

**SS04****The Chaudiere and Nariva Wildflysch of Central Trinidad: a Modern Sedimentological Perspective**

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**Abstract**

The Chaudiere (Paleocene) and Nariva (Oligo-Miocene) formations are shale and sand successions with dominantly benthonic forams. Bouldery mud intervals with floating clasts of older formations are interpreted as olistolithic mudflows, rather than tectonic imbrications, based on: (1) gritty, non-laminated mudstone type, typical of mudflows; (2) spectrum of clast sizes, from millimetric to metric or larger (some rafts 10 s -100 s m long could be genuine imbrics); (3) clasts always older than matrix (need not be so in tectonic melanges, or in mud diapirs with stoped blocks); and (4) reverse stratigraphic order of clast first-appearances in the Nariva at Pointe-a-Pierre, consistent with source-area unroofing (Kugler, 1953, Bull. Ass. Suisse des Giol. et Ing. du Pitrole, v. 20, p. 47). Both formations pass southward into laminated shales rich in planktonic forams (lower Lizard Springs and middle Cipero formations, respectively). Based on the above

characteristics, I interpret the depositional environment as a S-facing submarine slope-apron with mudflows and olistostromes (Chaudiere/Nariva), passing S into a deep-sea basin plain (Lizard Springs/Cipero).

Contemporaneous uplift of the adjacent proto-Northern Range to the N is invoked, subjecting shale-dominated deep-sea Cretaceous strata to subaerial erosion, to explain: (a) the abundance of mud in the Chaudiere and Nariva; (b) the southward (distal) disappearance of clasts; (c) prevalence of clasts attributable to local Trinidadian formations (Cuiche = Laventille = Toco shale; Naparima Hill argillite, etc.); (d) absence of clasts of the Soldado Formation (pre-Chaudiere Paleocene age), known only in southern Trinidad, as (N?-) transported clasts in other formations; and (e) the scarcity of planktonic forams, reflecting turbid (muddy) seawaters surrounding the paleo-Northern Range island (or peninsula?), due to rapid river- and wave erosion of the shale-dominated land. The inferred uplift of the Northern Range in Paleocene time is much earlier than in some tectonic models.

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