CANADA
DEPARTMENT
OF
MINES AND TECHNICAL SURVEYS

GEOLOGICAL SURVEY OF CANADA

GEOLOGICAL SERIES

SHEETS $21\frac{1}{1}\left(E\frac{1}{2}\right)$ and $21\frac{1}{4}\left(W\frac{1}{2}\right)$

LEGEND

A — *Area of no coal, underlain by formations older than coal seam*

B — *Area, where coal is probably present under overburden of not more than 50 feet*

C — *Area, where coal is probably present under overburden of more than 50 feet*

Area, worked out by strip-mining
Area, worked out by shaft-mining
Outcrop of coal seam
Coal outcrop ×
Slope, adit (Note: shafts are too numerous to be shown)
Elevation contour of coal seam (in feet above sea-level); contour interval 25 feet 25
Approximate position of boundary of provincial mining blocks with number 21
Bore-hole (location approximate except for No.10) B.H.7
Run-of-mine sample for coal analyses (See Table 2 in accompanying report) 12
Average thickness, in inches, of coal as determined from one or more borings (location approximate; upright red figures are for coal, slanting black figures are for shale) 13 / 6 / 15

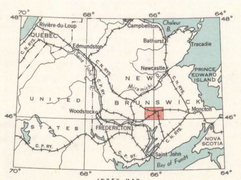
Compiled by J. E. Muller, 1948

Cartography by the Geological Mapping Division, 1950

Provincial highway 10
Road and buildings
Road not well travelled
Trail
Abandoned railway
Power line (on steel towers, on wooden poles)
Triangulation station ▲
Survey monument ⊙
County boundary
Parish boundary
Forest Experiment Station boundary
Game Refuge boundary
Church ⛪
School S.H
Post Office P.O
Sawmill S.M
Water tank W.T
Oil tank O.T
Cemetery CEM
Intermittent stream
Rapid R.
Marsh
Height in feet above mean sea-level 14

Base-map surveyed by the Topographical Survey and by the Army Survey Establishment in 1945, 1947 and 1948. Compiled by the Topographical Survey and by the Army Survey Establishment in 1949, from air photographs taken in 1944 and 1945, by the Royal Canadian Air Force.

Approximate magnetic declination, 22°26' West



INDEX MAP

PUBLISHED, 1951

MAP 1005A

COAL DEPOSITS

MINTO-CHIPMAN

NEW BRUNSWICK

Scale: One Inch to One Mile = 1/63,360

Miles 1 ¾ ½ ¼ 0 1 2 3

DESCRIPTIVE NOTES

This map summarizes available data on the extent of the coal seam of the Minto-Chipman area. It has been compiled from the mining-block maps on 1 inch to 400 feet, prepared by the Provincial Geologist, Dr. W.J. Wright, supplemented by geological information collected by the author.

The map is divided into areas where, according to available information (A) no coal is present; (B) coal is present beneath an overburden of not more than 50 feet; and (C) coal is present beneath more than 50 feet overburden.

The boundary between areas A and B is the outcrop of the coal seam at the bedrock surface. This outcrop may be exposed, but in most places it lies beneath a cover of drift from a few feet to about 30 feet thick. In the area near Minto, where the seam is generally close to the present surface, several coal-bearing patches are surrounded by barren areas, due to variations in the depth of glacial erosion. It is possible that more such patches occur in the outcrop area of the upper part of the Minto formation (See Geological Map 1003 A). The outcrop of the coal seam, which is also the boundary of the coal-bearing area, is shown as a broken line in areas where it is known from old workings extending to this limit, or from groups of bore-holes. If only general geological information, without facts concerning the seam itself, is available, the line is dotted.

The boundary between areas B and C has been traced by using the contours of the coal seam and of the topography. The distinction between these areas is made because strip-mining, which in present operations is becoming increasingly important, does not extend beyond this limit of 50 feet overburden. It will be noticed that all areas worked out by this method fall within those (B) with 50 feet or less of overburden. Underground workings commonly cross the boundaries of these areas, but do not occur at depths of more than 150 feet.

The following suggestions may be helpful in prospecting suitable strip-or shaft-mining areas. It is generally known that the coal seam is everwhere accompanied by grey shales and fine grey sandstones, locally known as coalrock. Many discoveries of coal in the area were made by trenching or drilling natural outcrops of these rocks. Not so well known is the fact that red sandstones and shales, with some green-grey sandstone and conglomerate, of the Hurley Creek formation, everywhere overlie the coal-bearing beds. If, therefore, these red beds are encountered in outcrop or borehole, coal-bearing strata can be expected to underlie them, though the coal seam itself may be of insufficient thickness or may even be missing. On the other hand, a thick series of grey sandstones and quartz conglomerates underlies the coal-bearing formation, and occurrence of these beds will in most places indicate that no coal will be found at greater depths.

As the coal seam appears to be thin or missing in the area north of the Hardwood Ridge anticline, the area most recommended for prospecting would be in the southwest corner of the map-area. It may be advisable to commence shallow drilling within areas where the seam may be expected at less than 50 feet depth (B), about ¼ mile from the outcrop of the seam as shown on the map. It should be realized, however, that the position of this outcrop, where shown by a dotted line, is only a rough approximation. It may, therefore, happen that only grey sandstones and conglomerates are encountered. If a thickness of about 50 feet of such beds has been drilled, it would appear that the drill had reached the lower part of the Minto formation, and that no coal is present. In this case, the next hole should be drilled farther from the plotted position of the coal outcrop, which apparently would require revision on the map. If, however, only red beds are encountered, coal may be assumed to be present beneath, and the next trial should be made nearer the position of the coal outcrop as shown on the map.

There is some evidence to indicate that another coal seam may overlie the Minto seam. This other seam, occurring in the Sunbury Creek formation, is known from two prospects on Mowatt Brook, near the north border of the Minto-Chipman area. The thickness of the seam at these prospects is only about 1 foot.