



**THE BLUESKY - A STRATIGRAPHIC MARKER IN NORTHEASTERN BRITISH COLUMBIA
(93I, O, P)**

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Over the past 25 years there has been extensive drilling by both petroleum and coal exploration companies south of the John Hart Highway in northeastern British Columbia. Correlation of formation tops from the geophysical logs taken from the drill holes allows accurate prediction of formation thicknesses over an extensive area. As part of a study of Lower Cretaceous sedimentary rocks in northeastern British Columbia, an isopach map of the Bluesky transitional unit (Fig. 25) was produced from drill hole information.

The Gething Formation as described by D. C. Pugh (1960) consists of 'grey, silty, fine- to coarse-grained siltstones, grey to brownish grey, silty, fine to coarse-grained sandstones, and dark grey and black, carbonaceous shales and coal.' Most of the better coals are found in the Upper Gething and these coals are sought after by numerous exploration companies in northeastern British Columbia. It is because much of the coal is found in the upper section that it is important to establish the top of the Gething Formation, which is marked by a transitional unit called the Bluesky.

The Bluesky is a transitional unit between continental sedimentary rocks of the Gething Formation and marine shales of the overlying Moosebar Formation. The Bluesky was first described in 1954 by the Alberta Study Group who took their description from the Bluesky well No. 1 in Alberta (4-29-81-1, W6). The Bluesky at this location was found in the interval 834 metres and 856.5 metres, with a total thickness of 22.5 metres. The unit was described as 'fine- to medium-grained sandstone with interbeds of shale.' The top was characterized by black, rounded chert granules and pebbles which decreased in abundance downward. Glauconite was common in this type section of the Bluesky.

In 1960, D. C. Pugh proposed using Fort St. John well No. 10 from interval 987.6 metres to 999 metres as the typical representative Bluesky section in northeastern British Columbia. It was described as '24 feet [7.3 metres] of very fine-grained, glauconitic sandstone with carbonaceous inclusions, 5 feet [1.5 metres] of glauconitic, sandy shale and 11 feet [3.4 metres] of porous, fine-grained, glauconitic sandstone.' Pugh extended his study of the Bluesky in British Columbia to the area north of the John Hart Highway, where petroleum exploration companies had extensively drilled.

In this preliminary study emphasis is being placed on the Bluesky unit because it marks the top of the Gething Formation, which contains important economic reserves of coal. As well, in some northeastern British Columbia localities, the Bluesky contains significant oil and gas

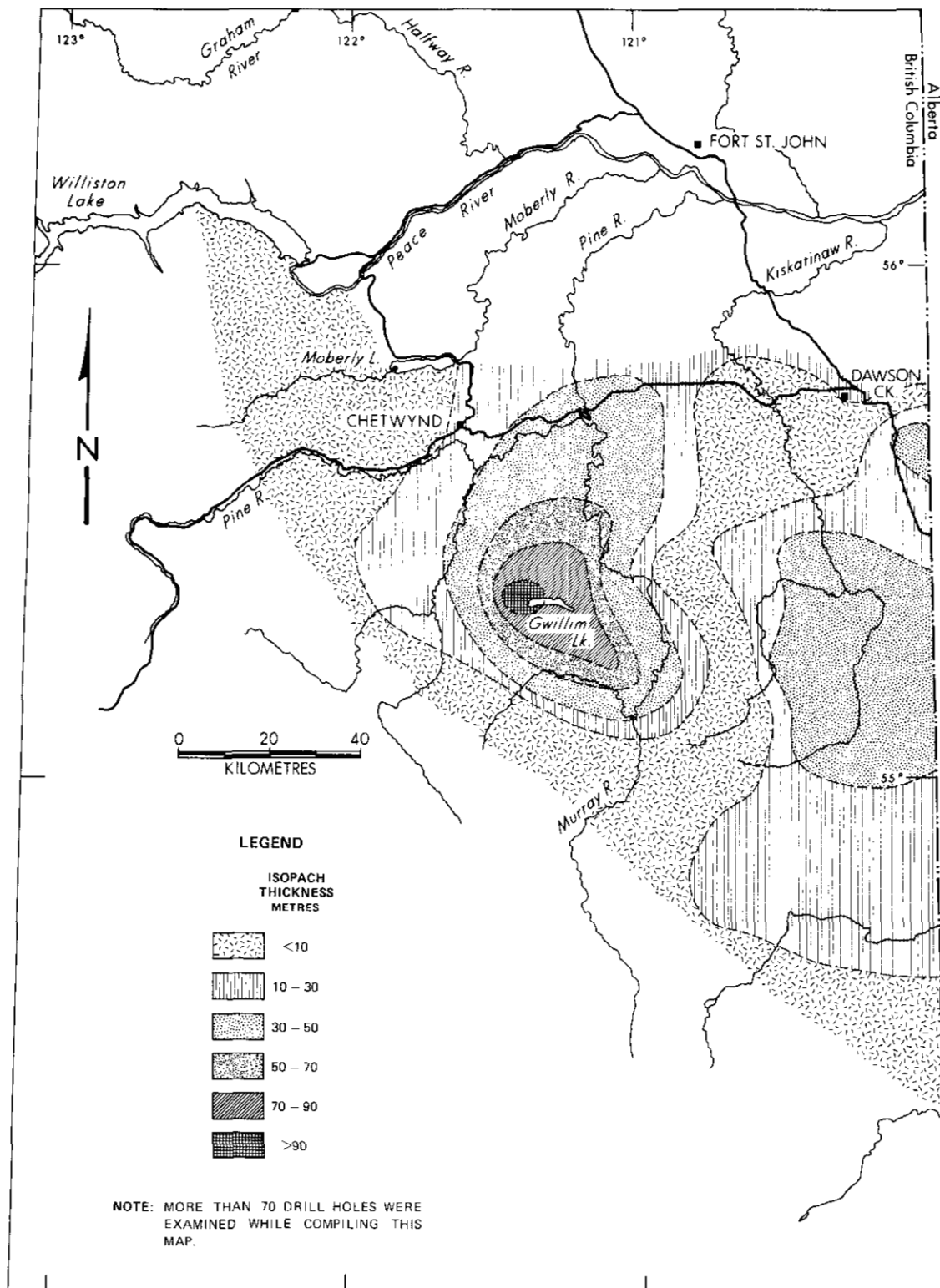


Figure 25. Isopach map of the Bluesky unit, Gething Formation south of Peace River in northeastern British Columbia.

reserves. Further examination of outcrops, drill core, and geophysical logs during this study will emphasize the distribution and character of the Bluesky unit throughout the Peace River Coalfield.

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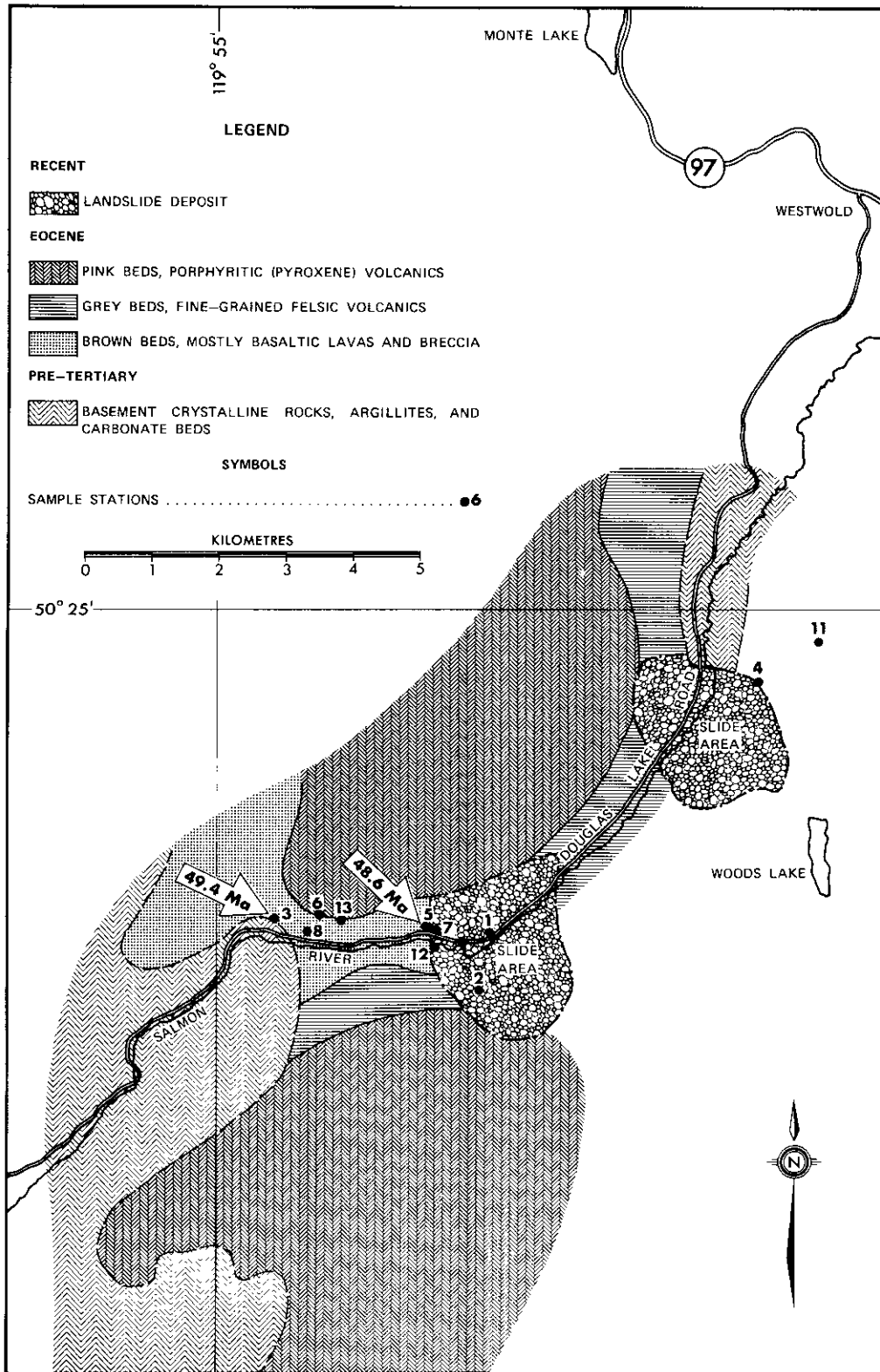


Figure 26. Sketch map of the geology of the Salmon River area.