Iron-Ore Resources of the United States Including Alaska and Puerto Rico, 1955

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A survey of iron-ore resources of the United States, with selected bibliography and tables of iron-ore reserves and potential ore

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ALASKA

Iron deposits are known to occur at a number of localities in Alaska (pl. 2), and although discovery of other deposits can be expected, the area appears unfavorable for deposits of major size.

PRINCE OF WALES ISLAND

The principal iron deposits of Alaska, which occur in the Kasaan Peninsula of Prince of Wales Island, are replacement masses of magnetite in a folded and faulted part of a sequence of volcanic rocks. Accessory amounts of the copper-bearing mineral, chalcopyrite, are present and locally were sufficiently abundant to have been mined from 1905 to 1918 in the Mount Andrew-Mamie area; minor amounts of gold and silver were also recovered.

The largest iron deposits in the Kasaan Peninsula are in the Mount Andrew-Mamie area, mainly in two gently inclined bodies along the bottom of folds. The ore body at the Mount Andrew mine is a compound mass of numerous contorted layers of magnetite and an approximately equal amount of interlayered rock; it is 600 feet long and 550 feet wide, and extends to a depth of 100 to 150 feet. The deposit at the Mamie mine is at least 400 feet long, 15 to 50 feet thick, and is known to a depth of 400 feet and probably does not extend much deeper.

Deposits in other parts of the Kasaan Peninsula are steeply inclined masses along fracture zones. The main reserve is in the Poor Man deposit, which is 1,500 feet long and 15 to 150 feet wide and is estimated to extend to a depth of at least 200 feet.

Lenses of magnetite in Jumbo basin (pl. 2) are believed to be replacements of marble. The principal lens is 300 feet long and as much as 60 feet thick and extends for more than 400 feet at an inclination of 60°. A few much smaller lenses are present.

HAINES-KLUKWAN

At Haines-Klukwan, altered volcanic rocks over an area of about 2 square miles average about 13 percent iron recoverable as magnetite-ilmenite that is found in disseminated form and in anastomosing masses or veins. The rock in a zone about 2 miles long and 500 feet wide averages about 20 percent iron. An alluvial fan at Klukwan is believed to average about 10 percent magnetic iron over an area of about 4 square miles, with a maximum thickness of about 700 feet. Milling tests by the U.S. Bureau of Mines indicate that concentrates

containing about 60 percent Fe and 2 to 4 percent TiO_2 can be obtained with a concentration ratio of about 10 : 1.

SNETTISHAM

Iron deposits at Snettisham are similar to those at Haines and underlie an area approximately 8,000 feet long and 2,000 feet wide. The average crude ore contains about 12 percent magnetic iron, and concentration to 20 percent of the original sample volume is required for assays of 60 percent iron.