



SPG-165

SL-100-SPG  
1147-57/W- *1147-57/W-216*

OTTAWA, May 31, 1972

SPECIAL APPROVAL

Granted to: Westcoast Transmission Company Ltd.,  
1133 West Georgia Street,  
Vancouver, B.C.

Attention: Mr. D. J. Hunter,  
Superintendent of Measurement.

Subject: Use of Thermal Energy Equation for determining  
calorific value of Gas at Hudson's Hope.

Special Approval has been granted by the Standards Branch to Westcoast Transmission Company to use the Thermal Energy Equation in determining the calorific value of gas delivered from its Fort Nelson Mainline to Inland Natural Gas Company Limited at Hudson's Hope. The Thermal Energy Equation method developed by Transwestern Pipeline Company utilizes the following equation:

$$\text{BTU's at 14.73 psia} = 1544.6 (G) + 141.5 - \frac{(2489.4 \times \text{CO}_2)}{100} - \frac{(1736.5 \times \text{N}_2)}{100}$$

where G equals the specific gravity of gas by gravitometer  
 CO<sub>2</sub> represents the amount of carbon dioxide (in % Volume) determined by analysis  
 N<sub>2</sub> represents the amount of nitrogen (in % Volume) determined by analysis.

The BTU's calculated from the gas analysis will be used as a control for accuracy of the Thermal Energy Equation methods. The Vancouver District Office shall periodically assure that the method is providing essentially accurate results.

*W. J. S. Fraser*  
 W.J.S. Fraser,  
 Chief,  
 Electricity and Gas Division.

c.c. Mr. R.G.D. Ward

