



Invest in increased petroleum recovery



This funding supports a partnership to procure polymers the industry has access to in ways the university doesn't, in order to conduct research critical to the industry in Alaska.

ARPA Investment: Oil & Gas Recovery \$5.0 M

The oil and gas industries are critical to Alaska's economy. UA is collaborating with industry partners to research new and more efficient methods of extraction. Our industry partners have access to processes and materials, such as the polymers in the funding request, that are not readily available to the university.

UA's depth of knowledge from research into extraction and recovery, together with our partner's access to materials, can lead to developing new oil and gas reserves previously too difficult or costly to consider. It's a great example of government, academia and industry collaboration.

Investment Priorities

- This project is intended to develop technology enabling the production of heavy oil in the Ugnu formation, for which no production technique currently exists. A new enhanced oil recovery method, called polymer-alternating solvent (PAS), will enable heavy oil development in the Arctic, a 12-15 billion-barrel target.
- Development of this technology requires lab improvements and increased faculty research capacity. Funding will allow UAF to immediately begin lab work leading to a field demonstration conducted in partnership with Hilcorp within two years.
- Contingent upon the procurement of polymer for field trials in partnership with industry via procurement by industry partners or additional funds to industry partners for procurement (estimated at \$5 million).
- Using polymers to produce heavy oil has environmental benefits. Unlike steam injection, which is used in California's heavy oil reservoirs, polymer injection doesn't require additional energy to heat materials, and it protects the permafrost that is vital to Alaska's ecosystem. And it means more oil can be produced from existing reservoirs without expanding their surface footprint.

Research partnerships between the university and the industry work for a simple reason: They are mutually beneficial. The university gets access, opportunity and funding to conduct its research and in return students work in the field, while industry partners benefit from advanced technologies and expertise.

The state as a whole also benefits, because UA's programs produce a workforce uniquely trained to work in Alaska.