The Energy Resources Section
Alaska Division of Geological & Geophysical Surveys

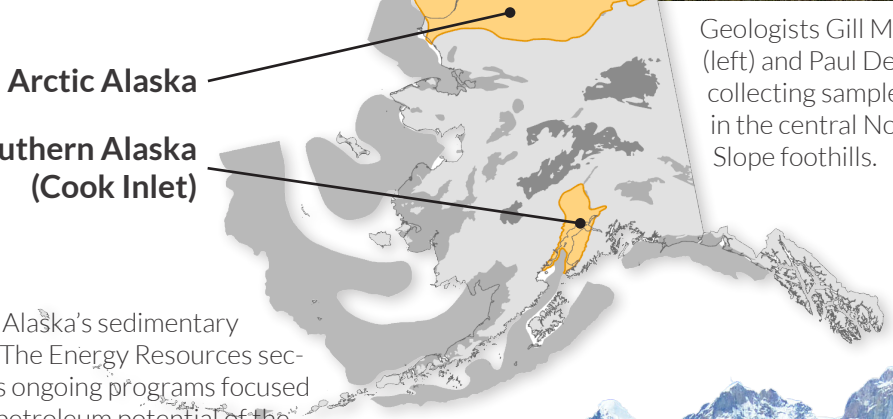
The Division of Geological & Geophysical Surveys' (DGGS) Energy Resources section acquires and publishes new, relevant, and unbiased information on the geologic framework of frontier sedimentary basins in Alaska that may host undiscovered oil, gas, and coal resources. This work promotes exploration and production success.

The section's role is critically important as most oil companies have downsized their exploration departments and reduced or eliminated their applied geology research laboratories.

Alaska hosts **enormous quantities of undiscovered hydrocarbon** resources and **nearly half of the nation's coal deposits.**

Data produced by the Energy Resources section helps industry find and produce these resources and assists policymakers in crafting effective land use decisions.

Geologists Gill Mull (left) and Paul Decker collecting samples in the central North Slope foothills.



Map of Alaska's sedimentary basins. The Energy Resources section has ongoing programs focused on the petroleum potential of the Arctic Alaska and Cook Inlet basins and in several prospective interior basins (shown in dark gray).

Direct Benefit

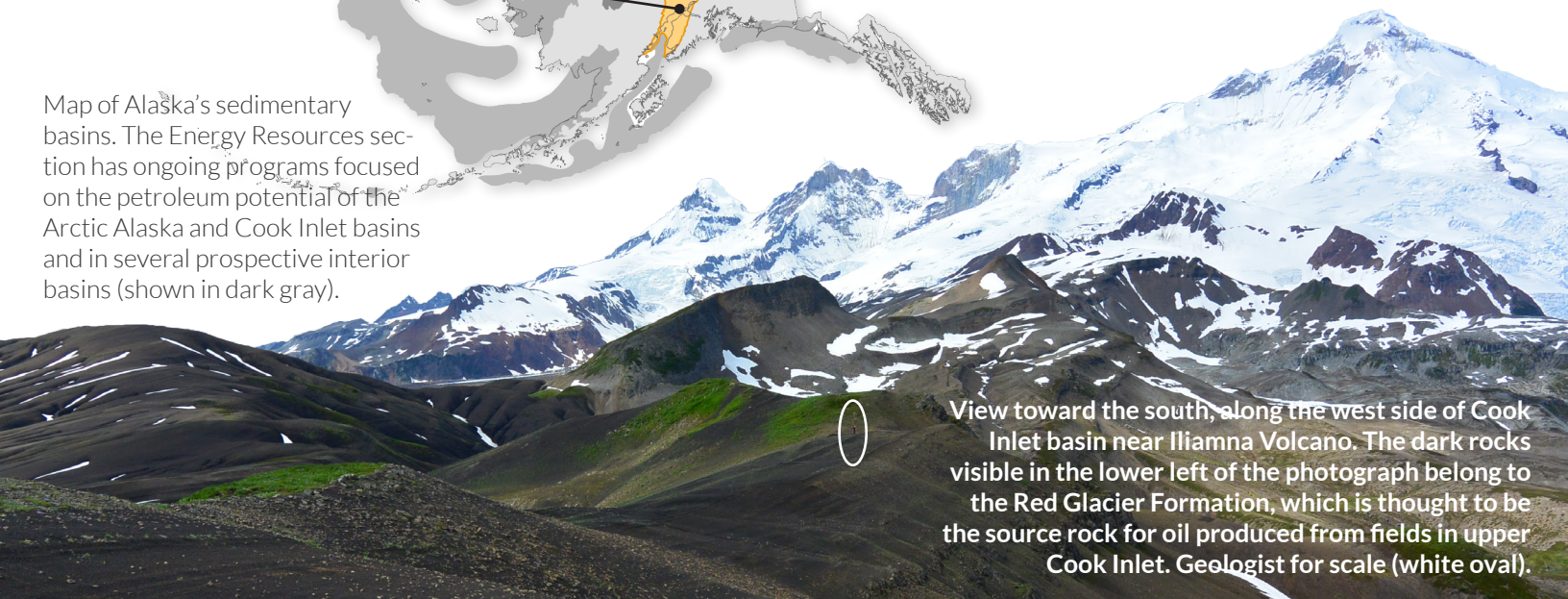
Energy Resources section staff lend their expertise to industry

Field Trips

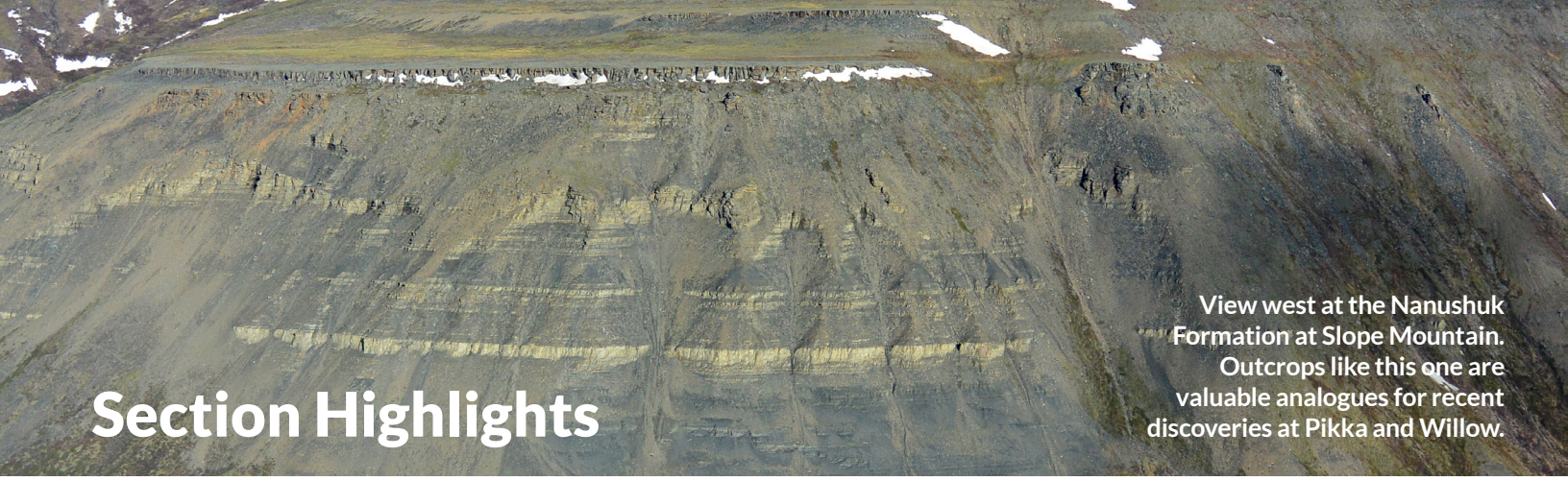
Section geologists lead field trips for petroleum industry groups focusing on petroleum source and reservoir rocks.

Core Workshops

The section leads core workshops focusing on the petroleum potential of the North Slope.

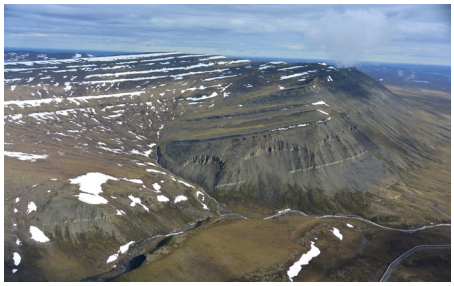


View toward the south, along the west side of Cook Inlet basin near Iliamna Volcano. The dark rocks visible in the lower left of the photograph belong to the Red Glacier Formation, which is thought to be the source rock for oil produced from fields in upper Cook Inlet. Geologist for scale (white oval).



View west at the Nanushuk Formation at Slope Mountain. Outcrops like this one are valuable analogues for recent discoveries at Pikka and Willow.

Section Highlights

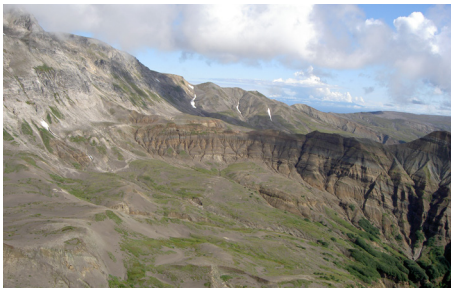


North Slope Field Work

Ongoing work on the North Slope has **improved understanding of the petroleum potential** of several Brookian Formations, including the Nanushuk and Seabee Formation which form the main reservoirs at Pikka and Tarn, respectively.

Umiat-Gubik

Recent work in the Umiat-Gubik area has led to **better understanding of the complexity of the structural trap at Umiat oil field.**



Upper Cook Inlet Field Work

Recent work in Cook Inlet has **advanced our understanding of the basin's hydrocarbon potential** and how petroleum trapping structures formed in upper Cook Inlet fields.

Lower Cook Inlet Discovery

Recent work in lower Cook Inlet basin resulted in the **discovery of an exhumed oil field**, demonstrating conventional reservoir potential in Mesozoic age strata (160 million years old).

Response to Energy Costs

In response to high energy costs in rural Alaska, the Energy Resources section **summarized existing information on locally available, geologically hosted sources of energy** across the state and published findings in Special Report 66.

Publications

Energy Resources section reports are **helping explorationists unravel complex geological relations** on the North Slope and in Cook Inlet basin and are available for free from the DGGS website: dggs.alaska.gov

Learn more online: dggs.alaska.gov or contact
David LePain: david.lepain@alaska.gov | 907-451-5085
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