Geologic Units

Quaternary

- af — Artificial fill
- Qs — Marine sediments, offshore; includes unconsolidated marine sands and silts on the continental shelf
- Qsw — Sand wave deposits, offshore dune-like sand deposits typically less than 50 cm thick mobilized by large storm surges
- Qal — Alluvium; unconsolidated gravel, sand, silt, and clay
- Qc — Colluvium; unconsolidated poorly-sorted gravel, sand, silt, and clay produced by hillslope processes
- Qls — Landslide deposits; arrows show direction of inferred movement
- Qe — Eolian deposits; active and inactive sand dunes
- Qf — Fluvial terrace deposits; unconsolidated gravel, sand, silt, and clay deposited in stream valleys
- Qcs — Fluvial channel deposits, offshore; generally overlain by transgressive marine sand and silt
- Qm — Marine terrace deposits; unconsolidated gravel, sand, silt, and clay commonly overlain by alluvial fan and colluvial deposits
- Qoa — Older alluvium; poorly consolidated siltstone, claystone, and conglomerate

Tertiary — Pliocene

Unconformity

- Tmp — Pismo Formation; undifferentiated
- Tpps — Squire Member of the Pismo Formation; massive white to tan, medium- to coarse-grained sandstone

Local unconformity

- Tpob — Belleview Member of the Pismo Formation; sandy claystone, siltstone; claystone and fine-grained sandstone, diatomaceous horizons
- Tpgg — Gragg Member of the Pismo Formation; fine- to medium-grained sandstone, rare diatomaceous siltstone, pebble conglomerate, and bituminous sandstone

Geologic Units (continued)

Tertiary — Miocene

Unconformity

- Tmpe — Edna Member of the Pismo Formation; fine- to coarse-grained sandstone, locally bituminous
- Tmpm — Miguelito Member of the Pismo Formation; brown claystone and siltstone

Unconformity

- Tmm — Monterey Formation; chert with siliceous and dolomitic siltstone, tuffaceous sandstone, diatomite, and opaline and procelaneus shale

Progressive unconformity

- Tmo — Obispo Formation, undifferentiated
- Tmof — Obispo Formation; tuffaceous and diatomaceous sandstone and silty sandstone
- Tmod — Obispo Formation; diabase
- Tmor — Obispo Formation; resistant zeolitized tuff

Tertiary — Oligocene

Unconformity

- Tmr — Rincon Formation; dark brown siltstone, and silty claystone

Unconformity

- Tpz — Vaqueros Sandstone; conglomerate and sandstone, with local coquina horizon

Jurassic/Cretaceous

Unconformity

- KJ — Undifferentiated well bedded brown fine- to coarse-grained arkosic to lithic sandstone with shale

Faulted

- KJf — Franciscan Complex, undifferentiated
- KJfm — Franciscan Complex rocks, melange; sheared shale, mudstone and siltstone with knockers of graywacke, schist, conglomerate, metavolcanic rocks, and green, white, or red chert
- KJfmv — Franciscan Complex, metavolcanic rocks
- KJfch — Franciscan Complex, ophiolite
- Ub — Serpentine

Symbols

- Contact; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
- Syncline; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
- Anticline; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
- Fault; Tertiary age or older (inactive), solid where well located, dashed where approximate, dotted where concealed, queried where inferred)
- Fault; slip rate <1 mm/yr, solid where well located, dashed where approximate, dotted where concealed, queried where inferred)
- Hosgri fault; slip rate ≥1 mm/yr, generally covered but, shown as solid where well located, dashed where approximate, queried where inferred
- Lineament; solid where well expressed, dashed where moderately expressed
- Measured bedding orientation
- Picks of faults and fold axes interpreted from shallow seismic survey lines
- Diver sample, formation indicated
- Core sample, formation indicated

Note: See Table B-2, B-3 and B-4 for descriptions of diver and core samples

Geologic units with two labels separated by a slash (e.g., Qe/Qoa) indicate depth profiles in which the former unit overlies the latter.

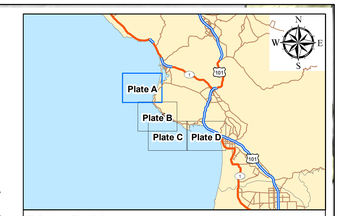

Plate B-1A
NORTH SECTION GEOLOGIC MAP
MORRO BAY TO POINT BUCHON

DATA SOURCES and NOTES:

- 2010 Project DEM image is shown. This DEM includes 1 m multi-beam bathymetry data (PG&E, 2010), 1 m near-shore LiDAR topography data (PG&E, 2010) and 5 m SLO County InSAR data (SLO County, 2008)
- Map Projection: UTM Zone 10N, NAD 1983, Map Scale: 1:12,000

0 0.1 0.2 0 1,000 2,000 0 100 200 400

Nautical Miles | Feet | Meters

Pacific Gas and Electric Company

File path: S:\13800\13838\13838.002\Figures\20101112_Report\Appendix_B\Plate_B-1A.mxd; Date: [12/21/2010]; User: S. Bucknam

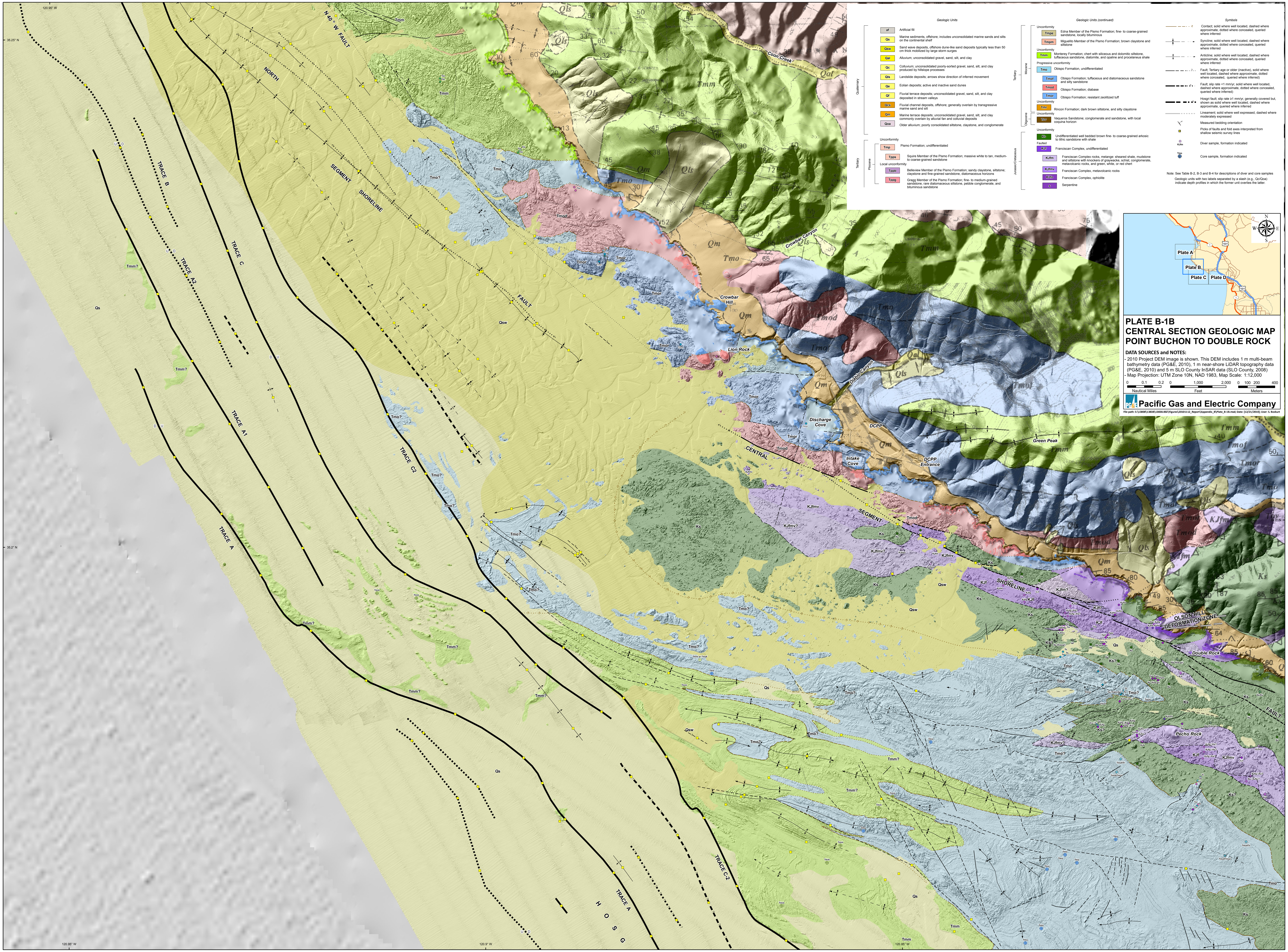
Geologic Units
Quaternary
af Artificial fill
Qs Marine sediments, offshore; includes unconsolidated marine sands and silts on the continental shelf
Qsw Sand wave deposits, offshore dune-like sand deposits typically less than 50 cm thick mobilized by large storm surges
Qal Alluvium; unconsolidated gravel, sand, silt, and clay
Qc Colluvium; unconsolidated poorly-sorted gravel, sand, silt, and clay produced by hillslope processes
Qls Landslide deposits; arrows show direction of inferred movement
Qe Eolian deposits; active and inactive sand dunes
Qf Fluvial terrace deposits; unconsolidated gravel, sand, silt, and clay deposited in stream valleys
Qcs Fluvial channel deposits, offshore; generally overlain by transgressive marine sand and silt
Qm Marine terrace deposits; unconsolidated gravel, sand, silt, and clay commonly overlain by alluvial fan and colluvial deposits
Qoa Older alluvium; poorly consolidated siltstone, claystone, and conglomerate
Tertiary
Pliocene
Unconformity
Tmp Pismo Formation; undifferentiated
Tpps Squire Member of the Pismo Formation; massive white to tan, medium- to coarse-grained sandstone
Local unconformity
Tppb Belleview Member of the Pismo Formation; sandy claystone, siltstone; claystone and fine-grained sandstone, diatomaceous horizons
Tppg Gragg Member of the Pismo Formation; fine- to medium-grained sandstone, rare diatomaceous siltstone, pebble conglomerate, and bituminous sandstone
Geologic Units (continued)
Tertiary
Miocene
Unconformity
Tmpe Edna Member of the Pismo Formation; fine- to coarse-grained sandstone, locally bituminous
Tmpm Miguelito Member of the Pismo Formation; brown claystone and siltstone
Unconformity
Tmm Monterey Formation; chert with siliceous and dolomitic siltstone, tuffaceous sandstone, diatomite, and opaline and procelaneus shale
Progressive unconformity
Tmo Obispo Formation, undifferentiated
Tmof Obispo Formation; tuffaceous and diatomaceous sandstone and silty sandstone
Tmod Obispo Formation; diabase
Tmor Obispo Formation; resistant zeolitized tuff
Unconformity
Tmr Rincon Formation; dark brown siltstone, and silty claystone
Oligocene
Unconformity
Tov Vaqueros Sandstone; conglomerate and sandstone, with local coquina horizon
Unconformity
Jurassic/Cretaceous
Ks Undifferentiated well bedded brown fine- to coarse-grained arkosic to lithic sandstone with shale
Faulted
KJf Franciscan Complex, undifferentiated
KJfm Franciscan Complex rocks, melange: sheared shale, mudstone and siltstone with knockers of graywacke, schist, conglomerate, metavolcanic rocks, and green, white, or red chert
KJfmv Franciscan Complex, metavolcanic rocks
KJfo Franciscan Complex, ophiolite
s Serpentine
Symbols
Contact; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
Syncline; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
Anticline; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
Fault; Tertiary age or older (inactive), solid where well located, dashed where approximate, dotted where concealed, queried where inferred)
Fault; slip rate <1 mm/yr, solid where well located, dashed where approximate, dotted where concealed, queried where inferred)
Hosgri fault; slip rate ≥1 mm/yr, generally covered but, shown as solid where well located, dashed where approximate, queried where inferred
Lineament; solid where well expressed, dashed where moderately expressed
Measured bedding orientation
Picks of faults and fold axes interpreted from shallow seismic survey lines
Diver sample, formation indicated
Core sample, formation indicated
Note: See Table B-2, B-3 and B-4 for descriptions of diver and core samples
Geologic units with two labels separated by a slash (e.g., Qc/Qoa) indicate depth profiles in which the former unit overlies the latter.
N
S
E
W
Plate A
Plate B
Plate C
Plate D
101
1
PLATE B-1B
CENTRAL SECTION GEOLOGIC MAP
POINT BUCHON TO DOUBLE ROCK
DATA SOURCES and NOTES:
- 2010 Project DEM image is shown. This DEM includes 1 m multi-beam bathymetry data (PG&E, 2010), 1 m near-shore LiDAR topography data (PG&E, 2010) and 5 m SLO County InSAR data (SLO County, 2008)
- Map Projection: UTM Zone 10N, NAD 1983, Map Scale: 1:12,000
0 0.1 0.2 Nautical Miles
0 1,000 2,000 Feet
0 100 200 400 Meters
Pacific Gas and Electric Company
File path: S:\13800\13838\13838.002\Figures\20101112_Report\Appendix_B\Plate_B-1B.mxd; Date: [12/21/2010]; User: S. Bozkurt
120.95° W
120.9° W
120.85° W
35.25° N
35.2° N
N 40° W FAULT
NORTH
SEGMENT
SHORELINE
FAULT
CENTRAL
SEGMENT
SHORELINE
FAULT
TRACE B
TRACE C
TRACE A2
TRACE A1
TRACE A
TRACE C2
HOSG
Coon Creek
Crowbar Canyon
Crowbar Hill
Lion Rock
Diablo Canyon
Discharge Cove
DCPP
Intake Cove
DCPP Entrance
Green Peak
OLSON HILL DEFORMATION ZONE
Double Rock
Pecho Rock

PLATE B-1C
SOUTH SECTION GEOLOGIC MAP
DOUBLE ROCK TO SAN LUIS HILL

DATA SOURCES and NOTES:

- 2010 Project DEM image is shown. This DEM includes 1 m multi-beam bathymetry data (PG&E, 2010), 1 m near-shore LiDAR topography data (PG&E, 2010) and 5 m SLO County InSAR data (SLO County, 2008)
- Map Projection: UTM Zone 10N, NAD 1983, Map Scale: 1:12,000

0 0.1 0.2 Nautical Miles | 0 1,000 2,000 Feet | 0 100 200 400 Meters

Pacific Gas and Electric Company

File path: S:\13800\138381\13838.002\figures\20101112_Report\Appendix_B\Plate_B-1C.mxd; Date: [12/21/2010]; User: S. Bozkurt

Geologic Units

Quaternary
- af — Artificial fill
- Qs — Marine sediments, offshore; includes unconsolidated marine sands and silts on the continental shelf
- Qsw — Sand wave deposits, offshore dune-like sand deposits typically less than 50 cm thick mobilized by large storm surges
- Qal — Alluvium; unconsolidated gravel, sand, silt, and clay
- Qc — Colluvium; unconsolidated poorly-sorted gravel, sand, silt, and clay produced by hillslope processes
- Qls — Landslide deposits; arrows show direction of inferred movement
- Qe — Eolian deposits; active and inactive sand dunes
- Qf — Fluvial terrace deposits; unconsolidated gravel, sand, silt, and clay deposited in stream valleys
- Qcs — Fluvial channel deposits, offshore; generally overlain by transgressive marine sand and silt
- Qm — Marine terrace deposits; unconsolidated gravel, sand, silt, and clay commonly overlain by alluvial fan and colluvial deposits
- Qoa — Older alluvium; poorly consolidated siltstone, claystone, and conglomerate

Tertiary — Pliocene
- Unconformity
- Tmp — Pismo Formation; undifferentiated
- Tpps — Squire Member of the Pismo Formation; massive white to tan, medium- to coarse-grained sandstone
- Local unconformity
- Tppb — Belleview Member of the Pismo Formation; sandy claystone, siltstone; claystone and fine-grained sandstone, diatomaceous horizons
- Tppg — Gragg Member of the Pismo Formation; fine- to medium-grained sandstone, rare diatomaceous siltstone, pebble conglomerate, and bituminous sandstone

Geologic Units (continued)

Tertiary — Miocene
- Unconformity
- Tmpe — Edna Member of the Pismo Formation; fine- to coarse-grained sandstone, locally bituminous
- Tmpm — Miguelito Member of the Pismo Formation; brown claystone and siltstone
- Unconformity
- Tmm — Monterey Formation; chert with siliceous and dolomitic siltstone, tuffaceous sandstone, diatomite, and opaline and procelaneus shale
- Progressive unconformity
- Tmo — Obispo Formation, undifferentiated
- Tmof — Obispo Formation; tuffaceous and diatomaceous sandstone and silty sandstone
- Tmod — Obispo Formation; diabase
- Tmor — Obispo Formation; resistant zeolitized tuff

Tertiary — Oligocene
- Unconformity
- Tmr — Rincon Formation; dark brown siltstone, and silty claystone
- Unconformity
- Tmzg — Vaqueros Sandstone; conglomerate and sandstone, with local coquina horizon

Jurassic/Cretaceous
- Unconformity
- Kh — Undifferentiated well bedded brown fine- to coarse-grained arkosic to lithic sandstone with shale
- Faulted
- KJf — Franciscan Complex, undifferentiated
- KJfm — Franciscan Complex rocks, melange: sheared shale, mudstone and siltstone with knockers of graywacke, schist, conglomerate, metavolcanic rocks, and green, white, or red chert
- KJfmv — Franciscan Complex, metavolcanic rocks
- KJfch — Franciscan Complex, ophiolite
- Ks — Serpentine

Symbols
- Contact; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
- Syncline; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
- Anticline; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
- Fault; Tertiary age or older (inactive), solid where well located, dashed where approximate, dotted where concealed, queried where inferred)
- Fault; slip rate <1 mm/yr, solid where well located, dashed where approximate, dotted where concealed, queried where inferred)
- Hosgri fault; slip rate ≥1 mm/yr, generally covered but, shown as solid where well located, dashed where approximate, queried where inferred
- Lineament; solid where well expressed, dashed where moderately expressed
- Measured bedding orientation
- Picks of faults and fold axes interpreted from shallow seismic survey lines
- KJfm — Diver sample, formation indicated
- Tmp — Core sample, formation indicated

Note: See Table B-2, B-3 and B-4 for descriptions of diver and core samples

Geologic units with two labels separated by a slash (e.g., Qc/Qoa) indicate depth profiles in which the former unit overlies the latter.

HOSGRI FAULT ZONE
TRACE A
TRACE C-2
EAST TRACE
WEST TRACE
RATTLESNAKE FAULT
SOUTH SEGMENT SHORELINE FAULT
Double Rock
Pecho Rock
Santa Rosa Reef
Westdahl Rock
San Luis Hill
120.9° W
120.85° W
35.15° N
35.1° N

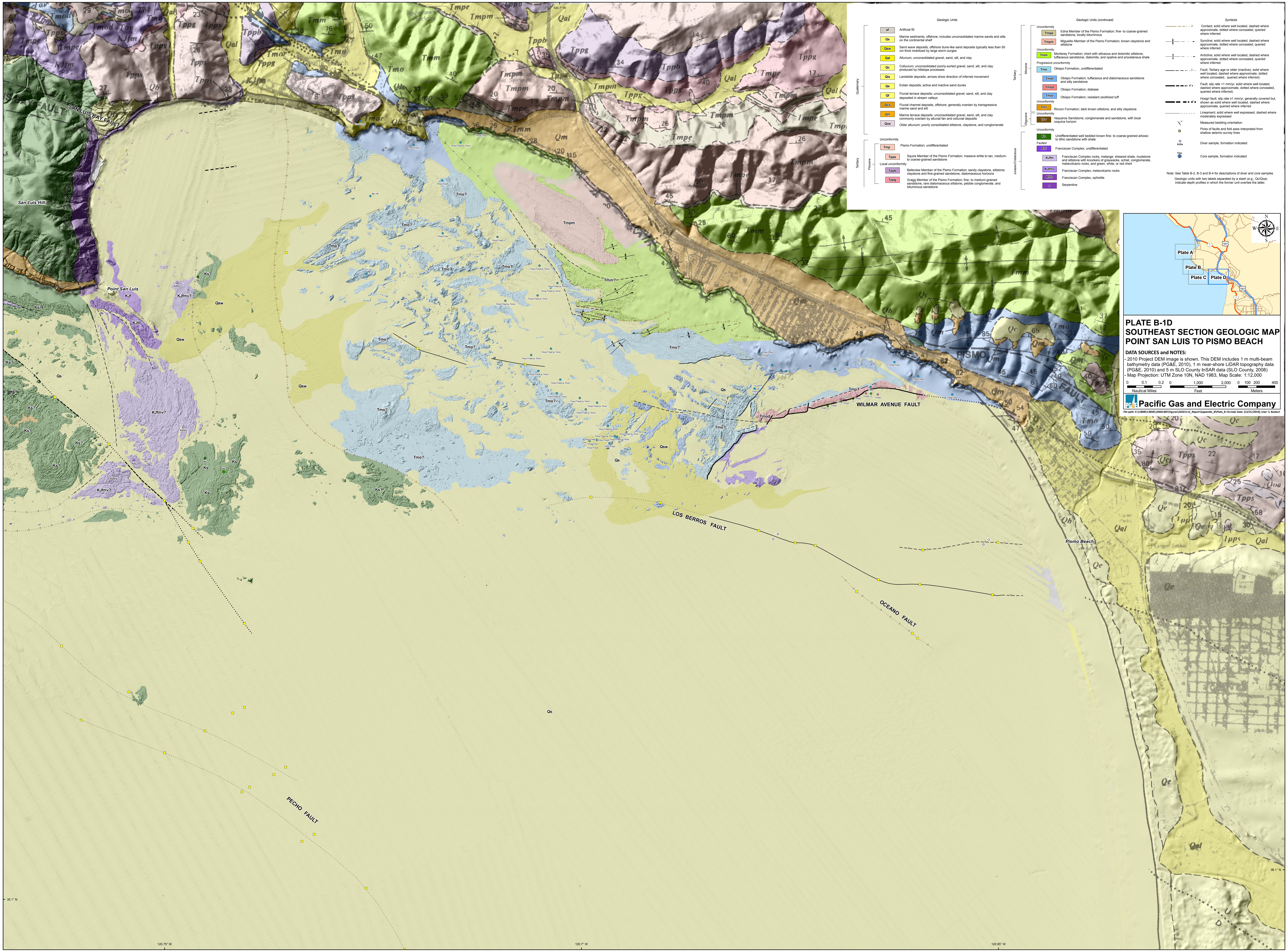
SAN LUIS BAY FAULT
San Luis Hill
Point San Luis
LOS BERROS FAULT
OCEANO FAULT
FECHO FAULT
WILMAR AVENUE FAULT
PISMO
FAULT
Pismo Beach
120.75° W
120.7° W
120.65° W
35.1° N
Geologic Units
Quaternary
af Artificial fill
Qs Marine sediments, offshore; includes unconsolidated marine sands and silts on the continental shelf
Qsw Sand wave deposits, offshore dune-like sand deposits typically less than 50 cm thick mobilized by large storm surges
Qal Alluvium; unconsolidated gravel, sand, silt, and clay
Qc Colluvium; unconsolidated poorly-sorted gravel, sand, silt, and clay produced by hillslope processes
Qls Landslide deposits; arrows show direction of inferred movement
Qe Eolian deposits; active and inactive sand dunes
Qf Fluvial terrace deposits; unconsolidated gravel, sand, silt, and clay deposited in stream valleys
Qcs Fluvial channel deposits, offshore; generally overlain by transgressive marine sand and silt
Qm Marine terrace deposits; unconsolidated gravel, sand, silt, and clay commonly overlain by alluvial fan and colluvial deposits
Qoa Older alluvium; poorly consolidated siltstone, claystone, and conglomerate
Unconformity
Tertiary
Pliocene
Tmp Pismo Formation; undifferentiated
Tpps Squire Member of the Pismo Formation; massive white to tan, medium- to coarse-grained sandstone
Local unconformity
Tppb Belleview Member of the Pismo Formation; sandy claystone, siltstone; claystone and fine-grained sandstone, diatomaceous horizons
Tppg Gragg Member of the Pismo Formation; fine- to medium-grained sandstone, rare diatomaceous siltstone, pebble conglomerate, and bituminous sandstone
Geologic Units (continued)
Tertiary
Miocene
Unconformity
Tmpe Edna Member of the Pismo Formation; fine- to coarse-grained sandstone, locally bituminous
Tmpm Miguelito Member of the Pismo Formation; brown claystone and siltstone
Unconformity
Tmm Monterey Formation; chert with siliceous and dolomitic siltstone, tuffaceous sandstone, diatomite, and opaline and procelaneus shale
Progressive unconformity
Tmo Obispo Formation, undifferentiated
Tmof Obispo Formation; tuffaceous and diatomaceous sandstone and silty sandstone
Tmod Obispo Formation; diabase
Tmor Obispo Formation; resistant zeolitized tuff
Unconformity
Tmr Rincon Formation; dark brown siltstone, and silty claystone
Oligocene
Unconformity
Tov Vaqueros Sandstone; conglomerate and sandstone, with local coquina horizon
Unconformity
Jurassic/Cretaceous
Ks Undifferentiated well bedded brown fine- to coarse-grained arkosic to lithic sandstone with shale
Faulted
KJf Franciscan Complex, undifferentiated
KJfm Franciscan Complex rocks, melange: sheared shale, mudstone and siltstone with knockers of graywacke, schist, conglomerate, metavolcanic rocks, and green, white, or red chert
KJfmv Franciscan Complex, metavolcanic rocks
KJfo Franciscan Complex, ophiolite
s Serpentine
Symbols
Contact; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
Syncline; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
Anticline; solid where well located, dashed where approximate, dotted where concealed, queried where inferred
Fault; Tertiary age or older (inactive), solid where well located, dashed where approximate, dotted where concealed, queried where inferred)
Fault; slip rate <1 mm/yr, solid where well located, dashed where approximate, dotted where concealed, queried where inferred)
Hosgri fault; slip rate ≥1 mm/yr, generally covered but, shown as solid where well located, dashed where approximate, queried where inferred
Lineament; solid where well expressed, dashed where moderately expressed
Measured bedding orientation
Picks of faults and fold axes interpreted from shallow seismic survey lines
Diver sample, formation indicated
Core sample, formation indicated
Note: See Table B-2, B-3 and B-4 for descriptions of diver and core samples
Geologic units with two labels separated by a slash (e.g., Qc/Qoa) indicate depth profiles in which the former unit overlies the latter.
Plate A
Plate B
Plate C
Plate D
101
1
N
W
E
S

PLATE B-1D
SOUTHEAST SECTION GEOLOGIC MAP POINT SAN LUIS TO PISMO BEACH

DATA SOURCES and NOTES:

- 2010 Project DEM image is shown. This DEM includes 1 m multi-beam bathymetry data (PG&E, 2010), 1 m near-shore LiDAR topography data (PG&E, 2010) and 5 m SLO County InSAR data (SLO County, 2008)
- Map Projection: UTM Zone 10N, NAD 1983, Map Scale: 1:12,000

0 0.1 0.2 Nautical Miles
0 1,000 2,000 Feet
0 100 200 400 Meters

Pacific Gas and Electric Company

File path: S:\13800\13838\13838.002\Figures\20101112_Report\Appendix_B\Plate_B-1D.mxd; Date: [12/21/2010]; User: S. Bozkurt