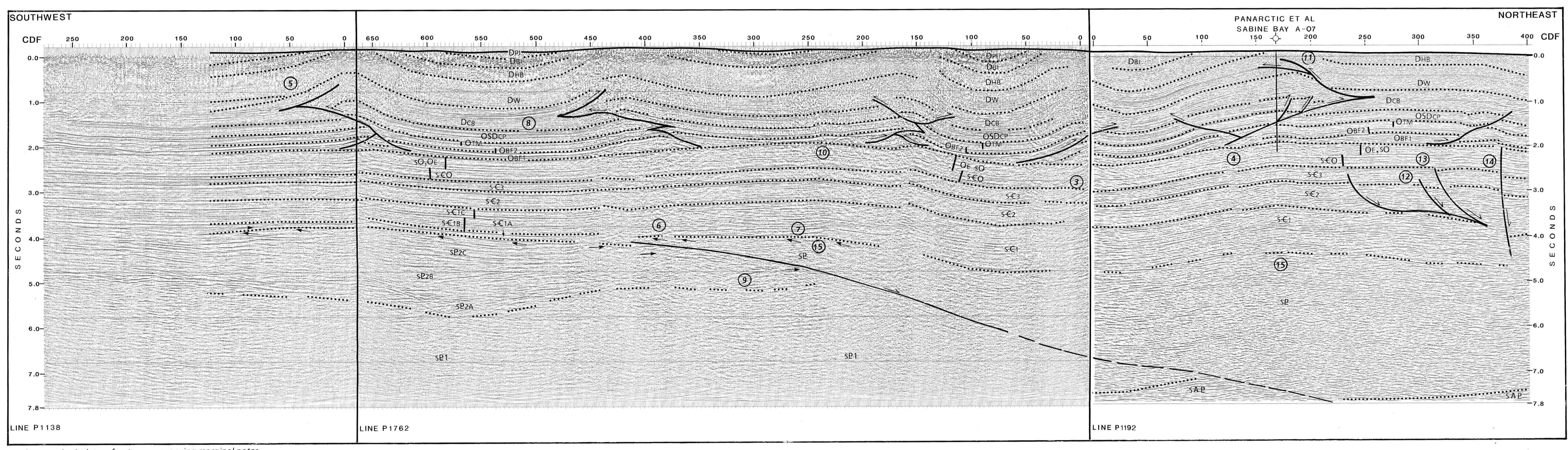
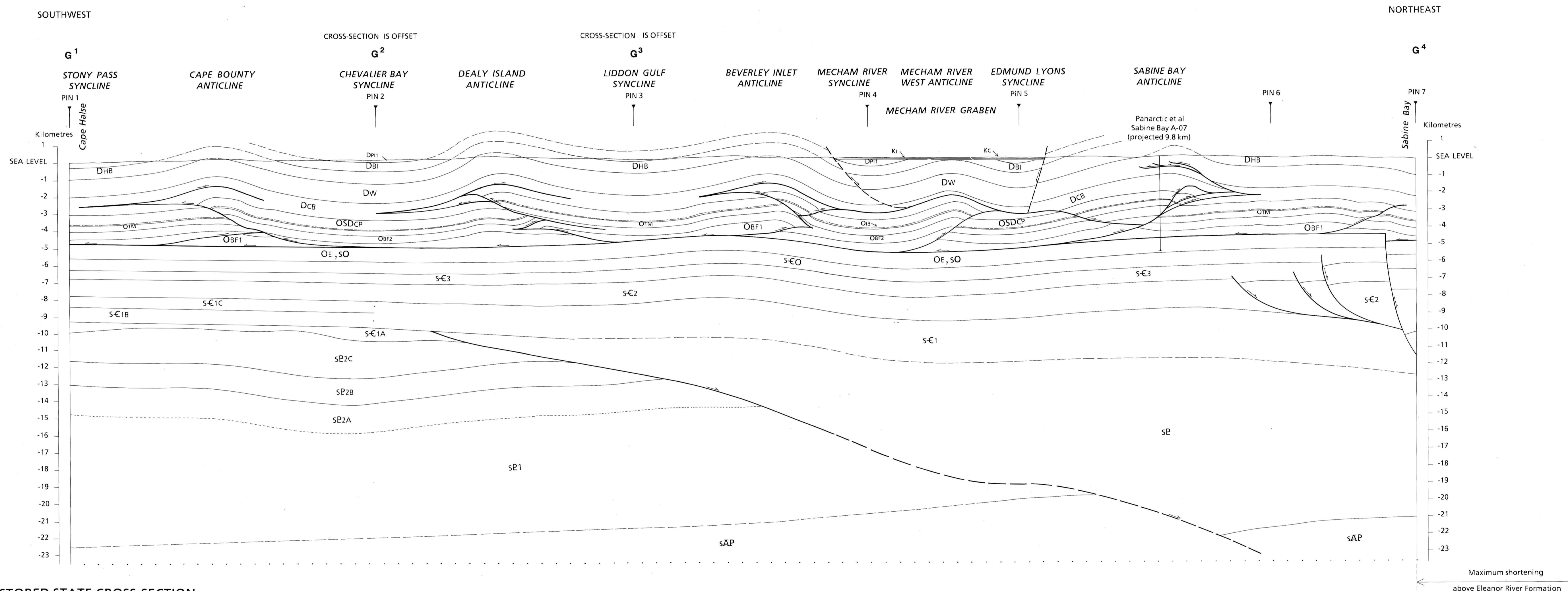


INTERPRETED SEISMIC DATA

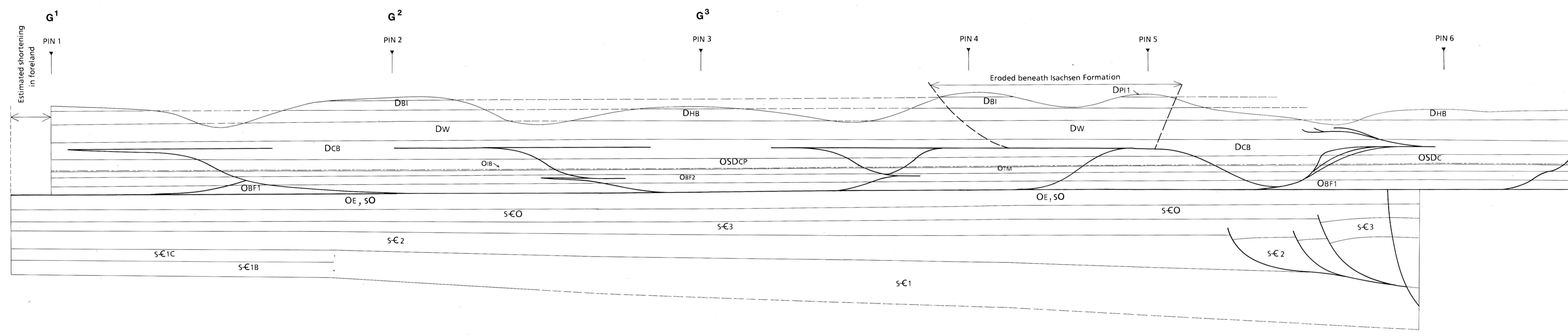


Number on seismic data refers to accompanying marginal notes

DEFORMED STATE CROSS-SECTION



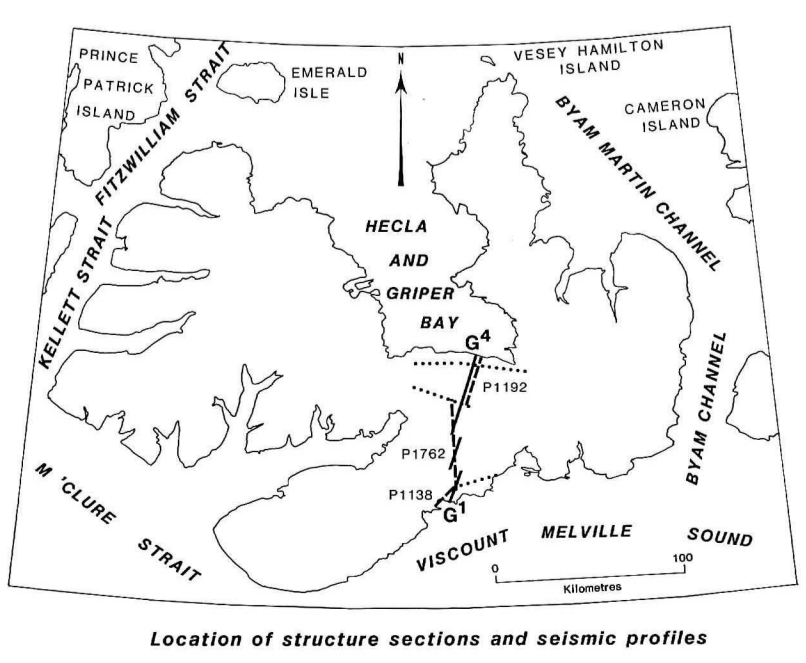
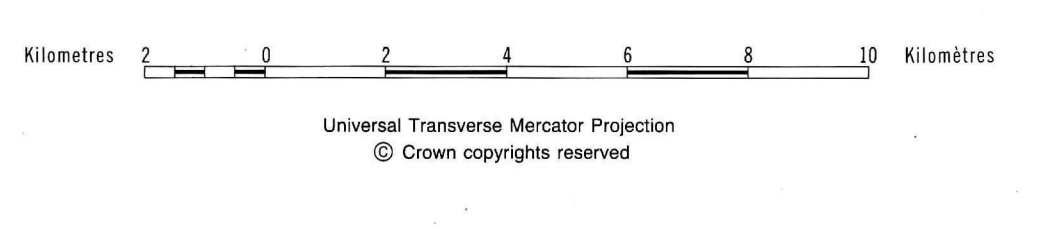
RESTORED STATE CROSS-SECTION



NOTES TO ACCOMPANY SECTION G  
(Seismic lines P1762, P1192 and half of P1138)

- |   |   |   |  |
|---|---|---|--|
| <p><b>Acquisition and Processing</b></p> <ol style="list-style-type: none"> <li>Lines P1138 and P1762 intersect where the two lines are spliced.</li> <li>Lines P1762 and P1192 do not intersect. Splice is made where the two lines are closest. CDF 0 on P1192 is 6.0 km southeast and on strike from the north end of line P1762. Offset of surveys has resulted in some mismatch of deep reflectors.</li> <li>The steep southerly dip of reflectors below the Bay Fiord (OBF1) and north of CDF 32 on P1762 is probably too great to be attributed to residual velocity pull-up. The pull-up, whether it is a structural feature or geophysical artifact, does not extend onto P1192.</li> <li>Depression of reflectors below the lower Bay Fiord (OBF1) and between CDF 116 and 140, line P1192, is attributed to a tectonically thickened column of salt in this part of OBF1.</li> </ol> <p><b>Seismic Stratigraphic Features</b></p> <ol style="list-style-type: none"> <li>The contact between the Cape De Bray (DCB) and Weatherall (DW) formations is a markedly diachronous surface drawn above regionally extensive clinoform reflectors. This diachronous character is displayed below CDF 64, P1138, where a topset reflector above the Cape De Bray rolls into a clinoform. To the south the topset reflector marking the top of the Cape De Bray is stratigraphically higher.</li> <li>The contact between unit SC1A and unit SP is chosen where there is a dramatic increase in unit thickness, and parallel increase in regional dip of the underlying 7a fault surface (CDF 452, P1762).</li> <li>The contact between unit SP and SC1 (CDF 224 to 452, P1762) could be either an angular unconformity or a flooding surface above toppling clinoforms.</li> </ol> | <p><b>Structural Features</b></p> <ol style="list-style-type: none"> <li>Divergence and local thickening of the Cape De Bray north of CDF 500, line P1762, is attributed to tectonic wedging of a thrust sheet into a medial Cape De Bray detachment level.</li> <li>The contact between units SP and SP2 below CDF 265 to 492, line P1762, could also be interpreted as an angular unconformity that cuts out all three members of unit SP2.</li> <li>A salt well in the lower Bay Fiord (OBF1) beneath CDF 220 to 245 on P1762 is apparently not associated with faults in the overlying strata.</li> <li>Three south vergent minor thrusts (two obvious and associated minor folds are interpreted to exist in the medial Weatherall (DW) interval in the axial area of the Sabine Bay Anticline (CDF 148 to 210, P1192).</li> <li>There are two listric extensional faults (below CDF 240 and 288, P1762) that appear to have been active during deposition of basal unit SC1. The base of unit SC2 is a local detachment surface for these faults.</li> <li>The listric extensional fault beneath CDF 310, line P1762, appears to have been active during deposition of the basal part of unit SC0.</li> <li>The steep dipping fault below CDF 375, line P1762, displaces seismic units as high as the Bay Fiord Formation (OBF1). The fault was active after deposition of the Hecla Bay (DHB) interval since a monoclinical flexure related to slip on the deep-seated fault affects all units above the Bay Fiord.</li> <li>There are two long sinusoidal undulations of reflectors above SP (the apices of which are centred on CDF 250, P1762, and CDF 175, P1192) that each have an amplitude of 450 ms and wavelength of 35 km. These are interpreted to be folds that affect the entire Cambrian to Devonian succession. The extent of this deformation is uncertain below the top of SP.</li> </ol> | <p><b>Depth Conversion</b></p> <p>DH: 3.6 km s<sup>-1</sup><br/>         DHB: 3.8 km s<sup>-1</sup><br/>         DW: 4.3 km s<sup>-1</sup><br/>         DCB: 3.7 km s<sup>-1</sup> (south) - 3.6 km s<sup>-1</sup> (north)<br/>         OSDCP: 5.0 km s<sup>-1</sup> (south) - 4.4 km s<sup>-1</sup> (north)<br/>         OIM, OBF1, OBF2: 6.4 km s<sup>-1</sup><br/>         OBF1: 5.3 km s<sup>-1</sup><br/>         SC1A-OI: 5.7 km s<sup>-1</sup><br/>         below SC1A: 6.2 km s<sup>-1</sup></p> <p><b>Method of Cross-section Construction and Restoration</b></p> <p>Bed length measurement and balancing of the contacts above OBF1, OBF2, OIM, and OSDCP between pairs of adjacent pin lines.</p> <p>Bed length measurement of the contacts above OI and DHB.</p> <p>Area measurement and restoration of OBF1, DCB, DW, DHB, and DHB between pairs of adjacent pin lines. This method assumes that horizontal shortening of units OBF1 and DCB-DHB is the same as that expressed by bed lengths of contacts above OBF1-OSDCP.</p> | <p><b>Results</b></p> <p>Section length: 79.7 km</p> <p>Bed length of OIM (this section): 88.0 km<br/>         Shortening of OIM (this section): 88.0 - 79.7 = 8.3 km (9.4%)<br/>         Estimated shortening in foreland*: 2.3 km<br/>         Total shortening of OIM from foreland: 8.3 + 2.3 = 10.6 km (6.2%)</p> <p>Bed length of OI (this section): 79.9 km<br/>         Shortening of OI (this section): 79.9 - 79.7 = 0.2 km (0.2%)<br/>         Estimated shortening in foreland*: nil<br/>         Total shortening of OI from foreland: 0.1 km</p> <p>Deformed state bed length of DHB: 83.2 km<br/>         Apparent shortening of DHB (this section): 83.2 - 79.7 = 3.5 km (4.2%)<br/>         Estimated apparent shortening in foreland*: 1.1 km<br/>         Total apparent shortening of DHB from foreland: 3.5 + 1.1 = 4.6 km (2.8%)</p> <p>Range of assumed tectonic thickening of DW-DHB (approximate): 5 - 10%</p> <p>*Foreland shortening is carried over to this section along the axial trace of Stony Pass Syncline from pin line 9 on Section F.</p> |
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SECTION G  
STONY PASS SYNCLINE NEAR CAPE HALSE TO  
SABINE BAY NEAR REID POINT,  
MELVILLE ISLAND  
Scale 1:125,000



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