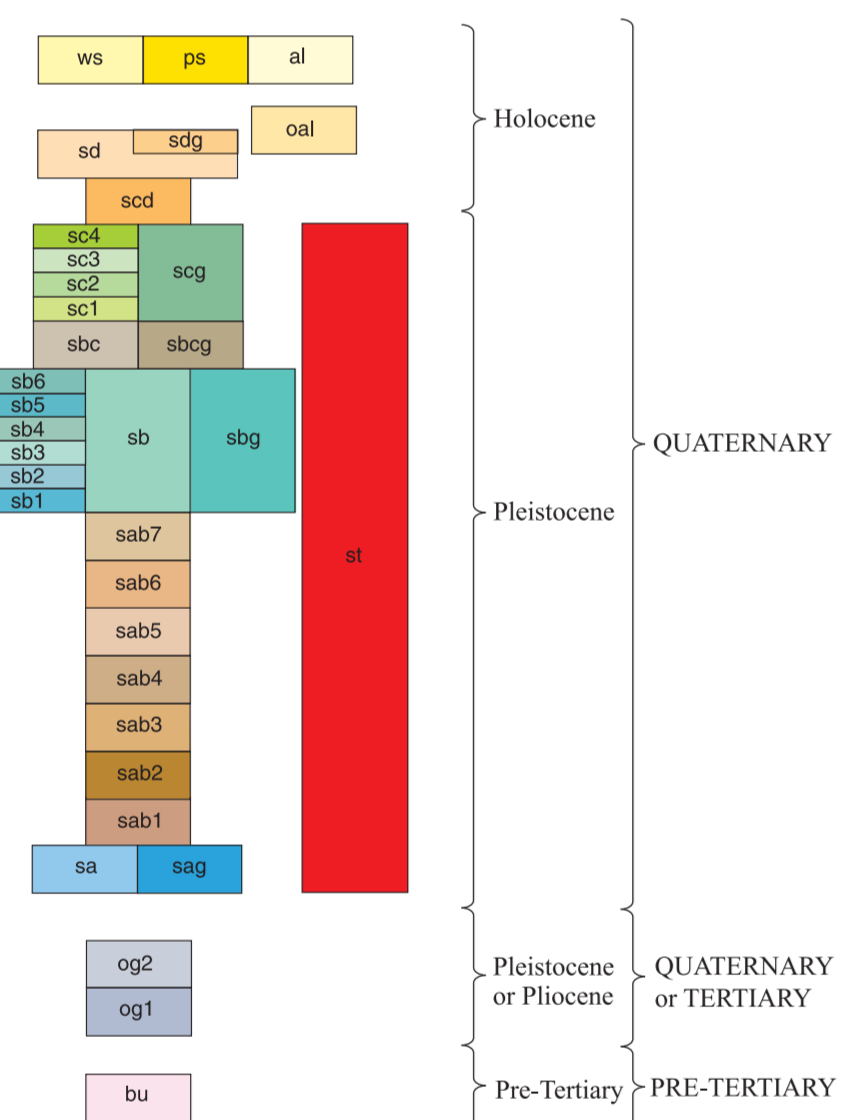


Base from U.S. Geological Survey, 1:62,500,
Searles Lake, 1949
Polyconic Projection

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. Ziegler

CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

[See plate 1 for map location. Searles Lake Formation is a newly accepted formation described in the text. Note unit names may change from map to map]

ws Windblown sand and colluvium (uppermost Holocene)—Windblown sand mixed with pebbly colluvium; forms sheet

ps Silt (uppermost Holocene)—Playa-surface sediment

al Alluvium (uppermost Holocene)—Gravel and sand, frequently active

oal Older alluvium (upper and middle Holocene)—Medium to coarse sand, some pebbles; inactive; surfaces smooth and nearly free of channels

Searles Lake Formation (middle Holocene to upper Pleistocene)

Unit D (middle Holocene)

sdg Gravel and sand—Mostly near-shore lacustrine deposits but some are colluvial or alluvial; dark angular fragments in a matrix of sand and silt; represented in many places by scattered lag gravel

sd Sand and silt—Lacustrine deposits; tan to gray-orange; forms puffy surfaces, commonly cemented by halite

Unit CD (lower Holocene)

sod Sand and gravel—Alluvial and colluvial deposits; light- to dark-orange-gray sand and fine gravel; commonly has slightly orange pebbly lag gravel on surface; locally contains reworked(?) snails and clams

Unit C (upper Pleistocene)

sc4 Clay and sand—Lacustrine deposits; grayish-green; plastic when moist; clay is faintly bedded (color variations) but unlaminated; interbeds of sand locally grade upward into thicker beds of fine to medium sand that is well sorted and bedded; locally disconformable with underlying unit

sc3 Silt and clay—Lacustrine deposits; white on weathered surface, grayish-green on fresh surface; characterized by thin white argonitic laminae; orange tuff(?) zone near base; contains ostracodes and molluscs in west half of map area

sc2 Sand—Lacustrine deposits; tan, locally orange; medium to coarse, well-sorted, deltaic bedding common; locally contains molluscs

sc1 Silt and clay—Lacustrine deposits; white on weathered surface, grayish-green on fresh surface; laminated to finely bedded; gypsum crystals common; thin orange tuff(?) bed 1 to 3 m above base; contains ostracodes and molluscs in western half of map area

scg Gravel—Lacustrine deposits; dark-brown on weathered surfaces, pebble-sized fragments, well sorted and rounded

Unit BC (upper Pleistocene)

sbc Sand and gravel—Mostly lacustrine deposits, some alluvial zones; tan to orange; sand coarse to very coarse, commonly displays pronounced deltaic structures; brown nodose tufa common along basal contact; soil developed on upper surface

sbog Gravel—Lag gravel deposited on surfaces when shorelines of this age were carved on older alluvial gravels; fragments are cobble and boulder sizes, abundant nodose tufa fragments; soil developed on upper surface

Unit B (upper Pleistocene)

sb6 Silt—Greenish-gray; thinly bedded; scattered snails and clams

sb5 Sand—Medium to coarse; tan; grading down to silt and very fine sand; greenish-gray; prominently laminated

sb4 Sand—Very fine to medium sand grading down to silt; laminated; sand highly calcareous; unit notably lenticular

sb3 Sand—Fine grained; gray-orange; ripple marks

sb2 Silt and sand—Massive; greenish-gray; very fine sand

sb1 Sand—Medium-orange; some ulexite, snails, and clams

sb Silt grading up to sand—Lacustrine deposits; greenish-orange to greenish-gray; micaceous sand is medium to fine, very well sorted, poorly bedded; silt grades upward to sand

sbog Gravel—Lacustrine deposits; weathers dark-gray to brown; composed of angular to rounded pebbles and cobbles; some sand; highly calcareous; unit notably lenticular

Unit AB (upper Pleistocene)

sab7 Gravel and sand—Mostly lacustrine deposits, some alluvial or lag gravels; grayish-orange; orange hues especially intense in upper 0.5 to 2 m; locally, a 0.3-1 m bed of greenish lacustrine silt and sand in middle of unit

sab6 Sand and silt—Lacustrine deposits; greenish gray to tan; numerous resistant, fine-sand lenses mostly <15 cm thick; 0.2-3 m of indurated white silt at base

sab5 Sand—Lacustrine deposits; tan to yellowish gray in some areas, orange in others; very coarse, prominent gravel layer at top locally contains molluscs and ulexite

sab4 Silt—Lacustrine deposits; white in lower part, greenish in upper part; nodose tufa layer and orange tuff(?) layer one-third up section

sab3 Sand—Lacustrine deposits; orange to tan; medium to very coarse; locally fine; some interbeds of silt; concentration of pebbles and molluscs at top contact

sab2 Silt and sand—Lacustrine deposits; tan to green; sand very fine; massive to faint bedding

sab1 Sand—Lacustrine deposits; tan, locally orange or brown; fine to very coarse; gravel layers at base and top of unit; some molluscs

Unit A (upper Pleistocene)

sa Silt and sand—Lacustrine deposits; weathers very light green to white; sand is fine; massive to faintly bedded; near north edge of this map, member consists of alternating lacustrine sand and alluvial gravel; calcareous soils developed on and in upper part of unit

sag Gravel—Lacustrine deposits; weathers dark-brown to gray; well rounded, well sorted, pebble to boulder; massive; deposits include lag gravels on surfaces of older gravels with shorelines of this age carved on them

st Tufa, undivided (upper Pleistocene)—Lacustrine deposits; tufa; brown nodose (argonitic) tufa, overlies tan laminae-textured (calcic) tufa

Older gravel (middle to lower Pleistocene or Pliocene)

og2 Alluvial deposits—Weathers to dark-orange-brown; pebble to cobble-sized fragments are angular to subangular; soil development variable

og1 Alluvial deposits—Weathers to very dark gray or brown; cobble to boulder-sized fragments are subangular to subrounded; local strongly developed calcic soil

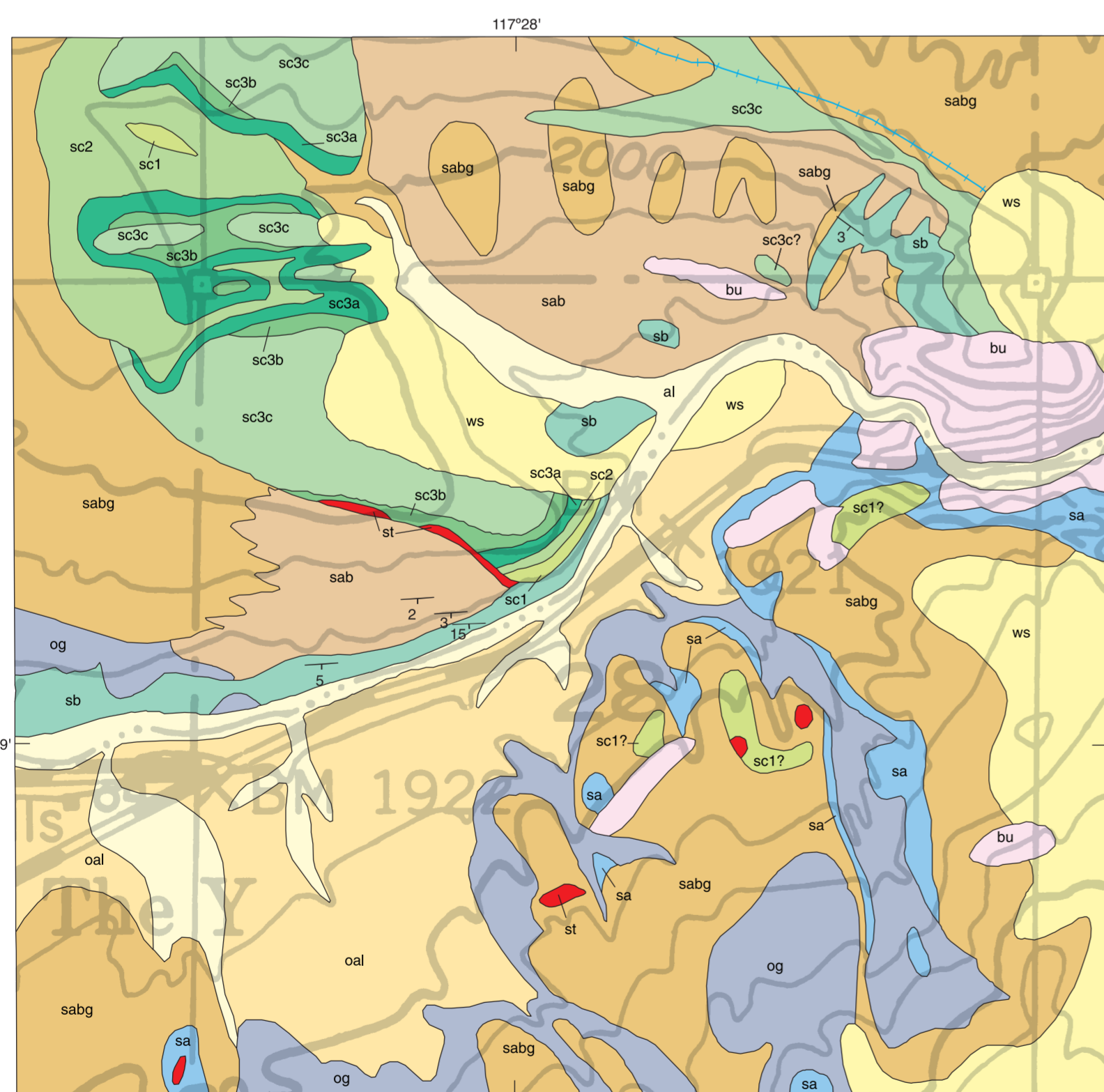
bu Bedrock (pre-Tertiary)—Undifferentiated bedrock, mostly plutonic types, some dikes

Contact—Querred where gradational or poorly exposed

Tufa-lined channels

10 Strike and dip of beds

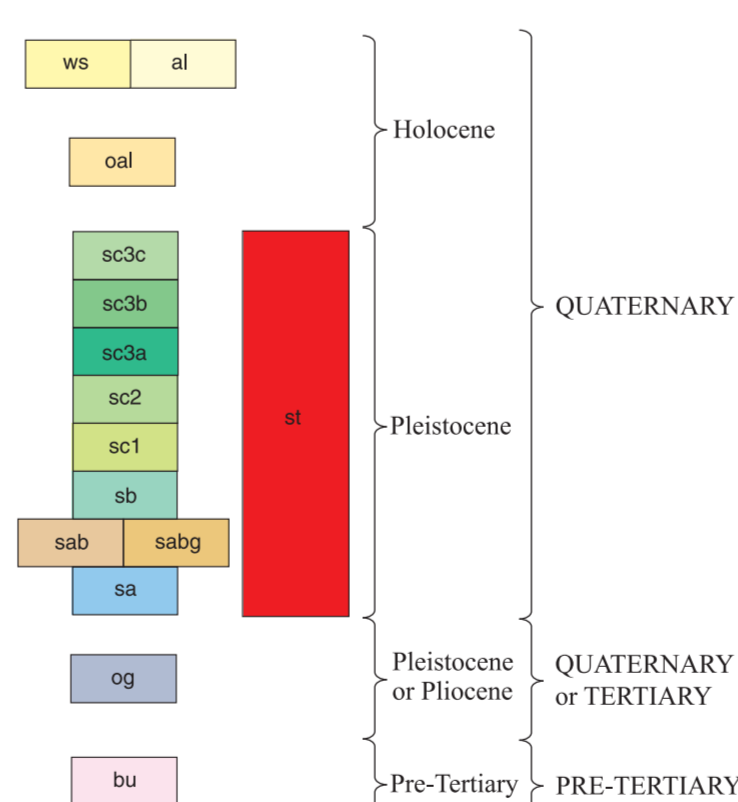
Plate 3A—Poison Canyon



Base from U.S. Geological Survey, 1:62,500,
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CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

[See plate 1 for map location. Searles Lake Formation is a newly accepted formation described in the text. Note unit names may change from map to map]

ws Windblown sand and colluvium (uppermost Holocene)—Windblown sand mixed with colluvial pebbles

al Alluvium (uppermost Holocene)—Gravel and sand, in active channel

oal Older alluvium (upper and middle Holocene)—Medium to coarse sand, some pebbles, inactive, forms smooth, nearly channel-free inactive surfaces

Searles Lake Formation (middle Holocene to upper Pleistocene)

Unit C (upper Pleistocene)

sc3c Sand and gravel—Lacustrine deposits; gray; sand is medium to very coarse, moderately well sorted; gravel is fine; weak lag gravel developed on surfaces; fragments and beds of nodose tufa locally present

sc3b Sand—Lacustrine deposits; grayish-brown; deltaic bedding; locally a thin bed of nearly white very fine sand near top

sc3a Silt and sand—Lacustrine deposits; light-green, calcareous, oolitic, massive to faintly bedded

sc2 Sand—Lacustrine deposits; grayish-orange, fine to coarse, well sorted; forest beds common; a 1-m-thick silt layer locally in middle of unit

sc1 Silt and gravel—Lacustrine deposits; mostly green calcareous silt, gypsiferous in upper part; poorly bedded; some pebble gravels; argonitic nodose tufa locally deposited on underlying surfaces prior to deposition of unit

Unit B (upper Pleistocene)

sb Silt, sand, and gravel—Lacustrine deposits; silt and fine sand, grayish-green; thin bedded but not laminated; contains dark-brown organic(?) fragments, numerous mud-crack structures; locally fractured and contorted; coarse sand beds are orange-gray to yellowish-gray, 10 to 40 cm thick; gravel is yellowish-gray; well bedded; rounded fragments as much as 2 cm long form 5-20% of strata

Unit AB (upper Pleistocene)

sabg Gravel—Alluvial and lake-transported deposits; upper 10-20 cm of gravel generally stained dark-orange-brown; composed mostly of subangular to subrounded fragments of hypabyssal dike rocks, as much as 15 cm across, that in places were transported horizontally by currents in a lake; unit forms a cap on the bar in northeast corner of map; moderately strong calcareous soil locally developed on surfaces

sab Sand and silt—Lacustrine with some thin alluvial(?) deposits; sand is fine to medium; unit is grayish-orange to light tan; forms the bulk of a north-west-trending bar in northeast corner of map

sa Silt, sand, and gravel—Lacustrine deposits, tan to gray, calcareous, well bedded, moderately well indurated; some zones of tan, calcite-cemented sand; ostracodes locally; unit restricted to area south of highway

st Tufa, undivided (upper Pleistocene)—Lacustrine deposits; nodose and lithoid tufa

og Older gravel (middle to lower Pleistocene or Pliocene)—Alluvial gravels; light- to dark-brown, reddish-gray, or gray, cobble- to boulder-size fragments in finer matrix (larger clasts are not well rounded), local well-developed calcareous soil

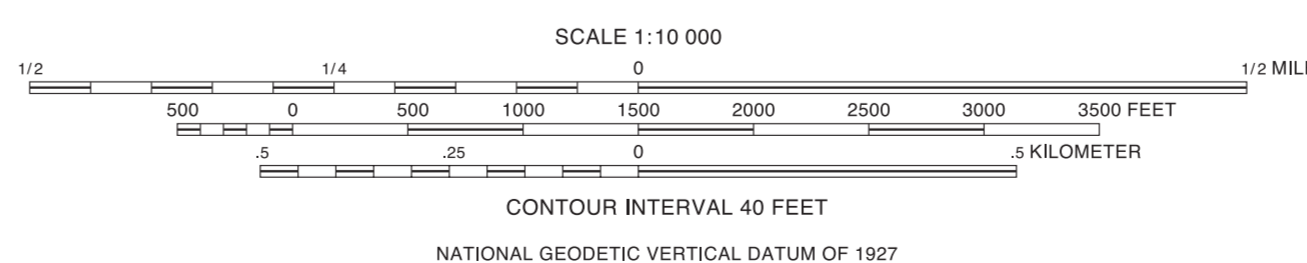
bu Bedrock (pre-Tertiary)—Undifferentiated bedrock, mostly plutonic types, some dikes

Contact—Certain

Crest of lacustrine bar

10 Strike and dip of beds

Plate 3B—Salt Wells Valley



Geologic Maps of Poison Canyon and Salt Wells Valley

By
George I. Smith
2009