



EXPLANATION

- Joint Symbol
Dip adjacent to flag
Spacing opposite flag
- Strike and Dip of beds
- Fault Trace
- Approximate Contact, structural feature
- Concealed Contact, structural feature
- Shear Zones
- Dikes
- Scarp
- Detail Line Traverse

TERTIARY ROCKS

GERONIMO HEAD FORMATION ?

Tut UPPER TUFFS, well bedded (upper) to massive (lower) tuffs surrounding the area of interest. A generic term for rocks above El 2700 to the north and beyond the talus slope to the south of the river. Individually described where mapped.

APACHE GAP RHYODACITE ?

Trd RHYODACITES, massive ash flow, buff colored, fine grained volcanic ejecta that has been fused into a hard homogeneous mass, discretely banded along flowage lines, difficult to break with hammer blow. Contains irregularly spaced near vertical joints 3-10 feet apart. One set about parallel to canyon wall; a second about perpendicular. Horizontal fractures are irregular and discontinuous across vertical joints.

Tdp DACITE PORPHYRY, a flow banded mass of igneous rock, light grey to red, except for f.w. bands, a homogeneous porphyry of plagioclase with hornblende and mica in a fine matrix. Contains clasts of andesite near lower contact. Difficult to break with heavy hammer blow. Light to moderate near vertical jointing oriented northwest and northeast on 3-5 ft. centers, 2-5 yd³ blocks are formed by 0-40° dipping joints formed along flow structure lines.

Tua UPPER ANDESITE, a basaltic flow, dark gray, with red mottled zones of olivine altered to iddingsite. Fragments ring when struck with hammer. Highly to intensely jointed; especially near lower contact. Joints are short and discontinuous; tend to be oriented along flow, forming sharp edged interlocking plates.

Tag AGGLOMERATE, a lahars or mudflow type deposit, light purple, contains 20% subangular clasts of mostly scoriaceous basalt fragments 1/2-2", 15% 1 ft. and a few up to 6 ft. in a fine grained matrix. Both clasts and matrix can be broken with a moderate hammer blow. Individual clasts are very well bonded by the surrounding matrix; clasts cannot be broken out. A few poorly defined near horizontal joints and a 40-60° dipping set break the mass into 2-5 yd³ blocks where exposed.

Tla LOWER ANDESITE, a basaltic flow, dark gray, with red mottled zones of olivine altered to iddingsite. Fragments ring when struck with hammer except for some deeply weathered upper surfaces which are shattered to soil like. Highly to intensely jointed; especially near shear zones and around upstream terminus of unit except lightly jointed downstream north side. Joints are short and discontinuous; tend to be nearly parallel structural features otherwise perpendicular to cooling surfaces, some slight columnar structure.

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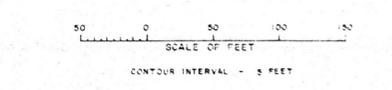
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TOPOGRAPHY IN THIS AREA HAS BEEN MODIFIED. SEE DWG. NO. 25-300-58



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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

SALT RIVER PROJECT - ARIZONA

HORSE MESA DAM

GEOLOGY

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RELOGY BY: _____ TECHNICAL APPROVAL: _____
 DRAWN BY: _____ DRAWN BY: _____
 CHECKED BY: _____ ADMIN. APPROVED: _____