Natural Resources Canada / Ressources naturelles Canada

GEOLOGICAL SURVEY OF CANADA / COMMISSION GÉOLOGIQUE DU CANADA

This is section two of a set of three stratigraphic cross sections through the Saglek and Hopedale Basins in the Labrador Sea, on the east coast of Canada, from North to South.

The datum in all sections is top Kenamu. This is an event that appears on seismic and is a good, easily mapped marker. The logs are shown with the Gamma Ray and SP on the left side, the Sonic and Density on the right as well as the Resistivity and Caliper log. The lithology stems from two different sources. Canstrat on the left column, and D'Eon Miller on the right. There are significant differences between the two, as Canstrat is a computer-based system and the other, Al-Hajri are the formation names in coloured section, to make comparison easy. They are based on the lithostratigraphic picks by Al-Hajri, Miller, Sylvester and Williams. Lithostratigraphic contacts are determined and indicated (Williams, 2007). They in many cases do not clearly line up with the lithostratigraphic tops, and both have mismatches with seismic tops. This results from the absence of good, basin-wide markers on the seismic and in the stratigraphic column. Added to the lithostratigraphic tops is a column that shows the depositional environment as indicated by the biostratigraphical assemblages. At the bottom of each well is a plot that shows pressure, temperature, hydrocarbons, porosity, permeability, Vitrinite and Homer plot, log analysis of these pressured intervals, thermal maturity as measured from vitrinite reflectance and Rock Eval, source rock analysis, hydrocarbons, Rock Eval, Vitrinite reflectance, have been cut and those porosities that have been measured on them.

The discrepancy between tops is demonstrated by considering where the top of the green Cartwright Formation lies in relation to the top Thoretlian in the biostratigraphic tops in the wells Hekja, Snorri (on the section) and Gjoa G-37 (off section). In the wells on this section, at Hekja the Thoretlian top sits in the middle of that formation and in Bjarni the whole formation is above the Thoretlian top.

Pressure gradients are indicated on the pressure plots. These are based on the mud weights. Only in Hopedale are these overpressures confirmed by a DST. Several wells show 'dogleg' signatures on the logs that indicate actual overpressure or transient remnants.

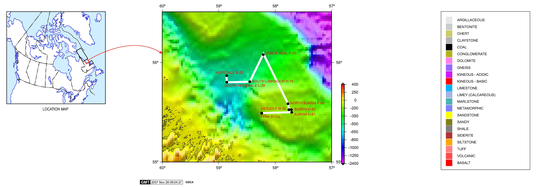
Thermal maturity is in the immature zone or in the oil window in the wells.

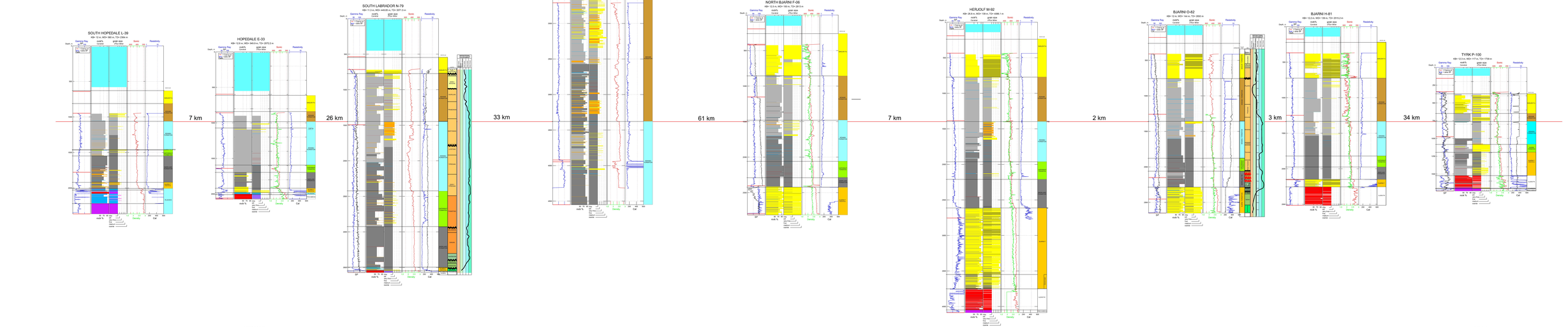
REFERENCES

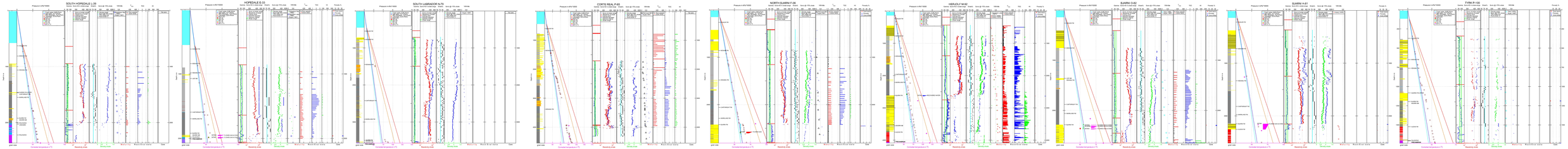
Williams, G.L.
2007: Stratigraphic cross sections Corte Real, Hopedale Basin, Labrador Shelf; Geological Survey of Canada Open File Report 5905, 19 p. (2 sheet).

Williams, G.L.
2008: Stratigraphic cross sections South Hopedale-Tyrk, Hopedale Basin, in the Labrador Sea, on the east coast of Canada, from North to South; Geological Survey of Canada Open File Report 5904, 26 p. (1 sheet).

Williams, G.L., Sylvester, Z., and Miller, A.
2007: Paleological analysis of Corte Real and Bjarni D-60, Hopedale Basin, Labrador Shelf; Geological Survey of Canada Open File Report 5905, 26 p. (1 sheet).







Stratigraphic cross section South Hopedale-Tyrk, Hopedale Basin, in the Labrador Sea, on the east coast of Canada, from North to South.

OPEN FILE
DOSSIER PUBLIC
5904
GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA
2008

This map is in general accordance with the National Topographic Data Base (NTDB) at publication.

For more information on the NTDB, contact Geomatics Canada.

Recommended citation:
Williams, G.L.B.W., and Williams, G.L.
2008: Stratigraphic cross section South Hopedale-Tyrk, Hopedale Basin, in the Labrador Sea, on the east coast of Canada, from North to South; Geological Survey of Canada, Open File 5904.

OFR 5904(2) Nov.2008 © Crown Copyright

Canada