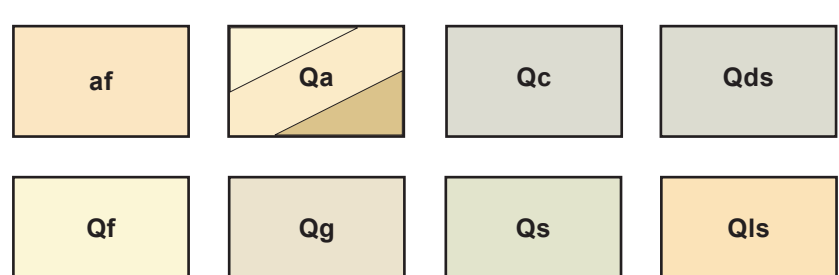
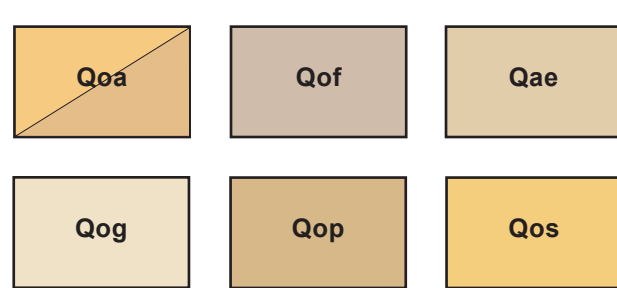


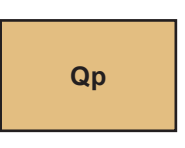
Dibblee Wall Map Legend



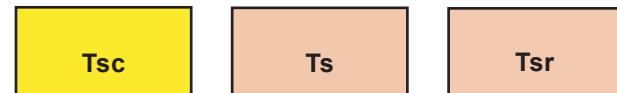
SURFICIAL SEDIMENTS
 af artificial fill
 Qa alluvium of gravel, sand, clay
 Qc silt and clay of coastal marshlands
 Qds dune sand
 Qf alluvial fan gravel and sand
 Qg stream channel sand and gravel
 Qs beach sand
 Qls landslide debris



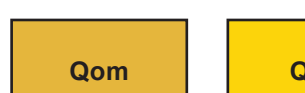
OLDER SURFICIAL SEDIMENTS
 Qoa dissected, weakly indurated alluvium
 Qof alluvial fan gravel and sand
 Qae alluvial fan sediments of granitic sand
 Qog elevated remnants of older alluvium
 Qop paleosol, indurated hardpan
 Qos older sandy alluvium



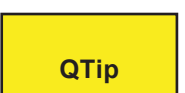
PACOIMA FORMATION
 Qp brown alluvial gravel and sand



SAUGUS FORMATION
 QTs weakly indurated pebble-cobble gravel, sand and clay
 QTsv breccia conglomerate of andesite-basalt
 Tsc pebbly sand
 Ts weakly indurated pebble-cobble gravel, sand and clay
 Tsr Ts with oyster shells



SHALLOW MARINE SEDIMENTS
 Qom marine deposits of pebbly sand, gravel and silt
 Qap San Pedro sand with shell fragments
 Ql Inglewood Formation, fine grained sandstone
 Qfu massive silty claystone



LAS POSAS SAND
 QTlp medium grained massive sand



PICO FORMATION
 Tps medium grained sandstone
 QTpm mudpit claystone
 Tp claystone and siltstone
 Tpg conglomerate of cobbles of granitic and metavolcanic rock



FERNANDO FORMATION
 Tf silty claystone
 Tfsc semi-friable sandstone
 Tfr crumbly claystone



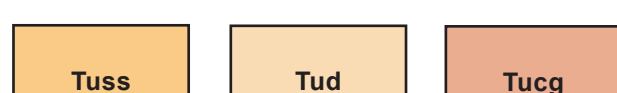
TOWSLEY FORMATION
 Ttoc micaceous siltstone-claystone
 Ttos semi-friable sandstone
 Ttog granitic and gneissic detritus



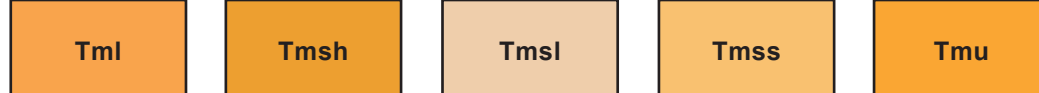
CASTAIC FORMATION
 Tcal diatomaceous claystone or siltstone



SISQUOC FORMATION
 Tsq clay shale
 Tsqs coherent to semi-friable sandstone



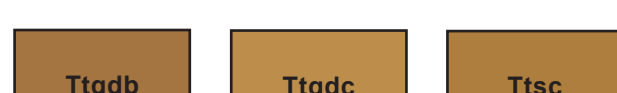
UNAMED SHALE AND SANDSTONE (upper part of Modelo Formation)
 Tust sandstone and minor siltstone
 Tush claystone and siltstone
 Tuss sandstone
 Tud semi-punky diatomaceous clayey shale
 Tucg conglomerate of granitic, basaltic-andesitic detritus



MONTEREY FORMATION
 Tm thin bedded shale
 Tmb siliceous shale
 Tmcg conglomerate of granitic detritus in sandstone matrix
 Tmcl clay shale
 Tml thin bedded clayey shale
 Tmsh thin bedded siliceous shale
 Tmsl clay shale and thin bedded shale
 Tmss semi-friable bedded sandstone
 Tmu thin bedded shale with friable sandstone



MINT CANYON FORMATION
 Tmg detritus of gabbro-norite, anorthosite, gneiss and granitic rocks
 Tmc gray claystone



TOPANGA (?) FORMATION
 Ttqdb massive to vaguely bedded breccia
 Ttqdc crudely bedded conglomerate and breccia
 Ttsc semi-friable sandstone



DERITAL SEDIMENTS OF LINDERRO CANYON
 Tts semi-friable sandstone
 Ttbr breccia of Mesa Peak andesitic and basaltic detritus
 Ttbs friable tan sandstone
 Ttsc conglomerate of granitic detritus
 Ttvc conglomerate of volcanic detritus andesite dacite
 Tvcg conglomerate of andesitic and basaltic detritus

SYMBOLS

(not all symbols present on each map)
FORMATION CONTACT **MEMBER CONTACT**
 dashed where inferred or indefinite between units of a formation

CONTACT BETWEEN SURFICIAL SEDIMENTS
 located approximately in places

FAULT: Dashed where indefinite or inferred, dotted where concealed, queried where existence is doubtful. Parallel arrows indicate inferred relative lateral movement. Relative vertical movement is shown by U/D (U=upthrown side, D=downthrown side). Short arrow indicates dip of fault plane. Sawteeth on upper plate or low angle thrust fault.

FOLDS: ANTICLINE SYNCLINE
 arrow on axial trace of fold indicated direction of plunge; dotted where concealed by surficial sediments

STRIKE AND DIP OF STRATIFIED ROCKS
 18° inclined
 20° inclined
 80° overturned
 75° inclined
 vertical
 horizontal
 approximate
 metamorphic or igneous rock foliation or flow banding

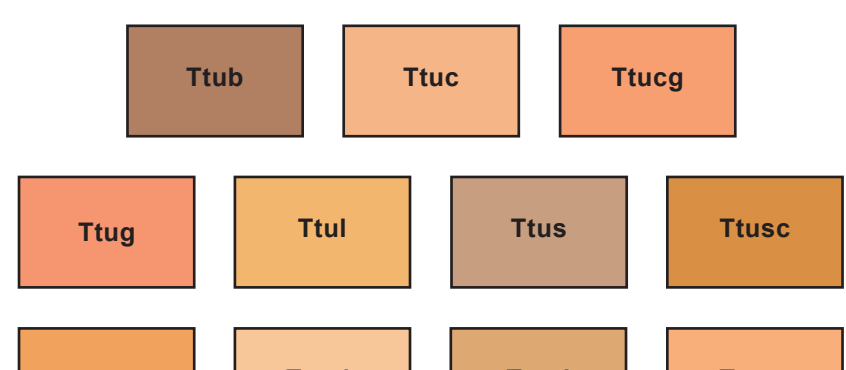
FOSSIL LOCALITY
 DIRECTION OF LANDSLIDE MOVEMENT
 SANDSTONE MARKER BED
 CONGLOMERATE MARKER BED
 ABANDONED EXPLORATORY OIL (OR GAS) WELL
 OIL WELLS (ON TOPOGRAPHIC BASE MAP)

This wall mosaic is composed of 19 individual Dibblee geologic maps. Dibblee maps use USGS 7.5-Minute topographic maps as their base maps and correspond to the topo map names shown below.

34°22'30"	DF-41 Santa Paula 1992	DF-40 Mooypark 1992	DF-39 Simi 1992	DF-38 Santa Susana 1992	DF-36 Oak View 1992	DF-33 San Fernando 1991	DF-32 Sausalito 1991	DF-84 Cantor Peak 2002
	DF-28 Comarillo 1990	DF-49 Newbury Park 1993	DF-37 Thousand Oaks 1992	DF-35 Calabasas 1992	DF-31 Canyon Park S 1992	DF-30 Van Nuys S 1991	DF-30 Burbank S 1991	DF-23 Pasadena 1989
	DF-29 Point Mugu 1990	DF-48 Point Dume 1993	DF-47 Malibu Beach 1993	DF-35 Topanga 1992	DF-31 Van Nuys S 1991	DF-30 Burbank S 1991	DF-30 Hollywood 1991	DF-22 Los Angeles 1989



EON	ERA	PERIOD	EPOCH	AGE (ma)
Phanerozoic	Cenozoic	Quaternary	Holocene	.01
			Pleistocene	2.6
		Tertiary	Pliocene	5.2
			Miocene	23
			Oligocene	33.9
			Eocene	55.8
	Mesozoic	Cretaceous	Jurassic	145
			Triassic	199
			Permian	251
		Paleozoic	Carboniferous	299
Devonian	359			
Pre Cambrian	Paleozoic	Silurian	416	
		Ordovician	433	
		Ordovician	488	
		Cambrian	543	
		Cambrian	4500	



UPPER TOPANGA FORMATION
 Ttub blueschist breccia
 Ttuc clay shale
 Ttucg breccia conglomerate of sandstone and siltstone
 Ttug conglomerate of metavolcanic rocks and quartzite
 Ttul semi-siliceous shale
 Ttus sandstone, semi-friable, thick bedded
 Ttusc massive sandstone with pebble-cobble conglomerate
 Ttug semi-friable sandstone and pebble-cobble-boulder conglomerate
 Ttush micaceous silty claystone
 Ttusl micaceous clay shale
 Ttuv conglomerate of volcanic detritus andesite dacite



FRANCAS FORMATION
 Ttrb blueschist conglomerate breccia
 Ttrc clay shale
 Ttrs friable sandstone



QUARTZ DIORITE BRECCIA
 Tqdb brecciated mass of quartz diorite



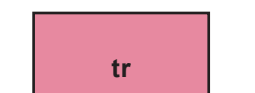
MIDDLE TOPANGA FORMATION
 Ttbs sandstone of basaltic origin
 Ttc micaceous clay shale
 Ttcg conglomerate of pebbly granitic, metaporphyrific rocks
 Ttlic micaceous clay shale
 Tts thick bedded semi-friable sandstone
 Ttsl semi-friable sandstone
 Ttsl semi-friable sandstone and micaceous claystone
 Tva andesitic flows and flow breccias
 Tvb basaltic volcanic rocks



CONEJO VOLCANICS (EXTRUSIVE)
 Tcva andesitic flows and flow breccias
 Tcvab andesitic flow
 Tcvad andesite-dacite breccia
 Tcvar andesitic flow breccias
 Tcvaz andesitic breccia
 Tcvb basaltic rocks
 Tcvbb basaltic breccias on Mountiel Ridge
 Tcvbp basaltic-andesite breccia
 Tcvbr basaltic breccia at Malibu Creek
 Tcvbv porphyritic basalt-andesite breccia
 Tcvbz basaltic rocks in Francas Formation
 Tcvdb dacitic breccias
 Tcvb basaltic sandstone and siltstone



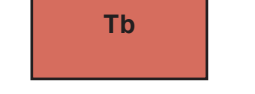
CONEJO VOLCANICS (INTRUSIVE)
 aci andesite composed of plagioclase
 ai andesite
 aoi porphyritic olivine andesite
 api porphyritic andesite
 bi basalt
 db diabase or optical basalt
 di dacite



INTRUSIVE ROCKS
 tr trachyte, andesitic



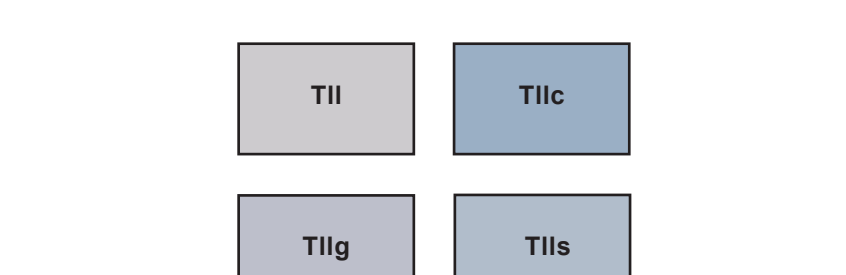
LOWER TOPANGA FORMATION
 Ttvc micaceous clay shale with fossils
 Ttlgv granitic rocks, porphyritic andesite and quartzite
 Ttr sandstone and conglomerate
 Ttis bedded sandstone
 Ttlsc sandstone and some conglomerate
 Ttlsv bedded sandstone with fossils



INTRUSIVE BASALT
 Tb black fine grained basalt dike



SESPÉ FORMATION
 Tsg coarse conglomerate of granitic rocks
 Tsp sandstone and claystone
 Tspc red micaceous claystone



LAJAS FORMATION
 Tll micaceous clay shale and sandstone
 Tllc cobbles of granitic and metavolcanic conglomerate
 Tllg conglomerate of granitic, metavolcanic and quartzite
 Tlls sandstone



UNNAMED MARINE STRATA
 Tes calcareous sandstone



DIKE ROCKS
 Td thin dikes basaltic to andesitic
 Ti thin dikes of talite porphyry



SANTA SUSANA FORMATION
 Tsi Simi conglomerate, quartzite cobbles and metavolcanics
 Tsv micaceous clay, shale and siltstone
 Tstg conglomerate with cobbles of granitic, metavolcanic
 Ttui algal limestone
 Tsur sandstone and conglomerate, claystone
 Ttus sandstone
 Ttuv sandstone with conglomerate



CHATSWORTH FORMATION
 Kcg conglomerate of granitic rocks
 Kca sandstone
 Kcsh gray clay shale



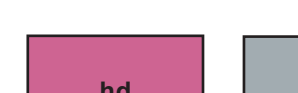
UNNAMED STRATA
 Kcr conglomerate of granitic rocks with claystone
 Ksh micaceous shale
 Kss massive to bedded sandstone
 Kssi interbedded sandstone
 Ku shatterd, brecciated interbedded sandstone



APLITE DIKE
 ap aplite white



QUARTZ DIORITE
 qd quartz diorite
 gqd gneissoid quartz diorite



HORNBLLENDE DIORITE-GABBRO
 hd medium grained diorite-gabbro
 hdg hornblende diorite gabbro amphibolite



DIKE ROCKS
 d fine grained andesitic rocks



SERPENTINE
 sp serpentized peridotite



SANTA MONICA SLATE
 sms dark bluish gray slate-phyllite-hornfels



LEUCOCRATIC GRANITIC ROCKS
 gr quartz monzonite-granodiorite
 grd granodiorite
 grdb granitic rocks stained brown



LOWE GRANODIORITE
 lgd granodiorite
 lgdd darker hornblende rich gneissoid facies
 lgdh hornblende granodiorite



ANORTHOSITE-GABBRO COMPLEX
 an anorthosite
 sy syenite
 fgb ferro-gabbro
 agb anorthosite and dark layers of gabbro diorite
 jgb jordanite-norite-gabbro-diorite mafic complex
 hgb hornblende gabbro
 ijb gabbro-norite
 lgb leucogabbro



GRANITE
 egr medium grained granite



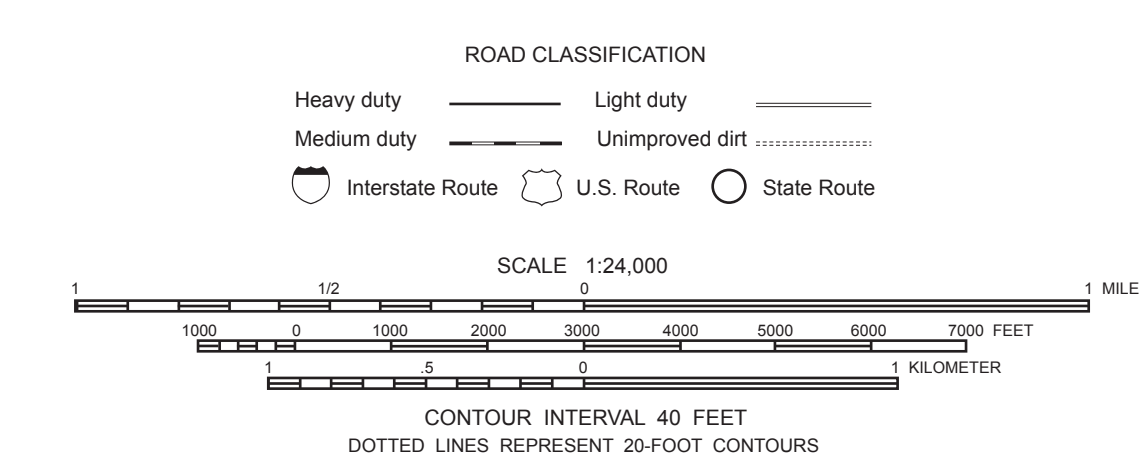
SILICEOUS METAMORPHIC ROCKS
 mq light gray quartzite
 msl meta-quartzite of metachert



GNÉISSIC ROCKS
 agn augen gneiss
 dgn dioritic gneiss
 gn gneiss
 ml white layered marble



MENDENHALL GNEISS
 mgn dark gray gneiss



DISCLAIMER: The colors of rock units are generally consistent across each map. However, there are color variations on a few of the maps. In cases where the difference is significant, the legend will indicate two or three colors associated with the same unit.