



## CASE STUDY

### CUSTOMER

**STEP ENERGY OIL SERVICES**

### LOCATION

**BLACKFALDS, AB CANADA / 2012-2014**

### EQUIPMENT

**STEP ENERGY SERVICES N2 PUMPER, TWIN PUMPER, COIL TUBE UNIT, AND BULKER TRACTOR FLEET**

### APPLICATION

**OIL, GLYCOL, FUEL AND HYDRAULIC FLUID**

### PROVEN RESULTS



**INCREASED LEVEL OF EQUIPMENT RELIABILITY**

### CHALLENGE

Contaminated oil, glycol, fuel and hydraulic fluid causes premature component wear resulting in downtime and premature failure if not properly filtered. Traditional depth media filtration is unable to filter contamination efficiently under 5 microns in size. Tolerances on hydraulic components and bearings are below three microns to sub-micron in size. Contamination left in the system will cause premature wear of the components and reduce the oil or fluid life. Another advantage magnetic filtration offers is on cold start ups traditional filtration are in bypass thereby your system has no protection. OEI magnetic filtration has minimal flow restriction and will filter the fluid or oil to sub-micron levels on cold start up thereby protection the equipment integrity.

### SOLUTION

Dale Constantine, Maintenance Manager for STEP Energy tested and now employs OEI filtration systems as the standard for all their equipment.

- on the Twin Pumpers the ADD-Vantage 9000 is employed on the Quintuplex pump,
- on the Coil Tube Unit a hydraulic suction manifold scrubber,
- on all equipment y-strainers are incorporated into the wet kit, coolant, lube oil circuit and other areas dependent on the machinery.



PHOTO B

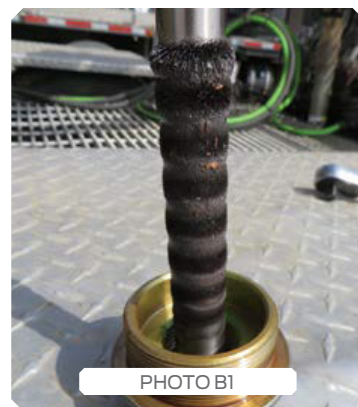


PHOTO B1



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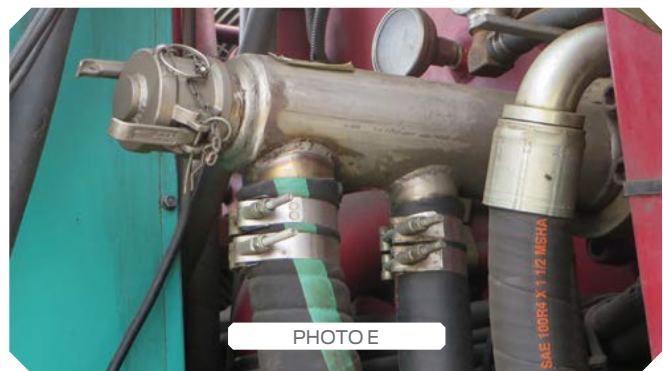


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## RESULTS

Photos B-E show a large amount of contamination from 100+ microns to sub-micron trapped by the magnetic filters, protecting the equipment from premature wear and failure. OEI magnetic filtration technology never goes into bypass as even when traditional filter elements are unable to filter the oil it still passes the magnetic filter, never losing filtration efficiency.

- Photos B and D highlight OEI magnetic filters' ability to remove non-ferrous as well as ferrous contamination, in these images the filters trapped copper (Photo B) and Namco silicon rubber flakes (blue (Photo D)).
- "The amount of contamination found in the Twin Pumps oil circuit (Photo C) would have clogged off between 15 and 20 traditional filters and caused components failure", stated Dale Constantine.
- Photo E shows the contamination removed from the hydraulic suction manifold after the traditional 5 micron filter (1 year service interval).



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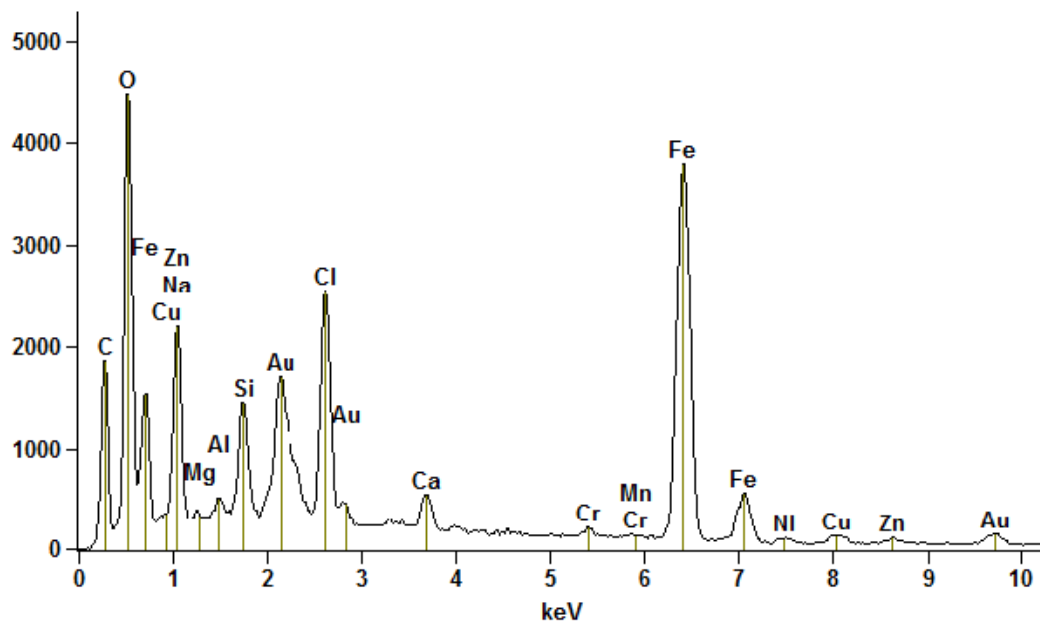


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## SUCTION MANIFOLD CONTAMINATION ANALYSIS

Full scale counts: 4473

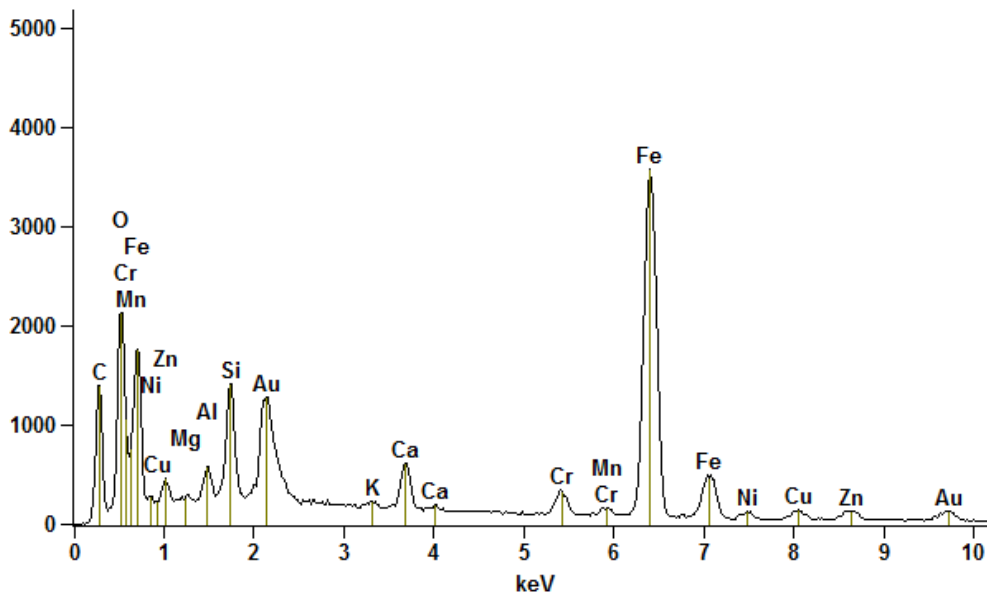
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## LUBE OIL CONTAMINATION ANALYSIS

Full scale counts: 3576

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