

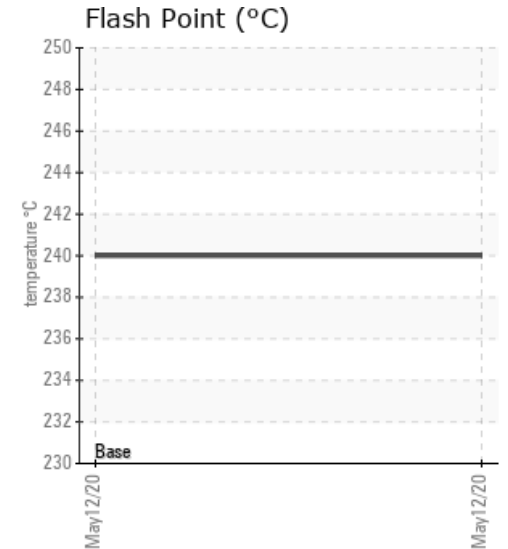
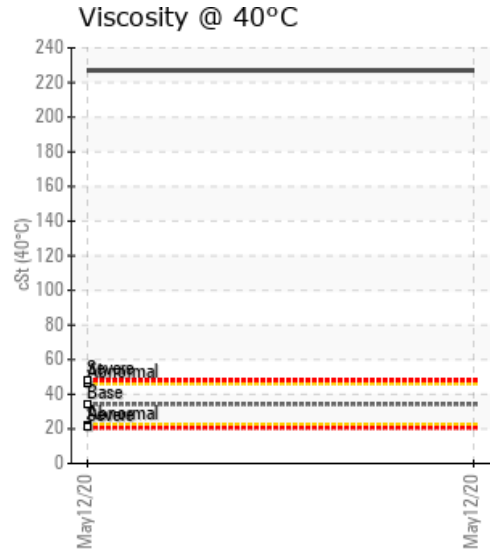
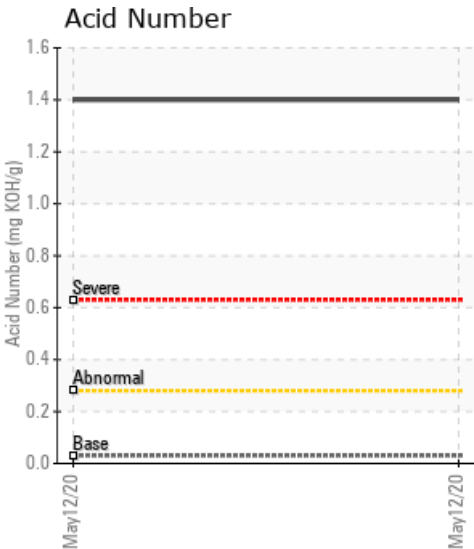
**[02-11-060-04W6] H-802**

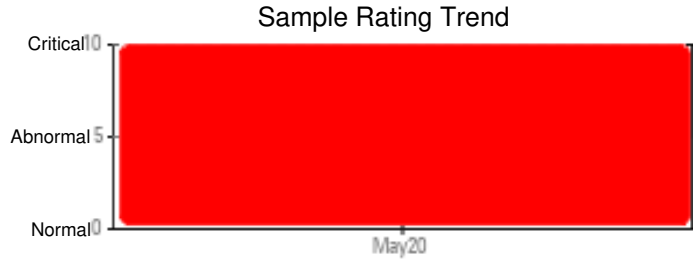
| Customer: PTRHTF20226   | System Information  | Sample Information  |
|---|---|---|
| PEYTO EXPLORATION<br>Box 1380<br>Grande Cache, AB T0E 0Y0 Canada<br>Attn: Brandon Ambrose<br>Tel: (780)524-7941<br>E-Mail: bambrose@peyto.com | System Volume: 0 ltr<br>Bulk Operating Temp: Not Specified<br>Heating Source:<br>Blanket:<br>Fluid: PETRO CANADA PETRO-THERM<br>Make: | Lab No: 02355171<br>Analyst: Peter Hartevelde<br>Sample Date: 05/12/20<br>Received Date: 05/21/20<br>Completed: 05/26/20<br>Peter Hartevelde<br>peter.hartevelde@petrocanadalsp.com |

Recommendation: The oil is in a poor condition and no longer suitable for use. Fe content and AN are high. These are indications of the oil being acidic and corrosive wear is taking place. The viscosity is very high as a result of degradation. The Pentane Insoluble (solids) content of the fluid has exceeded the reportable limit of 0.5% sixfold. It is recommended to change out the fluid and prior to that do a system clean and flush. Please contact your Petro-Canada Tech Service Advisor for assistance. System volume and fluid service life are required to work on this.

Comments: Iron ppm levels are severe. PQ levels are severe. Pentane Insolubles levels are severely high. Acid Number (AN) is severely high. (GCD) 10% Distillation Point is severely high. Visc @ 40°C is severely high. (GCD) 50% Distillation Point is marginally high.

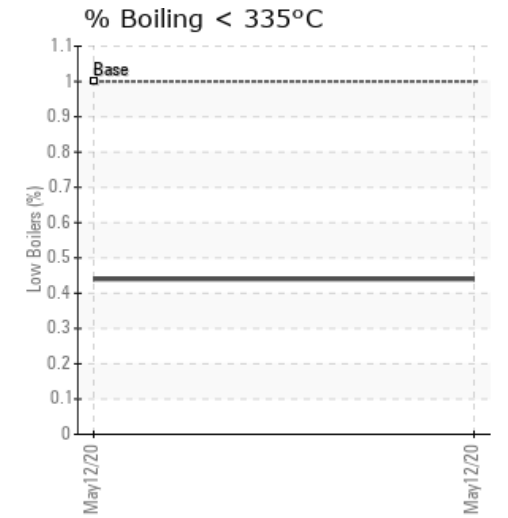
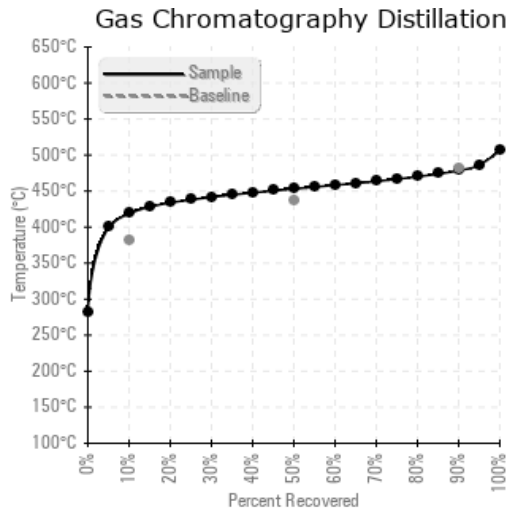
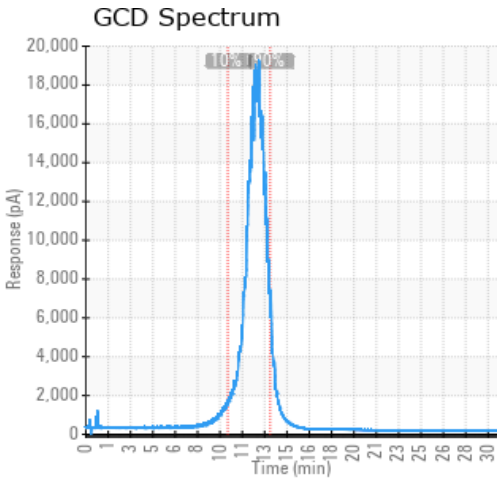
| Sample Date   | Received Date | Fluid Age | Sample Location | Flash Point (COC) | Water (KF) | Viscosity (40°C) | Acid Number | Solids | GCD 10%   | GCD 50%   | GCD 90%   | GCD % < 335°C |
|---------------|---------------|-----------|-----------------|-------------------|------------|------------------|-------------|--------|-----------|-----------|-----------|---------------|
|               | mm/dd/yy      |           |                 | °F/°C             | ppm        | cSt              | mg/KOH/g    | %wt    | °F/°C     | °F/°C     | °F/°C     | %             |
| 05/12/20      | 05/21/20      | 0y        | AFTER PUMP      | 464 / 240         | 212.6      | 227              | 1.40        | 3.14   | 786 / 419 | 848 / 453 | 893 / 479 | 0.44          |
| Baseline Data |               |           |                 | 433 / 223         |            | 34.2             | 0.03        |        | 720 / 382 | 817 / 436 | 900 / 482 | 1.00          |





| Sample Date   | Iron | Chromium | Nickel | Aluminum | Copper | Lead | Tin | Cadmium | Silver | Vanadium | Silicon | Sodium | Potassium | Titanium | Molybdenum | Antimony | Manganese | Lithium | Boron | Magnesium | Calcium | Barium | Phosphorus | Zinc |
|---------------|------|----------|--------|----------|--------|------|-----|---------|--------|----------|---------|--------|-----------|----------|------------|----------|-----------|---------|-------|-----------|---------|--------|------------|------|
| 05/12/20      | 523  | 1        | 0      | 0        | 0      | 0    | 0   | 0       | 0      | 0        | 1       | 0      | 3         | 0        | 0          | 0        | 4         | 0       | 0     | 0         | 0       | 0      | 0          | 0    |
| Baseline Data |      |          | 0      | 0        |        |      |     |         |        | 0        |         |        | 0         | 0        |            |          |           | 0       |       |           |         |        | 0          |      |

Elemental analysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]



### Historical Comments

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