GEOLOGIC MAP OF THE LEWIS SPRINGS 7½' QUADRANGLE, COCHISE COUNTY, ARIZONA

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Arizona Geological Survey Digital Geologic Map 51 (DGM-51), version 2.0

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1:24,000 scale

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(also available in Adobe pdf format on CD-ROM)

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Map Unit Descriptions

Other units

Plowed areas - historically or actively plowed fields, irrigated pastures, and other lightly disturbed ground

d — **Disturbed ground** - areas of substantial excavation or anthropogenic deposition, for example, sewage treatment facilities or gravel pits

Qtc — **Quaternary hillslope talus and colluvium** - thin, steeply to moderately sloping, weakly-bedded hillslope deposits mantling the middle and lower slopes of bedrock hills

San Pedro River alluvium

Qyf — **Active river channel deposits** - unconsolidated, very poorly sorted sandy to cobbly beds in active river channels

Qyf — **Historical river terrace deposits** - unconsolidated sand, gravel and silt deposits on low terraces inset below the abandoned early historical floodplain

Qyf — **Latest Holocene to historical river terrace deposits** - silt, clay, sand and minor gravel deposits underlying the early historical floodplain

Qyf — **Late to early Holocene river terrace deposits** - silt, clay, sand and minor gravel terrace deposits slightly above the early historical floodplain

Qif — **Late Pleistocene river terrace deposits** - gravelly, sandy river terrace deposits up to 25 m above the active river channel

Qif — **Middle to late Pleistocene river terrace deposits** - higher intermediate terraces composed of a mix of river sand, gravel, and silt and clay about 10 to 15 m above the Holocene floodplain of the San Pedro River

Qif — **Early to middle Pleistocene river terrace deposits** - isolated deposits covered with well-rounded river gravel associated with the highest river terraces along the San Pedro River

Qi — **Pleistocene river terrace deposits, undifferentiated**

Piedmont alluvium and surficial deposits

Qy — **Modern stream channel deposits** - active channel deposits composed of very poorly-sorted sand, pebbles, and cobbles with some boulders to moderately-sorted sand and pebbles

Qy — **Latest Holocene alluvium** - unconsolidated, very poorly-sorted silty to cobbly low terrace and overflow channel deposits

Qyaf — **Late Holocene alluvium, active fan deposits** - active portions of young fan deposits exhibiting distributary drainage patterns

Qy — **Late Holocene alluvium** - young deposits in floodplains, low terraces and small channels that are part of the modern drainage system

Qy — **Older Holocene alluvium** - planar to undulating terrace deposits standing higher than adjacent Qy2 surfaces found mostly along the margins of incised drainages

Qys — **Fine-grained Holocene alluvium derived from the Saint David Formation** - Holocene alluvium derived from distal Saint David basin fill deposits

Qy — **Holocene alluvial deposits, undifferentiated**

Qyi — **Holocene to late Pleistocene alluvial fan and terrace deposits** - thin, relatively fine-grained alluvial fan deposits mantling lower slopes of Saint David Formation near the San Pedro River

Qi — **Late Pleistocene alluvial fan and terrace deposits** - slightly dissected, fairly smooth terraces and alluvial fans consisting of pebbles, cobbles, and finer-grained sediment exhibiting weak rock varnish

Qi — **Middle to late Pleistocene alluvial fan and terrace deposits, undifferentiated**

Qi — **Middle to late Pleistocene alluvial fan and terrace deposits** - moderately dissected relict alluvial fans and terraces with moderate to strong soil development and moderately varnished surface clasts

Qi — **Early to middle Pleistocene alluvial fan and terrace deposits** - moderately to deeply dissected relict alluvial fans with strong soil development and moderately to strongly varnished surface clasts

Qi — **Pleistocene alluvial fan and terrace deposits, undifferentiated**

Qo — **Early Pleistocene alluvial fan deposits** - moderately to deeply dissected relict alluvial fan deposits with moderate to strong calcic soil development capping eroded ridges or high mesas depending on local preservation

Quaternary to Tertiary Basin Fill alluvium

QTsd — **Pliocene to early Pleistocene St. David Formation** - middle member of the St. David formation (Lindsay et al, 1990) dominated by coarse distal fan environments and fine-grained floodplain deposition associated with a north-flowing axial drainage

Bedrock units

Kgs — **Quartz monzonite of Government Draw (Upper Cretaceous)** - medium-grained, slightly plagioclase-porphyritic, 10% biotite-hornblende, quartz monzonite

Kg — **Quartz monzonite of Brunckow Hill (Upper Cretaceous)** - medium-grained, slightly plagioclase-porphyritic, 10% biotite-hornblende, quartz monzonite

Kai — **Fine-grained andesite dikes (Cretaceous)** - andesite dikes containing <5%, <1mm plagioclase phenocrysts in very fine-grained matrix

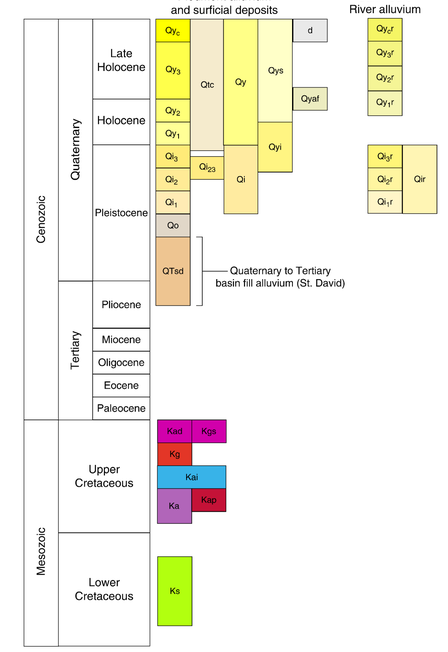
Kad — **Coarse-grained andesite dikes (Cretaceous)**

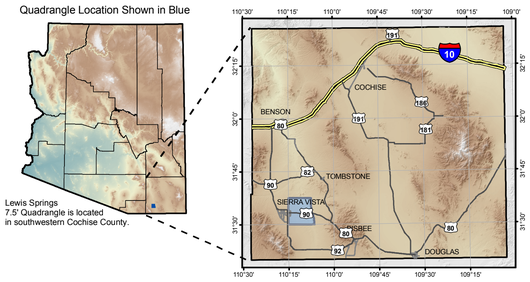
Kap — **Andesite porphyry (Cretaceous)** - a distinctive, hypabyssal andesite porphyry containing 10-25%, 1-3mm, euhedral plagioclase phenocrysts in a fine-grained crystalline matrix

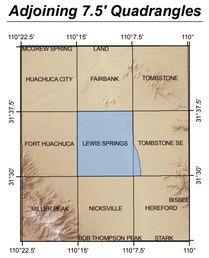
Ka — **Andesite (Cretaceous)** - amalgamated andesite lava flows intruded by a myriad of dikes characterized by relatively fine-grained (<3.0mm and usually <2.0mm), euhedral to subhedral plagioclase phenocrysts

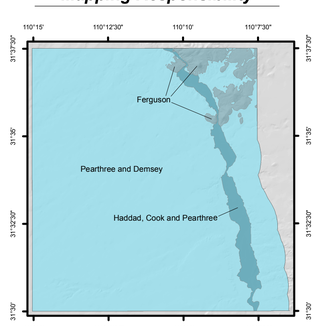
Ks — **Bisbee Group (Lower Cretaceous)** - complexly intertonguing sequences of thin- to thick-bedded, cross-stratified and plane-bedded, quartz sandstone, feldspathic quartz sandstone, and lithic-feldspathic quartz sandstone, gray-green to red siltstone and mudstone

Correlation Diagram









Map Symbols

Faults
- fault, accurate
- fault, approximate
- fault, concealed

Contacts
- accurate contact
- approximate contact

Structure Symbols
- 27 bedding, inclined
- 19 bedding, inclined with tops known
- 53 bedding, overturned
- 32 lineation, intersection
- 44 fault attitude
- 65 vein orientation

Topographic base from USGS 1:24,000 scale quadrangle series.
North American Datum of 1983 (NAD83). Projection and 1,000-meter grid: Universal Transverse Mercator, zone 12.

MN
12½°

SCALE 1:24,000
1 0.5 0 1 Miles
1 0.5 0 1 Kilometers
0 1000 2000 3000 4000 5000 Feet
CONTOUR INTERVAL 25 FEET

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