

Hydraulic fluids help meet environmental concerns

MAINTAINING OPERATIONAL performance while using products that protect the environment can be a challenge, however, sometimes switching to an environmentally friendly product can improve performance.

That's what happened to **Bertram Drilling Corp** when they switched to environmentally friendly hydraulic fluid for their drilling equipment.

Bertram Drilling is one of the largest privately owned seismic drilling companies in Canada. Based in Carbon, Alberta, they have been drilling since 1962 and have worked in environmentally sensitive areas stretching from remote Arctic islands to the Rocky Mountains in Montana to the tropical forests of Trinidad.

Bertram operates over 50 drill and compressor assemblies including helicopterable, low impact and conventional drills. Many of the assemblies have been fabricated, upgraded or modified by Bertram.

The equipment is used for drilling holes ranging in depth from 20 to 200 ft (6-61 metres) into almost any type of material including rock, limestone and sandstone, and through sand, earth and water. They drill in all weather conditions year round and in temperatures ranging from over 30°C (86°F) to as low as -45°C (-49°F).

A common occurrence when working in these conditions is blown hydraulic hoses. The resulting fluid spills need to be cleaned up, adding to maintenance time and costs.

Bertram had been using a leading brand name supplier for its hydraulic fluid but decided to look at what environmentally friendly products were available.

"We go into areas that are environmentally sensitive, so if there is a spill, if a hose blows and the oil sprays out, we have to clean it up," says **Lester Stanvick**, a supervisor of 33 years with Bertram Drilling.

"We have all the equipment to clean it up but if we're using an environmentally friendly product, then we know that it will have minimal impact on the environment."



ENVIRON M, according to Petro-Canada, is non-toxic, inherently biodegradable, recyclable and is virtually free of heavy metals such as barium or zinc, making it well suited for applications in environmentally sensitive locations. In switching to the fluid, Bertram Drilling discovered an additional benefit: the fluid addressed heat problems the company was having with their equipment.

After meeting with its lubricant distributor, Bertram decided to switch to Petro-Canada's ENVIRON MV hydraulic fluid. The fluid, according to Petro-Canada, is non-toxic, inherently biodegradable, recyclable and virtually free of heavy metals such as barium or zinc, making it well suited for applications in environmentally sensitive locations.

In making the switch, Bertram discovered an additional benefit: the fluid addressed heat problems they were having with their equipment.

"On the portable drills, we had a lot of problems with heat," Mr Stanvick said.

"But with ENVIRON, we had a good temperature change difference. It came down a few degrees."

ENVIRON hydraulic fluids are designed for year-round use in mobile and stationary heavy-duty hydraulic systems operating in wide temperatures, Petro-Canada says.

Their superior oxidization and thermal stability extends time between oil changes and minimizes sludge and var-

nish deposits that can cause premature wear.

"We have less heat in the oil," explains Mr Stanvick. "We have a Murphy system on the drills, so if it gets too hot it will shut down, even in the hydraulics. With ENVIRON, we noticed that the temperature dropped some."

"It means that the hydraulics will have a longer life span. We've been running them for about a year now and the heat isn't there anymore."

Petro-Canada says its ENVIRON hydraulic fluid starts with the patented HT purity process used to produce 99.9% pure, crystal-clear base oil.

By removing the impurities that hinder the performance of competitive conventional oils, ENVIRON reportedly retains its fresh oil properties longer.

Petro-Canada then blends in specialty additives for even longer fluid life.

ENVIRON is said to last longer than conventional hydraulic oils and 10 times longer than vegetable base oils as measured by ASTM D943 tests. ■