Plate 1

Geologic Map of Stanford Linear Accelerator Center

compiled by
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with contributions from
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Explanation

Geologic Units

- Qnf — Native Fill* / Qal — Non-native Fill
- Qal — Alluvium and Terrace Deposits (Quaternary)
- QTsc — Santa Clara Formation [may include Merced (?) Formation] (Plio-Pleistocene)
- Tm — Monterey Formation (Middle - Upper Miocene)
- Tls — Ladera Sandstone (Middle Miocene)
- Tpm — Page Mill Basalt (Middle Miocene)
- Twh — Whiskey Hill Formation (Eocene)
- KJfs — Franciscan Complex - serpentinite (Jurassic - Cretaceous)
- KJfu — Franciscan Complex - undifferenciated (Jurassic - Cretaceous)

Historic groundwater monitoring well, geotechnical boring**
Groundwater monitoring well, installed by ESE#
Elevation control point in feet

Fault, dashed where location is approximate or inferred, dotted indicates covered; arrow indicates dip; ball and bar indicates downthrown side

Thrust fault, dashed where location is approximate or inferred, dotted indicates covered; barbs on upper plate

Stratigraphic contact, dashed where location is approximate or inferred, dotted indicates covered; arrow indicates dip

Anticline (A' noted)

Strike and dip of overturned bedding

Strike and dip of bedding

Axis of anticline, dotted where covered

Axis of syncline, dotted where covered

Axis of overturned syncline, dotted where covered

* Native Fill areas are more extensive than shown on map because of ongoing construction activities. Fill under the Interstate 280 and Sand Hill Road interchange may not be native to area.

** Includes borings from Rosewood Hotel site, adjacent to SLAC at Sand Hill Road - Interstate 280 interchange

Base map provided by SLAC Mechanical Design Department
Contours in feet above mean sealevel. Contour interval 5 feet.

Geology compiled by Kenn Ehrhan, modified after SLAC (1966). Primary data sources include Dibblee (1973), Dibblee (1980), Page and Tabor (1967), Page and Tabor (1968), Page (1965), and others (2005), Crawford (2004), SLAC (2002, 2003), Zlotnik, Ehrhan, Simmons and Nieves (1997), and CWO, TRC Lowney (2006).
Subsurface geologic interpretations and contact relationships done by Kenn Ehrhan and Susan Wlebsky, 1997 - 2006. Examination of borehole, test pits descriptions, continuous core, geophysical logs done by Kenn Ehrhan, 1997 - 2006.

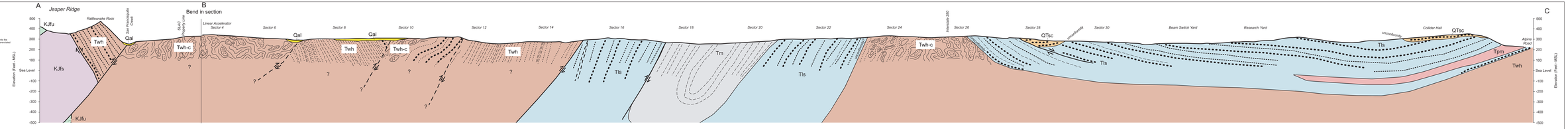
N

A

B

C

0 500 feet
Horizontal Scale

Cross section modified from ABA (1965), Page and Tabor (1967), and Page (1965). Topographic profile and geology modified from ABA (1965) from Plate 2 and represents conditions prior to construction of the linear accelerator.

Whiskey Hill Formation (Twh) is divided into two members on cross section. Twh represents the orderly member and Twh-c represents chaotic member. Note that these units are not differentiated on the geologic map.