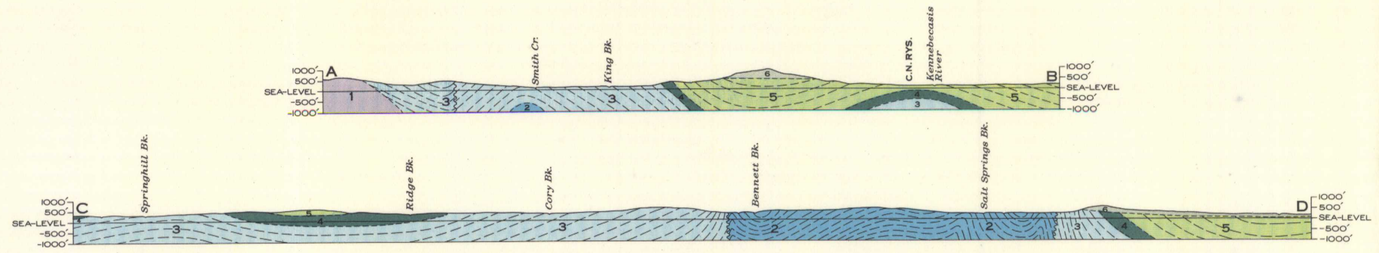
CANADA

DEPARTMENT OF MINES AND RESOURCES

MINES AND GEOLOGY BRANCH

BUREAU OF GEOLOGY AND TOPOGRAPHY



Diagrammatic structure sections along lines A-B and C-D

LEGEND

CARBONIFEROUS

PENNSYLVANIAN — PETITCODIAC GROUP

6 — *Grey sandstone, shale and conglomerate*

MISSISSIPPIAN AND (?) PENNSYLVANIAN — HOPEWELL GROUP

5 — *Red conglomerate, sandstone and shale*

MISSISSIPPIAN — WINDSOR SERIES

4 — *Mainly limestone and gypsum*

3 — *Red feldspathic grit, coarse conglomerate, sandstone and shale* — MONCTON GROUP

2 — *ALBERT FORMATION: grey shale, sandstone, conglomerate and limestone*

PALAEOZOIC

PRE-CARBONIFEROUS

PRECAMBRIAN OR PALAEOZOIC

1 — *Highly altered sedimentary and volcanic rocks; granitic intrusives*

Fault

Bedding (inclined, vertical, horizontal)

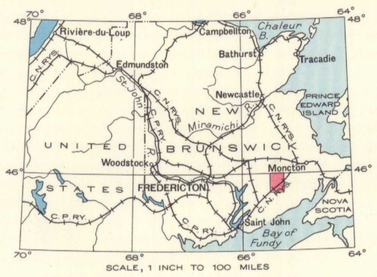
Observed rock outcrop

Note. Observed rock outcrops may be indicated either by a cross, x, or by a bedding symbol.

Provincial highway
Road and buildings
Road not well travelled
Bush road or trail
Power line
Church
School
Post Office
Cemetery
Prospect
Water-tank
Triangulation station
Airport
County boundary (position approximate)
Parish boundary (position approximate)
Intermittent stream
Dam
Marsh
Contours (interval 50 feet)
Depression contour

Geology by J. S. Stewart, 1939.

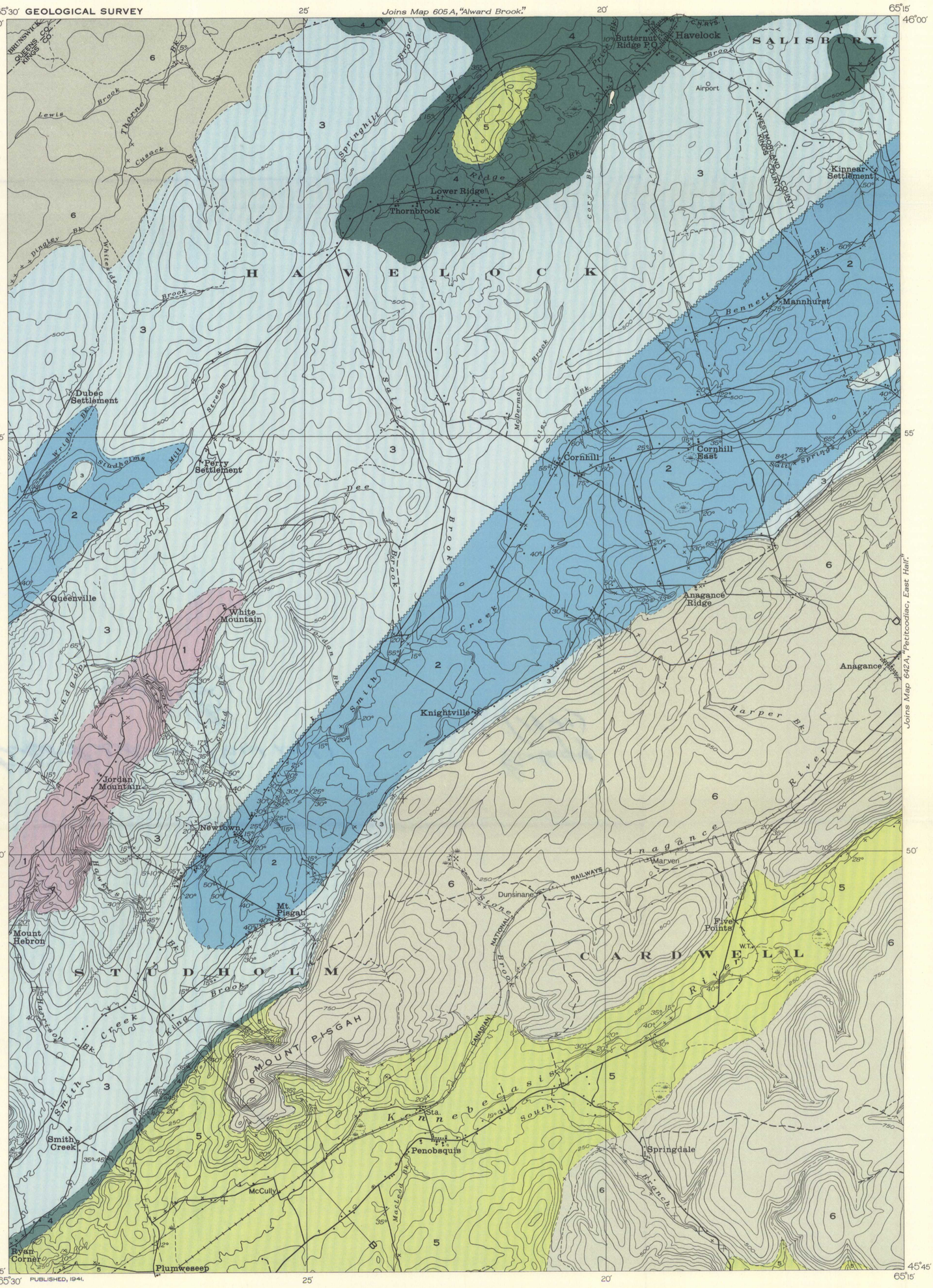
Base-map from surveys and topography by the Topographical Survey, 1933 and 1935. Cartography by the Drafting and Reproducing Division, 1941.



65°30' GEOLOGICAL SURVEY — 25' — 20' — 65°15' — 46°00'

Joins Map 605A, "Alward Brook."

Joins Map 642Ai, "Petitcodiac, East Half."



65°30' — 25' — 20' — 65°15' — 45°45'

PUBLISHED, 1941.

DESCRIPTIVE NOTES

The Albert formation (2) consists mainly of thin bedded dark grey shales. These weather readily and are easily eroded so that the sections exposed are small. The base of the formation is not exposed within the map-area and, as no horizon guides were recognized, the total thickness of Albert strata could not be estimated. Although several small sections of the upper part of the formation outcrop along Smith Creek the contact with the overlying Moncton group was not observed. These exposed sections are mainly repetitions of the same beds, as the creek follows the general direction of strike of the formation.

In the regular sequence the Moncton group (3) rests on the Albert formation but around White and Jordan Mountains, Moncton strata rest unconformably on pre-Carboniferous rocks. Some volcanic tuff of undetermined thickness outcrops in road-side ditches in two places north of White Mountain. Its stratigraphic position is somewhere in the lower part of the Moncton group, and it probably represents the same horizon as the tuffs found in the lower part of the Weldon formation, on Boyd Creek, in the Hillsborough map-area.

The Windsor Series (4) is poorly exposed, and its contact with the underlying Moncton group was not observed. There is however no evidence of structural discordance with the Moncton. The gypsum of the Windsor series lies above the limestone and much of the area underlain by gypsum is characterized by numerous sink holes. West of Havelock a ridge of Windsor limestone exposes a section 185 feet thick.

The Hopewell group (5) rests unconformably on the Windsor series but there is no appreciable structural discordance. In most places the lower Hopewell beds consist of coarse red conglomerate. The contact with the underlying Windsor beds is not exposed in this map-area but to the east, west and south the basal Hopewell conglomerate rests on different Windsor members in different places. In the type locality near Hillsborough, the Hopewell group includes formations of both Mississippian and Pennsylvanian age that follow one another with apparent conformity. In this map-area the Hopewell beds are equally as deformed as the underlying Mississippian strata and it is probable that they here include only the lower formations of the group and may not be represented near Hillsborough.

The Petitcodiac group (6) of this map-area overlies the Hopewell unconformably. The beds form nearly flat lying deposits that blanket a large part of the area and overlap onto different older formations at different places. The basal beds are made up mainly of pebble conglomerates in which the pebbles are mostly white quartz and about one inch in diameter. Plant remains are common in Petitcodiac strata but are rare in the Hopewell and Moncton beds. A few thin coal seams occur near Dunsinane; these have been prospected but there has been no production.

With the exception of the granitic intrusive bodies, which are comparatively fresh and undeformed, the pre-Carboniferous rocks are closely folded, much broken by faults, and greatly metamorphosed. In contrast with them the Mississippian formations, though folded and faulted to a moderate degree, are quite unaltered. The general structural trend of both pre-Carboniferous and Mississippian rocks is northeasterly. Pennsylvanian, Petitcodiac strata are only gently warped and in most places are nearly flat lying.

MAP 643A

PETITCODIAC

(WEST HALF)

KINGS, AND WESTMORLAND COUNTIES

NEW BRUNSWICK

Scale, ~~63,360~~ or 1 Inch to 1 Mile

Miles 1 0 1 2 3

Approximate magnetic declination, 23°15' West.

643A