

## ***Cretaceous Oceanic Red Beds (CORB), a model for study of rapid changes of geochemical condition in deep sedimentary environments***

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### ***Abstract***

*Study of Aptian sediments in the Interior Fars Province confirm existence of red shale beds intervals show pelagic facies and oxic environmental condition. Geochemical data (elemental and mineralogy analysis) release increasing in Fe and Mn and presence of goethite in these sediments. Since that geochemical data confirm diagenesis condition in a close burial system, the red color of these sediments can be attributed to iron bearing minerals that have been deposited in the basin. These sediment have been deposited in an oxidant condition which is completely different with previous organic rich sediments. The cause of the oxidant condition in deep oceanic environment is the reduction of temperature after the OAEs; the water temperature variation has led to an increase in the oxidation potential of deep water basins, change in the water circulation pattern and eventually transfer of oxygen to these areas. Considering that the temperature reduction factor is the release of a large volume of carbon dioxide from the atmosphere in the form of organic-rich sediments, formation of these red oceanic layers during the Cretaceous is considered as an event subsequent to the anoxic event of the ocean.*

**Keywords:** *Red Bed, Goethite, Dariyan Formation, Aptian, Zagros*