

concerns is the International Minerals and Chemical Corporation, which has 2,000 acres under cultivation.

The aim of the phosphate miners now is to reclaim one acre for each acre mined out, a process that is restoring the countryside to the attractiveness that the remainder of Polk County presents to the visitor.

Only a short driving distance from the phosphate area is Winter Haven and its Cypress Gardens, which has already planned a multi-million-dollar expansion in anticipation of greater tourist volume from Disney World, a vast project soon to rise near Orlando. The Cypress Gardens Sheraton, a 165-unit motel opposite the entrance to Cypress Gardens, was opened last month. It has a rooftop convention hall seating 700, while another convention hall will seat 400.

Here in Lakeland, plans are being discussed for a civic auditorium that would be used for such varied purposes as sports, recreation and cultural entertainment.

MINING'S GREEN THUMB—MINE PLAN FOR TOTAL RESOURCE MANAGEMENT—SIMULTANEOUS MINING-RECLAIMING OF PHOSPHATE HOLDINGS IS MORE ECONOMICAL—CREATES USABLE LAND FROM WHAT ONCE WAS CONSIDERED USELESS SWAMP, AND DEVELOPS PROPERTY FOR HOUSING, RECREATION, CONSERVATION, FOOD PRODUCTION OR FOREST PRODUCTS

One of Florida's greatest assets—the richness of its phosphate deposits—contributes handsomely to the economic importance of the state and its people. Jobs, payrolls and business activities of phosphate mining add more than \$250-million a year to Florida's economy. The industry also employs over 10,000 state residents, who earn more than \$70-million annually. In addition, allied industries furnishing goods and services to the phosphate producers employ thousands of other workers earning many more millions of dollars.

Phosphate shipments also help make Tampa the largest port between New Orleans and Norfolk, ranking it among the first six ports in the nation in freight car unloadings. In 1966, Florida's production of 21.0-million long tons of phosphate rock accounted for about 28% of the global output of approximately 75-million long tons. From this state's total, 7-million long tons of phosphate rock were exported to foreign customers, a market vital to the future economic health of the industry and the community around it.

These are the dollar and cent values of the industry to the public. What is not commonly appreciated are the additional dividends contributed by the industry in the form of land for housing developments, for crops, for wildlife refuges, and for recreational activities. These added benefits are all possible because of a voluntary program of reclaiming phosphate land after it has been mined.

Coordinating this voluntary plan is the Land Use & Reclamation Committee, of the Florida Phosphate Council (FPC), whose members are: Agrico Chemical Co. Div., Continental Oil Co.; American Cyanamid Co.; Armour Agricultural Chemical Co.; Borden Chemical Co.; Smith-Douglass Div.; W. R. Grace & Co., Agricultural Products Div.; Farmland Industries Inc.; International Minerals & Chemical Corp.; Mobil Chemical Co., Agricultural Chemicals Div.; Occidental Agricultural Chemicals Corp.; and F. S. Royster Guana Co. A non-profit trade organization of Florida phosphate rock processors, FPC is largely responsible for this pictorial review of what is being done with reclaimed land in the industry.

The most sophisticated method of land restoration—simultaneous mining-reclaiming—was developed in 1960 by American Cyanamid Co. This system evolved over many years, and was an outgrowth of a need to reduce reclaiming costs to a reasonable amount. Earlier attempts at land reclamation produced costs exceeding \$1,000 per acre, and this figure was considered uneconomical in this highly competitive plant food raw materials industry. Under the new method, all land mined, except that needed for waste colloidal clay settling and water conservation basins, can be restored immediately to a value that is equal or greater than its original worth.

Essentially, land reclamation is made an integral part of mine planning and mine operations by deciding before exploitation starts what the ground should look like after the deposit is depleted.

Since phosphate rock removal leaves pits which eventually become lakes, it may be desirable to plan for these lakes in a logical manner. Mine cuts are designed to accomplish this, and the engineering layout on the preceding page illustrates the method.