

Construction of the diversion tunnel for the St. Mary Dam was begun in 1946. This tunnel, 20 feet in diameter and 2,115 feet in length, was completed in 1947. Excavation of the irrigation tunnel for the St. Mary Dam was completed during the summer of 1949 and work on placing the lining in the tunnel was almost completed by Mar. 31, 1950. Fill operations on the dam continued during 1949. Completion of work on the main dam is expected in 1950.

Six and one-half additional miles of main canal joining the Pothole Coulee Reservoir with the St. Mary Dam were completed during the 1949 construction season. In addition, excavation work on the St. Mary spillway was begun in the autumn of 1949 and was almost completed by Mar. 31, 1950.

*Central Saskatchewan River Development.*—The Central Saskatchewan Development is a proposed irrigation project of the territory lying between the town of Elbow and the city of Saskatoon. The key structure on the project will be a dam on the South Saskatchewan River located at a point midway between the towns of Outlook and Elbow in Saskatchewan.

The plan is to stabilize agriculture in the south central area of the Province where prolonged droughts have created serious economic problems for over 50,000 farmers. Full use will be made of the river's water resources through irrigation, water control, power, urban water supply, recreation and employment.

Considerable investigational work was undertaken on the project during the year ended Mar. 31, 1950, a full report of which was presented to the Government of Canada.

*Bow River Irrigation Project.*—The Bow River Project is the undeveloped portion of the Canada Land and Irrigation Company project located west and north of Medicine Hat in Alberta. Development of this project will facilitate the irrigation of 180,000 additional acres of land in that district. The Government of Canada has authorized the purchase of the project from the Canada Land and Irrigation Company and negotiations are under way to complete the purchase and to execute the agreement. This project is being undertaken by the Government of Canada in order to rehabilitate hundreds of farmers now residing within the drought areas of southern Saskatchewan and southeastern Alberta. In addition, it is expected that this scheme will serve as a stabilizing influence on agriculture in south central Alberta.

Engineering surveys and soil mechanics investigations were commenced on this project during the 1949-50 fiscal year.

*Red Deer River Project.*—The proposed Red Deer River Development will bring under irrigation over 500,000 acres of land located in the east central part of Alberta. The project will consist of a dam on the Red Deer River at Ardley and about 100 miles of main canal to two main reservoirs—Craig Lake and Hamilton Lake.

The dam will contain power installations to produce power for pumping and also for sale commercially. An estimated 20,000,000 kwh. of water power will be available for sale when fully developed.

Engineering topographic and plain table surveys on lands proposed for irrigation were all but completed during the 1949-50 fiscal year. Engineer surveys on proposed irrigation works were also nearing a stage of completion and negotiations were under way to finalize all those phases of study pertinent to the development of the project.

*Irrigation Development in British Columbia.*—Irrigation development in British Columbia has been undertaken in connection with the Veteran's Land Act and at the request of the British Columbia Government. Two projects, namely, the Chase