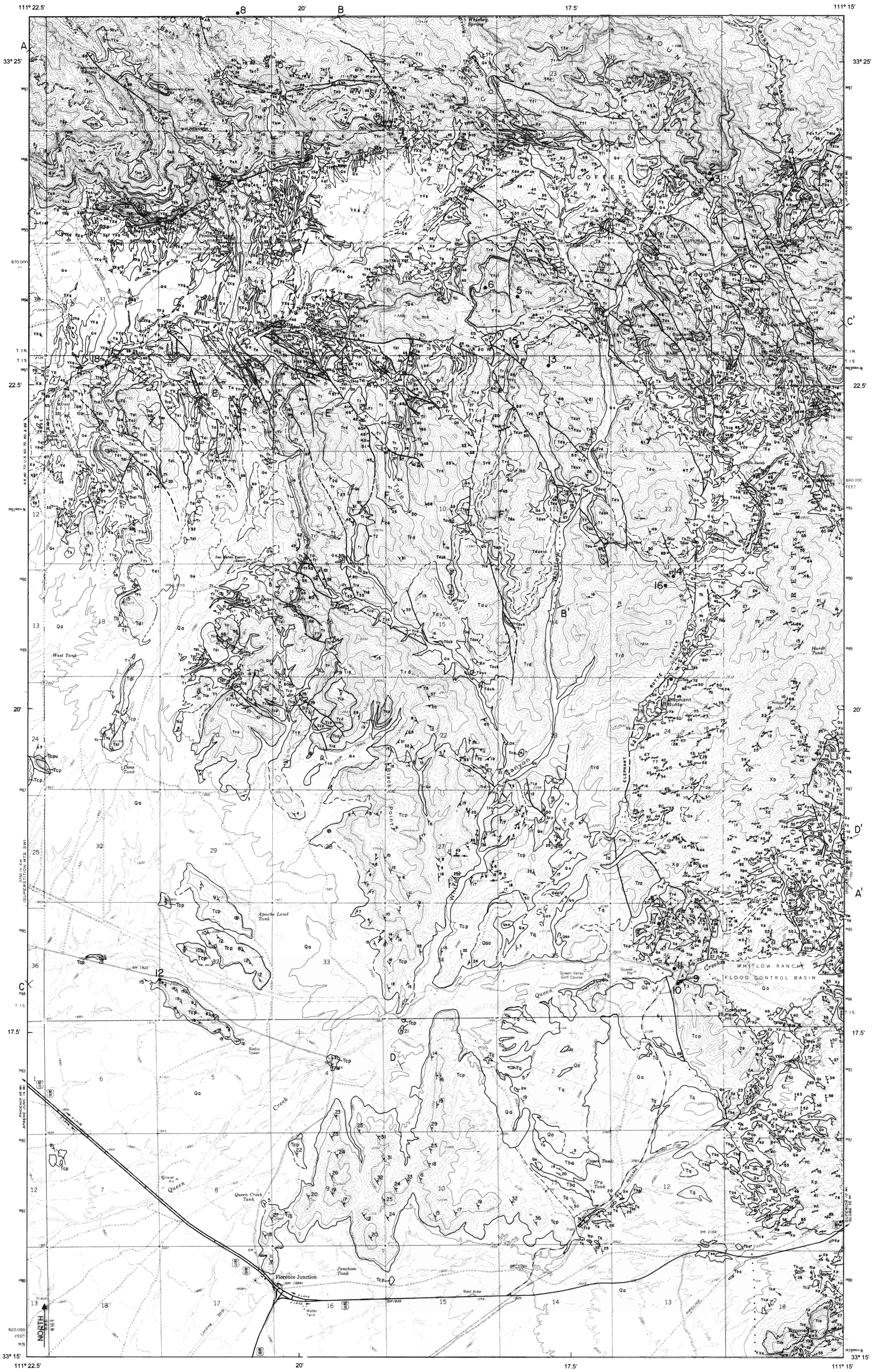

SCALE 1:24,000

1 .5 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

GEOLOGIC MAP OF THE FLORENCE JUNCTION AND SOUTHERN PORTION OF THE WEAVERS NEEDLE 7.5' QUADRANGLES, PINAL COUNTY, ARIZONA

by

Charles A. Ferguson, and Steven J. Skotnicki

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MAP UNITS

Quaternary map units

d	**disturbed ground (Recent)**
Qa	Alluvium and colluvium (Quaternary)
Qao	Older alluvium and colluvium (Quaternary)

Tertiary rock units of the Superstition Mountains

Tru	Upper rhyolite lava (Tertiary)
Trut	Lithic tuff (Tertiary)
Tfi	Fine-grained intrusive rhyodacite (Tertiary)
Tfu	Upper rhyodacite lava of Coffee Flat Mountain (Tertiary)
Tfl	Lower rhyodacite lava and intrusions of Coffee Flat Mountain (Tertiary)
Ts	**Superstition Tuff, undifferentiated (Tertiary)**
Tsfl	**Superstition Tuff, lower Flatiron member (Tertiary)**
Tsp	Superstition Tuff, Peralta Canyon member (Tertiary)
Tsm	Superstition Tuff, Miners Needle member (Tertiary)
Tsh	Superstition Tuff, Hieroglyphic member (Tertiary)
Tsx	Superstition Tuff, mesobreccia (Tertiary)
Trx	Rhyolite lava breccia (Tertiary)
Tr	Intrusive rhyolite (Tertiary)
Tdl	Lower dacite lava (Tertiary)
Ta	Andesite and basaltic andesite lava (Tertiary)
Trdl	Lower rhyodacite lava (Tertiary)

Tertiary rock units of the Whitlow Canyon area

Tq	**Unit of Queen Valley** (Tertiary)
Tqb	Basalt lava (Tertiary)
Teb	Lamproite of Elephant Butte (Tertiary)
Tcp	Tuff of Comet Peak (Tertiary)
Tcpu	Tuff of Comet Peak, poorly welded interval (Tertiary)
Tfu	Upper rhyodacite lava of Coffee Flat Mountain (Tertiary)
Tful	Lower flow unit of the upper rhyodacite lava of Coffee Flat Mountain (Tertiary)
Tdu	upper dacite lava (dacite of Buzzards Roost) (Tertiary)
Tdub	Upper dacite lava, breccia (Tertiary)
Tduv	Upper dacite lava, vitrophyre (Tertiary)
Trd	Rhyodacite lava (rhyodacite of Whitlow Canyon) (Tertiary)
Tr	Rhyolite lava (Tertiary)
Tt	Unwelded, bedded tuff (Tertiary)
Tdx	Crystal rich dacite lava (dacite of Randolf Canyon) (Tertiary)
Tbb	Bedded breccia (Tertiary)
Ta	Andesite or basaltic andesite lava (Tertiary)
Tau	Upper andesite lava (Tertiary)
Tdl	Lower dacite (dacite of San Mateo Castro Ranch) (Tertiary)
Tal	Lower andesite lava (Tertiary)
Trdl	Lower rhyodacite lava (Tertiary)
Ttq	Tuff of Quarter Circle U Ranch (Tertiary)
Tbcg	Coarse-grained basalt/basaltic andesite (Tertiary)
Tb	Basalt lava, undifferentiated (Tertiary)
Tc	Conglomerate (Tertiary)
Tx	Breccia (Tertiary)

Middle Proterozoic rock units of the Apache Group and Apache diabase

Ya	Apache Group and Apache diabase, undifferentiated (middle Proterozoic)
Yd	Diabase (middle Proterozoic)
Yb	Basalt (middle Proterozoic)
Ym	Mescal Limestone (middle Proterozoic)
Yp-q	Pioneer Shale and Dripping Springs Quartzite, undifferentiated (middle Proterozoic)
Yq	Quartzite, feldspathic arenite, and arkose (Dripping Springs Quartzite) (middle Proterozoic)
Yc	Barnes Conglomerate (middle Proterozoic)
Yr	Rhyolite (middle Proterozoic)
Yp	Pioneer Shale (middle Proterozoic)
Ys	Scanlan Conglomerate (middle Proterozoic)

Middle Proterozoic intrusive rock units

YXq	Quartz monzonite (middle to lower Proterozoic)
YXge	Granite (middle to lower Proterozoic)
YXa	Amphibolite (middle to lower Proterozoic)
YXg	Granitoid (middle to lower Proterozoic)
YXd	Diorite (middle to lower Proterozoic)
YXv	Quartz veins (middle to lower Proterozoic)

Lower Proterozoic metamorphic rock units and foliated granitoids

Xgf	Foliated granitoid (lower Proterozoic)
Xp	Pinal Schist, undifferentiated (lower Proterozoic)
Xpa	Pinal Schist, amphibolite (lower Proterozoic)
Xpc	Pinal Schist, calc-silicate schist and marble (lower Proterozoic)
Xpq	Pinal Schist, quartzite (lower Proterozoic)

MAP SYMBOLS

Dikes

- mafic
- felsic
- intermediate

Contacts, dashed where approximate, dotted where concealed

- depositional or intrusive
- fault, ball on downthrown block

Strike and dip of planar elements

- depositional or intrusive contact
- dike
- fault contact
- bedding
- eutaxitic foliation (welded tuffs)
- flow-banding (lavas)
- principle schistosity or gneissic layering in Pinal Schist north of Milk Ranch
- tectonic foliation in plutonic rocks

Metamorphic foliations (Pinal schist south of Milk Ranch)

- S_1, principal schistosity or cleavage
- S_2, crenulation cleavage, locally intensely developed
- S_3, broad, chevron-style, crenulation cleavage

Linear elements

- trend of flow-banding (welded tuffs)
- trend and plunge of S_2 crenulations or fold hinges
- trend and plunge of S_3 crenulations or fold hinges
- trend and plunge of slickenlines on fault surfaces (plunge value not everywhere shown)

- trace of axial plane: syncline, anticline
- B' Cross-section line

17 SANIDINE $^{40}Ar/^{39}Ar$ GEOCHRONOLOGY SAMPLE LOCATIONS

1) FX-184 18.93 ± 0.12 Ma
2) *2/4/18-16
3) 1-12-95-2 18.02 ± 0.05 Ma
4) 2-23-95-4 no sanidine
5) FS-297 18.02 ± 0.09 Ma
6) FS-298 18.31 ± 0.04 Ma
7) FX-163 18.56 ± 0.06 Ma
8) FX-162 18.60 ± 0.05 Ma
9) FS-307 18.49 ± 0.06 Ma
10) *8/10/24-2
11) FX-186 18.57 ± 0.03 , 19.35 ± 0.07 (old crystals)
12) FX-187 18.51 ± 0.08 Ma
13) FS-301 18.63 ± 0.06 Ma
14) FX-183 18.65 ± 0.12 Ma
15) FS-300 18.53 ± 0.11 Ma
16) FX-182 18.64 ± 0.06 Ma
17) FX-185 18.71 ± 0.09 Ma
18) FX-164 no sanidine

Dates added September, 1997 from Ferguson and others, in preparation

*Samples submitted to USGS by Don Peterson

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