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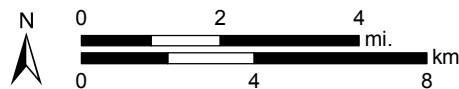


EXPLANATION

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

- Interstates
- Highways
- Major roads



Map projection and scale: NAD 1983 | UTM Zone 10N, 1:175,000

Irish Hills Study Area and 2011 Onshore Seismic Reflection Data

2011 ONSIP

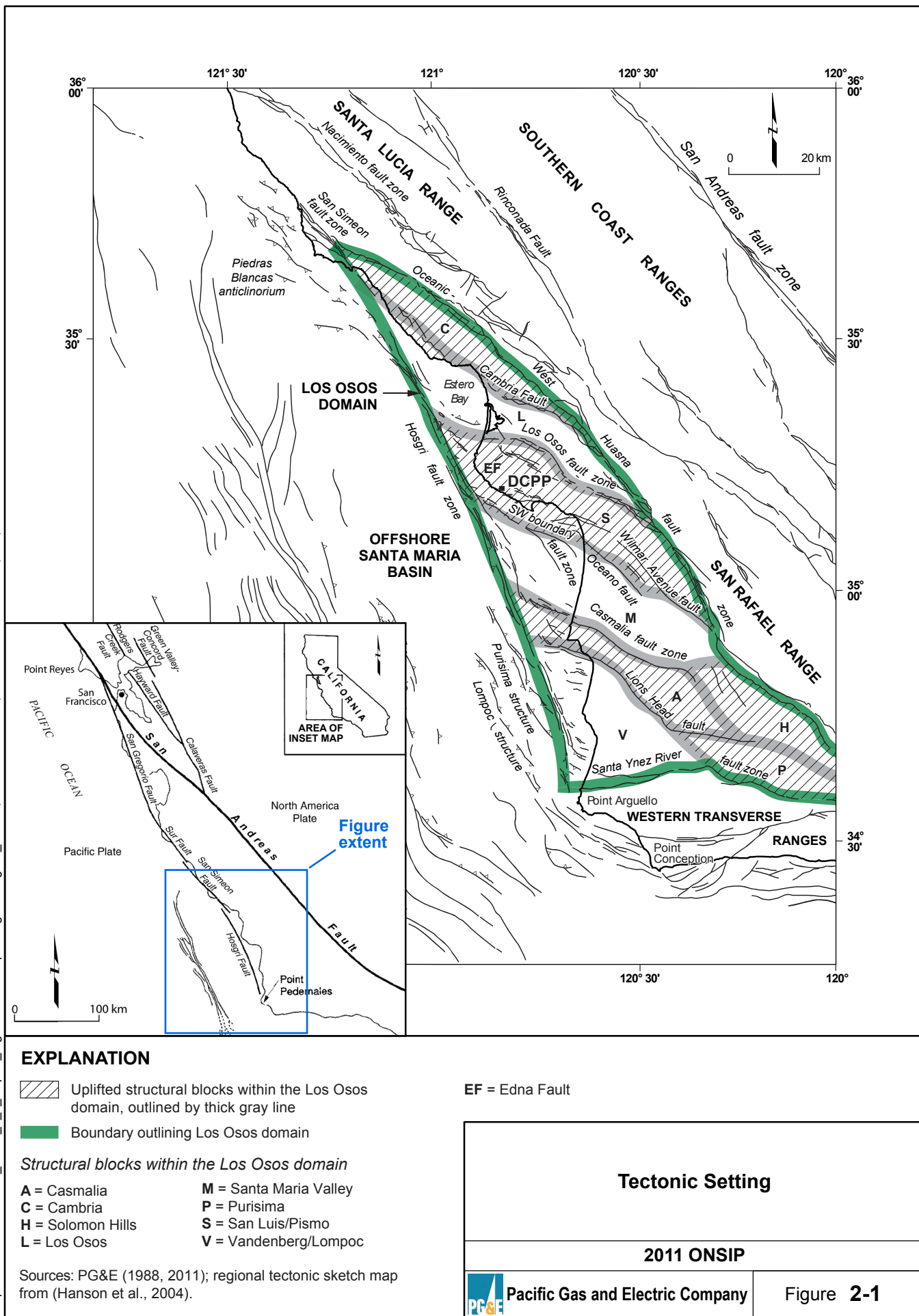


Pacific Gas and Electric Company

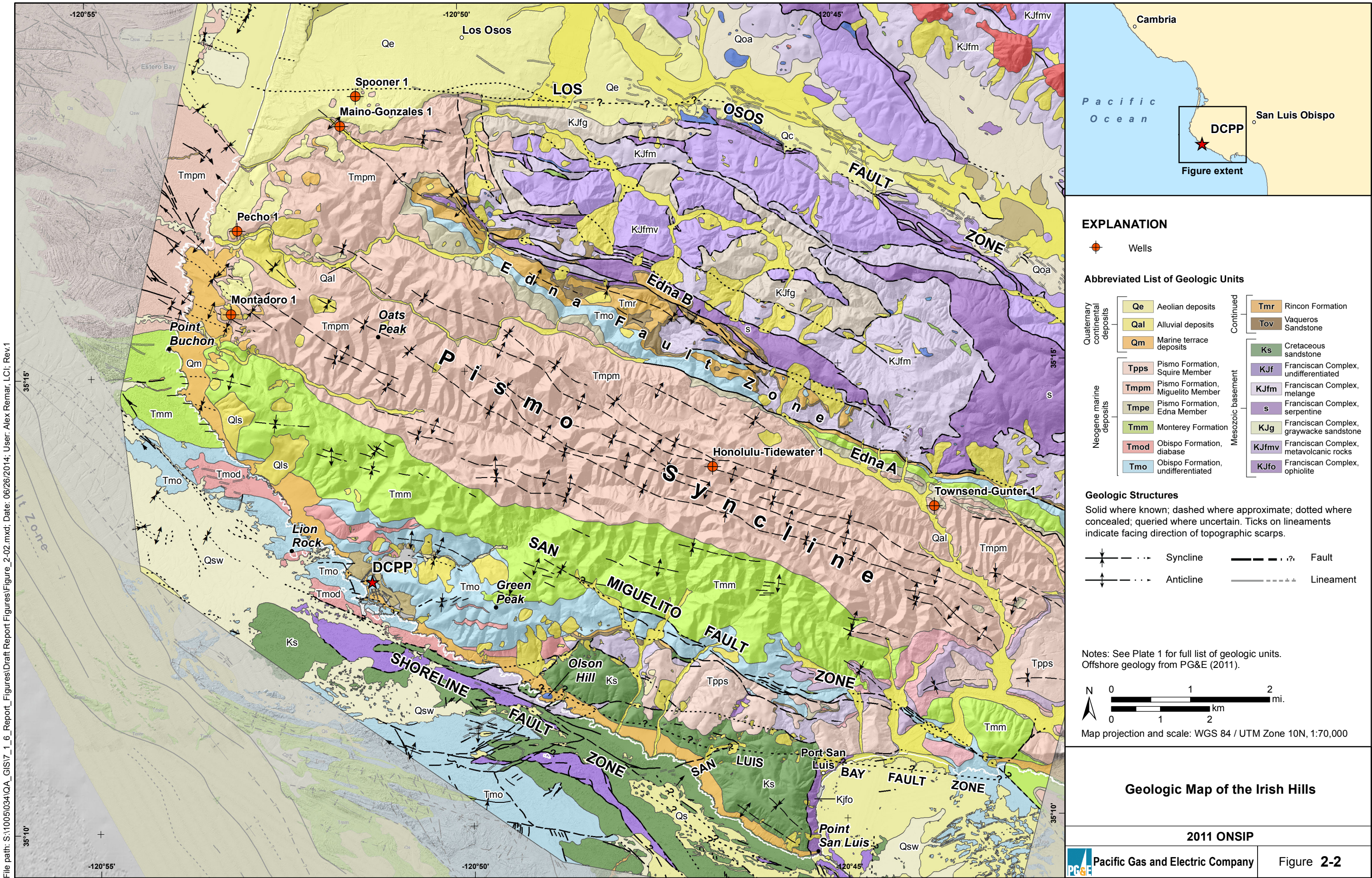
Figure 1-1

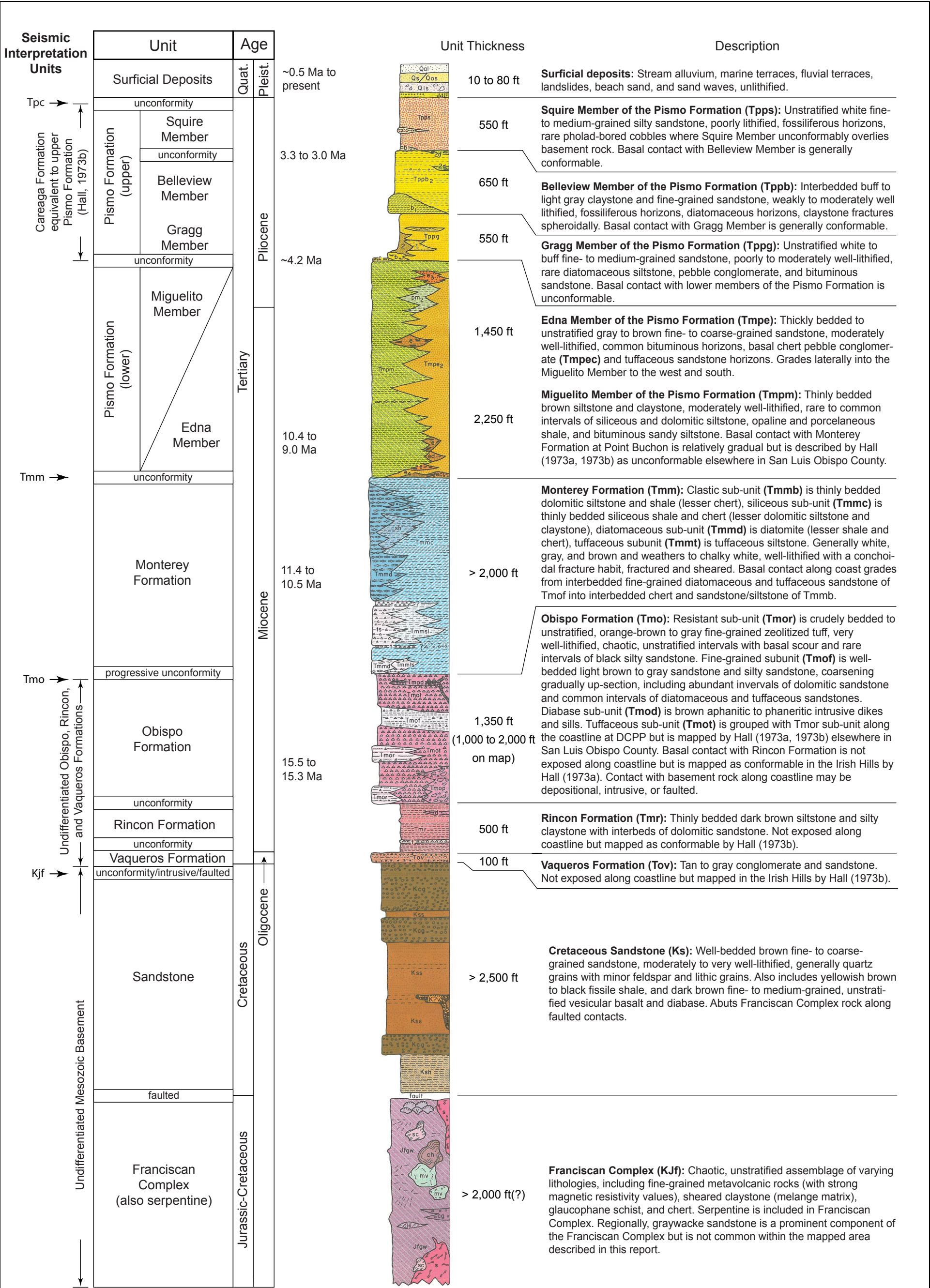
Ch7.GEO.DCPP.TR.14.03 R0

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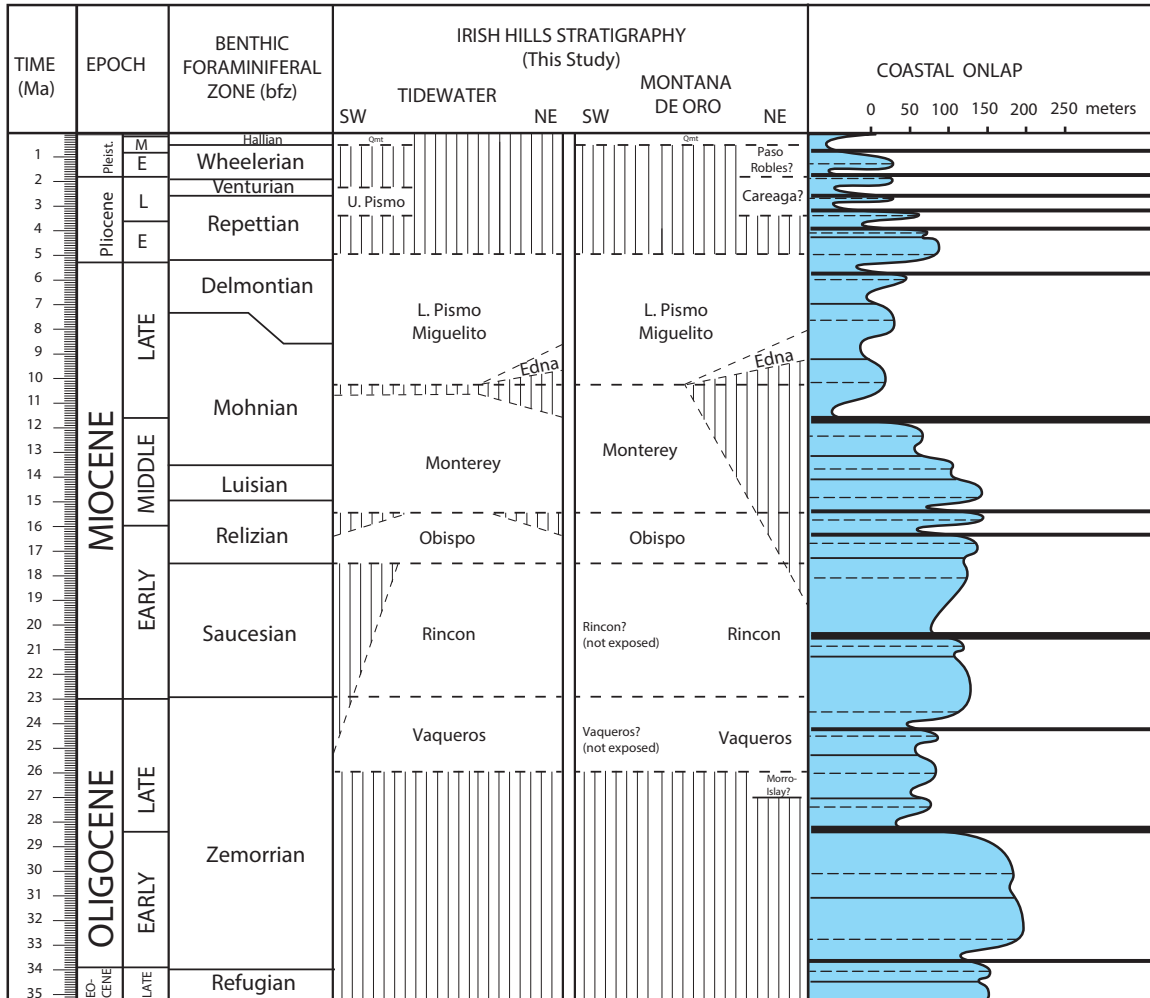
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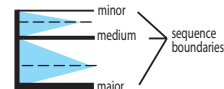


Source: Figure modified from Hall (1973b)

TERTIARY STRATIGRAPHY OF THE PISMO SYNCLINE IN THE IRISH HILLS



Vertical lines represent missing stratigraphic section.



Note: Epoch, benthic foraminiferal zones, and coastal onlap data are from McDougall (2008). Irish Hills stratigraphy modified from Hall (1973b). See Section 2.0 for further discussion and additional references.

Tertiary Stratigraphy of the Pismo Syncline in the Irish Hills

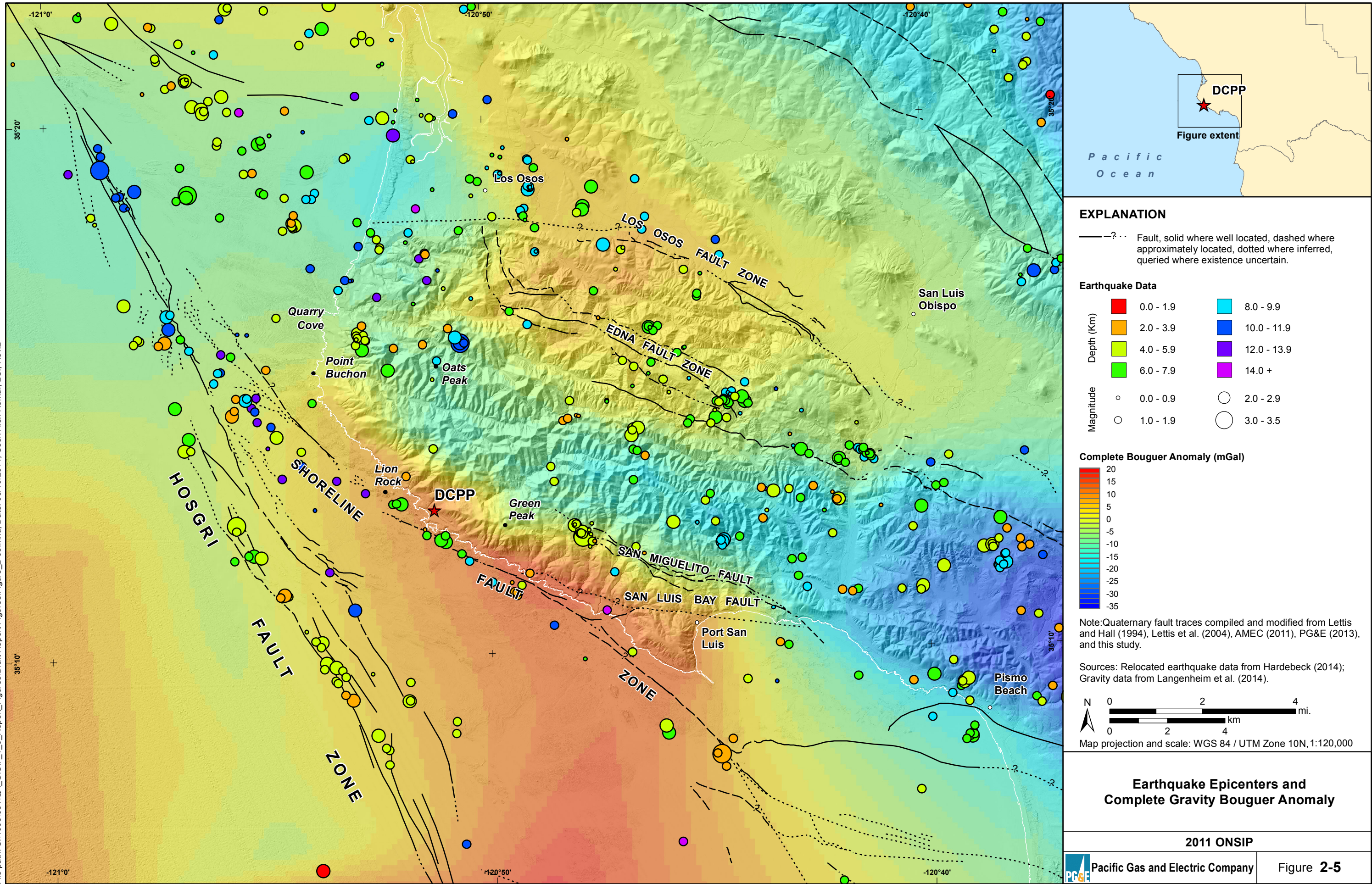
2011 ONSIP

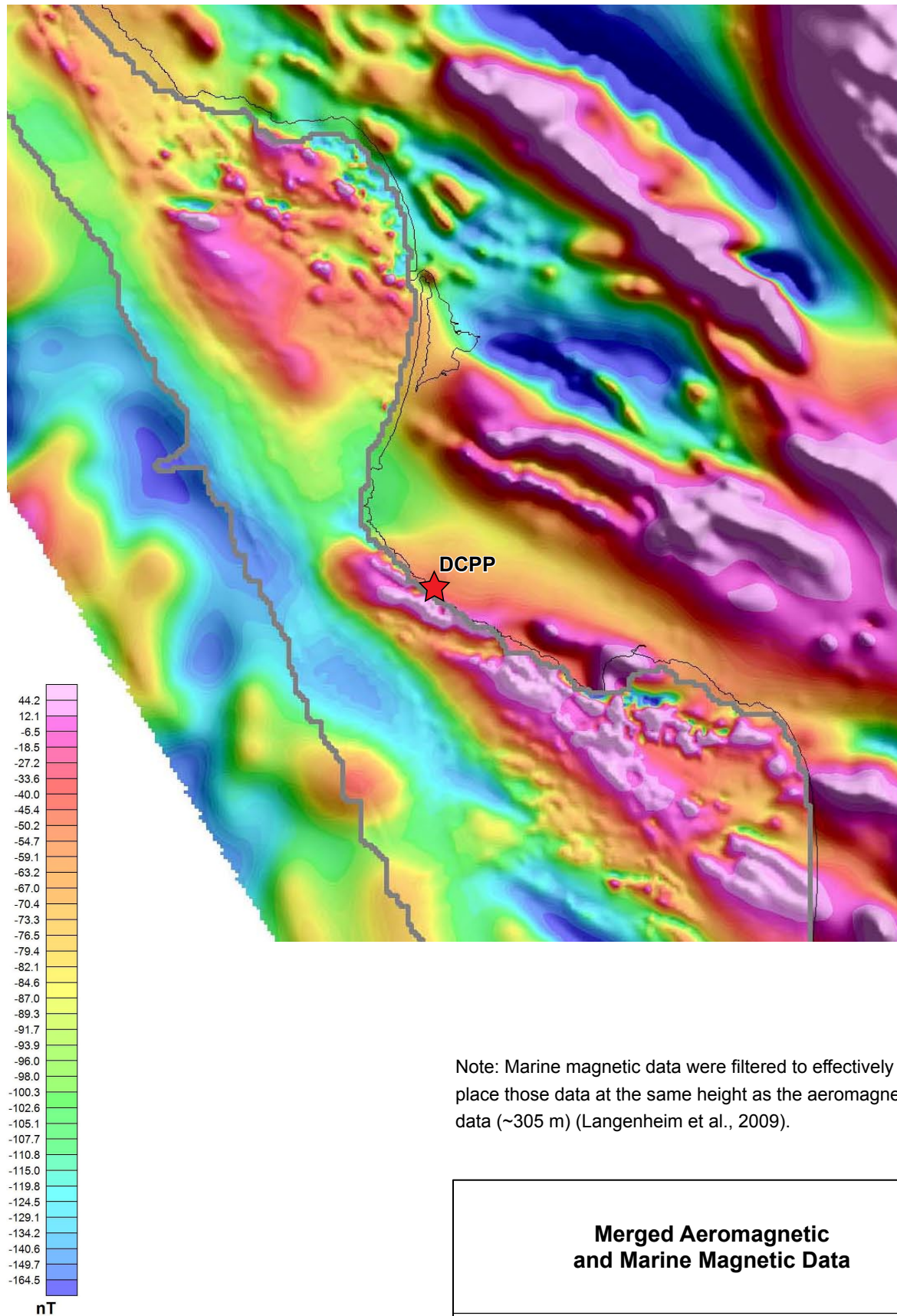


Pacific Gas and Electric Company

Figure 2-4

File path: S:\1005\034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_2-05.mxd; Date: 06/10/2014; User: Alex Remar, LCI; Rev.2





Note: Marine magnetic data were filtered to effectively place those data at the same height as the aeromagnetic data (~305 m) (Langenheim et al., 2009).

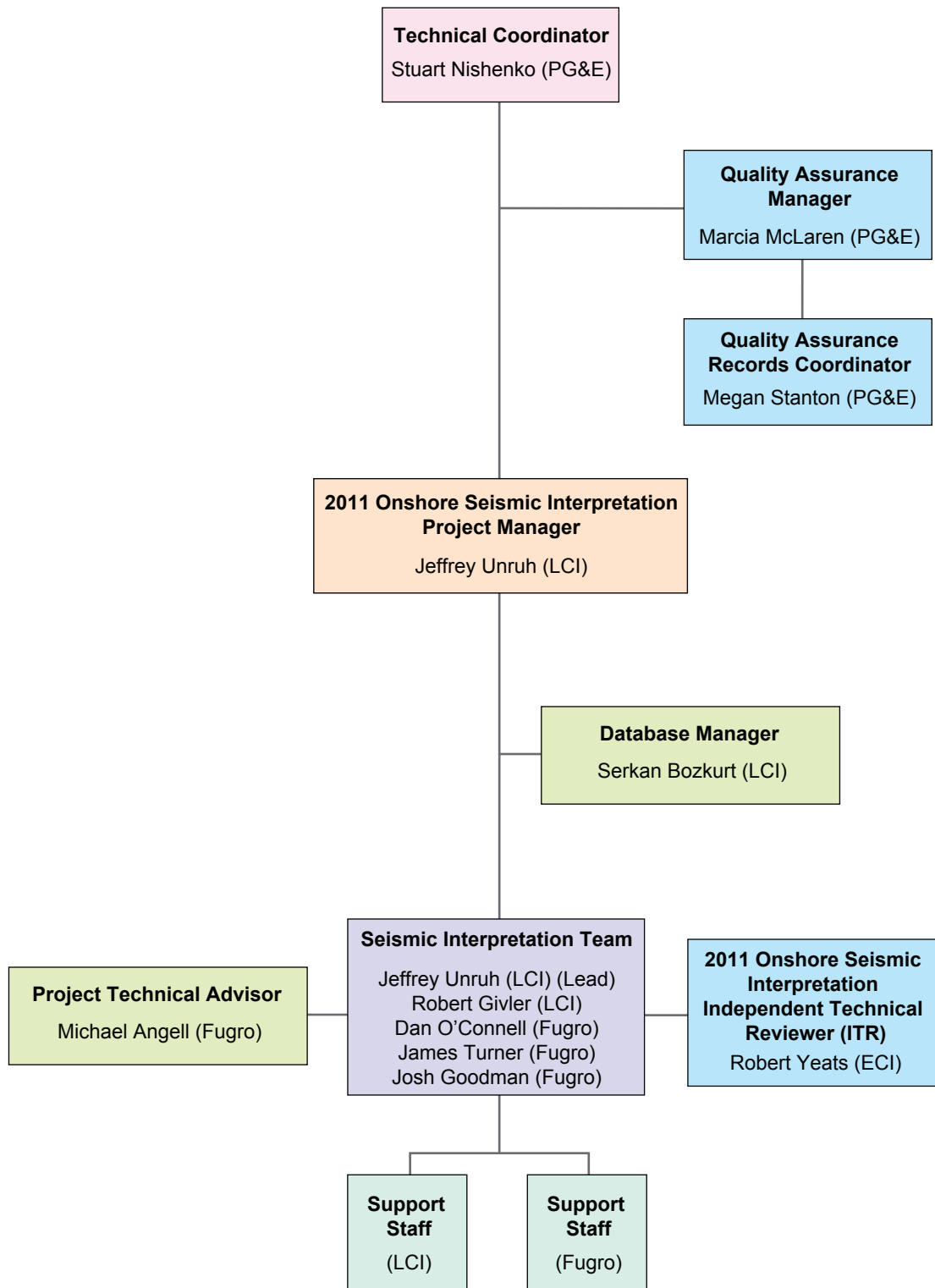
Merged Aeromagnetic and Marine Magnetic Data

2011 ONSIP



Pacific Gas and Electric Company

Figure 2-6



Organization Chart for the Onshore Seismic Reflection Interpretation Project

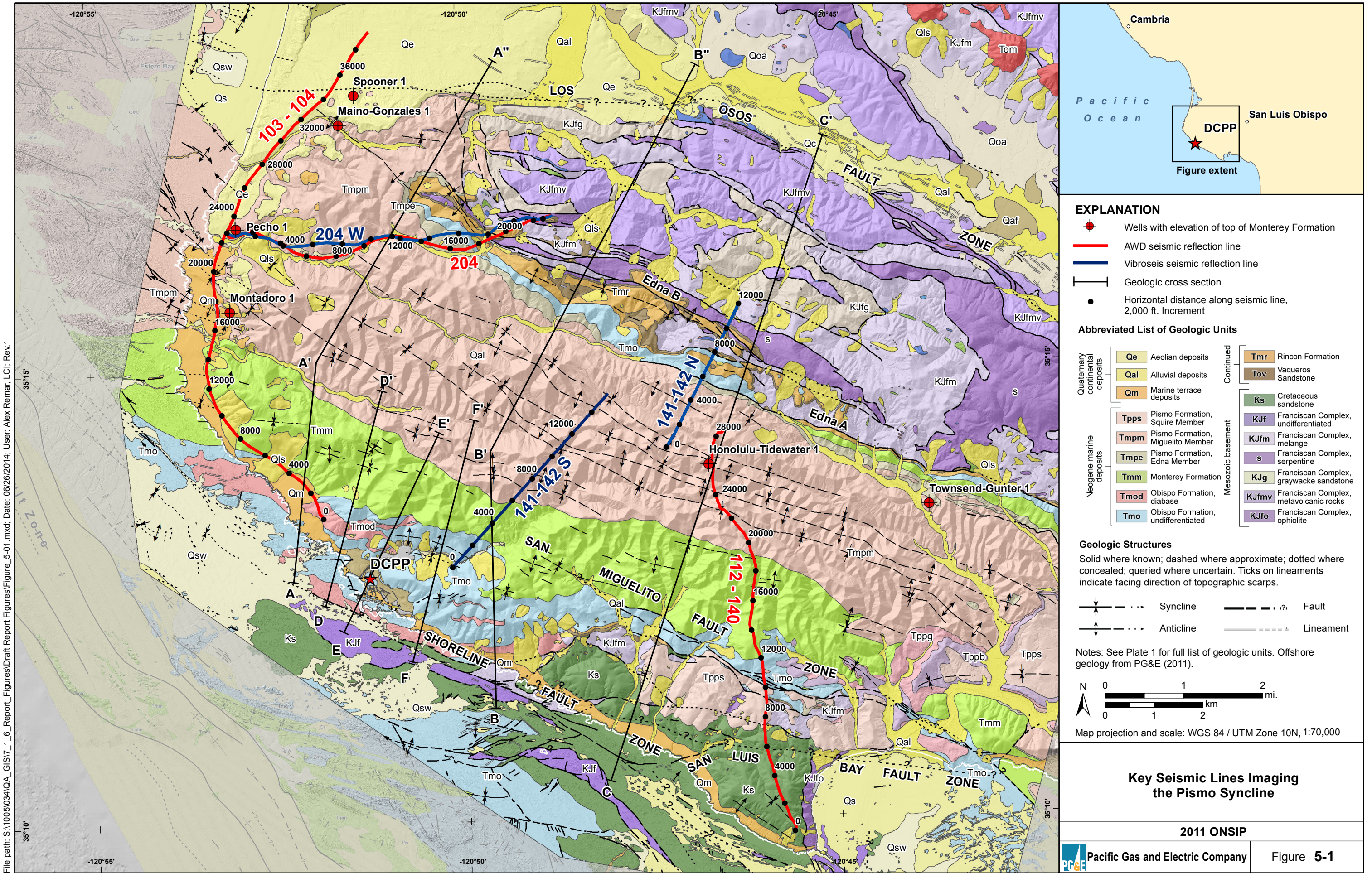
2011 ONSIP



Pacific Gas and Electric Company

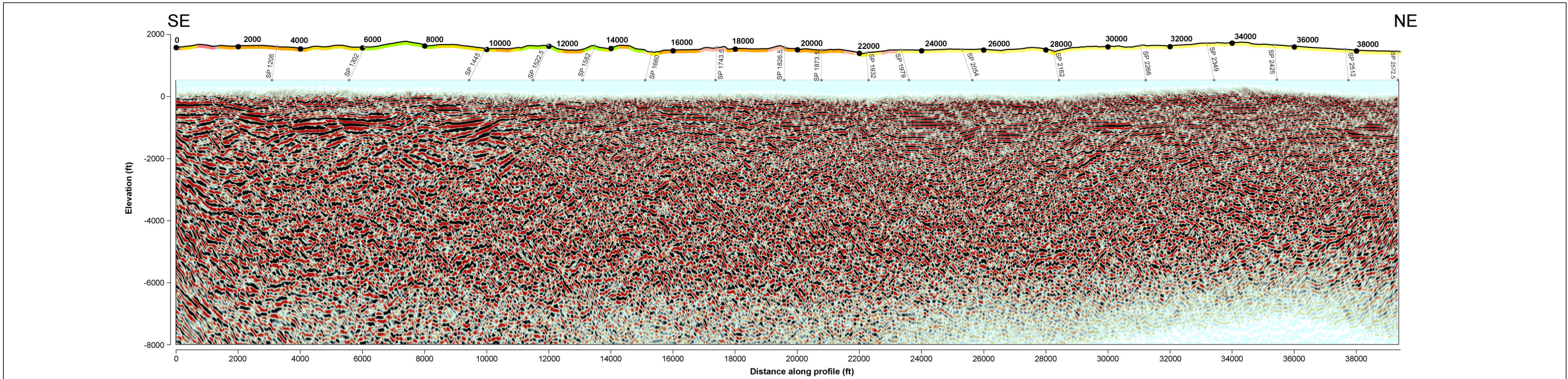
Figure 3-1

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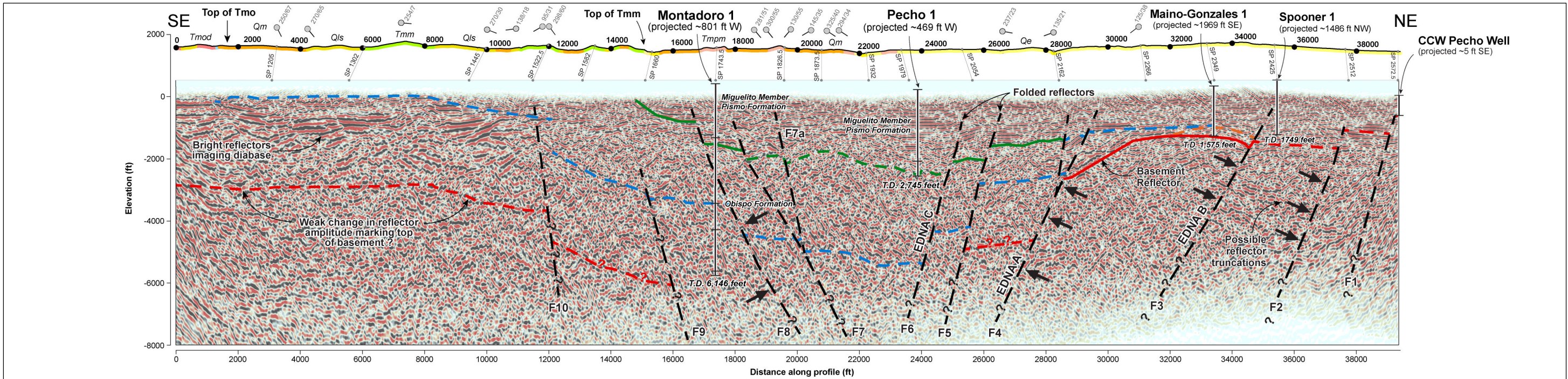


File path: S:\10051034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-02_Line_103_104_AWD_LCI.mxd; Date: 06/10/2014; User: Jereme Chandler, LCI Rev.1

(a) Uninterpreted



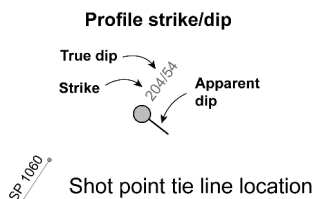
(b) Interpreted



EXPLANATION

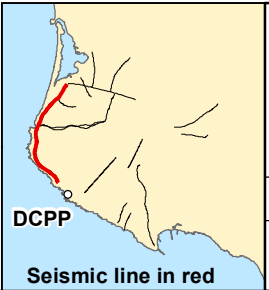
- Fault: solid where well located, dashed where approximately located
- Tmm Top of Monterey Formation
- Tmo Top of Obispo Formation
- Tmr Top of Rincon Formation

- KJf Top of Mesozoic basement
- 2000 Horizontal distance along seismic line, 2,000 ft increment
- Arrows marking offset or truncated reflectors



Notes:

- Seismic line 103-104_AWD_FBM_psd_m_1_mix_depth_tvfac.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 5-1 for explanation of map units.
- See Plate 2 for full-scale interpreted seismic line with geologic strip map.
- Horizontal offsets are shown along a topographic profile above the seismic line.



AWD Line 103-104:
(a) Uninterpreted and (b) Interpreted

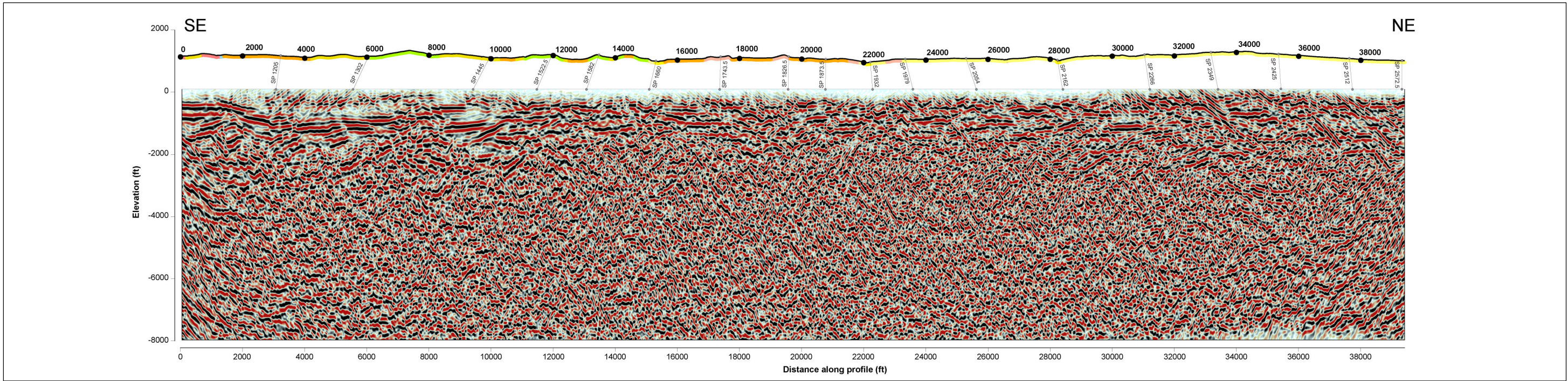
2011 ONSIP

Pacific Gas and Electric Company

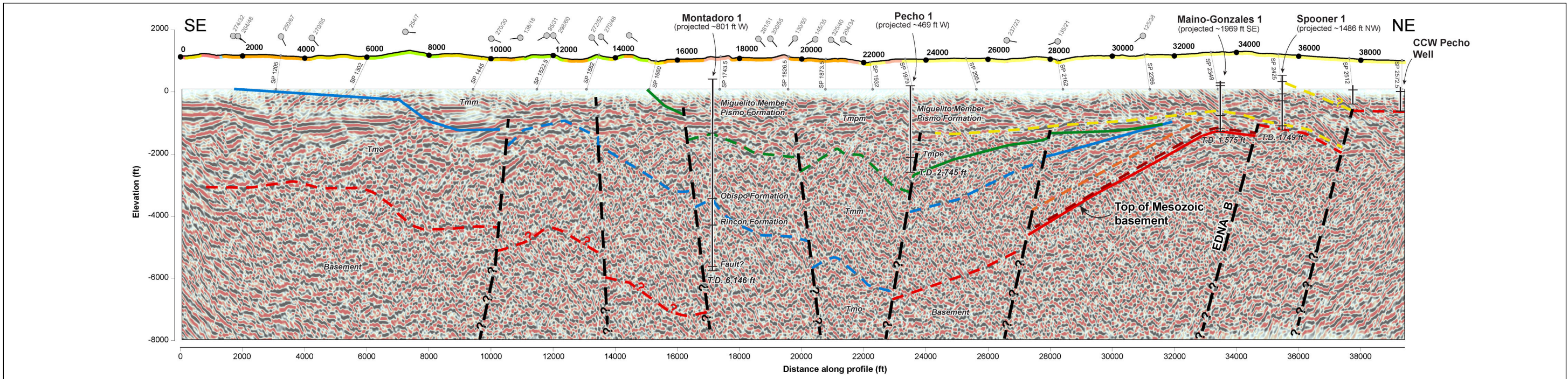
Figure 5-2

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(a) Uninterpreted



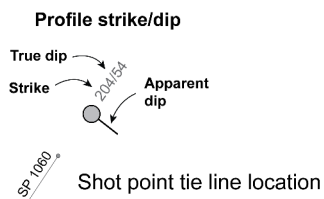
(b) Interpreted



EXPLANATION

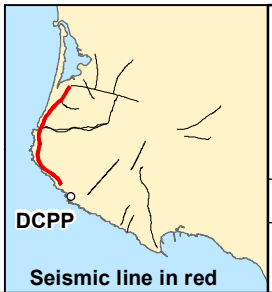
- Fault: solid where well located, dashed where approximately located
- Tmpe Top of Edna Formation
- Tmm Top of Monterey Formation
- Tmo Top of Obispo Formation

- Tmr Top of Rincon Formation
- Tmv Top of Vaqueros Formation
- KJf Top of Mesozoic Basement
- 2000 Horizontal distance along seismic line, 2,000 ft increment



Notes:

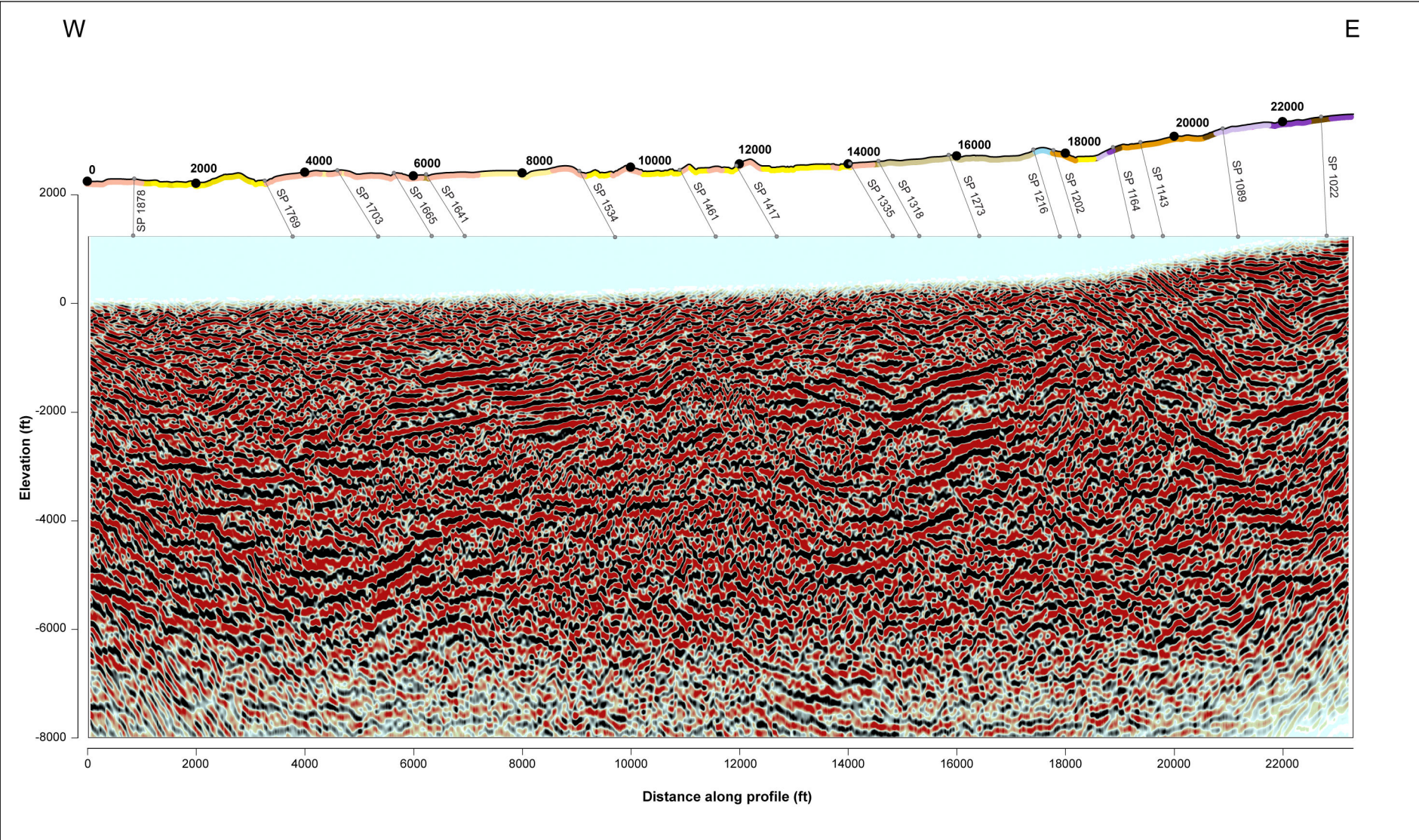
- Seismic line QA_bpfagc_103_104_AWD_FBM_psd_m_1_mix_depth_notvfacg_ieee.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 5-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



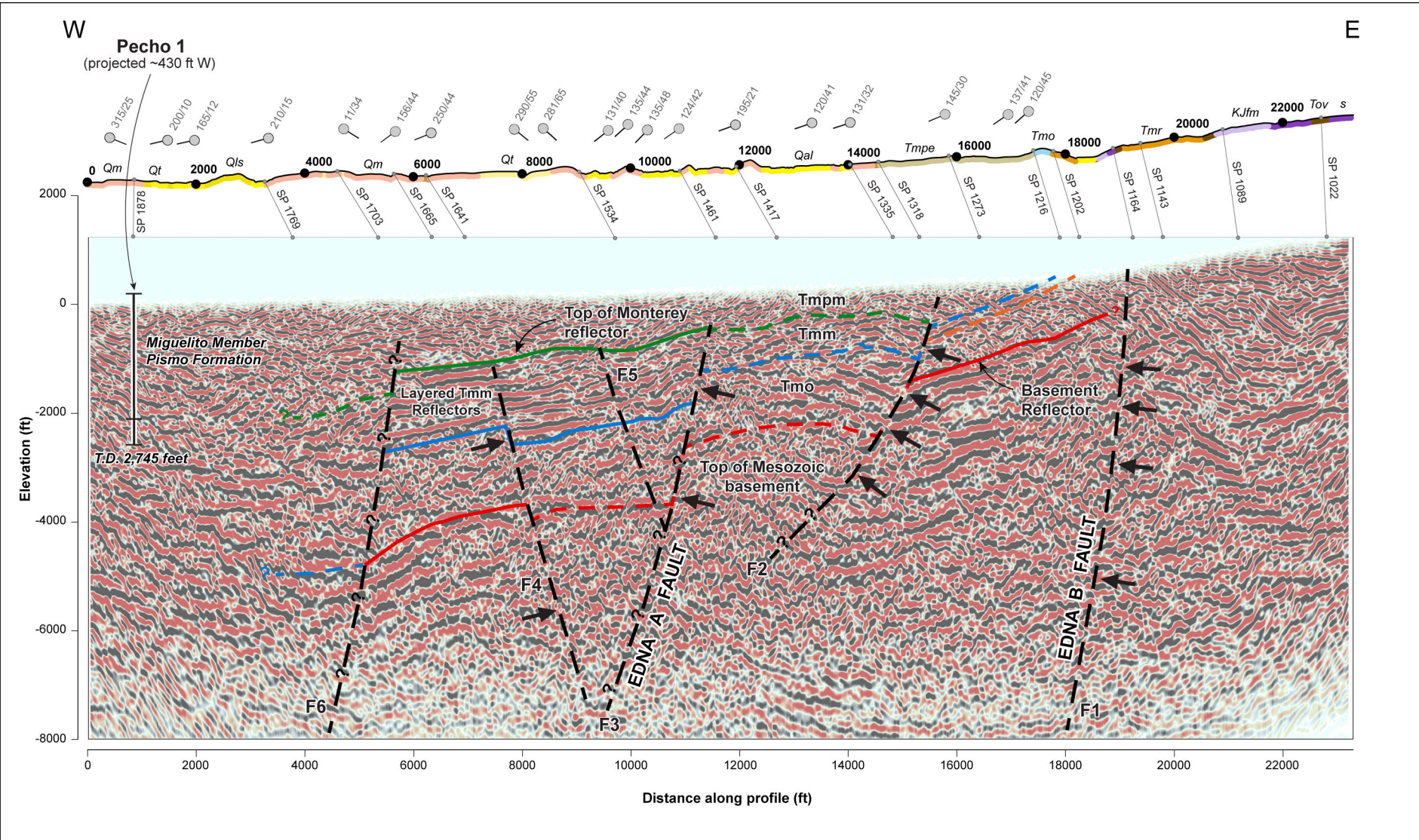
Alternative Interpretation of AWD Line 103-104: (a) Uninterpreted and (b) Interpreted	
2011 ONSIP	
 Pacific Gas and Electric Company	Figure 5-3

File path: S:\1005\034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure 5-04_Line_204_AWD_LCI.mxd; Date: 06/10/2014; User: Jereme Chandler, LCI; Rev.1

(a) Uninterpreted



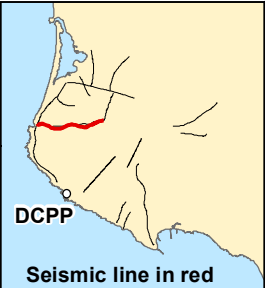
(b) Interpreted



EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tmm Top of Monterey Formation
- Tmo Top of Obispo Formation
- Tmr Top of Rincon Formation
- KJf Top of Mesozoic Basement
- 2000 Horizontal distance along seismic line, 2,000 ft increment
- Profile strike/dip: True dip, Strike, Apparent dip
- Shot point tie line location
- Arrows marking offset or truncated reflectors

Notes:
- Seismic line 204_AWD_FBM_psdm_1_mix_depth_tvfacg.
- Geology along topographic profile from Plate 1, see Plate 1 and Figure 5-1 for explanation of map units.
- See Plate 3 for large-scale interpreted seismic line with geologic strip map.
- Horizontal offsets are shown along a topographic profile above the seismic line.



AWD Line 204:
(a) Uninterpreted and (b) Interpreted

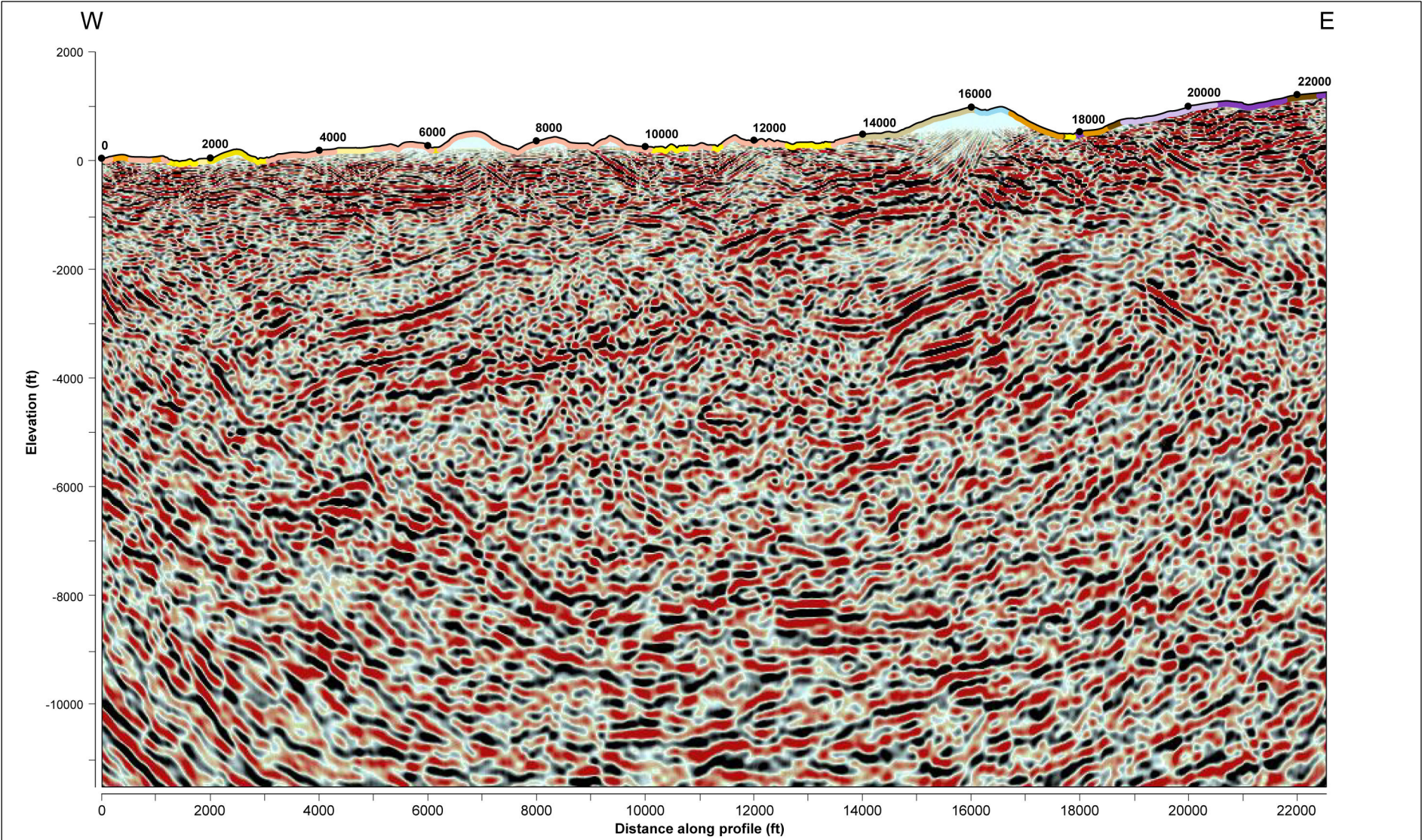
2011 ONSIP

Pacific Gas and Electric Company

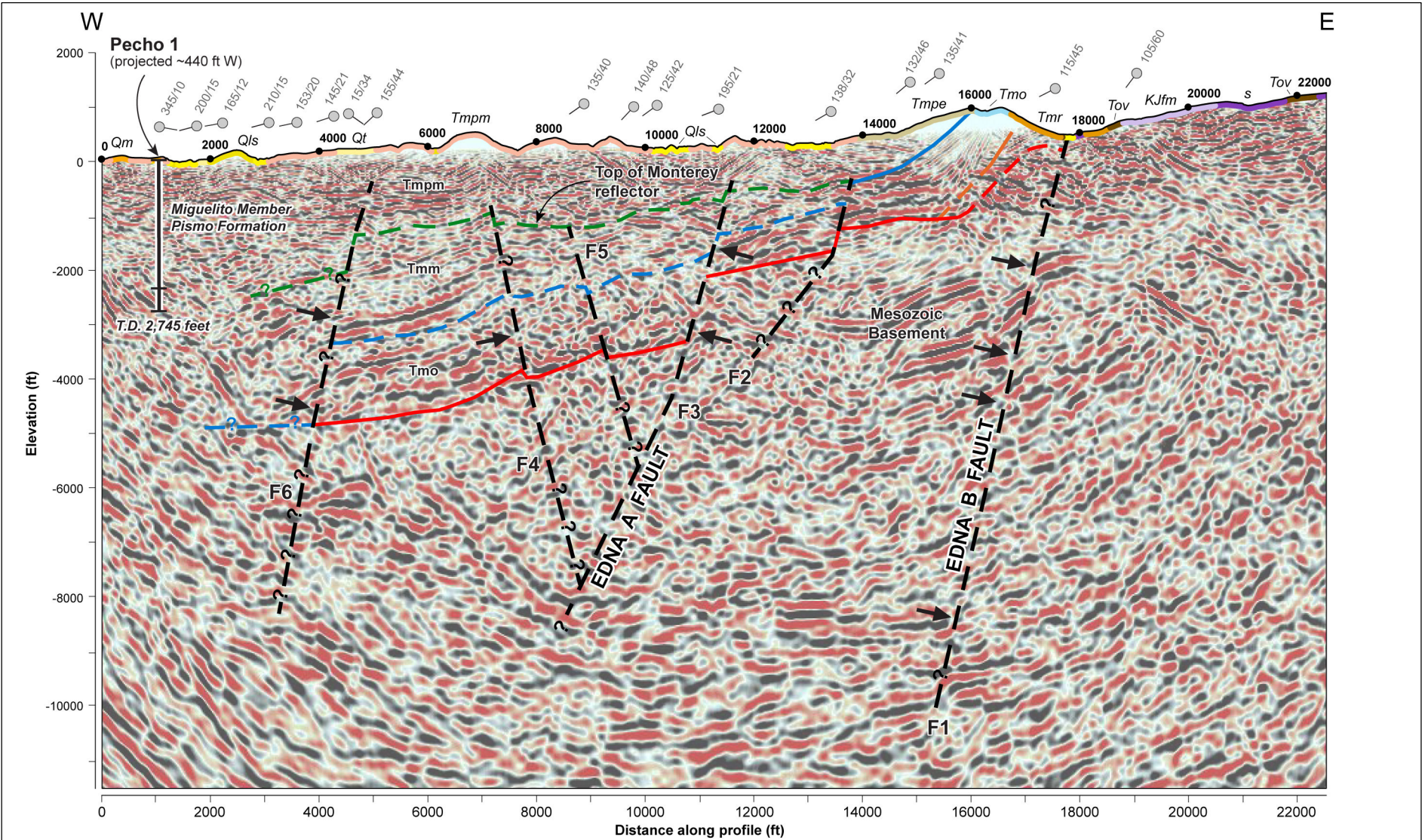
Figure 5-4

File path: S:\1005\034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-05_Line_204_Vibe_West.mxd; Date: 06/10/2014; User: Jereme Chandler, LCI; Rev:1

(a) Uninterpreted



(b) Interpreted

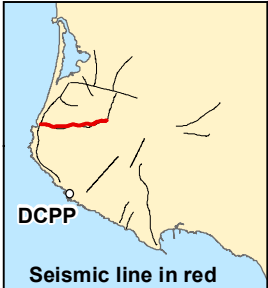


EXPLANATION

- Fault: solid where well located, dashed where approximately located
 - Tmm Top of Monterey Formation
 - Tmo Top of Obispo Formation
 - Tmr Top of Rincon Formation
 - KJf Top of Mesozoic Basement Formation
 - 2000 Horizontal distance along seismic line, 2,000 ft increment
- Profile strike/dip
True dip
Strike
Apparent dip
204/84
- Arrows marking offset or truncated reflectors

Notes:

- Seismic line trimmed_204_west_2D_beam_50K_vibeonly_poly_sl_stackagc_IEEE_uninterpMay13.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 5-1 for explanation of map units.
- See Plate 4 for large-scale interpreted seismic line with geologic strip map.
- Horizontal offsets are shown along a topographic profile above the seismic line.



Vibroiseis Line 204 West:
(a) Uninterpreted and (b) Interpreted

2011 ONSIP

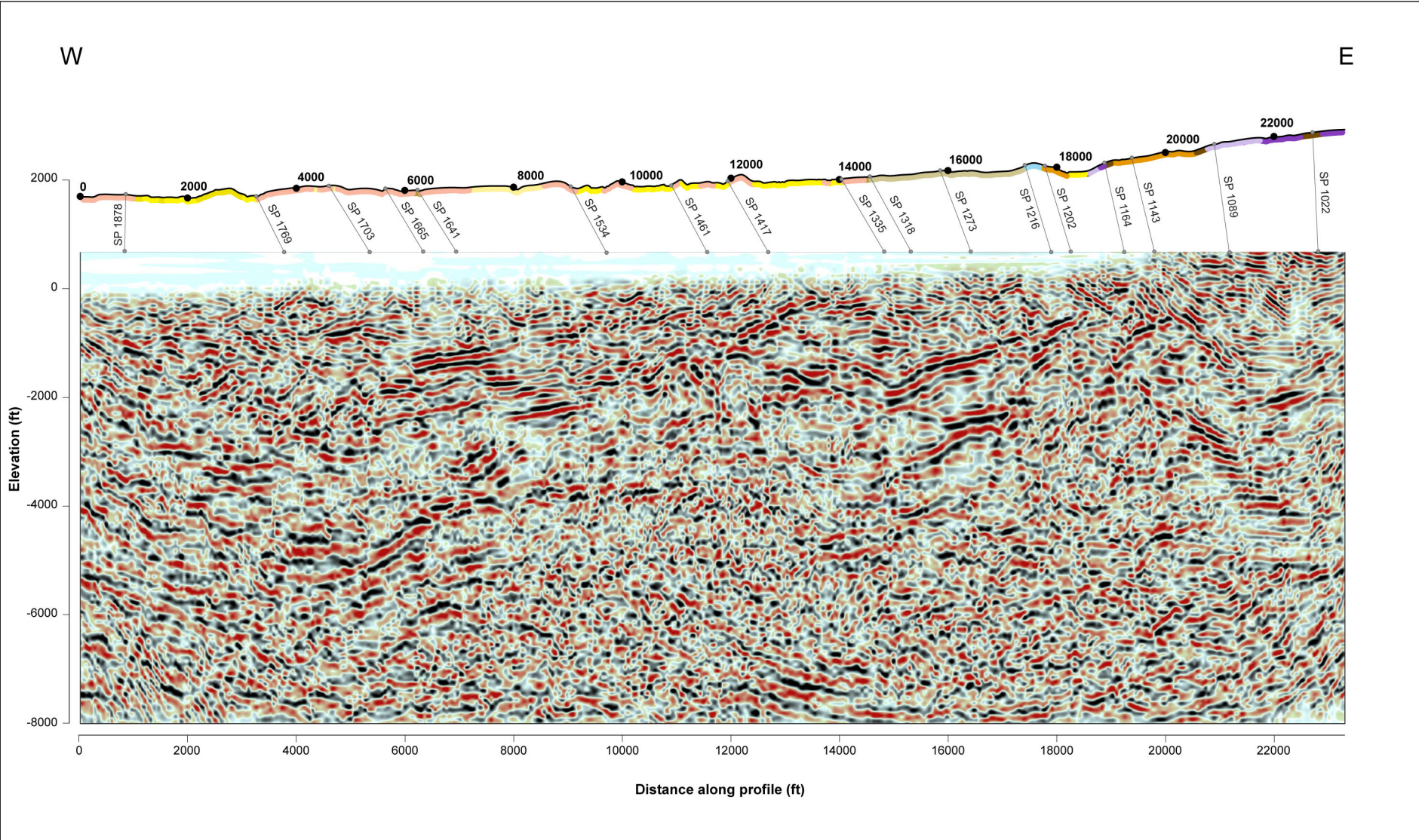


Pacific Gas and Electric Company

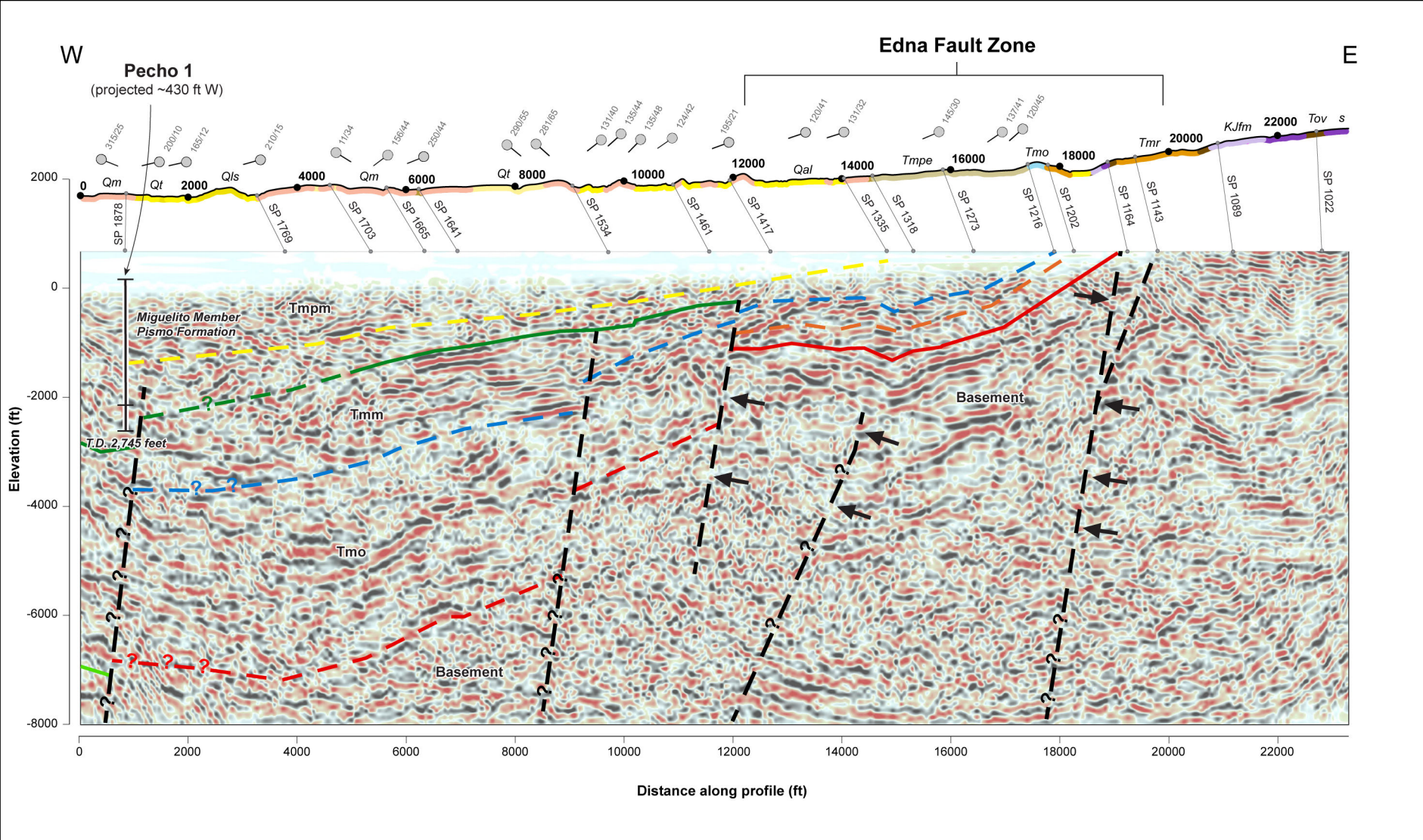
Figure 5-5

File path: S:\1005\034QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure 5-06_Line_204_AWD_Fugro.mxd; Date: 06/10/2014; User: Jereme Chandler, LCI; Rev. 1

(a) Uninterpreted



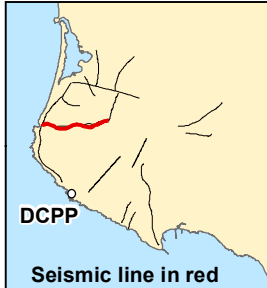
(b) Interpreted



EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tmpe Top of Pismo Formation, Edna Member
- Tmm Top of Monterey Formation
- Tmo Top of Obispo Formation
- Tmr Top of Rincon Formation
- KJf Top of Mesozoic Basement
- 2000 Horizontal distance along seismic line, 2,000 ft increment
- Profile strike/dip: True dip, Strike, Apparent dip
- Shot point tie line location
- Arrows marking offset or truncated reflectors

Notes:
- Seismic line QA_bpfagc_204_AWD_FBM_psdm_1_mix_depth_notvfagc_ieee.
- Geology along topographic profile from Plate 1, see Plate 1 and Figure 5-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



Alternative Interpretation of AWD Line 204:
(a) Uninterpreted and (b) Interpreted

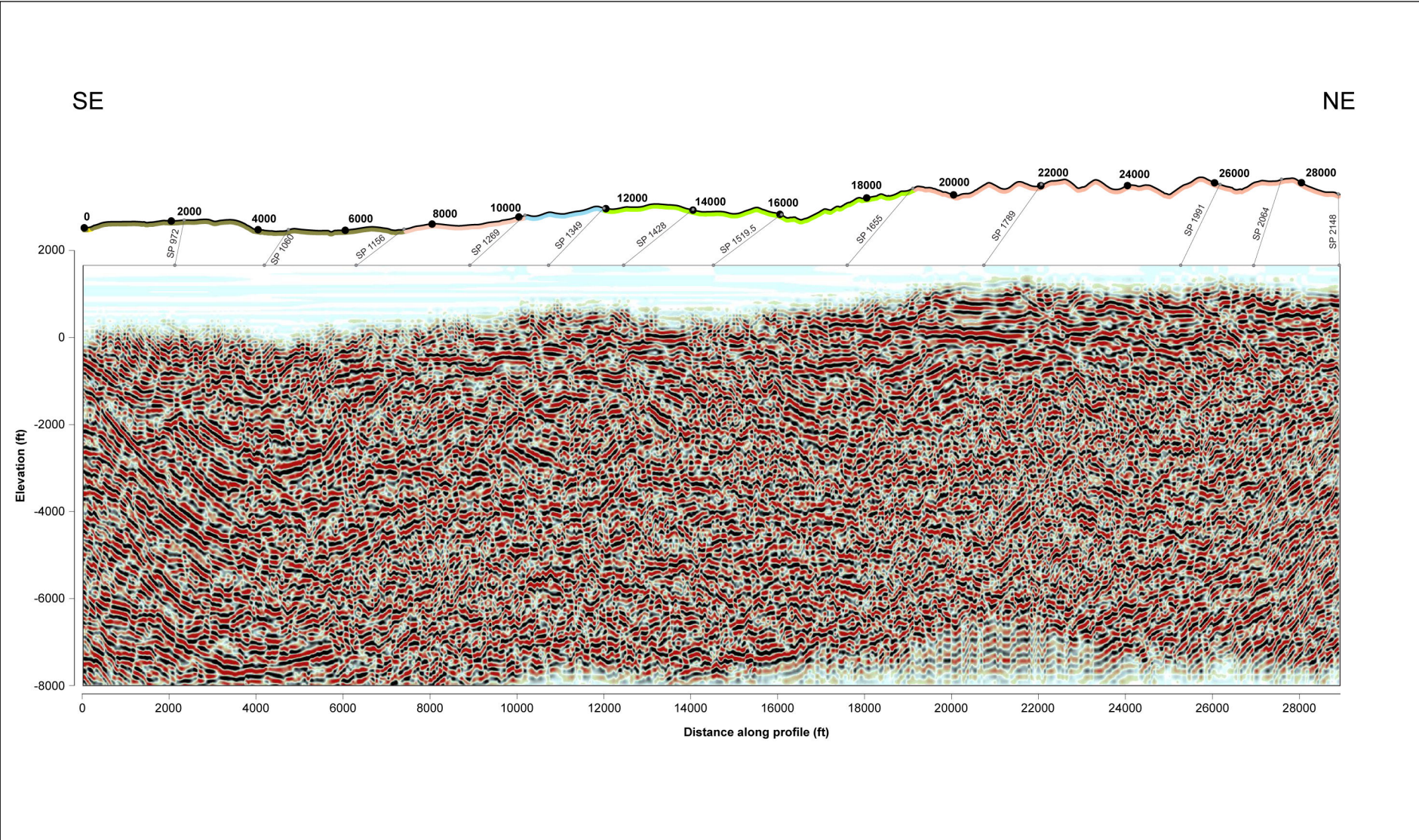
2011 ONSIP

Pacific Gas and Electric Company

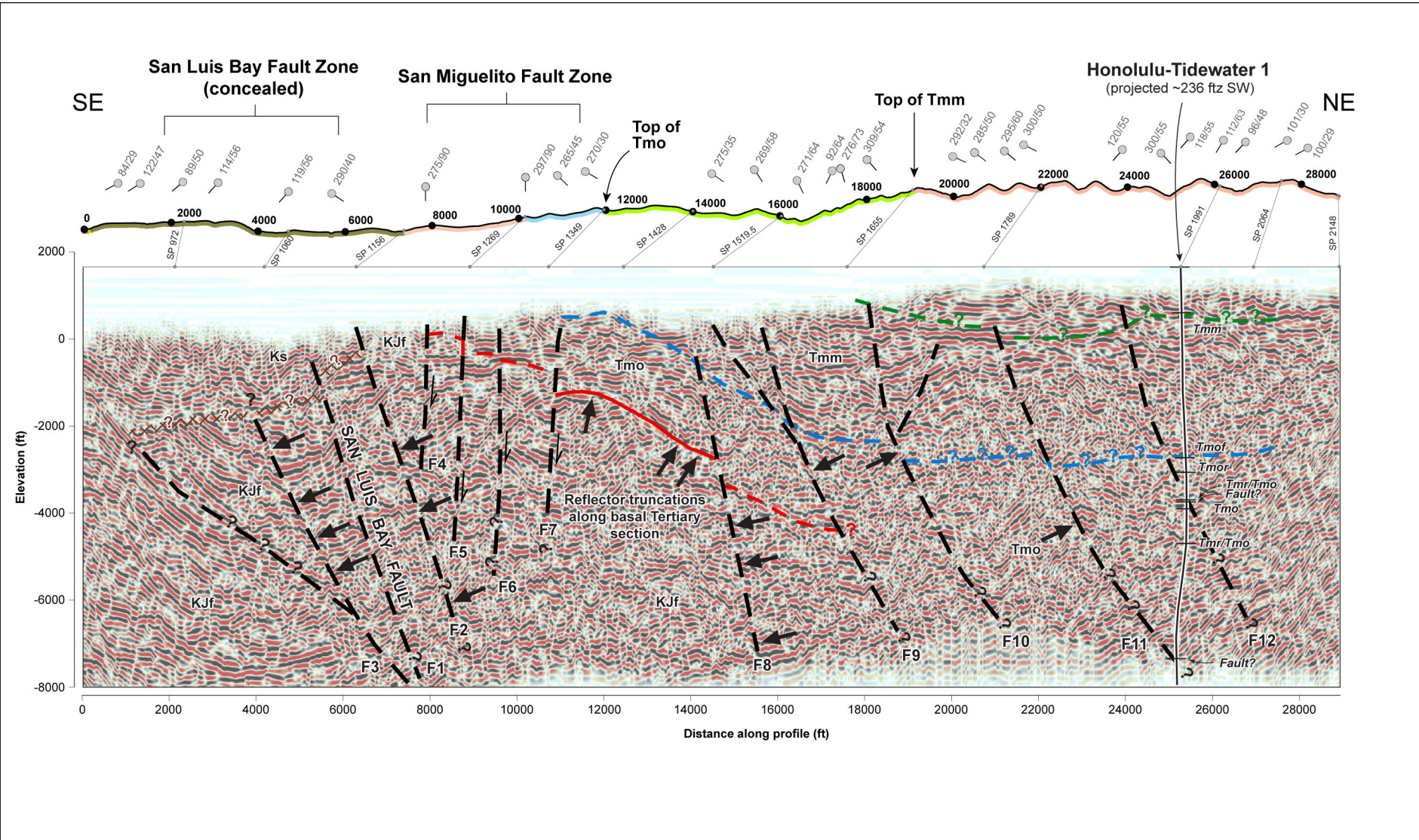
Figure 5-6

File path: S:\1005\034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure 5-07_Line_112-140_AWD_LCI.mxd; Date: 06/10/2014; User: Jerome Chandler, LCI; Rev.1

(a) Uninterpreted



(b) Interpreted

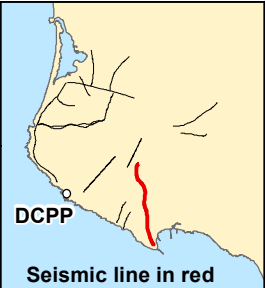


EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tmm Top of Monterey Formation
- Tmo Top of Obispo Formation
- KJf Top of Mesozoic Basement
- 2000 Horizontal distance along seismic line, 2,000 ft increment
- Profile strike/dip: True dip, Strike, Apparent dip
- Shot point tie line location
- Arrows marking offset or truncated reflectors

Notes:

- Seismic line QA_bpfagc_dwf 112-140 AWD fbm psdm 1 mix depth notvfagc ieee.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 5-1 for explanation of map units.
- See Plate 3 for large-scale interpreted seismic line with geologic strip map.
- Horizontal offsets are shown along a topographic profile above the seismic line.



AWD Line 112-140:
(a) Uninterpreted and (b) Interpreted

2011 ONSIP

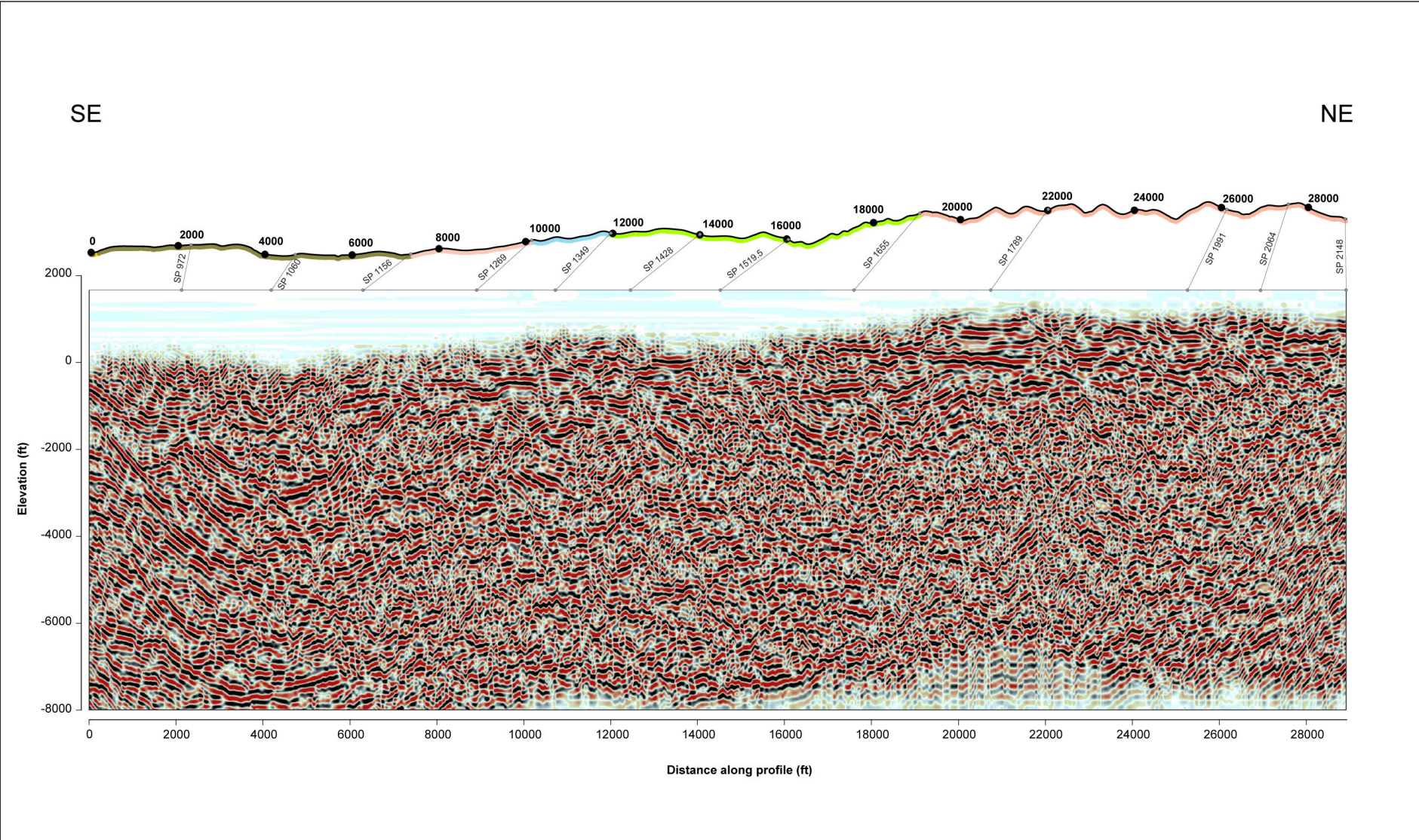


Pacific Gas and Electric Company

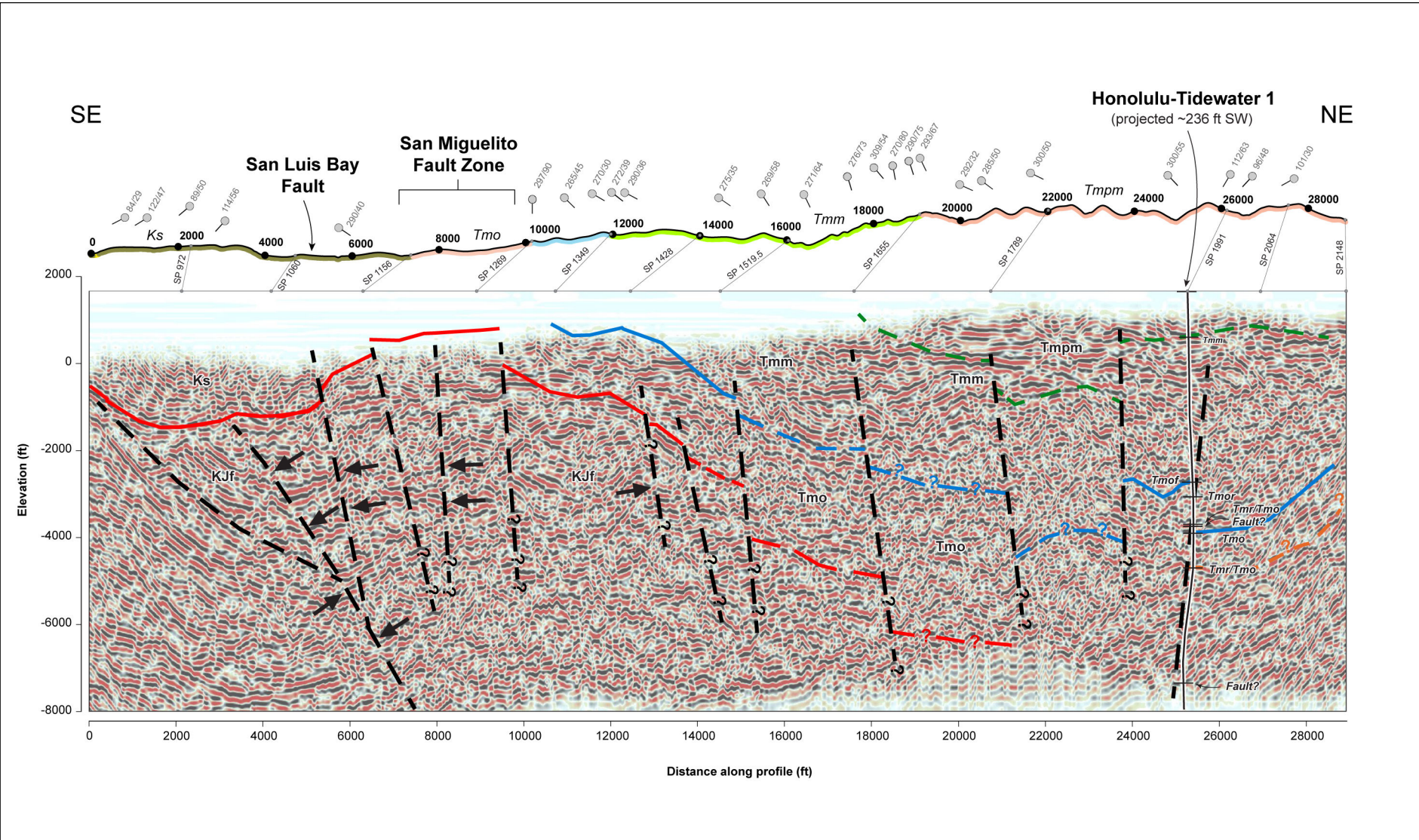
Figure 5-7

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(a) Uninterpreted



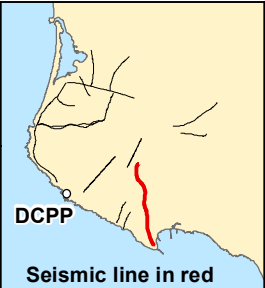
(b) Interpreted



EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tmm** Top of Monterey Formation
- Tmo** Top of Obispo Formation
- Tmr** Top of Rincon Formation
- KJf** Top of Mesozoic Basement
- 2000 Horizontal distance along seismic line, 2,000 ft increment
- Profile strike/dip: True dip, Strike, Apparent dip
- Shot point tie line location
- Arrows marking offset or truncated reflectors

Notes:
- Seismic line QA_bpfagc_dwf_112-140_AWD_fbm_psdm_1_mix_depth_notvfagc_ieee.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 5-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



Alternative Interpretation of
AWD Line 112-140:
(a) Uninterpreted and (b) Interpreted

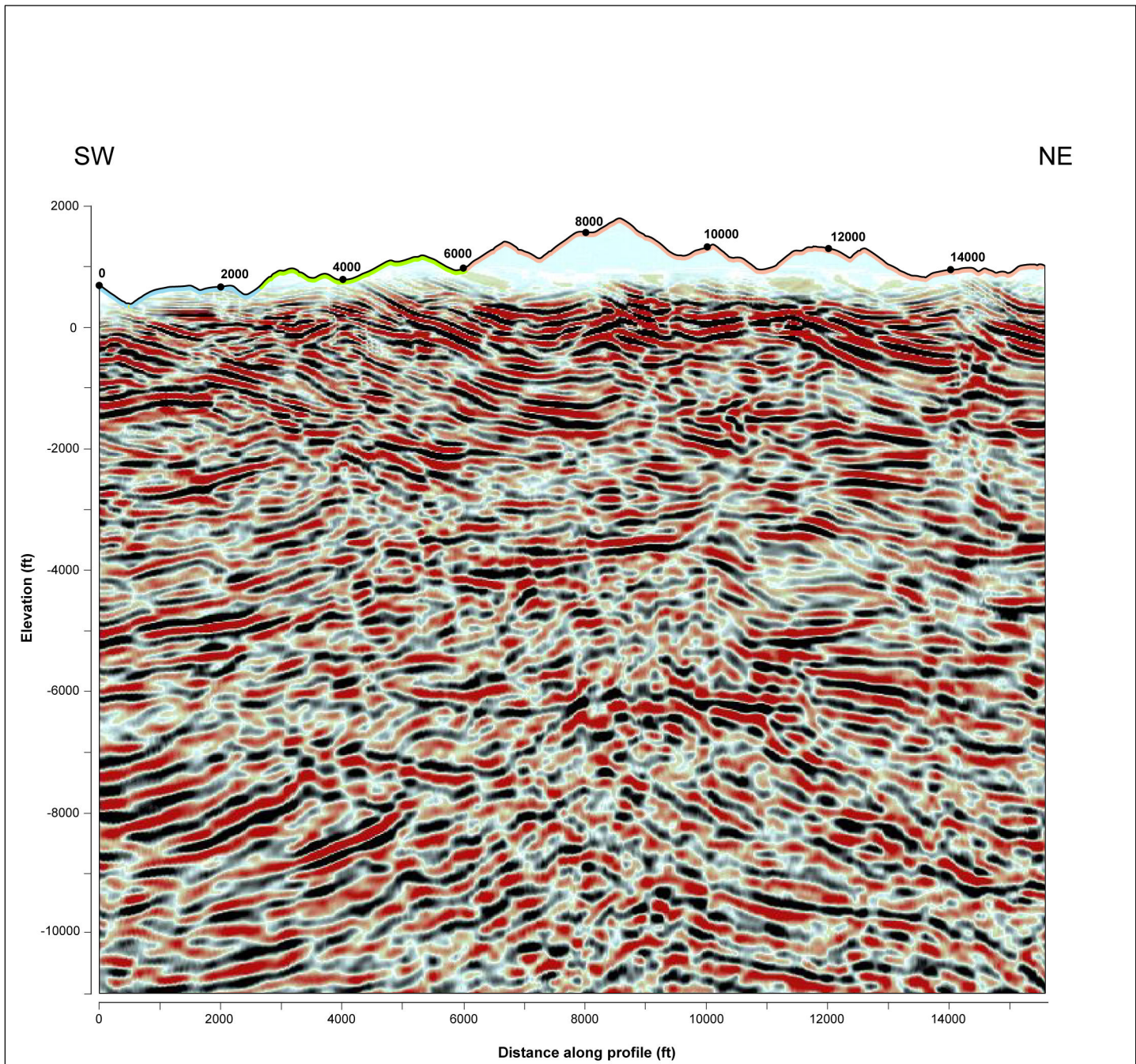
2011 ONSIP

Pacific Gas and Electric Company

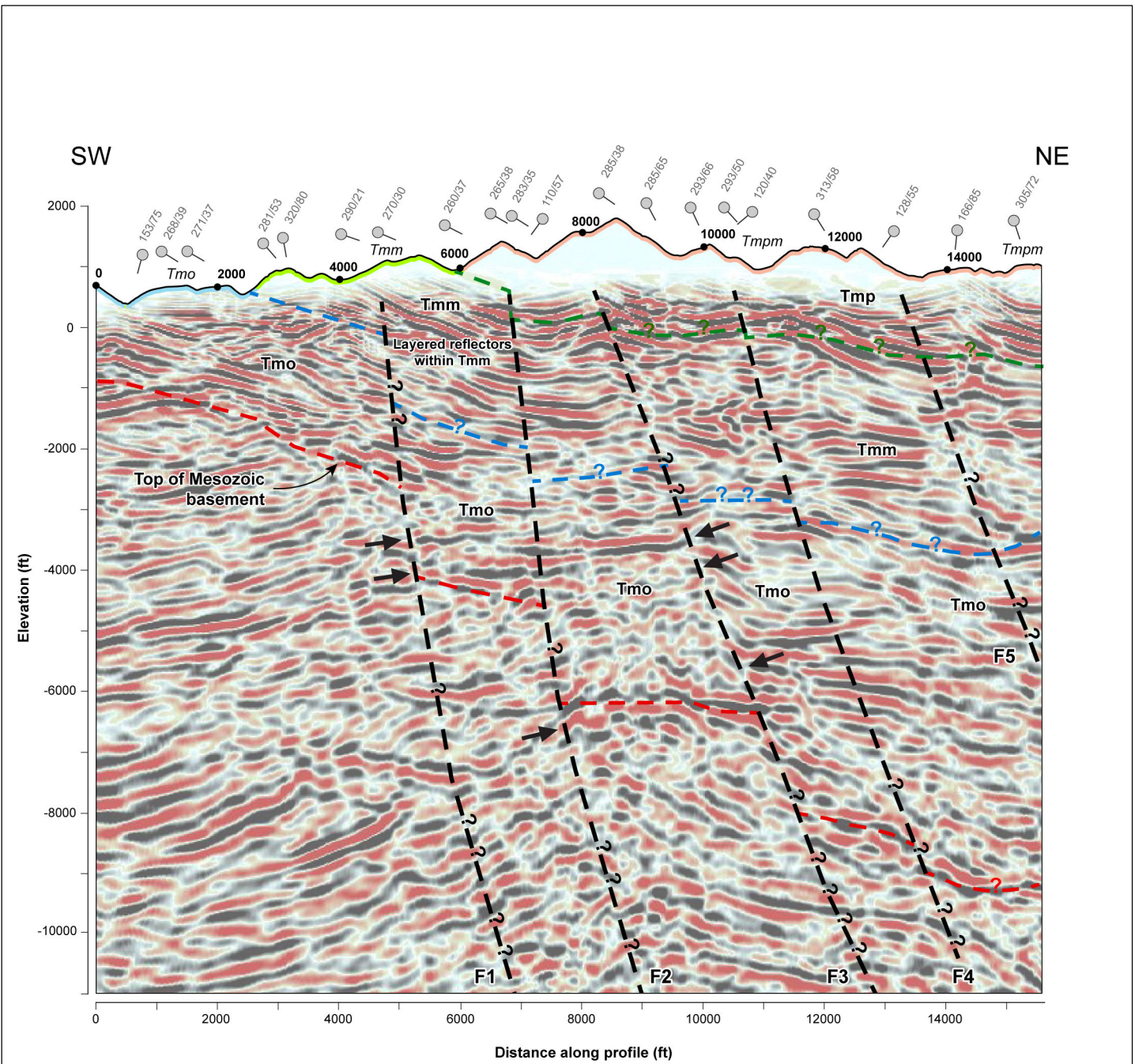
Figure 5-8

File path: S:\1005034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-09_Line_141_142_South.mxd; Date: 06/10/2014; User: Jerome Chandler, LCI; Rev.1

(a) Uninterpreted



(b) Interpreted

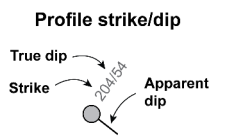


EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tmm Top of Monterey Formation
- Tmo Top of Obispo Formation
- KJf Top of Mesozoic Basement

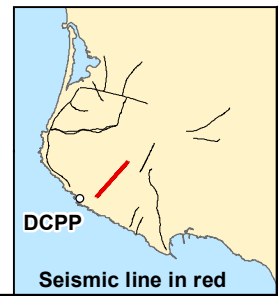
2000 Horizontal distance along seismic line, 2,000 ft increment

Arrows marking offset or truncated reflectors



Notes:

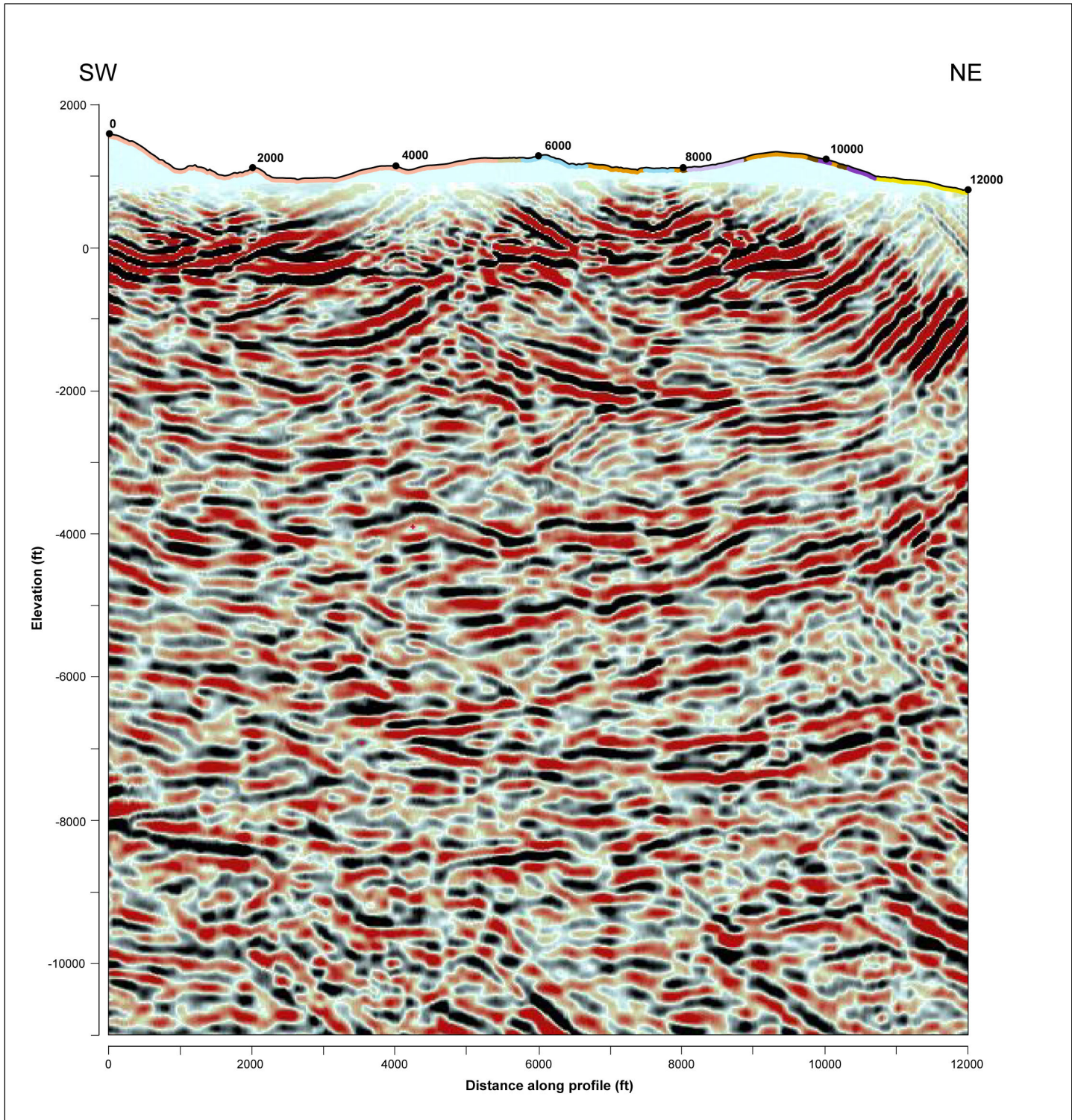
- Seismic line 2011 3D Arb straight south 141-142 IEEE.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 5-1 for explanation of map units.
- See Plate 6 for large-scale interpreted seismic line with geologic strip map.
- Horizontal offsets are shown along a topographic profile above the seismic line.



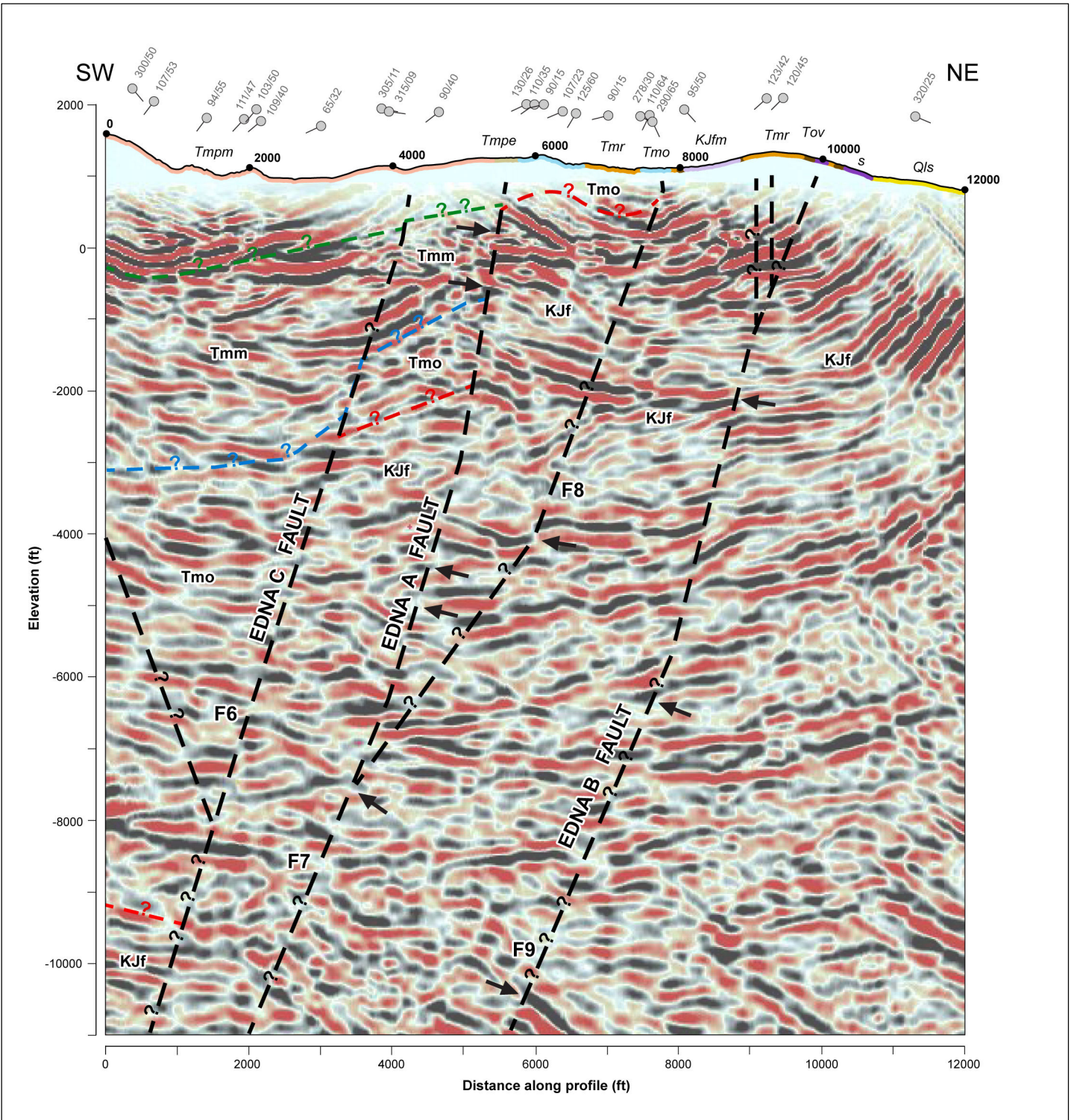
Vibroseis Line 141-142 South: (a) Uninterpreted and (b) Interpreted	
2011 ONSIP	
Pacific Gas and Electric Company	Figure 5-9

File path: S:\1005034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-10_Line_141_142_North.mxd; Date: 06/10/2014; User: Jerome Chandler, LCI; Rev:1

(a) Uninterpreted



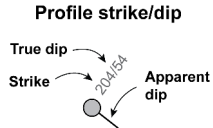
(b) Interpreted



EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tmm Top of Monterey Formation
- Tmo Top of Obispo Formation
- KJf Top of Mesozoic Basement

- 2000 Horizontal distance along seismic line, 2,000 ft increment
- Arrows marking offset or truncated reflectors

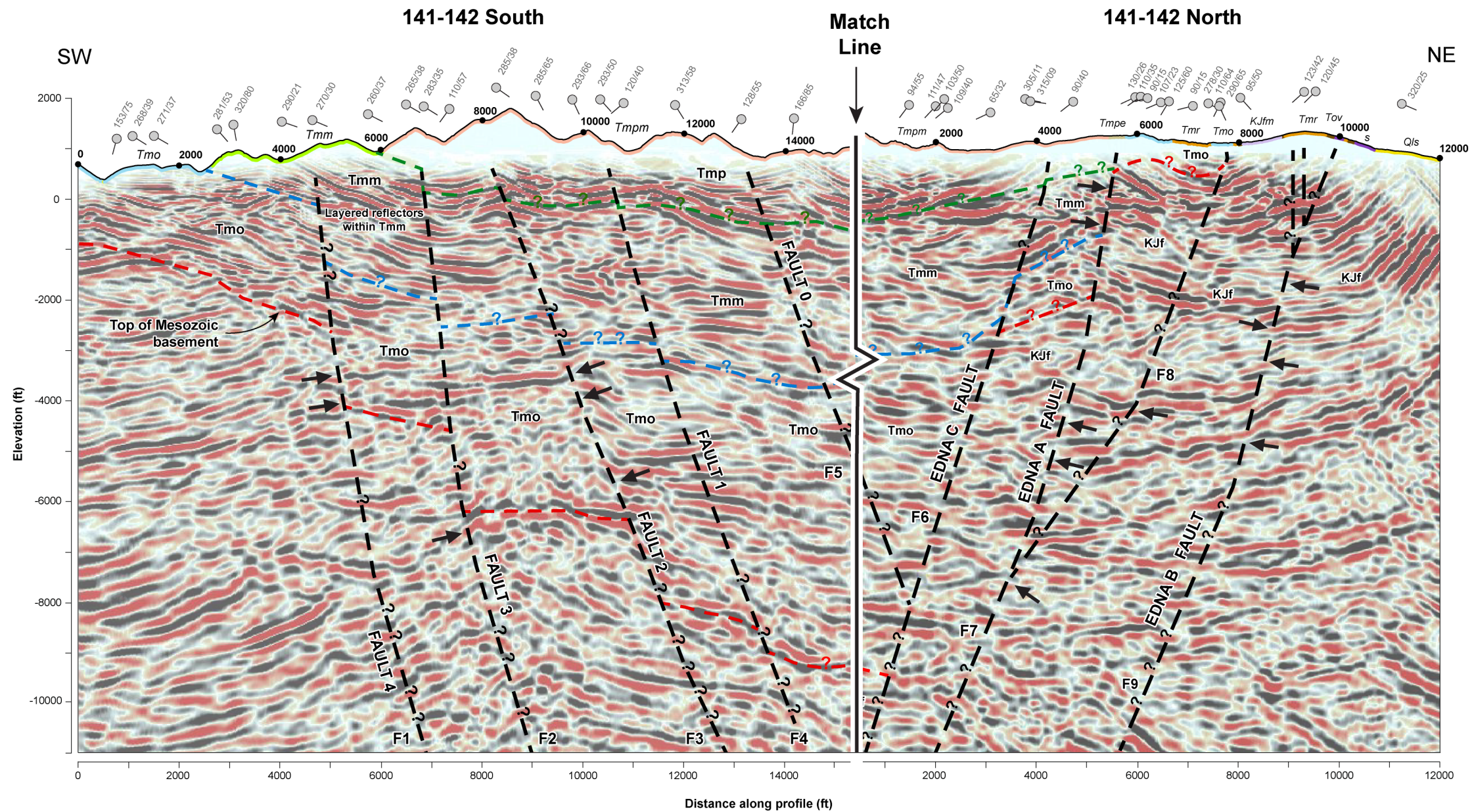


- Notes:
- Seismic line 2011 3D Arb straight north 141-142 IEEE.
 - Geology along topographic profile from Plate 1; see Plate 1 and Figure 5-1 for explanation of map units.
 - See Plate 6 for large-scale interpreted seismic line with geologic strip map.
 - Horizontal offsets are shown along a topographic profile above the seismic line.



Vibroseis Line 141-142 North: (a) Uninterpreted and (b) Interpreted	
2011 ONSIP	
Pacific Gas and Electric Company	Figure 5-10

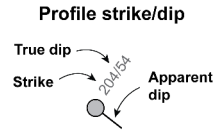
File path: S:\1005\034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure 5-11_Line_141_142_North_South_Combined.mxd; Date: 06/10/2014; User: Jereme Chandler, LCI; Rev:1



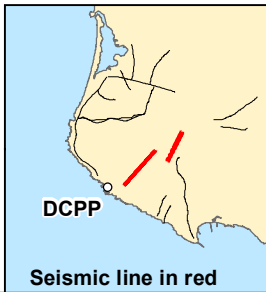
EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tmm Top of Monterey Formation
- Tmo Top of Obispo Formation
- KJf Top of Mesozoic Basement

- 2000 Horizontal distance along seismic line, 2,000 ft increment
- Arrows marking offset or truncated reflectors



- Notes:
- Seismic line 2011 3D Arb straight north 141-142 IEEE and 2011 3D Arb straight south 141-142 IEEE.
 - Geology along topographic profile from Plate 1; see Plate 1 and Figure 5-1 for explanation of map units.
 - See Plate 6 for large-scale interpreted seismic line with geologic strip map.
 - Horizontal offsets are shown along a topographic profile above the seismic line.

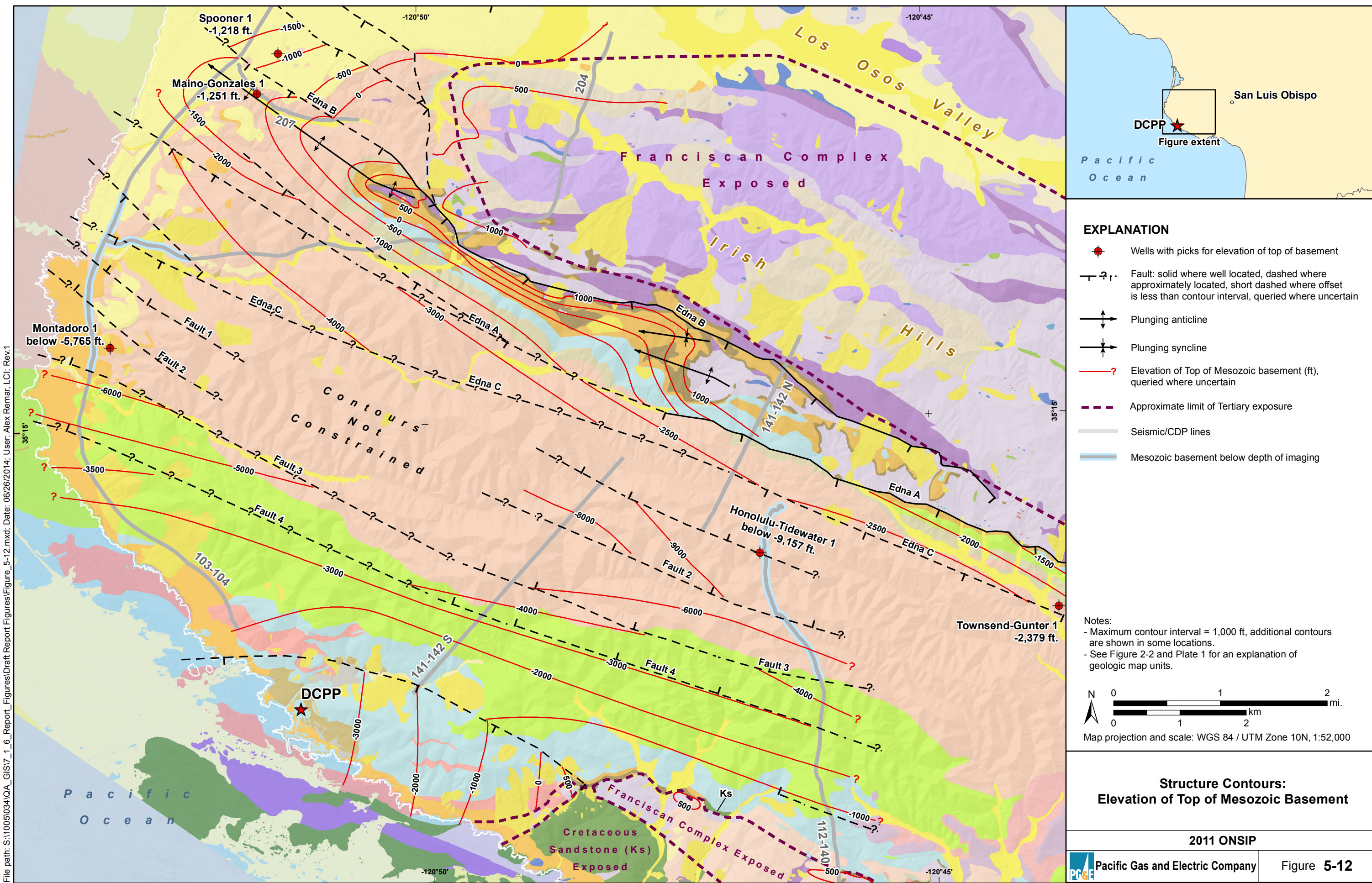


Vibroseis Line 141-142, North and South: Segments Joined

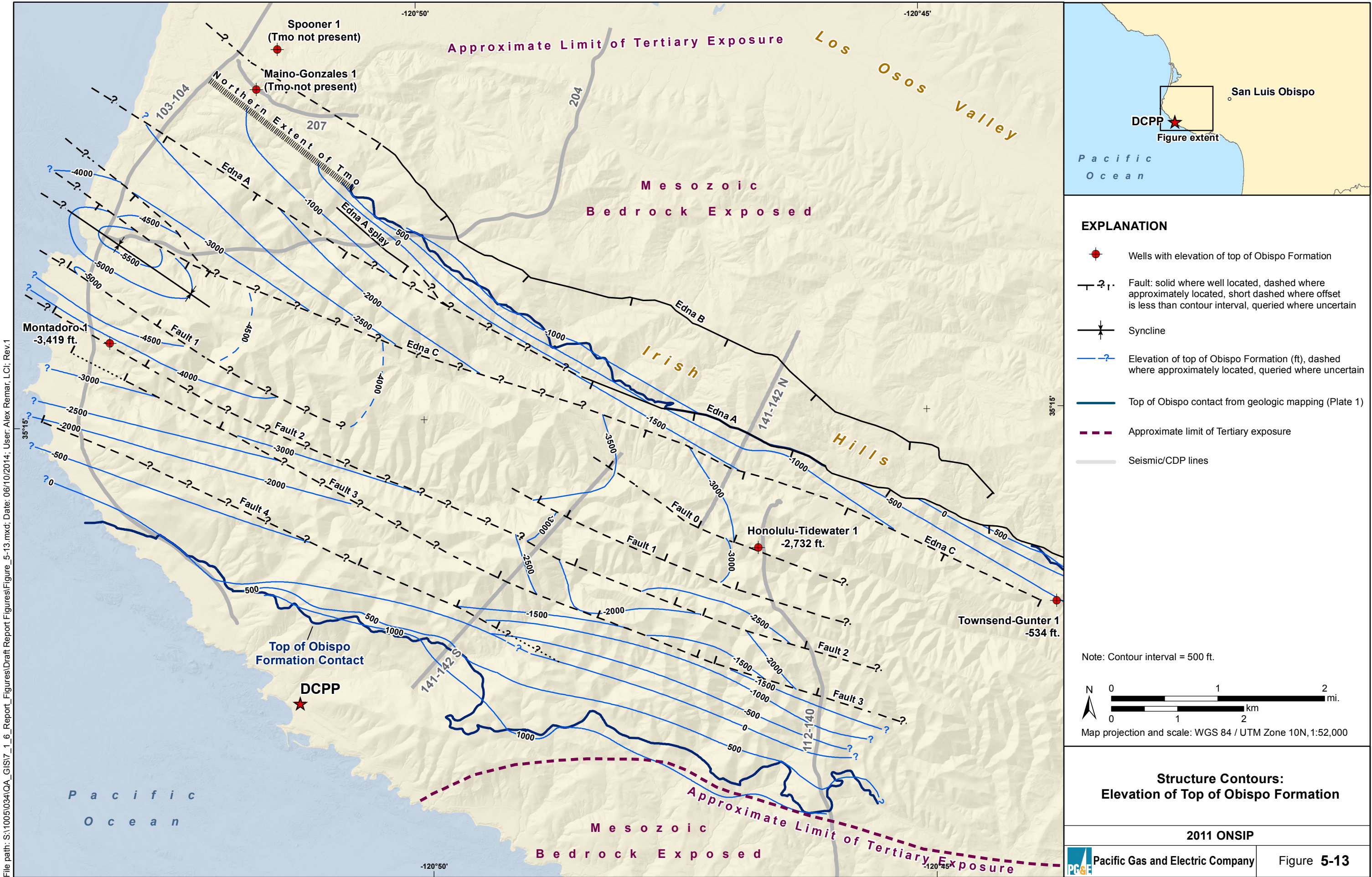
2011 ONSIP

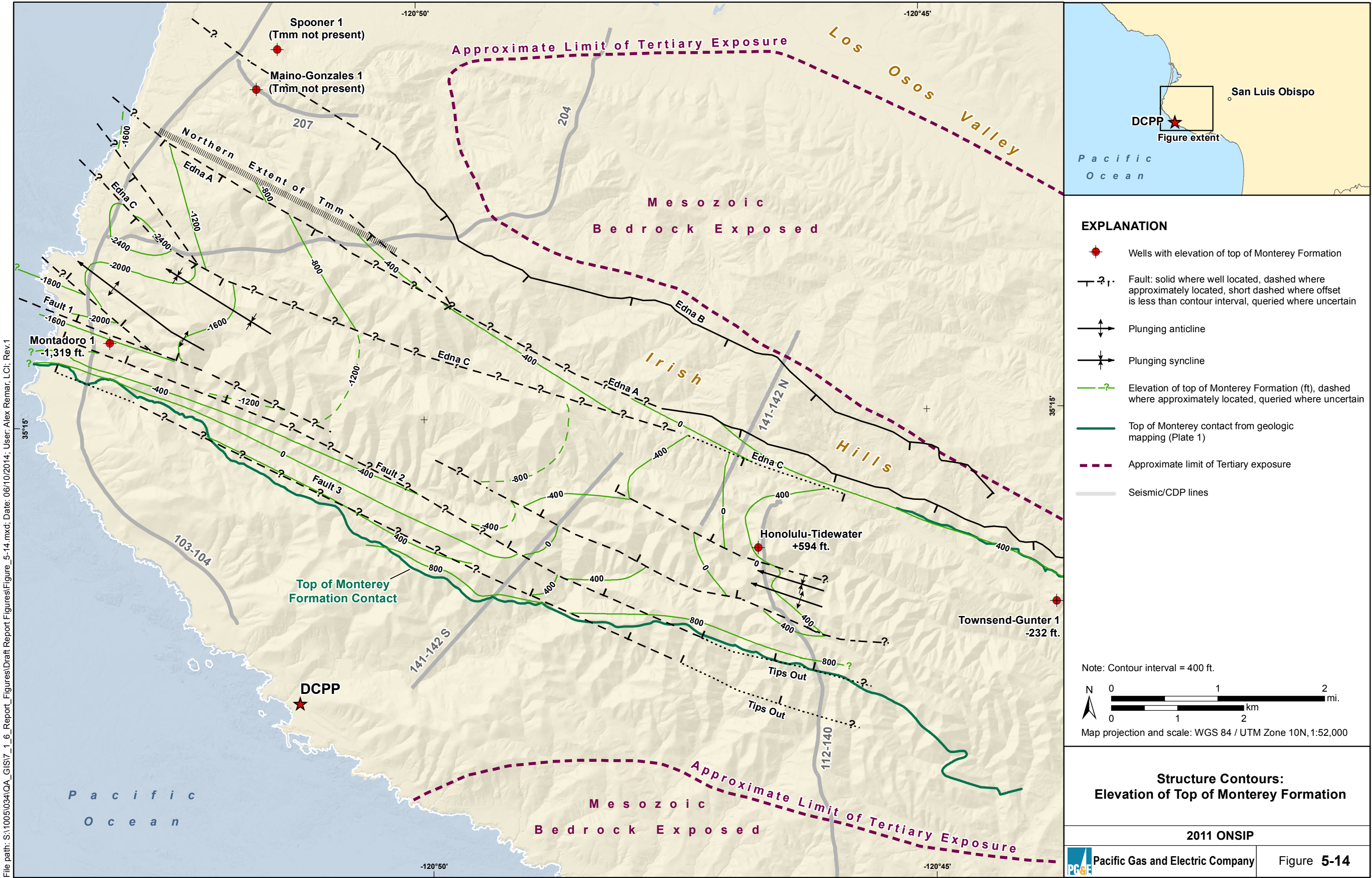


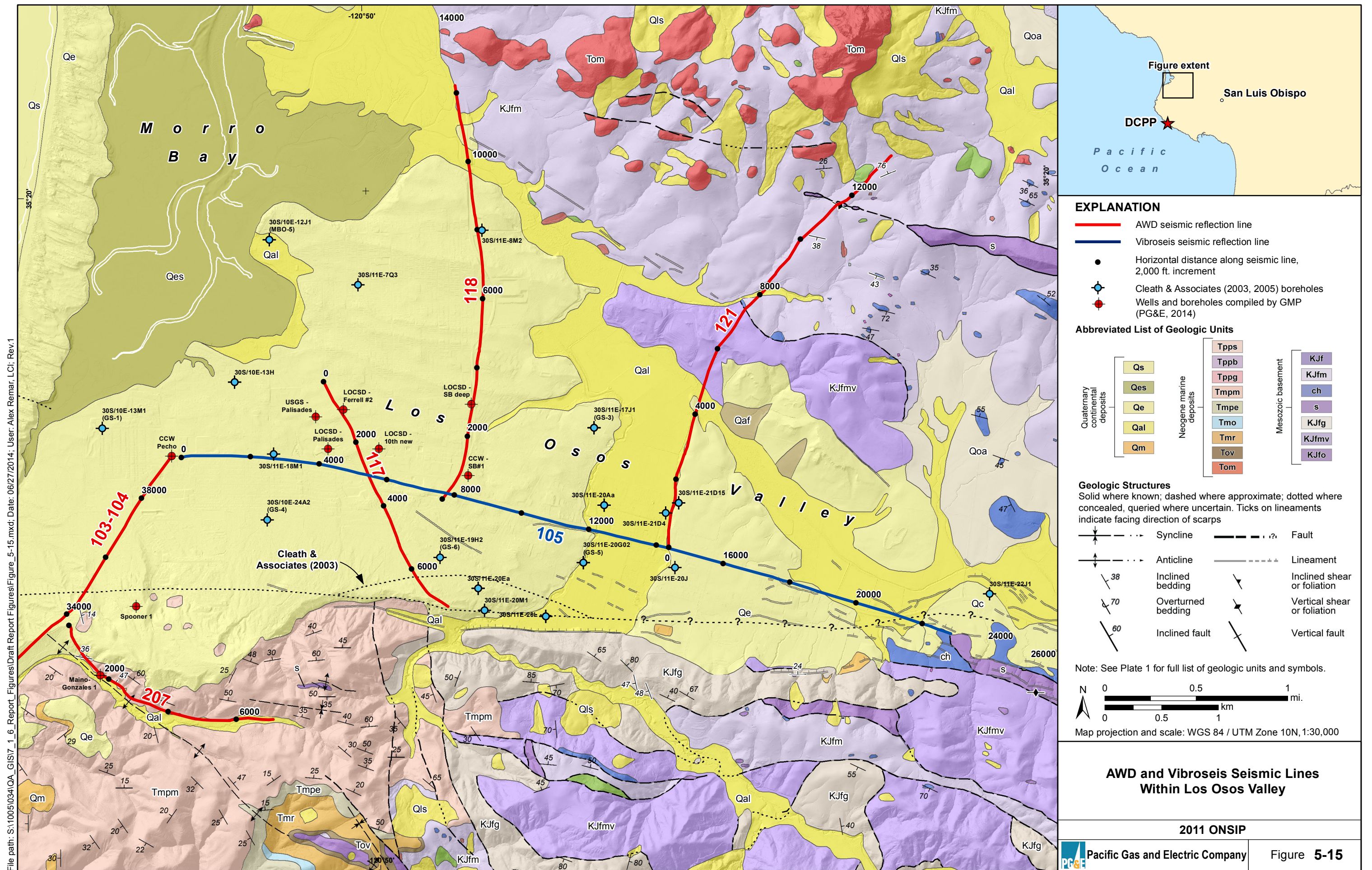
Figure 5-11



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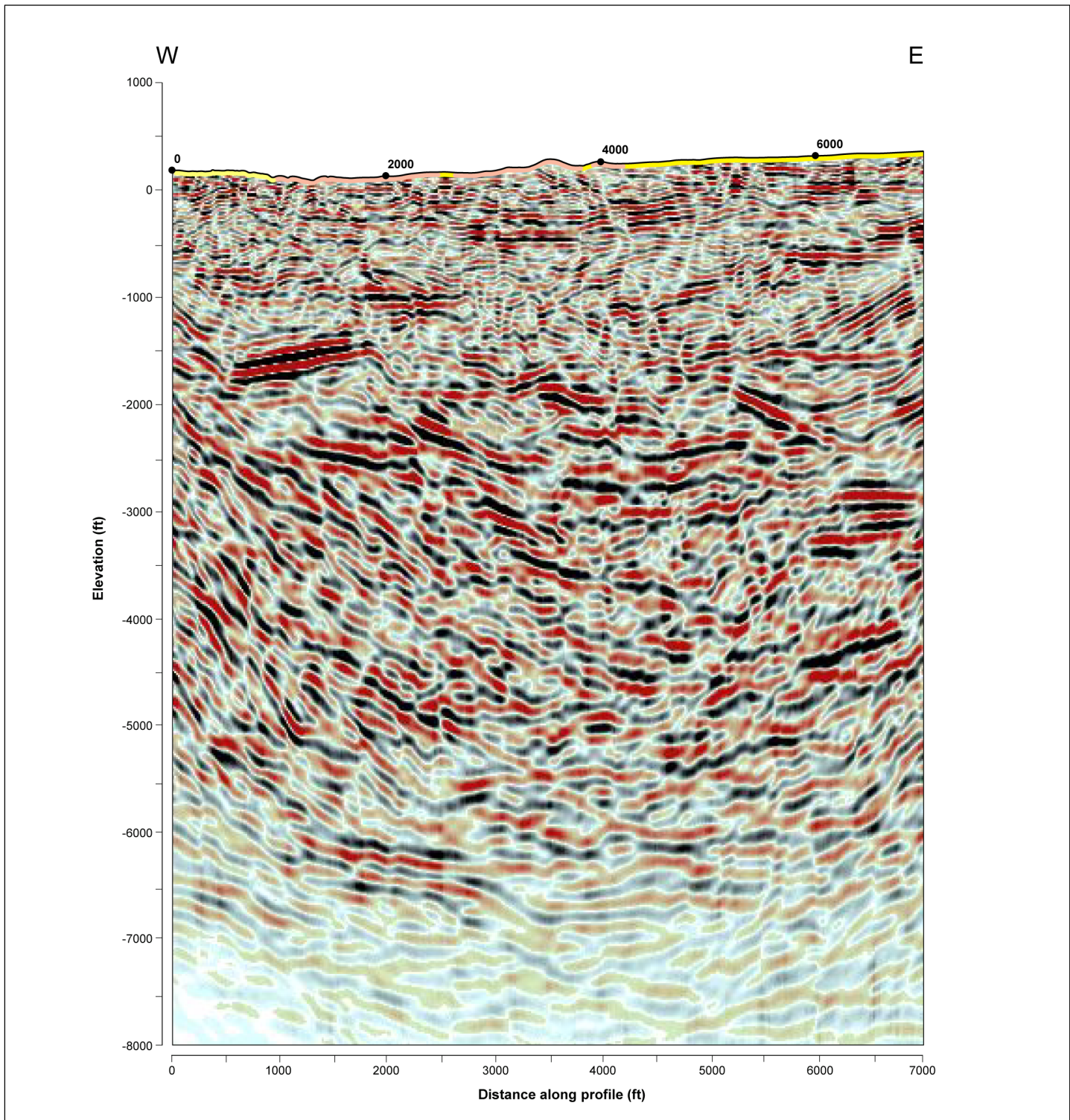




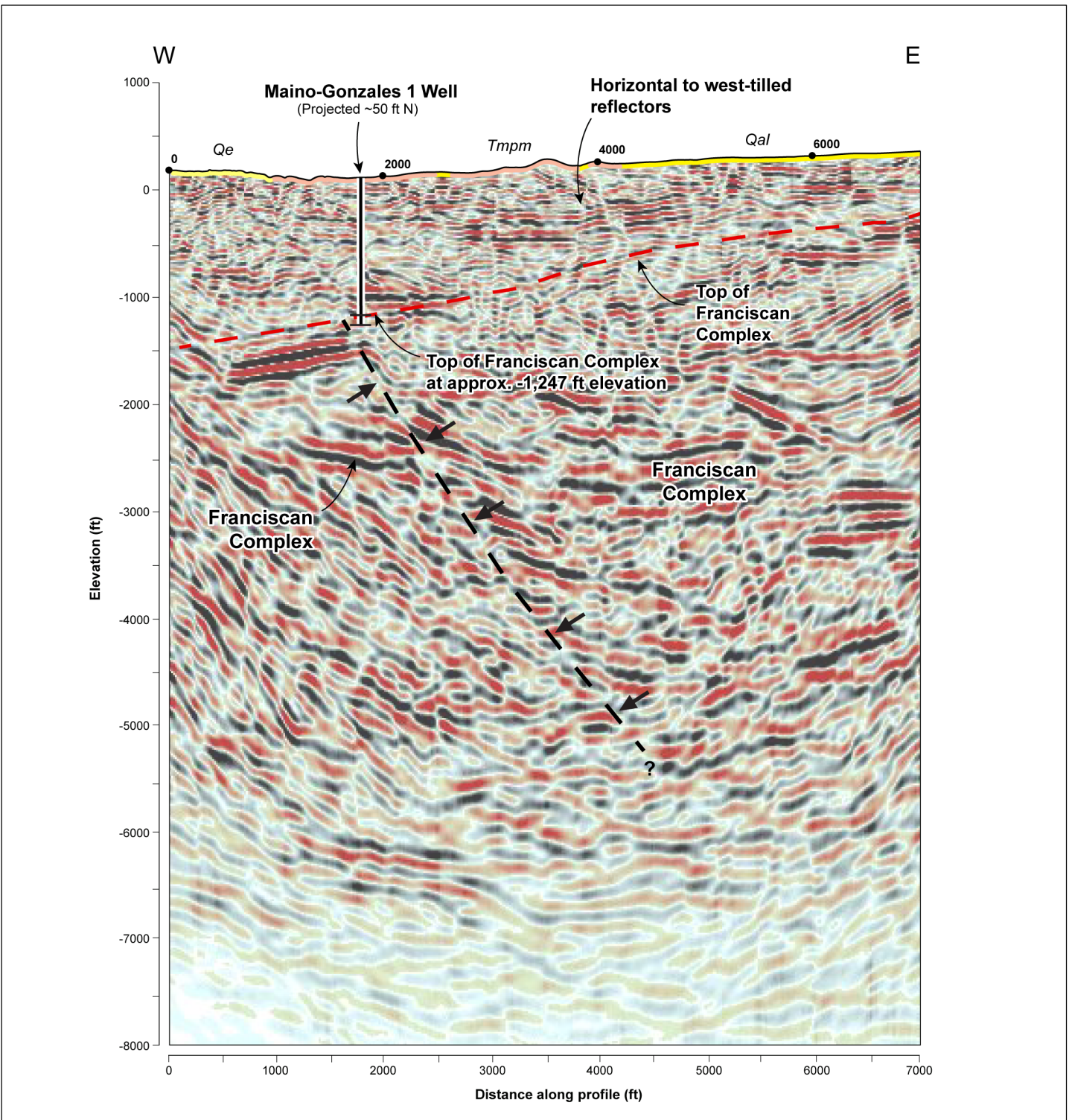


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(a) Uninterpreted



(b) Interpreted



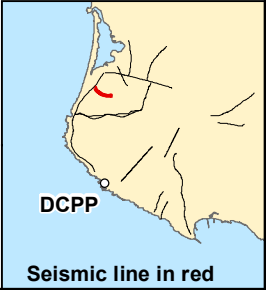
EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Top of Mesozoic Basement

- 2000 • Horizontal distance along seismic line, 2,000 ft increment
- ← Arrows marking offset or truncated reflectors

Notes:

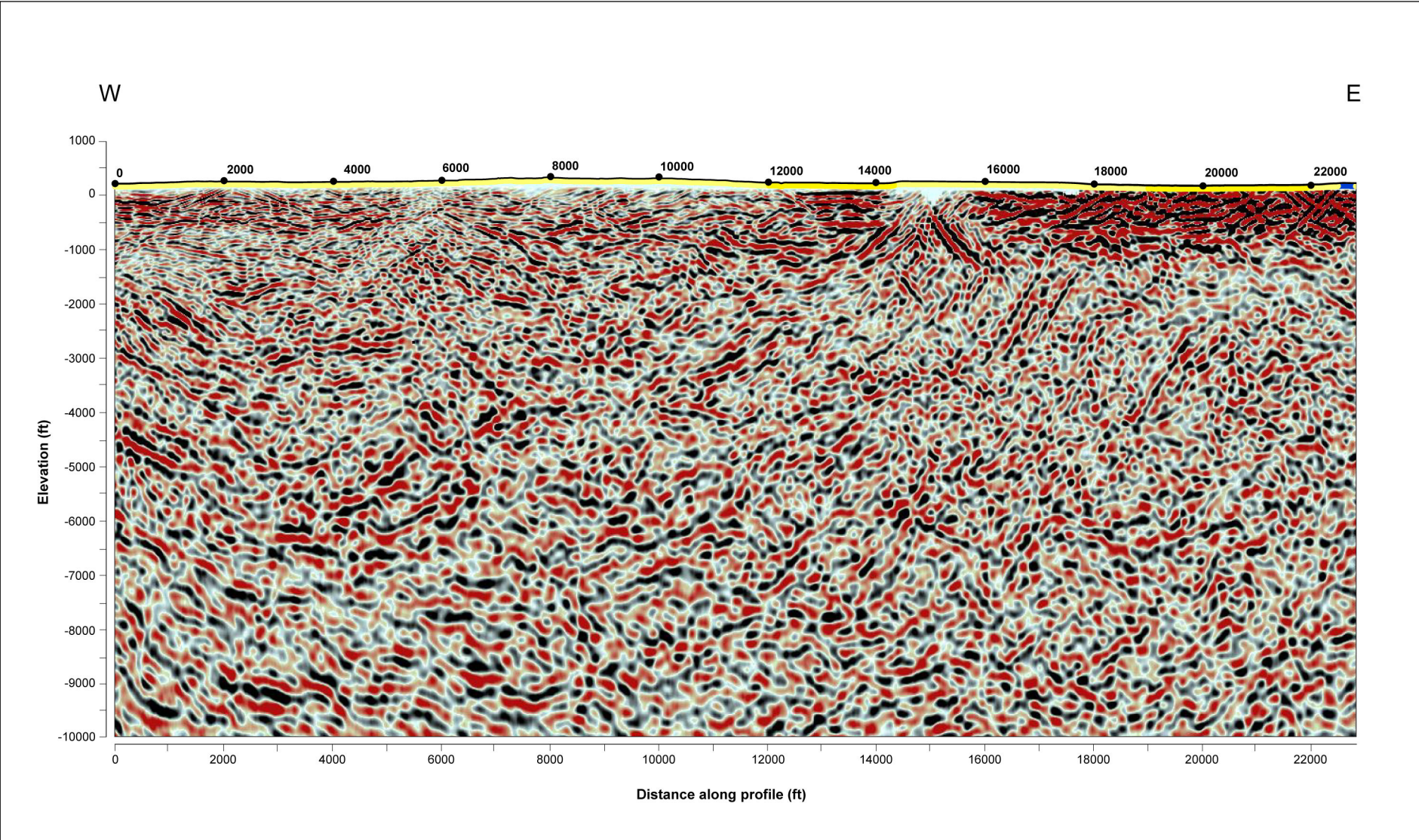
- Seismic line 207 awd fbm psdm 1 mix depth tvfagc.
- Geology along topographic profile from Plate 1; see Plate 1 and Figures 2-2 and 5-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



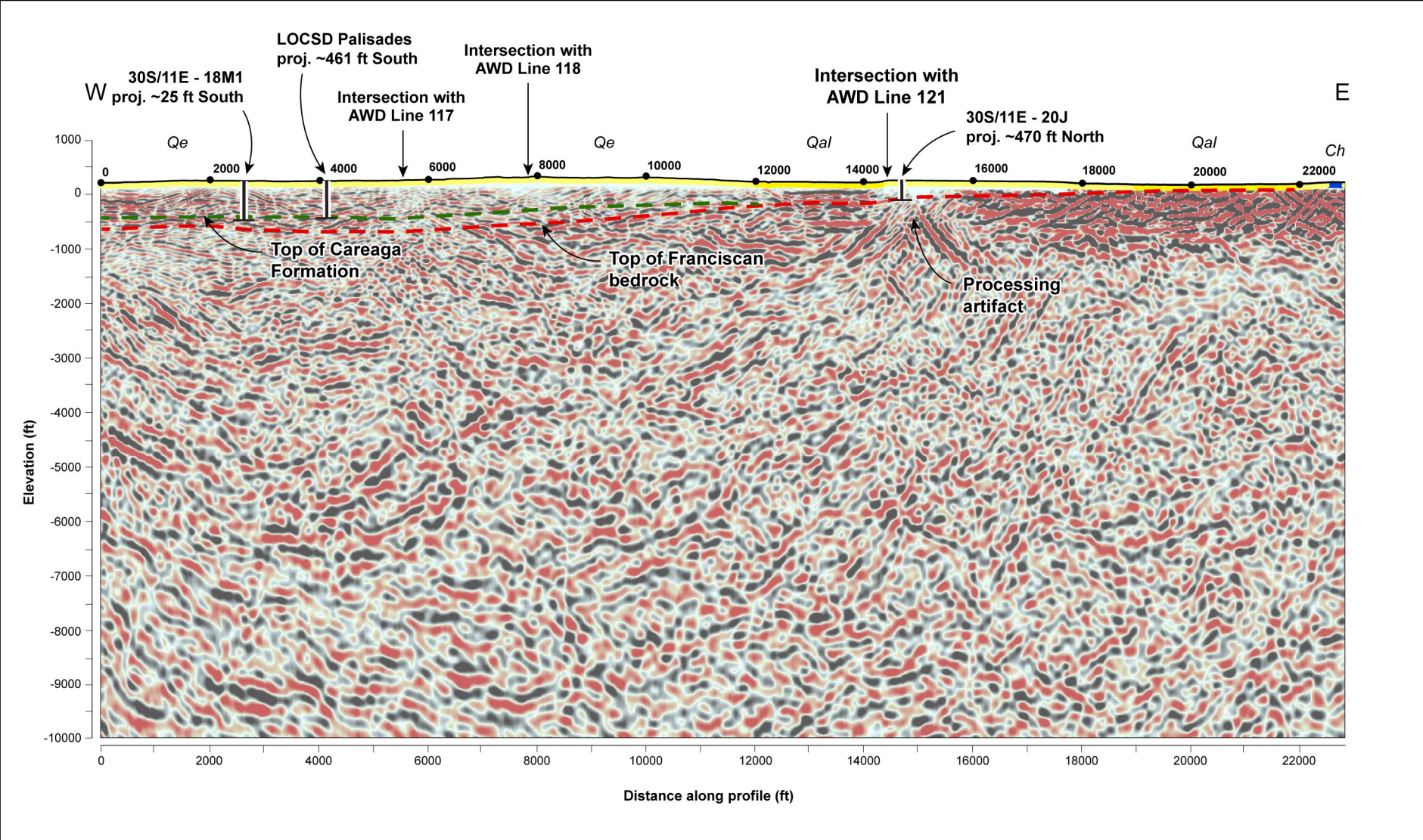
AWD Line 207: (a) Uninterpreted and (b) Interpreted	
2011 ONSIP	
Pacific Gas and Electric Company	Figure 5-16

File path: S:\1005\034QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-17_Line_105.mxd; Date: 06/10/2014; User: Jereme Chandler, LCI; Rev:1

(a) Uninterpreted



(b) Interpreted

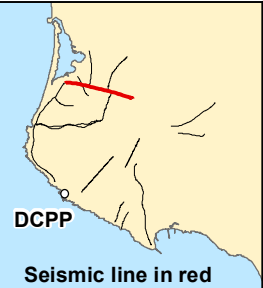


EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tpc* Top of Careaga Formation
- KJf* Top of Mesozoic Basement
- 2000 Horizontal distance along seismic line, 2,000 ft increment

Notes:

- Seismic line trimmed_105_2D_beam_50k_vibeonly_poly_sl_stackagc_IEEE.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 6-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



Vibroseis Line 105:
(a) Uninterpreted and (b) Interpreted

2011 ONSIP

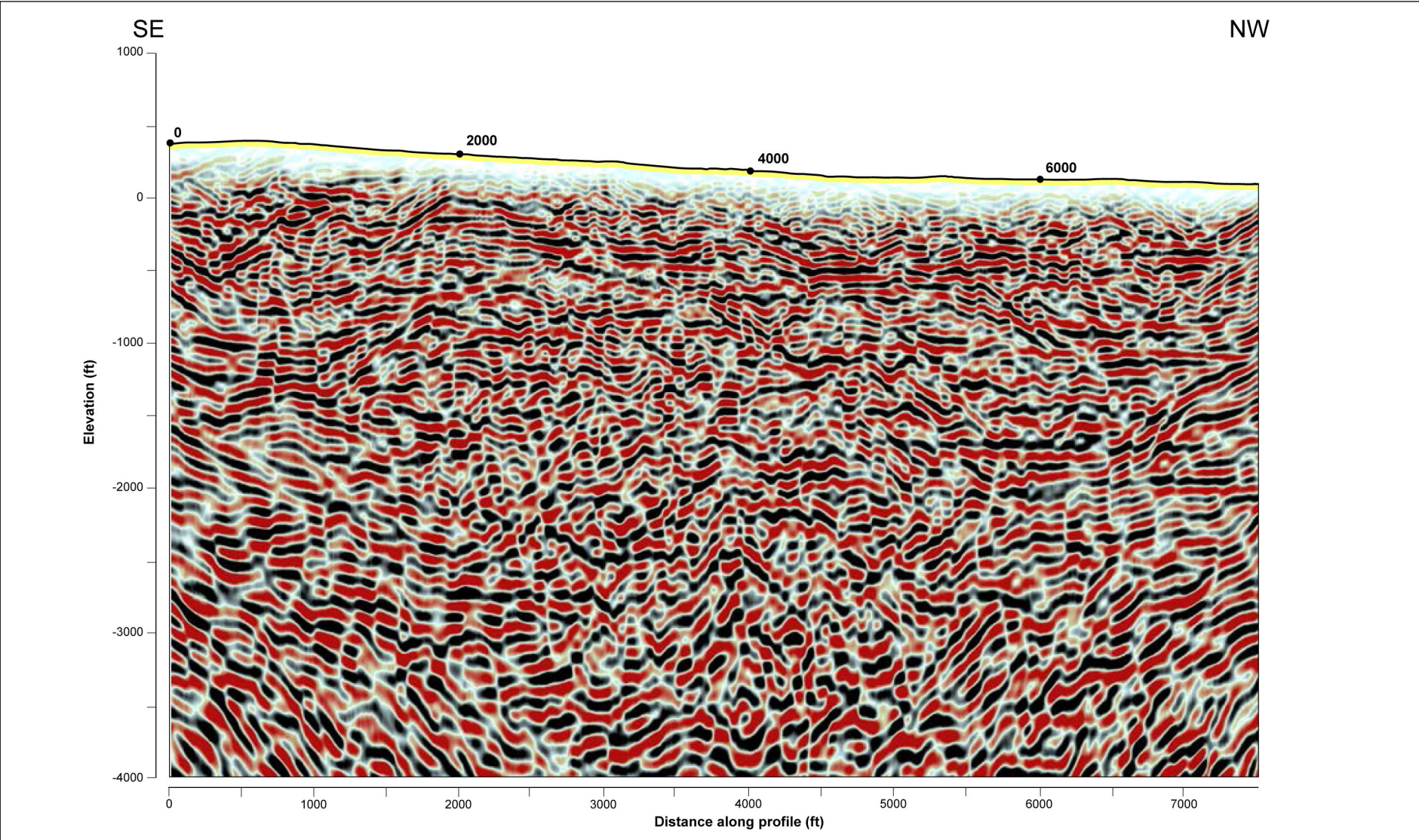


Pacific Gas and Electric Company

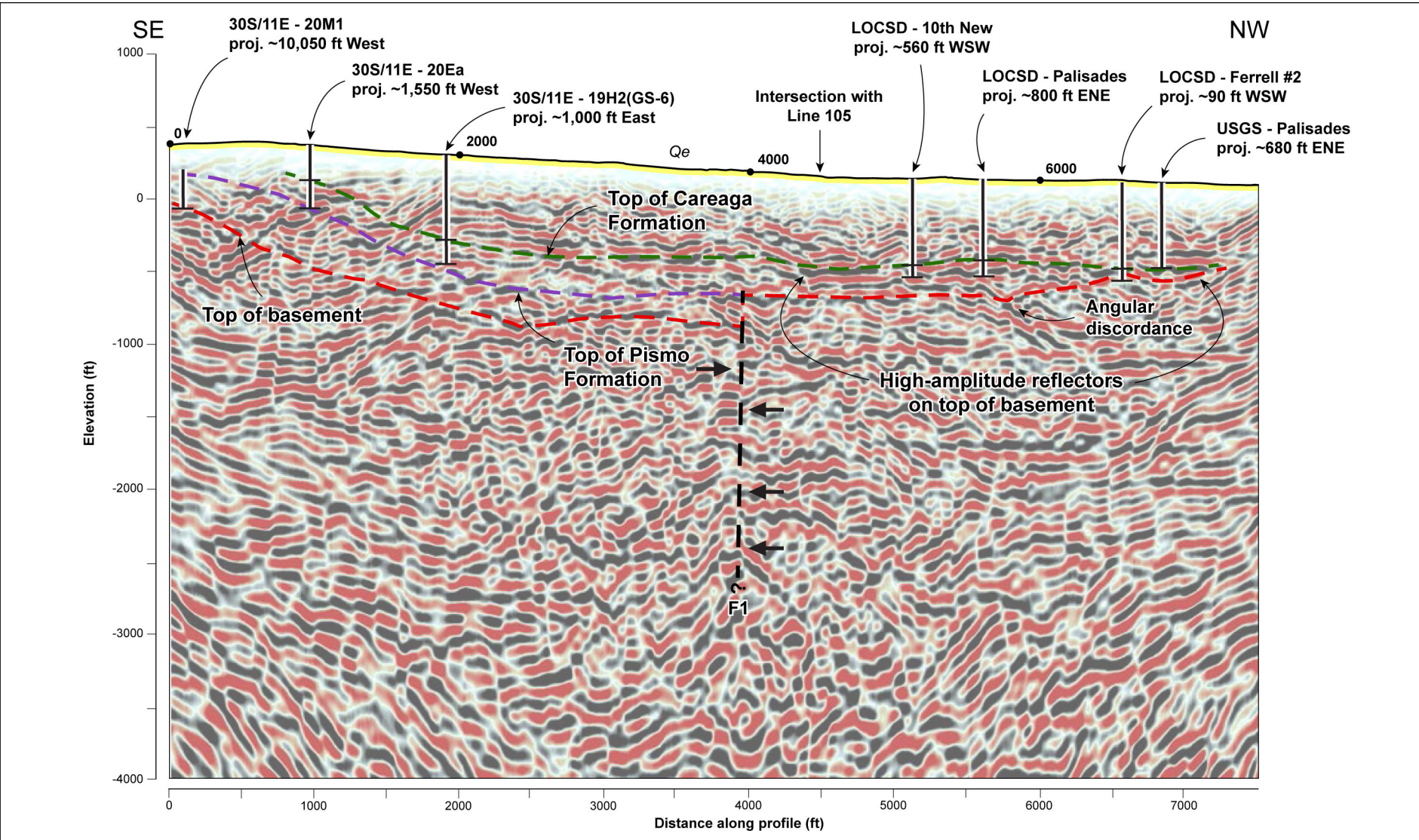
Figure 5-17

File path: S:\1005\034QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-18_Line_117.mxd; Date: 06/10/2014; User: Jereme Chandler, LCI; Rev:1

(a) Uninterpreted



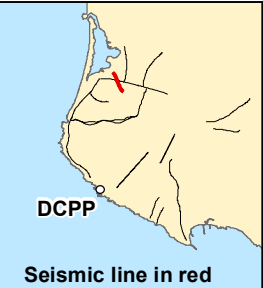
(b) Interpreted



EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tpc* Top of Careaga Formation
- Tmp* Top of Pismo Formation, undifferentiated
- KJf* Top of Mesozoic Basement
- 2000 Horizontal distance along seismic line, 2,000 ft increment
- ← Arrows marking offset or truncated reflectors

Notes:
- Seismic line 117 AWD FMB tvfagc.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 6-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



AWD Line 117:
(a) Uninterpreted and (b) Interpreted

2011 ONSIP

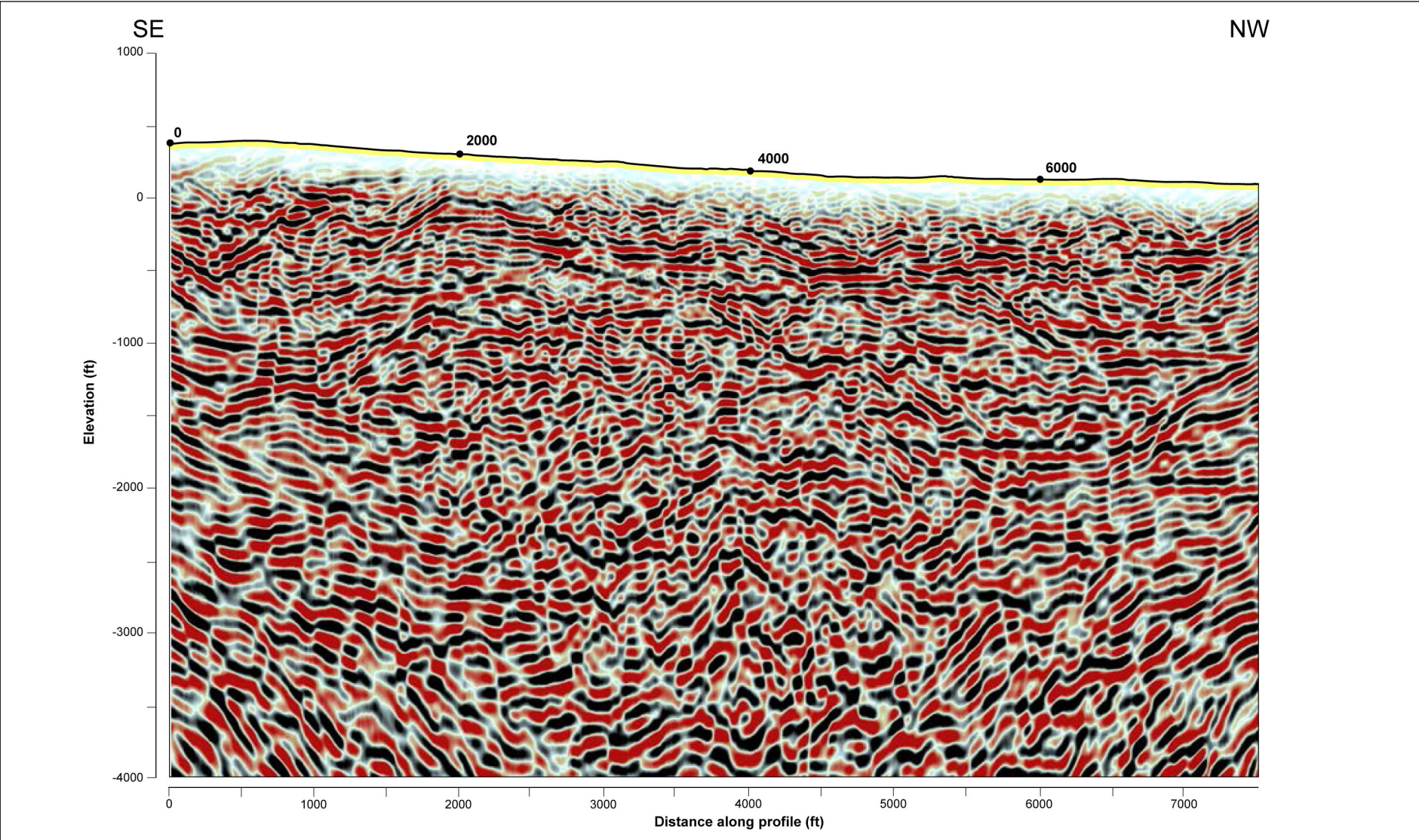


Pacific Gas and Electric Company

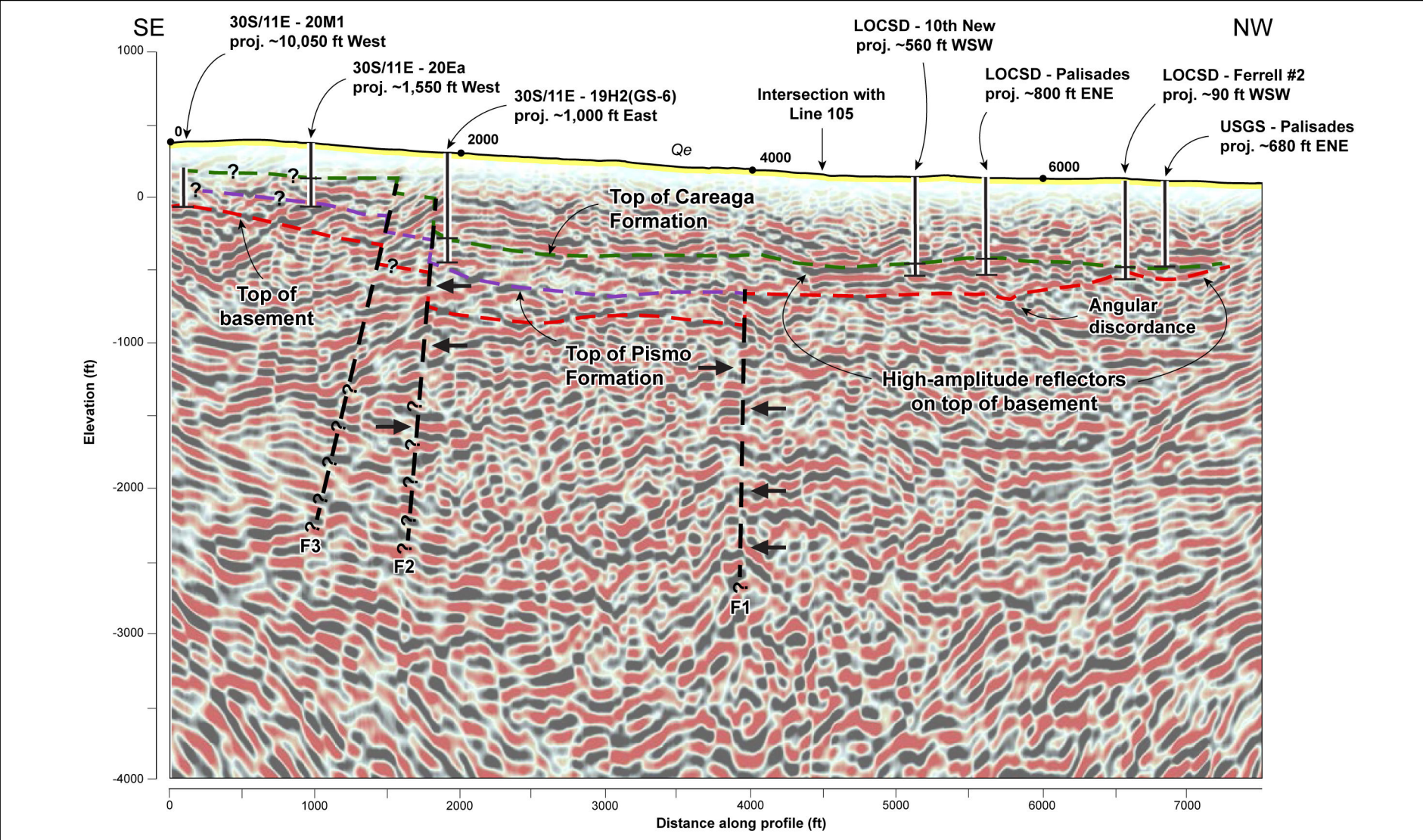
Figure 5-18

File path: S:\1005\034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-19_Line_117_Alternative.mxd; Date: 06/10/2014; User: Jereme Chandler, LCI; Rev: 1

(a) Uninterpreted



(b) Interpreted

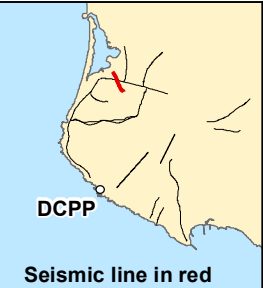


EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tpc* Top of Careaga Formation
- Tmp* Top of Pismo Formation, undifferentiated
- KJf* Top of Mesozoic Basement
- 2000 Horizontal distance along seismic line, 2,000 ft increment
- ← Arrows marking offset or truncated reflectors

Notes:

- Seismic line 117 AWD FMB tvfagc.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 6-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



Alternative Faulting Interpretation of AWD Line 117: (a) Uninterpreted and (b) Interpreted

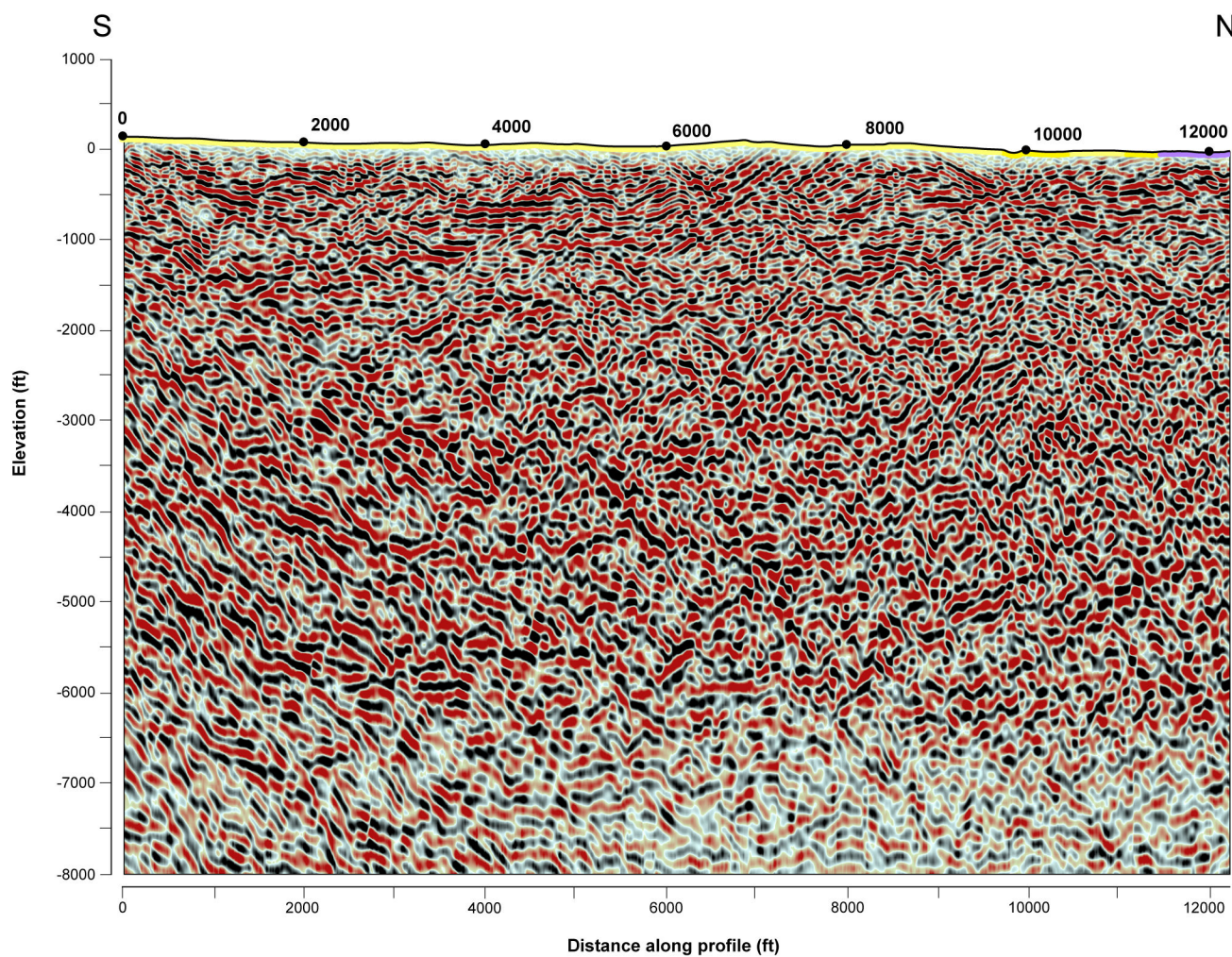
2011 ONSIP



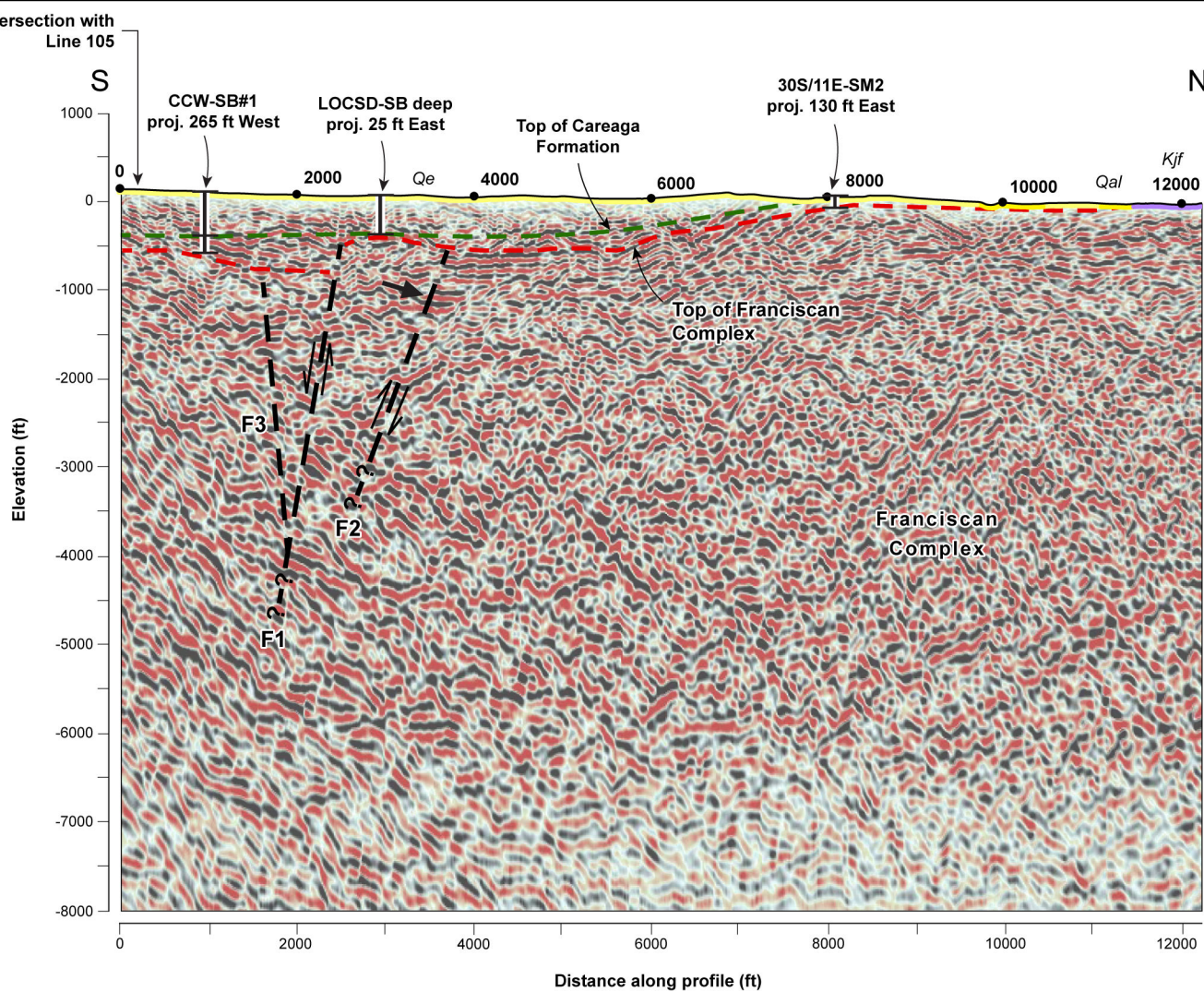
Pacific Gas and Electric Company

Figure 5-19

(a) Uninterpreted



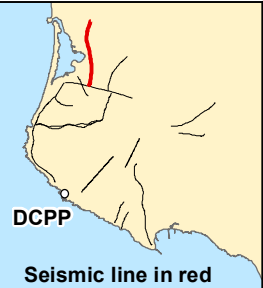
(b) Interpreted



EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tpc* Top of Careaga Formation
- Kjf* Top of Mesozoic basement
- 2000 Horizontal distance along seismic line, 2,000 ft increment
- ← Arrows marking offset or truncated reflectors

Notes:
- Seismic line 118 AWD FBM tvfagc.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 6-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



AWD Line 118:
(a) Uninterpreted and (b) Interpreted

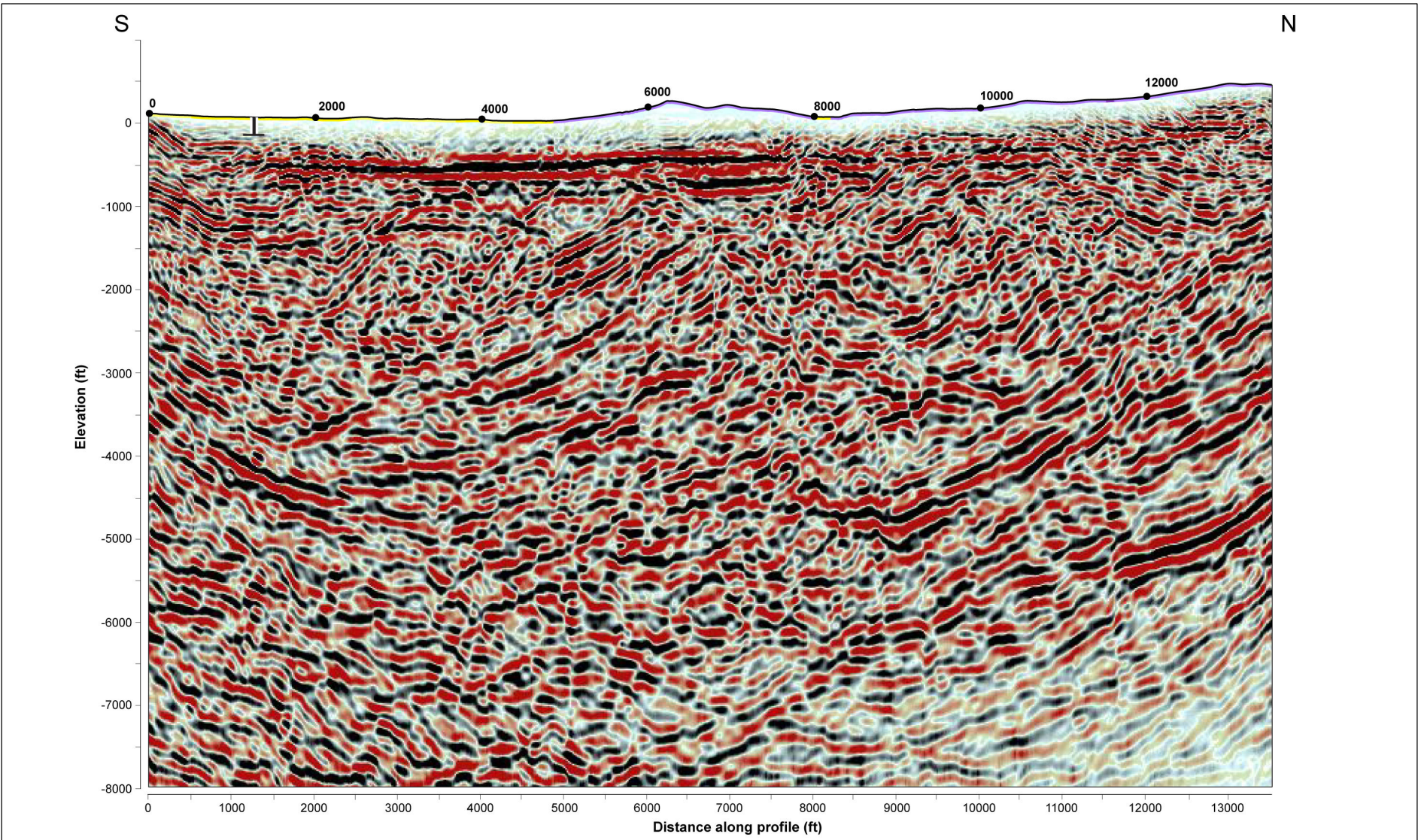
2011 ONSIP



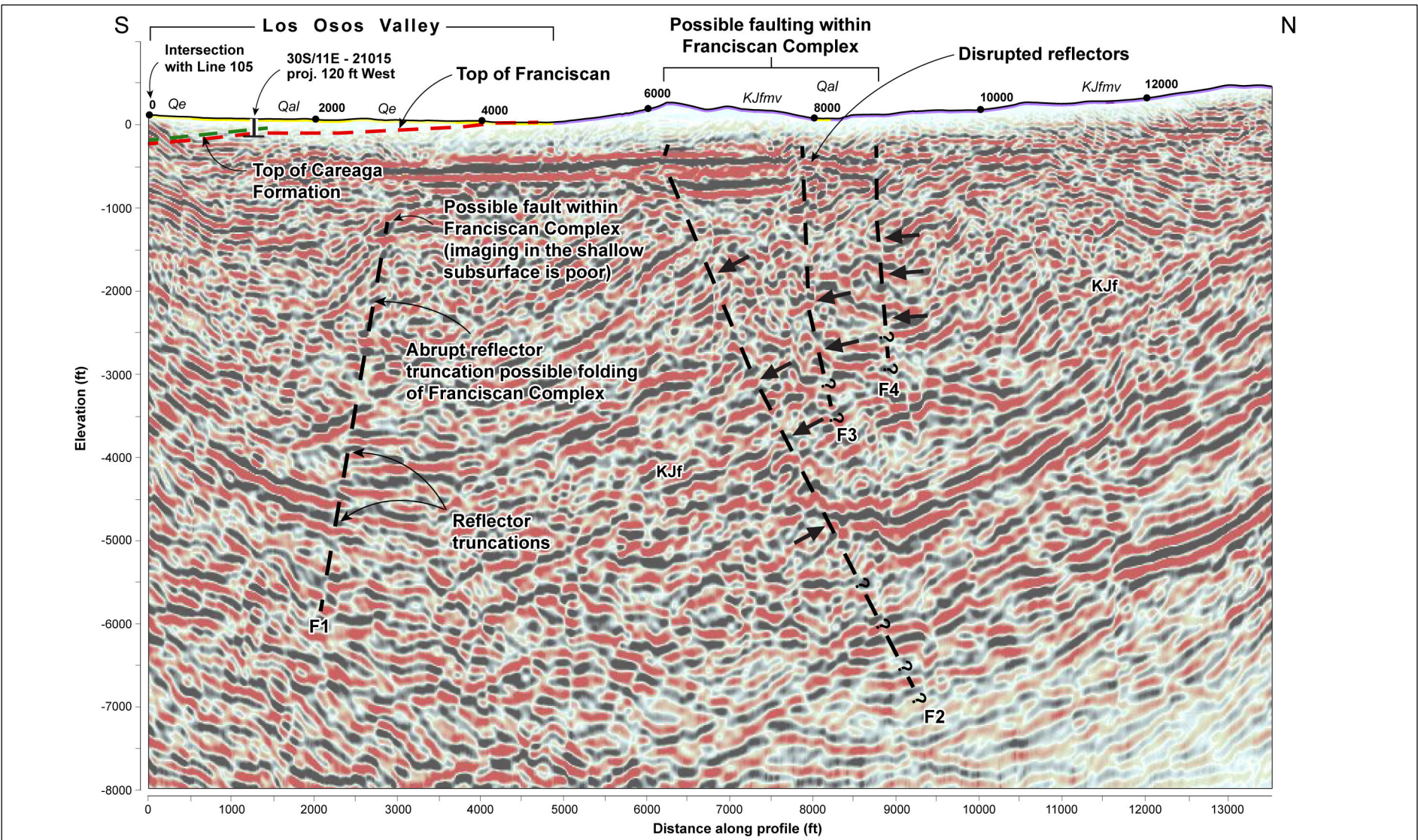
Pacific Gas and Electric Company

Figure 5-20

(a) Uninterpreted



(b) Interpreted

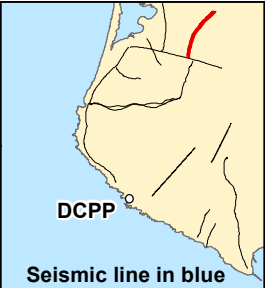


EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Tpc** Top of Careaga Formation
- KJf** Top of Mesozoic basement
- 2000 Horizontal distance along seismic line, 2,000 ft increment
- ← Arrows marking offset or truncated reflectors

Notes:

- Seismic line 121 awd fbm psdm 1 mix depth tvfagc.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 6-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



AWD Line 121:
(a) Uninterpreted and (b) Interpreted

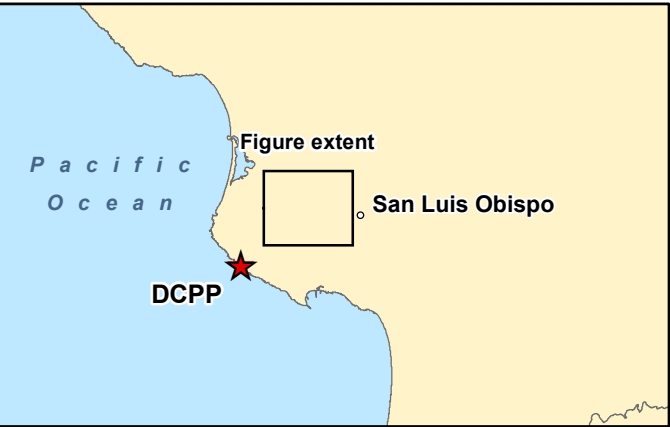
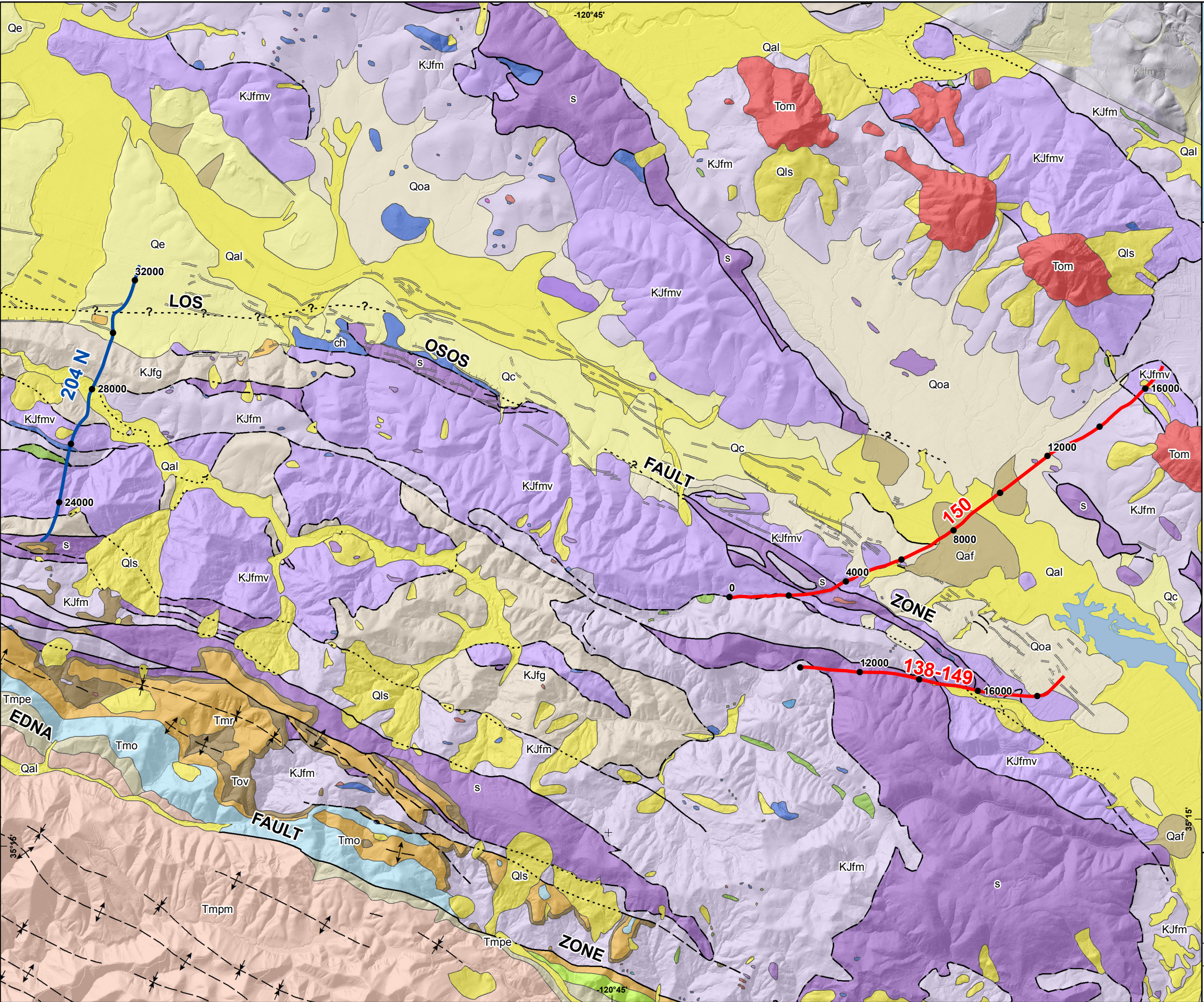
2011 ONSIP



Pacific Gas and Electric Company

Figure 5-21

File path: S:\1005034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-23.mxd; Date: 06/26/2014; User: Alex Renar, LCI; Rev:1



EXPLANATION

- AWD seismic reflection line
- Vibroseis seismic reflection line
- Horizontal distance along seismic line, 2,000 ft. increments

Abbreviated List of Geologic Units

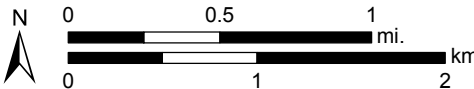
Quaternary continental deposits	- Qe Aeolian deposits - Qal Alluvial deposits - Qm Marine terrace deposits	Continued	- Tmr Rincon Formation - Tov Vaqueros Sandstone
Neogene marine deposits	- Tpps Pismo Formation, Squire Member - Tmpm Pismo Formation, Miguelito Member - Tmpe Pismo Formation, Edna Member - Tmm Monterey Formation - Tmod Obispo Formation, diabase - Tmo Obispo Formation, undifferentiated	Mesozoic basement	- Ks Cretaceous sandstone - KJf Franciscan Complex, undifferentiated - KJfm Franciscan Complex, melange - s Franciscan Complex, serpentine - KJg Franciscan Complex, graywacke sandstone - KJfmv Franciscan Complex, metavolcanic rocks - KJfo Franciscan Complex, ophiolite

Geologic Structures

Solid where known; dashed where approximate; dotted where concealed; queried where uncertain. Ticks on lineaments indicate facing direction of topographic scarps.

- Syncline
- Anticline
- Fault
- Lineament

Note: See Plate 1 for full list of geologic units and symbols.

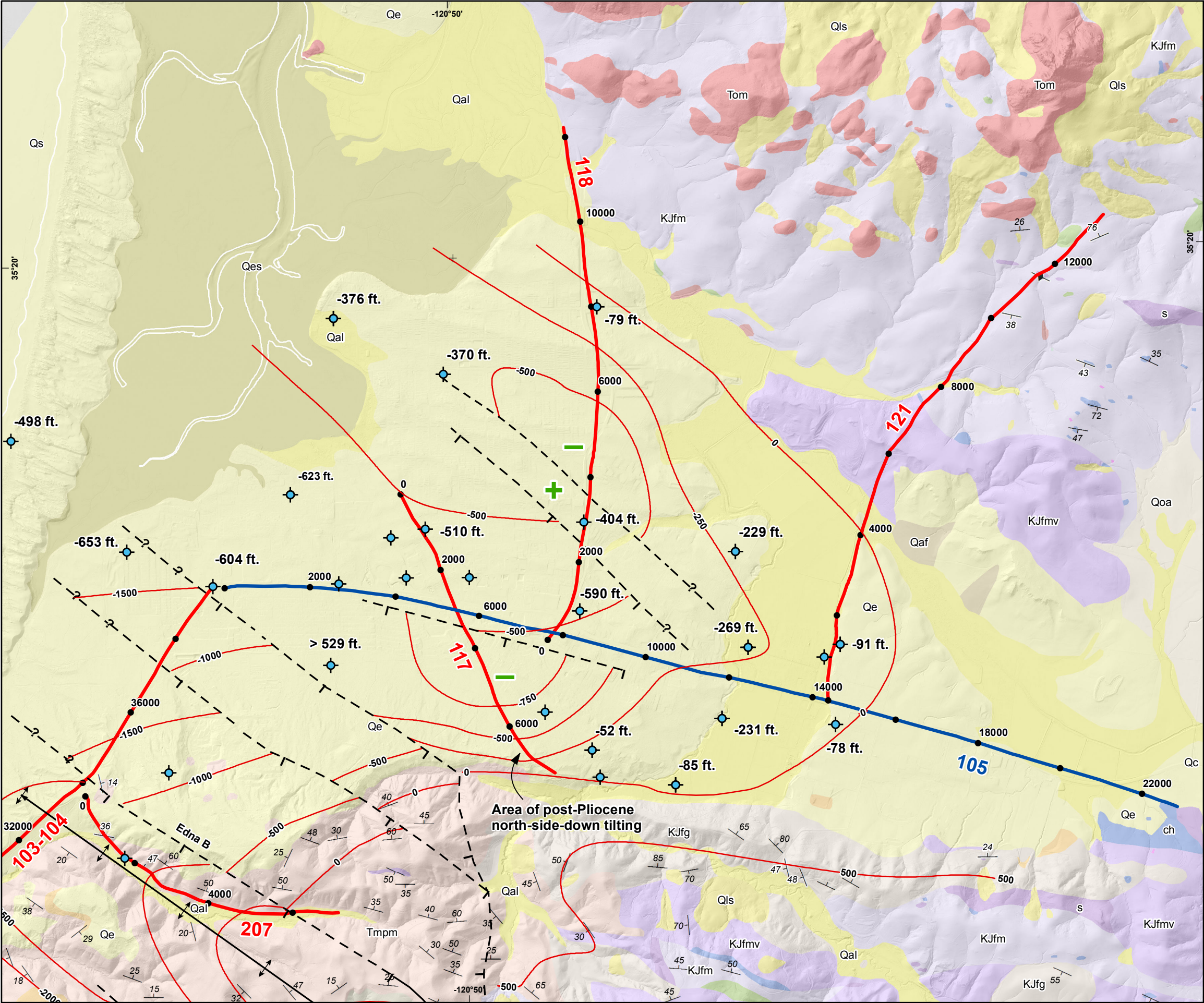


Map projection and scale: WGS 84 / UTM Zone 10N, 1:40,061

Key Seismic Lines Imaging the Los Osos Fault

2011 ONSIP

File path: S:\1005034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-22.mxd; Date: 06/26/2014; User: Alex Remar, LCI; Rev.1



EXPLANATION

- AWD seismic reflection line
- Vibroseis seismic reflection line
- Horizontal distance along seismic line, 2,000 ft increments
- Wells with picks for elevation of top of Mesozoic basement
- Fault: solid where well located, dashed where approximately located, short dashed where offset is less than contour interval, queried where uncertain
- Plunging anticline
- Elevation of top of Mesozoic basement (ft)
- Local structural high (+)
- Local structural low (-)

Notes:
- See Plate 1 for explanation of geologic units and symbols.
For well names, see Figure 6-1.

Map projection and scale: WGS 84 / UTM Zone 10N, 1:28,000

Structure Contours Elevation of Top of Mesozoic Basement Within Los Osos Valley

W E

1000
0
-1000
-2000
-3000
-4000
-5000
-6000
-7000
-8000

10000 12000 14000 16000 18000

Elevation (ft)

10000 12000 14000 16000 18000

Distance along profile (ft)

This figure is a geological cross-section of the Los Osos fault system. The vertical axis represents Elevation (ft) from 1000 to -8000, and the horizontal axis represents Distance along profile (ft) from 10000 to 18000. The section shows a complex fault system with three main faults labeled F1, F2, and F3. Fault F1 is the primary fault, dipping at 58°-70° southwest. Faults F2 and F3 are secondary faults. The top of the Franciscan Complex is marked at 80 ft depth. The section also shows the location of the Laguna Golf course, projected to be ~1,200 ft NW. The top of the section is labeled with 'Serpentinite', 'KJfmv', 'Qal', 'SP', and 'KJfm'. A 'Bend in section' is indicated near the Laguna Golf course. The section is oriented West (W) to East (E).

Notes:

- Seismic line 138-149 - AWD FBM tvfagc.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 7-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



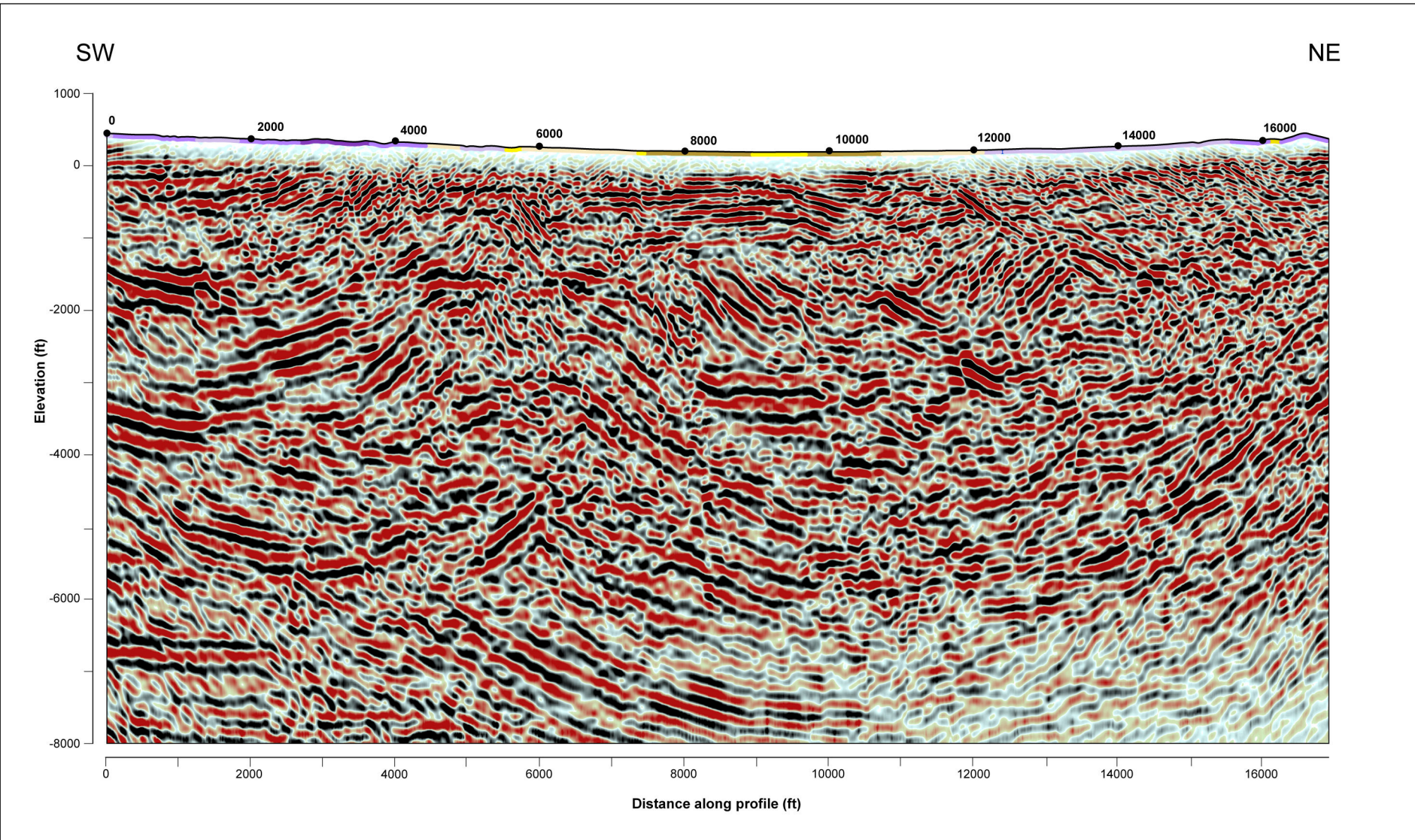
**AWD Line 138-149 Across the Los Osos Fault:
(a) Uninterpreted and (b) Interpreted**

2011 ONSIP

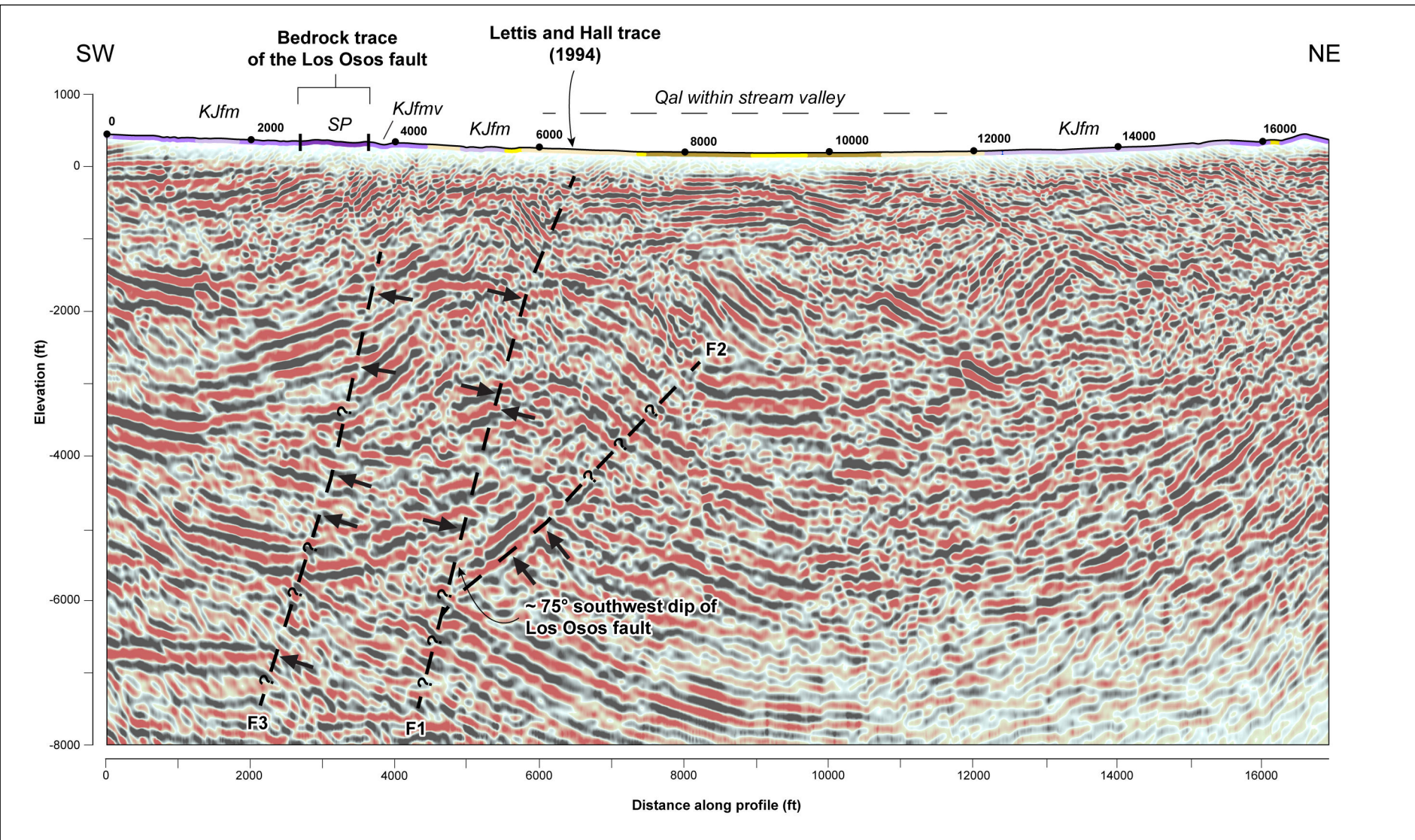
 Pacific Gas and Electric Company

Figure 5-24

(a) Uninterpreted



(b) Interpreted

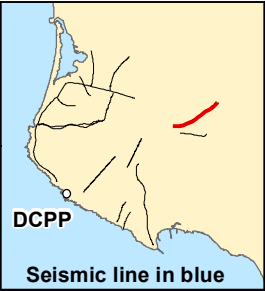


EXPLANATION

- Fault: solid where well located, dashed where approximately located
- 2000 Horizontal distance along seismic line, 2,000 ft increment
- ← Arrows marking offset or truncated reflectors

Notes:

- Seismic line 150 AWD FBM tvfagc.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 7-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



AWD Line 150 Across the Los Osos Fault:
(a) Uninterpreted and (b) Interpreted

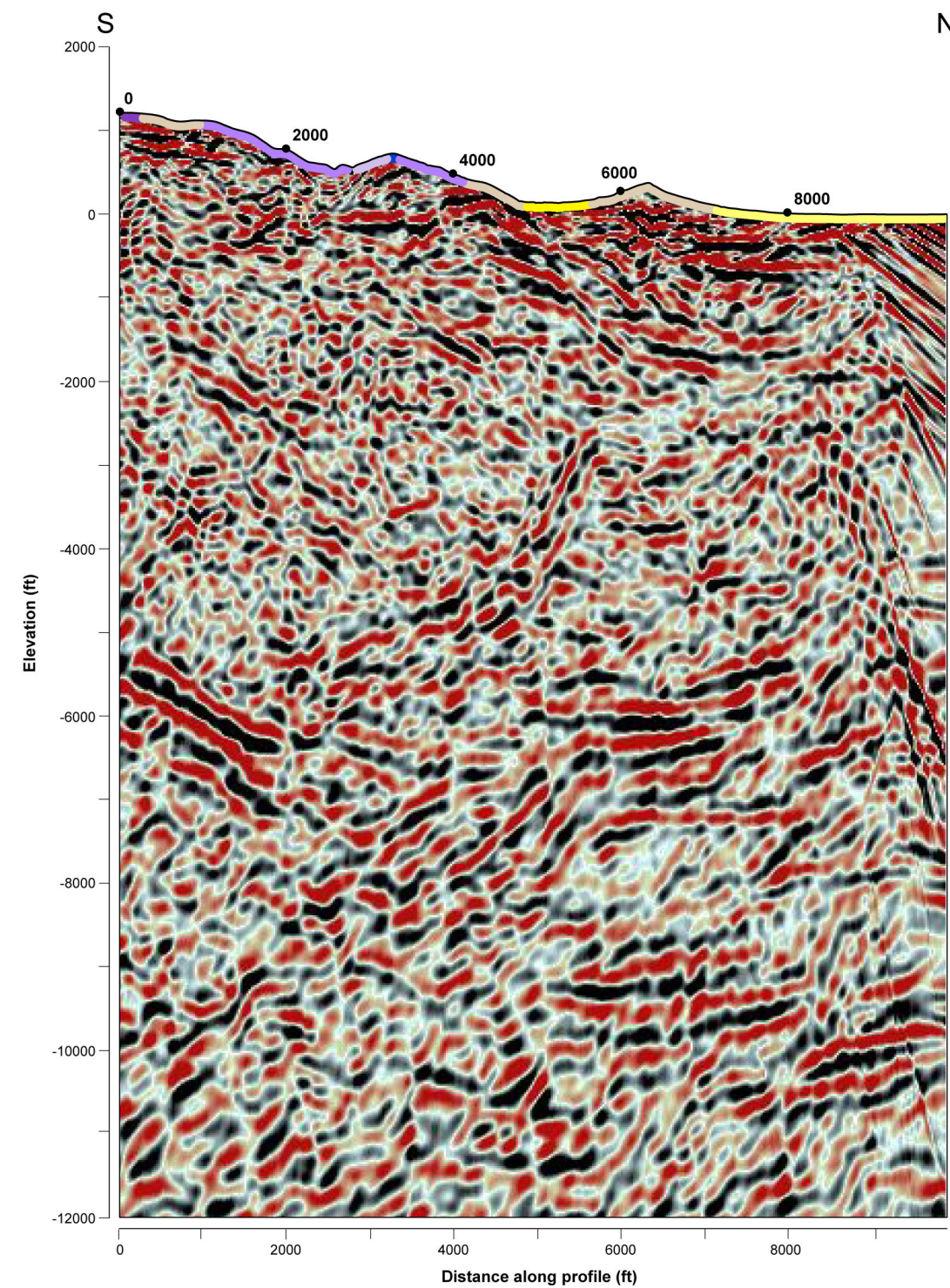
2011 ONSIP



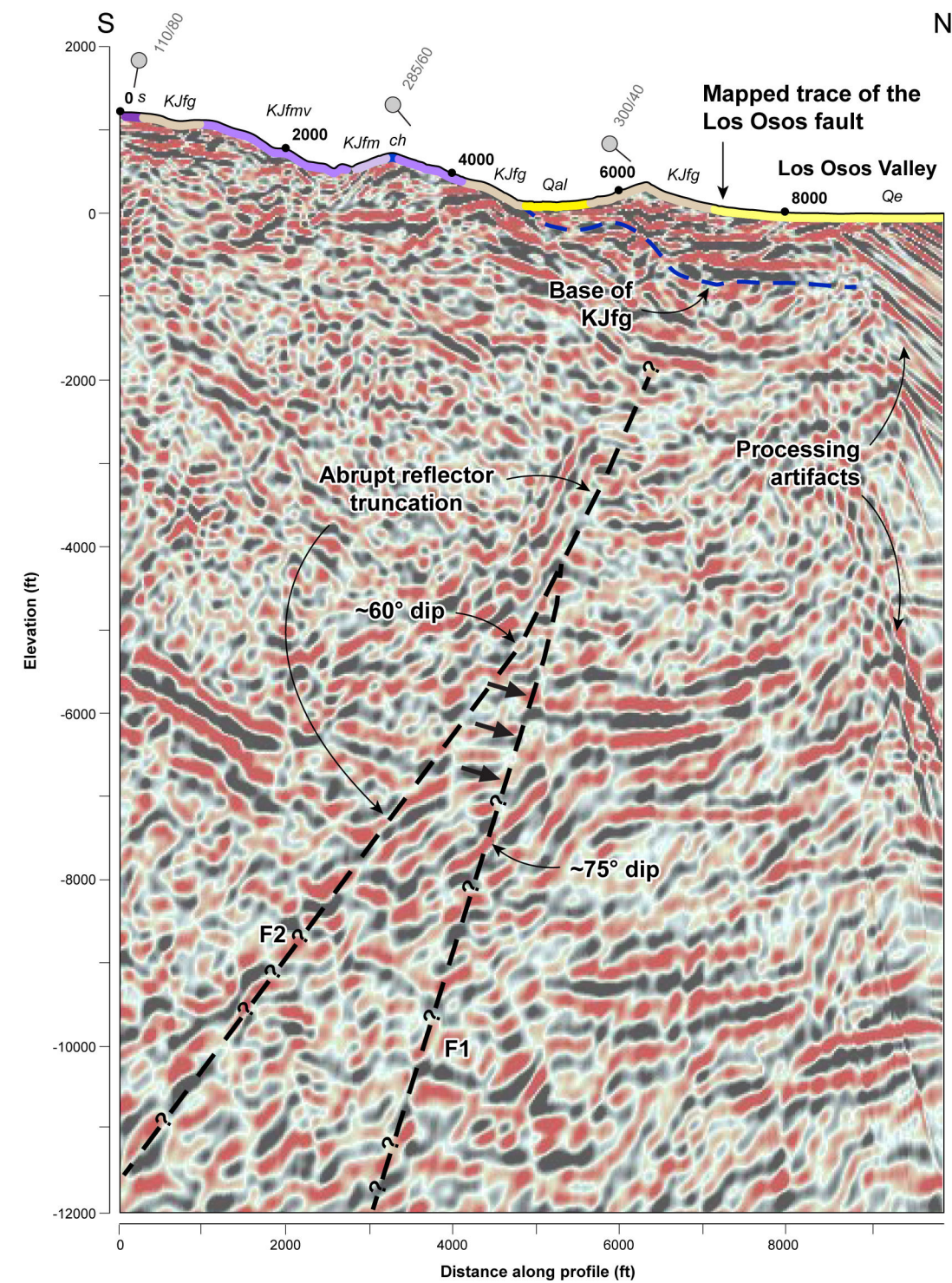
Pacific Gas and Electric Company

Figure 5-25

(a) Uninterpreted

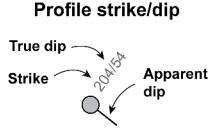


(b) Interpreted



EXPLANATION

- Fault: solid where well located, dashed where approximately located
- Base of KJfg
- ← Arrows marking offset or truncated reflectors



2000 • Horizontal distance along seismic line, 2,000 ft increment

Notes:
- Seismic line trimmed_204_north_2D_beam_50K_vibeonly_poly_sl_stackage_1EEE.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 7-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.

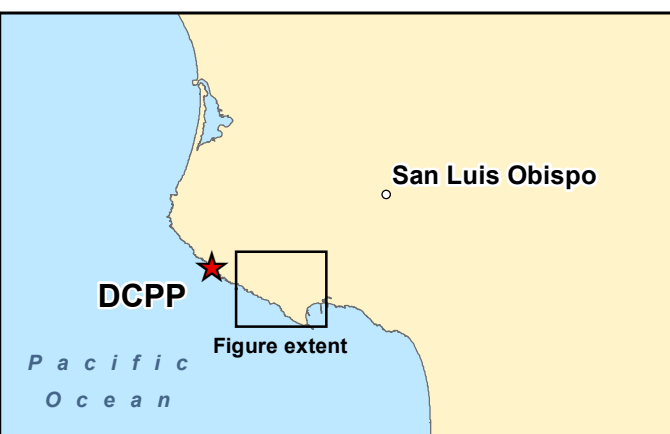
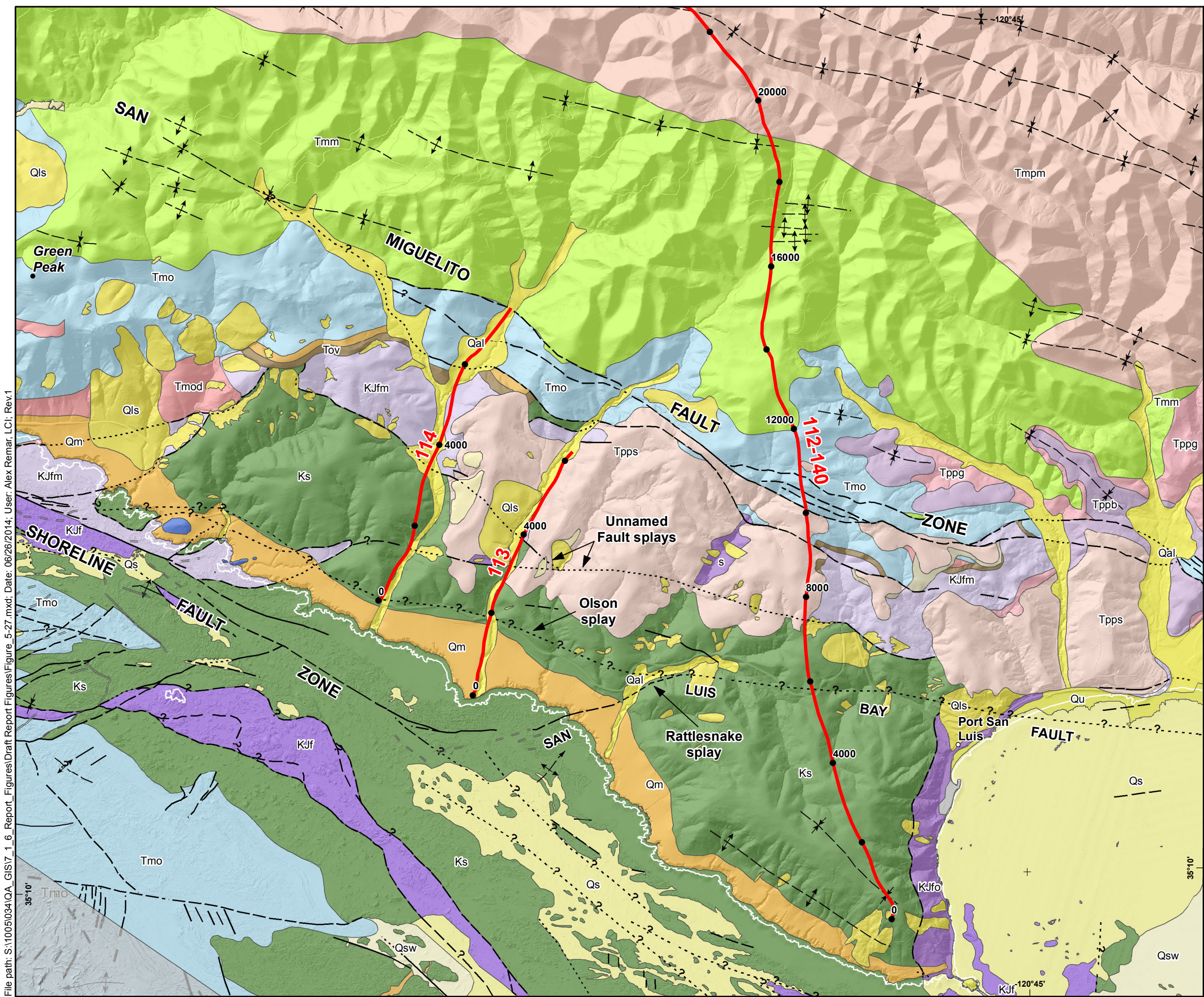


Vibroseis Line 204 North:
(a) Uninterpreted and (b) Interpreted

2011 ONSIP

Pacific Gas and Electric Company

Figure 5-26



EXPLANATION

AWD seismic reflection line

Horizontal distance along seismic line, 2,000 ft increments

Abbreviated List of Geologic Units

Quaternary continental deposits	Neogene marine deposits	Mesozoic basement
Qs	Tpps	KJf
Qes	Tppb	KJfm
Qe	Tppg	ch
Qal	Tmpm	s
Qm	Tmpe	KJfg
	Tmo	KJfmv
	Tmr	KJfo
	Tov	
	Tom	

Geologic Structures
Solid where known; dashed where approximate; dotted where concealed, queried where uncertain. Ticks on lineaments indicate facing direction of scarps

Symbol	Description	Symbol	Description
~ ~ ~	Syncline	- - - - -	Fault
~ ~ ~	Anticline	- - - - -	Lineament
38	Inclined bedding	↘	Inclined shear or foliation
70	Overturned bedding	↗	Vertical shear or foliation
60	Inclined fault	↖	Vertical fault

Notes:
- See Plate 1 for full list of geologic units and symbols.
- Offshore geology from PG&E (2011).

Map projection and scale: WGS 84 / UTM Zone 10N, 1:28,000

Key Seismic Lines Imaging the San Luis Bay Fault

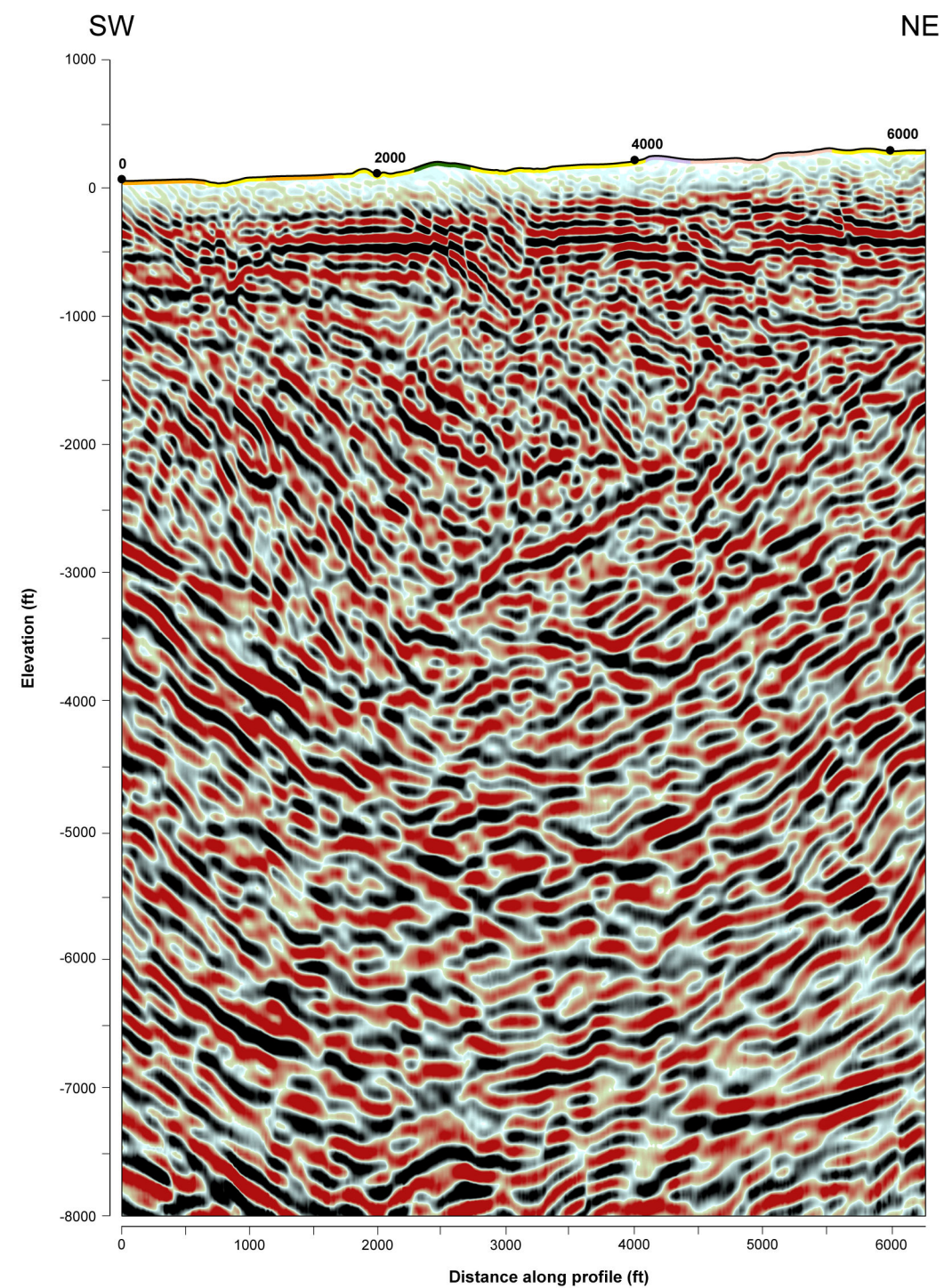
2011 ONSIP

Pacific Gas and Electric Company

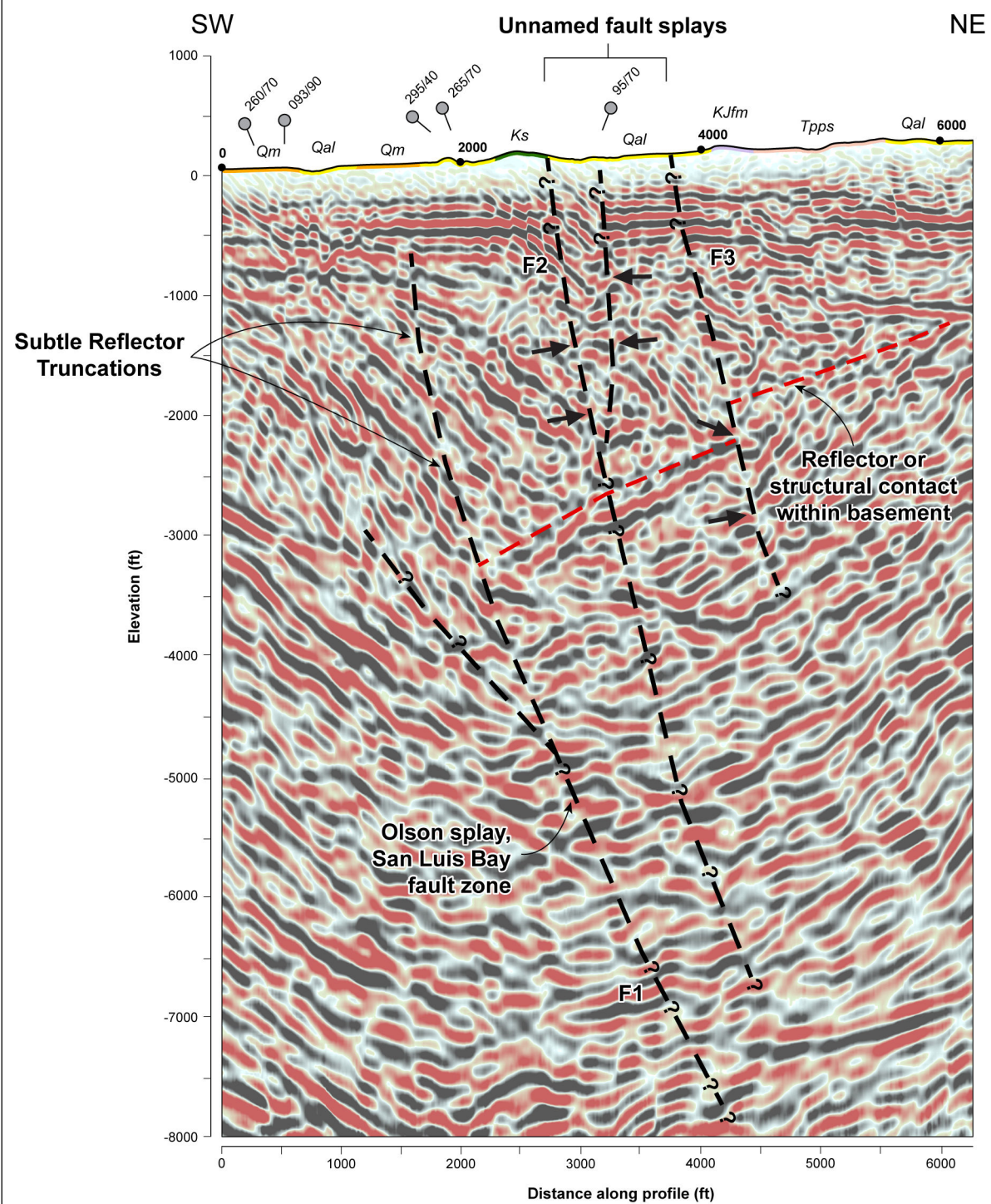
Figure **5-27**

File path: S:\1005034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure 5-27.mxd; Date: 06/26/2014; User: Alex Remar, LCI; Rev:1

(a) Uninterpreted

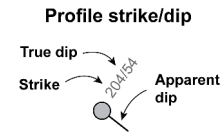


(b) Interpreted



EXPLANATION

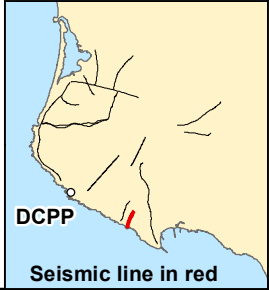
- Fault: solid where well located, dashed where approximately located
- Reflector within basement rocks
- ← Arrows marking offset or truncated reflectors



2000 • Horizontal distance along seismic line, 2,000 ft increment

Notes:

- Seismic line 113 AWD FBM PSDM 1 Mix Depth Tvfacg.
- Geology along topographic profile from Plate 1; see Plate 1 and Figure 8-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



AWD Line 113:
(a) Uninterpreted and (b) Interpreted

2011 ONSIP

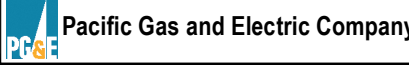
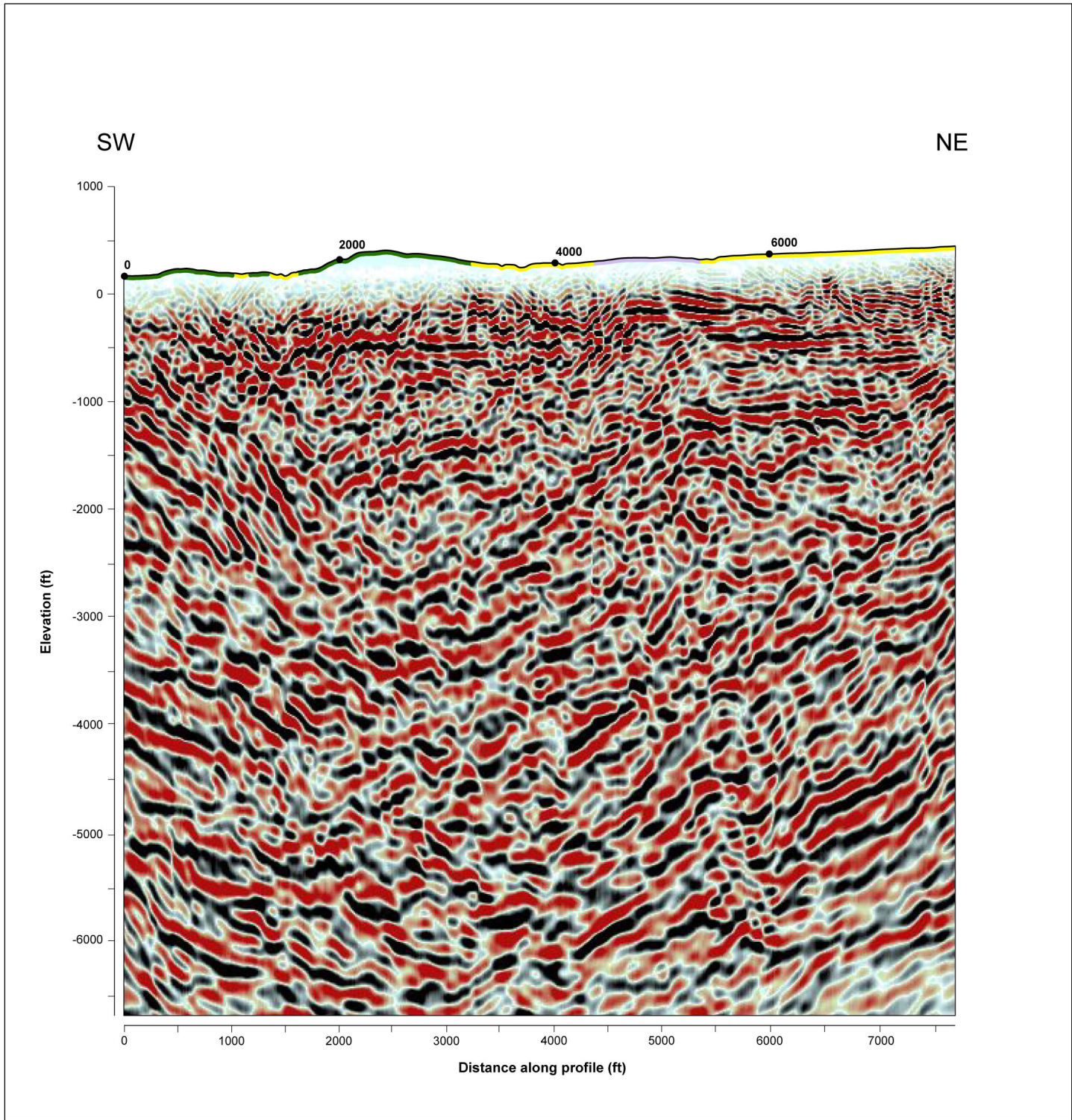
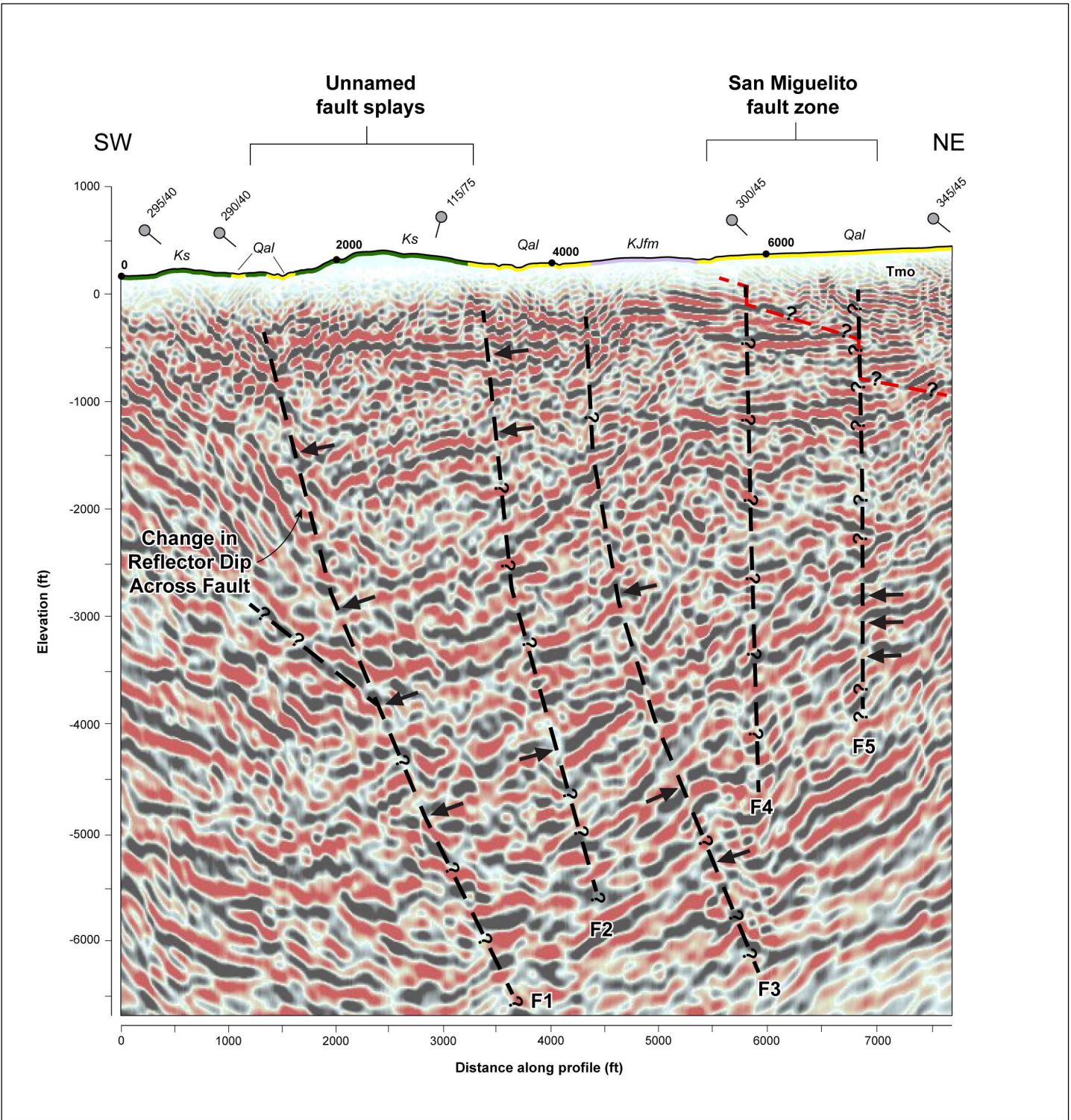


Figure 5-28

(a) Uninterpreted

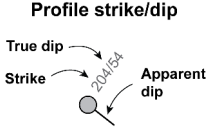


(b) Interpreted



EXPLANATION

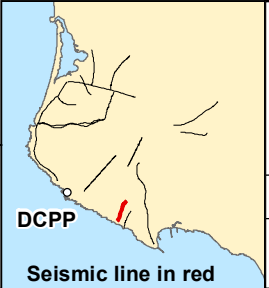
- Fault: solid where well located, dashed where approximately located
- Top of Mesozoic Basement
- ← Arrows marking offset or truncated reflectors



2000 • Horizontal distance along seismic line, 2,000 ft increment

Notes:

- Seismic line 114_AWD_FBM_psdm_1_mix_depth_tvfac.
- Geology along topographic profile from Plate 1, see Plate 1 and Figure 8-1 for explanation of map units.
- Horizontal offsets are shown along a topographic profile above the seismic line.



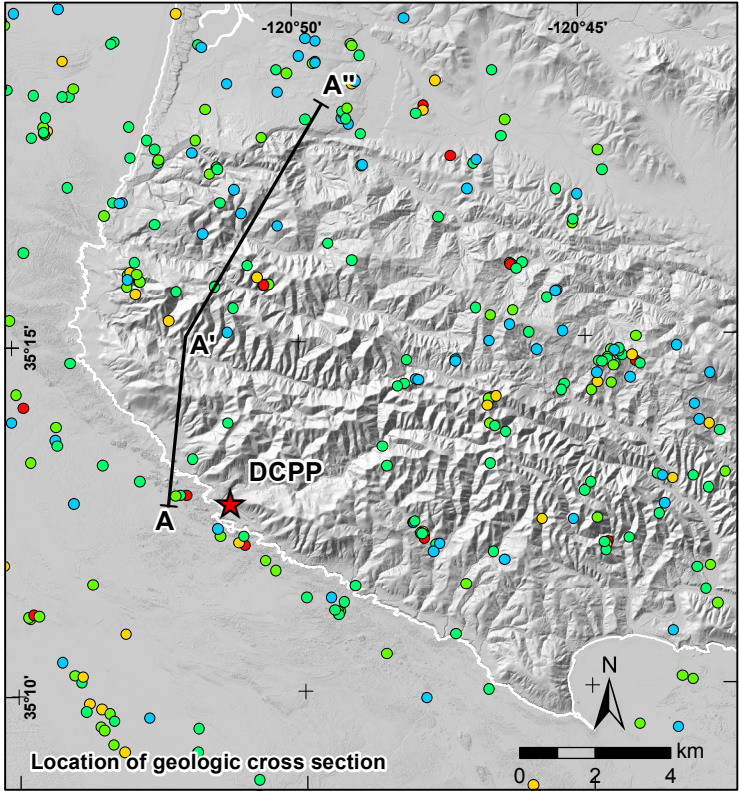
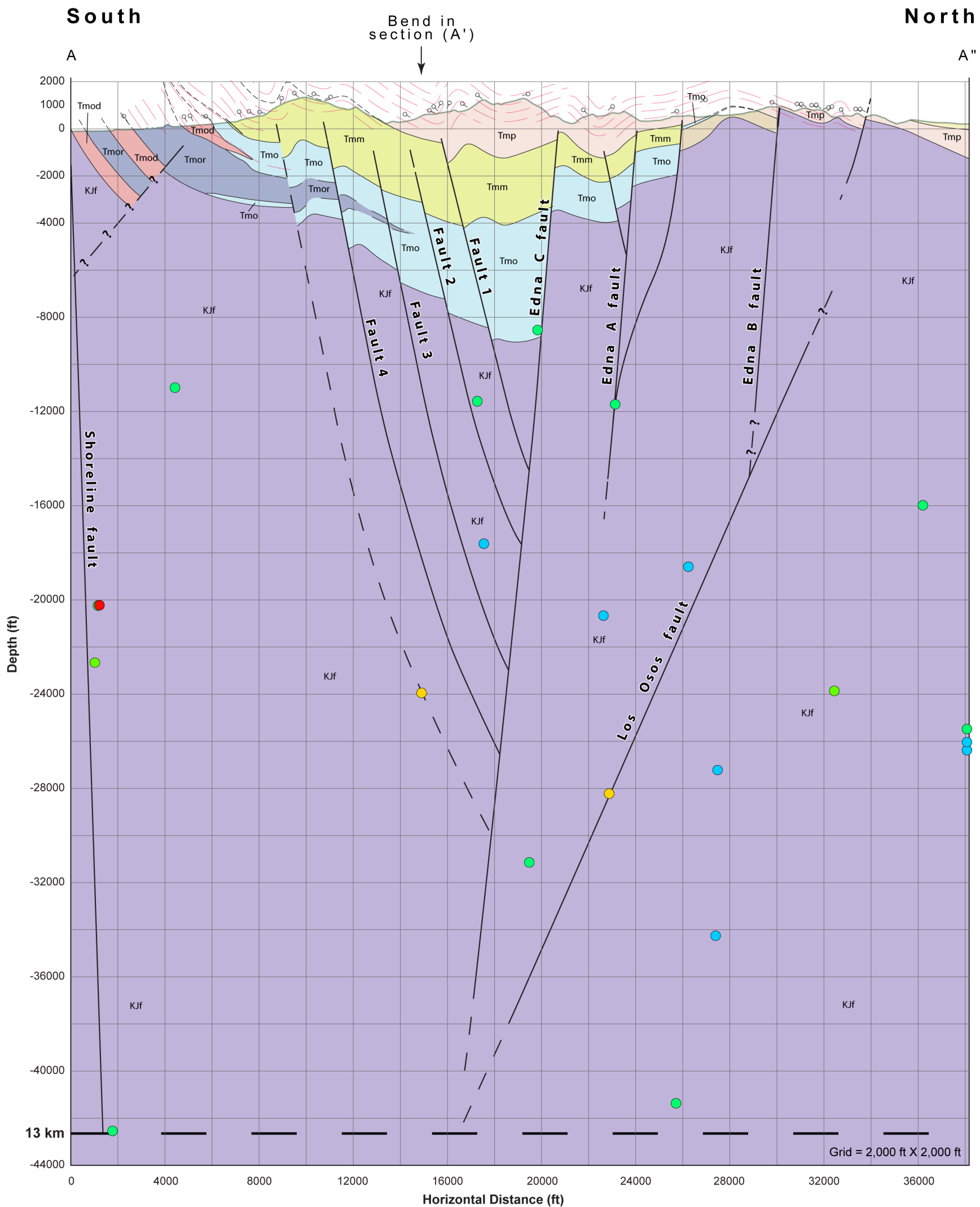
AWD Line 114:
(a) Uninterpreted and (b) Interpreted

2011 ONSIP

Pacific Gas and Electric Company

Figure 5-29

File path: S:\1005\034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-30.mxd; Date: 06/10/2014; User: Alex Remar, LCI; Rev:1



EXPLANATION

Geologic cross section

Seismicity [M]

- 0.00 - 0.49
- 0.50 - 0.99
- 1.00 - 1.49
- 1.50 - 1.99
- 2.00 - 2.49
- 2.50 - 3.50

Note: See Figure 5-1 and Plate 1 for geologic mapping along cross section.

Source: Seismicity data from Hardebeck (2014).

Geologic Units

- Tmpm Pismo Formation, Miguelito Member
- Tmm Monterey Formation
- Tmo Obispo Formation
- Tmod Obispo diabase
- Tmor Obispo Formation, resistant unit
- KJf Franciscan Complex

Geologic Symbols

- Fault: dashed where inferred, queried where uncertain
- Form line
- Apparent dip

Geologic Cross Section A-A''

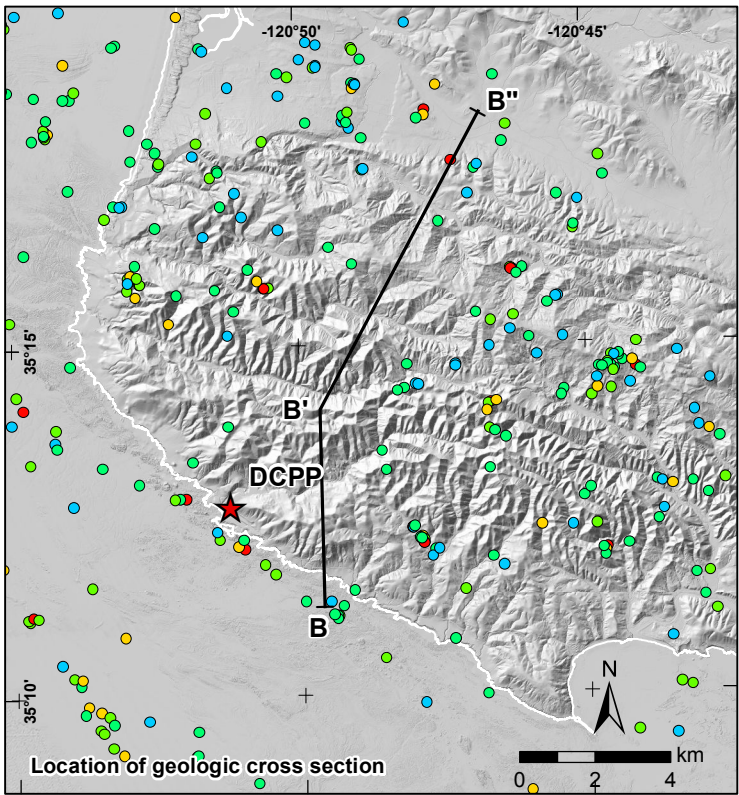
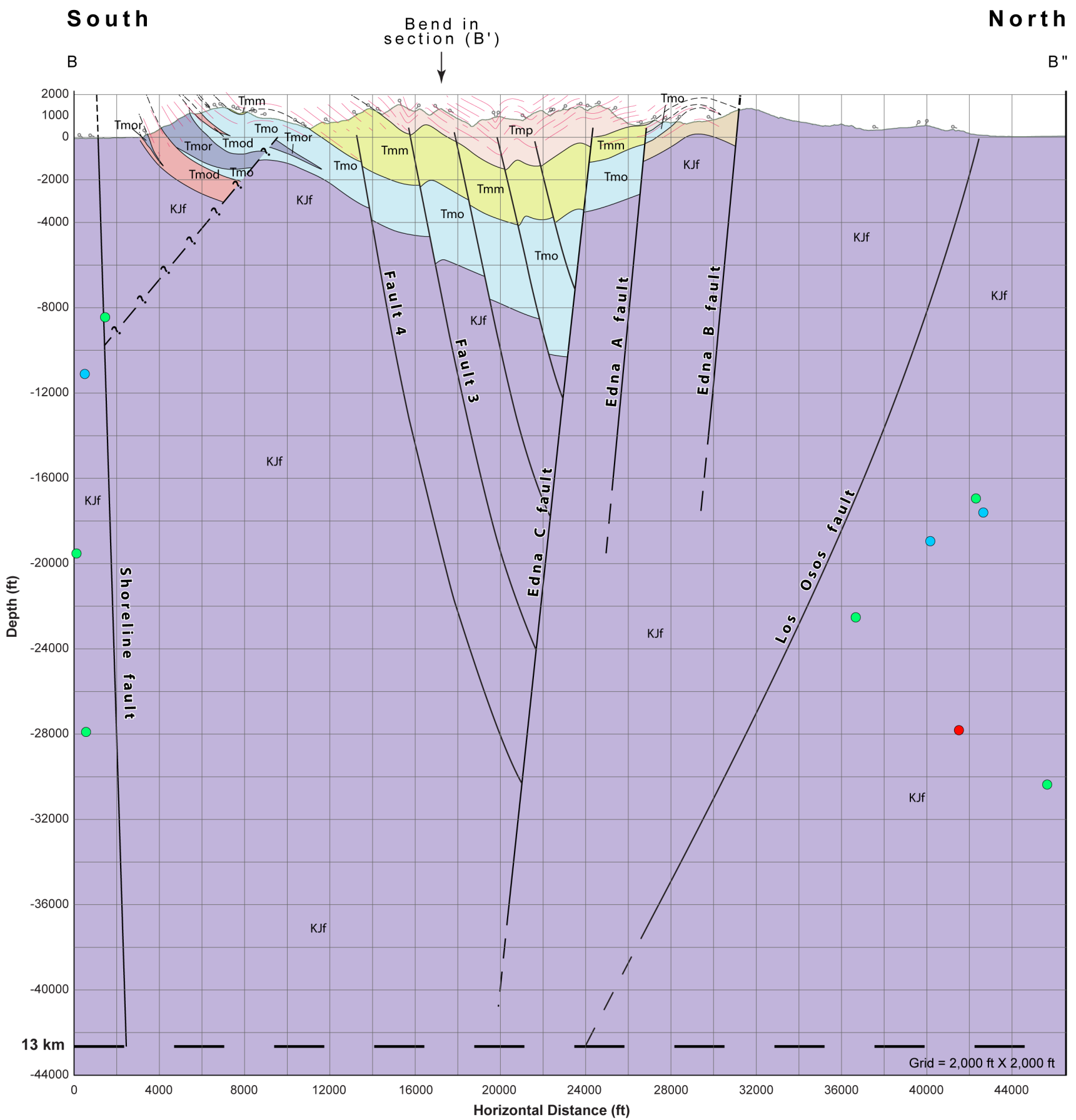
2011 ONSIP



Pacific Gas and Electric Company

Figure 5-30

File path: S:\1005\034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-31.mxd; Date: 06/24/2014; User: Alex Remar, LCI; Rev.1



EXPLANATION

Geologic cross section

Seismicity [M]

- 0.00 - 0.49
- 0.50 - 0.99
- 1.00 - 1.49
- 1.50 - 1.99
- 2.00 - 2.49
- 2.50 - 3.50

Note: See Figure 5-1 and Plate 1 for geologic mapping along cross section.

Source: Seismicity data from Hardebeck (2014).

Geologic Units

- Tmpm: Pismo Formation, Miguelito Member
- Tmm: Monterey Formation
- Tmo: Obispo Formation
- Tmod: Obispo diabase
- Tmor: Obispo Formation, resistant unit
- KJf: Franciscan Complex

Geologic Symbols

- Fault: dashed where inferred, queried where uncertain
- Form line
- Apparent dip

Geologic Cross Section B-B''

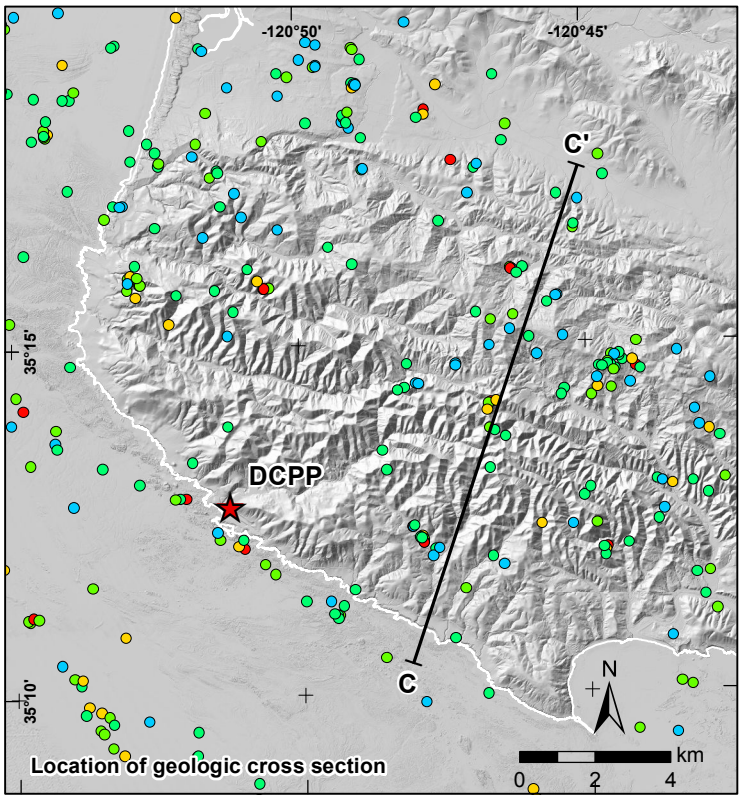
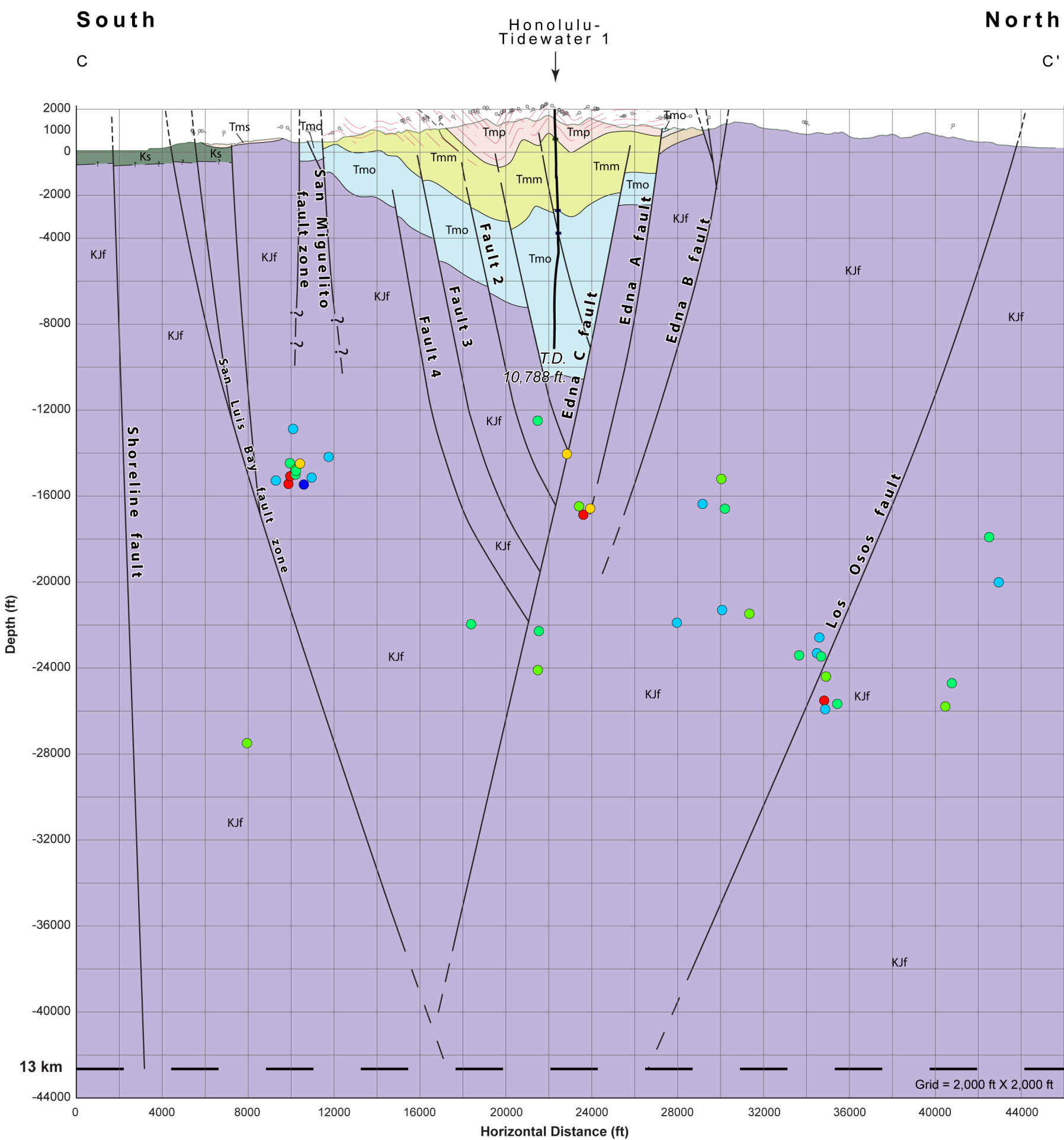
2011 ONSIP



Pacific Gas and Electric Company

Figure **5-31**

File path: S:\1005\034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-32.mxd; Date: 06/10/2014; User: Alex Remar, LCI; Rev.1



EXPLANATION

Geologic cross section

Seismicity [M]

- 0.00 - 0.49
- 0.50 - 0.99
- 1.00 - 1.49
- 1.50 - 1.99
- 2.00 - 2.49
- 2.50 - 3.50

Notes: See Figure 5-1 and Plate 1 for geologic mapping along cross section.

Source: Seismicity data from Hardebeck (2014).

Geologic Units

- Tmpm: Pismo Formation, Miguelito Member
- Tmm: Monterey Formation
- Tmo: Obispo Formation
- Tmod: Obispo diabase
- Tmor: Obispo Formation, resistant unit
- KJf: Franciscan Complex

Geologic Symbols

- 2-: Fault: dashed where inferred, queried where uncertain
- - - - -: Form line
- Q: Apparent dip

Geologic Cross Section C-C'

2011 ONSIP

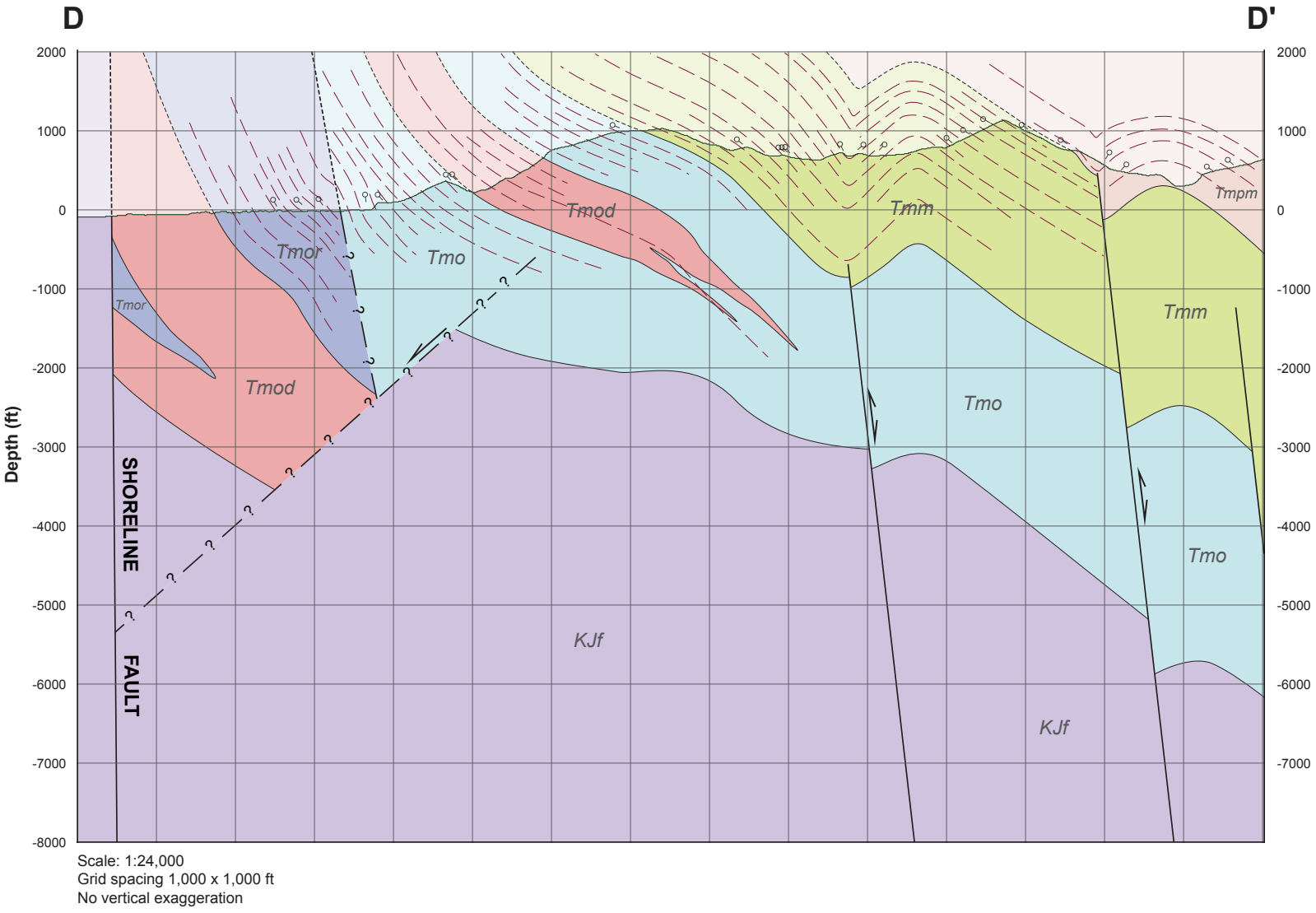


Pacific Gas and Electric Company

Figure 5-32

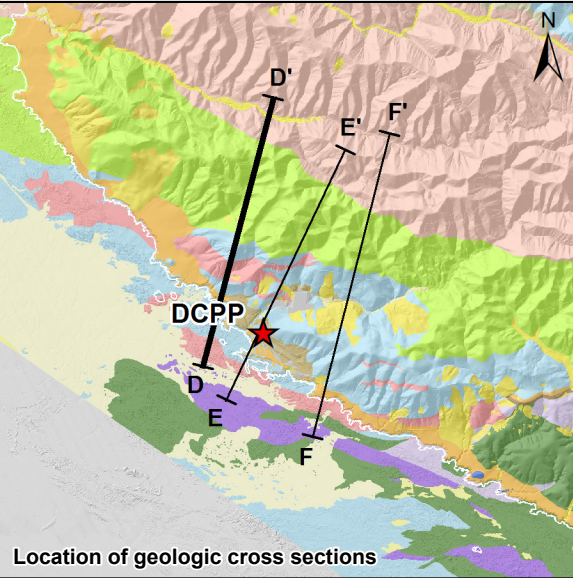
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South North



EXPLANATION

- 2. Fault: solid where well located, dashed where approximately located, queried where uncertain
- - - - - Form line
- Apparent dip
- Tmpm Pismo Formation, Miguelito Member
- Tmm Monterey Formation
- Tmo Obispo Formation
- Tmod Obispo diabase
- Tmor Obispo Formation, resistant tuff unit
- KJf Franciscan Complex



Geologic Cross Section D-D'

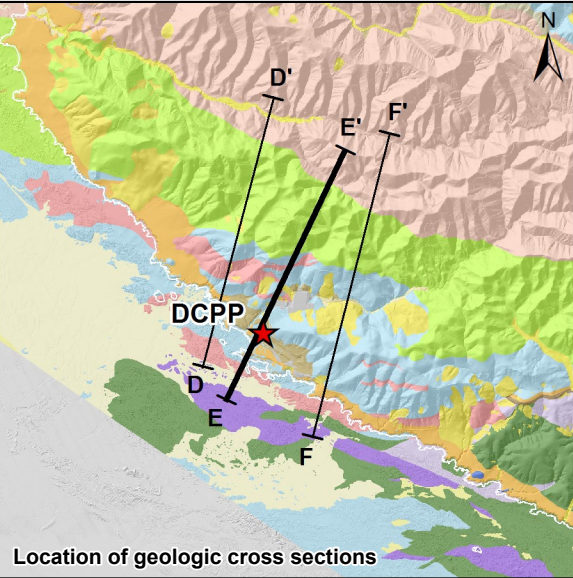
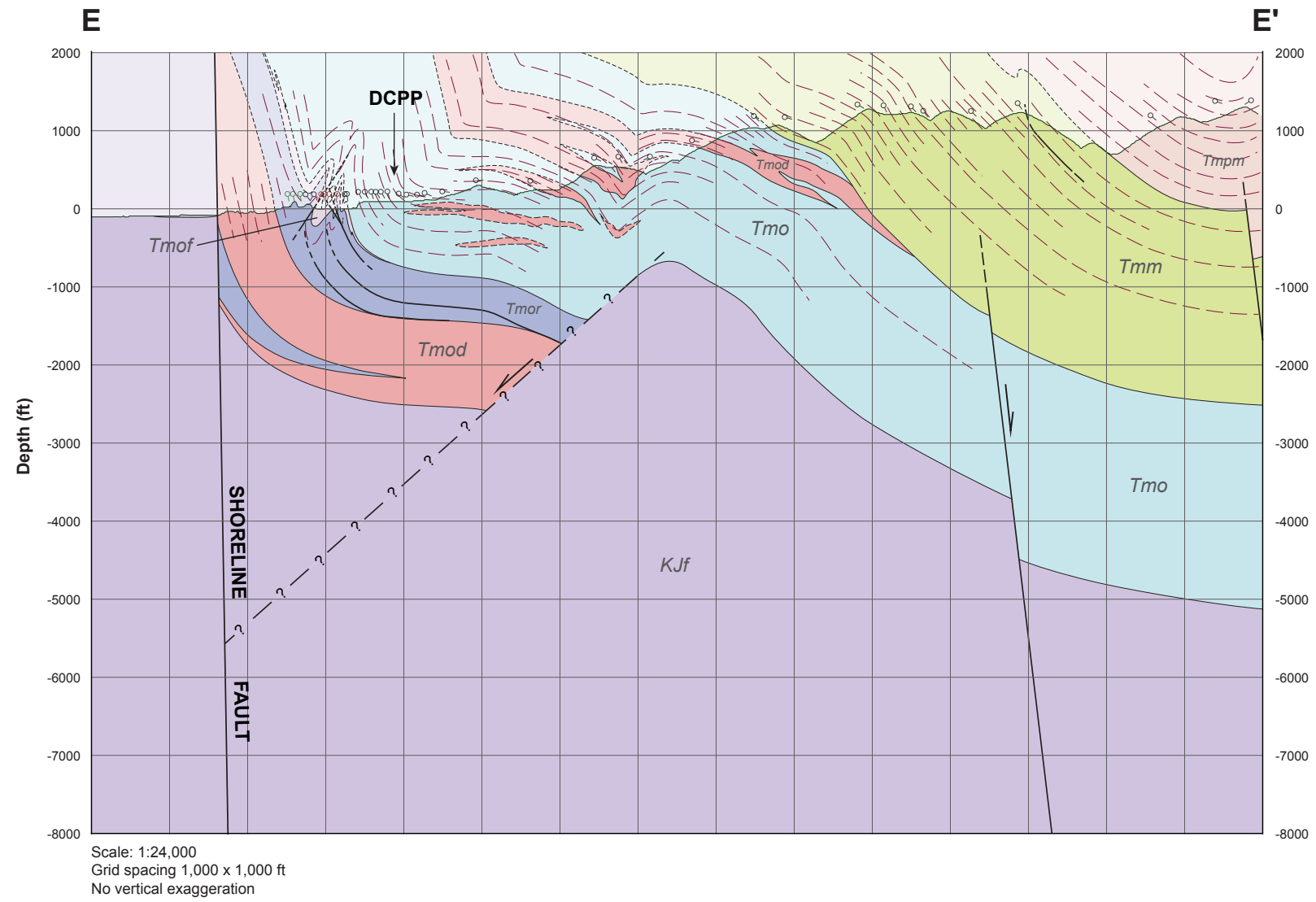
2011 ONSIP

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Figure 5-33

File path: S:\1005\034\QA_GIS\7_1_6_Report_Figures\Draft Report Figures\Figure_5-34_24kCrossSection_E-E.ai; Date: 06/26/2014; User: Matt Huebner, LCI; Rev: 1

South North



EXPLANATION

- | | | | | | |
|-----------|--|------|-----------------------------------|------|---------------------------------------|
| -----2. | Fault: solid where well located, dashed where approximately located, queried where uncertain | Tmpm | Pismo Formation, Miguelito Member | Tmof | Obispo Tuffaceous Siltstone |
| - - - - - | Form line | Tmm | Monterey Formation | Tmod | Obispo diabase |
| ∠ | Apparent dip | Tmo | Obispo Formation | Tmor | Obispo Formation, resistant tuff unit |
| | | | | KJf | Franciscan Complex |

Geologic Cross Section E-E'

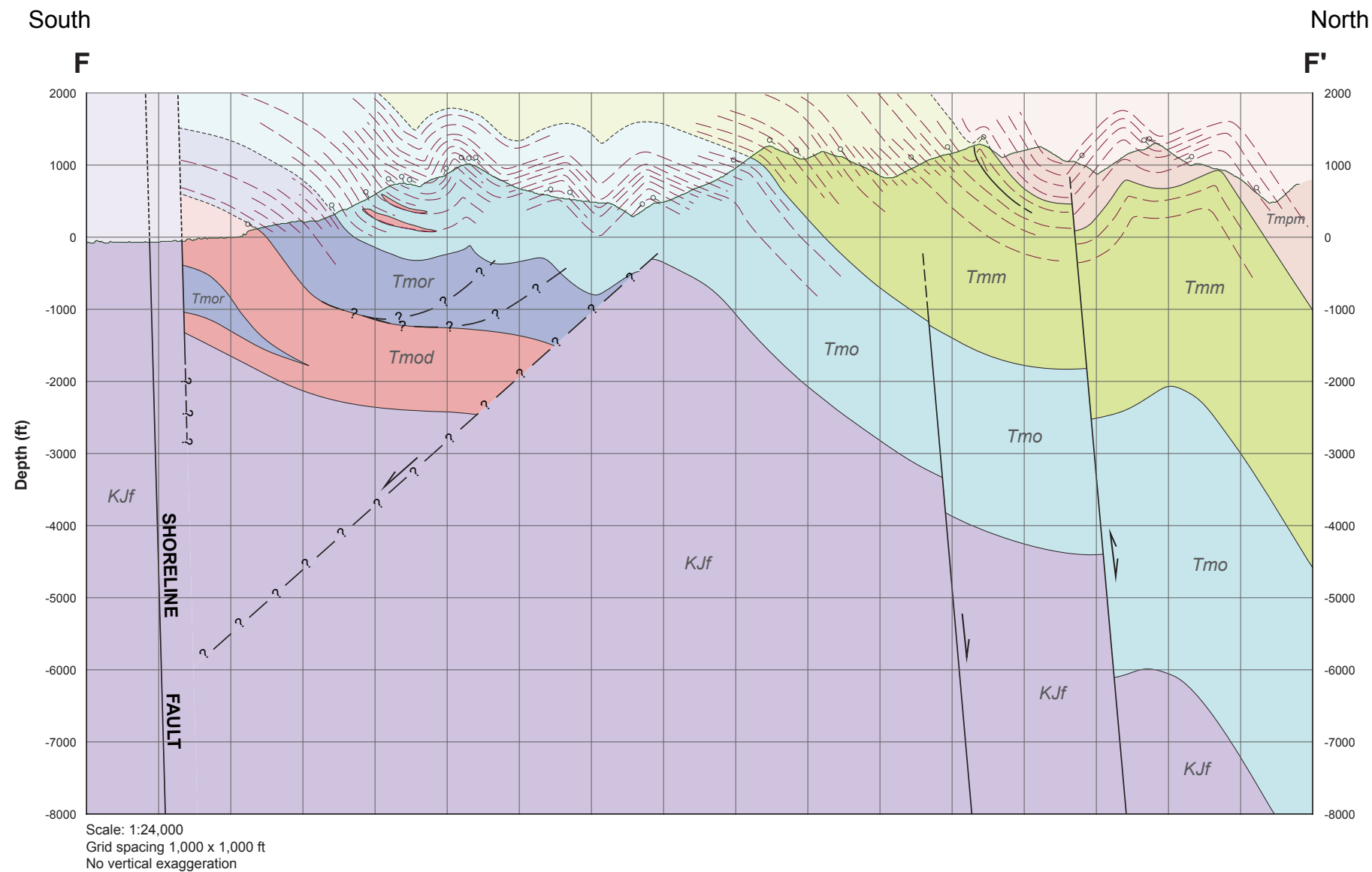
2011 ONSIP



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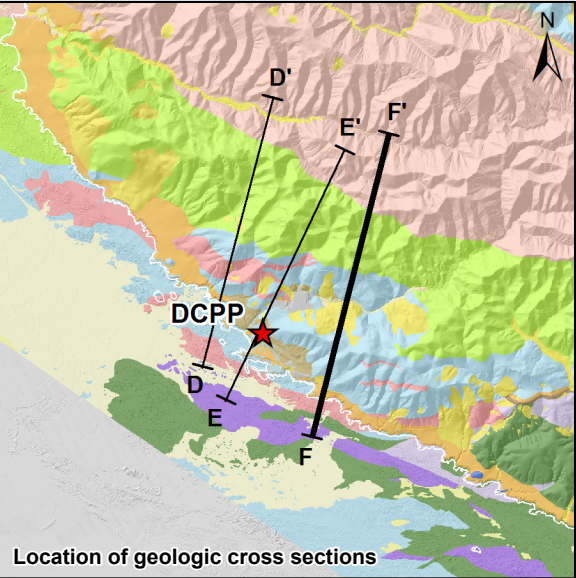
Figure 5-34

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EXPLANATION

	Fault: solid where well located, dashed where approximately located, queried where uncertain		Pismo Formation, Miguelito Member		Obispo diabase
	Form line		Monterey Formation		Obispo Formation, resistant tuff unit
	Apparent dip		Obispo Formation		Franciscan Complex



Geologic Cross Section F-F'

2011 ONSIP

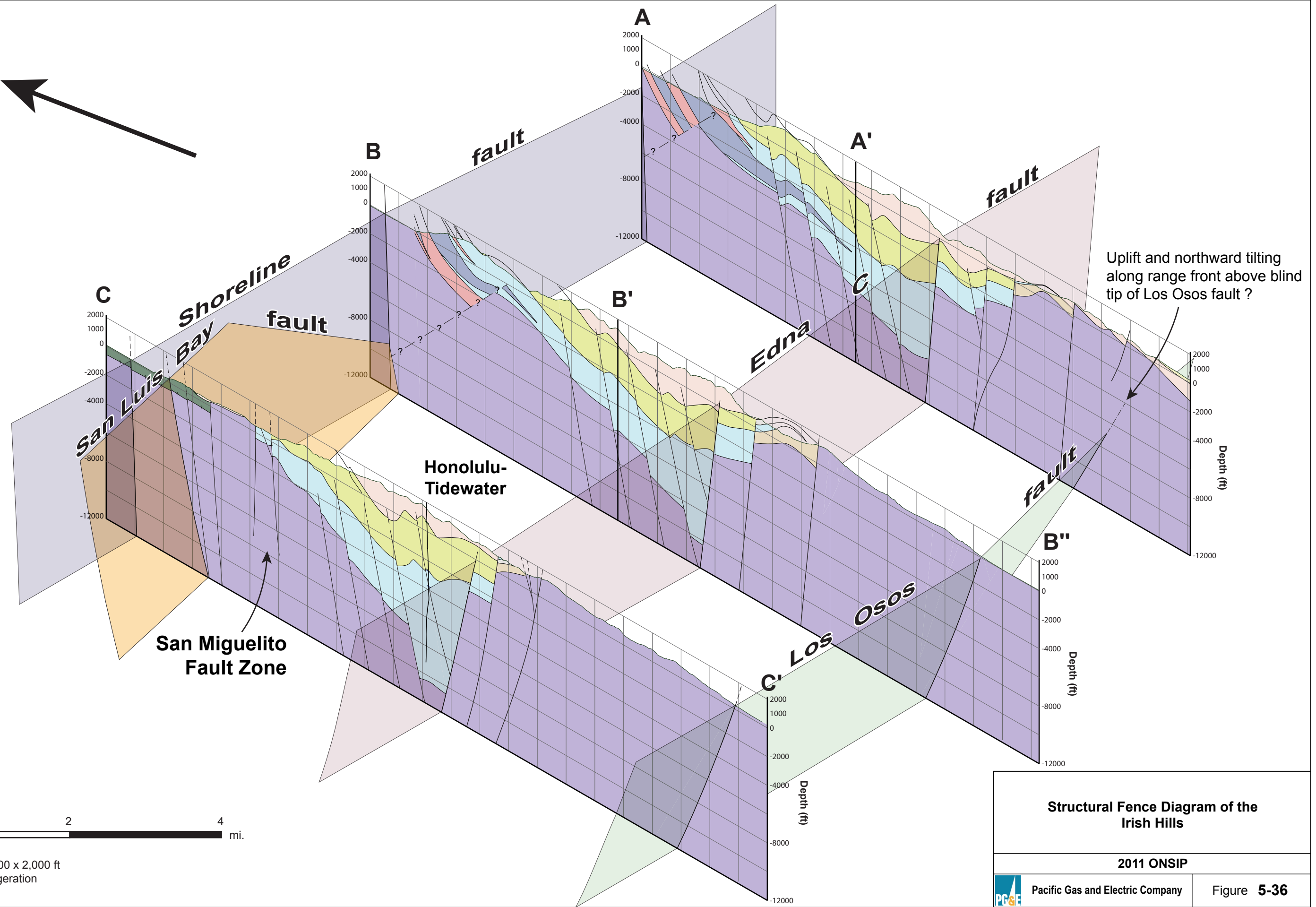
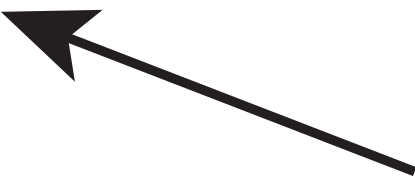


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Figure **5-35**

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S



0 1 2 4 mi.

Grid spacing 2,000 x 2,000 ft
No vertical exaggeration

Structural Fence Diagram of the
Irish Hills

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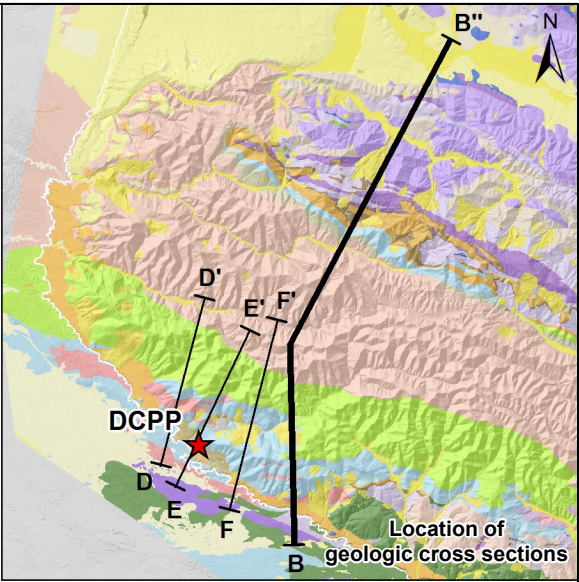
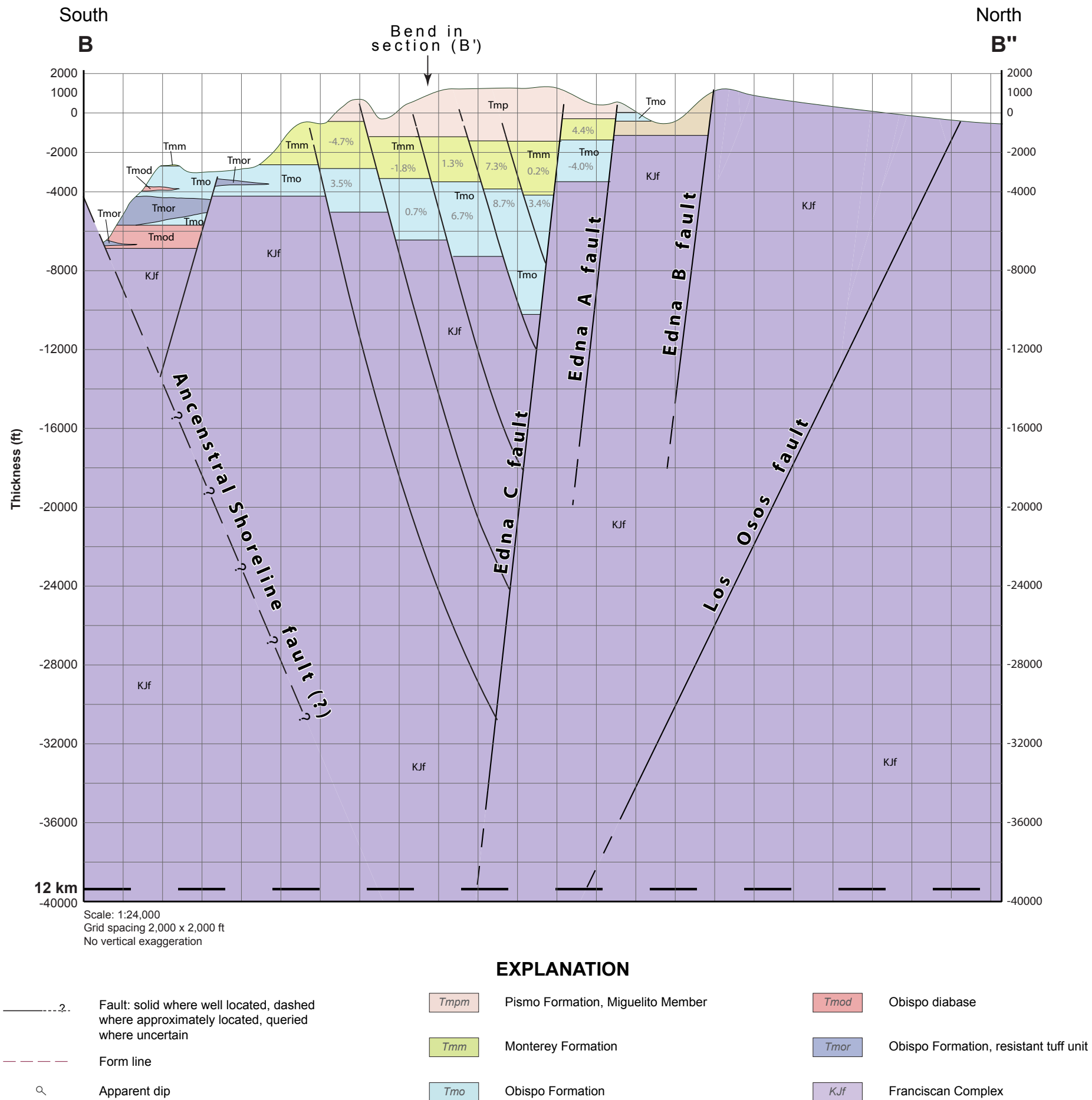


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Figure 5-36

Ch7.GEO.DC.PP.TR.14.03 R0

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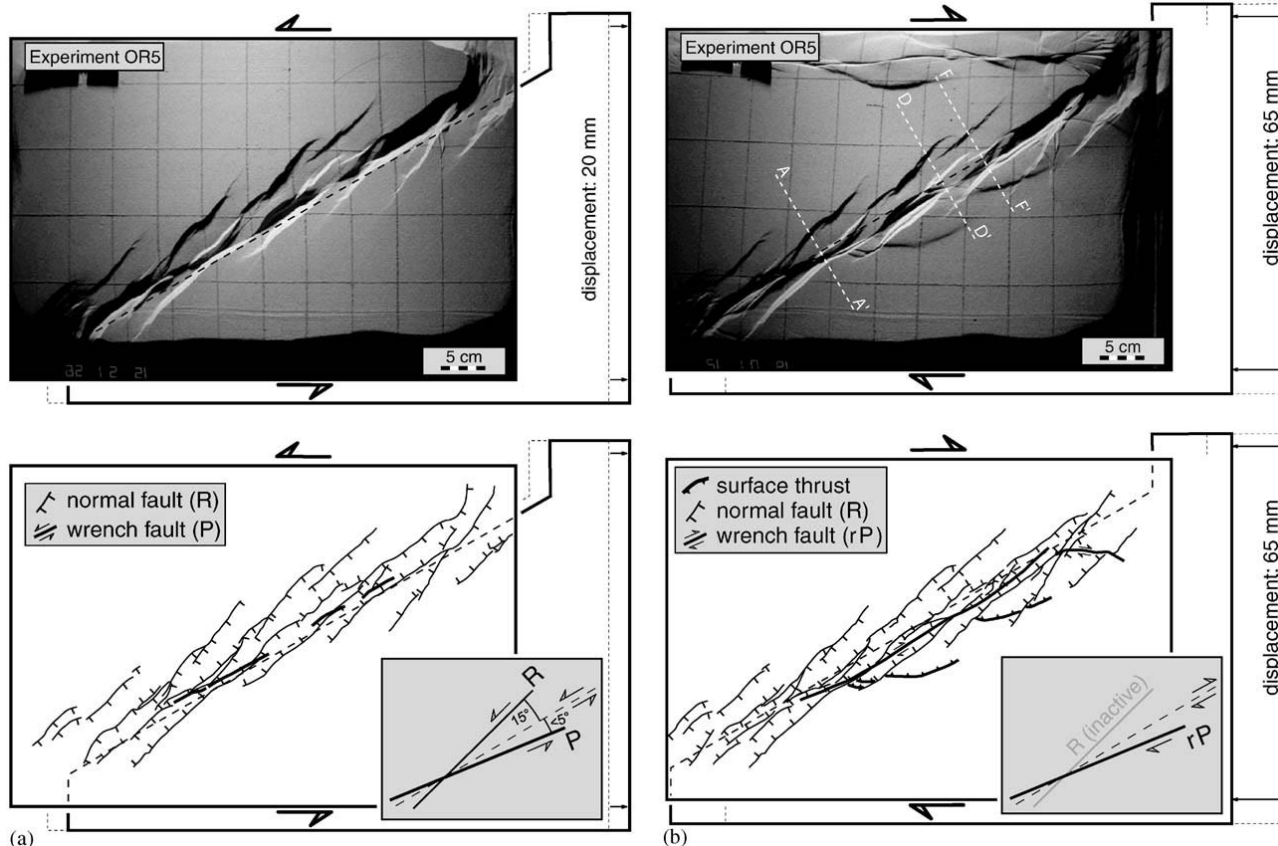
Geologic Cross Section B-B'' Restored

2011 ONSIP

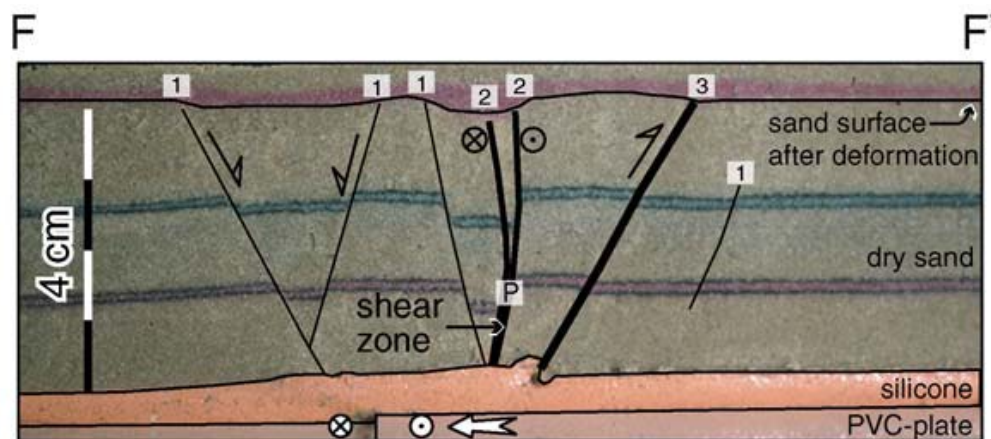


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Figure **5-37**



(a) Analogue sandbox model of an extensional basin formed under left-lateral transtensional boundary conditions (top left), and subsequently deformed under right-lateral transpressional conditions (top right). Note the right-stepping en echelon pattern of the normal faults formed during sinistral transpression, and development of lobate thrust faults along the margins of the extensional basin system during the later phase of transpression.



(b) Cross section through the final sandbox model (F-F'; location in upper right figure) showing a late-stage transpressional reverse fault playing upward from the principal displacement zone at the base of the model.

Source: Figures from Ustaszewski et al., (2005).

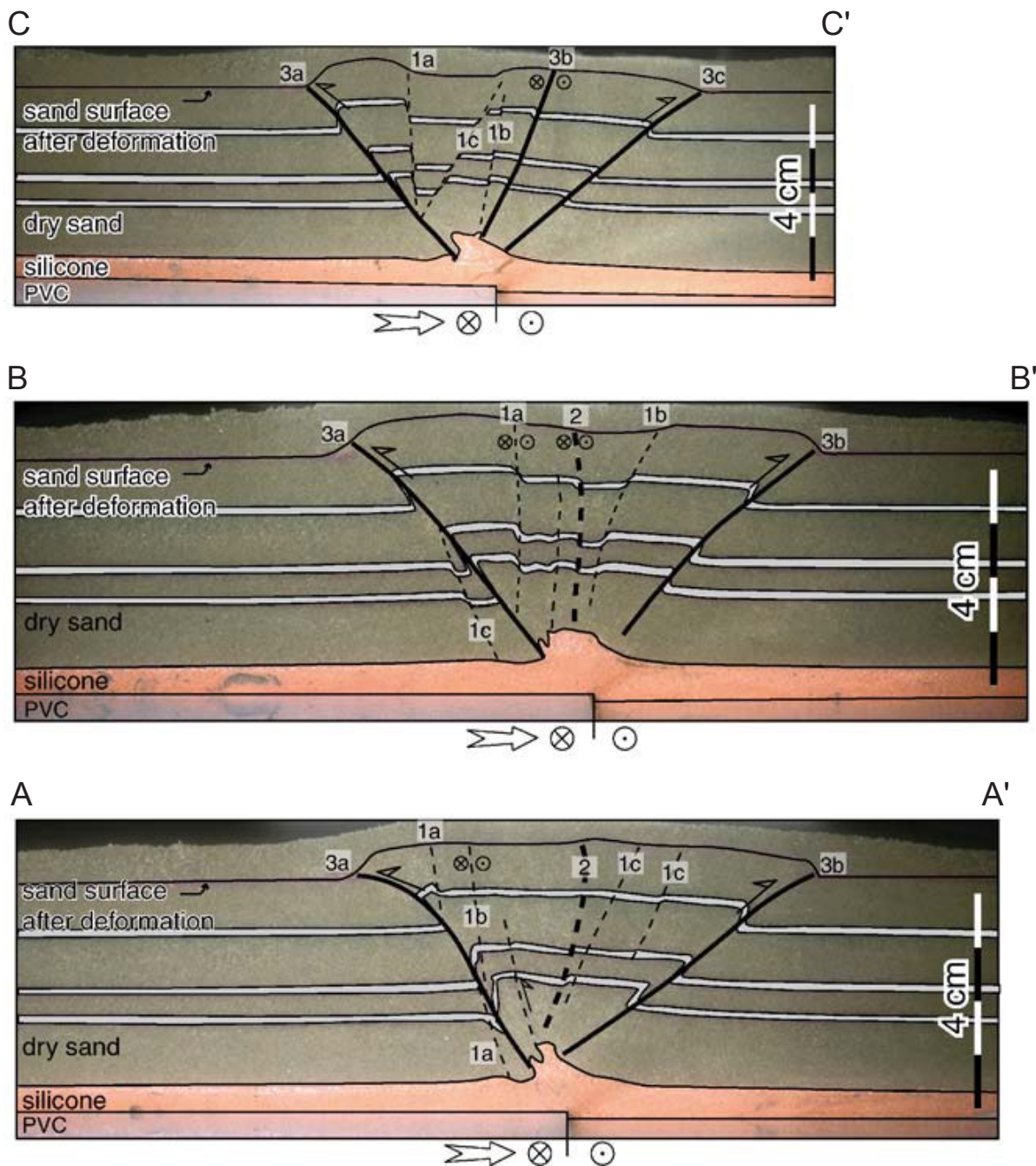
Sandbox Model of a Transtensional Basin Deformed by Transpression

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Figure 5-38



Cross section through an analogue sandbox model of a transensional basin subsequently deformed under transpressional boundary conditions. Note that late-stage thrust and reverse faults splay upward from the principal displacement zone at the base of the model that formed the root zone for the normal faults. Also note that the normal faults are locally cut and offset by the late-stage reverse faults.

Source: Figures from Ustaszewski et al., (2005).

Cross Sections Through Transpressionally Deformed Extensional Basin

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Figure 5-39