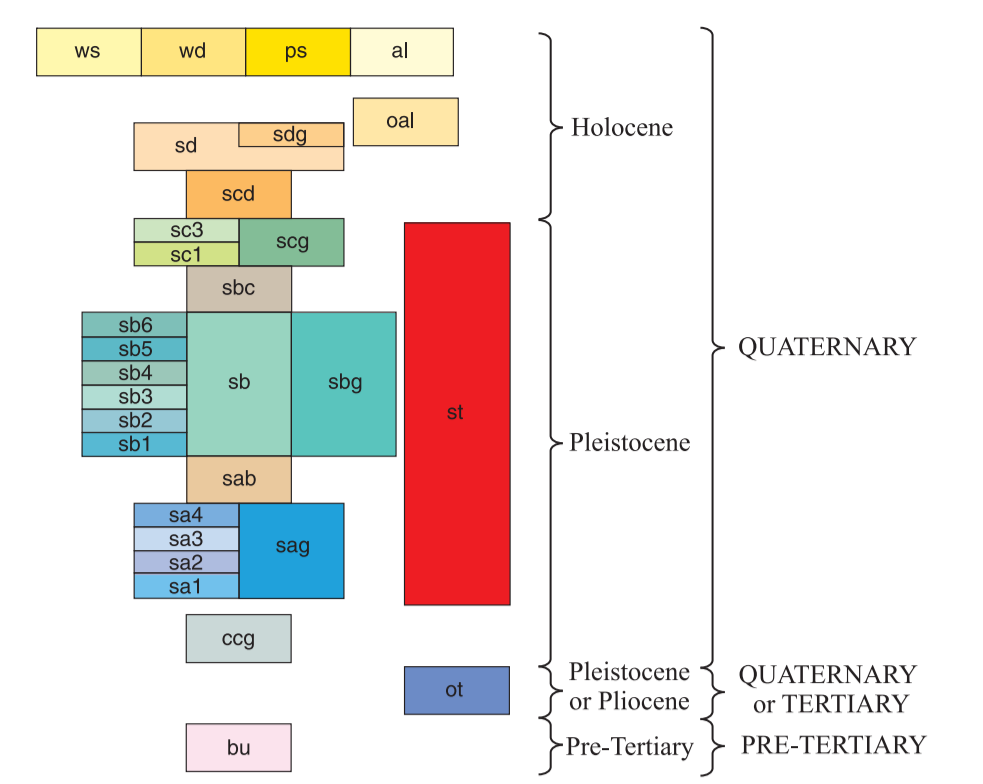


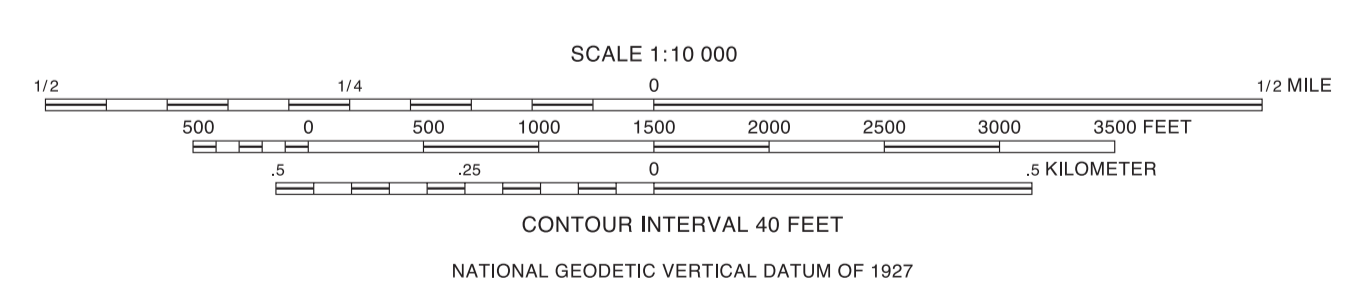
CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

- [See plate 1 for map location. Searles Lake Formation is a newly accepted formation described in text. Note: unit names may change from map to map.]
- ws** Windblown sand and colluvium (uppermost Holocene)—Windblown sand mixed with colluvial pebbles; forms sheets
 - wd** Windblown dune sand (uppermost Holocene)—Sand dunes, continuously being modified
 - ps** Silt and clay (uppermost Holocene)—Playa and lake surface sediments
 - al** Alluvium (uppermost Holocene)—Gravel and sand in active channels
 - oal** Older alluvium (upper and middle Holocene)—Medium to coarse sand, some pebbles; inactive; forms smooth, nearly channel free, surfaces
 - Searles Lake Formation (middle Holocene to upper Pleistocene)**
 - Unit D (middle Holocene)**
 - sdg** Gravel—Lacustrine deposits; dark angular fragments in silt and sand matrix; locally preserved as a lag gravel; includes some alluvial material
 - sd** Clay, silt, and sand—Lacustrine deposits; gray-orange, yellow-green, or tan; forms poorly bedded
 - Unit CD (lower Holocene)**
 - scd** Gravel—Alluvial and colluvial deposits; mostly angular, cobble-sized fragments
 - Unit C (upper Pleistocene)**
 - sc3** Silt and clay—Lacustrine deposits; light greenish-gray in outcrop, dusky yellow-green on fresh surfaces; mostly laminated
 - sc1** Silt and clay—Lacustrine deposits; light greenish-gray in outcrop, dusky yellow-green on fresh surfaces; gypsum crystals locally present, weakly laminated to finely bedded
 - scg** Gravel—Lacustrine deposits; medium- to dark-brown on weathered surfaces; pebble-size fragments well sorted and rounded; matrix is coarse sand
 - Unit BC (upper Pleistocene)**
 - sbc** Gravel—Alluvial, lag, and near shore lacustrine gravels; medium- to dark-brown, cobble- to boulder-sized fragments; abundant fragmentary nodose tufa; forms carbonate-cemented terraces, especially in the vicinity of The Pinnacles
 - Unit B (upper Pleistocene)**
 - sb** Silt and sand—Silt beds separated by sand layers. Lacustrine deposits; silt and clay is light-green to white, massive to thinly bedded or faintly laminated; sand is tan to grayish-orange; subunits numbered in ascending stratigraphic order; contacts between subunits are at tops of mappable sand layers; mapped only in north third of map area
 - Subunit 6**—Sand, medium to fine; well bedded; greenish-gray; 20 cm thick; contains snails and clams
 - Subunit 5**—Sand, medium to very coarse; poorly bedded; greenish-gray; some orange streaks; 10 cm thick. Silt to very fine sand; faintly laminated in upper part, prominently laminated in lower part; 50 cm thick
 - Subunit 4**—Sand, very fine to medium; well bedded; tan with orange streaks; 10 cm thick. Silt, white; very prominent laminae; 80 cm thick
 - Subunit 3**—Sand, fine; ripple-mark structures; light-orange to tan; 40 cm thick. Silt; faint laminae in upper half; prominent laminae in lower half; 60 cm thick
 - Subunit 2**—Sand, very coarse; ripple marks; orange-tan in top part, tan in lower; 20 cm thick. Silt with some very fine sand; weathers greenish-gray; massive; 90 cm thick
 - Subunit 1**—Sand, moderate to well sorting; orange-tan; some shells and ulexite; 60 cm thick. Silt; greenish; poorly bedded; 80 cm or more thick
 - st** Silt (little sand)—Lacustrine deposit; greenish-orange to greenish-gray; faintly bedded to massive; locally well bedded
 - Gravel and sand (little silt)**—Lacustrine deposit; weathers to gray or brown; sand is coarse; gravel mostly composed of angular to rounded pebbles and cobbles; nodose tufa fragments common
 - Unit AB (upper Pleistocene)**
 - sab** Gravel and sandy gravel—Alluvial and near-shore lacustrine deposits; mostly tan to light brownish-orange; fragments in uppermost layers mostly stained dark brownish-orange; gravels near bedrock are mostly alluvial and composed of angular to well-rounded cobbles and boulders; outcrops along Teagle Wash mostly interbedded, thin layers of lacustrine fine gravel, sand, and silt, or alluvial gravel (in one area, contains cobble-sized fragments of older ostracode-bearing lacustrine silts)
 - Unit A (upper Pleistocene)**
 - sa4** Gravel—Lacustrine deposit; medium to very dark gray, angular, cobbles to small boulders; forms surface of prominent bar 1.5 km northwest of The Pinnacles
 - sa3** Sand and gravel—Lacustrine deposits; sand weathers to light-gray; gravel layers are darker; very calcareous; well indurated; massive to faintly bedded; produces extensive lag-gravel surfaces; some interbedded layers of silt and lithoid tufa
 - sa2** Gravel—Alluvial deposits; orange to orange-brown when fresh, dark orange-brown to dark-brown when weathered; angular pebbles- to cobble-sized fragments
 - sa1** Silt, sand, and gravel—Lacustrine deposits; light-green silt; some sand, lattice-type tufa mostly on top of this unit, some is at base
 - sag** Gravel, undivided—Mostly lacustrine deposits; cobble to boulder-sized fragments; rounding is variable; strong desert varnish; sorting fair to poor
 - st** Tufa, undivided (upper Pleistocene)—Lacustrine deposits; brown to tan tufa; darker-colored nodose (aragonite) tufa rests on lighter-colored lithoid (calcite) tufa
 - Christmas Canyon Formation (middle Pleistocene)**
 - cog** Gravel and sand—Alluvial gravel; weathers to dark-gray or brown, sand matrix is reddish-brown; tan, locally gray green; forms surfaces characterized by subrounded cobbles and boulders of vesicular basalt and other volcanics
 - ot** Older tufa (middle to lower Pleistocene or Pliocene)—Lacustrine deposits; gray tufa (calcite) with clastic impurities; massive; occurs mostly as large mound-like hills
 - bu** Bedrock (pre-Tertiary)—Undifferentiated rocks of pre-Tertiary age
 - Contact**—Queried where gradational or poorly exposed

Geology mapped by G.I. Smith, 1961-1970, 1983-1996
 Digital database by J.E. Robinson
 Digital cartography by J.E. Robinson and Richard Koch
 Edited by J.L. Zigler



Geologic Map of The Pinnacles Area

By George I. Smith 2009

Base from U.S. Geological Survey, 1:62,500, Searles Lake, 1949 Polyconic Projection

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