BEDROCK GEOLOGY OF THE SANTAN MOUNTAINS, PINAL AND MARICOPA COUNTIES, ARIZONA
EAST HALF

by Charles A. Ferguson, and Steven J. Skotnicki, June 1996

EARTH FISSURE MAPPING by Ray C. Harris (from Arizona Geological Survey Open-File Report 94-11)

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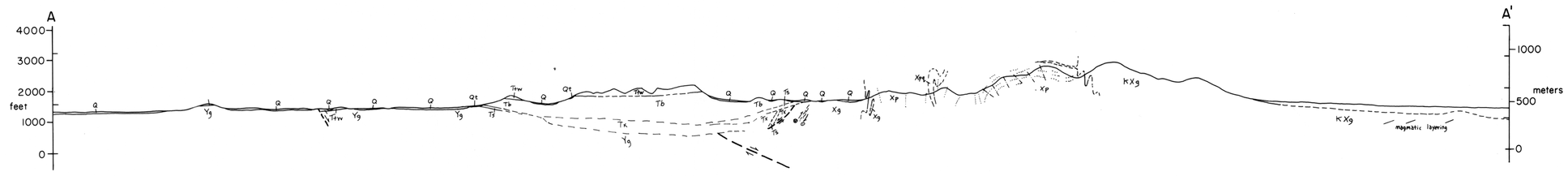
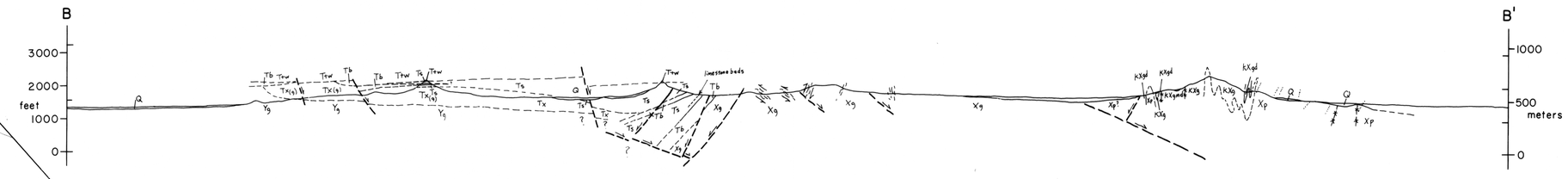
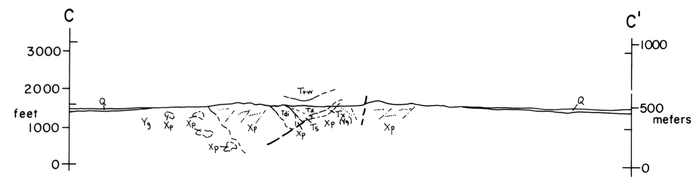
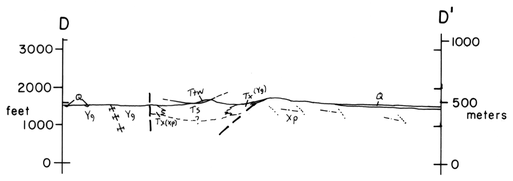






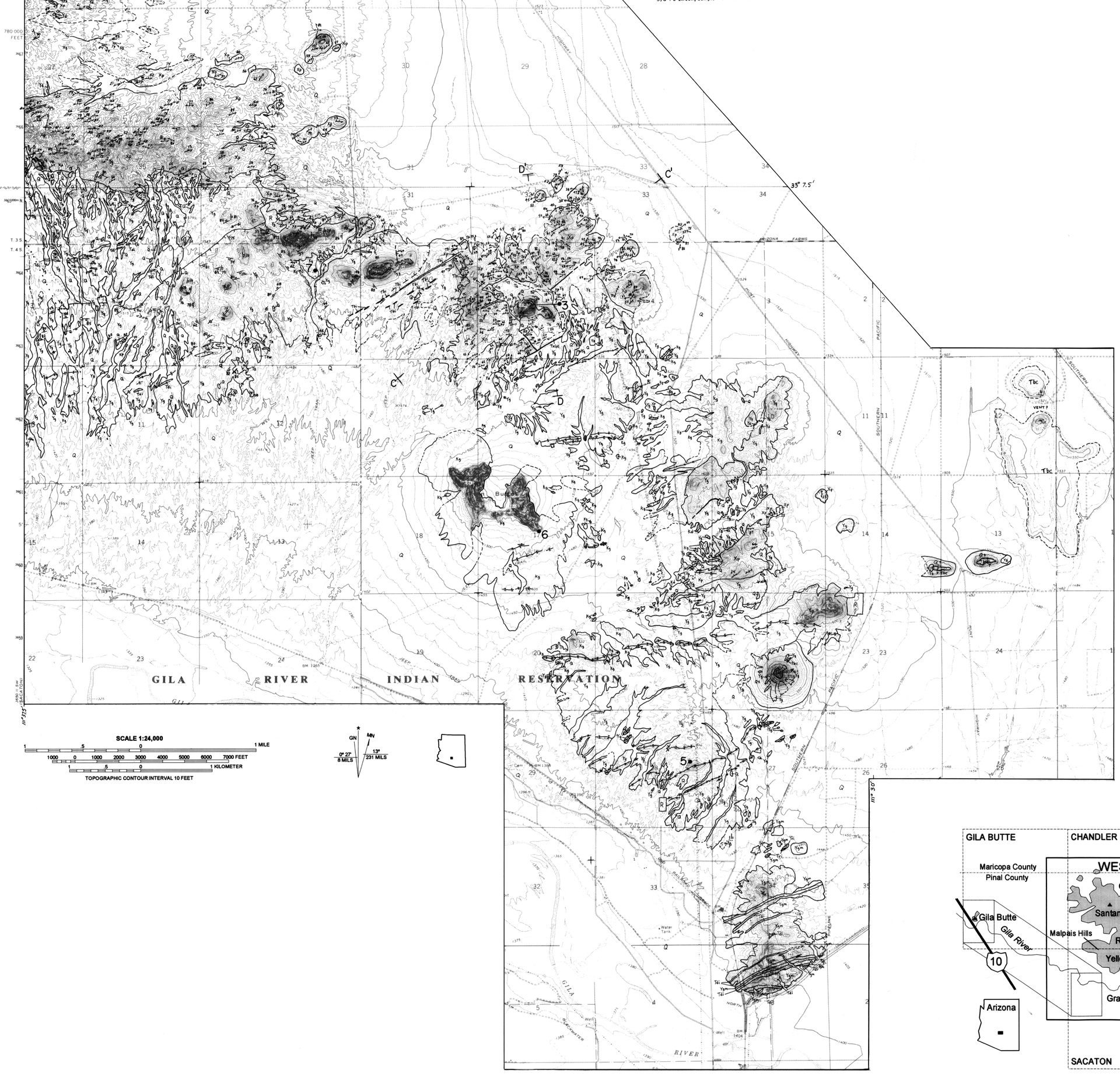


5 • RADIOMETRIC AGE SAMPLE LOCATIONS

*1) $^{40}Ar/^{39}Ar$ sanidine, sample FX-5: 18.58 ± 0.11 Ma
*2) $^{40}Ar/^{39}Ar$ sanidine, sample FX-10: 18.80 ± 0.16 Ma
*3) $^{40}Ar/^{39}Ar$ sanidine, sample FX-84: 18.56 ± 0.08 Ma
4) K/Ar phlogopite, sample KA-71-74: 26.00 ± 0.54 Ma (Balla, 1972)
5) K/Ar hornblende, sample KA-71-66: 63.90 ± 2.30 Ma (Balla, 1972)
6) K/Ar biotite, sample KA71-65: 66.00 ± 0.90 Ma (Balla, 1972)
7) K/Ar biotite, sample KA71-64: 72.10 ± 1.40 Ma (Balla, 1972)
8) K/Ar biotite, sample KA71-63: 1341 ± 61 Ma (Balla, 1972)

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

9) U-Pb zircon, sample FX-189: 1637.7 ± 4.2 Ma (added Sept, 1998)



EXPLANATION

Quaternary	R	disturbed areas
	Q, Qay, Qt	Quaternary undivided, younger alluvium, talus
Pliocene-Quaternary	Tsy	younger sedimentary deposits
Miocene-Pliocene	Tbc	basalt lava
mid-Tertiary	Ttw	welded tuff
	Tt	unwelded tuff
	Ts	sandstone-conglomerate
	Tb, Tbs	basalt, bedded scoria
	Tx	sedimentary breccia (principal lithology indicated)
early Tertiary	Tdi, Tri, Tbi	intrusive rocks, intermediate, felsic, mafic
Cretaceous	Kg, Kd, Kv	quartz monzonite, diorite, cataclastic zone
Cretaceous?	KXg, KXgl, KXgmd	granite, leucogranite, monzodiorite
Middle Proterozoic	Yd	diabase
	Yg, Ygm	K-feldspar porphyritic granite, medium-grained granite
Early Proterozoic	Xg, Xgd, Xgmd	granodiorite, diorite, monzodiorite, ~ if foliated
	Xp, Xpq	Pinal Schist undivided, quartzite-calc schists

felsic dike (Tri)
intermediate dike (Tdi) dip shown if known
mafic dike (Tbi) dip shown if known
pegmatite dike
anticline
B' cross-section line
limit of alteration, teeth on altered side
earth fissures (in alluvium only)

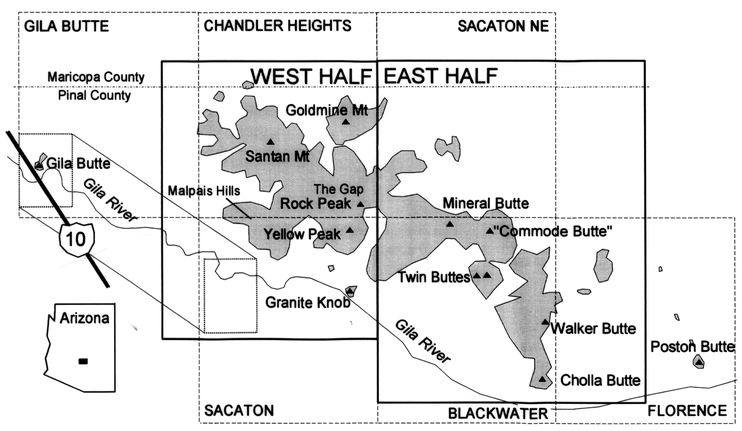
faults and contacts, dashed if approximate, dotted if concealed, dip shown if known
contact
fault, sense unkown
normal fault, ball on hangingwall
thrust fault, teeth on hangingwall

strike and dip of planar features, **dashed if approximated**
17 bedding
87 prominent jointing
14 eutaxitic foliation (in Tertiary units only)
57 magmatic layering
77 tectonic foliation (plutonic rocks)
r 23 S-C fabric, reverse sense, C plane measured
n 37 S-C fabric, normal sense, C-plane measured
s 51 S-C fabric, S-plane measured
67 mylonite, sense unknown
r 43 mylonite, reverse sense
n 23 mylonite, normal sense

metamorphic foliations (Pinal Schist)
53 banding (predates prominent schistosity)
69 prominent schistosity
79 crenulation cleavage (postdates prominent schistosity)

linear features
13 faint crenulation lineation, mineral elongation
21 crenulation lineation, related to secondary cleavage
slickenlines on faults
37 flow-lineation in dikes
41

cross-section symbols
prominent schistosity
crenulation cleavage (postdates prominent schistosity)



Arizona Geological Survey
Open-File Report 96-9, sheet 1 of 2, with text