

### Prime Minister Trudeau pays tribute to Mr. Roland Michener

At a state dinner on January 7 in honour of former Governor-General Michener's retirement, the Prime Minister borrowed one of Mr. Michener's "favourite tour stories" to illustrate his appreciation for help received from Mr. Michener since 1968, when Mr. Trudeau took office.

It seems that Mr. Michener was visiting the outports of Newfoundland, travelling on a Canadian destroyer.

In Mr. Trudeau's words:

When he came aboard, the commander of the ship introduced him to the local pilot for the trip, a laconic Newfoundland seaman named Tom Hounsel. "Well, Captain Tom," said the Governor General, "I've heard about your great skill in these waters, and I understand you know where all the rocks are."

"Don't know about that, sir," Captain Tom replied. "But I sure know where all the rocks ain't."

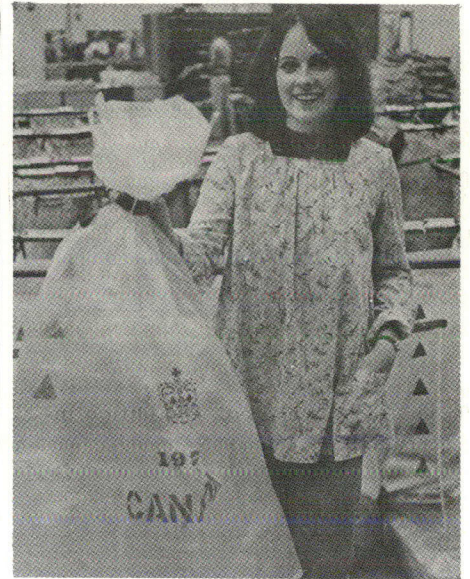
Your Excellency, as I recall your nearly 30 years in public life — as I recall with personal gratitude the many Wednesday nights since 1968 when you have offered me your encouragement and counsel on the nation's business — I can testify that you are a man who

also knows, better than most, "where the rocks ain't".

At your installation in 1967, our friend Mike Pearson expressed the same thought more elegantly when he cited the words of the poet Tennyson. I believe that Tennyson's words fit your career even better today, and should like to repeat them as you leave us:

"Much has he seen and known; cities of men and manners, climates, councils, governments. Himself not least, but honoured them all."

Your Excellency, as you retire from your high office, I wish to extend to you and to Her Excellency the thanks of all Canadians, and to propose a toast to your health and happiness.



Elaine Charron of the Post Office Department shows one of the 150,000 new plastic mail bags used by the Toronto Post Office during the Christmas rush. These transparent, water-proof polyethylene bags were destined for use only when there was a shortage but, because of the material and the satisfactory type of closure, the Post Office may use them at other times too.

### Long-term implications of oil spills

In 1970, when the tanker *Arrow* ran aground, it released 16,000 tons of bunker oil into the ocean. Now, four years later, that oil is still present and poisonous along the sheltered beaches of Chedabucto Bay, Nova Scotia. Various clean-up techniques were tried; none proved entirely effective.

Toronto's Institute of Environmental Sciences and Engineering has been studying what would happen if a break occurred on land in the proposed pipeline pumping crude oil from Canada's Arctic frontier down the Mackenzie Valley. The project is part of the Arctic Land Use Research Program, which is a \$20-million federal investigation on the probable environmental and social effects of pipelines in the North.

The Toronto scientists believe that a rupture would allow about 50,000 gallons of crude to drain on to the delicate Arctic tundra before the leak could be contained. In summer this would soak down to perma-

frost level, and spread like any other fluid through the extensive drainage system. In winter the contaminated area would be smaller since oil thickens with cold and is absorbed by snow.

In either case, the oil is lethal for many animal species and also to the sensitive mosses and lichens, which predominate on the tundra.

This data has been prepared from observations in the laboratory and in the field. The Toronto team has made controlled spills of oil into an Arctic lake to measure the spread of the slick and its effects on living things. They have spilled oil on snow and have observed it flow under snow cover. They have returned to their spills to measure the rate at which different hydrocarbon components evaporate from exposed oil, and how this changes the oil's toxicity.

Unfortunately, the scientists don't know yet how to clean up such a spill. In the Arctic, a large force of volunteers cannot be mobilized, they point out, nor can they bulldoze earthen dykes to burn off the oil. The

search for micro-organisms that digest oil on such a scale has not yet succeeded.

Whether the Government or the petroleum industry is going to fund a large scale program clean-up technology is a question that remains unanswered. At present, neither does to any significant degree.

"What Canada needs is a co-ordinated and effective oil pollution research program," says Dr. Donald Mackay, of the Oil and Gas Working Group in the Institute of Environmental Sciences and Engineering.

### Mineral production, 1973

Based on an estimate of the production of Canadian minerals during 1973 prepared by Statistics Canada, the total value exceeded \$8.24 billion. Values of the leading mineral commodities were: crude petroleum, \$2,246 million; copper, \$1,148 million; nickel, \$785 million; zinc \$653 million; iron ore, \$613 million; and natural gas \$482 million.