

A large blue offshore oil rig stands against a clear blue sky with light clouds. The rig has a tall derrick structure with yellow accents. A red banner is overlaid on the left side of the image, containing the title text. An American flag is visible on the rig's structure. In the foreground, there is a dirt area with some equipment and a dark pickup truck.

# Alaska Operations

2015 Snapshot



## ConocoPhillips in Alaska

ConocoPhillips is Alaska's largest oil producer and one of the largest owners of state and federal exploration leases, with over a million net undeveloped acres. ConocoPhillips has been a leader in oil and gas exploration and development in Alaska for more than 50 years. Significant oil development and exploration opportunities still exist in Alaska, particularly onshore on Alaska's North Slope and offshore in the Chukchi Sea. Additionally, in conjunction with other producers and the State of Alaska, the company is evaluating potential liquified natural gas (LNG) exports from the North Slope's vast gas resources.

### Where We Operate

Kenai Liquefied Natural Gas Plant	since 1969	100% owner
Tyonek Platform in Cook Inlet	since 1969	100% owner
Kuparuk River Unit	since 1981	55.3% owner
The Beluga River Gas Field	since 1986	33.3% owner
The Colville River Unit (Alpine)	since 2000	78% owner
Alaska headquarters in Anchorage		

### Non-Operated Alaska Assets

Prudhoe Bay Unit	since 1977	36.1% owner
Trans Alaska Pipeline System	since 1977	29.1% owner

### More ConocoPhillips Assets in Alaska

Polar Tankers
Shared Services

## 2015 Alaska Production

178,000 barrels of oil equivalent per day (boepd) (net, from operated and non-operated assets)

### In the Community

Total Philanthropic statewide spend for 2015 was nearly \$5 million

- 25% Health and Safety
- 18% Social Services
- 19% Education
- 15% Civic and Arts
- 10% Natural Resources
- 2% Employee Volunteer Grants and other Community Investments

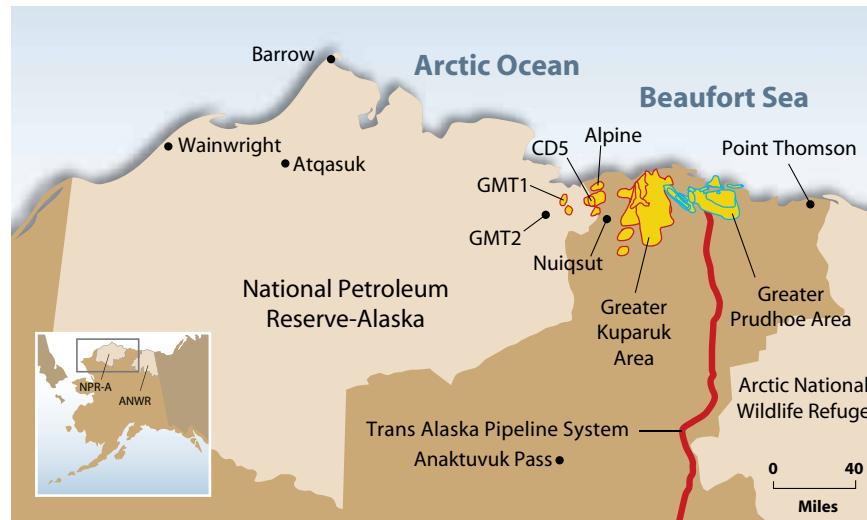
On average, more than 6,000 employee volunteer hours per year

Nearly \$125 million in philanthropic donations in Alaska since 2000

### Investment & Economy

Invested more than \$1.3 billion in capital projects in 2015, slightly lower than our investment in 2014

Approximately 1,200 employees



■ ConocoPhillips Acreage 
 ■ ConocoPhillips Operated 
 ■ TAPS 
 ■ BP Operated



## Kuparuk River Unit

North Slope, Alaska

### Field Facts

<b>Operator</b>	ConocoPhillips	
<b>Ownership</b>	ConocoPhillips	55.3%
	BP Exploration	39.2%
	Chevron	4.9%
	ExxonMobil	0.6%
<b>Average Daily Production</b>	51,000 boepd (net, 2015) 105,000 bopd (gross, 2015)	
<b>Peak Production</b>	320,000 boepd (gross, 1992)	
<b>Start-up</b>	December 1981	
<b>Unit Area</b>	256,976 acres (gross) 139,041 acres (net)	
<b>Original Oil in Place (gross)</b>	6 billion barrels	

### Basic Facts

The Kuparuk River Field (“Kuparuk”) is about 40 miles west of Prudhoe Bay, and was discovered in 1969. Production began in 1981 and increased to a record rate of 320,000 barrels per day (boepd) in 1992. Kuparuk reached a milestone in July 2005 when cumulative production reached 2 billion barrels. Drill pads were reduced from 65-acre pads (the original Prudhoe Bay design) to about 11-acre drill sites at Kuparuk.

Kuparuk River Unit has produced over

# 2.5 billion barrels

More than 1,175 wells have been drilled in the Kuparuk River Unit and more development wells are planned. Kuparuk has three Central Processing Facilities (CPFs), a Seawater Treatment Plant (STP), plus 48 drill sites. Kuparuk satellite fields Tarn, Tabasco, West Sak and Meltwater share production facilities with Kuparuk. New Drill Site 2S, the first new drill site at Kuparuk in more than 12 years, had first production on October 9, 2015. Funding has also been approved for viscous oil development 1H NEWS, with first oil from the project expected in late 2017.

ConocoPhillips and its co-venturers at Kuparuk have invested billions of dollars to develop Kuparuk and implement programs to optimize oil recovery since its startup. Kuparuk production is currently enhanced through the use of peripheral and infill drilling, water injection, alternating water and gas injection (IWAG) as well as miscible water alternating gas injection (MWAG). The Kuparuk processing facilities handle over 700 million cubic feet of gas daily, and some 700,000 barrels of water per day.

In 2009, the CDR2-AC purpose-built coiled tubing drilling (CTD) rig successfully initiated operations at Kuparuk to drill complex, multi-lateral wells to tap into previously inaccessible oil. Since startup, the rig has delivered impressive performance and is allowing ConocoPhillips to economically deliver millions of barrels of oil reserves. Sidetracks from existing well bores utilizing CTD is now a primary means for development drilling at Kuparuk. An additional CTD rig is currently under construction and scheduled to begin drilling late in 2016. Additionally, ConocoPhillips has taken delivery of a new rotary drilling rig, Doyon 142, which began drilling in 1Q 2016.





## Alpine – Colville River Unit

North Slope, Alaska

### Field Facts

<b>Operator</b>	ConocoPhillips	
<b>Ownership</b>	ConocoPhillips	78%
	Anadarko Petroleum	22%
<b>Average Daily Production</b>	30,000 boepd (net, 2015) 48,000 bopd (gross, 2015)	
<b>Peak Production</b>	139,000 boepd (gross, 2007)	
<b>Start-up</b>	November 2000	
<b>Unit Area</b>	117,227 acres (gross) 91,425 acres (net)	
<b>Stats</b>	5 drill sites, approximately 185 wells	

### Basic Facts

The Colville River Unit (commonly referred to as “Alpine”) is located in the Colville River Delta on Alaska’s Western North Slope, 34 miles west of Kuparuk and eight miles north of the Inupiat village of Nuiqsut. Field construction and development took three years, 6 million man-hours and cost more than \$1.3 billion. Alpine has no permanent road connecting it to other North Slope infrastructure. In the winter an ice road is built connecting Kuparuk to Alpine to move in supplies for the rest of the operating year. In any given winter season more than 1,500 truckloads of essential supplies and equipment are moved to Alpine over the ice road. More than eight years of environmental studies guided conceptual development of the field, allowing engineers and environmental experts to locate drill sites and facilities in areas where they have had minimal impact on wildlife, waterfowl and the subsistence lifestyle practiced by Nuiqsut residents.

More than **8 years**

of studies guided conceptual development of the field

### Alpine Production

Alpine was the first North Slope field developed exclusively with horizontal well technology to access greater than 50 square miles of subsurface from a single drilling pad. It also employs enhanced oil recovery (EOR) through waterflooding and miscible gas injection. Its one-day production record was 139,000 barrels in 2007. The original Alpine facility was planned as a 97-acre surface development that included stand-alone processing facilities (CD1), a second drilling pad (CD2), and an airstrip/3-mile gravel road connecting the two pads. That original development accessed about 40,000 acres of subsurface area from the original two drill sites. With additional drill sites and satellite field development, including CD5, the total surface development now encompasses about 220 acres.

The first two Alpine satellites – Fiord (CD3) and Nanuq (CD4) – came on line in 2006. CD3 is three miles north of the main Alpine facility and CD4 is four miles south of the main Alpine facility. These two satellites represent approximately \$500 million in investment. In July 2008 another oil pool, Qannik, began producing. The Qannik development is an extension of the CD2 drill site two miles west of the main Alpine processing facility. About 470 million barrels have been produced from the Colville River Unit.

After processing, the sales-quality crude oil from Alpine moves to market through an elevated 34-mile, 14-inch pipeline connecting Alpine to the Trans Alaska Pipeline System via the Kuparuk pipeline system.

### CD5 & NPR-A

In December 2011, the U.S. Army Corps of Engineers granted a permit allowing construction of a gravel road, bridge and pipeline over the Nigliq channel of the Colville River for development of CD5, five miles west of Alpine within the boundaries of the National Petroleum Reserve-Alaska (NPR-A). Terms of the permit were incorporated into the project plan, and the CD5 project was sanctioned for funding in October 2012. Construction began in the winter of 2013/14. First production was in Oct. 2015. CD5 represents the first commercial oil development on Alaska Native lands within the boundaries of the National Petroleum Reserve-Alaska. Peak gross production is anticipated at about 16,000 barrels of oil per day. The project also added approximately 700 new direct jobs during construction and hundreds more support jobs.

ConocoPhillips is continuing to evaluate further exploration and development potential in the NPR-A area, and is advancing development of Greater Mooses Tooth 1, in the Greater Mooses Tooth Unit. Development plans include a new gravel pad, a 7.8-mile road, and pipelines connecting it to CD5 and the Alpine Processing Facility. GMT1 has a potential monthly peak rate of 30,000 barrels of oil per day, gross. Funding for the project was approved in Nov. 2015, and first oil is planned for late 2018.



## Beluga River Gas Field

West Cook Inlet, Alaska

### Field Facts

<b>Operator</b>	ConocoPhillips	
<b>Ownership</b>	ConocoPhillips	33.3%
	Hilcorp	33.3%
	Municipal Light & Power	33.3%
<b>Average Daily Production</b>	16 MMCFD (net, 2015) 55 MMCFD (gross, 2015)	
<b>Peak Production</b>	~171 MMCFD (2003) maintained production plateau from 2003 through 2007	
<b>Start-up</b>	March 1968	
<b>Unit Area</b>	8,227 acres (gross) 2,742 acres (net)	

Discovered in 1962, the Beluga River Gas Field is located on the upper west side of Cook Inlet, about 35 air miles from Anchorage. The Beluga River Gas Field serves major customers in Southcentral Alaska, including local utilities and industrial consumers. Beluga River production also is used as supplemental supply for the Kenai LNG Plant.

The Beluga River field is one of the **primary suppliers** of natural gas to the local Anchorage utility market

### History

A drilling venture among the Richfield Oil Corporation, Shell and Standard Oil Company of California (Chevron) discovered the Beluga River Gas Field while drilling a deep oil exploration prospect in 1962. In 1968, Chugach Electric Association constructed a power plant at Beluga and became the first consumer of gas from the field. In 1984, ENSTAR Natural Gas Company constructed a pipeline from Anchorage to the Beluga River Gas Field, opening up residential and commercial heating markets. In 1986, ConocoPhillips (then ARCO) took over from Chevron as operator of the field on behalf of the co-owners, Chevron and Municipal Light & Power (owned by the Municipality of Anchorage). ConocoPhillips has continued to operate the field since 1986. Chevron transferred its ownership interest to the Chevron affiliate Union Oil Company of California in 2009. Union Oil Company subsequently conveyed its interest in the Beluga River Unit to Hilcorp Alaska in 2011. ConocoPhillips has signed a Purchase & Sale agreement with ML&P and Chugach Electric for the Beluga River Unit and expects to close the sale in 2016.

### COOK INLET AREA





## North Cook Inlet Field & the Tyonek Platform

Cook Inlet, Alaska

### Facility/Field Facts

<b>Operator</b>	ConocoPhillips	
<b>Ownership</b>	ConocoPhillips	100%
<b>Average Daily Production</b>	15 MMCFD (net, 2015) 17 MMCFD (gross, 2015)	
<b>Peak Production</b>	~177 MMCFD (1996) maintained production plateau from 1994 through 2003	
<b>Start-up</b>	May 1969	
<b>Unit Area</b>	9,781 acres (gross) 9,781 acres (net)	

The North Cook Inlet Gas Field was discovered in 1962 and historically primarily fed the Kenai LNG Plant. The field is located offshore on the western side of the Cook Inlet, 5 miles from the western coastline of Cook Inlet and about 37 miles west-southwest of Anchorage. The field is operated from the Tyonek Platform, the northern-most platform in Cook Inlet. The Tyonek Platform, the 12th platform in Cook Inlet, was installed in about 100 feet of water during 1968. This platform is designed to withstand the harshest expected conditions. North Cook Inlet Unit has been producing natural gas since 1969, and current production supports LNG exports and the local Southcentral Alaska energy market.

North Cook Inlet Unit  
has been producing natural gas

**since 1969**





## Kenai Liquefied Natural Gas Plant

Cook Inlet, Alaska

The first  
**exporter of LNG**  
 from North America

### Facility/Field Facts

<b>Operator</b>	ConocoPhillips	
<b>Ownership</b>	ConocoPhillips	100%
<b>Start-up</b>	June 1969	
<b>Plant Capacity:</b>	Can process up to 240 million cubic feet per day	
<b>Export Capacity:</b>	Capable of 1.2 million tons per year	
<b>Tank Capacity:</b>	2.2 billion cubic feet between three tanks. Currently licensed to export a total of 40 bcf until April 2018	

The Kenai LNG Plant is located in Nikiski, on the Kenai Peninsula, approximately 60 air miles from Anchorage and 10 miles from the city of Kenai. Nearly all LNG produced at the plant has been sold via contracts with two Japanese utilities. The Kenai LNG Plant complex includes docking and loading facilities to transport LNG to customers by tanker. The plant operated continuously for more than 40 years. Due to local and international market and supply changes, since 2011 the plant has had periods of warm shut-down, at which time the LNG tanks have remained cold but no LNG has been produced at the plant. The current export authorization allows ConocoPhillips to export as much as 40 BCF of LNG over the course of two years, until April 2018. ConocoPhillips remains committed to local gas supply needs and to meeting its local gas supply contracts.

### LNG Technology

LNG is manufactured from raw natural gas via ConocoPhillips' proprietary Optimized Cascade process that chills the gas to -259 degrees Fahrenheit (-161 Celsius). This shrinks the gas to less than one-600th of its original volume, which makes long distance shipping feasible. The LNG is stored and transported at atmospheric pressure.





## Greater Prudhoe Bay Area

North Slope, Alaska

# Prudhoe Bay

has produced over 13 billion barrels

### Field Facts

<b>Operator</b>	BP Exploration (Alaska) Inc.	
<b>Ownership</b>	BP Exploration	26.4%
	ConocoPhillips	36.1%
	ExxonMobil	36.4%
	Chevron	1.1%
<b>Average Daily Production</b>	92,000 boepd (net, 2015) 282,000 bopd (gross, 2015)	
<b>Peak Production</b>	>1,500,000 boepd (gross, 1978-1988)	
<b>Start-up</b>	Summer 1977	
<b>Unit Area</b>	254,235 acres (gross) 91,796 (net)	
<b>Original Oil in Place (gross)</b>	25 billion barrels	

### Basic Facts

The Greater Prudhoe Area is made up of the Prudhoe Bay Field, the Prudhoe Bay satellite fields and the Greater Point McIntyre Area fields. After more than 35 years of production, Prudhoe Bay remains the largest conventional oil field in the United States and is the 10th largest natural gas field in the United States.

When production started at the Prudhoe Bay field, the recovery factor for the 25 billion barrels of oil in place was expected to reach 40 percent. Today, using new technologies, we have increased that estimate to approximately 60 percent.



The Prudhoe Bay Field has more than 1,300 active oil-producing wells. Drilling is expected to continue for many years. Prudhoe Bay also is the site of one of the largest waterflood and enhanced oil recovery projects in the world, as well as a large gas processing plant that processes more than 7 BCFD of natural gas before reinjection into the reservoir.

Prudhoe Bay contains potential gross reserves of approximately 25 trillion cubic feet of natural gas. ConocoPhillips, in cooperation with BP, Exxon Mobil, the state of Alaska and the Alaska Gasline Development Corporation, continues to work on opportunities to commercialize this resource.





## Exploration

NPR-A, Kuparuk, Chukchi Sea

### Basic Facts

ConocoPhillips is one of the largest holders of federal and state leases in Alaska, with significant interests in the National Petroleum Reserve-Alaska (NPR-A) and the Chukchi Sea, as well as other undeveloped acreage on the North Slope. In all, ConocoPhillips has drilled more than 60 exploration wells since 2000, including 22 in NPR-A.

### Highlights

The Greater Mooses Tooth (GMT) Unit was established in 2008.

An oil discovery, Lookout, was announced in the area now known as GMT in 2001. Development planning for a drill site in the unit, GMT1, is underway.

The Bear Tooth Unit, also in NPR-A, was established in 2009.

In 2013, a new oil discovery at Cassin in the Bear Tooth Unit in northeast NPR-A was drilled and the discovery is currently being evaluated for further development potential.

In 2014, the Rendezvous oil discovery in the Greater Mooses Tooth Unit was successfully appraised, and resulted in ConocoPhillips applying for a Permit to Drill in Aug. 2015 for the GMT2 development.

In its 2015 Q4 earnings, ConocoPhillips announced that it will book an impairment for its Chukchi leases. A decision on the disposition of the leases will be made later this year.

In 2015, ConocoPhillips plans to drill three exploration wells, two in NPR-A and one near CD5.

ConocoPhillips has drilled more than  
**60 exploration**  
wells in Alaska since 2000





## Shared Services

Anchorage, Fairbanks, Deadhorse,  
Kuparuk and Alpine airports

Shared Services transports more than

# 26,000

workers per month

### Fleet Facts

<b>Operator</b>	ConocoPhillips	
<b>Ownership</b>	ConocoPhillips	50%
	BP	50%
<b>Aircraft</b>	3 Boeing 737-700s 1 Twin Otter 1 CASA 212	

### Basic Facts

Shared Services, a co-venture between ConocoPhillips and BP, transports more than 27,000 employees and contract workers per month between Anchorage, Fairbanks and multiple locations on the North Slope. The service provides 22 weekly Boeing flights, 60-80 weekly CASA and Otter flights and is crewed by 24 pilots and 24 flight attendants who are all ConocoPhillips personnel.

The Boeing 737 aircraft have a capacity of 136 passengers each, can be utilized for medical evacuations and are stationed at Ted Stevens Anchorage International Airport. The 15-passenger Twin Otter and the 18-passenger CASA 212, based at the Alpine facility, are also utilized for cargo, medical evacuations, freight, pipeline patrol, emergency response, survey work and ice strip operations.





## Trans Alaska Pipeline System

Prudhoe Bay to Valdez, Alaska

# 70,000

people were involved in building the pipeline

### System Facts

<b>Operator</b>	Alyeska Pipeline Service Company	
<b>Ownership</b>	BP Pipelines (Alaska), Inc.	48.4%
	ConocoPhillips Transportation Alaska, Inc.	29.1%
	ExxonMobil Pipeline Company	21.1%
	Unocal Pipeline Company	1.4%
<b>Average Daily Throughput</b>	508,446 bopd (gross, 2015), which is one percent lower than 2014	
<b>Peak Throughput</b>	2,100,000 bopd (gross, 1988)	
<b>Length</b>	800 miles	
<b>Construction Cost</b>	\$8 billion	
<b>Start-up</b>	June 20, 1977	
<b>Total Throughput Since Startup</b>	~ 17 billion barrels	

### Basic Facts

At a cost of \$8 billion, the Trans Alaska Pipeline System (TAPS) was the world's largest privately funded construction project when it was built. The system includes the 800-mile-long pipeline and the Valdez Marine Terminal, where oil is loaded onto tankers for shipment to market. It also includes the Ship Escort/Response Vessel System (SERVS), which provides two state-of-the-art tugboats to travel with every tanker through the Valdez Narrows to Hinchinbrook Entrance. The system is operated by Alyeska Pipeline Service Company on behalf of its four owners.

Construction of the pipeline project began in April, 1974 and finished in June, 1977. A total of 70,000 people were involved in building the line. The pipeline has become an engineering icon and has set a standard for design which endures to this day. Its distinctive zig-zags allow the pipe to flex in the event of an earthquake. More than half the pipeline runs above ground because otherwise the hot oil would melt the permafrost that is prevalent along the route. In permafrost areas, the pipeline is elevated on 78,000 vertical support members.

### Operations

TAPS is run from Alyeska's Operations Control Center in Anchorage and is monitored 24/7. The pipeline is protected by three separate leak detection systems. The system includes 71 gate valves that allow operators to stop pipeline flow in four minutes.

### Throughput

TAPS was originally built with 11 pump stations and reached a peak throughput of about 2.1 million barrels on Jan. 14, 1988. Since then, throughput has declined. It now takes over two weeks for oil to travel from Prudhoe Bay to Valdez. In winter, the oil can cool significantly as it travels along its route. The number of pump stations has been reduced to four, and Alyeska is looking at a variety of other engineering approaches to deal with the reduced flow.



## Polar Tankers

The fleet transports more than  
**70 million barrels**  
 of Alaska North Slope crude oil per year

### Ship Facts

<b>Ship Class</b>	Endeavour
<b>Builder</b>	Northrop Grumman Ship Systems
<b>Fleet</b>	5 ships
<b>Length (overall)</b>	895 feet
<b>Beam</b>	152 feet
<b>Depth</b>	86 feet
<b>Weight</b>	141,000 deadweight tons
<b>Cargo Capacity</b>	1 million barrels at full capacity
<b>Top Speed</b>	16 knots
<b>Range</b>	12,500 nautical miles
<b>Engines</b>	Two 15,000 BHP, slow-speed diesel

ConocoPhillips owns and operates Polar Tankers, one of the largest oil tanker fleets under U.S. flag. The fleet transports Alaska North Slope crude oil primarily to refineries in Puget Sound, San Francisco, Long Beach and Hawaii each year.

The Polar Tanker fleet consists of five Endeavour Class tankers – the Polar Endeavour, Polar Resolution, Polar Discovery, Polar Adventure and Polar Enterprise – designed specifically for the twice-monthly 2,500 to 5,000-mile round-trip from Valdez, Alaska, to Washington, California and Hawaii.

The Endeavour Class introduced the first-ever crude oil tankers operating under U.S. flag that combine:

- Double hulls with 10 feet of space between the hulls;
- Independent engine rooms;
- Redundant propulsion and twin-steering systems;
- A separate bow thruster; and
- Precise advanced navigation systems

Advanced technology and ConocoPhillips' innovative design have produced the Endeavour Class vessels that meet or exceed all current or planned environmental, structural and mechanical standards.

The Endeavour Class ships were the first to be built in the United States following the Oil Pollution Act of 1990, which mandated the phasing out of single-hulled tankers. The ships, designed specifically for the transport of crude oil, have been designed in partnership with some of the world's leading naval architecture and marine engineering firms to ensure they are best-of-class tankers.



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