



CASE STUDY

CUSTOMER

PRECISION DRILLING

LOCATION

CALGARY, AB, CANADA / 2012-2015

EQUIPMENT

TOP DRIVE CLOSED LOOP HYDRAULICS

APPLICATION

CLOSED LOOP HYDRAULIC LINE

ROI



ANNUAL COST
SAVING OF

\$280,000

“The Magnetic Scrubber now allows us to filter in both directions filtering out the particles finer than the 10 micron size that our standard filters are rated for. We have experienced a substantial reduction in pump wear and catastrophic failures since we installed the One Eye Industries Y-Strainers approximately three years ago”

- Maintenance Manager

CHALLENGE

As this is a closed loop system flowing 300 gpm from their pump to the motor and vice versa, Precision Drilling needed a filter that was capable of filtering bi-directionally. The conventional filters in place between the pump and motor was unable to protect against particulate under 10 microns. The tolerances of the pump and motor components are < 4 microns. Further, they required filtration for the fluid before the pump to protect against contamination produced by the motor.

High pressure filters require increased horsepower to maintain flow rate, this puts increased pressure on the pump. The Parker P14/P16 pumps cost \$35,000 per set, and the maintenance team was changing them out every 2-3 months because of wear contamination.



SOLUTION

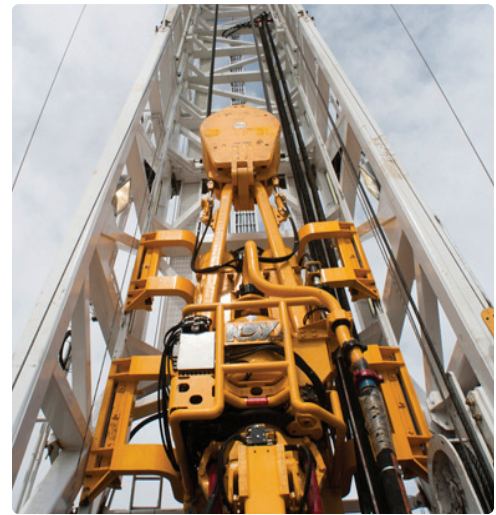
Precision Drilling tested and now employs OEI filtration systems as the standard on much of their equipment. Precision determined that an OEI high-pressure magnetic filter scrubber would protect the pump from all sizes of contamination produced by the motor. These magnetic filters are the only full-flow filters capable of removing contamination below three microns to sub-micron in size. They would also be used as a predictive maintenance tool, checked both before and during the deployment of any new rig.



RESULTS

Unlike traditional filtration these filters act as predictive maintenance tools, they identify component failure due to premature wear before the failure occurs. To reduce maintenance costs, checking the amount of contamination trapped on the magnetic filter elements during commissioning and before leaving for site, allows for damaged components to be fixed prior to leaving the rigup yard.

Precision is now changing out these pumps every 2-3 years, equating to a minimum \$280,000 savings plus downtime costs on each unit. This will also reduce production loss penalties that may be assigned onsite



Precision Drilling has installed two of these high pressure magnetic filter scrubbers on 28 of their first generation Super Single Top Drive rigs. Precision is also using various other OEI magnetic filters on their Super Single rigs in the return filter housings of their open loop hydraulics.



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