

# ★ CHAPTER ELEVEN ★

## OIL CHANGED TEXAS



## Overview

*Chapter 11: Oil Changed Texas* includes the exhibits that represent the Texas oil boom during the 1900s. During their visit, students will explore the beginning of the modern oil industry that started with Spindletop in 1901 and discover how oil was located, extracted, and used.

Finally, students will investigate how the oil industry and its supporting infrastructure helped transform Texas from a rural to an urban state and how oil wealth gave Texas national political power.

# ★ THE STORY OF TEXAS EDUCATOR GUIDE ★

## CHAPTER ELEVEN: OIL CHANGED TEXAS

### Student Objectives

- ★ Use oil-related terms to write a newspaper article about Spindletop in 1901.
- ★ Conclude what life may have been like as a laborer in the oil fields, based on their own interpretations of photographs taken during the Texas oil boom.
- ★ Observe and record information and ideas from exhibits that represent the oil industry in the 1900s, and conclude how oil changed life in Texas.

### Guiding Questions

- ★ How was Spindletop important to the oil boom in the 1900s?
- ★ What might it have been like to work in the oil fields in the 1900s?
- ★ How was oil located, obtained, and used in the early days of the oil industry?
- ★ What changes did the discovery and production of oil bring about in Texas?

### TEKS

(TEXAS ESSENTIAL KNOWLEDGE AND SKILLS)

- § 113.15. Social Studies, Grade 4
  - History 4.5A, 4.5B
  - Economics 4.13B
  - Social Studies Skills 4.21A, 4.21B, 4.21C, 4.21D
  - Social Studies Skills 4.22A, 4.22C, 4.22D
- § 113.19. Social Studies, Grade 7
  - History 7.1A, 7.1C
  - History 7.7A
  - Economics 7.12B, 7.12C
  - Economics 7.13A, 7.13C
  - Social Studies Skills 7.21A, 7.21B, 7.21C, 7.21D, 7.21E
  - Social Studies Skills 7.22A, 7.22D
- § 74.4 English Language Proficiency Standards
  - Learning Strategies 1C, 1E
  - Listening 2I
  - Speaking 3D, 3E, 3G, 3J
  - Reading 4G, 4I, 4J, 4K
  - Writing 5B

### Materials

- *The Story of Texas Student Journal: Chapter 11: Oil Changed Texas*
- *Texas Oil Terms* – student page
- *Texas Oil Terms* – card match

## Set the Stage

In 1901, Texans struck oil at Spindletop. Over the next forty years Texas became the center of oil exploration and production in the nation. The discovery of oil elevated Texas to national and world importance, changing the economic, social, and political climate of the state.

Geophysicists such as Clarence “Doc” Karcher and Everette DeGolyer pursued scientific methods in their search for oil. Like **wildcatters**, they knew that surface features held clues to underground petroleum reserves. They also knew that a more precise mapping system of subsurface rock layers could improve drilling crew accuracy. Karcher conducted experiments to improve scientific instruments such as geophones, seismic recorders and amplifiers. His experiments resulted in the creation of a reflection seismograph that is used to find most of the world’s oil reserves today. The scientific discoveries made in the early 1900s were critical to the development of new technologies used in locating oil.

Texans found innovative solutions to overcome the challenges of drilling in Texas. Early **wildcatters** discovered the failure of the standard cable tool drills to penetrate into the varied ground conditions in Texas. As a result, they invented the “Texas Poor Boys” drill that could penetrate through conditions ranging from soft to hard rock. Howard R. Hughes developed his own drill bit that pulverized hard rock, drilling into the ground ten times faster than other drills. He then founded the Hughes Tool Company and sold his invention around the world. When the well at Spindletop erupted, it gushed for nine days because no one knew how to stop it. Drillers adapted a cap first used on earlier Texas wells that could control the flow of oil into and out of a well. The assembly was called a “Christmas Tree” because of the valves, spools, and fittings that covered it. Christmas Trees became standard equipment on oil wells. Along with advancements in drilling equipment, developments in firefighting techniques and tools became essential in safely operating oil fields around the world.

Locating, extracting, and refining oil came at a cost. **Wildcatters** began to sell shares in companies and attracted investors from inside and outside Texas. Even influential Texans, such as governors James Hogg and Ross S. Sterling, successfully participated in the oil-**speculation** business. The abundant investment opportunities prompted the birth of legendary “**tycoons**.”

The emerging oil industry led to the development of communities, businesses, and job opportunities for everyday Texans. Communities appeared on farm lands where oilfields were discovered, and many businesses were created to support the industry. The need to transport, refine, ship, and market oil drew workers from Texas farms and ranches to jobs in factories and offices, transforming Texas from a largely rural to an urban state. People rushed in seeking jobs, money, and opportunities to profit from the boom. Cities called “**boomtowns**” appeared overnight, especially in the Texas Panhandle and West Texas. If the oil – and the prosperity it generated – dried up, then the cities disappeared.

Houston was a **boomtown** and grew to include hotels, offices, oil refineries, and the Houston Ship Channel. By 1929, forty oil companies had located offices in the city, including the Texas Company, Humble Oil and Refining Company, and Gulf Oil Corporation. The completion of the Houston Ship Channel in 1914 secured Houston’s prominence in the oil industry.

As Texas strengthened economically, Texas leaders began to form partnerships with the federal government and brought in funds and business to help modernize the state. Prior to World War II, Texans promoted open land, mild climate, major seaports, and capacity for oil production and convinced national leaders that Texas was the place to locate military bases and defense-related industries. By the end of the war, Texas had laid the groundwork as an emerging international force in economics, politics, and technology.

## Vocabulary

<b>Boll weevil</b>	An inexperienced worker on a drilling rig
<b>Boomtown</b>	A town that has grown very rapidly as a result of sudden economic development such as the establishment of oil fields
<b>Drilling rig</b>	A machine that creates holes in the ground
<b>Gusher</b>	An oil well with a strong flow of oil
<b>Industrialization</b>	the change of an agricultural society to an industrial society
<b>Natural Resources</b>	materials in the environment that are useful to people
<b>Nonrenewable Resources</b>	natural resources that nature cannot replace within a lifetime
<b>Prospector</b>	One who explores an area for mineral deposits or oil
<b>Renewable Resources</b>	Natural resources that nature produces over and over
<b>Roughneck</b>	A skilled worker on a drilling rig
<b>Roustabout</b>	An unskilled worker hired to do jobs in an oil field, such as ditch digging and pipe laying
<b>Speculator</b>	Someone who invests in land with the anticipation of making a profit from oil
<b>Tycoon</b>	A wealthy or powerful business person
<b>Urbanization</b>	The increase of populations in towns resulting in the creation of urban cities; migration of rural dwellers into cities
<b>Wildcatter</b>	A risk taker who uses his own money to search for oil

**Before the Museum**

## BUILD BACKGROUND

1. Give students the Texas Oil Terms student page containing the following words.
  - Gusher
  - Wildcatter
  - Boll weevil
  - Roughneck
  - Roustabout
  - Boomtown
  - Tycoon
  - Prospector
2. Students work in groups to write what they think each term means. Allow time for each group to share their ideas with the class.
3. Then give each group a set of Texas Oil Terms Card Match. Students match the terms to their meanings. Check the words as a class. Students write the actual word meanings on their Texas Oil Terms student page.
4. Students write a newspaper article about the Spindletop gusher in 1901. Students include the terms along with who, what, where, when, and how to help tell the story. Students may visit online resources such as The Handbook of Texas Online: Spindletop Oilfield at [www.tshaonline.org/handbook/](http://www.tshaonline.org/handbook/) to conduct research.

## PREDICT

1. Give each student a *Story of Texas Student Journal*. Ask students the Thinking Ahead question: How did the oil industry change life in Texas?
2. Students discuss and record what type of evidence they might find to answer the question. Evidence can include primary sources such as maps, documents, artifacts, newspapers, and letters.



## Engage at the Museum

1. Gather students around the entrance of this chapter. Ask students to observe the image on the wall and describe what they see.
  - ★ How are the people dressed?
  - ★ What types of expressions do you see on their faces?
  - ★ What do you see in the background of the picture?
  - ★ Who do you think the people are?
  - ★ Where do you think they are?
  - ★ What do you think the men are doing at this location?
  - ★ Why might their picture be included in this exhibit?
2. After discussing students' answers to the questions, ask each student to infer what the men in the picture might be thinking. As students share their ideas, ask them to give reasons for their responses.
3. Remind students to examine the images they will see in this exhibit to help them understand how Texans overcame the challenges that stood in the way of progress in the oil industry.



## Explore the Museum

1. Remind students to look for evidence to help them answer the Thinking Ahead question written on the cover of their student journals: How did the oil industry change life in Texas?
2. Explain that students will identify and analyze the events that took place during the 1900s when Texas emerged as a center of oil exploration and production.
3. Divide the class into groups of three to four students. Students rotate through the exhibits to locate primary and secondary sources that will help them complete their journals.

### 11.1 Oil in Texas

Identify an artifact that is a tool or piece of equipment used in locating, obtaining, or using oil. Explain how a boomtown formed, and how it could disappear.

### 11.2 Oil Changes Texas

Explain what you think was the biggest change that oil made in Texas. Explain why. Draw a picture or graphic organizer of the change.

### 11.3 A Picture Speaks a Thousand Words

Locate your favorite picture from this chapter. Study the picture closely. Explain what you think the person, or people, in the picture might be thinking and why. Explain why this is your favorite picture.

4. After investigating and recording information in their student journals, ask groups to present their information and ideas to the class while standing near the exhibits they used for their research.
5. Students record what they learn from the group presentations in their student journals.



## After the Museum

### DRAW CONCLUSIONS

1. Students share the information they gathered in their student journals during the Museum visit.
2. Refer back to the Thinking Ahead question found on the cover of the student journals. Compare the evidence students were looking for to what they actually observed at the Museum.
3. Discuss students' responses to the question. The oil industry brought opportunities to Texans. Texas became the center of oil exploration and production in the nation. Many rural areas grew into cities. New types of jobs were created, and people had more time to enjoy leisure activities such as baseball. Houston and Dallas emerged as cities that provided high quality shopping to accommodate new wealth.

### EXTEND STUDENT LEARNING

- ★ Create a museum exhibit that teaches about the oil industry in the 21st century. Research and explain the technology and techniques that people use to locate and extract oil from the ground today. Research and show where the world's oil supplies are located today and how much oil Texas currently produces.
- ★ Research oil formation. Create a digital or 3-dimensional model that shows the stages of development. Include information that explains the process.
- ★ Research renewable and nonrenewable resources in Texas. Create a multi-media presentation showing:
  - how renewable and nonrenewable resources are important to the Texas economy
  - how renewable and nonrenewable resources are obtained and used
  - consequences that result from obtaining and using natural resources
  - alternative resources that can replace nonrenewable resources
- ★ Research the products made from oil. Create a poster to show how much people depend on oil products in their daily lives. Include:
  - Products made from oil
  - How the products are produced
  - Effects on the environment

**ACTIVITY 11.3** A PICTURE SPEAKS A THOUSAND WORDS

Locate your favorite picture from this chapter. Study the picture closely.

What is the title of the picture?	→	
Describe what the picture shows.	→	
Describe the person, or people, in the picture.	→	
Describe what is happening in the picture.	→	
Other observations	→	

Explain what you think the person, or people, in the picture might be thinking and why.

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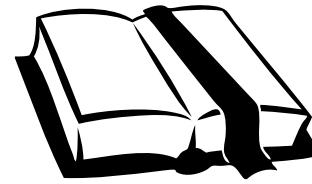
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★ THE STORY OF TEXAS STUDENT JOURNAL ★



**CHAPTER ELEVEN:**  
OIL CHANGED TEXAS

**STUDENT NAME**

 **Question:** How did the oil industry change life in Texas?

Before I visit:	During my visit:
<b>What evidence will I look for to answer the question?</b>	<b>What evidence have I found to answer the question?</b>



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After exploring this chapter I learned \_\_\_\_\_

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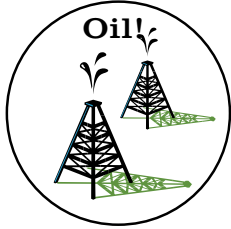
**ACTIVITY 11.1: OIL IN TEXAS**

In 1901, Texans struck oil at Spindletop. Over the next 40 years, Texas became the center of oil exploration and production in the nation.

Complete the graphic organizer to show what you have learned about oil in Texas.

What did you learn about finding oil?

What did you learn about getting oil out of the ground?



What did you learn about using oil?

What did you learn about paying for oil?

Explain how a boomtown formed and how it could disappear.

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**ACTIVITY 11.2: OIL CHANGES TEXAS**

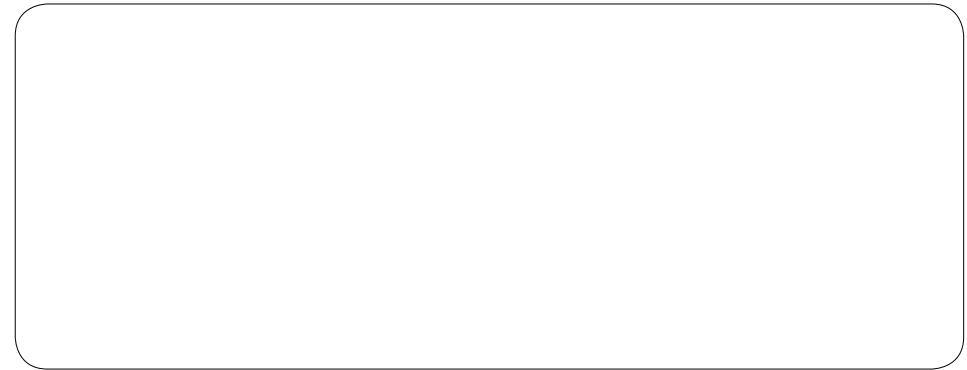
The oil industry created jobs in factories and offices, and brought opportunities to everyday Texans.

Identify a tool or piece of equipment used in locating, obtaining, or using oil.

Artifact: \_\_\_\_\_

Use: \_\_\_\_\_

Picture:



Explain what you think was the biggest change that oil made in Texas. Explain why.

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# Texas Oil Terms

## Student Page

The following terms were commonly used in the oil business. Write what you think each word means. After completing the card match, write the actual meaning for each word. How close were you?

Word	What I think the word means	What it actually means
gusher		
wildcatter		
boll weevil		
roughneck		
roustabout		
Boomtown		
tycoon		
prospector		
drilling rig		



**Extra, Extra, Read all about it!**  
Write a newspaper article about the Spindletop gusher in 1901. Include these oil terms along with *who, what, where, when, and how* to help tell the story. Students may visit online resources such as *Spindletop: The Boom that Shook the World* to conduct research.

# Texas Oil Terms

## Card match

Directions: Copy and cut out the cards. Shuffle the cards and match the terms to their meanings.

<b>gusher</b>	an oil well with a strong flow of oil
<b>wildcatter</b>	a risk taker who uses his own money to search for oil
<b>boll weevil</b>	an inexperienced worker on a drilling rig
<b>roughneck</b>	a skilled worker on a drilling rig
<b>roustabout</b>	an unskilled worker hired to do jobs in an oil field, such as ditch digging and pipe laying
<b>boomtown</b>	a town that has grown very rapidly as a result of sudden economic development such as the establishment of oil fields
<b>tycoon</b>	a wealthy or powerful business person
<b>prospector</b>	one who explores an area for mineral deposits or oil
<b>drilling rig</b>	a machine that creates holes in the ground