EXPLANATION

Seismic Reflection Survey

- 2011 AWD line
- 2011 AWD line and 2011 Vibroseis line
- 2011 Vibroseis line
- 2011 nodal receivers, no shotpoints
- 2011 nodal receiver array
- 2012 high-resolution survey receiver array

Note: Only selected line numbers are shown.
**Locations of Selected Wells**

**DCPP GEOLOGIC MAPPING PROJECT**

Pacific Gas and Electric Company  Figure 3-2

**EXPLANATION**

**Wells**
- Hydrogeologic well
- Oil well

**Seismic Reflection Survey**
- 2011 AWD line
- 2011 AWD line and 2011 Vibroseis line
- 2011 Vibroseis line
- 2011 nodal receivers, no shotpoints
- 2011 nodal receiver array
- 2012 high-resolution survey receiver array

Note: Well names are provided on Plate 1, Figure 3-9, and Appendix E figures.
Note: Hall et al. (1979) covers the map areas of Hall (1973a) and Hall and Prior (1975).
Irish Hills study area

PG&E (1990), Plate GSG Q16-1A

Price Canyon study area

PG&E (1990), Plate GSG Q16-1B

Avila Beach

Los Osos

Point Buchon

Morro Bay

Santa Barbara

Figure extent

Map projection and scale: NAD 83 / UTM Zone 10N, 1:175,000

Geologic Maps Developed for the LTSP Used in This Study

DCPP GEOLOGIC MAPPING PROJECT

Pacific Gas and Electric Company

Figure 3-4
Map of the Los Osos Fault Zone by Lettis and Hall (1994) Used in This Study
Irish Hills study area

DCPP

Dibblee (2006a)

Dibblee (2004)

Dibblee (2006b)

Dibblee (2006c)

Price Canyon study area

Irish Hills study area

DCPP study area

Point Buchon

Los Osos

Point San Luis

Avila Beach

Port San Luis

Dibblee

Avila Beach

Dibblee

Port San Luis

Price Canyon

DCPP GEOLOGIC MAPPING PROJECT

Pacific Gas and Electric Company

Figure 3-6

Geologic Maps by T.W. Dibblee
Reviewed for This Study

Map projection and scale: NAD 83 / UTM Zone 10N, 1:175,000

DCPP GEOLOGIC MAPPING PROJECT

Pacific Gas and Electric Company

Figure 3-8
EXPLANATION

Geologic Units

Quaternary

Quaternary deposits: un lithified silt, sand, and gravel valley fill deposited during overbank flooding, channel backfilling, and construction of debris flow levees.

Fluvial terrace deposits: un lithified silt, sand, and gravel deposited in stream valleys.

Oamaru alluvial deposits: weakly lithified siltstone, sandstone, and conglomerate deposited as valley fill in the Pleistocene.

Miocene

Mio Pliocene Formation: tuffaceous silts, silts, and tuffaceous sandstones, shales, and siltstones, gray and brown (weathering to chalky white), thinly bedded and well-lithified, includes common sandstone laminae.

Geologic Structures

Pliocene

Mojave Member: siltstone and claystone, brown, thinly bedded, moderately well-lithified, includes rare to common intervals of siliceous beds and doleritic siltstone, sparsely and porosities shale, and bituminous sandstone siltstone.

Toluca Member: siltstone, brown, thinly bedded to un lithified, weakly to moderately well-lithified, includes intervals of bituminous sandstone.

Maps are generated automatically.

Note: No field stations were collected in the Price Canyon study area.

EXPLANATION

Location of Significant Revisions to Existing Geologic Maps

DCPP GEOLOGIC MAPPING PROJECT

Pacific Gas and Electric Company Figure 7-1
Changes:
1) Reclassified Monterey Formation to Obispo Formation or Pismo Formation, Edna Member (across the figure extent).
2) Reclassified Pismo Formation, Miguelito Member to Pismo Formation, Edna Member along the Edna fault zone (locally at the southeast end of the figure).
3) Added bedding attitudes (throughout the figure extent).

Notes:
• Panel A map explanation on Plate 1.
• Creek names added to Panel A for reference.

Comparison of (a) Revised and (b) Previous (AMEC, 2012a) Mapping, NE Margin of Pismo Syncline

DCPP GEOLOGIC MAPPING PROJECT

Pacific Gas and Electric Company

Figure 7-2
Changes:
1) Modified contact between Monterey Formation and Pismo Formation (central and northwest portion of the figure).
2) Added bedding attitudes and map-scale folds (throughout the figure extent).

Notes:
- Panel A map explanation on Plate 1.
- Creek names added to Panel A for reference.
Comparison of (a) Revised and
(b) Previous (PG&E, 2011) Mapping,
Monterey Formation/Obispo
Formation Contact

Changes:
1) Modified contact between Monterey Formation and Obispo Formation (east edge of the figure).
2) Modified contact between Obispo Formation diabase and Obispo Formation volcaniclastics (southeastern portion of the figure).
3) Added bedding attitudes and map-scale folds (throughout the figure extent).

Notes:
- Panel A map explanation on Plate 1.
- Roads and creeks added to Panel A for reference.
Comparison of (a) Revised and (b) Previous (AMEC, 2012a) Mapping, Los Osos Fault Zone

Notes:
- Panel A map explanation on Plate 1.
- Roads added to Panel A for reference.

Changes:
1) Modified fault traces within Franciscan Complex rocks (central portion of figure).
2) Mapped chert (ch) within previously mapped Franciscan Complex metavolcanics and Quaternary deposits (northwestern portion of the figure).
3) Modified extent of serpentinite (s) within previously mapped Franciscan Complex metavolcanics (northwestern portion of the figure).
4) Mapped marine terrace deposits (Qm) (northwestern end of the figure).
5) Modified locations of lineaments and faults (minor modifications; throughout the figure extent).
6) Added bedding attitudes (across the central portion of the figure).
Changes:
1) Added extent of Obispo Formation previously exposed and mapped beneath DCPP (eastern portion of figure).
2) Subdivided Obispo Formation tuffs and volcanoclastics into tuffaceous resistant subunit (Tmor), bedded fine-grained subunit (Tmolc), and bedded coarser-grained volcanoclastic subunit (Tmob) (throughout the figure extent).
3) Added bedding attitudes and faults (throughout the figure extent).
4) Modified interpretation of Discharge Cove faults and stratigraphy based on additional Kelpfly MBES data (central and northwestern portion of figure).
5) Modified contact between Obispo Formation diabase (Tmod) and tuffaceous, resistant Obispo Formation (Tmor) based on helicopter magnetic survey data (across the central portion of the figure).

Comparison of (a) Revised and (b) Previous (PG&E, 2011) Mapping, Offshore of DCPP

Note: Panel A map explanation on Plate 2.
Comparison of (a) Revised and (b) Previous (PG&E, 2011) Artificial Hillshade Images of the Discharge Cove Area

Map projection and scale: NAD 83 / UTM Zone 10N, 1:5,000

Image Source: Composite DEM, version 7 (DCPP Geodatabase, 2013)
Artificial sunlight azimuth and inclination (degrees): 315 / 45

Image Source: Composite DEM, version 6 (DCPP Geodatabase, 2011)
Artificial sunlight azimuth and inclination (degrees): 045 / 45
Helicopter Magnetic Survey Data in the DCPP Area and Inferred Geologic Contact between Tmod and Tmor

EXPLANATION
Total Magnetic Intensity (nT)

48,800
47,250

Geologic Contacts
Tmod / Tmor contact defined by:

- Helicopter Magnetic and MBES data
- Onshore mapping and MBES data
- Other geologic contacts

Notes:
- Magnetic data are from Langenheim et al. (2012).
- See Plate 2 for geologic units and explanation of geologic contacts.