SRP1106

SAN PEDRO 19
SP6P013

GEOLOGY

SANTA CRUZ - SAN PEDRO RIVER BASINS

ARIZONA

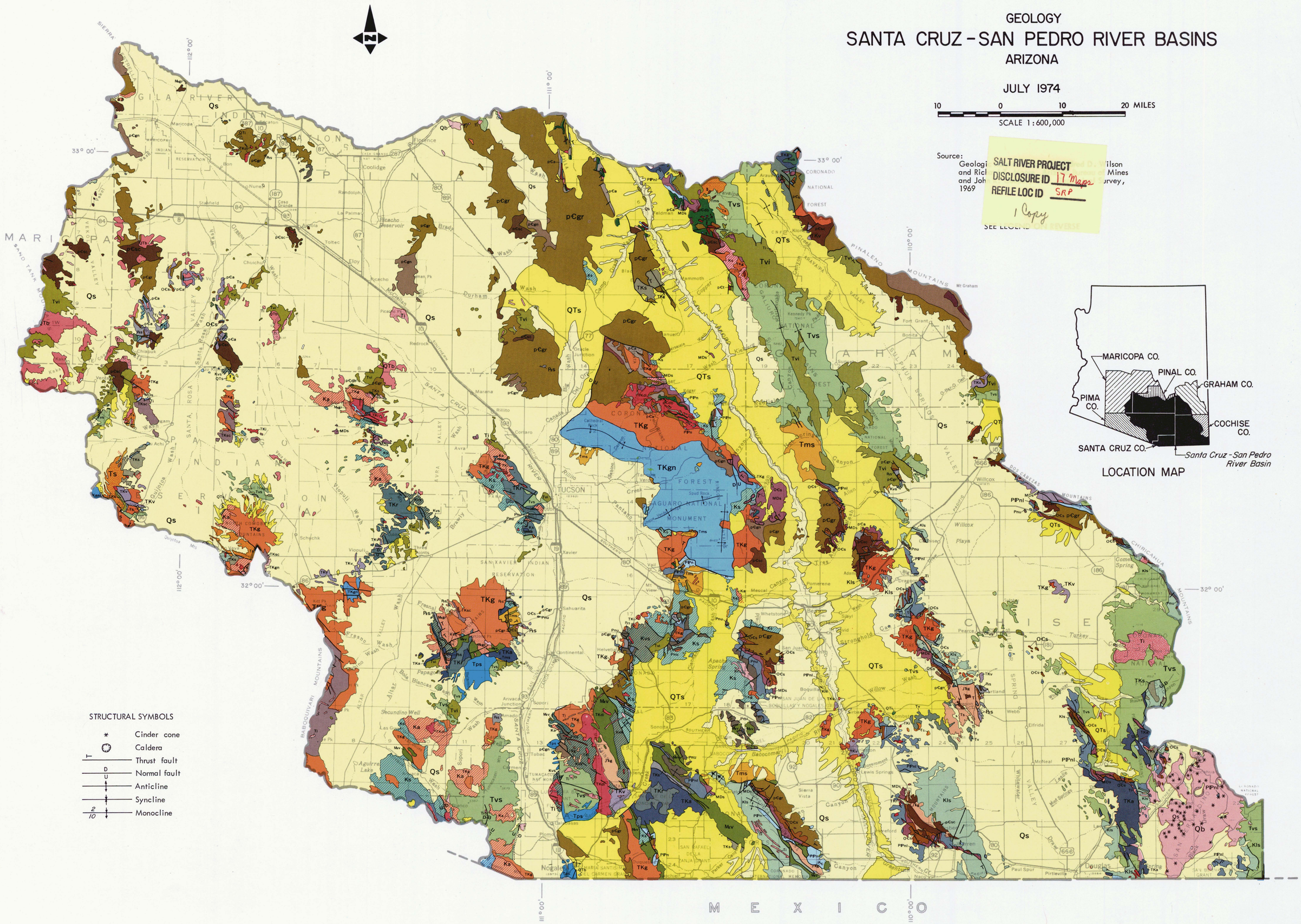
JULY 1974

10 0 10 20 MILES

SCALE 1:600,000

Source:
Geologi ilson
and Ric Mines
and Joh urvey,
1969

SALT RIVER PROJECT
DISCLOSURE ID 17 Maps
REFILE LOC ID SRP
1 Copy



STRUCTURAL SYMBOLS

- Cinder cone
- Caldera
- Thrust fault
- Normal fault (D, U)
- Anticline
- Syncline
- Monocline (2, 10)

LOCATION MAP

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND, OREG. 1974

M7-E-23195-3

SAN PEDRO 19
SP6P013

SRP1107

LEGEND

QUATERNARY — Pleistocene & Recent

Qs
SEDIMENTARY DEPOSITS
Mainly alluvial gravel, sand, and silt in flood plains, terraces, fans, and pediment cappings but locally includes dune sand, lake deposits, and landslide masses. Shown only in areas where they are of appreciable thickness or extent

Qb
VOLCANIC ROCKS
Basaltic flows, agglomerate, tuffs, and cinders distinguished from older basalts by recognizable cinder cones, calderas, and other geomorphic evidence of youth

TERTIARY & QUATERNARY — Pliocene & Pleistocene

QTs
SEDIMENTARY DEPOSITS
Includes Gila Conglomerate and other stream and lake deposits mainly in intermontane areas. Consists of loosely to firmly consolidated gravel, sand, and silt, local clay, gypsum, marl, limestone, diatomite, and some intercalated basalt flows and felsic tuff beds

QTb
VOLCANIC ROCKS
Basaltic flows, agglomerate, tuff, and cinders

QTi
DIKES AND PLUGS
Mainly andesitic to basaltic in composition

TERTIARY — Pliocene

Tms
SEDIMENTARY ROCKS
Terrestrial conglomerate, sandstone, siltstone, limestone, tuffaceous beds, and andesitic flows and breccias, including Locomotive Fanglomerate, Helmet Fanglomerate, Pantano Formation, and Whitetail conglomerate

Ts
SEDIMENTARY ROCKS
Mainly conglomerate, sandstone, siltstone, limestone, and tuffaceous beds but locally includes volcanic units ranging from rhyolitic to andesitic in composition

Tv | Tvs | Tvi
VOLCANIC ROCKS
Flows, tuffs, breccias, and agglomerates interfingering in part with Tertiary sedimentary rocks. Includes some plugs and dikes
Tv, rhyolitic to basaltic rocks
Tvs, silicic volcanic rocks
Tvi, intermediate volcanic rocks

Ti
DIKES, SILLS, AND PLUGS
Rhyolitic to basaltic in composition

Tps
SEDIMENTARY DEPOSITS
Fossiliferous alluvial and lacustrine deposits of middle or early Pliocene age within valleys of present drainage systems and correlative conglomerate, sand, silt, and clay

CRETACEOUS & TERTIARY — Upper Cretaceous & Pre-Miocene

TKs
SEDIMENTARY ROCKS
Includes Cloudburst Formation in Pinal County and unnamed shale, sandstone, conglomerate, and limestone units; locally contains volcanic rocks

TKv | TKa | TKr
VOLCANIC ROCKS
Includes flows, pyroclastic rocks, and associatied conglomerates consisting largely of volcanic debris.
TKv, andesitic to rhyolitic in composition
TKa, predominantly andesitic in composition
TKr, predominantly rhyolitic in composition

TKg | TKi
INTRUSIVE ROCKS
TKg, granite, quartz monzonite, granodiorite, quartz diorite, and some porphyry equivalents of these rocks
TKi, granitic, dioritic, rhyolitic, and andesitic dikes, sills, and plugs

TKsc | TKgn
METAMORPHIC ROCKS
TKsc, schist and phyllite
TKgn, gneiss

CRETACEOUS — Upper Cretaceous

Kus
SEDIMENTARY ROCKS
Includes beds, probably equivalent to the Pinkard Formation, Graham and Pinal Counties. Upper Cretaceous beds in the Santa Rita Mountains are included with the undivided Cretaceous rocks (Ks)

Ks | Kv | Ka | Kvs
SEDIMENTARY AND VOLCANIC ROCKS
Ks, includes Amole Arkose and Recreation Red Beds and other units of known or supposed Cretaceous age
Kv, rhyolitic to andesitic flows and tuffs
Ka, predominantly andesitic flows and tuffs
Kvs, intercalated sedimentary and rhyolitic to andesitic volcanic rocks

CRETACEOUS — Lower Cretaceous

Kls
SEDIMENTARY ROCKS
Includes Bisbee Group; in northern Cochise County also includes underlying Jurassic (?) or Triassic (?) volcanic rocks

TRIASSIC & JURASSIC

JTRg
Granite, quartz monzonite, alaskite, and granitic to monzonitic porphyries

Order does not reflect age

Mzgr
MESOZOIC GRANITE TO QUARTZ DIORITE

Mzv
MESOZOIC VOLCANIC ROCKS
Rhyolitic to andesitic flows and pyroclastic rocks; locally includes interfingering shale, sandstone, and conglomerate. Includes units known to predate Lower Cretaceous rocks in the Huachuca and Patagonia Mountains

PENNSYLVANIAN & PERMIAN

PIPn
NACO GROUP UNDIVIDED

Pnu
UPPER FORMATIONS
Includes Rainvalley Formation, Concha Limestone, and Scherrer Formation

PIPnl
LOWER FORMATIONS
Includes Epitaph Dolomite (Permian), Colina Limestone (Permian), Earp Formation (Permian and Upper Pennsylvanian, and Horquilla Limestone (Pennsylvanian)

Pzs
PALEOZOIC SEDIMENTARY ROCKS UNDIVIDED

DEVONIAN & MISSISSIPPIAN

MDs
SEDIMENTARY ROCKS
Includes Upper Mississippian Paradise Formation, Escabrosa Limestone (Upper and Lower Mississippian), Martin Formation and locally Pennsylvanian limestone

CAMBRIAN & ORDOVICIAN

O€s
SEDIMENTARY ROCKS
Includes El Paso Limestone (Lower Ordovician), Abrigo Formation (Upper and Middle Cambrian), and Bolsa Quartzite (Middle Cambrian) in eastern Cochise County and Abrigo Formation and Bolsa Quartzite in western Cochise, Graham, Pima, Santa Cruz, and Pinal Counties

PRECAMBRIAN — Younger Precambrian

p€a
APACHE GROUP
Includes Mescal Limestone and associated basalt flows, Dripping Spring Quartzite, and Pioneer Shale

p€db
DIABASE
Locally includes post-Precambrian diabase

p€t
TROY QUARTZITE
Locally may contain Cambrian sandstone and quartzite

PRECAMBRIAN — Older Precambrian

p€gr
INTRUSIVE ROCKS
Granite, quartz monzonite, granodiorite, and quartz diorite. Locally includes areas of granitic rocks, and other igneous rocks of post-Paleozoic age

p€sc | p€gn
METAMORPHOSED SEDIMENTARY AND VOLCANIC ROCKS
Mainly phyllite, slate, mica schist, chlorite schist, and amphibolite derived from interbedded shale, sandstone, and rhyolitic to basaltic flows and tuffs but locally includes intrusive rhyolite, diorite, gabbro, and pyroxenite
p€sc, Pinal Schist and other schistose units
p€gn, gneiss: includes some areas of undivided schist and granite