancher drilling for water east of Laredo discovered gas, ". . . and in 1911 the Border Gas Company completed a pipe line from the Reiser field to Laredo and began the delivery of gas to consumers there."⁵ From 1908 to 1913 the development of oil and gas in the region was slow and no major discoveries were made.

In 1913 the Somerest field was accidentally discovered by C. Kurz, while drilling for artesian water; a rancher also seeking water at Charco Redondo secured minor oil production at a depth of 160 feet.⁶

³C. A. Warner, Texas Oil and Gas Since 1543, p. 280.
⁴Ibid., p. 281.
⁵Ibid.
⁶Ibid.
At White Point there was renewed interest in 1914 when tests were started there, and in August, 1915,

... gas production estimated at more than 5,000,000 cubic feet per day was encountered at a depth of 2,020 feet in the test of the Gulf Coast Oil and Gas Company on the Kirkland. ⁷

In 1915 there was renewed interest in Bexar County, which had produced small quantities of oil for many years, through the opening of the Alta Vista field by J. T. Marrs. From 1915 to 1920 the development of oil and gas wells in the region was slight, but starting in the twenties the development began to increase.

In 1920 the first discoveries were made in Refugio County which ranks high now with other leading counties in the state in the production of oil and gas.

On February 7, 1920 the Kleberg Oil and Gas Company encountered approximately 6,000,000 cubic feet of gas per day at a depth of 2,143 feet in a test being drilled near Kingsville, but major production was not secured there until two years later. ⁸

Small production had been secured at Charco Redondo in 1913, and the Webb Zapata Company had drilled more than forty wells there prior to 1921. This company operated extensively in Webb and Zapata counties which included these localities:

... the Charco Redondo Oil Wells, Jennings gas pool, and Mirando oil pool, in Zapata County, and the Reiser gas wells and Schott oil pool and the gas wells of the Carolina-Texas Oil Company in Webb County. Of

⁷ Ibid., p. 282.
⁸ Ibid., p. 283.
these several localities, the Reiser field is the oldest as a commercial field, having been discovered in 1909, although previous to that time oil had been noted in shallow wells drilled for water at Charco Redondo Rancho. 9

The completion of a new well in the Mirando field in 1921 increased the interest there, and many new adjoining fields were developed.

O. W. Killam is given much credit for the development of the Mirando Valley field, and "If anybody deserves the title of the father of South Texas oil it probably is Oliver Winfield Killam of Laredo." 10 The Mirando Valley discovery was completed April 21, 1921. "Oil was bringing from 75 cents to $1 a barrel in those days so Killam rapidly stirred up a market for the new Mirando crude." 11

In 1921 the demand for natural gas by industrial users and urban centers aided further development in the region in 1921. The city of San Antonio was connected by a pipe line with the gas fields in McMullen county. Although gas had become of considerable importance in the region, the natural gas industry was to expand soon to much greater magnitude because of the discovery of new gas reserves in Duval and Live Oak Counties.

In 1922 the Frances Oil Company was carrying on successful operations near Kingsville. In the same year, the "Kanokla

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9E. H. Sellards, Notes on the Oil and Gas Fields of Webb and Zapata Counties, p. 5.
10Corpus Christi Caller Times, October 16, 1949.
11Ibid.
Oil Company No. 3 Garcia at Mirando was completed for an initial production of 3,000 barrels per day.\(^\text{12}\) By 1923 the fields near Laredo began to assume major importance in the gas industry, and "field rules for the Laredo district were adopted by the Railroad Commission."\(^\text{13}\)

In 1923, 

... the first commercial gas in the Saxet field was secured when Pearson et al. completed their No. 1 Dunn on January 18; and in order to handle increased production from the Callihan area, the Grubstake Company built a 3 inch oil pipe line from there to Three Rivers in Live Oak County.\(^\text{14}\)

The Natural Gas industry had become of major importance in 1923. Before that time

The natural gas industry had entered Southwest Texas in 1911 when the Border Gas Company laid its line from the Reiser field to Laredo, and it had expanded in 1915 when the same company constructed additional pipe line facilities to connect that town with the Jennings ranch field in Zapata County, where the company had completed several gas wells in 1914. Increased interest in gas was manifested in 1921 when preperations were made to furnish natural gas to San Antonio. The Grubstake investment company had completed its No. 1 Brown in the Callihan area of McMullen County as a 40,000,000-foot gas well at a depth of 878 feet on November 16, 1918, and the subsequent completion of additional wells had proven the presence there of a considerable gas reserve. The Southern Gas Company accordingly contracted on September 13, 1921, to deliver gas to San Antonio from this area, and the first natural gas from McMullen County reached that city through the newly-constructed pipe line in November, 1922.\(^\text{15}\)

These discoveries were important and were to prove the background for future major gas pipe-line construction from the Rio Grande Plain to other points.

\(^{12}\) Warner, op. cit., p. 285. \(^{13}\) Ibid. 
\(^{14}\) Ibid. \(^{15}\) Ibid., p. 286.
From 1924 to 1927 the number of gas wells in the region increased greatly. An excellent idea as to the area embraced by this gas development and the total reserves then being developed is furnished by the table showing the total daily open-flow capacity of the wells completed during 1927 alone:

<table>
<thead>
<tr>
<th>County</th>
<th>Field</th>
<th>Total Daily Capacity (M. C. F.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duval</td>
<td>Cole</td>
<td>1,416,000</td>
</tr>
<tr>
<td>Jim Hogg</td>
<td>Alworth</td>
<td>30,000</td>
</tr>
<tr>
<td>Jim Hogg</td>
<td>Henne Winch Farris</td>
<td>195,000</td>
</tr>
<tr>
<td>Live Oak</td>
<td>Mount Lucas</td>
<td>230,000</td>
</tr>
<tr>
<td>Medina*</td>
<td>Adams</td>
<td>338,000</td>
</tr>
<tr>
<td>Nueces</td>
<td>Saxet</td>
<td>104,000</td>
</tr>
<tr>
<td>Refugio†</td>
<td>Refugio</td>
<td>801,000</td>
</tr>
<tr>
<td>San Patricio</td>
<td>White Point</td>
<td>450,000</td>
</tr>
<tr>
<td>Webb</td>
<td>Albercas</td>
<td>165,050</td>
</tr>
<tr>
<td>Webb</td>
<td>Carolina-Texas</td>
<td>118,000</td>
</tr>
<tr>
<td>Webb</td>
<td>New Cole</td>
<td>100,000</td>
</tr>
<tr>
<td>Zapata</td>
<td>Jennings</td>
<td>90,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>4,037,650</strong></td>
</tr>
</tbody>
</table>

*Denotes counties with only a portion within Rio Grande Plain.

The demand of the larger cities of the coast for the gas of the Rio Grande Plain was great, to supply the industrial needs. In 1925 there was under construction a pipe line from Mount Lucas, in Live Oak County, to Houston. This line was completed February 16, 1926.

This line, which was the largest project of its kind in the history of the industry up to that time, was completed and began delivering gas to the sulphur plant at Gulf on September 10, 1925, to Houston on December 31, 1925, to industries at Deepwater on February 16, 1926, and to Baytown on April 15, 1926.  

16 Ibid., p. 288.  
17 Ibid., p. 289.
While this line was being built, the Houston Gulf Gas Company began construction of its line from White Point and Refugio to Houston. Other companies began to transport gas from the region and this enterprise was well established by 1928. In 1928 several new fields were discovered, including

... the Agua Dulce field by the Grimm and Norris No. 1 Garrett well, which was completed September 26, 1928, for an initial production of 75,000,000 cubic feet of wet gas per day from a total depth of 2,023 feet. Other discoveries included Kohler in Duval County and the shallow Three Rivers field in Live Oak County.\textsuperscript{18}

There were many discoveries of new oil and gas producing areas in the Rio Grande Plain during 1928. Scattered over a large territory, the areas discovered indicated more conclusively than ever before that this region was one of steadily increasing importance.

In the Lower Rio Grande Valley the first development in oil and gas started in 1928, and today these products rank second in the Valley's income. The development came at a time that farmers and ranchers had begun to knuckle under the squeeze of a nationwide depression.

Then the Texas Company struck oil in its D-1 Guerra well in the rocky area near Roma in Starr County and set off a boom that still is rolling over an ever-widening horizon along the Rio Grande today. The first oil producer made 756 barrels during 1929 as the lease brokers, drillers, wildcatters and other followers of oil booms converged on the Valley.\textsuperscript{19}

\textsuperscript{18}Ibid., p. 290.

\textsuperscript{19}Corpus Christi Caller Times, October 16, 1949.
The first field to be developed in the Valley was the Samfordyce Field, located 20 miles west of the present city of Mission. By 1935, "it had 89 producers and a record total of a million barrels of oil. A year later Samfordyce had 158 wells."20

The Valley's first pipe line was laid in October, 1935. "It was 91 miles long and cost $225,000. It extended from Samfordyce Field to Port Isabel."21

Small farmers and ranchers became rich oil field holders, and new industries sprang up as the search and development of oil fields developed south along the Rio Grande Valley.

Today there are 105 different fields in six border counties. They have 2,377 producing wells that made an estimated 1.3 million barrels last month. The oil industry in the Rio Grande Valley is taken pretty much for granted now. It has become a part of the versatile Valley's wealth.22

Oil remains an important item in the Valley's economy. Practically every city, town, and "wide spot in the road" from Zapata County to Brownsville has benefited and is benefiting from the oil and gas industry. However, McAllen, Edinburg, and Raymondville probably realized the greatest benefits. In the Valley there are located seven refineries, serving the lower Rio Grande Valley oil and gas industry.

Newest in the refining field is the Coastal Refining and Mayfair Minerals, Inc., which is erecting a cycling plant near McAllen. Sun recently completed a $4.5 million plant that makes gasoline and liquified petroleum from natural gas, in Starr County.23

20Ibid.  21Ibid.  22Ibid.  23Ibid.
A recent report of the Texas Railroad Commission shows:

Hidalgo County has 12 fields that produce 30,000 barrels from 62 wells. In Jim Hogg County are 469 wells producing 125,000 barrels of oil in 13 fields.

Starr County has 26 fields with 710 wells that produce 417,000 barrels a month. Willacy County has two fields with 232 wells that produce 171,000 barrels of oil.

Zapata County has 373 wells in seven fields, producing 38,000 barrels of oil.24

Aside from the wealth it brought to the Rio Grande Valley, oil has made other contributions in road improvements and civic development. Its employees and executives today are a part of every community.

The development of the oil industry in the Lower Rio Grande Valley since 1933 to 1950 is credited with a large part in booming the Valley's population "from 135,000 in 1933 to 270,000 today [1950]."25

In the upper portion of the Rio Grande Plain, there was continued development in the oil and gas industries from 1928 to 1930, with emphasis being put on drilling and discovering new fields. However, the activity in the industries declined considerably in 1931," dropping approximately fifty per cent,"26 resulting largely from the floods of oil pouring out of East Texas and from the fact that the average price of refined products had been greatly lowered. Development of previously discovered fields continued, and additional exploration opened up several new areas of production; but the total production for the year declined.

New discoveries were also being made.

Along the coast and in the area immediately inland, the Armagosa gas field of Jim Wells County was discovered April 9, 1931, by Garsil Oil & Gas Company No. 1 McGill; the Aransas gas field of San Patricio County was discovered in April by Aransas Oil Company No. 1 Welder; and first oil was secured in the McFadden gas by the completion of Humble Oil Company No. 1 O'Connor for an initial production of 2,000 barrels per day of 24 gravity oil from a Miocene sand at 4,155 feet on December 2. 27

In 1931 the companies began to drill their tests much deeper in the region; the greater depth proved very successful for the companies operating there.

Activity in the region during 1932 showed a considerable increase over that for 1931. Production declined at some of the fields in the region, but new discoveries and development served to maintain interest in the region at a high level.

Between 1932 and 1938 intensive development and extensive explorations were carried on. Discoveries of new fields and further development of the old fields were the routine in this period. Some of the most outstanding discoveries in the period were the Greta field, Samfordyce, Tom O'Connor, Loma Novia, Lopez, Placedo, Plymouth, Flour Bluff, Benavides, and East Premont.

The King Ranch leased land in 1933 and has reaped a substantial profit by doing so.

27Ibid., p. 206.
Humble Oil (subsidiary of Standard Oil of N. J.) bought the right to explore the ranch's 1,250,000 acres in 1933. The reported down price was $3,000,000. It now appears that wells on the property in Kleberg County, south of Corpus Christi, tap some of the richest deposits of a huge producing area.

Geologists are excitedly discussing the possibilities of the merging formations in Kleberg, Brooks, Nueces, and Jim Wells counties. The pools and fields discovered piecemeal may form a single extensive deposit second only to almighty East Texas.28

Concurrent with the development of the oil and gas fields of the Rio Grande Plain have been the construction of trunk pipe lines for the transportation of oil and gas and of connection lines from individual fields to major trunk lines, the erection of refineries and gasoline plants, and the development of facilities for handling large quantities of oil at such ports as Corpus Christi, Port Isabel, and Brownsville. (See tables 1 and 2).

Statistics released by local and district oil sources show that 391 new fields have been opened in South Texas during the nine-year period from 1938 to 1946.

New fields discovered and opened include 32 during 1938; 44 in 1939; 51 in 1940; 30 in 1941; 33 in 1942; 31 in 1943; 70 in 1944; 56 in 1945 and 44 in 1946.29

Since 1946 numerous additional fields have been brought in, and steady development is still in progress in large unexplored areas of the Rio Grande Plain. From all indications, exploration and development will continue for years.

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29Alice Daily Echo, October 19, 1949.
While the Rio Grande Plain region has been producing oil and gas on a large scale slightly more than three decades, it is now one of the more important regions of the state. The total production of oil in barrels in 1948 for the region was 136,340,520. The total production for the producing counties in the region up to January 1, 1949, was 1,239,642,695 barrels. (See table 1).

One of the more recent fields of exploration has been Padre Island, that narrow sand bar which extends more than 100 miles along the Gulf Coast from Corpus Christi to Brownsville. The Sun Oil Company, leasing about 35,000 acres, holds the majority of the leases on the island.  

TABLE 2
NATURAL GASOLINE PLANTS*

<table>
<thead>
<tr>
<th>Company</th>
<th>Location of Plant</th>
<th>Plant Capac. MCF/D</th>
<th>Gasoline Produced Barrels</th>
<th>Type Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claymore</td>
<td>Refugio</td>
<td>50,000</td>
<td>123,460</td>
<td>Absorption</td>
</tr>
<tr>
<td>Humble</td>
<td>Flour Bluff</td>
<td>15,000</td>
<td>67,433</td>
<td>Gasoline</td>
</tr>
<tr>
<td>Humble</td>
<td>Heyser</td>
<td>38,000</td>
<td>147,678</td>
<td>Gasoline</td>
</tr>
<tr>
<td>Sinclair Prairie</td>
<td>E. White Point</td>
<td>90,000</td>
<td>166,195</td>
<td>Gasoline</td>
</tr>
<tr>
<td>Smith Bros.</td>
<td>Plymouth</td>
<td>30,000</td>
<td>116,850</td>
<td>Gasoline</td>
</tr>
<tr>
<td>Southern Minerals</td>
<td>Stratton</td>
<td>60,000</td>
<td>78,095</td>
<td>Absorption</td>
</tr>
<tr>
<td>Southern Minerals</td>
<td>Saxet</td>
<td>90,000</td>
<td>153,314</td>
<td>Absorption</td>
</tr>
<tr>
<td>Stanolind</td>
<td>Luby</td>
<td>90,000</td>
<td>361,715</td>
<td>Absorption</td>
</tr>
<tr>
<td>United Gas</td>
<td>Agua Dulce</td>
<td>50,000</td>
<td>15,586</td>
<td>Gasoline</td>
</tr>
<tr>
<td>Totals...</td>
<td></td>
<td>513,000</td>
<td>1,230,326</td>
<td></td>
</tr>
</tbody>
</table>

*Above information taken from Pamphlet: Corpus Christi Oil Center of South Texas, Corpus Christi Chamber of Commerce.

TABLE 3
RECYCLING AND REPRESSURING PLANTS*

<table>
<thead>
<tr>
<th>Company</th>
<th>Field</th>
<th>Gas MCF/A Processed</th>
<th>Products Rec. Bbls.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agua Dulce</td>
<td>Agua Dulce</td>
<td>13,192,708</td>
<td>143,960</td>
</tr>
<tr>
<td>Chicago Corp.</td>
<td>Agua Dulce</td>
<td>22,636,881</td>
<td>407,576</td>
</tr>
<tr>
<td>Gulf Plains</td>
<td>Agua Dulce</td>
<td>33,329,341</td>
<td>639,011</td>
</tr>
<tr>
<td>Skinner Eddy</td>
<td>Alice</td>
<td>17,409,531</td>
<td>184,641</td>
</tr>
<tr>
<td>Lockhart</td>
<td>Banquette</td>
<td>14,060,983</td>
<td>260,744</td>
</tr>
<tr>
<td>Duval Gaso.</td>
<td>Benavides</td>
<td>3,554,752</td>
<td>110,565</td>
</tr>
<tr>
<td>La Gloria</td>
<td>La Gloria</td>
<td>94,541,510</td>
<td>2,653,584</td>
</tr>
<tr>
<td>Stanolind</td>
<td>La Rosa</td>
<td>29,383,852</td>
<td>263,303</td>
</tr>
<tr>
<td>Continental</td>
<td>Rincon</td>
<td>4,193,597</td>
<td>163,588</td>
</tr>
<tr>
<td>Gulf States</td>
<td>San Salvador</td>
<td>9,756,814</td>
<td>72,439</td>
</tr>
<tr>
<td>Trinity</td>
<td>Sejita</td>
<td>17,054,311</td>
<td>551,524</td>
</tr>
<tr>
<td>Duval Gaso.</td>
<td>Southland</td>
<td>3,774,371</td>
<td>38,733</td>
</tr>
<tr>
<td>Chicago Corp.</td>
<td>Stratton</td>
<td>38,716,159</td>
<td>838,073</td>
</tr>
<tr>
<td>Gaso. Products</td>
<td>W. Tuleta</td>
<td>17,836,601</td>
<td>385,918</td>
</tr>
</tbody>
</table>

Totals............. 319,441,411 6,713,659

*Above information taken from Pamphlet: Corpus Christi Oil Center of South Texas, Corpus Christi Chamber of Commerce.
### TABLE 4

**OIL PRODUCTION, BY COUNTIES**

<table>
<thead>
<tr>
<th>Name of County</th>
<th>Year of Discovery</th>
<th>Production 1948 (Bbls.)</th>
<th>Total Production To Jan. 1, 1949</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aransas</td>
<td>1936</td>
<td>997,634</td>
<td>11,058,684</td>
</tr>
<tr>
<td>Atascosa</td>
<td>1917</td>
<td>3,191,685</td>
<td>10,465,130</td>
</tr>
<tr>
<td>Bee</td>
<td>1930</td>
<td>3,130,036</td>
<td>34,985,606</td>
</tr>
<tr>
<td>Bexar</td>
<td>1889</td>
<td>79,190</td>
<td>14,312,185</td>
</tr>
<tr>
<td>Brooks</td>
<td>1936</td>
<td>5,788,400</td>
<td>18,319,551</td>
</tr>
<tr>
<td>De Witt</td>
<td>1930</td>
<td>623,292</td>
<td>2,581,267</td>
</tr>
<tr>
<td>Dimmit</td>
<td>1943</td>
<td>285</td>
<td>9,629</td>
</tr>
<tr>
<td>Duval</td>
<td>1905</td>
<td>15,262,541</td>
<td>24,921,324</td>
</tr>
<tr>
<td>Ector</td>
<td>1934</td>
<td>4,084,430</td>
<td>9,247,915</td>
</tr>
<tr>
<td>Goliad</td>
<td>1930</td>
<td>9,310,562</td>
<td>10,776,980</td>
</tr>
<tr>
<td>Hidalgo</td>
<td>1922</td>
<td>2,519,580</td>
<td>23,535,028</td>
</tr>
<tr>
<td>Jim Wells</td>
<td>1932</td>
<td>20,984,119</td>
<td>103,116,055</td>
</tr>
<tr>
<td>Karnes</td>
<td>1930</td>
<td>2,852,817</td>
<td>12,065,952</td>
</tr>
<tr>
<td>Kenedy</td>
<td>1947</td>
<td>1,764</td>
<td></td>
</tr>
<tr>
<td>Kleberg</td>
<td>1926</td>
<td>2,274,276</td>
<td>12,928,605</td>
</tr>
<tr>
<td>La Salle</td>
<td>1940</td>
<td>1,745,131</td>
<td></td>
</tr>
<tr>
<td>Live Oak</td>
<td>1931</td>
<td>3,599,822</td>
<td></td>
</tr>
<tr>
<td>McMullen</td>
<td>1919</td>
<td>8,974,994</td>
<td></td>
</tr>
<tr>
<td>Maverick</td>
<td>1929</td>
<td>5,469</td>
<td></td>
</tr>
<tr>
<td>Medina b</td>
<td>1909</td>
<td>318,935</td>
<td></td>
</tr>
<tr>
<td>Nueces</td>
<td>1930</td>
<td>192,686,875</td>
<td></td>
</tr>
<tr>
<td>Refugio b</td>
<td>1928</td>
<td>266,712,972</td>
<td></td>
</tr>
<tr>
<td>San Patricio</td>
<td>1930</td>
<td>113,431,046</td>
<td></td>
</tr>
<tr>
<td>Starr</td>
<td>1929</td>
<td>57,973,484</td>
<td></td>
</tr>
<tr>
<td>Webb</td>
<td>1921</td>
<td>43,397,582</td>
<td></td>
</tr>
<tr>
<td>Wilson</td>
<td>1941</td>
<td>11,136</td>
<td></td>
</tr>
<tr>
<td>Willacy</td>
<td>1936</td>
<td>18,152,381</td>
<td></td>
</tr>
<tr>
<td>Zapata</td>
<td>1919</td>
<td>20,141,463</td>
<td></td>
</tr>
<tr>
<td>Zavala</td>
<td>1937</td>
<td>18,100</td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td><strong>136,340,520</strong></td>
<td><strong>1,239,642,695</strong></td>
</tr>
</tbody>
</table>

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*Above information taken from Texas Almanac 1949-1950, pp. 275-276.*

*b Denotes counties with only a portion within Rio Grande Plain.
Other Natural Resources

Coal is located in the region and has been mined at various times, but mining has been discontinued each time because of the competition of gas and oil and the difficulty of transporting to distant points. Counties in which coal appears are Atascosa, Bexar, Dimmit, Maverick, Medina, Webb, Wilson and Zavala. Coal is most prominent in Webb and Maverick counties.

The Texas cannel coal is found in Tertiary strata of the Rio Grande region. Commercial deposits occur in several seams of which only two were mined. These are the San Pedro and the Santo Tomas seams.31

Another source states:

There are two other producing coal fields in Texas, both of them fringing the Rio Grande; one in Webb County (Laredo) and one in Maverick County (Eagle Pass). The Webb County field extends also into Dimmit and Zavala Counties, but there are no commercial operations in these counties. The coal is probably of Cretaceous Age, although some lower Tertiary strata appear to be involved also. It is sub-bituminous in quality.32

The seams continue northward, but the commercial value of the coal is confined to Webb and Maverick counties. At an early date the coal in the vicinity of the Rio Grande was mined by the "Texas New Ireland Land Company, and the association was broken up by the revolution in 1836."33

Bituminous coal also occurs in the vicinity of Eagle Pass in Maverick County; mining was carried on in the vicinity of Olmos for some years, but all the mines are now inactive. The company that carried on operation there was the Olmos Coal Company. "In 1912 this company washed 23,599 tons and recovered 20,639 tons of washed coal, with 4,960 tons of refuse."\textsuperscript{34} The mining of coal in this section has been discontinued.

Salt is located in the region, and at one time it was of considerable importance to the people along the Rio Grande. It occurs in La Sal Vieja and Sal del Rey in Willacy and Hidalgo counties. "The Sal del Rey, a salt lake located in Hidalgo County, in early times supplied large quantities of salt to all the settlements of the Rio Grande."\textsuperscript{35} There is not a great deal of commercial value being placed on the development of salt in the region now.

In 1929 the United Gas Company was drilling a well for water needed in connection with a power plant three miles from Byram on the Texas-Mexican Railroad and struck a vein of sulphur and found it worth developing. For a while it lacked transportation facilities to transport it to the Texas-Mexican Railroad. The United Gas Company's property has been connected with the Texas-Mexican Railroad and is now producing small quantities of sulphur.

\textsuperscript{34}Ibid., p. 11. \hspace{1cm} \textsuperscript{35}Johnson, \textit{op. cit.}, p. 643.
Greensand is being processed in Bexar County today and has a small part in the economic development of the Rio Grande Plain.

"There is a large glass plant at Three Rivers, in Live Oak County, but it has operated intermittently in recent years."\(^{36}\)

Large use of the oyster shells that are found along the Gulf Coast has been useful to the region commercially.

Another valuable resource in the region is asphalt.

One of the largest known deposits of asphalt limestone is the Cretaceous Anacacho limestone extending from near the western border of Bexar County to near Spofford in Kinney County. A large amount of this limestone has been quarried, crushed and used directly as road surfacing material. A five-foot asphalitic sandstone in the vicinity of the Nueces River is located near the Uvalde Zavala County line.\(^ {37}\)

Various types of sand, gravel, caliche, and cement have been processed in the region and have aided the economic growth of the region. There are other natural resources that are being developed, but there are also some that have not been developed.

\(^{36}\)Texas Almanac 1949-1950, p. 291.

CHAPTER VII

PRESENT TRENDS

The Rio Grande Plain is endowed with physical characteristics which can make that region one of the most productive in the United States. The climate is ideal for farming and for the location of factories, and nature has provided the necessary natural resources to sustain future development.

The present trends in the use of the rivers to man's advantage indicate that further utilization of the rivers of the region will occur during the next few years when adequate projects on these streams are completed. On the Nueces River alone there are sixteen projects in prospect.\textsuperscript{1} Under these plans, waters of the tributary Frio and Atascosa Rivers, as well as those of the Nueces, would be used to irrigate several hundred thousand acres. In addition to irrigation the conservation and control of water resources will be of great value. On the Rio Grande there are several projects in prospect that will help solve the water problem for lands near the river. The San Antonio River, if properly harnessed, will serve as well as the other two major streams.

\textsuperscript{1}Federal Writers' Program, Texas: A Guide to the Lone Star State, p. 19.
Stock farming has increased tremendously in the region since ranchmen discovered that the growing of hay and small grains along with the raising of cattle was very profitable. Until recent years beef-cattle production was confined almost entirely to the large ranches in the region, but the adoption of diversification as a farm policy has spread the breeding of beef cattle even to the smallest farms of the region. The large ranches are still very important in the raising of livestock. Much emphasis is also being placed on dairying, which is a fairly recent development. Stockmen and ranchers take pride in the blooded stock now being produced in the region, and dairying has become an important phase in the development of raising livestock.

The rapid growth of farming in the last fifty years has proved to be of great importance to the people in the region as it has elsewhere in the nation. When more water is made available for irrigation, the volume of production will increase. However, farmers in the Lower Rio Grande Valley can prosper only if they make good workable plans and cooperate to carry them out. If everyone in the Valley grew any kind of fruit that he chose, especially plums, a certain fruit fly would breed in such quantities as to ruin the oranges and grapefruit. But if plums are not grown, there comes a time each season when there is no fruit in which the fly can breed, and the number of these pests remains low. Therefore,
growing plums is prohibited in this district. "Thirty inspectors work in this small area to control fruit pests."

In the Lower Rio Grande Valley, nearly all of the land is irrigated with water that is lifted from the Rio Grande by pumps. Some water is lifted a second time to reach a terrace, and some is lifted even the third time to reach a yet higher terrace. It would be a simple problem in engineering to build a dam up the stream and make one master canal to bring water along the upper side of this irrigated area. From the central canal the water could flow over the whole area.

The trend as far as transportation is concerned has been slow in developing, and there seems to be much to be done before the needs of this growing section are met. The region is being served by all modes of transportation, but new transportation facilities will be a necessity in the future.

The region is dotted with progressive cities, and some of these are destined to be great cities because of their location and the diversified economy that supports their growth.

As a producer of raw materials the region has justly attained a high standing in the state and nation. Processing

2Smith, op. cit., p. 231.
and manufacturing of raw materials have advanced much further in the region than is commonly recognized. Petroleum refining on the Rio Grande Plain has attained a high rank in manufacturing in the state. The presence of huge quantities of fuel and energy resources in the region and the probability that petroleum and natural gas will contribute in the near future even a larger proportion of the nation's energy are fundamental factors in the region's economic development.

The population increases in the region parallel the economic development, and with the utilization of the physical forces and natural resources in the future, the region can easily support a much larger population. If contemplated irrigation facilities are completed, thousands of additional acres of land will be put into cultivation.

The Rio Grande Plain is destined to become one of the most productive regions in the world in the future.
BIBLIOGRAPHY

Books

Allhands, J. L., **Gringo Builders**, Dallas, Privately Printed, 1931.


Carter, William Thomas, **The Soils of Texas**, College Station, Texas Agricultural and Mechanical College of Texas, 1939.


Chambers, W. T., **The Geography of Texas**, Austin, Steck Company, 1946.

Chatelle, Miriam, **For We Love Our Valley**, San Antonio, The Naylor Company, 1946.


Dobie, J. F., **Mustangs and Cow Horses**, Austin, Texas Folklore Society, 1940.

Dobie, J. F., **The First Cattle in Texas and the Southwest**, *Progenitors of the Longhorns*, (Reprint from the *Southwestern Historical Quarterly*), Vol. XLII, No. 3, January, 1939.


Grinstead, J. E., *Southwest Texas*, Kerrville, Editor of The Mountain Sun, 1904.


James, V. L., *Frontier and Pioneer*, San Antonio, Published by Author, 1926.


Laredo Times, Laredo, 1925.


Menn, A. E., *Texas As It Is Today*, Austin, Gammel's Book Store, 1925.


Sellard, E. H., Notes on the Oil and Gas Fields of Webb and Zapata Counties, Bulletin 2230, University of Texas, 1922.


Texas University, Texas Looks Ahead, Vol. I, The Resources of Texas, Austin, 1944.


Periodicals


Newspapers

Alice Daily Echo, October 19, 1949.

Corpus Christi Caller Times, October 16, 1949; October 18, 1949; October 30, 1949; November 6, 1949; November 14, 1949; January 1, 1950; May 19, 1950; June 1, 1950.
Corpus Christi Caller Times, Special Magazine Section, "50 Years of Progress," January 1, 1950.


Fort Worth Star Telegram, June 21, 1950.


The Houston Chronicle, July 13, 1950.

Miscellaneous

"Corpus Christi Oil Center of South Texas," Pamphlet, Corpus Christi Chamber of Commerce.


Exhibit No. 5, Valley Chamber of Commerce, Weslaco, Texas.

Folder, Brownsville Chamber of Commerce.

Folder, Harlingen Chamber of Commerce.


Laredo Facts, Laredo Chamber of Commerce.

Letter, Frank G. Brunemann, County Agricultural Agent, Cameron County, May 25, 1950.

Magic Valley, Valley Chamber of Commerce, Weslaco, Texas.

Pamphlet, Corpus Christi Chamber of Commerce.

San Antonio Facts, San Antonio Chamber of Commerce.