[*Texte*]

extended season over what we have now, 9 or 10 months of the year, into the difficult times, into the ice times.

If the answer to that is yes, then the next question to be answered, I think, is how will it be done. How will the person who owns the commodity and is extracting it want to do it? Will he do it by surface ships? If so, how are we going to regulate them, what are we going to require to do it? Is he going to do it by submarine or how is he going to do it? Is he going to try to put pipelines under the channels, a case of oil, or what?

When that question has been answered, then the final one, I think—well, not the final one—but the next one is to say, are we prepared to let him do this on his own? Can he assure us or can we assure ourselves, that the method he is going to use by some kind of ship or other, whatever it is, is such that there is no possibility of these ships getting stuck and demaging themselves in a way that would be harmful to the Arctic? If he just sinks his own ships and they do not do any harm, that is his own affair. This is the risk of the entrepreneur, but I am not too sure that that one should not be qualified either because it is accepted as a government responsibility that shipowners and ship operators who move in our waters are entitled to certain areas of support. They are entitled to hydrographic charts to enable them to operate safely in safe waters, they are entitled to aids to navigation, again to enable them to operate safely. An icebreaker is, in a sense, an aid to navigation. It is a help to them to navigate safely in the way a lighthouse or a radio beacon is. So, would we be prepared to turn him loose and say, we are not going to give you this kind of support, you are on your own? That really is the big question or, at least, the two main questions, I think. The other ones of what kind of an icebreaker, if any, and how many are needed are subsidiary questions.

We have done enough of our own homework to know roughly what size of icebreaker would be needed for a total Northwest passage, a 12-month operation, to support, say, Humble Oil, and we have a very good idea of how much that can be lessened to support, say, a Baffinland iron ore operation, for about 9 or 10 months of the year in the easy part of the Eastern Arctic. It was a very interesting exercise, as a matter of fact. We did it, first of all, in-house in my own shop and came up with an answer that just appalled me. I was horrified. I once grabbed all the papers, knotted them up and said, do not you dare talk about this to anybody. So then we went out and hired consultants and did not tell them what we had done. I just set them down and said, now these are the parameters, ice of such and such thickness, pressure of such and such, so many months of the year, such and such a route, and they came out, give or take 5 per cent, with the same answer that we came out with. When we heard, in a round about way, that Humble Oil Company had gone to Waertsila, the Finnish firm of icebreaker builders and had said to them, this is our project for the Northwest passage, we believe we will have to have some kind of icebreaker support, such as a rescue vessel; we are not sure the Canadians are going to provide it; we are not sure the U.S. Coast Guard intends to provide it or will be allowed to provide it and we, therefore, must be prepared to do it ourselves, will you please tell us what kind of an icebreaker we ought to have? So, Waertsila went to work, without consulting anybody, and they

[*Interprétation*]

voudra se servir d'un navire et, dans ce cas, quel contrôle allons-nous imposer? Est-ce qu'il va se servir de sous-marins, est-ce qu'il va installer des pipe-lines, que fera-t-il?

Quand on aura répondu à la question, il faudra se demander si on se sent prêt à le laisser s'occuper seul de la chose. Peut-on être certains que les méthodes qu'il va appliquer seront telles qu'il n'y aura aucun danger que ses navires soient immobilisés ou échouent de façon à causer des dégâts dans l'Arctique. C'est à l'entrepreneur de prendre ses risques. Cependant, le gouvernement prévoit que les exploiteurs qui se déplacent dans nos eaux ont le droit d'avoir une certaine aide. Ils ont le droit à des cartes de la région, et à toute aide concernant la navigation, afin de se déplacer en sécurité. Le brise-glace aide à la navigation, de même que le phare ou la radio. Pouvons-nous lui demander d'agir seul sans aucun genre d'aide. C'est là la question. Quel genre de brise-glace faut-il employer et combien?

Nous avons étudié la question d'assez près pour savoir à peu près quel genre de brise-glace il faudrait, pour une année d'exploitation pour la compagnie *Humble Oil*. Le brise-glace peut être moins perfectionné si on l'utilise dans l'Est de l'Arctique. Cette étude a été très intéressante; je l'ai faite chez moi d'abord et j'ai trouvé une réponse qui m'a vraiment épouvanté. J'ai décidé de ne pas en parler. Ensuite, mes collègues et moi avons retenu les services de conseillers, et nous ne leur avons pas dit ce que nous avions fait. Nous leur avons remis les données de base et ils en sont arrivés à la même réponse à 5 p. 100 près. Nous avons entendu dire que la *Humble Oil Company* était allée trouver une société finlandaise pour lui demander quel genre de brise-glace il lui faudrait pour se rendre dans le nord-ouest de l'Actique, elle a ajouté que ni le gouvernement canadien ni la garde-cotière américaine ne consentirait à fournir un brise-glace. Cette société finlandaise est arrivée au même résultat que nous à 10 p. 100 près. Je dois toutefois dire qu'il s'agit là d'un navire absolument extraordinaire.