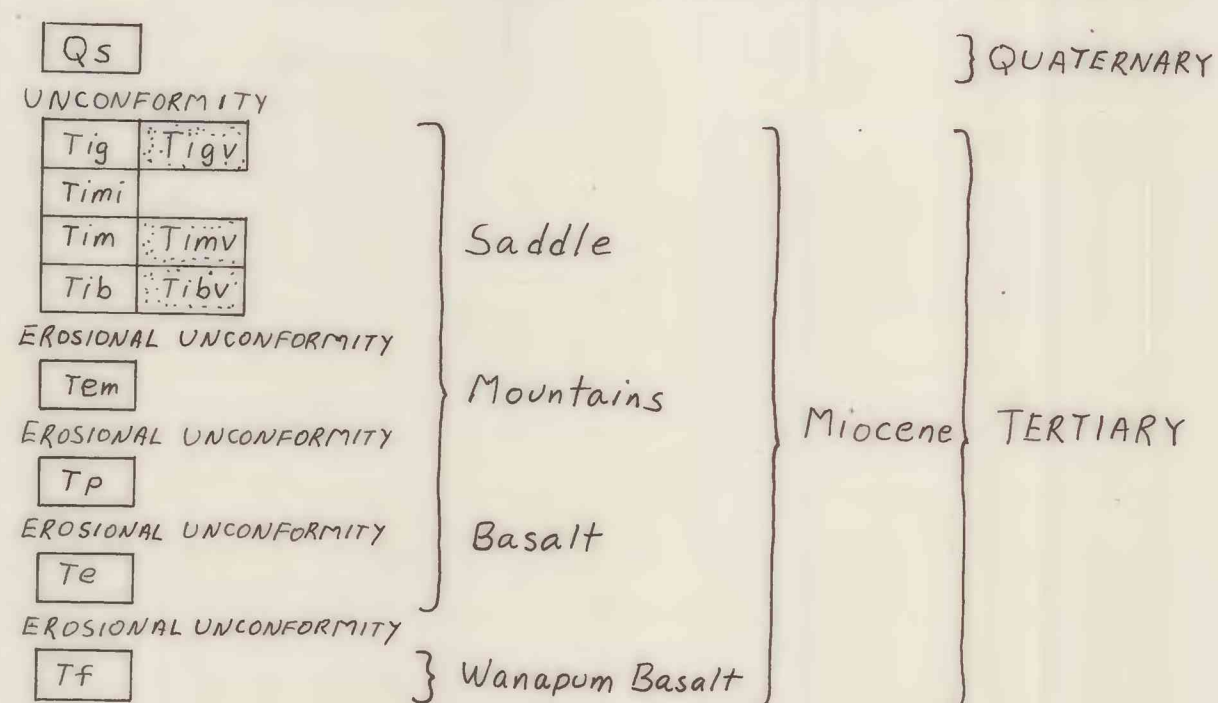


BEDROCK GEOLOGIC MAP OF THE VENT SYSTEM FOR THE ICE HARBOR MEMBER OF THE SADDLE MOUNTAINS BASALT, ICE HARBOR DAM - BASIN CITY AREA, SOUTHEAST WASHINGTON

BY D. A. SWANSON AND R. T. HELZ

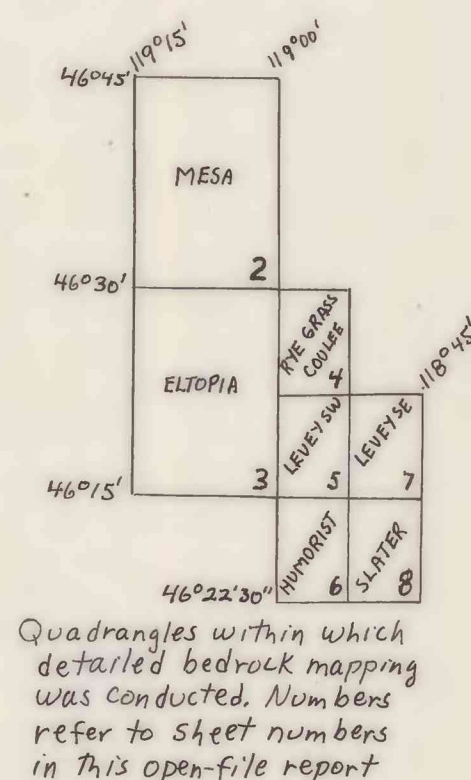
1979

CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

- Qs** SEDIMENTARY DEPOSITS - Chiefly silt, sand, and gravel deposited by Missoula (Spokane) floods. Includes alluvium and wind-blown sand.
- COLUMBIA RIVER BASALT GROUP**
- YAKIMA BASALT SUBGROUP**
- SADDLE MOUNTAINS BASALT**
- ICE HARBOR MEMBER**
- Tig** Basalt of Goose Island - Flows, minor tephra, and dikes of Goose Island (formerly Ice Harbor 2) chemical type (Wright and others, 1973; Helz and others, 1976). Contains scattered phenocrysts of plagioclase, olivine, and magnetite generally less than 5 mm across. Low latitude normal (transitional) magnetic polarity (Choiniere and Swanson, 1979).
- Tigv** Vent material - Collapsed pahoehoe (Swanson, 1973) and tephra.
- Timi** Basalt of Martindale - Phryic flows of reversed magnetic polarity (Choiniere and Swanson, 1979).
- Tim** Indian Memorial flow of Helz (1978) - Uppermost flow or flows in basalt of Martindale. Indian Memorial chemical type (Helz, 1978). Less phryic than older Martindale flows and lacks clots.
- Timv** Basalt flows, minor tephra, and dikes - Contains phenocrysts and glomerophyric clots of plagioclase, augite, and olivine. Some clots are 2 cm or more across. Of Martindale (formerly Ice Harbor 1) chemical type (Wright and others, 1973; Helz and others, 1976).
- Tib** Vent material - Collapsed pahoehoe and tephra, commonly palagonitized.
- Tibv** Basalt of Basin City - Flows, minor tephra, and dikes of Basin City chemical type (Helz and others, 1976). Phenocrysts and glomerophyric clots of plagioclase and olivine, with no clinopyroxene. Normal magnetic polarity (Choiniere and Swanson, 1979).
- Tem** Vent material - Collapsed pahoehoe and tephra.
- Elephant Mountain Member** - Nearly aphyric flows of Elephant Mountain chemical type (Wright and others, 1973). Normal and transitional magnetic polarity (Rietman, 1966; Choiniere and Swanson, 1979).
- Pomona Member** - Slightly phryic flow of Pomona chemical type (Wright and others, 1973). Small phenocrysts of plagioclase, clinopyroxene, and olivine. Reversed magnetic polarity (Rietman, 1966; Choiniere and Swanson, 1979). Unit includes vitric tuff below and mixed in peperitic fashion with basalt flow along Snake River.
- Esquatzel Member** - Phryic basalt of Esquatzel chemical type (Swanson and others, 1979b) occurring in four small (<5 m) columnar blocks 5-6 km south of Eltopia. Numerous clots of plagioclase and clinopyroxene less than 5 mm across. Blocks are questionably in place; they may be erratics deposited by Missoula (Spokane) floods.
- Wanapum Basalt**
- Tf** FRENCHMAN SPRINGS MEMBER - Phryic and aphyric flows of Frenchman Springs chemical type (Wright and others, 1973). Plagioclase, commonly in glomerophyric clots, is only phenocryst mineral. Normal magnetic polarity (Rietman, 1966).



EXPLANATION

- Contact. (Dashed where approximately located)
- Crest of anticline and trough of syncline. (Dashed where approximately located; dotted where concealed)
- Monocline, showing abrupt increase of dip in direction of arrows. (Dashed where approximately located; dotted where concealed)
- X 71-118
Location and number of chemically analyzed sample in Wright and others (1979). First two digits are either 71, 72, 73, 74, or 75.
- X 70-B-202
Location and number of chemically analyzed sample in Brock and Grolier (1973).
- X
Dike of Ice Harbor Member

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