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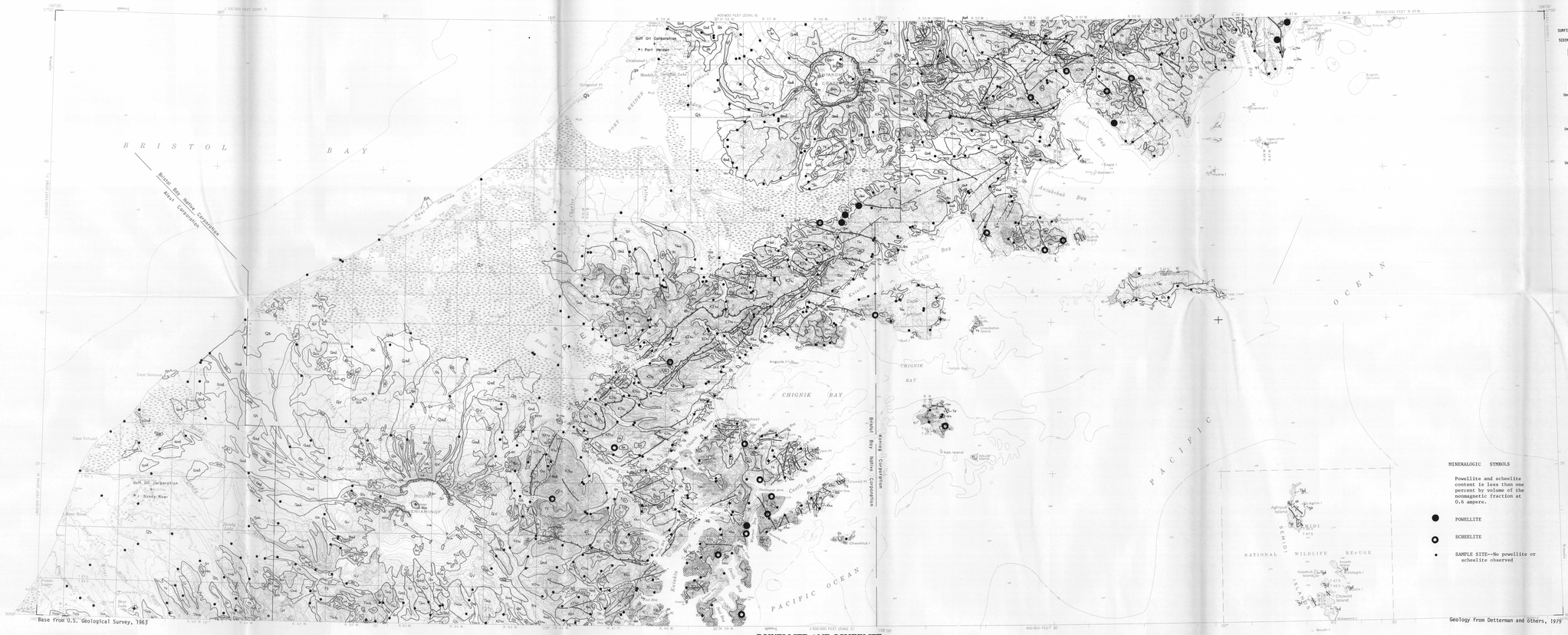
MISCELLANEOUS FIELD STUDIES
MAP MF-1053I

FOLIO OF THE CHIGNIK AND SUTWIK ISLAND QUADRANGLES, ALASKA
MINERALOGIC MAPS FOR SELECTED MINERALS
SHEET 2 OF 2



POWELLITE AND SCHEELITE

ANGLESITE, CERUSSITE, CINNABAR, CUPRITE, GALENA, MOLYBDENITE, SAPPHIRE, SMITHSONITE AND SPHALERITE

SCALE 1:250 000

0 5 10 15 20 25 MILES
0 5 10 15 20 25 KILOMETERS

MAPS SHOWING MINERALOGIC DATA FOR SELECTED MINERALS IN NONMAGNETIC HEAVY-MINERAL CONCENTRATES OF STREAM SEDIMENTS IN THE CHIGNIK AND SUTWIK ISLAND QUADRANGLES, ALASKA

By
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1980

DISCUSSION

Reconnaissance geochemical and mineralogic sampling was done in the Chignik and Sutwik Island quadrangles, Alaska, during 1977 and 1978 as part of the Alaska Mineral Resource Assessment Program (AMRAP) (Detterman and others, 1980). These maps show the occurrence of pyrite, barite, chalcopyrite, arsenopyrite, powellite, scheelite, anglesite, cerussite, cinnabar, cuprite, galena, molybdenite, corundum (var. sapphire), smithsonite, and sphalerite in the nonmagnetic fraction of heavy-mineral concentrates of stream-sediment samples.

The heavy-mineral concentrates were obtained by panning stream sediments in the field to remove most of the light minerals. The panned samples were then sieved through a 20-mesh (0.8 mm) sieve in the laboratory, and the minus-20-mesh fraction was further separated with bromoform (specific gravity, 2.86) to remove any remaining light-mineral grains. Magnetite and other strongly magnetic heavy minerals were removed from the heavy-mineral fraction by use of a hand magnet. The remaining sample was passed through a Frantz Isodynamic Separator[1] and a nonmagnetic fraction obtained. Samples from approximately 620 sites were examined for mineralogical content. Identifications were done with the aid of a binocular microscope and an x-ray diffractometer. The nonmagnetic concentrates primarily contained low-iron magnesium silicates, zircon, sphene, apatite, tourmaline, rutile, and anatase. Most ore and ore-related minerals also occurred in this fraction.

Minerals from heavy-mineral concentrates reflect known mineralized areas and indicate other anomalous areas.

[1] The use of trade names is for descriptive purposes only and does not constitute endorsement of these products by the U.S. Geological Survey.

REFERENCES

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Map Area

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