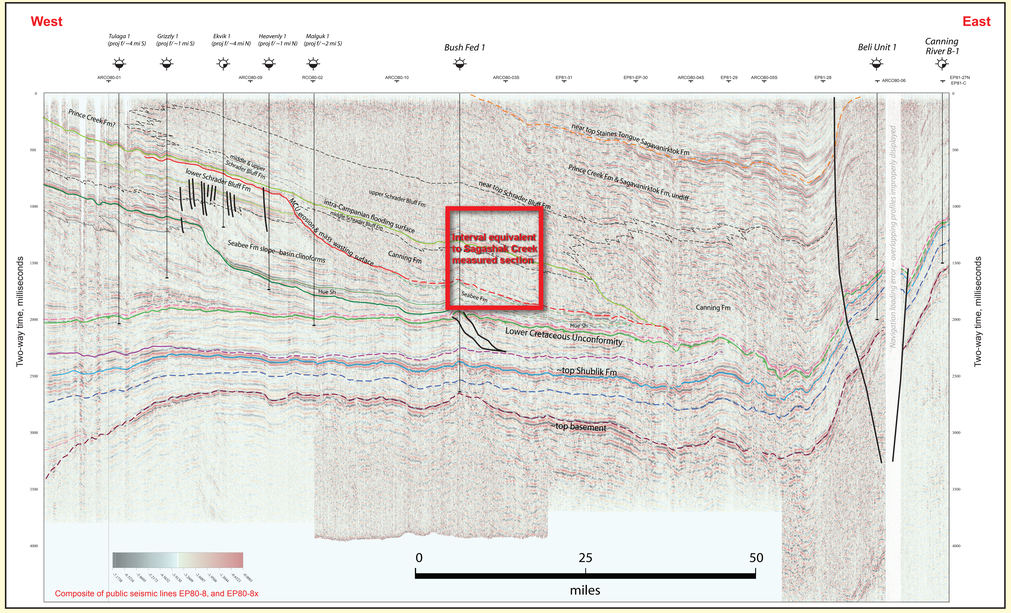
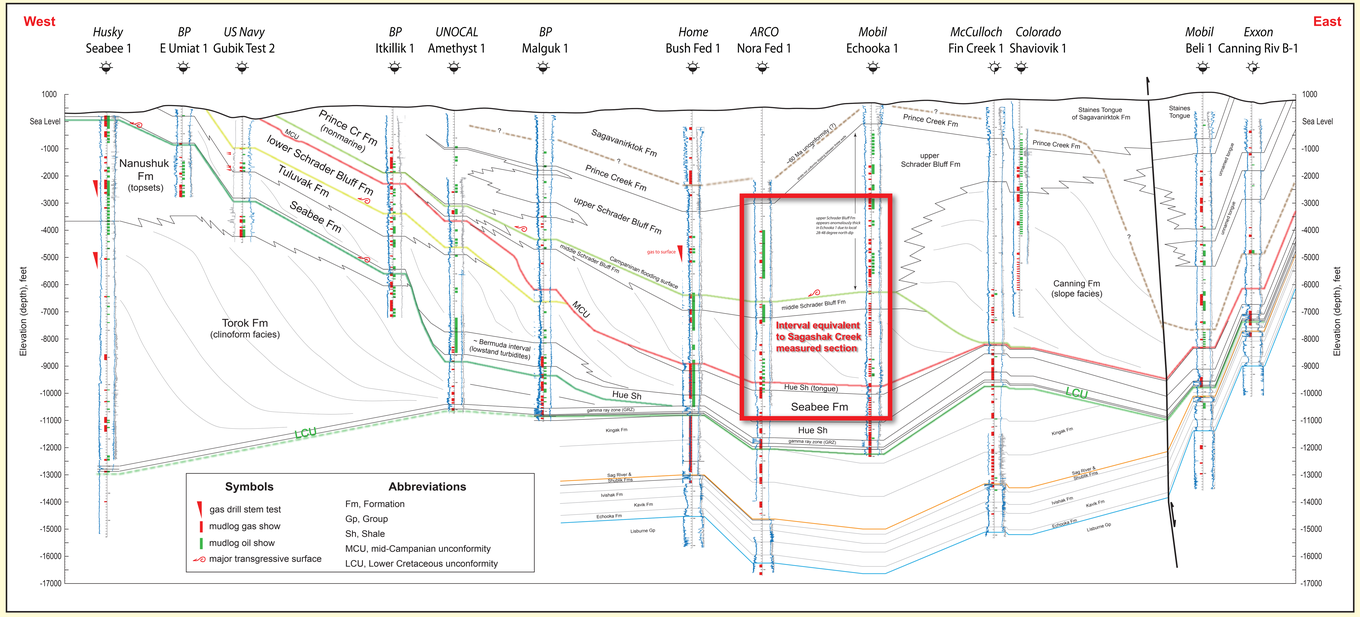
BROOKIAN SEQUENCE REGIONAL SEISMIC TRAVERSE



BROOKIAN SEQUENCE REGIONAL SUBSURFACE CORRELATIONS



FORELAND BASIN DEPOSITIONAL CYCLES

4 **Paleocene-Miocene:** Sagavanirktok Fm topsets & Canning Fm slope-basin facies deposition. North of Sagashak Cr.

sequence boundary (?)

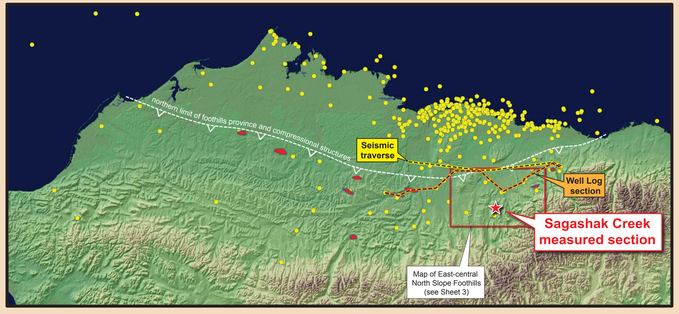
3 **Santonian-Campanian-Maastrichtian-Paleocene:** Prince Creek Fm nonmarine facies, Schrader Bluff Fm marine topsets, & Canning Fm slope-basin facies deposition. Seismic resolution of key sequence boundaries and flooding surfaces is problematic, perhaps due to thick coal-bearing units. Significant lowstand erosion and submarine mass wasting (MCU, possibly other events), transgressive flood-backs, and forced regressions occurred within this cycle.

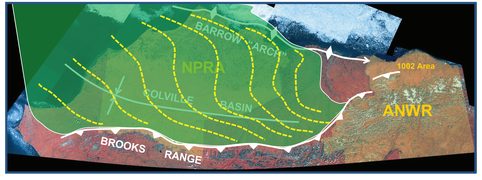
transgressive surface

2 **Cenomanian-Turonian-Coniacian:** Tuluvak Fm topsets & Seabee Fm slope-basin facies prograde eastward across pre-existing Nanushuk-Torok terrace and into underfilled basin farther east. Near basin axis, Sagashak Creek area received substantial sandy and conglomeratic deepwater deposits of this cycle.

major transgressive surface

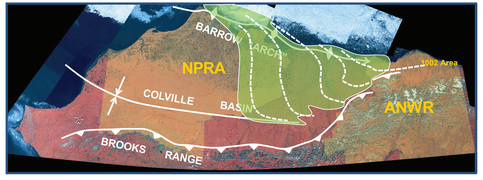
1 **Albian-Cenomanian:** Nanushuk Fm topsets & Torok Fm clinoforms prograde east and northeast as genetic couplet, building thick terrace of nonmarine, shallow marine, and deepwater facies. Sagashak Creek area probably received only distal slope Torok Formation from this cycle.





lower Brookian foreland basin: Early to middle Cretaceous East & northeast prograding shelf margins

(deposition of Okpikruak, Fortress Mountain, and Torok-Nanushuk genetic units)



middle & upper Brookian foreland basin: middle Cretaceous to Tertiary Westward floodback followed by resumed shelf margin progradation

(deposition of Tuluvak-Seabee, Prince Creek-Schrader Bluff-Canning, and Sagavanirktok-Canning genetic units)