
Export Prospects Increase As Alaska's Output Drops

Crude revival threatened by coronavirus pandemic.

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Data Sources for This Publication

CME Group
EIA
California Energy Commission
Washington Department of Ecology
Alaska Department of Revenue

To discover more about the data sources used, [click here](#).

Rapid Collapse

Alaska's crude production fell by 98 thousand barrels/day to 422 mb/d between March 26 and May 21 in the wake of the coronavirus-induced oil price crash according to the state's Department of Revenue. The cutback could double, starting in June, if ConocoPhillips proceeds with a 100 mb/d reduction in output announced April 30. The rapid production collapse hasn't just been a response to lower prices but to operational constraints at the Valdez, Alaska shipping terminal. Meanwhile, Alaska's North Slope, or ANS, crude is currently competitive in Asian markets and three relatively rare export cargoes have been shipped there in April and May. This note discusses the fate of ANS crude production and opportunities to increase exports.

Renaissance

Alaska crude output reached its lowest annual level for 42 years in 2019, averaging 491 mb/d according to the state's Department of Revenue, down from a peak over 2 million barrels/day in 1988. Despite a long slow decline since the 1980s optimism increased last year around new investment initiatives we detailed in a May 2019 note (see [Prospects for ANS Renaissance](#)). New discoveries and application of more efficient technologies in the Prudhoe Bay, Alaska, region where ANS is produced led IHS Markit to forecast in August 2018 that output could grow by 40% in the next eight years to 2026. Increased investment by legacy producers Conoco Phillips, BP, and ExxonMobil, as well as newer discoveries operated by Repsol, ENI, Hilcorp, and Australian company, Oil Search, all showed promise for future output.

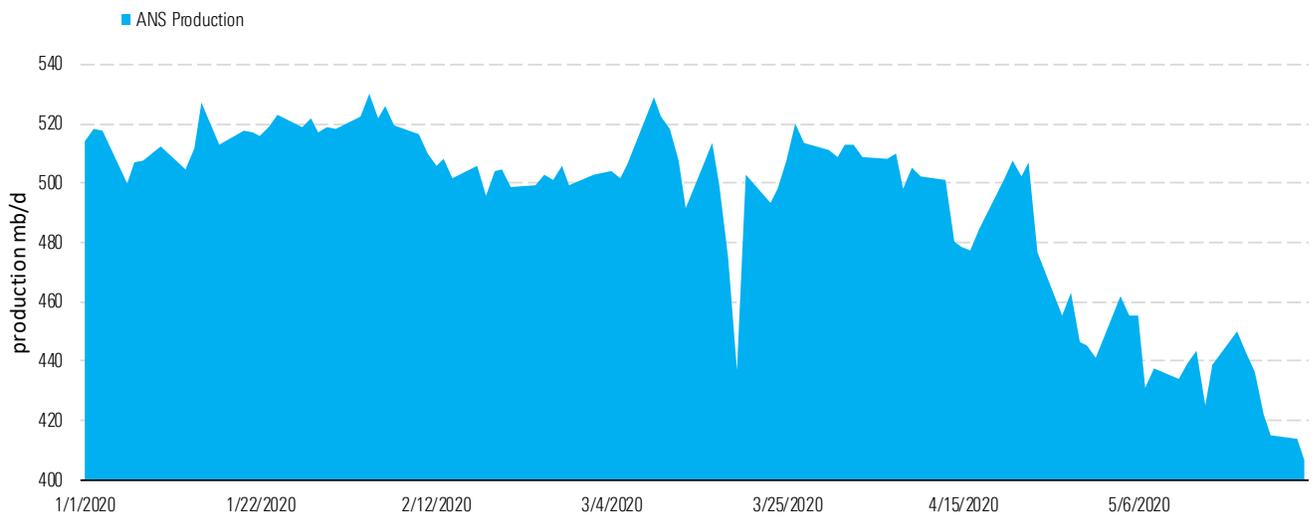
In a deal announced August 27, 2019, BP sold its Alaskan production assets to privately held Houston company Hilcorp for \$5.6 billion, including a 26% stake and operatorship in the giant Prudhoe Bay North Slope field. That sale is still expected to close later this year despite the recent oil price crash and Hilcorp's expertise in exploiting mature fields is expected to revive ANS output in coming years. A February forecast by the Alaska Department of Natural Resources predicted annual output would increase 6% this year to 519 mb/d with new wells expected online.

Pandemic Collapse

That was before the COVID-19 pandemic crushed oil prices and demand worldwide during April. Since then Alaska's crude production declined continuously through April and May to a low of 407 mb/d on May 26 according to daily data provided by Alaska's Department of Revenue (Exhibit 1). That decline has primarily been prompted by drilling and production cuts made by Alaska's largest operators—the three North Slope partners, BP, ConocoPhillips and ExxonMobil. In early April BP ended 2020 drilling

development in Prudhoe Bay, ConocoPhillips demobilized their North Slope drilling fleet and ExxonMobil announced a 30% cut to global capital expenditures. By the end of April Alaska's DNR revised their 2020 production forecast down by 13 mmb/d to 506 mb/d and predicted a 5.2% decline in output during 2021. As noted in our introduction, on April 30, ConocoPhillips announced a 100 mb/d cut in Alaskan production beginning in June. In early May Oil Search and Repsol deferred the final investment decision on their \$5 billion-6 billion Pikka development project that had been expected in 2020 and Oil Search suspended new drilling until winter 2021/2022.

Exhibit 1 Alaska Crude Production 2020



Source: Alaska Department of Revenue.

Proration

Aside from producer cutbacks, Alaska's crude output has also been reduced by proration on the Trans-Alaska Pipeline, or Taps, that runs 800 miles south from Prudhoe Bay in the Beaufort Sea to the Valdez shipping terminal south of Anchorage, AK. The pipeline has more than 2 mmb/d capacity and is operated on behalf of the three North Slope partners by the Alyeska pipeline company. Taps delivers crude to the Valdez terminal where it is temporarily accommodated in 14 storage tanks with 6.6 million barrels of working capacity before loading onto tankers at the two operating berths. These berths typically handle about 20 tankers a month between them, the majority of which are U.S.-flagged Jones Act vessels required to transfer cargo between domestic ports. Although there is working storage at Valdez, the facility isn't designed to provide commercial storage for customers. Alyeska uses the available tanks to stage pipeline flows onto tankers, typically speeding up or slowing down tanker arrivals to prevent Valdez storage overflowing.

During April Taps operators faced an unusual situation when demand for crude by downstream refiners dried up and shippers delayed crude pickup schedules from Valdez. That forced the company to prorate volumes they allowed shippers to put into the pipeline in order to prevent a storage overflow at Valdez. Alyeska introduced a 10% proration on April 24 (approximately 50 mb/d) then raised that to 15% on May 8 (75 mb/d) before reducing it back to 5% on May 16 as downstream demand picked up and in anticipation of the planned ConocoPhillips reduction of 100 mb/d starting in June. The proration effectively required producers to shut in Prudhoe Bay wells.

ANS Demand

We look next at declining domestic demand for ANS crude during the pandemic. Most Alaskan crude not consumed by state refineries is shipped by tanker from Valdez to refineries on the West Coast or in Hawaii. According to the California Energy Commission, an average 201 mb/d of ANS was shipped to California during 2019. Our analysis of data from Washington state's Department of Ecology implies Washington state refineries consumed an average 172 mb/d of ANS in 2019. According to U.S. Census data an average 17.5 mb/d of ANS was exported in 2019. Given 2019 production averaging 491 mb/d, the remaining 100.5 mb/d of ANS can be assumed to have been consumed by refineries in Alaska and Hawaii.

Although full data isn't yet available on how much West Coast and Hawaii refineries reduced consumption of ANS during the pandemic, weekly data from the Energy Information Administration for the period from the last week of March to May 15, indicate regional refineries operated at an average 72% of levels for the same period in 2018. We use 2018 as a comparison because a series of outages plagued California's refineries during this period in 2019 (see our June 2019 note [California Gasoline Shortage Boosts Refinery Margins](#)). Weekly data reported to the CEC indicates the state's refineries processed an average 1.2 mmb/d of crude between March 23 and May 15—down 36% from 1.8 mmb/d during the same period in 2018. Adding to the pressure on ANS demand, Bloomberg reported that a flotilla of international tankers carrying 20 million barrels of crude gathered off California's coast in April.

Export Opportunity

Even as Alaskan producers responded to low prices by slashing output in April and May, downstream refineries in the U.S. still couldn't absorb ANS supplies. That has resulted in three cargoes of ANS being exported to China, one leaving Valdez on April 25 aboard the OSG-owned U.S. flag tanker Alaska Navigator, another aboard the Greek-registered Sofia on May 16, and most recently another U.S. flag tanker the Polar Endeavor that left Valdez May 27. All three vessels were initially bound for China although the Alaska Navigator made a second stop in South Korea.

Although exports of ANS have been permitted for decades under certain conditions, they are relatively rare—particularly using more U.S. flag vessels that are costlier to operate and usually restricted to domestic voyages. The recent uptick in ANS exports is driven in part by lower demand from West Coast refineries as well as a pricing arbitrage window opened between ANS and Asian markets since the start of April. Prices for crude delivered to Asia have traded at an average of \$5/barrel above ANS so far in the second quarter. Exhibit 2 shows daily prices for ANS, Dubai and Oman crudes in 2020. Mideast crudes

delivered to Asia typically price against a formula averaging Dubai and Oman. In the first quarter of 2020, the Dubai/Oman average was basically level with ANS on average. In the second quarter ANS has been far cheaper than Middle Eastern rivals, meaning it is competitive in Asian markets even with higher freight charges for U.S. flag vessels.

Exhibit 2 ANS, Dubai and Oman Crude Prices 2020



Source: Alaska Department of Revenue, CME Group, Dubai Mercantile Exchange.

The ANS pricing advantage should continue to provide opportunities for exports for several reasons that could alleviate Taps' operational constraints and allow producers to ramp up output again in the second half of 2020. The first reason is China's emergence from lockdown and growing crude demand. That increased demand coincides with output cuts agreed to by OPEC+ in April coming into effect, that have already reduced supplies to Asia. A second reason favoring ANS is location. The shipping time from Valdez to Chinese refineries is only about 12 days, meaning ANS freight cost is very competitive with shale crude shipped from the Gulf Coast around South America. Third, the medium sour quality of ANS is favored by Asian refiners over lighter shale crudes. And finally, China committed last year to buy \$18.5 billion more U.S. energy products in 2020, over what it purchased in 2017 as part of their trade deal with the U.S. So far purchases haven't lived up to these promises (see our February 2020 note "[Hollow Energy Promises in China Deal](#)") and the terms of the deal will be harder to meet with oil and natural gas prices now at decade-low levels, but purchasing U.S. crude exports would be an easy win for China.

Longer Term

We've already witnessed an investment hiatus from independent shale producers by private equity, leaving major oil companies positioning themselves as long-term players in the Permian and Eagle Ford. BP is in the process of leaving Alaska and ConocoPhillips has chosen to halve its output in the state. Yet the nascent production revival that surfaced in Alaska during 2019 could continue if producers with deep pockets commit the necessary investment. We believe the export market for ANS crude to Asia justifies longer-term investment, provided prices recover above \$50/barrel. As the COVID-19 crisis unwinds, major oil companies and larger, financially secure producers need to find investment horizons they can live with. If that horizon is short term in response to an uncertain price- and demand scenario then shale plays are more attractive. If the horizon is longer term based on confidence that oil has a 30-year future, then bigger plays like Alaska should be favored. ■■

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