

The oil industry's ups and downs

Oil is no stranger to disruptions, but faces new pressures

By NEAL FRIED
and SARA TEEL

COVID-19 caused large job losses in most industries this spring, but it's far from the first time Alaska's oil industry has faced a period of turmoil.

In addition to the current losses from measures to curb the pandemic, the industry has sustained at least five other periods of job loss during Alaska's short history, nearly all due to falling oil prices — and the worst stretch ended just over a year ago.

The other four periods fell between 1985 and 2003. Some were shallow and short-lived, such as the 1985-1987 and 2001-2002 losses, and others were longer and deeper.

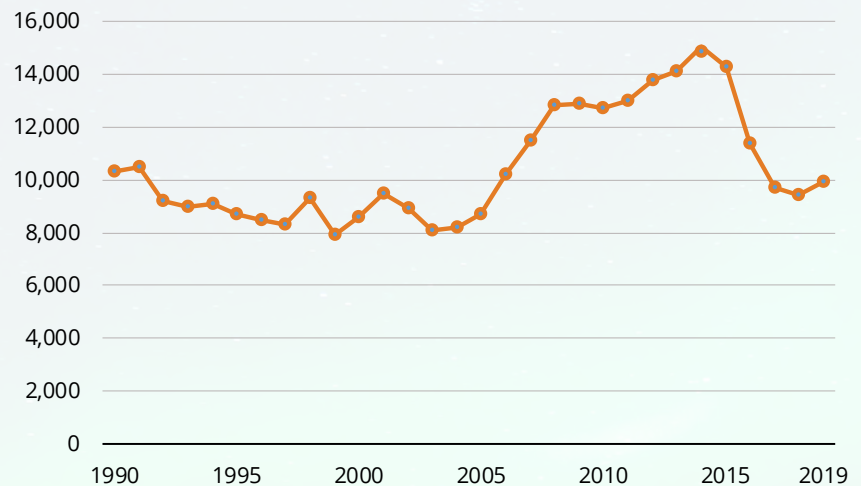
Those downturns don't necessarily shed light on how the industry will weather this one — a pandemic puts us in new territory, and other factors are putting additional downward pressure on jobs — but historical and current data show waxing and waning has been common over the last 30 years.

How the oil industry is defined here

This article focuses on a narrow group of oil industry employers that are either oil producers or oil field service companies. Thousands of other jobs that serve the oil industry, but they aren't categorized as oil industry employers.

For example, in 2019, 29 percent of the jobs in Prudhoe Bay were in other categories such as security, catering, accommodations, transportation, and engineering services. This analysis excludes those types of jobs.

Total oil industry employment, 1990 to 2019



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

The big picture for jobs in the industry since 1990

During the 1990s, direct oil industry employment (see the sidebar) fell from a high of 10,700 in 1991 to a low of 7,900 by the decade's end. Those swings felt dramatic and volatile at the time, but in retrospect, job levels remained within a fairly tight range.

Employment did trend downward over that decade, however, and it wasn't until 2006 that the trend reversed. The industry broke the 10,000 jobs level again that year and employment continued to climb.

By 2013, industry employment topped 14,000. It peaked in 2014 at 14,800 jobs, then remained above 14,000 through 2015.

But in 2015, after four years of oil prices around \$100 per barrel, prices fell to half that level and remained low for the next three years. Jobs declined

over those three years as well. Between 2015 and 2018, the oil industry lost a third of its employment (nearly 5,000 jobs). That was more than double the amount the industry had lost at any point in history.

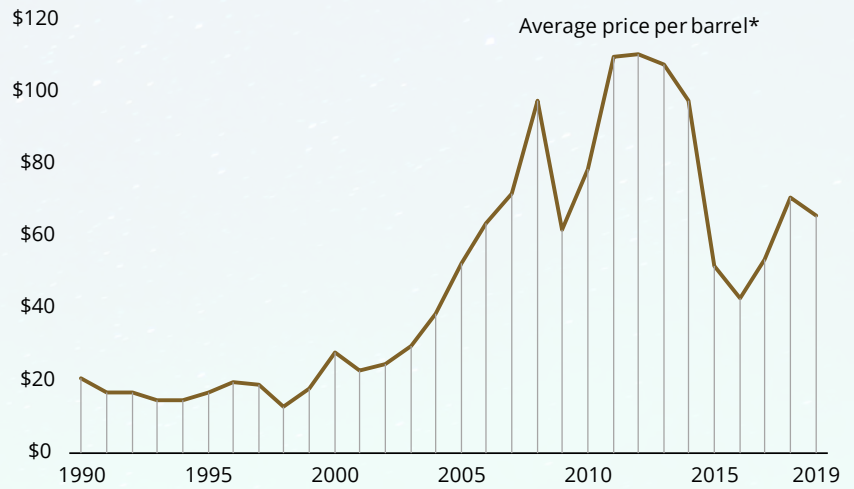
After bottoming out at 9,400 jobs in 2018, the industry regained its footing and began to add jobs again. Employment grew to 9,900 by the end of 2019 and to 10,500 by March 2020.

We forecasted that growth would continue in 2020, but the industry took a double hit from COVID-19 restrictions and plunging oil prices in late March, and jobs and prices began to fall in concert. Employment dropped to an estimated 8,900 in April, the lowest since 2005, and is anticipated to fall further.

A number of recent factors put brakes on employment growth

Even before the pandemic-related travel and hiring restrictions hit, several factors were restraining the industry's job growth. Technology continues to improve, which reduces labor costs, and the state's production had been on the decline for decades before the small gains in recent years. However, the effects of technology and production on jobs aren't clear cut.

Oil prices volatile over the last two decades



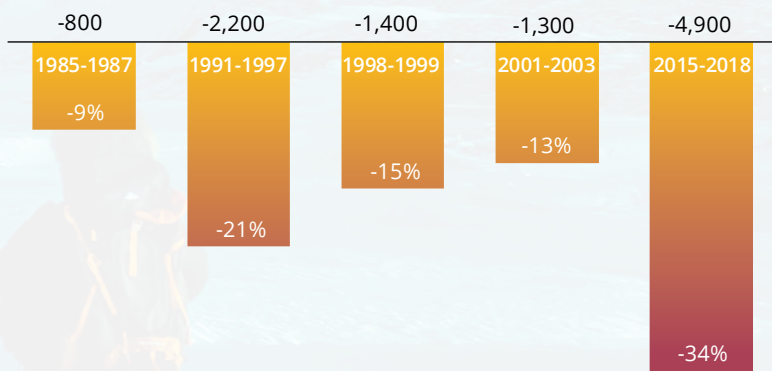
*Not adjusted for inflation
Source: Alaska Department of Revenue

Employment remained near its peak in 2015 despite production hitting its lowest daily level that same year. Record oil prices and more independents entering the scene who were willing to tap smaller or harder-to-develop fields explain part of this apparent paradox.

A closer look how at jobs relate to oil production

In the early 2000s, declining oil production led Alaskans to doubt the industry would ever again reach the 10,000 jobs mark it first passed in the early

Recent stretch of oil job loss was steepest



We are in new territory, as production has never fallen so hard and so fast, and prices have never fallen so low.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

1990s. In our jobs forecast for 2004 through 2014, we projected zero growth for the industry.

By 2006, production had dwindled to half its peak. The downward trajectory was broadly accepted as permanent, which presumably meant employment would follow the same path. But that didn't happen. A combination of high oil prices, new exploration and development, and the need for more labor to produce the same amount of oil kept industry employment at much higher levels than observers had thought possible.

In a sense, lower production with higher employment isn't surprising. The Prudhoe Bay oil field, North America's largest and most productive, has been on a long decline, requiring more effort to produce a barrel of oil. Most of the new fields have been smaller and require more investment as well as more labor.

In 1992, the average Alaska oil industry employee produced 197 barrels of oil a day. That fell to 107 by 2005, then to a low of 36 barrels per worker in 2015 — around the same time employment hit its highest level to date.

The biggest determinant for jobs was the price of oil

Prices were the real tonic behind the industry's dramatic job numbers. The price of oil doubled from 2002 to 2005, to around \$53 per barrel, allowing employment to resume growing and hit new heights within just two years.

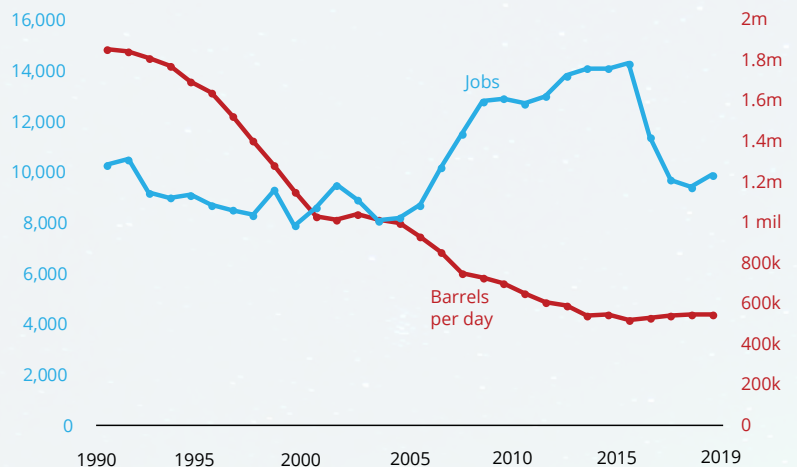
By 2008, oil reached an average of \$98 a barrel — a new annual high — and in July of that year it briefly hit \$144. Prices softened during the U.S. Great Recession that followed, then rose above \$100 a barrel again in 2011 and remained high for four years.

The job count followed a similar pattern, surpassing 12,000 in 2008 and breaking new records each year before topping out at 14,800 in 2014.

What's different this time

The price of oil will be the biggest variable in determining the size of the state's oil workforce in the

Production and jobs don't always track



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

coming years, and COVID-19 means additional pressures and uncertainty. Production has never fallen so hard or so fast, and prices have never fallen so low. The related oversupply and how long it lasts is another concern.

In January 2020, a barrel of Alaska North Slope crude sold for \$65, which halved to \$33 in March and halved again by April, to \$17. Toward the end of April, the price dropped below \$10 for four days, with one day registering a negative price — something that's never happened before. A negative oil price means that due to oversupply, a seller must pay someone to take possession of the oil, at least on paper. (At press time, prices had moved into more positive territory and were hovering in the \$30s.)

The pandemic was the main reason for the glut, as global shelter-in-place orders and other social restrictions spurred an unprecedented and sudden drop in demand for crude oil worldwide, estimated at 20 million fewer barrels per day during the early weeks.

At the same time, the Saudi and Russian governments waged a price war over output and market share, resulting in Saudi Arabia flooding the market with crude oil. The sheer volume put immense pressure on storage capacity and price.

To deal with the economic and logistical problems, oil producers are taking far-reaching measures such as curtailing production, slashing capital budgets, and laying off workers.

What Alaska's oil industry workforce looks like today

Alaska had 8,900 direct oil industry jobs in April, and nearly all of them were in three areas: The North Slope Borough, Anchorage, and the Kenai Peninsula Borough. Oil comes from the North Slope and Kenai, and Anchorage is the headquarters and service center for most of the industry.

While Valdez is the terminus for the Trans-Alaska Pipeline, most of Valdez's oil-related workforce moves oil from the North Slope to tidewater. Fairbanks has a small number of oil industry jobs, but it is a major logistic and supply center for the North Slope.

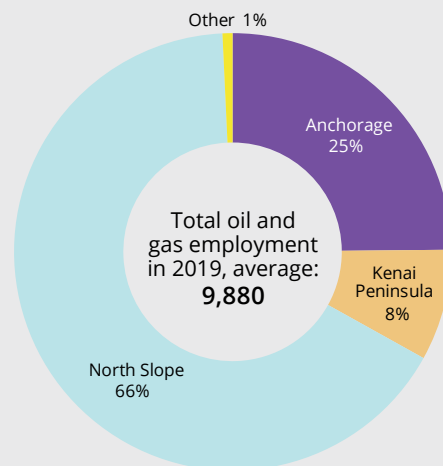
While the jobs are concentrated in these areas, the industry draws workers who live in nearly every part of the state. (The North Slope Borough itself is an exception. Few of its residents work on the Slope.)

A prime example is the Matanuska-Susitna Borough, which has no oil employment or production yet supplies the third-largest group of Alaskans to the North Slope, after Anchorage and the Kenai Peninsula Borough.

Six percent of working Mat-Su residents commute to the North Slope. In 2018, that was 1,789 workers who earned \$193 million. That's an impressive number because it represents more in payroll than any single Mat-Su industry generated in 2018.

Overall, nonresidents hold more than a third of the state's oil industry jobs, at 35 percent in 2018, which was up slightly from the year before but down somewhat from the record high of 37 percent in 2016. Over the long term, the percent of nonresidents has been the rise, but it will take time to see if the COVID-19 disruptions affect that trend.

Two-thirds of oil industry jobs are on the North Slope



Resident oil industry workers and their total wages in 2018

| Place of residence | Resident workers | Total wages to residents |
|------------------------------|------------------|--------------------------|
| Municipality of Anchorage | 3,218 | \$508,449,652 |
| Kenai Peninsula Borough | 1,889 | \$203,530,877 |
| Matanuska-Susitna Borough | 1,789 | \$192,747,065 |
| Fairbanks North Star Borough | 429 | \$38,351,115 |
| Valdez-Cordova Census Area | 57 | \$5,793,803 |
| Northwest Arctic Borough | 34 | \$1,108,201 |
| Yukon-Koyukuk Census Area | 34 | \$2,706,004 |
| Southeast Fairbanks CA | 22 | \$1,851,659 |
| North Slope Borough | 18 | \$1,129,330 |
| Haines Borough | 14 | \$617,498 |
| Lake and Peninsula Borough | 10 | \$629,955 |
| Dillingham Census Area | 7 | \$421,082 |
| Juneau, City and Borough | 6 | \$607,986 |
| All other | 39 | \$3,773,591 |

Note: Areas with fewer than six workers are not disclosable.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

So far in Alaska, ConocoPhillips has announced plans to cut its North Slope production by 100,000 barrels per day, and the Trans-Alaska Pipeline reduced its flow rate by 50,000 barrels per day for several weeks in late April and early May.

ConocoPhillips and OilSearch have already reduced their capital budgets in Alaska. Doyon, Halliburton, Schlumberger, and Baker Hughes are among a number of companies that have each reported

layoffs of at least 700 employees.

With such uncertainty, Alaska's oil and gas employment is likely to remain at lower levels for an extended period.

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