



## CASE STUDY:

# HDD Fluid Recycling

Eliminating sumps with onsite fluid processing



### Project Description

In the summer of 2022, Apex was approached by a trenchless contractor doing a DPI installation under a creek in a remote part of northern British Columbia.

The contractor had witnessed Apex equipment producing shale bins full of bone-dry cuttings at a previous microtunneling project in Calgary in 2021 and was looking for the same results for their upcoming project.

The contractor was looking to Apex for a drilling fluid processing system that would eliminate a sump and vacuum truck usage resulting in saved money and a reduced carbon footprint.

### Apex eliminates sumps and vac truck usage with onsite drilling fluid recycling system.

#### The Challenge

A trenchless contractor was looking to eliminate the need for a sump and reduce vacuum truck costs by implementing Apex's drilling fluid recycling system on a DPI Crossing. The crossing was in a remote part of northern British Columbia with the closest drilling fluid disposal site located more than 5 hours away.

Due to the remoteness of the site and the pipeline owners desire to limit environmental impact, the operator wanted a full closed-loop drilling fluid recycling system.

The initial Geotech reports showed a very high sand content over the length of the crossing, so the operator stressed the importance of the recycled drilling fluid maintaining proper viscosity and a sand content below 2%. Equally important was maintaining the driest cuttings possible to reduce mix-off material and enable transport in end-dump trucks for land spreading on the pipeline right of way.

SPEAK WITH AN EXPERT TO FIND OUT MORE:

1.877.347.1628 | [apexsiterentals.com](https://www.apexsiterentals.com)



INNOVATION | ENVIRONMENT | SAFETY | SERVICE



## The Solution

Apex supplied two Mud Cubes™ for maximized sand removal and two Lynx 40 centrifuges to remove all fine particles from the drilling fluid. The equipment package also included polymer injection tankage and all required pumps.

Two Apex operators remained on location to ensure the system was optimized for the ever-changing geology and slurry coming back from the cutter head.

## The Results

Apex delivered the results the operator was looking for by meeting the following KPI's:

- Sumpluss operation for the duration of the drill
- No vacuum truck usage required during the project
- Drilling fluid sand content maintained below 2%
- Dry cuttings transported in end dump trucks
- All cuttings spread on pipeline right-of way
- Total volume of dry cuttings disposed = 1,018 m<sup>3</sup>
- Reduction of fluid on cuttings >97%
- All drilling fluid recycled on site with nothing hauled off location for processing
- Final drilling fluid was stripped down to clear water before being transported offsite for disposal

