PTAC Webinar Sprint
Reducing Methane Emissions from Tanks

March 30th to April 1st, 2020
About NAL Resources Ltd

• Private oil and gas company owned by Manulife Financial, operating in the Western Canadian Sedimentary Basin for 29 years.
• In 2019, NAL produced approximately 39,100 boe per day of conventional oil and natural gas in core areas of central and northwestern Alberta and southeastern and southwestern Saskatchewan.
• As an innovator and industry leader, NAL is focused on growth, efficiency, operational and environmental excellence.
• NAL’s culture of smart risk taking and collaboration encourages investment in innovative technologies.
• NAL is currently investing in a broad range of methane-reduction solutions which support long-term, sustainable energy development that have the potential to benefit the entire industry.
• NAL is heavily involved in PTAC, CAPP and CRIN and has greatly benefitted from a variety of collaborations with industry peers, vendors, academics and other industry associations.
Qualitative Observations*

- Tanks and pneumatics are the largest sources of emissions. Alberta and BC field studies have observed these sources to emit >60% of total methane emissions
  - Pneumatics - solutions for controllers, chem pumps are pervasive and can be supported by carbon offsets where applicable,
  - Tanks - novel and economic solutions are not as pervasive

**WHAT CAN TARGETED, EFFECTIVE COLLABORATION ACHIEVE?**

*Clearstone Alberta Update of Equipment, Component and Fugitive Emission Factors for Alberta Upstream Oil and Gas.*

*Cap-Op Energy British Columbia Oil & Gas Methane Emissions Field Study*
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Challenges

Measurement:
- Access, Ambient conditions, Operating conditions/maintenance, Safety, Cost, Accuracy & Reproducibility, Methodology, Variability, Tank design

Analytics:
- Software, Interpretation, Integration, Quality (of data), Shelf life, Alt-FEMP, Value proposition, Data (storage)

Mitigation:
- Variability in operating conditions, Max and Min allowable working pressure, Scalability, Variability in measurement, Controlled vs uncontrolled tanks, Wellsite attributes; Pipeline connected?, Grid-connected?, Funding, Cost, Root Cause, Economics
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NAL Collaborations:

Vendors
E&P’s
AER
MER
SRC
PTAC
CAPP
FEMP EA
Alt-FEMP
AMFC 1.0, 2.0
CanERIC
STV
MCP
ERA
AI
EEA
UofC
Harrisburgh U

Compelling Issue:
• Tank Venting