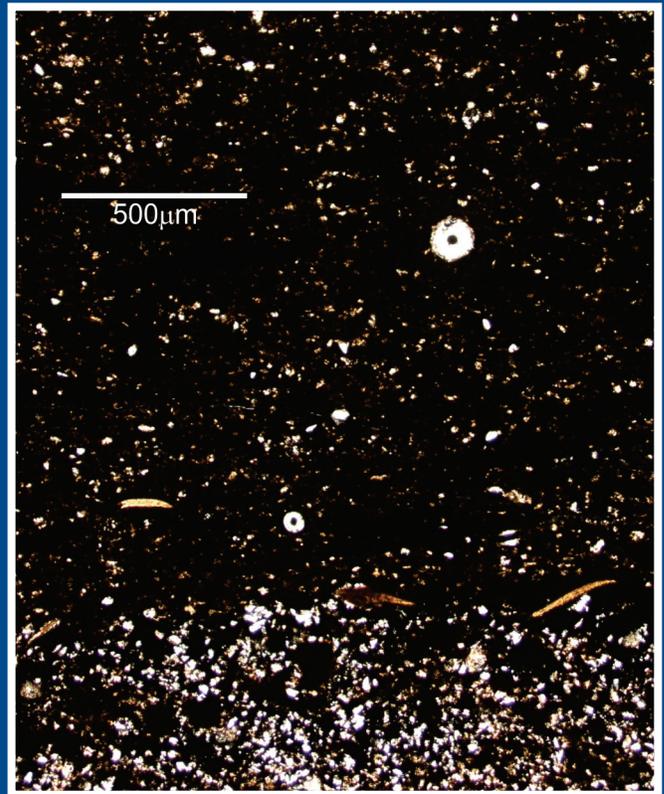
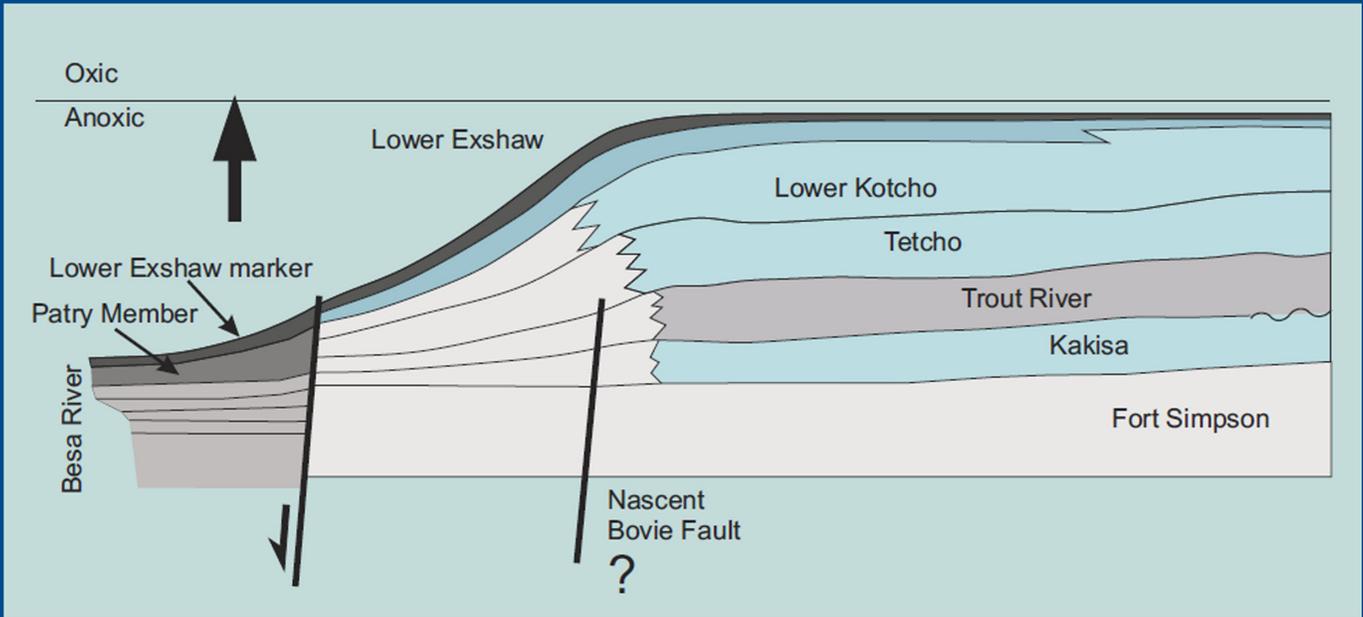


Oil and Gas Geoscience Reports 2015



Ministry of Natural Gas Development
Tenure and Geoscience Branch

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Front cover

Top: Model for the origin of organic-rich shales in the central part of Liard Basin. Organic-rich mudrocks of the Patry member were deposited in anoxic waters adjacent to a syndepositional, west-side-down normal fault sub-parallel to the Bovie Fault. At the stage of sedimentation depicted, sea level has risen and anoxic waters have flooded the shelf, depositing the lower part of the Exshaw Formation.

Bottom left: Dark grey calcareous shale of the lower Patry member containing thin discontinuous light grey carbonate layers and a pyrite nodule (upper left), 3771.6 m level.

Bottom right: Photomicrograph of dark grey, laminated and calcareous shale of the lower Patry member, 3775.2 m level. Calcareous laminae contain detrital carbonate grains such as crinoid ossicles and shell fragments.

See

Ferri, F., McMechan, M., and Creaser, R., 2015. The Besa River Formation in Liard Basin, British Columbia, pp. 1-27.

This publication is available, free of charge, from the Government of British Columbia website:

www2.gov.bc.ca/gov/content/industry/natural-gas-oil/petroleum-geoscience/petroleum-geoscience-publications

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Foreward

The 2015 volume of Geoscience Reports presents research from the Tenure and Geoscience Branch that continues the focus on unconventional resources.

The paper by Ferri, McMechan, and Creaser describes the regional setting and stratigraphic relationships of the Besa River Formation in Liard Basin. Although this unit host significant shale gas resources, it is poorly understood. The paper also examines and analyzes recently released data from core of the Apache b-23-K well, which was cut from the gas-rich zone of the Besa River Formation. This paper suggests possible correlations of the “pay zone” with known formations in other parts of the Western Canada Sedimentary Basin and proposes a depositional model for this sequence.

The second paper by Janicki and Balogun describes a thin, tight sandy to silty horizon in the upper part of the Fernie Formation that may be equivalent to the Rock Creek sandstone of southern Alberta. The stratigraphic proximity of this unit to underlying organic-rich shales of the Nordegg (Gordondale) Member of the Fernie Formation lends it to likely being charged with hydrocarbons.

Filippo Ferri
Director, Petroleum Geoscience
Tenure and Geoscience Branch
Upstream Development Division
British Columbia Ministry of Natural Gas Development

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