

# CLEAN RESOURCES

ADVANCED HYDROCARBONS

CLEANER HYDROCARBON PRODUCTION – RECOVERY TECHNOLOGIES

## FUNDING DETAILS

### The NAIT Centre for Oil Sands Sustainability

The Centre for Oil Sands Sustainability (COSS) assists industry with the acceleration of new technology for the oil sands sector. This project supports the expansion of technology testing capabilities through the purchase of new, complementary assets and direct operating costs associated with business development, facility administration, proposal development and infrastructure maintenance. Infrastructure and services will assist with technology development gaps identified in collaboration with industry clients. These gaps are: tailings treatment technologies, industrial process water treatment, hot water extraction of bitumen, and process optimization through measurement and monitoring. Alberta Innovates funding helps COSS serve industry by providing facilities enhancements and support allowing COSS to directly assist companies with technology development.



#### RECIPIENT:

Northern Alberta  
Institute of  
Technology - NAIT



#### PARTNERS:

NSERC, Western  
Economic  
Diversification,  
Ledcor, Suncor,  
COSIA



#### TOTAL BUDGET:

\$3,363,105



#### AI FUNDING:

\$1,655,000



#### PROJECT DATES:

SEP 1, 2018 –  
MAR 31, 2022



#### PROJECT TRL:

Start: 3  
End: 7

## APPLICATION

The target market for the project is primarily the oil sands mining industry and its suppliers. COSS assists industry with the acceleration of new technology for the oil sands sector. We accomplish this by providing technical expertise to oil sands firms and their suppliers through research and training services in key technical areas of interest to the industry. Our areas of expertise are Water Treatment, Mining Extraction and Efficiency, Tailings Technology and Process Optimization Through Measurement.



# ALBERTA INNOVATES CLEAN RESOURCES

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## PROJECT GOALS

The project operates in 4 technical themes: tailings treatment technologies, industrial process water treatment, hot water extraction of bitumen, and process optimization through measurement and monitoring

The key goals of the project are:

- Accelerating oil sands technology development by providing appropriate facilities and test services.
- Train and nurture HQSP in the methods and techniques involved in technology development for heavy industries
- Bring technical knowledge and techniques developed by our centre staff to industry practitioners best positioned to implement them

## BENEFITS TO ALBERTA

The project enables the development of new facilities at the new Productivity and Innovation Centre located at NAIT main campus in Edmonton. This facility includes specialized laboratory and teaching facilities to help facilitate technology development, with an emphasis placed on Alberta based companies, including SMEs.

A successful project will result in:

- Reductions of GHG emissions by large emitters such as oil sands mining operations.
- Improvements in efficiency of key industrial processes, reducing energy demand and lowering costs
- Increased partnerships between Alberta based and international experts on solving global challenges associated with oil and gas recovery.
- Facilitated sharing of key knowledge on oil sands extraction processes.



15 Publications



241 Students  
Trained



5 Project Jobs



240 Future Jobs

## CURRENT STATUS

### OCT 2020

The project is currently on pace to meet or exceed most of our key performance indicators and is developing new business lines to supplement our capacity. In Milestone 2, the Centre partnered with 4 SMEs, continued our partnership with Suncor, Imperial Oil, BASF and Syncrude, and performed technology development and consulting work with 6 technology types. Although not quite as advanced as the last Milestone, the Centre is on track to meeting targets for Milestones 3 and 4.