

MIDDLE DEVONIAN CARBONATE BARRIER-COMPLEX OF WESTERN CANADA

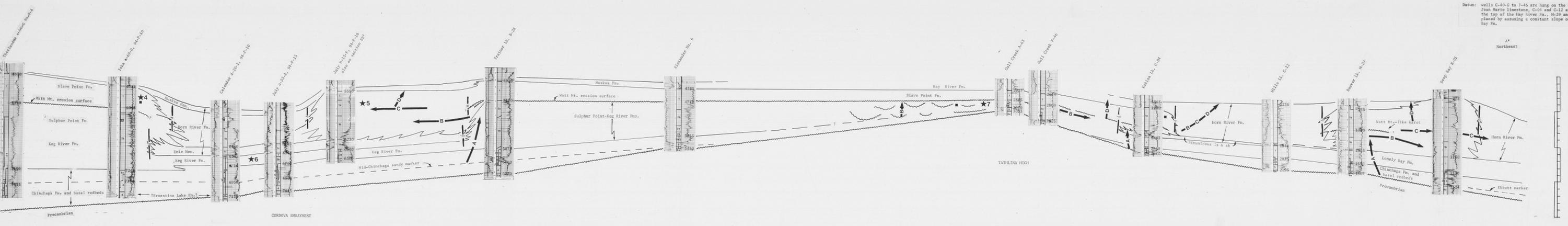
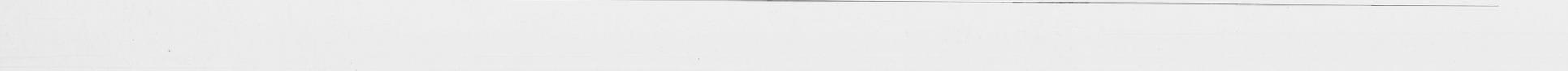
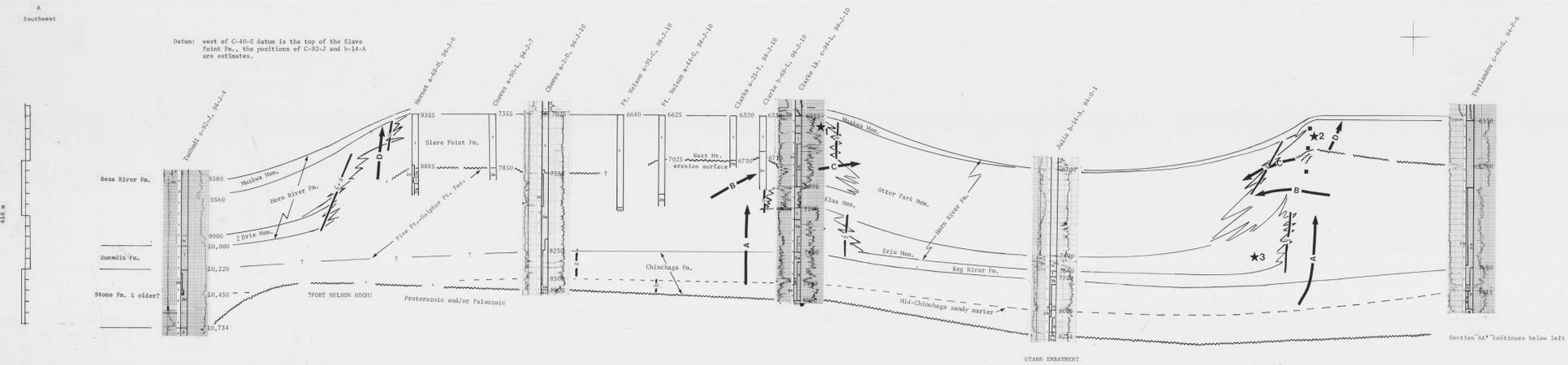
CROSS-SECTIONS AA' AND BB'

Compiled by G.K. Williams, ISPG, Calgary, 1981

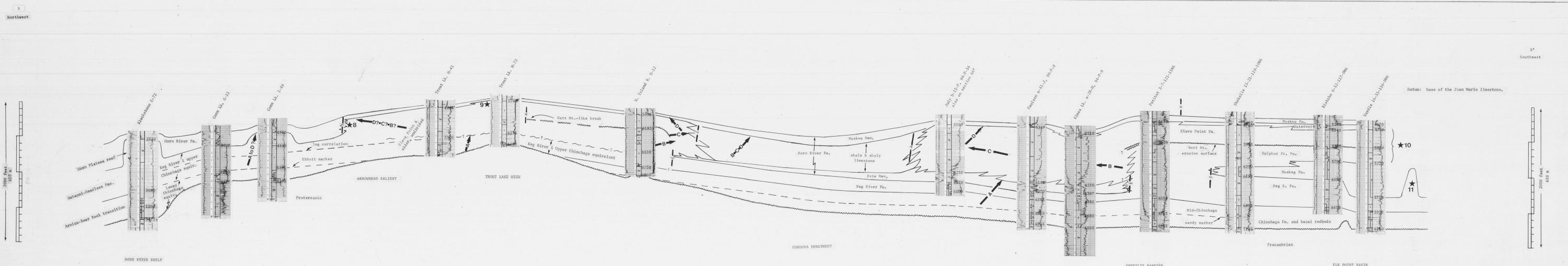


- LEGEND**
- Generalized Lithology**
- Limestone: 1a light colored, interpreted to be of shallow water origin, includes reef, sands and muds; 1b darker, interpreted to be carbonate detritus deposited in moderately deep water; 1c dark bituminous limestone - shale, interpreted to be of relatively deep water origin.
 - Dolomite: 2a dense to micro crystalline, 2b fine to medium crystalline; 2c coarse crystalline (Presqu'ile-type).
 - Anhydrite
 - Redbeds: a mixture of dolomite, anhydrite, silt, clay
 - Sandstone
 - Basement: 6a igneous and metamorphic rocks of Precambrian shield; 6b Upper Proterozoic slightly metamorphosed sediments; 6c quartzite or sandstone, Paleozoic and/or Precambrian.
- (shale, interbedded with or mixed with the above can be read from the mechanical logs)
- Subaerial erosion
 - Non-deposition or submarine erosion
 - Presqu'ile dolomite (type 2c) occurs at the indicated horizon in nearby wells
- Facies lines (see maps)**
- a-b Western and eastern limits of a belt that is transitional from normal-marine carbonates of the Alberta or Stone Fm. west of line to restricted evaporite deposits of the Bear Rock or Lower Chinchaga Fm. east of line
 - c Western limit of Upper Chinchaga anhydrite
 - d Seward (generally northward or westward) limit of the Keg River barrier during the earliest stages of its growth
 - e Northwestern limit of Muskeg anhydrite
 - f Limit (generally northern or western) of Watt Mountain karsting where this limit is not coincident with the Slave Point edge
 - g Southern limit of Klus shale
 - h Seward limit of Slave Point Fm.
 - i Limit of Waterways Fm. or equivalent shale
- Main subsidence - eustatic events**
- A Early, rapid part of Keg River transgression
 - B Late, slow part of Keg River transgression
 - C Marine sediments deposited during the Watt Mountain regression
 - D Early part of Swan Hills transgression (arrows slope in the direction of facies migration)
- Petroleum traps**
- ★4 Approximate stratigraphic position of fields
 - 1 Clarke Lake, gas
 - 2 Ketchikan - Ration trend, gas
 - 3 Yoyo, Koml, gas in reefs or mounds
 - 4 Helinet, Hoss, S. Island river, gas
 - 5 Pango, Trainor Lake C-39, gas
 - 6 N. Helinet, gas
 - 7 Rabbit Lake, gas
 - 8 Betla (C-07), gas
 - 9 Celibeta, gas
 - 10 numerous Alberta fields, gas, oil
 - 11 Rainbow and Zama, oil, gas

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Datum: wells C-40-C to F-46 are hung on the base of the Jean Marie limestone, C-04 and C-12 are hung on the top of the Lay River Fm., W-29 and B-01 are placed by assuming a constant slope on the Lonely Bay Fm.



Datum: base of the Jean Marie limestone.

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