

KEY TO LITHIUM OCCURRENCES AND SUMMARY DATA, CANADA, 1965

MAP NO. SYSTEM NO.	NAT. TROP. COORDINATE	LATITUDE	LONGITUDE	LOCALITY, NAME OR MAJOR CORPORATE OWNER	LITHIUM MINERALS	REMARKS	REFERENCE (See List)
1	82E	50°53'	118°15'	Mount Begbie, B.C.	lepidolite	very small, rare	Jones
2	82N/5	51°15'	117°45'	Gold Hill Camp, B.C.	Q-calc vein, insignificant		U.S.C. Am. Rept. Vol. VI p25R, 1895
3	82N/11	51°35'	117°05'	Walt-It Creek, B.C.	cocksite	Q-galena veinlets, insignificant	U.S.C. Am. Rept. Vol. VI p25R, 1895
4	85J1	62°05'	112°11'	Yellowknife-Beaulieu Dist., N.W.T.	spodumene, amblygonite	numerous, large, important	Jolliffe, Rowe, 1952; Henderson; Fortin; Lattapelle, 1955
5	73M.C.	63°47'	109°39'	Mackay Lake, N.W.T.	spodumene	5 localities mapped	Yates, 1945, 1952
6	76C	64°25'	109°05'	Ajmer Lake, N.W.T.	spodumene	3 localities mapped	Lord and Barnes, 1954
7	63J/3	63°05'	109°35'	Herb Lake District, Man. (Green Bay Mining & Exp. Canadian, Sherrill Gordon)	spodumene	3 localities, important, drilled	Mulligan; Farrey; Rowe, (1956); Stockwell, 1957
8	63J/2	64°34'	97°11'	Cross Lake, Man.	spodumene	1 locality	Bent, 1962
9	53J/14	54°45'	95°12'	Marner Lake, Man.	spodumene	1 locality	Bent, 1962
10	53J/14	54°52'	94°10'	God's Lake, Man.	spodumene	small	Bent, 1962
11	53N/5	55°05'	92°48'	Red Cross Lake, Man.	spodumene, amblygonite	several large important, development advanced	Potter, 1962
12	52N.11.12	52°31'	92°25'	Cat Lake-Winnipeg River District, Man. (Canadian Lithium Corp. of Can., etc.)	spodumene, amblygonite, lepidolite, epidote, topazite	several large important, development advanced	Thorn, 1956; Stockwell, 1957; Springer 1961, 1962; Daves 1955-1958; Hutchinson, 1959; Wright, 1961
13	52E/14	49°35'	95°10'	East Brantford-West Hawk Lake District, Ont. (North American Rare Metals, Lithium Corp. Amer.)	spodumene, minor amblygonite	some possibly important, drilled	Mulligan, 1957
14	52E/5	49°49'	92°40'	Dryden area, Ont. (Econ. Geol. Mines)	spodumene	drilled	Mulligan, 1957
15	52C/8	48°22'	91°55'	Lac la Croix area, Ont. (International Lithium, Leinster)	spodumene	several, drilled	Pye, 1956, 1965; Mulligan, 1957; Tanton
16	52E/13	50°45'	92°42'	Root Lake area, Ont. (Capital Lithium, Conrod, Morrison)	spodumene	several, drilled	Pye, 1956; Mulligan, 1957
17	52E/16	50°58'	90°14'	Pashokogan Lake, Ont.	spodumene		Goodwin
18	52N/9	51°38'	88°15'	Fort Hope area, Ont.	spodumene, lepidolite		Prent, Burwash
19	52N/8	52°15'	88°05'	Falcon Lake-228 Lake area, Ont. (British Canadian Lithium, Dempsey)	spodumene	several, drilled	Pye, 1956, 1963, 1965c
20	52E	49°25'	88°25'	Niagara Falls, Ont. (The Nickel Mines, etc.)	spodumene, rare amblygonite	numerous, large, 1 developed	Pye, 1956, 1963, Mulligan, 1957
21	42L	50°30'	87°00'	O'Brian Lake area, Quebec, Lithium, Canada Lithium, Ontario Lithium, etc.)	spodumene		Northern Miner Vol. XI p904, 1955
22	33D	52°56'	79°00'	Wahus Island, James Bay, Que.	spodumene		Johnson, U.S.C. Am. Rept. N.S. XJ p158
23	33M/10	47°41'	78°38'	Lac Esprit (Simard), Ontario Tp., Que.	spodumene		
24	32N/1	49°05'	78°28'	Wahus, Lacopere, Montserrat Tp., Que.	spodumene		
25	32N/8-C/5	48°15'	77°47'	Priscoe, Lacome District, Que., Quebec Lithium, Canadian Lithium, Lithium Corp. America, etc.)	spodumene, minor lepidolite	numerous, Quebec Lithium producing	Northern Miner, 1944; Tremblay, 1956; Lattapelle, Valiquette
26	32N/12	51°47'	75°52'	Lac des Montagnes, Montserrat Tp., Que.	spodumene	explored	
27	32N/11	50°37'	75°27'	Astoria Lake area (Simard)	spodumene	explored	
28	32N/10	50°44'	74°53'	Lac Arme, Regoube Lake area, Abitibi Terr., Que.	spodumene	old quarry	Ronot
29	31E/2	49°45'	73°45'	Lac des Neiges, Wakefield Co., Que. (Lac 25, R. 10)	spodumene		Regeles, Elsworth
30	20P/13	49°59'	65°59'	Beaulieu Lake, Vermont Co., N.S.	amblygonite		Taylor, 1961
32	21A	44°39'	64°25'	New Ross area, Lunenburg Co., N.S.	spodumene, lepidolite	2 localities, very small	Elsworth, Farbeault

LEGEND

SEDIMENTARY AND VOLCANIC ROCKS

PLEISTOCENE AND RECENT
Q Alluvium, glacial drift, included sand and gravel in District of Franklin may be in part Tertiary.

OLIGOCENE
O Sedimentary rocks: sandstone, conglomerate

PALEOCENE AND EOCENE
E Sedimentary rocks: sandstone, shale, conglomerate; coal measures

TERTIARY
T_v Mainly volcanic rocks: basalt, andesite. May include some Upper Cretaceous rocks
T_s Mainly sedimentary rocks: sandstone, shale, conglomerate; coal measures. May occur in the Hood and Elzevir Mountains and District of Franklin

UPPER CRETACEOUS
K_u Mainly sedimentary rocks: shale, sandstone, conglomerate, limestone, and non-marine, oil and natural gas, coal, bentonite

LOWER CRETACEOUS
K_l Mainly sedimentary rocks: sandstone, shale, conglomerate; limestone, and non-marine, oil and natural gas, coal, bentonite. Includes some Triassic and Jurassic beds south of Peace River

CRETACEOUS (Undivided)
K Sedimentary rocks

JURASSIC AND CRETACEOUS
JK Undivided Jurassic and Lower Cretaceous in Rocky Mountains and District of Franklin

JURASSIC
J Sedimentary and volcanic rocks: argillite, greywacke, sandstone, limestone, andesite, volcanic breccia, tuff. Includes considerable Lower Cretaceous and some Triassic rocks. Oil in Alberta and Saskatchewan

TRIASSIC
T Sedimentary and volcanic rocks: argillite, quartzite, limestone, andesite, volcanic breccia, tuff. Includes considerable Lower Cretaceous and some Triassic rocks. Oil in Alberta and Saskatchewan

MESOZOIC (Undivided)
M Sedimentary and volcanic rocks: some coal measures. Includes some Paleozoic rocks

CARBONIFEROUS AND PERMIAN
C Sedimentary and volcanic rocks: argillite, cherty argillite, limestone, quartzite, andesite, volcanic breccia, tuff, sandstone, shale, conglomerate

PENNSYLVANIAN
Cp Mainly sedimentary rocks: sandstone, shale, conglomerate; some volcanic rocks; coal measures

MISSISSIPPIAN
Cm Mainly sedimentary rocks: limestone, shale, sandstone, conglomerate, volcanic rocks: quartzite, andesite, oil and natural gas

DEVONIAN AND CARBONIFEROUS
DC Sedimentary rocks: limestone, shale, sandstone, quartzite, oil and natural gas. Includes some Cambrian and Frasnian in Rocky Mountains

DEVONIAN
D Sedimentary and volcanic rocks: shale, limestone, dolomite, conglomerate, sandstone, volcanic rocks: tuff, oil and natural gas

SILURIAN
S Mainly sedimentary rocks: sandstone, shale, limestone, dolomite, conglomerate, sandstone, volcanic rocks: quartzite, sandstone, quartzite, gneiss, oil and natural gas

ORDOVICIAN
O Sedimentary rocks: limestone, dolomite, shale, argillite, sandstone, quartzite, gneiss, oil and natural gas

ORDOVICIAN AND SILURIAN
OS Sedimentary rocks. Includes some Devonian on western north of Great Bear Lake

CAMBRIAN
C Sedimentary rocks: dolomite, limestone, shale, chert, quartzite, sandstone, conglomerate

PALEOZOIC (Undivided)
P Mainly sedimentary rocks. May include some Mesozoic and Precambrian rocks in northern Cordillera and Precambrian rocks on Ellesmere Island

LATE PROTEROZOIC
Eu Sedimentary and volcanic rocks: shale, argillite, slate, chert, limestone, dolomite, quartzite, sandstone, quartzite, conglomerate, sandstone, volcanic rocks: andesite, basalt, andesite, tuff, volcanic breccia, non-formation

EARLY PROTEROZOIC
E_s Sedimentary and volcanic rocks: shale, argillite, slate, chert, limestone, dolomite, quartzite, sandstone, quartzite, conglomerate, sandstone, volcanic rocks: andesite, basalt, andesite, tuff, volcanic breccia, non-formation

PROTEROZOIC (Undivided)
P Sedimentary and volcanic rocks

PRECAMBRIAN
A Sedimentary, volcanic, and metamorphic rocks

INTRUSIVE ROCKS
7 Acid rocks: granodiorite, quartz monzonite, quartz diorite; granite, syenite
6 Basic and ultrabasic rocks: gabbro, pyroxenite, andesite
5 Acid, basic, and ultrabasic rocks: granite, and related rocks; andesite, pyroxenite, gabbro, serpentinite, volcanic deposits
4 Acid rocks: granite, granodiorite, diorite; gneiss rocks in Yukon Territory
3 Basic rocks: diorite sills and dykes
2 Mainly acid rocks: granodiorite, quartz diorite, granite gneiss. Includes much granitoid sedimentary and volcanic rocks. Documents widespread Proterozoic in lower basins of Canadian Shield
1 Basic and ultrabasic rocks: mainly anorthosite and gabbro

Geology derived from published and unpublished maps and reports of the Geological Survey of Canada, Provincial Departments of Mines, mining companies, and other sources. Cartography by the Geological Survey of Canada, 1954, with some revisions, 1965.

Metallogenic data compiled by R. Mulligan, 1965
Cartography by the Geological Survey of Canada

Explanation of Symbols
Single occurrence of compact group: +15
Area containing numerous occurrences: +12

EXPLANATORY NOTES

A major purpose of this publication is to supplement Economic Geology Report No. 21—"Lithium in Canada". In addition to listing several newly-discovered deposits, it shows the distribution of all the occurrences in relation to geological features, especially structural provinces and subprovinces, according to current concepts (Stockwell, 1964). All the Canadian lithium occurrences, except two very minor ones (Nos. 2 and 3) in the Cordillera, are pegmatites. All except two deposits of any appreciable size or importance are in the Archean Slave and Superior provinces of the Precambrian Shield. They occur in metamorphic or metavolcanic rocks or less commonly in granitic gneisses, near their contacts with granitic intrusions.

In the western half of the Superior structural province most of the deposits fall within or close to the three delineated sub-provinces or "belts": Cross Lake, English River, and Quetico. A majority of beryllium occurrences and the few known tin occurrences of the western Superior province also lie in or near the designated belts.

In a few places the distribution of lithium occurrences suggests a relationship to linear features of unknown nature. One example is the Cordilleran group. These occurrences are so small that their significance is dubious, but beryllium and tin are known to occur on the same general line. The occurrences in northern Manitoba form a linear group, which lies mainly within the Cross Lake belt but crosses the boundary from the Superior into the Churchill province.

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GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS

MAP 1207A
METALLOGENIC MAP
LITHIUM IN CANADA

SCALE: 1 INCH TO 120 MILES = 1:7,200,000

MILES 0 100 200 300 400
KILOMETRES 0 100 200 300 400

51 CANADA Lithium
A. Guel. Scale - 1 inch to 120 miles
Map no. 1207A 1965

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