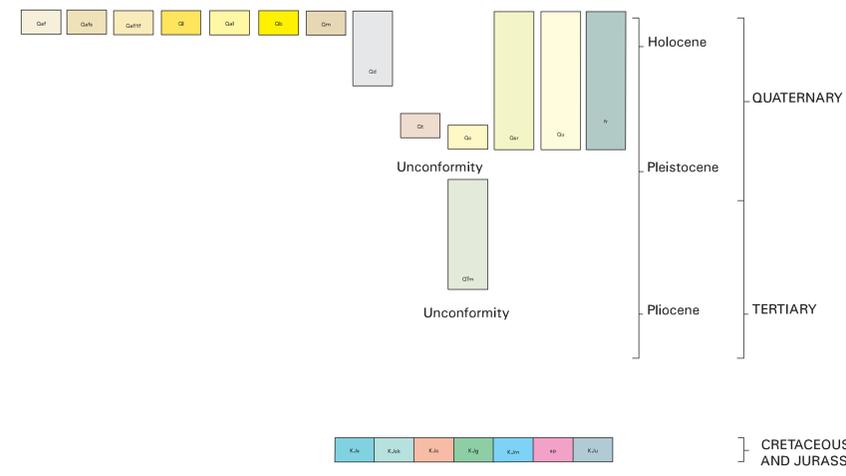


Magnetic declination is 16.5 degrees east of north

- EXPLANATION**
- GEOLOGIC UNIT DESCRIPTIONS**
- water
 - QUATERNARY**
Holocene
 - Qaf Artificial fill
Clay, silt, sand, rock fragments, organic matter, and man-made debris.
 - Qatf Artificial fill over tidal flat
Clay, silt, sand, rock fragments, organic matter, and man-made debris, placed over tidal flats.
 - Qafs Artificial fill, Native American shellmound.
Dark silt to sandy soil containing shell fragments and rare intact shells.
 - Ql Landslide deposits
Composition and structure depend on the geologic formation involved and type of landslide.
 - Qal Alluvium
Mostly sand and silt but locally contains clay, gravel, or boulders; generally gray to brown.
 - Qb Beach Deposits
Predominantly well sorted medium-grained loose gray sand; locally consists of sand, gravel and cobbles.
 - Qm Bay mud
Soft (moist) to firm (dry) clay and silt; locally contains shell fragments, plant remains, and thin beds of sand.
 - Qd Dune sand
Well sorted fine-grained sand, gray and loose in most places, grayish orange to reddish brown and firm in a few places. Age extends into Pleistocene.
 - Pleistocene
 - Qt Marine terrace deposits
Predominantly friable well sorted fine-grained yellowish-orange to gray sand; includes alluvial gravel and colluvial clay.
 - Qsr Slope debris and ravine fill
Stony silt to sandy clay; locally silty to clayey sand or gravel; yellowish-orange to medium gray, unstratified or poorly stratified. Where it overlies the Merced or Colma Formation it is commonly a silty to clayey sand, or gravel.
 - Qc Colma Formation
In northwest and central parts of area, friable well sorted fine to medium sand containing a few beds of sandy silt, clay, and gravel. In southeast part of area, mostly sandy clay and silty sand; yellowish orange to gray.
 - Qu Sedimentary deposits, undifferentiated
 - TERTIARY AND QUATERNARY**
Pleistocene and Pliocene
 - fr Fault rocks
Zone of gouge, breccia, fractured and sheared rock along the San Andreas fault. Gradational contact with surrounding rocks. Limits poorly known. Age extends into Holocene
 - CRETACEOUS AND JURASSIC**
Franciscan Complex and associated rocks
 - Kjs Sandstone and shale
Interbedded sandstone and shale, hard where fresh and intact, soft where weathered or sheared. Commonly medium dark gray where fresh, olive gray to yellowish brown where moderately weathered, and yellowish orange to yellowish gray where highly weathered.
 - Kjsk Sandstone and shale
Sandstone generally containing more than two percent potassium feldspar.
 - Kjc Chert
Hard chert interbedded with firm shale; chert layers generally two or three inches thick, shale layers less than one inch thick; generally grayish red.
 - Kjg Greenstone
Altered volcanic rocks, fine grained, mostly basalt; hard where fresh, but weathered and firm to soft in most exposures; commonly grayish olive to moderate olive gray where moderately weathered, dark yellowish orange to light brown where highly weathered.
 - Kjm Metamorphic rocks
Hard to firm, fine- to coarse-grained schistose, gneissose, or granulose metamorphic rocks; dark gray, dark greenish gray, or dark bluish gray.
 - sp Serpentine
Hard to soft, generally greenish gray; contains small bodies of grabbro and diabase.
 - Kju Sheared rocks
Small to large fragments of hard rock in matrix of sheared rock. Matrix generally coherent and firm, but soft in places, especially where weathered. Dark gray where fresh, yellowish brown where weathered. Derived mostly from shale and sandstone of Franciscan Complex and serpentine.



This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards or with the North American Stratigraphic Code. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

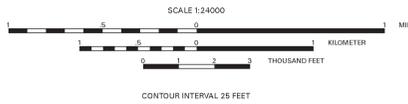
This database, identified as "Preliminary Geologic Map of the San Francisco South 7.5' Quadrangle and part of the Hunters Point 7.5' Quadrangle, San Francisco Bay Area, California: A Digital Database", has been approved for release and publication by the Director of the USGS. Although this database has been subject to review and is substantially complete, the USGS reserves the right to revise the data pursuant to further analysis and review. Furthermore, it is released on the condition that neither the USGS nor the United States Government may be held liable for any damages resulting from its authorized or unauthorized use.

U.S. Department of the Interior
United States Geological Survey
Plot derived from
Open-File Report 98-354

Base scanned from U.S. Geological Survey 1:25000 San Francisco-South and Hunters Point California topographic maps, 1980 photorevised editions.

Stateplane Projection
California Coordinate System Zone 3

This map is a plot derived from data contained in the digital database Open-File Report 98-354, "Preliminary Geologic Map of the San Francisco South 7.5' Quadrangle and part of the Hunters Point 7.5' Quadrangle, San Francisco Bay Area, California: A Digital Database". A PostScript and Portable Document Format plot file of this map is included in the Open-File Report, but the Open-File Report does not contain a paper copy of this map. The Open-File Report consists of the digital data and a pamphlet explaining the database and indicating how to obtain the data from which this map was prepared as well as the PostScript and Portable Document Format plot file of the map. The pamphlet also explains how those without computers can obtain a plot of this map from a private vendor.



PRELIMINARY GEOLOGIC MAP OF THE SAN FRANCISCO SOUTH 7.5' QUADRANGLE AND PART OF THE HUNTERS POINT 7.5' QUADRANGLE, SAN FRANCISCO BAY AREA, CALIFORNIA

By
M. G. Bonilla
Digital Database Prepared By

Carl Wentworth, Marjorie Lucks, Heather Schoonover, Scott Graham, and Thomas May

