GEOLOGIC MAP OF THE SOUTHERN PLOMOSA MOUNTAINS, LA PAZ COUNTY, ARIZONA

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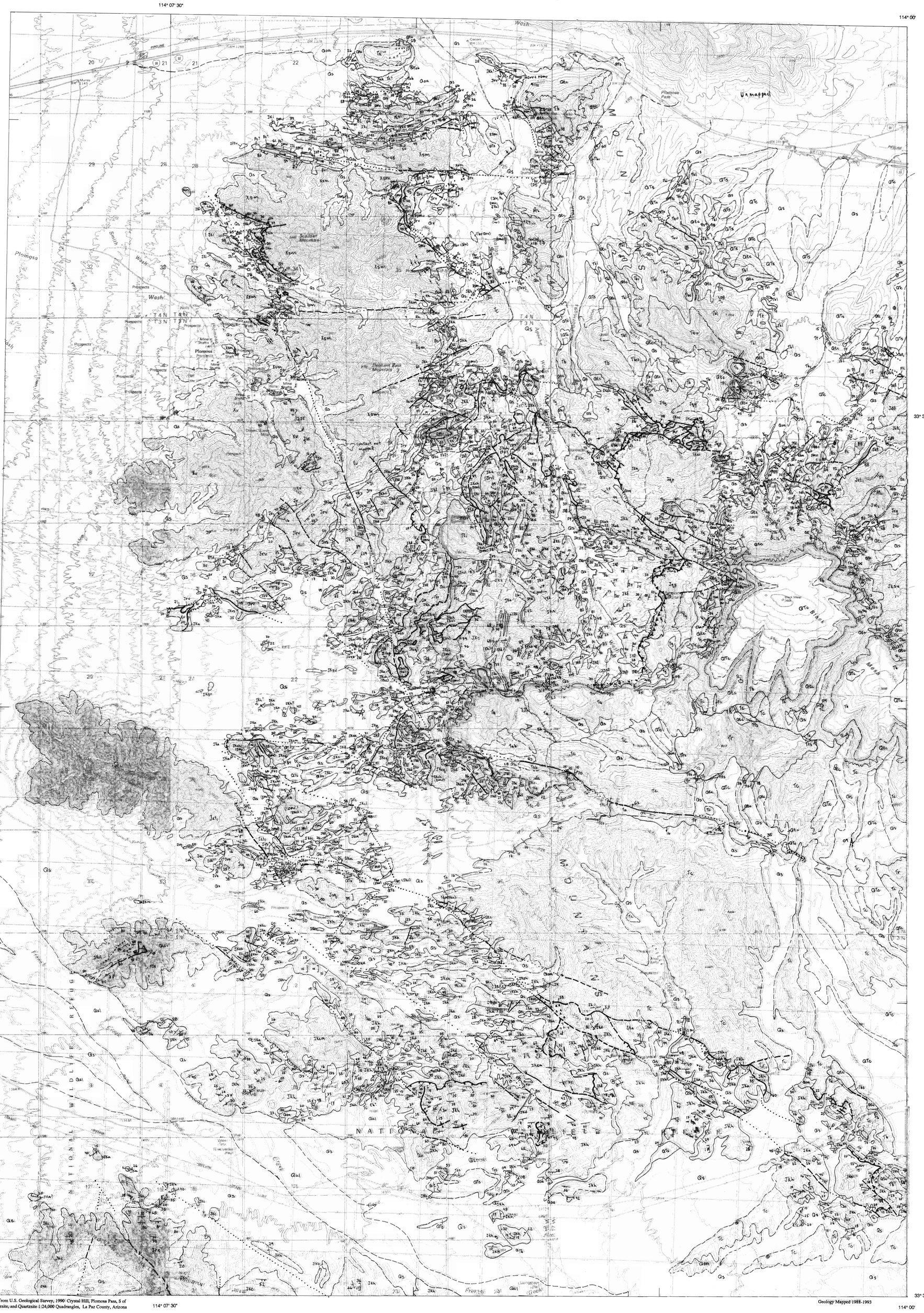

Base from U.S. Geological Survey, 1990 Crystal Hill, Plomosa Pass, S of Quartzsite, and Quartzsite 1:24,000 Quadrangles, La Paz County, Arizona

Geology Mapped 1988-1993

Rock Units

Quaternary

- **Qs** **Undivided sediments**
- **Qtc** **Talus and colluvium**
- **Qoa** **Old alluvium**

Quaternary or Tertiary

- **QTc** **Pedogenic carbonate**
- **QTs** **Boulder and cobble conglomerate**

Tertiary

- **Tss** **Fine-grained sandstone**
- **Tb** **Basalt or basaltic andesite, undivided**
- **Tbu** **Olivine-pyroxene basalt**
- **Tbl** **Plagioclase-pyroxene basalt**
- **Tbb** **Basaltic breccia**
- **Tbs** **Basaltic pyroclastic rocks**
- **Tbi** **Intrusive basalt or basaltic andesite**
- **Ta** **Hornblende-biotite andesite**
  - –·–·– Internal boundaries between flows or domes
- **Tab** **Andesite breccia**
- **Tr** **Rhyolite**
- **Tf** **Felsite lava**
  - vvvv Vitrophyre marker bed
- **Tfi** **Intrusive felsite**
- **Tt** **Welded tuff**
- **Tu** **Poorly welded tuff**
- **Ts** **Tuff and tuffaceous sediments**
- **Tb** **Block tuff**
- **Tc** **Conglomerate**
- **Tsb** **Sedimentary breccia**
- **Tbr** **Monolithologic breccia**

Jurassic or Cretaceous

- **JKd** **Diorite intrusions**
- **Clastic rocks**-- Stratigraphically variable conglomerate, sandstone and mudstone are labeled based on purely lithologic divisions.
  - JKsu undivided sandstone and conglomerate
  - JKsh light grey silvery phyllitic shale
  - JKf very thin bedded, locally laminated, mudstone, siltstone and very fine-grained sandstone.
  - JKs massive to medium bedded lithofeldspathic sandstone and conglomeratic sandstone.
  - JKa Arkosic to feldspathic sandstone, conglomeratic sandstone, and conglomerate
  - JKq vitreous quartzite
  - JKvs volcanic lithic sandstone
  - JKsc interbedded lithofeldspathic sandstone, conglomeratic sandstone and conglomerate
  - JKc Conglomerate--Varieties are subdivided locally based on predominant clast types:
    - JKcl--Limestone clast conglomerate
    - JKca--Arkosic matrix with abundant granitoid clasts
    - JKcm--Mixed clast-abundant Paleozoic carbonate clasts (recognizable lithology), Jurassic volcanic clasts,and granitoid clasts
    - JKcc--Non-descript carbonate clasts, abundant quartzite
    - JKcv--Abundant Jurassic volcanic clasts
  - JKbr monolithologic breccia of angular clasts of grey vitreous quartzite
  - JKmb Megablock conglomerate and breccia--blocks of Paleozoic and Proterozoic rock
  - JKch (Pzl; DMu) Chaos of lenses and blocks of Cb, Dm, Mr, Jv and rarely Pk?.
- **JKh** **Crystal Hill formation**-- interbedded quartzite cobble conglomerate, quartzite, calcareous quartz arenite, and fine to very-fine grained purple sandstone.
  - JKhc basal conglomerate of the Crystal Hill formation

Jurassic

- **Jvs** **Sediments derived from quartz porphyry**
- **Jrv** **Undivided volcanic rocks**
- **Jvc** **Volcanic-lithic conglomerate**
- **Jxq** **Quartz porphyry**--characterized by round quartz phenocrysts up to 6 mm in diameter
- **Jxt_2** **Quartz-feldspar porphyry**--2-3 mm diameter crystal rich, fiamme rare
- **Jda** **Tuff and hypabyssal rocks**--intermediate composition
- **Jxt_1** **Quartz-feldspar porphyry**--2-3 mm crystal rich, fiamme common.
- **Jvb** **Black latite**--Black crystal poor aphanite.
- **Jdf** **Intermediate Volcanic Rocks**--Dacitic lava flows and associated rocks
- **Jqp** **Monzogranite porphyry**--intrusive rock similar to Jxq, with larger crystals
- **Jl** **Latite(?) flow**--Massive dark purple gray lava with local fragmental texture
- **Jv** **Vampire Conglomerate**--Massive cobble to boulder conglomerate

Jurassic, Paleozoic or Proterozoic

- **JPXu** **Tectonite derived from mixed rocks**

Mesozoic

- **Mzs** greenish grey to grey chlorite-muscovite-quartz-feldspar phyllite.

Paleozoic

Permian

- **Pk** **Kaibab Limestone**
- **Pc** **Coconino Quartzite**
- **Pc?** **Quartzite**--like Coconino, but grayer color

Pennsylvanian or Permian

- **Ps** **Supai Formation**

Devonian through Permian

- **PMDu** **Undivided Supai, Redwall and Martin formation**

Devonian or Mississippian

- **DMu** **Martin and Redwall Formations undivided**

Mississippian

- **Mr** **Redwall Limestone**

Devonian

- **Dm** **Martin Formation**

Cambrian

- **Cba** **Bolsa quartzite and Abrigo Formation undivided**
- **Ca** **Abrigo Formation**
- **Cb** **Bolsa Quartzite**

Jurassic or Middle Proterozoic

- **JYcg** **Coarse-grained porphyritic monzogranite**
- **JYd** **Diorite**
- **JYg** **Granite**

Jurassic or Early Proterozoic

- **JXg** **Poorman granitoid**
- **JXr** **Rhyolite dikes**
- **JXi** **Metamorphic tectonite**--metaigneous

Middle Proterozoic

- **Yg** **Monzogranite**

Early Proterozoic

- **Xsm** **Scadden Mountain quartz monzonite**
- **Xh** **Hornfels**
- **Xv** **Metavolcanic rocks**
- **old mafic dike**
- **conglomerate marker bed**
- **sandstone marker bed**
- QUARTZ VEIN

Symbols

wavy strike line indicates irregular foliation

broken strike line indicates approximate measurement

Primary foliation

upright — vertical — BEDDING; strike and dip

FLOW FOLIATION in igneous rocks

Tectonic foliations

CLOSE DISJUNCT CLEAVAGE

PROTOMYLONITE; S-TECTONITE

LAMINATED DIFFERENTIATED FOLIATION

SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0.5 0 1 KILOMETER

CONTOUR INTERVAL 20 AND 40 FEET

N MN 12.5°