PARAMOUNT TRANSMISSION LTD.

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NEB File 3400-P097-1 & 2620-D-4-7

March 20, 2002

National Energy Board 444 7th Avenue S.W. Calgary, Alberta T2P 0X8

Attention: Mr. Michel Mantha

Mackenzie Valley Land & Water Board

File

MAR 2 5 2002

Application #<u>MIDOOPC</u>DSS Copled To <u>PUM I COBJEL</u> | Rec

Dear Sir;

Re: Paramount Transmission Ltd. Cameron Hills Pipeline and Fuel Gas Pipeline, Order XO-P097-02-2002; Conditions 14: Corrosion Inhibition Program

The following is Paramount Transmission Ltd.'s (PTL) response to the request for additional information regarding PTL's corrosion inhibition program by the National Energy Board (NEB) on March 18, 2002. In general, as stated in previous submissions by PTL, the corrosion inhibition program proposed for the Cameron Hills Pipeline is similar and comparable to the program being used in Paramount Resources Ltd.'s Bistcho Gas Gathering System. The programs are comparable because the production fluid compositions, corrosion inhibition chemicals, and the pipeline flow characteristics in both areas are also comparable.

The NEB's request for additional information has been reiterated in italics for reference and PTL's response follows immediately after it.

1. The flow regime and the chemistry of the water in the Bistcho Lake field:

Response: The Bistcho Gas Gathering System is comprised of pipelines which vary in outside diameters from 88.9 mm to 273.1 mm. Their flow regimes range from mist to stratified to slug flow. The Cameron Hills Pipeline is predicted to have a stratified flow in the pipeline.

The water chemistry for the Cameron Hills Pipeline will be similar to the Bistcho Gas Gathering System since the Cameron Hills production will be from similar zones of production as in Bistcho Lake area. Therefore the water analysis submitted to the NEB previously can also be used for the Bistcho Gas Gathering System.

2. Indicate as to whether PTL intends to use inhibited methanol in its system and a description of the effect of methanol on the corrosion inhibitor film;

6. The rationale for using coupons rather than corrosion monitoring spools.

Response: Corrosion monitoring spools have the following disadvantages:

- They are less accurate to weigh to measure the corrosion rate due to their size and external effects (e.g. paint);
- They are more cumbersome to remove to inspect because of their weight and size (i.e. a crane would be required); and
- A shutdown of the production is required to remove and inspect the spools.

PTL would like to reiterate that the fluid compositions and operating conditions are comparable between the Cameron Hills field and the Bistcho Lake field, which allows the use of comparable corrosion inhibition programs. The Bistcho Lake corrosion inhibition program has proven to successful in its mitigation against corrosion. Since the operating conditions and fluid composition within gathering systems are seldom constant but are dynamic, PTL's corrosion monitoring programs will ensure that the Cameron Hills Pipeline will be optimally protected by adjusting the program to changes in the operating conditions of the pipeline.

If you require any further clarifications then please contact the undersigned at (403) 290-3696 or by e-mail, tom.hong@paramountres.com. Since the Leave to Open will imminently be submitted, your approval of PTL's corrosion inhibition program at your earliest convenience would be a greatly appreciated.

Yours truly,

PARAMOUNT TRANSMISSION LTD.

Tom Hong, P.Eng. Project Manager

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