



# Condensate Quality Project Update

CCQTA/COQA Meeting  
February 10 & 11, 2010  
New Orleans

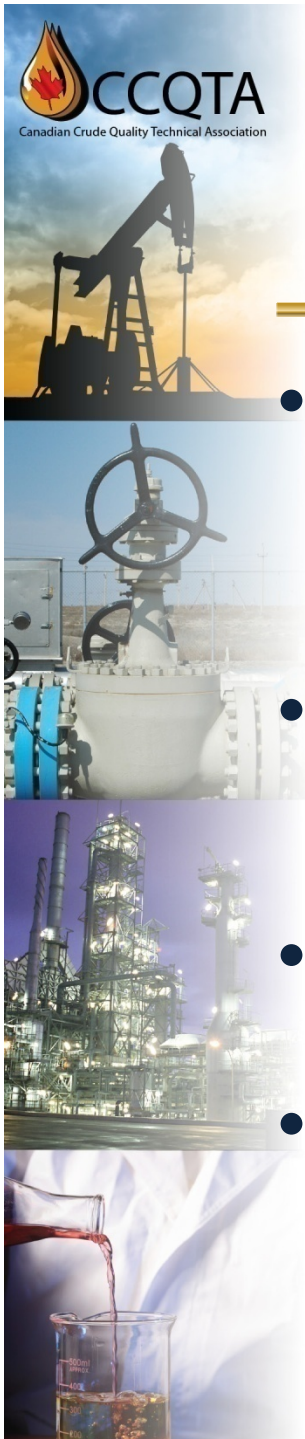




# Condensate Quality Project Update

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- **History**
- **Project Scope**
- **Participants**
- **Work Summary**
- **Proposed Future Activities**



# Condensate Quality History

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- Condensate quality issues identified within the NGL Contamination project,
  - NGL fractionator plant reboiler foulant suggests the presence of a similar foulant source in the C5<sup>+</sup> fraction.
- A possible role for condensate as a contributor of iron in heavy oils
  - Iron Fouling project activity
- The discovery of large quantities of solids in CRW feeder streams, both organic and inorganic in nature.
- CRW diluent sources testing (D4807) reports sediment levels as high as 350 wt ppm.



# Condensate Quality Project Scope

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Two primary areas of focus at this time

1. Identifying and understanding contaminant issues with railed and common diluent pool condensates (CRW)
  - 🔥 Looking at both production and refining quality issues
2. Assessing and developing test methodologies to identify the following:
  - 🔥 Total solids
  - 🔥 Precipitated waxes and asphaltenes
  - 🔥 Organic sediment (non-toluene soluble)
  - 🔥 Inorganic sediment



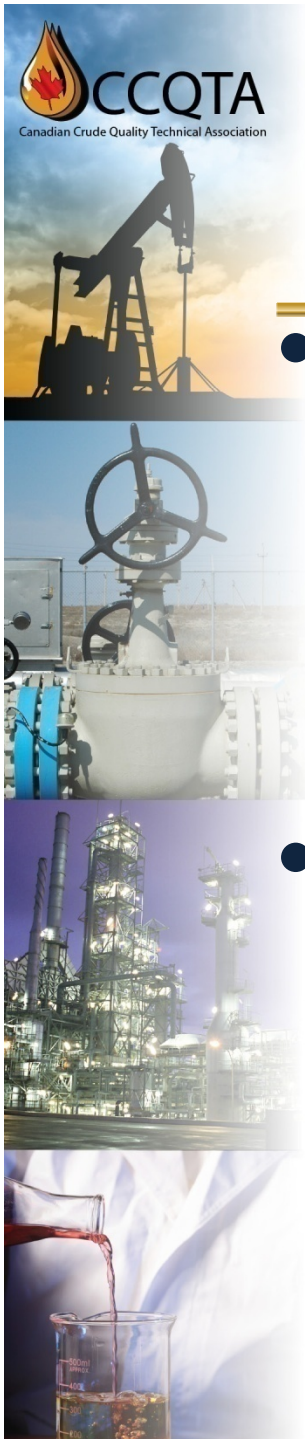


# Condensate Quality Participants

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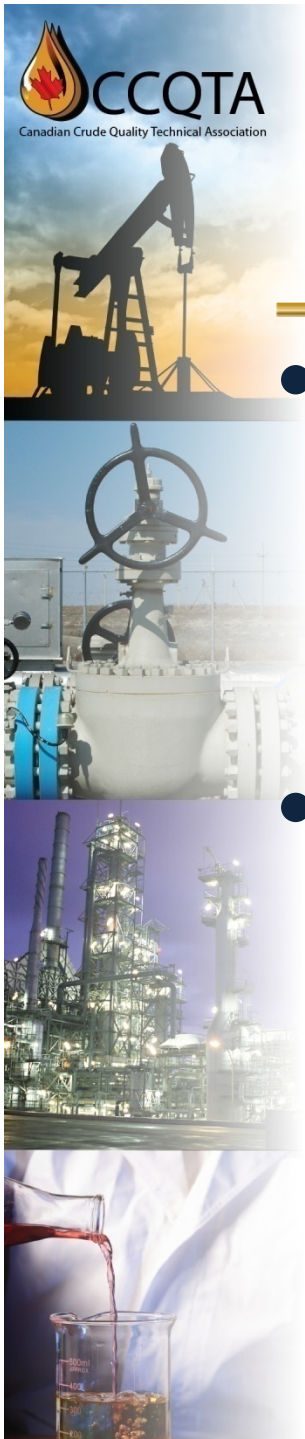


- ARC – work in kind
- Pall – work in kind
- Shell Canada
- Shell US Pipelines
- ConocoPhillips
- Maxxam – work in kind
- Encana
- Devon Canada
- Imperial Oil
- Keyera
- Provident
- Suncor



# Condensate Quality Work Summary

- Cooperative work with the NGL Contamination project (Deposit Analysis Protocol) to analyze fractionator reboiler deposits
  - Non-toluene soluble organic identified as polyaromatic hydrocarbons & additives
- Determined components of filter solids collected during Enbridge CRW testing
  - Significant quantities of precipitated wax and surfactants (identified by high res mass spec)



# Condensate Quality Future Activities

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- Assist the Enbridge CRW committee in the selection of a test methodology for monitoring the new sediment spec.
  - Differentiate between organic & inorganic components of solids
- Investigate the impact/applicability of other proposed condensate specs.
  - Aromaticity, benzene
  - Compatibility



# CCQTA Contact Information

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