# Geologic Map of the Phoenix South 30' x 60' Quadrangle, central Arizona


Compiled by

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Scale 1:100,000

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## EXPLANATION

**Quaternary and Late Tertiary Surficial Deposits**

| | |
|---|---|
| Q | Alluvium and talus, undifferentiated (Holocene and Pleistocene) |
| Qyc | Young alluvium in modern stream channels (Holocene) |
| Qy | Young alluvium (Holocene) |
| Qye | Eolian deposits (Holocene) |
| Qt | Talus (mostly Holocene) |
| Qm | Middle alluvium, undifferentiated (Late to Middle Pleistocene) |
| $Qm_2$ | Younger middle alluvium (Late to Middle Pleistocene) |
| $Qm_1$ | Older middle alluvium (Middle Pleistocene) |
| Qmo | Middle and older alluvium, undifferentiated (Middle to Early Pleistocene) |
| Qo | Older alluvium (Middle to Early Pleistocene) |
| QTa | Older alluvium along Hassayampa River (Quaternary or Late Tertiary) |
| QTb | Basalt (Quaternary to Late Tertiary) |

**Tertiary Volcanic and Sedimentary Rocks**

| | |
|---|---|
| Tsy | Younger sedimentary rocks; conglomerate, sandstone, and lacustrine rocks (Late Tertiary) |
| Tsm | Sedimentary rocks; conglomerate, sedimentary breccia, sandstone, and siltstone (Middle Tertiary) |
| Tsv | Sedimentary rocks related to Tertiary volcanism; locally includes breccia, tuff, and other volcanic rocks (Middle Tertiary) |
| Tv | Volcanic rocks, undifferentiated (Middle Tertiary) |
| Tb | Basalt, undifferentiated (mostly Middle Tertiary) |
| Tba | Basalt, basaltic andesite, tuff, and clastic rocks (Middle Tertiary) |
| Tr | Rhyolite and rhyodacite, undifferentiated (Middle Tertiary) |
| Trf | Rhyolite and rhyodacite flows, tuffs, and domes (Middle Tertiary) |
| Trt | Rhyolite and rhyodacite ash-flow tuff and associated sedimentary rocks (Middle Tertiary) |

**Tertiary and Cretaceous Intrusive Rocks**

| | |
|---|---|
| Ti | Intrusive and hypabyssal rocks (Middle Tertiary) |
| Tcb | Chlorite breccia in South Mountains (Middle Tertiary) |
| Tg | Granite in South Mountains (Middle Tertiary) |
| JXg | Granite (Jurassic or Early Proterozoic) |

**Proterozoic Rocks**

| | |
|---|---|
| YXg | Granite (Middle or Early Proterozoic) |
| Yg | Granite (Middle Proterozoic; ~1.4 Ga) |
| Xg | Granitoid rocks; commonly foliated (Early Proterozoic) |
| Xgm | Mooreville granite (Early Proterozoic) |
| Xgl | Leucogranite (Early Proterozoic) |
| Xgp | Porphyritic granite (Early Proterozoic) |
| Xt | Tonalite, diorite, granodiorite, and their metamorphosed equivalents (Early Proterozoic) |
| Xd | Diorite (Early Proterozoic) |
| Xqd | Quartz diorite (Early Proterozoic) |
| Xc | Carbonate (Early Proterozoic) |
| Xmv | Metavolcanic rocks, undifferentiated; metamorphosed mafic to felsic flows, tuff, and sedimentary rock (Early Proterozoic) |
| Xr | Metarhyolite, rhyodacite, and dacite (Early Proterozoic) |
| Xq | Quartzite (Early Proterozoic) |
| Xvs | Volcaniclastic and volcanic rocks (Early Proterozoic) |
| Xm | Metamorphic rocks, undifferentiated (Early Proterozoic) |
| Xmg | Mixed Xm and Xg (Early Proterozoic) |
| Xa | Amphibolite (Early Proterozoic) |
| Xms | Metasedimentary rocks, including schist, phyllite, quartzite, and rare thin marble (Early Proterozoic) |

**Symbols**

- Contact; dashed where approximately located
- Fault; bar and ball on downthrown side; dashed where approximately located; dotted where covered
- Low-angle normal fault; ticks on upper plate
- Detachment fault; ticks on upper plate (South Mountain)
- Thrust fault
- Felsic dike
- Intermediate dike
- Mafic dike
- Bedding
- Overturned bedding
- Horizontal bedding
- Foliation, with lineation
- Vertical foliation
- Ramp shear zone
- Vent

**Correlation of Map Units**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Qy | Qyc | Qye | Qt | | | | | | | |
| | Qm | $Qm_2$ | | Q | | | | | | |
| | | $Qm_1$ | Qmo | | | | | | | |
| | | Qo | | | | | | | | |
| | | QTb | QTa | | | | | | | |
| | | Tsy | | | | | | | | |
| | Tsm | | | | | | | | | |
| Tsv | Tv | Tb | | Tba | Tr | Trt | Trf | | | |
| | | Ti | Tcb | | | | | | | |
| | | JXg | | | | | | | | |
| | YXg | Yg | | | | | | | | |
| | | Xg | Xgm | Xgl | Xgp | | | | | |
| Xm | Xms | Xq | Xc | Xvs | Xr | Xa | Xmv | Xmg | | |
| | | Xt | Xd | Xqd | | | | | | |


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