



Bulletin

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CANADIAN ARCHAEOLOGISTS RETURN TO IRAN

This summer, for the fourth season since 1965, archaeologists from Canada's Royal Ontario Museum will excavate Godin Tepe, a site in western Iran, which was occupied continuously from about 6000 B.C. to 600 B.C. A new ROM "dig" will also begin at nearby Seh Gabi.

Godin Tepe, which has seven major periods of occupation, is situated in the central Zagros Mountains, beside the Silk Road, an ancient trade-route winding from Mesopotamia to China. Since the ROM crew began excavating in 1965, they have unearthed a monumental structure dating from about 700 B.C., which they believe was a prince's palace in the land of the Medes.

The Median kingdom was a confederation of small local kingdoms that was gradually formed under the leadership of a powerful royal line. Judging from the strategic location of the palace on the main road to Babylon and the immense size of the complex, it is likely that the ruler was an important figure in the Median confederation.

The main feature of the palace is a monumental columned hall about 95 feet long and 81 feet wide,

which is said to be an early example of the type of great audience hall found at Pasargadae and Persepolis. There are also 12 store-rooms, a fortified outer wall with four defensive towers, a pantry and a kitchen with hearths and an oven, bearing witness to the banquets served in the great meeting-hall.

Historical accounts reveal that the Medes were rather troublesome to the mighty Assyrian Empire, which stretched from Iran on the east to Egypt on the west. In 614 B.C., the Medes formed the spearhead of the attack that led to the final fall of Assyria. Eventually, they established the capital of the Median empire at Hamadan, which thrives today a short distance from Godin Tepe.

FIRST COMPLETE DIG

Although there are numerous Biblical and literary references to the Medes and Media, little is known about their culture from first-hand archaeological evidence in Iran. The ROM expedition, headed by T. Cuyler Young Jr., Curator of the Museum's West Asian Department, is the first to excavate a Median site systematically and to compile a complete archaeological history of the area.

The selection of Godin Tepe proved fortunate, not only because of the impressive structure built by the Medes but also because of the remains of five earlier settlements.

Period I covers the current use of the mound as a cemetery and the presence of a small shrine. Period II is the Median occupation about 700 B.C. The people whose remains are classified as Period III lived in the area from about 2200 B.C. to 1200 B.C., but they cannot be identified with any historically-known people or nation.

In one of the Period III levels in the excavations, the Museum's crew unearthed a large building that had been violently destroyed, possibly by an earthquake. Deep layers of debris, including roofing reeds and plaster, covered the floors. On some of the walls there were fragile remains of reed mats that had once

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hung like tapestries against the sun-dried mud-bricks. Masses of smashed pottery littered the floors. Several hearths and a bread oven were well preserved. In one hearth even the andirons that held the cooking pots were still in place. All signs indicate that the archaeologists that the building had probably been a large private house or *palazzo* in the Mesopotamian style, with long narrow rooms parallel to slightly larger and wider ones.

Other levels and areas of excavations for Period III reveal remains of village houses, workshops, small streets and alleys. A main street is lined by houses built on massive stone foundations.

SECOND EXPEDITION

Another expedition from the Royal Ontario Museum, headed by Dr. Louis D. Levine, Assistant Curator of the Museum's West Asian Department, will begin excavations at the nearby site of Seh Gabi ("Three Sickles"), 15 kilometers from Godin. Here material from Periods VI and VII (about 6000-3500 B.C.) is close to the surface. Similar material exists at Godin, but to unearth it the archaeologists would have to dig to a depth of 700 feet.

The archaeologists are not sure what to expect from the earliest level of occupation (Period VII), but they do know what they are likely to find from Period VI at Seh Gabi. The material from this age relates to that found from the Mediterranean coast to the southern tip of Saudi Arabia and to the borders of Afghanistan. The major characteristic linking the settlements is pottery painted with geometric designs. The Iranian versions often have stylized animal designs as well. The culture is known as Ubaid, which is the name of the site where the material was first found.

Because excavations are still in process, the material has not yet been fully analyzed. However, there are hints among the Median material that might substantiate a Biblical passage which tells of the King of Assyria exiling the people of Israel to Assyrian territories, which included the towns of Media (*II Kings 18: 9-11*). Recent finds indicate the possibility that sometime during the late eighth century B.C., certain new forms of pottery were introduced to Media. These bear a strong resemblance to forms known from the Kingdom of Israel just slightly before this time. If future data can establish the case with greater certainty, the ROM team may be able to demonstrate that part of Israel was indeed taken in exile to Media.

One rainy day, Dr. Young and Dr. Levine visited a neighbouring village to investigate a "stone" buried in the mud, which the workmen had spoken about. The stone turned out to be a stele, an inscribed monument, erected by Sargon II "the great king, the mighty king, king of Assyria", who had held sway over all Babylonia westward to the border of Egypt and north to the mountains of what is now Turkey. After having conquered Samaria, the capital city of the Kingdom of Israel and exiling its popu-

lation to Media, Sargon set up a monument in the district of his glory and the glory of his gods. The stele, which has been dated to 716 B.C., contains a portrait of Sargon on one side and a 75-line Babylonian inscription on the reverse.

MIME THEATRE PREMIERE

The world première of *The Lamplighter*, by Alex Nagy, will be performed by the Centre Studio at the National Arts Centre on April 29. The production, directed by Adrian Pecknold, artistic director of this mime troupe, will run until May 15. Mr. Nagy also designed the production.

Despite the fact that mime is one of the most demanding of theatre arts, the Centre Studio, Canada's first professional mime company, has received much acclaim since it was founded at Niagara-on-the-Lake, Ontario, in 1969.

"We saw a work of a very high order," wrote Christopher Dafoe of the *Vancouver Sun*, and Gordon Legge of the *Calgary Herald* said in his review: "The performance left you with the feeling that everybody should have the opportunity to watch them." Gretchen Pierce wrote in the *Mail Star* of Halifax: "Their goal - entertainment - is always surpassed."

Mr. Pecknold and his company - Harro Maskow, George Stanislav and Margaret Lamarre, will also be touring schools in the Ottawa region with their program of VISUAL DELIGHTS, under the auspices of the Youth Programming Department of the National Arts Centre.

CANADA-MEXICO AIR PACT EXPANDED

The Secretary of State for External Affairs, Mr. Mitchell Sharp and the Minister of Transport, Mr. Don Jamieson, announced recently that the existing bilateral air agreement between Canada and Mexico had been amended through an exchange of notes in Mexico City between the Mexican Minister for External Affairs, His Excellency Emilio O. Rabasa and the Canadian Ambassador, Mr. S.F. Rae. The amendments were negotiated in Mexico City in November 1970.

Under the revised bilateral air agreement, new traffic points have been added, including Edmonton and Winnipeg in Canada and, in Mexico, Acapulco and certain other points on the Pacific coast, and three points in the Yucatan area. Also, more frequencies will be available on the services operated between the two countries.

Mr. Sharp and Mr. Jamieson expressed their satisfaction with the new arrangement which will permit a further expansion in air services between Mexico and Canada and thus serve to strengthen the close and friendly relations that already exist between the two countries.

PAPINEAU AND HEARNE STAMPS

Two 6-cent stamps commemorating the political reformer Louis Joseph Papineau and the explorer Samuel Hearne will be issued on May 7.

The four-colour stamp marking the centenary of Papineau's death, is vertical in shape and measures 24 mm by 40 mm. The other stamp, commemorating the two-hundredth anniversary of Hearne's expedition to the Coppermine River, measures 40 mm by 24 mm in a horizontal format and is being printed in three colours. Laurent Marquart of Jacques Guillon Designers Inc., Montreal, created the designs for both stamps. Twelve million copies of each issue are being printed by the British American Bank Note Company of Ottawa.

PAPINEAU

Louis Joseph Papineau was a member of the Legislative Assembly of Lower Canada from 1808 to 1837 and served as Speaker from 1815. An ardent reformer, he came to be regarded as the leader and chief spokesman for the French-Canadian Patriot Party. Papineau was dedicated to resolving the problems of French Canada through constitutional reform and, in this regard, he inspired the famous "Ninety-Two Resolutions", which were a presentation of grievances coupled with the demand for elective institutions. They were passed by the Legislature in 1834.



HEARNE

Samuel Hearne became in July 1771 the first European to reach the Coppermine River and Canada's Arctic coast over land. In the service of the Hudson's



Bay Company at Fort Prince of Wales, Hearne was commissioned to search for the Northwest Passage and to locate a copper-mine that was said to exist in the Far North. After two fruitless ventures, Hearne reached his goal on the third expedition with the help of his guide the Indian leader Matonabee. Although his expectations of finding the Northwest Passage or the fabled copper-mine were not fulfilled, Hearne's record of his journey provided a valuable

legacy of information on the Indians, the wildlife and the geography of the Far North.

ALUMINUM IN INDIA

The Indian aluminum industry reached an important landmark with the opening of a new smelter, part of a \$65-million processing complex, at Belgaum, in the west coast state of Mysore.

The smelter adds 33,000 tons to the annual production capacity of the Indian Aluminium Company, of which Alcan Aluminium Limited, a Canadian company, is the major shareholder; the other owners are more than 5,000 Indian shareholders. Capacity will soon be increased to 45,000 tons; ultimate design capacity is set at 110,000 tons. The new plant brings the Indian Aluminium Company's total production capacity to 77,000 tons, or more than one third of the national total.

The smelter and alumina plant at Belgaum, and bauxite mining operations nearby, are the largest installations of the new complex already in operation. A foil rolling plant at Kalwa, near Bombay, produces plain and decorative foil.

Alcan contributed equity investment, technical knowhow and management assistance throughout the long growth period of the Indian company. For the current project, Alcan additionally subscribed \$6 million in new common shares and the Export Development Corporation of Canada made a loan of \$5.5 million to cover purchases of Canadian equipment. Some \$40 million, or two thirds of the project financing, was raised in India and the Export-Import Bank of the United States made loans of \$12 million to cover purchases of U.S. equipment. Of the total expenditures, some \$15 million remains to be made in 1971-72, mainly to complete a 15,000-ton-per-year sheet mill near Bombay.

COMMUNIVERSITY IDEA IN ALBERTA

Two new types of educational institution have been suggested by the post-secondary committee of Alberta's Worth Commission. They recommend that an "open communiversity" and a "techniversity" be set up.

A "communiversity", which the committee would like to see established by 1980, would give programs for large groups of part-time students - people who want to work and gain a formal education at the same time. It would serve people throughout the province and thus would need to make imaginative use of radio, television, correspondence courses and intensive tutorial or seminar programs on week-ends (or one-week periods).

The "techniversity", the committee suggests, would offer four-year advanced programs in technologies based for the main part, on the physical sciences and mathematics.

ONTARIO'S PLEASURE PLACE

A mammoth entertainment complex built by the Province of Ontario on man-made islands off the north shore of Lake Ontario will open on May 22. Ontario Place, situated south of the Canadian National Exhibition Grounds in Toronto, will be open to visitors seven days a week until October 11 and will become a permanent feature of the Toronto scene. The massive project, which cost \$19 million, is expected to pay its way.



The dome-shaped Cinesphere theatre, jewelled with 310 cylindrical lights, will illuminate the night scene at Ontario Place.

Its attractions will include: a film theatre with a screen as high as a six-storey building; a huge outdoor forum, resembling an ancient Greek amphitheatre; five gleaming "pods" rising out of Lake Ontario on steel stilts; and a marina, acres of parkland, canals, boutiques and restaurants. Grassy picnic areas and contoured beaches will also be found there.

DREAM TO REALITY

The daring proposal of creating this entirely new complex on the Toronto waterfront was first announced in August 1968 by the former Prime Minister of Ontario Mr. John Robarts, when he officially opened that year's Canadian National Exhibition. It would employ he said, "the natural setting of the waterfront, modern structural designs and attempt to create the mood of gaiety and openness which helped make so popular the Ontario Government pavilion at Expo 67".

The vision began to assume reality on March 17, 1969, when construction started on the complex on the lake. To create the two islands at Ontario Place,

more than 2.5 million cubic yards of fill were needed, with as many as 1,800 truckloads of fill being dumped each day. By opening day, almost 30,000 trees, shrubs and plants will have been planted, 17 acres of grass sodded, 3.4 miles of pathways constructed, and almost half a mile of beaches graded and contoured.

FILM THEATRE

The west island at Ontario Place is dominated by Cinesphere, a triodetic, dome-shaped theatre. One of the most advanced theatres in the world, it houses a giant 60 by 80-foot screen, a projection capability that ranges from 16 mm to the Ontario-developed "Imax" projection system that fills the entire screen, and a 24-track stereophonic sound system with 55 speakers.

The east island houses The Forum, an 8,000-capacity outdoor amphitheatre, where live entertainment, including symphony concerts, folk-dancing, pop and rock music, jazz and other events will take place. A province-wide amateur talent hunt is now under way, to provide opportunities on stage at The Forum for performers from all over Ontario.

MARINA

To welcome visitors who come by water, Ontario Place offers one of the largest, most modern and best-equipped marinas on the Great Lakes. It will have 292 slips, in five sizes, accommodating boats of up to 40 feet in length. Alongside the marina is a seafood restaurant and a sailors' pub. Adding to the nautical atmosphere, the *Haida*, a destroyer of the Second World War and a veteran of the Murmansk run and of service with the United Nations in Korea, will use the site as "home port".

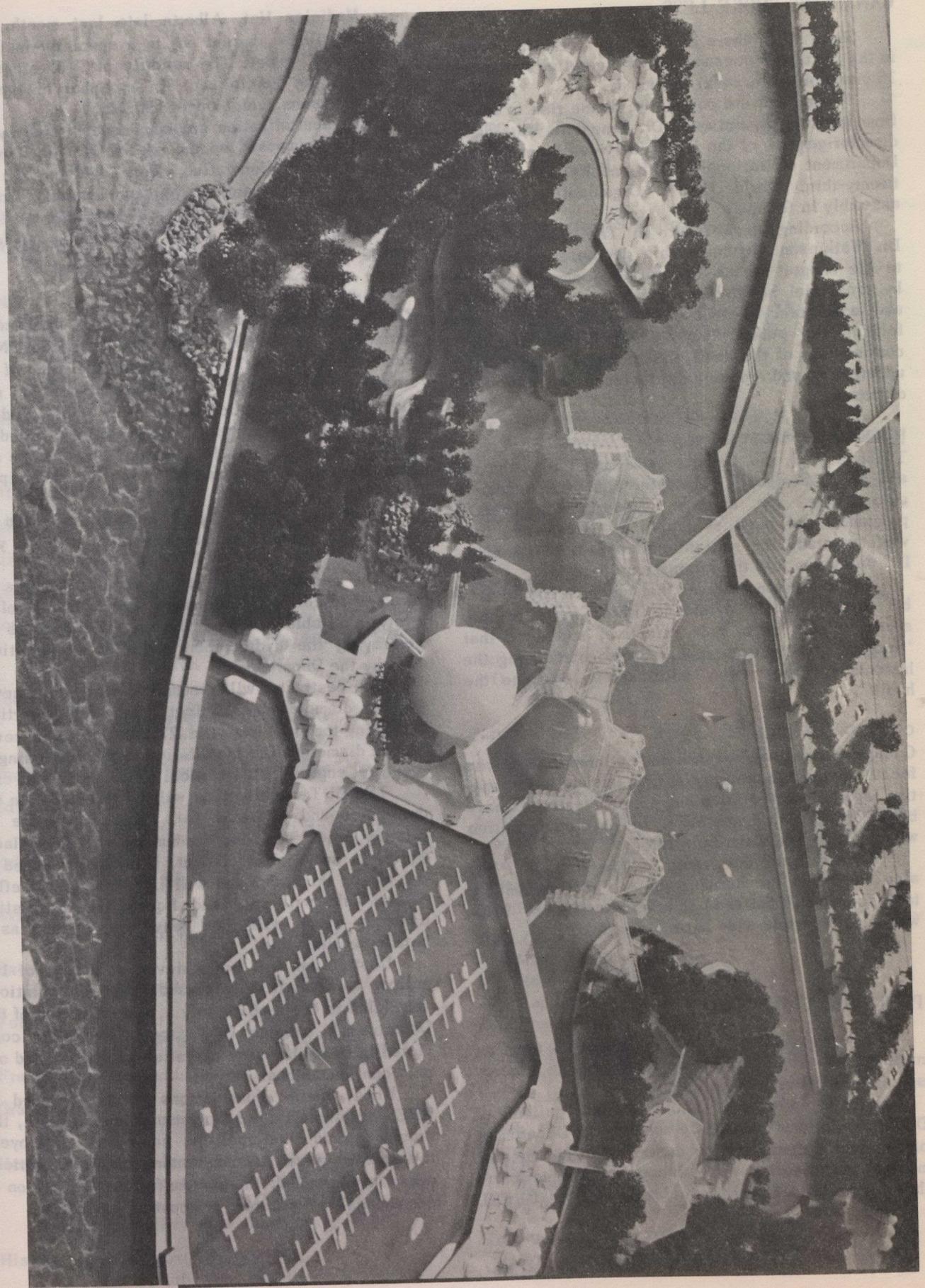
Rising between the east and west islands is the Ontario Place Pavilion, designed with five "pods", which are suspended above Lake Ontario from 105-foot-high steel columns. Exhibits in each of these pods depict the story of Ontario and its people. The roofs of all five may be used as observation areas, providing a panorama of the entire site, as well as of the Toronto skyline and Lake Ontario.

PROVISION FOR THE HANDICAPPED

The handicapped and the aged have also been considered in the design of the new giant showplace, where the islands and buildings can if necessary, be reached without climbing a single stair. Graduated ramps and walks will easily accommodate a wheelchair or those who have difficulty in walking.

Ontario Place will be able to handle 30,000 to 40,000 people a day, with a peak capacity of 19,000 visitors at one time.

Architect's model of Ontario Place.



CANADIANS SMOKE LESS

Since 1966, there has been a 7 percent decline in the *per capita* consumption of cigarettes by persons 15 years of age or older in Canada.

"Canadians are now aware of the risk to health from smoking cigarettes," Dr. Ernest A. Watkinson, director-general of the health services branch of the Department of National Health and Welfare, told the twenty-third World Health Organization national assembly in Geneva.

According to a report in *The Medical Post*, Dr. Watkinson attributes this decrease in smoking to the support of the Federal Government's efforts by provincial health departments, various agencies and educators. The Government has aimed at informing the public about risks, encouraging discontinuation of the habit, dissuading the young from adopting it, and reducing the incidence of associated diseases.

RESEARCH NECESSARY

Twice a year, the Federal Government releases tar and nicotine reports on popular cigarette brands. It also carries out surveys, supports experimental programs, and provides grants to universities that wish to study the motivational aspect of smoking, Dr. Watkinson told the international meeting.

Dr. Watkinson believes that research should also be carried out to determine which parts of this strategy have been most effective, and says that "increasing attention must be paid to reducing the hazards for those who unfortunately continue the habit".

CANADA PRAISED

Canada was praised by numerous national delegations for its remarkable progress and its unusually informative report. Documentation and program materials have been offered, through WHO, to any other nation wishing to follow a similar strategy.

Canada, said the report in *The Medical Post*, also welcomed the summary by the WHO scientific task force, and believed that sponsorship by WHO would have a world-wide impact on smoking.

PESTICIDE ELIMINATION

This year Canada will become one of the first nations to adopt procedures designed to destroy specific environmental pollutants.

Batch shipments of about 107,000 gallons of DDT formulations, previously used by the Department of National Defence for the control of biting flies at military installations, were shipped for destruction to the Defence Research Establishment Suffield (DRES),

near Medicine Hat, Alberta late last month. The process will be carried out in a specially-designed "destructor" plant. The majority of DND stores of DDT will be neutralized by December in the destructor system, which cost \$150,000.

The neutralization program, necessitated by the restrictions imposed on the use of DDT in Canada, represents a collaborative effort involving the Defence Research Board, the Surgeon-General's Branch of the Canadian Armed Forces and an industrial firm in Burlington, Ontario, which is designing and fabricating the plant.

FOUR-STAGE PROGRAM

The pesticide-destruction program will proceed in four stages. First to be neutralized will be DND's formulations of DDT in kerosene and part of the existing stocks of DDT emulsion concentrates; next the chlorinated pesticides held by other Federal Government departments; then, materials stored by the provinces, and finally, destruction of those now held in storage by Canadian cities and municipalities.

DRB and Armed Forces specialists began investigating requirements for the plant about a year ago.

The general project began when DRES was instructed to conduct a literature search and to follow every available lead in planning a procedure for destroying the hydrocarbon pesticide combinations held by the Department.

The destructor will resemble a water-pipe seven feet in diameter and 15 feet long, with a vertical scrubbing-tower at one end 27 feet high and seven feet in diameter. The installation resembles a single-stage jet engine with a vertical tower at the exit end.

The DDT combinations will be injected into the destructor and atomized in a high-temperature refractory, where complete combustion will take place. Water, to serve as a coolant, will be introduced at the top of the tower and will flow through a Teflon filter. This will cool and liquify the combustion products which will then leave the system as a harmless dilute acid.

Destruction will be achieved at a rate of 100 gallons an hour. It is estimated that with operations scheduled to begin about July 1, neutralization of the Department's surplus DDT stocks should be completed in December. The operation will be carried out on a continuous basis.

When similar formulations to be shipped to DRES by other Federal Government departments, the provinces and municipalities have been destroyed, the scientists will then determine the recalibrations necessary to modify the system for the destruction of compounds with different combustion products.

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