

Part One

HISTORY OF OIL

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Chapter 1

Emergence of Black Gold

Oil. No other resource dominates the world economy more than oil. Wars have been fought for control of it. Lives have been lost over it. Fortunes made from it.

Although oil has been around for thousands of years, the industry itself has only existed for 150 years. You can trace the birth of the industry back to when Edwin Drake and William Smith dug the first oil well in the small town of Titusville, Pennsylvania. Their single well produced roughly 15 to 25 barrels of oil a day, enough to meet demand. Today, OPEC estimates worldwide demand for oil at 86.56 million barrels a day.¹

Although we can give credit to Drake and Smith for setting in motion a California style gold rush for oil, the black substance has seeped from the ground for almost 4,000 years. In fact scientists suggest the earliest evidence of petroleum can be traced back to the

ancient city of Nineveh in Iraq, which served as the capital of Assyrian Empire from 705 to 612 B.C.² The difference between then and now is that oil wasn't "actively" sought after. In other words, there were no oil wells or drilling equipment to pump massive amounts of it out of holes in the ground.

But this doesn't mean people didn't use oil. They did, but they used what naturally seeped out of the ground. You see, petroleum is a fossil that is found in sediment below the surface. Petroleum means rock oil. The word itself comes from Latin; *petra* which means rock, and *oleum* which means oil.³

Petroleum is found mainly in fine grain sedimentary rocks such as shale, but not just any type of shale rock. It's found only in rocks that are older than 2 million years. Oil is trapped in tiny holes in the rocks along with gas and water. Depending on how porous the rock is, and if the holes are capped, the oil remains trapped inside the rock. Oil can only seep out of holes in rocks that are not capped. Because of the makeup of gas, it leaks out from the rocks into the atmosphere while the oil seeps to the surface.

The oil that naturally oozes from the ground was used by civilizations from all over the world that date back thousands of years. For example, evidence shows that naturally seeping petroleum was used in the construction of buildings in the ancient city of Babylon, where it was taken from local springs. In ancient Sicily, petroleum was used in lamps, referred to as "Sicilian oil." Petroleum (or pitch) is even found as an ingredient used by Egyptians in the embalming process.⁴ Ancient Egyptians used petroleum in the construction of pyramids. Boats that traveled along the Euphrates were constructed with woven reeds and sealed with pitch. Herodotus, the Greek historian, speaks of oil wells found on the ancient island of Zante, 500 years before Christ. In the Old Testament, petroleum is referred to as the slime used in the construction of the Tower of Babel. Christian Crusaders put the liquid into boxes that they set afire and then catapulted at their enemies. To defend castles, boiling oil was poured on soldiers climbing up the castle walls.

References to petroleum in Japan can be found in the ancient Japanese history called *Kokushiryaku* that tells of burning water found in ancient Echigo around 615 A.D.⁵ Believe it or not, petroleum was

used as a medicine before it was used for lighting lamps or powering automobiles. Marco Polo talks about petroleum being used as an ointment applied to camels with mange.

Jonas Hanway in his *Historical Account of the British Trade over the Caspian Sea* describes how Russians drank the thinner petroleum as a medicine and a cordial.⁶ In Bavaria, around 1436, petroleum gathered from the Tegera Sea was used as a medical ointment, which locals called St. Quirinus' oil. In the United States, the earliest mention of petroleum was around 1627 by a French missionary who described the substance found in the area later known as New York.⁷ American Indians such as the Seneca tribes used petroleum not only for war paint on their faces but for medicinal purposes as well. In 1849, S.M. Kier bottled distilled petroleum and sold it as "American Oil" with instructions to be used for external purposes only.⁸ Petroleum was a popular remedy for treating arthritis and rheumatism. William Fowler wrote, oil in the 1860s was hailed as "a disinfectant, a vermin killer, hair oil, boot grease, and a cure for kidney stones."⁹

Oil Domination

Crude oil or petroleum varies from a somewhat colorless liquid to green, brown, and almost black. It also varies in density from water-like to almost solid. Depending on where it is found, petroleum is made up mainly of hydrocarbons with small amounts of oxygen, nitrogen, and sulphur. Refineries convert the crude oil into many substances including petroleum gas used to heat homes, plastics, gasoline, kerosene, gas oil (or diesel), lubricating oil, coke, asphalt, and tar, to name a few.

A survey by the American Petroleum Institute of major refineries showed that refinery plants are capable of refining petroleum into over 2,000 different products.¹⁰ In reality, the refining process isn't complicated. It involves heating the oil to various temperatures and separating the vapors. After it is heated, the oil is sent to a distillation column operating under immense pressure. The columns can separate about 25,000 barrels of oil a day. The temperature the oil is heated to determines the end product. See Table 1.1.

Table 1.1 Crude Oil Refining Temperatures

| Product Desired | Boiling Point of Oil (Celsius) |
|------------------------|---------------------------------------|
| Gases | below 30 |
| Gasoline | 30–210 |
| Naphtha | 100–200 |
| Kerosene and Jet Fuel | 150–250 |
| Diesel | 160–400 |

SOURCE: U.S. Government, U.S. Energy Information.

Today there are 717 refineries in the world. The world's largest refinery is located in Ras Tanura, Saudi Arabia and is owned and operated by Saudi Aramco. The world's first oil refinery was constructed in Ploesti, Romania in 1856.¹¹

In the United States, which is the country with the greatest number of refineries, there are 148 oil refinery plants.¹² Compare that to the scant 15 refineries that existed in 1860. Called “tea kettle” stills, they could process roughly up to 100 barrels a day. Refineries today can process as much as 17 million barrels a day.

With the building of refineries came pipelines to carry the oil. Before pipelines, oil was transported in railcars mainly controlled by Standard Oil, which owned the Union Tank Line. In fact, John D. Rockefeller springboarded to wealth and fame by controlling the transportation of oil. In later chapters, you'll discover more about Rockefeller's secret weapon for domination of the oil industry.

Pipelines slowly took over railways as the main vehicle for transporting oil to refineries. In 1942 and 1943, engineers built what was then the world's longest crude oil pipeline dubbed “The Big Inch,” which spanned 1,254 miles and moved crude from Texas oil fields to East Coast refineries.¹³ Now, well over 180,000 miles of pipeline transport oil all across the United States.¹⁴

Today more than 40 percent of the world's oil travels through pipelines. Pipelines can be found in the following countries:

- Indonesia
- Thailand
- Singapore
- Afghanistan

- Bangladesh
- India
- Myanmar
- Pakistan
- China
- Japan
- South Korea
- Australia
- New Zealand

Of course, you'll find refineries in the Middle East including the following countries:

- Iran
- Iraq
- Israel
- Jordan
- Kuwait
- Oman
- Qatar
- Saudi Arabia
- Syria
- United Arab Emirates
- Lebanon

The list of countries with refineries goes on and on, including Azerbaijan, Belarus, Estonia, Georgia, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, Bulgaria, Greece, Hungary, Romania, Serbia, France, Germany, Belgium, Italy, Switzerland, Norway, Denmark, Spain, Portugal, Panama, Ireland, United Kingdom, Argentina, Brazil, Chile, Costa Rica, Colombia, Canada, Mexico and the United States.

The oil we consume doesn't just travel through pipelines; it's also carried across oceans on huge tankers. There are approximately 4,000 tankers equipped for carrying millions of barrels of oil. Experts say more than 100 million tons of oil is shipped each day by tankers.¹⁵ In 1873, the Palmers Shipbuilding & Iron Company assembled the first steam-driven oil tanker, named the *Vaderland*. The first modern

oil tanker, the Zoroaster, was designed and built in 1878 by Ludvig Nobel of Sweden.¹⁶

Needless to say the oil industry has seen significant growth over the past 150 years. In 1920, 95 million tons of oil was produced annually around the world. The number skyrocketed to 500 million tons by 1950. By 1960, that number had doubled to a billion tons. By the early part of 1990, average annual production reached 3 billion tons.¹⁷ The truth is, the petroleum business has grown to become one of the largest in the world. In the first quarter of 2010, the petroleum business (which includes both oil and natural gas production and petroleum refining and marketing) saw net income increase more than 1,000 percent from the same time period of 2009.¹⁸

Today, 50 percent of the largest corporations in the world are oil companies.¹⁹ They include the following:

- ExxonMobil
- Royal Dutch Shell
- British Petroleum
- Chevron
- Conoco Phillips

Who are the largest producers of oil? The top 10 aren't U.S. companies and include the following:

- Saudi Arabian Oil Company
- National Iranian Oil Company
- Qatar General Petroleum Corporation
- Iraq National Oil Company
- Petroleos de Venezuela S.A.
- Abu Dhabi National Oil Company
- Kuwait Petroleum Corporation
- Nigerian National Petroleum Corporation
- National Oil Company, Libya
- Sonatrach, Algeria²⁰

But it wasn't always this way.

For the first part of the twentieth century, the United States was king of the oil industry. In 1949 to 1950, we were producing about

5.4 million barrels of oil a day and responsible for 52 percent of the world's crude oil production.²¹ And our consumption was right in line with what we produced—about 5.6 million barrels a day. We imported about 6 percent of the rest of the oil we needed. As for exporting oil, until the end of the 1940s, the United States and Latin America provided Europe's oil.²²

We continued on this path of oil domination until about 1970, when the U.S. oil production reached its peak. At the time, the United States produced about 9.6 million barrels a day, which was about 43 percent of all world oil production. We were consuming 13.8 million barrels of oil a day. It's also around this time that petroleum-related imports totaled 6.3 million barrels per day. And that number grew each year until October 1973, when the Arab members of the Organization of Petroleum Exporting Countries (OPEC) embargoed the sale of oil to the United States, and petroleum imports fell for two years. This led to long lines at gas stations, worldwide energy crisis, and elevated oil prices. This also led to the creation a U.S. Strategic Petroleum Reserve. Today, the U.S. Strategic Petroleum Reserve is the largest stockpile of government-owned emergency crude oil in the world with 727 million barrels.²³ The 1973 oil embargo led to a decline in U.S. consumption of petroleum to 16 million barrels per day. By 1975, it slowly began to rise again, until 1979 when the Iranian revolution caused oil prices to rise and consumption to decline.

A marked decline in petroleum consumption in the United States continued into the early 1980s. By 1983, the United States was consuming a low of 15.2 million barrels per day, a decline of almost 20 percent from the record consumption level of 18.9 million barrels per day in 1978. By 1994, the trend of importing more oil continued and has stayed that way ever since. By 2004, the United States was producing only about 13 percent of world oil production. Yet our consumption of oil has grown to 21 million barrels of oil a day or roughly 25 percent of world production.²⁴ Today, imported oil accounts for 53 percent of all U.S. oil consumption.²⁵ OPEC now accounts for 43 percent of world oil production.²⁶ Oddly enough, OPEC consumes very little of its own oil. Most of the oil we consume is used for gasoline. Of every 10 barrels of petroleum consumed in the United States more

than 4 barrels are consumed in the form of gasoline. The transportation sector alone accounted for two-thirds of all petroleum used in the United States.²⁷

For the Love of Oil

Until the mass production of the automobile, gasoline was considered a wasteful by-product of petroleum refining. Today, the United States uses more than 320 million gallons of gasoline per day, or about 3,700 gallons per second, every single day.²⁸

Our thirst for gasoline is greater than South America, Europe, Africa, and Asia combined.²⁹ You could say our addiction to gasoline is self-induced. After all, we love our cars. But it was a slow burning love until 1908, the year that Henry Ford debuted his Model T. Up until then, cars were bought by rich and wealthy people. And the process took months because each car was built by hand.

The first production Model T Ford was assembled at the Piquette Avenue Plant in Detroit on October 1, 1908. By 1914, the moving assembly line enabled Henry Ford to produce far more cars than any other company.³⁰ For \$825, a customer could buy a Ford Model T, billed as a reliable and easy to drive car. In his first year of production, Henry Ford sold over 10,000 cars. The number of cars on the nation's highways jumped from 8,000 to 125,000.

From 1920 to 1930, the number of cars owned by Americans jumped from 8.1 to 26.7 million.³¹ Standard Oil of California opened the first gas filling station in 1907.³² Today there are 244 million cars on U.S. highways. And there are roughly 93,374 gas stations at which you can stop and "fill'er up."³³

Over the years, the cost to fill the tank has steady increased. In 1950, the cost of a gallon of regular gasoline was 26.8 cents. Gas prices rose about a cent every year until 1957. From 1957 to 1969, prices went up, but only by a total of 3.8 cents from 31 cents per gallon to 34.8 cents per gallon. However, by 1974, the cost had risen to 53.2 cents per gallon.³⁴ The cost rose dramatically because of the Clean Air Act, which forced gas stations and automakers to meet an octane standard of 87, which limited lead to 4.0 grams per gallon. But the more significant reason for the price increase was the Oil Embargo by OPEC.

Gas continued to increase slowly but reached a new high in 2004, when it was selling for almost \$2 a gallon. Just one year later, in 2005, prices skyrocketed to \$3.36 dollars per gallon. The price jumped up and down over the next few years. In 2009, the average price of a gallon of gasoline was \$2.83. In 2010, the average price hovered around \$2.73.³⁵

Although the oil industry was forced to meet certain octane standards, the U.S. auto industry hasn't been as progressive in increasing fuel efficiency as industries in other countries. Did you know that in Europe, the average vehicle gets more than 32 miles to the gallon while in the United States a similar-size car gets only 22 miles to the gallon? European automakers have better fuel efficiency standards. Had we pushed for better standards, even as little as increasing fuel efficiency by 0.4 miles per year, the United States could have saved about 3.3 million barrels of oil a day.³⁶

The lack of fuel efficiency is not the only problem; it's also the lack of reliable, dependable public transportation. On average, new highway construction projects receive up to 80 percent of federal funding, whereas new public transportation projects receive just 50 percent. In 2009, the proposed U.S. budget would cut \$202 million from transit spending and transfer another \$3.2 billion from funds dedicated to transit to other sectors. Our own Treasury Department estimates that the Highway Trust Fund and the Mass Transit Account will both face massive deficits in 2009 and 2010 because of these budget cuts.³⁷

Of course, gas isn't the only factor that drives our oil consumption through the roof. Other uses include jet fuel, chemicals to make plastic, lubricants, greases, pharmaceuticals, pesticides, clothing, cosmetics such as lipstick, nylon, agricultural fertilizer, and other household products such as petroleum jelly, shampoos, and even DVDs.

The Rise of OPEC

Unfortunately when the United States moved from being its own supplier of petroleum to being dependent on foreign oil, control of the industry went to OPEC, the Organization for Petroleum Exporting Countries. OPEC was created at the Baghdad Conference in Iraq in

September 1960. The founding members of the organization were Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela. OPEC's share of world production was only 28 percent in 1960. By 1970, this figure would rise to 41 percent. Today, the demand for OPEC crude oil is estimated at 28.7 million barrels per day. OPEC expects that number to reach 28.9 million barrels a day in 2011.³⁸

Before OPEC, seven companies, often referred to as the Seven Sisters, dominated the oil industry.³⁹

1. Exxon (was Standard Oil of New Jersey, then Esso)
2. Royal Dutch Shell (formerly Royal Dutch Petroleum)
3. British Petroleum (Anglo Iranian)
4. Chevron (formerly Standard Oil of California)
5. Texaco
6. Gulf Oil
7. Mobil (Standard Oil of New York)

Together, they were responsible for 76 percent of the world's oil production. Because the Seven Sisters were made up of American and European companies, they controlled the market. And control it they did. These seven companies controlled every aspect of oil production and distribution including extraction, refining, and transportation. As oil production increased so too did the earnings and profits of the Seven Sisters.

Here's why. Because the Seven Sisters had access to low production costs, they agreed to set the price of a barrel of oil to match the higher prices being sought by other companies. In 1950, a barrel of oil, which by the way holds 42 gallons, sold for \$1.75. But costs for the Seven Sisters were extremely low, roughly \$.10 for production, on top of their royalty fees of \$.50. This left them with a nice profit on each barrel sold. Over time and through mergers and acquisitions the Seven Sisters have become four: ExxonMobil, Chevron-Texaco, BP (acquired Amoco and Arco), and Royal Dutch Shell. Although they are not quite the OPEC cartel, they still are huge players in the domination of the oil industry.

In later chapters of this book, you'll learn more about these companies and how they've hoodwinked us into believing that alternative

sources of fuel aren't possible or in our best interest. You'll also learn how they've destroyed the environment and, in some cases, a way of life for those living in oil-rich areas. You'll also learn how OPEC has manipulated oil prices and brainwashed us into thinking oil shortages are imminent. You'll come to understand why we call oil companies and OPEC Barbarians of Oil.

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