

# Greater Prudhoe Bay

## Prudhoe Bay oil production passes 12 billion barrels

Prudhoe Bay hit a major milestone in 2012, when in October the Prudhoe Bay oil field surpassed the 12 billion barrel mark. This achievement is significant in view of the fact that, upon discovery in 1968, it was estimated to contain about 9.6 billion barrels of recoverable oil.

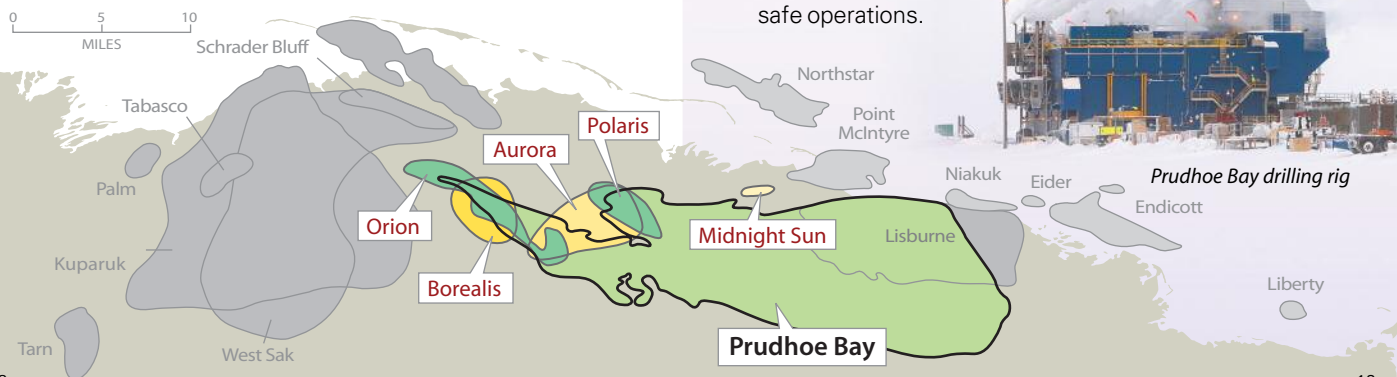
Prudhoe Bay remains the largest oil field in North America and ranks among the top 20 oil fields ever discovered worldwide. During the last three decades Prudhoe Bay has been a proving ground for oil field technology that has helped BP Alaska and other companies go beyond what was ever thought possible in maximizing production from the super-giant field.

Techniques that have enhanced oil recovery and boosted overall oil recovery include large-scale gas cycling, water flooding around the periphery of the field, miscible gas injection, and a technique called water-alternating gas. Improved reservoir analysis and delineation; advanced drilling techniques, such as horizontal and multi-lateral drilling; and advanced well completion methods also made significant contributions. With these technologies Prudhoe Bay is expected to yield more than an additional billion barrels of oil over its lifetime.

### Prudhoe Bay satellites

Satellite fields are smaller accumulations of oil that can often be developed using existing infrastructure. The 2012 average daily production from Prudhoe Bay satellites is about 30,000 BOE per day. BP's net share of that production is about 7,000 BOE per day.

There are five satellite fields currently producing and the liquids are processed through the field's main facilities.



Aurora and Borealis satellite fields are produced from similar formations. Midnight Sun produces from a sandstone formation at 8,000 feet below sea level. Orion and Polaris fields both produce the difficult viscous oil from the Schrader Bluff formation, at depths of 4,000 to 5,000 feet below sea level.

By using advanced drilling technologies we are growing this important resource. The Prudhoe Bay satellite fields have produced about 168 million BOE. BP's net cumulative production is approximately 38 million BOE.

### Prudhoe Bay renewal

BP has measurable safety and reliability programs for pipeline assurance on the North Slope. It includes frequent inspections and applied technology. BP does more than



110,000 annual inspections for corrosion under insulation and about 160,000 total pipeline inspections a year (X-ray, ultrasound and visual). Spending on corrosion monitoring and prevention is roughly \$120 million

annually. In addition, with other North Slope safety and reliability programs, such as annual turnarounds, BP has spent about \$850 million annually for the past eight years.

In 2008, BP commissioned a new 16-mile oil transit line system. The \$500 million project included rebuilding the main Prudhoe Bay oil delivery system, pigging modules, corrosion inhibitor injection facilities, state-of-the-art leak detection, metering facilities and all the affiliated electrical and emergency systems. This project incorporated the best technology and materials to ensure continued safe operations.



Oil Fields	Prudhoe Bay	Midnight Sun	Aurora
<b>Owners</b>	BP (Operator) ~26% ConocoPhillips ~36% ExxonMobil ~36% Chevron ~1%	BP (Operator) ~26% ConocoPhillips ~36% ExxonMobil ~36% Chevron ~1%	BP (Operator) ~26% ConocoPhillips ~36% ExxonMobil ~36% Chevron ~1%
<b>Field Data</b>			
<b>Participating Field Area</b>	217,827 acres (includes satellite fields)	3,113 acres	10,480 acres
<b>Original Oil in Place</b>	24 billion bbls	0.1 billion bbls	0.2 billion bbls
<b>Original Gas in Place</b>	40 tcf		
<b>Cumulative Oil Production</b>	<b>Gross Field</b>	<b>Gross Field</b>	<b>Gross Field</b>
<b>Production (12/31/12)</b> (barrels of oil equivalent)	12 billion	19 million	35 million
<b>Current Rates (12/31/12)</b>	<b>Gross Field</b>	<b>Gross Field</b>	<b>Gross Field</b>
<b>Oil</b> (thousands barrels/day)	271	1	7
<b>Gas</b> (MMcf/day)	7,036	5	22
<b>Water</b> (thousands bbl/day)	924	12	11
<b>Number of Wells</b>			
<b>Oil Producers</b>	836	2	17
<b>Gas Injection</b>	32	0	0
<b>Water Injection</b>	183	3	10
<b>WAG Injection*</b>	30	0	6

Oil Fields	Orion	Polaris	Borealis
<b>Owners</b>	BP (Operator) ~26% ConocoPhillips ~36% ExxonMobil ~36% Chevron ~1%	BP (Operator) ~26% ConocoPhillips ~36% ExxonMobil ~36% Chevron ~1%	BP (Operator) ~26% ConocoPhillips ~36% ExxonMobil ~36% Chevron ~1%
<b>Field Data</b>			
<b>Participating Field Area</b>	19,842 acres	11,684 acres	16,840 acres
<b>Original Oil in Place</b>	3.2 billion bbls	1 billion bbls	350 million bbls
<b>Cumulative Oil Production</b>	<b>Gross Field</b>	<b>Gross Field</b>	<b>Gross Field</b>
<b>Production (12/31/12)</b> (millions of barrels of oil equivalent)	27	15	69
<b>Current Rates (12/31/12)</b>	<b>Gross Field</b>	<b>Gross Field</b>	<b>Gross Field</b>
<b>Oil</b> (thousands barrels/day)	6	5	10
<b>Gas</b> (MMcf/day)	5	4	24
<b>Water</b> (thousands bbl/day)	4	1	23
<b>Number of Wells</b>			
<b>Oil Producers</b>	12	9	31
<b>Gas Injection</b>	0	0	0
<b>Water Injection</b>	20	15	9
<b>WAG Injection*</b>	11	2	10