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ONTARIO DEPARTMENT OF MINES

Mineral Resources Circular No. 4

Uranium and Thorium Deposits of Southern Ontario

By D. F. HEWITT

1967

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Uranium and Thorium Deposits of Southern Ontario

By

D. F. Hewitt

Abstract

This mineral inventory briefly describes 124 deposits of uranium and thorium in southern Ontario. Most of these deposits are pegmatitic in character, although some are metasomatic replacements and vein deposits. Work was done on these deposits principally during the uranium rush of 1954-1957. Four properties produced uranium valued at \$105,141,819 from 1956-1964. /

By

D. F. Hewitt¹

The principal uranium and thorium deposits of Ontario occur in the Blind River and Bancroft areas. Uranium and thorium deposits of the Bancroft area of southeastern Ontario include pegmatitic granite dikes, pegmatites, metasomatic replacement deposits and calcite-fluorite-apatite veins. Only deposits of the pegmatitic granite class have been worked commercially and the principal production has come from two mines. Production figures for the Bancroft area are as follows:

Mine	Years of Production	<u>Total Value</u>
Faraday mine	1957-1964	\$ 51,726,126
Bicroft mine	1956-1963	44,054,075
Dyno mine	1958-1960	8,526,729
Greyhawk mine	1957-1959	834,889
	Total Production	\$ 105,141,819

Most of the deposits occur in Faraday, Cardiff, and Monmouth townships in an area extending 25 miles in a southwesterly direction between Bancroft and Tory Hill. This region contains three major batholiths which are mantled by variably granitized paragneiss and lime-rich metamorphic rocks. A few of the uranium deposits occur within the batholithic complexes, and a few others are remote from them, but most, including the main deposits, lie in the rocks mantling the batholiths.

¹ Senior Geologist, Ontario Department of Mines, Toronto. Manuscript received by the Director, Geological Branch, 13 Jan. 1967.

The principal radioactive minerals in the deposits are uraninite and uranothorite. In the granitic deposits zircon is abundant. Virtually all the deposits carry some calcite and fluorite. Commercial orebodies in the pegmatitic granites are of the order of 0.1% U₃0₈ and from 0.025 to 0.2% Th0₂.

Classification of Uranium Deposits in the Bancroft Area

The most important uranium deposits in the Bancroft area including those of the Bicroft, Faraday, Dyno, Halo and Greyhawk mines, are in pegmatitic granite dikes. Disseminated metasomatic replacement deposits of uraninite and uranothorite occur in marble, metamorphic pyroxenite and occasionally in granite or syenite. Hydrothermal calcite-fluorite veins also carry uraninite and uranothorite.

The mode of occurrence and history of the uranium deposition in the area is complex; there appear to have been three stages in the sequence, and these frequently overlap even in a single deposit.

These stages are:

- Pegmatitic granite stage: Dilatant injection accompanied
 by assimilation and replacement;
- 2. Metasomatic replacement stage;
- 3. Hydrothermal vein stage, usually of the calcite-fluoriteapatite vein type.

Pegmatitic Granite Dikes

These bodies do not show the usual characteristics of granite pegmatites of the segregated, zoned type. They are complex, composite granitic bodies usually occurring as dikes or irregular pod-shaped, branching bodies cutting and replacing the country rocks. Their contacts vary from sharp to gradational depending to some extent on the type of wall rock. Grain size is variable, and is pegmatitic only in places.

The bodies often consist of multiple facies with the different lithologic units being quite irregular in shape, size and position. Marked lithologic changes frequently occur along the dikes. The most common lithologic types are pink granite gneiss; pink leucogranite frequently magnetite-rich; pegmatitic granite, often peristeritic; pyroxene granite and syenite; pyroxene granite and syenite pegmatite; and cataclastic quartzrich granite pegmatite. Inclusions and relict schlieren of wall rocks in all stages of assimilation may occur in the dikes. Lithologically the bodies grade from syenite to granite.

The essential minerals are quartz, peristerite, and microcline microperthite. Characterizing accessories are pyroxene, hornblende, biotite and magnetite. Varietal accessories include purple fluorite, allanite, zircon, titanite, apatite, hematite, calcite, pyrite, pyrrhotite, molybdenite and the uranium minerals in order of importance: uranothorite, uraninite, uranophane, and occasionally thorite, pyrochlore or fergusonite.

This type of pegmatitic granite body is regarded by the

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author as typical of catazone ultrametamorphism. Uranium deposition is influenced by the chemical and physical properties of the host rocks in which the granitic rocks occur. Host rocks rich in iron and calcium-magnesium-iron silicates such as pyroxene and hornblende, are favourable. In the Bancroft area the Faraday, Greyhawk and Blue Rock Cerium dikes are in metagabbro or ortho-amphibolite. The Bicroft, Dyno and Halo dikes occur in limy para-amphibolite carrying interbeds of pyroxene-scapolite granulite and garnet-sillimanite paragneiss.

Uranium minerals occur in shoots within the dikes, but they are not confined to any particular litholigic unit. There may be hanging wall or footwall enrichment, or enrichment close to inclusions within the dike. Fracturing and cataclasis may play a part in localizing the ore. Hematitization and red colouration of feldspars and quartz usually accompany uranium mineralization.

Metasomatic Replacement Deposits

Thorium uraninite and uranothorite occur in disseminated metasomatic replacement deposits in marble, carbonate rock and metamorphic pyroxenite usually near the contacts of granitic, syenitic or pegmatitic intrusives. Frequently there is a development of skarn minerals (diopside, tremolite, scapolite, phlogopite, apatite, magnetite, pyrite, etc.) in the marble. Salmon pink to red colouration of the marble is characteristic. The uranium- bearing zones are irregular in size and shape, and distribution of the uranium mineralization is frequently erratic.

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Hydrothermal Vein Deposits

The hydrothermal calcite-fluorite-apatite veins of the Wilberforce area carry uraninite and sometimes uranothorite. They occur as lenticular, discontinuous, fissure-filling veins from a few inches to 12 feet wide, and up to 300 feet long. The veins are frequently well-banded with alternating narrow stringers of white calcite and purple fluorite. Banding is parallel to vein walls. The veins are usually steeply dipping, but their vertical extent is limited because they pinch and swell irregularly.

The essential minerals of the veins are calcite and fluorite. Green to red apatite is a characteristic accessory. Hornblende, biotite, pyroxene, scapolite, feldspar, magnetite, titanite and pyrite may occur as accessories or may line the walls of the fissure veins. Uraninite and sometimes uranothorite, thorite, pyrochlore or betafite are radioactive accessories.

A more detailed account of the classification of Bancroft uranium deposits may be found in Hewitt (1957, p. 53-58) and Satterly (1956, p. 8-14).

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Descriptions of

Uranium and Thorium Deposits of Ontario

arranged alphabetically according to

County

and

Township

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CARLETON COUNTY, MARCH TOWNSHIP

O'Brien Mine

Location: Lot 6, concession II, March township, Carleton county.

Radioactive Minerals Present: Uraninite.

Development: Old feldspar workings, open pit.

Years of Activity: Not reported.

Geology: Radioactive granite pegmatite dike.

Dimensions and Grade: Not reported.

Reference: Lang (1962, p. 268).

<u>Remarks</u>: Present ownership status unknown.

FRONTENAC COUNTY, MILLER TOWNSHIP

Whytock - Gray - Elkington Occurrence

Location: Lot 15, SW Range.

Radioactive Minerals Present: Pyrochlore.

<u>Development</u>: Open cut feldspar mine 150 feet long and 30 feet wide.

Years of Activity: 1954-1955.

<u>Geology</u>: Zoned granite pegmatite dike; pyrochlore confined to the wall zone. Pegmatite cuts granitized paragneiss.

Dimensions and Grade: Not reported.

Reference: J. Satterly, unpublished report, 1955.

<u>Remarks</u>: Present ownership status unknown.

FRONTENAC COUNTY, PALMERSTON TOWNSHIP

J. Eastman

Location: Lot 9, concession III, Lots 2 & 3, concession V, Palmerston township, Frontenac county.

Radioactive Minerals Present: Uraninite.

Development: Diamond drilled.

Years of Activity: Not reported.

Geology: Radioactive granite pegmatite dike.

Dimensions & Grade: Not reported.

<u>Reference</u>: Lang (1962, p. 275).

<u>Remarks</u>: Present ownership status unknown.

HALIBURTON COUNTY, CARDIFF TOWNSHIP

Amalgamated Rare Earth Mines Limited

Halo Group

Location: Lots 4 & 5, concession XVIII (shaft and adits), Cardiff township.

Radioactive Minerals Present: Uraninite, uranothorite, betafite.

Development: 2780 feet of surface trenching and 142 diamond drill holes totalling 48,736 feet in 1955-56. No. 1 shaft to 48 feet; No. 1 adit has 1270 feet of drifting, 365 feet of crosscutting and 91 feet of raising. No. 2 adit has 494 feet of drifting, 341 feet of crosscutting, and 28 feet of raising. Underground drilling amounted to 89 holes totalling 9,822 feet.

Years of Activity: 1953-1956.

<u>Geology</u>: Pyroxene syenite and granite pegmatite dikes cut biotite paragneiss and garnet-biotite paragneiss. One ore zone in mica-scapolite pyroxenite. <u>Dimensions and Grade</u>: Drilling and adits indicated 400,000 tons averaging 0.114 per cent U₃08 (Canadian Mines Handbook, 1957).

Reference: Satterly (1956, p. 59).

Atlin - Ruffner Allanite Occurrence

Location: N1/2 lot 2, concession XVI, Cardiff township.

Radioactive Minerals Present: Allanite, zircon.

<u>Development</u>: Three surface trenches and pits, 80 to 140 feet long. Scintillometer and magnetometer survey; nine diamond drill holes totalling 2713 in 1953.

Years of Activity: 1953-1955.

<u>Geology</u>: Allanite granite pegmatite and allanite syenite pegmatite cut hybrid syenite gneiss. Main allanite zone strikes N30°E, dips 55°SE, and has an average width of 8 feet.

<u>Dimension and Grade</u>: Width of 8 feet, traced over 200-foot length. Amount of allanite present 10 to 40 per cent.

Reference: Satterly (1956, p. 27).

Remarks: Present status of ownership not known.

Bancroft Uranium Mines Limited

Location: Lot 5, concession XXII, Cardiff township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Open cut blasting and test pitting.

Years of Activity: 1955-1956.

<u>Geology</u>: Sill of fluorite - pyroxene syenite pegmatite with a maximum thickness of 4 feet and an observed length of 50 feet cuts granitized paragneiss, leucogranite gneiss and fluorite - pyroxene syenite which strike N65°E and dip 20°S. Reference: Satterly (1956, p. 29).

Burma Shore Mines Limited

Location: Lot 7, concession XX, Cardiff township.

Radioactive Minerals Present: Uraninite, uranothorite.

<u>Development</u>: Stripping, trenching and seven drill holes totalling 1522 feet.

Years of Activity: 1955.

<u>Geology</u>: Uraninite and uranothorite in two scapolite pyroxene skarn bands 1/2 to 2 feet wide and 40 feet apart. The skarn bands are adjacent to sills of pyroxene syenite pegmatite. Uraninite also present in scapolite - pyroxene syenite pegmatite.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 40).

<u>Remarks</u>: Ontario charter cancelled, April, 1965. Present ownership status unknown.

Canada Radium Corporation Limited

Location: Lot 9, concession XII, Cardiff township.

Radioactive Minerals Present: Uraninite, uranothorite.

<u>Development</u>: Vertical shaft to 400-foot depth, levels at 125', 250' and 375'. 591 feet of drifts, 1219 feet of crosscuts. Development work carried out on granite pegmatite to recover feldspar. Shaft sunk prior to 1937.

Years of Activity: 1932-1936, 1939-1942, 1954-1955.

<u>Geology</u>: Minor radioactive minerals in granite pegmatite dikes. Narrow uranium - bearing sections of the dikes show little or no continuity from drill hole to drill hole.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 41).

<u>Remarks</u>: Present ownership status unknown.

Canadian Dyno Mines Limited

- Location: B zone, lot 12, concession VIII, Cardiff township. A zone, lot 12, concessions VIII and IX, Cardiff township. C zone, lot 12, concession VII, Cardiff township.
- <u>Radioactive Minerals Present</u>: Uraninite, uranothorite, allanite, uranophane.
- Development: 3-compartment shaft on B zone to depth of 1720 feet opening ten levels; total drifting 19,439 feet; crosscuts 29,376 feet; raises, 16,847 feet. Extensive diamond drilling on A and B zones. 42 holes on A zone in 1954-56 totalling 20,995 feet. 105 holes on B zone in 1954-56 totalling 33,188 feet.

Years of Activity: 1954-1960.

- <u>Geology</u>: Red to pink leucogranite pegmatite dikes characterized by the presence of microcline, peristerite, smoky quartz and magnetite, with minor uraninite, uranothorite, allanite, uranophane, titanite and zircon, cut amphibolite, biotite pyroxene granulite and syenitized amphibolite. Dikes strike about N15°W and dip 40-65°E. Hematitization is frequently present in the uraniferous zones of the dikes. Ore shoots occur in the dikes. Dikes 5 to 50 feet wide, often over 100 feet in length.
- Production: Operated 1100-ton mill from May 1, 1958, to April 27, 1960 producing 802,998 pounds of U308 worth \$8,526,729 from treatment of 660,850 tons. Average grade 1.2 to 1.3 lbs. U308 per ton.
- Dimensions and Grade: Prior to start of production official estimate indicated 2,250,000 tons averaging 1.86 lbs. U308 after dilution to a depth of 1000 feet on B zone and 600 feet on A and E zones. Additional ore on C and D zones (Canadian Mines Handbook 1959).

Reference: Satterly (1956, p. 43).

Cardiff Uranium Mines Limited

Location: Lots A and 1 and north half of lot 2, concession XVII; lot 2, concession XVIII; south halves of lots 1 and 2 and lot 3, concession XIX, Cardiff township.

Radioactive Minerals Present: Uraninite.

Development: Trenching, diamond drilling, 3 adits and a shaft to a depth of 275 feet with levels of 125 and 250 feet in 1947 to 1955.

Years of Activity: 1943-1955.

- <u>Geology</u>: Uraninite crystals up to one inch in size in a calcite fluorite vein cutting paragneiss, amphibolite and marble. The main vein strikes N10°E and dips 50°E.
- Dimensions and Grade: The main vein is exposed on surface over a length of 100 feet and a width of 4 to 5 feet. This vein was picked up in the adit where it is exposed over a length of 80 feet. Grade is estimated (Satterly, 1956, p. 48) at about 0.052 per cent U₃0₈.

<u>Reference:</u> Satterly (1956, p. 46).

<u>Remarks:</u> Formerly Cardiff Fluorite Mines Limited.

Consolidated Thor Mines Limited

(now Nealon Mines Limited)

Location: Lot 6, concessions V and VI; lot 7, concession V, Cardiff township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Bulldozing, trenching and 13 diamond drill holes totalling 4,393 feet on 8 radioactive showings in 1954 to 1956.

Years of Activity: 1954-1956.

<u>Geology</u>: Granite and granite pegmatite carrying uranothorite and allanite cut paragneiss.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 50).

Remarks: Present ownership status unknown.

Consolidated Tungsten Mining Corporation of Canada Limited

(now Mount Wright Iron Mining Company Limited)

Location: Lot 31, concession XIII, Cardiff township.

<u>Radioactive Minerals Present</u>: Uraninite, uranothorite, uranophane.

Development: 18 diamond drill holes totalling 6348 feet.

Years of Activity: 1954-1955.

<u>Geology</u>: Hornblende granite or syenite pegmatite dikes carrying radioactive minerals cut marble and hybrid syenite gneiss.

Dimension and Grade: Not reported.

Reference: Satterly (1956, p. 52).

<u>Remarks</u>: Present ownership status unknown.

J. C. Cottrill

Location: Lots 11 and 12, concession VI, Cardiff township.

Radioactive Minerals Present: Not identified.

<u>Development</u>: Surface exploration and 3 diamond drill holes totalling 621 feet.

Years of Activity: 1953-1955.

<u>Geology</u>: Radioactive granite and granite pegmatite dikes cut amphibolite and marble.

<u>Dimensions and Grade</u>: Core intersections range from 1 to 55 feet in length. Grade not reported.

Reference: Satterly (1956, p. 53).

<u>Remarks</u>: Property optioned to Climax Molybdenum Company in 1955. Present status of ownership unknown.

G. H. Denfield

Location: Lot 11, concession XXI, Cardiff township.

Radioactive Minerals Present: Not identified.

<u>Development</u>: Surface exploration, one drill hole 43 feet in length.

Years of Activity: 1954-1955.

Geology: Radioactive granite pegmatite dikes.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 53).

<u>Remarks</u>: Claims optioned to Stratmat Limited.

R. W. Doubt

Location: Lot 10, concession II, Cardiff township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Bulldozed stripping and rock trenches.

Years of Activity: 1955-1956.

<u>Geology</u>: Pink to red leucogranite dikes carrying radioactive minerals cut amphibolite. Mineralization is erratic.

<u>Dimensions and Grade</u>: Dike widths 1 to 50 feet, exposed length up to 250 feet. Grade not reported.

Reference: Satterly (1956, p. 53).

Remarks: Present ownership status unknown.

D. E. Foster

Location: Lot 20, concession XV, Cardiff township.

Radioactive Minerals Present: Uranothorite, allanite.

<u>Development</u>: Bulldozed strippings and 3 drill holes totalling 1695 feet.

Years of Activity: 1956.

<u>Geology</u>: Leucogranite pegmatite dike cuts granitized amphibolite. Dike strikes N40°E, width varies from 1.5 to 10 feet. Exposed length of dike is 200 feet.

Dimension and Grade: Not reported.

Reference: Satterly (1956, p. 58).

Remarks: Present ownership status unknown.

Kemp Uranium Mines Limited

Location: Lot 5, concession XIV, Cardiff township.

Radioactive Minerals Present: Uranothorite, thorite.

<u>Development</u>: Bulldozed stripping, trenches and seven diamond drill holes totalling 2882 feet.

Years of Activity: 1954-1955.

<u>Geology</u>: Radioactive showings consist of disseminations of uranothorite in pyroxene marble, or crystals of thorite in pyroxene skarn adjacent to leucogranite sills.

<u>Dimensions and Grade</u>: Uranothorite-bearing zone 15 feet wide and 60 feet long is indicated. Grade not reported.

Reference: Satterly (1956, p. 64).

<u>Remarks</u>: Present ownership status unknown.

Kenmac Chibougamau Mines Limited

Location: Lot 6, concession XIV, Cardiff township.

<u>Radioactive Minerals Present</u>: Uranothorite, allanite.

<u>Development</u>: 52 diamond drill holes totalling 19,408 feet. 275-foot adit driven under No. 1 showing.

Years of Activity: 1955.

<u>Geology</u>: Leucogranite and pyroxene granite pegmatite carrying uranothorite cut paragneiss and amphibolite. Dikes 12 to 30 feet wide, exposed up to 85 feet in length.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 64).

Macassa Gold Mines Limited, Bicroft Division

- Location: Lots 27 and 28, concession XI (mine shafts), Cardiff township.
- <u>Radioactive Minerals Present</u>: Uraninite, uranothorite, allanite, pyrochlore, betafite.
- <u>Development</u>: No. 1 shaft 234 feet deep; No. 2 shaft 1843 feet deep. Adit level and 13 underground levels; 79,392 feet of drifting; 63,108 feet of crosscuts; 87,645 feet of raises.

Years of Activity: 1953-1963.

- <u>Geology</u>: Complex dikes of pyroxene syenite pegmatite, pyroxene granite pegmatite, porphyroblastic granite pegmatite, granite gneiss and cataclastic quartz-rich pegmatite cut garnet - sillimanite gneiss, paragneiss and amphibolite. Dikes strike northeast and dip 40 to 70°E.
- <u>Production</u>: Operated 1375 ton capacity mill from 1956 to 1963 producing \$44,054,075 worth of uranium.

Bicroft Mine Production*

Dicroit Mine Production			
<u>Year</u>	<u>Gross Production</u>	Average recovery per ton	<u>Ton treated</u> per day
1963 1962 1961 1960 1959 1958 1957 1956	\$2,437,831 4,682,178 6,724,823 8,117,007 8,288,700 8,850,454 7,156,693 465,667	\$13.16 19.97 20.06 19.53 19.05 17.28	975 1063 1243 1162 1273 1134

[°] Canadian Mines Handbook.

<u>Dimensions and Grade</u>: The average grade of Bicroft uranium ores was slightly less than 2 pounds of U₃08 to the ton. The length of the dike zone mined was approximately 4000 feet. The J and K orebodies which were among the largest at Bicroft were approximately 300 feet long, 10 feet wide and extended to a depth of over 1350 feet with a plunge of 70°south. Other oreshoots of smaller size were of similar shape. Forty-nine ore shoots were outlined on the first level, having a combined length of 4143 feet and an average width of 6 feet.

Reference: Satterly (1956, p. 30).

<u>Remarks</u>: Second largest uranium producer in the Bancroft area.

McLean - Hogan Occurrence

Location: Lot 8, concession XIX, Cardiff township.

Radioactive Minerals Present: Uraninite.

<u>Development</u>: 11 bulldozed cross trenches; 69 diamond drill holes totalling 3585 feet.

Years of Activity: 1954-1955.

- <u>Geology</u>: Uraninite in metamorphic pyroxenite. Narrow radioactive zones in metamorphic pyroxenite dip 30°E. Pyroxenite zone strikes N25°E and dips 40°E, is 500 feet wide, 4000 feet long.
- Dimensions and Grade: Bulk sampling by A. E. Tyson for Anuwon Uranium Mines Limited in 5 trenches gave the following results: 0.09, 0.10 and 0.02 per cent in three trenches near trench No. 5, 0.06 per cent U₃08 in trench No. 10 and 0.03 per cent U₃08 in trench No. 11.

<u>Reference</u>: Satterly (1956, p. 66).

<u>Remarks:</u> Present ownership status unknown.

Milhol Exploration and Development Limited

Location: Lots 10 and 11, concession V, Cardiff township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Trenching and 12 drill holes totalling 3631 feet. <u>Years of Activity</u>: 1953-1955.

<u>Geology:</u> Leucogranite pegmatite carrying radioactive minerals cuts amphibolite and paragneiss.

<u>Dimensions and Grade</u>: Not reported.

Reference: Satterly (1956, p. 67).

Remarks: Present ownership status unknown.

Mindus Corporation Limited

Location: Lot 11, concession XIV, Cardiff township.

Radioactive Minerals Present: Uranothorite.

Development: Trenching and diamond drilling.

Years of Activity: 1953-1955.

<u>Geology</u>: Radioactive granite and granite pegmatite cut hybrid syenite gneisses.

<u>Dimensions and Grade</u>: Dikes from a few inches to 6 feet in width; stock-like bodies from 5 to 40 feet in width. Grade not reported.

Reference: Satterly (1956, p. 67).

Remarks: Present ownership status unknown.

Molybdenum Corporation of America

Location: Lot 11, concession XI, Cardiff township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Strippings and trenches, one diamond drill hole 300 feet long.

Years of Activity: 1953-1955.

<u>Geology</u>: Fine-grained, pink radioactive leucogranite or leucogranite pegmatite cut biotite paragneiss. Reference: Satterly (1956, p. 68).

<u>Remarks:</u> Present ownership status unknown.

Montgomery Occurrence

Location: Lot 9, concession XXI, Cardiff township.

Radioactive Minerals Present: Uraninite.

<u>Development</u>: Open cuts up to 60 feet long.

Years of Activity: 1942.

- <u>Geology</u>: Uraninite in calcite-fluorite-apatite veins cutting hybrid syenite gneiss.
- <u>Dimensions and Grade</u>: Veins lens-like, less than 1 to 2 feet wide. Grade not reported but erratic distribution of uraninite.

Reference: Satterly (1956, p. 72).

Remarks: Present ownership status unknown.

Richardson Occurrence

(Fission Mines Limited)

Location: Lots 4, 5 and 6, concession XXI, Cardiff township.

Radioactive Minerals Present: Uraninite, uranothorite.

<u>Development</u>: Surface trenching and pits and an adit in 1929, to 1931. Further surface work and 12,000 feet of diamond drilling between 1946 and 1948. 10 diamond drill holes totalling 2545 feet in 1955.

Years of Activity: 1929-1933, 1937, 1946-1948, 1954-1955.

<u>Geology</u>: Uraninite and uranothorite occur in calcite-fluorite veins and in pyroxene syenite pegmatite dikes. Pegmatite dike strikes N50°E, dips 45-70°SE, with a width of 7 to 55 feet and an exposed length of 250 feet. Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 56).

Remarks: Present ownership status unknown.

W. S. Robertson Occurrence

Location: S1/2 lot 11, concession XI, Cardiff township.

Radioactive Minerals Present: Uranothorite, allanite.

<u>Development</u>: Trenching and diamond drilling, 2 holes totalling 902 feet in 1955.

Years of Activity: 1955.

<u>Geology</u>: Leucogranite and granite pegmatite dikes cut amphibolite.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 50).

<u>Remarks</u>: Present ownership status unknown. Exploration done by Climax Molybdenum Company.

Tomlinson and Mulliette

Location: Lots 11 and 12, concession X, Cardiff township.

Radioactive Minerals Present: Uranothorite, allanite.

<u>Development</u>: 4 drill holes totalling 2109 feet. Scintillometer survey.

Years of Activity: 1955.

<u>Geology</u>: Radioactive granite and granite pegmatites from a few inches to 68 feet across cut diopside paragneiss or mica metamorphic pyroxenite.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 74).

Remarks: Present ownership status unknown.

Tripp Occurrence

Location: Lot 8, concession XXI, Cardiff township.

<u>Radioactive Minerals Present</u>: Uraninite, uranothorite, allanite, thorite.

<u>Development</u>: Bulldozed strippings, trenches, pits; 22 foot vertical shaft with 18 feet of drifting. Inclined shaft with lateral work at 125-foot level amounting to 274 feet of crosscutting and 192 feet of drifting. 8 surface drill holes totalling 1551 feet; 13 underground drill holes totalling 3,150 feet.

Years of Activity: 1924, 1954-1956.

<u>Geology</u>: Radioactive occurrences of three types occur; uraninite in red syenitized gneiss; uranothorite in syenite pegmatite; uraninite and uranothorite in calcite-fluorite-apatite veins. The country rock is amphibolite, paragneiss and syenite gneiss.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 69).

<u>Remarks</u>: Development by Nu-Age Uranium Mines Limited. Present ownership status unknown.

Triton Uranium Mines Limited

- Location: Lot 8, concession II, Cardiff township; Lot 9, concessions I & II, Cardiff township.
- <u>Radioactive Minerals Present</u>: Uraninite, uranothorite, uranophane, allanite.

<u>Development</u>: Trenching and 17 diamond drill holes totalling 3427 feet.

Years of Activity: 1955.

<u>Geology</u>: Radioactive leucogranite and leucogranite pegmatite dikes cut marble and amphibolite. Largest dike exposed 110 feet in width, 330 feet in length.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 75).

Remarks: Present ownership status unknown.

Urban Quebec Mines Limited

Location: S1/2 lot 22, concession IX, Cardiff township.

Radioactive Minerals Present: Uraninite, allanite, uranothorite.

<u>Development</u>: Five trenches and nine diamond drill holes. Total drilling on the property of 15 claims amounted to 21 holes totalling 6097 feet.

Years of Activity: 1954-1955.

- <u>Geology</u>: Radioactive pyroxene granite pegmatite with patches rich in biotite, hornblende, calcite and scapolite cuts amphibolite and biotite paragneiss. Dike strikes N50°E, has an exposed length of 150 feet and width of 2 to 20 feet.
- Grade: Not reported.
- Reference: Satterly (1956, p. 28).

Remarks: Formerly Aumacho River Mines Limited.

West Lake Mining Company Limited

Location: Lot 9, concession XIII, Cardiff township.

Radioactive Minerals Present: Uranothorite.

Development: 500 feet of trenching between 1944 and 1951.

Years of Activity: 1944 to 1951.

<u>Geology</u>: Radioactive pyroxene granite pegmatite and calcite veins cut amphibolite, syenitized amphibolite and silicated marble. Calcite veins up to 3 feet across strike N3-13°E and dip 45°W.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 76).

Remarks: Property inactive.

HALIBURTON COUNTY, GLAMORGAN TOWNSHIP

Nu-Cycle Uranium Mines Limited

Location: Lots 26-28, concession II, Glamorgan township.

Radioactive Minerals Present: Uranothorite, allanite.

<u>Development</u>: 16 pits and trenches; 21 diamond drill holes totalling 4,309 feet.

Years of Activity: 1955.

<u>Geology</u>: Radioactive granite and granite pegmatite dikes contain erratically distributed radioactive minerals. The dikes cut metagabbro.

Dimension and Grade: Not reported.

<u>Reference</u>: Satterly (1956, p. 78).

Remarks: Company dormant.

Nu-World Uranium Mines Limited

Location: Lot 19, concession II, Glamorgan township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Strippings, trenches and diamond drilling; 12 drill holes totalling 1506 on this lot.

Years of Activity: 1955.

<u>Geology</u>: Radioactive granite pegmatite dikes ranging from 20 to 130 feet in width and up to 725 feet in length cut marble and other metasediments.

Dimensions and Grade: Not reported.

<u>Reference</u>: Satterly (1956, p. 80).

<u>Remarks</u>: Present ownership status unknown.

HALIBURTON COUNTY, HARCOURT TOWNSHIP

P. J. McLean

Location: Lot 6, concession IV, Harcourt township.

Radioactive Minerals Present: Uranothorite.

<u>Development</u>: Bulldozed strippings and pits over a north-south length of 700 feet.

Years of Activity: 1957.

<u>Geology</u>: Radioactive red leucogranite dike cutting scapolitebiotite gneiss and silicated marble.

Dimensions and Grade: Not reported.

Reference: J. Satterly, unpublished report, 1957.

Remarks: Present ownership status unknown.

HALIBURTON COUNTY, LUTTERWORTH TOWNSHIP

E. T. Hogan

Location: Lot 11, concession VIII, Lutterworth township, Haliburton county.

<u>Radioactive Minerals Present</u>: Allanite, thorite, uranothorite. <u>Development</u>: Not reported.

Years of Activity: Not reported.

Geology; Radioactive minerals in pegmatite.

Dimensions and Grade: Not reported.

Reference: Lang (1962, p. 266).

<u>Remarks</u>: Present ownership status unknown.

HALIBURTON COUNTY, MONMOUTH TOWNSHIP

Acmac Mining Corporation Limited

Location: Lot 33, concession XIV, Monmouth township.

Radioactive Minerals Present: Uranothorite, thorite.

<u>Development</u>: Adit 34 feet long; two trenches and three open cuts.

Years of Activity: 1955.

<u>Geology</u>: Graphic granite dikes cut limy amphibolite. Radioactive minerals occur in a pyroxene-bearing zone at the contact of the granite.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 82).

Remarks: Present ownership status unknown.

Amalgamated Rare Earth Mines Limited

Rare Earth Mine

- Location: No. 1 shaft, lot 20, concession VIII, Monmouth township. No. 2 shaft, lot 19, concession VI, Monmouth township.
- <u>Radioactive Minerals Present</u>: Allanite, uranothorite, fergusonite, uraninite, uranophane.
- Development: No. 1 shaft sunk to 657 feet with levels at 120, 240, 360, 480 and 630 feet. Also an adit. 36,434 feet of diamond drilling. No. 2 shaft sunk to 440 feet with levels at 100, 250 and 400 feet. Also an adit level. 73,578 feet of diamond drilling.

Years of Activity: 1948-1956.

<u>Geology</u>: Radioactive ore shoots are found in granite or granite pegmatite bodies intruding diopside quartzite at No. 1 shaft. Radioactive ore shoots are found in granite or granite pegmatite intruding metagabbro at No. 2 shaft. Reference: Satterly (1956, p. 92).

Ansil Mines Limited

(formerly Silanco Mining and Refining Company Limited)

Location: Lot 32, concession VI, Monmouth township.

Radioactive Minerals Present: Uranothorite.

<u>Development</u>: Strippings and trenching; 5 drill holes totalling

498 feet.

Years of Activity: 1955.

<u>Geology</u>: Radioactive showings in granite pegmatite dikes cutting metasediments.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 104).

<u>Remarks</u>: Present ownership status unknown.

Canadian All Metals Explorations Limited

Location: Lots 6 & 7, concession IX, Monmouth township.

<u>Radioactive Minerals Present</u>: Uraninite, pyrochlore.

<u>Development</u>: Bulldozed stripping and trenching; 8000 feet of diamond drilling; 1200 feet of lateral work from an adit.

Years of Activity: 1955.

<u>Geology</u>: Radioactive minerals in zones of silicated marble containing lenses and pods of pink calcite.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 83).

<u>Remarks</u>: Property idle.

Cassiar Rainbow Gold Mines Limited

Location: Lots 3-5, concession III, lots 2-4, concession IV, Monmouth township, Haliburton county.

<u>Radioactive Minerals Present</u>: Euxenite, allanite, uranothorite, uranophane.

Development: Diamond drilled.

Years of Activity: 1955-1956.

Geology: Radioactive granitic dikes.

Dimensions and Grade: Not reported.

<u>Reference</u>: Lang (1962, p. 270); Satterly (1956, p. 77).

<u>Remarks</u>: Ontario charter cancelled April, 1962.

Cordell Gold Mines Limited

Location: Lots 27 and 28, concession XVI, Monmouth township.

Radioactive Minerals Present: Uraninite.

<u>Development</u>: Stripping and trenching; 6 diamond drill holes totalling 541 feet.

Years of Activity: 1955.

<u>Geology</u>: Green diopsidic metamorphic pyroxenite containing uraninite. Also uraninite in silicated marble.

Dimensions and Grade: Not reported.

<u>Reference</u>: Satterly (1956, p. 85).

Remarks: Inactive.

T. Cudney

Location: Lots 29 and 30, concession XVI, Monmouth township. <u>Radioactive Minerals Present</u>: Uraninite, uranothorite.

<u>Development</u>: Over 20 bulldozed strippings.

Years of Activity: 1955.

<u>Geology</u>: Uraninite in metamorphic pyroxenite; uranothorite in pyroxene syenite pegmatite.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 85).

Remarks: Present ownership status unknown.

Desmont Mining Corporation Limited

(formerly Homer Yellowknife Mines Limited)

Location: Lot 31, concession XVII, Monmouth township.

Radioactive Minerals Present: Uranothorite, uraninite.

<u>Development</u>: Bulldozed strippings and trenches; 17 drill holes totalling 2810 feet.

Years of Activity: 1954-1955.

<u>Geology</u>: Uranothorite in green diopside-calcite rock in marble. Disseminated uraninite in lime silicate bands in marble or in micaceous marble.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 86).

<u>Remarks</u>: Ontario charter cancelled in March, 1959.

Empire Minerals Inc.

(formerly Empire Oil and Minerals Inc.)

Location: Lot 35, concession XI, Monmouth township.

Radioactive Minerals Present: Uraninite, uranothorite, allanite.

<u>Development</u>: 31 diamond drill holes totalling 15,072 feet mainly on this lot.

Years of Activity: 1954-1955.

<u>Geology</u>: The uranium mineralization is in leucogranite or granite pegmatite dikes cutting metasediments and syenite gneiss.

Dimensions and Grade: Dikes average 4 to 9 feet wide, 100 to 400 feet long, grading 0.065 to 0.125 per cent U₂08.

Reference: Satterly (1956, p. 54).

Remarks: Present ownership status unknown.

Fairley Red Lake Gold Mines Limited

Location: Lot 4, concession III, Monmouth township.

<u>Radioactive Minerals Present</u>: allanite, uranothorite, uranophane.

<u>Development</u>: Trenching and 8 packsack drill holes totalling 483 feet.

Years of Activity: 1955-56.

<u>Geology</u>: Radioactive leucogranite with pegmatitic patches cuts amphibolite. Trenching exposes a 200-foot width of granite which has been traced over 800 feet in length.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 88).

<u>Remarks</u>: Present ownership status unknown.

Jesko Uranium Mines Limited

Location: Lots 13 and 14, concession IV, Monmouth township.

Radioactive Minerals Present: Uranothorite, allanite.

<u>Development</u>: Surface trenches and 13 diamond drill holes totalling 1998 feet.

Years of Activity: 1954.

<u>Geology</u>: Radioactive granite or granite pegmatite dikes cut paragneiss. One leucogranite pegmatite has an exposed width of 50 feet and exposed length of 200 feet. <u>Dimensions and Grade</u>: Grab samples assayed from 0.05 per cent to 0.108 per cent U_208 .

Reference: Satterly (1956, p. 89).

<u>Remarks</u>: Present ownership status unknown.

Long Ridge Uranium Mines Limited

Location: Lot 13, concession XII, Monmouth township.

Radioactive Minerals Present: Uraninite.

<u>Development</u>: Bulldozed stripping and 8 drill holes totalling 1295 feet.

Years of Activity: 1956.

Geology: Uraninite in marble.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 91).

Remarks: Present ownership status unknown.

Monmouth Occurrence

Red Bark Mines Limited

Location: Lots 5 and 6, concession XI, Monmouth township.

Radioactive Minerals Present: Uraninite.

<u>Development</u>: Bulldozed strippings and 11 diamond drill holes totalling 1847 feet.

Years of Activity: 1954.

Geology: Uraninite in mica-pyroxene marble.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 99).

<u>Remarks</u>: Ontario charter cancelled, April, 1965.

Old Smokey Occurrence

Nu-Age Uranium Mines Limited

Location: Lot 7, concession X, Monmouth township.

Radioactive Minerals Present: Uranothorite.

<u>Development</u>: Surface trenching and pitting; 8 diamond drill holes totalling 2126 feet.

Years of Activity: 1955.

Geology: Rare uranothorite in calcite veins cutting gneisses.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 91).

Remarks: Present ownership status unknown.

Roford Mines Limited

Location: Lot 13, concession XIII, Monmouth township. Lot 2, concession X, Monmouth township.

Radioactive Minerals Present: Uraninite, uranothorite, thorite.

<u>Development</u>: Strippings, pits and trenches; 6 diamond drill holes totalling 1667 feet.

Years of Activity: 1955.

<u>Geology</u>: Uranothorite commonly occurs with pyroxene concentrations in granite or granite gneiss.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 100).

Remarks: Present ownership status unknown.

Saranac Uranium Mines Limited

Location: Lot 24, concession X, Monmouth township; Lots 23 and 24, concession IX, Monmouth township. <u>Radioactive Minerals Present</u>: Thorite, allanite, uranothorite, uranophane.

<u>Development</u>: Bulldozed strippings, trenches; 42 diamond drill holes totalling 8498 feet.

Years of Activity: 1954-1956.

<u>Geology</u>: Zircon and thorite occur in granite exposed for 100 feet in an open cut. The granite sill is 0-4 feet wide and cuts marble. Radioactive minerals occur in a granite sill 7 feet thick cutting biotite amphibolite. The sill has been traced for 250 feet in length.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 102).

<u>Remarks</u>: Ontario charter cancelled September, 1964.

Urotomic Mines Limited

Location: Lot 19, concession IV, Monmouth township.

Radioactive Minerals Present: Uraninite, uranothorite.

- <u>Development</u>: Bulldozed strippings; 11 diamond drill holes totalling 2249 feet.
- Years of Activity: 1955-1956.
- <u>Geology</u>: Uraninite and uranothorite in a hornblende-calcite zone at the contact of marble and syenitized amphibolite.

Dimensions and Grade: Not reported.

<u>Reference</u>: Satterly (1956, p. 105).

<u>Remarks</u>: Present ownership status unknown.

Wadasa Gold Mines Limited

Location: Lot 5, concession VI, Monmouth township.

Radioactive Minerals Present: Uraninite.

<u>Development</u>: Trenching and 7 diamond drill holes totalling 1813 feet.

Years of Activity: 1954-1956.

Geology: Uraninite in silicated marble.

<u>Dimensions and Grade</u>: Bulk sample taken over 35 feet assayed 0.14 per cent U_308 .

Reference: Satterly (1956, p. 106).

Remarks: Present ownership status unknown.

HALIBURTON COUNTY, SNOWDON TOWNSHIP

C. Giles

Location: Lot 11, concession II, Snowdon township, Haliburton county.

Radioactive Minerals Present: Uraninite, thorite.

Development: Not reported.

Years of Activity: Not reported.

Geology: Radioactive granitic pegmatites.

Dimensions and Grade: Not reported.

<u>Reference</u>: Lang (1962, p. 278).

<u>Remarks</u>: Present ownership status unknown.

HASTINGS COUNTY, DUNGANNON TOWNSHIP

Gordon Card

Location: Lot 18, concession XI, Dungannon township. <u>Radioactive Minerals Present</u>: Uranothorite, uranophane. <u>Development</u>: Bulldozed strippings. Years of Activity: 1956-1957.

<u>Geology</u>: Radioactive granite and granite pegmatite exposed over a length of 950 feet.

Dimensions and Grade: Not reported.

Reference: Satterly, unpublished report, 1957.

P. J. McLean

Location: Lots 5 and 6, concession XVII, Dungannon township.

Radioactive Minerals Present: Not identified.

<u>Development</u>: Pits and trenches.

Years of Activity: 1957.

<u>Geology</u>: Pink radioactive leucogranite and granite pegmatite cut marble.

Dimensions and Grade: Not reported.

Reference: Satterly, unpublished report, 1957.

<u>Remarks</u>: Present ownership status unknown.

Normingo Mines Limited

Location: Lot 14, concession XVI, Dungannon township.

Radioactive Minerals Present: Uranian thorianite.

<u>Development</u>: Bulldozed stripping and trenching.

Years of Activity: 1954.

Geology: Thorianite in salmon pink marble.

Dimensions and Grade: Not reported.

Reference: Satterly (1965, p. 107).

<u>Remarks</u>: Present ownership status unknown. Ontario charter cancelled August, 1964.

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HASTINGS COUNTY, FARADAY TOWNSHIP

Basin Occurrence

Silver Crater Mines Limited

Location: Lot 31, concession XV, Faraday township.

Radioactive Minerals Present: Betafite.

<u>Development</u>: Bulldozed stripping, trenches; 34 diamond drill holes totalling 5613 feet. An adit with 435 feet of drifting and crosscutting, and 94 feet of raising.

Years of Activity: 1953-1955.

- <u>Geology</u>: Betafite occurs in a carbonate body carrying apatite, mica, plagioclase and hornblende as principal accessories.
- Dimensions and Grade: Lenticular carbonate body 400 feet long, average thickness of 50 feet; grade not reported.

Reference: Satterly (1956, p. 123).

Remarks: Ontario charter surrendered, August 1965.

Baumhour - Campbell Occurrence

Silver Crater Mines Limited

Location: Lots 28, 29, and 30, concession XV, Faraday township.

Radioactive Minerals Present: Uranothorite, allanite, uranophane.

<u>Development</u>: Bulldozed strippings and trenches; 7705 feet of drilling; three showings.

Years of Activity: 1954-1956.

<u>Geology</u>: Dikes of leucogranite, granite and syenite pegmatite carrying uranium minerals cut amphibolite.

Dimensions and Grade: Not reported.

Reference: Satterly, (1956, p. 132).

<u>Remarks</u>: Ontario charter cancelled, August 1965.

Eagle Nest Uranium Mines Limited

Location: Lot 69, Hastings Road West, Faraday township; lots 69 and 70, Hastings Road East, Dungannon township.

Radioactive Minerals Present: Uranothorite, uraninite.

<u>Development</u>: Bulldozed strippings, pitting, trenching and 13 drill holes.

Years of Activity: 1956-1957.

<u>Geology</u>: Red syenite and granite pegmatite dikes cut hybrid syenite gneiss, leucogranite and hybrid granite gneiss.

Dimensions and Grade: Not reported.

Reference: Satterly, unpublished report, 1957.

<u>Remarks</u>: Present ownership status unknown.

Hydra Explorations Limited

(formerly Bonville Gold Mines Limited)

Location: Lots 22 and 23, concession A, Faraday township.

<u>Radioactive Minerals Present</u>: Uranothorite, uranophane, pyrochlore.

<u>Development</u>: Surface trenching and 25 diamond drill holes totalling 9642 feet.

Years of Activity: 1954.

Geology: Radioactive granite pegmatites cut marble.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 107).

Howard Kerr

Location: Lot 28, concession B, Faraday township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Surface exploration and two diamond drill holes totalling 580 feet.

- Years of Activity: 1954.
- <u>Geology</u>: Radioactive minerals in pegmatite and silicated marble.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 121).

<u>Remarks</u>: Optioned to Silver Crater Mines Limited in 1954.

J. Lockwood

Location: Lot 29, concession A, Faraday township.

Radioactive Minerals Present: Uraninite, uranothorite.

<u>Development</u>: Pits and trenches; two diamond drill holes totalling 444 feet.

Years of Activity: 1954.

Geology: Uranium minerals occur in silicated marble.

Dimensions and Grade: Not reported.

Reference: J. Satterly (1956, p. 121).

<u>Remarks</u>: Optioned to Silver Crater Mines Limited in 1954.

Metal Mines Limited

Faraday Mine

Location: Lots 16 and 17, concession XI, Faraday township.

<u>Radioactive Minerals Present</u>: Uraninite, uranothorite, thorite, uranophane, allanite.

<u>Development</u>: When the mine closed in 1964 No. 1 shaft was 1455 feet deep and No. 2 shaft was 196 feet deep. Total development footage to Dec. 31, 1963 was as follows: 52,705 feet of drifts; 35,271 feet of crosscuts; 41,292 feet of raises. Years of Activity: 1948-1964.

- <u>Geology</u>: The radioactive minerals occur in bodies of leucogranite, leucogranite pegmatite and pyroxenehornblende granite or syenite pegmatite cutting metagabbro, gabbroic amphibolite and paragneiss.
- <u>Production</u>: Operated a 1400-ton daily capacity mill from April 15, 1957 to mid-1964 producing 2,805,641 tons with an average grade of 0.1074 per cent U₃08 and a metal content of 6,025,955 lbs. of U₃08 (Bullis 1965, p. 720). Bullis states that the various levels have contributed the tonnages shown below:

Level	Tons	Grade	lbs. U ₃ 08
			<u>_</u>
Adit	487,084	.1105	1,076,826.4
150	410,235	.1037	850,598.8
300	433,865	.0989	857,999.0
450	548,430	.1040	1,141,221.8
600	541,338	.1055	1,141,837.0
750	231,679	.1254	581,008.0
900	135,709	.1261	342,267.4
1050	17,078	.0988	33,756.6
1200	223	.0986	439.6

Bullis gives the ore reserves at July 15, 1964, as 453,250 tons grading 0.144 per cent U₃₀₈ containing 1,311,298 lbs. U₃₀₈. He states that "during the life of the mine it was necessary to explore and outline the orebodies with diamond drills. The irregular nature of the ore zones was such that no other method of exploration would have been satisfactory, and some 2998 holes were drilled for a footage of 457,365 feet to May 1, 1964. If the production is added to the present reserve, it can be shown that 2998 holes have outlined 3,258,891 tons containing 7,337,253 lbs. of U₃₀₈. The ratio of pounds U₃₀₈ outlined to feet of drilling is 16.04 lbs. per foot of hole".

<u>References:</u> Satterly (1956, p. 108); Bullis (1965, p. 713-721).

Metal Mines Limited

Greyhawk Mine

Location: Lot 10, concession XII, Faraday township.

<u>Radioactive Minerals Present</u>: Allanite, uranothorite, uraninite, pyrochlore.

Development: 189 suface diamond drill holes totalling 62,463 feet; 76 underground diamond drill holes totalling 10,542 feet. One three-compartment vertical shaft 402 feet deep with three levels at 110,211 and 333 feet. A winze collared on the third level extends 375 feet at 16° and serves the 390 and 425-foot levels. Underground development amounted to 5965 feet of drifting, 1655 feet of crosscutting and 2294 feet of raising.

Years of Activity: 1954 - March 31, 1959.

<u>Geology</u>: Radioactive porphyroblastic leucogranite pegmatites cut metagabbro. Ore commonly occurs in magnetiterich or quartz-rich pegmatites.

Production: Production 1957-1959 valued at \$834,889.

Dimensions and Grade: Official estimate 800,000 tons averaging 0.095 per cent U₃08 (Canadian Mines Handbook, 1958).

Reference: Satterly (1956, p. 117).

Gerald L. Reasor

Location: Lot 30, concession XVI, Faraday township.

<u>Radioactive Minerals Present</u>: Uraninite, uranothorite, pyrochlore.

Development: Bulldozed trenches, pits and trenches.

Years of Activity: 1954-1955.

Geology: Radioactive pegmatites cut amphibolite.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 122).

<u>Remarks</u>: Present ownership status unknown.

York River Uranium Mines Limited

Location: Lot 4, concession B; lot 6, concession XV, Faraday township.

Radioactive Minerals Present: Pyrochlore, uranothorite.

Development: Bulldozed strippings, pits and trenches.

Years of Activity: 1955-1956.

<u>Geology</u>: Radioactive syenite and granite pegmatites carry pyrochlore at the B zone, lot 4, concession B. Radioactive granite pegmatite carries uranothorite at the D zone, lot 6, concession XV.

Dimensions and Grade: Not reported.

Reference: Satterly, unpublished report, 1957.

HASTINGS COUNTY, HERSCHEL TOWNSHIP

W. A. Patterson

Location: Lots 17 and 18, concession XVI, Herschel township.

Radioactive Minerals Present: Euxenite-polycrase.

Development: Series of strippings over a length of 400 feet.

Years of Activity: 1956.

<u>Geology</u>: Radioactive minerals in granite pegmatite having widths of 25 to 40 feet and an exposed length of 400 feet. The dike strikes N60°E and cuts amphibolite and hybrid granite gneiss.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 134).

Remarks: Present ownership status unknown.

Peter Rock Mining Company Limited

Location: Lot 39, concession VIII, Herschel township.

<u>Radioactive Minerals Present</u>: Pyrochlore, euxenite, uranothorite, allanite.

<u>Development</u>: Pits and trenches, 3 drill holes totalling 537 feet. <u>Years of Activity</u>: 1955. <u>Geology</u>: Zoned granite pegmatite dike 1 to 11 feet wide and traced for a length of 430 feet cuts hybrid granite gneiss.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 135)

Remarks: Present ownership status unknown.

Standard Ore and Alloys Corporation

Location: Lot 26, concession V, Herschel township.

Radioactive Minerals Present: Uranothorite.

Development: 5 trenches and 9 diamond drill holes.

Years of Activity: 1955.

<u>Geology</u>: Radioactive pegmatites up to 8 feet wide intersected in drilling. The pegmatites cut amphibolite.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 135).

Remarks: Present ownership status unknown.

HASTINGS COUNTY, MONTEAGLE TOWNSHIP

S. J. Carr

Location: Lots 7 and 8, concession III, Monteagle township. Hastings county.

<u>Radioactive Minerals Present</u>: Allanite, uranothorite.

<u>Development</u>: Strippings.

Years of Activity: 1954.

<u>Geology</u>: Radioactive leucogranite pegmatite cuts amphibolite. <u>Dimensions and Grade</u>: Not reported. Reference: Hewitt (1954, p. 69).

<u>Remarks:</u> Present ownership status unknown.

Carr - Quirk - Mellish Occurrence

Location: Lot 5, concession I, Monteagle township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Bulldozed strippings, trenching and packsack drill holes.

Years of Activity: 1956-1957.

Geology: Radioactive granite pegmatites 2 to 20 feet wide.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 136).

<u>Remarks</u>: Present ownership status unknown.

Carr - Quirk - Robson Occurrence

Location: Lot 1, concession IV; Monteagle township lots 1, 2 and 3, concession V, Carlow township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Strippings, trenches and nine drill holes totalling 2,066 feet.

Years of Activity: 1955-1957.

<u>Geology</u>: Radioactive leucogranite pegmatite dikes cut metasediments.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 136).

<u>Remarks</u>: Present ownership status unknown. Optioned in 1955 to Mentor Exploration and Development Company Limited.

MacDonald Mine

Location: Lot 18 and 19, concession VII, Monteagle township.

Radioactive Minerals Present: Cyrtolite, ellsworthite, allanite, uranothorite, uraninite.

Development: Large open cut.

Years of Activity: 1919-1935, feldspar production.

<u>Geology</u>: Zoned radioactive granite pegmatite 600 feet long and 70 feet wide cuts syenitized gneisses. Dike dips 60 to 70°north. Core of calcite in the dike.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 138).

Remarks: Present ownership status unknown.

Musclow Occurrence

Standard Ore and Alloys Corporation

Location: Lots 17 and 18, concession II, Monteagle township.

Radioactive Minerals Present: Uraninite.

Development: Bulldozed stripping.

Years of Activity: 1956.

Geology: Uraninite in silicated marble.

Dimensions and Grade: Zone 105 feet long and 3 to 5 feet wide; grade not reported.

Reference: Satterly (1956, p. 142).

<u>Remarks</u>: Present ownership status unknown.

Peter Rock Mining Company Limited

Location: Lot 29, concession VIII, Monteagle township.

Radioactive Minerals Present: Allanite, uranothorite.

Development: 10 drill holes totalling 868 feet.

Years of Activity: 1954-1955.

<u>Geology</u>: Three-foot radioactive granite pegmatite dike, striking N70°E and dipping 45°N, cuts amphibolite or hybrid granite gneiss.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 140).

Remarks: Present ownership status unknown.

H. Quirk

Location: Lots 11 and 12, concession IV, Monteagle township.

Radioactive Minerals Present: Uranothorite.

Development: Surface trenching.

Years of Activity: 1954-1955.

<u>Geology</u>: Uraniferous skarn at the contact of thin granite sills cutting paragneiss.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 140).

<u>Remarks</u>: Present ownership status unknown.

Bruce C. Robson

Location: Lot 3, concession III, Monteagle township.

Radioactive Minerals Present: Uraninite.

Development: Blasting on cliff face.

Years of Activity: 1955.

Geology: Uraninite in syenite pegmatite.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 141).

Mrs. W. M. Thompson

Location: Lot 4, concession VII, Monteagle township.

Radioactive Minerals Present: Uranothorite.

Development: Stripping and test pitting.

Years of Activity: 1954.

<u>Geology</u>: Uranothorite in granite pegmatite exposed for 70 feet in length and 15 feet in width.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 142).

Woodcox Mine

Location: Lot 17, concession VIII, Monteagle township.

- <u>Radioactive Minerals Present</u>: Betafite, ellsworthite, allanite.
- <u>Development</u>: Open pit feldspar mine; 7 drill holes totalling 1472 feet.

Years of Activity: 1922-1923.

<u>Geology</u>: Zoned radioactive granite pegmatite cuts granite gneiss.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 143).

<u>Remarks</u>: Present ownership status unknown.

LANARK COUNTY, S. SHERBROOKE TOWNSHIP

Christie Lake Mines Limited

Location: N1/2 lot 18, concession III, S. Sherbrooke township, Lanark county.

Radioactive Minerals Present: Brannerite, uraninite, thorite.

<u>Development</u>: Diamond drilled.

Years of Activity: 1956-1957.

Geology: Radioactive granite pegmatite.

Dimensions and Grade: Not reported.

<u>Reference</u>: Lang (1962, p. 278).

Remarks: Ontario charter cancelled May, 1965.

Orser - Kraft Mine

Location: Lot 13, concession V, S. Sherbrooke township, Lanark county.

Radioactive Minerals Present: Euxenite.

Development: Open cut feldspar mine.

Years of Activity: 1916-1923.

Geology: Radioactive granite pegmatite.

Dimensions and Grade: Euxenite is irregularly distributed.

<u>Reference</u>: Lang (1962, p. 278).

<u>Remarks</u>: Present ownership status unknown.

NIPISSING DISTRICT, BUTT TOWNSHIP

Wm. Elliot

Location: Lot 13, concession VII, Butt township, Nipissing district.

Radioactive Minerals Present: Uraninite, allanite.

<u>Development</u>: Strippings.

Years of Activity: 1919.

Geology: Radioactive muscovite granite pegmatite dike.

Dimensions and Grade: Not reported.

Reference: Ellsworth (1932, p. 187).

<u>Remarks</u>: Present ownership status unknown.

Rivers Occurrence

Location: Lot 5, concession IX, Butt Township, Nipissing district.

Radioactive Minerals Present: Euxenite.

<u>Development</u>: Stripping and blasting.

Years of Activity: 1953-1954.

Geology: Radioactive zoned granite pegmatite cuts migmatite.

Dimensions and Grade: Not reported.

Reference: Satterly, unpublished report, 1954.

Remarks: Held by E. J. Rivers.

NIPISSING DISTRICT, CALVIN TOWNSHIP

Calvin Township Occurrence

Location: Lot 19 or 20, concession IX, Calvin township. Nipissing district.

Radioactive Minerals Present: Polycrase.

Development: Underground.

Years of Activity: Not reported.

Dimensions and Grade: Not reported.

<u>Reference</u>: Lang (1962, p. 251).

<u>Remarks</u>: Present ownership status unknown.

Molybdenum Corporation of America

Location: Lots 21 and 22, concession VIII; lots 19, 20, 21, and 22, concession IX; lots 19, 20, 21, concession X, Calvin township, Nipissing district.

Radioactive Minerals Present: Euxenite, allanite.

Development: Stripping, trenching and test pitting.

Years of Activity: Not reported.

Geology: Radioactive granite pegmatite dikes.

Dimensions and Grade: Not reported.

<u>Reference:</u> Lang (1962, p. 251); Rose (1960, p. 21).

Remarks: Present ownership status unknown.

NIPISSING DISTRICT, MATTAWAN TOWNSHIP

O'Brien - Fowler Mine

(Molybdenum Corporation of America)

Location: Lot 29, concession III, Mattawan township, Nipissing district.

Radioactive Minerals Present: Euxenite-polycrase.

Development: Open pit feldspar mine.

Years of Activity: 1926, 1955.

Geology: Radioactive granite pegmatite dike.

Dimensions and Grade: Not reported.

<u>Reference</u>: Lang (1962, p. 269).

Remarks: Present ownership status unknown.

NIPISSING DISTRICT, MURCHISON TOWNSHIP

Cameron Mine

Location: Lot 22, concession VIII, Murchison township, Nipissing district.

Radioactive Minerals Present: Allanite, euxenite.

Development: Open cut feldspar mine.

Years of Activity: 1940-1945, 1950-1951; produced feldspar.

<u>Geology</u>: Granite pegmatite dike with radioactive accessory minerals.

<u>Dimensions and Grade</u>: Erratic distribution of radioactive minerals.

<u>Reference</u>: Lang (1962, p. 275).

Remarks: Present ownership status unknown.

Location: Lot 17, concession VI, Murchison township, Nipissing district.

Radioactive Minerals Present: Allanite, fergusonite.

<u>Development</u>: Open pit feldspar mine.

Years of Activity: 1949-1951, 1953; produced feldspar.

<u>Geology</u>: Granite pegmatite dike with radioactive accessory minerals.

<u>Dimensions and Grade</u>: Erratic distribution of radioactive minerals.

Reference: Lang (1962, p. 274).

Remarks: Present ownership status unknown.

J. G. Gole Mine

- Location: Lots 14 and 15, concession IV, Murchison township, Nipissing district.
- Radioactive Minerals Present: Allanite, fergusonite.
- Development: Open cut feldspar mine.
- Years of Activity: 1937-1944, produced feldspar.
- <u>Geology:</u> Granite pegmatite dike with radioactive accessory minerals.

Dimensions and Grade: Not reported.

<u>Reference</u>: Lang (1962, p. 274).

Remarks: Present ownership status unknown.

NIPISSING DISTRICT, SABINE TOWNSHIP

Gal-Wood Mines Limited

Location: South half of lot 32, concession XV, Sabine township.

Radioactive Minerals Present: Euxenite-polycrase.

Development: Open cut 25 by 30 feet.

Years of Activity: 1956-1957.

<u>Geology</u>: 20-foot wide granite pegmatite strikes N60°E, dips 50°NW, cuts pink biotite granite and hybrid granite gneiss.

Dimensions and Grade: Grade low.

Reference: Satterly, unpublished report, 1956.

Remarks: Present ownership status unknown.

PARRY SOUND DISTRICT, CONGER TOWNSHIP

McQuire Mine

Location: Lots 9 and 10, concession IX, Conger township, Parry Sound district.

<u>Radioactive Minerals Present</u>: Uraninite, calciosamarskite, thucholite, allanite.

<u>Development</u>: Open cut feldspar mine.

Years of Activity: 1925.

Geology: Muscovite granite pegmatite.

Dimensions and Grade: Not reported.

<u>Reference</u>: Lang (1962, p. 256).

Remarks: Present ownership status unknown.

PARRY SOUND DISTRICT, HENVEY TOWNSHIP

Besner Mine

Location: Lot 5, concession B, Henvey township, Parry Sound district.

<u>Radioactive Minerals Present</u>: Uraninite, cyrtolite, thucholite, allanite.

Development: Open cut feldspar mine.

Years of Activity: 1926-1929.

Geology: Radioactive granite pegmatite dike.

Dimension and Grade: Not reported.

<u>Reference</u>: Lang (1962, p. 248).

Remarks: Present ownership status unknown.

PARRY SOUND DISTRICT, McDOUGALL TOWNSHIP

Ascot Metals Corporation Limited

(now Quebec Ascot Copper Corporation Limited)

- Location: Lot 12, concession A; lot 15, concession A, McDougall township.
- <u>Radioactive Minerals Present</u>: Uranothorite, uranophane, uraninite, allanite.

Development: Trenches and pits.

Years of Activity: 1954.

- <u>Geology</u>: Pink radioactive biotite granite pegmatite and purplish-red leucogranite pegmatite cut biotite paragneiss.
- <u>Dimensions and Grade</u>: Dikes range from 7 to 20 feet wide and up to 200 feet in exposed length. Grade not reported.

Reference: Satterly, unpublished report, 1954.

Remarks: Present ownership status unknown.

J. A. Fenn

Location: Lot 27, concession IX, McDougall township, Parry Sound district.

Radioactive Minerals Present: Uraninite.

Development: Not reported.

Years of Activity: Not reported.

Geology: Radioactive granite pegmatite.

Dimensions and Grade: Not reported.

<u>Reference</u>: Lang (1962, p. 269).

Remarks: Present ownership status unknown.

PETERBOROUGH COUNTY, ANSTRUTHER TOWNSHIP

Amalgamated Mining Development Corporation Limited

(formerly Garland Mining and Development Company Limited)

Location: Lots 6 and 7, concession XVIII, Anstruther township.

<u>Radioactive Minerals Present</u>: Allanite, uranothorite, uranophane, uraninite.

<u>Development</u>: Bulldozed stripping and trenching; 12 drill holes totalling 1,792 feet.

Years of Activity: 1955.

Geology: Radioactive granite or granite pegmatite cut marble.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 150).

Remarks: Present ownership status unknown.

Farcroft Mines Limited

Location: Lots 24 and 25, concession III, Anstruther township. <u>Radioactive Minerals Present</u>: Allanite, uraninite, uranothorite. <u>Development</u>: 36 diamond drill holes totalling 11,664 feet. <u>Years of Activity</u>: 1953-1955.

<u>Geology</u>: Radioactive granite pegmatites 40 to 50 feet wide containing ore shoots. Dikes cut granitized paragneiss. Dimensions and Grade: Lenses intersected in A zone were named A, B, C & D.

Lens	Length feet	Average Width feet	Grade U ₃ 08 Chemical per cent
Α	1180	10.4	0.077
В	250	5.0	0.100
С	150	4.0	0.0525
D	210	8.0	0.07

Reference: Satterly (1956, p. 148).

<u>Remarks</u>: Ontario charter cancelled, November, 1964.

Gray Wolf Exploration Company Limited

Stoney Creek Occurrence

Location: Lots 2 and 3, concession IX, Anstruther township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Strippings and trenches; 8 drill holes totalling 693 feet.

Years of Activity: 1955-1956.

<u>Geology</u>: Radioactive leucogranite pegmatite dikes cut biotite paragneiss or leucogranite.

Dimensions and Grade: Not reported.

<u>Reference</u>: Satterly (1956, p. 151).

Remarks: Present ownership status unknown.

Higgins Uranium Mines Company Limited

Location: Lot 2, concession X, Anstruther township.

Radioactive Minerals Present: Uranothorite.

<u>Development</u>: Blasting, trenches and 4 drill holes totalling 1203 feet. Years of Activity: 1955.

<u>Geology</u>: Radioactive medium to coarse-grained, brick red leucogranite, with pegmatitic patches, cuts biotite paragneiss.

Dimension & Grade: Not reported.

Reference: Satterly (1956, p. 152).

Remarks: Present ownership status unknown.

Hydra Explorations Limited

(formerly Aubelle Mines Limited)

Location: Lot 19, concessions I and II, lot 25, concession II, Anstruther township.

Radioactive Minerals Present: Not identified.

Development: 10 drill holes totalling 4,209 feet.

Years of Activity: 1953-1955.

<u>Geology</u>: Radioactive granite pegmatites cut paragneisses. Dikes strike northeast and dip 40°SE.

<u>Dimensions and Grade</u>: Assays of 0.068 per cent U_30_8 over 8.3 feet; 0.054 per cent U_30_8 over 6.0 feet; 0.083 per cent U_30_8 over 2.8 feet; 0.054 per cent U_30_8 over 2.0 feet; 0.057 per cent U_30_8 over 11 feet.

Reference: Satterly (1956, p. 143).

<u>Remarks</u>: Present ownership status unknown.

A. L. Kemp

Location: Lots 32 and 33, concession XVII, Anstruther township. Radioactive Minerals Present: Uranothorite. <u>Development</u>: Bulldozed strippings, 24 trenches and 7 drill holes totalling 1714 feet. An adit was commenced in September, 1957.

Years of Activity: 1957.

<u>Geology</u>: Radioactive coarse granite pegmatite and leucogranite dikes cut silicated marble.

Dimensions and Grade: Not reported.

Reference: Satterly, unpublished report, 1957.

<u>Remarks</u>: Present ownership status unknown.

Zenmac Metal Mines Limited

Location: Lots 17 and 18, concession I, Anstruther township.

Radioactive Minerals Present: Uranothorite.

Development: 19 drill holes totalling 6400 feet.

Years of Activity: 1953-1955.

- <u>Geology</u>: Uranium-bearing lenses of granite pegmatite adjacent to a garnet gneiss band.
- <u>Dimensions and Grade</u>: 4 uranium-bearing lenses in granite pegmatite measured 370, 240, 270 and 135 feet in length. Assays range from 0.08 to 0.321 per cent U₃08 in places.

<u>Reference</u>: Satterly (1956, p. 154).

<u>Remarks</u>: Present ownership status unknown.

PETERBOROUGH COUNTY, BURLEIGH TOWNSHIP

Augustus Exploration Limited

(formerly Pole Star Mines Limited)

Location: Lot 25, concession XII, Burleigh township.

Radioactive Minerals Present: Uranothorite, uraninite, allanite.

Development: 21 drill holes totalling 8403 feet.

- Years of Activity: 1953-1954.
- <u>Geology</u>: Radioactive granite and granite pegmatites cut biotite-hornblende gneiss.
- Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 158).

Remarks: Present ownership status unknown.

PETERBOROUGH COUNTY, CAVENDISH TOWNSHIP

Amalgamated Rare Earth Mines Limited

Cavendish Mine

Location: Lot 14, concession VII, Cavendish township.

- <u>Radioactive Minerals Present</u>: Allanite, uranothorite, thorite, uraninite, uranophane, kasolite.
- <u>Development</u>: 179 drill holes totalling 52,482 feet; a vertical 2-compartment shaft sunk to 88 feet with a level at 70 feet. 800 feet of drifting, 400 feet of crosscuts and 75 feet of raises were completed.

Years of Activity: 1954-1956.

<u>Geology</u>: Radioactive zones in granite and granite pegmatite. Several gently dipping radioactive zones.

Dimensions and Grade: Indicated ore reserves 1,420,537 tons averaging 0.10 per cent U₃0₈ (Canadian Mines Handbook, 1957).

Reference: Satterly (1956, p. 159).

Remarks: Formerly Cavendish Uranium and Mining Company Limited.

Ansil Mines Limited

(formerly Silanco Mining and Refining Company Limited)

Pencil Creek Occurrence

Location: Lot 21, concession XI, Cavendish township.

<u>Radioactive Minerals Present</u>: Allanite, uraninite, uranothorite, uranophane.

Development: Stripping and trenching.

Years of Activity: 1955.

<u>Geology</u>: Radioactive leucogranite or leucogranite pegmatite with an exposed length of 200 feet and a width of 25 to 70 feet. The country rock is paragneiss or amphibolite.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 167).

<u>Remarks</u>: Present ownership status unknown.

Ansil Mines Limited

(formerly Silanco Mining and Refining Company Limited)

Windover Occurrence

Location: Lot 3, concession III, Cavendish township.

Radioactive Minerals Present: Uranothorite, fergusonite.

<u>Development</u>: Stripping, trenching and 9 drill holes totalling 3766 feet.

Years of Activity: 1955.

<u>Geology</u>: Radioactive granite or granite pegmatite cut paragneiss. Six showings were investigated.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 167).

<u>Remarks</u>: Present ownership status unknown.

Cromwell Uranium and Development Company Limited

- Location: Lot 13, concession VI; lot 14, concession V, Cavendish township.
- <u>Radioactive Minerals Present</u>: Allanite, uranothorite, uranophane, betafite.
- Development: Strippings, trenches and 14 drill holes totalling 3696 feet.

Years of Activity: 1955.

<u>Geology</u>: Radioactive granite pegmatite dikes cut biotite paragneiss.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 162).

Remarks: Present ownership status unknown.

Drude Uranium Mines Limited

Buckhorn Road Group

Location: Lot 16, concession III, Cavendish township.

Radioactive Minerals Present: Allanite, uranothorite, uranophane.

<u>Development</u>: 5 trenches and 2 diamond drill holes totalling 725 feet.

Years of Activity: 1955.

Geology: Radioactive red leucogranite and granite pegmatite.

<u>Dimensions and Grade</u>: Explored length 300 feet, grade not reported.

Reference: Satterly (1956, p. 164).

Drude Uranium Mines Limited

Higgins Lake Group

Location: Lot 16, concession IX, Cavendish township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Trenching and 4 diamond drill holes totalling 1941 feet.

Years of Activity: 1955-1956.

Geology: Red radioactive leucogranite with pegmatite patches.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 162).

Drude Uranium Mines Limited

Picard Lake Group

Location: Lot 14, concession XI, Cavendish township.

Radioactive Minerals Present: Allanite, uranothorite.

<u>Development</u>: Bulldozed strippings, trenches, 2 drill holes totalling 1079 feet.

Years of Activity: 1955.

<u>Geology</u>: Radioactive pink leucogranite and granite pegmatite are cut by fractures showing hematitization.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 163).

Kelbee Rare Metals Corporation Limited

Location: Lots 24 and 25, concession XIV, Cavendish township.

<u>Radioactive Minerals Present</u>: Uranothorite, allanite, uranophane, uraninite.

D. J. Smith

Location: Lot 15, concession IX, Cavendish township, Peterborough county. <u>Radioactive Minerals Present</u>: Uranothorite. <u>Development</u>: Not reported. <u>Years of Activity</u>: Not reported. <u>Geology</u>: Radioactive granite pegmatite. <u>Dimensions and Grade</u>: Not reported. <u>Reference</u>: Lang (1962, p. 255). Remarks: Present ownership status unknown.

United Macfie Mines Limited

(formerly Macfie Explorations Limited)

Location: Lot 8, concession IV, Cavendish township.

Radioactive Minerals Present: Allanite, uranothorite.

Development: Test pits and 21 drill holes totalling 5001 feet.

Years of Activity: 1955-1956.

<u>Geology</u>: Radioactive pink leucogranite with pegmatitic patches cuts biotite paragneiss.

Dimensions and Grade: Not reported.

<u>Reference</u>: Satterly (1956, p. 166).

Remarks: Present ownership status unknown.

PETERBOROUGH COUNTY, CHANDOS TOWNSHIP

Consolidated Uranium Corporation Limited

Location: Lot 9, concession XVI, Chandos township.

<u>Radioactive Minerals Present</u>: Allanite, uranothorite, uranophane.

Development: Trenches and 7 drill holes.

Years of Activity: 1954.

Geology: Radioactive granite pegmatite dikes cut amphibolite.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 170).

<u>Remarks</u>: Present ownership status unknown.

PETERBOROUGH COUNTY, GALWAY TOWNSHIP

W. Blott

Location: Lots 23 and 24, concession XI, lot 24, concession XII, Galway township.

Radioactive Minerals Present: Uranothorite, uraninite.

<u>Development:</u> Strippings, trenches and 17 drill holes totalling 3493 feet.

Years of Activity: 1953-1955.

<u>Geology</u>: Lenticular bodies of pink radioactive leucogranite pegmatite cut marble and paragneiss.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 171).

<u>Remarks</u>: Present ownership status unknown.

Crystal Lake Occurrence

(Coballoy Mines and Refiners Limited)

Location: Lots 23 and 25, concession X, Galway township.

<u>Radioactive Minerals Present</u>: Allanite, uranothorite, thorite, uranophane. <u>Development</u>: Pits, trenches and 21 drill holes totalling 3,287 feet. An adit was driven 300 feet with two drifts totalling 130 feet.

Years of Activity: 1954-1957.

- <u>Geology</u>: Large radioactive sills of pink granite and granite pegmatite cut marble.
- <u>Dimensions and Grade</u>: Dikes have lengths up to 1,800 feet; widths up to 400 feet. Grade not reported.

<u>Reference</u>: Satterly (1956, p. 172) and unpublished report, 1957. <u>Remarks</u>: Present ownership status unknown.

C. A. McWilliams

Location: Lot 30, concession IX, Galway township.

Radioactive Minerals Present: Uraninite.

<u>Development</u>: 18 cross trenches and 8 drill holes totalling 2038 feet.

Years of Activity: 1956.

Geology: Biotite syenite gneiss carries radioactive minerals.

Dimensions and Grade: Not reported.

Reference: Satterly (1956, p. 172).

<u>Remarks</u>: Present ownership unknown.

PETERBOROUGH COUNTY, HARVEY TOWNSHIP

Roy Kennedy

Location: Lot 18, concession XII, Harvey township.

Radioactive Minerals Present: Thorite, uranothorite.

<u>Development</u>: Surface work and 13 diamond drill holes.

Years of Activity: 1954-1955.

<u>Geology</u>: Radioactive medium-grained leucogranite pegmatite cuts granitized hornblende-biotite gneiss.

<u>Dimensions and Grade</u>: No. 2 dike exposed for 180 feet with a width of 9 to 25 feet. Grade not reported.

Reference: Satterly (1956, p. 176).

<u>Remarks</u>: Present ownership status unknown.

Roy Kennedy

Location: Lot 26, concession XVI, Harvey township.

Radioactive Minerals Present: Uranothorite.

Development: Strippings and trenches.

Years of Activity: 1954, 1957.

- <u>Geology</u>: Two dikes of pink radioactive leucogranite pegmatite cut biotite granite.
- <u>Dimensions and Grade</u>: No. 1 dike is exposed for 190 feet with a width of 2 to 15 feet. No. 2 dike is exposed for 200 feet with a width of 2 to 20 feet. Grade not reported.

<u>Reference</u>: Satterly (1956, p. 175).

<u>Remarks</u>: Present ownership status unknown.

RENFREW COUNTY, ALICE TOWNSHIP

McCoshen Occurrence

Location: Lot 13, concession XV, Alice township, Renfrew county.

Radioactive Minerals Present: Euxenite-polycrase.

Development: Not reported.

Years of Activity: Not reported.

Geology: Probably granite pegmatite.

Dimensions and Grade: Not reported.

<u>Reference</u>: Lang, (1952, p. 136).

RENFREW COUNTY, BAGOT TOWNSHIP

Zenith Mine

(Goldyke Mines Limited)

Location: W1/2 lot 28, concession IV, Bagot township, Renfrew county.

Radioactive Minerals Present: Not reported, probably uraninite.

<u>Development</u>: Diamond drilling, old shaft and workings for molybdenum.

Years of Activity: For molybdenum: 1914-1917, 1924-1938, 1942. For uranium: 1955.

Geology: Uranium in metamorphic pyroxenite.

Dimensions and Grade: Grades of 0.06 to 0.42 per cent U₃08 reported in the Northern Miner of May 26, 1955.

<u>References</u>: Northern Miner, May 5 and May 26, 1955.

<u>Remarks</u>: Present ownership status unknown.

RENFREW COUNTY, HORTON TOWNSHIP

J. S. Dempsey and N. Harvey

Location: Lot 1, concession III, Horton township, Renfrew county.

Radioactive Minerals Present: Uranothorite, allanite.

<u>Development</u>: Not reported.

Years of Activity: Not reported.

Geology: Radioactive dike of pink granite pegmatite cuts granite.

<u>Dimensions and Grade</u>: Dike at least 25 feet wide and 100 feet long. Sample showed radioactivity of 0.02 per cent U₂08.

<u>Reference</u>: Lang (1962, p. 264).

Remarks: Present ownership status unknown.

RENFREW COUNTY, RAGLAN TOWNSHIP

Marquart Occurrence

Location: Lot 32, concession V, Raglan township.

Radioactive Minerals Present: Uranophane, uraninite, uranothorite.

Development: Stripping and trenches.

Years of Activity: 1955-1956.

<u>Geology</u>: Radioactive granite and granite pegmatite cut amphibolite.

Dimensions and Grade: Not reported.

Reference: Satterly, unpublished report, 1956.

<u>Remarks</u>: Later explored by Henderson Uranium Mines Limited. Present ownership status unknown.

SUDBURY DISTRICT, DILL TOWNSHIP

Cubar Uranium Mines Limited

Location: Lot 2, concession II, Dill township, Sudbury district.

<u>Radioactive Minerals Present</u>: Betafite, euxenite, allanite, ellsworthite, pyrochlore-microlite.

<u>Development</u>: Open cut feldspar mine 1924-1925. Diamond drilled 1954. Pit 300 feet long and 25 to 75 feet wide. <u>Geology</u>: Erratically distributed uranium minerals in granite pegmatite.

<u>Dimensions and Grade</u>: Not reported.

<u>Reference</u>: Lang (1962, p. 258).

<u>Remarks</u>: Present ownership status unknown.

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APPENDIX

Uranium Occurrences

arranged by County, Township, Concession and Lot

arranged by councy, row	month, conception and house	
	Р	age
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Haliburton County, Cardiff Tow	nship	
Concession I & II, lot 9	Triton Uranium Mines Ltd.	21
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Concession II, lot 10	R. W. Doubt	14
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Concessions VIII & IX, lot 12	Canadian Dyno Mines Ltd.	11
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Concession	XI, S1/2 lot 11	W. S. Robertson	20
Concession	XI, lots 27 & 28	Macassa Gold Mines Ltd.	16
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Concession VI, lot 5	Wadasa Gold Mines Ltd.	32
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Concession VI, lot 19	Amalgamated Rare Earth Mines Ltd.	25
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Concession X, lot 24	Saranac Uranium Mines Ltd.	31
Concession X, lot 2	Roford Mines Ltd.	31
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