

Chart of the Week:
The Arctic National Wildlife Refuge
Crude Oil Potential:
An NPV Assessment

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<u>NET PRESENT VALUE AT FID in 2026</u>		
		in Billion\$ Crude Oil
Gross		\$214.92
Costs		\$83.47
Net before Royalties/Taxes		\$131.44
Alaska State Royalties/Taxes	9.75%	\$12.82
Federal Royalties/Taxes	33.00%	\$43.38
Net after Royalties/Taxes		\$75.25



ASSUMPTIONS				Source:
Economically recoverable Reserves	High Price	Low Price	Mean	
Crude Oil (Billion Barrels)	15.2	5.9	10.4	USGS/EIA
Production period estimate - 20 years; 4 years to peak, 4 years to end-of-life, 12 years of peak				
Crude oil	2031-2050			USGS/EIA
Peak Production				
Crude Oil	1	BB/d		EPRINC
Development time to First Production (years)				
Crude oil	4			USGS/EIA
Price Estimates at port/hub				
Crude Oil	\$45.00 at Valdez Alaska			EPRINC
Costs				
Crude Oil (Capital - first four years)	\$30.00 billion over 4 years			CRS
Crude Oil (Operating - duration of project)	\$7.50 per bbl			EPRINC
Crude Oil (Freight to Valdez)	\$5.00 per bbl			USGS
Take-away capacity:				
Crude Oil	2 BBd of Trans-Alaska Pipeline System (TAPS) of which 1 to 1.5 will be available			
Discount Rate	10.0%			

Arctic National Wildlife National Refuge Key Points



- The northern coast of Alaska holds some of the largest crude oil reserves in the United States. So far, only a very small portion of the region, Prudhoe Bay consisting of approximately 215 thousand acres, has been developed, producing over 16 billion barrels of crude oil since 1980.
- ANWR (the Arctic National Wildlife Refuge), an adjacent area of almost 2 million acres, was identified as important to wildlife and received its first protections from the 1918 Migratory Bird Treaty Act.
- Beginning with the crude oil shortages in the 1970s, crude oil development within ANWR has been actively debated.
- Any potential scope of crude oil production is limited to a 2,000 acre plot located within Area 1002, an almost 2 million acre subsection of ANWR.
- Estimated total economically recoverable crude oil are estimated to range from 5.9 to 15.2 billion barrels, with the mean being 10.4.
- With a production interval of 20 years and a peak plateau of 12, EPRINC estimates that total production would be 6.2 billion barrels with the NPV (net present value) of this 2,000 acre development being \$131 billion in 2026, the earliest when an FID (final investment decision) would be made.
- Of the \$131 billion, there would be a \$43 billion NPV directed to Federal Royalties/Taxes, and \$12.9 to Alaska State Royalties/Taxes.
- With legislation passed in December 2017, ANWR's 2,000 acre tract became available for leasing and development.
- On June 1, 2020 Biden administration announced today that it will suspend leases to drill for oil and natural gas in the Arctic National Wildlife Refuge that were sold in the final days of the Trump administration.
- The expanded version of this slide deck is available at: <https://eprinc.org/chart-of-the-week/>
- For more information on this chart, please contact Will Pack, willp@eprinc.org