

Canadian Natural Resources Limited Utilizes Emerson SMART Meter Verification to Satisfy Government Regulations

RESULTS

- Saves \$532,425 per year in labor savings
- Eliminates process interruption mandated by Alberta's Directive 17



SMART Meter Verification allows CNRL to satisfy the requirements to meet Alberta's Directive 17 without physically removing the meters from the line.

APPLICATION

Applying SMART™ Meter Verification (SMV) to satisfy the regulatory compliance requirements of upstream production flowmeters including reservoir polymer injection and produced water flow meters.

CUSTOMER

CNRL - Canadian Natural Resources Limited

CHALLENGE

Currently the Provincial Alberta Energy Regulator requires CNRL to physically pull and inspect meters manually every year to meet Directive 17 compliance on regulated flows. The customer is required to manually take coil and electrode readings to verify the health of the meter as well as pull the meter and inspect the liner and electrode condition to ensure the integrity of the flowmeter measurements. Physically removing and inspecting meters every year is a time consuming and costly process that can require process shutdowns and lost production. Further, the removal and re-installation of functioning meters can result in damage or errors which can actually degrade performance.

CNRL has similar requirements on the balance of the 775 flowmeters and did not have an effective method to gauge meter health as part of their predictive maintenance program. This resulted in unscheduled shutdowns when maintenance was required.



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SOLUTION

The Alberta Energy Regulator accepts SMV in lieu of physically removing and inspecting flowmeters to satisfy Directive 17. In addition, SMV will predict when a magnetic flowmeter is nearing the end of its life allowing CNRL to plan replacement of a failing meter during scheduled downtimes eliminating impacts to production.

CNRL is installing SMV on existing meters in the field saving \$687.00 dollars per meter per year in labor savings. This saving is realized by not having to remove a magnetic flowmeter from the line to satisfy Directive 17. This is multiplied by ~775 magnetic flowmeters for a total savings of \$532,425 per year.

RESOURCES

Emerson Process Management Oil and Gas Industry

<http://www2.emersonprocess.com/en-US/industries/oil-gas/Pages/OilandGas.aspx>

Rosemount Magnetic Flowmeters

<http://www2.emersonprocess.com/en-us/brands/rosemount/flow/magnetic-flowmeters/pages/index.aspx>



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