EXPLANATORY NOTES

PURPOSE AND SCOPE OF MAP The purpose of this map is to show the distribution of silver in Canada. Types of occurrences containing silver are denoted by various symbols on an uncoloured geological map of Canada in order that comparisons with geological features can be made.

The map has been designed to emphasize the more important occurrences by using black symbols for these and blue symbols for those of less importance. Black symbols indicate significant contributions are sufficient expectations. indicate significant occurrences usually with good silver values, large deposits containing 1 ounce silver per ton or more, and mines that produced a sizeable amount of ore at or above this cut-off assay. The symbols represent a range of values indicating the relative amount of silver in each occurrence. Low values generally indicate approximately 1 to 5 ounces silver per ton, medium values 5 to 15 ounces silver per ton, and high values greater than 15 ounces silver per ton. A symbol with a low value in many cases indicates that silver is a by-product metal, e.g. the Pb-Zn-Ag ores of the Sullivan mine (87¢), whereas a symbol with a high value generally indicates that silver is a first rank metal, e.g. the Ag-Pb-Zn ores of the Keno Hill area (5•).

CLASSIFICATION

On the map the following classification of silver deposits has been adopted: SHALE DEPOSITS: The silver minerals occur as disseminations in layers or beds of shale. Most deposits of this type are mined for copper, and silver is won as a by-product in some places. Typical examples are the Kupferschiefer of Germany and the White Pine deposits in Michigan. No good examples of this type are known in Canada. SANDSTONE TYPE: The silver minerals occur as disseminations in terrestrial sandstones, arkose, and conglomerates. In other deposits the silver minerals occur in veins or lenses within the content of t cutting these rocks. These types of deposits are frequently referred to as 'red bed' deposits. Most of the economic deposits are found outside of Canada. They contain copper as the whost of the economic deposits are found outside of Canada. They contain copper as the principal economic metal, but some are mined for their lead or uranium. Silver is generally won as a by-product. A few deposits contain silver as the only economic element. SKARN TYPE: The silver minerals are mainly argentiferous galena, tetrahedrite, gold-silver, or argentite. These occur in a matrix of calc-silicate minerals, quartz, etc., usually in irregular leaves poor capable or in bide carde metaporarbite. in irregular lenses near granitic contacts or in high-grade metamorphic terranes.
POLYMETALLIC TYPE: These deposits occur in all varieties of rocks. Four sub-types can

. Gold-silver veins, lodes, and stockworks containing essentially gold with more or less of galena, sphalerite, tetrahedrite, etc. The gangue is generally quartz.

Lead-zinc-copper-silver veins, lodes, and lenses containing essentially galena, sphalerite, tetrahedrite, chalcopyrite, argentite, etc. The gangue is either quartz or

Massive sulphide deposits containing either pyrite, pyrrhotite, pentlandite, and chalcopyrite (Sudbury type) or assemblages of pyrite, pyrrhotite, galena, sphalerite, and chalcopyrite (Flin Flon type). Silver is generally won as a by-product metal.

Ni-Co arsenide (Cobalt) type. The principal silver mineral is native silver. Associated

82. Renfrew group, Stein River. Refs. 33, 1957, p. 23; Northern Miner, Nov. 29/62, p.99. elements in some deposits are bismuth and uranium. The gangue is usually calcite, On the map sub-types 1, 2, and 3 are grouped together for simplicity.

DISTRIBUTION AND SOURCES OF SILVER Mexico leads the world in silver production with an output of 43.0 million ounces in 1963. Peru and the United States are the next largest producers followed by Canada. Most of the 30.7 million ounces of silver produced in Canada in 1963 came from Ontario, British Columbia, Yukon, and Quebec. The record level of silver production in Canada was in 1960 when 34.0 million ounces were produced from the following sources: 2 per cent from gold ores, 77 per cent from base-metal ores, and 21 per cent from silver ores. In the Cordilleran region most of the silver has come from the lead-zinc-silver ores of the Sullivan mine (87), the silver-rich lead-zinc ores of the Keno Hill area (5), the Slocan (84) and Ainsworth areas (85), and the Premier gold mine (31). Deposits in the Cordillera, mined primarily for silver, include those in the Beaverdell area (93), the Torbrit and Dolly Varden deposits (32) and the Silver Standard (35) and Henderson deposits (40). The Rocher Déboulé copper deposit (35) near Hazelton, British Columbia is the only known silverbearing deposit in the Cordilleran region containing the complex cobalt-nickel arsenide minerals and uraninite.

Massive sulphide deposits containing principally copper, copper-nickel, and copper-lead-zinc ores yield large amounts of silver as a by-product and are one of the most important sources of the metal in the Canadian Shield. These deposits are mined in the Flin Flon (110), Manitouwadge (123), Matagami Lake (136), Noranda (142), and numerous other e the world's largest single source of silver with an annual output of approximately million ounces. The Ni-Co arsenide-native silver type of deposit is of frequent occurrence in a number of places in the Shield. The Cobalt (145) and subsidiary districts rank with the upply about 17 per cent of Canada's silver output. The Silver Islet mine (119) produced 94. lota, Islay B., Stemwinder Mountain. Refs. 32, p. 201; 33, 1947, pp. 146, 147. nuch silver before the turn of the century, and the metal was recovered, until recently, Most of the silver in the Appalachian region is won as a by-product from massive sulphide 96. Eureka-Victoria mines, Silver Peak. Ref. 179, pp. 152-160. ckel belt, most of those in the Noranda area, various other deposits in the Canadian

The same applies to numerous gold mines in the Appalachians, the Shield, and the

SOURCES OF INFORMATION

LOCALITIES AND REFERENCES

it designates, but where it represents a number of symbols the locality number is ols although blue symbols are sometimes included as part of the area designated. To dicate the importance of many of these localities the number of occurrences known to ave yielded 1 ounce silver per ton or more, and/or the names of the more important nines that produced at this rate are enclosed in brackets in the locality list at the side of ap. Reference numbers in the locality list relate to the list of selected references. Or

LOCALITIES

Locality numbers underlined indicate areas (but not individual mines) where silver was produced at a rate of 1 ounce silver per ton or more in 1964. Fifteen Mile River. Refs. 7;20, pp. 23-25. 2. Spotted Fawn Gulch, Little Twelve Mile River. Refs. 7;12, pp. 15-17.

3. Upper Beaver River. Refs. 6, pp. 9-17; 7. McQuesten region (63 occurrences). Refs. 3, pp. 232-239; 7;8;9, pp. 4-6; 10;11;20, pp. 16-20. 4. Peso Silver Mines Ltd., Haggart and Secret Creeks area. Refs. 4, pp. 15, 16; 20, pp. 120. Pays Plat River. Ref. 114, p. 267.

9. Vangorda area. Refs. 3, p. 234; 4, pp. 31, 32; 17; 20, pp. 36, 37. 10. Little Salmon Lake. Refs. 3, p. 234; 15, p. 9; 16, 20, pp. 38-40. Nansen Creek. Refs. 4, pp. 26-28; 20, pp. 32-34. . Ketza River and McConnell River, Pelly Mountains. Refs. 3, p. 234; 4, pp. 40-42; 128. Porter Township. Ref. 189. 13. Boswell River. Ref. 25, pp. 23, 24.

Tom group, MacMillan Pass. Refs. 3, p. 234; 20, pp. 47, 48; 27, p. 65.

8. Redstone River area. Refs. 5, pp. 35-40; 18; 21, pp. 34-37.

15. Norquest Joint Venture, Tyers River. Ref. 20, pp. 45, 46. 16. Prairie Chicken Creek. Refs. 18, p. 12; 19, p. 26. 17. McMillan property, near Quartz Lake. Ref. 27, p. 66. 18. Frances River Syndicate, near Tom Lake. Refs. 4, p. 44; 21, p. 33.

20. Wheaton district (6 occurrences). Refs. 3, p. 232; 26, pp. 123, 124, 126, 127, 135, 136. 21. Rainy Hollow and Three Guardsmen areas (6 occurrences). Ref. 28, pp. 40-60. 22. Windy Arm district (6 occurrences). Refs. 26, pp. 127-131; 33, 1929, p. 120. 23. Atlin-Ruffner, Fourth of July Creek, Atlin area. Ref. 186, pp. 71, 72. 24. Whitemoose Mountain and Hoboe Creek, Atlin area. Refs. 33, 1933, pp. 81-82; 182, pp. 92-96, 105, 106.

 Taku River area (7 occurrences). Refs. 1, pp. 112-121; 2, pp. 7-16; 29, pp. 58-63, 70-72;
 185, pp. 180-187, Northern Miner, Aug. 13/64 p. 2 (Tulsequah Chief, Big Bull). 26. McDame area. Ref. 30, pp. 109, 114-116, 119-122. 27. Johnson River, Iskut River area. Ref. 54, pp. 77, 78. 28. Cumberland group, Sulphurets Creek. Ref. 33, 1935B, pp. 11, 12. 29. Swannell River, Ingenika River area. (2 occurrences). Ref. 46, pp. 204-211.

30. Jupiter group, Lay Creek. Ref. 46, pp. 218-221.

4.) Indian ¢, Premier Border ¢, Dunwell ¢, Portland Canal Mining Co. (Lucky Seven)¢, Prosperity ¢, Porter-Idaho ¢.). 32. Kitsault River — Alice Arm — Illiance River region (25 occurrences). Refs. 31, pp. 52-87; 33, 1947, pp. 92-94 (Torbrit (Toric), Dolly Varden, North Star, Esperanza). 33. Kay group, Pinchi Fault zone, Ref. 47, p. 172. 34. Manson River — Germansen River area (5 occurrences). Ref. 47, pp. 173, 178-181. 36. Whisky Creek, Cedarvale area. Ref. 39, p. 52.

38. Kitsumgallum Lake area (6 occurrences). Refs. 38; 39; 40. 39. Terrace area (25 occurrences). Refs. 38; 39; 40. 40. Hudson Bay Mountains, Smithers area (23 occurrences). Refs. 41, pp. 90-131; 42. (Henderson (Duthie)). Tétreault mine, Montauban township. Ref. 142, p. 25.

41. Driftwood area (11 occurrences). Refs. 36, pp. 107-110; 43, pp. 19-37; 44 (Cronin Babine).

43. Ascot township (5 occurrences). Refs. 1, pp. 902-909; 2, pp. 466-469; 142, p. 2; 153, pp. 206, 207, 225-234, 265, 266; 154, pp. 123, 124, 127, 130. (Moulton Hill, Suffield). 42. Topley area. Refs. 36, pp. 149-155; 44.

43. Grouse Mountain and Mineral Hill. Refs. 33, 1951, pp. 113-117; 36, pp. 115-117; 44. 44. Hunter Mountain and Howson Basin. Refs. 36, pp. 118-120; 42. 45. Bob Creek — Buck River — Morice Mountain area. Refs. 36, pp. 121-125; 44. 46. Babine Lake, south (2 occurrences). Ref. 47, pp. 174-176. 47. Averil Creek, Fraser River. Refs. 33, 1935C, pp. 31, 32; 48, p. 106; 50. 49. Whitesail Lake area (7 occurrences). Refs. 33, 1926, p. 150; 35, pp. 89-95, 98.

51. Scarn group, Copper Creek. Ref. 33, 1960, pp. 17-19. 52. Spanish Lake area. Ref. 33, 1947, pp. 123-128. 53. Tatlayoko Lake. Refs. 33, 1935F, pp. 29-35; 49, pp. 70-72. 54. H.P.H. property, Nahwitti Lake. Ref. 33, 1936F, pp. 47-52.

55. Quatsino area. Refs. 32, p. 219; 33, 1953, p. 167 and 1955, p. 76; 52, pp. 122-125 (Yreka). 167. Magnet Cove Barium Corp'n., Walton. Ref. 170. 56. Doratha Morton mine, Phillips Arm. Refs. 32, p. 194; 51, pp. 11-14. 57. Muchalat Arm, Nootka Sound (3 occurrences). Refs. 33, 1946, pp. 179-182; 184, pp. 169. Strickland. Refs. 172, pp. 84, 85; 173, pp. 41-46.

58. Domineer, Mount Washington. Refs. 33, 1963, pp. 103-105; Can. Mining J. Dec/64, p. 9. 171. Silverdale (Bear Cove). Ref. 172, p. 78. 59. Western Mines Ltd., Buttle Lake. Refs. 33, 1963, pp. 105-109; 53, pp. 66-71. 60. Twin "J" mine, Mount Sicker. Ref. 1, pp. 88-93.

67. North Barrière River area. Refs. 33, 1927C, pp. 187-191 and 1936D, pp. 36-38 and 1950

pp. 132-137 and 1953, pp. 102, 103; 59, pp. 103, 104; 60; Western Miner, Dec/64, p. 20. (Homestake (Skwaam Bay)). Revelstoke area (12 occurrences). Refs. 33, 1935E, pp. 19-21 and 1918, p. 157 and 1922, pp. 215-217; 90, pp. 120-130; 91, pp. 165-191; 92; 188. Monarch and Kicking Horse mine, Field area. Refs. 1, pp. 231-237; 2, pp. 143-152; 37, pp. 215-222, 225-229. Vermont and McMurdo Creeks, Spillimacheen River area. Refs. 33, 1936E, pp. 31-42; . Lardeau area. Refs. 33, 1918, pp. 162-166 and 1935E, pp. 21-24 and 1956 pp. 99-105; 73. Frances Creek (4 occurrences). Refs. 33, 1915, pp. 98-100 and 1922, pp. 183, 184; 88. Toby Creek - Invermere area (29 occurrences). Refs. 33, 1949, pp. 196-199 and 1959,

1923, pp. 234, 235, 1920, p. 135, 1929, pp. 342, 343, 1930, p. 262 and 1935E, pp. 24, 25. 78. Vernon area (10 occurrences). Ref. 61. 79. Consolidated Nicola Goldfields, Stump Lake. Refs. 1, pp. 183-186; 62, pp. 45-58.

84. Slocan region. Refs. 1, pp. 200-205; 2, pp. 88-95; 75; 85. (A large number of the more han 200 properties that shipped ore from the region produced important amounts 85. Ainsworth-Riondel area. Refs. 1, pp. 216-218; 2, pp. 95-104; 33, 1951, pp. 144-161 and 1952, pp. 156-169; 76, pp. 55, 56, 77-82; 83; 84. (Bluebell ¢, Florence ¢, Spokane-Trinket ¢, Maestro ¢, Banker ¢, Yale Lead and Zinc (Highlander, etc.) ¢, Highland ¢, No. 1 ¢, Krac & Silver Heard &)

91. Union mine, Franklin camp. Refs. 72; 73, pp. 10, 11.

95. Summit camp (9 occurrences). 33, 1952, pp. 119-134; 180, pp. 100-107.

99. Fairview camp (7 occurrences). Refs. 65, pp. 15-21; 66; 67; 70; 73, pp. 17, 18. (Morning 100. Greenwood-Phoenix-Grand Forks region. Refs. 2, pp. 132-136; 72; 73, pp. 11-14; 74, 101. Paulson area (5 occurrences). Refs. 33, 1953, pp. 111-112; 72; 73, pp. 9, 10. (Berlin and The map is based largely on information obtained from publications of the Geological Survey of Canada and the various provincial departments of mines to mid 1964. The files of the Geological Survey of Canada and the Mineral Resources Division, Department of Energy, Mines and Resources were an additional source of information.

102. Rossland camp. Refs. 1, pp. 189-196; 75. (Iron Mask, War Eagle, IXL, Cliff and Cons. St. Elmo).

103. Moyie (6 occurrences). Refs. 32, pp. 188, 205, 211, 214; 78. (St. Eugene, Aurora, Society Girl). 105. Camsell River Silver Mines Ltd. Refs. 93, pp. 91-93; 97.

> 107. François River niccolite deposit. Ref. 98, pp. 60, 61. 108. Goldfields area (4 occurrences). Refs. 95, pp. 170-173; 99, pp. 30, 31; 100; 101, pp. 92-94, 110. Flin Flon area (4 occurrences). Refs. 1, pp. 295-301; 2, pp. 258-262; 101, pp. 102, 103; 102; 103, pp. 64-78. (Flin Flon, Mandy, Schist Lake).

2. Snow Lake area. Ref. 103. pp. 85-89. (Chisel Lake). Jan. 21/65, p. 1, and Feb. 4/65, p. 20, (Berens River). Thunder Bay Silver region (36 occurrences). Ref. 113.

117. Rabbit Mountain area (Porcupine, Badger, Beaver, Rabbit Mountain). 119. Silver Islet mine. 5. Keno Hill — Galena Hill area (50 occurrences). Refs. 2, pp. 51-77; 4, pp. 7-15; 20.

125. Michipicoten Island. Ref. 117, pp. 506, 507, 703, 704, 737. 126. Jarvis and Duncan townships. Ref. 111, p. 78. (Jardun). 127. Kerr claim, Otter township. Ref. 120, p. 196. 129. Errington and Vermillon mines, Sudbury Basin. Ref. 111, pp. 85, 86. 130. Turner township. Ref. 111, p. 86. 14. Tintina Silver Mines Ltd., Ings River, Pelly Mountains. Refs. 3, p. 234; 21, pp. 26-29.

140. (Siscoe Metals of Ontario Ltd. (Miller Lake — O'Brien), McIntyre Porcupine Mines Ltd. (Castle-Trethewey), Morrison, Walsh, Mann, Reeve-Dobbie). 133. Texas Gulf Sulphur Co., Kidd township, Ref. 141. 19. Wolf Lake — Rancheria River area. Refs. 3, pp. 233, 234; 4, pp. 47, 48; 21, p. 32; 22; 23, pp. 17, 18; 33, 1949 pp. 69-71; Can. Mining J. Dec./65, p. 12.

> 136. Matagami Lake area. Refs. 147, pp. 740-757; 148, pp. 389-396; 192. (Mattagami Lake Mines Ltd., Orchan Mines Ltd.). 137. Richmond Gulf and Little Whale River. Ref. 119, p. 131. 9. Lesueur township. Refs. 149, pp. 17-21; 150. (Coniagas). 140. New Formaque Mines Ltd., Dalquier township. Ref. 145, pp. 27, 28.

142. Lake Dufault mine and Vauze mine, Noranda area. Refs. 142, pp. 14, 15; 143; 144, pp. 409-412. 143. St. Pierre property, Morrisette township. Ref. 111, 'p. 32. 120, pp. 155-163; 127, p. 16; 133, pp. 47-51; 134; 135, pp. 107-109; Northern Miner, Dec. 19/63, p. 6.

146. Casey Cobalt mine, Casey and Harris townships. Refs. 120, pp. 145-148; 127, p. 16. Bourlamaque township (2 occurrences). Ref. 142, p. 7. (Golden Manitou mine). 35. Hazelton area (26 occurrences). Refs. 2, pp. 20-27; 33, 1950, pp. 82-100; 41, pp. 24-89; 45. (Silver Standard *, Silver Cup *, Rocher Déboulé Δ). 150. Strathy township. Ref. 121, pp. 26, 27, 35, 36, 41.

> 152. Katherine mine, Lake township. Ref. 119, pp. 157, 158. 153. Barrie township. Ref. 152, p. 67. 157. Risborough and Marlow townships. (2 occurrences). Refs. 155, pp. 81, 82; 156, pp. 15,

Aug. 8/63, p. 19, March 9/64, p. 18, and Sept. 10/64, p. 12.

88. Mindamar mine, Stirling. Refs. 2, pp. 495-502; 171, pp. 81-87. 70. American Smelting and Refining Co., Buchans. Refs. 174, pp. 77-80; 175, pp. 288-296. 172. Bloomfield, Goose Bay. Ref. 176, p. 136.

 Bridge River — Cadwallader Creek area (8 occurrences). Refs. 33, 1954, pp. 104-106;
 pp. 67, 68; 57, pp. 18, 19, 22, 25, 28. 65. Diamond S group, Criss Creek, Ref. 62, pp. 79, 80. 66. Queen Bess, Blackpool, North Thompson River. Refs. 32, p. 209; 33, 1951, pp. 125-128;

pp. 74-89; 87; 88. (Paradise, Mineral King). 75. Silver Key group, Doctor Creek. Refs. 33, 1935E, p. 11; 82. 76. Duncan Lake area (7 occurrences). Refs. 33, 1918, p. 162 and 1925, pp. 235, 236; 86,

83. Lightning Peak (7 occurrences). Refs. 71, pp. 79-115; 72.

86. Rose Pass — Crawford Creek area (2 occurrences). Refs. 32, p. 213; 76, pp. 73-75. (Silver Hill). 87. Kimberley. Refs. 1, pp. 219-230; 76, pp. 55, 61; 81; 185, pp. 142-174. (Sullivan, Stem-88. Wild Horse River — Bull River area (14 occurrences). Refs. 2, pp. 153-158; 33, 1925, p. 229 and 1951, pp. 185-190; 79; 80, (Estella, Kootenay King). 89. Sanca Creek — La France Creek area. Refs. 32, p. 202; 33, 1926, pp. 283-286 and 1956, p. 87; 76, pp. 66, 67, 75, 76. 90. Nelson-Salmo River region. Refs. 2, pp. 104-110, 124-132; 33, 1937E, pp. 8-27; 75; 76, pp. 62-66; 77. (Eureka φ, Silver King *, California φ, Perrier φ, Protection (Goodenough) φ, Ymir φ, Willcock (Ymir Wilcox) φ, Blackcock φ, Dundee φ, Yankee Girl φ, Wesko Comstock +, Keystone +, Arlington +, HB +, Nugget +, Bayonne +, Spokane +).

92. Carmi mine, Carmi camp. Refs. 65, pp. 32-34; 67; 70. 93. Wallace Mountain, Beaverdell area (16 occurrences). Refs. 2, pp. 136-141; 65, pp. 29-34; 67; 68; 69; 70. (Highland-Bell, Sally and Robb Roy, Wellington).

98. Horn Silver mine, Richter Mountain. Refs. 33, 1960, pp. 58-60; 65, p. 26; 67; 70. pp. 684-694. (B.C.†, Providence *, Skylark *, King Solomon †, Jewel †, Amandy †, No. 7 ¢, City of Paris †, Golden Eagle ¢, Hummingbird †). 93, pp. 60, 86, 87, 140-148, 179-184, 279; 94, pp. 55-92; 95, pp. 190, 196-198; 96, pp. 35-38;

106. Indian Mountain Lake, Ref. Northern Miner, May 14/64, p. 24.

111. Dominion claims, Gurney Gold mine, Copper Lake. Ref. 181, pp. 49, 50; 183, pp. 5-7, 25. 13. Echimamish River. Refs. 104, pp. 15, 16, 27, 28, 32-34; 105. 14. Favourable Lake. Refs. 1, pp. 365-368; 106, pp. 68-78, 83; 107, pp. 79-92. Northern Miner, 115. Huronian mine, Moss township. Ref. 112, pp. 109-127 116. Silver Mountain mine.

6. Trombley Creek and Casino Creek, Dip Creek area. Refs. 3, p. 233; 4, pp. 22-24; 13, pp. 11-13; 14; 20, pp. 34, 35.

122. Township 80 (3 occurrences). Refs. 111, pp. 43, 44, 57, 61; 115, p. 5.

123. Manitouwadge area (4 occurrences). Refs. 111, pp. 49, 50, 55, 56, 50 123. Manitouwadge area (4 occurrences). Refs. 111, pp. 49, 50, 55, 56, 59, 65; 116. (Geco, 124. Kozak Lake, Twp. 28, R. 26. Refs. 118, pp. 25, 26; 122.

132. Gowganda — Shiningtree area (numerous occurrences). Refs. 2, pp. 388-392; 108; 120, pp. 165-194; 127, pp. 15-17; 133; 135; 136; 137, pp. 1-78; 138, pp. 87-99; 139, p. 49;

135. Normetal mine. Refs. 1, pp. 683-692; 146.

141. Barraute and Fiedmont townships (5 occurrences). Refs. 142, pp. 3, 4, 17; 193, p. 10; 194, pp. 10, 11; 195, p. 3.

145. Cobalt area. Refs. 2, pp. 377-388; 120; 126; 127; 128, pp. 101-103; 129; 130; 131; 132; 136.

37. Granby Peninsula, near Anyox. Refs. 31, p. 93; 32, p. 198; 33, 1933, pp. 45, 46 and 1938 B, pp. 4-7. (Granby Point).

158. Marsoui River area (6 occurrences). Refs. 142, p. 6; 155, pp. 11-13, 32. (Candego). 159. Restigouche Mining Corp., Third Portage Lake. Ref. Northern Miner, Nov. 18/65, p. 13. 48. Mount Sweeney and Swing Peak (2 occurrences). Ref. 35, pp. 84-89. (Emerald Glacier).
49. Whitesail Lake area (7 occurrences). Refs. 33, 1926, p. 150; 35, pp. 89-95, 98.

161. Bathurst area. Refs. 2, pp. 485-492; 157; 158; 160; 161; 162, pp. 88-98; 177, pp. 78-83; 178, pp. 84-89; Can. Mining J., Nov/65, p. 10. (Brunswick No. 6, Brunswick No. 12). 162. Heath Steele Mines Ltd. Refs. 158; 160, pp. 13, 14; 162, pp. 88-98; 163, pp. 539-556. 163. Musquash Harbour (2 occurrences). Refs. 119, pp. 65, 66; 164, pp. 93, 94. 164. New Horton area. Ref. 165. (generally less than 1 oz. Ag per ton). 165. Dorchester copper deposit. Refs. 166; 167. (generally less than 1 oz. Ag per ton). 166. Tatamagouche area. Rets. 168: 169, pp. 309-324. (generally less than 1 oz. Ag per ton).

173. Strathcona Sound. Ref. 190, p. 23.

LEGEND LEGEND TYPE OF OCCURRENCE AREA OF OCCURRENCES SEDIMENTARY AND VOLCANIC ROCKS CONTAINING SILVER OCCURRENCES SILVER VALUES PLEISTOCENE AND RECENT CARBONIFEROUS AND PERMIAN Low Med. High Sedimentary and volcanic rocks: argillite, cherty argillite; Alluvium, glacial drift; included sand and gravel in District Q of Franklin may be in part Tertiary C limestone, quartzite; andesite, volcanic breccia, tuff, sandstone, shale, conglomerate **♦ ♦** OLIGOCENE PENNSYLVANIAN Cp Mainly sedimentary rocks: sandstone, shale, conglomerate; some volcanic rocks; coal measures ∇ Sedimentary rocks: sandstone, conglomerate Polymetallic MISSISSIPPIAN PALEOCENE AND EOCENE Pb, Zn, Cu, Cd, Au Mainly sedimentary rocks: limestone; shale, sandstone, Cm conglomerate; volcanic rocks; gypsum, anhydrite; oil and natural gas Ni, Co, As, Bi, U DEVONIAN AND CARBONIFEROUS Sedimentary rocks: limestone; dolomite, shale; gypsum, Mainly volcanic rocks: basalt, andesite. May include Miscellaneous occurrence (grade of silver and/or type unknown). . . Tv some Upper Cretaceous rocks DC anhydrite; oil and natural gas. Includes some Cambrian Significant occurrences shown by black symbols and Triassic in Rocky Mountains Less significant occurrences shown by blue symbols Mainly sedimentary rocks: sandstone, shale, conglomerate; Ts coal measures. Many occurrences on Axel Heiberg and D Sedimentary and volcanic rocks: shale, limestone, dolomite; conglomerate, sandstone; volcanic rocks; salt; oil and natural gas A vertical line through a symbol indicates a past or present Ellesmere Islands not indicated producing mine or mines . . UPPER CRETACEOUS SILURIAN ELEMENT SYMBOLS Ku Mainly sedimentary rocks: shale; sandstone, conglomerate, marine and non-marine; oil and natural gas, coal, bentonite Mainly sedimentary rocks: sandstone, shale, limestone, dolomite; S conglomerate; some volcanic rocks; gypsum, salt; oil and natural gas Molybdenum LOWER CRETACEOUS Nickel. ORDOVICIAN Mainly sedimentary rocks: sandstone, shale, conglomerate; O Sedimentary rocks: limestone, dolomite, shale, argillite, KI marine and non-marine; oil and natural gas, coal, tar sand. Uranium . sandstone, quartzite, grit; oil and natural gas Includes some Triassic and Jurassic beds south of Peace River ORDOVICIAN AND SILURIAN CRETACEOUS (Undivided) Sedimentary rocks. Includes some Devonian on mainland OS north of Great Bear Lake Metallogenic data compiled by A. G. Johnston, 1964 K Sedimentary rocks To accompany G.S.C. Bulletin 160, by R. W. Boyle CAMBRIAN JURASSIC AND CRETACEOUS Sedimentary rocks: dolomite, limestone, shale, chert, quartzite; sandstone, conglomerate Cartography by the Geological Survey of Canada 1967 JK Rocky Mountains and District of Franklin PALÆOZOIC (Undivided) Mainly sedimentary rocks. May include some Mesozoic and Sedimentary and volcanic rocks: argillite, greywacke, sandstone P Precambrian rocks in northern Cordillera and Precambrian J limestone; andesite, volcanic breccia, tuff. Includes considerable rocks on Ellesmere Island Lower Cretaceous and some Triassic rocks. Oil in Alberta and LATE PROTEROZOIC Sedimentary and volcanic rocks: sandstone, quartzite, Pu conglomerate, shale; iron-formation, basalt. Includes Sedimentary and volcanic rocks: argillite, quartzite, limeston R andesite, volcanic breccia, tuff. Includes Jurassic rocks. younger rocks in Yukon Territory May include some Palaeozoic limestone in southwestern Sedimentary and volcanic rocks and derived metamorphic rocks: Yukon Territory. Natural gas at Fort St. John Pus argillite, quartzite, limestone; schist, gneiss, crystalline limestone; N No White Pringles River A WAR andesite, greenstone. May be in part Palaeozoic MESOZOIC (Undivided) EARLY PROTEROZOIC M Sedimentary and volcanic rocks: some coal measures. Sedimentary and volcanic rocks: shale, argillite, slate, chert; Includes some Palaeozoic in Yukon Territory Pl limestone, dolomite (algal structures) ; sandstone, quartzite, arkose, greywacke, conglomerate; andesite, basalt, trachyte; tuff, volcanic breccia; iron-formation PROTEROZOIC (Undivided) P Sedimentary and volcanic rocks ARCHÆAN Mainly sedimentary and derived metamorphic rocks: argillite, As slate, arkose, quartzite, greywacke, conglomerate; sedimentary gneiss and schist, iron-formation. Asg, Grenville Mainly volcanic and derived metamorphic rocks: andesite, AV dacite, basalt; rhyolite, trachyte; minor volcanic breccia and tuff; greenstone schist, hornblende gneiss ARCHÆAN (Undivided) A Sedimentary, volcanic, and metamorphic rocks INTRUSIVE ROCKS MESOZOIC AND CENOZOIC Acid rocks: granodiorite, quartz monzonite, quartz diorite; granite, syenite Basic and ultrabasic rocks: gabbro, pyroxenite, peridotite Acid, basic, and ultrabasic rocks: granite, and related rocks; peridotite, pyroxenite, gabbro; serpentine; asbestos deposits Acid rocks: granite; granodiorite, diorite; gneissic rocks in Yukon Territory 3 Basic rocks: diabase sills and dykes ARCHÆAN AND/OR PROTEROZOIC Mainly acid rocks: granodiorite, granite, quartz diorite granite gneiss. Includes much granitized sedimentary and volcanic rock. Represents undivided Precambrian in lesser known parts of Basic and ultrabasic rocks: mainly anorthosite and gabbro Geology derived from published and unpublished maps and reports of the NTERTOR Geological Survey of Canada, Provincial Departments of Mines, mining companies, and other sources. Cartography by the Geological Survey of Canada, 1954, with some revisions, 1962. GEOLOGICAL SURVEY OF CANADA DEPARTMENT OF ENERGY, MINES AND RESOURCES MAP 1233A METALLOGENIC MAP SILVER IN CANADA SCALE: 1 INCH TO 120 MILES = 7,603,200

SELECTED REFERENCES

35. Whitesail Lake map-area, British Columbia; Geol. Surv. Can., Mem. 299, 1959.

Structural geology of Canadian ore deposits; Can. Inst., Mining Met., Jubilee Volume, 99. Geology of Lake Athabaska region, Saskatchewan; Geol. Surv. Can., Mem. 196, 1936. 2. Structural geology of Canadian ore deposits; Can. Inst. Mining Met., Congress Volume, 1957.

101. Mineral occurrences in the Precambrian of northern Saskatchewan; Sask. Dept. Mineral Resources, Rept. No. 36, 1959. 3. Silver in the Yukon; Bull. Can. Inst. Mining Met., vol. 56, No. 611, 1963.

5. Mineral industry of District of Mackenzie, 1962; Geol. Surv. Can., Paper 63-9, 1963.

104. Echimamish area, northern Manitoba; Geol. Surv. Can., Paper 37-18, 1937. 6. Upper Beaver River area, Mayo district, Yukon Territory; Geol. Surv. Can., Sum. Rept., 1924, pt. A.

104. Echimamish area, northern Manitoba; Geol. Surv. Can., Paper 37-18, 19
105. Cross Lake map-area, Manitoba; Geol. Surv. Can., Paper 61-22, 1962. Dawson, Larsen Creek, and Nash Creek map-areas, Yukon Territory; Geol. Surv. Can., Paper 62-7, 1962. 8. Mayo Lake, Yukon Territory; Geol. Surv. Can., Map 5-1956, 1957. Silver-lead deposits of Davidson Mountains, Yukon Territory; Geol. Surv. Can., Sum. Rept., 1921, pt. A.

11. McQuesten, Yukon Territory; Geol. Surv. Can., Map 1143A, 1964. Silver-lead deposits of the Twelvemile area, Yukon Territory; Geol. Surv. Can., Sum. Rept., 1918, pt. B. Silver-lead deposits of Rude Creek, Yukon Territory; Geol. Surv. Can., Sum. Rept., 1927, pt. A. 14. Preliminary map, Selwyn River area, Yukon Territory; Geol. Surv. Can., Paper 44-34, 15. Little Salmon area, Yukon Territory; Geol. Surv. Can., Sum. Rept., 1928, pt. A. 16. Geology, Glenlyon, Yukon Territory; Geol. Surv. Can., Map 25-1960, 1960.

17. Geology, Tay River, Yukon Territory; Geol. Surv. Can., Map 13-1961, 1961. 18. Redstone Mines Ltd., Prospectus, June, 1962 and Ann. Rept., 1962. 20. The mineral industry of Yukon Territory and southwestern District of Mackenzie, 1964; Geol. Surv. Can., Paper 65-19, 1965. 21. Mineral industry of Yukon Territory and southwestern District of Mackenzie, 1962; Geol. Surv. Can., Paper 63-38, 1963.

22. Wolf Lake, Yukon Territory; Geol. Surv. Can., Map 22-1957, 1958. Geological reconnaissance along the Alaska Highway between Watson Lake and Tes-lin River, Yukon and British Columbia; Geol. Surv. Can., Paper 44-25, 1944. Mineral industry of Yukon Territory and southwestern District of Mackenzie, 1960; Geol. Surv. Can., Paper 61-23, 1961. 25. Geology of Teslin — Quiet Lake area, Yukon; Geol. Surv. Can., Mem. 203, 1936. 26. Whitehorse map-area, Yukon Territory; Geol. Surv. Can., Mem. 312, 1961. 27. The Yukon Territory, Mecca for base metals; Can. Mining J., vol. 77, No. 4, 1956. 28. The Squaw Creek — Rainy Hollow area, British Columbia; B.C. Dept. Mines, Bull. 25,

29. Taku River map-area, British Columbia; Geol. Surv. Can., Mem. 248, 1948. 30. McDame map-area, Cassiar district, British Columbia; Geol. Surv. Can., Mem. 319, 31. Portland Canal area, British Columbia; Geol. Surv. Can., Mem. 175, 1935. 32. Index No. 3 to publications of the British Columbia Department of Mines, 1955. (Contains table listing recorded production of lode-metal mines.) 33. Annual Reports, British Columbia Department of Mines.

63. Geology and mineral deposits of the Princeton map-area, British Columbia; Geol. Surv. Can., Mem. 243, 1947.

163. Geology, sulphur isotopes and the origin of the Heath Steele ore deposits, Newcastle, New Brunswick; Econ. Geol., vol. 55, No. 3, 1960. 65. Preliminary report, mineral deposits of the west half of Kettle River area, British Columbia; Geol. Surv. Can., Paper 37-21, 1937.

Lands and Mines, Mines Branch, Paper 51-2, 1951.

Lands and Mines, Mines Branch, Paper 51-2, 1951.

Lands and Mines, Mines Branch, Paper 51-2, 1951. 68. Minerals from the Highland-Bell silver mine, British Columbia; University of Toronto Studies, Geological Ser. No. 50, pp. 27-33, 1946.

169. Supergene copper-uranium deposits in northern Nova Scotia; Econ. Geol., vol. 53, No. 3, 1958. 69. Ore deposits of the Beaverdell map-area, British Columbia; Geol. Surv. Can., Mem. 79, 1915.

Geology of the barite, gypsum, manganese and lead-zinc-copper-silver deposits of the Walton-Cheverie area, Nova Scotia; Geol. Surv. Can., Paper 62-25, 1963. 74. Geology and copper deposits of the Boundary district, British Columbia; Bull. Can. Inst. Mining Met., vol. 49, No. 534, 1956.

176. Geology and copper deposits of the Boundary district, British Columbia; Bull. Can. Inst. Mining Met., vol. 49, No. 534, 1956. 75. Nelson map-area, west half, British Columbia; Geol. Surv. Can., Mem. 308, 1960. 76. Nelson map-area, east half, British Columbia; Geol. Surv. Can., Mem. 228, 1941. 81. St. Mary Lake, Kootenay district, British Columbia; Geol. Surv. Can., Map 15-1957, 1957.

181. Geology and mineral deposits of a part of northwest Manitoba; Geol. Surv. Can., Sum. Rept., 1930, pt. C. 82. Findlay Creek map-area, British Columbia; Geol. Surv. Can., Paper 53-34, 1954. 182. Atlin district, British Columbia; Geol. Surv. Can., Mem. 37, 1913.

61. Vernon map-area, British Columbia; Geol. Surv. Can., Mem. 296, 1959.

85. Description of properties, Slocan mining camp, British Columbia; Geol. Surv. Can., 86. Lardeau map-area, British Columbia; Geol. Surv. Can., Mem. 161, 1930. 87. Geology and mineral deposits of Windermere map area, British Columbia; Geol. Surv. Can., Mem. 148, 1926. 88. Lardeau, east half, Kootenay district, British Columbia; Geol. Surv. Can., Map 12-1957, 1957. 89. Geology of the Ferguson area, Lardeau district, British Columbia; B.C. Dept. Mines and Petroleum Resources, Bull. No. 45, 1962.

Geological reconnaissance of the Precambrian of northwestern Baffin Island, Northwest Territories; Geol. Surv. Can., Paper 64-42, 1965. Tungsten deposits of British Columbia; B.C. Dept. Mines, Bull. No. 10, 1943.
 Geology and mineral deposits of Big Bend map-area, British Columbia; Geol. Surv. Can., Sum. Rept., 1928, pt. A.
 Base Metal deposits in the Labrador Trough, by R. M. Slipp; unpublished Ph.D. Thesis, McGill University, 1957.
 Geology of north half of Galinée township and of southeast quarter of Isle-Dieu 92. Flotation of silver-lead-zinc ore from Jordan River mines property, from Bralorne Pioneer Mines, Ltd., British Columbia; Mines Branch, Dept. Mines Tech. Surv. Invest. Rept. IR 61-40, 1961.

92. Flotation of silver-lead-zinc ore from Jordan River mines property, from Bralorne township; Que. Dept. Nat. Res., Prel. Rept. No. 527, 1964.

93. Flotation of silver-lead-zinc ore from Jordan River mines property, from Bralorne township; Que. Dept. Nat. Res., Prel. Rept. No. 527, 1964.

94. Preliminary report on the northeast quarter of Fiedmont township; Que. Dept. Mines, Prel. Rept. No. 364, 1958. 35. Canadian deposits of uranium and thorium; Geol. Surv. Can., Econ. Geol. Ser. No. 16 196. New Brunswick Dept. Lands and Mines, Ann. Rept. 1959.

(second edition), 1962.

96. Milling pitchblende-silver ores at Eldorado plant; Eng. Mining J., vol. 139, No. 4, Survey 3, 1963. 97. Camsell River, District of Mackenzie, Northwest Territories; Geol. Surv. Can., Map 1014A, 1953.

198. Silver, preliminary mineral review 1963; Mineral Resources Division, Dept. Mines, Tech. Surveys. 98. Great Slave Lake — Coppermine River area, Northwest Territories; Geol. Surv. Can., Sum. Rept., 1932, pt. C.

100. Goldfields — Martin Lake map-area, Saskatchewan; Geol. Surv. Can., Mem. 269, 1952. 102. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports. 4. The mineral industry of Yukon Territory and southwestern District of Mackenzie, Northwest Territories, 1963; Geol. Surv. Can., Paper 64-36, 1964.

102. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

103. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

104. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

105. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

106. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

107. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

108. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining and Smelting Co. Ltd., Annual Reports.

109. Hudson Bay Mining Annual Reports.

109. Hudson Bay Mining Annual Reports.

109. Hudson Bay Mining Annual Reports.

109. Hudson

106. Geology of the area between Favourable Lake and Sandy Lake, District of Kenora (Patricia portion); Ont. Dept. Mines, Ann. Rept., vol. 38, pt. 2, 1929. 107. Recent developments in the Favourable Lake area; Ont. Dept. Mines, Ann. Rept., vol. 47, pt. 7, 1938. Timmins — Kirkland Lake sheet, geological compilation series; Ont. Dept. Mines, Map 2046, 1964. 10. McQuesten Lake and Scougale Creek map-areas, Yukon Territory; Geol. Surv. Can., Paper 58-4, 1958.

109. Kowkash — Ogoki gold area, District of Thunder Bay; Ont. Dept. Mines, Ann. Rept., vol. 40, pt. 4, 1931.

110. Tashota — Onaman gold area, District of Thunder Bay; Ont. Dept. Mines, vol. 34, Copper, nickel, lead, and zinc deposits in Ontario; Ont. Dept. of Mines, Metal Res. Circ. No. 2, 1957. Huronian gold mine, Moss township. District of Thunder Bay; Ont. Dept. Mines, Ann. Rept., vol. 37, pt. 4, 1928. 113. Fort William and Port Arthur, and Thunder Cape map-areas, Ontario; Geol. Surv. Can., Mem. 167, 1931. 114. Fifth report of the inspector of mines; Ont. Bur. Mines, Ann. Rept., 1895, vol. 5, 1896. 115. Geology of the Jackfish — Middleton area; Ont. Dept. Mines, Geol. Circ. No. 4, 1956. 116. Geology of the Manitouwadge area; Ont. Dept. Mines, Ann. Rept., vol. 66, pt. 8, 1957.

19. Virginia Falls and Sibbeston Lake map-areas, Northwest Territories; Geol. Surv. Can., Paper 60-19, 1960.

117. Geology of Canada; Geol. Surv. Can., Rept. of Prog. From Its Commencement to 1863. Goudreau and Michipicoten gold areas, District of Algoma; Ont. Dept. Mines, Ann Rept., vol. 40, pt. 1931. 119. Zinc and lead deposits of Canada; Geol. Surv. Can., Econ. Geol. Ser. No. 8, 1930. 120. The cobalt-nickel arsenides and silver deposits of Temiskaming (Cobalt and adjacent areas); Ont. Bur. Mines, vol. 19, pt. 2, 1913. The northeastern portion of the Timagami Lake area; Ont. Dept. Mines, Ann. Rept., vol. 51, pt. 6, 1942. 122. Adonis Mines Ltd., prospectus, 1959 and 1960.

> 123. The Matabitchuan area; Ont. Dept. Mines, Ann. Rept., vol. 34, pt. 3, 1925. Description of mining properties visited in 1952 and 1953; Que. Dept. Mines, P.R. 330, 1956. 125. Timiskaming county, Quebec; Geol. Surv. Can., Mem. 103, 1918. Mines, Ann. Rept., vol. 31, pt. 2, 1922.

126. Geology of the mine workings of Cobalt and South Lorrain silver areas; Ont. Dept. 127. Mineral resources of the Timiskaming silver—cobalt area; Ont. Dept. Mines, Bull. 128. Anima—Nipissing Lake area; Ont. Dept. Mines, Ann. Rept., vol. 35, pt. 3, 1926. 129. Cobalt silver area; Ont. Dept. Mines, Maps 2050, 2051, 2052, 1964. 130. Preliminary reports of Coleman township and Gillies Limit; Ont. Dept. Mines, P.R. 1960-3, P.R. 1961-2, P.R. 1961-3, P.R. 1961-4, P.R. 1961-6, P.R. 1961-7. Preliminary report of the geology of the north part of Lorrain township con. VII to XII, District of Timiskaming; Ont. Dept. Mines, P.R. 1960-1, 1962. 34. Texada Island and Moresby Island, British Columbia; Geol. Surv. Can., Sum. Rept., 132. Preliminary report on Bucke township, District of Timiskaming; Ont. Dept. Mines, P.R. 1960-2, 1964.

36. Mineral resources along the Canadian National Railway between Prince Rupert and Prince George, British Columbia; Geol. Surv. Can., Paper 36-20, 1936.

133. Gowganda and other silver area; Ont. Dept. Mines, Ann. Rept., vol. 30, pt. 3, 1921. 134. Blanche River area; Ont. Dept. Mines, Ann Rept., vol. 31, pt. 3, 1922. 37. Geology of the Field map-area, British Columbia and Alberta; Geol. Surv. Can., 135. Geology of Gowganda mining division; Geol. Surv. Can., Mem. 33, 1913. 38. Mineral resources of Terrace area, British Columbia; Geol. Surv. Can., Mem. 205, 137. Gowganda silver area; Ont. Dept. Mines, Ann. Rept., vol. 35, pt. 3, 1926. 39. Mineral resources, Usk to Cedarvale, Terrace area, Coast district, British Columbia; Geol. Surv. Can., Mem. 212, 1937.

138. Shiningtree silver area; Ont. Dept. Mines, Ann Rept., vol. 36, pt. 2, 1927.

139. Tyrrell—Knight area; Ont. Dept. Mines, Ann Rept., vol. 41, pt. 2, 1939. 139. Tyrrell—Knight area; Ont. Dept. Mines, Ann Rept., vol. 41, pt. 2, 1932. Geology of Terrace map-area, British Columbia; Geol. Surv. Can., Mem. 329, 1964.
 Mineral resources, Hazelton and Smithers area. Cassiar and Coast districts. British

 Mineral resources, Hazelton and Smithers area, Cassiar and Coast districts, British Columbia; Geol. Surv. Can., Mem. 223, 1954. 141. The Timmins rush; Precambrian, vol. 37, No. 6, 1964. 42. Preliminary map, Smithers, British Columbia; Geol. Surv. Can., Paper 44-23, 1944

43. Driftwood Creek map-area, Babine Mountains, British Columbia; Geol. Surv. Can.

44. Driftwood Creek map-area, Babine Mountains, British Columbia; Geol. Surv. Can.

45. Driftwood Creek map-area, Babine Mountains, British Columbia; Geol. Surv. Can. 43. Driftwood Creek map-area, Babine Mountains, British Columbia; Geol. Surv. Can., Sum. Rept., 1924, pt. A.

Dept. Mines, Prel. Rept., No. 371, 1958.

The Lake Dufault story; Mining in Canada (formerly Precambrian), vol. 37, No. 10, 1964. 44. Report and preliminary map, Houston map-area, British Columbia; Geol. Surv. Can., Paper 40-18, 1940 (Map 671A, 1942).

144. Exploiting a small orebody, Vauze Mines Ltd.; Bull, Can. Inst. Mining Met., vol. 57, No. 624, 1964. 45. Preliminary map, Hazelton, British Columbia; Geol. Surv. Can., Paper 44-24, 1944.

46. Geology and mineral deposits of Alken Lake mapages. British Columbia; Geol. Surv. Can., Paper 44-24, 1944.

47. Description of mining properties examined in 1956 and 1957; Que. Dept. Mines, Prel. Rept., 390, 1959. 46. Geology and mineral deposits of Aiken Lake map-area, British Columbia; Geol. Surv. Can., Mem. 274, 1954.

Rept., 390, 1959.

Rept., 390, 1959.

Normetal Mine area; Que. Dept. Mines, Geol. Rept., 34, 1951.

47. Fort St. James map-area, Cassiar and Coast districts, British Columbia; Geol. Surv. Can., Mem. 252, 1949.

147. Geology and ore deposits of the Mattagami area, Quebec; Econ. Geol., vol. 56, No. 4, 1961. 48. Mineral deposits between Lillooet and Prince George, British Columbia; Geol. Surv.
Can., Mem. 118, 1920.

148. Mattagami Lake Mines Ltd.; Bull. Can. Inst. Mining Met., vol. 57, No. 624, 1964.

149. Southwest part of Lesueur township: Oue Dept. Mines. Geol. Rept. 72, 1957. 149. Southwest part of Lesueur township; Que. Dept. Mines, Geol. Rept., 72, 1957. 49. Chilko Lake and vicinity, British Columbia; Geol. Surv. Can., Sum. Rept., 1924, pt. A. 150. The Coniagas Mines Ltd.; 57th Ann. Rept., 1963. 50. Geology, McLeod Lake, British Columbia; Geol. Surv. Can., Map 2-1962, 1962.

51. Lode-gold deposits, southwestern British Columbia; B.C. Dept. Mines, Bull. 20, pt. IV. 1944 52. Geology and mineral deposits of Quatsino — Nimpkish area, Vancouver Island, British Columbia; Geol. Surv. Can., Sum. Rept., 1929, pt. A.

153. The copper deposits of the Eastern Townships of the province of Quebec; Que. Dept. Colonization, Mines and Fisheries, Mines Branch, 1915. 53. Buttle Lake map-area, Vancouver Island, British Columbia; Geol. Surv. Can., Sum. Rept., 1930, pt. A.

154. Geology of a southwestern part of the Eastern Townships of Quebec; Geol. Surv. Can., Mem. 257, 1950. 54. Lower Stikine and western Iskut River areas, British Columbia; Geol. Surv. Can., Mem. 246, 1948.

155. Annotated bibliography of metallic mineralization in the Quebec Appalachians; Que. Dept. Nat. Res., S-72, 1963. 55. Pemberton area, Lillooet district, British Columbia; Geol. Surv. Can., Sum. Rept., 156. Risborough—Marlow area, Frontenac county; Que. Dept. Mines, Geol. Rept., No. 3,

56. Geology and mineral deposits of Bridge River mining camp, British Columbia; Geol. Surv. Can., Mem. 213, 1937.

157. Structure and ore deposits of northern New Brunswick, by A. L. McAllister; Annual Convention, Prospectors and Developers Association, Toronto, March 8, 1954. 57. Geology and mineral deposits of Tyaughton Lake map-area, British Columbia; Geol. Surv. Can., Paper 43-15, 1943.

158. Bathurst-Newcastle area, Northumberland, Restigouche and Gloucester counties, New Brunswick; Geol. Surv. Can., Map 1-1957, 1957. 58. Clearwater River and Foghorn Creek map-area, British Columbia; Geol. Surv. Can., Sum. Rept., 1930, pt. A.

159. Jacquet River and Tetagouche River map-areas, New Brunswick; Geol. Surv. Can., Mem. 227, 1941. 59. Geology of the North Thompson Valley map-area, British Columbia; Geol. Surv. Can., Sum. Rept., 1921, pt. A.

160. Mineralogy and paragenesis of lead-zinc-copper ores of the Bathurst-Newcastle district, New Brunswick; Geol. Surv. Can., Bull. 72, 1961. 161. Geology of the Austin Brook and Brunswick No. 6 sulphide deposits, Gloucester 60. Geology, Adams Lake, British Columbia; Geol. Surv. Can., Map 48-1963, 1964. county, New Brunswick; Geol. Surv. Can., Paper 63-24, 1964. 62. Geology and mineral deposits of Nicola map-area, British Columbia; Geol. Surv. 162. Massive sulphide deposits in New Brunswick; Bull. Can. Inst. Mining Met., vol. 53, No. 574, 1960.

64. Reconnaissance of Silver Creek, Skagit and Similkameen Rivers, Yale district, British Columbia; Geol. Surv. Can., Sum. Rept., 1923, pt. A.

164. Geology and mineral resources of New Brunswick; Geol. Surv. Can., Rept. 983, 1907.

165. New Horton copper deposits, Albert county. New Brunswick; New Brunswick; New Brunswick; Dept. 165. New Horton copper deposits, Albert county, New Brunswick; New Brunswick Dept. Columbia; Geol. Surv. Can., Paper 37-21, 1937.

66. Lode gold deposits of Fairview Camp, Camp McKinney, and Vidette Lake area, and the Dividend-Lakeview property near Osoyoos, British Columbia; Geol. Surv. Can., Mem. 179, 1935.

67. Mineral localities. Kettle Biver, west helf. Similkamens and Osoyoos districts. British 67. Mineral localities, Kettle River, west half, Similkameen and Osoyoos districts, British Columbia; Geol. Surv. Can., Map 539A, 1940.

168. Sedimentary copper, Tatamagouche area, Nova Scotia, by G. Shumway; unpublished M.Sc. thesis, M.I.T., 1951.

70. Geology, Kettle River, west half, British Columbia; Geol. Surv. Can., Map 15-1961, 171. Massive sulphide deposits in Nova Scotia; Bull. Can. Inst. Mining Met., vol. 53, No. 1. Lightning Peak area, Osoyoos district, British Columbia; Geol. Surv. Can., Sum.
Rept., 1930, pt. A.

Mines and mineral resources of Newfoundland; Nfld. Dept. Mines and Resources, Info Circ. No. 4, 1953. 72. Kettle River east half, Similkameen, Kootenay and Osoyoos districts, British Columbia; Geol. Surv. Can., Map 6-1957, 1957.

173. La Poile-Cinq Cerf map-area, Newfoundland; Geol. Surv. Can., Map 6-1957, 1957. 73. Lode-gold deposits, central southern British Columbia; B.C. Dept. Mines, Bull. 20, pt. III, 1945.

174. Massive sulphide deposits in Newfoundland; Bull. Can. Inst. Mining Met., vol. 53, No. 574, 1960. 175. Geology of the Buchans orebodies; Trans. Can. Inst. Mining Met., vol. 65, 1962.

177. Geology of the Bathurst—Newcastle mineral district, N.B.; Trans. Can. Inst. Mining Met., vol. 61, 1958. 77. Stratigraphy and structure of the Salmo lead-zinc area; B.C. Dept. Mines, Bull. No. 41, 1959.

178. History of mining exploration, Bathurst—Newcastle district, N.B.; Trans. Can. Inst. Mining Met. vol. 61, 1958. Mining Met., vol. 61, 1958. 78. Geology of Cranbrook map-area, British Columbia; Geol. Surv. Can., Mem. 76, 1915. 179. Coquihalla area, British Columbia; Geol. Surv. Can., Mem. 139, 1924. 79. Cranbrook map-area, British Columbia; Geol. Surv. Can., Mem. 207, 1937.

80. Fernie map-area, west half, British Columbia; Geol. Surv. Can., Paper 58-10, 1958.

180. Geological exploration in Yale and Similkameen mining divisions, southwestern British Columbia; Geol. Surv. Can., Sum. Rept., 1922, pt. A.

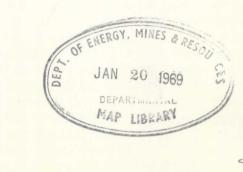
83. Notes on geology and mineral deposits at Ainsworth, British Columbia; Geol. Surv. 183. Geology of Gurney gold mine area, Manitoba; The Precambrian, vol. 17, No. 4, 1944. 84. Geology and ore deposits of Ainsworth mining camp, British Columbia; Geol. Surv. Can., Mem. 117, 1920. 185. The operations and plants of the Consolidated Mining and Smelting Company of Canada; Can. Mining J., vol. 75, No. 5, 1954. 186. Atlin map-area, British Columbia; Geol. Surv. Can., Mem. 307, 1959. 187. Geology of the Duncan Lake area, British Columbia; B.C. Dept. Mines, Bull. No. 49,

> 189. Amendment No. 1 to the prospectus of Ferco Mines Ltd., dated March 22, 1962. Geology of north half of Galinée township and of southeast quarter of Isle-Dieu township; Que. Dept. Nat. Res., Prel. Rept. No. 527, 1964.

93. Mineral industry of District of Mackenzie, Northwest Territories; Geol. Surv. Can., Mem. 261, 1951.

Description of mining properties examined in 1958; Que. Dept. Mines, Prel. Rept. No. 406, 1959. 94. The pitchblende and silver discoveries at Great Bear Lake, Northwest Territories; Mines Branch, Dept. Mines Tech. Surv., Report 727, 1932.

195. Description of mining properties examined in 1960; Que. Dept. Nat. Res., Prel. Rept. No. 472, 1962.



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