

Sedimentary basins are geologic features created when tectonic plates (mobile segments of the Earth's crust) move, lower and become filled in with sedimentary deposits. The coastal mountain ranges of BC were formed by tectonic uplift, breaking, folding and buckling of the Earth's crust. As these mountain ranges eroded over time, sedimentation filled in offshore sedimentary basins.¹

There are four major sedimentary basins in Canada's Pacific: Queen Charlotte Basin, Winona Basin, Tofino Basin and Georgia Basin.¹ Portions of these basins are within PNCIMA, with the Queen Charlotte Basin taking up the largest portion (see table).

Portions of four major sedimentary basins fall within PNCIMA

Sedimentary basins have the potential to contain petroleum reserves. Queen Charlotte Basin, Tofino Basin and Georgia Basin are part of the continental shelf and have been the subject of exploratory drilling. Winona Basin is located at the base of the continental slope in deep water and remains largely unexplored.¹

Oil, tar and gas seeps have been found on Haida Gwaii and in offshore waters; no significant oil or gas deposits had been discovered as of 2007.¹

Material presented is drawn from the following literature review, which includes primary references:
1 Conway, K.W. and D. Johannessen. 2007. Ecosystem overview: Pacific North Coast Integrated Management Area (PNCIMA). Appendix A: Geology. Can. Tech. Rep. Fish. Aquat. Sci. 2677. 60pp.

Sedimentary basins in Canada's Pacific¹

Sedimentary Basin	Total area of basin (km ²)	Area within PNCIMA (km ²)	Percent within PNCIMA
Queen Charlotte	67,710	64,885	96
Georgia	15,380	710	5
Winona	7,915	140	2
Tofino	29,485	140	0.5

