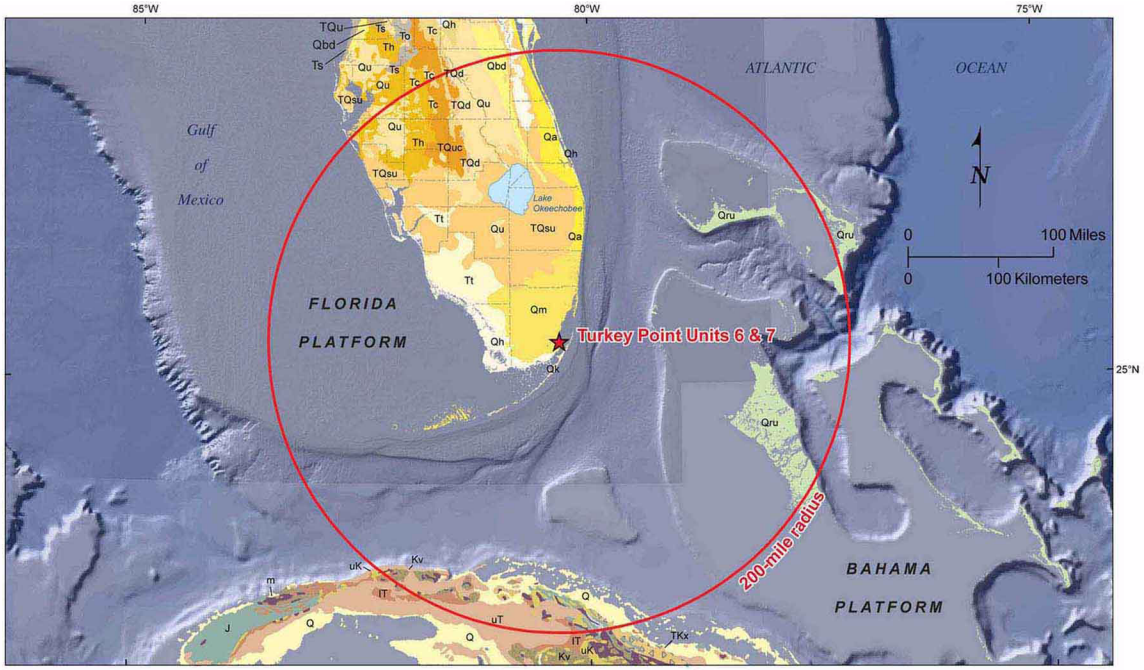
PTN COL 2.5-1

Figure 2.5.1-201 Site Region Geologic Map (Sheet 1 of 2)



Base sources: References 216 and 309

PTN COL 2.5-1

Figure 2.5.1-201 Site Region Geologic Map Legend, Florida Geology (Sheet 2 of 2)

Explanation

Florida Geologic Units

QUATERNARY

- Qh — Holocene sediments
- Qa — Anastasia Formation
- Qk — Key Largo Limestone
- Qm — Miami Limestone
- Qdb — Beach Ridge and Dune deposits
- Qu — Undifferentiated sediments

LATE TERTIARY/ EARLY QUATERNARY

- TQsu — Shelly sediments (includes Fort Thompson, Bermont, and Caloostahatchee Formations)
- TQuc — Reworked Cypresshead sediments
- TQd — Dune deposits
- TQu — Undifferentiated sediments

TERTIARY

- Tc — Cypresshead Formation
- Tt — Tamiami Formation
- Th — Hawthorn Group, undivided
- Ts — Suwannee Limestone
- To — Ocala Limestone

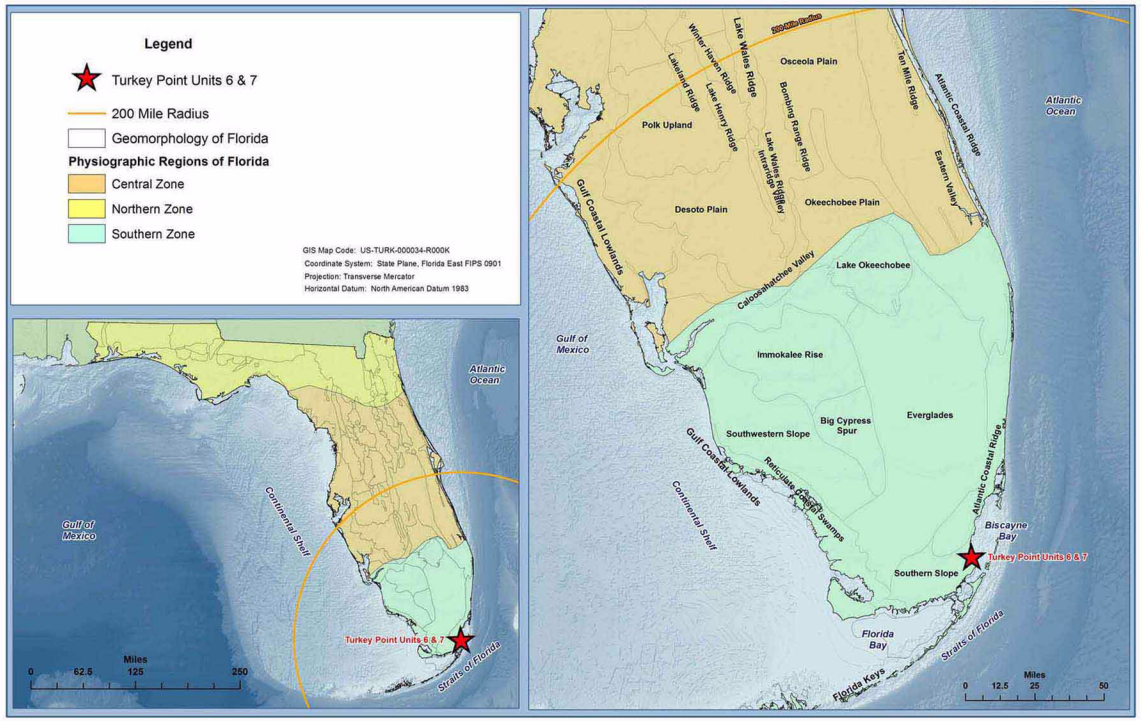
Other Geologic Units

- Q — Quaternary alluvium
- Qru — Quaternary reef deposits, undivided
- uT — Post-Eocene marine strata
- lT — Eocene and/or Paleocene marine strata
- TKx — Tertiary and Cretaceous complex of deformed sedimentary rocks
- uK — Upper Cretaceous marine strata
- Kv — Cretaceous volcanic rocks
- Ki — Cretaceous plutons, mostly intermediate to silicic
- J — Jurassic marine and continental strata
- Mm — Mesozoic metamorphic rocks
- m — Mafic and ultramafic rocks

Note:Florida geologic information from References 218 and 339, and Cuba Geologic Units from Reference 257

PTN COL 2.5-1

Figure 2.5.1-202 Coastal Plain Physiographic Region: Florida



Modified from References 325 and 357
Note: Florida is within the Atlantic Coastal Plain physiographic province.

PTN COL 2.5-1

Figure 2.5.1-203 Paleozoic — Mesozoic Stratigraphy

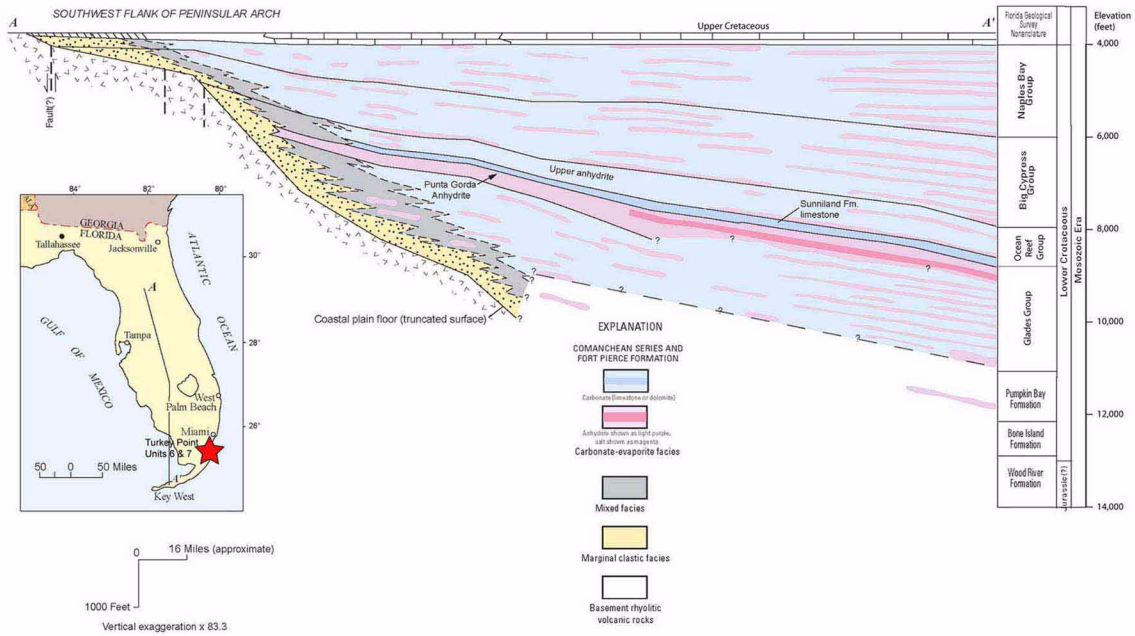
ERA	SYSTEM	SERIES	STRATIGRAPHIC UNIT		LITHOLOGY	APPROXIMATE THICKNESS (ft)
MESOZOIC	CRETACEOUS	UPPER	Pine Key Formation		chalk, ls, dol	3000
		LOWER	Naples Bay Group	Corkscrew Swamp Fm	ls with anhyd & dol	450
				Rookery Bay Fm		500
				Panther Camp Fm		350
			Big Cypress Group	Dollar Bay Fm	ls w. dol & anhyd	450-620
				Gordon Pass Fm	anhyd w. ls & dol	475
				Marco Junction Fm	ls w. dol & anhyd	350
			Ocean Reef Group	Rattlesnake Hammock Fm	anhyd w. ls & dol	600
				Lake Trafford Fm	ls with anhyd, dol	150
				Sunniland Fm	ls with dol & anhyd	200-300
			Glades Group	Punta Gorda Anhydrite	salt with anhyd & dol	800
				Lehigh Acres Formation	anhyd, ls, dol	210
					ls, dol, brown dol zone	300
					sh	200
			Pumpkin Bay Formation		anhyd with ls	1200
			Bone Island Formation		ls with anhyd & dol	1300-2000
	JURASSIC	UPPER	Wood River Formation		dol, anhyd, salt, ss	1700-2100
		MIDDLE	basement volcanic province		felsic rocks: rhyolite porphyry	
		LOWER			mafic volcanics: basalt & diabase	
PALEOZOIC			Suwannee Terrane	Paleozoic sedimentary Suite	quartzitic sandstone & black shale	
				St. Lucie Meta-morphic Complex	pan-African metamorphics	
				Osceola Granite	granite	
				Osceola volcanic complex	felsic meta-igneous	
TOTAL THICKNESS						12,750-14,300

Abbreviations:
ls = limestone
dol = dolomite
ss = sandstone
anhyd = anhydrite
sh = shale
Fm = formation

Sources: References 205, 207, 210, 235, 321, 322, 334, and 363

PTN COL 2.5-1

Figure 2.5.1-204 Simplified North-South Profile of Mesozoic-Age Rocks in Florida



Modified from Reference 322

PTN COL 2.5-1

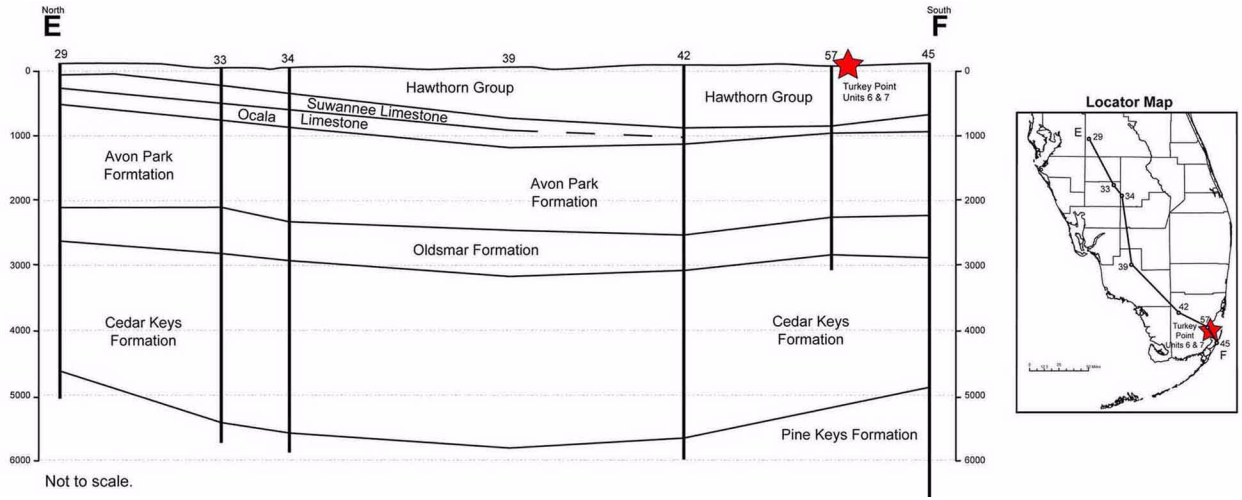
Figure 2.5.1-205 Regional Cenozoic Stratigraphy

ERA	SYSTEM		SERIES	STRATIGRAPHIC UNIT		LITHOLOGY	APPROXIMATE THICKNESS (ft)
CENOZOIC	QUATERNARY		PLEISTOCENE	Miami Limestone / Key Largo Limestone/ Anastasia Formation		sandy, oolitic, coralline, shelly limestone	10-180
				Caloosahatchee Formation/ Fort Thompson Formation		poor/well indurated sandy, fossiliferous limestone	50-100
	TERTIARY	NEOGENE	PLIOCENE	Tamiami Formation/ Cypresshead Formation (Long Key Formation)		fossiliferous sand & silt with limestone	25-220
			MIOCENE	Hawthorn Group	Peace River Formation	sands, clays, & phosphatic carbonates	100-650
					Arcadia Formation	fine crystalline limestone with sand/clay, phosphatic fossiliferous limestone, & dolomite	100-700
		PALEOGENE	OLIGOCENE	Suwannee Limestone		poor/well indurated fossiliferous vuggy to moldic limestone	200-600
			EOCENE	Ocala Limestone		poor/well indurated fossiliferous limestone	200-400
				Avon Park Formation		poor/well indurated fossiliferous limestone & vuggy dolostone	400-1200
				Oldsmar Formation		vuggy limestone & dolomite	500-1500
			PALEOCENE	Cedar Keys Formation		dolomite, gypsum, & anhydrite	500-2000
TOTAL THICKNESS							**5000-6000**

Sources: References 230, 245, 266, 280, 281, 301, 310, 326, 328, 337, and 363

PTN COL 2.5-1

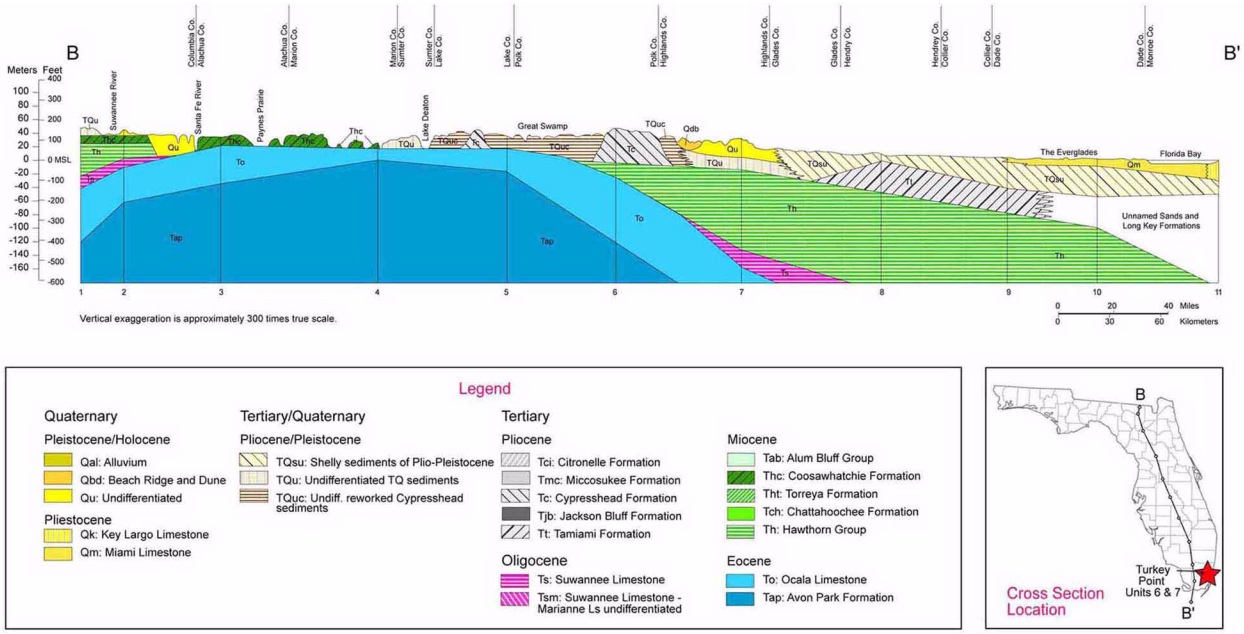
Figure 2.5.1-206 North-South Geologic Cross Section of Upper Mesozoic and Lower Cenozoic Rocks in Southern Florida



Modified from Reference 366

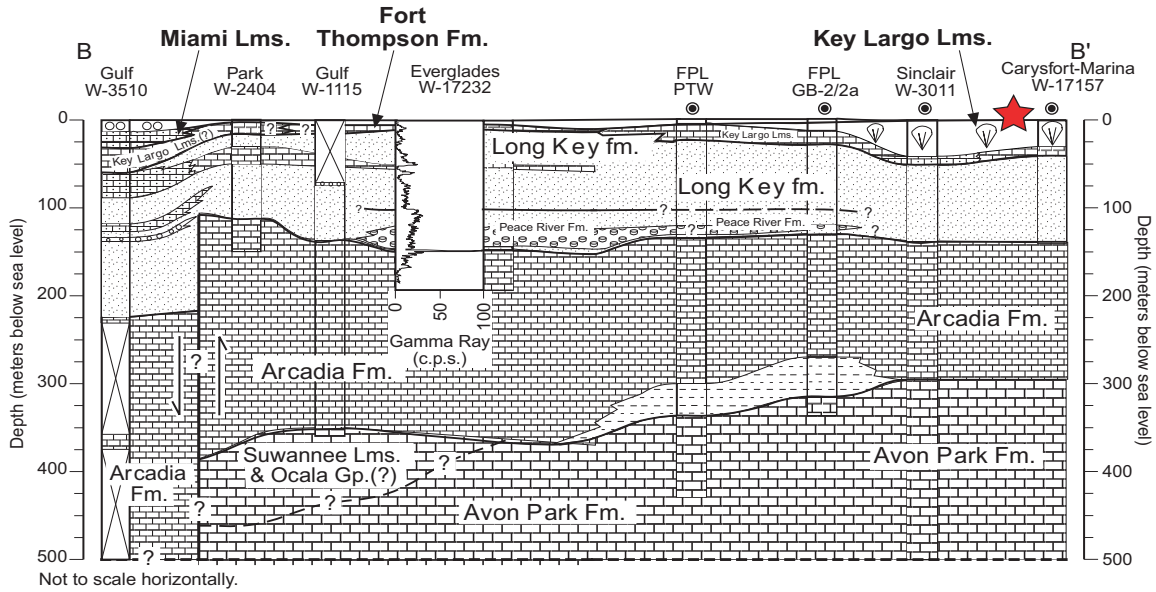
PTN COL 2.5-1

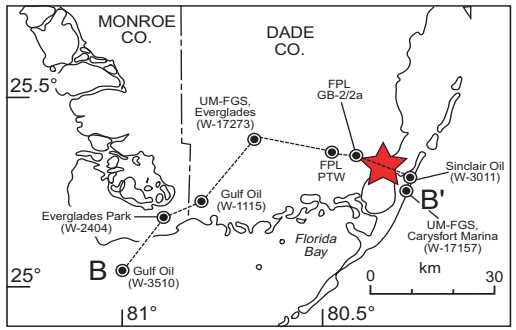
Figure 2.5.1-207 Simplified North-South Geologic Profile of Florida



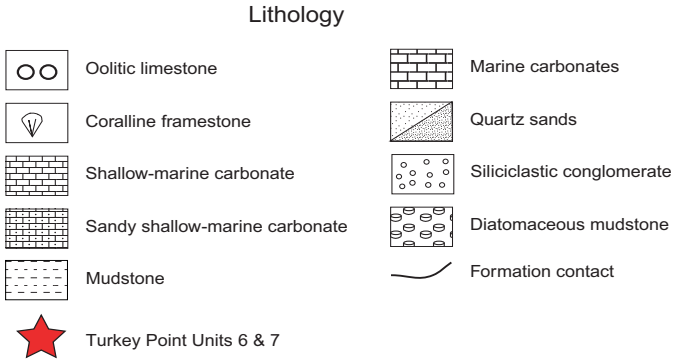
Modified from Reference 339

PTN COL 2.5-1 **Figure 2.5.1-208 East-West Geologic Cross Section of Upper Cenozoic-Age Rocks in Southern Florida**





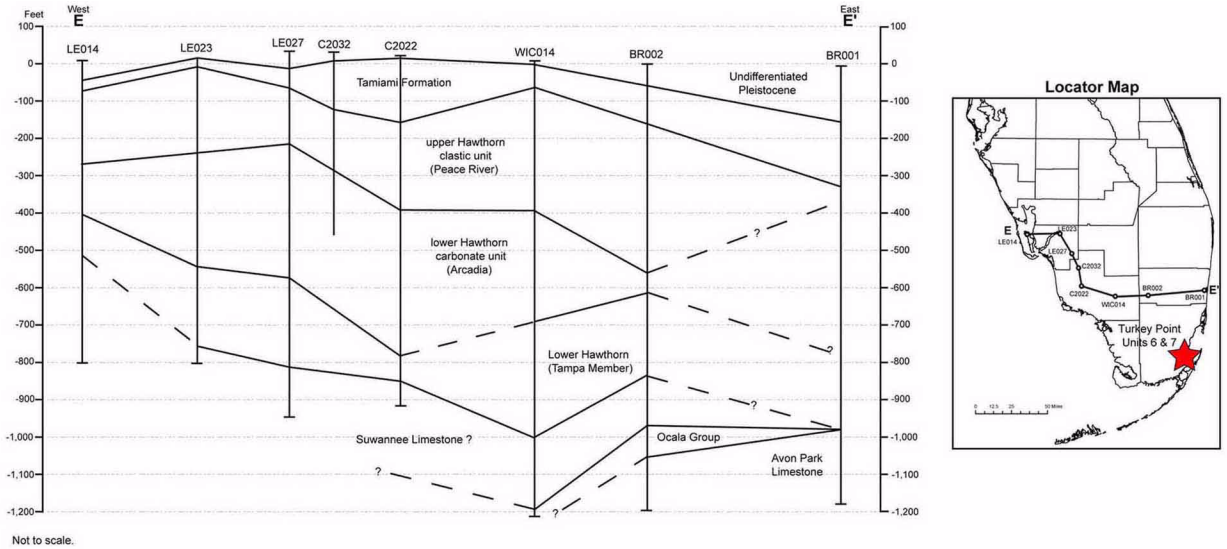
Location of cross section (B-B') in southern Florida.



Modified from Reference 230
Note: Primary siliclastic source — Appalachians

PTN COL 2.5-1

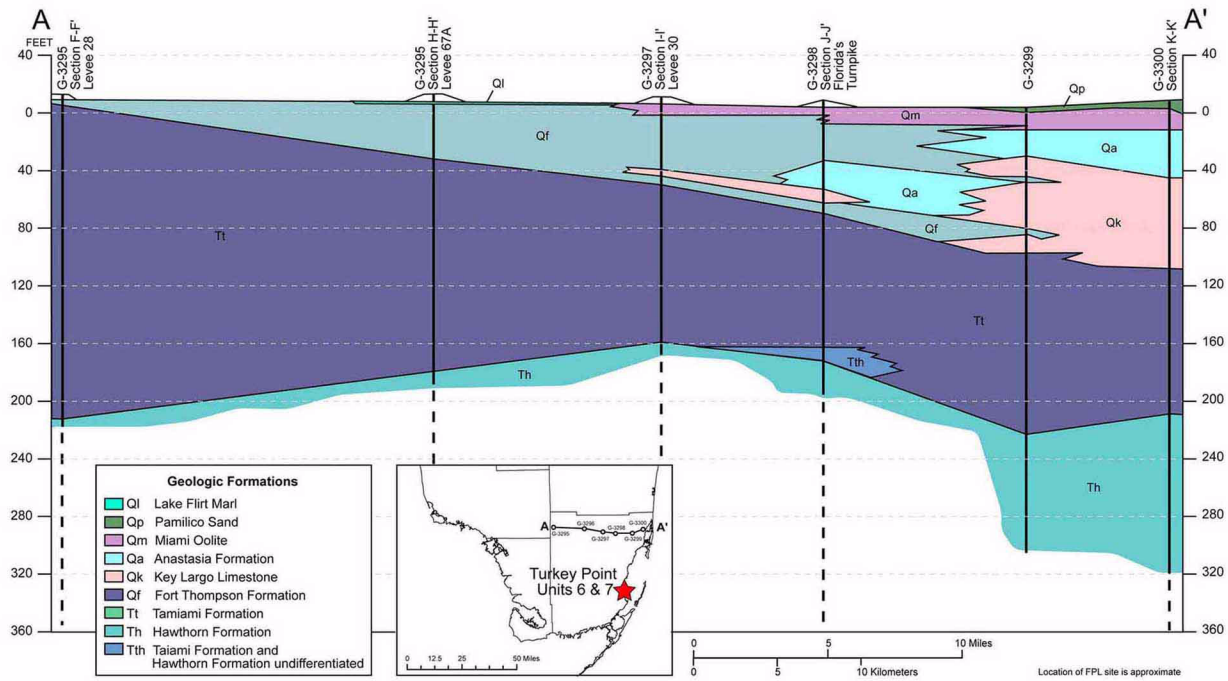
Figure 2.5.1-209 East-West Geologic Cross Section of Eocene through Pliocene-Age Rocks in Southern Florida



Modified from Reference 341

PTN COL 2.5-1

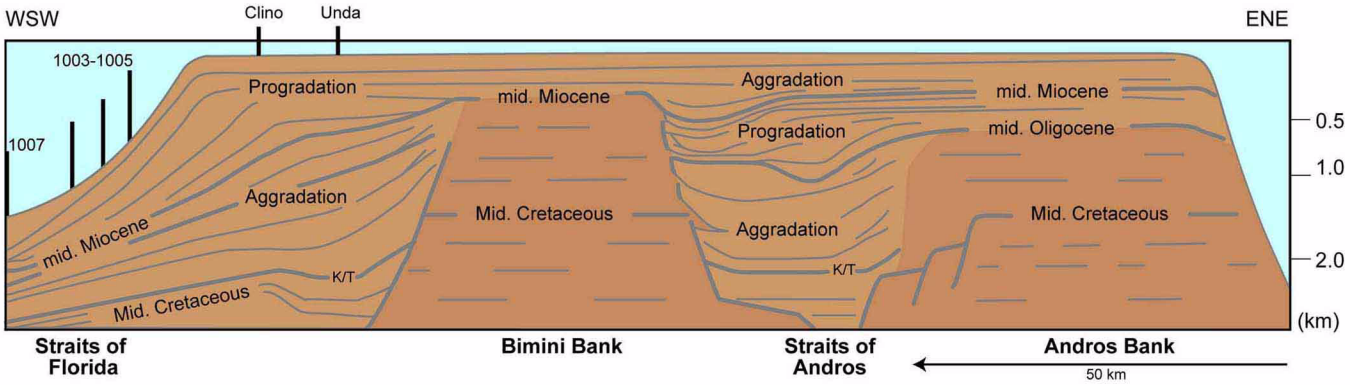
Figure 2.5.1-210 East-West Geologic Cross Section of Miocene through Pleistocene-Age Rocks in Miami-Dade County Florida



Modified from Reference 251

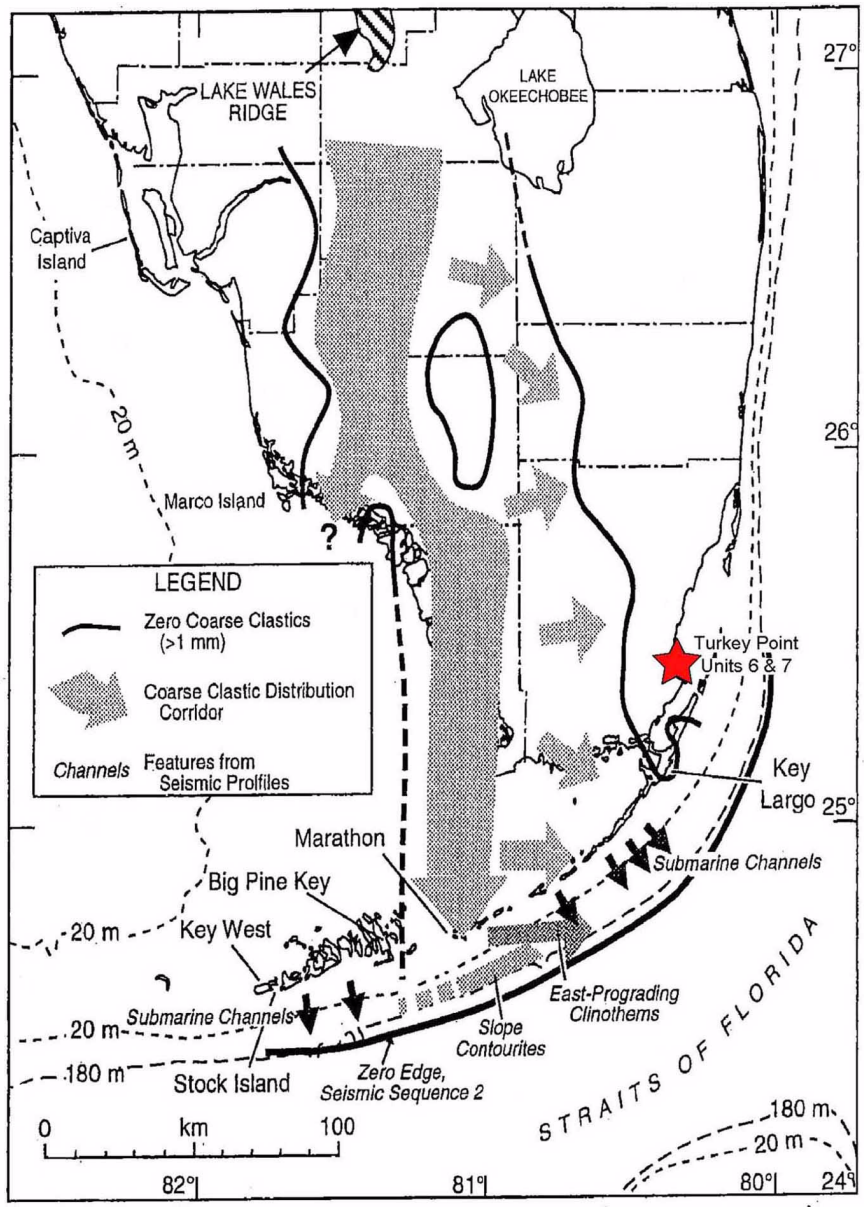
PTN COL 2.5-1

Figure 2.5.1-211 Great Bahama Bank Geologic Environment



Modified from Reference 267

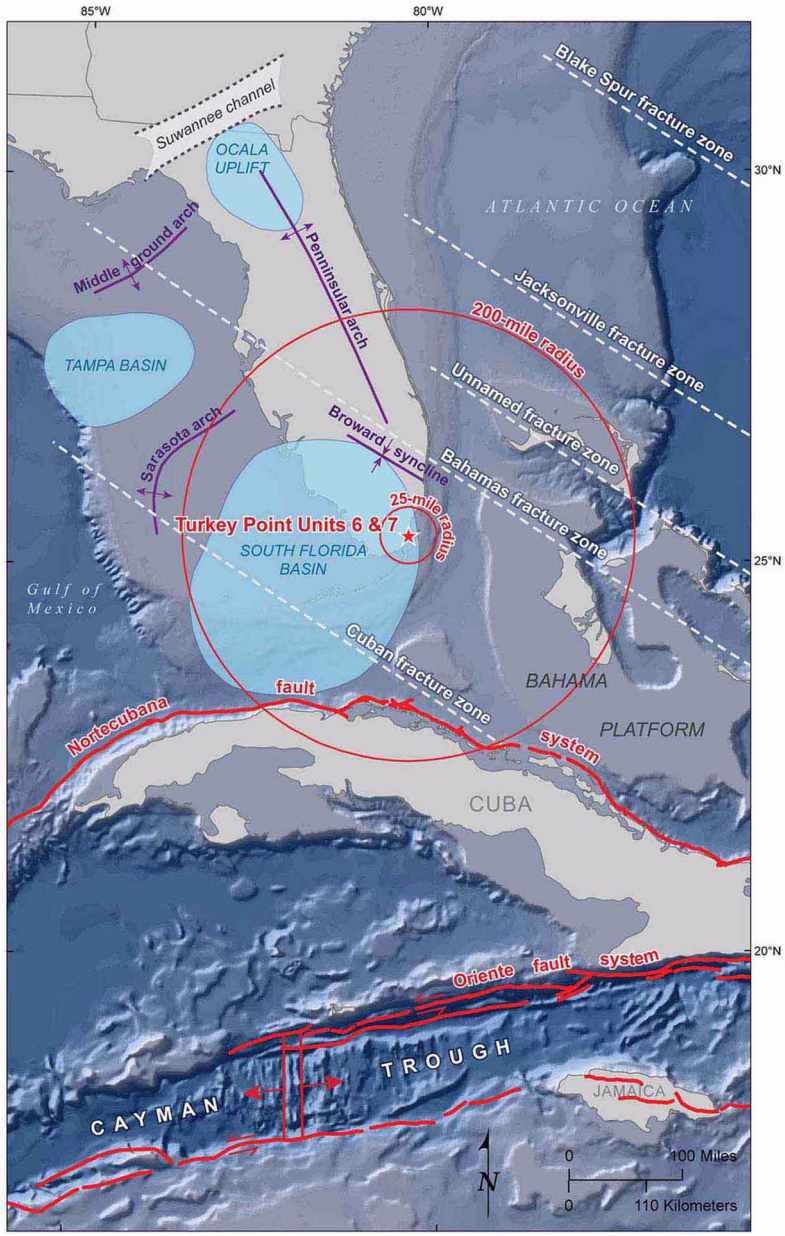
PTN COL 2.5-1 **Figure 2.5.1-212 Miocene-Pliocene Siliciclastic Transport Pathways in Southern Florida**



Source: Reference 356
Note: primary siliciclastics source — Appalachians

PTN COL 2.5-1

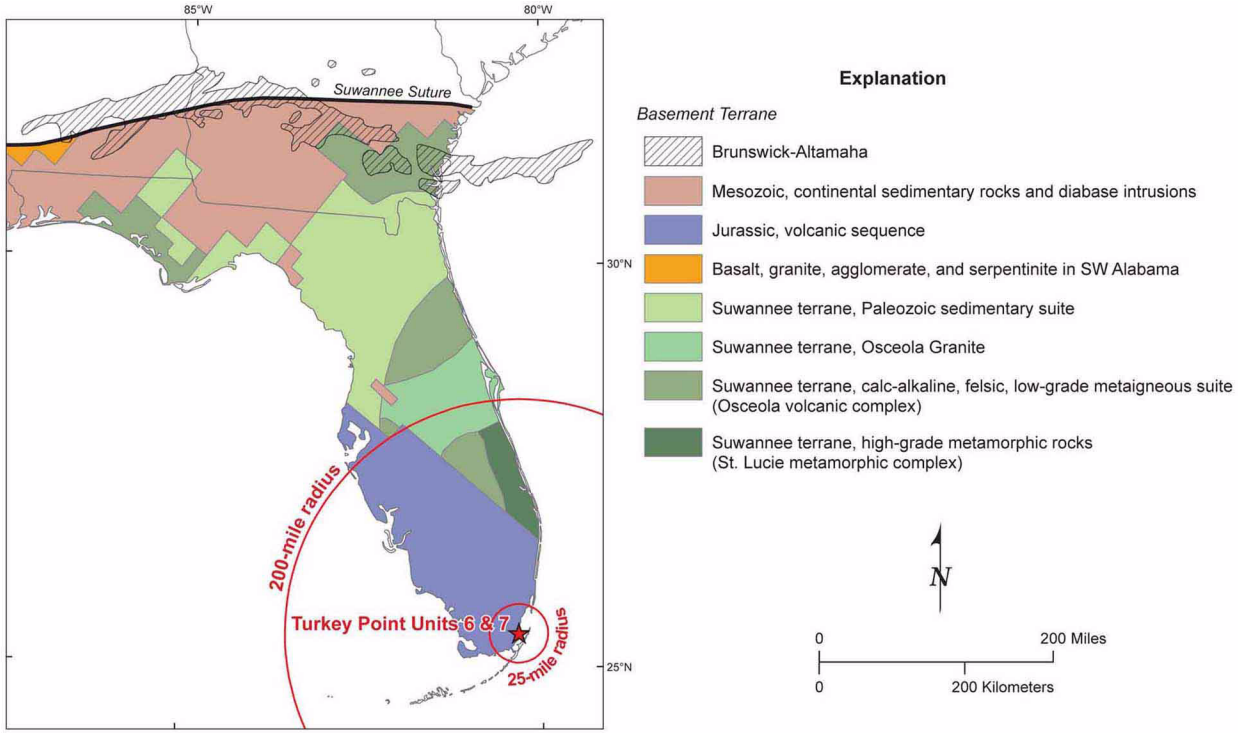
Figure 2.5.1-213 Regional Tectonic Features



Base source: Reference 216
Source of Caribbean geologic faults: Reference 257
Source of non-fault geologic features: Plate 2 of Reference 248

PTN COL 2.5-1

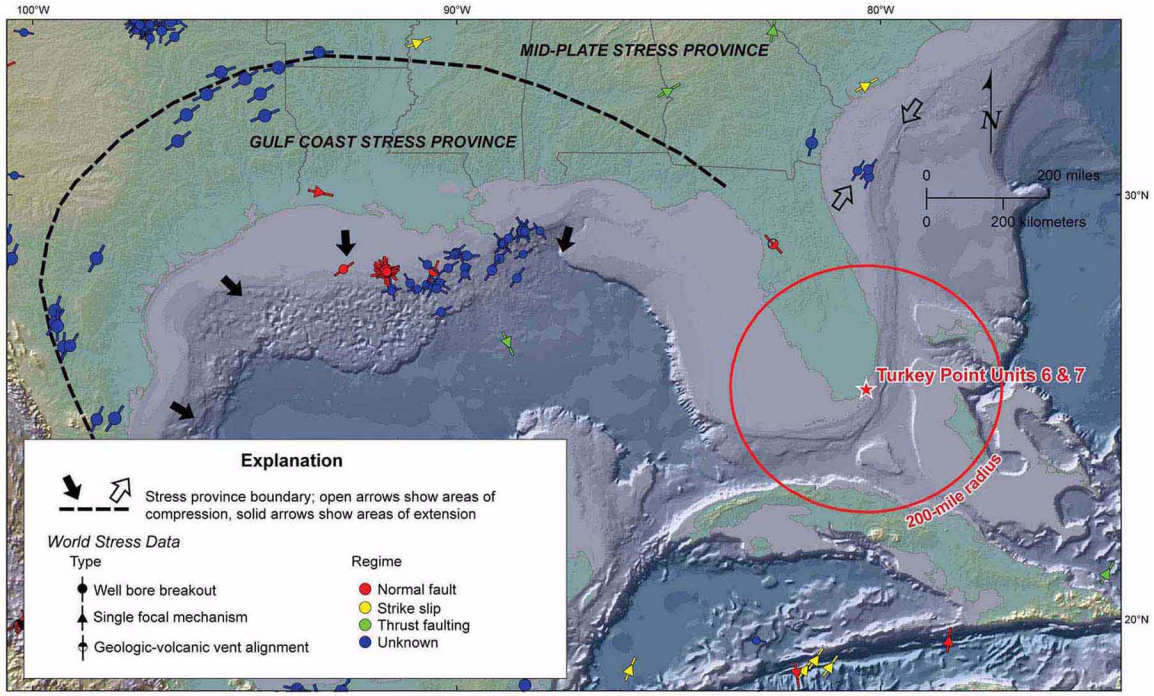
Figure 2.5.1-214 Basement Terrane



Modified from References 234, 235, and 236

PTN COL 2.5-1

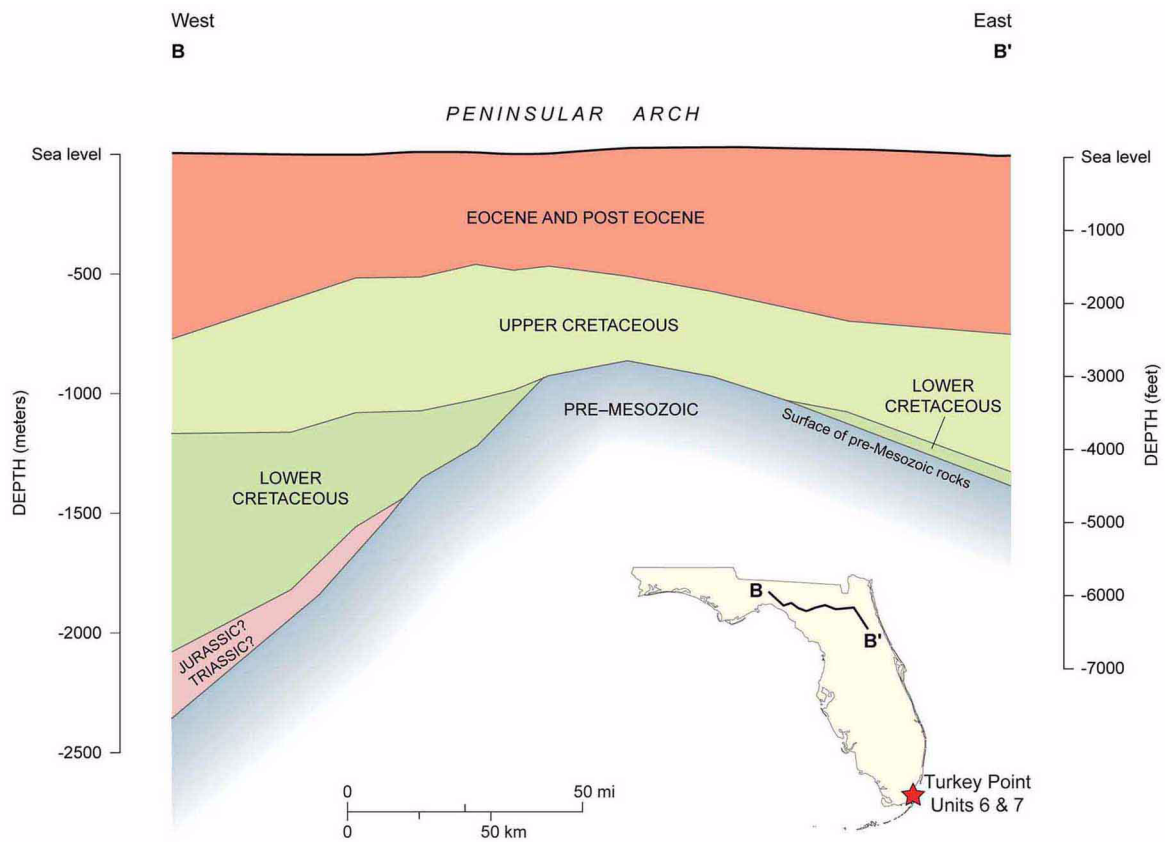
Figure 2.5.1-215 Stress Provinces



Base source: Reference 216
Source of world stress data: Reference 329

PTN COL 2.5-1

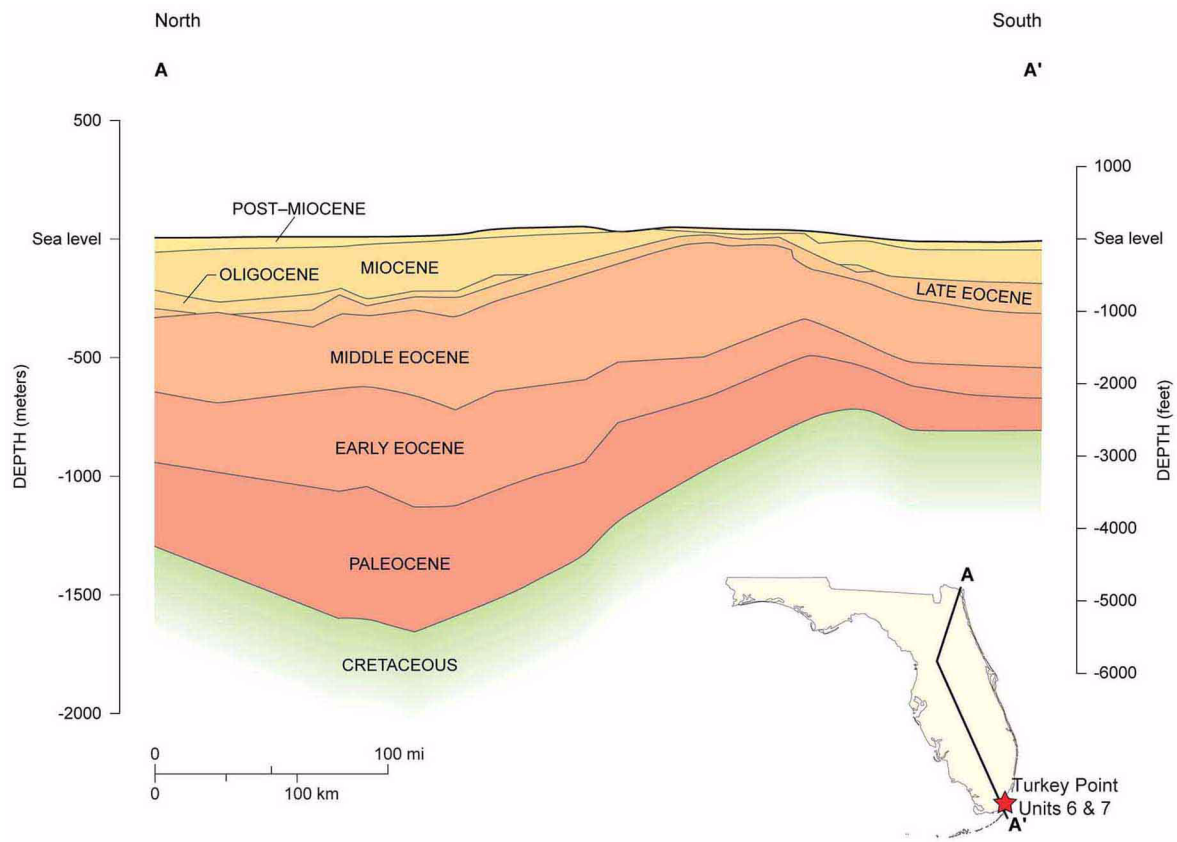
Figure 2.5.1-216 Generalized West-East Cross Section of the Peninsular Arch



Source: Reference 325

PTN COL 2.5-1

Figure 2.5.1-217 Generalized North-South Cross Section of Florida Peninsula



Source: Reference 325

PTN COL 2.5-1

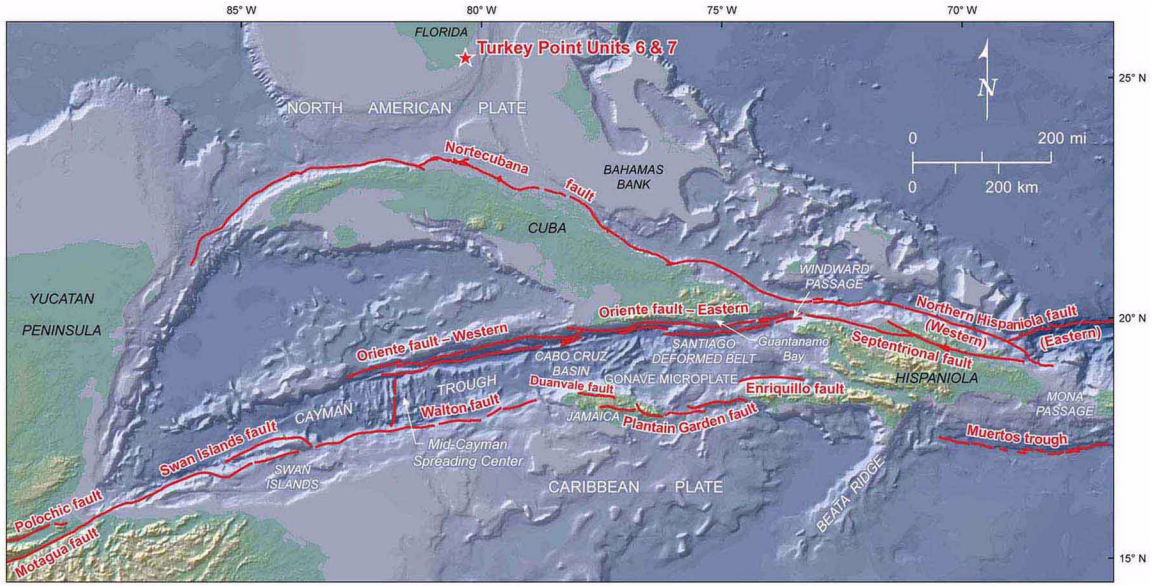



Figure 2.5.1-218 Tectonic Map of Northern Caribbean-North America Plate Boundary