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EXPLANATION

SEDIMENTARY

INTRUSIVE IGNEOUS

EXTRUSIVE IGNEOUS

QUATERNARY

- Qal** alluvium
mostly youngest stream sediments; in places includes terrace gravels, talus, and alluvial fan material.
- TQg** Gila conglomerate
weakly cemented conglomerates; in places includes well bedded lacustrine sediments.

-----unconformity-----

TERTIARY

CRETACEOUS

- Ks** terrigenous rocks

-----unconformity-----

PRECAMBRIAN PALEOZOIC

- CMD** undifferentiated marine sedimentary rocks
Carboniferous, Mississippian and Devonian
- Oe** undifferentiated Ordovician and Cambrian rocks
Ordovician: Longfellow Limestone, shales and limestones
Cambrian: Coronado Quartzite

-----unconformity-----

- pEp** Pinal schist

- Und** undifferentiated intrusives
age uncertain; includes rhyolite, latite, and andesites; dikes shown by X'ed lines.
- Tgd** granodiorite
light pinkish gray to light greenish gray hornblende rich; restricted to Markham Wash (area B-2).
- Tal** andesite dikes
light pinkish gray or pale red (area B-2).
- Tgp** undifferentiated hypabyssal granitic porphyries
includes quartz monzonite, granodiorite, quartz diorite of Safford-Morenci mining district; *mostly small stocks or large dikes.

*beyond scope of this project
to subdivide intrusive rocks.

- pEgr** granite
Morenci area only

- Tur** upper rhyolites
light brown to cream; interbedded lithic ash flows and mud flows.

-----unconformity-----

- Tb** basalt flows
very dark gray

-----unconformity-----

- Tdun** undifferentiated Datil volcanics
locally subdivided into the following rock types.

- Tdb** brown welded tuff
(restricted to areas A-1 and B-2)

- Tdr** lithic rhyolite tuff
light cream to light greenish yellow; fragmental, biotite-rich, weakly welded ash flow. May contain some rhyolite flow.

- Tda** andesite porphyry
dark purplish gray, conspicuous plagioclase phenocrysts, (in places abundant geodes). An intermediate flow-rock within the Datil volcanics.

- Tdl** weakly welded ash flows
light colored, restricted to George Canyon area (area A-1).

-----unconformity-----

- Tab** andesitic basalts
vesicular, amygdaloidal or massive, very dark brown to moderate reddish brown; chalcedony filled vesicles and minor quartz veining are conspicuous locally.

-----unconformity-----

- Tr** Red Hills rhyolite
moderate brown, densely welded lithic ash flows

-----unconformity-----

- Ka** andesite flows
(Ka = unaltered, Ka_a = altered), unaltered dark olive brown to dark gray, altered light gray, light yellowish brown to moderate reddish brown (leached cap); porphyritic, brecciated, vesicular, locally bears copper and iron mineralization.

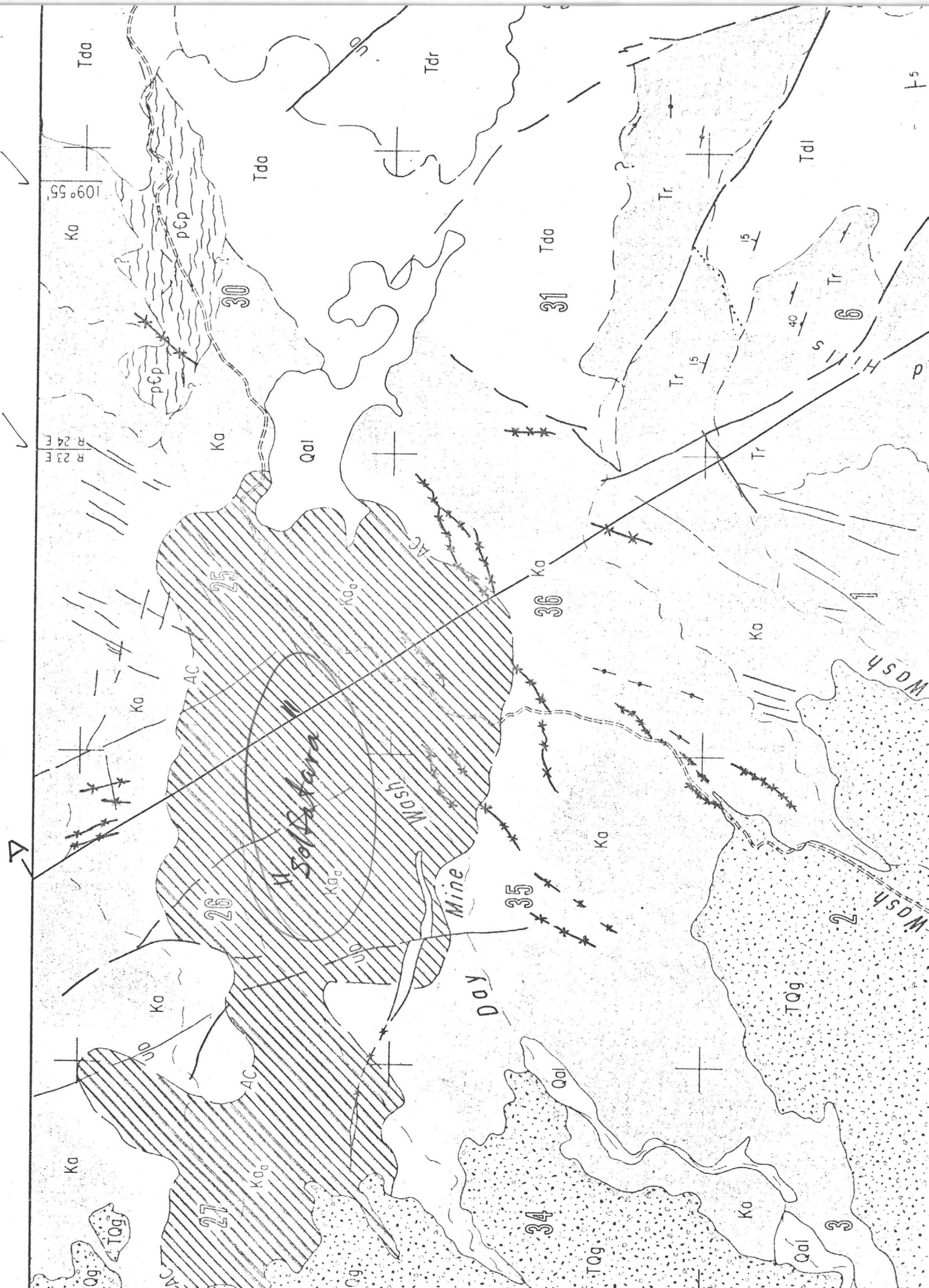
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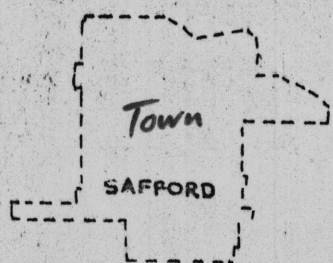
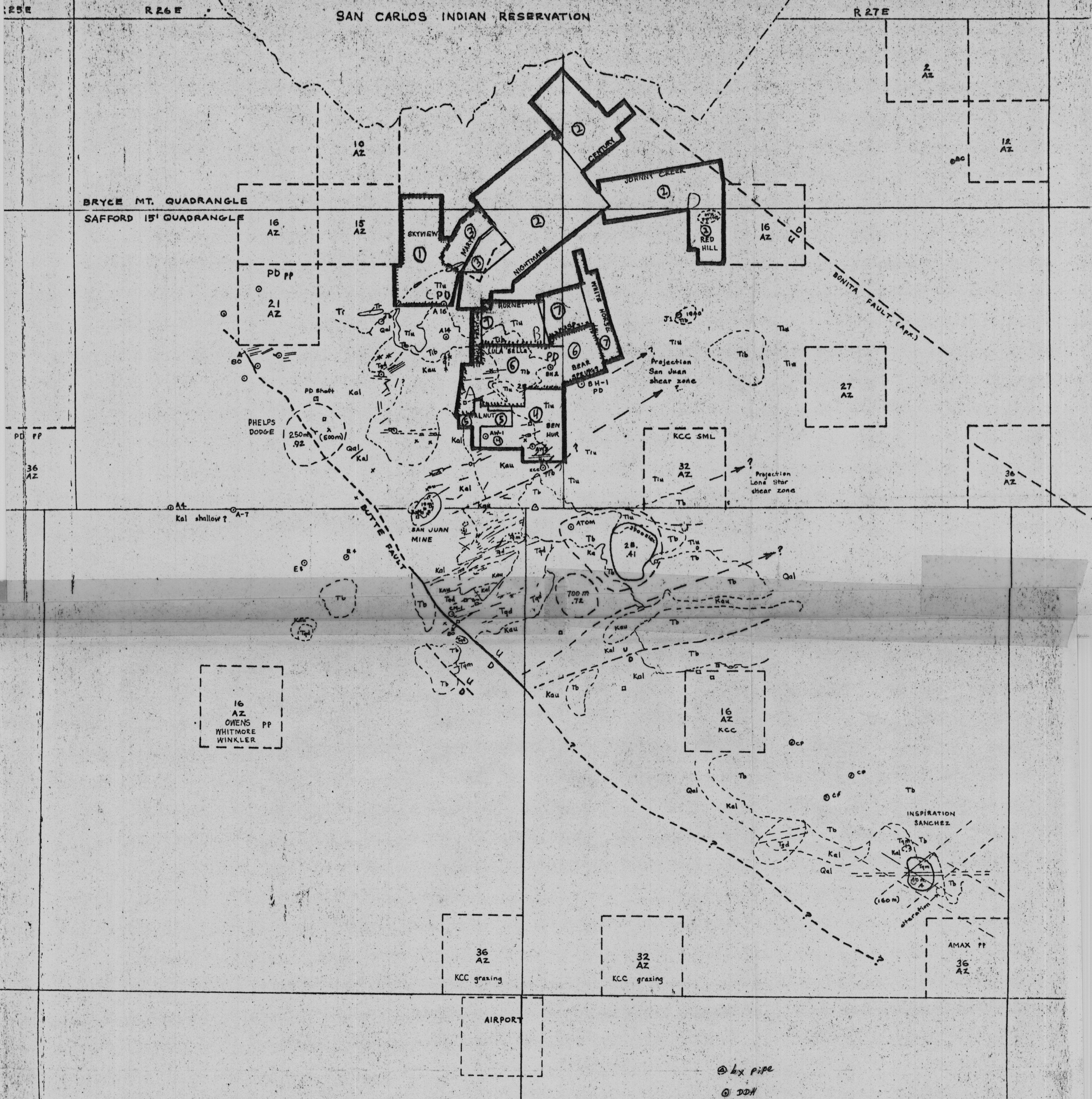
NOTE:

This is a master ex-
planation of the rock types in
the rock types m-
boundaries. Of course
not occur in ex-

Photogeol by F. Platt 1970

in. Gila Mts W of Safford





Towne Mines Exploration
Preliminary Geology & Claims
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Note: Reserve Estimates