Prudhoe Bay, home to the nation’s largest oil field, is what single-handedly transformed Alaska into an oil-producing powerhouse and became the source of the state’s greatest wealth. According to historian Terrance Cole, “The balance sheet of Alaskan history is simple: One Prudhoe Bay is worth more in real dollars than everything that has been dug out, cut down, caught, or killed in Alaska since the beginning of time.” And yet, it’s a place few Alaskans ever visit.

Oil-related activity has since spread well beyond Prudhoe Bay, and this article uses the terms “oil patch” and “the Slope” to refer to the entire oil industrial complex in the area, including Prudhoe Bay and Kuparuk but also Moose’s Tooth to the west, Point Thomson to the east, and any other area in the North Slope Borough that is touched by oil.

Because this article’s focus is oil and gas-related activity, it excludes employment in the North Slope Borough’s eight Inupiat communities. For more on those communities, see “When The North Slope is Home” in the September 2016 edition of Alaska Economic Trends.

Industry makeup of the Slope

Alaska began producing employment numbers for the Slope in 1986, seven years after oil began to flow down the Trans-Alaska Pipeline and 18 years after the field’s discovery. (See Exhibit 1.) These numbers include both direct oil and gas industry jobs and all other employment in the oil patch because in this unique location, nearly everything is tied to oil and gas activity.

Many of those supporting jobs are categorized in professional and business services and include everything from engineering and geological firms to facility support services and waste management and remediation. The Slope also has a substantial number of jobs in the leisure and hospitality sector, employers that operate the camps and other facilities that feed and house the large workforce. (See Exhibit 2.)

Two other large categories of oil patch employers are construction and transportation companies, as there’s plenty to build and maintain as well as thousands of workers and materials to transport.

Some industries are notably absent on the Slope. For example, there’s almost no employment in retail or government. In contrast, these represent over a third of all jobs statewide.
The oil patch’s historical ebb and flow

Over the last 30 years, employment levels have fluctuated from year to year, sometimes considerably. During the first two decades, Slope employment reached a high of 6,524 in 1990, two years after oil production peaked, then dwindled to 4,816 by 1999. (See Exhibit 1.)

At the time, this waxing and waning seemed dramatic and volatile, but in hindsight, the bandwidth of oil patch employment stayed mostly within a tight range of 5,000 to 6,000.

The overarching declining trend that began in the 1990s was punctuated by periods of recovery, but jobs remained below the 6,000 mark until 2003. In the early 2000s, with production declining, it seemed unlikely that Slope employment would ever top 6,000 again. Consequently, the oil industry’s long-term job outlook was bleak. The 10-year industry forecast we published in 2006, for example, predicted no growth from 2004 to 2014.

Oil production was down to less than half its peak in 2006, and the downward trajectory was broadly accepted as permanent with employment levels expected to follow. But that didn’t happen. Oil prices began to rise in 2003 and by 2005 had more than doubled.

In 2006, the oil patch resumed adding jobs at a strong pace. In addition to the tonic provided by four years of above-average oil prices, maintenance and work on a number of new fields breathed life into the industry, and early that year a section of BP’s pipeline sprung a leak that turned into the largest oil spill in North Slope history and resulted in millions spent on repairs.

This “mature” oil province was now the fastest-grow-
ing employment area in the state and oil was the fastest growing industry. In 2007, oil patch employment hit a new record of 7,781 — more than 1,000 jobs above the 1990 peak.

The price of oil soared to a record $133 per barrel in 2008, and employment reached 10,000 that year for the first time. Prices softened some during the U.S. recession but remained above $100 per barrel from 2011 to 2014.

After 2008, employment hit a new record each year until topping out at 12,540 average monthly jobs for 2015. Monthly employment hit a high of 13,485 that March. (See Exhibit 3.)

Less oil produced per worker

Employment was at an all-time high even as production continued a long-term declining trend in what had been North America’s most productive oil field. (See Exhibit 4.) Most new fields were smaller, requiring more investment and more workers to produce a barrel of oil.

In terms of the production-to-worker ratio, the peak was 372 barrels a day per worker in 1988, which fell to less than half that by 2000 (163 barrels). The ratio continued to drop, dipping below 100 barrels per worker in 2005 and reached a low of 45 in 2016.

Two-Year Job Decline from 2015 Peak

NORTH SLOPE OIL PATCH, 2015 TO 2017

Note: Employment numbers include all industries.  
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

The high job levels didn’t last

Oil prices began to fall in late 2014 and dropped to $40 a barrel by 2015. Employment began to follow suit later that year. By the second quarter of 2017, employment had fallen to 2007 levels, erasing most of the past decade’s gains.

About the data

This article’s data include employment in all industries in the North Slope’s oil patch, as running these virtually self-contained camps on the North Slope requires a range of support workers in addition to oil industry workers.

In this article, “the oil patch” and “the Slope” refer only to the oil fields and related oil activity and exclude North Slope Borough employment in its eight communities: Anaktuvuk Pass, Atqasuk, Utqiagvik (was Barrow), Kaktovik, Nuiqsut, Point Hope, Point Lay, and Wainwright. To learn more about these communities, see the September 2016 issue of Alaska Economic Trends.
National oil industry employment began to recover in late 2016, and Alaska’s overall oil and gas job losses began to moderate in 2017. (See Exhibit 5.)

Prices have inched up to around $70, possibly high enough to stabilize the industry, and planned exploration and maintenance on the North Slope in 2018 are also likely to stem further losses. Another positive for the industry is that oil production has increased over the past two years.

A mostly imported workforce

One of the most striking aspects of the oil patch workforce is that it’s almost entirely imported from other parts of the state and nation. Slope workers stay in camps that house thousands of people and work shifts such as one or two weeks on before flying home to other parts of Alaska or the Lower 48.

Although data for residency and work location aren’t available for just the oil patch, looking at numbers for the entire North Slope Borough still show how unusual the oil patch workforce is. Statewide, 67 percent of workers live and work in the same area. In the North Slope Borough, less than one in five workers also live there. Nearly half make the long commute from other parts of Alaska and 35 percent commute from out of state. (See Exhibit 6.)

Wages are a major attraction

Although Alaska has the most seasonal workforce in the nation and no other place in the U.S. has winters as harsh as the North Slope, oil-related work there carries on year-round and is much less seasonal than in other parts of the state. There’s less construction and maintenance in the winter, but ice road building and exploration continue through the winter and early spring.
Tough and remote conditions and the need for a highly skilled workforce mean high wages. In 2016, average earnings in the oil patch were more than double the statewide average of $53,000. (See Exhibit 7.) The Slope’s average is driven up even further by the long hours — usually 60 to 70 or more per week.

Earnings are highest for those employed by the oil producers, at $192,283 on average in 2016. For those in construction and transportation, wages averaged $118,773 and $106,858, respectively — over 50 percent higher than their statewide industry averages.

Wages for support work were considerably lower but still well above their industry averages statewide. For example, leisure and hospitality jobs in the oil patch averaged $56,251, but just $23,316 Alaska-wide.

Nonresident share grows

As noted, these high wages attract workers from all over the country. Over the past decade, the share of oil industry workers who aren’t Alaska residents has grown, ranging from 28 percent nonresident in 2009 to 37 percent in 2016. While no breakout exists for the Slope, which represents two-thirds of Alaska’s oil industry, its nonresident percentage is likely even higher because of the work schedules that allow people to commute such long distances.

The numbers of residents and nonresidents in the oil industry both declined in 2016, however. Resident employment fell by 18 percent and nonresident employment by 14 percent.

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