

CASE:

**Producer Optimizes Compression
Fleet Performance, Saves \$2M/yr
while Increasing Production by
\$15M/yr**

CASE STUDY

Canada's Largest Natural Gas Producer Optimizes their Compression Fleet Performance, Reducing Costs by over \$2M per year while increasing production by \$15M

Background:

Canada's largest natural gas producer operates one of the largest compression fleets in the industry, comprising approximately 1,200 units with an aggregate of over 1,100,000 horsepower. The company's key operational priorities include:

- Ensuring safe operation of large equipment to avoid harm and incidents.
- Optimizing production to increase recovery rates and throughput.
- Managing operational expenses (OpEx) and turnaround capital expenditures (TA CapEx).
- Reducing energy waste and emissions.
- Meeting regulatory requirements for emission monitoring and reporting.

The Mission:

Managing such an extensive fleet comes with inherent complexities and challenges, such as:

1. Maintaining visibility across a large and geographically distributed fleet.
2. Achieving consistent operational optimization across diverse equipment types and conditions.
3. Balancing production goals with cost efficiency and environmental stewardship.

The Solution:

To address these challenges, the producer partnered with [Detection Technologies](#) to implement their Analysis platform. The platform provides advanced monitoring and optimization capabilities tailored to the unique demands of compression fleets.

Key results through fleetwide implementation of the solution included:

- **Production Optimization:** Analysis enabled a 1% production improvement, translating to an increase of approximately 600,000 m³/day (21.2 MMcf/d), resulting in an additional \$15M/year
- **Cost Management:** A 1% improvement in operational and TA CapEx reduced costs by approximately \$2.1 million annually.
- **Energy Efficiency:** Optimization efforts achieved a 1% reduction in energy waste, resulting in an annual savings of approximately \$60,000 in fuel and greenhouse gas (GHG) emissions.
- **Regulatory Compliance:** Enhanced monitoring and reporting capabilities ensured adherence to federal emission regulations.
- **Fleet Management:** Improved inventory management supported maintenance planning and surplus identification.

The Impact:

The company experienced substantial benefits following the deployment of the Enalysis platform:

1. **Increased Production:** Optimized compression led to lower suction pressures improving overall well deliverability, enhancing production rates and reserve recovery.
2. **Operational Efficiency:** Routine compressor optimization reduced power consumption while maintaining production volumes. This continual optimization resulted in peak efficiency when analyzing power consumption by produced volume.
3. **Improved Reliability:** Predictive analytics helped prevent unplanned downtime by identifying failures before they happened, increasing fleet availability and reducing maintenance burdens.
4. **Environmental Gains:** Waste reduction efforts decreased power and fuel consumption, resulting in lower GHG emissions and energy costs. Furthermore, excess fuel gas was rerouted to sales, contributing to revenue.

The adoption of Detection Technologies' Enalysis platform exemplifies the power of digital transformation in the oil and gas sector. By leveraging advanced analytics and optimization tools, Canada's largest natural gas producer achieved significant production gains, cost efficiencies, and environmental improvements while ensuring compliance and safety across its fleet.

About Detection:

Detection Technologies is a leader in optimizing remote assets for the Oil and gas industry. Our purpose-built solution delivers asset performance management to help you increase production, reduce risk, improve sustainability and reduce operating expenses. Our cloud-based, asset-specific solutions, are built on digital twins and leverage data analytics to provide a complete IIoT solution with autonomous edge capabilities. Over 100 organizations have trusted Detection to help them reduce their operating expenses, make more informed decisions, better manage field activities and reduce risk all while maintaining compliance.