

East Coast Canyons

Similar to West Coast

- (1) Great distance from shore
- (2) Great depth

Sandstorm blocks -

Fossils labeled @ (100,000,000 cetaceans) form on type of upper artic (10,000 years old)

- (1) Hudson River Canyon
- (2) 4,000 feet elevation
- (3) Gravel, shell, clay
- (4) Trench across valley
- (5) 180 miles long

Submarine Mountain Range

Continental Drift + Gondwonedland Theories

Mid-Atlantic Mountain Ridge

East of Greenland to Azores

(10-12,000 miles long)

Some volcano peaks reach above surface

St. Paul's Rock
Asunicion Island

St. Helena's Island

Continuous thru South Atlantic and around Cope into Indian Ocean and South

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Africa graben & around Cape into Pacific

Chile and California

Lost under California

Marine Deposition

Sandstone - visible to naked eye (1/16 to 2 mm) land or sea origin

Sheet sands - scores to hundreds of miles/ marine or limestone sheet sands on

Cape Cod deposited by currents

Oil rich sandstone Stringers elongated lenses (oil wealth of world)

Deep Sea Sand: sand behavior salt suggests quiet water

Graduated bedding coarse to finer

Shale - laminated mudstone (silt and clay)

Siltstone - silt sized particles

Clay stone- clay size particles

Shale stone appears to be formed in shallow ?0 on central shelf

Shelf mud deposits: mud turns to shale little stratified

Lagoonal Muds: Barrier Islands -look for oil - glauconite

CaCo₃ - oolites

Gypsum - salt deposits

Dillie Margin Muds: from non-alterations of shale - mud-storms, sandstorms

Black Shake: fossil contents no 02

Deep Basin Muds: California /foraminiferous

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Limestone: 50 calcite = dolomite

Chalk: fine grain, poor consolidation (lime)

Mare: highly consolidated (Clay)

Reef Limestone: (petroleum source)

Conglomerates: not too broad in are probably caused by ice (ect)

Deposition Relative to Land Proximity

(1) **Neretic:** land deposition in sea

(a) Sand: calcarenite - shelf

(b) Clay: from a glacier to a lagoon

(2) Hemi pelgir: Rock floor off of river mouth - more organic as you go deeper

Calcareous ooze: most abundant in ablatu

(a) globigerina

(b) pteropod

(c) siliceous

Beaches: to furthest point sand is transported by waves -bounded by dunes and

cliffs

Backshore: Slopes to land

Foreshore: slope to sea

Offshore: always under H₂O

Hook: sand spit curved

Spit: parallel sand deposition connected to land

Rill: H₂O masses in sand

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Ripple masses: look like wall on sand

New England Beaches

(1) Rocky

(2) Sandy: (Cape & South) (New Hampshire & North)

(1) Rocky Beach: little sand boulders & pebbles - precipitation shores

Cape Cod: Result of Glaciations

10,000 years ago

Clay, silt, & gravel

Thru bodies of H₂O

(1) Atlantic Ocean: cold H₂O - 6 Vi foot tide -rapid erosion - three feet per year erosion

(2) Cape Cod Bay: warm H₂O - 9-10 feet tide - deposition - wide beach

(Brewster) salt mountains

(3) National Sound: warmest H₂O - 2-4 feet tide - growth slope no dunes

If not beach it is because:

(1) Either precipitation

(2) Too flat

Shore Composition Factors

(1) Soil

(2) Climate

(3) Marine environment

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