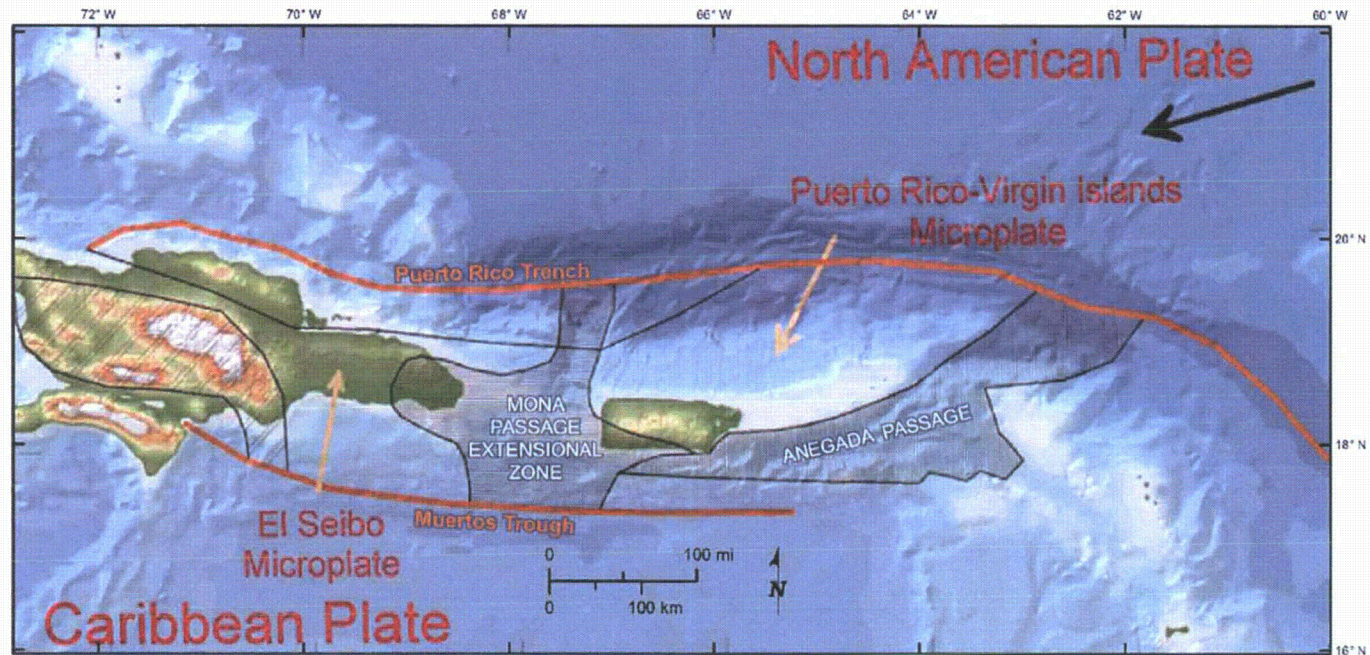


Turkey Point Units 6 & 7  
COL Application  
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Figure 2.5.1-322 Regional Tectonic Map of Hispaniola and Puerto Rico

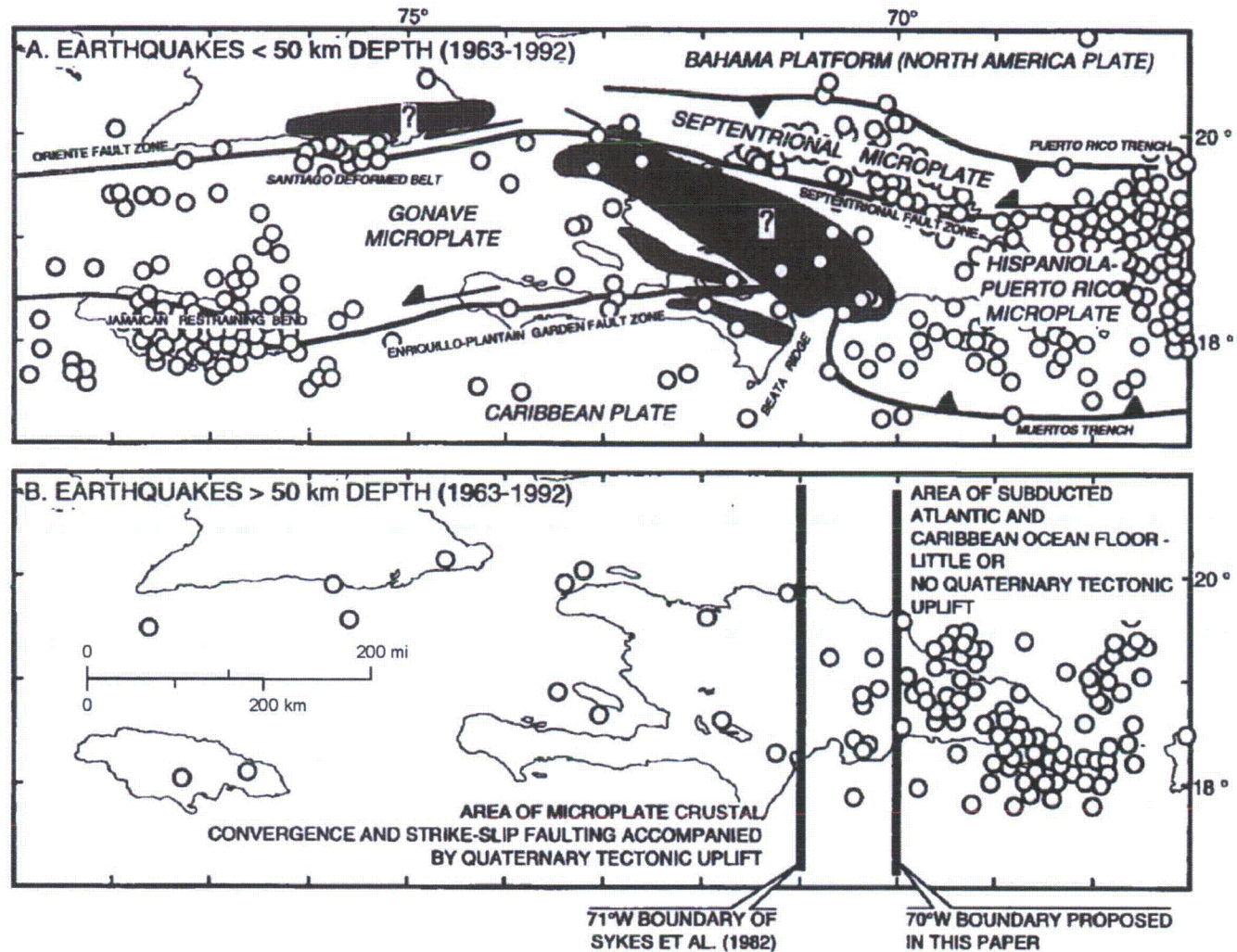


Note: Stippled regions are extensional zones. Black arrow in upper right shows relative North America-Caribbean Plate motion.

Source: Reference 577

Turkey Point Units 6 & 7  
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Figure 2.5.1-323 Earthquakes by Depth and Major Plate Boundary Structures in the Northeastern Area of the North America-Caribbean Plate Boundary

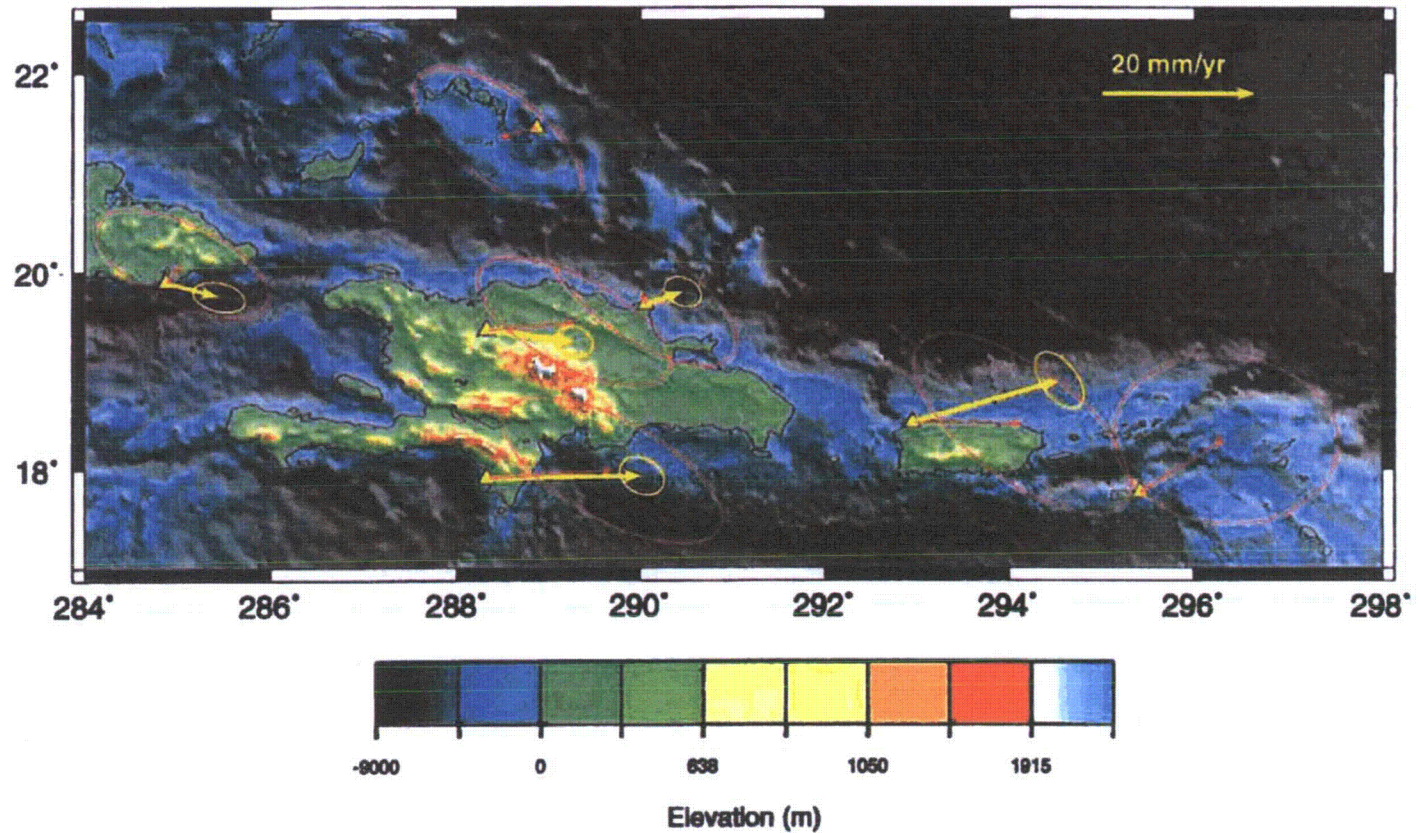


Source: Reference 639



Turkey Point Units 6 & 7  
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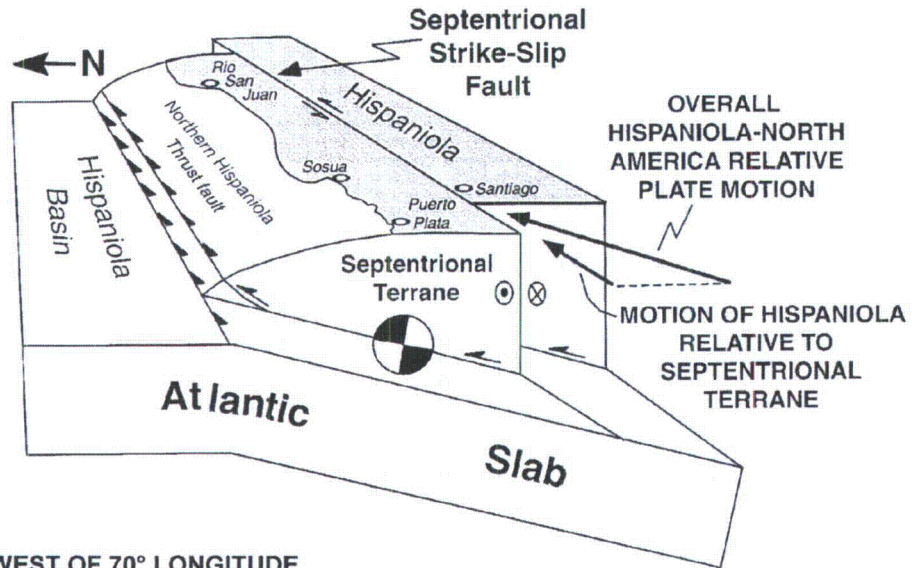
Figure 2.5.1-324 GPS Site Velocities with Respect to North America



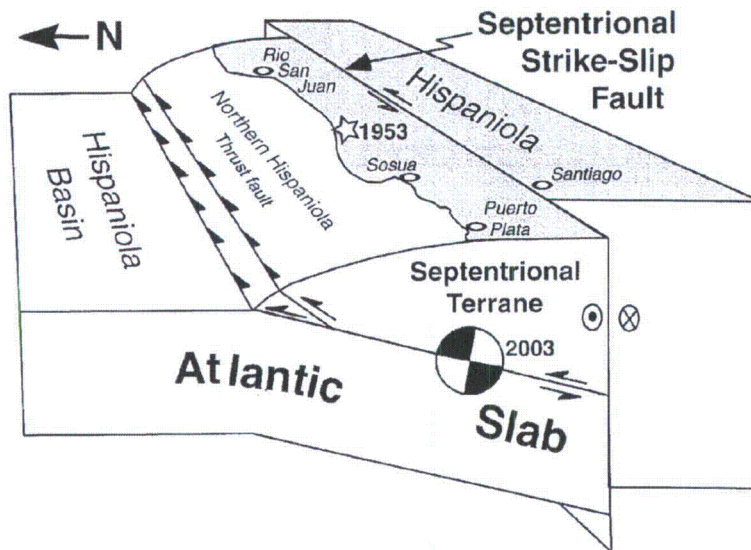
Source: Reference 780

**Figure 2.5.1-325 Kinematic Illustrations Showing Interactions of Septentrional and Northern Hispaniola Faults at Depth**

**(A) EAST OF 70° LONGITUDE**



**(B) WEST OF 70° LONGITUDE**



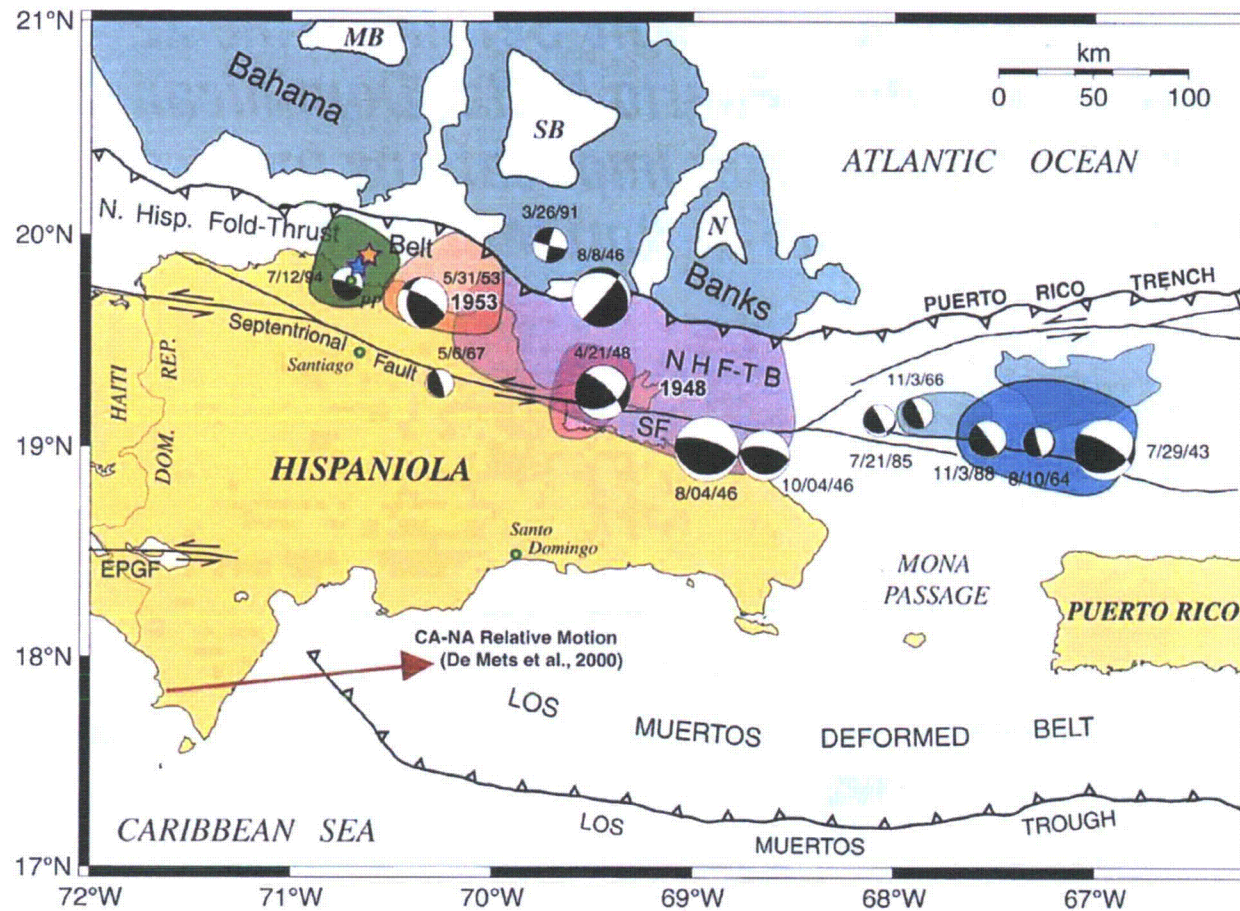
Note: Northern Hispaniola Thrust fault is equivalent to North Hispaniola Subduction Zone.

Source: [Reference 638](#)



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Figure 2.5.1-326 Focal Mechanisms for Major Earthquakes in the North Hispaniola Subduction Zone

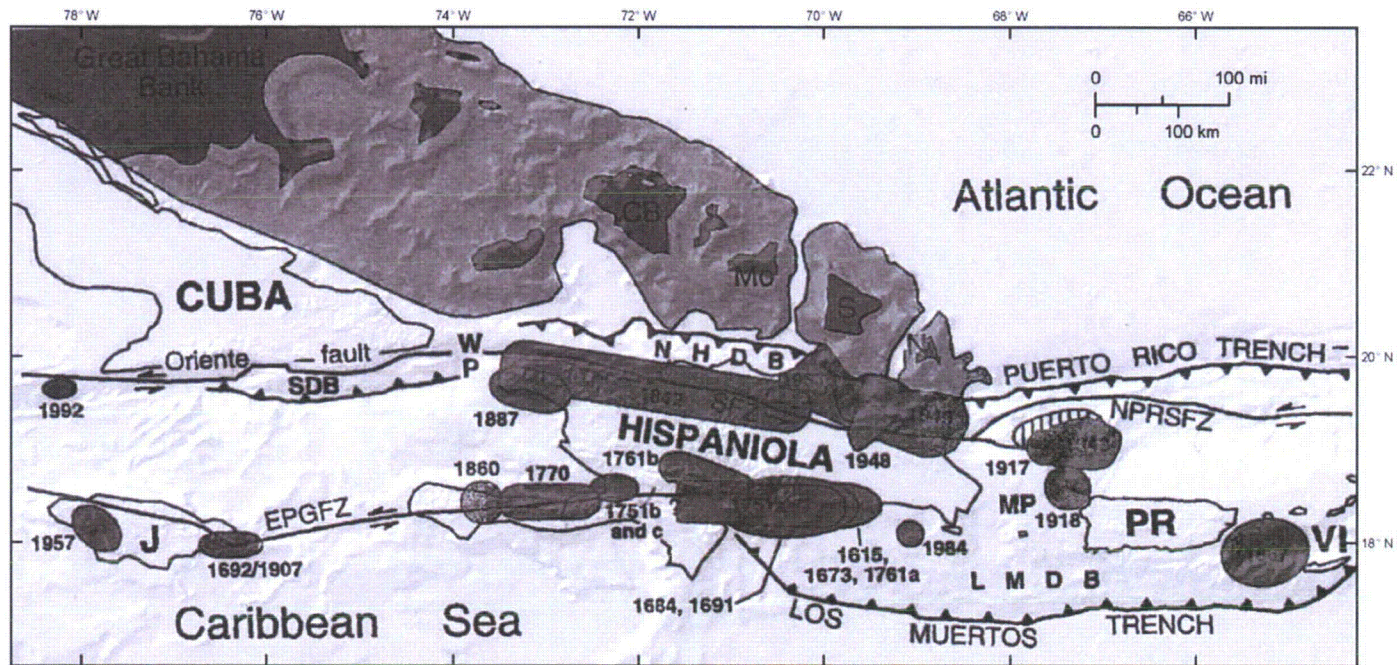


Notes:  
EPGF = Enriquillo-Plantain Garden fault zone  
NHF-TB = Northern Hispaniola fold-thrust belt  
SF = Septentrional fault

Source: [Reference 638](#)

Turkey Point Units 6 & 7  
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Figure 2.5.1-327 Damage Zones for Major Earthquakes in the Northeastern Caribbean, 1615-1992

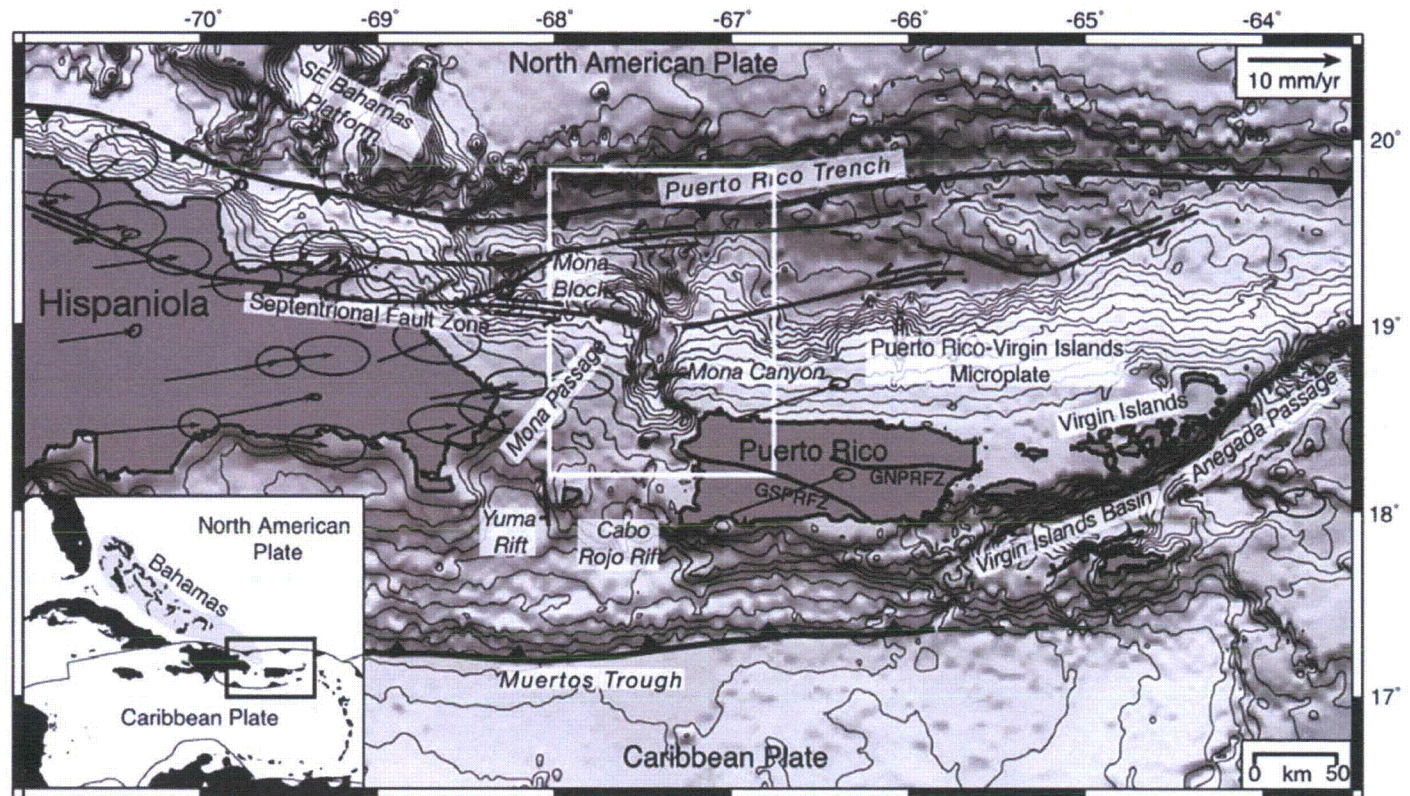


Source: Reference 591



Turkey Point Units 6 & 7  
COL Application  
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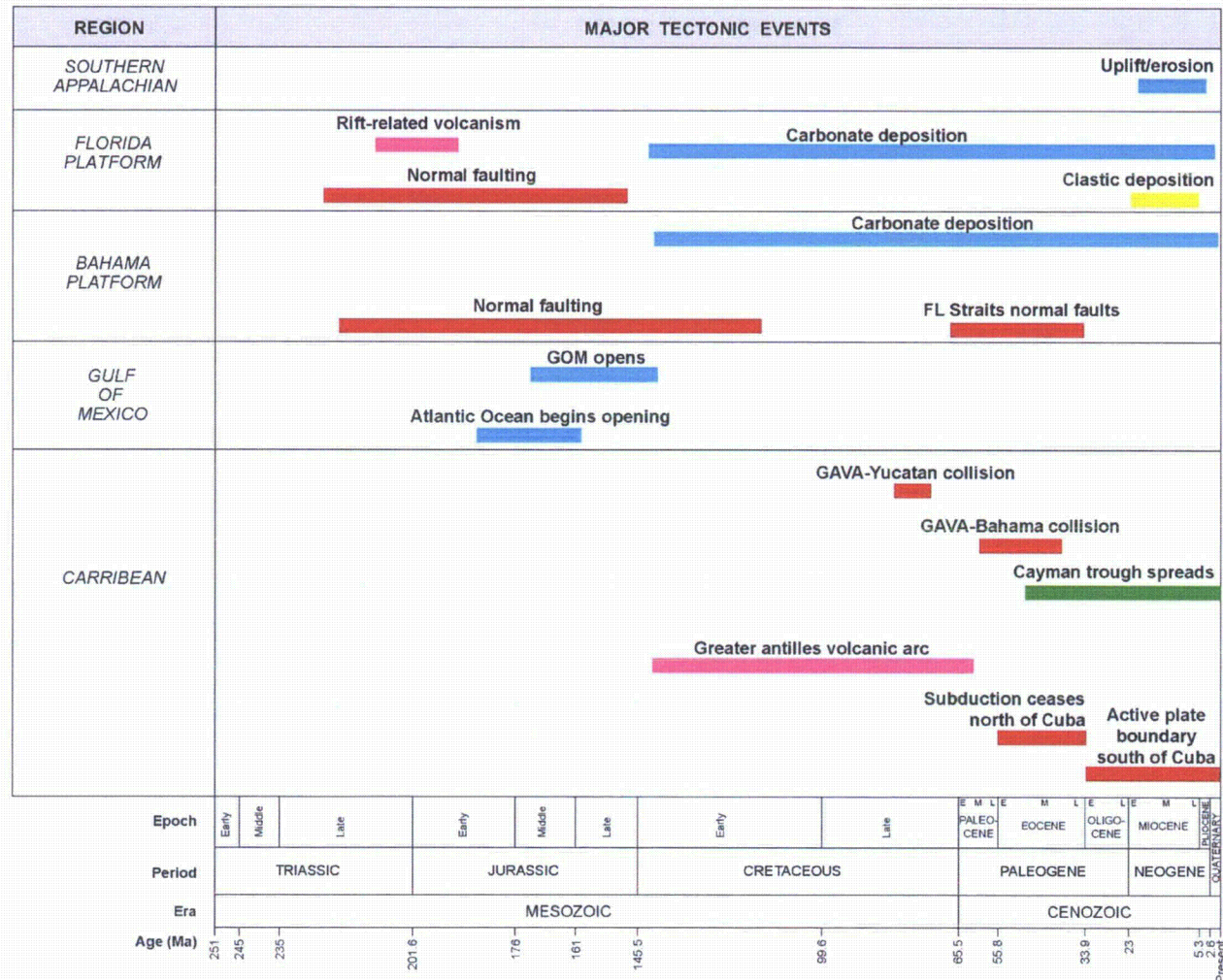
Figure 2.5.1-328 Bathymetry, Structural Features, and GPS Vectors relative to North America, Northeastern Caribbean



Source: [Reference 585](#)

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COL Application  
Part 2 — FSAR

Figure 2.5.1-329 Timeline of Regional Tectonic and Geologic Events

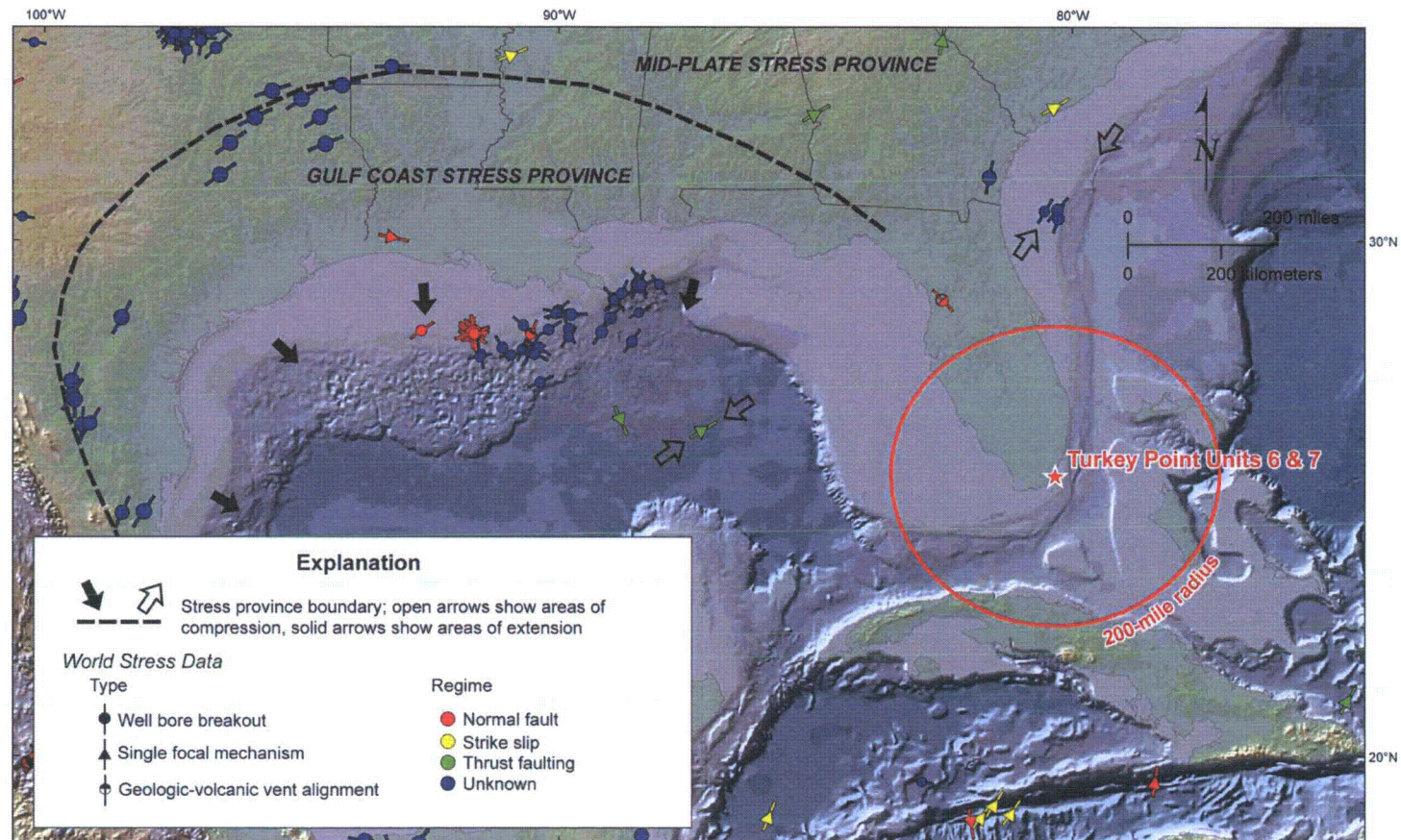


Sources: References 307, 368, and 639



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

Figure 2.5.1-330 North America Stress Provinces



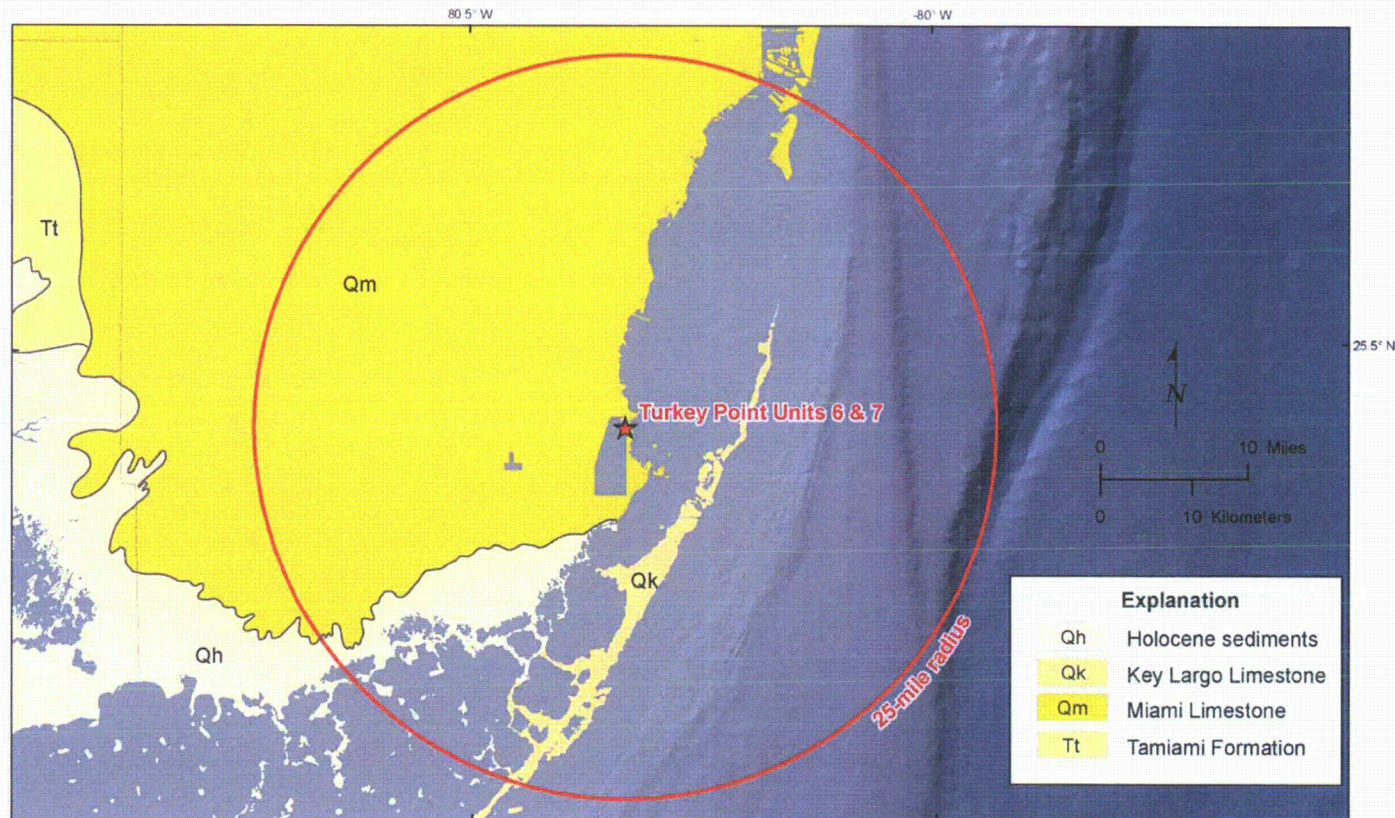
Base Source: Reference 822

Source of world stress data: Reference 731



Turkey Point Units 6 & 7  
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Figure 2.5.1-331 Site Vicinity Geologic Map



Base sources: Reference 435  
Source of geologic information: Reference 827



Turkey Point Units 6 & 7  
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Part 2 — FSAR

Figure 2.5.1-332 Site Stratigraphy

ERATHEM	SYSTEM	SERIES	HYDRO- GEOLOGIC UNIT		STRATIGRAPHIC UNIT	LITHOLOGY	APPROXIMATE TOP ELEVATION (ft NAVD 88)	APPROXIMATE THICKNESS (ft)
CENOZOIC	QUATERNARY	HOLOCENE			organic muck	organic soil and silt	0	3
		PLEISTOCENE	Surficial aquifer system	Biscayne aquifer	Miami Limestone	sandy, oolitic limestone	-3	25
					Key Largo Limestone	well indurated, vuggy, coralline limestone	-28	22
					Fort Thompson Formation	poor/well indurated fossiliferous limestone	-50	65
	TERTIARY	PLIOCENE			Semi-confining unit	Tamiami Formation	sand and silt with calcarenitic limestone	-115
		MIOCENE	Intermediate confining unit	Hawthorn Group	Peace River Formation	silty calcareous sand and silt	-220	235
					Arcadia Formation	calcareous wackestone with indurated limestones, sandstone, and sand	-455	>160
					drilling ended at -616.5 ft			
		formation contact based on natural gamma signature						

Note: see Figures 2.5.1-338, 2.5.1-339, 2.5.1-340, and 2.5.1-341 for site geologic cross sections.

Turkey Point Units 6 & 7  
COL Application  
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**Figure 2.5.1-333 Vegetated Depressions Identified Within Site from Photographs Taken Before Construction of the Cooling Canal System**

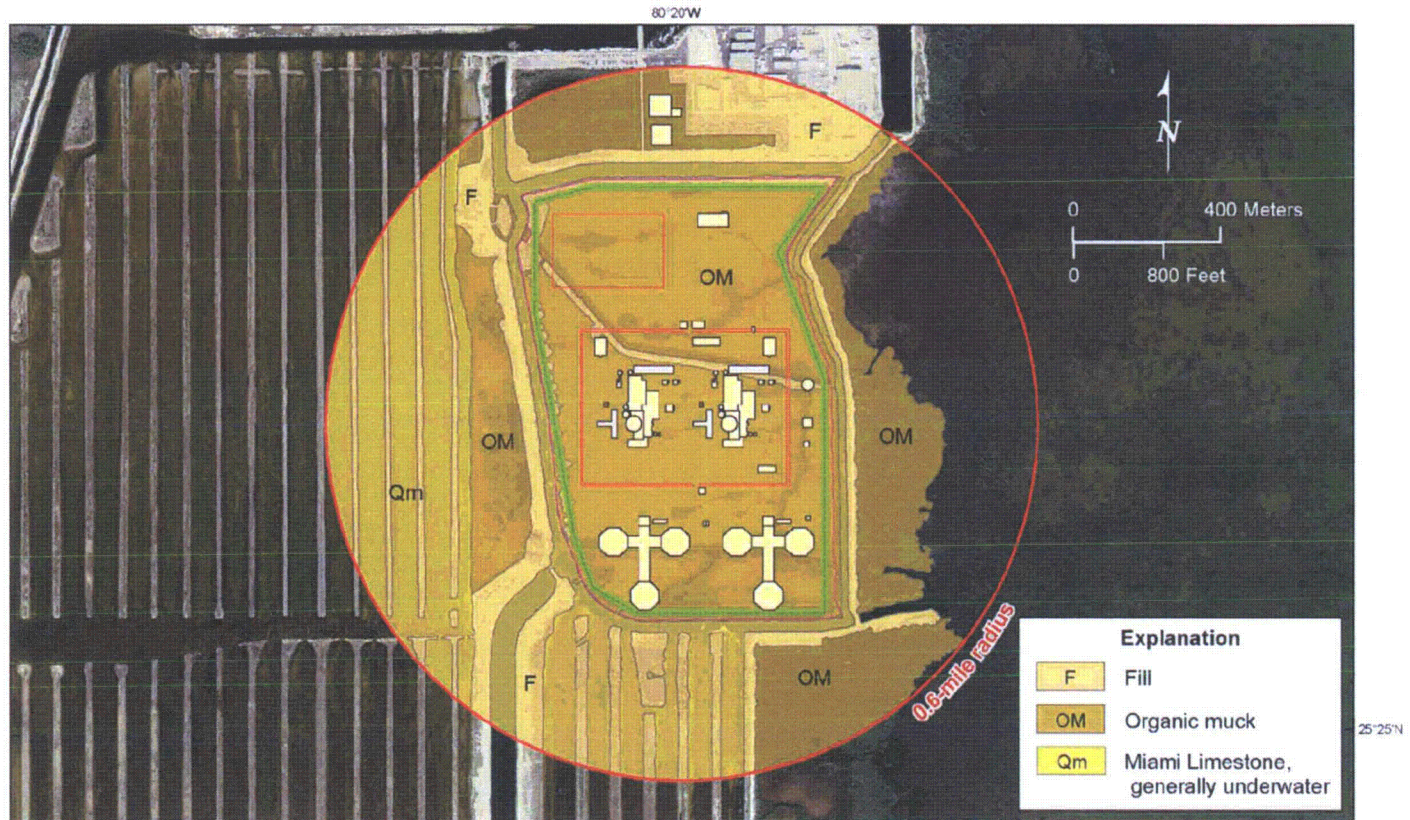


Note: Reconnaissance mapping performed using 1940s 1:40,000 scale panchromatic stereo aerial photography (Reference 386), but shown on 2004 imagery (Reference 435) of the Units 6 & 7 site for reference.



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

Figure 2.5.1-334 Site Geologic Map

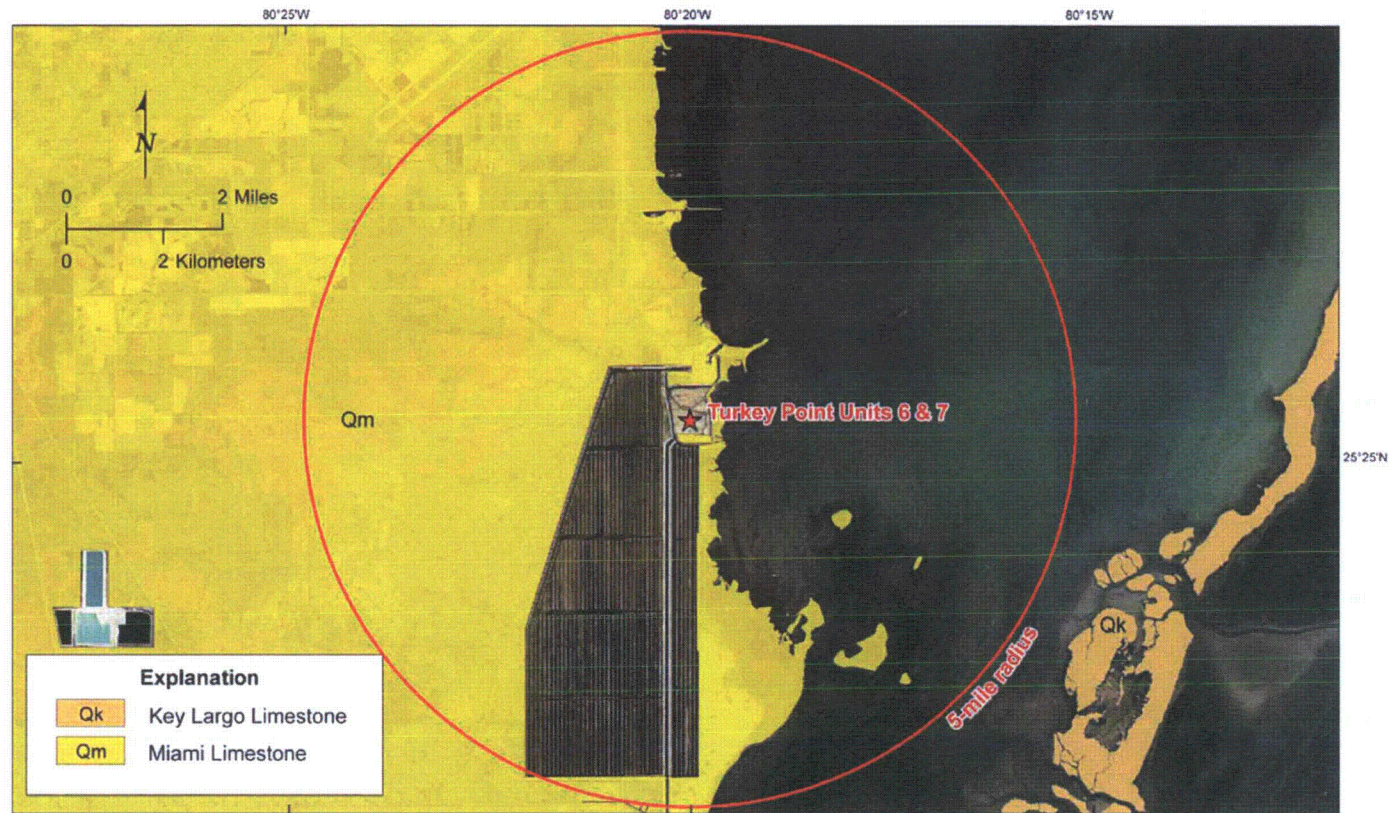


Base sources: [References 829](#), and [435](#)  
Source of geologic information: [Reference 827](#)



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

Figure 2.5.1-335 Site Area Geologic Map

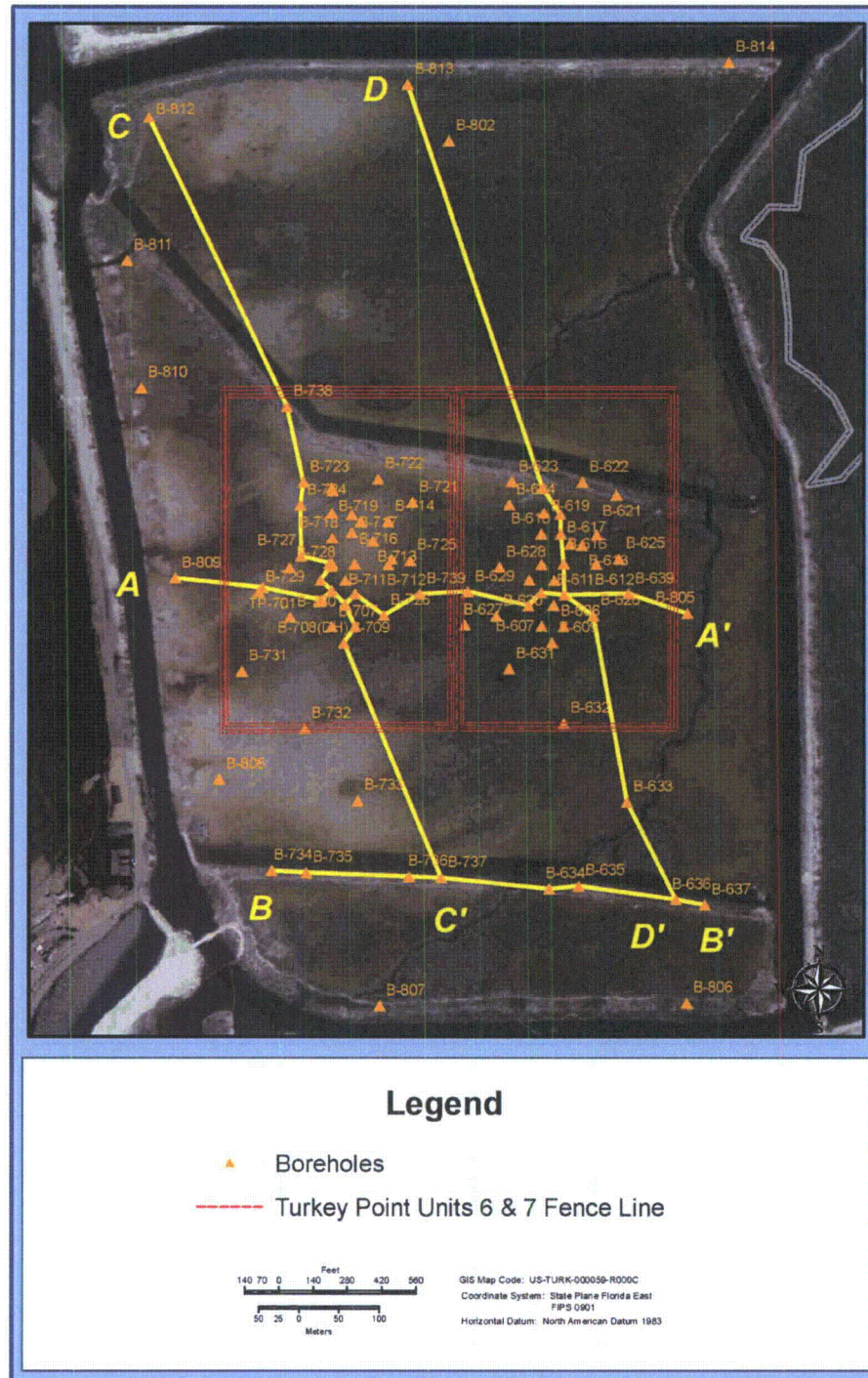


Base sources: [Reference 435](#)  
Source of geologic information: [Reference 219](#)



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

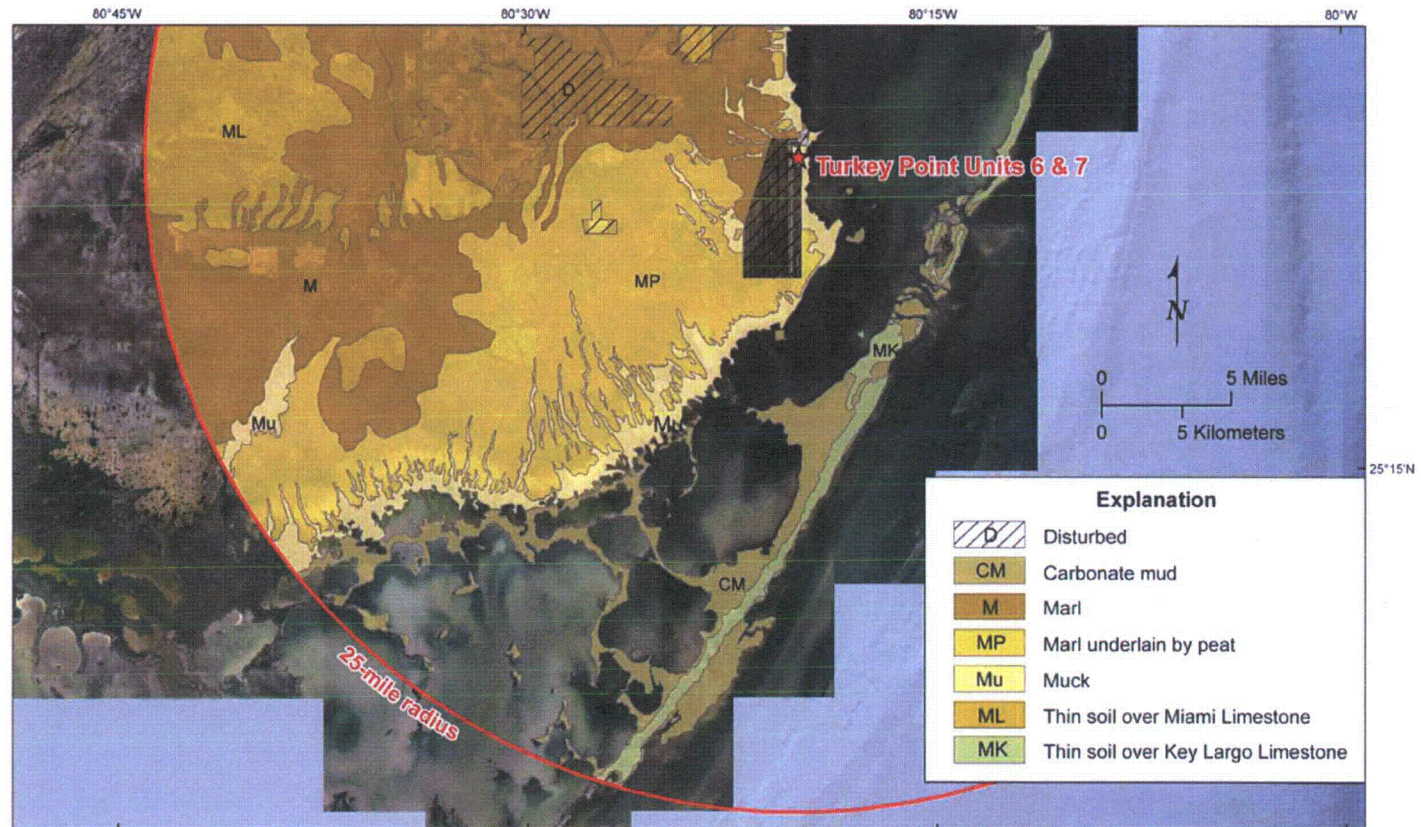
Figure 2.5.1-336 Locations of Geologic Cross Sections





Turkey Point Units 6 & 7  
COL Application  
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Figure 2.5.1-337 Surficial Deposits Map



Base sources: Reference 829

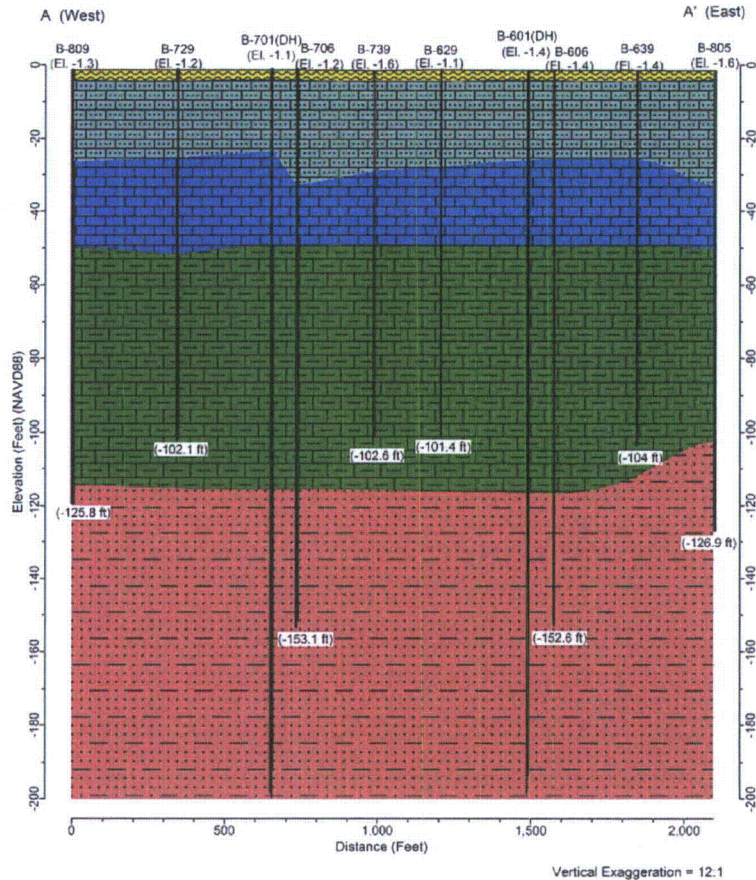
Source of geologic information: References 715 and 830



Turkey Point Units 6 & 7  
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02.05.01-17

**Figure 2.5.1-338 Cross-Section A-A' Truncated  
(Vertical Exaggeration = 12:1)**  
This figure appears in Appendix 2.5AA as Figure 2.5AA-211

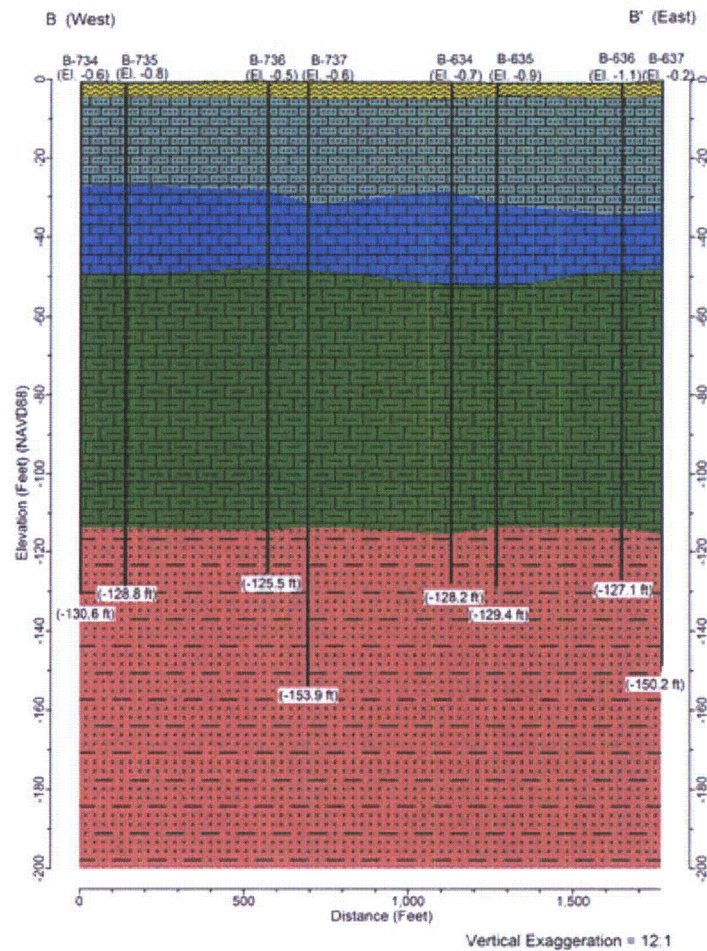


Stratigraphy	
	Muck/Peat
	Miami Limestone
	Key Largo Limestone
	Fort Thompson Fm.
	Tamiami Fm.
	Peace River Fm.
	Arcadia Fm.


Notes.

Stratigraphic contacts are approximate and interpolated from the borings.  
Subsurface data have been obtained only at the actual boring locations.  
Actual stratification between the borings may differ.  
Elevations (ft) are noted at the base of each boring.

**Figure 2.5.1-339 Cross-Section B-B' Truncated  
(Vertical Exaggeration = 12:1)**  
This figure appears in Appendix 2.5AA as Figure 2.5AA-212



### Stratigraphy



- Muck/Peat
- Miami Limestone
- Key Largo Limestone
- Fort Thompson Fm.
- Tamiami Fm.
- Peace River Fm.
- Arcadia Fm.

## Notes

Stratigraphic contacts are approximate and interpolated from the borings.

Subsurface data have been obtained only at the actual boring locations.

Actual stratification between the borings may differ.

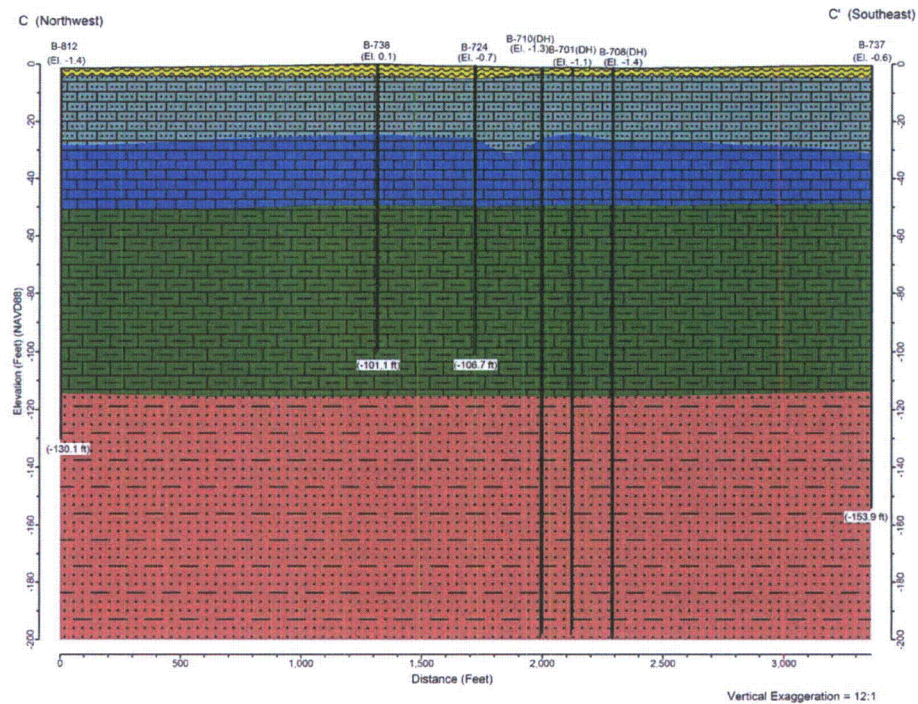
Elevations (ft) are noted at the base of each boring.



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-340 Cross-Section C-C' Truncated  
(Vertical Exaggeration = (12:1))**  
**This figure appears in Appendix 2.5AA as Figure 2.5AA-213**

PTN RAI  
02.05.01-17



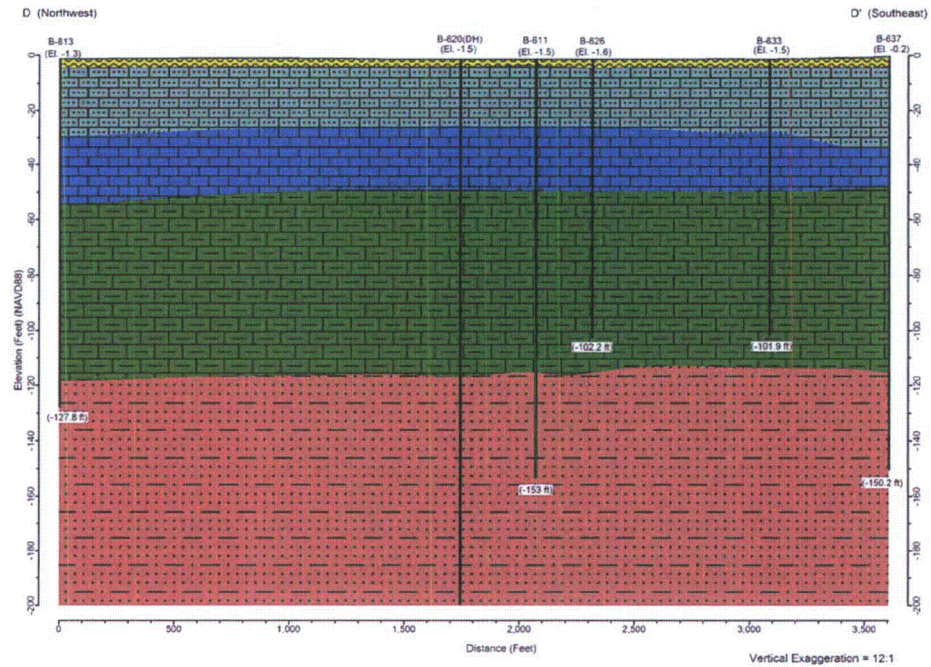
Stratigraphy	
	Muck/Peat
	Miami Limestone
	Key Largo Limestone
	Fort Thompson Fm.
	Tamiami Fm.
	Peace River Fm.
	Arcadia Fm.

Notes.  
Stratigraphic contacts are approximate and interpolated from the borings.  
Subsurface data have been obtained only at the actual boring locations.  
Actual stratification between the borings may differ.  
Elevations (ft) are noted at the base of each boring.

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-341 Cross-Section D-D' Truncated  
(Vertical Exaggeration = 12:1)  
This figure appears in Appendix 2.5AA as Figure 2.5AA-214**

PTN RAI  
02.05.01-17



Stratigraphy	
	Muck/Peat
	Miami Limestone
	Key Largo Limestone
	Fort Thompson Fm.
	Tamiami Fm.
	Peace River Fm.
	Arcadia Fm.

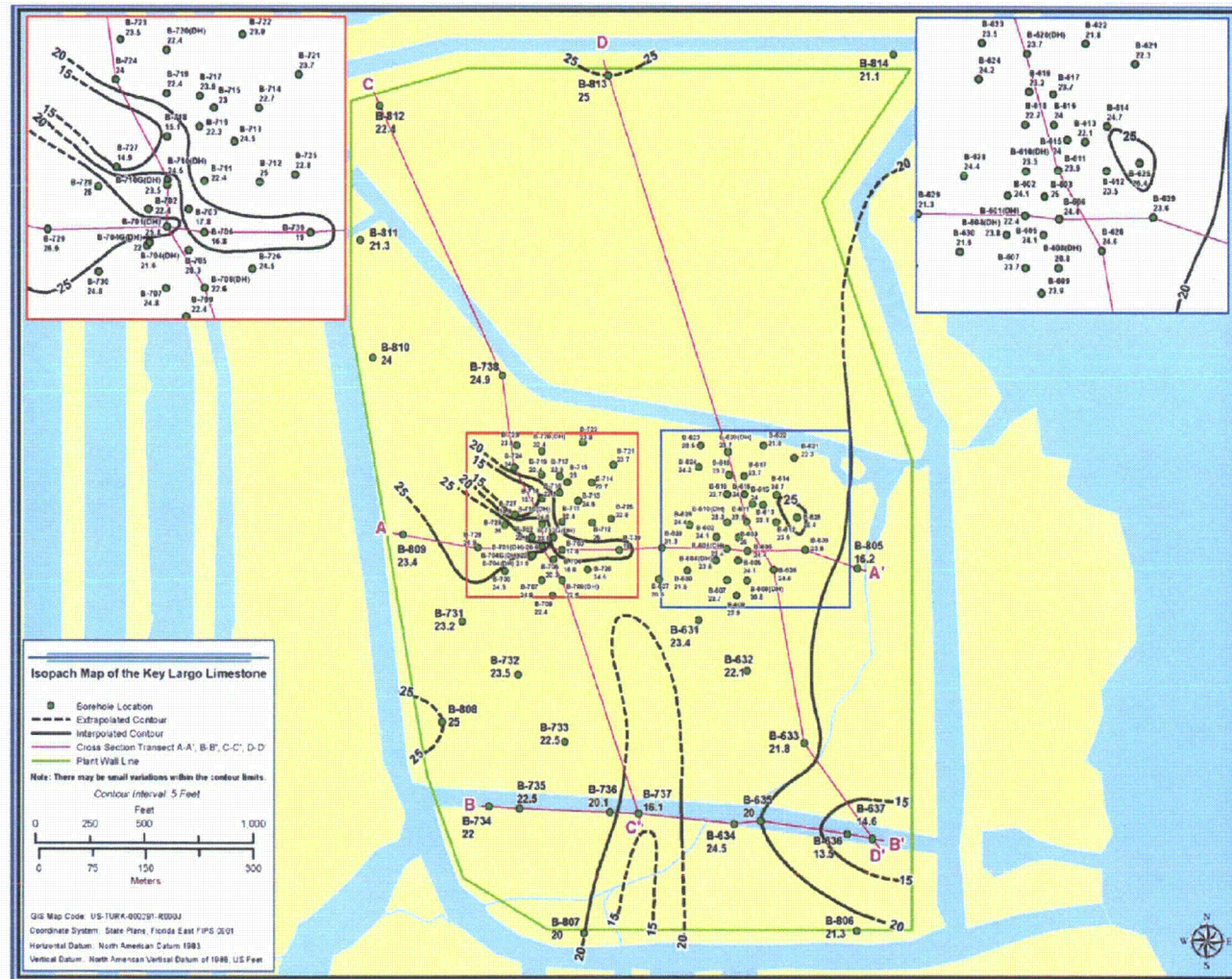
Notes.  
Stratigraphic contacts are approximate and interpolated from the borings.  
Subsurface data have been obtained only at the actual boring locations.  
Actual stratification between the borings may differ.  
Elevations (ft) are noted at the base of each boring.



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-342 Isopach Map of the Key Largo Limestone**  
This figure appears in Appendix 2.5AA as Figure 2.5AA-207

PTN RAI  
02.05.01-17

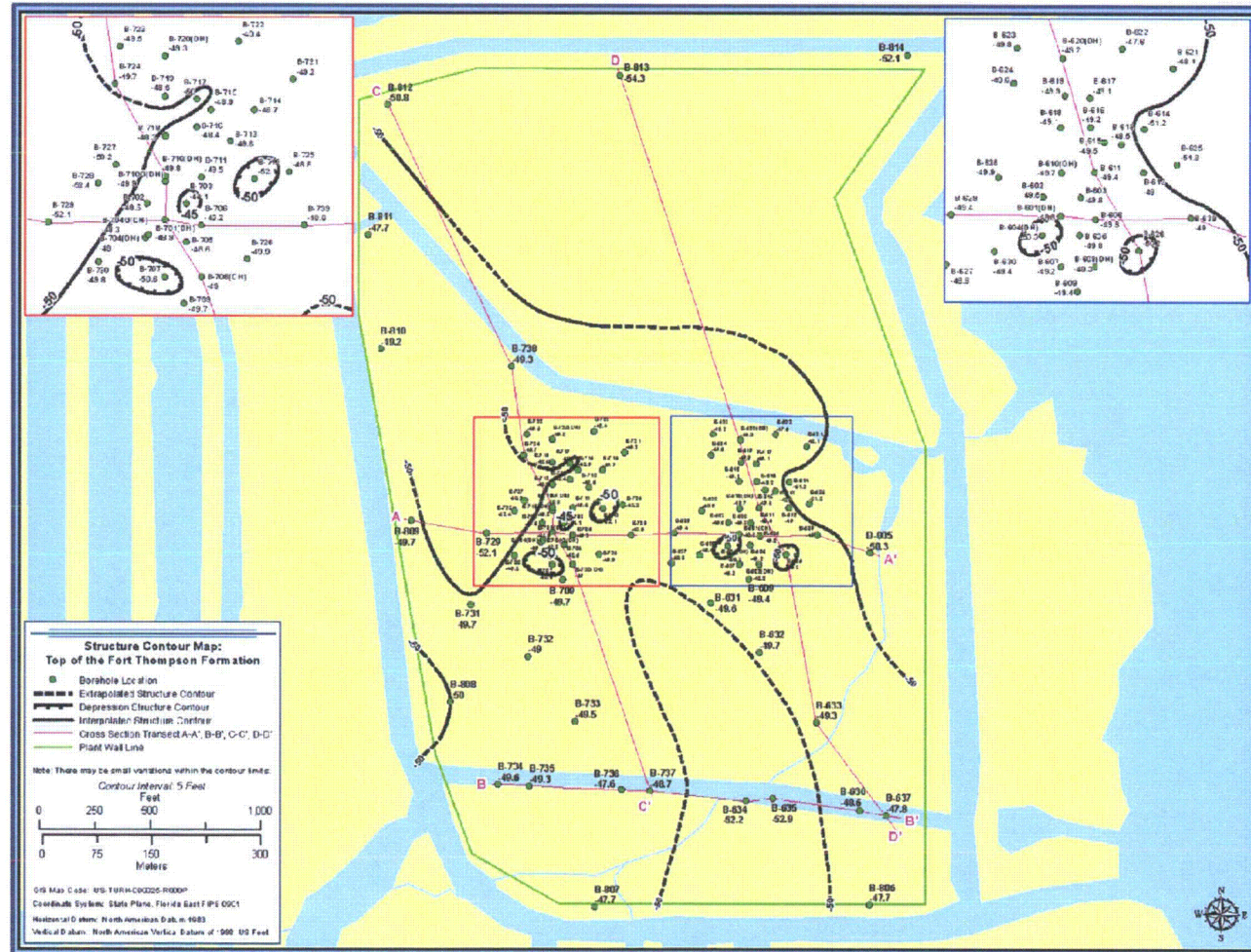




Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-343 Structure Contour Map of the Top of the Fort Thompson Formation**  
This figure appears in Appendix 2.5AA as Figure 2.5AA-208

PTN RAI  
02.05.01-17



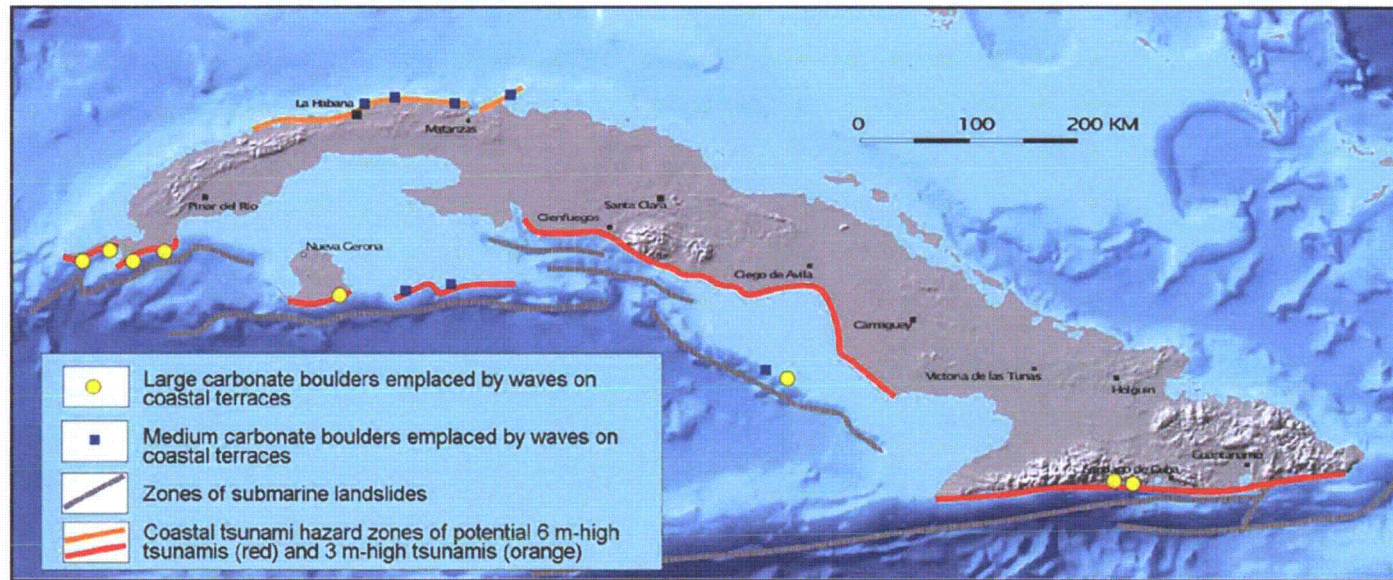


PTN RAI  
02.05.01-17



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

Figure 2.5.1-345 Geologic Hazards for Coastal Zones of Cuba

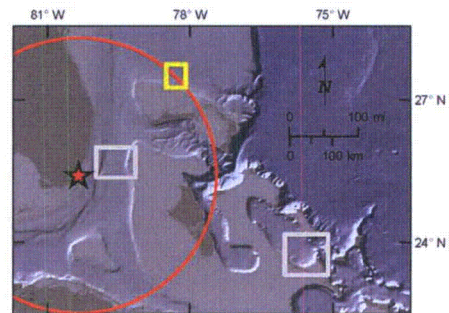
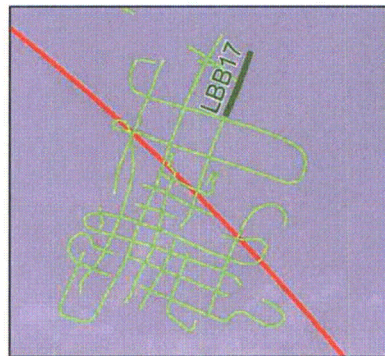
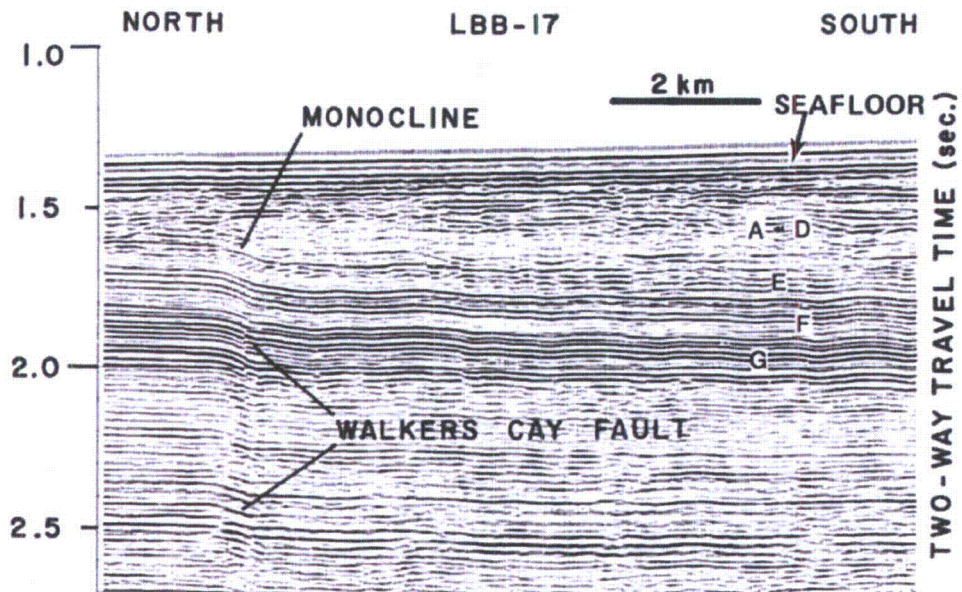


Modified from: [Reference 742](#)



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

Figure 2.5.1-346 Interpreted Seismic Line across the Edge of the Little Bahama Bank

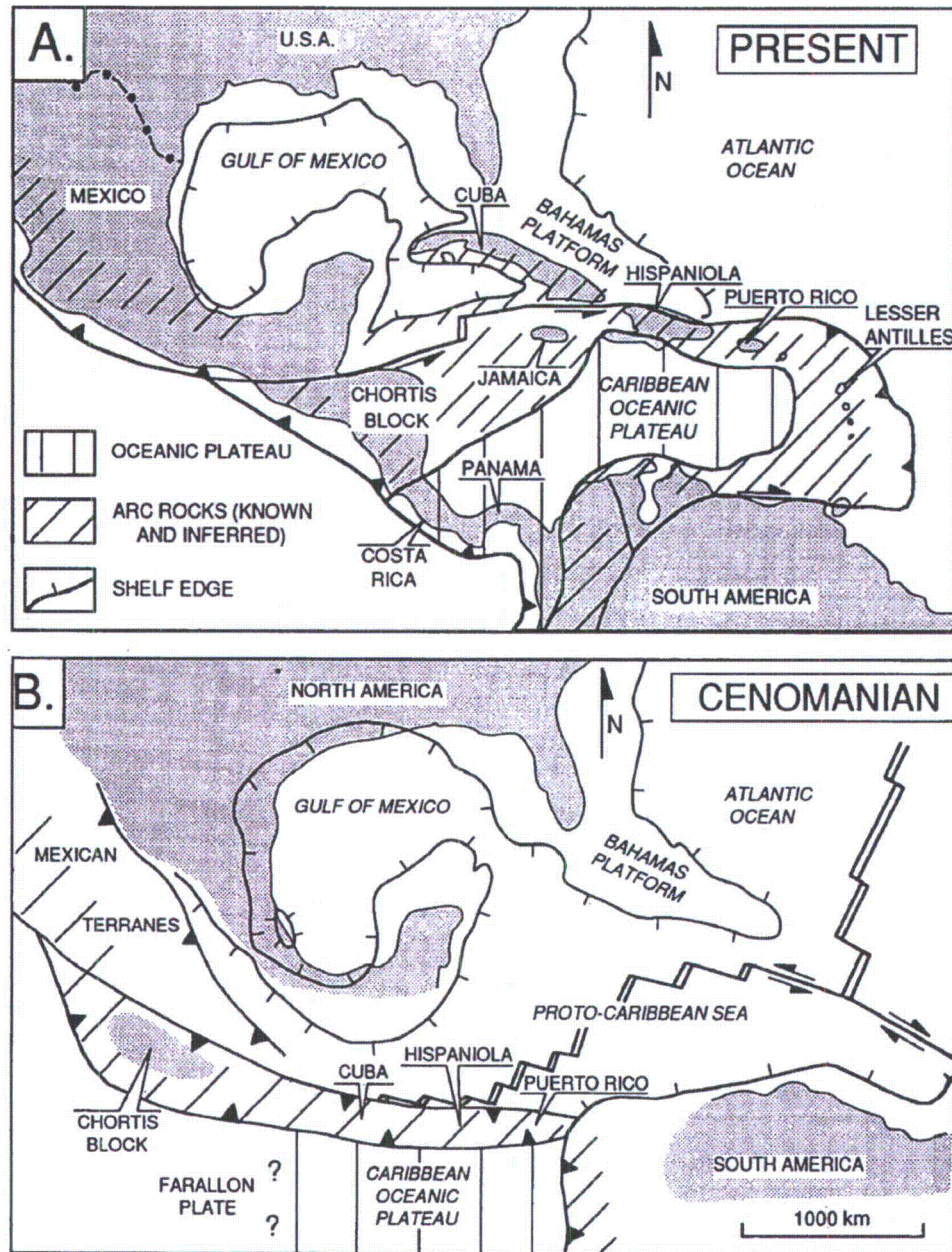


Note: Sequence G (the shallow-water carbonate platform sampled at Site 627) is offset, while sequences A-F thicken across the fault trace, suggesting syn-sedimentary movement.

Modified from: [Reference 785](#)

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-347 Initiation of the Greater Antilles Arc and Collision with the Caribbean Oceanic Plateau**



Notes:

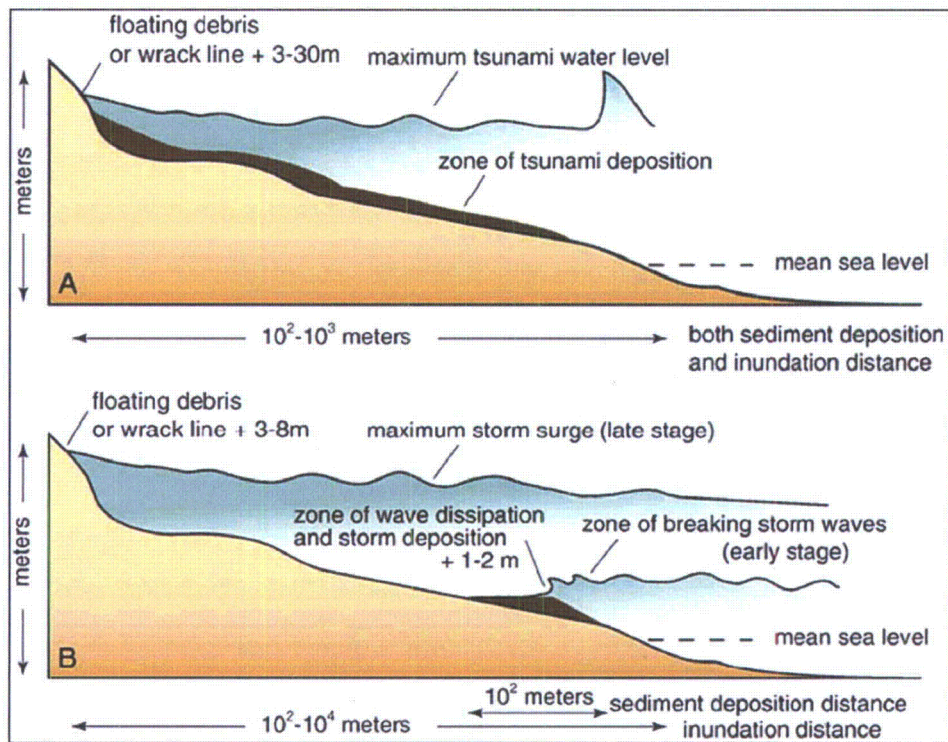
- A. Present-day distribution of Cretaceous to Recent island arc and late Cretaceous oceanic plateau crust in the Caribbean.
- B. Mid-Cretaceous (Cenomanian) reconstruction of the Caribbean island arc and oceanic plateau

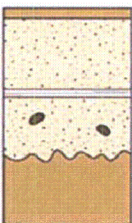
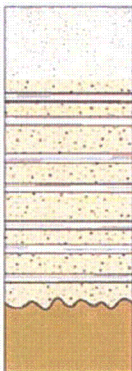
Source: [Reference 833](#)



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Part 2 — FSAR

Figure 2.5.1-348 Tsunami Sediments



C. Typical tsunami deposit	Typical storm deposit
 <ul style="list-style-type: none"> <li>• mudcap</li> <li>• lamina sets may be separated by thin mud or heavy mineral lamina</li> <li>• often normally graded</li> <li>• rip up clasts</li> <li>• 5-25 cm thick</li> <li>• abrupt lower contact</li> </ul>	 <ul style="list-style-type: none"> <li>• mudcap rare</li> <li>• may have foresets, troughs, climbing ripples</li> <li>• planar stratification</li> <li>• many laminae and laminasets</li> <li>• 25-200 cm thick</li> <li>• abrupt lower contact</li> </ul>

Notes:

A and B. Comparison of typical inundation distances, sediment-transport distances, and maximum water levels (indicated by height of wrack line) for deposition by tsunamis (A) and coastal storms (B)  
C. Composite characteristics of typical sandy tsunami and storm deposits

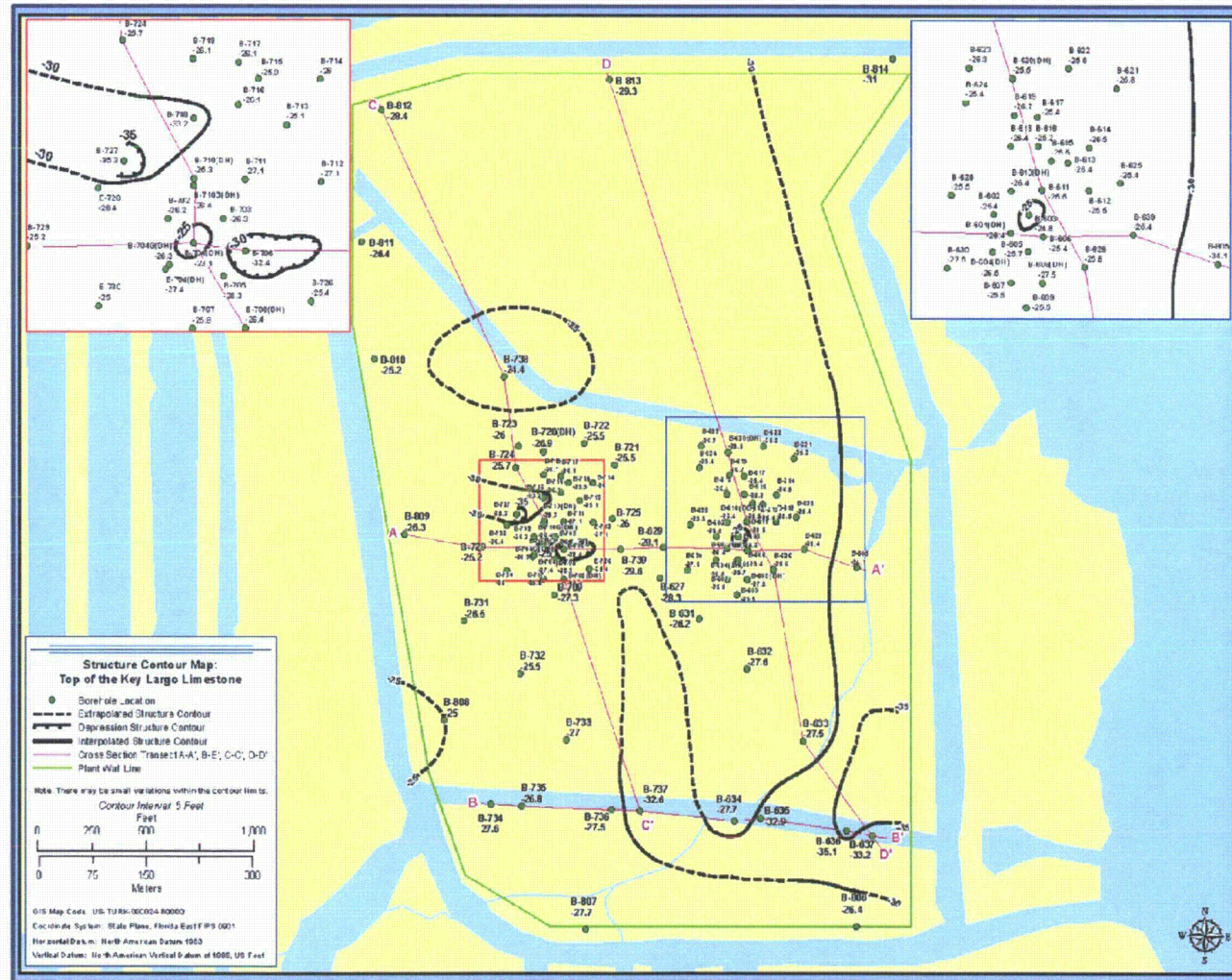
Source: Reference 890



Turkey Point Units 6 & 7  
COL Application  
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**Figure 2.5.1-349 Structure Contour Map of the Top of the Key Largo Limestone**  
This figure appears in Appendix 2.5AA as Figure 2.5AA-209

PTN RAI  
02.05.01-17

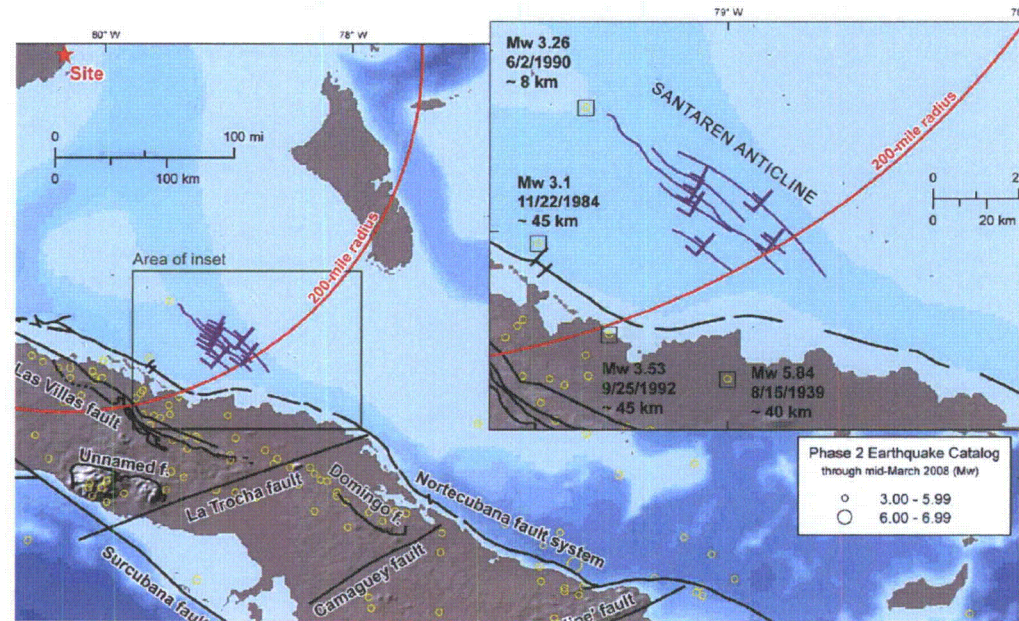




Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-350 Regional Seismicity Plotted on a Map of the Nortecubana Fault and Santaren Anticline**

PTN RAI  
02.05.01-15



Source: References 439, 443, 448, 477, 492, 494, and 770

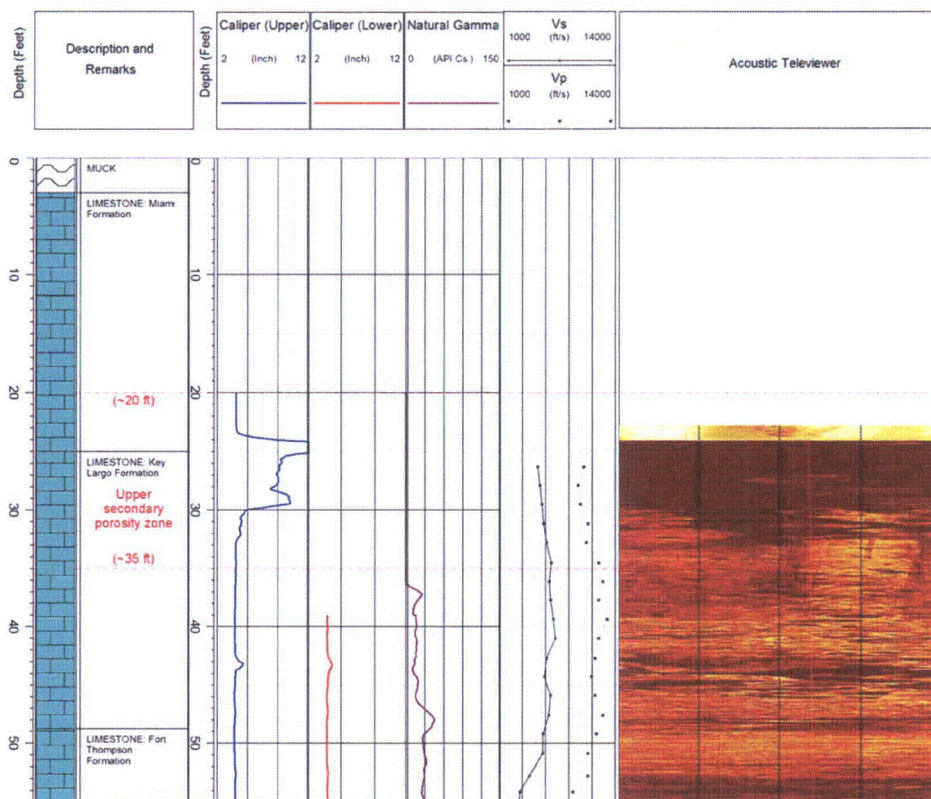
Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-351 The Two Zones of Secondary Porosity on B-604 (DH) Showing the Lithology, Caliper, Natural Gamma, Velocity ( $V_s$  and  $V_p$ ) and Acoustic Televiewer Logs (Sheet 1 of 3)**

PTN RAI  
02.05.01-17

Log ID: B-604 (DH)  
Total Depth: 165 ft  
Northing: 396,916 (NAD83/90)  
Easting: 876,592 (NAD83/90)  
Hole Diameter: 5" from 0.0 to 29.0 ft; 4" from 29.0 to 165.0 ft.  
Elevation (Ground Surface): -1.5 ft  
Drilling Date: Started 3/19/08 Completed 3/23/08  
Drilled By: P. Pitts / R. Landeros  
Lithology Logged By: S. Woodham  
Geophysical Log Operator: GEOVision Geophysical Services

Note:  
Caliper (upper section) from 20.05 to 105 feet bgs.  
Caliper (lower section) from 39.05 to 157 feet bgs.  
Natural Gamma (lower and upper sections) from 20.05 to 157 feet bgs.  
Receiver to receiver  $V_s$  and  $V_p$  from 26.3 to 150.9 feet bgs.  
Acoustic Televiewer from 22.78 to 120.65 feet bgs.





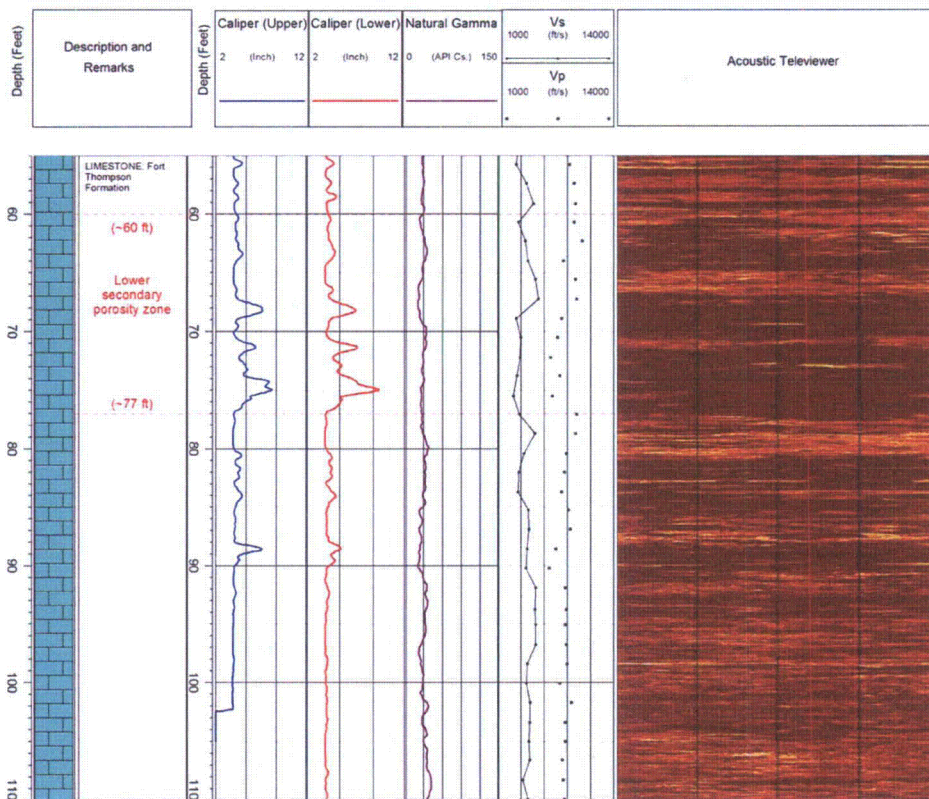
Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-351 The Two Zones of Secondary Porosity on B-604 (DH) Showing the Lithology, Caliper, Natural Gamma, Velocity ( $V_s$  and  $V_p$ ) and Acoustic Televiewer Logs (Sheet 2 of 3)**

PTN RAI  
02.05.01-17

Log ID: B-604 (DH)  
Total Depth: 165 ft  
Northing: 396,916 (NAD83/90)  
Easting: 876,592 (NAD83/90)  
Hole Diameter: 5" from 0.0 to 29.0 ft; 4" from 29.0 to 165.0 ft.  
Elevation (Ground Surface): -1.5 ft  
Drilling Date: Started 3/19/08 Completed 3/23/08  
Drilled By: P. Pitts / R. Landeros  
Lithology Logged By: S. Woodham  
Geophysical Log Operator: GEOVision Geophysical Services

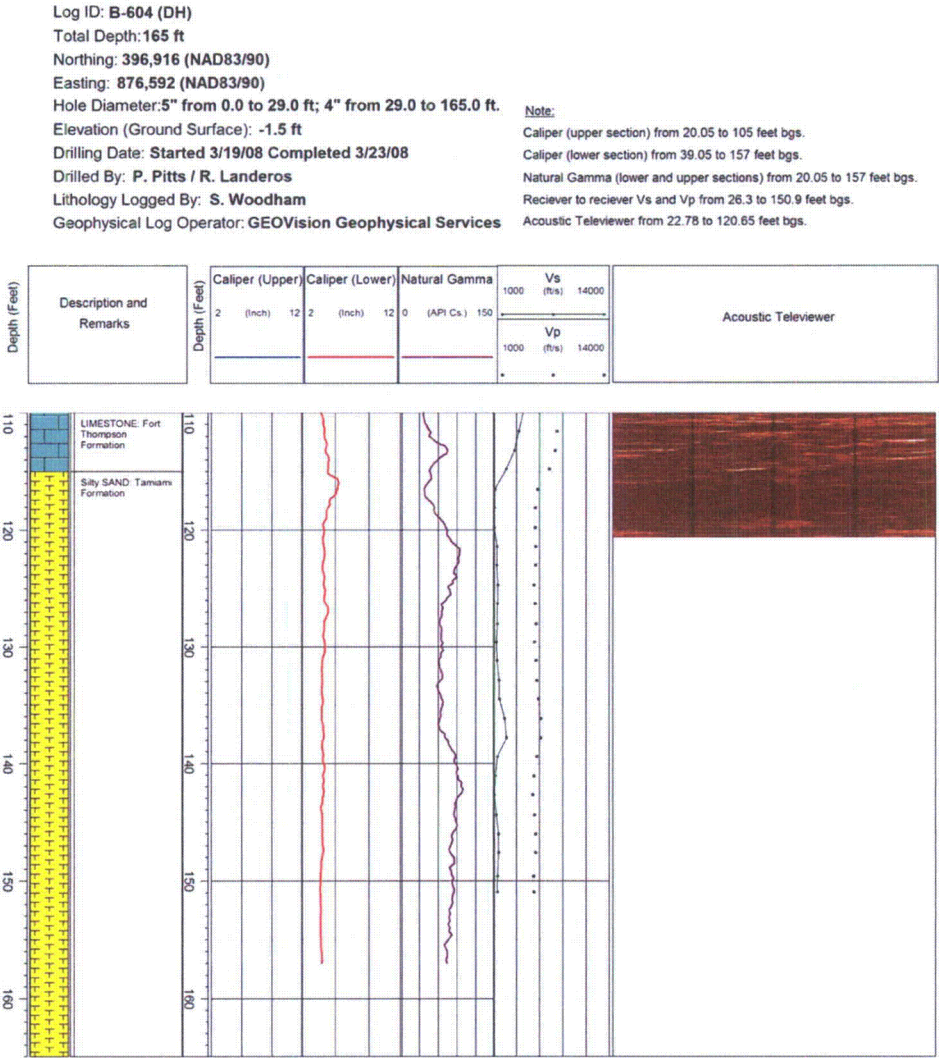
Note:  
Caliper (upper section) from 20.05 to 105 feet bgs.  
Caliper (lower section) from 39.05 to 157 feet bgs.  
Natural Gamma (lower and upper sections) from 20.05 to 157 feet bgs.  
Receiver to receiver  $V_s$  and  $V_p$  from 26.3 to 150.9 feet bgs.  
Acoustic Televiewer from 22.78 to 120.65 feet bgs.



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-351 The Two Zones of Secondary Porosity on B-604 (DH)  
Showing the Lithology, Caliper, Natural Gamma, Velocity (Vs and Vp) and  
Acoustic Televiewer Logs (Sheet 3 of 3)**

PTN RAI  
02.05.01-17





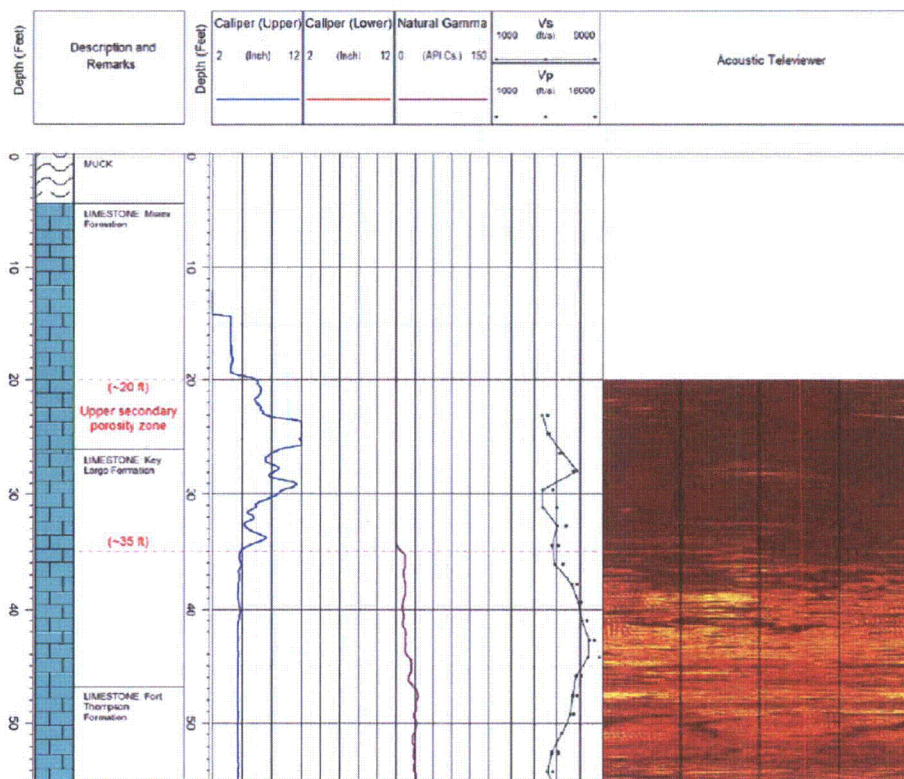
Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-352 The Two Zones of Secondary Porosity on B-608 (DH) Showing the Lithology, Caliper, Natural Gamma, Velocity (Vs and Vp), and Acoustic Televiewer Logs (Sheet 1 of 5)**

PTN RAI  
02.05.01-2

Log ID: B-608 (DH)  
Total Depth: 265.4 ft  
Northing: 396,830 (NAD83/90)  
Easting: 876,736 (NAD83/90)  
Hole Diameter: 5" from 0.0 to 34.0 ft; 4" from 34.0 to 265.4 ft.  
Elevation (Ground Surface): -1.5 ft  
Drilling Date: Started 3/25/08 Completed 4/2/08  
Drilled By: R. Landeros/N. Rodriguez (MACTEC)  
Lithology Logged By: S. Woodman/B. Taylor (MACTEC)  
Geophysical Log Operator: GEOVision Geophysical Services

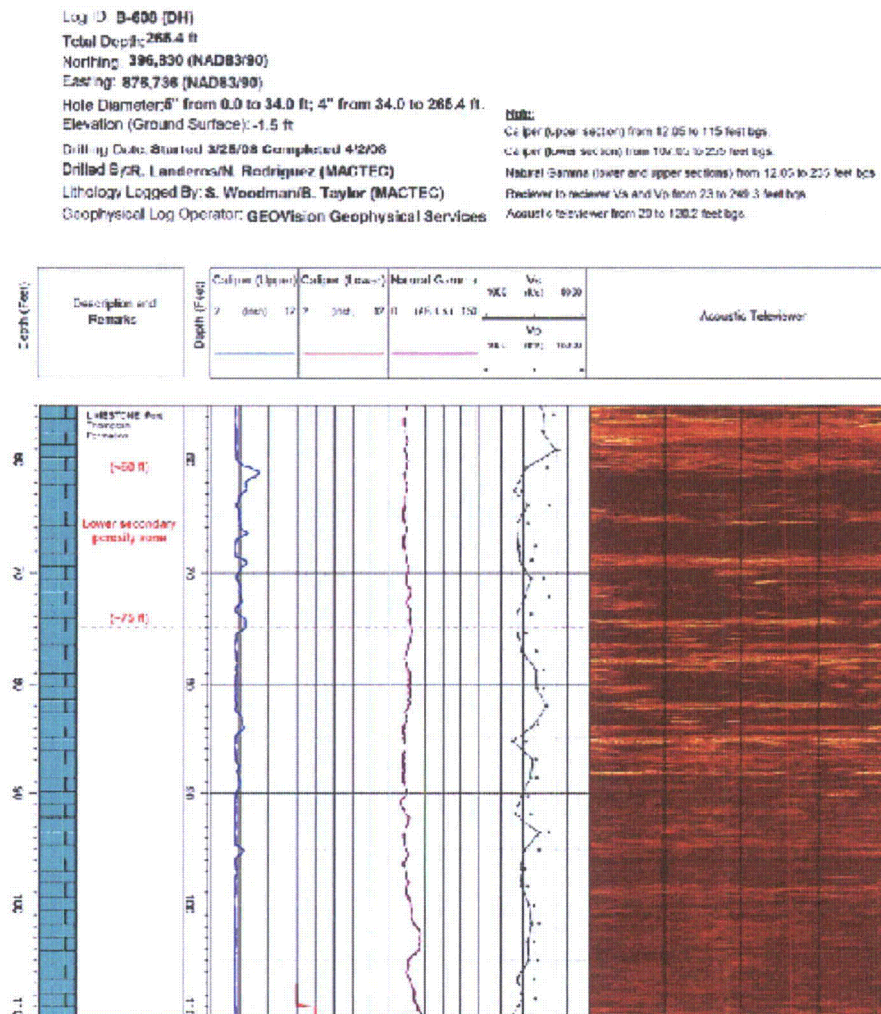
Note:  
Caliper (upper section) from 12.05 to 115 feet bgs.  
Caliper (lower section) from 107.05 to 255 feet bgs.  
Natural Gamma (lower and upper sections) from 12.05 to 255 feet bgs.  
Receiver to receiver Vs and Vp from 23 to 249.3 feet bgs.  
Acoustic televiewer from 20 to 120.2 feet bgs.



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-352 The Two Zones of Secondary Porosity on B-608 (DH) Showing the Lithology, Caliper, Natural Gamma, Velocity ( $V_s$  and  $V_p$ ), and Acoustic Televiewer Logs (Sheet 2 of 5)**

PTN RAI  
02.05.01-2

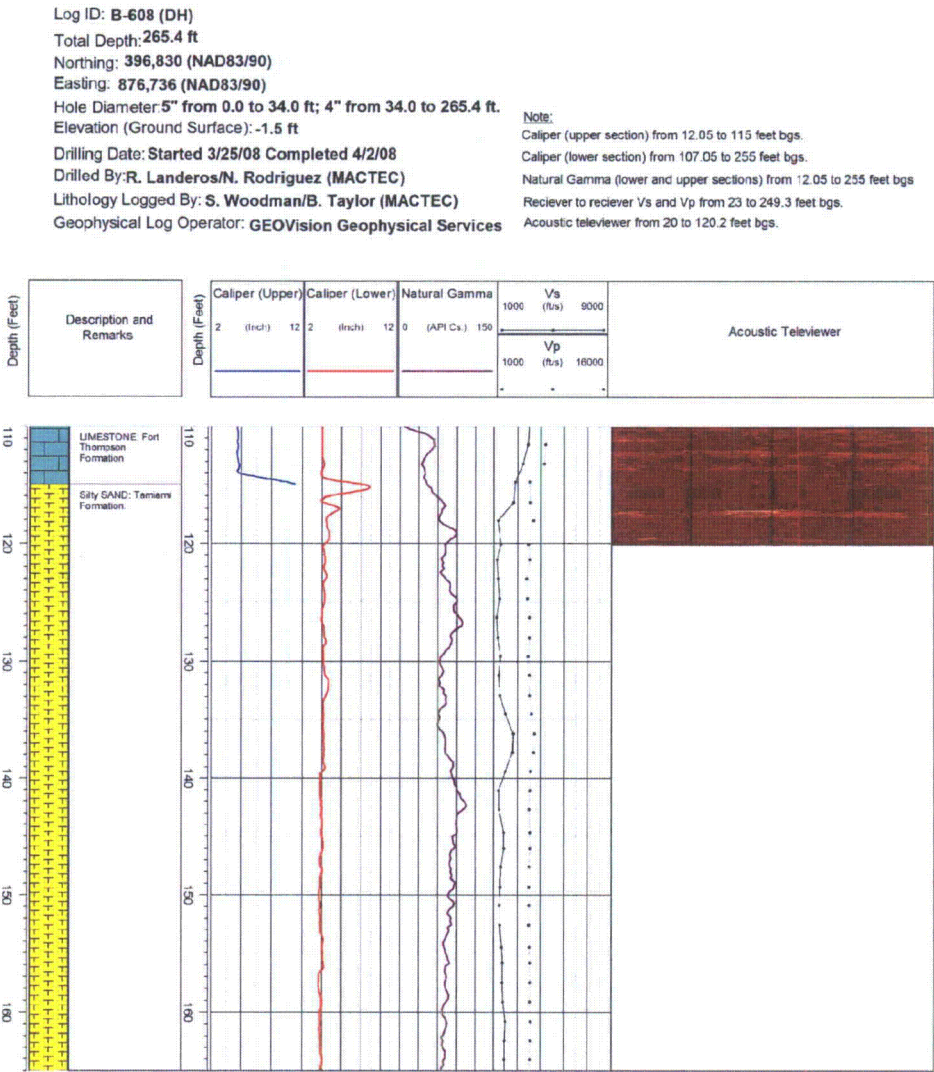




Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-352 The Two Zones of Secondary Porosity on B-608 (DH) Showing the Lithology, Caliper, Natural Gamma, Velocity (Vs and Vp), and Acoustic Televiewer Logs (Sheet 3 of 5)**

PTN RAI  
02.05.01-2



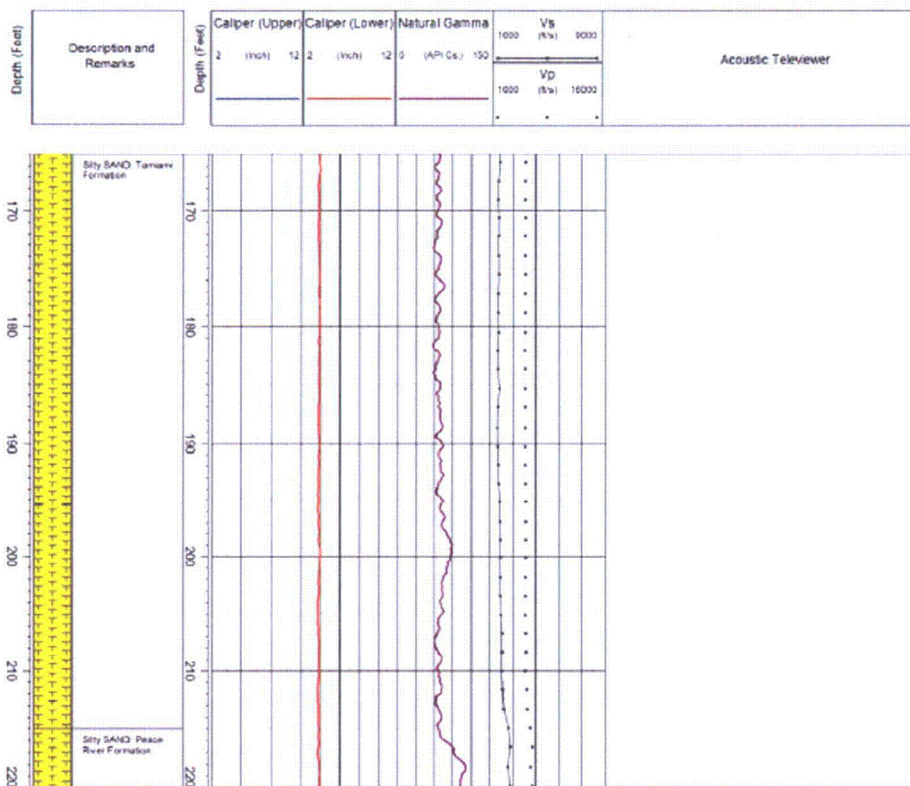
Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-352 The Two Zones of Secondary Porosity on B-608 (DH) Showing the Lithology Caliper, Natural Gamma, Velocity ( $V_s$  and  $V_p$ ) and Acoustic Televiewer Logs (Sheet 4 of 5)**

PTN RAI  
02.05.01-2

Log ID: **B-608 (DH)**  
Total Depth: **265.4 ft**  
Northing: **396,830 (NAD83/90)**  
Easting: **876,736 (NAD83/90)**  
Hole Diameter: **5" from 0.0 to 34.0 ft; 4" from 34.0 to 265.4 ft.**  
Elevation (Ground Surface): **-1.5 ft**  
Drilling Date: **Started 3/25/08 Completed 4/2/08**  
Drilled By: **R. Landeros/N. Rodriguez (MACTEC)**  
Lithology Logged By: **S. Woodman/B. Taylor (MACTEC)**  
Geophysical Log Operator: **GEOVision Geophysical Services**

Note:  
Caliper (upper section) from 12.05 to 115 feet bgs.  
Caliper (lower section) from 107.05 to 255 feet bgs.  
Natural Gamma (lower and upper sections) from 12.05 to 255 feet bgs.  
Receiver to receiver  $V_s$  and  $V_p$  from 23 to 249.3 feet bgs.  
Acoustic televiewer from 20 to 120.2 feet bgs.





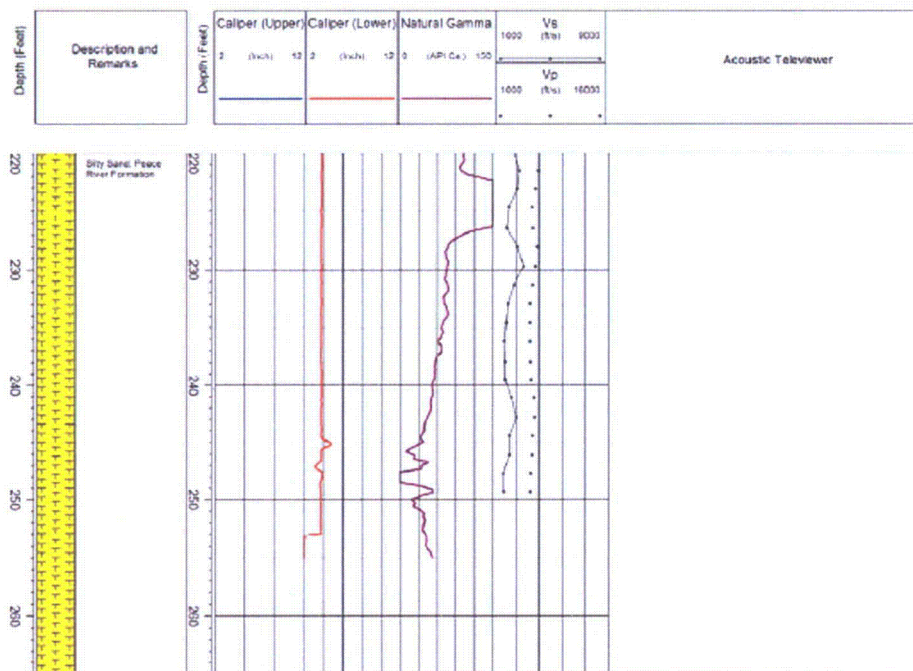
Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-352 The Two Zones of Secondary Porosity on B-608 (DH) Showing the Lithology Caliper, Natural Gamma, Velocity ( $V_s$  and  $V_p$ ) and Acoustic Televiewer Logs (Sheet 5 of 5)**

PTN RAI  
02.05.01-2

Log ID: **B-608 (DH)**  
Total Depth: **265.4 ft**  
Northing: **396,830 (NAD83/90)**  
Easting: **876,736 (NAD83/90)**  
Hole Diameter: **5" from 0.0 to 34.0 ft; 4" from 34.0 to 265.4 ft.**  
Elevation (Ground Surface): **-1.5 ft**  
Drilling Date: **Started 3/25/08 Completed 4/2/08**  
Drilled By: **R. Landeros/N. Rodriguez (MACTEC)**  
Lithology Logged By: **S. Woodman/B. Taylor (MACTEC)**  
Geophysical Log Operator: **GEOVision Geophysical Services**

**Note:**  
Caliper (upper section) from 12.05 to 115 feet bgs.  
Caliper (lower section) from 107.05 to 255 feet bgs.  
Natural Gamma (lower and upper sections) from 12.05 to 255 feet bgs.  
Receiver to receiver  $V_s$  and  $V_p$  from 23 to 249.3 feet bgs.  
Acoustic televiewer from 20 to 120.2 feet bgs.



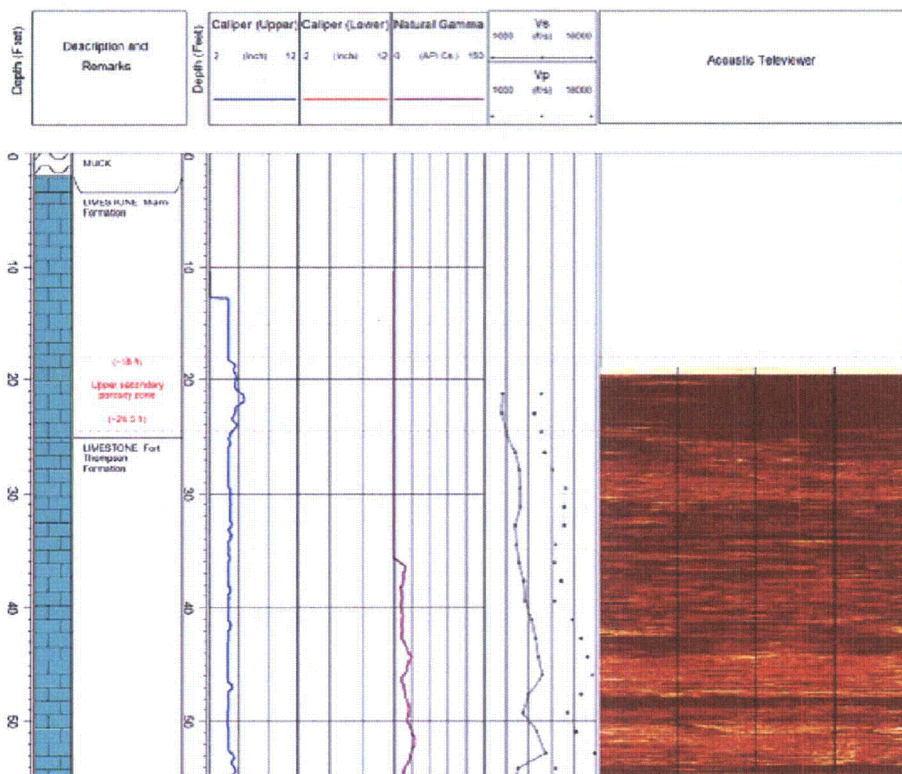
Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-353 The Two Zones of Secondary Porosity on B-710 G (DH) Showing the Lithology, Caliper, Natural Gamma, Velocity ( $V_s$  and  $V_p$ ), and Acoustic Televiewer Logs (Sheet 1 of 5)**

PTN RAI  
02.05.01-17

Log ID: B-710G(DH)  
Total Depth: 273.5 ft  
Northing: 397,075 (NAD83/90)  
Easting: 875,792 (NAD83/90)  
Hole Diameter: 4" from 0.0 to 273.5 ft  
Elevation (Ground Surface): -1.4 ft  
Drilling Date: Started 3/10/08 Completed 3/13/08  
Drilled By: R. Landeros / N. Rodriguez  
Lithology Logged By: S. Woodham  
Geophysical Log Operator: GEOVision Geophysical Services

Note:  
Caliper (upper section) from 10.4 to 130 feet bgs.  
Caliper (lower section) from 90.4 to 264 feet bgs.  
Natural Gamma (lower and upper sections) from 10.4 to 264 feet bgs.  
Receiver to receiver  $V_s$  and  $V_p$  from 26.2 to 257.5 feet bgs.  
Acoustic Televiewer from 19 to 120.4 feet bgs.

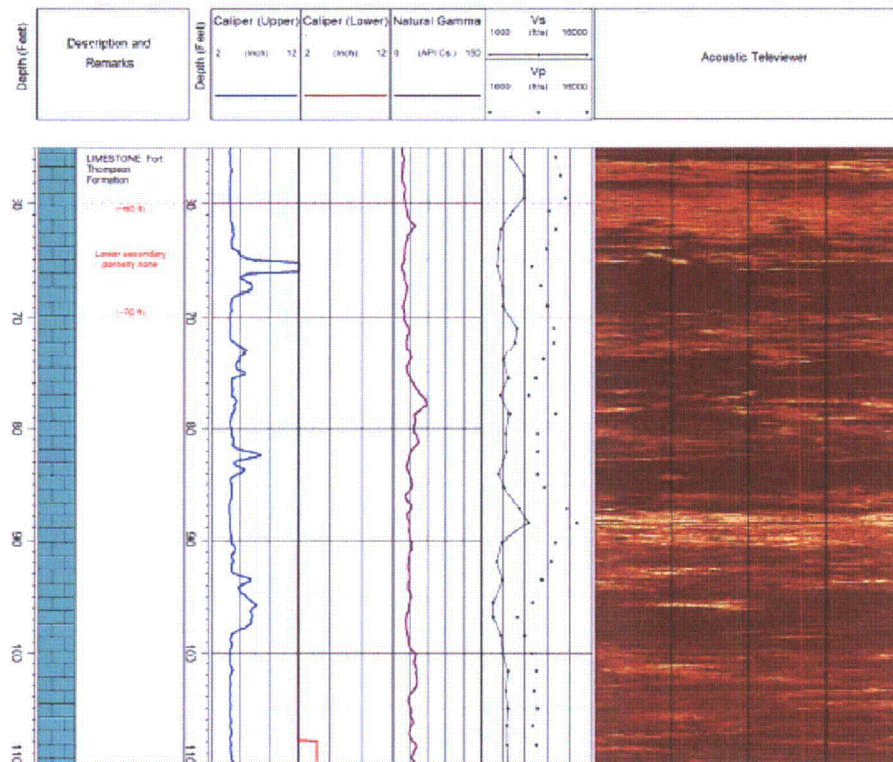




**Figure 2.5.1-353 The Two Zones of Secondary Porosity on B-710 G (DH) Showing the Lithology, Caliper, Natural Gamma, Velocity ( $V_s$  and  $V_p$ ), and Acoustic Televiewer Logs (Sheet 2 of 5)**

Log ID: **B-710G(DH)**  
Total Depth: **273.5 ft**  
Northing: **397,075 (NAD83/90)**  
Easting: **875,792 (NAD83/90)**  
Hole Diameter: **4" from 0.0 to 273.5 ft**  
Elevation (Ground Surface): **-1.4 ft**  
Drilling Date: **Started 3/10/08 Completed 3/13/08**  
Drilled By: **R. Landeros / N. Rodriguez**  
Lithology Logged By: **S. Woodham**  
Geophysical Log Operator: **GEOVision Geophysical Services**

Note:  
Caliper (upper section) from 10.4 to 130 feet bgs.  
Caliper (lower section) from 90.4 to 264 feet bgs.  
Natural Gamma (lower and upper sections) from 10.4 to 264 feet bgs.  
Receiver to receiver Vs and Vp from 26.2 to 257.5 feet bgs.  
Acoustic Televiwer from 19 to 120.4 feet bgs.



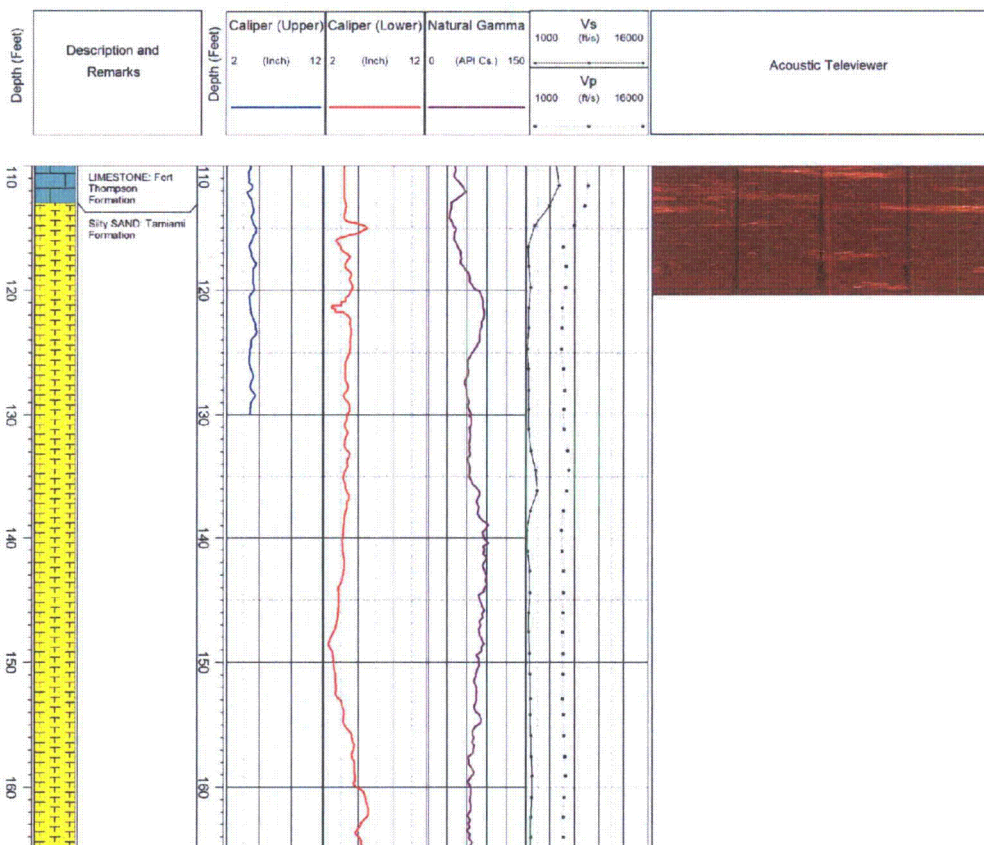
Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-353 The Two Zones of Secondary Porosity on B-710 G (DH) Showing the Lithology, Caliper, Natural Gamma, Velocity (Vs and Vp), and Acoustic Televiewer Logs (Sheet 3 of 5)**

PTN RAI  
02.05.01-17

Log ID: B-710G(DH)  
Total Depth: 273.5 ft  
Northing: 397,075 (NAD83/90)  
Easting: 875,792 (NAD83/90)  
Hole Diameter: 4" from 0.0 to 273.5 ft  
Elevation (Ground Surface): -1.4 ft  
Drilling Date: Started 3/10/08 Completed 3/13/08  
Drilled By: R. Landeros / N. Rodriguez  
Lithology Logged By: S. Woodham  
Geophysical Log Operator: GEOVision Geophysical Services

Note:  
Caliper (upper section) from 10.4 to 130 feet bgs.  
Caliper (lower section) from 90.4 to 254 feet bgs.  
Natural Gamma (lower and upper sections) from 10.4 to 264 feet bgs.  
Receiver to receiver Vs and Vp from 26.2 to 257.5 feet bgs.  
Acoustic Televiewer from 19 to 120.4 feet bgs

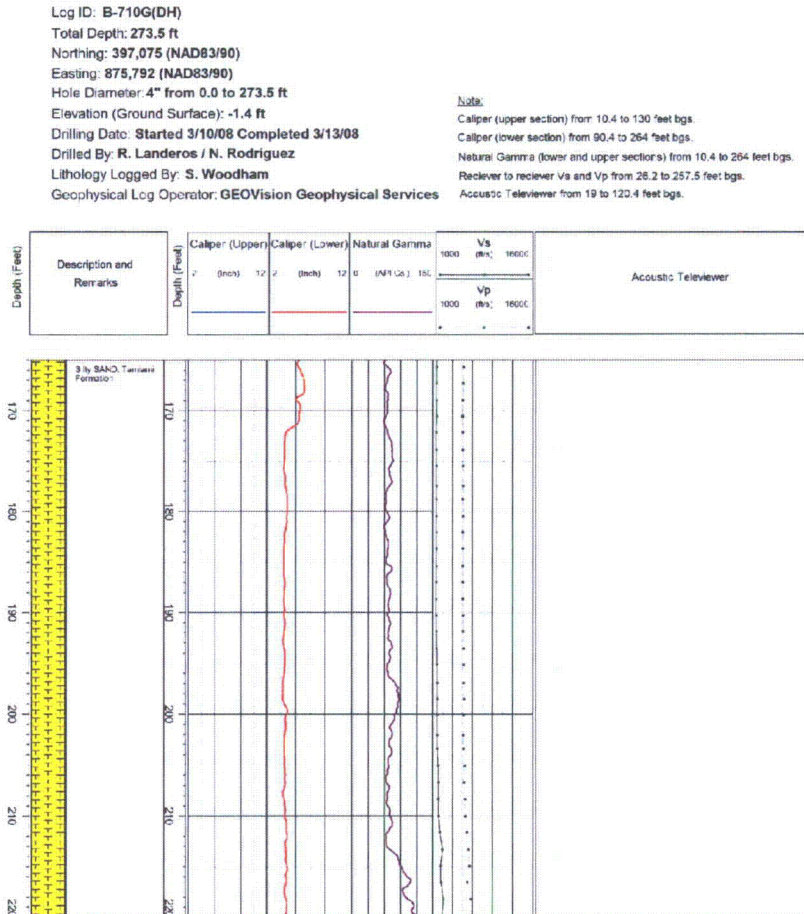




Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-353 The Two Zones of Secondary Porosity on B-710 G (DH) Showing the Lithology, Caliper, Natural Gamma, Velocity ( $V_s$  and  $V_p$ ), and Acoustic Televiewer Logs (Sheet 4 of 5)**

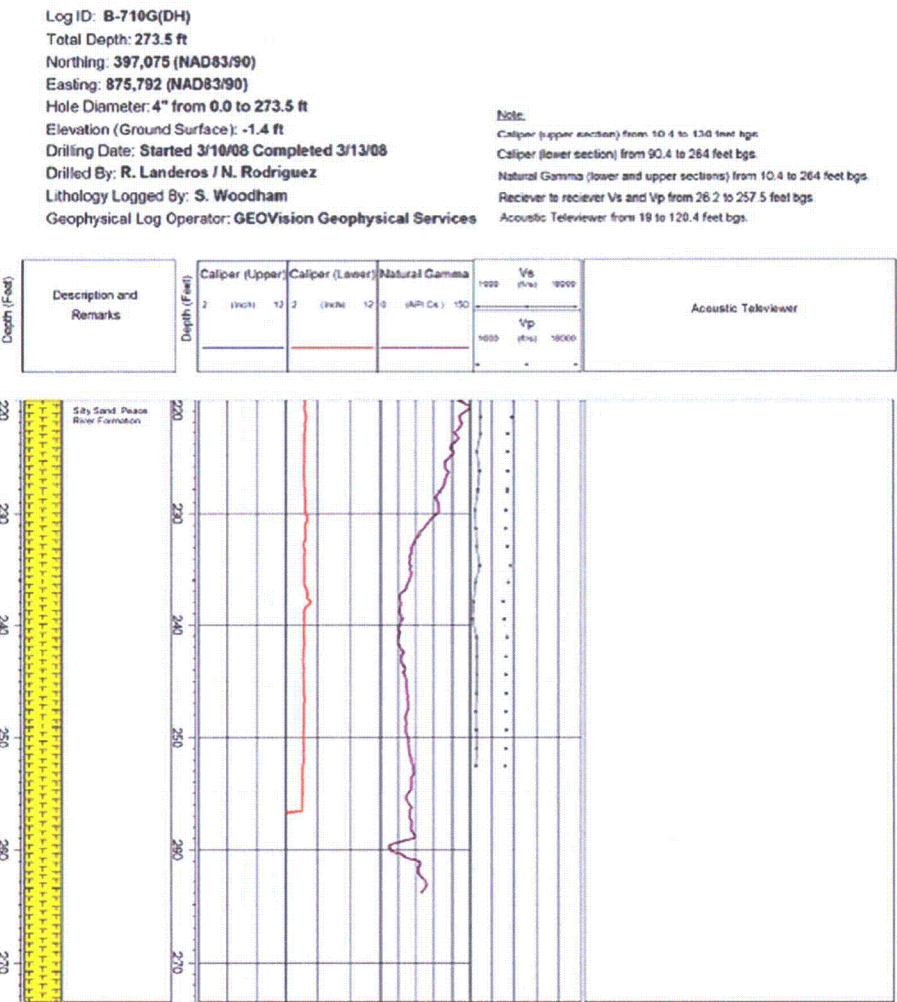
PTN RAI  
02.05.01-17



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-353 The Two Zones of Secondary Porosity on B-710 G (DH) Showing the Lithology, Caliper, Natural Gamma, Velocity ( $V_s$  and  $V_p$ ), and Acoustic Televiewer Logs (Sheet 5 of 5)**

PTN RAI  
02.05.01-17



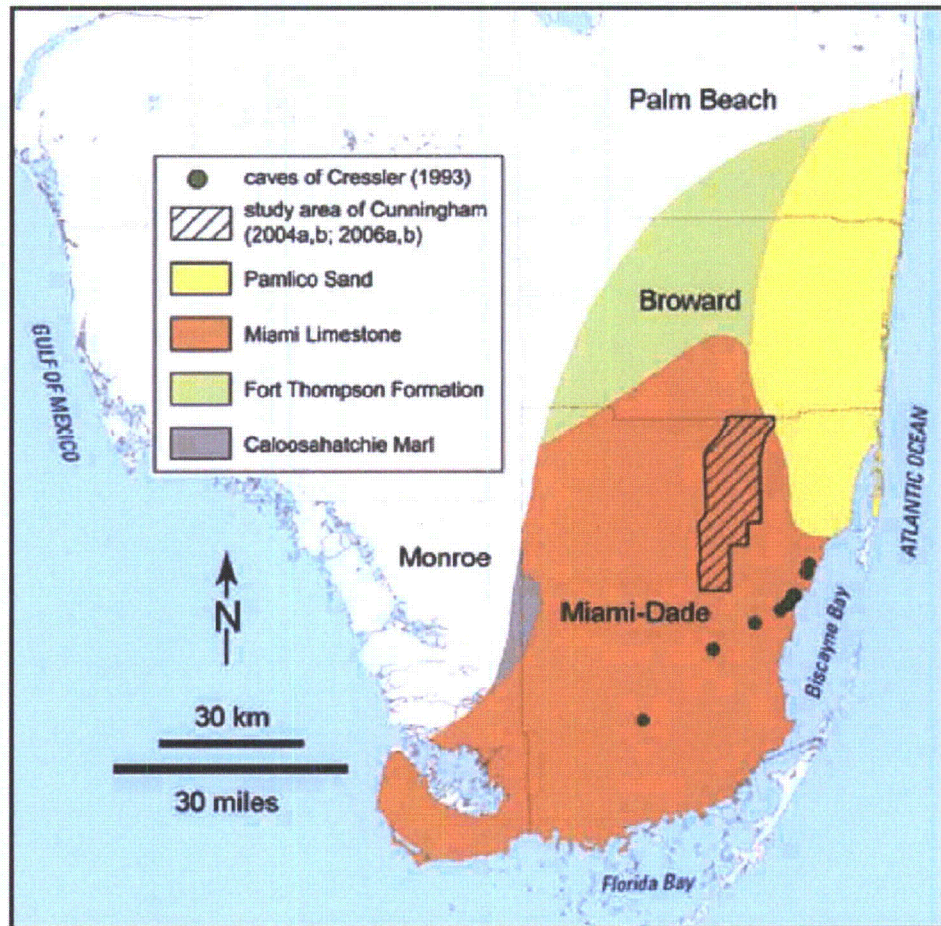
Source: Reference 708



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-354 Map of Southern Florida Showing the Locations of Caves Identified by Cressler**

PTN RAI  
02.05.01-1

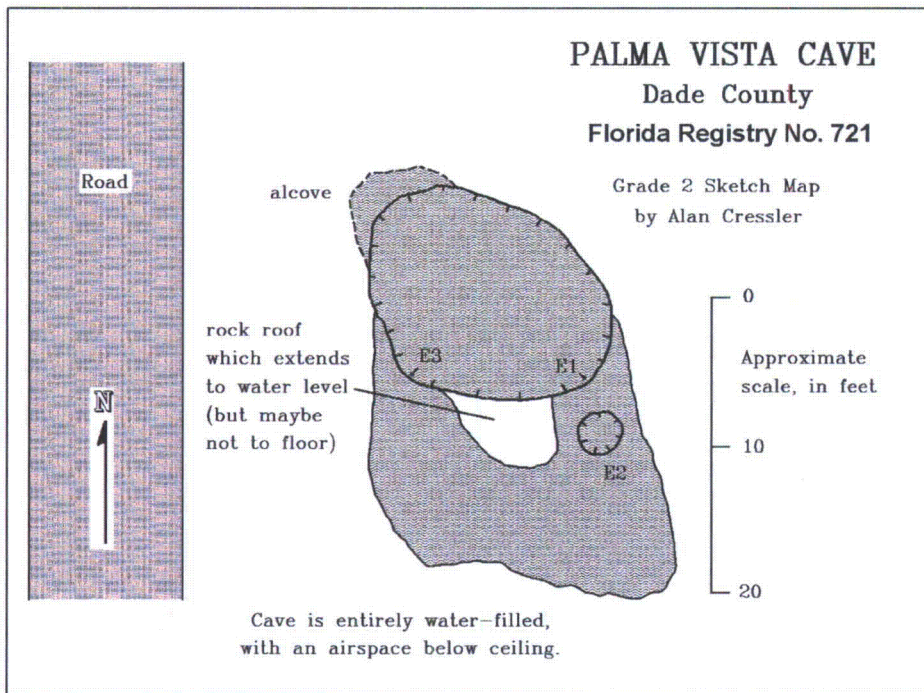


Source: Reference 954

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-355 Palma Vista Cave**

PTN RAI  
02.05.01-1



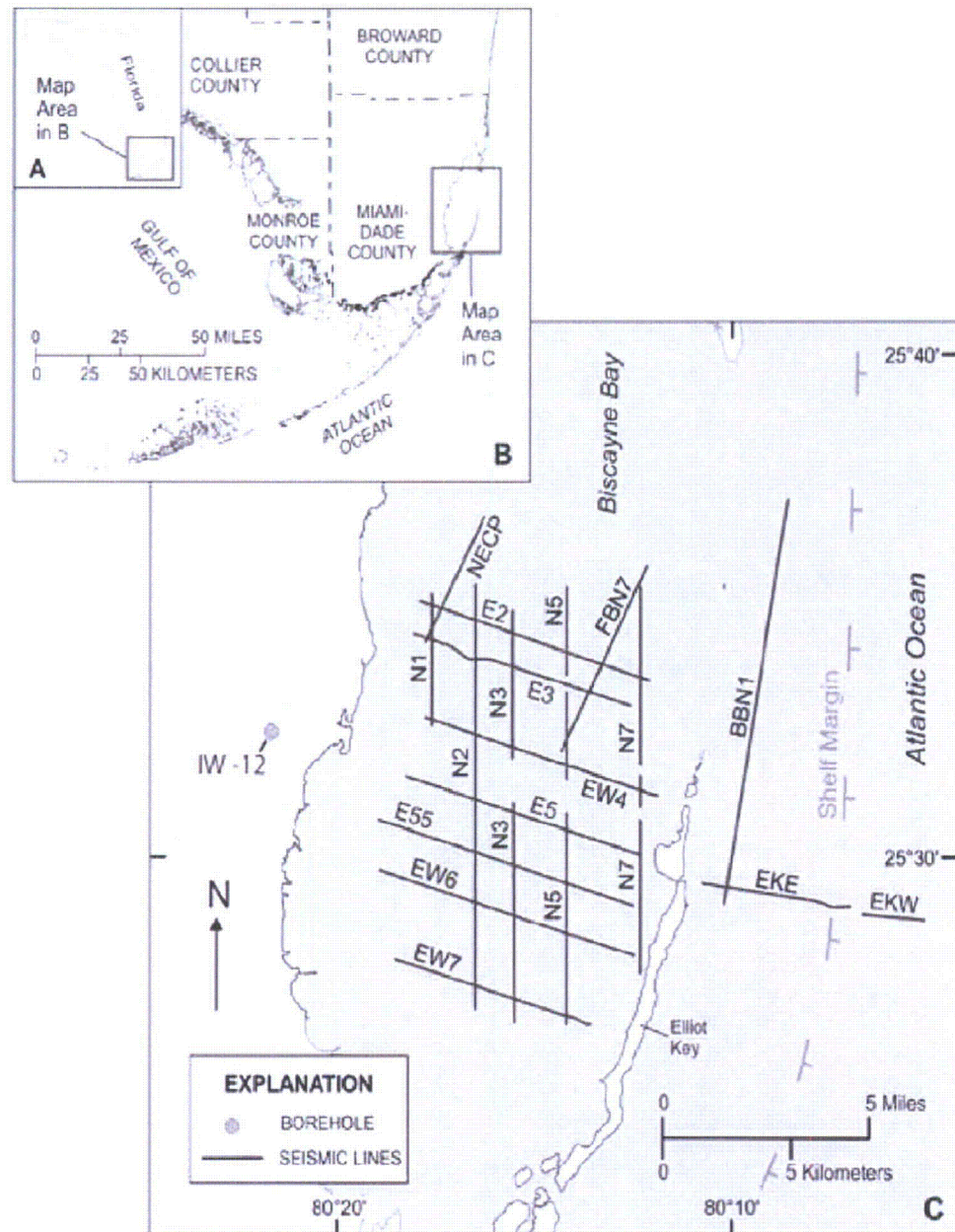
Source: Reference 955



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-356** Cunningham and Walker Study Area in Biscayne Bay, Southeast Florida

PTN RAI  
02.05.01-1



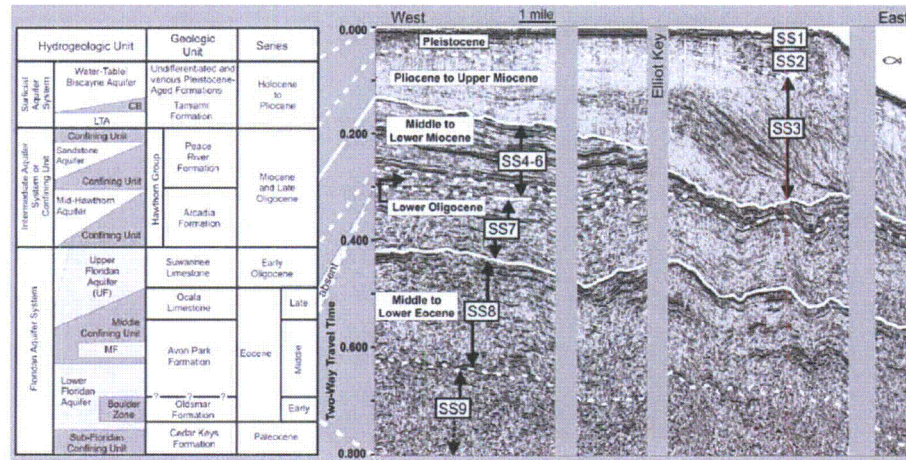
- Notes:
- (a) Location map of area delimited in B.
  - (b) Outline of study area shown in C.
  - (c) Location map of seismic profiles in Biscayne Bay.

Source: Reference 958

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-357 Correlation of Hydrogeologic and Geologic Units to Time Stratigraphic Units of Southern Florida**

PTN RAI  
02.05.01-1



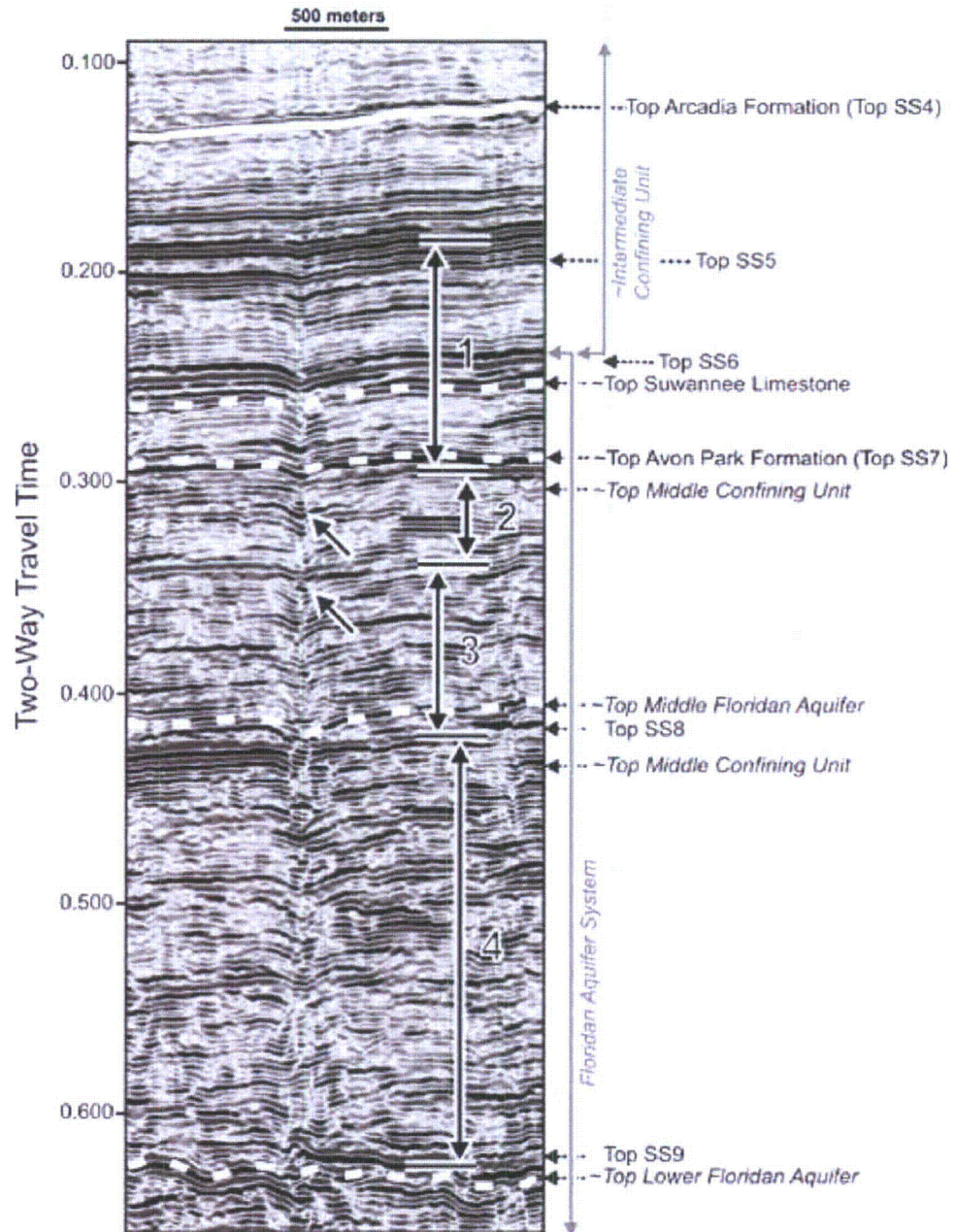
Note: Correlation of hydrogeologic and geologic units, and time stratigraphic units of southern Florida to a provisional seismic-reflection stratigraphy (SS1–SS9) of seismic profiles EW4 in Biscayne Bay, and EKW and EKE east of Elliot Key in the Atlantic Ocean (Reference 958).



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

PTN RAI  
02.05.01-1

**Figure 2.5.1-358 A Part of Seismic-Reflection Profile N1 Across Four Vertically Stacked, Narrow Zones (1–4) of Seismic Sags That Combine to Form a Single Seismic-Sag Structural System**

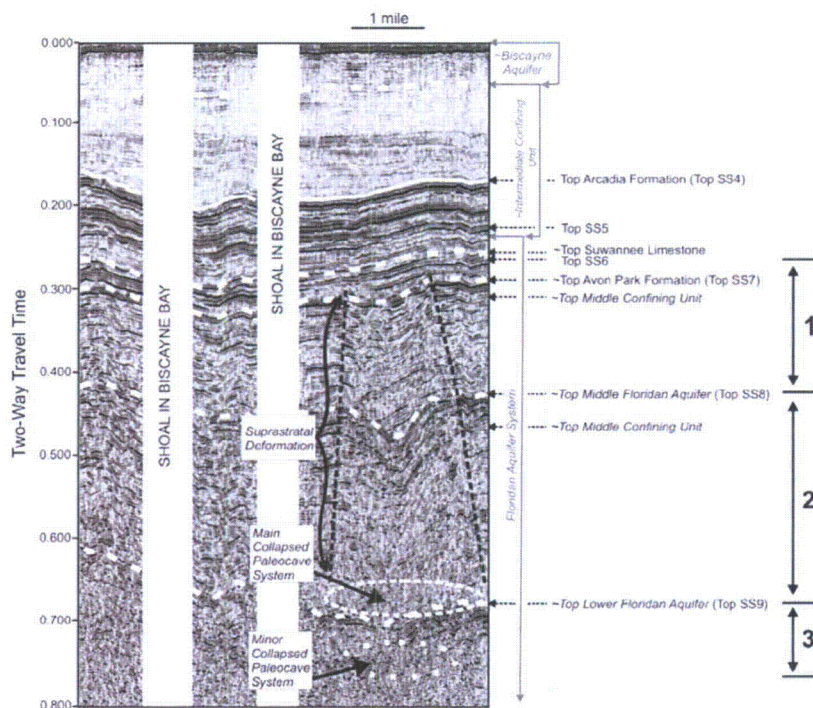


Source: Reference 958

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

PTN RAI  
02.05.01-1

**Figure 2.5.1-359 Seismic-Reflection Profile N5 Across a Vertically Stacked Arrangement of Structural Sags**



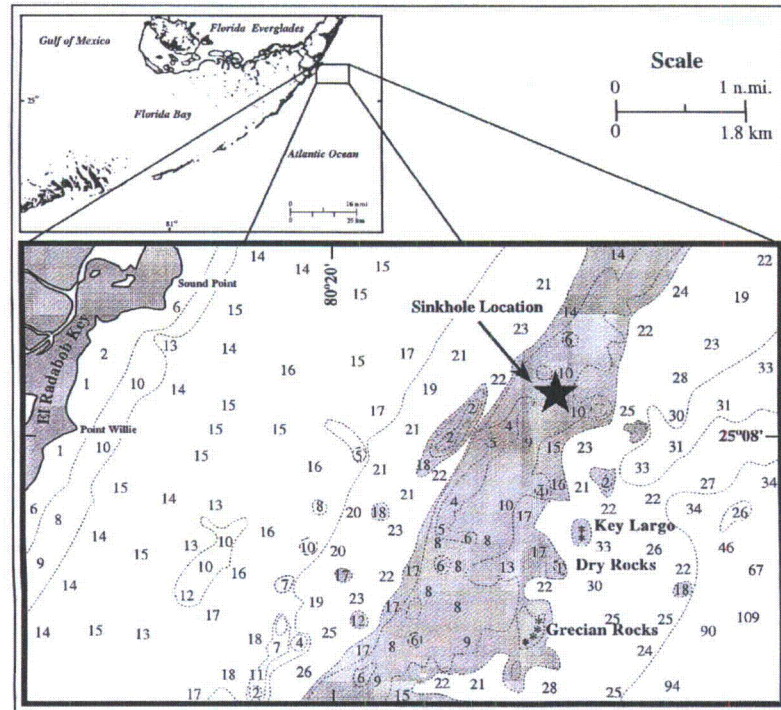
**Note:** Three zones (1–3) of sags in seismic reflections are shown with each zone of seismic sags having different sag angles. No effects of the collapse are visible above the top of zone 1 (Reference 958).



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-360 Sinkhole in the Key Largo National Marine Sanctuary  
About 1 Mile (1.8 km) From Key Largo Dry Rocks Reef**

PTN RAI  
02.05.01-1

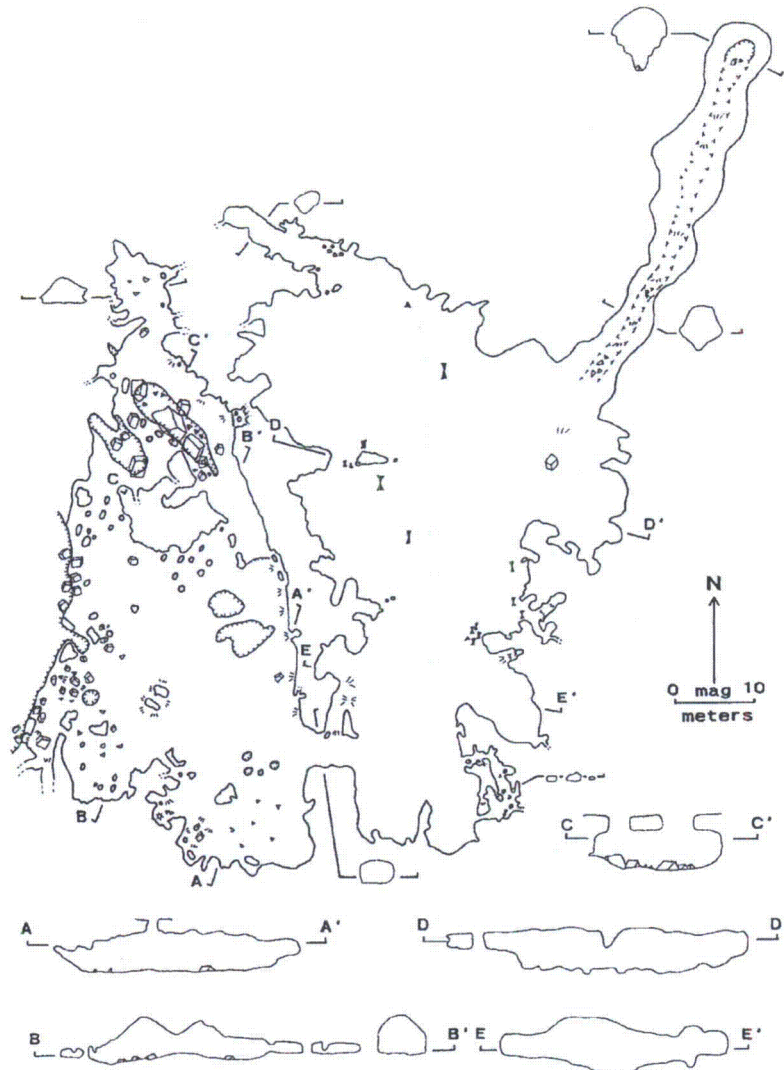


Source: Reference 959

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-361 Salt Pond Cave, Long Island, Bahamas, a Flank Margin Cave**

PTN RAI  
02.05.01-1



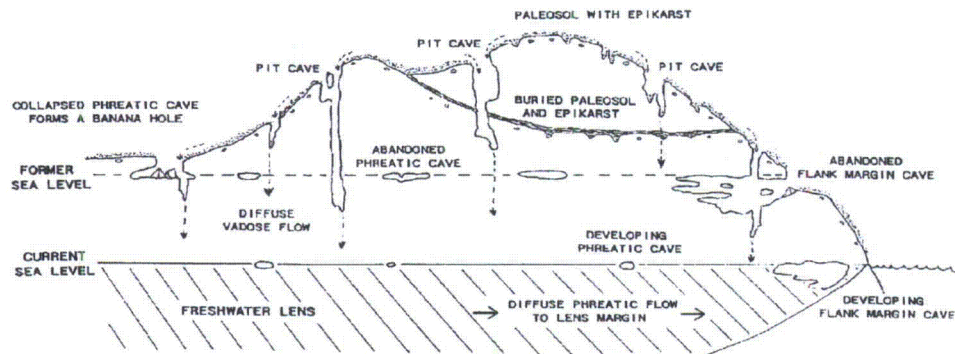
**Note:** The cave has an irregular phreatic morphology and is horizontally extensive but vertically restricted (Reference 263).



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-362 Diagrammatic Representation of the Main Dissolution Features Found on Carbonate Islands**

PTN RAI  
02.05.01-1

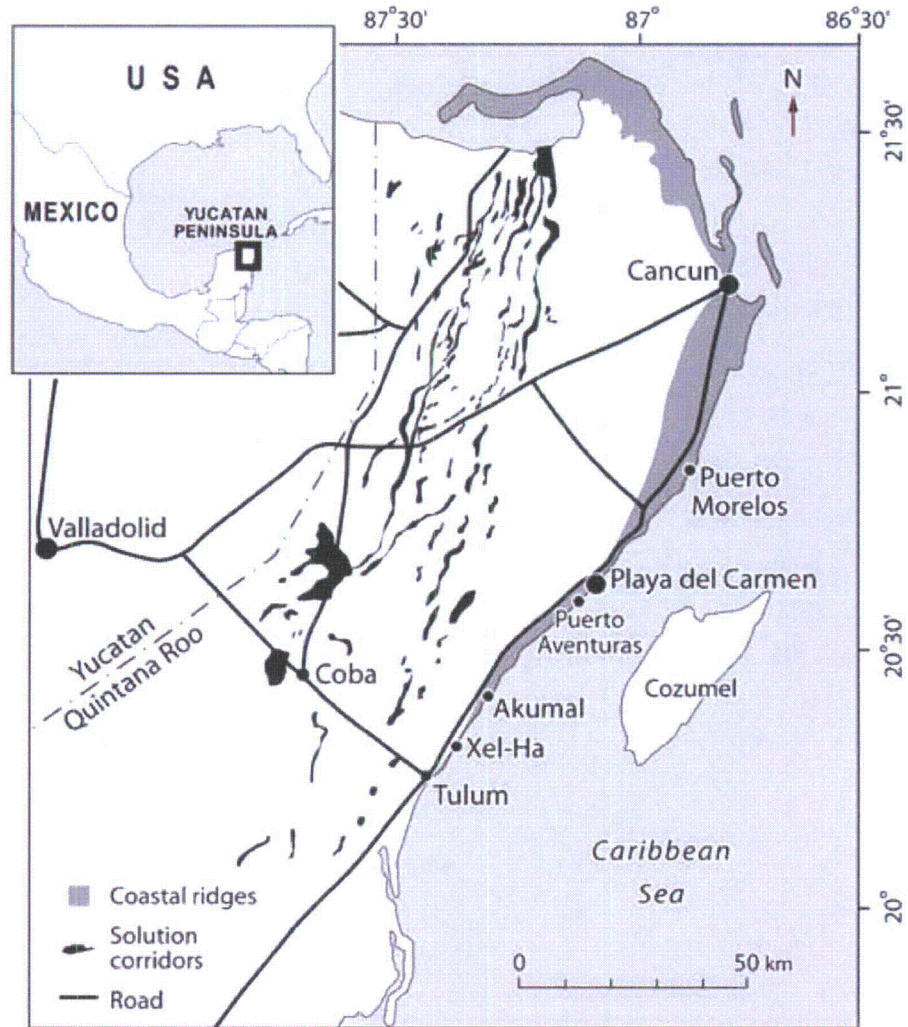


Note: The features shown are epikarst with paleosol, pit caves, banana holes, phreatic caves, and flank margin caves. Changes in sea level move the position of the karst features ([Reference 263](#)).

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-363 Location of the Quintana Roo Caves**

PTN RAI  
02.05.01-1



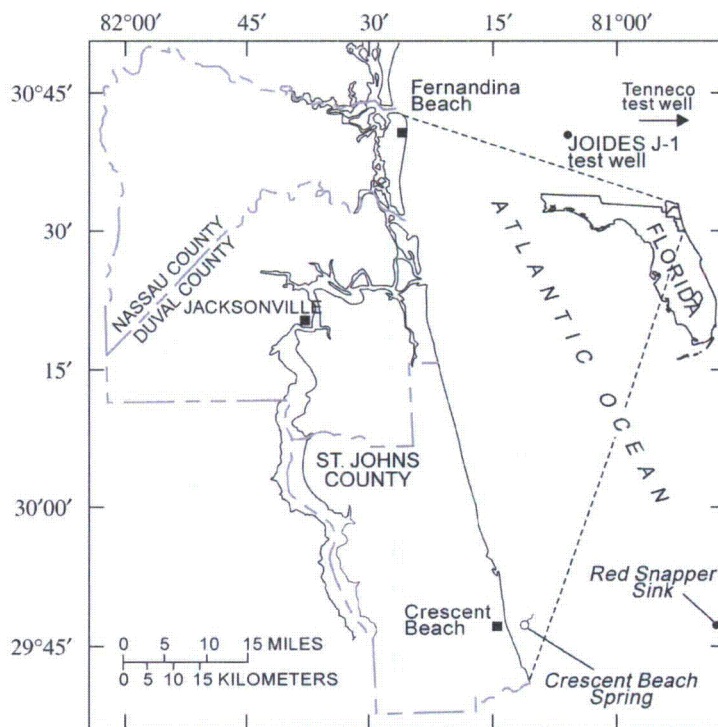
Source: Reference 965



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-364 Locations of Crescent Beach Spring and Red Snapper Sink**

PTN RAI  
02.05.01-1

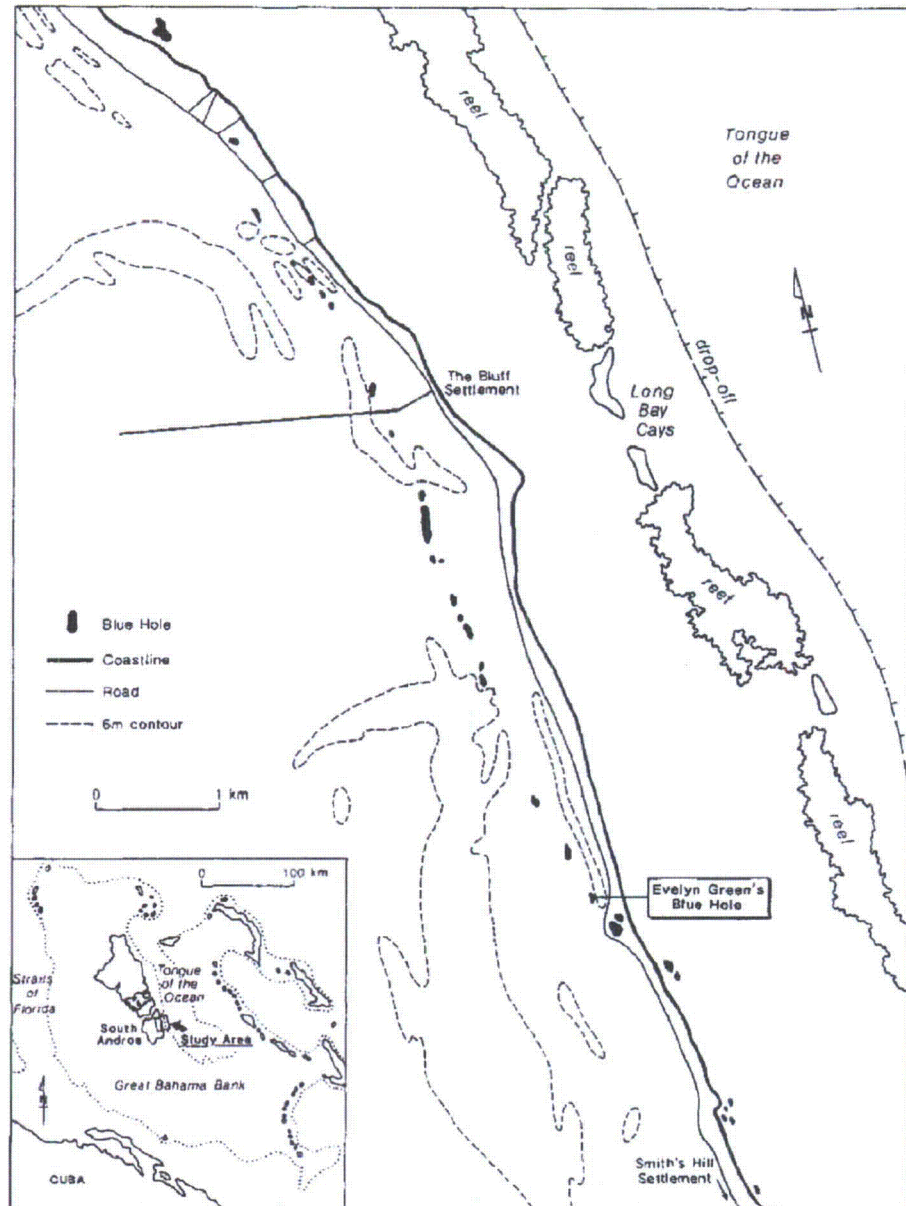


Source: Reference 966

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-365 Location Map of the Bahamas Showing a Chain of Fracture-Controlled Blue Holes on South Andros Island**

PTN RAI  
02.05.01-1



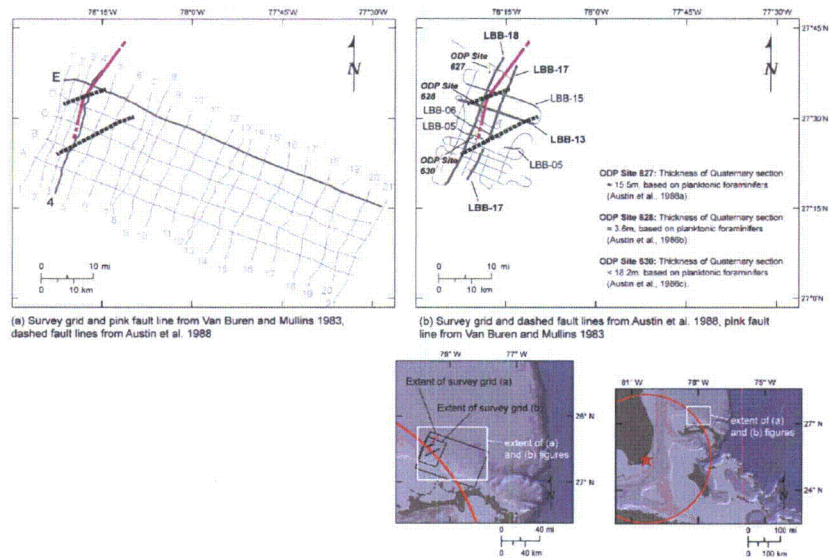
Source: Reference 950



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-366 Mapped Depictions of the Walkers Cay Fault Based on Seismic Data**

PTN RAI  
02.05.01-14

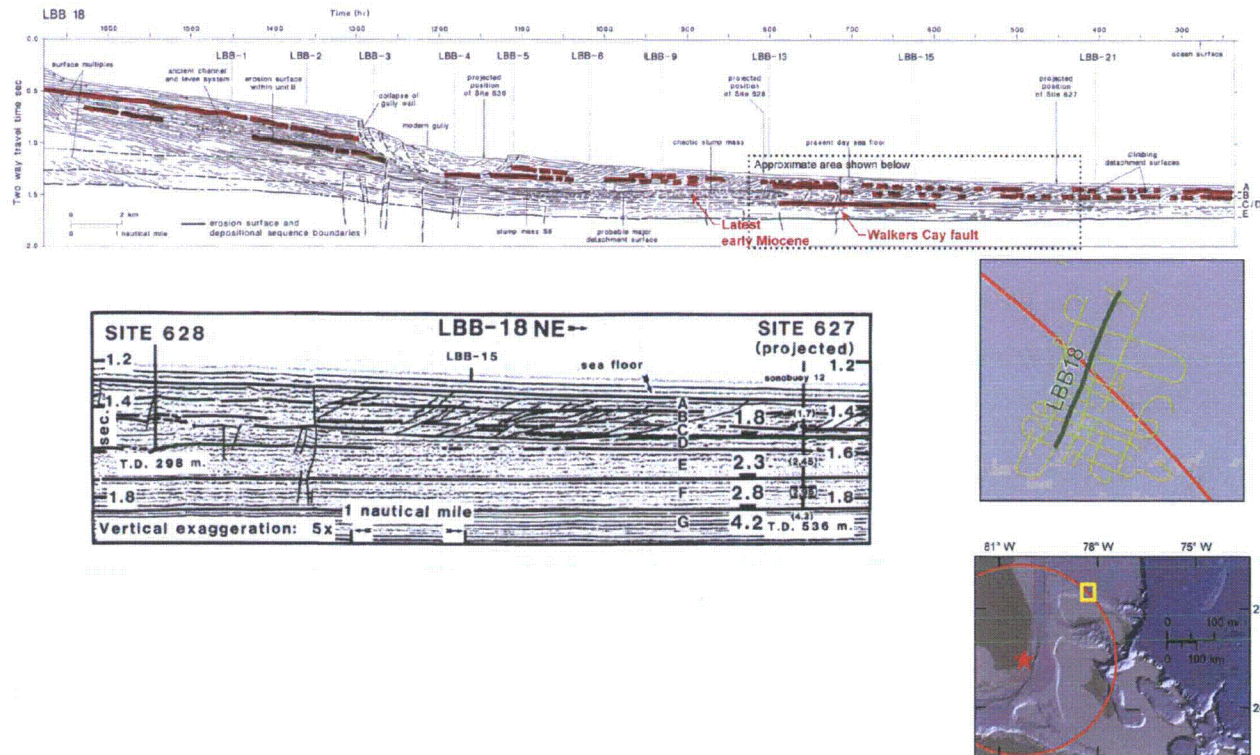


Source: References 474 and 791

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-367 Interpretation of the Walkers Cay Fault in Seismic Line LBB-18**

PTN RAI  
02.05.01-14

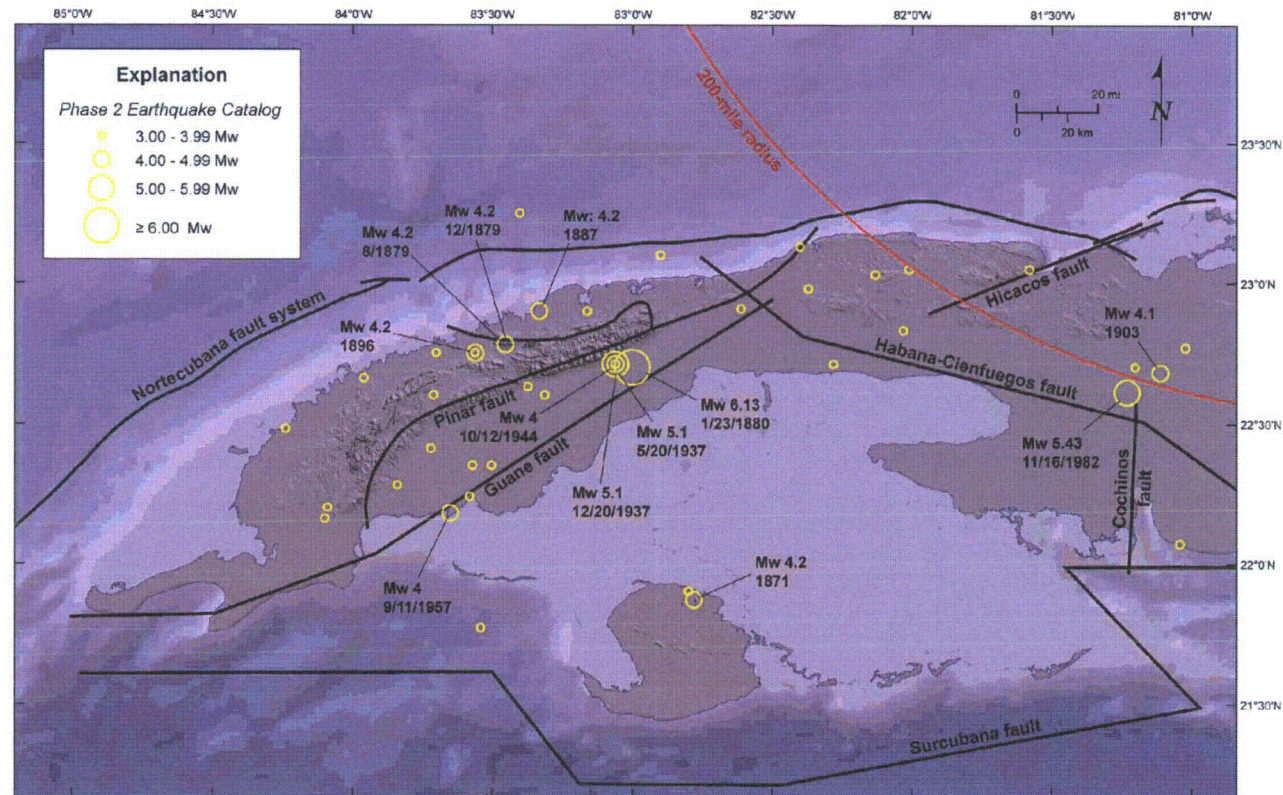


Source: References 476 and 785



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-368** Fault Map of Cuba Showing Earthquakes From the Phase 2 Earthquake Catalog (Sheet 1 of 3)



Multiple sources were used to compile this map, including References 439, 448, 492, and 494.

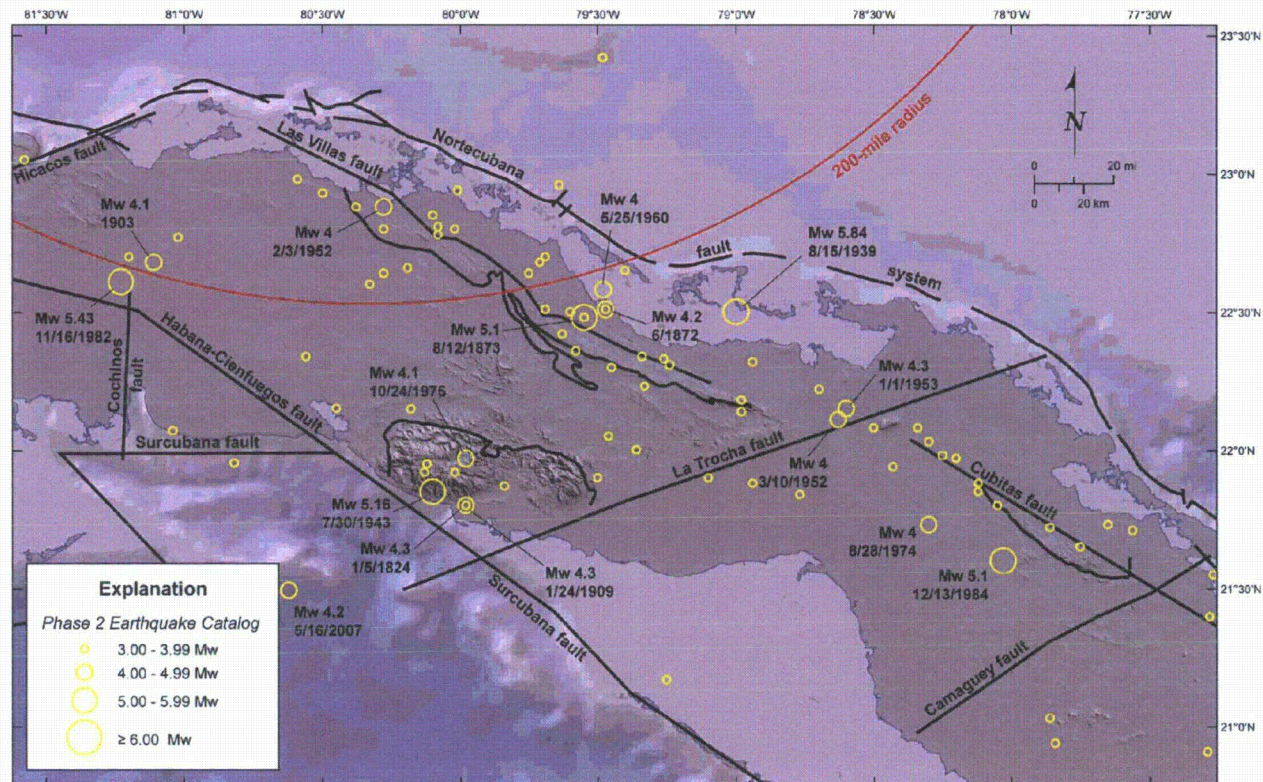
PTN RAI  
02.05.01-21  
LDP-  
CS564



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-368 Fault Map of Cuba Showing Earthquakes From the Phase 2 Earthquake Catalog (Sheet 2 of 3)**

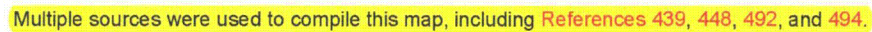
PTN RAI  
02.05.01-21  
LDP-  
CS564



Multiple sources were used to compile this map, including References 439, 448, 492, and 494.



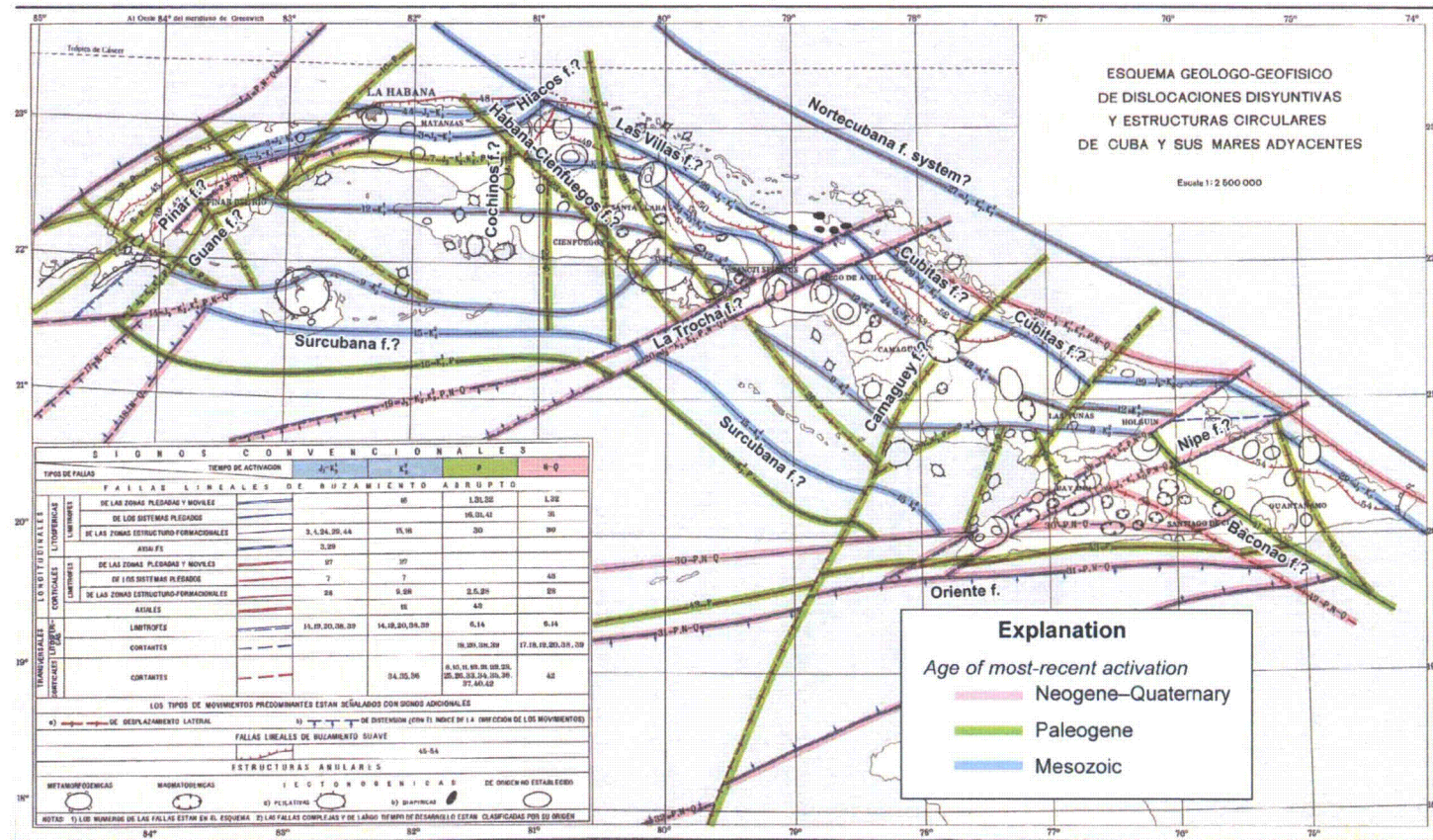
PTN RAI  
02.05.01-21  
LDP-  
CS564





Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

Figure 2.5.1-369 Map of Estimated Ages of Faults in Cuba



Note: Modified after Reference 848.

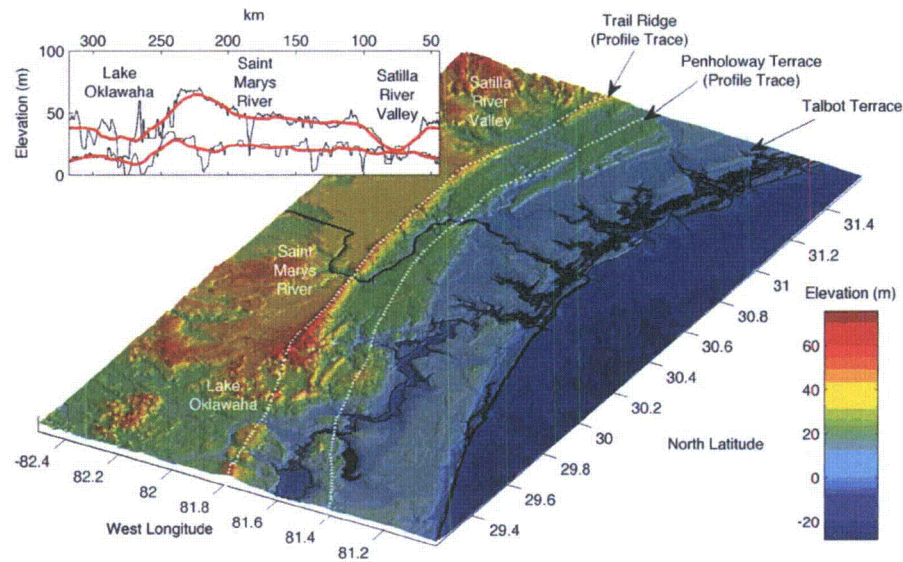
PTN RAI  
02.05.01-21



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

PTN RAI  
02.05.01-4

**Figure 2.5.1-370** Locations of the Trail Ridge, Penholoway Terrace, and Talbot Terrace in Northern Florida and Southern Georgia

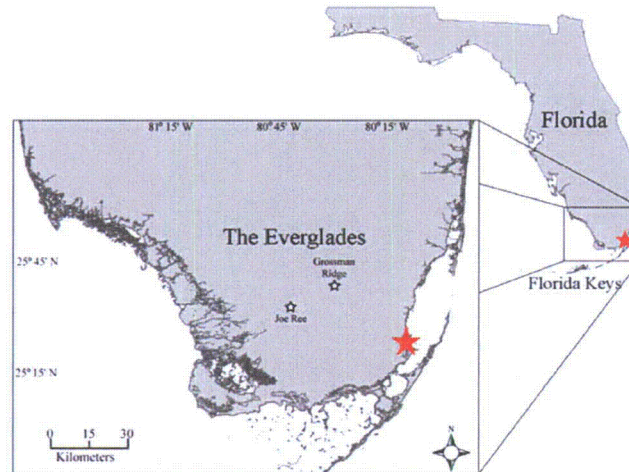


**Note:** Oblique hill shade image of northern Florida and southern Georgia showing Trail Ridge, modern shoreline, and karstified central Florida. The inset is a profile along Trail Ridge axis showing spatial variation in uplift, which agrees with spatial variation in karstification and/or lithology (Reference 927).

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-371 Joe Ree Rock Reef and Grossman Ridge Rock Reef  
Locations in South Florida in Relation to the Turkey Point Units 6 & 7 Site**

PTN RAI  
02.05.01-4



Source: Modified from Reference 928



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-372 Correlation of Marine Sequences of the Fort Thompson Formation and Miami Limestone**

PTN RAI  
02.05.01-4

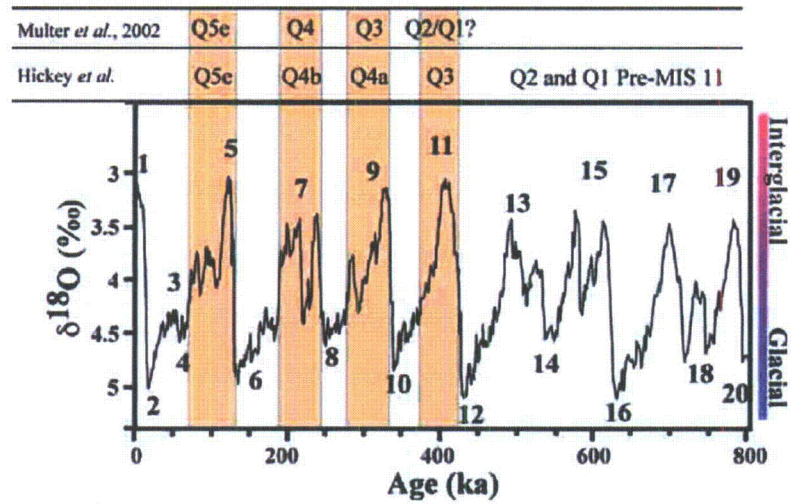
Epoch	Pleistocene		Formation	Hoffmeister & Multer (1964, 1968)	Perkins (1977)	Harrison <i>et al.</i> (1984)	Multer <i>et al.</i> (2002)	Cunningham <i>et al.</i> (2006)	Everglades Rock Reefs (this study)
	Fort Thompson Formation	Miami Limestone	Key Largo Limestone		Q5	Q5	Q5e	HFC5e	Q5e
				Q4	Q4	Q4b	Q4b	HFC4	Q4b
					Q4a	Q4a	Q4a		Q4a
				Q3	Q3	Q3	Q3	HFC3b	Q3a
								HFC3a	
				Q2	Q2	Q2	Q2	HFC2h	Q2d
								HFC2g	Q2c
								HFC2f	Q2b
								HFC2e	Q2a
								HFC2d	
							HFC2c	Q1b	
							HFC2b		
							HFC2a	Q1a	

Source: Reference 928

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-373** Interpreted Correlation of South Florida Pleistocene Sea Level Record

PTN RAI  
02.05.01-4



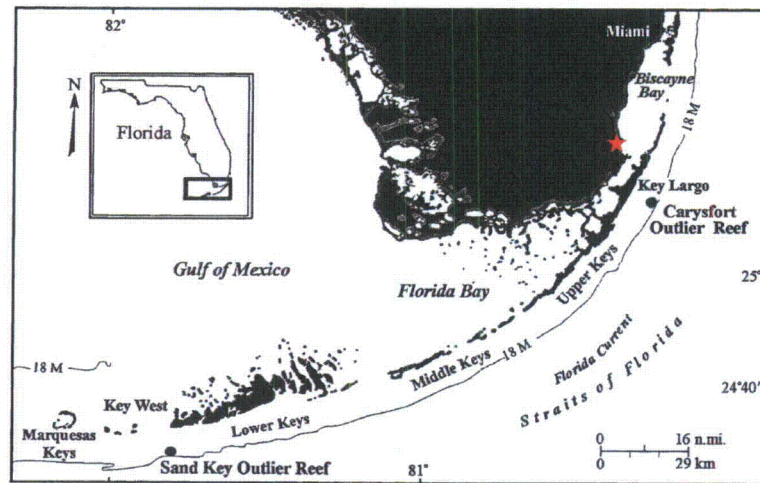
Source: Reference 928



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-374 Carysfort Outlier Reef and Sand Key Outlier Reef  
Locations in South Florida in Relation to the Turkey Point Units 6 & 7 Site**

PTN RAI  
02.05.01-4

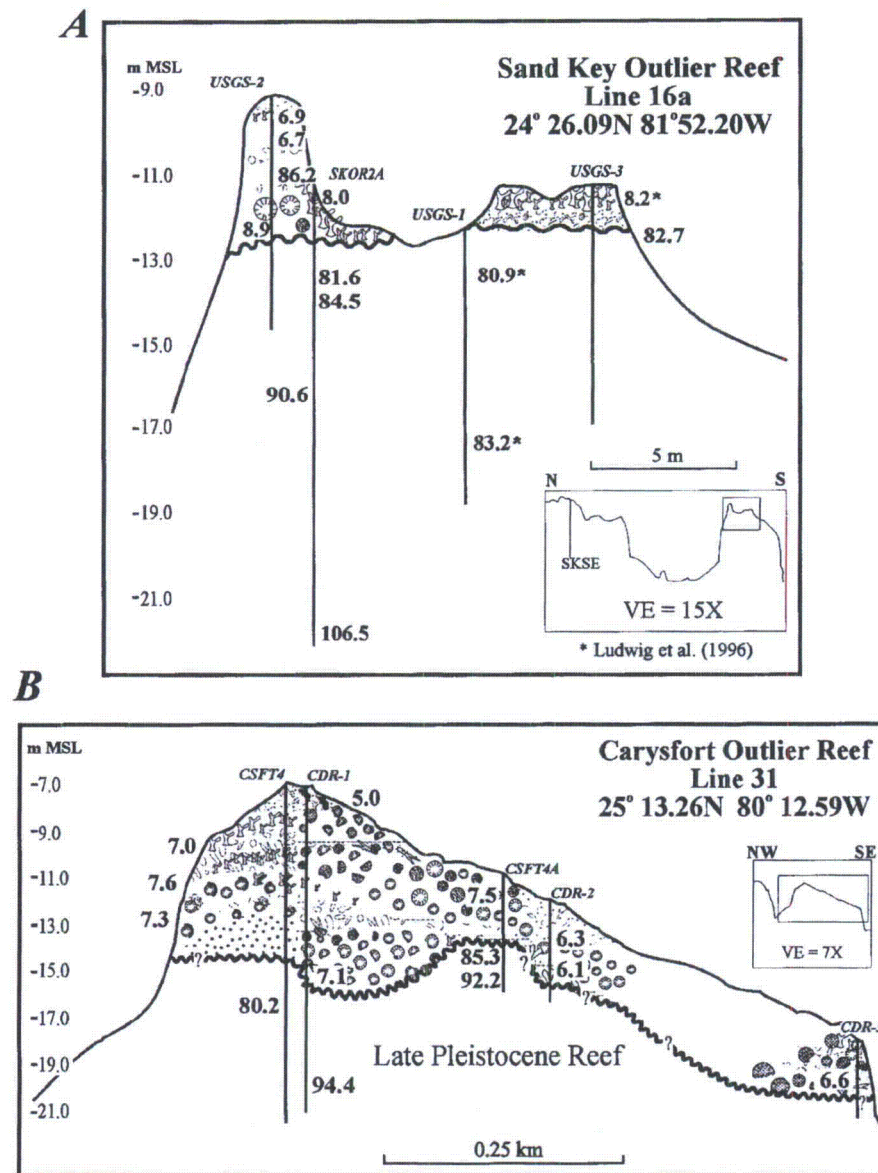


Source: Modified from Reference 931

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

PTN RAI  
02.05.01-4

**Figure 2.5.1-375 Schematic Cross Sections of the Sand Key Outlier Reef and the Carysfort Outlier Reef**



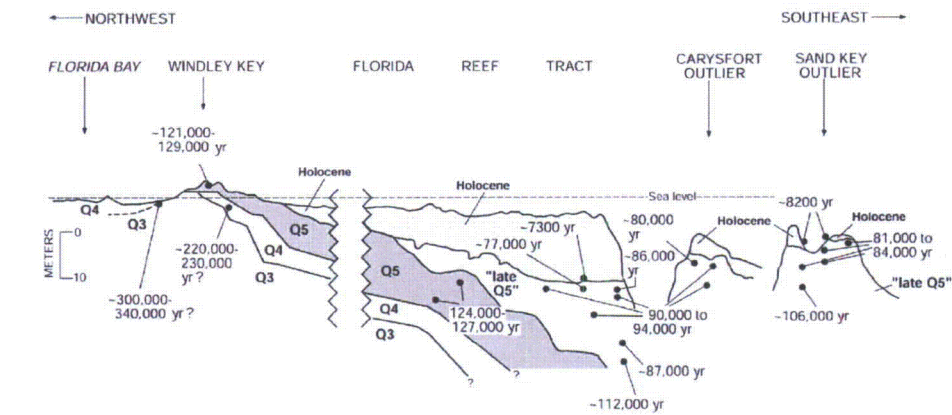
**Note:** Interpreted cross sections for Sand Key (main outlier reef) and Carysfort Outlier Reef. All dates were determined via the high-precision TIMS U-Th technique. Unconformities were placed using the U-Th dates and stable isotope data differentiating marine units from subaerial exposure horizons (Reference 932). All Pleistocene U-Th dates indicate in situ post-Substage 5e reef growth. A: Sand Key Cross Section — One Pleistocene date of 86.2 ka in core SKOR2A is considered to be reworked into the associated rubble-pinnacle feature. B: Carysfort Cross Section — All cores are shown. An *A. palmata* reef crest occurs in core CSFT4A (Reference 932).



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-376 Composite Cross Section of the Florida Keys from Northwest to Southeast and U-Series Ages of Corals From Quaternary Reefs**

PTN RAI  
02.05.01-4

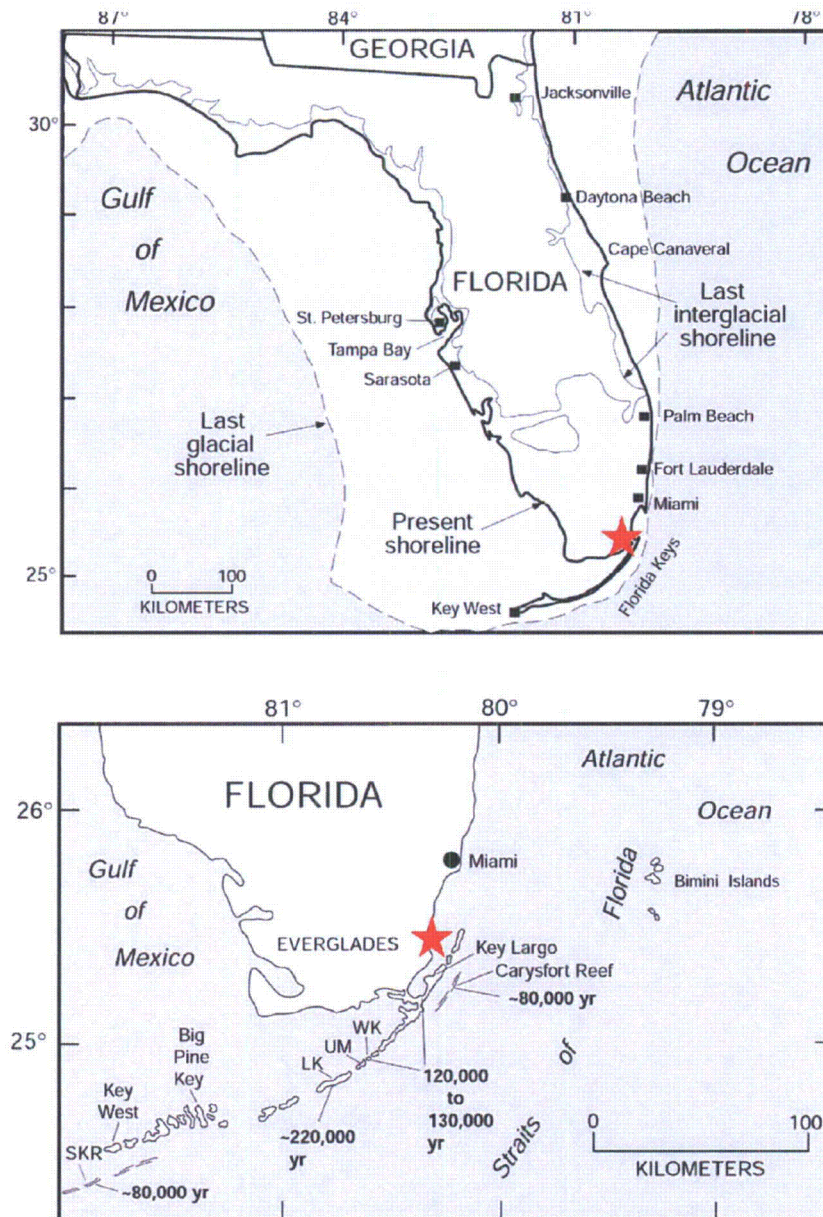


Source: Reference 933

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-377 State of Florida Showing Modern Last Glacial and Last Interglacial Shorelines and Uranium Series Age Dates of Pleistocene Reefs in South Florida in Relation to the Turkey Point Units 6 & 7 Site**

PTN RAI  
02.05.01-4



Notes:

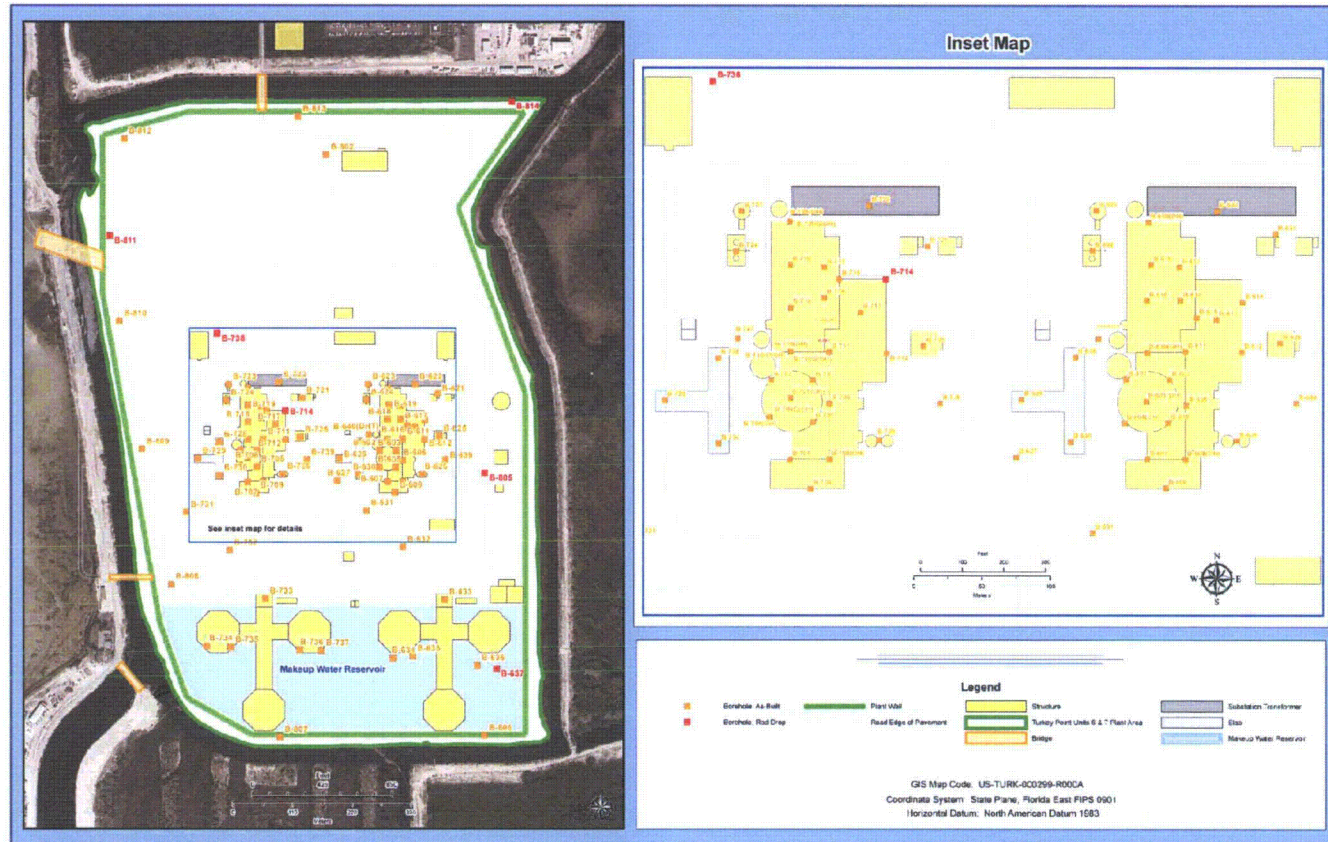
- (a) Upper: Map of the state of Florida showing the modern, last glacial (~21,000 years), and last interglacial (~120,000 years) shorelines.
- (b) Lower: Detail of southern Florida, including the Florida Keys and U-series ages of emergent or shallow-submerged Pleistocene reefs.
- (c) Abbreviations: WK—Windley Key, UM—Upper Matecumbe Key, LK—Long Key, SKR—Sand Key Reef (Reference 933).



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-378** Locations of Borings With Rod Drops at the Turkey Point Units 6 & 7

PTN RAI  
03.08.05-1

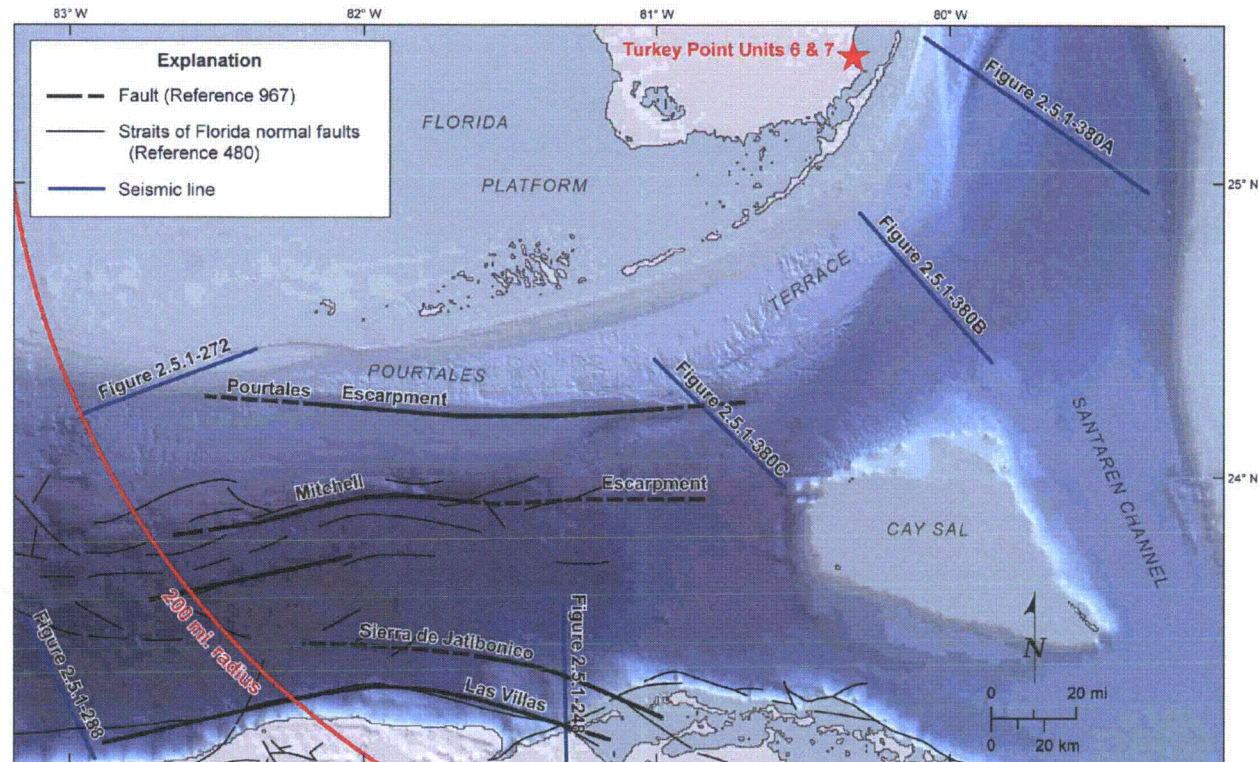


Source: Reference 708

Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-379 Map of Selected Seismic Lines in the Straits of Florida**

PTN RAI  
02.05.01-16

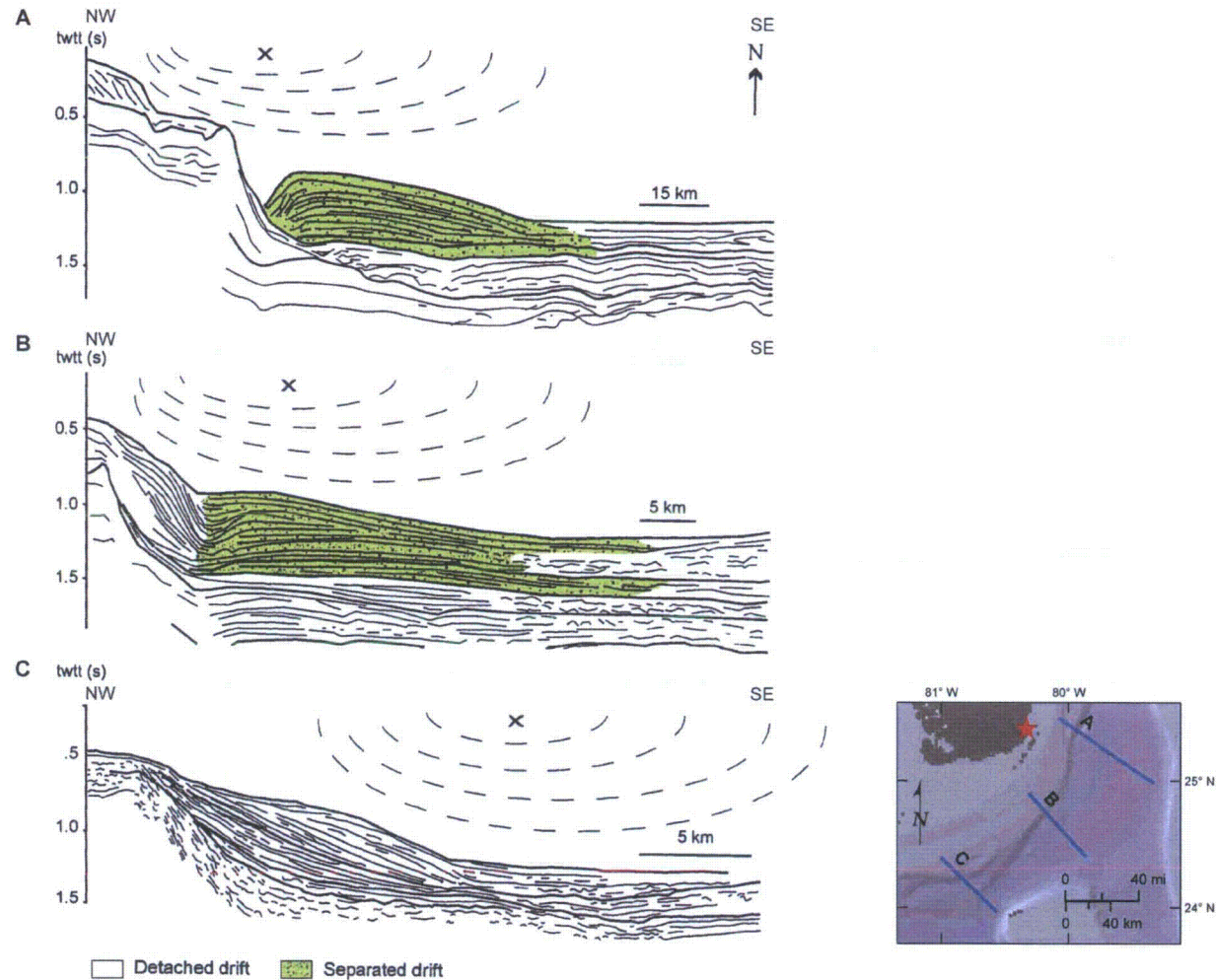




Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-380 Profiles Across the Miami/Pourtales Escarpment Illustrating the Variation in Geomorphology and Stratigraphy**

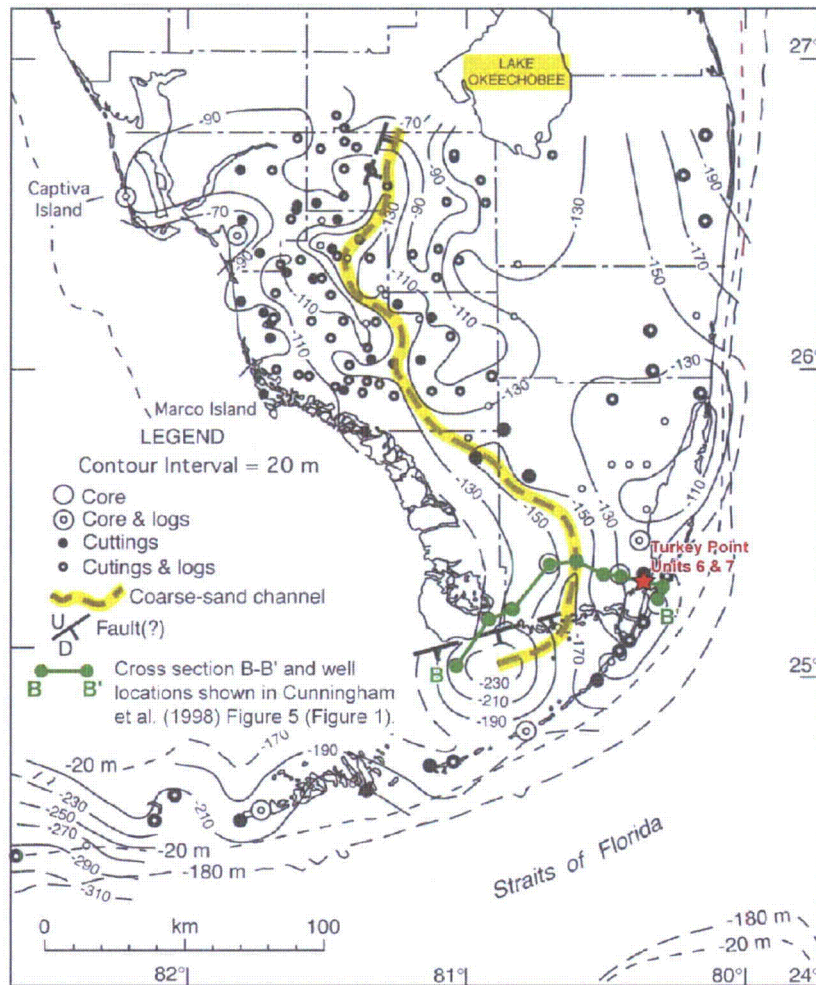
PTN RAI  
02.05.01-16



Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-381 Structure Contour Map of the Top of the Oligocene-Miocene Arcadia Formation**

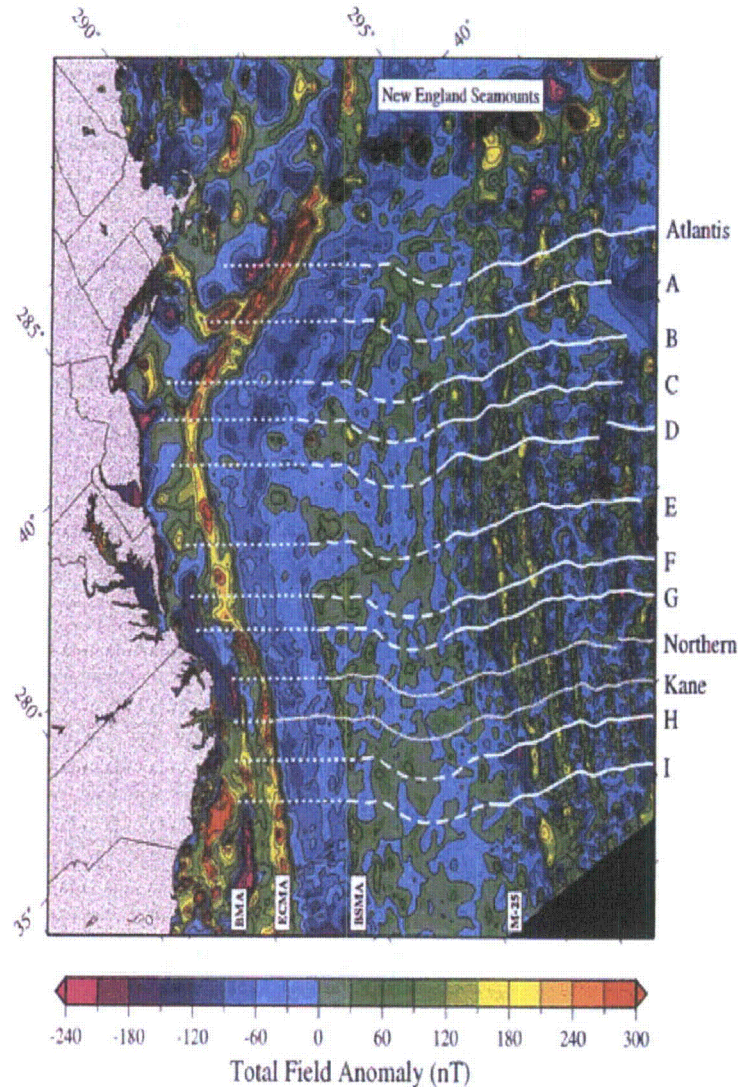
PTN RAI  
02.05.01-12





Turkey Point Units 6 & 7  
COL Application  
Part 2 — FSAR

**Figure 2.5.1-382 Total Field Magnetic Anomaly From the Geological Survey of Canada**



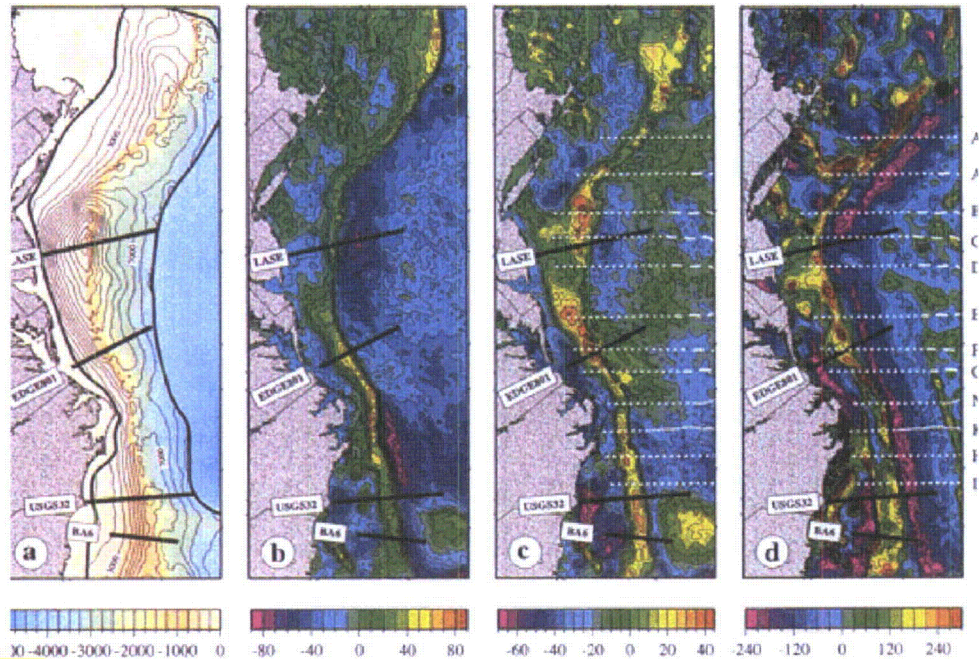
**Note:** Total field magnetic anomaly from the Geological Survey of Canada modified in Behn and Lin, 2000. Areas without adequate data control are masked in black. The segmented magnetic high running parallel to the margin is the ECMA. Solid gray lines show the location of the Kane and Northern fracture zones, white lines show the location of the offset zone traces identified in Behn and Lin (Reference 972), solid lines represent areas where the offset zone traces are constrained by offsets in magnetic lineations; dashed lines are used where the traces are primarily constrained and the dotted lines are used to represent the high uncertainty in the location of the offset zone traces between the BSMA and the East Coast margin. The right hand margin labels are major offset zones (Atlantic, Kane, Northern, and A-I).

LDP-  
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**Figure 2.5.1-383 Shaded Bathymetry of the U.S. East Coast, Combining NGDC Ship Track Data and ETOPO5 Digital Bathymetry Data**



**Notes:**

- (a) Shaded bathymetry of the U.S. East Coast, combining National Geophysical Data Center (NGDC) ship track data and ETOPO5 (Earth Topography 5-minute) digital bathymetry data. Light black contour lines show sediment thickness from USGS seismic reflection grids and thick black lines show the extent of the USGS data coverage.
- (b) Free-air gravity satellite gravity map.
- (c) Isostatic gravity anomaly map.
- (d) Reduced-to-the-pole (R-T-P) magnetic anomaly along the East Coast margin. LASE (Large Aperture Seismic Experiment), EDGE-801, USGS32 and BA-6 are seismic transect lines.

Source: Reference 972

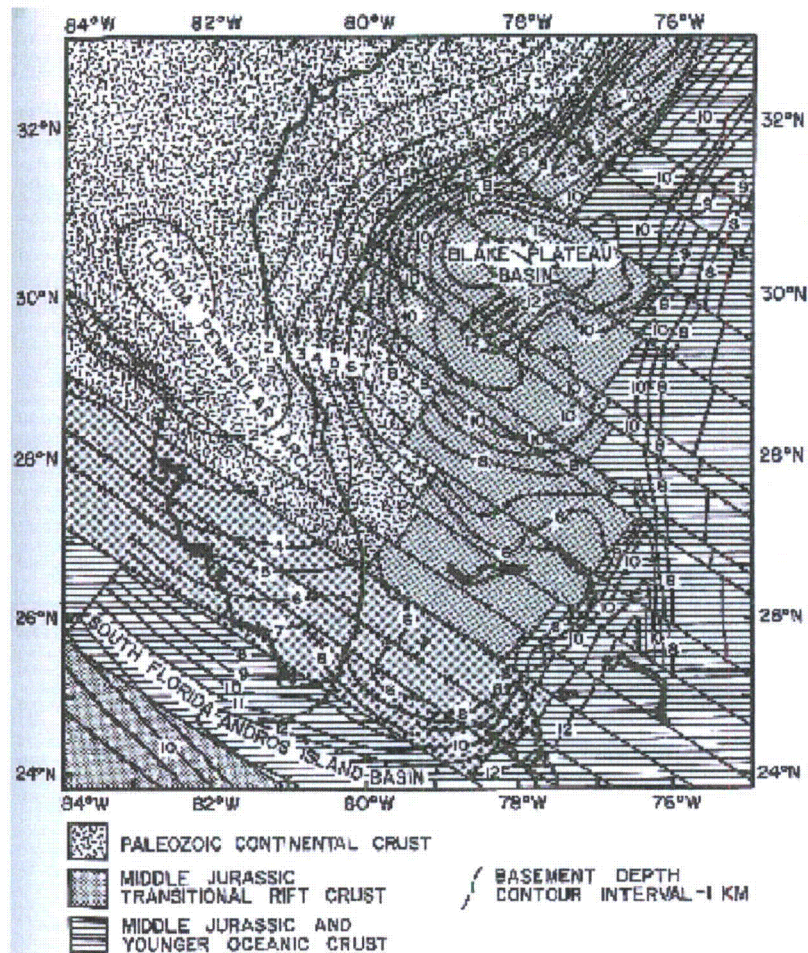
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**Figure 2.5.1-384 Basement Map of the Florida-Northern Bahamas Region**

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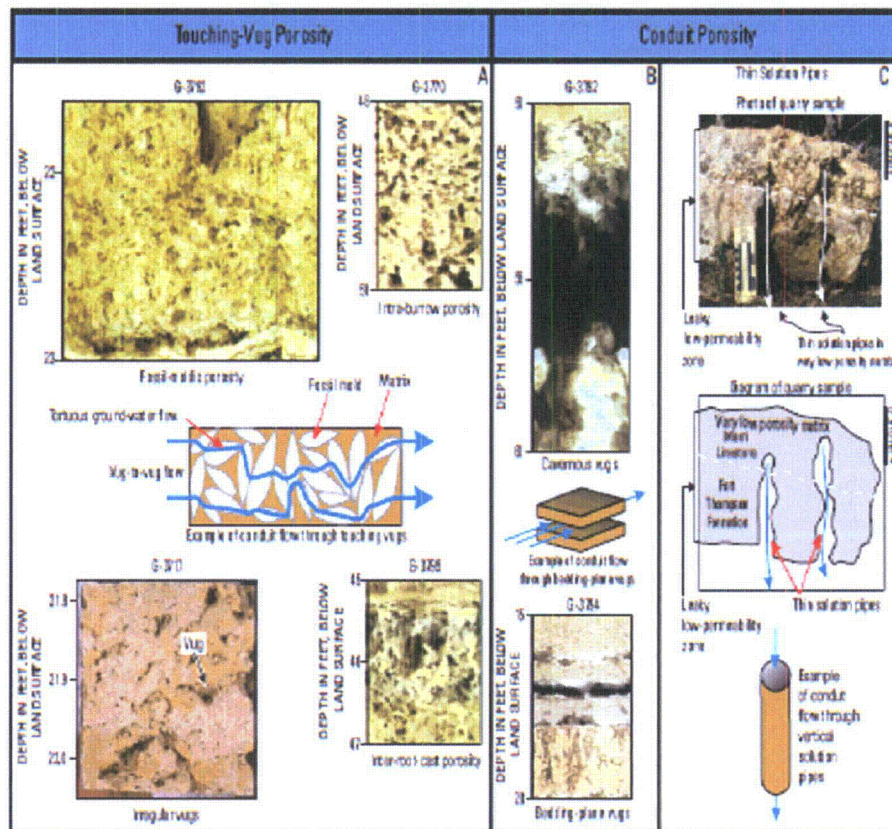
Note: Basement map of the Florida-northern Bahamas region showing depth in kilometers and basement type (continental, transitional, or oceanic with approximate age ranges).

Source: Modified from Reference 307

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**Figure 2.5.1-385 Relation Between Touching-Vug Porosity and Conduit Porosity for the Fort Thompson Formation and Miami Limestone of the Biscayne Aquifer in Cunningham et al. Study Area**

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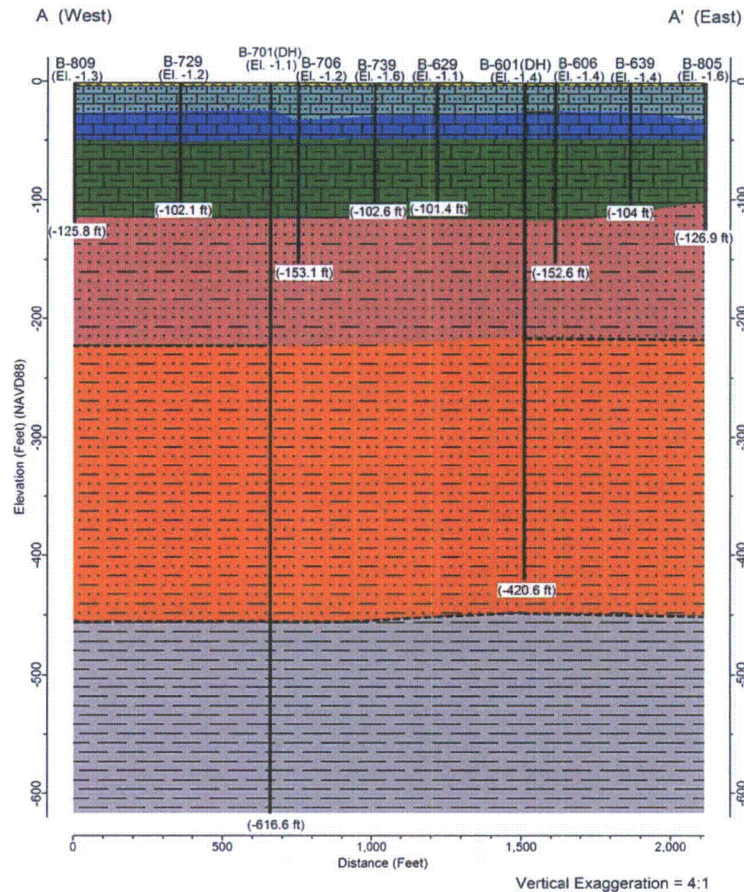
Source: Modified from Reference 404



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**Figure 2.5.1-386 Cross-Section A-A' (Vertical Exaggeration = 4:1)**  
This figure appears in Appendix 2.5AA as Figure 2.5AA-215

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Stratigraphy	
	Muck/Peat
	Miami Limestone
	Key Largo Limestone
	Fort Thompson Fm.
	Tamiami Fm.
	Peace River Fm.
	Arcadia Fm.

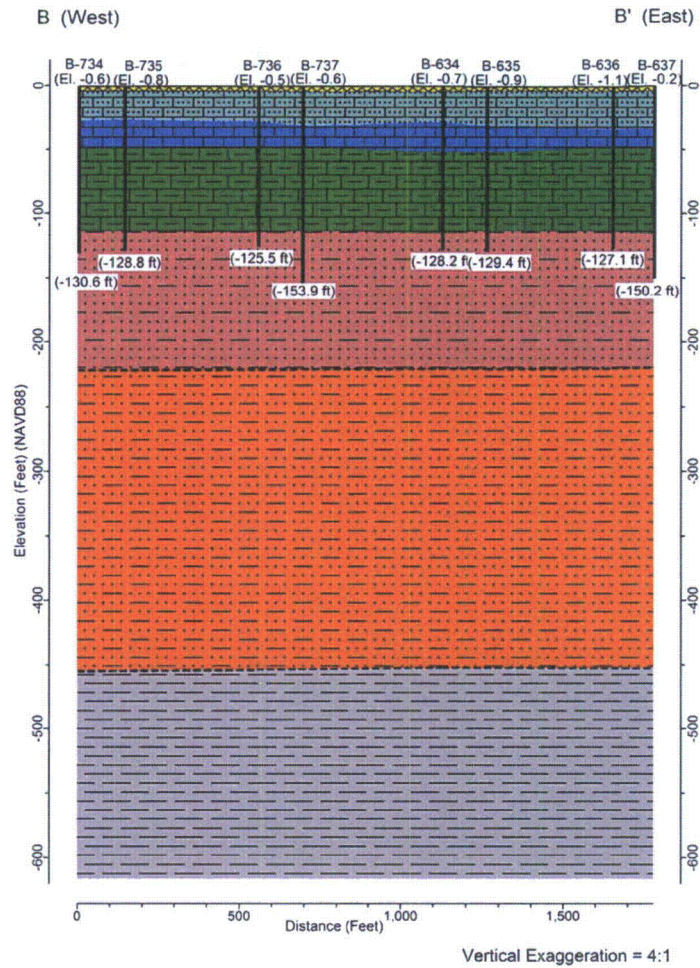
**Notes**

- Stratigraphic contacts are approximate and interpolated from the borings. The dashed line is an extrapolated stratigraphic contact.
- Subsurface data have been obtained only at the actual boring locations. Actual stratification between the borings may differ.
- Elevations (ft) are noted at the base of each boring.

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**Figure 2.5.1-387 Cross-Section B-B' (Vertical Exaggeration = 4:1)**  
This figure appears in Appendix 2.5AA as Figure 2.5AA-216

PTN RAI  
02.05.01-17



Stratigraphy	
	Muck/Peat
	Miami Limestone
	Key Largo Limestone
	Fort Thompson Fm.
	Tamiami Fm.
	Peace River Fm.
	Arcadia Fm.

Notes.

----- Stratigraphic contacts are approximate and interpolated from the borings. The dashed line is an extrapolated stratigraphic contact.

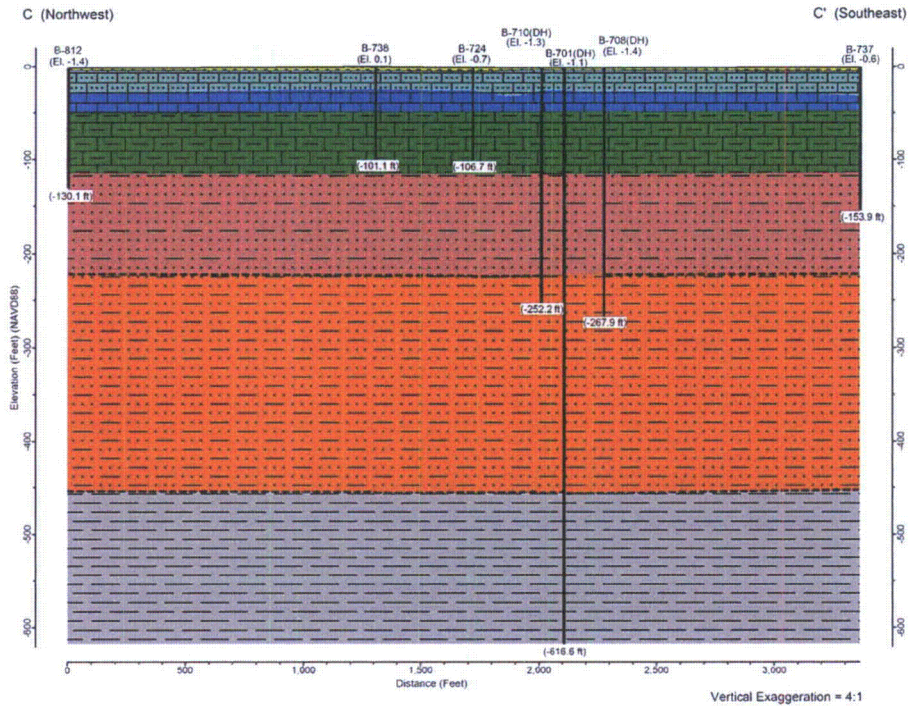
Subsurface data have been obtained only at the actual boring locations. Actual stratification between the borings may differ. Elevations (ft) are noted at the base of each boring.



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**Figure 2.5.1-388 Cross-Section C-C' (Vertical Exaggeration = 4:1)**  
This figure appears in Appendix 2.5AA as Figure 2.5AA-217

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Stratigraphy	
	Muck/Peat
	Miami Limestone
	Key Largo Limestone
	Fort Thompson Fm.
	Tamiami Fm.
	Peace River Fm.
	Arcadia Fm.

Notes:

- Stratigraphic contacts are approximate and interpreted from the borings. The dashed line is extrapolated from select borings.
- Subsurface data have been obtained only at the actual boring locations.
- Actual stratification between the borings may differ.
- Elevations (ft) are noted at the base of the borings.

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**Figure 2.5.1-389 Cross-Section D-D' (Vertical Exaggeration = 4:1)**  
This figure appears in Appendix 2.5AA as Figure 2.5AA-201

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