



This map is a reprinting of one published separately on transparent paper (price 50 cents); some of the following notes are therefore not applicable.

EXPLANATORY NOTES

PURPOSE AND SCOPE OF MAP

The main purpose of this map is to show the location of known uranium occurrences in Canada and to permit relating this information to principal geological features; in other words, to illustrate the present state of knowledge of "metalogenic provinces" for uranium in this country. This information will be useful in selecting areas for any prospecting that may be undertaken for uranium, and to companies seeking prospects. It is also a guide to much of the literature on Canadian uranium deposits and their geology.

Because it is impracticable to include data for areal geology on this map, it is printed on fairly transparent paper and on the same scale as the Geological Map of Canada (No. 106A, price 50 cents), so that geological comparisons can be made by placing the map over Map 106A. The present map may also be compared with the Tectonic Map of Canada, although this is not on the same scale; the Tectonic Map, published jointly by the Geological Society of America and the Geological Association of Canada, is available at \$1.50 (U.S.) from the Geological Society of America, 419 West 17th Street, New York 20, N.Y.

The information shown on this map is based on about 1,500 discoveries found or from which samples have yielded assays indicating 0.05 per cent U₃O₈ or more. Most of these occurrences or properties are grouped so closely that it is impracticable to show them individually, therefore the areas containing them are indicated. The larger of these areas are generalized to some extent and include some fairly large sections in which occurrences have not yet been found. Virtually all uranium occurrences have been omitted because the discoverers do not wish them to be revealed, but in almost all cases where permission to publish information is not available the locations fall within the ruled areas outlined by other occurrences that may be revealed. Many of the occurrences appear to be small and of only scientific interest, but their positions are useful in providing more complete information on the distribution of uranium in small quantities. Thorium occurrences have been omitted unless they are known or believed to contain uranium in amounts of 0.05 per cent U₃O₈ or more. Occurrences of the mineral allanite have been omitted unless assays from the occurrences showed 0.05 per cent U₃O₈ or more.

CLASSIFICATION

In the Canadian Shield the uranium ores, and most of the prospects and minor occurrences, are divisible into three general types. The deposits of the Blind River area consist mainly of conglomerate whose matrix contains finely dispersed uranium minerals; these are called the "conglomeratic" type, although a few deposits are actually in quartzite and related rocks. The producing uranium mines of Saskatchewan and the Northwest Territories, and also many prospects and occurrences consist of veins, lenses, stringers, and disseminations of pitchblende and are called the "vein" type for convenience, although many are not actually veins. The ores of the Bancroft area, and many occurrences there and elsewhere, belong to the general "pegmatitic" class. Many of these are not true pegmatites but are related to them; they include migmatites, unusual calcite-bearing pegmatites, contact metasomatic deposits, granites, and syenites. The three classes of deposits usually occur in distinct parts of the Shield, which correspond with recognized geological provinces and sub-provinces, or parts thereof. Minor overlapping of types occurs however in some regions, for some of which only the dominant type can be indicated because some generalizations must be made on a map of this scale. For example, one pegmatitic occurrence has been reported from the area between Great Bear and Great Slave Lakes, where all other known occurrences are of the "vein" type. Also, pegmatitic and vein types are intermixed to some extent at the East Arm of Great Slave Lake and in the Tatlayin area between that lake and Lake Athabasca. Several pegmatitic occurrences have been found in the Beaverlodge region, but it contains thousands of individual veins and related occurrences, and most of the known pegmatitic areas are near the border of the area. In the Blind River area almost all discoveries are of the conglomeratic type, but one stringer of pitchblende has been reported, and a few other occurrences are also of the vein type, but these could not conveniently be separated on a map of this scale.

A few occurrences in the Canadian Shield have not been differentiated as to type because of lack of sufficient information. The occurrences in the Cordilleran and Appalachian regions have not been differentiated because the compiler believes are favourable and because several belong to types other than the three that are separated in the Shield. In the list of localities, the names of the principal uranium mineral or minerals reported are included in parentheses if the information is available.

FAVOURABLE AREAS

Besides the areas in which uranium has already been discovered — where additional occurrences are likely to be found — certain other areas that the compiler believes are favourable in a more general way are indicated roughly. These are mainly extensions of geological provinces or sub-provinces, in other parts of which uranium has been found. This information is based on theoretical and, commonly, very scanty evidence; it should be used cautiously.

Within the Canadian Shield, most such areas are designated as favourable for either the vein or the pegmatitic type of occurrences, although occurrences of other kinds might also be found. A belt extending from the vicinity of Sault Ste. Marie to that of Lake Mistassini is unclassified as to type because occurrences of various kinds have been found along it. Areas favourable in a general way for further discoveries of the conglomeratic type are not designated because certain problems regarding the origin of these deposits are not yet solved. Many additional parts of the Shield are also favourable in a general way but are not indicated because less is known about them.

The entire Appalachian region is shown as favourable because that area is relatively small on a map of this scale. The part of the Cordilleran region lying between the Rocky Mountain Trench and the Coast Range Belt, exclusive of large areas of young volcanic rocks, is indicated as favourable in a general way, but many parts of the territory farther west are not unfavourable. At present, because of lack of producing uranium mines, neither the Appalachian nor the Cordilleran region can be regarded as favourable by many parts of the Canadian Shield.

The areas indicated are much generalized because of the scale of the map. All parts of them are not equally favourable. Local geological maps and reports available for most areas provide much more detailed data.

It must be emphasized that the present map is only a step in the elucidation of the distribution of uranium in Canada; further discovery and research will undoubtedly cause changes in the pattern as they progress.

SOURCES OF INFORMATION

The information on this map is based largely on reports made to the Geological Survey of Canada by prospectors and companies as required by the Atomic Energy Control Regulations, and later released for publication. Additional information has been obtained from studies made and published by the Geological Survey, by Provincial mining departments, and by geologists and mineralogists working for companies or independently. All these sources of information are acknowledged gratefully. Most of the information shown has been verified but it is possible that a few of the occurrences that have not yet been studied may prove to be misplaced or wrongly classified.

REFERENCES

If information has been published on an occurrence or on the uranium deposits of an area, references are listed in the margin of the map. For some areas the literature is extensive and a selection has been made. Many additional publications are listed in a recent publication: "A Bibliography on the Occurrence of Uranium in Canada, and Related Subjects" (Geological Survey of Canada, Paper 595).

For those occurrences not yet described in publications the list of localities includes the name and address of the prospector who reported the discovery or the name of the company concerned.

The Geological Survey of Canada cannot supply publications other than its own, nor unpublished information.

LEGEND

- OCCURRENCES OF THE CONGLOMERATIC TYPE**
- Area containing more than one producing mine
 - Area containing occurrences
- OCCURRENCES OF THE VEIN TYPE**
- Area containing more than one producing mine
 - Single producing mine
 - Area containing occurrences
 - Favourable area from which occurrences have not been reported
- OCCURRENCES OF THE PEGMATITIC TYPE**
- Area containing more than one producing mine
 - Single occurrence
 - Favourable area from which occurrences have not been reported
- TYPE UNDIFFERENTIATED**
- Area containing occurrences
 - Single occurrence
 - Favourable area from which occurrences have not been reported
- Metalogenic data compiled by A.H. Lang, 1957
- Cartography by the Geological Cartography Unit, 1958

LOCALITIES

(With key to selected references where available. Otherwise names of companies or individuals concerned are included)

1. Atlin area. Ref. 2, 1953, p. 79; 2, 1955, p. 7 (uraninite)
2. Lincoln Creek. Y.T. (B. A. Sapp, 10824A-2 Ave., Edmonton, Alta.)
3. Hazelton area. Ref. 1, p. 40; 2, 1948 p. 80; 2, 1949 p. 82 (uraninite)
4. Granite Creek. Ref. 2, 1955 p. 29 (pyrochlore)
5. Grandview claim, near Houston. (C. S. Powney, Fort St. James, B.C.)
6. Nation River. Ref. 3 (uraninite)
7. Fraser Lake (south of). Ref. 2, 1955 p. 28; 2, 1956 p. 28 (autunite, etc.)
8. Tudyah Lake. (N. Micholls, 4444 E. Marine Drive, S. Burnaby, B.C.)
9. Zabalos list. (S. R. 4717 Rander St., Vancouver, B.C.)
10. Bridge River area. Ref. 1, p. 43; 2, 1948 p. 112
11. Clinton area. Ref. 1, p. 44
12. Horsley River. (R. B. Earle, 2254 Bowker Ave., Victoria, B.C.)
13. Birch Island area (including Resgar deposit). Ref. 2, 1953 p. 101; 2, 1954 p. 108; 2, 1955 p. 38; 2, 1956 p. 70; (uraninite, uranorthite)
14. Lemarié area. Ref. 2, 1952 p. 115; 2, 1954 p. 111 (pyrochlore)
15. Texas Creek. Ref. 1, p. 45 (uraninite)
16. Lytton area. Ref. 1, p. 45; 2, 1955 p. 33, 34 (metazuite)
17. Harrison Lake (south of). (L. G. Woodman, 1671 Harrow St., Vancouver, B.C.)
18. Hope area. Ref. 1, p. 45
19. A.M. claims. Ref. 2, 1954 p. 152 (uraninite)
20. Hedley Lake (north of). (G. Ramsay, Kenmore, B.C.)
21. Armstrong area. Ref. 1, p. 44 (uraninite)
22. Kelowna area. Ref. 1, p. 45 (ferugonite)
23. Part of Kootenay region. Ref. 1, p. 44; 45; 2, 1954 p. 142; 150; 2, 1955 p. 86; 2, 1956 p. 142 (uraninite, pyrochlore)
24. Great Bear Lake area (Eskorimo mine). Ref. 1, p. 46; 57 (pitchblende)
25. Gelleau Lake. Ref. 1, p. 46
26. Hepburn Lake. (A. M. Berry, 14 Mercantile Bldg., Edmonton, Alta.)
27. Hottah Lake area. Ref. 1, p. 57-60 (pitchblende)
28. Contoway Lake (approx). Ref. 5 (pitchblende)
29. Marston River area (Rayrock mine). Ref. 1, p. 61; 6; 7 (pitchblende)
30. De Staffay property. Ref. 1, p. 64
31. Barnston River area. Ref. 1, p. 63, 64 (uraninite)
32. Copper property. Ref. 1, p. 64
33. Stars Lake and Murky Channel areas (Rag property, etc.). Ref. 1, p. 64, 65 (pitchblende)
34. Rex property. Ref. 1, p. 65 (uraninite)
35. Tee Lake. Ref. 1, p. 66
36. Nonacho (Tatlayin) area. Ref. 1, p. 66 (pitchblende)
37. Nicholson Lake. Ref. 1, p. 66 (uraninite)
38. Leggo Lake area (pegmatitic). Dog River Mining Co. Ltd.
39. Leggo Lake. Dog River Mining Co. Ltd. (pitchblende)
40. Abitibi River. New Sargento Mines Ltd.
41. Fort Chipewyan. New Sargento Mines Ltd., etc. (uraninite)
42. Fidler Point. Goldfields Uranium Mines Ltd. (pitchblende)
43. Beaverlodge or Goldfields area. Ref. 1, p. 68-106, 8, 9, 10, 11 (pitchblende)
44. Sucker Bay and Grease River. Ref. 1, p. 107, also Fond-du-Lac Exploration Co. (pitchblende)
45. Black Lake area (pegmatitic). Ref. 1, p. 108-109; 13 (pitchblende)
46. Black Lake area. Ref. 1, p. 108-112; 13 (pitchblende)
47. Middle Lake occurrence. Ref. 12 (autunite)
48. Charlebois Lake area. Ref. 1, p. 108-114; 13, 14 (uraninite)
49. Foster Lakes. Ref. 15; 16 (uraninite)
50. Cup Lake area. Ref. 15 (uraninite)
51. Lac la Ronge area. Ref. 1, p. 114-116; 15; 17; 18; 19 (uraninite)
52. Bleasdale Lake area. Ref. 20 (uraninite)
53. Herb Lake area. Ref. 21 (uraninite)
54. Manigotagan River - Bird River area. Ref. 1, p. 116-117; 21 (uraninite)
55. Whiteshell area. Ref. 1, p. 117; 21 (uraninite, uranorthite)
56. Kenora area. Ref. 1, p. 117-121; 22; 23; 24 (uraninite)
57. Wolf Island, Lake of the Woods. Ref. 1, p. 120, 22
58. Balmaj Lake. Ref. 24
59. Fort Frances area. Pioneer Consultants Ltd.
60. Port Arthur. Ref. 1, p. 120 (uraninite)
61. Port Arthur. Ref. 1, p. 120
62. Greenwood Lake. Ref. 1, p. 118 (pitchblende)
63. Mountain Bay. Ref. 1, p. 118
64. Marathon area. Ref. 1, pp. 118-121
65. Montreal River area (Sault Ste. Marie Region). Ref. 1, pp. 121-136; 25 (pitchblende)
66. Nemegos area. Ref. 1, p. 131 (pyrochlore)
67. Township 100. Ref. 1, p. 128 (assay in this reference should read 0.081, not 0.81)
68. Aukakagama Lake. Ref. 1, p. 123 (uraninite)
69. Farry Falls. Ref. 1, p. 132 (uraninite)
70. Tarbutt Township. Tarbutt Mines Ltd.
71. Blind River area. Ref. 1, p. 122, 124; 27; 28; 29; 30 (brannerite, uraninite)
72. Carter Township. Ref. 1, p. 150 (euxenite)
73. Elk Lake - New Liskeard area. Ref. 1, p. 150
74. Vermilion River - Timagami Lake area. Aubby Uranium Mines Ltd., etc. (uraninite)
75. Lake Nipissing area. Ref. 34 (pyrochlore)
76. Farry Sound area. Ref. 1, pp. 136-146 (uraninite, etc.)
77. Haliburton area. Ref. 1, pp. 146-149 (uraninite, etc.)
78. Bancroft area. Ref. 1, pp. 136-150; 31; 32; 33 (uraninite, uranorthite, etc.)
79. Kipissie area. (Dr. J. T. Maclean, 202 Medical Arts Bldg., Ottawa, Ont.; Mr. Gerald Jones, Kipissie, Que.) (ferugonite, etc.)
80. Abitibi area. Ref. 1, p. 153; 33 (uraninite)
81. Pontiac-Gatineau area. Ref. 1, pp. 151-154, 37; 38; 39 (uraninite, etc.)
82. Oka area. Ref. 40 (pyrochlore)
83. Laviolette Portneuf area. Ref. 1, p. 152-153 (uranorthite, etc.)
84. Bressanville Township. Ref. 41 (uraninite)
85. Levy Township. Opemiska Copper Mines Ltd.
86. Harvey Township. (J. R. Daltre, 466 rue de Sales, Chicoutimi, Que.)
87. Charlevoix area. Ref. 1, p. 151 (uraninite, ferugonite, etc.)
88. Letellier Township. Ref. 41 (uraninite)
89. Cross Point. Ref. 1, p. 154, 42 (pitchblende)
90. Coos Brook. Ref. 42 (pitchblende)
91. Shipagan Island. Ref. 42 (pitchblende)
92. Harvey area. Ref. 42 (uranospinel)
93. Hamilton. Ref. 42 (uranium-bearing hydrocarbon)
94. Shediac River. Maritime Exploration Co. Ltd.
95. Black Brook. Ref. 42
96. Georgeville. Ref. 42 (cristallite, uranorthite)
97. New Ross. Ref. 42 (torbernite)
98. Barnes Ice Sheet, Baffin Island (radioactive columbite-tantalite)
99. Ryan Bay
100. Ten Mile Lake. Froehner Ltd. (pyrochlore)
101. Seal Lake area. British Newfoundland Exploration Ltd. (pitchblende)
102. Makkovik area. British Newfoundland Exploration Ltd. (uraninite)
103. Makkovik area. British Newfoundland Exploration Ltd. (pitchblende)
104. Indian Head area. Ref. 43 (uraninite)
105. Flat Bay area (J. J. Dodd, Flat Bay River, Newfoundland)
106. Searston area (J. J. Dodd, Flat Bay River, Newfoundland)
107. Torbay area (J. J. Dodd, Flat Bay River, Newfoundland)

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CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS
GEOLOGICAL SURVEY OF CANADA
MAP 1045A-M1
METALLOGENIC MAP
URANIUM IN CANADA
SCALE: 1 INCH TO 120 MILES 1:600,000
MILES 0 100 200 300 400
KILOMETRES 0 100 200 300 400

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