

DETECHTION
t e c h n o l o g i e s

Powerful Compressor Optimization Tools.



DETECHTION
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www.detection.com

**Increasing production
and lowering
operating costs
through effective
compressor utilization**

May 11, 2012

Detection Technologies - Introduction

● Experience



- Formed in 1998, Detection Technologies has grown to become the largest provider of engineering consulting and fleet management tools tailored specifically for the natural gas compression market
- Over 6,000 compressors worldwide are currently managed by Detection Technologies
- Corporate head office located in Calgary, AB. Branch offices are located in Houston, TX; Pittsburg, PA; and Brisbane, AUS

● Commitment



- Our customer-centric business model puts our clients' needs first through:
 - Engineering services & consulting
 - Enalysis web-based monitoring & fleet management tools
 - Ongoing return on investment through fleet management & optimization



Detection Technologies - Introduction

- **Engineering Services**

- Detection employs a staff of highly trained engineers to support all of our clients' compression needs. Our services include:



- Proactive identification of optimization opportunities through constant review of client Analysis reports
- Horsepower utilization studies for field & gathering system optimization
- On-going training and field support
- Consulting services on new compressor packages
- Compressor loading curves
- Interfacing with 3rd party vendors to spec valves and other maintenance equipment
- 24/7 phone and email support



Visibility into your compressors with Enalysis

- **Fleet Management**

- Producers who realize the largest ROI & cost savings use our tools & our team for management of their entire compressor fleet. Some of the available fleet management reports available are:

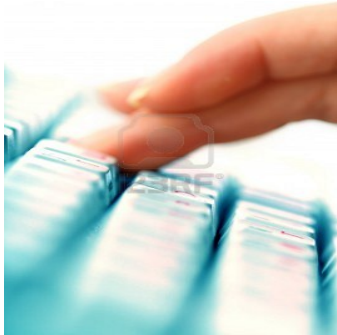


- Fuel Gas Consumption Summary (approved by the ERCB)
- Emissions Report (approved by the ERCB)
- Emission Factors
- Electricity Consumption Summary
- Maintenance Downtime
- Mean Time Between Failure
- Cash Flow at Risk
- Asset Utilization Summary
- Fleet Performance Snapshot



Visibility into your compressors with Enalysis

- **Data Entry**



- Enalysis is a flexible tool, allowing for sophisticated SCADA integration, or manual input through our website
- Data is collected once per week by operators or multiple times per day through SCADA
- Data collection is a simple process as the measurements needed are:
 - Suction & discharge pressures for each stage
 - Suction & discharge temperature (surface) for each throw
 - Pocket position
 - Station inlet pressure
 - Driver information:
 - Boost
 - RPM
 - Stoich



Visibility into your compressors with Enalysis

- **Enalysis Operator Reports**

- Enalysis was developed to provide a simple to use web based tool for operators to diagnose compressor issues, perform preventative maintenance, and fully optimize their gas compressors.



Using basic compressor data, the operator Enalysis report will identify:

- Rod Loading
- Blowby
- Potential hydrate formation within coolers
- Driver Loading
- Improper setup for operating conditions
- Instrumentation maintenance
- Overall mechanical efficiency



Adding Value through Gas Compressor Optimization

- **Optimization Opportunities**

- By analyzing the data collected by operators & Enalysis reports, your engineer will help make recommendations to optimize compressors in your fleet through:



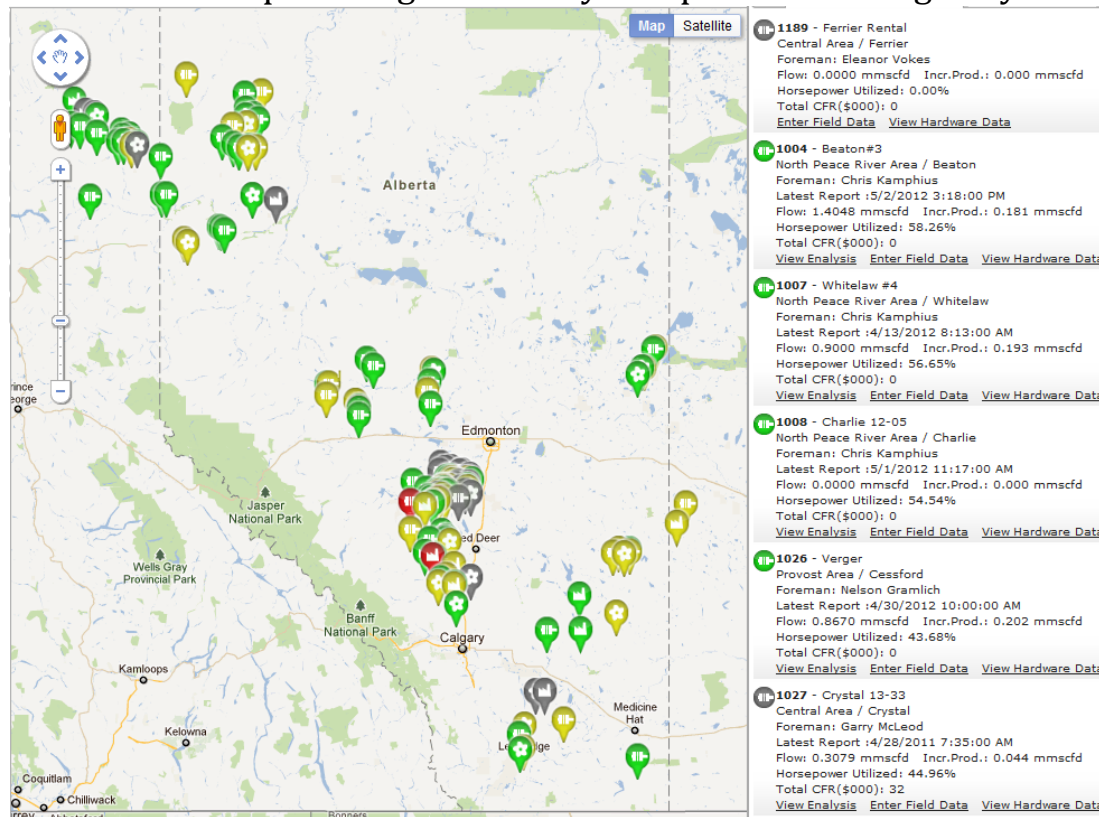
- Predictive / preventative maintenance & failure avoidance
- Fuel gas savings
- Horsepower consolidation
- Throughput gains
- Regulatory compliance



Client Example – Bonavista Energy Database & Fleet Visibility

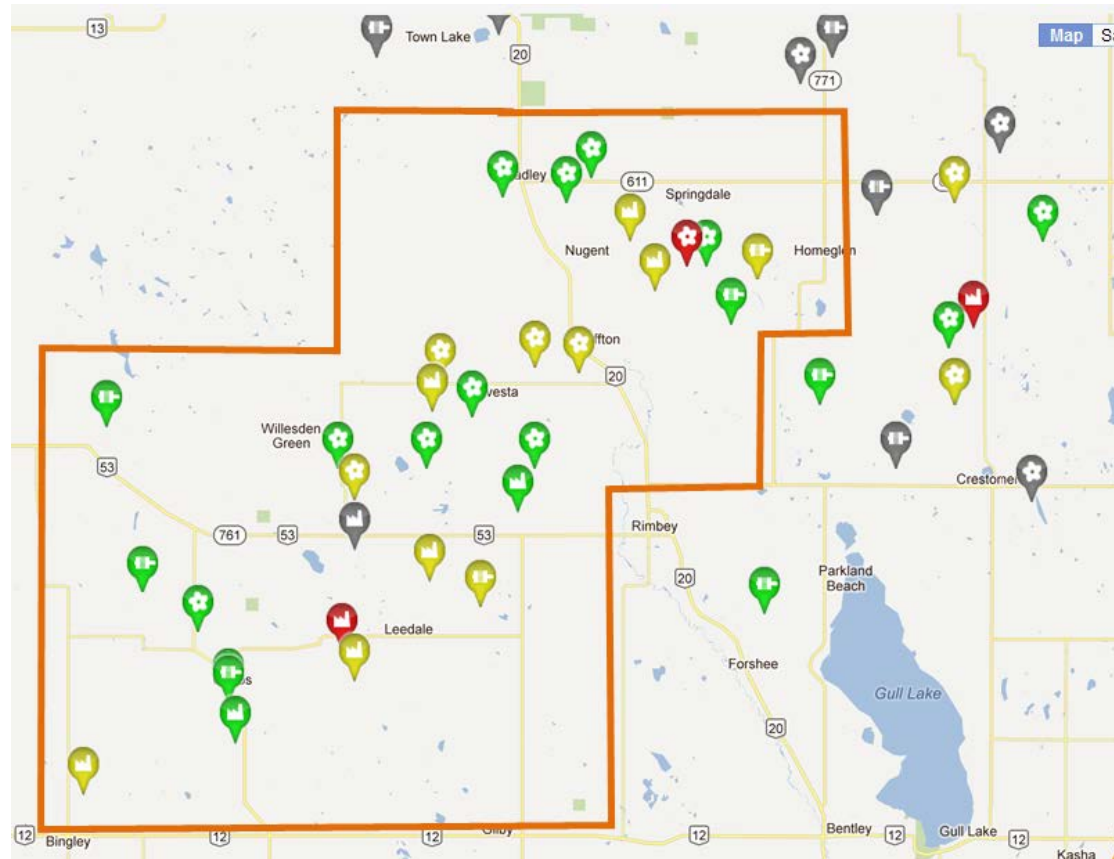
Scott Hanson Vice President, Production Bonavista Energy

- 300 Reciprocating and Rotary Compressors managed by Detection:



Field & Gathering System Management Fleet Visibility & Real-Time Conditions

- By having visibility into our entire compressor fleet, we have the ability to optimize multiple sites as well as field compression
- The map shows 42 compressors that are all tied together in one way or another
- Depending on when & where volumes come on, the ability to respond quickly to condition changes is vital

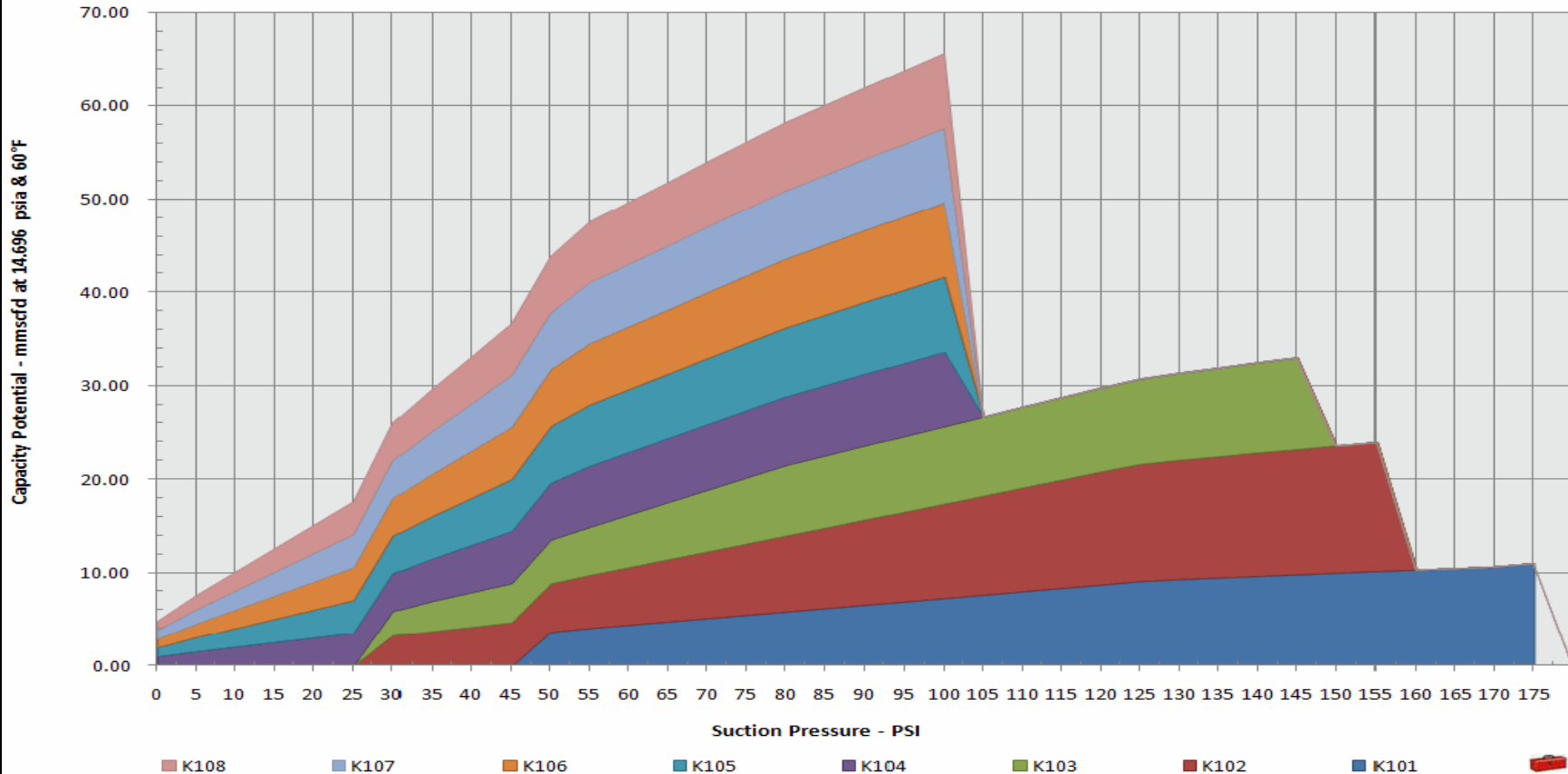


Field & Gathering System Management Stacked Capacity Curve

BONAVISTA
ENERGY TRUST

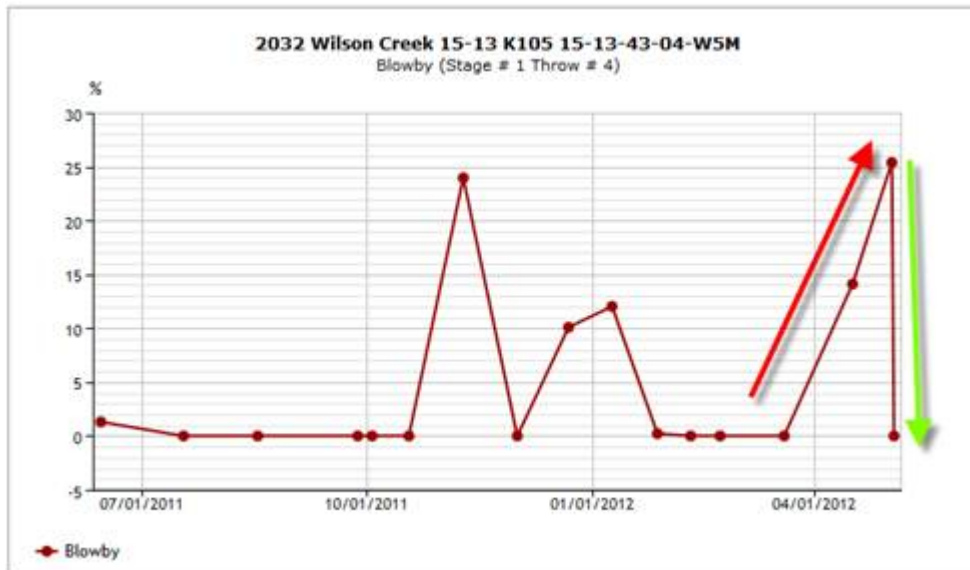
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Total Potential Capacity of Wilson Creek 15-13 Plant Based on 1000 psig discharge



Predictive Maintenance

- Monitor compressors for valve/piston ring damage



- Diagnostic reports highlight when cylinders are generating excess heat
- Repairs can be planned into scheduled maintenance



The Advantage of SCADA Data Collection for Optimizing Compression

- **Real-time running conditions aid in:**



- Compressor moves to different locations
- Expedites compressor optimization once at site
- Downtime avoidance by ensuring compressors are always running at their peak hp / flow
- Identify immediate optimization opportunities and red flag potential issues before they become catastrophic



The Advantage of SCADA Data Collection 6 Month Trend

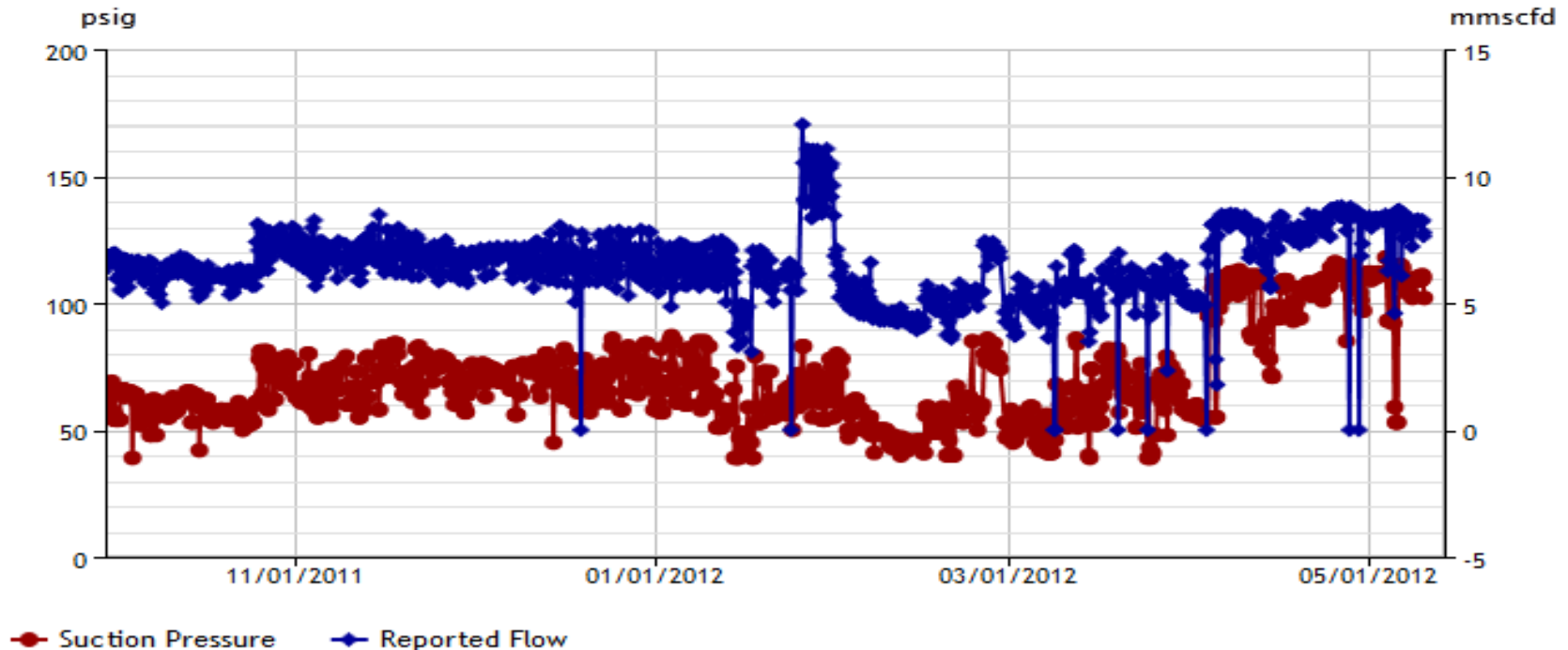
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Graph Date: May 10, 2012

Reset zoom

6000 Portable #1 12-19-57-18-W5M

Suction Pressure (Stage # 1 Throw # 3) vs. Reported Flow



Conclusion – Questions?

Detection Technologies provides fleet management and compressor optimization for over 90 clients with a total of 6,000 compressors worldwide. Our clients have realized true cost savings of hundreds of millions of dollars by integrating Analysis into their organizations and engaging our engineers to truly be part of their team.

CORPORATE HEAD OFFICE

277, 1100 8 Ave SW
Calgary, AB T2P 3T8
Tel: 800-780-9798
www.detection.com

Elias Panasuik

Office: 403.781.7078
Cell: 403.816.8350
epanasuik@detection.com

ABOUT DETECTION TECHNOLOGIES INC.

Detection Technologies provides the energy sector with compressor fleet management tools and optimization services. Our very discriminating client base includes the majority of the producers in the Western Canadian Sedimentary Basin. Our highly specialized staff of Engineers & Business Development professionals continue to exceed the standards of quality in service and return on investment that our clients demand. By constantly staying on the cutting edge of technology and development, Detection Technologies has become one of the most trusted names in natural gas compression.

