GEOLOGIC MAP OF THE SOUTHWESTERN PART OF THE NEW RIVER MOUNTAINS, ARIZONA

by

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Scale: 1:12,000

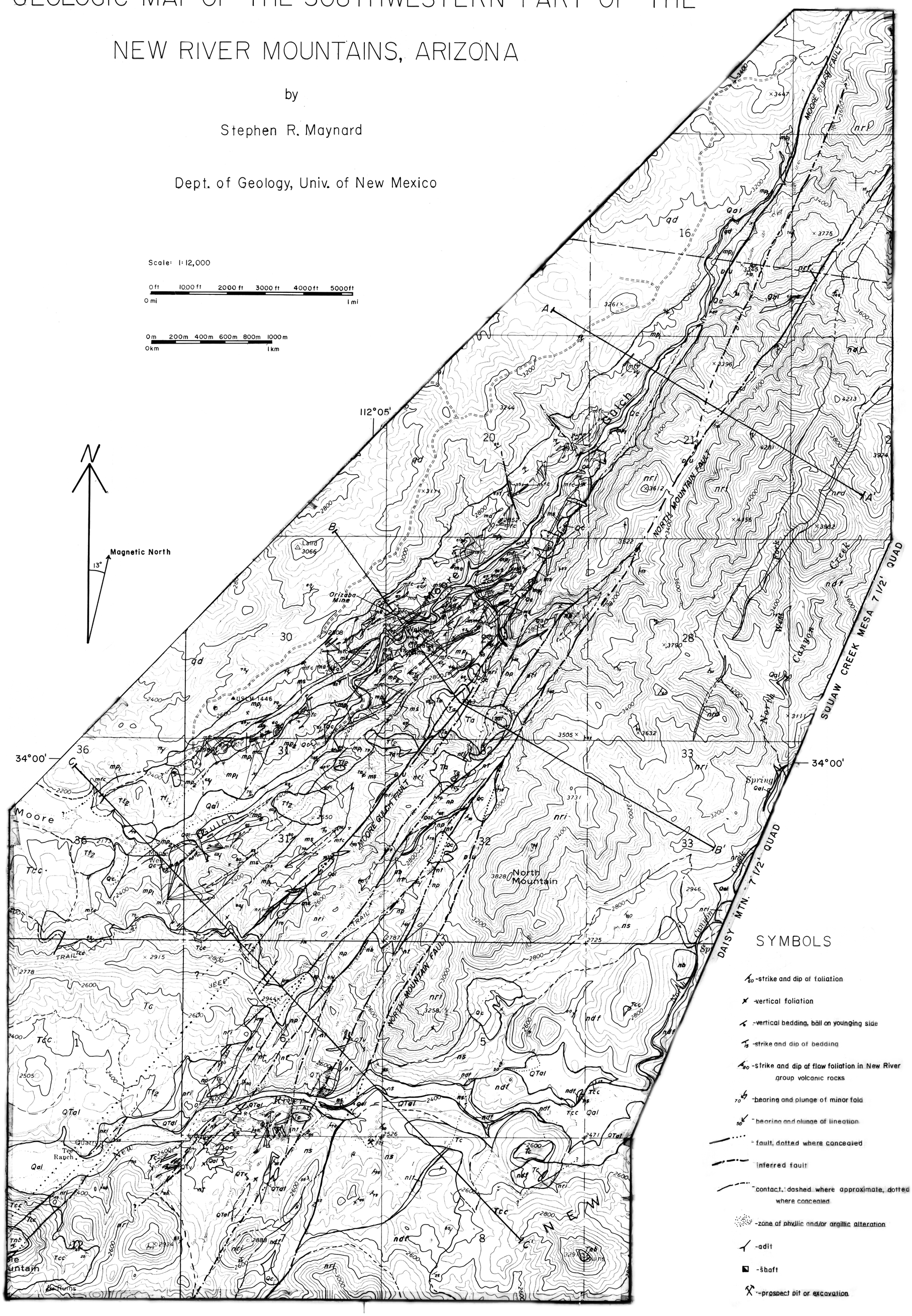
0 ft 1000 ft 2000 ft 3000 ft 4000 ft 5000 ft
0 mi 1 mi

0 m 200 m 400 m 600 m 800 m 1000 m
0 km 1 km

N

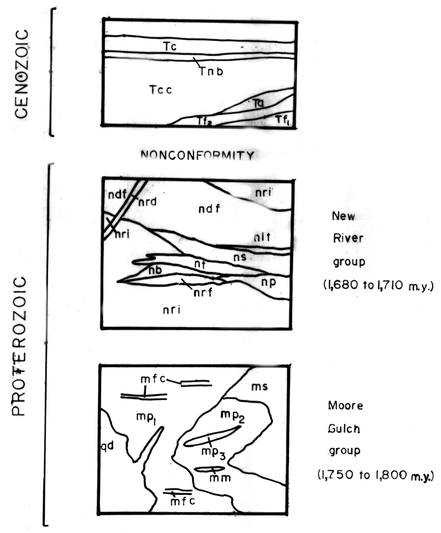
Magnetic North

13°



EXPLANATION

CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

QUATERNARY

- **Qc** — Colluvium. Shown where important contacts are obscured.
- **Qal** — Alluvium of Moore Gulch and New River.

TERTIARY

Pliocene-Recent

- **QTv** — Veins or sinter deposits of massive quartz with minor tourmaline and epidote.

Mio-Pliocene

- **QTal** — Terrace-forming alluvium of New River.

Miocene

- **Tc** — Conglomerate. Composed of New River Mesa basalt (Tnb) and subordinate Precambrian lithologies. 200 to 300 ft (60 to 90 m) thick.
- **Tnb** — Olivine basalt capping Table Mountain, butte in the southeastern part of section 8, and New River Mesa. 30 to 100 ft (9 to 30 m) thick.

Oligocene

- **Tcc** — Chalk Canyon Formation (Gomez, 1979). Lacustrine dolomite and marl, air-fall tuffs, and basalt. 600 to 700 ft (180 to 210 m) thick.
- **Ta** — Hornblende andesite plug, dike, and flows 40 to 60 ft (12 to 18 m) thick.
- **Tf1, Tf2** — Fanglomerate. Contains Precambrian quartz diorite clasts (Tf1) and Precambrian New River group ignimbrite (Tf2).

PRECAMBRIAN

New River group

- **nrd** — Rhyolite dike. Orange, with 3.0 to 8.0 mm plagioclase and 4.0 to 6.0 mm quartz phenocrysts in sericitic groundmass. Up to 170 ft (50 m) thick.
- **ndf** — Dacite flows. Brown, rubbly, with 2.0 to 4.0 mm plagioclase phenocrysts in sericitic groundmass. Up to 3,000 ft (900 m) thick.
- **nlt** — Lithic tuff. Brown to purple, with 0.1 to 5.0 cm aligned lithic clasts.
- **ns** — Hematitic sediments. Volcaniclastic conglomerate, sandstone, and shale. Purple to red, with well-preserved channel-fill conglomerate; graded bedding and rip-up clasts in sandstone. Up to 2,900 ft (880 m) thick.
- **nt** — Tuff. White, tan to red quartz-sericite phyllite with relict pyroclastic textures. Probably equivalent to nri. Up to 2,500 ft (760 m) thick.
- **np** — Phyllite. Green, weakly to moderately foliated, fine grained quartz-chlorite-carbonate rock. Limy mudstone protolith. Up to 600 ft (180 m) thick.
- **nb** — Volcanic breccia. Angular to subangular cobbles and boulders of ignimbrite in tuffaceous matrix. Debris flow or pyroclastic breccia.
- **nrf** — Rhyolite flow. Gray and white 2.0 mm-wide continuous bands with 3.0 mm to 4.0 mm feldspar and quartz phenocrysts. Up to 300 ft (90 m) thick.
- **nri** — Rhyolite ignimbrite. Buff, red, purple, or black where densely welded. Massive resistant outcrops. Flattened pumice and broken crystals of plagioclase and quartz common. Up to 6,000 ft (1,800 m) thick.

- **qd** — Quartz diorite. Green to greenish brown, foliated. Phenocrysts of feldspar and quartz up to 5.0 mm.

Moore Gulch group

- **mp1** — Quartz-chlorite phyllite. Green, fine grained, weakly to strongly foliated. Thin chert and marble layers common. Up to 2,000 ft (640 m) thick. Graywacke protolith.
- **mp2** — Quartz-sericite-chlorite-carbonate phyllite. Buff to greenish brown, moderately to strongly foliated, fine grained. Marble lenses common. Up to 1,500 ft (450 m) thick. Limy sandstone protolith.
- **ms** — Quartz-chlorite schist. Blue-green to green, fissile, strongly foliated. Up to 1,000 ft (320 m) thick. Sandy siltstone protolith.
- **mp3** — Quartz phyllite. Tan to brown, moderately foliated. Breaks with conchoidal fracture. Up to 40 ft (12 m) thick. Rhyolite protolith.
- **ma** — Amphibolite. Green, foliated, and subophitic with 0.8 mm hornblende crystals in a lighter colored matrix. In pod-like bodies 10 ft to 20 ft (3 m to 6 m) thick. Mafic dike or volcanic protolith.
- **mm** — Marble. Tan to brown, non foliated. Up to 35 ft (10 m) thick.
- **mfc** — Ferruginous chert. Red on weathered surfaces; gray on fresh surfaces. Specular hematite layers 0.1 mm to 2.0 mm thick. Chert bodies form bold outcrops from 4 in. to 15 ft (10 cm to 5 m) thick.

SYMBOLS

- 60 — strike and dip of foliation
- vertical foliation
- vertical bedding, ball on younging side
- 15 — strike and dip of bedding
- 80 — strike and dip of flow foliation in New River group volcanic rocks
- 70 — bearing and plunge of minor fold
- 50 — bearing and plunge of lineation
- fault, dotted where concealed
- inferred fault
- contact, dashed where approximate, dotted where concealed
- zone of phyllic and/or argillic alteration
- adit
- shaft
- prospect pit or excavation

ARIZONA GEOLOGICAL SURVEY CONTRIBUTED MAP CM-89-E
1989

CM-89-E
(SHEET 1 of 2)