

## RCN IN PACIFIC EXERCISE

Three destroyer-escorts of the Royal Canadian Navy's Pacific Command effected a rendezvous 1,400 miles south-southwest of Victoria, British Columbia, on January 10, with a 23-ship task group of the United States First Fleet, to begin a series of anti-submarine training exercises.

HMC ships "Assiniboine", "Margaree" and "Ottawa", of the second Canadian Escort Squadron, left Esquimalt on January 5 on a three-and-a-half months' training cruise that will take them half-way around the world. The American task group is made up of the 30,000-ton anti-submarine aircraft carrier "Bennington" and ships of Destroyer Squadrons 21 and 13 and Destroyer Division 92. The joint training exercise off the Hawaiian Islands recently ended. The ships spent the weekend of January 13 in Pearl Harbour.

Following completion of the exercise, the Canadian destroyer escorts continued their Far Eastern cruise, which will include a Commonwealth fleet exercise centered on Ceylon. They will return to Esquimalt in mid-April.

\* \* \* \*

## ORGANIC TEST REACTOR TO BE BUILT

An engineering test reactor, known as the Organic Test Reactor (OTR), will be built at the Whiteshell Nuclear Research Establishment in Manitoba. The reactor will be the first major facility to be constructed by Atomic Energy of Canada Limited at the Whiteshell centre, which is now being developed at a site on the Winnipeg River about 60 miles east-northeast of Winnipeg. The cost of the reactor and the building to house it will be about \$14.5 million. The Civilian Atomic Power Division of the Canadian General Electric Company Limited, Peterborough, Ontario, is designing the reactor, which is expected to go into operation in 1965.

### OPERATION

Like other reactors in the Canadian nuclear research and development programme, the OTR reactor will use heavy water to maintain the chain reaction that "burns" uranium. To remove heat from the reactor core, however, the OTR will use organic liquids, which consist of carbon and hydrogen atoms linked in unique ways. Organic coolants have not been used in Canadian reactors, as heat-transfer media, though they have been tested in the NRX reactor. The NRU, Douglas Point and NPD reactors use heavy water for the coolant. Organic coolants will operate at very much lower pressures than water at the same temperature. Stress problems, and hence capital costs, are thus much reduced.

The primary purpose of OTR is to provide facilities for large-scale testing of fuel rods, coolant systems and components for organic-cooled, heavy-water-moderated power reactors. In addition, OTR is being specifically designed with enough flexibility to allow it to be used for a variety of engineering tests, including those involving other heat transfer media, such as steam.

The reactor will have an initial heat output of 25,000 kilowatts, with provision for increase to 60,000 kilowatts. (The NRX engineering test and research reactor at Chalk River has a heat output of 40,000 kilowatts.)

\* \* \* \*

## CANADIAN PAINTING IN POLAND

Sixty paintings by 15 Canadian artists are now on display at the National Gallery in Warsaw. The show, arranged by the National Gallery of Canada, opened on January 15. Regarded as a major cultural exchange with Poland, it was assembled to give the Polish public a chance to see the type of painting currently produced in Canada. All the works on exhibit have been completed since the end of the Second World War and form a typical cross-section of the work of some of Canada's better-known younger artists.

"We hope that the Polish people will come to know Canadians more intimately through this present exhibition," stated Charles F. Comfort, the Gallery director. "We look forward to viewing the exhibition of Polish painting being assembled for a Canadian audience next year. Through it, we hope to gain further insight and understanding of the spiritual and cultural life of the Polish people."

\* \* \* \*

## CANADIAN IN SEISMOLOGY GROUP

Dr. John H. Hodgson, Chief Seismologist, Department of Mines and Technical Surveys, has just returned to Ottawa from South America, where he spent two months as a member of a mission sent by UNESCO to report on the status of seismology in areas prone to earthquakes. This mission was the second of three ordered by UNESCO following the heavy toll of life and extensive damage of the Agadir, North Africa, and the Chilean earthquakes. The first mission took place in May and June of 1961 and covered Southeast Asia, and the third, which will visit the Mediterranean, will be held in March and April. The object of these missions is to investigate what is being done in seismology, geology and the construction design of buildings in earthquake areas to assist in avoiding loss of life and destruction of property.

Heading all three missions is Vladimir V. Belousov, professor of geophysics at the University of Moscow and president of the International Union of Geodesy and Geophysics, to which UNESCO referred when seeking assistance in carrying out the investigations.

The South American mission visited Colombia, Ecuador, Bolivia, Argentina and Chile, and spent two months investigating the extent of work in seismology, the number of seismic stations, the equipment at and operation of these stations and available facilities for the training of seismologists in these countries. It looked into existing geological studies of the structure of the earth's crust, designed to learn more about the cause of earthquakes, and the availability of maps showing earthquake probability as well as into the question of engineering design of buildings and the existence and enforcement of building codes governing earthquake resistant construction.