CALIFORNIA GEOLOGICAL SURVEY
JOHN G. PARRISH, Ph.D., STATE GEOLOGIST

STATE OF CALIFORNIA - ARNOLD SCHWARZENEGGER, GOVERNOR
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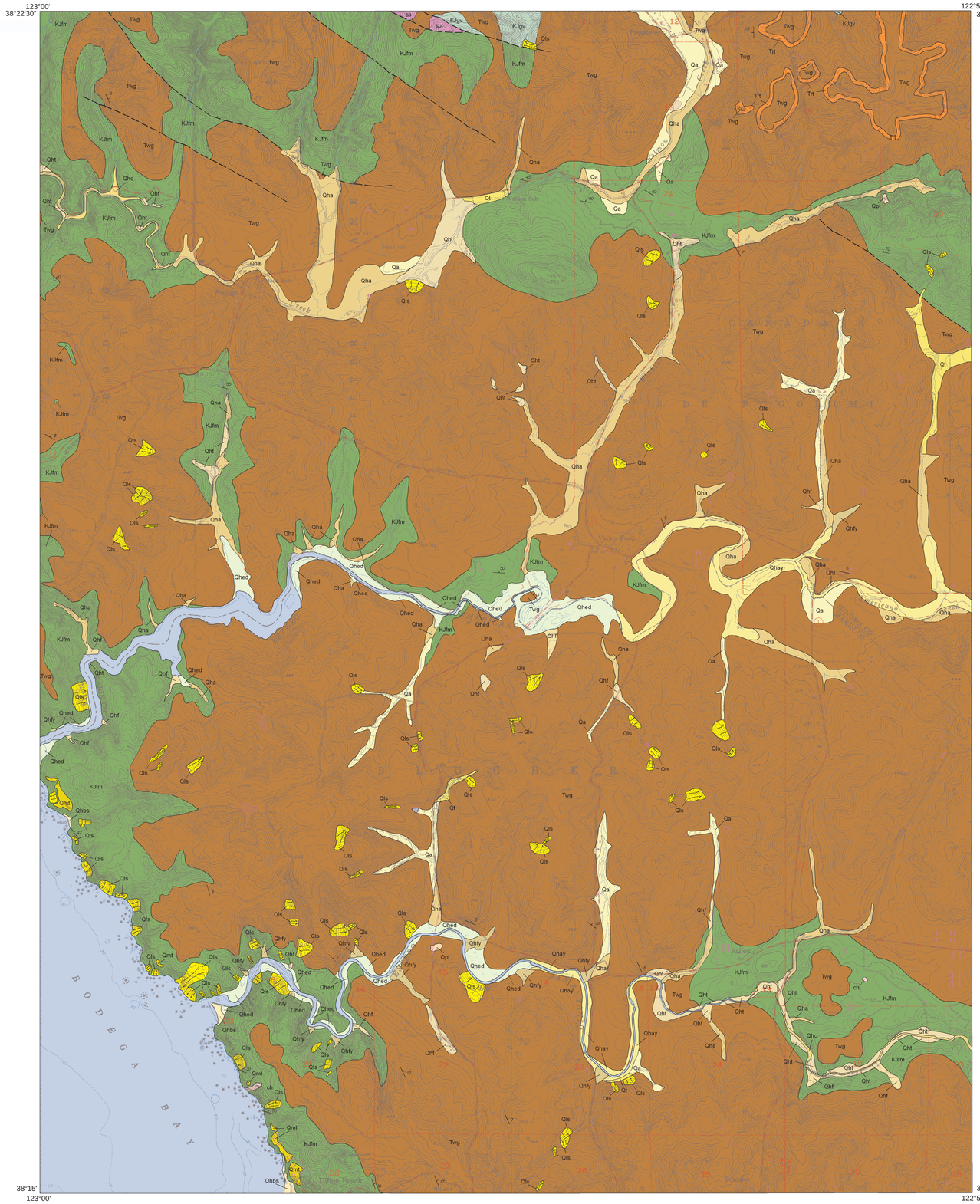
Preliminary Geologic Map available from:
http://www.conservation.ca.gov/cgs/rghm/rgm/preliminary_geologic_maps.htm




# GEOLOGIC MAP OF THE VALLEY FORD 7.5' QUADRANGLE SONOMA AND MARIN COUNTIES, CALIFORNIA: A DIGITAL DATABASE

VERSION 1.0

By
Mark O. Wiegers

Digital Database
by:
Carlos I. Gutierrez and Karen Toman-Sager
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## Unit Explanation

**Qhc** — **Modern stream channel deposits (Holocene < 150 years)** - Deposits in active, natural stream channels. Deposits consist of loose alluvial sand, gravel and silt.

**Qhbs** — **Modern beach sand (Holocene < 150 years)** - Well-sorted fine to coarse sand with some gravel deposited on active ocean beaches.

**Qhay** — **Alluvium (Holocene < 1,000 years)** - Young fluvial sediments deposited on modern floodplains. Age based on presence of youthful meander scars and braid bars identified on aerial photos and geomorphic position close to the elevation of modern stream channels. Deposits consist of sand, silt, and clay.

**Qhfy** — **Alluvial fan deposits (Holocene < 1,000 years)** - Fluvial sediments deposited on gently sloping fan-shaped alluvial surfaces at the mouth of steep drainages by debris flows and intermittent heavy stream flow. Age based on youthful appearance of fan surface evaluated on aerial photos. Deposits consist of poorly to moderately sorted sand, silt, clay, and gravel.

**Qhed** — **Estuarine deposits (Holocene)** - Estuarine sediments deposited at the mouth of tidally influenced coastal streams. Deposits include silt and clay with interbedded layers of peat and woody debris deposited by slack tidal and fluvial currents, and sand and gravel deposited by more vigorous fluvial currents.

**Qha** — **Alluvium (Holocene)** - Fluvial sediments deposited on stream banks, fans and terraces along active streams. Deposits consist of moderately to well-sorted gravel, sand, silt and clay.

**Qhf** — **Alluvial fan deposits (Holocene)** - Fluvial sediments deposited on gently sloping fan-shaped alluvial surfaces at the mouth of steep drainages by debris flows and intermittent heavy stream flow. Deposits consist of poorly to moderately sorted sand, silt, clay and gravel.

**Qht** — **Stream terrace deposits (Holocene)** - Fluvial sediments deposited in point bar and over-bank settings. Terrace surfaces are generally less than 25 to 30 feet above the stream channel. Deposits consist of moderately to well-sorted gravel, sand, silt and minor clay.

**Qa** — **Alluvium (latest Pleistocene to Holocene)** - Fluvial sediments deposited on stream banks and terraces near active streams where age is uncertain. Deposits consist of poorly to well-sorted gravel, sand, silt and clay.

**Qt** — **Stream terrace deposits (latest Pleistocene to Holocene)** - Fluvial sediments on relatively undissected terraces where age is uncertain. Deposits consist of moderately to well-sorted gravel, sand, silt with minor clay. May include active stream channels that are too narrow to show at the scale of the map.

**Qls** — **Landslide deposits (Holocene and Pleistocene)** - Poorly sorted clay, sand, gravel, boulders, and rock masses. Deposited by mudflows, debris flows, and block slides.

**Qpt** — **Stream terrace deposits (late Pleistocene)** - Fluvial sediments on slightly dissected terraces above flood level. Deposits consist of moderately to well-sorted gravel, sand, and silt with minor clay.

**Qmt** — **Marine terrace deposits (Pleistocene)** - Deposits on uplifted marine abrasion platforms. Deposits consist of well-sorted, moderately to well-bedded sand and gravel.

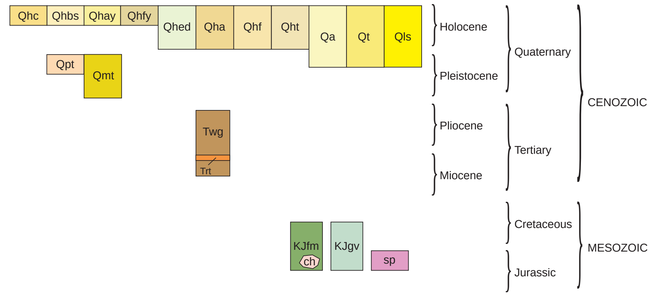
**Trt / Twg** — **Wilson Grove Formation (Pliocene and Miocene)** - Predominantly massive to thick-bedded, fine- to medium-grained, well-sorted, light-gray, buff-weathering friable, quartz-lithic arenite. Sand grains are predominantly quartz with some dark chert. Contains lenses of conglomerate, sandy shale, and mollusk and gastropod-bearing shell hash. Locally includes a basal pebble to boulder conglomerate consisting of clasts derived from the Franciscan Complex. The Wilson Grove Formation was deposited on an erosional surface of moderate relief beveled across underlying basement rocks of the Franciscan Complex. Fossils in the Wilson Grove range from late Miocene to late Pliocene. The unit contains a marker bed of white, water-lain tuff and pumice breccia informally named the Robiar tuff (Trt) (Sarna-Wojcicki, 1992) which is radiometrically dated at 6.26 Ma (McLaughlin and others, 2005).

**KJfm (ch)** — **Franciscan Complex mélange (Cretaceous and Jurassic)** - Massive to distinctly bedded, brown and orange weathering, gray to green lithic-wacke, gray to black siltstone and shale, and mélange consisting of a sheared argillite and graywacke matrix enclosing diverse blocks of sedimentary, metamorphic and mafic volcanic rocks. Complexly folded and faulted graywacke sandstone and interbedded shale are the most common rocks exposed in the map area. Blocks of chert (ch) and mafic volcanic rocks embedded in sheared argillite are exposed in wave cut sea cliffs along the coast.

**KJgv** — **Great Valley Complex (Cretaceous and Jurassic)** - Brown-weathering, dark-gray, well-bedded sandstone, brown siltstone and shale, and pebble to boulder conglomerate. Coarse clasts include quartz, porphyritic volcanic rocks, and chert.

**sp** — **Serpentinite (Jurassic)** - Highly sheared, fault-bounded slivers of serpentinite derived from the Coast Range Ophiolite.

## Unit Correlation




## Symbol Explanation

Contact between map units - solid where accurately located, dashed where approximately located.

Fault - dashed where approximately located; dotted where concealed.

25 — Strike and dip of bedding plane.

Landslide - arrows indicate principal direction of movement.

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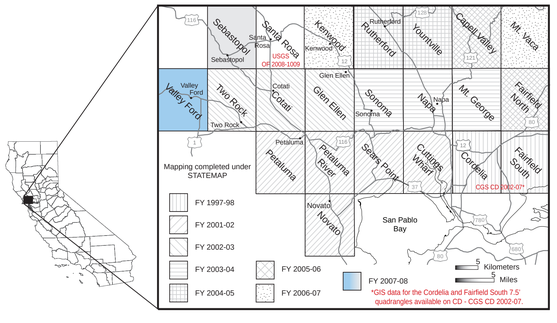


Topographic base from U.S. Geological Survey
Valley Ford 7.5-minute Quadrangle, 1971
UTM projection, Zone 10, North American Datum 1927

Scale 1:24,000

UTM GRID AND 2008 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Contour Interval 20 feet
Datum is Mean Sea Level

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