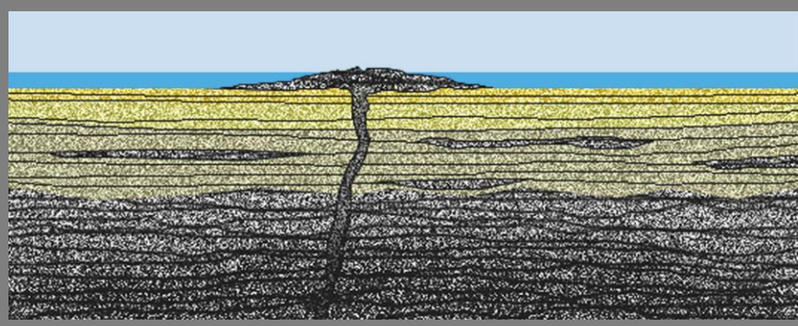
STRATIGRAPHIC HISTORY OF THE COLORADO PLATEAU

sources: Ron Blakey + Wayne Ranney, *Ancient Landscapes of the Colorado Plateau*

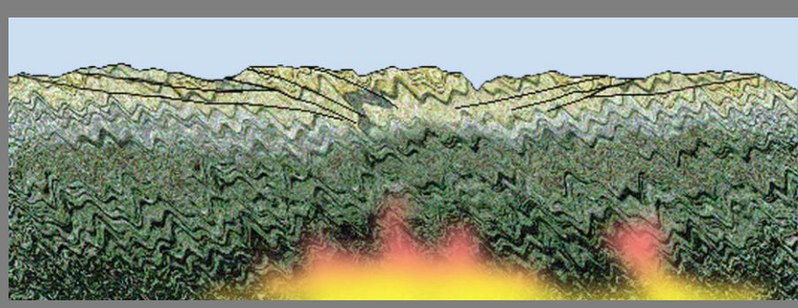
PROTEROZOIC
> 1800 mya

Deposition and accumulation of a thick stack of sediments and lavas on top of oceanic crust.



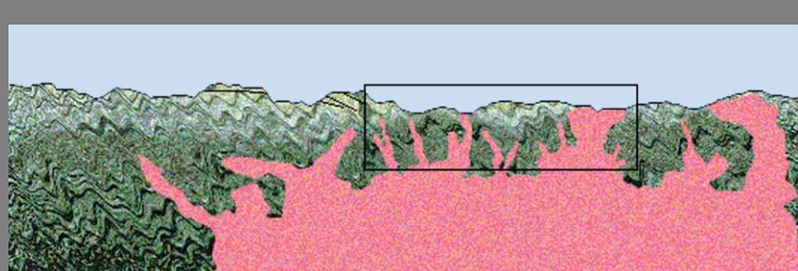
PROTEROZOIC
1750 mya

Island arc collision with North America resulting in mountain uplift, compression, metamorphism, with continuing granite intusion leading to basement rocks formation (igneous + metamorphic) and thickening of the crust.



PROTEROZOIC
1750 - 1300 mya

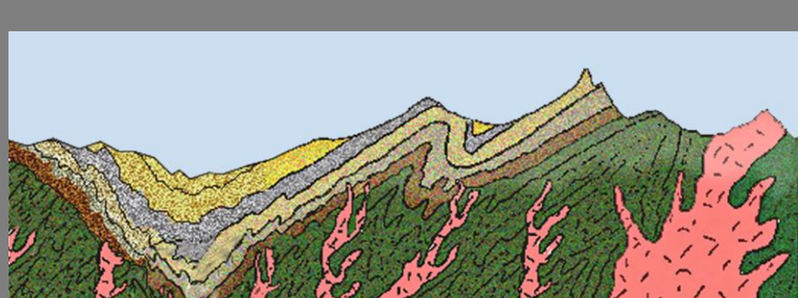
Continuing uplift with intermittent granite intrusions.



framed area shown on all subsequent panels *(represents approx. 160kms of Grand Canyon-Grand Staircase region)*

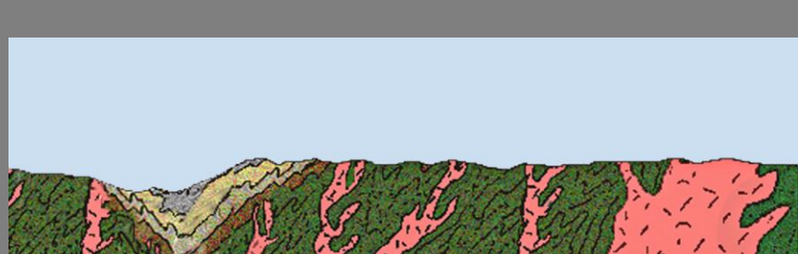
PROTEROZOIC
1750 - 1300 mya

Long period of erosion follows as mountains are gradually worn down.



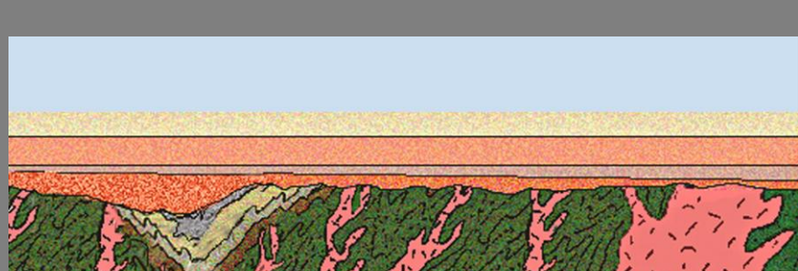
PROTEROZOIC
1255 mya

Once deeply buried midcrustal rocks are now on the surface, planned flat to near sea level.



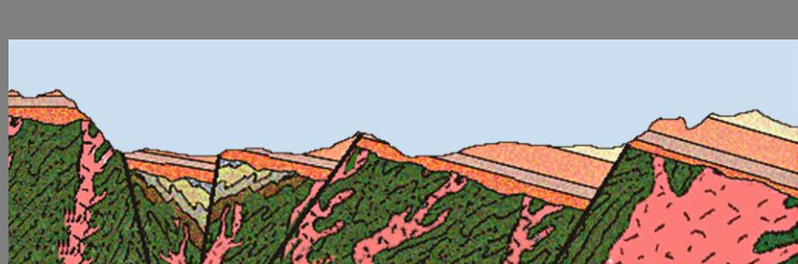
PROTEROZOIC
1255 - 740 mya

Rivers, eolian dunes, and shallow marine settings deposit Grand Canyon Supergroup (more than 3700m thick) on the eroded surface.



PROTEROZOIC
740 - 650 mya

Region experiences another episode of uplift, faulting and tilting. Supergroup rocks are left deformed upon the landscape, preserved in basins between mountain uplift.



PROTEROZOIC

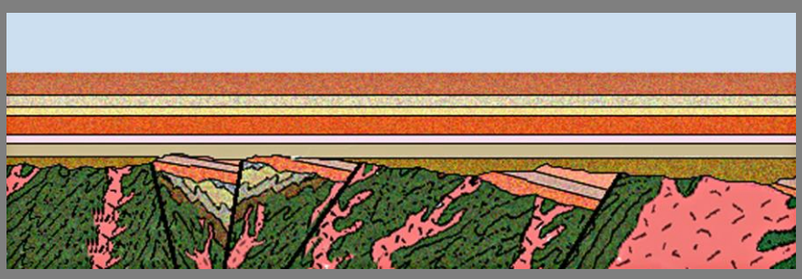
650 - 525 mya

Supergroup rocks become highly eroded in most areas and are left as isolated fault block remnants everywhere else.

PALEOZOIC + MESOZOIC

525 - 70 mya

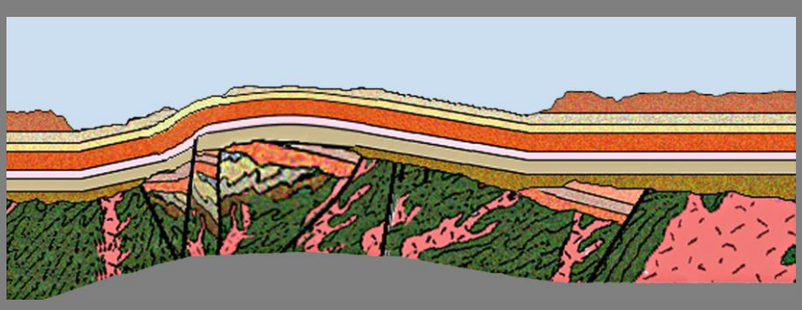
plateau near sea level and subsiding leading to accumulation of sediments (4300 to 5500m thick) in shallow marine or terrestrial settings (marine, alluvial, fluvial, and eolian deposits).



CENOZOIC

70 - 40 mya

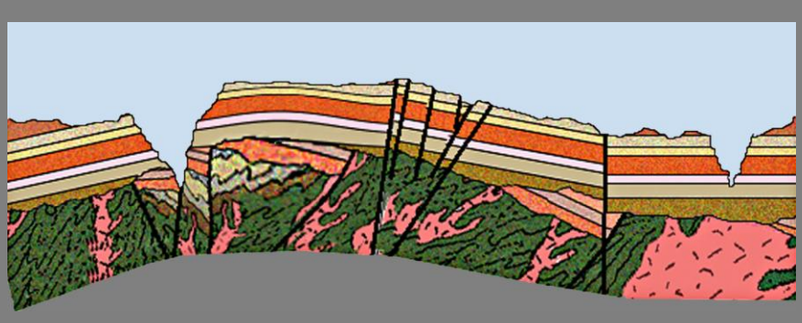
Uplift and creation of the Rocky Mountains, uplift and formation of monoclines. Youngest sedimentary layers begin to erode.



CENOZOIC

10 - 5 mya

Deep canyon cutting occurs with river system integration.



CENOZOIC

2 - 0 mya

Recent episode of volcanic eruptions. Colorado River continues to widen and deepen its path as it flows to sea level.