# Globally extensive Cenozoic coals indicate high post-Flood boundary

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Thick Cenozoic (with respect to the secular understanding of the geologic column) coal beds have been discovered on nearly every continent (figure 1). North America has its most extensive and thickest coal beds in the Lower Cenozoic section of the Powder River Basin, Wyoming.[1,2] Powder River Basin coal beds, which are all within Paleogene system rock layers, contain the largest reserves of low-sulfur subbituminous coal in the world.[1] At least six individual coal beds in the Powder River Basin exceed 30 m in thickness and extend outwards in excess of 120 km.[2] The Big George coal seam alone exceeds 70 m in thickness.[1] Unlike Carboniferous coal beds, most of the Powder River Basin coal beds are composed of angiosperms and gymnosperms like the metasequoia.[3]

Cenozoic coal beds in South America are also the thickest and most extensive compared to other coal layers.[4] Cenozoic coal beds alone make up about one half of all coal in South America and the tonnage is estimated to be greater than that found in any other geologic system or combination of systems.[4]

Germany, one of the largest coal producers in Europe, has approximately 65% of its coal reserves in Cenozoic rocks.[5]

Australia has vast coal beds in the Cenozoic basins along the country's southern boundary, especially in the onshore and offshore portions of the Gippsland Basin.[6] Here, the Miocene brown coals of the onshore Latrobe Valley are up to 200 m thick.[6]

China has significant volumes of Cenozoic coal both onshore and offshore. The onshore coals are mostly in eastern China, found in Cenozoic-age basins. Early Cenozoic, Paleogene coals are found onshore in northeastern China, whereas the younger Neogene coals dominate the onshore in southeastern China (figure 1).[7] A single Paleogene coal seam in the Fushun Basin was found to be 70 m thick.[7] The Xianfeng, Xiaolongtan, and Zhaotong Basins of southeastern China contain Neogene coal beds that attain thicknesses of 237 m, 223 m and 140 m, respectively.[7] These Chinese Cenozoic coals are composed of predominantly angiosperm plants, as noted for the Powder River Basin coals in the US.[7]

## Cenozoic coals of offshore Asia

An extensive Cenozoic coal deposit is also found in offshore China, offshore southeast Asia, and north and east of Russia under the Sea of Okhotsk and the Arctic Ocean (Laptev Sea and East Siberian Sea).[8–13] The South China Sea has some of the deepest Cenozoic coals discovered to date and in the deepest water. Oil wells in an area of the southern South China Sea known as North Luconia (about 280 km west of Borneo) encountered Oligocene coal beds within a 1,500 m section of sediment that today resides 3,000 m below sea level.[14]

Uniformitarian scientists believe all coals accumulate *in situ* and not by transport. So how do they justify these thick coal beds that accumulated so far offshore and in such deep water? Evolutionary geologist Peter Lunt tried to explain:

> "Coal-bearing Late Oligocene beds are known in several wells in North Luconia, but now in water depths of more than 1,000 m, with these coals typically 3 km or more below modern sea level. These wells therefore indicate 3 km or more of basement

**SUBDIVISIONS OF GEOLOGIC TIME**

| ERA | PERIOD AND SUBPERIOD | | EPOCH | |
|---|---|---|---|---|
| CENOZOIC | QUATERNARY | | Holocene | |
| | | | Pleistocene | Our proposed boundary |
| | TERTIARY | NEOGENE SUBPERIOD | Pliocene | |
| | | | Miocene | |
| | | PALEOGENE SUBPERIOD | Oligocene | |
| | | | Eocene | |
| | | | Paleocene | K-Pg boundary |
| MESOZOIC | CRETACEOUS | | Late | |
| | | | Early | |
| | JURASSIC | | Late | |
| | | | Middle | |
| | | | Early | |
| | TRIASSIC | | Late | |
| | | | Middle | |
| | | | Early | |

**Figure 1.** Partial geologic timescale showing the subdivisions of the Mesozoic and Cenozoic. Image credit: Susan Windsor, ICR

> [crustal] subsidence since the Late Oligocene."[14]

Lunt added that the depth of these coal beds complicates the necessary subsidence history of the area:

> "Geohistory analysis of the G10-1 well shows that the Oligocene section [containing coal beds] drilled there is both thick and rapidly deposited. The facies [perceived environment] is remarkably consistent over the 2,100 m of section, with facies … suggesting coastal to very shallow marine throughout."[14]

Lunt explained that the lack of variation within the vast coal-rich Oligocene section (greater than 10,000 km$^2$) was simply due to these thick coal beds having sunk at exactly the same rate as the coal was accumulating, keeping the coal swamps constantly at about sea level.[14] Maintaining such a perfect balance of subsidence and deposition while a 1,500-m-thick section was accumulating across such a wide area seems highly improbable; such explanations are based on supposition and bring belief to the issue, not fact.

The wells drilled in North Luconia also show a thick deep-water Miocene section deposited directly on top of the coal-rich beds. This requires the land surface to have instantly dropped about 1,500 m from one deposit to the next. Lunt discovered that the Mulu-1 well "is quite exceptional in the extremity of events it shows", adding more coincidences to his uniformitarian story.[14]

In total, over 3,000 m of subsidence had to take place in the southern South China Sea (1,500 m for the Oligocene coal beds and then a second 1,500 m to accommodate the deep-water Miocene rocks deposited on top). Subsidence is defined as the sudden sinking or gradual downward settling of the surface of the earth in a certain region with little or no horizontal motion. However, this particular act of subsidence had to be nearly instantaneous to change from a perceived 'coastal' environment to a 'deep-water' environment across the Oligocene-Miocene boundary. This explanation truly exceeds credible science.

## Cenozoic coals are from Flood runoff

Evolutionary scientists insist coal originated from plants that grew in place. They interpret even offshore coals as the remnants of vast swamps that must have once existed where the coal is located. But Cenozoic coals are globally too extensive, currently located far offshore, and are sometimes buried over 3 km deep. There is no known land area in the South China Sea area for these coals to have grown upon, nor are there known instances of drastic sea level change to accommodate the findings. Instead, uniformitarian doctrine requires outlandish stories of thousands of metres of near instant sea level change.

Advocates of a post-Flood boundary at the K-Pg (Cretaceous-Paleogene) in the creation science community are in an equal quandary. Onshore and offshore Cenozoic coal deposits found globally, and in such thicknesses and extent, cannot be dismissed as the results of local post-flood catastrophes, especially the massive volumes of Cenozoic coals observed in deep water.

Placing the post-Flood boundary at the Neogene–Quaternary, near the top of the Cenozoic, better explains the rock and paleontological data (figure 1).[15–17] Our conclusion is that all the onshore and the offshore Cenozoic coal beds were produced by the runoff processes late in the Flood. Vast forests of trees living on the pre-Flood uplands were ripped from the land as the floodwaters crested on Day 150. These huge mats of vegetation were trapped in subsiding Cenozoic basins buttressed by adjacent mountains that were simultaneously rising as the water began to recede. Other vast mats of vegetation may have been transported *en masse* off the various continents and buried in the ocean as the Flood continued to recede, creating vast Cenozoic coal beds offshore. This scenario best explains the Cenozoic coals found both onshore and offshore.

This interpretation also helps explain the dominance of angiosperm plants in the Cenozoic strata and in the Cenozoic coals.[7] The pre-Flood world was apparently stratified by ecological zones.[18] Paleozoic coals, like those found in Lower Carboniferous and Permian rocks, are dominated by wetland and coastal plants living at near sea level such as lycopods and pteridosperms.[7] Mesozoic coals are dominated by gymnosperms, ginkgos, and cycads, plants living at slightly higher elevation.[7] Finally, Cenozoic coals are composed of mostly angiosperms and some gymnosperms that were living at the pre-Flood highest elevations.[7] As the Flood sequentially progressed from Day 1 to Day 150, it inundated higher and higher ecological zones, resulting in the stratified fossils and coals we observe globally.[18]

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