

## **New carbon isotope records of the Late Cretaceous Oceanic Anoxic Event 3 from the Western Interior Seaway**

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The sedimentary record of the Cretaceous Western Interior Seaway is characterized by periods of enhanced organic carbon burial known as Oceanic Anoxic Events (OAEs). The most studied of these events, OAE 2, is associated with a 2-4‰ inorganic carbon isotope excursion. Despite the fact that in some regions the organic carbon flux during the later Coniacian-Santonian OAE 3 (~86 Ma) is up to twice as large as that of OAE 2, its designation as an OAE has been debated, in part because previously documented inorganic carbon isotopic excursions for the event are relatively small (<0.5‰) [1,2].

Here we present new high-resolution inorganic carbon isotope records from the Coniacian-Santonian event (OAE III) of the Niobrara Formation recovered in the USGS #1 Portland core from Canon City Basin, Colorado and the Amoco Rebecca K. Bounds core recovered from Greeley County, Kansas. Both records exhibit abrupt >1‰ positive isotope excursions at the onset of carbon burial superimposed on larger >2‰ isotope trends. Comparison of these records with previously published seaway carbon isotope records indicates regional variations in carbon burial. Trace metal records (Mo, Re, Cd, Mn) indicate variable bottom water oxygenation and changing carbon burial mechanisms throughout OAE 3.

[1] Pratt *et al* (1993) Geological Association of Canada, *Special Paper* **39**, 333-354. [2] Jarvis *et al* [2006] *Geol Mag* **143**, 561-608.