

**TEST REPORT**

- 1. **Name of substance** : BOW RIVER CRUDE OIL
- 2. **General data**
  - 2.1 Composition : 100% Petroleum Crude Oil
  - 2.2 Proper Shipping Name : Petroleum Crude Oil
  - 2.3 UN Number : UN 1267
  - 2.4 Molecular formula : Complex mixture of hydrocarbons
  - 2.5 Physical form : Liquid
  - 2.6 Colour : Brown/black
  - 2.7 Density : 0.888 kg/m<sup>3</sup> @ 15° Celsius
  - 2.8 Last Sample Date : September 9, 2016\*
  - 2.9 Laboratory : Exova
- 3. **Flash Point Determination**
  - 3.1 Method : ASTM 93-08, Pensky-Martins Closed Cup (Automatic)
  - 3.2 Result : <-5° Celsius
- 4. **Initial Boiling Point Determination**
  - 4.1 Method : ASTM D-7169 Standard Test Method for Boiling Point Distribution of Samples with Residues Such as Crude Oils and Atmospheric and Vacuum Residues by High Temperature Gas Chromatography
  - 4.2 Result : 22.7° Celsius
- 5. **Class Determination**
  - 5.1 Method : *TDG Regulations Part 2, 2.18 Class 3 Flammable Liquids*
  - 5.2 Criteria : *(1)(a) Flash point ≤ 60°C in closed-cup test*
  - 5.3 Result : Class 3 substance
- 6. **Packing Group Determination**
  - 6.1 Method : *TDG Regulations Part 2, 2.19 Packing Groups*
  - 6.2 Criteria : *(1)(a) Flash Point ≤23°C; Initial Boiling Point ≤35°C*
  - 6.3 Result : Packing Group I
- 7. **Conclusion** : UN1267, Petroleum Crude Oil, Class 3, PG I
  - 7.1 Date : October 28, 2016

\*The latest laboratory results available on request.