UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY AMERICAN FORK (JUNC. U.S. 91) 23 MI. ASPEN GROVE 3.4 MI. R. 3 E. 32'30" R. 4 E. 2000000 FEET 15ig 13ald 1 -- Thrust Fault 17'30" 32'30" R. 4 E. Mapped, edited, and published by the Geological Survey SCALE 1:24000 ROAD CLASSIFICATION Control by USGS and USC&GS HARD-SURFACE ALL WEATHER ROADS DRY WEATHER ROADS Topography from aerial photographs by multiplex methods Aerial photographs taken 1946. Field check 1948 Heavy-duty______ *LANE IS LANE Improved dirt____ Medium-duty ___ + LANE_IS LANE Unimproved dirt ======== Polyconic projection. 1927 North American datum Loose-surface, graded, or narrow hard-surface 10,000-foot grid based on Utah coordinate system, I DI FI FI FI FI U. S. Route State Route CONTOUR INTERVAL 40 FEET DATUM IS MEAN SEA LEVEL Unchecked elevations are shown in brown Dashed where approximately located; barbs on upper plate Dashed land lines indicate approximate location BRIDAL VEIL FALLS, UTAH N4015-W11130/7.5 APPROXIMATE MEAN DECLINATION, 1948 THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS EDITION OF 1950 FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO OR WASHINGTON 25, D. C. Mapped mainly in 1937, 1948, 1949, and 1952 with the assistance at different times of R.R.Clawson, F.E.Dennis, GEOLOGIC MAP OF THE BRIDAL VEIL FALLS QUADRANGLE UTAH a.M. Franson, H. J. Bissell and S. O. Silva

A.A. BAKER

1963

OPEN-FILE MAP

EXPLANATION

Q1s Qal Qow Q+ Qls, landslide

Qal, valley fill Qow, outwash and alluvial cones Qt, terrace gravel

> Qm Moraine and glacial outwash

Pos Pol "en: beu Pob

Pou gray to tan, fine- to medium-grain, limy to quartzitic sandstone with some beds of thinto thick-bedded gray to black limestone with two thick beds of dark-gray limestone in lower part, including the Shingle Mill Limestone Member (Pos) 200 to 450 feet thick at the base, in part containing abundant nodules of black chert. Total thickness is about 15,500 feet but rocks in the quadrangle include only about the lower 7,000 feet which is of Pennsylvanian Missouri to Virgil age. Pol, gray to tan limy to quartzitic sandstone with numerous thin to thick beds of gray to black limestone in part sandy and in part with abundant nodules and stringers of black chert, about 4,000 to 8,350 feet thick with a bed of light-gray-weathering limestone up to 50 feet thick present locally about 2,000-2,300 feet above the base containing the coral Chaetetes (ch. bed). Basal unit is the Bridal Veil Limestone Member (IPob) 1,250 feet thick consisting of dark-gray to black thick-bedded limestone. Bridal Veil Limestone Member and the overlying IPol range in age from Morrow to Des Moines or Early Missouri. OUTRAL FOR LATION

MANNING CANYON SHALE

Black and brown shale with interbedded shaly sandstone, thin beds of rusty-weathering fine-grained dark-gray quartzite, grit, and thin to thick beds of gray to black limestone 1,650 feet thick. Massive gray limestone 90 feet thick near the middle of the formation contains fossils of Pennsylvanian age but cephalopod fossils of Mississippian age occur about 75 feet below the limestone near the road at the divide 1,1/2 miles northwest of the near the road at the divide 1 1/2 miles northwest of the Rock Canyon Picnic Area.

Dark-gray to black, thin, regularly bedded limestone, and shaly limestone with some interhedded black shale and occasional thin beds of rusty-weathering, fine-grained, dark-gray quartzite. Thickness is 2,800 feet as measured on north side of Rock Canyon.

Light-to dark-gray, thin-to thick-bedded limestone with some dolomite, contains abundant chert and is interbedded with medium-to fine-grained, light-gray to buff, limy to quartzitic sandstone which causes a characteristic buff and gray banding of the outcrop; thickness is 520 feet measured in Rock Canyon.

DESERTE LIMESTONE

Interhedded limestone and dolomite in thick heds with distinctive light-and dark-gray banding. Black chert in thin layers, blebs, and irregular masses is present in most beds and is very abundant in some. The Deseret Limestone is 375 feet thick as measured in Rock Canyon but ranges in thickness up to 585 feet in Provo Deer Creek and 650 feet in the Quirrh Mountains.

> mg GARDISON LIMESTONE

Dark-gray, mostly thin-bedded limestone with abundant

light-brown to black chert, characteristically cliff-forming. Abnormal thickness of 900 feet measured in Rock Canyon contrasts with measurements of about 600 feet elsewhere in the Wasatch Mountains and may be due to thickening at the crest of the fold in Rock Canyon.

FITCHVILLE FORWITON Medium-to light-gray thin-bedded to massive cliff-forming dolonite that is free of chert and contains numerous small vugs; some interhedded limestone in upper part and 2 to 9 feet of grit at the base of the formation; thickness 265 feet.

MAXFIELD LIMESTONE

Medium-gray to nearly white dolomite 165 feet thick at top of formation in Rock Canyon is underlain by 430 feet of light-to dark-gray mainly thin-bedded limestone with abundant yellow-brown to grayish-yellow mottling. Thickness variable beneath unconformity.

Olive-green micaceous shale with some thin beds of greenish sandstone and a zone with thin beds of shaly brown-mottled limestone in the upper part; thickness 250 feet as measured in Slate Canyon 3 miles south of Rock

OPHIR FORMATION

£+

TINTIC QUARTZITE

Light-brown-weathering, white to tan, fine-to coarse-grained, thin-to thick-bedded quartite with a few conglomeratic bands in the lower 200 feet containing quartz pebbles up to 2 inches in diameter and with boulders of quartz a foot or more in diameter common at the base; uppermost beds are greenish quartite with some interbedded greenish shale at gradational contact with Ophir Formation; thickness 1,170 feet as measured in Slate Canyon.

Unconformity

pemf MINERAL FORK TILLITE

Gray to brown, fine-to coarse-grained micaceous siltstone weathering dark-brown to black with scattered rounded to subrounded boulders up to 4 feet in diameter consisting incomplete thickness at mouth of Rock Canyon about 200 feet.

> Contact Dashed where approximately located

______ Dashed where approximately located; dotted where inferred; bar and ball on downthrown side.

AAAAAAAAA Thrust Tault

Strike and dip of heds

Strike and dip of overturned beds U.S. Geological Survey OPEN FILE MAP This map is preliminary and has not been edited or reviewed for conformity with Geological Survey

standards or nomenclature.

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