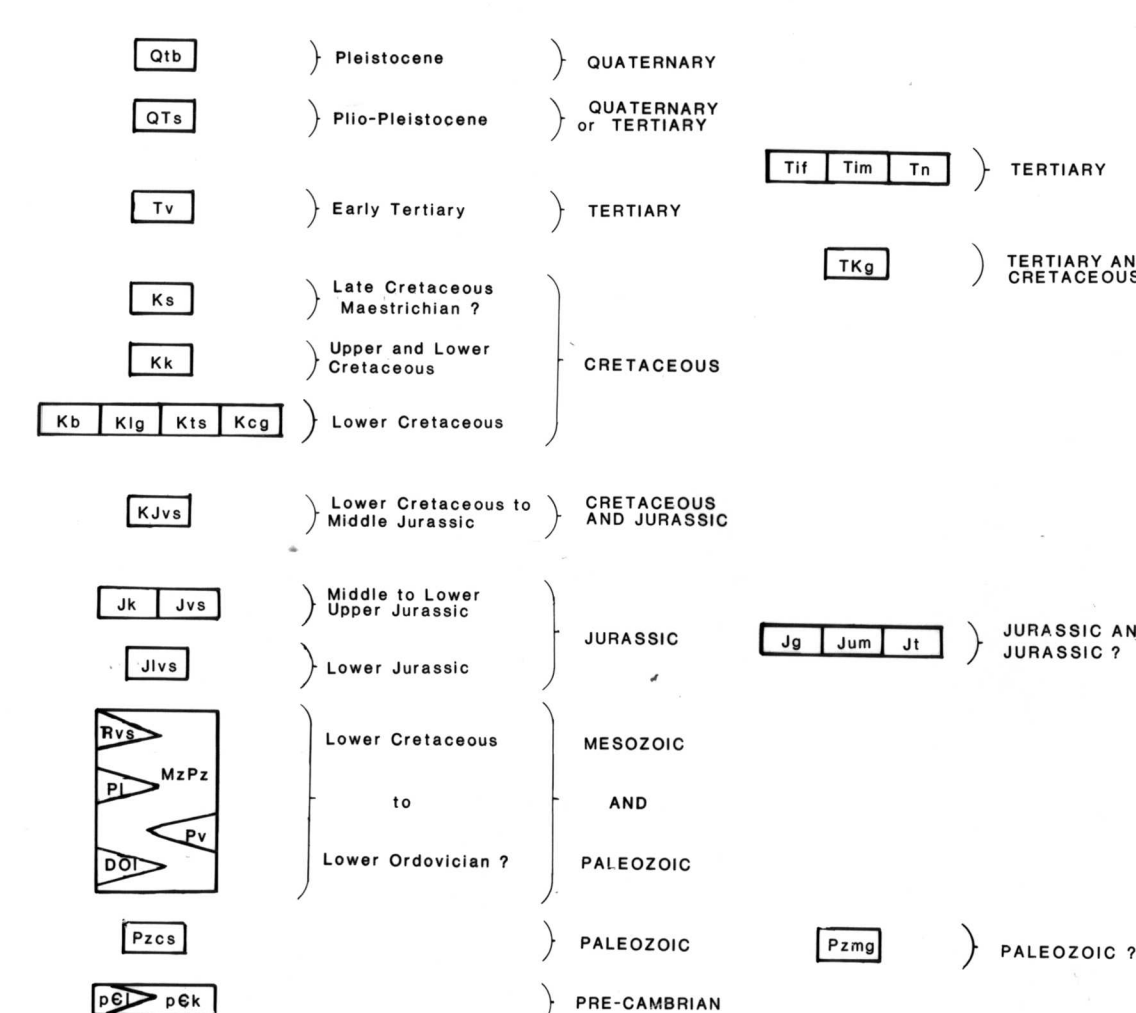


## GEOLOGY GENERALIZED FROM HOARE AND COONRAD (1978)

## SURFICIAL DEPOSITS

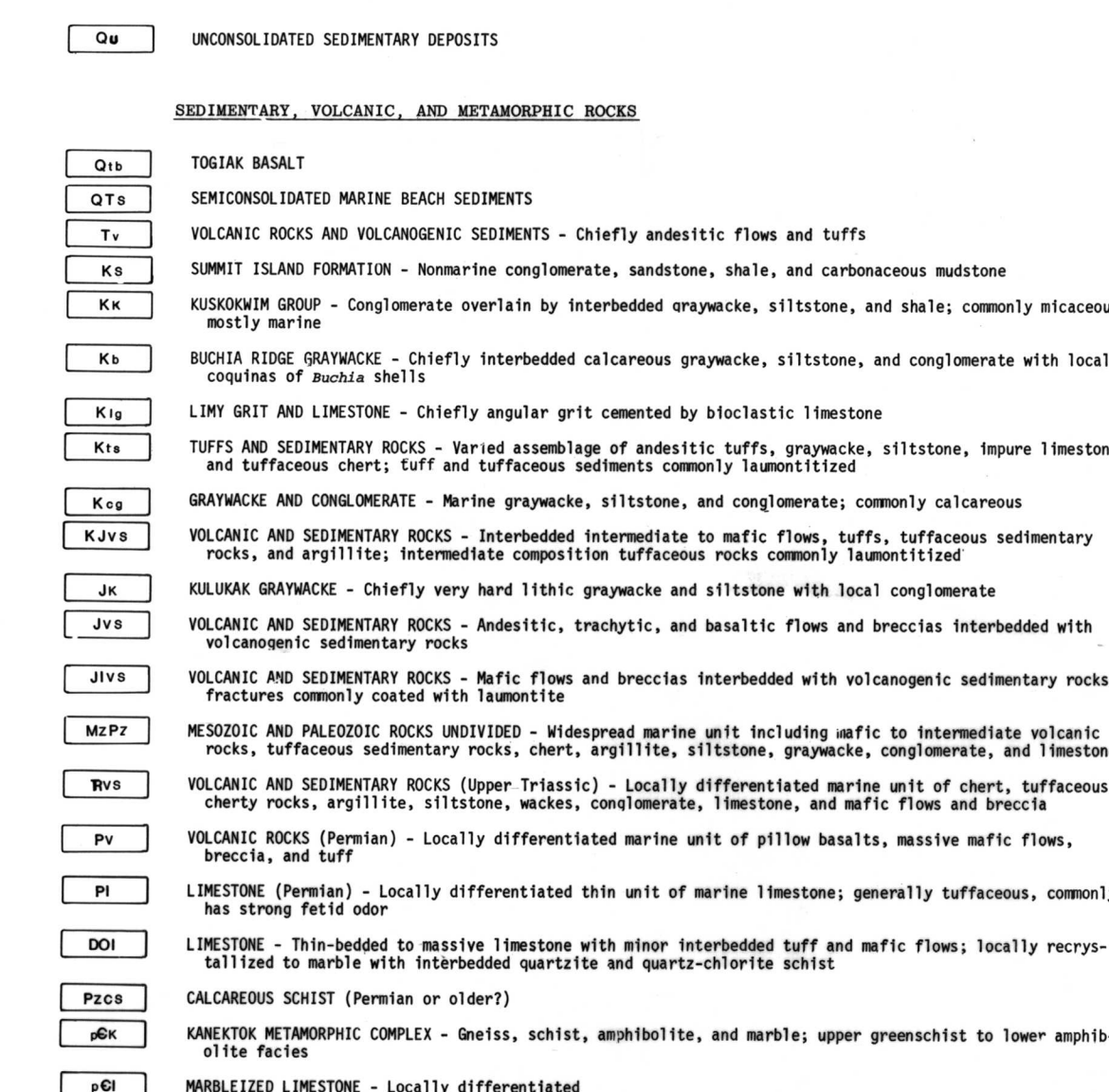
VOLCANIC, SEDIMENTARY,  
AND METAMORPHIC ROCKS

## INTRUSIVE ROCKS

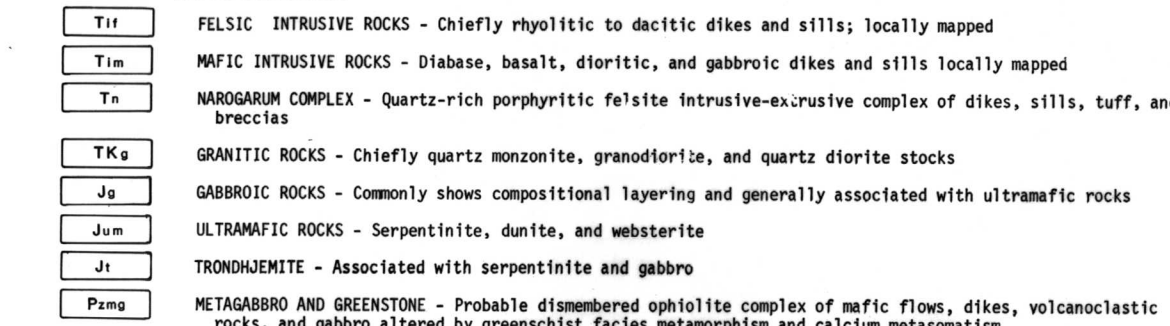


### DESCRIPTION OF MAP UNITS

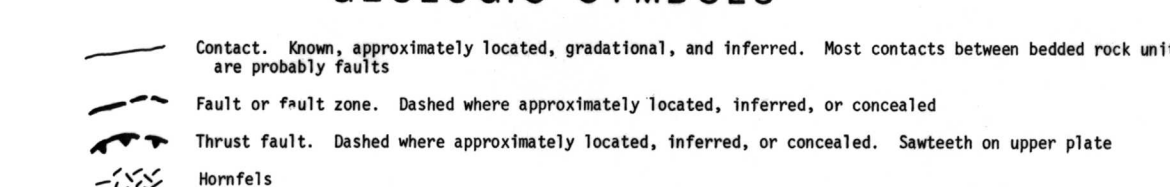
SUBJECT: DEPORT



## FOCUS



GEOLOGIC SYMBOLS



## GEOCHEMICAL SYMBOLS

## RED MOUNTAIN ULTRAMAFIC BODY

## GEOCHEMICAL SAMPLE SITES

- Y ROCK (CLARK, GRYBECK, GREENWOOD, AND OTHERS, 1978;  
COONRAD, AND OTHERS, 1978)
- \* CONCENTRATE (OVERSTREET, AND OTHERS, 1973)
- ◇ OFFSHORE AND ONSHORE SEDIMENTS (BARNES, AND  
OTHERS, 1978)
- ◎ BEACH AND STREAM SEDIMENTS (BERRYHILL, 1963)
- STREAM DRAINAGE SEDIMENT (HESSIN, AND OTHERS, 1978)
- STREAM DRAINAGE SEDIMENT (CLARK, GRYBECK, HESSIN,  
AND OTHERS, 1978)

## ABUNDANCY

- NUMBER WITH SOLID ROCK SAMPLE-SITE SYMBOL REPRESENTS GEOCHEMICAL CONCENTRATION IN PARTS PER MILLION (PPM)
- SOLID STREAM-DRAINAGE SAMPLE-SITE SYMBOL INDICATES GEOCHEMICAL ABUNDANCE OF 90TH PERCENTILE VALUE OR GREATER IN TWO OR MORE GEOCHEMICAL DETERMINATIONS AS SHOWN IN HISTOGRAMS (SHEET 1)
- ABUNDANCE SYMBOLS REPRESENTING 95TH PERCENTILE OR GREATER CONCENTRATIONS DETERMINED IN STREAM-DRAINAGE SITE SAMPLES ARE SHOWN WITH HISTOGRAMS (SHEET 1)

## DISCUSSION OF GEOCHEMISTRY

THE TWO SHEETS COMPRISING THIS REPORT SHOW THE DISTRIBUTION AND ABUNDANCE OF COBALT AS GEOCHEMICALLY DETERMINED IN VARIOUS SAMPLES COLLECTED FROM LOCATIONS THROUGHOUT THE THOMES AND HAGEMASTER ISLAND QUADRANGLES REGION. SHEET 1 COVERS THE ENTIRE REGION AND SHEET 2 COVERS THE AREA OF ABUNDANT SAMPLE DATA IN THE VICINITY OF PLATINUM. SAMPLE LOCATION AND CONCENTRATION SYMBOLS ARE SIMILAR ON BOTH SHEETS. DATA PRESENTED HAVE BEEN COMPILED FROM ANALYSES AND CALCULATIONS REPORTED BY BARNES AND OTHERS (1978); CLARK, GRYBCEK, AND GREENWOOD, AND OTHERS (1978); CLARK, GRYBCEK, HESSIN, AND OTHERS (1978); CONRAD AND OTHERS (1978); HESSIN AND OTHERS (1978); AND OVERSTREET AND OTHERS (1973).

THE HISTOGRAMS ON SHEET 1 HAVE BEEN USED TO IDENTIFY THE CONCENTRATIONS OF COBALT THAT MIGHT BE ANOMALOUS. ALTHOUGH THESE HISTOGRAMS ARE BASED SOLELY ON THE ANALYSES REPORTED BY HESSIN AND OTHERS (1978), THE RESPECTIVE SAMPLE POPULATIONS (BETWEEN 800 AND 900 SAMPLES) APPEAR TO PROVIDE REPRESENTATIVE CONCENTRATION STATISTICS. MANY OF THE HIGHER VALUES OF CONCENTRATION OF COBALT SHOWN ON THE MAPS OF SHEET 1 ARE LOCATED IN AREAS KNOWN TO BE KNOWN TO CROSS OUT WITHIN THE IMMEDIATE SOURCE AREA, AND SUCH VALUES ARE NOT NECESSARILY ANOMALOUS (SEE HISTOGRAM OF ROCK ANALYSES DATA FROM RED MOUNTAIN ULTRAMAFIC BODY ON SHEET 2). THE GENERALIZED GEOLOGIC MAP DATA INCLUDED IN SHEET 1 AND THE MORE DETAILED GEOLOGIC MAP OF THE SOURCE AREA OF SHEET 1981 CAN BE UTILIZED IN CONSIDERING POSSIBLE SOURCE ROCKS FOR THE COBALT THAT HAS BEEN DETECTED IN VARIOUS GEOCHEMICAL SAMPLES.

## BY

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