

## Case Study

# Dewatering Solutions for Oil Sands

### Application:

Tailings Dewatering

### Slurry:

Mature Fine Tailings (MFT)

### Flow rate:

6,000 gpm (1,363m<sup>3</sup>/hr)

### Head:

100 ft (30m)

### Pump:

Multiflo MD14

### Pump materials:

Hi-chrome iron

### Drive:

550HP Diesel Engine

### Features:

Pontoon mounted with skid

Warman MD 14 Heavy duty  
slurry Pump

Automatic Priming



1. Pump and Engine assembly ready for mounting on pontoon
2. Assembled unit on site

### The rugged and engineered-to-order designs of Multiflo pumps are ideal for Canadian oil sands.

The Athabasca Oil Sands located in northern Alberta Canada contains the largest deposits of bitumen, (heavy crude oil), in the world. An estimated 1.7 trillion barrels of oil, which is comparable to the world's total proven reserves of conventional petroleum, is contained in these deposits which consist of a mixture of crude bitumen (a semi-solid form of crude oil), silica sand, clay minerals, and water. Approximately 10% of these deposits, or about 170 billion barrels are currently considered to be economically recoverable at today's prices making Canada's total oil reserves the second largest in the world, after Saudi Arabia. This reserve has spawned numerous large scale operations to recover and refine this oil.

When one of the largest producers in the Alberta Oil Sands, required a better solution for pumps that could handle Mature Fine Tailing (MFT) and tailings dewatering, they turned to Weir Minerals for a solution.

The operators were using dredges to pump the MFT; however the cost to own and operate the dredges was prohibitive therefore a more economical method to pump the MFT was needed. With a proven history in mine dewatering and other severe applications, Weir Minerals was able to come up with a viable and cost effective method for their problem that was rugged enough to handle the service.



A Multiflo barge unit was selected due to features such as:

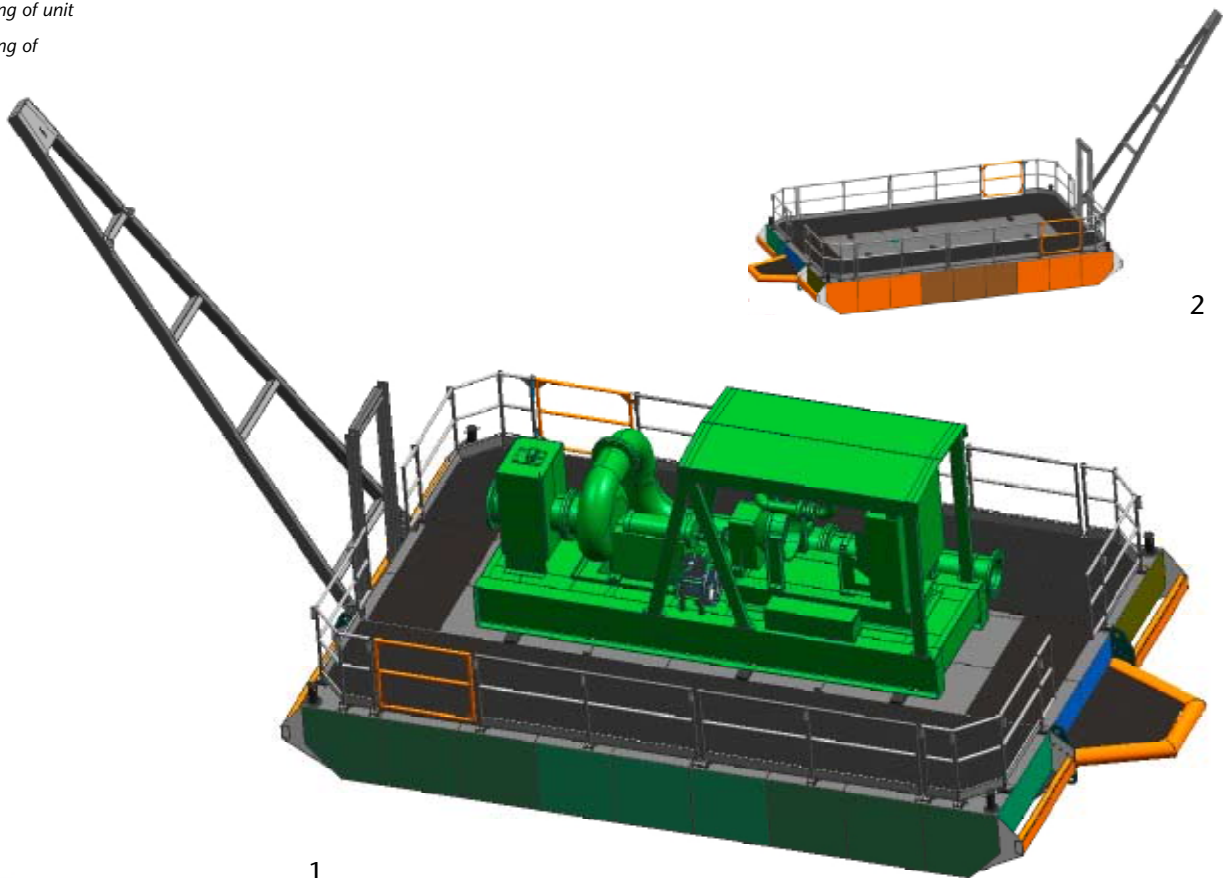
- Heavy duty mining construction
- The unit outfitted with a Warman 14MD heavy duty dredge pump.
- Automatic priming with run dry and snore capability
- The pontoon was designed so that it could be "skidded" around the mine site without the use of cranes.
- The unit could be used in other locations for dewatering
- The unit could be customized to meet their specific needs of the client
- Economy and delivery of Multiflo unit versus a dredge unit

Weir Minerals has been a leading supplier of pumps to the oil sands industry for many years, providing standard and "engineered to order" pumping solutions for even the

toughest services. Weir Minerals Multiflo has been manufacturing our mine dewatering pump range in Australia for over 30 years and has a large number of units in the Australian and Asian mining industry. The Multiflo product range was recently introduced to the North American market and is being manufactured locally by Weir Minerals Hazleton in Pennsylvania. The Multiflo product has already found success in the oil sands industry with multiple units being supplied to date including MF120 and MF160 diesel driven trailer mounted units, and most recently seven 600hp diesel driven barge units to be fitted with a Hazleton 16-26CBC heavy duty slurry pumps for tailings dewatering

Weir Minerals offers a full range of mining duty trailer, skid or barge mounted, electric or diesel driven Multiflo pump units that can be adapted to accept any of Weir Minerals' pumps and is fully customizable to meet the customer specific needs.

1. CAD rendering of unit
2. CAD rendering of pontoon



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