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ONTARIO GEOLOGICAL SURVEY
Open File Report 5311

Uranium and Thorium Deposits of
Southern Ontario

by

J.B. Gordon, U.C. Rybak, and
J.A. Robertson

1981

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E.G. Pye, Director
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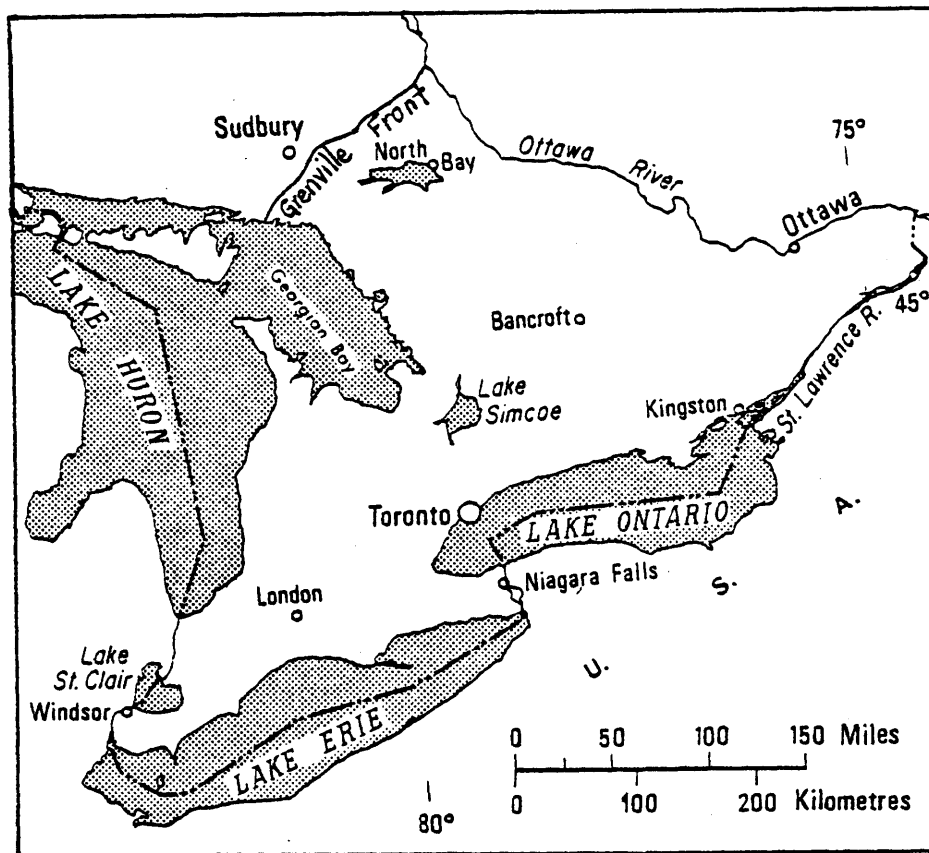
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ABSTRACT

This mineral inventory describes 450 deposits of uranium and thorium in Southern Ontario, i.e., that part of the province lying south of the Grenville Front. The majority of the deposits are of Late Precambrian age and are associated with pegmatite showing a wide range in composition, texture, mineralogy, grade, structural setting, and lithology of the host rock. To date only the complex pegmatites have supported uranium production and these remain the principal targets for exploration. Other significant deposit types include silicates and/or marbles hosting disseminated uraninite, uranium-bearing fluorite-apatite-carbonate veins and bodies, disseminated mineralization in granite and syenite and calc-alkalic complexes and fenites. In addition epigenetic deposits of disseminated uraniferous hydrocarbon are present in sandy dolomite of Ordovician age. Uraninite was first identified in the Grenville Province in 1922 but it was the discovery of the Centre Lake deposit in 1952 followed by Faraday in 1953 that provided the incentive for the major exploration activity that took place in the period 1954-57. Uranium production in the Bancroft camp, was achieved by the Bicroft, Faraday, Consolidated Dyno and Greyhawk mines between 1956 and 1964 when all production ceased. A total of 11,102,056 lbs. of U_3O_8 were produced from 6,188,852 tons of ore in this period. Approximately 90% of this production was from the Faraday and Bicroft mines. In 1976, Faraday (Madawaska Mines Limited) resumed operations and to the end of 1979 produced 1,838,490 lbs. of U_3O_8 from 1,152,629 tons of ore. The Faraday mine operated by Madawaska Mines Limited is the only uranium producer in operation in Southern Ontario.



LOCATION MAP

Uranium and Thorium Deposits
of
Southern Ontario

by

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Manuscript approved by the Chief of Mineral Deposits
Section, February 16, 1981.

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E.G. Pye, Director, Ontario Geological Survey.

CARLETON COUNTY - type

on separate
line

March Township
(NTS 31G/5)

124 O'BRIEN-FOWLER OCCURRENCE

12.12 125 COMMODITY → 12 B1 Feldspar, uranium, thorium

12.12 125 RADIOACTIVE MINERALS → 12 B1 Uraninite

12.12 125 LOCATION → 12 B1 Lot 6, concession II,
March Township. *21 1/2 miles*
Latitude 45.324, Longitude 75.927. *R*
Map Reference: GSC 414A, Ottawa Sheet (West Half). *Σ*

125 GEOLOGY → A zoned granite pegmatite dike, about 30 feet wide,
and opened up along 120 feet, cuts pyroxenic gneiss.
The pegmatite comprises pink microcline and quartz,
with considerable black mica, tourmaline and magnetite,
and small amounts of calcite, fluorite and uraninite.

125 ECONOMIC FEATURES → About 3,500 tons of spar were shipped from the property.

125 HISTORY OF DEVELOPMENT → 1919-21: Mining operations including a small plant
and a pit, 130 by 30 by 30 feet, were conducted by
Messrs. O'Brien and Fowler.

125 PRINCIPAL REFERENCES → GSC 1932, Econ. Geol. Ser. No. 11, p. 203-209.

Type all headings as per this
sample

SOUTH MARCH OCCURRENCE

COMMODITY } Uranium, copper

RADIOACTIVE MINERALS } Uranian hydrocarbon

LOCATION } S $\frac{1}{2}$ lot 12, concession II,
March Township.
Latitude 45.349, Longitude 75.953.
Map Reference: GSC Map 414A, Ottawa Sheet (West Half)

GEOLOGY } Alternating sandstone and dolomite of the Ordovician
March Formation host a zone of uranium - copper
mineralization. The zone, 2000 feet long and 500
feet wide, strikes slightly east of north at
approximately right angles to the regional strike.
Accessory minerals include pyrite, chalcopyrite,
apatite, zircon and a black uranian hydrocarbon.

ECONOMIC FEATURES } Laboratory analysis of a composite sample of outcrop
material gave values of 175 ppm eU (0.02% U₃O₈) and
3.5 ppm eTh, indicating a uranium to thorium ratio of
50:1. A relatively pure sample of the hydrocarbon
assayed 0.71% U₃O₈.

HISTORY OF DEVELOPMENT } 1972-73: Airborne spectrometer survey, geological
mapping, hydrogeochemical, soil geochemical and snow
geochemical surveys by the Geological Survey of Canada.
1974-75: Prospecting by Kerr Addison Mines Limited.

PRINCIPAL REFERENCES } GSC 1973, Paper 73-1A, p. 286-289.
GSC 1975, Paper 75-1A, p. 229-233.
Northern Miner, February 27, 1975, p. 1.

FRONTENAC COUNTY

Clarendon Township

(NTS 31C/14, 31C/15)

ALIT-EL OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 2 - 5, concession II,
lots 4 - 9, concession I,
Clarendon Township.
Latitude 44.870, Longitude 76.826.
Map Reference: ODM 1956-4, Clarendon - Dalhousie - Darling
Area. Coordinates derived from NTS sheet.

GEOLOGY The property is underlain by biotite and granite gneisses of
the Cross Lake granite gneiss mass, and by a thin band of
easterly-trending biotite-hornblende gneiss.
Radioactivity occurs in east-west trending pegmatite dikes.
The dikes consist of medium- to- coarse-grained pink
pegmatite with approximately 10% biotite, often in well-
developed crystals.

ECONOMIC FEATURES Radioactivity varies from 4 to 15 times background on the
pegmatite dikes. The best zone exposes a dike for a length
of 50 feet for widths of 5 to 15 feet. A bulk sample from
this dike assayed 0.051% U_3O_8 (chemical) and nil ThO_2
(radiometric). The best bulk sample from a trench on the
property assayed 0.062% U_3O_8 and 0.050% ThO_2 .

HISTORY OF DEVELOPMENT 1968-69: Geological and scintillometer surveys, trenching and
bulk sampling by Alit-El Mines Limited.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. files 63.2592, 63E.19.

CONSOLIDATED GOLDEN ARROW OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Not identified.

LOCATION Lots 16, 17, concession IV and V,
Clarendon Township.
Latitude 45.899, Longitude 76.895.
Map Reference: ODM 1956-4, Clarendon - Dalhousie - Darling
Area. Coordinates derived from NTS sheet.

GEOLOGY The property is underlain by the Cross Lake granite gneiss and
by biotite granite gneiss striking east. Radioactive pegmatites
intrude the gneiss near or along an east - west anticlinal
axis crossing the central part of the property.

ECONOMIC FEATURES Assay samples range from 0.02 to 0.68% U_3O_8 . Most assays are
below 0.10%.

HISTORY OF DEVELOPMENT 1969: Magnetic and scintillometer surveys, test pits, plugger
hole sampling by Consolidated Golden Arrow Mines Limited.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. file 63.2670.

FYOCK OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 14 - 18, concession II - IV,
Clarendon Township.
Latitude 45.901, Longitude 76.867.
Map Reference: ODM 1956-4, Clarendon - Dalhousie - Darling
Area. Coordinates derived from NTS sheet.

GEOLOGY The property is underlain by granitic gneisses.
Radioactivity occurs in quartz-feldspar pegmatite dikes.
The largest dike is 5 to 30 feet wide and is exposed over
a length of 650 feet.

ECONOMIC FEATURES Best drill core sample assayed 0.134% U_3O_8 (chemical)
over 15 feet.

HISTORY OF DEVELOPMENT Work done by M. H. Fyock & Associates.
1955: Prospecting, diamond drilling and radiometric surveys.
1958-59: Geological and magnetic surveys, 12 diamond-drill
holes totalling 1106 feet.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. files 63.989, 63A.354.

Olden Township

(NTS 31C/10, 31C/15)

MID-EAST OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Uraninite, allanite, uranophane

LOCATION Lots 27 - 30, concession X,
Lots 28 - 31, concession XI,
Olden Township.
Lots 28 - 31, concession I,
Oso Township.
Latitude 44.858, Longitude 76.752.
Map Reference: ODM 1947-5, Olden - Bedford Area.
Coordinates derived from NTS sheet.

GEOLOGY Mineralization occurs within a series of pegmatite dikes intruding hornblende-biotite gneiss, metaconglomerate, and marble. The rock units generally strike N30°E and dip 10-40°SE, with local variations. The pegmatites are coarse- to- medium-grained, white to pink to light grey in colour, conformable to foliation, and locally folded. Pegmatites locally carry pyrite, hematite, smoky quartz, pyrrhotite, and magnetite. Molybdenite and chalcopyrite are also reported. Radioactivity, concentrated at the core and margins of larger pegmatites, is associated with shearing, abundant biotite and moderate fracturing. Local minor sulphides (pyrite, chalcopyrite, pyrrhotite) are found in all rock types in the area.

ECONOMIC FEATURES The pegmatite zone extends some 7500 feet along strike, with larger dikes 100 to 240 feet thick, to 500 feet long. Bulk sampling yielded grades of 0.36 - 0.99 pounds U₃O₈ per ton.

HISTORY OF DEVELOPMENT

1955: Discovered by W. Harvey.

1957: Thirteen holes (892 feet) drilled by Iso Uranium Mines Limited.

1968: Scintillometer and geological surveys, 3 trenches, 33 drill holes (greater than 7000 feet) by Guardian Mines Limited. Sixteen of the drill holes totalled 3805 feet.

1975-77: Detailed scintillometer and geological surveys, sixteen drill holes (3867 feet) by Mid-East Developments Limited.

PRINCIPAL REFERENCES

OGS, AFRO, Toronto: Tech. file 63.3449.

Palmerston Township

(NTS 31C/15)

CANOREX OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Uranophane

LOCATION S½ lot 6, W½ concession V,
Palmerston Township.
Latitude 44.898, Longitude 76.754.
Map Reference: ODM 1956-4, Clarendon - Dalhousie - Darling
Area. Coordinates derived from NTS sheet.

GEOLOGY Country rock of quartz-biotite-hornblende paragneiss
foliated in a northeasterly to easterly direction with
a shallow southeast to southerly dip is intruded by
medium- to- coarse-grained pegmatite. The pegmatite, up
to 150 feet wide, is generally conformable with the
paragneiss. Uranophane stain is best observed on freshly
blasted surfaces.

ECONOMIC FEATURES The average drill core assay was 0.017% U₃O₈ over 4 feet.

HISTORY OF DEVELOPMENT 1975: Stripping, trenching, and radiometric survey by
E.L. Reid.
1977: Airborne radiometric and magnetometer surveys; 5
diamond-drill holes for 452 feet by Canorex Developments
Limited.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech, files 2.1927, 63.3447.

CONSOLIDATED IMPERIAL OCCURRENCE

COMMODITY	Uranium, thorium
RADIOACTIVE MINERALS	Uraninite, uranophane
LOCATION	Lots 10, 11, concession V and VI, Lots 10, 11, concession VII, Palmerston Township. Latitude 44.929, Longitude 76.755. Map Reference: ODM 1956-4, Clarendon - Dalhousie - Darling Area. Coordinates derived from NTS sheet.
GEOLOGY	The country rock comprises a band of hornblende-plagioclase paragneiss with some marble, striking northeast and dipping gently southeast, surrounded by a massive stock of biotite granite gneiss. Quartz pegmatite dikes and brick-red pegmatites are anomalously radioactive. Visible uraninite and uranophane occur in pink non-foliated granite.
ECONOMIC FEATURES	Diamond drill core assays ranged from 0.001 to 0.30 pounds U_3O_8 per ton. Surface samples ranged up to 1.0 pound U_3O_8 per ton and 0.30 pounds ThO_2 per ton.
HISTORY OF DEVELOPMENT	1975-76: 51 blast holes, scintillometer surveys, trenching, stripping and sampling by Consolidated Imperial Minerals Limited. 1977: Geological and radiometric surveys, 2214 feet of diamond drilling in 5 holes by Noranda Exploration Company, Limited.
PRINCIPAL REFERENCES	OGS, AFRO, Toronto: Tech. files 2.2052, 2.2184, 63.3428.

CROSS LAKE OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 1 - 5, concession III,
Lot 4, concession IV,
Palmerston Township.
Latitude 44.883, Longitude 76.766.
Map Reference: ODM 1956-4, Clarendon - Dalhousie - Darling
Area. Coordinates derived from NTS sheet.

GEOLOGY Marble, paragneiss, and amphibolite trend generally
N35°E and dip about 45°SE. The metasediments are cut
by granitic gneiss and weakly radioactive granite
pegmatites.

ECONOMIC FEATURES Drill core intersections on pegmatite gave readings
of 0.075 to 0.10 mR/hr. over 2.5 feet.

HISTORY OF DEVELOPMENT 1969-70: Airborne radiometric survey; geological and
radiometric prospecting; minor trenching by Keevil
Mining Group Limited.
1976: Airborne radiometric and magnetic surveys by
Geoterrex Limited.
1977: Stripping, trenching, radiometric survey, one
diamond-drill hole (243 feet) by Bijou Mines, Limited.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. files 63A.569(Uranium Syndicate),
2.2240(J.P. Jewell).

GROUNDSTAR OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Uraninite

LOCATION Lots 6 - 9, concession IV,
Lots 6, 7, 9, concession V,
Lots 6 - 8, concession VI,
Lots 5 - 8, W $\frac{1}{2}$ concession VII,
Palmerston Township.
Latitude 44.917, Longitude 76.738.
Map Reference: ODM 1956-4, Clarendon - Dalhousie - Darling
Area. Coordinates derived from NTS sheet.

GEOLOGY Mineralization occurs within coarse-grained dikes and
sills of pegmatite intruding highly altered meta-
sediments. The metasediments consist of paragneiss,
amphibolite, pyroxenite, marble, and granite gneiss.
These rocks trend northeast and dip 30° SE.
Radioactive quartz-feldspar pegmatites with accessory
magnetite intrude two bands of metasediments, occupying
50% of the rock volume over one area 800 by 3000 feet,
and another area 1500 by 7000 feet.

ECONOMIC FEATURES The best grab sample assayed 0.13% U₃O₈. Bulk sampling
yielded values up to 1.92 pounds U₃O₈ per ton, but
averaging $\frac{1}{4}$ - $\frac{1}{2}$ pound U₃O₈ per ton.

HISTORY OF DEVELOPMENT 1976: Airborne radiometric survey and some prospecting
by Grange Mining Corporation. Groundstar Resources Limited
then performed geological and scintillometer surveys.
Trenching was followed by 9 drill holes for 1242 feet.
1977: Groundstar Resources Limited continued drilling,
four holes for 1087 feet. Detailed geological and

scintillometer surveys, trenching and bulk sampling
were also performed.

PRINCIPAL REFERENCES

Northern Miner, January 20, 1977.

OGS, AFRO, Toronto: Tech. files 2.2169, 2.2729.

:Palmerston Township Drill Report No. 25.

REXDALE OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 2 - 4, concession IV (E₁),
Lots 2 - 5, concession V,
Palmerston Township.
Latitude 44.890, Longitude 76.743.
Map Reference: ODM 1956-4, Clarendon - Dalhousie - Darling
Area. Coordinates derived from NTS sheet.

GEOLOGY Mineralization occurs within granite pegmatite intruding
biotite gneiss, granite gneiss and marble. The country
rocks strike northeast and dip 30-45°SE. They contain
local pyrrhotite, pyrite, and chalcopyrite.
The pegmatites are often hematitized and contain local
minor molybdenite, pyrite and marcasite.

ECONOMIC FEATURES Maximum geiger reading was 25 times background. The
best drill core sample assayed 1.02% U₃O₈ and 0.25% ThO₂.

HISTORY OF DEVELOPMENT 1968-69: Trenching; geiger and gamma-ray spectrometer
surveys; 44 diamond-drill holes for 5,154 feet by
Rexdale Mines Limited.
1976: Airborne radiometric and magnetic surveys;
11 diamond-drill holes for 1,290 feet by Geophysical
Engineering.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. files 63.2442, 2.2253
(Geophysical Engineering).

WESTWIND OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite

LOCATION Lot 10, concession III,
Lots 8, 9, concession II and III,
Palmerston Township.
Latitude 44.900, Longitude 76.779.
Map Reference: ODM 1956-4, Clarendon - Dalhousie - Darling
Area. Coordinates derived from NTS sheet.

GEOLOGY Uraninite occurs locally in pink, medium- to coarse-
grained granite pegmatites. The dikes intrude mica
gneiss and amphibolite striking northeast and dipping
60-80°SE.

ECONOMIC FEATURES The main dike is 8 to 60 feet wide and may extend
2,100 feet along strike. Trench samples assayed up
to 2.8 pounds U_3O_8 per ton; the best drill intersection
was 0.015% U_3O_8 over 8 feet.

HISTORY OF DEVELOPMENT 1976: Airborne radiometric and magnetic surveys by
J.P. Jewell. Stripping and trenching by Barclay Resources.
1976-77: Trenching; scintillometer and radon gas soil
surveys; 8 diamond-drill holes for 1853 feet by
Westwind Mines Limited.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. files 63.3491, 63.3511.

South Canonto Township

(NTS 31F/2)

BORDUN OCCURRENCE

COMMODITY Uranium, thorium, rare earths

RADIOACTIVE MINERALS Uraninite, uranothorite, uranophane

LOCATION Lots 2 and 3, concession V,
Lot 4, concession VI (N $\frac{1}{2}$),
South Canonto Township.
Latitude 45.151, Longitude 76.907.
Map Reference: ODM 1956-4, Clarendon - Dalhousie - Darling
Area. Coordinates derived from NTS sheet.

GEOLOGY Radioactive biotitic sheared granite pegmatites
intrude grey biotite granite gneiss. Uraninite,
uranothorite and uranophane occur in lenses and
tabular bodies up to 150 feet wide.

ECONOMIC FEATURES A composite from 35 selected grab samples
assayed 0.05% U₃O₈, 0.38% ThO₂ and 0.5% rare
earths.

HISTORY OF DEVELOPMENT 1969: Geiger survey; 88 shallow pits; grab
samples by prospector C. Kehoe.
1969: Geiger survey; detailed spectrometer surveys;
some stripping and trenching by Bordun Mining
Corporation Limited.
1976-77: Airborne radiometric survey; some
geological mapping and diamond drilling by Beach
Gold Mines Limited.

PRINCIPAL REFERENCES OGS 1980, OFR 5294. Manuscript.
OGS, AFRO, Toronto: Tech. files 63E.28,
63.2759, 2.2274 (Beach Gold Mines Limited).

HONSBERGER OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Thorite, uranothorite

LOCATION Lot 2, concession VIII (S₄),
Lot 4, concession VII (S₄),
South Canonto Township
Latitude 45.075, Longitude 76.918.

Map Reference: ODM 1956-4, Clarendon-Dalhousie-Darling
Area. Coordinates derived from NTS sheet.

GEOLOGY Thorite and uranothorite occur in granite pegmatite
sills and dikes up to 20 meters thick which intrude
biotite gneiss. Radioactivity is associated with
shearing, abundant biotite and quartz, smoky quartz
and dark pink feldspar.

ECONOMIC FEATURES Trench samples averaged 0.05% U₃O₈. Drill core
samples returned low values.

HISTORY OF DEVELOPMENT 1969: Prospecting; sampling of 21 trenches by
J. C. Honsberger.
1976: Airborne and ground spectrometer surveys;
trenching, sampling; 1500 feet of diamond drilling
in 5 holes by Beach Gold Mines Limited.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. file 63E.20
Regional Geologist's Files, OMNR, Kemptville: File
South Canonto No. 9.

FRONTENAC COUNTY MINOR

OCCURRENCES

Clarendon Township

(NTS 31C/14, 31C/15)

NAME AND LOCATION

LEWKE,

Lot 33, con. XI,

Clarendon Tp.

Lat. 44.915, Long. 77.000.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 256.

ODM Map 1956-4, Clarendon - Dalhousie - Darling Area.

Coordinates derived from NTS sheet.

REMARKS

A radioactive placer occurrence is reported. No other data.

Kennebec Township

(NTS 31C/10, 31C/11, 31C/15)

NAME AND LOCATION

A. G. B. CAMPBELL,

Lot 18, con. III,

Kennebec Tp.

Lat. 44.719, Long. 77.051.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p.265.

ODM Map 51d, Grimsthorpe - Kennebec Area. Coordinates
derived from NTS sheet.

REMARKS

Beta-uranophane in pegmatitic rock is reported.

No other data.

Loughborough Township
(NTS 31C/7)

NAME AND LOCATION

M. J. O'BRIEN,
(Foxton Mine),
Lot 11, con. IX,
Loughborough Tp.
Lat. 44.467, Long. 76.549.

REFERENCES

GSC 1932, Econ. Geol. Ser. No. 11, p.232.
ODM Map 2054, Gananoque Area. Coordinates derived from
NTS sheet.

REMARKS

Gadolinite and euxenite are found in a pegmatite
dike cutting between metamorphic pyroxenite and
gneissic granite. Pyrite, pyrrhotite, and chalcopyrite
also occur. The dike was worked for feldspar by
M.J. O'Brien before 1932.

Miller Township

(NTS 31C/14, 31F/2, 31F/3)

NAME AND LOCATION

T. F. BARNET,
Lots 33, 34, 37, con. XII,
Lots 33, 34 (W₂), con. XIII,
Miller Tp.
Lat. 45.127, Long. 76.990.

REFERENCES

OGS 1980, OFR 5294. Manuscript.
ODM Map 2392, Ontario Geological Map, Southern Sheet.
Coordinates derived from NTS sheet.

REMARKS

Pink and white granite pegmatites, up to 20 meters long and 1 meter wide, intrude granite gneiss and biotite-hornblende gneiss. Locally, uraninite, bastnaesite, zircon, and possibly allanite and uranothorite, are associated with magnetite, hematitization, and fracturing in the pegmatites. In 1954, prospecting was carried out by T.F. Barnet and others.

NAME AND LOCATION

DORANIUM,
Lots 6, 7, E $\frac{1}{2}$ 12, W $\frac{1}{2}$ 15, con. III,
Lot 6, con. IV,
Lots 6, E $\frac{1}{2}$ 13, 14, W $\frac{1}{2}$ 15, Con. V,
W $\frac{1}{2}$ lots 11 - 14, Con. VI,
Miller Tp.
Lat. 45.000, Long. 77.033.

REFERENCES

OGS 1980, OFR 5294. Manuscript.
ODM Map 2392, Ontario Geological Map, Southern Sheet.
Coordinates derived from NTS sheet.

REMARKS

Local weak radioactivity occurs in narrow granite
pegmatites intruding paragneiss and calc-silicate
rocks. In 1955-56, the Doranium Corporation
conducted geological mapping, radiometric surveys,
and drilling of four holes for 122 meters.

NAME AND LOCATION

PLEVNA,
Lots 25 - 29, con. XII,
Lots 25 - 30, con. XIII and XIV,
Miller Tp.
Lat. 45.092, Long. 77.875.

REFERENCES

OGS, AFRO, Toronto: Tech. files 63.3520, 63.3568.
ODM Map 2392, Ontario Geological Map, Southern Sheet.
Coordinates derived from NTS sheet.

REMARKS

Irregular pegmatite dikes and sills cut interbedded biotite paragneiss, amphibolite, and pink granite gneiss, granite, and amphibolitic gneisses and hornblende schists. These rocks strike northeasterly and dip 30 - 80°NW.
In 1976, Thomas Skimming and Associates staked claims covering a uranium anomaly discovered the previous year by a government-sponsored airborne radiometric survey. The property was optioned in 1977 to Geophysical Engineering Limited, who conducted magnetometer, scintillometer, and VLF-EM surveys. Samples from five trenches all assayed less than 0.005% U₃O₈ and less than 0.005% ThO₂.

NAME AND LOCATION

SALMOND

Lot 37, con. VIII,

Miller Tp.

Lat. 45.109, Long. 77.047.

REFERENCES

OGS 1980, OFR 5294. Manuscript.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates derived from NTS sheet.

REMARKS

Weakly radioactive white granite pegmatite dikes sharply crosscut garnet-hornblende-biotite gneiss and biotite-hornblende gneiss striking N14°E and dipping 60-65°NW. The dikes average 1 to 2.5 meters in width. Radioactivity occurs in the contact zones, which are characterized by the presence of smoky quartz and almandine garnets associated abundantly with biotite. In 1954, samples obtained by K. Salmond assayed 0.038, 0.20, and 1.46% U₃O₈ (radiometric).

NAME AND LOCATION

WHYTOCK,
Lot 15, Southwest Range,
Miller Tp.
Lat. 45.010, Long. 77.018.

REFERENCES

OGS 1980, OFR 5294. Manuscript.
ODM Map P.972, Uranium and Thorium Deposits of Ontario,
Southern Sheet.

REMARKS

A zoned, pink granite pegmatite intruding biotite gneiss is exposed for 60 feet along strike. The wall zones are graphic granite pegmatite with erratic muscovite. Pyrochlore and fergusonite or samarskite are present. The wall zones are estimated at 0.1% U_3O_8 over widths of 1.5 to 2.0 meters. In 1954, the property was mined for feldspar with an open cut 150 by 30 feet.

North Canonto Township

(NTS 31F/2)

NAME AND LOCATION

MOUNTAIN CHUTE

Lot 18, con. IX,

North Canonto Tp.

Lat. 45.193, Long. 76.901.

REFERENCES

OGS 1980, OFR 5294. Manuscript.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates derived from NTS sheet.

REMARKS

A radioactive area one by four meters occurs within a granite pegmatite exposed for 20 by 5 meters. The pegmatite intrudes marble, garnet amphibolite gneiss, and rusty felsic gneiss. Pegmatite contains about 20% sphene, biotite, a micaceous mineral (chlorite?), a black vitreous mineral (allanite?), and plagioclase. Radioactivity is associated with fracturing, a rusty surface, and dark-coloured rock. The occurrence was discovered in 1977 by C. Storey of the Ontario Geological Survey during field mapping.

Olden Township

(NTS 31C/10, 31C/15)

NAME AND LOCATION

BOLTON LAKES GROUP

Lots 23 - 25, con. VIII - X,

Olden Tp.

Lat. 44.825, Long. 76.758.

REFERENCES

OGS, AFRO, Toronto: Tech. file 63A.569(Uranium Syndicate).

ODM Map 1947-5, Olden - Bedford Area. Coordinates derived
from NTS sheet.

REMARKS

The area is dominated by gneissic red granite. To the northeast lies a succession of marble, white pegmatite, paragneiss, and granitic gneiss. Radioactivity occurs in pegmatites within the granite, and in white pegmatite. Highest readings were ten times background. In 1969-70, Keevil Mining Group Limited ran geological and ground radiometric surveys, and an airborne radiometric survey, and dug three small pits.

NAME AND LOCATION

W. H. DOUGLAS,
Lot 3(NE $\frac{1}{2}$), con. V,
Olden Tp.
Lat. 44.693, Long. 77.774.

REFERENCES

OGS, AFRO, Toronto: Olden Township Drill Report No. 20.
ODM Map 1947-5, Olden - Bedford Area. Coordinates
derived from NTS sheet.

REMARKS

In 1972, W.H. Douglas drilled one hole (101 feet),
intersecting diorite and pegmatite.

NAME AND LOCATION

S. HUGHES,
Lots 17(E $\frac{1}{2}$), 18(W $\frac{1}{2}$), con. II,
Olden Tp.
Lat. 44.746, Long. 77.858.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 275.
ODM Map 1947-5, Olden - Bedford Area. Coordinates derived
from NTS sheet.

REMARKS

A radioactive occurrence is reported. No other data.

NAME AND LOCATION

H. G. QUINN,
Lot 8, con. VII,
Olden Tp.
Lat. 44.714, Long. 76.786.

REFERENCES

ODM 1971, MRC 14, p. 45.
ODM Map 1947-5, Olden - Bedford Area. Coordinates derived
from NTS sheet.

REMARKS

Euxenite-polycrase is reported. In 1956, H.G. Quinn
drilled one hole for 36 feet in pegmatite.

NAME AND LOCATION

SOLAR,
Lots 23, 24(N $\frac{1}{2}$), con. X,
Lot 23(S $\frac{1}{2}$), con. IX,
Olden Tp.
Lat. 44.818, Long. 76.733.

REFERENCES

Regional Geologist's Files, OMNR, Kemptville: Files
Olden Township No. 10, 12.
ODM Map 1947-5, Olden - Bedford Area. Coordinates derived
from NTS sheet.

REMARKS

A scintillometer survey carried out by Solar Explorations
Limited in 1969 revealed one weakly radioactive zone.
The claims are underlain by granite gneiss and biotite
gneiss which both contain patches of pegmatite.

Oso Township

(NTS 31C/10, 31C/15)

NAME AND LOCATION

CLARENDON GROUP,
W₁ lot 31, con. I,
Oso Tp.
Lat. 44.823, Long. 76.751.

REFERENCES

OGS, AFRO, Toronto: Tech. file 63A.569 (Uranium Syndicate).
ODM Map 1947-5, Olden - Bedford Area. Coordinates
derived from NTS sheet.

REMARKS

The area is underlain by granitic gneisses containing
lenticular, conformable pegmatites, all striking
about N20°E and dipping about 45°SE. In 1969, Keevil
Mining Group Limited performed trenching, geological
and ground radiometric surveys, and an airborne
radiometric survey. Spectrometer readings over the
pegmatites averaged five times background.

Palmerston Township

(NTS 31C/15)

NAME AND LOCATION

J. EASTMAN,
Lots 2 and 3, con. V,
Palmerston Tp.
Lat. 44.881, Long. 76.736.

REFERENCES

ODM 1967, MRC 4, p. 8.
ODM Map 1956-4, Clarendon - Dalhousie - Darling Area.
Coordinates derived from NTS sheet.

REMARKS

Granite pegmatite intruding biotite gneiss, granite
gneiss and marble carries uraninite and local smoky
quartz and garnet.

NAME AND LOCATION

GAMSON,

S $\frac{1}{2}$ lot 5, W $\frac{1}{2}$ con. VII,

Palmerston Tp.

Lat. 44.902, Long. 76.709.

REFERENCES

Regional Geologist's Files, OMNR, Kemptville: File

Palmerston Township No. 2.

ODM Map 1956-4, Clarendon - Dalhousie - Darling Area.

Coordinates derived from NTS sheet.

REMARKS

In 1968, four drill holes (500 feet) intersected weakly radioactive granite pegmatites intruding biotite granite gneiss and biotite-garnet gneiss.

NAME AND LOCATION

HIGHLAND MERCURY,

Palmerston Tp.

Lat. 44.93, Long. 76.76.

REFERENCES

Northern Miner, July 8, 1976.

Northern Miner, August 5, 1976, p. 3.

ODM Map 1956-4, Clarendon - Dalhousie - Darling Area.

Coordinates given are for township centre, from
the Gazetteer of Canada.

REMARKS

In 1976, Highland Mercury Mines drilled 11 holes
testing radioactive granite pegmatites. One hole
intersected 6.5 feet assaying 0.05% U_3O_8 .

NAME AND LOCATION

RAM PETROLEUMS

Lots 10, S $\frac{1}{2}$ 11, con. VIII,

Palmerston Tp.

Lat. 44.941, Long. 76.713.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.2469.

ODM Map 1956-4, Clarendon - Dalhousie - Darling Area.

Coordinates derived from NTS sheet.

REMARKS

The property is underlain by granitic and pegmatitic rocks. Some of the granites are intrusive. Uranophane occurs in a coarse, reddish pegmatite with abundant biotite, and, commonly, hornblende and magnetite. Minor trenching and a geiger survey were performed by D. Riddell in 1975. In 1976, Ram Petroleum Limited carried out a scintillometer survey.

NAME AND LOCATION

D. W. RIDDELL,
Lot 6 (W $\frac{1}{2}$), con. IV,
Lots 6 (E $\frac{1}{2}$), 7 (SE $\frac{1}{4}$), con. V,
Palmerston Tp.
Lat. 44.919, Long. 76.731.

REFERENCES

OGS, AFRO, Toronto: Tech. files 2.1927, 2.2363.
ODM Map 1956-4, Clarendon - Dalhousie - Darling Area.
Coordinates derived from NTS sheet.

REMARKS

Uranophane occurs in pegmatites within country rock of biotite paragneiss and granite gneiss. In 1974, E. Reid, D. Riddell, and W. Bidgood carried out a geiger survey, stripping, trenching, gas drill excavation (340 cubic feet), and sampling. In 1976, Geoterrex Limited conducted airborne radiometric and magnetic surveys.

Portland Township
(NTS 31 c/7)

NAME AND LOCATION

WILKS MINE,
Lot 11, con. XI,
Portland Tp.
Lat. 44.479, Long. 76.704.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p.149.
ODM Map 2053, Madoc Area.

REMARKS

A sample from the Wilks Mine, operated by Hoyle Mining
Company Limited, contained allanite and assayed 1.73%
 U_3O_8 (radiometric).

South Canonto Township
(NTS 31F/2)

NAME AND LOCATION

M. KELLAR,
Lots 8 and 9, con. VI,
South Canontó Tp.
Lat. 45.070, Long. 76.882.

REFERENCES

GSC, Rad. Res. Div. File 31F/2-2.
ODM Map 1956-4, Clarendon - Dalhousie - Darling Area.
Coordinates derived from NTS sheet.

REMARKS

Chip samples collected ny M. Kellar in 1956-57
assayed up to 0.25% U_3O_8 equivalent.

NAME AND LOCATION

THUNDERWOOD,
South Canonto and Miller Tps.
Lat. 45.08, Long. 76.83.

REFERENCES

Northern Miner, February 4, 1977.
Northern Miner, March 17, 1977.
ODM Map 1956-4, Clarendon - Dalhousie - Darling Area.
Coordinates given are approximated from township
centres, from the Gazetteer of Canada.

REMARKS

Thunderwood Explorations carried out a scintillometer
survey over granitic pegmatite in 1976. Three drill
holes in 1977 did not return commercial values and
work was stopped. One grab sample from surface
ran 0.28 pounds U_3O_8 per ton.

Storrington Township
(NTS 31C/7)

NAME AND LOCATION

E. J. UBDEGROVE,
Lot 28, con. X,
Storrington Tp.
Lat. 44.461, Long. 76.301.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 279.
ODM Map 2054, Gananoque Area. Coordinates derived from
NTS sheet.

REMARKS

A radioactive occurrence is reported. No other data.

HALIBURTON COUNTY

Cardiff Township

(NTS 31D/16, 31E/1)

ATLIN - RUFFNER OCCURRENCE

(Allanite Property)

COMMODITY Cerium, thorium, uranium

RADIOACTIVE MINERALS Allanite

LOCATION Lots 1 - 3, 4(N₂), Concession XVI,
Cardiff Township.
Latitude 45.003, Longitude 78.186.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships

GEOLOGY The property is underlain by hornblendic gneisses and paragneisses, interbanded with syenite gneisses. The gneisses are intruded by pink leucogranite to leucosyenite, often with abundant magnetite and/or hornblende, and biotite, and by red pyroxene syenite pegmatite.
Allanite occurs in massive veins with pyroxene and as a constituent of syenite, syenite pegmatite and granite pegmatite. The main allanite zone strikes N30°E, dips 55°SE, and contains 10 - 40% allanite.

ECONOMIC FEATURES The main allanite zone, 200 by 6 by 160 feet deep, has been estimated to contain 36,600 tons of probable ore averaging about 2.29% CeO₂. Best drill core assays for uranium were 0.01% U₃O₈ over 20 feet, and 0.045% U₃O₈ over 1.3 feet.

HISTORY OF DEVELOPMENT 1953-54: Scintillometer and magnetometer surveys; 3 long trenches, 80 to 140 feet long spaced 50 feet apart; and 9 diamond-drill holes totalling 2713 feet by Stratmat Limited.
1955: Atlin-Ruffner (B.C.) Limited bulldozed 2 areas and took bulk samples. Five tons of material shipped to Electro-Metallurgical Company, Niagara Falls, New York, contained \$443 worth of cerium. Geological survey over N₂ lot 4, Concession XVI.

HISTORY OF DEVELOPMENT

1967: Airborne electromagnetic and magnetic surveys

by L. T. Chandler.

1971: Prospecting for fluorite by Landair Explorations.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 27-29.

AUMACHO RIVER OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite, allanite, uranothorite

LOCATION S½ lot 22, concession IX,
Cardiff Township.
Latitude 44.970, Longitude 78.051.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships

GEOLOGY The property lies on the southward extension of the Bicroft (Centre Lake) zone of syenitized metasediments. Radioactive dikes, 0.1 to 20 feet wide, intrude interbedded amphibolite and biotite paragneiss striking N65°E and dipping 40-50°SE. The dikes are granite pegmatite with pyroxene, and accessory titanite and uranothorite. One dike striking N50°E, 2 to 20 feet wide and exposed over 150 feet, contains patches rich in biotite, hornblende, calcite and scapolite as well as accessory uraninite, allanite, and uranothorite.

ECONOMIC FEATURES Drill intersections were generally low, below 0.05% U₃O₈ across mineable widths.

HISTORY OF DEVELOPMENT 1954: 5 trenches and 21 diamond drill holes for 6097 feet by Aumacho River Mines Limited. 12 of these holes explored extensions of the Bicroft augen-gneiss zone. The following year the company drilled an additional 9 holes for 430 feet.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 28.

REMARKS In 1962, Aumacho River Mines Limited changed its name to Urban Quebec Mines Limited.

BANCROFT URANIUM MINES OCCURRENCE

COMMODITY	Uranium, thorium, fluorite
RADIOACTIVE MINERALS	Allanite, uranothorite
LOCATION	Lot 5, concession XXII, Cardiff Township. Latitude 45.059, Longitude 78.199. Map Reference: ODM 1957-1, Cardiff and Faraday Townships
GEOLOGY	The property is underlain by paragneiss, hybrid gneisses, and syenite cut by syenite pegmatite bodies. Minor allanite and uranothorite occur within a fluorite-pyroxenite syenite pegmatite sill which cuts granitized biotite paragneiss, leucogranite gneiss and fluorite pyroxene syenite or syenite gneiss. These rocks strike N65°E and dip 20°S.
ECONOMIC FEATURES	The sill is exposed for 150 feet with a maximum width of 4 feet. Fluorite-bearing material shows geiger readings up to 12 times background.
HISTORY OF DEVELOPMENT	1955-56: Stripping, open-cut blasting and pitting by Bancroft Uranium Mines Limited.
PRINCIPAL REFERENCES	ODM 1956, Vol. 65, pt. 6, p. 29.

BICROFT URANIUM MINE (Centre Lake)

(Past Producer)

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, uraninite, allanite, thorite, rare
pyrochlore and betafite.

LOCATION Lots 27 and 28, concession XI,
Cardiff Township.
Latitude 44.997, Longitude 78.035.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships

GEOLOGY A north - south zone of radioactive granitic bodies
occurs in a band of syenitized paragneiss and amphibolite
striking N10°E and dipping about 50°E. The zone is
overlain by marble to the east, and underlain by the
east-dipping Centre Lake leucogranite sheet of the
Cardiff batholith to the west. The metasediments
comprise mainly biotite paragneiss, amphibolite,
scapolite-biotite gneiss, garnet-sillimanite-biotite
paragneiss, and a narrow band of silicated marble.
Radioactive dikes up to 80 feet wide and 400 feet long
occur en echelon in the metasedimentary band, striking
northeast and dipping 40-70°E. Ore shoots up to 200
feet long and of variable width, occur in mafic,
non-segregated, syenite and granite pegmatites, which
in turn are localized within garnet-sillimanite gneiss
and scapolite gneiss facies, extending over a length
of 3000 feet and to a depth of 1500 feet. The most
common mafic mineral is pyroxene. Uranothorite and
uraninite are accompanied locally by allanite, zircon,
titanite, apatite, fluorite, pyrite, pyrrhotite, and
molybdenite.

ECONOMIC FEATURES

As of December 31, 1960, reserves above the 1200-foot level were estimated at 559,000 tons grading 2.0 pounds U_3O_8 per ton before dilution. (MR 12, p. 200)

HISTORY OF DEVELOPMENT

1952: Main deposits discovered by G.W. Burns.

Work done by Centre Lake Uranium Mines Limited, renamed Bicroft Uranium Mines Limited (1955), renamed Macassa Gold Mines Limited (1961).

1953-54: Adit, trenching, diamond drilling; Number 1 shaft (234 feet) in N $\frac{1}{2}$ lot 27, concession XI.

1955-63: Number 2 shaft (1843 feet) in lot 28, concession XI; 1000 t.p.d. mill; production as of November 12, 1956 continuous to 1963.

1963: Operations terminated. Mill capacity had reached 1375 t.p.d.. 104 surface holes totalling 48,363 feet. Underground development included 79,392 feet of drifts, 63,108 feet of crosscuts, and 3882 drill holes totalling 523,775 feet. During September and October of 1958, a small pilot plant produced several commercial thorium compounds.

1975: Nine diamond-drill holes for 3606 feet by Kerr Addison Mines Limited.

PRODUCTION

From 1956 to 1963, 2,571,766 tons of ore averaging 1.72 pounds U_3O_8 per ton were milled to produce 4,445,973 pounds of U_3O_8 . (OGS File SMDR 154)

PRINCIPAL REFERENCES

EMR 1967, MR 12, p. 196-217.

ODM 1956, Vol. 65, pt. 6, p. 30-36.

OGS, AFRO, Toronto: Tech. file 63.3386.

OGS, GDC, Toronto: File Bicroft (Centre Lake), SMDR 154.

REMARKS

Second largest uranium producer in the Bancroft area.

BURMA SHORE OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite, uranothorite, possibly allanite

LOCATION Lots 6, 7, concession XIX,
Lots 7, 8, concession XX,
Cardiff Township.
Latitude 45.047, Longitude 78.181.
Map Reference: ODM 1957-1, Cardiff and Faraday
Townships.

GEOLOGY Highly radioactive red syenite pegmatite dikes intrude a band of lime silicates trending north. Mineralization occurs in 2 scapolite - pyroxene skarn bands, $\frac{1}{2}$ - 2 feet wide and 40 feet apart. The skarn bands are developed adjacent to, and underlie, sills of pyroxene syenite pegmatite, and are in turn underlain by scapolite - hornblende gneiss. Accessory minerals include apatite, calcite, pyrite, molybdenite, uraninite, uranothorite and fluorite.

ECONOMIC FEATURES A typical drill - hole sample assayed 0.17% U_3O_8 over 3.5 feet.

HISTORY OF DEVELOPMENT pre - 1948: Pitting
1955-56: Scintillometer survey, pitting, trenching and 7 diamond drill holes for 1522 feet by Burma Shore Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 40-41.
OGS, GDC, Toronto: File Burma Shore, SMDR 156.

HISTORY OF DEVELOPMENT

Work to 1955 was by Canada Radium Mines, Limited (name changed in 1954 to Canada Radium Corporation, Limited).

1932-36: A 400-foot shaft with levels at 125, 250 and 375 feet was sunk on lot 9, Concession XII; also 1810 feet of lateral work as well as surface work.

1939-42: 200 tons of feldspar pegmatite milled and magnetically separated in a 100 t. p. d. mill.

1954-55: Workings dewatered, magnetometer, scintillometer and geological surveys; 90 diamond-drill holes totalling 43,184 feet.

1968-69: 3 diamond-drill holes for 869 feet by Cam Mines Limited.

1969-70: Geological and radiometric surveys; 7 diamond-drill holes totalling 1366 feet by Initiative Explorations Limited.

1974: Preliminary work to dewater shaft by Golden Giant Mines.

1975: Radon gas survey by Kerr Addison Mines Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 43, 62.

OGS, AFRO, Toronto: Tech. files 63A.551, 2.2027 (Kerr Addison Mines Limited).

CANADIAN DYNO MINE

Past Producer

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite, uranothorite, allanite, uranophane, cyrtolite, thorite.

LOCATION Lot 12, concession VII - IX,
Cardiff Township.
Latitude 44.949, Longitude 78.079.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships.

GEOLOGY The property lies between the Cheddar granite mass to the west and the Centre Lake granite of the Cardiff pluton to the east. It is underlain by amphibolite, pyroxene amphibolite, biotite-diopside - scapolite granulite, and minor garnet - sillimanite paragneiss and marble. These metasediments, which strike N15-25°W and dip 50°E, are intruded and replaced by syenite gneiss. All the country rocks are intruded by north - trending pegmatitic leucogranite dikes. Five mineralized zones (A, B, C, D and E) are roughly aligned and may be connected at depth. Each zone contains numerous lenticular branching radioactive dikes of leucogranite and pegmatitic leucogranite with microcline, peristerite and smoky quartz. The shaft was sunk on the B zone, which contains ore shoots averaging 65 by 6.5 feet. Radioactive mineralization is associated with hematitization and abundant magnetite. Accessory minerals include titanite, zircon, allanite, uraninite, uranothorite, uranophane, and rare cyrtolite and thorite.

ECONOMIC FEATURES

Just before closure in 1960, reserves of possible ore were estimated at 500,000 tons grading 0.065% U_3O_8 (MR 12, p. 220). Additional tonnage was also indicated in the C and D zones.

HISTORY OF DEVELOPMENT

1953: P. Mulliette discovered radioactive occurrences in the area.

1954-60: Work by Canadian Dyno Mines Limited.

1954-55: Geological and radiometric surveys; 69 diamond-drill holes for 30,290 feet.

1955-60: Three-compartment shaft on lot 12, concession VIII (B zone) to a depth of 1,720 feet and opening 10 levels; total drifting 19,439 feet, total cross-cutting 29,376 feet, raises 16,847 feet; 147 diamond-drill holes on A and B zones for 54,183 feet. Mining operations from late 1957. 1100 t.p.d. mill started May, 1958. Mine closure April 15, 1960.

PRODUCTION

From 1958 to 1960, 659,403 tons of ore averaging 1.23 pounds U_3O_8 per ton were milled, producing 813,381 pounds of U_3O_8 (OGS File SMDR 158).

PRINCIPAL REFERENCES

EMR 1967, MR 12, p. 217-224.

ODM 1956, Vol. 65, pt. 6, p. 43-45.

OGS, GDC, Toronto: File Canadian Dyno, SMDR 158.

REMARKS

Present owner is International Mogul Mines Limited.

CANORAMA OCCURRENCE

COMMODITY	Uranium, thorium, molybdenum
RADIOACTIVE MINERALS	Not identified.
LOCATION	<p>Lots 3-6, Concession VIII</p> <p>Lots 5-7, Concession IX</p> <p>Lots 6, 7, concession X,</p> <p>Cardiff Township.</p> <p>Latitude 44.947, Longitude 78.132.</p> <p>Map Reference: ODM 1957-1, Cardiff and Faraday Townships.</p>
GEOLOGY	<p>The area is underlain by the Cheddar granite mass and cut by a band of older metasediments striking east-southeast and dipping northeast. The metasediments include carbonates, paragneiss, quartzite and amphibolite. There are numerous lit-par-lit pegmatite intrusions.</p> <p>A scintillometer survey indicated five radioactive zones. Trenches in the best zone, "A", exposed carbonates, biotite-hornblende gneiss, pyroxenite syenite pegmatite and amphibolites, with interbedded quartzite.</p>
ECONOMIC FEATURES	<p>Channel samples showed a best assay of 0.085% U_3O_8 over 6.3 feet.</p>
HISTORY OF DEVELOPMENT	<p>1956: The area was prospected for molybdenum by various individuals. Three open cuts in lot 6, concession IX may date from this time.</p> <p>1958: Geological and scintillometer surveys, stripping, trenching, 4 diamond-drill holes for 1006 feet by Canorama Explorations Limited.</p>
PRINCIPAL REFERENCES	OGS, AFRO, Toronto: Tech. file 63.959

CARBREW OCCURRENCE

COMMODITY Uranium, thorium, molybdenum, fluorite

RADIOACTIVE MINERALS Uraninite

LOCATION Lots 1-4, concession XX
N½ lots 2,3 concession XIX,
Cardiff Township.
Latitude 45.040, Longitude 78.195.
Map Reference: ODM 1957-1, Cardiff and Faraday
Townships.

GEOLOGY The property is underlain to the east by
syenites of the Cardiff plutonic complex, and
to the west by dominantly calcareous metasediments.
The country rocks all trend northeasterly and
dip about 50°SE.
Uranium occurs in granite pegmatite, in syenite
pegmatite, and in association with fluorite or
molybdenite. Calcite - fluorite - uraninite
zones in complex pegmatites and in vein dikes
are up to 700 feet long and 30 feet wide.

ECONOMIC FEATURES Drilling in 1966 indicated a weighted average
of 0.50% MoS₂ over a width of 13.6 feet and a
drilled strike length of 500 feet. The best
drill intersection in 1977 assayed 0.28% U₃O₈
and 0.375% ThO₂ over 8.1 feet.

HISTORY OF DEVELOPMENT pre - 1936: Trenching and sampling for
molybdenum by various operators including
Cardiff Molybdenite Mines Limited, United
Molybdenum Corporation Limited and Ventures
Limited.
1952-57: Trenching, 12 diamond-drill holes
for 953 feet on lot 4, concession XX by
Irondale Prospectors.
ca.1956-66: IP survey and 17 diamond-drill

holes totalling about 4000 feet by Georgia
Lake Lithium Mines, Limited.

1977-78: Geological mapping; radiometric,
VLF and magnetic surveys; 6 diamond-drill holes
for 2261 feet by Carbrew Explorations Limited.

PRINCIPAL REFERENCES

OGS, AFRO, Toronto: Tech. file 63.3505

CARDAY OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite, uranothorite, uranophane

LOCATION Lots 30(S $\frac{1}{2}$), 32(N $\frac{1}{2}$), concession XII,
Lots 31(S $\frac{1}{2}$), 32, concession XIII,
Cardiff Township, Haliburton County.
Lot 33, concession XIV,
Faraday Township, Hastings County.
Latitude 45.018, Longitude 78.026.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships
(Consolidated Tungsten).

GEOLOGY The property lies near the east flank of the Centre
Lake granite. A zone of amphibolite, paragneiss, and
hybrid syenite gneiss is cut by granite and syenite
pegmatite. The zone strikes northeast and dips 50°SE,
and is overlain to the east by marble.
Uraninite, uranothorite, and uranophane, accompanied
by shearing, hematitization, and often abundant
magnetite, occur in hornblende granite (or syenite)
pegmatite dikes. Accessory minerals include fluorite,
apatite, titanite, calcite, pyrite, pyrrhotite, and
chalcopyrite.

ECONOMIC FEATURES Drilling in 1954 indicated a zone 250 feet long
averaging 2.78 pounds U₃O₈ per ton across 3.8 feet.
Assays averaged about 0.06% U₃O₈ (radiometric).

HISTORY OF DEVELOPMENT 1954-55: Geological survey and 6,348 feet of diamond
drilling in 18 holes to test possible down-dip
extension of Bicroft zone by Consolidated Tungsten
Mining Corporation.

1968-69: Geological, radiometric and magnetic surveys;

2 drill holes for 60 feet by Fidelity Mining

Investments Limited in lot 33, concession XIV, Faraday Tp.

1974-75: Geological and geiger surveys; 5 diamond-drill

holes for 1,301 feet by Carday Uranium Mines Incorporated.

PRINCIPAL REFERENCES

OGS, AFRO, Toronto: Tech. files 2.1569, 63.3295.

CARDIFF URANIUM PROSPECT

COMMODITY Uranium, thorium, fluorspar

RADIOACTIVE MINERALS Uraninite

LOCATION Lots A, 1, N½ 2, concession XVII,
Lot 2, concession XVIII,
Lots S½ 1, 3, concession XIX,
Lot 3, concession XX,
Cardiff Township.
Shaft is located in N½ lot A, concession XVII.
Latitude 45.016, Longitude 78.194.
Map Reference: ODM 1975-1, Cardiff and
Faraday Townships.

GEOLOGY The western part of the property is underlain
by marble striking N10°E and dipping 40-60°E.
The marble is overlain by scapolite amphibolite,
biotite amphibolite and biotite paragneiss in
a band 300 to 500 feet wide. These gneisses
are syenitized and grade into hybrid syenite
gneiss to the east. They are intruded by
granitic and syenitic pegmatites. Mineralization
occurs within irregular calcite - fluorite -
uraninite veins in the gneisses near the marble
contact. The veins also contain biotite,
apatite, scapolite and pyroxene, and tend to
be banded. Several radioactive zones occur
along the same strike. The South Zone comprises
the original "B" and "C" zones; the North, "A",
"E" and "F".

ECONOMIC FEATURES Within the shaft in the "C" zone, 5 shoots 60
to 175 feet long averaged 0.095% U₃O₈ (radiometric)
and 18.10% CaF₂ over 44 inches. A bulk sample
from the adit in the "E" zone assayed 0.135%
U₃O₈ (chemical). (ODM 1957, p. 65)

HISTORY OF DEVELOPMENT

Work done by Cardiff Uranium Mines, Limited, known as Cardiff Fluorite Mines, Limited prior to 1953.

1943: Stripping and blasting to investigate fluorite potential.

1947-51: South Zone - a shaft on N½ lot A, concession XVII inclined at 49° with slope length of 311 feet and levels at 125 and 250 feet, an adit 133 feet long with 147 feet of lateral work; a service adit 181 feet long; underground work including 763 feet of drifts, 90 feet of crosscuts and 374 feet of diamond drilling in 6 holes.

North Zone - trenching, stripping, diamond drilling; an adit on S½ lot 1, Concession XIX, 550 feet long with 85 feet of drifting and 617 feet of cross cutting.

1954-55: Further underground work on South Zone bringing total drifting to 1233 feet; 4 surface diamond-drill holes totalling 334 feet; 1139 tons of material hoisted.

1976: 2704 feet of diamond drilling in 7 holes by Imperial Oil Limited.

PRINCIPAL REFERENCES

ODM 1957, Vol. 66, pt. 3, p. 63-66.
OGS, GDC, Toronto: File Cardiff (South Zone),
SMDR 162.

J. C. COTTRILL OCCURRENCE

COMMODITY	Uranium
RADIOACTIVE MINERALS	Not identified
LOCATION	Lots 11 and 12, concession VI, Cardiff Township. Latitude 44.935, Longitude 78.092. Map Reference: ODM 1957-1, Cardiff and Faraday Townships.
GEOLOGY	The property is underlain by amphibolite and marble, lying immediately southeast of the Cheddar granite mass. Radioactivity occurs in granite or granite pegmatite bodies intruding the metasediments, which strike north-northeast and dip 40-60°E.
ECONOMIC FEATURES	Core intersections of pegmatite range from 1 to 53 feet.
HISTORY OF DEVELOPMENT	1953-54: Surface exploration by J. C. Cottrill. 1955: Three diamond-drill holes for 621 feet by Climax Molybdenum Company. 1975: Radon gas survey by Kerr Addison Mines Limited.
PRINCIPAL REFERENCES	ODM 1956, Vol. 65, pt. 6, p. 52-53. OGS, AFRO, Toronto: Tech. file 2.1884 (Kerr Addison Mines Limited).

CROFT PROSPECT

COMMODITY	Uranium, thorium
RADIOACTIVE MINERALS	Uranothorite, secondary uranium minerals
LOCATION	<p>Lots 30, N$\frac{1}{2}$ 31, concession XIII, Lots 26 - 32, concession XIV and XV, Lots 30 -32, concession XVI, Cardiff Township, Haliburton County.</p> <p>Lots 33, 34, concession I, Herschel Township, Hastings County.</p> <p>Lots 32, 33, concession XV, Lot 33, concession XVI,</p> <p>Farada Faraday Township, Hastings County.</p> <p>The main zone ("Adit" or "J" zone) is in lot 32, concession XV, Cardiff Township.</p> <p>Latitude 45.034, Longitude 78.030.</p> <p>Map Reference: ODM 1957-1, Cardiff and Faraday Townships.</p>
GEOLOGY	<p>The Croft property lies in the same belt of syenitized paragneiss and amphibolite which hosts the Biccroft Uranium Mine. The metasediments strike N10°E and dip 45-65°SE. They comprise hornblende gneiss, amphibolite, biotite paragneiss, and biotite-garnet-sillimanite gneiss ("augen-gneiss"). They are cut and replaced by irregular syenite and granite dikes. Uranium mineralization occurs in shoots within complex pegmatitic granite dikes.</p> <p>Of the five main radioactive zones, the most important is the "J" or "Adit" zone. Four lenticular, <u>en echelon</u> dikes, ranging in length from 90 to 580 feet, occur along the contacts of pods of biotite-garnet-sillimanite gneiss. The dikes are biotite granite pegmatite in which the feldspar shows porphyroblastic texture. Uranothorite occurs with accessory zircon, pyrite, and molybdenite.</p>

ECONOMIC FEATURES

In 1975, the "J" zone, 1500 feet long by 40 feet wide and averaging 0.57 pounds U_3O_8 per ton, was estimated to contain reserves of 800,000 short tons, The South Zone was estimated to contain 100,000 to 200,000 tons at about 0.084% U_3O_8 (OGS file 63.3312). In 1978, estimates of reserves by Kerr Addison Mines Limited were 979,810 tons in 3 zones grading about 1.20 pounds U_3O_8 per ton (Northern Miner, Nov. 9/78).

HISTORY OF DEVELOPMENT

1953-54: Work by Croft Uranium Mines Limited.

Airborne scintillometer survey; 1585-foot adit at 70 feet below surface into "J" zone; underground work included 1211 feet of drifts, 485 feet of crosscuts, and 93 holes for 3053 feet; surface work included trenching and 40,117 feet of diamond drilling in 115 holes.

1975: Radon gas survey; experimental leaching, and 44 diamond-drill holes totalling 17,766 feet by Kerr Addison Mines Limited.

1977-78: Diamond drilling continuing with 48,745 feet already completed by Kerr Addison Mines Limited.

PRINCIPAL REFERENCES

Northern Miner, November 9, 1978.

ODM 1956, Vol. 65, pt. 6, p. 37-40.

OGS, AFRO, Toronto: Tech. file 63.3312.

REMARKS

This property has been described in the Northern Miner as the Cam Mines - Kerr Addison - Dolores Bench joint venture.

G. H. DENFIELD OCCURRENCE

COMMODITY Uranium, thorium, mica

RADIOACTIVE MINERALS Uraninite, uranothorite, euxenite

LOCATION Lots 11 - 16, concession XVII - XXI,
Cardiff Township.
Latitude 45.062, Longitude 78.151.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships.

GEOLOGY The property is underlain by granite, pegmatitic granite,
and hybrid granite gneiss. Uraninite, uranothorite,
and euxenite occur in mica pyroxenite, pegmatite
dikes and red pegmatitic granite within amphibolite,
paragneiss, and syenite gneiss. The radioactive mica
pyroxenite strikes N20°E and dips 25-35°E. Uraninite
also occurs in a small calcite-fluorite vein.

ECONOMIC FEATURES Grab samples returned assays of 0.020, 0.045, and
0.071% U₃O₈ (chemical).

HISTORY OF DEVELOPMENT pre-1949: Work on a mica showing by an unknown operator.
1949: Two diamond-drill holes for 170 feet by Fission
Mines Limited.
1953: Prospecting, stripping, trenching, 300 feet of
X-ray drilling by G.H. Denfield.
1954-55: Geological mapping, scintillometer survey,
stripping, trenching, one diamond-drill hole for
42.5 feet by Stratmat Limited.
1968: Scintillometer survey and geological mapping
by Cope Lake Mines Limited.
1975: Two diamond-drill holes for 318 feet in S½ lot
11, concession XXI by E. T. Hogan.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 53.
OGS, AFRO, Toronto: Tech. files 53A.189 (Stratmat Limited),
63.2418 (Cope Lake Mines Limited).

R. W. DOUBT OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite

LOCATION N $\frac{1}{2}$ lot 10, concession II,
Cardiff Township.
Latitude 44.900, Longitude 78.079.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships.

GEOLOGY Small, irregular granite bodies and sills intrude
hornblende gneiss and amphibolite striking N15^oE
and dipping 40-50^oSE.
Pink-to-red leucogranite bodies with patchy hematitization
contain accessory magnetite, allanite, uranothorite,
zircon, and tourmaline. Allanite is concentrated
near leucogranite margins.

ECONOMIC FEATURES Granite bodies are 1 to 50 feet wide, and up to 250
feet long. Geiger readings are erratic, averaging
2 to 15 times background.

HISTORY OF DEVELOPMENT 1955-56: Stripping and trenching over an area 700
feet long by R.W. Doubt.
1975: Radon gas survey by Kerr Addison Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 53-54.
OGS, AFRO, Toronto: Tech. file 2.2027 (Kerr Addison
Mines Limited).

EELS LAKE OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Not identified.

LOCATION Lots 2 - 4, concession II and III,
Lots 2 - 6, concession IV,
Cardiff Township.
Latitude 44.904, Longitude 78.116.
Map Reference: ODM 1957-1, Cardiff and Faraday
Townships (Red Bark - Eels Lake property).

GEOLOGY The property lies on the southeast margin of the Cheddar granite mass. It is underlain by a belt of biotite-hornblende gneiss, biotite paragneiss, and amphibolite with minor marble. The metasediments strike northeast and dip steeply to the east. Radioactivity occurs in granite pegmatite dikes, the largest of which is estimated to be 1200 feet long and 100 feet wide. Mineralized pegmatites are generally hematitized, with accessory magnetite and yellow uranium stain.

ECONOMIC FEATURES Samples taken in 1969 returned assays of 0.44% ThO_2 and 0.03% U_3O_8 from a trench, and 0.205% U_3O_8 and 0.03% ThO_2 from a blast sample.

HISTORY OF DEVELOPMENT 1954-55: Geiger and geological surveys, 4 diamond-drill holes for 1009 feet by Red Bark Mines, Limited.
1954-55: Eight diamond-drill holes for 1091 feet in lot 4, concession IV by Hazeur Chibougamau Mines Limited.
1967-69: Magnetic and radiometric surveys, trenching and blasting by Goldmaster Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 63 (Hazeur Chibougamau Mines, Limited), p. 73 (Red Bark Mines Limited).
OGS, AFRO, Toronto: Tech. files 63.2342 (Goldmaster Mines Limited), 63.2444 (Goldmaster Mines Limited).

ELMRIDGE OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite

LOCATION Lots 6 - 14, concession III,
Lots 7, 8, 14, concession IV,
Cardiff Township.
Latitude 44.908, Longitude 78.078.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships.

GEOLOGY The claims are underlain by a belt of amphibolite and
marble striking northeast and dipping 40-65°E.
Mineralization occurs within leucogranite and granite
pegmatite dikes and bodies conformable intruding
epidote-hornblende gneiss. Radioactive pegmatites
carry accessory biotite, magnetite, and allanite.
Local minor pyrite occurs throughout all rock units.

ECONOMIC FEATURES One pegmatite measured 40 feet by 300 feet. Geiger
readings of mineralized zones average 1 to 3 times
background, with spot highs to 13 times. Three grab
samples assayed 0.28, 0.18, and 0.28% U₃O₈ (chemical).

HISTORY OF DEVELOPMENT 1954: Geological survey, prospecting by Simard and Knight.
1956: Four diamond-drill holes for 1401 feet by
Elmridge Mines Limited.
1975: Radon gas survey by Kerr Addison Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 54.
OGS, AFRO, Toronto: Tech. files 63A.184 (Simard and
Knight), 2.2027 (Kerr Addison Mines Limited).

EMPIRE A, C, D OCCURRENCE

COMMODITY	Uranium, thorium, fluorite
RADIOACTIVE MINERALS	Uranothorite, uraninite, allanite, thorite
LOCATION	<p>Lot A, concession XII, Lots A, 1-4, Concession XIII, Lots A, 1, 2, Concession XV, Lot A, concession XVI, Cardiff Township. Latitude 45.004, Longitude 78.191. Map Reference: ODM 1957-1, Cardiff and Faraday Townships</p>
GEOLOGY	<p>The property, lying on the north contact of the Cheddar granite mass, is underlain by granite, granite gneiss, syenite, marble and biotite-hornblende gneiss striking N65°E and dipping 45-60°SE.</p> <p>Uranothorite occurs in lenticular, discontinuous leucogranite or granite pegmatite intrusive bodies. Biotite is the main accessory mineral, with local smoky quartz, hornblende and chalcopryrite.</p> <p>Other rare accessories are uraninite, zircon, titanite, allanite, magnetite and pyrite. Occasional calcite veins carry some fluorite and molybdenite.</p>
ECONOMIC FEATURES	<p>Drill core samples average 0.078% U₃O₈ (chemical) over 1 foot.</p>
HISTORY OF DEVELOPMENT	<p>1954-55: Scintillometer and geological surveys; 4 drill holes for 1972 feet by Empire Oil and Minerals Incorporated.</p>

1967-70: Airborne magnetic, electromagnetic, and radiometric surveys; 5 drill holes for 2138 feet by Canuc Mines Limited.

1971-75: Prospecting for fluorite; 4 diamond-drill holes for 2523 feet by Landair Explorations Limited (see also Empire B Prospect, Monmouth Township).

1976: Scintillometer and VLF-EM surveys by Powerex Resources Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 54-56.

OGS, AFRO, Toronto: Tech. files 63A.215, 63.2897

(Landair Explorations Limited), 63.3399 (Powerex Resources Limited), 63.3441 (Powerex Resources Limited).

ENERTEX OCCURRENCE

COMMODITY	Uranium, thorium, fluorite
RADIOACTIVE MINERALS	Uranothorite (?)
LOCATION	<p>Lots 3(N$\frac{1}{2}$), 4(N$\frac{1}{2}$), 5, concession XV, Cardiff Township.</p> <p>Latitude 45.005, Longitude 78.169.</p> <p>Map Reference: ODM 1957-1, Cardiff and Faraday Townships.</p> <p style="padding-left: 40px;">Coordinates derived from NTS sheet.</p>
GEOLOGY	<p>Quartz-feldspar pegmatites of variable size intrude amphibolitic paragneiss, granite gneiss, and granite. The gneisses carry local pyrite, pyrrhotite, chalcoppyrite, and calcite.</p> <p>Mineralization is generally confined to red, altered granite pegmatites which contain calcite, magnetite, and fluorite. Locally pyrrhotite and chalcoppyrite are present, and possible uranothorite.</p>
ECONOMIC FEATURES	<p>Grab samples assayed up to 0.05% U₃O₈ and 0.22% ThO₂. Drilling returned low uranium and thorium values. One hole intersected 9 feet assaying 13.4% CaF₂.</p>
HISTORY OF DEVELOPMENT	<p>1967: Airborne electromagnetic, magnetic and scintillometer surveys by L. T. Chandler.</p> <p>1975: Linecutting, prospecting and trenching by stakers.</p> <p>1976-77: Scintillometer, magnetic, and VLF-EM surveys; trenching, 5 diamond-drill holes for 2114 feet by Enertex Developments Incorporated.</p>
PRINCIPAL REFERENCES	<p>OGS, AFRO, Toronto: Tech. files 63.3509, 63.3431, 63.3393, 63.2148.</p>

FAB METAL OCCURRENCE

COMMODITY	Uranium
RADIOACTIVE MINERALS	Uraninite
LOCATION	Lots 27-30, concession IX, Lots 27, 28, concession X, Cardiff Township Latitude 44.982, Longitude 78.016. Map Reference: ODM 1957-1, Cardiff and Faraday Townships.
GEOLOGY	Uraninite occurs sparsely within sheared pink granite pegmatites intruding marble, biotite-hornblende gneiss and meta- greywacke. These rocks strike N20°W and dip 70°W.
ECONOMIC FEATURES	Geiger readings average 3 to 5 times background on surface, and up to 7 times in drill core. The maximum pegmatite exposure is 50 feet long by 1.5 feet wide.
HISTORY OF DEVELOPMENT	1953: Geological survey by Simard and Knight. 1954: Two drill holes for 1885 feet by Fab Metal Mines Limited.
PRINCIPAL REFERENCES	ODM 1956, Vol. 65, pt. 6, p. 56. OGS, AFRO, Toronto: Tech. file 63A. 170

HISTORY OF DEVELOPMENT

1922: First discovery of scattered uraninite in a zone 3100 by 250 feet by W. M. Richardson.

1929-31: Trenching; an adit 600 feet long with 850 feet of drifts and raises; a shaft 50 feet from surface to adit by Ontario Radium Corporation, Limited.

1931-33: A 50 t. p. d. mill was built to test recovery of radium minerals by International Radium and Resources, Limited.

1946-48: 12,000 feet of diamond drilling and some underground exploration by Fission Mines, Limited.

1955: 10 diamond-drill holes for 2545 feet, sampling and surface work by Fission Mines, Limited.

PRINCIPAL REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 142-145.

ODM 1957, Vol. 66, pt. 3, p. 66-67.

D. E. FOSTER OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite

LOCATION Lot 20, concession XV,
Cardiff Township.
Latitude 45.020, Longitude 78.090.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships

GEOLOGY The property is underlain by part of the Deer Lake
syenite, and by a band of amphibolite and paragneiss.
A radioactive dike striking N40°E cuts biotite amphibolite.
It is exposed for 200 feet and is 1.5 to 10 feet wide.
The dike is leucogranite pegmatite with abundant
coarse magnetite, and accessory uranothorite,
zircon and allanite.

ECONOMIC FEATURES A grab sample of the pegmatite at the location of the
highest geiger reading (100 times background) assayed
0.15% U₃O₈ (radiometric).

HISTORY OF DEVELOPMENT 1956: Stripping, 3 drill holes for 1695 feet by D.E. Foster.
1966: Stripping and trenching by P. Simonds.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 58.
Regional Geologist's Files, OMNR, Huntsville: File
Cardiff Township No 94 (P. Simonds).

J. GILBERT OCCURRENCE

COMMODITY	Uranium, thorium
RADIOACTIVE MINERALS	Uranothorite
LOCATION	Lot 9, concession VII, Cardiff Township. Latitude 44.943, Longitude 78.109. Map Reference: ODM 1957-1, Cardiff and Faraday Townships.
GEOLOGY	Small granite pegmatite bodies intrude biotite-hornblende gneiss and limestone. Mineralization occurs within crystalline limestone, a gneiss inclusion in pegmatite, and in a magnetite-rich pegmatite dike 0.5 feet wide containing cyrtolite and uranothorite.
ECONOMIC FEATURES	A grab sample from the No. 1 Zone (crystalline limestone) assayed 0.113% U_3O_8 .
HISTORY OF DEVELOPMENT	1955-56: Geological survey and 3 drill holes for 166 feet by J. Gilbert. 1975: Radon gas survey by Kerr Addison Mines Limited.
PRINCIPAL REFERENCES	ODM 1956, Vol. 65, pt. 6, p. 58-59. OGS, AFRO, Toronto: Tech. file 63A.268, 2.2027 (Kerr Addison Mines Limited).

HALO PROSPECT
(Northwest and Lake Zones)

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite, uranothorite

LOCATION Lots 4 and 5, concession XVIII,
Cardiff Township
Latitude 45.028, Longitude 78.180.

Map Reference: ODM 1957-1, Cardiff and Faraday
Townships.

GEOLOGY

The property, situated just west of the Monck Lake granite mass, is underlain by a curving belt of amphibolite, and paragneiss with interbedded marble and metamorphic pyroxenite. The metasediments strike northerly, parallel to the granite contact, and dip steeply east. In a 2 to 2½ mile long area, uranium mineralization occurs in pegmatite, syenite, metamorphic pyroxenite and calcite-fluorite veins.

In the Northwest Zone, in N½ lot 4, concession XVIII, the country rock is a biotite paragneiss or biotite-garnet paragneiss striking mainly west to northwest and dipping 30-75° S to SW. Uranium minerals, chiefly uraninite, occur in granite or syenite pegmatite characterized by abundant pyroxene and brecciation. The pegmatite bodies are irregular masses striking north to northwest and fingering out to the northwest.

The country rocks of the Lake Zone, S½ lots 4 and 5, concession XVIII, are paragneiss and garnet-biotite paragneiss with a narrow band of metamorphic pyroxenite and interbedded marble. These metasediments have variable strikes and dips. Uranium minerals, mainly uranothorite, occur in irregular lenticular masses of leucogranite pegmatite.

ECONOMIC FEATURES

The lowest estimate of reserves in 1957 was 472,000 tons grading 0.112% U_3O_8 . (Reg. Geol. File 39)

HISTORY OF DEVELOPMENT

1953-54: Geological and geiger surveys; stripping, trenching, limited diamond drilling by Stratmat Limited.

1955-56: Surface diamond drilling for 31,790 feet; a vertical, 3-compartment shaft 75 feet deep; underground development included 1,726 feet in No. 1 adit (Northwest Zone) and 863 feet in No. 2 adit (Lake Zone), and 9822 feet of diamond drilling in 89 holes. Work by Halo Uranium Mines, Limited.

1968: Geological, scintillometer and electromagnetic surveys; trenching and diamond drilling by Amalgamated Rare Earth Mines Limited.

1973: Surface exploration by Imperial Oil Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 59-61.

Regional Geologist's Files, OMNR, Huntsville: File Cardiff Township No. 39 (Amal. Rare Earth Mines).

REMARKS

This property is part of the present Rare Earth Resources prospect.

The Bald Mountain Zone comprises paragneiss, pyroxene gneiss and marble.

ECONOMIC FEATURES

Drilling in the Pyroxenite Zone has cut sections from 1 to 3 feet wide grading 0.15 to 0.20% U_3O_8 . In the South Zone drill intersections averaged from 0.05 to 0.75% U_3O_8 over 1.5 to 5.4 feet. In the Bald Mountain Zone, the best drill intersection graded 0.25% U_3O_8 over 8.4 feet.

HISTORY OF DEVELOPMENT

1953: Geological and scintillometer surveys, stripping, diamond drilling by Stratmat Limited.

1955: Sixteen trenches and 27 diamond-drill holes for 5064 feet in the Pyroxenite Zone; stripping, sampling and 23 diamond-drill holes for 9491 feet in the South Zone; 7 diamond-drill holes for 1516 feet in the Bald Mountain Zone. Work by Halo Uranium Mines Limited.

1968: Radiometric survey by Amalgamated Rare Earth Mines, Limited.

1973: Surface exploration by Imperial Oil Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 61-63.

Regional Geologist's Files, OMNR, Huntsville: File Cardiff Township No. 39 (Amal. Rare Earth Mines).

KEMP OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, thorite

LOCATION Lots 1(S₂), 2-5 concession XIV
Cardiff Township
Latitude 45.001, Longitude 78.159.

Map Reference: ODM 1957-1, Cardiff and Faraday Townships.

GEOLOGY The property lies within a belt of marble adjacent to the north boundary of the Cheddar granite mass. The marble, striking east and dipping vertically, is cut by small sills or masses of pink leucogranite.

The radioactive showings consist of disseminated uranothorite in pyroxene marble or thorite crystals in pyroxene skarn adjacent to leucogranite sills.

ECONOMIC FEATURES Best drill intersection graded 0.031% U₃O₈ over 18 feet.

HISTORY OF DEVELOPMENT 1954-55: Stripping, trenching, 7 diamond-drill holes for 2882 feet by Kemp Uranium Mines, Limited.
1975: One drill hole for 124 feet in N₂ lot 4, Concession XIV by E. T. Rogan.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 64.

KENMAC CHIBOUGAMAU PROSPECT

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite

LOCATION Lots 6 - 8, concession XIV,
Cardiff Township.
Latitude 45.002, Longitude 78.155.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships.

GEOLOGY Numerous small masses and dikes of pegmatite cut amphibolite, paragneiss, and marble. The metasediments strike northwest, and dip steeply northeast. Uranothorite and allanite occur with coarse magnetite in a leucogranite pegmatite dike cutting biotite-rich paragneiss. A pyroxene-rich syenite pegmatite cutting syenitized amphibolite contains calcite, biotite, and accessory zircon, apatite, scapolite, and uranothorite.

ECONOMIC FEATURES In 1955, estimated reserves were 200,000 tons averaging 0.20% U_3O_8 in a zone 20 feet wide by 525 feet long to a depth of 200 feet (Reg. Geol. File 121).

HISTORY OF DEVELOPMENT 1955: Stripping, trenching; 52 diamond-drill holes totalling 19,408 feet; adit with 275 feet of development; scintillometer survey by Kenmac Chibougamau Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 64-65.
Regional Geologist's Files, OMNR, Huntsville: File Cardiff Township No. 121.

KERR ADDISON - GROUP E OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uranothorite

LOCATION Lot 7, concession V,
Lots 4 - 6, concession VI and VII,
Cardiff Township.
Latitude 44.931, Longitude 78.124.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships.

GEOLOGY The property is situated at the southeast contact of
the Cheddar granite mass and is partially underlain by
an embayment of marble in the granite. Paragneiss,
amphibolite, and pegmatites are also exposed.
Radioactive mineralization occurs in narrow (up to 30
feet wide) granite and syenite pegmatites, and in
granite. Allanite and uranothorite are often closely
associated with magnetite.

ECONOMIC FEATURES The best assays were recorded from a drill hole in
lot 7, concession V, where 2 intersections gave 0.013%
 U_3O_8 over 30 inches, and 0.17% U_3O_8 and 0.42% ThO_2 over
8 inches.

HISTORY OF DEVELOPMENT 1954-56: Stripping and trenching on 8 radioactive
showings; 13 diamond-drill holes for 4393 feet by
Thor Uranium Mines Limited and Consolidated Thor
Mines, Limited.
1955-56: Two diamond-drill holes for 857 feet in
lot 5, concession VI by Lanark Uranium Mines Limited.
1975-76: Radon gas and radiometric surveys by Kerr
Addison Mines Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 50-52 (Cons. Thor Mines),
p. 65-66 (Lanark Uranium Mines).

OGS, AFRO, Toronto: Tech. file 2.2027

: Cardiff Township Drill Report No. 20 (Lanark
Uranium Mines Limited).

McLEAN - HOGAN OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite, uranothorite

LOCATION Lots 8-10, concession XIX,
Cardiff Township.
Latitude 45.040, Longitude 78.164.
Map Reference: ODM 1957-1, Cardiff and Faraday
Townships.

GEOLOGY Trenches expose a complex of mica metamorphic
pyroxenite, hornblende gneiss, pegmatite,
leucogranite and patches of marble, striking
N25°E and dipping about 40°E.
Vugs in the mica pyroxenite, which is exposed
over a length of 1000 feet, carry pyroxene,
apatite, titanite, scapolite, uraninite,
uranothorite, calcite, fluorite and locally
abundant chalcopyrite. Scattered uranothorite
occurs in a granite pegmatite dike intruding the
mica pyroxenite.

ECONOMIC FEATURES Grab samples assayed 0.019, 0.131 and 0.540%
U₃O₈ (chemical). The best bulk sample assayed
0.10% U₃O₈.

HISTORY OF DEVELOPMENT 1953: Eleven trenches by E. T. Hogan and some
short drill holes by Cope Lake Mines Limited.
1954-55: Scintillometer and geological surveys,
bulk sampling, 69 diamond-drill holes totalling
3585 feet by Anuwon Uranium Mines Limited.
1968: Scintillometer and geological surveys by
Cope Lake Mines Limited.

1975: Two diamond-drill holes for 332 feet by
E. T. Hogan (for Canadian Nickel Company Limited).

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 66-67.

OGS, AFRO, Toronto: Tech. file 63.2418 (Cope Lake Mines).

: Cardiff Township Drill Reports 11 (Anuwon Mines
Limited), 72 (E.T. Hogan).

MILHOL OCCURRENCE

COMMODITY Uranium, thorium, molybdenum

RADIOACTIVE MINERALS Allanite, uranothorite

LOCATION Lots 8 (N $\frac{1}{2}$), 9, concession IV,
Lots 9 - 12, concession V,
Lots 10 - 12, concession VI,
Cardiff Township.
Latitude 44.922, Longitude 78.091.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships.

GEOLOGY Amphibolite, garnet-biotite paragneiss, granite
gneiss and marble trend northerly and dip 40-70°E.
Mineralization occurs within leucogranite pegmatites
conformably intruding country rock. Pegmatites
contain feldspar, smoky quartz, and minor mafics,
with accessory titanite, pyrite, pyrrhotite, allanite,
uranothorite, molybdenite, and zircon. Radioactivity
is associated with shearing and fracturing in the
pegmatites, and is strongest at their margins.

ECONOMIC FEATURES One dike attains a width of 40 feet. Two grab samples
assayed 0.18 and 0.28% U₃O₈ (chemical); drill core
samples averaged approximately 0.06% U₃O₈ (chemical).

HISTORY OF DEVELOPMENT 1914-15: 50 pounds of molybdenum concentrate were
produced from a cut in pegmatite 55 by 4 by 5 feet.
1953-55: Geological and geiger surveys, trenching,
12 drill holes for 3631 feet by Fab Metal Mines
Limited, under option from Milhol Exploration and
Development Limited.
1976-77: Radon gas survey and 2 drill holes for
697 feet by Kerr Addison Mines Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 67.

OGS, AFRO, Toronto: Tech. files 63A.177, 53A.169,

2.2287 (Kerr Addison Mines Limited).

: Cardiff Township Drill Report No. 27.

MINDUS OCCURENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, monazite, allanite, uraninite, ellsworthite

LOCATION Lots 8-18, concession XIV-XVI,
Cardiff Township
Latitude 45.000, Longitude 78.127.

Map Reference: ODM 1957-1, Cardiff and Faraday Townships

GEOLOGY Granite pegmatites intrude granite, granite gneiss, biotite gneiss and hybrid syenite which trend southeast and dip southwest at about 60°.

Radioactive pegmatites are massive, red, and coarse-grained, and occur most abundantly as irregular dikes and stocks to 40 feet wide within the biotite gneiss. Uranium mineralization is associated with fracturing, hematitization and abundant magnetite. Accessory minerals are uranothorite, monazite, allanite, uraninite, ellsworthite, magnetite, hematite and molybdenite.

ECONOMIC FEATURES A chip sample assayed 0.12% U_3O_8 over 7 feet. One drill hole intersected very weak radioactivity.

Opawica Explorations Incorporated traced one dike along a strike length of 420 feet, and obtained assays of 0.40 pounds U_3O_8 per ton over 1.6 feet to 2.80 pounds U_3O_8 per ton over 6 inches from freshly blasted samples. Kerr Addison Mines Limited reported no significant results.

HISTORY OF DEVELOPMENT

1953: Geological and scintillometer surveys,
trenching by Mindus Corporation Limited.

1955-56: Trenching and 4 drill holes for 766 feet
by Mindustrial Corporation Limited.

1957-58: Geological and scintillometer surveys,
trenching, 4 drill holes for 108 feet by Mina Nova
Mines Limited.

1975-76: Radon gas, lake bottom sediment and scintillometer
surveys by Karr Addison Mines Limited.

1978: Radiometric, VLF - EM and geological surveys
by Opawica Explorations Incorporated.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 67-68.

OGS, AFRO, Toronto: Tech. files 63A.172, 63.941,
2.2160 (Karr Addison Mines Limited), 2.2836
(Opawica Explorations Incorporated).

: Cardiff Township Drill Report No. 54, 66.

MOLYBDENUM CORPORATION OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite

LOCATION Lot 10, concession XI and XII,
Cardiff Township.
Latitude 44.964, Longitude 78.113.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships

GEOLOGY The property lies on the contact of the Cheddar granite gneiss mass and biotite paragneiss. The gneiss strikes N20-30°W and dips 0-65°W. It carries minor molybdenite and pyrite, and is intruded by pegmatite.
Allanite and uranothorite occur in fine- to medium-grained graphic leucogranite and leucogranite pegmatite.

ECONOMIC FEATURES Geiger readings average 2 to 5 times background, with spot highs to 25 times. A 2,000-pound bulk sample assayed 0.06% U_3O_8 . The highest drill core assay was 0.23% U_3O_8 .

HISTORY OF DEVELOPMENT 1953-55: Stripping, trenching, bulk sampling, one drill hole for 300 feet by Molybdenum Corporation of America.
1968: Geological, magnetic and radiometric surveys; stripping, trenching, 8 drill holes for 2838 feet by Cam Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 68-69.
OGS, AFRO, Toronto: Tech. file 63.2457 (Cam Mines Limited).

PAUDASH LAKE OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Not identified

LOCATION $N\frac{1}{2}$ lots 24 - 26, concession IX
Lots 24 ($S\frac{1}{2}$), 25, 26 Concession X
Cardiff Township.
Latitude 44.984, Longitude 78.033.

Map Reference: ODM 1957-1, Cardiff and Faraday Townships

GEOLOGY The area is underlain by the Centre Lake granite sill, flanked to the east by a band of syenitized metasediments containing bodies of granite and granite pegmatite. Marble is exposed to the south. The gneisses strike north-northeast and dip $30-70^{\circ}$ SF. Mineralization occurs within a series of sub-parallel granite pegmatite dikes or sills cutting biotite-hornblende gneiss. Radioactivity is associated with magnetite and fracturing. Local intense hematitization and local minor sulphides are reported.

ECONOMIC FEATURES Assays from diamond drilling included 0.06 and 0.02% U_3O_8 (radiometric) over 2.5 and 7.0 feet respectively.

HISTORY OF DEVELOPMENT 1955: Sixteen diamond drill holes for 3548 feet by Paudash Lake Uranium Mines Limited.
1975: Scintillometer survey, reconnaissance geology by the Grenville Uranium Syndicate.
1978: Geological mapping by Dolores Bench Resources Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 72-73.
OGS, AFRO, Toronto: Tech. files 2.2054 (Grenville Uranium Syndicate), 2.2867 (Dolores Bench Resources Limited).

RIDGEMAR OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, thorite, uraninite, allanite (?)

LOCATION Lots 29, 30, Concession VIII,
Cardiff Township.
Latitude 44.973, Longitude 78.007.
Map Reference: ODM 1957-1, Cardiff and Faraday
Townships (Red Bark Mines Limited - Paudash Lake).

GEOLOGY Marble, striking $N60^{\circ}E$ and dipping $30-35^{\circ}S$, is
conformably intruded by a granite pegmatite sill about
40 feet wide. The sill contains uranothorite, thorite,
uraninite, allanite (?), magnetite, and local
hematitization.

ECONOMIC FEATURES Drill core samples assayed in the order of 0.085% U_3O_8
and 0.47% ThO_2 .

HISTORY OF DEVELOPMENT 1954-55: Geological and magnetometer surveys by Red
Bark Mines, Limited.
1975: Scintillometer survey and trenching by A. C.
MacPherson and Company, Limited.
1976: Radiometric survey; 10 diamond-drill holes for
1575 feet by Ridgemar Explorations and Development
Company Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 73-74 (Red Bark Mines Limited)
OGS, AFRO, Toronto: Tech. files 63.3343, 63.3442.

TRIPP OCCURRENCE

COMMODITY Uranium, thorium, fluorite

RADIOACTIVE MINERALS Uraninite, uranothorite, allanite, thorite

LOCATION Lot 8, Concession XXI,
Cardiff Township.
Latitude 45.061, Longitude 78.179.
Map Reference: ODM 1957-1, Cardiff and Faraday
Townships

GEOLOGY The property lies within a belt of amphibolite and syenitized gneisses northwest of the Cardiff plutonic complex. The gneisses strike N60°E and dip 30-50°SE. Radioactivity occurs as uraninite in red syenitized gneiss, uranothorite in pegmatite, and uraninite and uranothorite in calcite-fluorite-apatite veins. The largest vein is 110 feet long and up to 7 feet wide. Accessory minerals include magnetite, pyrite, chalcopyrite, allanite and thorite.

ECONOMIC FEATURES Thirteen 40-pound grab samples averaged 0.68% U₃O₈. Channel samples returned values of 0.516% U₃O₈ over 6.5 feet and 0.21% U₃O₈ over 85 feet.

HISTORY OF DEVELOPMENT 1924: Trench; 22-foot shaft with 18 feet of drifting; hand-picking of 2 tons of fluorite by Industrial Minerals Corporation.
1954-56: Scintillometer survey; stripping, pitting, trenching; 8 diamond-drill holes totalling 1551 feet; an inclined shaft (45°E) was sunk with a level at 125 feet, 274 feet of crosscuts, 192 feet of drifts, 13 underground drill holes totalling 3150 feet; 1600 tons of ore were

removed and stockpiled. In 1955, a 300 t.p.d. gravity separation pot mill was constructed and operated briefly - at least one small shipment of concentrate was made to the Eldorado Refinery in Port Hope. Work by Nu-Age Uranium Mines Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 69-70.

Nu-Age Uranium Mines Limited (1954-56) Progress Reports.

On file, OGS, MDS, Toronto.

TRITON OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite, uranothorite, uranophane, allanite

LOCATION Lots 7-9, concession I and II,
Cardiff Township.
Latitude 44.729, Longitude 78.215.
Map Reference: ODM 1957-1, Cardiff and Faraday
Townships

GEOLOGY Dikes and irregular bodies of granite pegmatite intrude
biotite-hornblende gneiss striking $N0-25^{\circ}E$ and dipping
 $40-50^{\circ}E$. To the north a lenticular band of silicated marble
strikes $N5^{\circ}W$ and dips $45^{\circ}E$.
Uraninite associated with coarse mica occurs in mica-
diopside marble. Pink leucogranite pegmatite bodies
contain uranothorite, allanite and uranophane associated
with biotite, magnetite and hematitization.

ECONOMIC FEATURES The largest pegmatite is 110 by 330 feet. Geiger
readings over mineralized zones averaged 3 times
background, maximum 20 times. The best drill core
intersections assayed 0.16% U_3O_8 over 0.6 feet and
0.118% U_3O_8 over 0.3 feet.

HISTORY OF DEVELOPMENT 1954: Geological and geiger surveys by Tetra Uranium
Mines Limited.
1955: Trenching; 16 diamond-drill holes totalling 3280
feet by Triton Uranium Mines Limited.
1975: Radon gas survey by Kerr Addison Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 75-76.
OGS, AFRO, Toronto: Tech. files 63.523, 2.2027 (Kerr
Addison Mines Limited).
: Cardiff Township Drill Report No. 24.

Glamorgan Township
(NTS 31 D/16)

CASSIAR RAINBOW OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, euxenite, uranothorite, uranophane

LOCATION Lots 32 - 35, concession I,
Lots 33 - 35, concession II,
Lots 32 - 34, concession III,
Glamorgan Township.
Lots 3 - 5, concession III,
Lots 5, S½ of 2 - 4, concession II,
Monmouth Township.
Latitude 44.890, Longitude 78.327.
Map Reference: ODM 2173, Glamorgan Township.

GEOLOGY A belt of paragneiss and marble striking N30°E and dipping 40°SE, is intruded by bodies of metagabbro, nepheline gneiss, syenite, granite, and granite pegmatite.
Radioactivity occurs in leucogranite pegmatite, and in syenite pegmatite bodies 2 to 50 feet wide.
Allanite was noted in one biotite granite pegmatite dike. Euxenite, uranothorite, and uranophane were reported from the Monmouth Township claims.

ECONOMIC FEATURES Pegmatites gave geiger readings of 3 to 6 times background, with rare spot highs to 10 times.

HISTORY OF DEVELOPMENT 1955-56: Scintillometer survey; 1 diamond-drill hole to 731 feet, 6 packsack drill holes for 288 feet by Cassiar Rainbow Gold Mines Limited.

PRINCIPAL REFERENCES GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 270.
ODM 1956, Vol. 65, pt. 6, p. 77-78.

EDGEWOOD OCCURRENCE

COMMODITY	Uranium, thorium
RADIOACTIVE MINERALS	Not identified
LOCATION	Lots 22 - 24, concession I, Lots 21 - 24, concession II, Lot 21, concession III, Glamorgan Township. Latitude 44.873, Longitude 78.386. Map Reference: ODM 2173, Glamorgan Township. Coordinates derived from NTS sheet.
GEOLOGY	Limestones and hornblende gneiss striking north and dipping east are intruded by gabbro and pegmatite. Uranium mineralization occurs in pink granite pegmatite dikes which intrude the limestones and are mostly conformable to bedding. The dikes contain smoky quartz, clusters of biotite, and pyrite, pyrrhotite, and chalcopyrite.
ECONOMIC FEATURES	Drilling intersected good grades along a strike length of 60 feet. Drill core samples assayed, in pounds per ton of U_3O_8 , 0.70 over 2.5 feet, 3.2 over 2 feet, and 0.80 over 1 foot.
HISTORY OF DEVELOPMENT	1968: Sampling by Gunnex Limited. Geological survey by Watts, Griffis and McOuat. 1976: Sampling by Conwest Exploration Company. 1977: Radiometric and geological surveys, 12 diamond-drill holes totalling 3623 feet by Edgewood Explorations Incorporated (known until 1977 as Crystal Comstock Mines Limited).
PRINCIPAL REFERENCES	OGS, AFRO, Toronto: Tech. file 63.3476.

MANDARIN OCCURRENCE

COMMODITY Uranium, thorium, molybdenite, feldspar

RADIOACTIVE MINERALS Uraninite, carnotite

LOCATION Lots 32-34, Concession IV,
Lots 32-35, concession V,
Glamorgan Township.
Latitude 44.911, Longitude 78.339.
Map Reference: ODM 2173, Glamorgan Township. Coordinates
derived from NTS sheet.

GEOLOGY Marble, paragneiss and amphibolite strike east
and dip south. Thorian uraninite and carnotite
occur in grey granitic and pink syenitic
pegmatites with local minor pyrite and pyrrhotite.
Radioactivity is associated with hematitization.
Uraninite also occurs in diopside - calcite
skarns within marble. Pyrite and molybdenite
are found in the skarn, and local graphite
in the marble.

ECONOMIC FEATURES Drill core samples ranged up to 0.21% U_3O_8
over 2.0 feet. Skarn rock carries continuous
radioactivity over a considerable distance.

HISTORY OF DEVELOPMENT pre - 1969: Two cuts for feldspar, and one pit
for molybdenite by unknown operators.
1969: Scintillometer survey, some prospecting
and trenching by Mandarin Mines Limited.
1973-77: Radon and spectrometer surveys,
geological mapping, airborne radiometric survey,
trenching, drilling of at least 16 holes for
4232 feet by Imperial Oil Limited.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. files 63.2933, 2.1533(Imperial
Oil Limited).

NU - CYCLE OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite, zircon

LOCATION Lots 25-28, concession II
Lots 25, 26, concession III
Glamorgan Township
Latitude 44.877, Longitude 78.359.
Map Reference: ODM 2173, Glamorgan Township.

GEOLOGY The property lies within a large body of metagabbro south of the Glamorgan granite gneiss batholith. Numerous radioactive dikes or bodies of granite, pegmatitic granite, or granite pegmatite cut the metagabbro.

Radioactive minerals are distributed erratically throughout the granite and granite pegmatite bodies, usually associated with magnetite, biotite, or pyroxene.

ECONOMIC FEATURES The best drill core intersection assayed 0.42% U_3O_8 (radiometric) over 2.0 feet.

HISTORY OF DEVELOPMENT 1955: 16 pits and trenches; 21 diamond drill holes totalling 4309 feet; geological and scintillometer surveys by Nu - Cycle Uranium Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 78-80.

NU - WORLD OCCURRENCE

COMMODITY	Uranium, thorium
RADIOACTIVE MINERALS	Allanite, uranothorite, uraninite
LOCATION	Lot 19, concession II, Lots 15, 16, concession III, Glamorgan Township. Latitude 44.966, Longitude 78.395. Map Reference: ODM 2173, Glamorgan Township.
GEOLOGY	Paragneiss, marble, metagabbro, nepheline gneiss, syenite, and granite pegmatite form an embayment in the northwest contact of the Green Mountain metagabbro mass. Allanite, uranothorite, and uraninite occur in granite pegmatite dikes, 20 to 130 feet wide, exposed over a length of 725 feet.
ECONOMIC FEATURES	Samples from seven rock trenches assayed up to 0.34% U_3O_8 (chemical).
HISTORY OF DEVELOPMENT	1955: Stripping, trenching, 22 diamond-drill holes for 1925 feet by Nu-World Uranium Mines Limited.
PRINCIPAL REFERENCES	ODM 1956, Vol. 65, pt. 6, p. 80-81.

Harcourt Township

(NTS 31E/1)

JET OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite

LOCATION Lots 1 - 8, concession III - V, S $\frac{1}{2}$ VI,
Harcourt Township
Latitude 45.091, Longitude 78.220.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The property is underlain by metasediments striking north with an average dip of 45°W. The metasediments include granite gneiss, marble, amphibolite and pyroxenite. The area of interest is in the eastern part of the property, where limy, banded hornblende and biotite gneiss are intruded by sills and dikes of both granite pegmatite and syenite pegmatite up to 150 feet wide. Radioactive minerals occur in pegmatite bodies and are usually associated with hematitization and fracturing. Uranothorite occurs in N $\frac{1}{2}$ lot 6, Concession IV in a red leucogranite pegmatite dike with abundant magnetite and accessory zircon and titanite.

ECONOMIC FEATURES Nine grab samples examined by equilibrium analysis in 1968 assayed 0.053% U₃O₈. Approximately 100 pounds of uranothorite were picked from a trench along a small pegmatite dike.

HISTORY OF DEVELOPMENT 1957: Stripping, pitting and trenching by P. J. McLean in N $\frac{1}{2}$ lot 6, concession IV.
1958: Radiometric and geological surveys; 5 diamond-drill holes for 1102 feet in lot 6, concession IV by Harcourt Mining Company Limited.

1968: Radiometric, geological and magnetic surveys; 8 diamond-drill holes for 2207 feet by Jet Uranium Limited.

PRINCIPAL REFERENCES

ODM 1971, OFR 5057, p. 7-9.

OGS, AFRO, Toronto: Tech. files 63A.360 (Harcourt Mining Company Limited), 63.2419.

Lutterworth Township
(NTS 31D/15)

LUNDBERG OCCURRENCE

COMMODITY Uranium, molybdenum, niobium

RADIOACTIVE MINERALS Not identified.

LOCATION Lot 23, concession V,
Lutterworth Township.
Latitude 44.796, Longitude 78.794.
Map Reference: ODM 52a, Haliburton Area.

GEOLOGY Molybdenum and uranium mineralization occurs within a series of parallel granite pegmatite dikes cutting marble. Granite gneiss, epidote-tremolite rock, and paragneiss are also exposed. Niobium occurs at one location within paragneiss.

ECONOMIC FEATURES The pegmatites are 25 to 50 feet wide. Two grab samples assayed 0.15% U_3O_8 , and 0.05% niobium.

HISTORY OF DEVELOPMENT 1916-17: A shaft 6 by 12 by 30 feet deep was sunk by Hamilton Molybdenum Alloys Company Limited.
1954: Airborne radiometric survey by Lundberg Exploration Limited.

PRINCIPAL REFERENCES ODM 1943, Vol. 52, pt. 2, p. 66.

Monmouth Township

(NTS 31D/16, 31E/1)

ACMAC OCCURRENCE

COMMODITY	Uranium, thorium
RADIOACTIVE MINERALS	Uranothorite, thorite
LOCATION	N $\frac{1}{2}$ lot 33, concession XIV, Monmouth Township. Latitude 45.024, Longitude 78.126. Map Reference: ODM 2174, Monmouth Township.
GEOLOGY	Marble, metamorphic pyroxenite, and amphibolite are intruded by a mass of graphic granite. Mineralization occurs within pyroxene-poor granite representing the contact zone between graphic granite and underlying limy amphibolite, which strikes N75-90 ^o E and dips 25-35 ^o S. Uranothorite, thorite and titanite occur.
ECONOMIC FEATURES	Geiger readings of the mineralized zone range from 20 to 80 times background.
HISTORY OF DEVELOPMENT	1955: An open cut 56 feet long, an adit 34 feet long, and trenches and cuts totalling 425 feet by Acmac Mining Corporation.
PRINCIPAL REFERENCES	ODM 1956, Vol. 65, pt. 6, p. 82-83.

AMALGAMATED RARE EARTH #1 PROSPECT

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite

LOCATION Lots 18-22, concession VII,
Lots 20-22, concession VIII,
S½ lots 23, 24, concession VIII,
Lot 24, concession IX,
Monmouth Township.
Shaft is located in lot 20, concession VIII.
Latitude 44.957, Longitude 78.251.
Map Reference: ODM Map 2174, Monmouth Township

GEOLOGY The property is underlain by bands of amphibolite quartzite and marble, intruded by syenite, granite and granite pegmatite. The metasediments strike northeast and dip 45° E.
Of six radioactive showings only the Main zone has warranted underground development. Uraniferous ore shoots are found in granite or granite pegmatite bodies intruding diopside quartzite, and forming elongate lenses or narrow dikes from a few to several hundred feet long. Accessory minerals include uranothorite, allanite, zircon, pyrite and, more rarely, pyrrhotite and molybdenite.
In the Monck zone, pyroxene syenite pegmatite sills with abundant zircon intrude diopside-biotite gneiss. The Northeast zone is a lenticular granite pegmatite body, conformably intruding plagioclase gneiss, displaying local concentration of pyroxene with accessory titanite and allanite. The Cliff zone is a pink granite pegmatite sill in hornblende-plagioclase gneiss. The pegmatite contains zircon, allanite, and rare uranothorite. The Otter Creek zone was discovered by drilling. It is a grey pegmatite 1200 feet long and 8.6 feet wide averaging 0.11% U₃O₈. The Pyroxenite

zone consists of pyroxene skarns and narrow mica pyroxenite bands in a variety of gneisses. Uranothorite occurs in a pyroxene-calcite rock.

ECONOMIC FEATURES

In 1957, reserves were estimated at 52,760 tons at 0.110% U_3O_8 to a 600-foot depth at the No. 1 Shaft. In addition, surface drilling indicated 163,900 tons at 0.110% U_3O_8 to a 200-foot depth in the Cliff and Otter zones. (Reg. Geol. File Cardiff 39)

HISTORY OF DEVELOPMENT

1948: Trenching and bulk sampling by Lead Ura Mines Limited.

1955-57: Surface diamond drilling totalling 36,434 feet; and adit in the Main zone with 493 feet of drifting and 343 feet of cross-cutting; a vertical, 3-compartment shaft to 657 feet with levels at 120, 240, 360, 480 and 630 feet; underground work amounting to 2449 feet of drifts and 1137 feet of cross-cuts. Work by Amalgamated Rare Earth Mines Limited.

1968: Scintillometer survey by Amalgamated Rare Earth Mines Limited.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 92-96.

OGS, AFRO, Toronto: Tech. file 63.2959.

Regional Geologist's Files, OMNR, Huntsville: File Cardiff Township No. 39.

REMARKS

This property is part of the present Rare Earth Resources prospect.

AMALGAMATED RARE EARTH #2 PROSPECT

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uranothorite, fergusonite, uraninite,
uranophane

LOCATION Lots 16-21 concession V
 Lots 17-21 concession VI
 Monmouth Township.
 Latitude 44.933, Longitude 78.248.
 Map Reference: ODM 2174, Monmouth Township.

GEOLOGY The property is underlain by bands of amphibolite and
 marble that strike east to northeast and dip 50-85° SE.
 These rocks are intruded by bodies of metagabbro and
 granite or granite pegmatite.
 In the Main (or C) Zone, uranium-bearing ore shoots
 from a few to 20 feet wide and 10 to 200 feet long,
 occur in lenticular granite-granite pegmatite bodies
 which intrude metagabbro. The ore shoots are brick-
 red, medium-grained, well-fractured leucogranite with
 altered pyroxene, abundant zircon and allanite, and
 also titanite, uranothorite, fergusonite, uraninite
 and uranophane.
 In Zone A, uranothorite occurs with altered pyroxene,
 chlorite, fluorite and leucogranite fragments as a
 fracture filling in small, irregular bodies of syenite
 pegmatite 60 to 240 feet long. In the Lake Zone, ore
 occurs in pyroxene granite pegmatite bodies cutting
 silicated marble and interbedded lime-silicate rocks.
 The richest zones include accessory zircon, allanite,
 titanite, pyrrhotite, pyrite, uranothorite and uraninite.

ECONOMIC FEATURES

In 1957, reserves were estimated at 292,444 tons at 0.095% U_3O_8 within 500 feet of the shaft and to a depth of 600 feet; and 56,720 tons at 0.120% U_3O_8 to a depth of 200 feet in the Lake Zone. (Reg. Geol. File Cardiff 39).

HISTORY OF DEVELOPMENT

1952: Trenching and 7 diamond-drill holes by Blue Rock Cerium Mines.
1953: Geophysical survey by Blue Rock Cerium Mines.
1954: Scintillometer survey, trenching and diamond drilling in 7 holes for 201 feet by Stratmat Limited.
1955: Geological survey by Blue Rock Cerium Mines.
1954-56: A 440 foot shaft on the Main Zone with levels at 100, 250, and 400 feet; 3416 feet of drifting and 2456 feet of crosscutting; adit driven to the 100 foot level. Work by Blue Rock Cerium Mines and Rare Earth Mining Corporation.
1969: Scintillometer survey by Amalgamated Rare Earth Mines Limited.
1974: Diamond drilling by Imperial Oil.

REFERENCES

QDM 1956, Vol. 65, pt. 6, p. 96-99.
OGS, AFRO, Toronto: Tech. file No. 63.2959.
Regional Geologist's Files. OMNR, Huntsville: File Cardiff No. 39.

CANADIAN ALL METALS OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Uraninite, pyrochlore

LOCATION Lots 5 - 9, concession IX,
 Lot 6, concession VIII,
 Monmouth Township.
 Latitude 44.947, Longitude 78.323.
 Map Reference: ODM 2174, Monmouth Township.

GEOLOGY The property, on the southeast border of the
 Glamorgan granite gneiss, is underlain by a
 complex of marble, quartzite, paragneiss, and
 granite gneiss. The metasediments strike N50°E
 and dip 30°SE.
 Uraninite and pyrochlore are erratically
 disseminated in discontinuous lenses within
 zones of silicated marble containing tremolite,
 pyroxene, mica, serpentine, and salmon-pink
 calcite.

ECONOMIC FEATURES Drill - hole sample average 0.184% U₃O₈ (chemical)
 over 49 inches.

HISTORY OF DEVELOPMENT 1955: Work by Canadian All Metals Explorations
 Limited included stripping, trenching, 38 diamond-
 drill holes totalling 5040 feet, 4 underground
 drill holes for 531 feet, an adit in N½ lot 6,
 Concession IX, with 642 feet of cross-cutting
 and 490 feet of drifting.
 1977: Ten diamond drill holes totalling 1976
 feet by Imperial Oil Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p.83-85.

EMPIRE B PROSPECT

COMMODITY Uranium, thorium, fluorite

RADIOACTIVE MINERALS Uranothorite, uraninite, allanite, thorite, uranophane

LOCATION Lots 33 - 35, concession X, XI and XII,
Monmouth Township.
Latitude 44.999, Long. 78.193.
Map Reference: ODM 2174, Monmouth Township.

GEOLOGY Uranium mineralization occurs within lenticular,
discontinuous leucogranite or granite pegmatite.
The pegmatites conformably intrude syenitic rock,
granite gneiss, hornblende-biotite gneiss,
amphibolite, and marble. These rocks strike $N65^{\circ}E$
and dip $45-60^{\circ}S$.
Accessory minerals in the pegmatite include
uranothorite, uraninite, zircon, allanite, thorite,
fluorite, and molybdenite.
Calcite-fluorite vein dikes occur along a marble -
syenitic gneiss contact. Other vein minerals
include apatite, pyroxene, uraninite, titanite,
and uranophane.

ECONOMIC FEATURES Drilling has indicated reserves of 2,179,166 tons
grading 0.726 pounds U_3O_8 per ton (OGS file 63.3510),
and 2,000,000 tons of low-grade fluorite ore (OGS
file 63.3365).

HISTORY OF DEVELOPMENT 1954-55: Scintillometer and geological surveys;
26 diamond-drill holes for 12,509 feet by Empire
Oil and Minerals Incorporated.
1967: Airborne magnetic, electromagnetic and
radiometric surveys by L. T. Chandler.

1968-70: Eleven diamond-drill holes for 6922 feet
by Canuc Mines Limited.

1971-75: Prospecting for fluorite; 6 diamond-drill
holes for 3319 feet by Landair Explorations Limited.

1976-77: VLF - EM and radiometric surveys; at least
3241 feet of diamond drilling in 6 holes by
Powerex Resources Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 54-56.

OGS, AFRO, Toronto: Tech. files 63.2897 (Landair
Explorations Limited), 63.3339 (Powerex
Resources Limited), 63.3365 (Landair Explorations
Limited), 63.3399 (Powerex Resources Limited),
63.3441 (Powerex Resources Limited), 63.3510
(Powerex Resources Limited), 63.3516 (Landair
Explorations Limited).

REMARKS

In 1975, Landair sold 24 of its 34 claims in
Monmouth and Cardiff Townships to Powerex Resources.
The remaining 10 claims - lots 34 and 35, concession
XII, Monmouth Township, and lots A, 1, and 2,
concession XVI, Cardiff Township - constitute the
fluorite prospect.

FAIRLEY RED LAKE OCCURRENCE

COMMODITY	Uranium, thorium
RADIOACTIVE MINERALS	Uranothorite, uranophane, allanite
LOCATION	N $\frac{1}{2}$ lot 4, concession III, Monmouth Township. Latitude 44.896, Longitude 78.308. Map Reference: ODM 2174, Monmouth Township
GEOLOGY	Uranothorite, uranophane and allanite occur in pink leucogranite bodies with pegmatitic patches intruding amphibolite.
ECONOMIC FEATURES	A granite body 200 by 800 feet gives average scintillometer readings of 3 to 4 times background, with highs of 20 to 30 times in the trench.
HISTORY OF DEVELOPMENT	1955-56: Scintillometer survey; one 20- foot trench and 8 drill holes totalling 483 feet by Fairley Red Lake Gold Mines Limited.
PRINCIPAL REFERENCES	ODM 1956, Vol. 65, pt. 6, p. 88-89.

HIGHLAND MERCURY OCCURENCE

COMMODITY Uranium, thorium, molybdenum

RADIOACTIVE MINERALS Uranothorite, uraninite, allanite

LOCATION Lot 33, concession XV,
Lots 31, 32, concession XVI,
Lots 25 - 32, concession XVII,
Monmouth Township.
Latitude 45.047, Longitude 78.242.

Map Reference: ODM 2174, Monmouth Township (Desmont Mining Corporation).

GEOLOGY The property is underlain by marble containing interbands of diopside rock, lime-silicate rock, and rusty mica gneisses. These rocks strike north-northwest and dip 45 - 60°E. They are cut by irregular bodies of granite pegmatite. Uranothorite occurs in diopside or diopside-calcite rock within marble. Uraninite is sparsely disseminated in lime-silicate bands in marble or in micaceous marble. Allanite, molybdenite, pyrrhotite and pyrite are present.

ECONOMIC FEATURES The main zone extends 900 meters, the east zone 400 meters. Assays average approximately 0.004% U₃O₈ (chemical). MoS₂ values range from 0.016% to 0.44%.

HISTORY OF DEVELOPMENT 1942: Stripping and shallow test pits by B. E. MacDougall.
1954: Surface prospecting, scintillometer survey, trenching, 17 diamond-drill holes for 2810 feet by Homer Yellowknife Mines, Limited.
1955: Stripping and trenching by Desmont Mining Corporation (formerly Homer Yellowknife Mines, Ltd.)

HISTORY OF DEVELOPMENT

1965: Geochemical survey and 3200 feet of diamond drilling in 13 holes by Molybdenum Corporation of Canada.

1976-77: Pitting, trenching, sampling, geological survey by Highland Mercury Mines, Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 86-88 (Desmont Mining Corporation).

OGS, AFRO, Toronto: Tech. file 2.2194.

IRONDALE OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Yellow secondary uranium

LOCATION Lots 24-31, concession VI - IX,
Monmouth Township.
Latitude 44.958, Longitude 78.216.
Map Reference: ODM 2174, Monmouth Township.
Coordinates derived from NTS sheet.

GEOLOGY The property is situated on the northwest margin of the Cheddar granite batholith. To the west it is underlain by metasediments and paragneiss striking north-northeast and dipping 60-80°E, containing lenticular bands of granitic pegmatite.
Uranium mineralization occurs in pink pegmatite in carbonate metasediments along the granite contact. Radioactivity in pegmatitic granite within the border phase of the Cheddar granite is erratic and discontinuous. Strong radioactivity is usually associated with hematitization and smoky quartz, and, in the North group, with traces of fluorite.

ECONOMIC FEATURES In the North group, a pegmatite reading up to 70 times background is exposed. In the South, several anomalous zones up to 1600 feet long have been established. Rock trenching and chip sampling on the North and South groups returned assays of 0.22 pounds U_3O_8 per ton over widths of 13 and 34 feet respectively.

HISTORY OF DEVELOPMENT 1974-75: Scintillometer prospecting and reconnaissance soil radon survey by T. Dancey.

1976: Geological, magnetic and radon surveys;
stripping, trenching and chip sampling by Lacana
Mining Corporation.

PRINCIPAL REFERENCES

ODM, AFRO, Toronto: Tech. file 63.3426 (Lacana
Mining Corporation).

Jesko Occurrence

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite, uraninite

LOCATION Lots 6-16, concession III and IV,
Monmouth Township.
Latitude 44.910, Longitude 78.271.

Map Reference: ODM 2174, Monmouth Township

GEOLOGY The property is underlain in the east by the Anstruther granite gneiss, and in the west by interbedded metasediments, paragneiss, amphibolite and marble. The metasediments strike northeast and dip 60-70°SE, and are intruded by a mass of metagabbro, and by a band of syenite containing patches of nepheline gneiss.
Three radioactive showings occur in leucogranite pegmatite in the paragneiss - amphibolite group. The pegmatite bodies are up to 90 feet wide and 450 feet long.

ECONOMIC FEATURES Grab samples from showings 1, 2 and 3 average respectively 0.108, 0.09 and 0.098% U₃O₈.

HISTORY OF DEVELOPMENT 1954: Trenching, 13 diamond drill holes totalling 1998 feet by Jesko Uranium Mines, Limited.
1969: Ground spectrometer survey by Milmount Exploration Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 89-91.
OGS, AFRO, Toronto: Tech. file 63.2651 (Milmount Exploration Limited).

LONG RIDGE OCCURRENCE

COMMODITY	Uranium
RADIOACTIVE MINERALS	Uraninite
LOCATION	Lots 13, 14, concession XI, Lots 11-13, S $\frac{1}{2}$ 14, concession XII, Monmouth Township Latitude 44.979, Longitude 78.307. Map Reference: ODM 2174 Monmouth Township
GEOLOGY	Marble, diopside rock and hornblende gneiss are cut by granite and granite pegmatite. Small uraninite cubes occur within marble consisting of calcite, diopside and phlogopite.
ECONOMIC FEATURES	The marble is exposed over a width of 50 feet. Geiger readings returned spot - highs of 11, 20 and 29 times background.
HISTORY OF DEVELOPMENT	1956: Stripping; 4 drill holes for 1568 feet by Long Ridge Uranium Mines Limited.
PRINCIPAL REFERENCE	ODM 1956, Vol. 65, pt. 6, p. 91.
REMARKS	Satterly (1956) reported eight holes drilled for 1295 feet, but there is no record of this work elsewhere.

NEW INSCO OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Uraninite

LOCATION Lots 27 and 28, concession XVI,
Monmouth Township
Latitude 45.030, Longitude 78.254.

Map Reference: ODM 2174, Monmouth Township (Cordell Gold
Mines).

GEOLOGY The claims are underlain by marble, lime-
silicate rocks, and metamorphic pyroxenite cut
by small bodies of granite, including very
coarse-grained, massive, structurally -
conformable pegmatites.

The main showing is an exposure of diopside
skarn about 50 feet long and 15 feet wide.

The skarn contains accessory titanite, apatite,
phlogopite, pyrrhotite and pyrite. Titanite
and uraninite occur on fracture planes.

Radioactivity in pegmatites is of secondary
interest due to a high thorium to uranium ratio.

ECONOMIC FEATURES Geiger readings on skarn averaged 4 to 10 times
background, 25 to 30 times on tremolite -
phlogopite marble.

HISTORY OF DEVELOPMENT 1955: Trenching, 6 diamond-drill holes totalling
540 feet by Cordell Gold Mines, Limited.

1976: Geological and radiometric surveys by New
Insko Mines, Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 85 (Cordell Gold Mines).
OGS, AFRO, Toronto: Tech. file 2.2129

NORTHERN NUCLEAR PROSPECT

COMMODITY Uranium

RADIOACTIVE MINERALS Uraninite

LOCATION Lots 5 - 8, concession VI and VII,
Monmouth Township.
Latitude 44.923, Longitude 78.319.
Map Reference: ODM 2174, Monmouth Township (Wadasa Gold Mines

GEOLOGY A belt of paragneiss, marble, metagabbro, nepheline gneiss,
syenite, and granite or granite pegmatite strikes northeast
and dips 30°E.
Uraninite occurs within a micaceous silicated marble
which is intruded by moderately radioactive coarse,
pink, graphic leucogranite pegmatite. The marble contains
phlogopite, tremolite, diopside, and calcite, and
accessory apatite, zircon, epidote, sericite, biotite,
chalcopyrite, and molybdenite.

ECONOMIC FEATURES The mineralized zone extends 1500 feet along strike,
500 feet down dip and averages 25 feet in thickness.
In 1969 it was estimated to contain about 200,000 tons
averaging 0.045% U₃O₈. (OGS File 63.3076).

HISTORY OF DEVELOPMENT 1954: Trenching, sampling, 7 drill holes for 1813 feet
by Wadasa Gold Mines Limited.
1968-69: Radiometric survey, open cut, 48 drill holes
for 11,139 feet, 10-ton bulk sample by Northern Nuclear
Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 106-107 (Wadasa Gold Mines).
OGS, AFRO, Toronto: Tech. file 63.3076
:Monmouth Township Drill Report No. 24, 38.

OLD SMOKEY OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite

LOCATION Lots 7, 8, 11 concession X
Lots 9-12 concession XI
Monmouth Township
Latitude 45.955, Longitude 78.326.
Map Reference: ODM 2174, Monmouth Township (Nu-Age Uranium Mines Limited).

GEOLOGY The property lies in the southeast border zone of the Cheddar granite gneiss mass; and is underlain by amphibolite and granite with minor marble. The country rocks strike $N40^{\circ}W$ to $N10^{\circ}E$ and dip $20-60^{\circ}NE$ or E.
Uranium mineralization occurs in numerous calcite veins or pods from one to 12 feet wide which often cut across the gneisses. The veins contain various amounts of biotite, hornblende, apatite, pyroxene and rare uranothorite.

ECONOMIC FEATURES Geiger readings show spot highs of up to 20 times background on mica - rich areas of the calcite veins.

HISTORY OF DEVELOPMENT 1955: Scintillometer survey, trenching and 14 diamond-drill holes for 2366 feet by Nu - Age Uranium Mines Limited.
1975: Geological and radiometric surveys by Imperial Oil Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 91-92 (Nu-Age Uranium Mines).
OGS, AFRO, Toronto: Tech. file 2.1688 (Imperial Oil Limited).

ROFORD - EAST OCCURRENCE

COMMODITY Uranium, thorium, molybdenite

RADIOACTIVE MINERALS Uranothorite, thorite(?)

LOCATION Lot 13 concession XIII,
Monmouth Township.
Latitude 44.990, Longitude 78.313.
Map Reference: ODM 2174, Monmouth Township

GEOLOGY A gently - dipping sill of graphic granite or granite gneiss overlies biotite - feldspar gneiss containing interbeds of pyroxene marble. The gneiss strikes N40°W and dips 30-50° SW. Uranothorite occurs with pyroxene concentrations in the granite or granite gneiss. Uranothorite or thorite also occurs in pods of pyroxene marble or lenses of calcite in the marble. The country rock is a hornblende-feldspar gneiss striking N10°W and dipping 10°S. It is slightly mineralized with large flakes of molybdenite, coarse pyrite and pyrrhotite.

ECONOMIC FEATURES Trenches within a stripped area 200 by 300 feet give geiger readings of 7 to 110 times background. Bulk samples assayed 0.05, 0.08 and 0.21% U₃O₈ and 0.30, 0.77 and 1.52% Th respectively.

HISTORY OF DEVELOPMENT 1916: 1300 pounds of ore grading 3.35% MoS₂ were shipped from a quarry face 50 by 10 feet by G. Padwell.
1939: Quarry enlarged by Canadian Molybdenite Mines Limited.
1954-55: Geiger survey, stripping, trenching, 6 diamond-drill holes for 1667 feet by Roford Mines, Limited.
1966: Magnetic, induced polarization and geochemical surveys for molybdenum by Georgia Lake Mines Limited.

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS

LOCATION Monmouth and Cardiff Townships, Haliburton County
Cavendish Township, Peterborough County
Map Reference: ODM 1957b, Haliburton - Bancroft Area

GEOLOGY For descriptions of the individual properties, see
Rare Earth No. 1 and Rare Earth No. 2, Monmouth
Township, Cavendish Mine, Cavendish Township, and
Halo - Northwest and Lake Zones, Cardiff Township.

ECONOMIC FEATURES Total recoverable U_3O_8 is estimated to be about
12 million pounds, contained in 4 to 7 million tons
grading $2\frac{1}{2}$ to $2\frac{3}{4}$ pounds per ton. (N.M., Oct. 4/79)

HISTORY OF DEVELOPMENT 1973 to present: Diamond drilling and feasibility
studies in joint venture with Esso Minerals Canada
and Rare Earth Resources Limited. Plan 500 tpd mining
operation to come on-stream in 1980.

PRINCIPAL REFERENCES Northern Miner, June 14, 1979.
Northern Miner, October 4, 1979.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 100-102.

ODM 1968, MRC 7, p. 30.

ROFORD - SOUTHWEST OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, uraninite (?)

LOCATION Lot 2, concession X,
 Monmouth Township.
 Latitude 44.951, Longitude 78.352.
 Map Reference: ODM 2174, Monmouth Township

GEOLOGY Uraninite or uranothorite occur in mica-pyroxene marble
 or mica metamorphic pyroxenite adjacent to sills of
 granite pegmatite or granite. The rocks generally trend
 northeast and dip southeast.

ECONOMIC FEATURES Erratic geiger readings range from 4 to 12 times background,
 with spot-highs of 30 and 50 times.

HISTORY OF DEVELOPMENT 1955: Geiger survey and test-pitting by Roford Mines,
 Limited.
 1973-74: Geological and scintillometer surveys by Imperial
 Oil Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 100-102.

SARANAC - EAST OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uranothorite, uranophane

LOCATION Lots 23 and 24, Concession IX,
Monmouth Township.
Latitude 44.970, Longitude 78.242.
Map Reference: ODM 2174, Monmouth Township

GEOLOGY Mineralization occurs within a 7-foot thick sill of
medium-grained, pale pink biotite-hornblende granite.
The sill overlies biotite-hornblende gneiss striking
N35°E and dipping 43-52°SE. Accessory minerals
are zircon, allanite, titanite, pyrite, uranothorite
and uranophane. Fractures and rusty stain characterize
radioactive granite. Radioactivity increases towards
the footwall.
Local minor pyrite and molybdenite were noted in the
drill core.

ECONOMIC FEATURES Drill core samples assayed from 0.018 to 0.36% U₃O₈ over
narrow widths. One sample also returned 4.22% ZrO₂.

HISTORY OF DEVELOPMENT 1954-56: Open cut 150 feet long and 32 drill holes for
7286 feet by Saranac Uranium Mines Limited.
1973: Geological survey and 4 drill holes for 643 feet
by Imperial Oil Limited.
1975: Scintillometer survey by Imperial Oil Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 102-104.
OGS, AFRO, Toronto: Tech. files 2.1481 (Imperial Oil
Limited), 2.1899 (Imperial Oil Limited).

SARANAC - ZIRCON OCCURRENCE

COMMODITY Uranium, thorium, zircon

RADIOACTIVE MINERALS Thorite

LOCATION $S\frac{1}{2}$ lot 24, concession X,
Monmouth Township.
Latitude 44.967, Longitude 78.237.
Map Reference: ODM 2174, Monmouth Township

GEOLOGY Marble country rock strikes $N0-15^{\circ}E$ and dips $28-40^{\circ}E$.
Radioactivity occurs within a concordant sill of thorite-
zircon-albite leucogranite or granite pegmatite, and
within skarn bands in the marble. The skarn bands
comprise zircon, thorite, titanite, pyroxene, scapolite,
calcite and occasional mica and fluorite.

ECONOMIC FEATURES The zone, 1500 feet long and 1 to 8 feet wide, contains
an average concentration of 15-20% zircon. A grab
sample assayed 0.298% U_3O_8 and 2.10% ThO_2 . Geiger
readings average 25 to 50 times background, with a
maximum of 100 times. Drilling indicates mineralization
does not continue down dip.

HISTORY OF DEVELOPMENT 1954-56: Scintillometer survey, stripping, trenching,
10 drill holes for 1212 feet by Saranac Uranium Mines,
Limited.
1973: Geological survey by Imperial Oil Limited.
1975: Scintillometer survey by Imperial Oil Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 102-104.
OGS, AFRO, Toronto: Tech. files 2.1481 (Imperial Oil
Limited), 2.1899 (Imperial Oil Limited).

SILANCO OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite

LOCATION Lots 32, 33 concession VI
Monmouth Township.
Latitude 44.949, Longitude 78.184.
Map Reference: ODM 2174, Monmouth Township

GEOLOGY The property lies within the Cheddar granite mass.
Trenching has exposed amphibolite, with bands of pyroxene-
scapolite skarn, and minor paragneiss cut by masses of
granite pegmatite, leucogranite, hybrid granite gneiss,
and minor syenite pegmatite. The gneissic structure
strikes $N45^{\circ}E$ and dips $50^{\circ}SE$.
Uranothorite occurs in syenite pegmatites containing
calcite, hornblende and pyrite.

ECONOMIC FEATURES Chemical assays on trench samples ran 0.48, 0.72, 1.85,
0.80 and 3.14% U_3O_8 .

HISTORY OF DEVELOPMENT 1955: Stripping, trenching, 6 drill holes for 506 feet
by Silanco Mining and Refining Company.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 104-105.

UROTOMIC OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite, uranothorite

LOCATION Lots 15-20, concession IV and S $\frac{1}{2}$ V,
Monmouth Township.
Latitude 44.920, Longitude 78.243.
Map Reference: ODM 2174, Monmouth Township

GEOLOGY Weakly radioactive leucogranite pegmatites and syenite
gneiss occur in paragneiss and marble.
The main mineralized zone is a skarn rock 1 to 7 feet
wide which forms the contact between marble and
feldspathized hornblende paragneiss. The gneiss strikes
N57°E and dips 65°SE. The skarn contains hornblende and
calcite with accessory titanite, pyrite, apatite,
uraninite, molybdenite and pyrrhotite. Small grains of
uraninite, uranothorite and fluorite were noted in the
marble.

ECONOMIC FEATURES The skarn zone registered 2 to 20 times background on the
geiger, with highs of 30 to 50 times at marble contacts.
Drilling by Imperial Oil encountered sulfides.

HISTORY OF DEVELOPMENT 1955-56: Geological and scintillometer surveys; 11
diamond drill holes for 2249 feet by Urotomic Mines,
Limited.
1969: Ground spectrometer survey by Milmount Exploration.
1974: Geological and radiometric surveys; soil sampling;
2 diamond drill holes for 508 feet by Imperial Oil Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 105-106.
OGS, AFRO, Toronto: Tech. Files 63.650, 63.2651
(Milmount Exploration), 2.1854 (Imperial Oil Limited).

Snowdon Township

(NTS 31D/15)

MIRO OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite

LOCATION Lots 15 - 18, 20 - 25, concession VII,
Lots 19 - 21, 24 - 25, concession VIII,
Lots 21 - 25, concession IX,
Lots 21, 23 - 25, concession X,
Snowdon Township.
Latitude 44.954, Longitude 78.265.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY Interbanded amphibolite, pegmatitic granite, biotite-hornblende gneiss, biotite granite gneiss, quartzite, and pegmatite trend northeasterly.
Mineralization occurs within a vertical shear in coarse-grained radioactive granite gneiss. The shear trends N30-40°E. Radioactivity also occurs within granite pegmatites where pegmatite dikes have intruded biotite-hornblende gneiss. The pegmatites contain quartz, biotite, feldspar, hornblende, and accessory magnetite and pyrite.

ECONOMIC FEATURES The shear is exposed for 200 feet and is 1 to 4 feet wide. A chip sample assayed 0.82% U₃O₈. The best drill sample assayed 0.183% U₃O₈ and 0.90% ThO₂ over 2 feet.

HISTORY OF DEVELOPMENT 1967: Prospecting by J. Fleming.
1968: Scintillometer and geological surveys; 8 drill holes (1383 feet) by Miro Mines Limited.

PRINCIPAL REFERENCES Regional Geologist's Files, OMNR, Huntsville:
Files Snowdon Township No. 2, 3, 4.

HALIBURTON COUNTY

MINOR OCCURRENCES

Bruton Township

(NTS 31E/1, 31E/8)

NAME AND LOCATION

A. J. TOMLINSON,

Lot 26, con. VII,

Bruton Tp.

Lat. 45.248, Long. 78.186.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 249.

ODM Map 52a, Haliburton Area. Coordinates derived from

NTS sheet.

REMARKS

A radioactive occurrence is reported. No other data.

Cardiff Township

(NTS 31D/16, 31E/1)

NAME AND LOCATION

CHUKUNI GOLD MINES,
Lots 28 (N $\frac{1}{2}$), 29 (S $\frac{1}{2}$), con. V,
Lot 29 (S $\frac{1}{2}$), con. VII,
Cardiff Township, Haliburton County.
Lot 33 (N1/3), con. VII,
Faraday Township, Hastings County.
Lat. 44.954, Long. 78.002.

REFERENCES

Regional Geologist's Files, OMNR, Huntsville: Files
Cardiff No. 190, 191.
ODM Map 1957-1, Cardiff and Faraday Townships. Coordinates
derived from NTS sheet.

REMARKS

Stripping and sampling by Chukuni Gold Mines Limited
in 1976.

NAME AND LOCATION

A. H. CLARK,
N $\frac{1}{2}$ lot 10, con. XII,
Cardiff Tp.
Lat. 44.988, Long. 78.128.

REFERENCES

Regional Geologist's Files, OMNR, Huntsville: File
Cardiff No. 146.
ODM Map 1957-1, Cardiff and Faraday Townships. Coordinates
derived from NTS sheet.

REMARKS

In 1975, a pegmatite sample from a pit, 17 by 5 by 10
feet, put down by A.H. Clark, assayed 0.05 pounds U₃O₈
per ton.

NAME AND LOCATION

C. EARLE,
Lot 10, con. XII,
Cardiff Tp.
Lat. 44.984, Long. 78.128.

REFERENCES

GSC 1932, Econ. Geol. Ser. No. 11, p. 227.
ODM Map 1957-1, Cardiff and Faraday Townships. Coordinates
derived from NTS sheet.

REMARKS

A shaft 8 feet square and reportedly 30 feet deep,
is sunk on a vein of reddish calcite containing
books of black mica, apatite, and ellsworthite.

NAME AND LOCATION

EELS,
Lots 5, 6, N½ 7, con. I,
Lots 6, 7, con. II,
Cardiff Tp.
Lat. 44.898, Long. 78.099.

REFERENCES

OGS, AFRO, Toronto: Tech. files 63A.216 (Simard and Knight),
2.2027 (Kerr Addison Mines Limited).
ODM Map 1957-1, Cardiff and Faraday Townships.

REMARKS

Hornblende-biotite gneiss, granite, granite gneiss, and
marble strike north-northeast and dip 35-45°E. Irregular
pegmatites up to 20 by 5 feet in size, striking north and
dipping east, contain magnetite, red hematite stain, and
radioactive minerals. In 1954, a geological survey was
carried out by J. G. Willars. In 1975, a radon gas survey
was conducted by Kerr Addison Mines Limited.

NAME AND LOCATION

ESSENTIAL MINERALS

Lots A and 1, con. XVIII,
Cardiff Tp.

Lat. 45.030, Long. 78.200.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 138.

ODM Map 1957-1, Cardiff and Faraday Townships. Coordinates
derived from NTS sheet.

REMARKS

Spotty radioactivity is associated with calcite-
fluorite deposits.

NAME AND LOCATION

KERR ADDISON - GROUP F,
Lots 1 - 3, con. I,
Lots 5, S $\frac{1}{2}$ of 2 - 4, con. II,
Lots 3, 4, 8(S $\frac{1}{2}$), 9, con. IV,
Lots 8(S $\frac{1}{2}$), 9, con. V,
Lot 9, con. VI,
Cardiff Tp.
Lat. 44.908, Long. 78.109.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.2233.
ODM Map 1957-1, Cardiff and Faraday Townships.
Coordinates derived from NTS sheet.

REMARKS

Marbles and paragneiss are intruded by granite stocks. Uraniferous pegmatitic granite dikes occur along the southeast side of the granite intrusive. In 1976, Kerr Addison Mines Limited carries out a scintillometer survey. Results were weak and erratic.

NAME AND LOCATION

KERR ADDISON - GROUP H

Lots 18, 22(N $\frac{1}{2}$), 23(N $\frac{1}{2}$), con. IX,

Lots 14-19, 22, 23, 24(N $\frac{1}{2}$), con. X,

Lots 14(S $\frac{1}{2}$), 15(S $\frac{1}{2}$), 16-19, 20(N $\frac{1}{2}$), 22, con. XI,

Cardiff Tp.

Lat. 44.975, Long. 78.083.

REFERENCES

OGS, AFRO, Toronto: Tech. files 2.2215, 2.2216.

ODM Map 1957-1, Cardiff and Faraday Townships.

Coordinates derived from NTS sheet.

REMARKS

The property is underlain mainly by granite gneiss and intrusive granite. Marbles and paragneiss are intruded by granite - syenite bodies. Radioactivity occurs in granite pegmatite dikes. In 1976 Kerr Addison Mines Limited conducted scintillometer surveys.

NAME AND LOCATION

KERR ADDISON - GROUP I,
Lots 21 - 25, con. XIV,
Lots 23 - 25, con. XV,
Cardiff Tp.
Lat. 45.027, Long. 78.073.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.2217, 2.2216.
ODM Map 1957-1, Cardiff and Faraday Townships. Coordinates
derived from NTS sheet.

REMARKS

Paragneisses striking east and dipping 50° S are
intruded by granite pegmatite, granite gneiss, and
syenite gneiss. Anomalous radioactivity up to 15
times background occurs on granite pegmatite.
In 1976, Kerr Addison Mines Limited conducted a
scintillometer survey in lots 23 - 25, con. XIV,
and a radon gas survey in lots 21 and 22, con. XIV
and lots 23 - 25, con. XV.

NAME AND LOCATION

KERR ADDISON - GROUP J,
Lot 27, con. XVI,
Cardiff Tp.
Lat. 45.037, Long. 78.060.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.2217.
ODM Map 1957-1, Cardiff and Faraday Townships. Coordinates
derived from NTS sheet.

REMARKS

Marbles and paragneiss are intruded by granite -
syenite pluton stocks. Uraniferous pegmatitic granite
dikes occur as a late intrusion. A scintillometer
survey conducted by Kerr Addison Mines Limited in
1976 detected no significant radioactive zones.

NAME AND LOCATION

MID-NORTH ENGINEERING,
S $\frac{1}{2}$ lot 4, con. XVI,
Cardiff Tp.
Lat. 45.009, Long. 78.169.

REFERENCES

OGS, AFRO, Toronto: Cardiff Township Drill Report No. 52.
ODM Map 1957-1, Cardiff and Faraday Townships. Coordinates
derived from NTS sheet.

REMARKS

In 1970, Mid-North Engineering Services Limited
drilled two holes (502 feet), intersecting
amphibolite and pegmatite.

NAME AND LOCATION

MONCK LAKE,
Lots 15 and 16, con. XIV,
Cardiff Tp.
Lat. 45.008, Long. 78.106.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 73-74 (Red Bark Mines Limited).
OGS, AFRO, Toronto: Tech. files 63A.230 (A. Skrecky),
2.2027 (Kerr Addison Mines Limited).
ODM Map 1957-1, Cardiff and Faraday Townships (Red
Bark Mines Limited - Monck Lake).

REMARKS

The claims are underlain by leucogranite, biotite granite, hybrid granite gneiss, minor amphibolite and paragneiss, and, to the west, a small mass of diorite and hornblendite. The gneisses strike northwest and dip 60°SW. The country rocks are cut by granite pegmatite dikes with accessory pyroxene, magnetite, titanite, pyrite, and rare radioactive minerals. In 1055, Red Bark Mines Limited put down four diamond-drill holes totalling 162 feet. Kerr Addison Mines Limited conducted a radon gas survey in 1976.

NAME AND LOCATION

F. K. MONTGOMERY,
Lot 9, con. XXI,
Cardiff Tp.
Lat. 45.057, Long. 78.169.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 72.
ODM Map 1957-1, Cardiff and Faraday Townships.
Coordinates derived from NTS sheet.

REMARKS

In 1942, F. Montgomery mined fluorite from an open cut about 60 by 10 by 6 feet deep. Irregular calcite-fluorite veins contain apatite and uraninite. The veins cut hybrid syenite gneiss which strikes N50°W and dips 35-70°SW.

NAME AND LOCATION

NORTH LAKE,
Lots 13, 14, con. XVII and XVIII,
Cardiff Tp.
Lat. 45.033, Long. 78.132.

REFERENCES

OGS, AFRO, Toronto: Tech. file 63A.185.
ODM Map 1957-1, Cardiff and Faraday Townships.
Coordinates derived from NTS sheet.

REMARKS

The area is underlain by granite and syenite gneiss of the Deer Lake pluton, and by biotite and hornblende paragneiss intruded by granite pegmatites. Three small, weakly radioactive pegmatite dikes, one with accessory magnetite, intrude paragneiss. In 1954, North Lake Mines Limited conducted a geological survey.

NAME AND LOCATION

NORTHERN URANIUM,
Lots 18 - 22, con. X,
Lots 19 - 22, con. XI and XII,
Cardiff Tp.
Lat. 44.992, Long. 78.072.

REFERENCES

OGS, AFRO, Toronto: Tech. files 63A.270, 2.2027 (Kerr
Addison Mines Limited).
ODM Map 1957-1, Cardiff and Faraday Townships.

REMARKS

A curving belt of biotite paragneiss lies between
the Monck Lake granite pluton to the north and the
Centre Lake leucogranite gneiss mass to the south.
The country rocks are cut by numerous dikes and bodies
of granite pegmatite, some of which are radioactive.
Highest geiger readings were 60 times background.
In 1955, Northern Uranium Mines Limited conducted
scintillometer and geological surveys. Kerr Addison
Mines Limited conducted a radon gas survey in 1975.

NAME AND LOCATION

RANROUYN,
Lot 12, con. XVIII,
Cardiff Tp.
Lat. 45.039, Long. 78.143.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 149.
ODM Map 1957-1, Cardiff and Faraday Townships.
Coordinates derived from NTS sheet.

REMARKS

An area about 20 feet in diameter in pegmatitic
granite showed radioactivity. No reports after 1949.

NAME AND LOCATION

L. REID,
Lot 13, con. VI,
Cardiff Tp.
Lat. 44.934, Long. 78.082.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 252.
ODM Map 1957-1, Cardiff and Faraday Townships. Coordinates
derived from NTS sheet.

REMARKS

A radioactive occurrence in granitic rock is reported.
No other data.

NAME AND LOCATION

TOPSPAR,
Lot 13, con. XXII,
Cardiff Tp.
Lat. 45.069, Long. 78.151.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 74-75.
ODM Map 1957-1, Cardiff and Faraday Townships.

REMARKS

Between 1940 and 1942, W. E. Clark extracted 30 tons of fluorite from bodies of coarse syenite pegmatite intruding hornblende gneiss. The pegmatites consist of potash feldspar, pyroxene, calcite, scapolite, apatite, and fluorite, with very rare uranothorite. In 1950, Tops Mining Syndicate investigated the fluorite by means of an open cut 80 feet long, an adit 75 feet long, and a raise to surface.

NAME AND LOCATION

WEST LAKE,
Lot 9, con. XIII,
Cardiff Tp.
Lat. 44.990, Long. 78.134.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 76-77.
ODM Map 1957-1, Cardiff and Faraday Townships.

REMARKS

Radioactive pyroxene granite pegmatites, containing calcite veins up to 3 feet wide, intrude amphibolite, marble, and syenite. Accessory pegmatite minerals include fluorite, magnetite, pyrite, uranothorite, and allanite. West Lake Mining Company carried out 500 feet of trenching in 1944-51, and surface exploration in 1969-70.

NAME AND LOCATION

J. R. WILSON,
Lot 29, con. VI,
Cardiff Tp.
Lat. 44.955, Long. 78.006.

REFERENCES

Regional Geologist's Files, OMNR, Huntsville: Files
Cardiff Township No. 142, 143.
ODM Map 1957-1, Cardiff and Faraday Townships. Coordinates
derived from NTS sheet.

REMARKS

In 1974, J.R. Wilson stripped an area 600 by 200
feet and put in a trench 250 by 6 by 4 feet deep.

Clyde Township

(NTS 31E/8)

NAME AND LOCATION

P. MALCOVITCH,
S $\frac{1}{2}$ lot 21, con. XI,
Clyde Tp.
Lat. 45.386, Long. 78.282.

REFERENCES

OGS, GDC, Toronto: File P. Malcovitch, SMDR 199.
ODM Map 52a, Haliburton Area. Coordinates derived
from NTS sheet.

REMARKS

In 1955-56, C. C. Huston and Associates carried
out stripping and trenching of a pegmatitic
granite containing biotite and allanite in a
shattered zone 3 to 10 feet wide. Geiger
readings averaged 2 to 4 times background with
highs to 14 times. A sample of the allanite
zone assayed 0.67% Ce_2O_3 .

Glamorgan Township
(NTS 31D/16)

NAME AND LOCATION

BANCROFT URANIUM,
N^o 1 lot 21, con. VIII,
Glamorgan Tp.
Lat. 44.925, Long. 78.418.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p.77.
ODM Map 2173, Glamorgan Township.

REMARKS

The property lies within the southeastern part of
the Glamorgan granite gneiss. In 1955, Bancroft
Uranium Mines Limited drilled six holes (240 feet),
reportedly intersecting nothing of commercial
interest. No other data.

Harcourt Township
(NTS 31E/1)

NAME AND LOCATION

HYLIGHT URANIUM

Lot 12, con. II,

Harcourt Tp.

Lat. 45.082, Long. 78.176.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 82.

ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

Granite pegmatite dikes intrude marble, amphibolite,
paragneiss, and granite gneiss. In 1955, Stratmat
Limited drilled seven holes.

NAME AND LOCATION

JEM,
Lot 23, con. X,
Harcourt Tp.
Lat. 45.168, Long. 78.161.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 82.
ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

Hybrid granite gneiss country rock contains
marble inclusions. A trench exposes metapyroxenite
cut by stringers of quartz and feldspar, of
hornblende, and of scapolite. In 1955, Jem
Exploration Corporation, Limited drilled two
holes for 663 feet, and ran a geiger survey which
showed readings up to times background.

- Livingstone Township

(NTS 31E/7)

NAME AND LOCATION

W. H. ROBILLARD,
Lots 17, 18, con. V, VI,
Livingstone Tp.
Lat. 45.374, Long. 78.683.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 266.
ODM Map 52a, Haliburton Area. Coordinates derived
from NTS sheet.

REMARKS

An occurrence of allanite in pegmatite is reported.
No other data.

Lutterworth Township
(NTS 31D/15)

NAME AND LOCATION

E. T. HOGAN,
Lot 11, con. VIII,
Lutterworth Tp.
Lat. 44.843, Long. 78.752.

REFERENCES

ODM 1967, MRC 4, p. 24.
ODM Map 52a, Haliburton Area. Coordinates derived
from NTS sheet.

REMARKS

Allanite, thorite and uranothorite occur in
pegmatites.

NAME AND LOCATION

JOEX,
Lutterworth Tp.
Lat. 44.83, Long. 78.78.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.2865.
ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

An airborne radiometric survey was carried out by
Jorex Limited in 1978 over all except the
northwest corner of the township.

Monmouth Township

(NTS 31D/16, 31E/1)

NAME AND LOCATION

BUCKSKIN,
Lot 23, con. VII,
Monmouth Tp.
Lat. 44.952, Long. 78.237.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.2191 (Imperial Oil Limited).
ODM Map 2174, Monmouth Township.

REMARKS

Hornblende-plagioclase-quartz paragneiss striking N10-20°E and dipping about 65°E is cut by syenitic and granitic veins trending N50-60°E. Readings of 4 to 10 times background were encountered over a few small, narrow pegmatite veins. In 1976, Imperial Oil Limited carried out geological and radiometric surveys.

NAME AND LOCATION

CANUC MINES,
S ½ lot 35, con. XI,
Monmouth Tp.
Lat. 44.994, Long. 78.190.

REFERENCES

OGS, AFRO, Toronto: Monmouth Township Drill Report
No. 17.
ODM Map 2174, Monmouth Township. Coordinates derived
from NTS sheet.

REMARKS

In 1970, Canuc Mines Limited drilled three holes
for 2392 feet, intersecting gneiss, granite, and
radioactive pegmatite. Pegmatite contains local
magnetite and minor chalcopyrite.
The best sample assayed 0.483% U_3O_8 (chemical)
and 0.24% ThO_2 (radioemtric) over 1.25 feet.

NAME AND LOCATION

T. CUDNEY

Lots 29 and 30, con. VI,
Monmouth Tp.

Lat. 45.034, Long. 78.244.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p.85-86.

ODM Map 2174, Monmouth Township.

REMARKS

Over 20 bulldozed strippings dating from 1955 expose decomposed marble, diopside rock, mica metamorphic pyroxenite, amphibolite and rare pegmatite. Uraninite occurs in diopside rock. A fracture in a pyroxene syenite pegmatite contains zircon, uranothorite, kasolite and pyrite. Geiger readings average 1 to 3 times background.

NAME AND LOCATION

C. EARLE,

Lot 15, con. XII,

Monmouth Tp.

Lat. 44.981, Long. 78.297.

REFERENCES

ODM 1944, Vol. 51, pt. 2, p. 85.

ODM Map 2174, Monmouth Township. Coordinates derived
from NTS sheet.

REMARKS

Four pits opened prior to 1943 exposed pink and
green pegmatite and hornblende syenite pegmatite
cut by a 4- to 5-foot hornblende-calcite-apatite-
feldspar vein. Accessory minerals include magnetite,
sphene, and scapolite. Uraninite and uranothorite
were reported.

NAME AND LOCATION

B. GOULD

Lot 24, con. XIII,

Monmouth Tp.

Lat. 45.006, Long. 78.257.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 89.

ODM Map 2174, Monmouth Township. Coordinates derived
from NTS sheet.

REMARKS

The claims lie at the east boundary of the
Glamorgan granite gneiss. Weak radioactivity occurs
in biotite gneiss interbanded with marble and
diopside rock. In 1955, B. Gould drilled four
holes for 415 feet.

NAME AND LOCATION

IMPERIAL OIL

Lots 3 - 9, con. V,

Lots 9 and 10, con. VI,

Monmouth Tp.

Lat. 44.918, Long. 78.302.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.1893.

ODM Map 2174, Monmouth Township. Coordinates
derived from NTS sheet.

REMARKS

Radioactive granitic and syenitic pegmatites
intrude syenite gneiss, marble and nepheline
gneiss. Imperial Oil Limited conducted a radiometric
survey in 1973, and a geological survey in 1975.

NAME AND LOCATION

IMPERIAL OIL

Lots 15, 17, con. XI,

Lots 19, 21, 22, con. XII,

Lot 22, con. XIII,

Monmouth Tp.

Lat. 44.993, Long. 78.263.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.2322.

ODM Map 2174, Monmouth Township. Coordinates
derived from NTS sheet.

REMARKS

The claim area is underlain in the northwest by the Glamorgan granite gneiss, and in the southeast by biotite-hornblende paragneiss, quartzite and marble. The metasediments strike northeast and dip 30 - 50°SE. Isolated radiometric highs occur over pegmatite and skarn.

In 1976, Imperial Oil Limited ran geological and radiometric surveys.

NAME AND LOCATION

IMPERIAL OIL - BEAR,
S 1/10 lot 2, con. IX,
Monmouth Tp.
Lat. 44.955, Long. 78.342.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.2244.
ODM Map 2174, Monmouth Township. Coordinates derived
from NTS sheet.

REMARKS

A geological and radiometric survey conducted by
Imperial Oil Limited in 1975 located one anomalous
zone with readings up to 20 times background in
an area of coarse-grained granitic gneiss intruded
by several pegmatite bodies.

NAME AND LOCATION

IMPERIAL OIL - MAKKONEN

Lots 22 and 23, con. VI,

Monmouth Tp.

Lat. 44.939, Long. 78.232.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.1811.

ODM Map 2174, Monmouth Township. Coordinates

derived from NTS sheet.

REMARKS

The claims, just west of the Cheddar granite, are underlain predominantly by paragneiss striking northerly and dipping steeply to the east.

Anomalies are associated with syenitic pegmatite and/or skarn at marble - paragneiss contacts.

In 1974, Imperial Oil Limited carried out radiometric and geochemical surveys.

NAME AND LOCATION

IMPERIAL OIL - McCUE LAKE

Lots 7 - 13, con. X,

Lot 10, con. IX,

Lots 7 - 9, 10(N $\frac{1}{2}$), 11, con. VIII,

Monmouth Tp.

Lat. 44.955, Long. 78.283.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.1688.

ODM Map 2174, Monmouth Township. Coordinates

derived from NTS sheet.

REMARKS

The claims, located along the southeast flank of the Glamorgan granite gneiss, are underlain by paragneiss, amphibolite, marble, and bodies of granite and syenitic and granitic pegmatite. The metasediments strike northeasterly and dip moderately to the southeast. Anomalous zones occur over pegmatite and skarn.

Imperial Oil performed geological and radiometric surveys in 1974, and carried out 1608 feet of diamond drilling in 8 holes to 1977. Drill core intersections typically assayed approximately 0.028% U₃O₈ over 1.0 foot.

NAME AND LOCATION

G. KELLER,

Monmouth Tp.

Lat. 44.96, Long. 78.28.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 148.

ODM Map 2174, Monmouth Township. Coordinates are given

for township centre, derived from Gazetteer of Canada.

REMARKS

Two samples of coarse granitic material collected

by G. Keller showed 0.05 and 0.25% U_3O_8 (radiometric).

NAME AND LOCATION

RED BARK - MONMOUTH

Lots 5, 6, con. XI,

Monmouth Tp.

Lat. 44.962, Long. 78.337.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 99-100.

ODM Map 2174, Monmouth Township.

REMARKS

The property lies within the southeast border of the Glamorgan granite gneiss mass. A large marble inclusion, 200 by 80 feet, is cut by granite pegmatite dikes. Uraninite occurs as a rare accessory in the mica-pyroxene marble. In 1954, Red Bark Mines, Limited performed stripping and drilled 11 holes for 1847 feet. Assay results from 19 drill-core samples were all low, mostly below 0.05% U_3O_8 (radiometric).

NAME AND LOCATION

ST. JOSEPH,
N $\frac{1}{2}$ lots 13 - 15, con. VII,
Lot 13, con. VIII,
Monmouth Tp.
Lat. 44.942, Long. 78.287.

REFERENCES

R.G. Jackson (1978) Soil Geochemistry Report. On file,
OGS, MDS, Toronto.
ODM Map 2174, Monmouth Township. Coordinates derived
from NTS sheet.

REMARKS

A fine-grained biotite granite intrudes a northwest-
trending belt of marbles and gneisses. A soil
geochemical survey conducted by St. Joseph
Explorations Limited in 1976 detected anomalous
uranium values associated with the granite intrusion.

Snowdon Township
(NTS 31D/15)

NAME AND LOCATION

CON. I, LOT 20,

Snowdon Tp.

Lat. 44.896, Long. 78.221.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 149.

ODM Map 1957b, Haliburton - Bancroft Area. Coordinates

derived from NTS sheet.

REMARKS

An occurrence of uraconite associated with magnetite
was reported in 1874. No other data.

NAME AND LOCATION

A. DI RENZO,
Lots 16, 17, con. VI,
Snowdon Tp.
Lat. 44.865, Long. 78.591.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 278.
ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

A radioactive occurrence in pegmatitic rock is reported.
No other data.

NAME AND LOCATION

C. GILES,

Lot 11, con. II,

Snowdon Tp.

Lat. 44.824, Long. 78.599.

REFERENCES

ODM 1967, MRC 4, p. 33.

ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

Uraninite and thorite occur in granitic pegmatites.

NAME AND LOCATION

VALENTINI

Lots 16 - 21, con. VI,

Snowdon Tp.

Lat. 44.934, Long. 78.255.

REFERENCES

Hopkins, A. (1978) Report on the Valentini Uranium
Prospect. On file, OGS, MDS, Toronto.

ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

A scintillometer survey by J. Fleming in 1968
located several radioactive anomalies over massive
granite pegmatite dikes and plugs. In 1977,
E. P. Valentini conducted a scintillometer survey
and plugger-hole sampling program. The best of
61 samples assayed 0.024% U_3O_8 (chemical).

NAME AND LOCATION

L. S. WINCH,

Lots 10, 17, 19 - 24, 26, 28, con. VI to XI,
Snowdon Tp.

Lat. 44.890, Long. 78.592.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 278.

ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

A radioactive occurrence in granitic rock is
reported. No other data.

HASTINGS COUNTY

Carlton Township

(NTS 31F/4, 31F/5)

MENTOR OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uranothorite

LOCATION Lots 1 and 2, concession IV,
Monteagle Township,
Lot 1, concession III,
Lots 1 and 2, concession IV,
Lots 2, 3, and 4, concession V,
Carlow Township.
Latitude 45.167, Longitude 77.720.
Map Reference: ODM 1954-3, Monteagle and Carlow Townships.
Coordinates derived from NTS sheet.

GEOLOGY Paragneiss, amphibolite, and marble striking north and
dipping 50-70°E, are intruded by pyroxenite,
nepheline rocks, syenite, and granite. The Mallard
Creek Fault crosses the property from east to west.
Allanite and uranothorite occur in granite pegmatite
dikes and sills, and in leucogranite in six
radioactive zones.

ECONOMIC FEATURES A drill sample from a trench assayed 0.043% U₃O₈
(chemical) over 10 feet.

HISTORY OF DEVELOPMENT 1955: Trenching by Carr, Quirk, Robson and Wilcox.
1955-57: Scintillometer and geological surveys;
169 trenches; 5 diamond-drill holes for 1253 feet
by Mentor Exploration and Development Company Limited.
1968-69: Bulk sampling; 8 diamond-drill holes for
817 feet by Union Mining Corporation.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 136-138 (Carr-Quirk-Robson).
OGS, AFRO, Toronto: Tech. files 2.93, 63A.297.

Dungannon Township
(NTS 31F/4, 31C/13)

CAM - LOWER DUNGANNON OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uranophane, uranothorite, uraninite

LOCATION Lots 13 and 14, concession XII and XIII,
S½ lot 12, concession XIII,
N½ lot 12, concession XII,
Dungannon Township.
Latitude 45.081, Longitude 77.745.
Map Reference: ODM 1955-8, Dungannon and Mayo Townships.
Coordinates derived from NTS sheet.

GEOLOGY Mineralized pink granite pegmatites intrude country
rocks of calc-silicate gneiss, rusty hornblende
gneiss, and syenitic gneisses.
Seven main radioactive showings have been delineated.
Allanite, uranophane, uranothorite, and uraninite
are often associated with hematitization, fracturing,
smoky quartz, peristerite, and sulfide-bearing
country rock.

ECONOMIC FEATURES Chip samples across widths of 2.5 meters assayed as
high as 2.2 pounds U_3O_8 per ton; grab samples as
high as 5.4 pounds U_3O_8 per ton. The best drill
hole intersection assayed 0.026% U_3O_8 over 1.5 meters.

HISTORY OF DEVELOPMENT 1957: Seven trenches by P. J. McLean.
1968: Scintillometer survey; stripping, trenching and
3 drill holes for 592 feet by Cam Mines Limited.

PRINCIPAL REFERENCES OGS 1980, OFR 5294, p. 41-44.
OGS, AFRO, Toronto: Tech. file 63.2457.

EAGLES NEST OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite, uranothorite, allanite, cyrtolite, sphene

LOCATION Lots 69, 70, Hastings Road,
Faraday Township.
Lots 66, 69 - 74, Hastings Road,
Lots 28 - 30, concession XV,
N $\frac{1}{2}$ lot 27, concession XV,
S $\frac{1}{2}$ lots 26 - 30, concession XVI,
Dungannon Township.
Latitude 45.082, Longitude 77.842.
Map Reference: ODM 1955-8, Dungannon and Mayo Townships.
ODM 1957-1, Cardiff and Faraday Townships. Coordinates
derived from NTS sheet.

GEOLOGY Uraninite, uranothorite, allanite, cyrtolite, and
sphene occur in 1) granitic and syenitic pegmatites,
2) metasomatic deposits in marble and
3) hydrothermal deposits in veins of pyroxene-
biotite and calcite-apatite-biotite. Country rocks
are leucogranite, granite gneiss, marble, biotite-
amphibole paragneiss, calc-silicate gneiss and
syenite. Seven main radiometric zones, up to 1900 by
75 feet in area, have been delineated.

ECONOMIC FEATURES Most drill core assays were less than 0.005% U₃O₈.
The best drill core samples assayed 0.081, 0.183
and 0.128% U₃O₈ over 0.8, 0.3 and 0.4 feet respectively.

HISTORY OF DEVELOPMENT 1956-57: Stripping, trenching, blasting; 17 diamond-
drill holes; reconnaissance scintillometer survey
by Eagle Nest Mines Limited.

1967: Blasting, sampling; scintillometer survey
by D. M. Mackerocher.

1968: Magnetometer survey by Watts Exploration
Services.

1970: Scintillometer survey by C. F. Ennis.

1976: Geological, magnetic and radiometric surveys;
sampling; 9 diamond drill holes totalling 1515 feet
by Canadian Nickel Mines Limited.

PRINCIPAL REFERENCES

OGS 1980, OFR 5294. Manuscript.

OGS, AFRO, Toronto: Tech. file 63.3373.

URBAN QUEBEC

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite

LOCATION Lot 14, concession XI,
Dungannon Township
Latitude 45.069, Longitude 77.739.
Map Reference: ODM 1955-8, Dungannon and Mayo Townships.
Coordinates derived from NTS sheet.

GEOLOGY An area 370 by 200 meters contains several radioactive pegmatite dikes intruding biotite paragneiss, calc-silicate gneiss, rusty gneiss and marble. Uraninite is associated with one or more of peristerite, abundant quartz, fracturing and rusty, pyritic patches.

ECONOMIC FEATURES Bulk samples assayed 0.037 to 0.20% U_3O_8 .

HISTORY OF DEVELOPMENT Work by Urban Quebec Mines Limited.
1968: Blasting, stripping, trenching, scintillometer survey, diamond drilling.
1969: Magnetometer survey; further diamond drilling.

PRINCIPAL REFERENCES Northern Miner, June 12, 1969, p. 10.
OGS 1980, OFR 5294, p. 59-62.

Faraday Township

(NTS 31F/4, 31E/1, 31C/13)

FARADAY (MADAWASKA) MINE

COMMODITY Uranium, thorium and rare earths

RADIOACTIVE MINERALS Uraninite, uranophane, uranothorite, allanite, euxenite and zircon.

LOCATION Lots 16 and 17, concession XI,
Faraday Township.
Latitude 45.021, Longitude 77.924

Map Reference: ODM 1957-1, Cardiff and Faraday Townships

GEOLOGY Extremely irregular mineralized bodies of sheared granite pegmatite, pegmatitic granite and syenitic pegmatite occupy an area approximately 1800 meters long by 150 meters wide. The pegmatites conformably intrude metagabbro, amphibolite, amphibole gneiss, biotite gneiss and calc-silicate gneiss striking east-northeast and dipping south.

Pegmatite is composed of feldspar, hornblende-chlorite (after augite), quartz, calcite, magnetite and zircon. Main accessory minerals are mica, titanite, apatite, allanite, tourmaline, uraninite, uranophane and uranothorite. Other accessories include hematite, fluorite, pyrite, pyrrhotite, chalcopyrite, euxenite, molybdenite, davidite and rare spencite. Some large pegmatites have vuggy cores containing excellent crystals of minerals such as calcite with gypsum, pyrite, goethite, limonite/hematite, uranophane, fluorite and chalcopyrite. Uranium mineralization is associated with hematitization, radial shattering, and the presence of hornblende-chlorites.

ECONOMIC FEATURES As of October, 1975, ore reserves were proven and

probable 1,023,086 tons averaging 2.9 pounds U_3O_8
per ton, plus inferred 1,600,000 tons averaging
1.85 pounds U_3O_8 per ton (Canadian Mines Handbook).

HISTORY OF DEVELOPMENT

Work by Faraday Uranium Mines Limited.

1949-53: Stripping, trenching, geological mapping,
bulk sampling, 66 drill holes for 13874 feet, ground
and airborne scintillometer surveys.

1954-64: Underground work included No. 1 shaft to
1455 feet, No. 2 shaft to 196 feet; drifts - 54,295
feet; crosscuts - 38,243 feet; raises - 42,028 feet;
2998 diamond-drill holes for 457,365 feet;
1400 t.p.d. mill operated from April, 1957 to June,
1964.

1967-69: Dewatering of mine; underground development
bringing total to 57,811 feet of drifts, 39,055 feet of
cross-cuts, 44,053 feet of raises; additional 174
underground diamond-drill holes for 28,042 feet.

1976: Production resumed in August.

1977: Diamond drilling between Madawaska and
Greyhawk Mines.

1979: Current production at mill capacity, 1500 t.p.d.

PRODUCTION

From 1957 to 1966, 5,731,574 pounds of U_3O_8 were
produced from ore averaging 1.99 pounds U_3O_8 per ton
(SMDR 247). From 1977-79, 1,593,284 pounds U_3O_8 were
produced from 1,060,967 tons of ore averaging 1.50
pounds U_3O_8 per ton (N.M., June 15/78, Globe and Mail,
May 23/80).

PRINCIPAL REFERENCES

Bullis, A.R. (1965) Geology of Metal Mines Ltd.
(Bancroft Division) in CIMM Bulletin, Vol. 58, No. 639,
p.713-721.

Canadian Mines Handbook, 1977-78, Northern Miner Press
Northern Miner, June 15, 1978, p. A23.

OGS, GDC, Toronto: File Faraday, SMDR 247.

Globe & Mail, May 23, 1980.

REMARKS

In 1963 Faraday Uranium Mines Limited was renamed The Canadian Faraday Corporation Limited. In 1967 the company acquired Metal Mines Limited and Augustus Exploration Limited and was renamed Consolidated Canadian Faraday Limited. This company (49%) together with Federal Resources Corporation (51%) formed Madawaska Mines Limited in 1975.

GOLDFAWK (NORTH) OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS

LOCATION Lots 17 - 21, Concession XIV
Lots 17 - 22, Concession XV
Faraday Township.
Latitude 45.044, Longitude 77.956.
Map Reference: ODM 1957-1, Cardiff and Faraday Townships.
Coordinates derived from NTS sheet.

GEOLOGY Marble, paragneiss and meta-arkose are intruded by both gneissic and massive bodies of granite and syenite. Pegmatite occurs conformably with paragneiss. Radioactivity in one area has been traced to syenite pegmatite.

ECONOMIC FEATURES Six major anomalously radioactive zones have been delineated.

HISTORY OF DEVELOPMENT 1954: Geological and geiger surveys by Goldhawk Porcupine Mines Limited.
1978-79: Prospecting, drilling, blasting, sampling; magnetic, VLF electromagnetic, radiometric and geologic surveys by Mercier Explorations Limited.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. files 2.2931, 2.3084

GREYHAWK MINE
(Past Producer)

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uranothorite, uraninite, pyrochlore and betafite

LOCATION Lots 9, 10 and 11, concession XII
Faraday Township.
Latitude 45.031, Longitude 77.897.

Map Reference: ODM 1957-1, Cardiff and Faraday Townships

GEOLOGY An amphibolite (metagabbro) body striking northeast and dipping 50-65° SE is intruded by radioactive granite pegmatite dikes. Ore shoots, averaging 100 by 6 feet, occur in magnetite-rich pegmatite, and in quartz-rich leucogranite. Allanite, uranothorite, uraninite, pyrochlore and betafite are associated with brecciation, hanging-wall or footwall enrichments, abundant magnetite, uralitized pyroxene and hematization.

ECONOMIC FEATURES In June, 1959, ore reserves were estimated at about 200,000 tons averaging 0.065% U₃O₈ (EMR, p.240).

HISTORY OF DEVELOPMENT 1955: Scintillometer and geological surveys by Goldhawk Porcupine Mines Limited and Greyhawk Uranium Mines Limited.
1955-56: A vertical, 3-compartment shaft was sunk to 361 feet with levels at 110, 211 and 333 feet; 114 surface drill holes for 42,299 feet; underground work on the first level including 430 feet of cross-cutting, 1606 feet of drifting and 512 feet of raising; 76 underground drill holes for 10,542 feet. Work by Greyhawk Uranium Mines Limited.
1957-59: Ore produced by Greyhawk Uranium Mines

Limited was processed at the Faraday Uranium
Mines Limited mill.

1962: Property taken over by Faraday Uranium
Mines Limited.

PRODUCTION

From 1957 to 1959, 111,128 pounds of U_3O_8 were
produced from ore averaging 1.38 pounds U_3O_8 per
ton.

PRINCIPAL REFERENCES

EMR 1967, MR 12, p. 240-243.

ODM 1956, Vol. 65, pt. 6, p. 117-121.

SILVER CRATER - BASIN OCCURRENCE

COMMODITY Uranium, thorium, mica

RADIOACTIVITY MINERALS Betafite, pyrochlore

LOCATION Lot 31, concession XV, Faraday Township.
Latitude 45.032, Longitude 78.011
Map Reference: ODM 1957-1, Cardiff and Faraday Townships

GEOLOGY The occurrence lies in a carbonate lens, encircled by a band of amphibolite and lying in a trough of syenitic and nepheline syenite gneisses. The carbonate body is about 400 feet long and 100 feet thick. It consists of coarse-grained calcite containing books of black mica (lepidomelane), apatite in crystals up to 2 feet long, amphibolite, albite and betafite (crystals up to 13 inches in diameter). The betafite occurs in two narrow zones dipping 30-35° E and parallelling the strike of the gneissic wall rock. Minor zircon, fluorite, titanite, molybdenite, pyrrhotite and pyrochlore occur.

ECONOMIC FEATURES Drilling in 1966-69 intersected 1- to 8- foot sections of pegmatite assaying 0.5 to 1.5% U₃O₈.

HISTORY OF DEVELOPMENT 1925: The north end of the carbonate body was worked for black mica by S. Orser and K.J. Wilson.
1947-51: 469 tons of black mica were produced from an open pit by Bancroft Mica and Stone Products.
1953-54: Trenching; 6 shallow X-ray drill holes; 34 diamond-drill holes for 5613 feet; and adit with 435 feet of drifting and cross-cutting and a 94-foot raise by Silver Crater Mines Limited.

1966-69: Trenching; scintillometer survey;
14 diamond-drill holes by Fidelity Mining
Investments Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt.6, p.123-132.

SILVER CRATER - BAUMHOUR - CAMPBELL OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite, uranophane

LOCATION Lots 28(N $\frac{1}{2}$), 29 concession B
Lots 27-34 Concession XIV
Lots 27-30 concession XV
Lots 29, 30(N $\frac{1}{2}$), 31 (N $\frac{1}{2}$) concession XVI
Faraday Township.
Latitude 45.031, Longitude 78.000.

Map Reference: ODM 1957-1, Cardiff and Faraday
Townships.

GEOLOGY The property is underlain by granite and granite gneiss to the northeast, and syenite and nepheline syenite to the southwest, with a narrow band of amphibolite or hornblende gneiss at the contact. The rocks, striking northwest and dipping steeply southwest, are cut by dikes, sills and irregular masses of granite pegmatite and pegmatitic granite. Three showings are present. The first consists of uranothorite occurring in pyroxene in calcite-scapolite-pyroxene syenite pegmatite and fluorite-pyroxene granite pegmatite. The pegmatites, 1 to 5 feet wide and 20 feet long, occur along a 200-foot exposure. Number two showing consists of bodies of leucogranite, granite pegmatite and syenite pegmatite. The bodies are 6 to 18 feet wide and 170 feet long, and contain accessory uranothorite, titanite and zircon. The third showing is a discontinuous leucogranite to leucogranite pegmatite dike with patches of pyroxene and accessory zircon, allanite, uranothorite and uranophane. The dike is exposed over 300 feet. It strikes east and dips 70° S.

ECONOMIC FEATURES

Drill core samples averaged 0.06% U_3O_8 . Best assay was 0.31% U_3O_8 over 6 feet.

HISTORY OF DEVELOPMENT

1954-56: Trenching, magnetometer survey, packsack drilling, 7075 feet of diamond drilling by Silver Crater Mines Limited.

1967-69: Geological, magnetic and radiometric surveys, 20 diamond-drill holes for 8377 feet by Fidelity Mining Investments Limited.

1968: Trenching and radiometric survey by F. H. Jowsey.

1975: Geological, geochemical, radiometric and magnetic surveys by R. Laird.

1975: Geological, geophysical and radiometric surveys by Brascan Resources.

1975-76: Radiometric and radon gas surveys by Kerr Addison Mines Limited.

1977: Airborne electromagnetic and magnetic surveys by Brascan Resources, Projex and R. Laird.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 132-134.

OGS, AFRO, Toronto: Tech. files 2.2027 (Kerr Addison Mines Limited), 63.2325 (Fidelity Mining Investments Limited).

YORK RIVER OCCURRENCES

COMMODITY Uranium, thorium, niobium

RADIOACTIVE MINERALS Uranothorite, pyrochlore

LOCATION Lots 2, 3, 6, concession XV,
 Lots 4-6, 8-10, Concession B,
 Faraday Township
 Latitude 45.060, Longitude 77.889

Map Reference: ODM 1957-1, Cardiff and Faraday Townships
 Coordinates derived from NTS sheet.

GEOLOGY The property is underlain by a succession of granitic
 gneiss, granite, biotite gneiss, biotite-amphibolite
 gneiss, calc-silicate gneiss and marble trending
 northeast and dipping to the southeast. Uranothorite
 and pyrochlore occur in granitic and syenitic pegmatites
 in zones designated A through G.
 Granite pegmatites of Zones A, C, D and E occur at or
 near the contact of granite with magnetite-bearing
 granitic gneiss. Granitic and syenitic pegmatites
 of the B and G Zones occur near the contact of
 leucogranite and syenite, and within a sequence of
 syenitic gneisses containing interlayered marble.

ECONOMIC FEATURES Widespread but erratic mineralization occurs in
 pegmatites up to 2 meters wide but averaging less than
 0.5 meters in width. In the D Zone, limited drilling
 has intersected 0.825% U_3O_8 over 0.9 feet and 0.163%
 U_3O_8 over 4.4 feet.

HISTORY OF DEVELOPMENT 1957: Stripping and trenching; diamond drilling
 on the D Zone by York River Uranium Mines Limited.
 1977: Geological and geophysical surveys; minor diamond
 drilling on D, E and G Zones by Canadian Nickel Mines
 Limited.

PRINCIPAL REFERENCES OGS 1980, OFR 5294, p.83-94.

Herschel Township

(NTS 31F/4, 31E/1)

STANDARD ORE OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite

LOCATION N $\frac{1}{2}$ lot 26, concession V,
Herschel Township.
Latitude 45.095, Longitude 78.016.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY An east-west belt of amphibolite cut by weakly
radioactive pegmatite bodies lies within an area
of hybrid granite gneiss and migmatite.

ECONOMIC FEATURES Drilling intersected pegmatites up to 8 feet wide.
Samples assayed from trace to 0.035% U₃O₈ (chemical).

HISTORY OF DEVELOPMENT 1955: Five trenches, and 9 drill holes for 1107 feet
by Standard Ore and Alloys Corporation.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 135.

Hungerford Township
(NTS 31C/11, 31C/6)

Monteagle Township

(NTS 31F/4)

1922-28: Mine operated by Genesee Feldspar Company.

1929-35: Mine operated by P. MacDonald.

1954-55: Drifting and crosscutting from an adit totalling 139 feet; 7 diamond-drill holes for 700 feet; pitting by Phillips-Doubt Grubstake Syndicate.

1956: Scintillometer and magnetometer surveys by Cloudmont Mines Limited.

PRINCIPAL REFERENCES

GSC, Rad. Res. Div. File 31F/4-11

ODM 1954, Vol. 63, pt. 6, p. 43-47.

REMARKS

Largest feldspar producer in Bancroft area.

MELL-QUIRKE PROSPECT

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uranothorite, uraninite, uranophane

LOCATION Lots 4 and 5, concession I
Monteagle Township
Latitude 45.133, Longitude 77.730.

Map Reference: ODM 1954-3, Monteagle and Carlow Townships. Coordinates derived from NTS sheet.

GEOLOGY Radioactive white to pale pink granite pegmatites intrude rusty calc-silicate gneisses and marble striking northeasterly and dipping 50-80° SE. Three main showings have been delineated. The North Showing is a fine-grained pink pegmatite sill, at least 213 by 4 meters, at the contact between amphibolite schist and grey marble containing uraninite, uranothorite and allanite. The Main Showing comprises a number of pegmatite sills ranging from 0.1 to 3 meters in width. Uraninite and uranophane occur preferentially in pegmatite which is fine-grained, sheared, pink, contains peristerite or abundant quartz, or is in contact with apatite-bearing biotite schist. The South Showing consists of leucogranite pegmatite dikes with sparse chloritization, hornblende and accessory pyrite.

ECONOMIC FEATURES The North Showing gives assays averaging 0.025% U_3O_8 over 104 meters. The Main Showing, about 2.5 meters wide and extending 400 meters along strike, gives average assays of 0.01% U_3O_8 over 137 meters. Narrow pegmatites of the South Showing give assays of 0.04-0.10% U_3O_8 (radiometric). (OGS 1980, p. 163)

HISTORY OF DEVELOPMENT 1956-57: Trenching, stripping and drilling of 1,972 feet by Mell-Quirke Uranium Mines Limited.

1969: Seven drill holes totalling 282 feet by

Nor-Scan Mining and Service Company Limited.

1975-77: Trenching, sampling, radon gas survey,

21 diamond-drill holes for 3,946 feet by Forefront

Consolidated Explorations Limited.

PRINCIPAL REFERENCES

OGS 1980, OFR 5294, p. 163-169.

HASTINGS COUNTY

MINOR OCCURRENCES

Bangor Township

(NTS 31F/5)

NAME AND LOCATION

BENNETT LAKE

N $\frac{1}{2}$ lot 26, con. IV,

Bangor Tp.

Lat. 45.340, Long. 77.674.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~ p. 239.

ODM Map 52b, North Hastings Area.

Coordinates derived from NTS sheet.

REMARKS

A pink granite pegmatite sill, exposed for 70 by 20 meters, intrudes biotite-hornblende gneiss. Radioactivity is confined to an area of two square meters, associated with fracturing and hematization adjacent to the quartz core of the pegmatite. The radioactive mineral may be anatase. Samples taken by Rockingham Mines Limited in 1954 assayed 0.048 to 1.85% U₃O₈ equivalent.

NAME AND LOCATION

E. DUBBLESTEIN

N $\frac{1}{2}$ lot 13, con. X,

Bangor Tp.

Lat. 45.370, Long. 77.770.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~ p. 7-9.

ODM Map 52b, North Hastings Area.

Coordinates derived from NTS sheet.

REMARKS

A flat-lying, zoned, pink granite pegmatite
cuts biotite-hornblende paragneiss.

Pyrochlore, associated with biotite in the
pegmatite, occurs in masses up to 2 cm. In
1955, E. Dubblestein carried out 352 feet of
drilling.

NAME AND LOCATION

A.C. THOMAS

S¹/₂, lot 13, con. X,

Bangor Tp.

Lat. 45.369, Long. 77.758

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~ p. 11-12.

ODM Map 52b, North Hastings Area.

Coordinates derived from NTS sheet.

REMARKS

A crudely zoned pink pegmatite sill,
2 meters thick and exposed for 60 meters,
intrudes biotite-hornblende-plagioclase
gneiss. Allantite and thorite occur in the
pegmatite associated with fracturing, red
stain, magnetite and muscovite. In 1958,
A.C. Thomas drilled 12 holes for roughly
700 feet.

Carlow Township

(NTS 31F/4, 31F/5)

NAME AND LOCATION

AMBIS

N $\frac{1}{2}$ lot 17, con. XII

Carlow Tp.

Lat. 45.258, Long. 77.685.

REFERENCES

OGS 1980, OFR 5294, p.27-29.

ODM Map 1954-3. Monteagle and Carlow Townships.

Coordinates derived from NTS sheet.

REMARKS

Uranothorite, uranium hydrocarbon and cyrtolite occur in a pegmatite cutting meta-arkose and siliceous marble. The mineralized pegmatite is syenitic, hematitized, cataclastic and contains abundant mafic minerals, mainly pyroxene.

Two drill core samples assayed 0.016 and 0.007% U₃O₈. In 1955-59, trenches and 16 drill holes totalling 1137 feet were put down by Ambis Mines Limited. In 1963-64, Faraday Uranium Mines Limited carried out geological and radiometric surveys, and drilling of five holes for 1058 feet.

NAME AND LOCATION

BURGESS MINE

Lot 14, con. XIV,

Carlow Tp.

Lat. 45.269, Long. 77.704

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p.137

ODM Map 1954-3, Monteaagle and Carlow Townships.

REMARKS

Red syenite pegmatite intrudes gneisses and corundum-bearing syenites. The deposit was worked for corundum by the Ontario Corundum Company from 1902 to 1905. Nodules of radioactive mineral were reported in fragments on the dump.

NAME AND LOCATION

SUNDSTROM (NORTH)

N $\frac{1}{2}$ lot 18, con. XII,

Carlow Tp,

Lat. 45.260, Long. 77.677.

REFERENCES

ODM 1971, OFR 5057, p.11-12

ODM Map 1954-3, Monteagle and Carlow Townships.

Coordinates derived from NTS sheet.

REMARKS

Granite gneiss with abundant allanite

and accessory titanite is exposed over an

area of 30 by 150 feet. A grab sample

assayed 0.01% U₃O₈ (radiometric). In 1957,

H. Sundstrom carried out trenching.

NAME AND LOCATION

SUNDSTROM (SOUTH)

S $\frac{1}{2}$ lot 17, con. XII

Carlow Tp.

Lat. 45.257, Long. 77.680.

REFERENCES

OGS 1980, OFR 5294, p. 35-36.

ODM Map 1954-3, Monteagle and Carlow Townships.

Coordinates derived from NTS sheet.

REMARKS

A pit, 15 by 10 by 5 feet deep, put down by H. Sundstrom in 1957, exposes calc-silicate gneisses with locally abundant diopside. Uranothorite and sphene occur in patches of quartz-rich pegmatite and in irregular patchy calcite veins.

Dungannon Township
(NTS 31F/4, 31C/13)

NAME AND LOCATION

G. CARD

Lot 18, con. XI,

Dungannon Tp.

Lat. 45.063, Long. 77.760.

REFERENCES

OGS 1980, OFR 5294, p. 45-46.

ODM Map 1955-8, Dungannon and Mayo Townships.

Coordinates derived from NTS sheet.

REMARKS

Granite pegmatite or pegmatitic granite

intruding biotite paragneiss, rusty calc-

silicate gneiss and marble is exposed over an

area up to 950 by 300 feet. Uranothorite and

allanite occur in pegmatitic rock containing

sulfides, hematite or pyroxene veins. In

1956-57, C. Rockwell carried out stripping.

A selected sample assayed 0.03% U_3O_8 (radiometric equivalent).

NAME AND LOCATION

HIGHWAY 500

Lot 18, con. XI,

Dungannon Tp.

Lat. 45.066, Long. 77.761.

REFERENCES

OGS 1980, OFR 5294, p. 47.

ODM Map 1955-8, Dungannon and Mayo Townships.

Coordinates derived from NTS sheet.

REMARKS

A granite pegmatite within syenite

intruding amphibolite and biotite gneiss

displays radioactivity across a width of

0.25 m along a few meters length.

NAME AND LOCATION

P.J. McLEAN
Lots 5 and 6, con. XVI,
Dungannon Tp.
Lat. 45.125, Long. 77.730.

REFERENCES

OGS 1980, OFR 5294, p. 48.
ODM Map 1955-8, Dungannon and Mayo Townships.
Coordinates derived from NTS sheet.

REMARKS

Leucogranite or granite pegmatite within
marble gives geiger readings averaging
2 times background, with spot-highs of
13 to 16 times. Pegmatites are 1.5 to 10.7
meters wide, and may extend along strike for
457 meters. In 1957, P.J. McLean put
in trenches. In 1968 a scintillometer
survey was conducted by Cam Mines Limited.

NAME AND LOCATION

NORMINGO

Lot 14, con. XVI

Dungannon Tp.

Lat 45.118, Long. 77.774

REFERENCES

OGS 1980, OFR 5294, p. 49 - 53.

ODM Map 1955-8, Dungannon and Mayo Townships.

Coordinates derived from NTS sheet.

REMARKS

Pink biotite marble, which occurs with unmineralized white marble and metapyroxenite between two leucogranite sills, gives readings of 10 to 17 times background over an area of 6 by 9 meters. The radioactive minerals are uranian thorianite, uraninite and uranothorite. In 1954, stripping and trenching were carried out by Normingo Mines Limited.

NAME AND LOCATION

RICBAN

S $\frac{1}{2}$ lot 8, con. XVI

Dungannon Tp.

Lat. 45.114, Long. 70.739.

REFERENCES

OGS 1980, OFR 5294, p. 55-56.

ODM Map 1955-8, Dungannon and Mayo Townships.

Coordinates derived from NTS sheet.

REMARKS

Radioactivity occurs in a white to pale pink granite pegmatite, 15 by 400 meters, intruding interbanded marble and quartzofeldspathic paragneiss. In 1958-59, Richban Mines Limited carried out trenching and drilling of 7 holes for 691 meters. Drill core samples returned a weighted average of 0.028% U₃O₈.

NAME AND LOCATION

C. ROCKWELL

Lot 20, con. XI,

Dungannon Tp.

Lat 45.061, Long. 77.763

REFERENCES

OGS 1980, OFR 5294, p. 57.

ODM Map 1955-8, Dungannon and Mayo Townships.

Coordinates derived from NTS sheet.

REMARKS

A radioactive biotite veinlet, 2 meters long

and up to 8 centimetres^{or} wide, crosscuts a

complex of biotite syenite, hybrid syenite

gneiss and biotite-nepheline-plagioclase gneiss.

Selected samples assayed 0.05, 0.16, 1.52 and

0.03% U_3O_8 (radiometric). In 1956, C.W. Rockwell

put down a test pit.

Faraday Township

(NTS 31F/4, 31E/1, 31C/13)

NAME AND LOCATION

BENTLEY-SIDDON LAKES

Lots 12-14, con. XI and A,

Faraday Tp.

Lat. 45.030, Long. 77.910.

REFERENCES

ODM 1956, Vol. 65, p.122-123 Red Bark Mines Ltd.-

Bentley-Siddon Lakes prop.

OGS, AFRO, Toronto: Tech. files 2.2344 (R. Ekstrom),
2.2664 (R. Ekstrom).

ODM Map 1957-1, Cardiff and Faraday Townships.

Coordinates derived from NTS sheet.

REMARKS

In 1955, Red Bark Mines Limited drilled five holes for 1820 feet. The one log available reports hornblende gneiss, with minor diabase and no radioactivity. R. Ekstrom conducted magnetic and electromagnetic surveys in 1977 and 1978 respectively, on the ice of the lakes.

NAME AND LOCATION

BONVILLE

Lots 22 and 23, con. A,

Faraday Tp.

Lat. 45.018, Long. 77.957.

REFERENCES

OGS 1980, OFR 5294, p. 63-64.

ODM Map 1957-1, Cardiff and Faraday Townships.

REMARKS

Uranothorite, uranophane and betafite occur in granite pegmatite and actinolite diopside skarn within country rocks of marble, calc-silicate gneiss, amphibolite and siliceous gneiss. Small mineralized zones, containing associated pyroxene, hornblende, actinolite and epidote, are scattered over a wide area. In 1954, Bonville Gold Mines Limited carried out surface exploration and drilling of 25 holes for 9642 feet.

NAME AND LOCATION

GOLDHAWK (EAST GROUP)

Lots 13 and 14, con. A,

Faraday Tp.

Lat. 45.033, Long. 77.917.

REFERENCES

OGS 1980, OFR 5294, p. 73-74.

ODM Map 1957-1, Cardiff and Faraday Townships.

Coordinates derived from NTS sheet.

REMARKS

REMARKS

Uraninite and uranothorite occur in alaskitic granite pegmatite intruding siliceous marble and pink syenite gneisses. The pegmatite, 1 to 5 metres^{or} thick and at least 200 meters long, gives readings of 20 to 50 times background. In 1954, trenching, pitting and diamond drilling were carried out by Goldhawk Porcupine Limited.

NAME AND LOCATION

LOCKWOOD

Lot 29, Con. A,

Faraday Tp.

Lat. 45.015, Long. 77.992.

REFERENCES

ODM 1956, Vol. 65, pt.6, p.121.

ODM Map 1957-1, Cardiff and Faraday Townships.

REMARKS

Uraninite and uranothorite occur in white tremolitic marble with accessory diopside, phlogopite, pyrite and graphite. In 1954, Silver Crater Mines Limited carried out pitting, trenching, and drilling of two holes for 444 feet. Geiger readings on marble were 12 times background.

NAME AND LOCATION

MACLAN

S $\frac{1}{2}$ lot 6, con. XII,

Faraday Tp.

Lat. 45.029, Long. 77.880.

REFERENCES

OGS, AFRO, Toronto: Tech files 63A.301 (Skrecky and Thompson), 2.978.

:Faraday Township Drill Report No. 15

ODM Map 1957-1, Cardiff and Faraday Townships.

Coordinates derived from NTS sheet.

REMARKS

Biotite-hornblende gneiss, marble and metagabbro strike northeast and dip 50-80°SE. Weakly radioactive pegmatite sills or dikes intrude metagabbro. A geological survey was conducted by A. Gamble in 1956, and spectrometer and magnetometer surveys were carried out by Leesa Explorations Limited in 1968. In 1970-73, Maclan Explorations Limited conducted radiometric, electromagnetic and magnetic surveys and put down five diamond-drill holes for 2042 feet. The best drill core intersection assayed 0.05% U₃O₈ over 1 foot.

NAME AND LOCATION

PACEMAKER

Lots 12, 13, con. X,

Faraday Tp.

Lat. 45.014, Long. 77.900.

REFERENCES

ODM 1956, Vol. 65, pt.6, p.121-122

ODM Map 1957-1, Cardiff and Faraday Townships.

Coordinates derived from NTS sheet.

REMARKS

Country rock of marble with minor paragneiss and amphibolite strikes northeast and dips 55-85° SE.

Three holes (2047 feet) drilled by Pacemaker Mines and Oils Limited in 1955, intersected two narrow pegmatite dikes.

NAME AND LOCATION

G.L. REASOR

Lot 30, con. XVI, Faraday Tp.

Lat. 45.049, Long. 78.010

REFERENCES

ODM, 1956, Vol. 65, pt. 6, p.122.

ODM Map 1957-1, Cardiff and Faraday Townships.

REMARKS

Syenitized amphibolite is cut by small lenses, less than 5 feet wide, of pegmatized zones, pyroxene syenite pegmatite or leucogranite. Sulphides and fluorite occur locally. Uraninite, uranothorite and a pyrochlore-microlite mineral occur in pegmatites. In 1954-55, stripping, pitting and trenching were performed by G.L. Reasor. Geiger readings averaged 2 to 7 times background, with spot highs to 25 times.

NAME AND LOCATION

SAN RAFAEL

Northwestern Faraday Tp.

Lat. 45.042, Long. 78.000

REFERENCES

Northern Miner, December 8, 1977

ODM 1957-1, Cardiff and Faraday Townships.

Coordinates derived from NTS sheet.

REMARKS

In 1977, San Rafael was planning an exploration program on a uranium prospect under option. No other data.

Herschel Township

(NTS 31F/4, 31E/1)

NAME AND LOCATION

BRASCAN

Lots 27-33, con. I,

Lots 26-33, con. II,

Lots 26-32, con. III, IV,

N $\frac{1}{2}$ lots 33,34, con. IV

S $\frac{1}{2}$ lots 27-34, con. V,

Herschel Tp.

Lat. 45.076, Long. 78.023

REFERENCES

OGS, AFRO, Toronto: Tech. files 2.1994, 2.2443

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

The area is underlain by paragneiss and marble, commonly intruded by radioactive pegmatites.

In 1975, reconnaissance geology, water radon

sampling and a scintillometer survey were

carried out by Brascan Resources Limited. In

1977, Western Mines Limited conducted airborne

magnetic, electromagnetic and spectrometer

surveys.

NAME AND LOCATION

D. A. BROWN,
Lot 30, con. I,
Herschel Tp.
Lat. 45.058, Long. 78.018.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p.137.
ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

Ellsworthite was tentatively identified in samples
collected by D. A. Brown. One sample showed 0.2, the
others less than 0.1% U_3O_8 (radiometric).

NAME AND LOCATION

J. W. GRIFFITH,

Lot 31, con. XVI, Faraday Tp.

Lots 32, 33, con. I, Herschel Tp.

Lat. 45.051, Long. 78.028.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 142.

ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

Uraninite, uranothorite, and a pyrochlore-microlite
mineral occur sparsely in pegmatite along 175 feet,
and within paragneiss near a granite contact.

In 1952, J.W. Griffith carried out a radiometric
survey and sampling.

NAME AND LOCATION

W. A. PATTERSON,
Lots 17 and 18, con. XVI,
Herschel Tp.
Lat. 45.199, Long. 78.024.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 134.
ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

Euxenite-polycrase minerals associated with magnetite
and biotite occur in a pegmatite dike 25 to 40 feet
wide, striking $N60^{\circ}E$. The dike cuts amphibolite and
hybrid granite gneiss striking $N70^{\circ}E$ and dipping $30^{\circ}S$.
W. A. Patterson carried out stripping in 1956.

NAME AND LOCATION

PETER-ROCK (WEST)

Lot 39, con. VIII,

Herschel Tp.

Lat. 45.139, Long. 77.911.

REFERENCES

OGS 1980, OFR 5294, p. 109-111.

ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

A zoned pink granite pegmatite dike, 0.3 to 3.5
meters wide and exposed for 131 meters, intrudes
biotite and hornblende gneisses. The radioactive
minerals - betafite, euxenite, uranothorite and
allanite - are associated with fracture zones or
books of biotite. They comprise less than 1% of
the dike. In 1955-56, six small pits or trenches
over a length of 430 feet, and 3 drill holes
totalling 537 feet were completed by Peter-Rock
Mining Company, Limited.

Madoc Township

(NTS 31 C/12, 31 C/11)

NAME AND LOCATION

SEYMOUR,

W $\frac{1}{2}$ lot 11, con. V,

Madoc Tp.

Lat. 44.551, Long. 77.519.

REFERENCES

GSC 1958, Bulletin 45, p. 53.

ODM Map 2154, Madoc Township.

REMARKS

Fine-grained disseminated magnetite occurs in
rhyolite and amphibolite. An open cut 180 by 20 feet
and a shaft 125 feet deep were worked for iron from
1837 to 1845. Magnetite is cut ^{by} carbonate veinlets
and by fissures bearing uraconite.

Monteagle Township

(NTS 31F/4)

NAME AND LOCATION

BANCROFT FELDSPAR,
Lot 6, con. XII,
Monteagle Tp.
Lat. 45.228, Long. 77.785.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 136.
ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

Allanite was reported at the quarry of the Bancroft
Feldspar Company. No other data.

NAME AND LOCATION

BARTLETT MINE

Lot 15, con. VIII,

Monteagle Tp.

Lat. 45.180, Long. 77.808.

REFERENCES

OGS 1980, OFR 5294, p. 149-150.

ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

A pink granite pegmatite dike, up to 80 feet wide, intrudes hornblende gneiss, syenitic gneiss and hornblende-quartz-feldspar gneiss. Mineralized areas of the pegmatite contain up to 10% allanite, 10% calcite, 3% apatite, hornblende and pink-red feldspar. The pegmatite was investigated for feldspar by pitting in 1926 by P. J. Dwyer, and in 1951 by K. Bowser.

NAME AND LOCATION

CAIRNS MINE
Lot 21, con. VII,
Monteagle Tp.
Lat. 45.168, Long. 77.834.

REFERENCES

ODM 1954, Vol. 63, pt. 6, p. 47.
ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

A zoned pink granite pegmatite intrudes amphibolite. The pegmatite contains soda spar and milky and smoky quartz, with minor titanite, hornblende, pyrite, magnetite and possibly uranpyrochlore. The property, originally opened by Dillon and Mills in 1920, was worked for feldspar until 1924 by Feldspar Mines Corporation and P. J. Dwyer. Two cars of feldspar were shipped from the main pit, 50 by 30 by 25 feet deep, and 2 other small cuts.

NAME AND LOCATION

J. R. CAMPBELL,
Lots 20 - 24, 29, con. VI,
Lots 22 - 24, con. VII,
Monteagle Tp.
Lat. 45.163, Long. 77.837.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 148.
ODM Map 1954-3, Monteagle and Carlow Townships.
Coordinates derived from NTS sheet.

REMARKS

Samples of pegmatitic material assayed between
0.007 and 1.62% U_3O_8 (radiometric).

NAME AND LOCATION

S. J. CARR

Lots 7 and 8, con. III,

Monteagle Tp.

Lat. 45.151, Long. 77.752.

REFERENCES

ODM 1954, Vol. 63, pt. 6, p. 69.

ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

A leucogranite pegmatite exposed for a length of 250 feet cuts amphibolite (metagabbro). Allanite, sometimes containing inclusions of uranothorite, is associated with magnetite, abundant quartz, and hematitization in the pegmatite. Stripping was carried out by S. J. Carr in 1954.

NAME AND LOCATION

P. J. DWYER,
Lot 21, con. VII,
Monteagle Tp.
Lat. 45.168, Long. 77.834.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 148.
ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

Euxenite was tentatively identified in a pegmatite
deposit worked for feldspar by P. J. Dwyer.

NAME AND LOCATION

J. F. FERRILL

Lots 27 and 28, con. III,

Monteagle Tp.

Lat. 45.119, Long. 77.847.

REFERENCES

OGS 1980, OFR 5294, p. 153-154.

ODM Map 1954-3, Monteagle and Carlow Townships.

Coordinates derived from NTS sheet.

REMARKS

A pegmatitic granite intruding hornblende and biotite syenitic gneisses contains allanite and rare earths. In 1950, J. F. Ferrill opened up pits. A 300-pound bulk sample showed a rare earths content of 1.6 pounds per ton.

NAME AND LOCATION

GENESEE NO. 2 MINE

S $\frac{1}{2}$ lot 14, con. VIII,

Monteagle Tp.

Lat. 45.178, Long. 77.801.

REFERENCES

OGS 1980, OFR 5294, p. 155-156.

ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

Pyrochlore, intimately associated with feldspar, occurs in a zoned pink granite pegmatite dike intruding rusty paragneiss, calcareous amphibolite, siliceous marble, quartz-feldspathic gneiss and syenitic gneiss. The pegmatite was worked for feldspar in 1926-31 by the Genesee Feldspar Company, and in 1948-50 by D. Vardy and W. Jessup. Total production was 2,846 tons.

NAME AND LOCATION

GENESEE NO. 2 MINE (SOUTH),
N $\frac{1}{2}$ lot 14, con. VII,
Monteagle Tp.
Lat. 45.178, Long. 77.797.

REFERENCES

OGS 1980, OFR 5294, p. 157.
ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

A small cut, 12 feet long, exposes graphic granite
pegmatite cutting siliceous marble. Uranothorite
occurs in feldspar, often along fractures. The pit
was probably opened by the Genesee Feldspar Company
during the 1920's.

NAME AND LOCATION

McCORMACK

Lot 24, con. VI,

Monteagle Tp.

Lat. 45.152, Long. 77.841.

REFERENCES

ODM 1954, Vol. 63, pt. 6, p. 42.

ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

An open cut 60 by 20 feet exposes a zoned pink granite pegmatite dike crosscutting amphibolite and biotite schist. The dike, 12 feet wide and exposed for 90 feet, contains minor magnetite, titanite, allanite and pyrochlore. The property was opened by Dillon and Mills in 1920, and reopened by P. J. Dwyer in 1926. 150 tons of feldspar were produced.

NAME AND LOCATION

PETER-ROCK (EAST)

S $\frac{1}{2}$ lot 29, con. VIII,

Monteagle Tp.

Lat. 45.163, Long. 77.880.

REFERENCES

OGS 1980, OFR 5294, p. 171.

ODM Map 1954-3, Monteagle and Carlow Townships.

Coordinates derived from NTS sheet.

REMARKS

Narrow pink granite pegmatite dikes crosscut

hybrid granite gneiss and hornblende gneiss.

Pegmatite contains variable amounts of accessory

pyroxene, biotite, magnetite, pyrite, zircon,

allanite and rare uranothorite. In 1954-55,

Peter-Rock Mining Company Limited carried out a

scintillometer survey and drilling of 10 holes

for 868 feet. Geiger readings on pegmatite core

were 1 to 3 times background with rare highs

to 5 times.

NAME AND LOCATION

PLUNKETT NORTH MINE

N $\frac{1}{2}$ lot 20, con. VI,

Monteagle Tp.

Lat. 45.160, Long. 77.827.

REFERENCES

OGS 1980, OFR 5294, p. 173-174.

ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

An irregularly zoned pink granite pegmatite dike, about 4 feet wide, cuts rusty syenitic gneisses and biotite schist. Betafite, euxenite and pyrochlore occur in narrow fracture zones near the pegmatite borders. In 1921, a pit 10 by 10 by 3 feet deep was put down by American Molybdenite Company.

NAME AND LOCATION

PLUNKETT SOUTH MINE

S $\frac{1}{2}$ lot 20, con. VI,

Monteagle Tp.

Lat. 45.157, Long. 77.826.

REFERENCES

OGS 1980, OFR 5294, p. 175-176.

ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

A zoned pink granite pegmatite dike, 20 to 25 feet wide and exposed for 175 feet along strike, intrudes feldspathic biotite paragneiss, amphibolite, granite gneiss and scapolite pyroxenite. The pegmatite comprises graphic granite, perthite, quartz, albite, hornblende, titanite, molybdenite, pyrite, magnetite and allanite. Uranothorite and thorite are associated with hornblende. In 1921, American Molybdenite Company carried out stripping and pitting. Further work was done in 1927 by S. Orser. Two cars of feldspar were reportedly shipped.

NAME AND LOCATION

H. QUIRK

Lot 12, con. IV,

Monteagle Tp.

Lat. 45.151, Long. 77.778.

REFERENCES

OGS 1980, OFR 5294, p. 177-178.

ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

The country rocks are marble, siliceous marble, metapyroxenite skarn, paragneiss and granite pegmatite. Uranothorite and thorite occur associated with pyroxene veins, scapolite pyroxenite, calcite pods or fractured granite pegmatite. In 1954, H. Quirk and J. E. Quirk carried out stripping, pitting and trenching. Samples assayed 0.14, 0.55, 3.55 and 4.48% U_3O_8 (radiometric).

NAME AND LOCATION

B. ROBSON

Lot 3, con. III,

Monteagle Tp.

Lat. 45.159, Long. 77.732.

REFERENCES

OGS 1980, OFR 5294, p. 179-180.

ODM Map 1954-3, Monteagle and Carlow Townships.

Coordinates derived from NTS sheet.

REMARKS

A pink biotite syenite pegmatite sill intrudes syenite, nepheline syenite gneiss and granitic gneiss. Uraninite, cyrtolite, and thorite in the pegmatite are associated with hematitization, fracturing, minor carbonate and biotite clusters up to 10 inches wide containing minor apatite. Geiger readings average 3 to 5 times background. In 1955, B. Robson blasted a section of cliff face 15 by 20 feet.

NAME AND LOCATION

SALMON TROUT LAKE,
Lot 14, con. VIII,
Monteagle Tp.
Lat. 45.185, Long. 77.808.

REFERENCES

OGS 1980, OFR 5294, p. 245.
ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

An open cut 30 by 40 feet exposes a granite
pegmatite dike cutting amphibolite. The dike is
traceable for 400 feet and contains rare allanite.

NAME AND LOCATION

SOUTH STATE (NORTH)

Lots 17 and 18, con. II,

Monteagle Tp.

Lat. 45.127, Long. 77.796.

REFERENCES

OGS 1980, OFR 5294, p. 181-183.

ODM Map 1954-3, Monteagle and Carlow Townships.

Coordinates derived from NTS sheet.

REMARKS

The property is underlain by metamorphic pyroxenite, leucogranite, granite gneiss and granite pegmatite. These rocks strike N30°E and dip 40°SE. Bulldozed strippings up to 725 feet long expose siliceous marble and biotite metapyroxenite which carry uraninite and thorianite. In 1956, stripping was carried out by Standard Ore and Alloys Corporation. In 1957, South State Uranium Mines Limited performed trenching, stripping and diamond drilling. Grab samples assayed 0.05 and 0.41% U_3O_8 (radiometric).

NAME AND LOCATION

SOUTH STATE (SOUTH),
N $\frac{1}{2}$ lot 20, con. I,
Monteagle Tp.
Lat. 45.115, Long. 77.802.

REFERENCES

OGS 1980, OFR 5294, p. 185.
ODM Map 1954-3, Monteagle and Carlow Townships.
Coordinates derived from NTS sheet.

REMARKS

Uranothorite occurs locally in pyroxene-biotite
veins cutting massive pink syenite. A pit, 13 by 10
feet, exposes radioactive siliceous marble.
In 1956-57, Standard Ore and Alloys Corporation
carried out stripping.

NAME AND LOCATION

THOMPSON MINE

Lot 11, con. VII,

Monteagle Tp.

Lat. 45.175, Long. 77.781.

REFERENCES

ODM 1954, Vol. 63, pt. 6, p. 43.

ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

A zoned pink granite pegmatite cuts leucogranitic gneiss, amphibolite, meta-pyroxenite and hornblende syenite gneiss. The dike is 20 to 25 feet wide and traceable for 500 feet. It contains accessory epidote, allanite, pyroxene, hornblende, sericite, chlorite, titanite and hematite. In 1923-25 and 1927, Feldspar Mines Corporation produced 2715 tons of spar.

NAME AND LOCATION

TROUT CREEK

Lots 4 and 5, con. VII,

Monteagle Tp.

Lat. 45.190, Long. 77.754.

REFERENCES

OGS 1980, OFR 5294, p. 187-188.

ODM Map 1954-3, Monteagle and Carlow Townships.

Coordinates derived from NTS sheet.

REMARKS

A pink, foliated granite with minor pegmatitic units and pyroxene and pyroxene carbonate veins, lies adjacent to a carbonate zone containing granitic and gneissic clasts. Uranothorite occurs in pyroxene veins and in pegmatitic granite, and is associated with hematitization and proximity to the carbonate zone. In 1954, blasting, pitting and stripping were carried out by R. H. Thompson and L. Black. Geiger readings on the pegmatite range up to 7 times background, with one spot high of 60 times over a fracture.

NAME AND LOCATION

WATSON FELDSPAR

Lot 21, con. VI,

Monteagle Tp.

Lat. 45.158, Long. 77.831.

REFERENCES

ODM 1954, Vol. 63, pt. 6, p. 41.

ODM Map 1954-3, Monteagle and Carlow Townships.

REMARKS

An open cut 27 by 4 meters exposes a zoned pink granite pegmatite dike cutting granitic gneiss, syenitic gneiss and amphibolite. The dike is 3 meters wide and contains graphic granite, smoky and milky quartz, feldspars, and rare allanite. From 1919-1926, the dike was worked for feldspar by Universal Silicates Limited (P. J. Dwyer), Mount Eagle Feldspar Company, and Consolidated Feldspar Company.

NAME AND LOCATION

WELSH FARM,

Lot 8, con. X,

Monteagle Tp.

Lat. 45.208, Long. 77.783.

REFERENCES

OGS 1980, OFR 5294, p. 189-190.

ODM Map 1954-3, Monteagle and Carlow Townships.

Coordinates derived from NTS sheet.

REMARKS

Fly rock close to a small pit shows syenite
pegmatite emplaced in hornblende plagioclase
gneiss. The pegmatite comprises feldspar and
hornblende, and contains up to 20% allanite in
masses up to 4 inches across.

NAME AND LOCATION

WOODCOX MINE

Lot 17 , con. VIII,

Monteagle Tp.

Lat. 45.179, Long. 77.818.

REFERENCES

OGS 1980, OFR 5294, p. 191-193.

ODM 1954-3, Monteagle and Carlow Townships.

REMARKS

An open cut 330 by 30 feet exposes a zoned pink granite pegmatite dike cutting pink leucogranite gneiss. Amazonite, peristerite, hornblende, magnetite, biotite, pyrite, columbite, allsworthite, allanite, muscovite, calcite, hematite, epidote, betafite, pyrochlore and calciosamaraskite were noted on the dump. Radioactive minerals associated with cyrtolite and columbite occur in nodular masses weighing up to 100 pounds. From 1921 to 1923, Feldspar Mines Corporation produced about 6000 tons of spar from the open cut. In 1948-49, the property was examined by Northern Uranium Mines, Limited. In 1955, seven holes for 1472 feet were drilled by Metro Minerals and Uranium Mines.

NAME AND LOCATION

R. WRIGHT,
Lot 25, con. VI,
Monteagle Tp.
Lat. 45.158, Long. 77.848.

REFERENCES

ODM 1954, Vol. 63, pt. 6, p. 42.
ODM 1954-3, Monteagle and Carlow Townships.

REMARKS

A zoned pink granite pegmatite intrudes hornblende
syenite gneiss and hybrid granite gneiss. The
pegmatite, exposed in an open cut face 25 feet
long by 8 feet high, contains minor biotite,
magnetite, hornblende, titanite, and allanite.
The area was examined by Dillon and Mills in 1920
and P. J. Dwyer in 1926.

Wicklow Township

(NTS 31F/5)

NAME AND LOCATION

C. PLECINSKI,
About 2 miles north of Maynooth,
Wicklow Tp.
Lat. 45.258, Long. 77.946.

REFERENCES

GSC, Rad. Res. Div. File 31F/5-2.
ODM Map 52b, North Hastings Area. Coordinates derived
from NTS sheet.

REMARKS

Pegmatite or granite containing magnetite and minor
allanite was examined by C. Plecinski in 1957.
Samples assayed 0.030 and 0.042% U_3O_8 (radiometric).

LANARK COUNTY

South Sherbrooke Township

(NTS 31C/15)

LANARK COUNTY MINOR

OCCURRENCES

Bathurst Township

(NTS 31C/16)

NAME AND LOCATION

C. INNES,

Lot 22, con. IX,

Bathurst Tp.

Lat. 44.942, Long. 76.372.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 248.

ODM Map 2054, Gananoque Area.

REMARKS

Euxenite, fergusonite, and cyrtolite were reported
in a pegmatite deposit formerly worked for feldspar.

South Sherbrooke Township
(NTS 31C/15)

NAME AND LOCATION

A. GARRETT,
Lot 15, con. VI,
South Sherbrooke Tp.
Lat. 44.818, Long. 76.500.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 145.
ODM Map 2054, Gananoque Area. Coordinates derived from
NTS sheet.

REMARKS

A sample collected by A. Garrett showed between
0.05 and 1.0% U_3O_8 (radiometric).

LENNOX AND ADDINGTON

COUNTY

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GLENSHIRE MINES OCCURRENCE

COMMODITY	Uranium
RADIOACTIVE MINERALS	Uranophane
LOCATION	<p>Lot 3, Concession VIII, Lots 3 - 5, Concession IX, Kaladar Township.</p> <p>Latitude 44.619, Longitude 77.087.</p> <p>Map Reference: ODM 2053, Madoc Area. Coordinates derived from NTS sheet.</p>
GEOLOGY	<p>Mineralization occurs within pegmatite dikes intruding altered amphibolitic rocks, crystalline limestone and paragneiss. These rocks all strike northeast and dip 35 - 45°SE. The more altered and schistose units carry disseminated pyrite and pyrrhotite, with minor chalcopyrite, sphalerite, molybdenite and galena. Numerous gossans are present.</p>
ECONOMIC FEATURES	<p>Three large (up to 500 by 2000 feet) weakly radio- active pegmatites were discovered. Best drill core assay was 0.037% U_3O_8.</p>
HISTORY OF DEVELOPMENT	<p>pre-1952: Trenching by an unknown operator.</p> <p>1974-75: Reconnaissance prospecting; stripping, trenching; VLF-EM, magnetic and geological surveys; soil sampling; 6 drill holes for 1030 feet by Glenshire Mines Limited.</p>
PRINCIPAL REFERENCES	<p>OGS, AFRO, Toronto: Tech. files 63.3389, 63.3288.</p>

HUDSON BAY OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Uraninite (?)

LOCATION Lots 14 - 17, concession X and XI,
Kaladar Township, Lennox and Addington County.
Lots 14 - 17, concession I,
Kennebec Township, Frontenac County.
Latitude 44.698, Longitude 77.081.
Map Reference: ODM 2053, Madoc Area. Coordinates
derived from NTS sheet.

GEOLOGY The area is underlain by a series of feldspathic
gneisses, marbles, schists and amphibolites.
Radioactive mineralization (possibly uraninite)
occurs in pegmatites within the gneiss and is
usually associated with magnetite and garnet
or with fractures.

ECONOMIC FEATURES The best sample collected from a showing assayed
0.112% U_3O_8 and 0.03% ThO_2 .

HISTORY OF DEVELOPMENT 1977: An airborne γ -ray spectrometer survey by the
Federal/Provincial Uranium Reconnaissance Program.
1977: Ground radiometric, magnetic and geological
surveys by Hudson Bay Exploration and Development
Company Limited.

PRINCIPAL REFERENCES Regional Geologist's Files, OMNR, Kemptville:
File Kaladar No. 16.

1. The first part of the document is a list of names and addresses.

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CANADIAN GEARY OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uraninite, uranothorite, uranophane

LOCATION Lots 14, 15, concession V,
 Lots 16, 17, concession VI,
 Lot 17, concession VII,
 Lots 18 - 21, concession VIII,
 Sheffield Township.
 Latitude 44.618, Longitude 77.632.
 Map Reference: ODM 2053, Madoc Area. Coordinates derived
 from NTS sheet.

GEOLOGY The country rocks are granite, granite gneiss, and
 pegmatites, with some metasediments and occasional
 outliers of Ordovician limestone. Radioactivity occurs
 in a zone of pegmatites trending northeast along the
 Farney Creek linear, and dipping 30-65°SE. Uraninite
 and uranothorite crystals, and uranophane stain, occur
 in the pegmatites, which are generally light-coloured
 and calcium-rich, and locally contain coarse plagioclasic,
 tremolitic, and amethystine phases and hematite-filled
 fractures.

ECONOMIC FEATURES One grab sample assayed 0.115% U₃O₈. Drill hole samples
 ranged from 0.01 to 0.03% U₃O₈ with one assay of
 0.134% U₃O₈ over 1.2 feet.

HISTORY OF DEVELOPMENT pre-1967: Geological survey of lot 17, concession VII
 by H. Dowhaluk.
 1967-69: Geiger and geological surveys, trenching,
 scintillometer survey, and 7 diamond-drill holes for
 370 feet by Canadian Geary Mining Corporation.
 1969: One drill hole (107 feet) by H. Dowhaluk in lot
 17, concession VII.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. file 63.2502.

NAME AND LOCATION

ZURICH,
Lots 19, 20, con. VI and VII,
Sheffield Tp.
Lat. 44.555, Long. 77.051.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.1968.
ODM Map 2053, Madoc Area. Coordinates derived from
NTS sheet.

REMARKS

Radioactive pegmatites intrude granite near its
contact with marble and amphibolitic rocks. The
pegmatites and metasediments strike north-northeast
and dip 30-65°SE. Uraninite, thorite, uranophane,
and phosphuranylite are present. Geiger surveys
and trenching were performed by Zurich Explorations
Limited in 1976. The best assay was a grab sample
running 0.115% U_3O_8 .

Sheffield Township

(NTS 31C/10, 31C/11)

LENNOX AND ADDINGTON

COUNTY MINOR OCCURRENCES

DISTRICT OF

MANITOULIN MINOR

OCCURRENCES

Carlyle Township

(NTS 41H/8 & 41H/7, 41H/14)

NAME AND LOCATION

L.R. BOUSQUET

Philip Edward Island,

Carlyle Tp.

Lat. 45.969, Long. 81.201.

REFERENCES

ODM 1971, OFR 5057, p.35-39.

ODM Map 2360, Sudbury-Manitoulin.

Coordinates derived from NTS sheet.

REMARKS

Biotite granite, leucogranite and granite

pegmatite intrude biotite paragneiss

striking N15-25°E and dipping 60-70°E.

Spotty radioactivity is associated with

biotite, hematite, uranophane and

monazite. A grab sample assayed

0.08% U_3O_8 (chemical).

NAME AND LOCATION

D. SCHAFFER

North side of Philip Edward Island,

Carlyle Tp.

Lat. 45.996, Long. 81.200

REFERENCES

ODM 1971, OFR 5057, p.29-34.

ODM Map 2360, Sudbury - Manitoulin.

Coordinates derived from NTS sheet.

REMARKS

Weakly radioactive biotite granite pegmatites intrude garnet - biotite paragneiss striking N40°E and dipping 80°SE. Radioactivity is associated with abundant biotite and accessory zircon and monazite. A grab sample assayed 0.006% U₃O₈ (chemical).

DISTRICT OF
MUSKOKA.

Freeman Township

(NTS 31E/4)

LA - CHIB OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Uranophane, uraninite (?)

LOCATION Lots 5, 6, concession VII and VIII,
Lot 6, concession IX,
Freeman Township.
Latitude 45.019, Longitude 79.716.
Map Reference: ODM 2118, Parry Sound - Huntsville Area.
Coordinates derived from NTS sheet.

GEOLOGY Granitic gneisses (meta-arkose) and biotite and/or
hornblende-bearing gneisses (metagreywacke) trend
north-northwest and dip west-southwest.
Two radioactive zones have been investigated. In
the South zone, radioactive minerals are confined to
a bed of red meta-arkose within metagreywacke. In the
North zone, uranophane and possibly uraninite occur
in a coarse leucocratic pegmatite with accessory
biotite, apatite, and chalcopyrite. Mineralization
is associated with red feldspar and smoky quartz.

ECONOMIC FEATURES Mineralized zones are 3 to 8 feet thick and up to
800 feet long. Drill samples assayed up to 0.30
pounds U_3O_8 per ton.

HISTORY OF DEVELOPMENT 1975: Radioactivity discovered by prospectors.
1978: Radiometric, magnetic and geological surveys;
7 diamond-drill holes for 1,635 feet by La - Chib
Mines Limited.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. file 63.3534.
:Freeman Township Drill Report No 10.

REMARKS This property is also known as the MacTier Uranium Prospect.

DISTRICT OF MUSKOKA

MINOR OCCURRENCES

Chaffey Township
(NTS 31E/6)

NAME AND LOCATION

INTERNATIONAL CERAMIC,

Lot 23, con. V,

Chaffey Tp.

Lat. 45.241, Long. 79.153.

REFERENCES

ODM 1967, G.R. 52, p. 45.

ODM Map 2118, Parry Sound - Huntsville Area.

REMARKS

A 40-foot wide zoned granite pegmatite dike striking N80°W cuts biotite paragneiss. The dike contains feldspar, quartz, biotite (crystals up to 6 feet diameter), magnetite, graphic granite, sericite, and an unidentified radioactive mineral. International Ceramic Mining Limited opened the dike in 1948.

NAME AND LOCATION

R. G. MORRIS,
About 6 miles from Huntsville,
Chaffey Tp.
Lat. 45.38, Long. 79.25.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 141.
ODM Map 2118, Parry Sound - Huntsville Area. Coordinates
given are for township centre, derived from the
Gazetteer of Canada.

REMARKS

R. G. Morris submitted a radioactive sample. No other data.

Freeman Township
(NTS 31E/4)

1.

NAME AND LOCATION

H. BARNES,
N $\frac{1}{2}$ lot 5, con. III,
Freeman Tp.
Lat. 45.051, Long. 79.766.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 261.
ODM Map 2118, Parry Sound - Huntsville Area. Coordinates
derived from NTS sheet.

REMARKS

A radioactive occurrence in granitic rock is reported.
No other data.

Muskoka Township
(NTS 31D/14)

NAME AND LOCATION

D. HALDEN,
Lots 12, 13, con. III,
Lots 11, 12, con. IV,
Lot 12, con. V,
Muskoka Tp.
Lat. 45.933, Long. 79.331.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 275.
ODM Map 52a, Haliburton Area. Coordinates derived from
NTS sheet.

REMARKS

A radioactive occurrence is reported. No other data.

DISTRICT OF NIPISSING

Butt Township

(NTS 31E/10, 31E/11)

WM. ELLIOT OCCURRENCE

COMMODITY Uranium, thorium, muscovite

RADIOACTIVE MINERALS Uraninite, allanite

LOCATION Lot 13, concession VII,
Butt Township
Latitude 45.701, Longitude 79.092
Map Reference: ODM P.972, Uranium and Thorium
Deposits of Ontario, Southern Sheet.

GEOLOGY Mineralization occurs within coarse-grained
pegmatite intruding granitic gneiss. The pegmatite
is composed of feldspar, quartz, mica, tourmaline and
uraninite (pitchblende). Rare earth oxides and smoky
quartz are reported. The dike is 90 feet long by 10
feet wide, and strikes $N40^{\circ}E$.

ECONOMIC FEATURES Uraninite samples assayed approximately
75% U_3O_8 .

HISTORY OF DEVELOPMENT 1919: Stripping, an open cut 40 by 8
feet for removal of muscovite by William Elliot.
1974: Radiometric survey, possibly by C.D. Gris.

PRINCIPAL REFERENCES GSC 1932, Econ. Geol. Ser. No. 11, p.187-188.

REMARKS Site of first uraninite found in Ontario.

Calvin Township

(NTS 31L/2, 31L/7)

MOLYBDENUM CORPORATION OCCURRENCE

COMMODITY Uranium, rare earths, feldspar

RADIOACTIVE MINERALS Euxenite-polycrase, allanite

LOCATION Lots 21 and 22, concession VIII,
Lots 19 - 22, concession IX,
Lots 19 - 21, concession X,
Calvin Township.
Latitude 46.271, Longitude 78.938.
Map Reference: ODM 2392, Ontario Geological Map, Southern
Sheet. Coordinates derived from NTS sheet.

GEOLOGY Granite pegmatite dikes intrude granitic gneiss striking
N20°W and dipping 75°NE. The dikes are usually
concordant with foliation, but occasionally crosscut it.
They are composed of quartz, feldspar, biotite, magnetite,
hematite, garnet, columbite, euxenite-polycrase, and
allanite.

ECONOMIC FEATURES The largest dike is up to 30 feet wide and over 500
feet long. Three bulk samples assayed 0.10% U₃O₈ each,
with 0.15, 0.10, and 0.12% columbium and tantalum oxides.

HISTORY OF DEVELOPMENT circa 1900: Feldspar mined by A. Ryan from two small pits.
1925-26: Prspecting; small feldspar shipments by
Harcourt-Patterson and O'Brien-Fowler.
circa 1950: Stripping, trenching, test pitting by
Molybdenum Corporation of America.
1953: Eight drill holes for 1011 feet by Trebor Mines
Limited.

PRINCIPAL REFERENCES GSC 1960, Paper 59-10, p. 21-22.
GSC 1932, Econ. Geol. Ser. No. 11, p. 147-148.

Lake Nipissing
(NTS 31L/3, 31L/5)

IRON ISLAND OCCURRENCE

COMMODITY Iron, niobium, titanium, uranium, nickel, tin, copper

RADIOACTIVE MINERALS Uranian pyrochlore

LOCATION In the western part of Lake Nipissing south of Sturgeon Falls.
Latitude 46.263, Longitude 79.881.
Map Reference: ODM 2216, North Bay Area.

GEOLOGY The Iron Island alkalic complex is a crude ellipse, about 1.5 miles long by 1 mile wide. On Iron Island, quartz fenite predominates to the north and east, and aegerine-potassic feldspar fenite predominates elsewhere. The southeastern area is underlain by hybrid silicate-carbonate rocks or silicocarbonatite containing nepheline syenite, with apatite, iron-titanium oxides, altered pyroxene and amphibole, zeolites, andraditic garnet, melilite, and pyrite.
Uranian pyrochlore is present in silicocarbonatite and ijolitic rocks.

ECONOMIC FEATURES Best assays from drill samples were 0.14% U_3O_8 over 10 feet, and 0.30% Nb_2O_5 and 0.07% U_3O_8 over 9 feet.

HISTORY OF DEVELOPMENT pre-1900: Some pitting. Possibly some iron ore was removed.
1948: Aeromagnetic survey by Dominion Gulf Company.
1951-53: Gravimetric and magnetic surveys; 26 diamond-drill holes for 16,318 feet by Nipiron Mines Limited.

PRINCIPAL REFERENCES ODM 1971, G. R. 94, p. 50-51, 79-81.

MANITOU ISLANDS PROSPECT

COMMODITY Uranium, niobium

RADIOACTIVE MINERALS Pyrochlore, uraninite

LOCATION Six miles southwest of North Bay, in Lake Nipissing.

Latitude 46.274, Longitude 79.583.

Map Reference: ODM 2216, North Bay Area.

GEOLOGY Five uranian pyrochlore deposits occur within an aegirine-potassic feldspar fenite zone. The country rocks are carbonatite and altered syenitic and pyroxenitic rock. The fenite zone is a circular feature 3.2 km long, 2.6 km across. The ring structure complex has been dated at 570 m. y.. Minerals found in the main (Newman) deposits include: acmite, calcite, potash feldspar, apatite, biotite, chlorite, fluorite, hematite, magnetite, monazite, plagioclase, pyrite, sericite, hornblende, pyrrhotite, uraninite and uranian pyrochlore.

ECONOMIC FEATURES In 1971 ore reserves were estimated at 3,596,120 tons grading 0.627% Cb_2O_5 and 0.032% U_3O_8 . (Canadian Mines Handbook, 1972-73, p. 254).

HISTORY OF DEVELOPMENT 1952: Geiger survey by J. Strohl; sampling by M. Van Cleef and J. Kenney.

1953: Geological, magnetic and scintillometer surveys; 85 diamond-drill holes by Beauclage Mines Limited.

1954-59: 20 surface drill holes for 13,024 feet; 60 underground holes for 13,055 feet; shaft to 425 feet with 77 feet of drifting on 275-foot level and, on the 400-foot level, 1142 feet of drifting and 1287 feet of crosscutting; 13,473 tons of ore hoisted; pilot flotation mill handling 25 to 50 t. p. d. operated for 7½ months.

Workings flooded in 1957. Work by Beaucege Mines Limited.
1971: Magnetometer survey and seven drill holes for
5252 feet by Nord Resources Corporation Limited.

PRINCIPAL REFERENCES

GSC 1958, Econ. Geol. Ser. No. 18, p. 45-62.
Northern Miner Press, Canadian Mines Handbook,
1972-73, p. 254.
ODM 1971, G. R. 94, p. 51-52, 81-83.

REMARKS

First large pyrochlore deposits discovered in
North America.

Mattawan Township

(NTS 31L/7)

O'BRIEN - FOWLER OCCURRENCE

COMMODITY Feldspar, uranium

RADIOACTIVE MINERALS Euxenite-polycrase

LOCATION Lot 29, concession III,
Mattawan Township.
Latitude 46.325, Longitude 78.779.
Map Reference: ODM 53d, Mattawan - Odrig Area.

GEOLOGY Mineralization occurs within a granite pegmatite
dike intruding biotite-hornblende-feldspar gneiss.
The dike strikes northeast and dips steeply northwest,
crosscutting a foliation striking N60°W and dipping
steeply northeast.
The dike contains a quartz-rich core, abundant feldspar,
and some biotite. Accessory euxenite-polycrase tends to
concentrate near the pegmatite margins and with biotite.

ECONOMIC GEOLOGY The dike is 18 to 25 feet wide and 300 feet long.
Fifteen bulk samples average 0.0294% U₃O₈ (chemical).

HISTORY OF DEVELOPMENT 1925-26: Dike worked for feldspar by 2 open cuts (each
about 120 by 25 by 20 feet deep) by M. J. O'Brien Limited.
1950: Bulk sampling by Molybdenum Corporation of America.

PRINCIPAL REFERENCES GSC 1932, Econ. Geol. Ser. No. 11, p. 189-191.
GSC 1952, Econ. Geol. Ser. No. 16, p. 147-148.

Murchison Township

(NTS 31E/9, 31F/12)

T. J. HAMILTON OCCURRENCE

COMMODITY Uranium, thorium, cerium, lanthanum, yttrium

RADIOACTIVE MINERALS Allanite

LOCATION Lot 4, Concession II, Murchison Township
Latitude 45.520, Longitude 77.941.
Map Reference: ODM 2392, Ontario Geological Map,
Southern Sheet. Coordinates derived from NTS sheet.

GEOLOGY The occurrence comprises two showings. The first is a granite pegmatite dike, 17 to 20 feet wide and exposed for 25 feet. It trends N60°E and dips steeply west through gently east-dipping hornblende gneiss and paragneiss. Allanite is concentrated in a fracture zone, in clots up to 3 inches wide. The second showing consists of several dikes concordantly intruding paragneiss which strikes northwest and dips about 10°E. The main dike, traceable for 75 feet, is 12 feet wide. The other dikes are up to 18 inches wide. Allanite occurs in fairly uniformly disseminated crystals and clots.

ECONOMIC FEATURES Two drill core samples assayed 0.007% U₃O₈ over 5 feet and 0.005% U₃O₈ over 8 feet. A selected sample of high-grade material from the first showing gave a spectrographic analysis of 2% Ce, 2% La, 0.3% Th and 0.05% Y.

HISTORY OF DEVELOPMENT 1960-70: Trenching and two drill holes for 78 feet by T. J. Hamilton.

PRINCIPAL REFERENCES GSC 1960, Paper 59-10, p. 29-30.
OGS, AFRO, Toronto: Murchison Township Drill Report No. 10.

DISTRICT OF NIPISSING

MINOR OCCURRENCES

Butt Township

(NTS 31E/10, 31E/11)

NAME AND LOCATION

ALGONKIAN URANIUM

Butt Tp.

Lat 45.71, Long. 79.00

REFERENCES

GSC 1962, Econ. Geol. Ser. No.16, 2nd ed., p.250.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates given are for township centre, from the
Gazetteer of Canada.

REMARKS

A radioactive occurrence in granitic rock was
reported by the Algonkian Uranium Corporation
Limited. No other reference.

NAME AND LOCATION

F.H. ARMSTRONG

S $\frac{1}{2}$ lot 8, con. IX,

Butt Tp.

Lat. 45.729, Long. 79.118.

REFERENCES

GSC 1921, Sum. Rept., Pt. D., p.64

ODM Map 2392, Ontario Geological Map, Southern
Sheet. Coordinates derived from NTS sheet.

REMARKS

Magnetite or ilmenite and a few small brownish
crystals, probably allanite, occur in a zoned
pegmatite 3 to 4 feet wide and 40 feet long.

No other reference.

NAME AND LOCATION

C.W. BEATON

S $\frac{1}{2}$ lot 7, con. IX,

Butt Tp.

Lat. 45.710, Long. 79.074.

REFERENCES

GSC 1921, Sum. Rept., Pt. D, p.64.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates derived from NTS sheet.

REMARKS

A pit, 8 by 4 by 8 feet deep, exposes a dike containing spar, quartz, a little biotite, ilmenite, titanite and a few small crystals, probably allanite. No other reference.

NAME AND LOCATION

CON. VI, LOT 7,

Butt Tp.

Lat. 45.710, Long. 79.061

REFERENCES

GSC 1921, Sum. Rept., Pt. D, p.65.

ODM Map 2392, Ontario Geological Map, Southern

Sheet. Coordinates derived from NTS sheet.

REMARKS

Some grains of radioactive minerals occur in a dike, 4 to 10 feet wide, comprising pink spar with some white and smoky quartz and black mica. No other reference.

NAME AND LOCATION

N. DAULT

N^o. 4, lot 4, con. VI,

Butt Tp.

Lat. 45.685, Long. 79.075

REFERENCES

GSC 1921, Sum. Rept., Pt. D., P.64.

ODM Map 2392, Ontario Geological Map. Southern
Sheet. Coordinates derived from NTS sheet.

REMARKS

A zoned, lens-shaped pegmatite dike, 100 feet long
and 6 feet wide at the thickest part in the
middle, comprises quartz and feldspar. The dike
contains local smoky quartz, biotite, magnetite or
ilmenite, garnet and some brownish crystals,
probably allanite. No other reference.

NAME AND LOCATION

C.D. GRIS

N^o 6, con. X,

Butt Tp.

Lat. 45.727, Long. 79.083.

REFERENCES

OGS, AFRO, Toronto: Tech, file 2.2195

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates derived from MTS sheet.

REMARKS

Slightly radioactive pegmatite dikes intrude granite gneiss and biotite hornblende gneiss. C.D. Gris carried out a radiometric survey in 1974, and a geological survey in 1976.

NAME AND LOCATION

McRAE OCCURRENCE

Lot 3, con. V,

Butt Tp.

Lat. 45.673, Long. 79.071

REFERENCES

GSC 1952, Econ. Geol. Series No. 16, p.148.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates derived from NTS sheet.

REMARKS

A quartz core within pegmatite is surrounded by radioactive black mica. Samples were taken by McRae Uranium Prospecting Syndicate.

NAME AND LOCATION

E.J. RIVERS

S $\frac{1}{2}$ lot 5, con. IX,

Butt Tp.

Lat. 45.707, Long. 79.085.

REFERENCES

Regional Geologist's Files, OMNR, Huntsville: File

Butt Township No. 1.

ODM Map P.972, Uranium and Thorium Deposits of
Ontario, Southern Sheet.

REMARKS

Pegmatites with a northeast trend and shallow dip intrude granite and mica paragneiss. Local accessory minerals include pyrochlore, samarskite, priorite, hematite, pyrite, chalcopryrite and sphalerite (?). The occurrence was discovered in 1953 during a geiger survey by E.J. Rivers. In 1953-54, D'Eldona Gold Mines Limited performed stripping, trenching and drilling of 13 holes for 1436 feet. A 60-pound bulk sample gave no uranium values.

NAME AND LOCATION

J. RYAN

S $\frac{1}{2}$ lot 6, con. VI,

Butt Tp.

Lat. 45.682, Long. 79.065

REFERENCES

GSC 1921, Sum. Rept., Pt. D., p.64-65.

ODM Map 2392, Ontario Geological Map, Southern
Sheet. Coordinates derived from NTS sheet.

REMARKS

Nuggets and grains of radioactive mineral up to
 $\frac{1}{4}$ inch in diameter occur in two small quartz-
feldspar dikes. No other reference.

NAME AND LOCATION

RYAN, MANN and SHEEHAN

Lots 1-3, con. VI,

Butt Tp.

Lat. 45.676, Long. 79.086.

REFERENCES

Satterly, J. (1945) Mineral Occurrences in the
Nipissing District. Unpublished.

ODM Map 2392, Ontario Geological Map. Southern
Sheet. Coordinates derived from NTS sheet.

REMARKS

An east-trending dike cuts through micaceous
gneiss striking north. The dike contains potash
spar, quartz (both white and smoky), biotite,
allanite, pyrite, chalcopyrite, garnet and a
black radioactive mineral.

NAME AND LOCATION

A.E. TRAFFORD

S $\frac{1}{2}$ lot 11, con. VII,

Butt Tp.

Lat. 45.697, Long. 79.045

REFERENCES

GSC 1921, Sum. Rept. Pt.D., p.63.

ODM Map 2392, Ontario Geological Map, Southern

Sheet. Coordinates derived from NTS sheet.

REMARKS

A dike 8 to 10 feet wide and 70 feet long

contains feldspar, quartz, abundant biotite, and

some small brown crystals, probably allanite.

No other reference.

NAME AND LOCATION

A.E. TRAFFORD

N $\frac{1}{2}$ lot 10, con. VII,

Butt Tp.

Lat 45.699, Long. 70.053

REFERENCES

GSC 1921, Sum. Rept., Pt. D., p.63-64.

ODM Map 2392, Ontario Geological Map, Southern Sheet. Coordinates derived from NTS sheet.

REMARKS

A pegmatite dike 1 $\frac{1}{2}$ to 2 feet thick is exposed for 45 feet. It comprises feldspar, quartz, and mica, with some smoky quartz, deep red spar and scattered grains of radioactive mineral. No other reference.

NAME AND LOCATION

F. WATSON

N $\frac{1}{2}$ lot 10, con. VI

Butt Tp.

Lat. 45.691, Long. 79.049.

REFERENCES

GSC 1921, Sum. Rept., Pt.D, p.64.

ODM Map 2392, Ontario Geological Map,

Southern Sheet. Coordinates derived

from NTS sheet.

REMARKS

A small stripping exposes dikes 1 to 2 feet wide.

The dikes contain pink spar, quartz, black mica,
and small brown crystals, probably of allanite.

No other reference.

Calvin Township

(NTS 31L/2, 31L/7)

NAME AND LOCATION

La SALLE YELLOWKNIFE

Calvin Tp.

Lat. 46.26, Long. 78.91.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p.146.

ODM Map 2392, Ontario Geological Map, Southern Sheet. Coordinates given are for township centre, from Gazetteer of Canada.

REMARKS

The Northern Miner (October 27, 1949) reported that La Salle Yellowknife Gold Mines Limited had found columbium and uranium near the Molybdenum Corporation of America property.

No other data.

NAME AND LOCATION

W. STEWART

Lots 11 and 12, con. I,

Calvin Tp.,

Lat 46.222, Long. 78.851.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p.138.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates derived from NTS sheet.

REMARKS

W. Stewart collected 2 samples containing

fergusonite which assayed 0.11 and 0.33% U_3O_8

(radiometric).

Chisholm Township

(NTS 31L/3)

NAME AND LOCATION

A. SANSEVILLE

Lots 20,21, con. XVII,

Chisholm Tp.

Lat. 46.166, Long. 79.217

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16,

2nd ed., p.256.

ODM Map 2216, North Bay Area. Coordinates

derived from NTS sheet.

REMARKS

A radioactive occurrence is reported.

Dickens Township

(NTS 31F/12)

NAME AND LOCATION

F.G. ARMSTRONG

Lot 9, con. XIII,

Dickens Tp.

Lat. 45.645, Long. 77.876

REFERENCES

GSC 1932, Econ. Geol. Ser. No. 11, p.192-195.

ODM Map 2392, Ontario Geological Map, Southern
Sheet. Coordinates derived from NTS sheet.

REMARKS

A dike comprising quartz, microcline, muscovite
and biotite contains accessory garnet, molybdenite,
monazite and a black mineral resembling euxenite
or samarskite.

NAME AND LOCATION

AYLEN LAKE

Lot 27, con. V,

Dickens Tp.

Lat. 45.552, Long. 77.923

REFERENCES

GSC 1952, Econ. Geol. Ser. No.16, p.142.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates derived from NTS sheet.

REMARKS

Numerous pegmatite bodies intrude country rock comprising garnet granite gneiss, biotite and hornblende schists, and basic intrusives. A pegmatite sill worked for mica and feldspar in 1943 also contained ellsworthite, euxenite and monazite.

NAME AND LOCATION

DAVIS MICA

S $\frac{1}{2}$ lot 27, con. V,

Dickens Tp.

Lat. 45.547, Long. 77.919

REFERENCES

OGS 1980, OFR 5296, p.364-366.

ODM Map 2392, Ontario Geological Map, Southern
Sheet. Coordinates derived from NTS sheet.

REMARKS

A zoned granite pegmatite intruding biotite-
plagioclase gneiss contains accessory garnet,
euxenite and monazite. In 1943 Canadian Flint
and Spar Limited produced 690 pounds of mica and
160 tons of feldspar from the dike.

NAME AND LOCATION

OPEONGO MINING

Lot 19, con. I,

Dickens Tp.

Lat. ~~45.528~~^{45.530}, Long. ~~77.963~~^{77.864}

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 142.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates derived from NTS sheet.

REMARKS

A dike worked for feldspar by Opeongo Mining Company showed radioactivity over a width of 30 feet and a length of 100 feet. Forty-two samples averaged 0.084% U_3O_8 (radiometric).

NAME AND LOCATION

PLEXMAN

S $\frac{1}{2}$ lot 22, con. I,

Dickens Tp.

Lat. 45.530, Long. 77.875

REFERENCES

OGS 1980, OFR 5294, p.37-40.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates derived from NTS sheet.

REMARKS

Aeschynite is associated with biotite in granite

pegmatite exposed over an area of two square metres.

Old feldspar pits in the immediate vicinity were

prospected by A.E. Plexman in 1954.

Lake Nipissing

(NTS 31L/3, 31L/5)

NAME AND LOCATION

BURRITT ISLAND,
North central part of Lake Nipissing,
Lat. 46.296, Long. 79.738.

REFERENCES

ODM 1971, G. R. 94, p. 81.
ODM Map 2216, North Bay Area.

REMARKS

Pyrochlore crystals are disseminated in a small
carbonatite intrusion within the Burritt Island
alkalic complex.

NAME AND LOCATION

CALLANDER COMPLEX OCCURRENCE

Several islands at the eastern end of Lake Nipissing.
Lat. 46.212, Long. 79.358.

REFERENCES

ODM 1971, G.R. 94, p. 52-53, 83-85.
ODM Map 2216, North Bay Area.

REMARKS

The Callander Complex occupies an almost circular depression 2½ miles in diameter. Shattered, slightly fenitized granitoid rocks grade inwards towards the centre of the complex through quartz fenite to aegirine - potassic feldspar fenite, which is intruded by nepheline syenite. Mineralization occurs in carbonatite and hematitized and carbonitized nepheline syenite. In 1956-58, Beaucage Mines Limited carried out sampling and drilled at least one hole (166 feet). In 1966-67, Min-Ore Mines Limited conducted magnetic and electromagnetic surveys and diamond drilling. Drilling intersected nepheline syenite containing up to 10% disseminated pyrite and pyrrhotite, minor magnetite and traces of chalcopyrite, silver and gold. Assays ran up to 0.05% Nb₂O₅ and less than 0.01% U₃O₈.

Latchford Township

(NTS 41-I/1)

NAME AND LOCATION

E. H. CLINE,

Lot 11, con. IX,

Latchford Tp.

Lat. 46.226, Long. 80.163.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 265.

ODM Map 2271, Burwash. Coordinates derived from NTS sheet.

REMARKS

A radioactive occurrence in granitic rock is reported.

No other data.

Loudon Township

(NTS 41-I/1, 41-I/8)

NAME AND LOCATION

H. D. TOMLINSON,
Lot D, con. V,
Loudon Tp.
Lat. 46.262, Long. 80.163.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 146.
ODM Map 2271, Burwash. Coordinates derived from NTS sheet.

REMARKS

H. D. Tomlinson collected samples showing 0.17 and 0.21%
 U_3O_8 (radiometric) from a pegmatite, and reported thorite.

Mattawan Township

(NTS 31L/7)

NAME AND LOCATION

C. PALANGIO,
Lot 29, con. II,
Mattawan Tp.
Lat. 46.318, Long. 78.777.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 147.
ODM Map 53d, Mattawan - Olig Area. Coordinates derived
from NTS sheet.

REMARKS

C. Palangio collected a sample containing euxenite-
polycrase which showed 7.3% U_3O_8 (radiometric).

NAME AND LOCATION

PURDY MICA,
Lots 6 and 7, con. II,
Mattawan Tp.
Lat. 46.320, Long. 78.905.

REFERENCES

GSC 1932, Econ. Geol. Ser. No. 11, p. 147.
ODM Map 53d, Mattawan - Orlig Area.

REMARKS

Uraninite occurs in dikes formerly worked for
muscovite by Purdy Mica Mines Limited.

Murchison Township

(NTS 31F/12, 31E/9)

NAME AND LOCATION

CAMERON,
Lot 22, con. VIII,
Murchison Tp.
Lat. 45.545, Long. 78.062.

REFERENCES

ODM 1967, MRC 4, p. 49.
ODM Map 2392, Ontario Geological Map, Southern Sheet.
Coordinates derived from NTS sheet.

REMARKS

Rare allanite and euxenite are erratically distributed
in a granite pegmatite dike which was worked for
feldspar in 1942-43 by Keystone Contractors Limited,
and in 1950-51 by K. Bowser.

NAME AND LOCATION

CAMERON AND ALECK,

Lot 17, con. VI,

Murchison Tp.

Lat. 45.536, Long. 78.032.

REFERENCES

ODM 1967, MRC 4, p. 50.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates derived from NTS sheet.

REMARKS

Allanite and fergusonite are erratically distributed in a granite pegmatites dike which produced feldspar from an open pit in 1949-51 and 1953.

NAME AND LOCATION

COMET QUARTZ,
Lots 14 and 15, con. IV,
Murchison Tp.
Lat. 45.523, Long. 78.011.

REFERENCES

OGS 1980, OFR 5294, p. 245.
ODM Map 2392, Ontario Geological Map, Southern Sheet.
Coordinates derived from NTS sheet.

REMARKS

Allanite and fergusonite are associated with black mica in a zoned, pink granite pegmatite dike 850 feet long and up to 60 feet wide. The dike was quarried by J. G. Gole in 1941. In 1943-44, Madawaska Feldspar Company produced 8639 tons of quartz and 1525 tons of feldspar. The quarry was reopened in 1976 by Comet Quartz Company.

NAME AND LOCATION

R.A. QUINN

Lot 8, con. III,

Murchison Tp.

Lat. 45.519, Long. 77.972.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16,

2nd ed., p.274.

ODM Map 2392, Ontario Geological Map, Southern

Sheet. Coordinates derived from NTS sheet.

REMARKS

A radioactive occurrence in pegmatitic rock is reported. No other data.

NAME AND LOCATION

R. VAN METER

N $\frac{1}{2}$ lot 22, con. VII,

Murchison Tp.

Lat. 45.541, Long. 78.061

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16,

2nd ed., p.274.

ODM Map 2392, Ontario Geological Map,

Southern Sheet. Coordinates derived from

NTS sheet.

REMARKS

A radioactive occurrence is reported in pegmatitic
rock worked for feldspar. No other data.

Peck Township

(NTS 31E/7, 31E/10)

NAME AND LOCATION

ALGONQUIN PARK,
Lots 2 - 8, con. IV,
Lots 2(S $\frac{1}{2}$), 4(N $\frac{1}{2}$), 5, 6, con. III,
Peck Tp.
Lat. 45.473, Long. 78.771.

REFERENCES

ODM 1971, OFR 5057, p. 44-52.
ODM Map P972, Uranium and Thorium Deposits of Ontario,
Southern Sheet.

REMARKS

Scattered allanite crystals occur in narrow granite
pegmatite dikes or sills intruding amphibolite or
hybrid granite gneiss. In 1956, claims were held by
the following:

R. J. Cousintine - Lots 2, 3, con. IV. Assays of 0.007
and 0.10% U₃O₈ (radiometric).

A. L. Leckie - Lot 4, con. III (N $\frac{1}{2}$), IV (S $\frac{1}{2}$). Geiger
readings of 2 to 3 times background.

K. H. McInnes - Lots 7, 8, con. IV. Minor stripping.
Grab sample assayed 0.007% U₃O₈ (radiometric).

J. G. McLennan - Lot 6, con. III and IV. Stripping.
Assays of 0.004 and 0.006% U₃O₈ (radiometric).
Pyrochlore tentatively identified.

N. McLennan - Lot 5, con. III and IV. Little stripping.
Assays of 0.003, 0.01 and 0.03% U₃O₈ (radiometric).

L. E. Smith - S $\frac{1}{2}$ lot 2, con. III. Minor stripping.
Grab sample assayed 0.003% U₃O₈ (radiometric).

Sabine Township

(NTS 31E/8)

NAME AND LOCATION

H. BOLTON

Lot 28, con. I,

Sabine Tp.

Lat. 45.346, Long. 78.045

REFERENCES

GSC 1932, Econ. Geol. No. 11, p.195-196.

ODM Map 52a, Haliburton Area. Coordinates derived
from NTS sheet.

REMARKS

Euxenite occurs in a microcline - quartz dike
with abundant biotite. In 1932 several carloads
of feldspar had been produced from the 12- to 20-
foot wide dike.

NAME AND LOCATION

GAL-WOOD

S $\frac{1}{2}$ lot 32, con. XV,

Sabine Tp.

Lat. 45.475, Long. 78.089.

REFERENCES

ODM 1971, OFR 5057, p.54-55.

ODM Map 52a, Haliburton Area. Coordinates

derived from NTS sheet.

REMARKS

Country rocks comprise biotite granite, granite gneiss and amphibolite. A 20-foot wide granite pegmatite dike striking N60°E and dipping 50°NW contains titanite and a few crystals or masses of euxenite-polycrase.

In 1956, Gal-Wood Mines opened a cut 25 by 30 feet.

NAME AND LOCATION

SABINE

Lot 28, con. I,

Sabine Tp.

Lat. 45.348, Long. 78.047

REFERENCES

Northern Miner, November 4, 1954, p.27.

Spence, H.S. (1932) Feldspar. Canada Mines
Branch Publication No. 731, p.53.

ODM Map 52a, Haliburton Area. Coordinates
derived from NTS sheet.

REMARKS

A pink granite pegmatite dike, 8 to 20 feet wide and 1000 feet long, contains free quartz, large, thin sheets of black mica, nodules of altered magnetite, and some euxenite. About 200 tons of spar were shipped from four pits in 1924-25 by Mahoney and Morin. In 1955-56, Sabine Uranium Mines Limited carried out geological and scintillometer surveys and stripping. Two selected samples assayed 2.33 and 5.65% U_3O_8 .

DISTRICT OF
PARRY SOUND

Conger Township

(NTS 31E/4)

NICKEL RIM OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 10, 11, N $\frac{1}{2}$ 12, concession III,
Conger Township
Latitude 45.177, Longitude 79.837.
Map Reference: ODM 2118, Parry Sound - Huntsville Area.
Coordinates derived from NTS sheet.

GEOLOGY The bedrock is predominantly a banded, granitized,
hornblende migmatite. Locally, high radiometric
anomalies are associated with a hornblende biotite
gneiss with coarse felsic inclusions and small
patches of pegmatite.

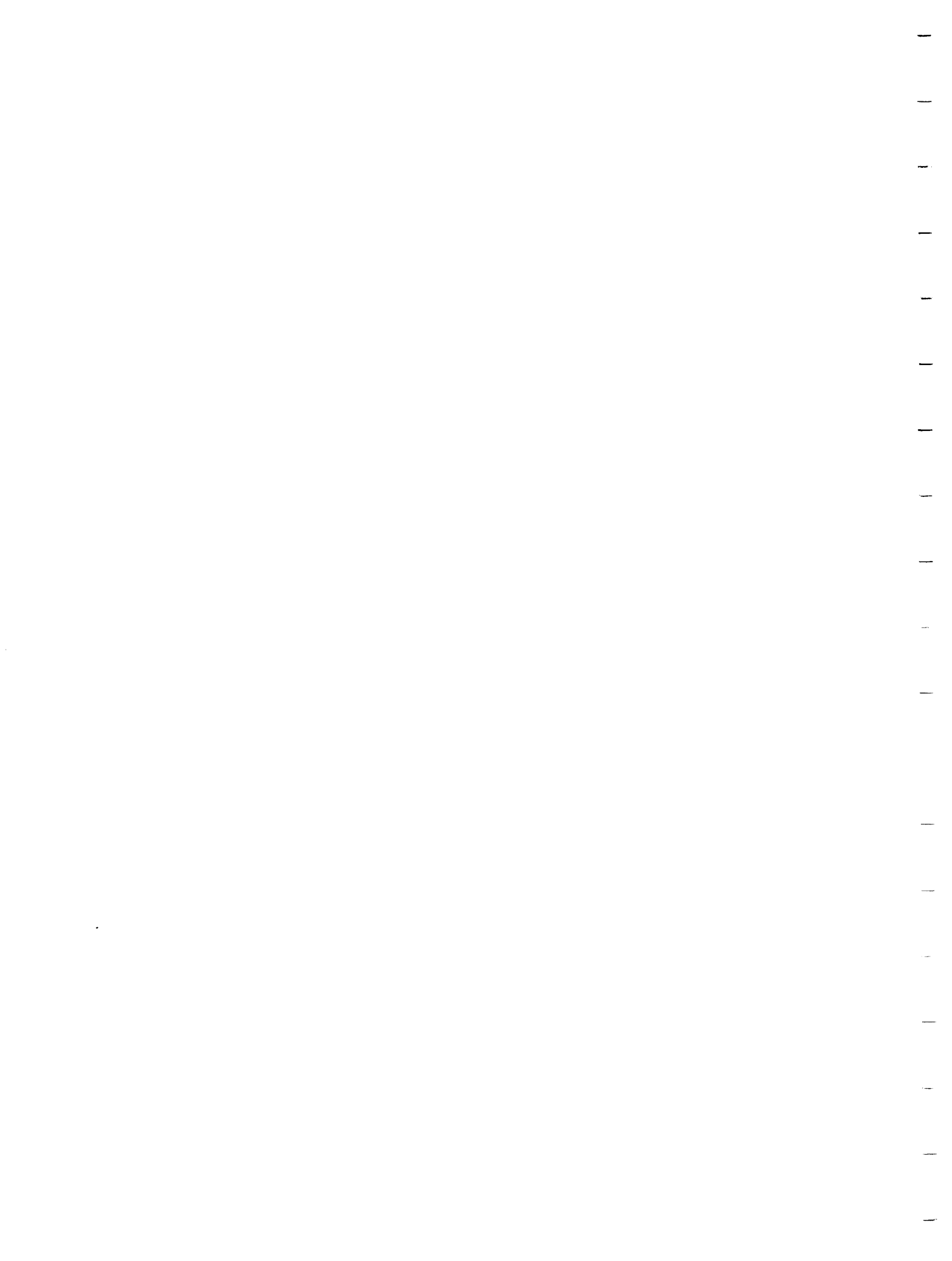
ECONOMIC FEATURES The average of 12 drill hole samples is 0.025%
U₃O₈ and 0.005% ThO₂ over 2.7 feet.

HISTORY OF DEVELOPMENT 1975: Airborne radiometric survey by Mid - North
Engineering Services.
1976: Scintillometer, magnetometer, geological
surveys; pitting, trenching by Nickel Rim Mines
Limited.
1977: 6 diamond-drill holes for 1585 feet by Mid -
North Engineering Services.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. files 2.1989 (Mid-North
Engineering Services), 2.2279.
:Conger Township Drill Report No. 10 (Mid-North
Engineering Services).

Henvey Township

(NTS 41H/15)



BESNER MINE OCCURRENCE

COMMODITY Feldspar, uranium, thorium

RADIOACTIVE MINERALS Cyrtolite, thucholite, uraninite, allanite

LOCATION Lot 5, concession B,
Henvey Township.
Latitude 45.802, Longitude 80.520.
Map Reference: ODM P972, Uranium and Thorium Deposits
 of Ontario, Southern Sheet.

GEOLOGY A 60-foot wide pegmatite dike striking N65⁰E and
 dipping steeply southeast, cuts granite gneiss.
 The dike consists of pink perthitic microcline masses
 separated by zones of massive white quartz. The dike
 contains biotite, chlorite, muscovite, garnet,
 scattered crystals of cyrtolite and beryl, and
 clots of thucholite, uraninite, and allanite.

ECONOMIC FEATURES

HISTORY OF DEVELOPMENT 1926-29: 2500 tons of spar were produced from an open
 cut 150 by 50 by 30 feet deep by Wanup Feldspar Mines
 Limited.

PRINCIPAL REFERENCES GSC 1960, Paper 59-10, p. 19-20.

REMARKS At one time, this dike supplied the best samples
 of thucholite found in Canada.

Mc Dougall Township

(NTS 31E/5, 41H/8 & 41H/7)

ASCOT METALS OCCURRENCE

COMMODITY	Uranium
RADIOACTIVE MINERALS	Uraninite, uranophane, allanite, uranothorite
LOCATION	<p>Lot 12, concession A, McDougall Township. Latitude 45.378, Longitude 80.055.</p> <p>Lot 15, concession A, McDougall Township. Latitude 45.379, Longitude 80.054.</p> <p>Map Reference: ODM 2118, Parry sound - Huntsville Area.</p>
GEOLOGY	<p>Lot 12, concession A - Biotite paragneiss striking north and dipping 35-45°E is intruded by pegmatite dikes varying in composition from biotite granite to leucogranite. Accessory minerals include scattered pyrite, minor garnet, very rare blue apatite, uranophane, and uraninite.</p> <p>Lot 15, concession A - A pink graphic leucogranite pegmatite sill intrudes gently-dipping biotite gneiss. Allanite, uranothorite, and uranophane are present.</p>
ECONOMIC FEATURES	The best assay was 0.116% U ₃ O ₈ (radiometric) over 15 feet from a channel sample.
HISTORY OF DEVELOPMENT	1954-56: Geological and geophysical surveys, trenching, some small test pits and 23 diamond-drill holes by Trio Uranium Mines Limited.
PRINCIPAL REFERENCES	ODM 1971, OFR 5057, p. 59-61.

DISTRICT OF PARRY

SOUND MINOR

OCCURRENCES

Bethune Township

(NTS 31E/11)

NAME AND LOCATION

N. B. TIFFANY,

Bethune Tp.

Lat. 45.553, Long. 79.141.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 149.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates given are for township centre, derived
from the Gazetteer of Canada.

REMARKS

In 1938, N. B. Tiffany staked claims for vanadium,
tantalum, titanium, and gold. He stated that an
autoradiograph had shown that samples were radioactive.
No other reference.

Burton Township

(NTS 41H/9)

NAME AND LOCATION

N.A. TAYLOR

Lot 37, con. XIV,

Burton Tp.

Lat. 45.716, Long. 80.278

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p.137.

ODM Map 2392, Ontario Geological Map,

Southern Sheet.

Coordinates derived from NTS sheet.

REMARKS

N.A. Taylor collected samples assaying

0.05 and 0.06% U_3O_8 (radiometric).

Carling Township

(NTS 414/8 + 414/7)

NAME AND LOCATION

QUARTZ ISLAND

Southwest of Middle Island in Georgian Bay,
opposite lot 75, con. XII,
Carling Tp.

Lat. 45.371, Long. 80.309.

REFERENCES

ODM 1971, OFR 5057, p. 56-58.

ODM Map 2118, Parry Sound - Huntsville Area.

REMARKS

Uranium mineralization occurs in two muscovite
granite pegmatite dikelets cutting a massive
garnet - biotite amphibolite. One dikelet, up
to 2 feet wide, is exposed for 40 feet; the other,
varying in width from 1 to 6 feet, is exposed for
100 feet. A sample from the first dike assayed
0.06% U_3O_8 (radiometric).

Chapman Township

(NTS 31E/11, 31E/12)

NAME AND LOCATION

RANEY,
Lot 3, con. VIII,
Chapman Tp.
Lat. 45.692, Long. 79.474.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p.141.
ODM Map 2392, Ontario Geological Map,
Southern Sheet.

REMARKS

A pegmatite dike, 260 feet wide and 1500 feet
long contains probable allanite and possible
uranothorite. A sample assayed 0.45% U_3O_8
(radiometric).

Conger Township

(NTS 31E/4)

NAME AND LOCATION

G. COLAUTTI

Lot 7, con. X,

Conger Tp.

Lat. 45.243, Long. 79.852.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p.141.

ODM Map 2118, Parry Sound-Huntsville Area.

REMARKS

A sample from a feldspar property operated by
Opeongo Mining Company contained euxenite, columbite
and possibly monazite.

NAME AND LOCATION

McQUIRE MINE OCCURRENCE

Lots 9 and 10, con. IX,

Conger Tp.

Lat. 45.237, Long. 79.860.

REFERENCES

ODM 1942, Vol. 51, pt. 2, p. 57.

ODM Map 2118, Parry Sound - Huntsville Area.

REMARKS

A granite pegmatite dike intruding granite and hornblende - biotite gneiss was worked for radium - bearing minerals by McQuire and Robinson in 1922. Uraninite crystals $1/8$ to $1/2$ inch in size are associated with mica. Other accessory minerals include calciosamarskite, thucholite, cyrtolite, allanite and molybdenite.

NAME AND LOCATION

OJAIPEE SILICA

Lot 4, con. IX,

Conger Tp.

Lat. 45.241, Long. 79.833.

REFERENCES

ODM 1967, G.R. 52, p.46.

ODM Map 2118, Parry Sound-Huntsville Area

REMARKS

Some allanite occurs in a 12-foot pegmatite dike carrying feldspars, quartz and biotite.

In 1910, Ojaipee Silica Feldspar Company produced 1500 tons of quartz and 100 tons of feldspar.

NAME AND LOCATION

RICHORE,

Lots 16-31, con. V and VI,

Lots 20-24, 5,12,13, con. VII,

Lots 5-9, con. VIII

Lots 5(N $\frac{1}{2}$),8(S $\frac{1}{2}$), 9(S $\frac{1}{2}$), con. IX,

Lots 4-6, con. X,XI and XII

Conger Tp.

Lat. 45.237, Long. 79.824.

REFERENCES

OGS, AFRO, Toronto: Tech. files 2.110, 2.148

ODM Map 2118, Parry Sound-Huntsville Area

Coordinates derived from NTS sheet.

REMARKS

The area is underlain by granitized

hornblende migmatites and granite pegmatite.

Selected samples collected from lot 6,

concession X by R.M. Clarke before 1952 assayed

from 0.1 to 1.0% U₃O₈ (radiometric). In 1970-71,

Richore Gold Mines Limited conducted airborne

and ground radiometric surveys, stripping and

trenching.

Cowper Township

(NTS 41H/8 & 41H/7)

NAME AND LOCATION

GEORGIAN BAY ISLANDS

Several islands in Georgian Bay west of Sandy Island, about 16 miles west of the town of Parry Sound, off Cowper Tp.
Lat. 45.276, Long. 80.274.

REFERENCES

ODM 1967, G.R. 52, p. 53.
ODM 1971, OFR 5057, p. 65-70 (T.W. Keating).
ODM Map 2118, Parry Sound - Huntsville Area.

REMARKS

Country rocks are biotite paragneiss, amphibolite, hybrid granite gneiss and granite pegmatite, which occurs as dikes or irregular masses from a few feet to 200 feet across. Regional strike is $N20^{\circ}W$ to $N25^{\circ}E$, with a dip steeply east to vertical. Uraninite, thucholite, allanite and uranophane occur in leucogranite pegmatite or biotite granite pegmatite. Radioactive pegmatite is generally medium-grained, hematitized and shattered, and contains accessory zircon and pyrite. Average geiger readings were 3 times background over mineralized zones from a few to ten feet across. Three shallow test pits and a packsack drill hole to 21 feet were put down probably in 1956 by T. W. Keating.

Ferguson Township

(NTS 41H/8 + 41H/7)

NAME AND LOCATION

TATE - MOFFAT

Lots 18, 20(N $\frac{1}{2}$), con. II,

Lot 15(N $\frac{1}{2}$), con. III

Ferguson Tp.

Lat. 45.488, Long. 80.032

REFERENCES

Regional Geologist's Office, OMNR, Huntsville:

File Ferguson Township No. 1

ODM Map 2392, Ontario Geological Map, Southern
Sheet. Coordinates derived from NTS sheet.

REMARKS

In 1956, 16 holes totalling 7692 feet were
drilled by A.N. Tate and R.Y. Moffat. Several
cut radioactive sections.

Foley Township

(NTS 31E/5)

NAME AND LOCATION

R. ANSON-CARTWRIGHT

Lot 13, con. II,

Foley Tp.

Lat. 45.266, Long. 79.895

REFERENCES

GSC 1952, Econ. Geo. Ser. No. 16, p.145

ODM 2118 Parry Sound-Huntsville Area

Coordinates derived from NTS sheet.

REMARKS

A sample collected by R. Anson-Cartwright
contained allanite and assayed 0.93% U_3O_8
(radiometric).

Hardy Township

(NTS 41-I/1, 41L/4)

NAME AND LOCATION

G. TOUGH,
S $\frac{1}{2}$ lot 28, con. IX,
Hardy Tp.
Lat. 46.012, Long. 80.000.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 146.
ODM Map 2216, North Bay Area. Coordinates derived
from NTS sheet.

REMARKS

G. Tough collected a sample assaying 0.15% U₃O₈
(radiometric).

Henvey Township

(NTS 414/15)

NAME AND LOCATION

AMBEAU MINE,
Lot 4, con. I,
Henvey Tp.
Lat. 45.799, Long. 80.532.

REFERENCES

GSC 1960, Paper 59-10, p. 18.
ODM Map 2392, Ontario Geological Map, Southern Sheet.
Coordinates derived from NTS sheet.

REMARKS

An open cut 200 by 20 by 18 feet deep exposes a
pegmatite dike cutting granitic and hornblendic
gneiss. The dike contains biotite, greenish muscovite,
garnet, magnetite, martite, and a few crystals and
clots of euxenite. It was worked for feldspar
before 1930.

NAME AND LOCATION

BRITT STATION

About $\frac{1}{2}$ mile southwest of Britt Station at a point about 200 yards south of the main Canadian Pacific Railway line and its intersection with the Britt spur line, Henvey Tp.

Lat. 45.789, Long. 80.541.

REFERENCES

GSC 1960, Paper 59-10, p. 20.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates derived from NTS sheet.

REMARKS

Pegmatite dikes in folded quartzitic paragneiss and hornblende gneiss comprise pink feldspar, quartz, and biotite, with accessory garnet, magnetite, and sporadic allanite. Rare thorianite, thorite, and spinel were identified by X-ray diffraction. Stripping, pitting, and diamond-drilling in the late 1950's.

NAME AND LOCATION

H. S. SPENCE,
Lot 4, con. A,
Henvey Tp.
Lat. 45.799, Long. 80.541.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 146.
ODM Map 2392, Ontario Geological Map, Southern Sheet.
Coordinates derived from NTS sheet.

REMARKS

Euxenite occurs in a pegmatite dike 25 by 150 feet.

NAME AND LOCATION

TRIO,
Lot 6, con. I,
Henvey Tp.
Lat. 45.787, Long. 80.538.

REFERENCES

OGS, AFRO, Toronto: Henvey Township Drill Report No. 10.
ODM Map 2392, Ontario Geological Map, Southern Sheet.
Coordinates derived from NTS sheet.

REMARKS

Radioactivity occurs in pegmatites in biotite gneiss.
Sixteen drill holes for 560 feet and 2 trenches were
put down in 1955 by Trio Uranium Mines Limited. One
rock sample returned as assay of 5.52% U_3O_8 , 12.6%
columbium oxide, 0.08% tantalum oxide, and over
10% titanium.

Laurier Township

(NTS 31E/14)

NAME AND LOCATION

E. J. RANTALA,
S½ lot 18, con. IX,
Laurier Tp.
Lat. 45.918, Long. 79.322.

REFERENCES

Regional Geologist's Files, OMNR, Huntsville: File
Laurier Township No. 1.
ODM Map 2392, Ontario Geological Map, Southern Sheet.
Coordinates derived from NTS sheet.

REMARKS

E. J. Rantala performed trenching in 1975-76.

Machar Township

(NTS 31E/13, 31E/14)

NAME AND LOCATION

C. PALANGIO,

Machar Tp.

Lat. 45.86, Long. 79.48.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 267.

ODM Map 2392, Ontario Geological Map, Southern Sheet.

Coordinates are given for township centre, derived
from the Gazetteer of Canada.

REMARKS

C. Palangio collected a sample containing allanite
which showed 0.09% U_3O_8 (radiometric).

McDougall Township

(NTS 31E/5, 41H/8 + 41H/7)

NAME AND LOCATION

BLOOM,
Lot 5, con. X,
McDougall Tp.
Lat. 45.451, Long. 79.955.

REFERENCES

ODM 1967, G.R. 52, p. 47.
ODM Map 2118, Parry Sound - Huntsville Area. Coordinates
derived from NTS sheet.

REMARKS

An open cut 50 by 20 by 10 feet deep put down by
M. Bloom in 1926 exposes a dike comprising good grade
pink spar with quartz stringers and accessory mica
and allanite.

NAME AND LOCATION

CON. XI, LOT 3,

McDougall Tp.

Lat. 45.462, Long. 79.946.

REFERENCES

ODM 1967, G.R. 52, p. 47.

ODM Map 2118, Parry Sound - Huntsville Area.

REMARKS

Accessory allanite occurs in granite pegmatite
dikes opened for feldspar in 1936.

NAME AND LOCATION

J. A. FENN,

Lot 27, con. IX,

McDougall Tp.

Lat. 45.408, Long. 80.054.

REFERENCES

ODM 1967, MRC 4, p. 52-53.

ODM Map 2118, Parry Sound - Huntsville Area. Coordinates
derived from NTS sheet.

REMARKS

Uraninite and possibly thucholite occur in granite
pegmatite.

NAME AND LOCATION

WALL ISLAND,

About 4 miles northwest of the town of Parry Sound
in Parry Sound, opposite McDougall Tp.

Lat. 45.369, Long. 80.112.

REFERENCES

ODM 1971, OFR 5057, p. 62-64.

ODM Map 2118, Parry Sound - Huntsville Area.

REMARKS

The country rocks are leucogranite gneiss and biotite
paragneiss. Two showings were examined in 1954. The
first is a 20 by 50 foot exposure of coarse pink
granite pegmatite. A grab sample assayed 0.04% U_3O_8
(radiometric). The second showing is a graphic
leucogranite pegmatite exposed for 450 feet with a
width of 30 to 40 feet. Grab samples assayed from
0.003 to 0.07% U_3O_8 .

Monteith Township

(NTS 41E/5)

NAME AND LOCATION

FRY LAKE,
Lot 21, concession B,
Monteith Tp.
Lat. 45.406, Long. 79.668.

REFERENCES

GSC 1960, Paper 59-10, p.23.
ODM Map 2118, Parry Sound - Huntsville Area.

REMARKS

Allanite occurs as well-developed crystals in
irregular granite pegmatite bodies cutting hornblende-
biotite gneiss.

Mowat Township

(NTS 41H/15)

NAME AND LOCATION

W. W. CURRIE,
Lot 32, con. XIII,
Mowat Tp.
Lat. 45.913, Long. 80.502.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 274.
ODM Map 2392, Ontario Geological Map, Southern Sheet.
Coordinates derived from NTS sheet.

REMARKS

A radioactive occurrence is reported.

PETERBOROUGH COUNTY

Anstruther Township
(NTS 31D/9, 31D/16)

ANSTRUTHER RARE METALS (Duncan Group) OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 21 - 24, concession XVIII, Anstruther Township.
Latitude 44.890, Longitude 78.222.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The property is underlain to the southwest by granite gneiss of the Anstruther batholith, and to the northeast by metasediments comprising biotite-hornblende gneiss and granite gneiss. The metasediments strike N40°W to N90°E and dip vertically to steeply north or south. Pegmatites occur throughout, cutting granite gneiss and lit-par-lit in paragneiss.

ECONOMIC FEATURES Pegmatite dikes with low radioactivity (4 to 5 times background) are 1 to 3 feet wide and about 100 feet long. Core assays range up to 0.037% U₃O₈ (radiometric) over 5 feet.

HISTORY OF DEVELOPMENT 1955-56: Scintillometer, magnetometer and geological surveys; trenches; 3 diamond-drill holes totalling 2026 feet in N1/3 of lot 22, concession XVIII by Anstruther Rare Metals Company.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 143.
OGS, AFRO, Toronto: Tech. file 63.677.

APSLEY OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Uraninite

LOCATION S½ lot 2, lots 22 - 25, concession I, Anstruther Township.
Lot 25, concessions XI and XII, Burleigh Township.
Latitude 44.737, Longitude 78.142.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The property is underlain by a folded sequence of highly granitized metasediments comprising hornblendic and micaceous metasediments and granitic gneiss. Narrow, sill-like masses of pegmatite are injected into the paragneisses. Radioactive zones in pegmatite are deep red with abundant smoky quartz and yellow alteration indicating uraninite.

ECONOMIC FEATURES Radioactivity is spotty.

HISTORY OF DEVELOPMENT 1954: Geiger and geological surveys; 21 diamond-drill holes for 8403 feet in lot 25, concession XII, Burleigh Township by Pole Star Mines, Limited.
1976: Scintillometer survey and geological mapping by St. Joseph Explorations Limited.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. file 2.2162.

AUBELLE OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 19 - 28, concession I and II,
Anstruther Township.
Latitude 44.745, Longitude 78.148.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The property is underlain by granite gneiss,
granite pegmatite and biotite amphibolite with
interbeds of garnet-biotite paragneiss, lying at
the boundary between the Anstruther and Burleigh
granite gneiss masses. Radioactivity occurs in
pegmatite bodies striking northeast and dipping
about 40°SE. One anomaly is associated with a
north-south fault in N½ lot 25, concession II;
the other with a northeast-striking lineament in
N½ lot 19, concession I.

ECONOMIC FEATURES The best drill core sample from lot 25, concession II
assayed 0.068% U₃O₈ over 8.3 feet. In lot 19,
concession I, one drill hole intersected 11 feet
assaying 0.057% U₃O₈ (radiometric).

HISTORY OF DEVELOPMENT 1953: Airborne scintillometer survey by Newkirk
Mining Corporation.
1954-55: Scintillometer and geological surveys,
trenching, and 10 diamond-drill holes for 4209 feet
by Aubelle Mines Limited.
1968: Geological, scintillometer and magnetometer
surveys on lot 28, concession II and III by
Glenn Explorations Limited.
1974: Magnetometer and electromagnetic surveys by
Camindex Mines Limited.

1976: Geochemical, scintillometer and geological surveys by St. Joseph Explorations Limited.

1976: Scintillometer and radon gas surveys by Kerr Addison Mines Limited.

PTINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 143-144.

OGS, AFRO, Toronto: Tech. files 63.2505 (Glenn Explorations Limited), 2.1415 (Camindex Mines Limited), 2.2461 (St. Joseph Explorations Limited), 2.2231 (Kerr Addison Mines Limited).

AVILLABONA OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 16 - 22, Concession IV and V,
Anstruther Township.
Latitude 44.775, Longitude 78.170.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The occurrence lies within the Anstruther mass of granite gneiss near its eastern margin. The Anstruther body is a heterogeneous mixture of granite, granite gneiss and pegmatite. The pegmatites are very irregular bodies, usually narrow, ranging in length from a few feet to occasionally over 900 feet.
The radioactive rock is a fine-to-medium-grained granite pegmatite. The usual accessory minerals are magnetite, hornblende and biotite.

ECONOMIC FEATURES Best drill core sample assayed 0.026% U_3O_8 (radiometric) over 5 feet, but many assayed less than 0.005 - 0.007% U_3O_8 (radiometric) over 10 feet.

HISTORY OF DEVELOPMENT 1953: Airborne scintillometer survey by Newkirk Mining Corporation.
1954-55: Geological and scintillometer surveys and 13 diamond drill holes totalling 4834 feet by Avillabona Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 145-146.
OGS, AFRO, Toronto: Tech. files 63A.219, 63A.256.

BRUNSMAN OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite

LOCATION Lots 23-27, concession V,
N $\frac{1}{2}$ lots 23-27, concession IV
Anstruther Township.
Latitude 44.776, Longitude 78.138
Map Reference: ODM 1957b, Haliburton-Bancroft
Area. Coordinates derived from NTS sheet.

GEOLOGY The occurrence lies on the southeast margin
of the Anstruther pluton. The contact zone
between metasediments and granitic rocks is a
hybrid zone of granitic gneiss, pegmatite dikes
and sills, and biotite-hornblende gneiss. These
rocks strike N30-40°E and dip 30-45°E.
Uranium mineralization occurs in granite
pegmatite or pegmatitic granite near the
contact with paragneiss. Uranothorite is
found in pink-to-buff leucogranitic pegmatitic
rock with small biotite books and rare accessory
pyrite, molybdenite and fluorite.

ECONOMIC FEATURES A shallow mineralized zone, the "A" lens,
indicated 0.071% U₃O₈ (chemical) over a width
of 4.9 feet for a distance of 710 feet.

HISTORY OF DEVELOPMENT 1953: Airborne scintillometer survey by
Newkirk Mining Corporation.
1954-55: Scintillometer, magnetic and geological
surveys; 29 diamond-drill holes for 9,809 feet
by Brunsmann Mines Limited.
1967: Feasibility study, lots 26 and 27,
concession IV by Glenn Exploration Limited.

PRINCIPAL REFERENCES

ODM, 1956, Vol. 65, pt.6, p.146-147.

OGS, AFRO, Toronto: Tech. file 63A.516

(Glenn Exploration Limited).

EL SOL OCCURRENCE

COMMODITY	Uranium
RADIOACTIVE MINERALS	Uraninite
LOCATION	<p>Lots 29-35, concession IX, Lots 31-34, concession X and XI, Anstruther Township. Latitude 44.828, Longitude 78.136. Map Reference ODM 1957b, Haliburton-Bancroft Area. Coordinates derived from NTS sheet.</p>
GEOLOGY	<p>Mineralization occurs within irregular granite pegmatite and granite bodies intruding granitic gneiss, biotite-hornblende gneiss and marble. The rocks generally trend $N0-15^{\circ}W$ and dip $30-50^{\circ}E$. Mineralized rock is medium- to coarse-grained, and light gray to pink to red in colour. Uraninite occurs sparsely with local smoky quartz, magnetite, biotite, hornblende and pyrite.</p>
ECONOMIC FEATURES	<p>Drill core samples averaged 0.009% U_3O_8 (radiometric), with a best assay of 0.130% U_3O_8 (radiometric) over 1 foot.</p>
HISTORY OF DEVELOPMENT	<p>1953: Airborne scintillometer survey by Newkirk Mining Corporation Limited. 1954-55: Ground scintillometer and geological surveys, trenching, surface sampling, 15 diamond-drill holes for 3708 feet by El Sol Gold Mines, Limited.</p>
PRINCIPAL REFERENCES	<p>ODM, 1956, Vol. 65, pt.6, p.147-148. OGS, AFRO, Toronto: Tech. file 63A.227.</p>

FARCROFT PROSPECT

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uraninite, uranothorite

LOCATION Lot 28, concession II,
Lots 23 - 28, concession III,
Anstruther Township.
Latitude 44.766, Longitude 78.144.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The prospect lies on the southeast rim of the Anstruther batholith, a dome-shaped body comprising granite, granite gneiss and pegmatites. Paragneiss or granitized paragneiss and limestone bordering the dome strike $N0-40^{\circ}E$ and dip $55^{\circ}E$.
Radioactive mineralization occurs in pegmatite or pegmatitic granite bodies, which may form dikes or lit-par-lit injections. The property is cut by the Farcroft break, a fault striking $N30^{\circ}E$ and dipping $60^{\circ}SE$.
The most interesting radioactive zone contains four shoots of different sizes. The uranium occurs in pegmatite dikes over an average width of 40 - 50 feet, and with a maximum length of 1,180 feet. Uranothorite, uraninite, allanite, and zircon occur in zones usually distinguished by hematitization, and the presence of biotite, chloritized inclusions of paragneiss, and minor molybdenite.

ECONOMIC FEATURES Diamond drilling has indicated a potential reserve of 1200 tons per vertical foot of uranium-bearing material, in four lenses, grading 0.077% U_3O_8 (Northern Miner, August 3, 1967).

HISTORY OF DEVELOPMENT

1953: Airborne scintillometer survey by Newkirk Mining Corporation Limited.

1954-55: Ground scintillometer, magnetometer and geological surveys; 36 drill holes for 11,664 feet by Farcroft Mines Limited.

1967-69: Nine drill holes for 5,191 feet by Glenn Explorations Limited.

1974: Magnetic and electromagnetic surveys by Camindex Mines Limited.

1976: Scintillometer and radon gas surveys by Kerr Addison Mines Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol 65, pt. 6, p. 148-150.

OGS, AFRO, Toronto: Tech. files 63A.516, 2.1416 (Camindex Mines Limited).

Northern Miner, August 3, 1967, p. 16 (Glenn Explorations Limited).

EIN OCCURRENCE

COMMODITY	Uranium, thorium
RADIOACTIVE MINERALS	Uraninite, uranothorite, thorite, allanite, uranophane
LOCATION	<p>N 1/3 lots 3-6, concession XVIII, Anstruther Township, Peterborough County.</p> <p>S 1/3 lots 2,3, concession I, Monmouth Township, S 1/3 lot 3, 5, concession I, Glamorgan Township, Haliburton County.</p> <p>Latitude 45.875, Longitude 78.313.</p> <p>Map Reference: ODM 1957b, Haliburton-Bancroft Area.</p> <p>Coordinates derived from NTS sheet.</p>
GEOLOGY	<p>The property is underlain to the west by paragneiss, with some marble and amphibolite, and to the east by granite and granite gneiss. The metasediments strike parallel to the granite contact at N25°E and dip 50-80°SE. They are intruded by metagabbro, syenite, and granite or granite pegmatite dikes. Radioactive mineralization occurs in a series of northeast-striking quartz-feldspar pegmatite dikes. They are quite coarse-grained, vary in colour from pink to deep red, and appear to dip southeast conformably with the metasediments. Accessory minerals include allanite, zircon, uranothorite, magnetite, uranophane, pyrite, uraninite and thorite.</p>
ECONOMIC FEATURES	<p>Chip samples assayed from 0.01 to 0.025% U_3O_8 (chemical). Early drilling intersected 0.156% U_3O_8 over 8.5 feet and 1.876% U_3O_8 over 5.5 feet. In 1977, the largest dike encountered in drilling had a true width of 9 feet and returned 0.1 pounds U_3O_8 and ThO_2 per ton.</p>

HISTORY OF DEVELOPMENT

1955: One drill hole for 520 feet by Scaddore Gold Mines.

1955: One drill hole for 731 feet by Cassiar Rainbow Gold Mines.

1955-56: Stripping, 2000 feet of trenching; geological and scintillometer surveys; 12 diamond-drill holes for 1792 feet by Garland Mining & Development Company Limited.

1968: Three drill holes for 370 feet by Redwood Gold Mines.

1976: Airborne radiometric survey by Vantreal Resources.

1976-77: Geological, scintillometer and magnetic surveys; 2 drill holes for 1287 feet by Fin Resources Limited.

1978: 12 diamond-drill holes for 2038 feet by Copper Lake Explorations.

PRINCIPAL REFERENCES

ODM, 1956, Vol. 65, pt.6, p.150-151.
(Garland Manufacturing and Development Co. Ltd)

OGS, AFRO, Toronto: Tech. files 63.3465, 2.2267

: Anstruther Township Drill
Report No. 36

: Glamorgan Township Drill
Report No. 14 (Cassiar Rainbow
Gold Mines), 15.

GRAY WOLF - STONY CREEK OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uranothorite

LOCATION Lots 2 and 3, concession IX,
Anstruther Township.
Latitude 44.790, Longitude 78.282.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY Mineralization occurs within leucogranite pegmatite
dikes and patches intruding leucogranite, granite
gneiss and biotite paragneiss. Accessory minerals
in the pegmatites are magnetite, allanite, zircon
and uranothorite.

ECONOMIC FEATURES Geiger readings average 3 times background,
maximum 8 to 14 times. Best assay was 0.03% U_3O_8
(radiometric). Maximum pegmatite core length is
20 to 25 feet; the average is 2 to 3 feet.

HISTORY OF DEVELOPMENT 1955-56: 1100 feet of stripping, minor trenching,
8 drill holes for 693 feet by Gray Wolf Exploration
Company Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 151-152.

HIGGINS OCCURRENCE

COMMODITY	Uranium, thorium
RADIOACTIVE MINERALS	Uranothorite
LOCATION	Lots 1 - 4, concession X - XII, Anstruther Township. Latitude 44.795, Longitude 78.288. Map Reference: ODM 1957b, Haliburton - Bancroft Area. Coordinates derived from NTS sheet.
GEOLOGY	The occurrence, situated near the centre of the Anstruther granite gneiss mass, is underlain by biotite paragneiss, fine-grained granite gneiss, or quartzo-feldspathic gneiss with a variable strike and dip that may average $N70^{\circ}E$ and dip $50^{\circ}NW$. Uranothorite occurs in a medium- to coarse-grained red leucogranite with pegmatitic patches up to 20 feet wide. Accessory minerals are abundant magnetite, zircon and pyrite.
ECONOMIC FEATURES	Geiger readings vary erratically from 3 to 16 times background, with a spot high of 30 times. Readings in the drill holes give a maximum of 4 times background.
HISTORY OF DEVELOPMENT	1955: Trenching, geiger survey, and 9 diamond-drill holes totalling 2188 feet by Higgins Uranium Mines Company Limited.
PRINCIPAL REFERENCES	ODM 1956, Vol. 65, pt. 6, p. 152.

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 29-31, concession V,
 Lots 22-31, concession VI,
 Lots 25(S₂), 26(S₂), 27-33, concession VII,
 Lots 27(S₂), 28-33, concession VIII,
 Anstruther Township.
 Latitude 44.792, Longitude 78.156.
 Map Reference: ODM 1957b, Haliburton-Bancroft
 Area. Coordinates derived from NTS sheet.

GEOLOGY The property is underlain to the west by granite,
 granite gneiss and pegmatites of the Anstruther
 granite gneiss mass and to the east by paragneiss
 and marble. The metasediments, striking N30-50°E
 and dipping 30-60°E, are cut by pegmatite dikes
 and are widely granitized.
 Uranium mineralization occurs in pegmatites close
 to the contact with granite or paragneiss.

ECONOMIC FEATURES The best drill core sample assayed 0.108% U₃O₈
 (radiometric) over 5 feet, however most were less
 than 0.05% U₃O₈ (radiometric).

HISTORY OF DEVELOPMENT 1953-55: Airborne scintillometer survey; ground
 scintillometer and geological surveys; 17 diamond-
 drill holes for 6989 feet by Newkirk Mining
 Corporation, Limited.
 1976: Radon gas and scintillometer surveys by
 Kerr Addison Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p.153.
 OGS, AFRO, Toronto: Tech. files 63A.220
 63.3452 (Kerr Addison
 Mines Limited)
 : Anstruther Township Drill Report No. 18.

NEWKIRK - B GROUP PROSPECT

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite

LOCATION Lots 14 - 18, concession I and II,
Anstruther Township.
Lot 26, concession VIII and IX,
Burleigh Township.
Latitude 44.737, Longitude 78.169.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The property is underlain by granite pegmatite and
granite gneiss of the Burleigh granite gneiss mass.
Inclusions of metasediments, which strike northeast
and dip 25-50°SE, comprise biotite amphibolite,
biotite paragneiss, garnet biotite gneiss, and, rarely,
marble.
Four uranium-bearing lenses occur in granite pegmatite
adjacent to a garnet gneiss band along a fault zone
striking N55°E and dipping 40°SE. The granite
pegmatite is deep pink with abundant biotite, as well
as uranothorite and rare zircon, molybdenite, and
chalcopyrite.

ECONOMIC FEATURES Diamond drilling has outlined a zone 1,000 feet long
to a depth of 500 feet with an average true width of
7.5 feet. Indicated and inferred reserves are
estimated at 406,000 tons grading 1.77 pounds U₃O₈
per ton. (Northern Miner, Jan. 25/68).

HISTORY OF DEVELOPMENT 1953-54: Airborne scintillometer survey; ground
scintillometer and geological surveys; trenching
by Newkirk Mining Corporation Limited.

1953-55: Diamond drilling in 19 holes for 6,400 feet
by Zenmac Metal Mines Limited.

1967-69: Diamond drilling in 18 holes for 12,088 feet
by Glenn Explorations Limited.

1974: Magnetometer and electromagnetic surveys by
Camindex Mines Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 154-155 (Zenmac Metal Mines
Limited).

OGS, AFRO, Toronto: Tech. files 62A.261 (Zenmac Metal
Mines Limited), 63A.221, 2.1415 (Camindex Mines
Limited).

:Anstruther Township Drill Report

No. 26 (Glenn Explorations Limited).

Northern Miner, January 25, 1968, p. 3 (Glenn
Explorations Limited).

Burleigh Township

(NTS 31D/9)

BIBIS YUKON OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Not reported

LOCATION Lots 21 - 23, Concession IV - VI, Burleigh Township
Latitude 44.704, Longitude 78.214.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The occurrence lies within the Burleigh granite gneiss pluton. Radioactive pegmatite and pegmatitic granite dikes and bodies striking northeast and dipping 40 - 50° SE intrude granite gneiss, hybrid granite gneiss and minor metasediments.

ECONOMIC FEATURES Assays of grab samples ranged from 0.007 to 0.024% U₃O₈ (radiometric). Pegmatite bodies intersected in diamond drilling returned low uranium values.

HISTORY OF DEVELOPMENT 1953: Airborne scintillometer survey by Newkirk Mining Corporation Limited.
1954-55: Geological and ground scintillometer surveys, grab samples and 6 diamond drill holes totalling 2338 feet by Bibis Yukon Mines, Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 155.
OGS, AFRO, Toronto: Tech. file 63A.223

GREAT BASIN OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite (?), gummite, uranophane

LOCATION Lot 15, concession VIII,
Lots 15-20, concession IX,
Lots 17-20, concession X,
Lots 18-21, concession XI,
Lots 22-23, concession XI and XII,
Burleigh Township.
Latitude 44.722, Longitude 78.146.
Map Reference: ODM 1957b, Haliburton-Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY A sequence of granite, granite gneiss, paragneiss, amphibolite and crystalline limestone intruded by a mass of gabbro strikes N20°E and dips 50-65°E. Mineralization occurs within concordant, coarse-grained pink pegmatite dikes intruding biotite granite gneiss. Uranothorite (?) and gummite-uranophane minerals are associated with hematitization, concentrations of mafic minerals, and proximity to country rock contacts.

ECONOMIC FEATURES Pegmatites range in size up to 110 feet wide and over 4000 feet long. Fresh rock samples assayed 0.04 - 0.72% U₃O₈, averaging 0.123% U₃O₈ for 14 samples.

HISTORY OF DEVELOPMENT 1955: 17 trenches, sampling, geological survey by G.W. Darling.
1967-69: Reconnaissance geological and scintillometer surveys, magnetometer and spectrometer surveys, trenching, 25 plugger holes by Great Basin Metal Mines Limited.
1970: Geological survey by Partridge River Mines Limited.

PRINCIPAL REFERENCES

OGS, AFRO, Toronto: Tech. files 63A. 236 (G.W. Darling),
63.2556, 2.234 (Partridge River Mines
Limited).

NEW KELORE OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 18-24, Concession XI,
Lots 22-24, Concession XII,
Burleigh Township
Latitude 44.738, Longitude 78.118.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The property is underlain by the Burleigh granite gneiss mass. Radioactive pegmatites occur in a broad contact zone between the Burleigh batholith and metasediments to the east, where paragneisses increase while intrusive or re-mobilized gneisses decrease from west to east.
Uranium minerals occur in granite pegmatite dikes or sills. Towards the south the granite pegmatites are continuous for several thousand feet but vary considerably in uranium content. Towards the north they are discontinuous or lens-like but often over 100 feet wide. The pegmatites are commonly chloritized and contain accessory magnetite and sulfides.

ECONOMIC FEATURES

HISTORY OF DEVELOPMENT 1955: Mapping, drilling, blasting, 17 trenches by L. G. Phelan.
1969: Magnetic and scintillometer surveys; grab samples by Great Basin Metal Mines Limited.

1970: Geological mapping by Partridge River
Mines Limited.

1976: Geological, magnetic and radiometric
surveys by New Kelore Mines Limited.

PRINCIPAL REFERENCES

OGS, AFRO, Toronto: Tech. file 2.2285

NEWKIRK - D GROUP OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 21-25, concession VII - X,
 Burleigh Township.
 Latitude 44.716, Longitude 78.169.
 Map Reference: ODM 1957b, Haliburton - Bancroft Area.
 Coordinates derived from NTS sheet.

GEOLOGY The claims lie just within the northeast border of the
 Burleigh granite gneiss mass. They are underlain
 by granite gneiss, granite, pegmatitic granite,
 or pegmatite, and hornblende gneiss. The gneisses
 and pegmatitic dikes strike northeast and dip
 17-50° SE.

ECONOMIC FEATURES Highest ground scintillator readings were 4 times
 background over pegmatitic rock. Drill core
 samples generally returned low uranium values,
 with a maximum assay of 0.049% U₃O₈ (chemical).

HISTORY OF DEVELOPMENT 1953-55: Airborne scintillometer survey; ground
 scintillator survey; 15 diamond drill holes
 totalling 6161 feet by Newkirk Mining Corporation,
 Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 156-157.
 OGS, AFRO, Toronto: Burleigh Township Drill
 Report No. 10.

NEWKIRK - E GROUP OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 24, 25 Concession IV - VII,
 Burleigh Township
 Latitude 44.716, Longitude 78.210.
 Map Reference: ODM 1957b, Haliburton - Bancroft Area.
 Coordinates derived from NTS sheet.

GEOLOGY The property is underlain in the south by granite
 gneiss and granite, and in the north mainly by
 hornblende gneiss. Weak radioactivity occurs in
 small scattered masses or dikes of pegmatitic
 granite or granite pegmatite. Regional strike
 is N60°E and dip averages 40°S.

ECONOMIC FEATURES The best drill core sample assayed 0.032% U₃O₈
 (radiometric) over 10 feet.

HISTORY OF DEVELOPMENT 1953-55: Airborne scintillometer survey; ground
 scintillometer and geological surveys; 5 diamond
 drill holes totalling 2529 feet by Newkirk
 Mining Corporation, Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 157-158.
 OGS, AFRO, Toronto: Tech. file 63A.281.

POLE STAR PROSPECT

COMMODITY Uranium, thorium, rare earths

RADIOACTIVE MINERALS Allanite, uranothorite, uraninite

LOCATION Lots 23-25, concession XI and XII,
Burleigh Township
Latitude 44.737, Longitude 78.127.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The west half of the property is underlain by granite gneiss, granite, pegmatitic granite and granite pegmatite of the Burleigh granite gneiss pluton. To the east, biotite-hornblende gneiss is invaded by numerous lenticular bodies of granite, pegmatitic granite, and granite pegmatite. The gneisses strike slightly west of north and dip 55-70°E.
A radioactive anomaly occurs in the zone of granite and pegmatite injection in biotite-hornblende gneiss. Uranium mineralization occurs in leucogranite with pegmatitic patches, with accessory magnetite, zircon, allanite, uranothorite, pyrite and titanite. X-ray refraction also identified uraninite, meta-allanite and melanoce rite.

ECONOMIC FEATURES Diamond drilling indicated reserves of 406,112 tons averaging 1.768 pounds U₃O₈ per ton (DEMR File U2,31D/9).

HISTORY OF DEVELOPMENT 1953: Airborne scintillometer survey by Newkirk Mining Corporation Limited.
1954: Geiger and geological surveys; 21 diamond-drill holes totalling 8403 feet by Pole Star Mines Limited.

1971: Diamond drilling by Camindex Mines Limited.

1976: Geological, radiometric and geochemical surveys
by St. Joseph Exploration Limited.

PRINCIPAL REFERENCES

DEMR, Mineral Development Sector, Ottawa, National
Mineral Inventory. File U2, 31D/9, Pole Star.

ODM 1956, Vol. 65, pt. 6, p. 158-159.

OGS, AFRO, Toronto: Tech. file 2.2162 (St. Joseph
Exploration Limited).

Cavendish Township

(NTS 31D/9, 31D/16)

ASARCO - TWIN LAKE OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Not identified

LOCATION Lots 9 - 11, concession VII,
Lots 9(N½), 10(N½), 11, concession VI,
Lot 11, concession V,
Cavendish Township.
Latitude 44.744, Longitude 78.373.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY Marbles with interbedded biotite paragneiss and
fine-grained amphibolite strike northwesterly and
dip moderately to steeply southwest. The metasediments
are intruded by pegmatites trending north to northeast
and dipping gently to moderately west.
Radioactive pegmatites are salmon-red and hornblendic.

ECONOMIC FEATURES Drill core samples from a radioactive zone 300 by
50 feet returned an average assay of 0.012% U_3O_8
(radiometric) over 10 feet.

HISTORY OF DEVELOPMENT 1967: Geological, scintillometer and magnetic surveys,
3 drill holes for 468 feet by Asarco Exploration
Company of Canada. Drill holes in S½ lot 10, concession VII.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. file 63.2324.

BRIAR COURT OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite

LOCATION Lots 17(S₁), 18, 19, concession VIII,
Lots 15(N₁), 18, 19, concession IX,
Lots 15 - 18, concession X,
Cavendish Township.
Latitude 44.774, Longitude 78.364.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY On the west flank of the Anstruther granite gneiss mass, a belt of metasediments composed largely of crystalline limestone and paragneiss is intruded by dikes and sills of granite and granite pegmatite. Uranium mineralization occurs in east-trending ridges of red syenitic granite, which are truncated to the west by an assumed north-south fault zone. Biotite, hornblende, black smoky quartz, and local magnetite, are common.

ECONOMIC FEATURES Geiger readings in test pits reached 200 to 400 times background. A typical channel sample assayed 0.03% U₃O₈ (chemical) and 0.07% U₃O₈ (radiometric) across 5 feet.

HISTORY OF DEVELOPMENT circa 1951: Sampling by D.J. Smith.
1957-58: Reconnaissance geiger and geological surveys, trenching by H.G. Greene.
1968-69: Scintillometer and electromagnetic surveys, pitting, trenching, 6 drill holes for 1,400 feet by Briar Court Mines Limited.

PRINCIPAL REFERENCES OGS, AFRO, Toronto: Tech. file 63.2421.
: Cavendish Township Drill Report
No. 27.

CAVENDISH PROSPECT

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uranothorite, thorite, uraninite, uranophane, kasolite, cyrtolite

LOCATION Lots 14-19, Concession V to IX, Cavendish Township.
Main workings are in S $\frac{1}{2}$ lot 14, Concession VII
Latitude 44.754, Longitude 78.355.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.

GEOLOGY The property lies in a belt of marble, paragneiss and amphibolite near the southwest contact of the Anstruther granite gneiss mass. The metasediments strike north and dip 25-40° W. They are intruded by gneissic granite, leucogranite, syenite and pegmatite. The paragneiss, mainly an amphibolitic biotite gneiss, forms the walls of the uranium-bearing pegmatites, which are flat-lying dikes striking northerly and dipping 15-30° E. The dikes are 40 to 200 feet thick and are composed of pink feldspar with graphic intergrowths of quartz. Accessory minerals include abundant magnetite and minor zircon, titanite, allanite, uranothorite, thorite, uraninite, uranophane, kasolite and cyrtolite. Radioactive minerals are associated with magnetite and shearing.

ECONOMIC FEATURES In 1957, the lowest estimate of reserves at the main workings was 435,624 tons grading 0.096% U₃O₈ (chemical).
(*Reg. Geol. File Cardiff No. 39*)

HISTORY OF DEVELOPMENT 1954: Magnetometer survey; pitting; 45 diamond-drill holes for 17,438 feet by Cavendish Uranium and Mining Company Limited.
1955-56: Vertical 88-foot shaft with a level at 70 feet; underground work including 1515 feet of lateral

work and 5634 feet of drilling; 78 surface diamond-drill holes for 45,772 feet by Cavendish Uranium and Mining Company Limited.

1957: Feasibility studies by Amalgamated Rare Earth Mines Limited.

1967: Feasibility studies; 13 diamond-drill holes for 2713 feet by Asarco Exploration Company of Canada Limited.

1975: Geological mapping; diamond drilling by Imperial Oil Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 159-161.

Regional Geologist's Files, OMNR, Huntsville: Files Cardiff Township No. 39 (Amal. Rare Earth Mines Limited), Cavendish Township No. 50.

REMARKS

This property is part of the present Rare Earth Resources Prospect.

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite, betafite,
uranophane

LOCATION Lot 13, concession VI,
Lot 14, concession V,
Cavendish Township,
Latitude 44.736, Longitude 78.354.
Map Reference: 1957b, Haliburton-Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The property lies just west of the Anstruther
granite gneiss batholith, in biotite paragneiss
cut by numerous dikes and bodies of leucogranite
and granite pegmatite.
Uranothorite, allanite and uranophane occur
in leucogranite or pegmatitic leucogranite with
accessory magnetite and zircon. Betafite, uranophane
and rare pyrite occur in the middle zone of a granite
pegmatite dike. This zone is deep red and magnetite-rich.

ECONOMIC FEATURES Geiger readings on leucogranite average 8 times
background. The middle zone of the granite pegmatite
reads 12 to 46 times background.

HISTORY OF DEVELOPMENT 1955: Stripping, trenching and 14 diamond-drill holes
for 3696 feet by Cromwell Uranium and Development
Company, Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt.6, p.162.

DRUDE - BUCKHORN ROAD OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Urankphane, allanite, uranothorite

LOCATION N½ lot 16, concession III,
Cavendish Township.
Latitude 44.720, Longitude 78.333.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY Mineralization occurs within a hematite-stained
leucogranite with pegmatitic patches. Accessory
minerals include magnetite, zircon, allanite,
uranothorite, uranophane, and local minor pyrite.

ECONOMIC FEATURES Geiger readings of the mineralized zones average
8 to 30 times background.

HISTORY OF DEVELOPMENT 1955: Trenching and two drill holes for 725 feet by
Drude Uranium Mines Limited.
1968: Seventeen drill holes for 3,556 feet by
Newlund Mines Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 164.
OGS, AFRO, Toronto: Cavendish Township Drill Report
No. 11, 25 (Newlund Mines Limited)..

DRUDE - HIGGINS LAKE OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uranothorite

LOCATION Lot 16, concession IX,
Cavendish Township.
Latitude 44.771, Longitude 78.358.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY Mineralization occurs within pink leucogranite
or granite pegmatites, with local graphic granite.
Maximum radioactivity is associated with granitic
areas with accessory allanite, zircon, magnetite,
uranothorite, and local biotite.
Drill core contains minor pyrrhotite and pyrite
within marble, and pyrrhotite, pyrite, molybdenite,
and chalcopyrite within granite.

ECONOMIC FEATURES One drill core sample assayed 0.09% U_3O_8 over 0.5
feet. In 1977, assays on trench samples ranged
from 0.004 to 0.171% U_3O_8 .

HISTORY OF DEVELOPMENT 1955: Scintillometer and geological surveys,
trenching, 5 diamond-drill holes for 1,925 feet
by Drude Uranium Mines Limited.
1977: Trenching and sampling by R.W. Drude.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 162-163.
OGS, AFRO, Toronto: Tech. file 63.727.
: Cavendish Township Drill Report
No. 15.

DRUDE - MISSISSAGUA LAKE OCCURRENCE

COMMODITY	Uranium
RADIOACTIVE MINERALS	Not identified
LOCATION	N $\frac{1}{2}$ lot 21, concession III, Cavendish Township. Latitude 44.726, Longitude 78.509. Map Reference: ODM 1957b, Haliburton - Bancroft Area. Coordinates derived from NTS sheet.
GEOLOGY	Mineralization occurs at oneshowing within coarse-grained pink granite pegmatite containing abundant coarse magnetite and patchy red stain. At another showing, mineralization occurs within granite pegmatite dikelets intruding leucogranite gneiss. The pegmatite contains masses of magnetite rimmed by a golden-yellow mineral. Local minor pyrite and pyrrhotite were noted in the drill core.
ECONOMIC FEATURES	Geiger readings are one to two times background.
HISTORY OF DEVELOPMENT	1955: Stripping and 3 drill holes for 1,445 feet by Drude Uranium Mines Limited.
PRINCIPAL REFERENCES	ODM 1956, Vol. 65, pt. 6, p. 164. OGS, AFRO, Toronto: Cavendish Township Drill Report No. 10.

KELBEE OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite, uranophane, uraninite

LOCATION N $\frac{1}{2}$ Lots 21-23, concession XII,
Lots 21-24, concession XIII,
S $\frac{1}{2}$ Lots 21-24, concession XIV,
Lot 25, N $\frac{1}{2}$ 26, concession XIV,
Cavendish Township.
Latitude 44.824, Longitude 78.336.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY The property straddles the northwestern margin of the Anstruther granite batholith. It is underlain by amphibolite, marble, granite gneiss, and hybrid granite gneiss cut by granite and granite pegmatite bodies. The metasediments and granite gneisses strike northeast and dip vertically to steeply northwest. Uranium mineralization is found in irregular bodies of leucogranite and leucogranite pegmatite within hybrid granite gneiss. The largest radioactive body has an exposed length of 450 feet, and varies in width from 20 to 120 feet. Leucogranitic rock contains allanite, uranothorite, magnetite, biotite, uranophane, zircon and uraninite.

ECONOMIC FEATURES Chemical assays of drill core samples range up to 0.044% U_3O_8 over 2.9 feet.

HISTORY OF DEVELOPMENT 1955-56: Trenching, stripping, 34 diamond-drill holes for 8095 feet by Kelbee Rare Metals Corporation Limited.

1978: Reconnaissance prospecting, detailed radiometric and geological surveys over two radioactive zones by C.R. Bowdidge.

PRINCIPAL REFERENCES

Bowdidge, C. R. (1978) Report on Pencil Lake Uranium Prospect. On file, MDS, OGS, Toronto.
ODM 1956, Vol. 65, pt. 6, p. 165-166.

UNITED MACFIE OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite

LOCATION Lots 6-8, concession IV,
Cavendish Township.
Latitude 44.720, Longitude 78.373.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY Leucogranite or granite pegmatite bodies intrude biotite
paragneiss and pyroxene-hornblende gneiss striking N60°E
and dipping 60°SE.
The main showing consists of three north-striking pink
pegmatitic leucogranite bodies. Maximum radioactivity is
associated with accessory allanite, magnetite, martite,
titanite, uranothorite and rare biotite, garnet and
tourmaline.

ECONOMIC FEATURES Drill core samples assayed up to 0.036% U₃O₈ over 2 feet,
and averaged 0.017% U₃O₈ over 2 feet. Pegmatite bodies
range in size to 200 by 500 feet.

HISTORY OF DEVELOPMENT 1955-56: Pits and 21 drill holes for 5001 feet by
Macfie Explorations, Limited.
1969: Magnetometer and scintillometer surveys by
Louvicourt Goldfields Corporation.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 166.
OGS, AFRO, Toronto: Tech. files 63.2471 (Louvicourt
Goldfields Corporation), 2.2258 (Louvicourt
Goldfields Corporation).
:Cavendish Township Drill Report No. 21.

Chandos Township

(NTS 31C/13, 31D/16)

Galway Township

(NTS 31D/9, 31D/10, 31D/15, 31D/16)

BLOTT OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, uraninite

LOCATION Lots 23 and 24, concession XI,
S $\frac{1}{2}$ lot 24, concession XII,
Galway Township.
Latitude 44.758, Longitude 78.499.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY Lenticular bodies of radioactive granite pegmatite intrude country rock of marble with interbeds of paragneiss and amphibolite. The metasediments strike N18^oE and dip about 45^o to the east.
There are at least five pegmatite bodies occupying a zone 1400 by 700 feet. Medium- to coarse-grained pink leucogranite pegmatite gives geiger readings of 4 to 8 times background, while pyroxene granite pegmatite on the west side of the zone gives readings of 15 to 25 times background. Accessory minerals include zircon, titanite, molybdenite (rare), uranothorite and uraninite.

ECONOMIC FEATURES Channel samples assayed 0.094% U₃O₈ (radiometric) over 16 feet and 0.125% U₃O₈ (chemical) over 125 feet.

HISTORY OF DEVELOPMENT 1954: 10 drill holes for 1324 feet.
1954-55: Stripping, 20 trenches and 6 drill holes totalling 213 feet by W. Blott.
1955: 11 drill holes for 3280 feet by Kenmac Chibougamau Mines Limited.

1968: Four drill holes for 443 feet by Swiss Oils of
Canada, Limited.

1970: Geological and scintillometer surveys by
Swiss Oils of Canada, Limited.

PRINCIPAL REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 171.

OGS, AFRO, Toronto: Tech. file 2.249(G.C. Stevens).

:Galway Township Drill Report No. 12(Tait Group),13.

CRYSTAL LAKE OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Allanite, uranothorite, thorite,
uranophane

LOCATION Lots 23, 24, 26, 27-29, concession IX,
Lots 21, 23, 25, 27-29, concession X,
Galway Township
Latitude 44.744, Longitude 78.489
Map Reference: ODM 1957b, Haliburton-Bancroft
Area. Coordinates derived from NTS sheet.

GEOLOGY Marble and amphibolite are intruded by lenticular
sills of granite and granite pegmatite striking
northeast and dipping 45-55° SE.
Allanite, uranothorite, thorite and uranophane
are sparsely and erratically distributed in granite and
granite pegmatite bodies. The more important showings
are on three sills consisting of pyroxene - poor
granite pegmatite or leucogranite, and pyroxene
peristerite granite pegmatite.

ECONOMIC FEATURES Two composite grab samples of granitic rocks
assayed 0.02% and 0.01% U₃O₈ (radiometric).

HISTORY OF DEVELOPMENT 1954-55: Scintillometer survey; 52 pits or
trenches; 3287 feet of diamond drilling in 21 holes
by Silver Crater Mines Limited.
1956-57: An adit 300 feet long with 310 feet of
drifting and 135 feet of cross-cutting in lot 25,
Concession X by Coballoy Mines and Refiners Limited.

PRINCIPAL REFERENCES ODM 1971, OFR 5057, p.75-76
ODM 1956, Vol. 65, pt.6, p.172-173

LOOM LAKE OCCURRENCE

COMMODITY Uranium

RADIOACTIVE MINERALS Uraninite

LOCATION $S\frac{1}{2}$ lot 30, concession IX,
Galway Township.
Latitude 44.742, Longitude 78.457.
Map Reference: ODM 1957b, Haliburton - Bancroft
Area. Coordinates derived from NTS sheet.

GEOLOGY Uraninite occurs within leucosyenite or biotite
syenite gneisses which intrude marble, strike
 $N45-55^{\circ}$ E and dip 65° SE. Accessory minerals
include magnetite, local coarse calcite, hematite,
and, in one drill core section, galena and
sphalerite.

ECONOMIC FEATURES A zone extending for 700 feet returns erratic
geiger readings, from 3 to 30 times background.

HISTORY OF DEVELOPMENT 1956: Six trenches, 7 drill holes for 1957 feet
by Newkirk Mining Corporation Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 172.

Harvey Township

(NTS 31D/9, 31D/10)

BIG NELL OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranothorite, allanite

LOCATION Lot 26, Concession XVI, Harvey Township
Latitude 44.613, Longitude 78.521.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY Leucogranite pegmatite dikes cut country rocks of fine- to medium-grained leucogranite or biotite gneiss or granite gneiss that strike northeast and dip vertically. Accessory minerals include magnetite - often abundant, biotite, tourmaline, zircon, allanite and uranothorite. Radioactivity increases in areas of shattering or abundant magnetite.

ECONOMIC FEATURES Surface sampling gives a total length of 1,180 feet averaging 0.129% U_3O_8 (chemical) across 7.6 feet. Chip samples range up to 0.31% U_3O_8 (radiometric) with a Th/U ratio of 4.8/1.

HISTORY OF DEVELOPMENT 1954: Stripping and trenching by Roy Kennedy.
1957: Stripping and 7 rock trenches totalling 400 feet by Big Nell Mines Limited.
1957: Geiger survey and sampling of dikes by Ontario Department of Mines geologist J. Satterly.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 175.
ODM 1971, OFR 5057, p. 79-80.

GLENN OCCURRENCE

COMMODITY	Uranium, thorium
RADIOACTIVE MINERALS	Not identified
LOCATION	<p>Lots 31, 32, concession I, Lots 30 - 32, concession II - IV, Harvey Township.</p> <p>Latitude 44.699, Longitude 78.306.</p> <p>Map Reference: ODM 1957b, Haliburton - Bancroft Area.</p> <p style="padding-left: 40px;">Coordinates derived from NTS sheet.</p>
GEOLOGY	<p>A sequence of rocks ranging from massive red granite in the south to biotite - amphibole gneiss in the north is intruded by numerous narrow, irregular pegmatites. Foliation generally strikes 60 - 90° and dips 60 - 80°S.</p> <p>Radioactive pegmatites usually strike northeast to east, and are coarse-grained, deep orange-red and biotite-rich. They may contain magnetite and molybdenite and display hematitized patches and yellow stain.</p>
ECONOMIC FEATURES	<p>Trench samples averaged 0.01 to 0.02% U₃O₈ (radiometric). The best assay was 0.06% U₃O₈ over 3 feet. The pegmatites are up to 25 feet wide, and one may be 800 feet long.</p>
HISTORY OF DEVELOPMENT	<p>1967-68: Geological and radiometric surveys; 14 trenches for 201 feet; 4 drill holes for 1115 feet by Glenn Explorations Limited.</p>
PRINCIPAL REFERENCES	<p>OGS, AFRO, Toronto: Tech. file 63.2276</p>

GRAY WOLF - NOGIES CREEK OCCURRENCE

COMMODITY Uranium, thorium, rare earths

RADIOACTIVE MINERALS Not identified

LOCATION Lots 29 - 31, concession XVI,
E½ lots 29 and 30, concession XVII,
Harvey Township.
Latitude 44.628, Longitude 78.527.
Map Reference: ODM 1957b, Haliburton - Bancroft Area.
Coordinates derived from NTS sheet.

GEOLOGY Mineralization occurs in a gneissic band within
a granite gneiss sill intruding marble and
amphibolite. The mineralized band is a hematitized,
quartz-rich, chlorite-pyroxene granite gneiss with
accessory magnetite and rare earth minerals. The
band is ½ to 4 feet thick and up to 800 feet long,
and strikes N45°E and dips 45°SE.

ECONOMIC FEATURES Geiger readings of the mineralized zone were 3 to 8
times background, with spot-highs to 30 times. The
best assay was 0.076% U₃O₈ (chemical) associated
with a 13-times-background reading. One sample
analyzed spectrographically assayed 0.10% gadolinium
and praseodymium, 0.1 - 1.0% thorium, 0.5 - 5.0%
each of cerium, lanthanum, yttrium and zirconium.

HISTORY OF DEVELOPMENT ca. 1955: Geiger counter survey by Ontario Department
of Mines geologist J. Satterly.
1955-56: Stripping, pitting, sampling by Gray Wolf
Exploration Company, Limited.

PRINCIPAL REFERENCES ODM 1956, Vol. 65, pt. 6, p. 174-175.

PETERBOROUGH COUNTY MINOR

OCCURRENCES

Anstruther Township

(NTS 31D/9, 31D/16)

NAME AND LOCATION

Wm BLOTT

Lots 6 (N¹/₂), 7-10, con. I

Anstruther Tp.

Lat. 44.728, Long. 78.208

REFERENCES

Regional Geologist's Office, OMNR,

Huntsville: File Anstruther No. 67,68,72

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet

REMARKS

In 1978, William Blott carried out prospecting,

stripping, sampling and drilling. Country

rocks include granite gneiss and pegmatite.

No radioactivity.

NAME AND LOCATION

ESSO MINERALS

Lots 33 (N $\frac{1}{2}$), 34 (N $\frac{1}{2}$), con. XI,

Lots 33, 34 (N $\frac{1}{2}$), 35 (N $\frac{1}{2}$), con. XII,

Anstruther Tp.

Lat. 44.844, Long. 78.140.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.3068.

ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

Feldspar hornblende gneisses strike north-northeast
and dip 35-55^o SE. Anomalous readings up to 10 times
background are associated mainly with pegmatite
sills and dikes intruding the gneiss. In 1978,
Esso Minerals Canada carried out geological and
radiometric surveys.

NAME AND LOCATION

R. HALLIDAY

Lot 36, con. XI,

Anstruther Tp.

Lat. 44.841, Long. 78.119

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p.247.

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

A radioactive occurrence is reported. No
other data.

NAME AND LOCATION

IMPERIAL OIL - CAMP CREEK

N $\frac{1}{2}$ of lots 23, 23, con. III,

S $\frac{1}{2}$ of lots 23, 24, con. IV,

Anstruther Tp.

Lat. 44.764, Long. 78.151

REFERENCES

OGS, AFRO, Toronto: Tech file 2.2211

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet

REMARKS

Numerous granitic sills conformably intrude feldspathic paragneiss striking northeasterly and dipping about 45°SE. A pegmatite-paragneiss contact zone gave readings of 10 to 50 times background. Geological mapping and scintillometer survey were carried out in 1976 by Imperial Oil Limited. Some trenching and diamond drilling had been done by an unknown previous operator.

NAME AND LOCATION

IMPERIAL OIL - EELS CREEK,
Lots 32(N $\frac{1}{2}$), 33(N $\frac{1}{2}$), con. VIII,
Lots 30 - 35, con. IX,
Lots 31 - 34, con. X,
Lots 32, 33(S $\frac{1}{2}$), con. XI,
Anstruther Tp.
Lat. 44.835, Long. 78.139

REFERENCES

OGS, AFRO, Toronto: Tech. files 2.2203, 2.2654
: Anstruther Township Drill
Report No. 37
ODM Map 1957b, Haliburton-Bancroft Area.
Coordinates derived from NTS sheet

REMARKS

Radioactive granitic to syenitic sills
intrude feldspathic paragneiss and marble
which strike generally north-northeast and
dip 30 - 45°E. Assays from plugger cuttings
of pegmatite outcrops range from 0.01 to
0.06% U₃O₈. Imperial Oil Limited
conducted geological and radiometric surveys
in 1976, and diamond-drilled 32 holes
totalling 2889 feet in 1977-78.

NAME AND LOCATION

IMPERIAL OIL - WEBSTER

Lots 31 - 33, con. IX,

Anstruther Tp.

Lat. 44.821; Long. 78.131.

REFERENCES

OGS, AFRO, Toronto: Tech. files 2.2172, 2.2147.

ODM Map 1957b, Haliburton - Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

Radioactive granitic to syenitic pegmatite sills

intrude paragneiss, marble and biotite quartzite

which strike north-northeast and dip southeast.

In 1976, Imperial Oil Limited carried out geological

mapping and a radiometric survey.

NAME AND LOCATION

A.L. KEMP

Lots 32, 33, con. XVII,

Lot 34, con. XVIII,

Anstruther Tp.

Lat. 44.892, Long. 78.167

REFERENCES

ODM 1971, OFR 5057, p.1-2.

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

Silicated marble striking $N20^{\circ}W$ and dipping $70^{\circ}S$ is intruded by leucogranite and granite pegmatite. Uranothorite occurs in patches of calcite - pyroxene and pyroxene syenite pegmatite. In 1957 A.L. Kemp put in 24 trenches, 7 diamond-drill holes for 1714 feet, and an adit 225 feet long.

NAMES AND LOCATION

KERR ADDISON - GROUP A

Lots 38, 39, con. XIV, XV and S $\frac{1}{2}$ XVI,
Anstruther Tp.

Lat. 44.871, Long. 78.040.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.2232.

ODM Map 1957b, Haliburton - Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

Marbles and paragneisses are intruded by granite
stocks. Uraniferous granite dikes occur along a
north to northeast strike.

In 1976, Kerr Addison Mines Limited carried
out a scintillometer survey.

NAME AND LOCATION

KERR ADDISON-GROUP C,
Lots 33 (N $\frac{1}{2}$) and 34 (N $\frac{1}{2}$), con. XI,
Lots 33-35, con. XII,
Lots 34, 35, con. XIII and XIV,
Lots 33 (N $\frac{1}{2}$), 34-36, 37 (N $\frac{1}{2}$), con. XV,
Lots 33-36, 37 (S $\frac{1}{2}$), con. XVI,
Asntruther Tp.
Lat. 44.845, Long. 78.136

REFERENCES

OGS, AFRO, Toronto: Tech file 2.2217, 2.2232, 2.2233
ODM Map 1957b, Haliburton-Bancroft Area.
Coordinates derived from NTS sheet.

REMARKS

Marbles and paragneisses are intruded by hybrid granite gneiss. The metasediments strike north and dip 30-60°E.
Radioactive mineralization occurs in granite pegmatite dikes. In 1976-77, Kerr Addison Mines Limited conducted a scintillometer survey and diamond drilled 2 holes for 746 feet. The best drill sample assayed 0.4 pounds U₃O₈ per ton over 1.4 feet.

NAME AND LOCATION

SEYMOUR

Lots 2(S $\frac{1}{2}$),3,4, con. XVI,

Lots 3,4,5 (S $\frac{1}{2}$), con. XVII,

Anstruther Tp.

Lat. 44.858, Long. 78.308

REFERENCES

ODM 1956, Vol. 65, pt.6, p.153-154.

OGS, AFRO, Toronto: Tech file 63A.285

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

Radioactive granite pegmatites intrude marble

and paragneiss striking N60°E and dipping 45-90°SE.

Geological and scintillometer surveys were conducted

in 1955 by Seymour Mining Company Limited. A grab

sample assayed 0.99% U₃O₈ (chemical).

NAME AND LOCATION

TRITON - BRITCO - TETRA,
N $\frac{1}{2}$ lots 13-15, con. II,
N $\frac{1}{2}$ lots 10-11, con. III,
Lots 12-15, con. III,
Lots 9-12, con. IV,
Asntruther Tp.
Lat. 44.729, Long. 78.215.

REFERENCE

OGS, AFRO, Toronto: Tech. file 63A.287
ODM Map 1957b, Haliburton-Bancroft Area.
Coordinates derived from NTS sheet.

REMARKS

Geological and radiometric surveys were performed in 1955 by Triton Uranium Mines Limited, Britco Oil Company Limited and Tetra Uranium Mines Limited. Radioactivity occurs in hematitized or mafic-rich granite pegmatites intruding hybrid granite gneiss, marble, paragneiss and quartzite.

Burleigh Township

(NTS 31D/9)

NAME AND LOCATION

Wm. BLOTT,
Lot 26 (E ½), con. VI,
Burleigh Tp.
Lat. 44.723, Long. 78.204.

REFERENCES

Regional Geologist's Office, OMNR, Huntsville: File
Burleigh Township No. 19.
ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

In 1978, William Blott put down two diamond-drill
holes (379 feet) intersecting coarse-grained pink
granite and biotite schist. No radioactivity.

Cavendish Township

(NTS 31D/9, 31D/16)

NAME AND LOCATION

M. CZIRAKY

Lot 3, con. IX,

Cavendish Tp.

Lat. 44.758, Long. 78.422

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16,

2nd ed., p. 255.

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

A radioactive occurrence in granitic rock
is reported. No other data.

NAME AND LOCATION

R. W. DRUDE,
Lot 3, con. III,
Cavendish Tp.
Lat. 44.701, Long. 78.393.

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.2601.
ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

In 1977, samples from several trenches by R. W. Drude
assayed from 0.048 to 0.216% U_3O_8 .

NAME AND LOCATION

GANYMEDE

Lots 8 - 13, con. V - VII,

Cavendish Tp.

Lat. 44.736, Long. 78.368.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 165.

ODM Map 1957b, Haliburton - Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

The occurrence is located within a belt of paragneiss and marble, intruded by dikes and bodies of leucogranite and granite pegmatite. Geiger readings on the pegmatite were 1 to 3 times background with spot highs of 20 times where uranothorite was noted.

In 1955 and 1957, Ganymede Uranium Mines Limited put down 11 diamond-drill holes totalling 3989 feet.

NAME AND LOCATION

IMPERIAL OIL - J. R. Wilson

Lots 6-9, N $\frac{1}{2}$ of 10-15, con. V,

Lots 8-13, S $\frac{1}{2}$ of 6, 7, 15, 16, con. VI,

Lots 8-13, con. VII,

Cavendish Tp.

Lat. 44.746, Long. 78.370.

REFERENCES

Regional Geologist's Files, OMNR, Huntsville: File

Cavendish Township No. 59.

ODM Map 1957b, Haliburton - Bancroft Area. Coordinates derived from NTS sheet.

REMARKS

The claims lie adjacent to the Cavendish Uranium Mine. Marble, quartzite and quartzo-feldspathic gneiss, and minor amphibolitic paragneiss form a fold whose east limb strikes north-northeast while the west limb strikes north-northwest. Dips are generally moderately to the west. Granitic pegmatite lenses containing minor biotite, hornblende, pyroxene and magnetite display uranophane stain.

An unknown operator had carried out some trenching and diamond drilling. In 1975 Imperial Oil Limited conducted geological and radiometric surveys.

NAME AND LOCATION

T. C. MICHIE

Lots 8, 9, con. XVIII,

Cavendish Tp.

Lat. 44.845, Long. 78.431.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 166.

ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

Marble, granite gneiss and paragneiss strike
northeast. In 1955, Camor Metals Corporation
conducted a scintillometer survey. In the same year
Cardicore Uranium Corporation put down eleven trenches
and drilled one hole (207 feet) which intersected
two 3-foot sections of granite pegmatite.

NAME AND LOCATION

QUEBEC URANIUM,
N $\frac{1}{2}$ lots 11 - 14, con. III,
Lots 11 - 14, N $\frac{1}{2}$ 15, con. IV,
Lots 15, S $\frac{1}{2}$ 11 - 14, con. V,
S $\frac{1}{2}$ lots 15 and 16, con. VI,
Cavendish Tp.
Lat. 44.724, Long. 78.353.

REFERENCES

OGS, AFRO, Toronto: Tech. file 63.2326.
:Cavendish Township Drill Report No. 29.
ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

Drilling intersected quartz-biotite gneiss, minor
diabase, and very weakly radioactive pegmatite
and granite. Granite is locally hematitized. All
core showed radioactivity levels less than two
times background.

Quebec Uranium Mining Corporation conducted airborne
radiometric and ground magnetic surveys, prospecting,
stripping and trenching in 1968. In 1969, five
holes totalling 1,508 feet were drilled.

NAME AND LOCATION

K.S. READ

Lot 4, con. X,

Cavendish Tp.

Lat. 44.765, Long. 78.418

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16

2nd ed., p.255

ODM Map 1957b, Haliburton-Bancroft Area

Coordinates derived from NTS sheet

REMARKS

A radioactive occurrence in granitic
rock is reported. No other data.

NAME AND LOCATION

A. J. THIFFAULT,
Lots 10 - 15, con. VIII - XII,
Cavendish Tp.
Lat. 44.775, Long. 78.372.

REFERENCES

ODM 1956, Vol. 65, pt. 6, p. 169.
ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

The area is underlain by north- to northeast-striking
biotite paragneiss, marble, and granite. In 1955,
airborne scintillometer and magnetometer surveys
indicated a radioactive anomaly in Kent Island
in Picard Lake with an intensity of twice that over
water.

Chandos Township

(NTS 31C/13, 31D/16)

NAME AND LOCATION

BUNKER HILL

Lots 1,2, con. XVI,

Lots 1,2,6,7, con. XV,

½ lots 3,4,5, con. XV,

Chandos Tp.

Lat. 44.849, Long. 78.099

REFERENCES

ODM 1956, Vol. 65, pt.6, p.170.

GSC. Rad. Res. Div. File 31F/4-16.

ODM Map 2019, Chandos Township.

Coordinates derived from NTS sheet.

REMARKS

Biotite paragneiss striking northeast and dipping about 50° SE is intruded by pegmatite dikes.

Channel samples across a radioactive dike 10 feet wide and 300 feet long averaged 0.005% U₃O₈ over 21 feet.

In 1955, Bunker Hill Extension Mines Limited carried out magnetic, scintillometer and geological surveys, some trenching, and drilled 4 holes totalling 2,009 feet.

NAME AND LOCATION

SIMARD GROUP

Lots 3, 4, con. XVII,

Lots 3-5, con. XVIII,

Chandos To

Lat. 44.872, Long. 78.102.

REFERENCES

OGS, AFRO, Toronto: Tech. file 63.572.

ODM Map 2019, Chandos Township. Coordinates derived
from NTS sheet.

REMARKS

Amphibolite and paragneiss are intruded by
hornblende granite gneiss and granite pegmatite.
Sporadic radioactivity of low intensity occurs in
granite pegmatite. The Simard group carried out
geological and magnetic surveys in 1954 and 1955,
respectively.

NAME AND LOCATIO

RICBAN,
S $\frac{1}{2}$ lot 11, con. XI,
Chandos Tp.
Lat. 44.823, Long. 78.034

REFERENCES

OGS, AFRO, Toronto; Chandos Township Drill
Report No. 10
ODM Map 2019, Chandos Township

REMARKS

Two holes totalling 725 feet drilled by Ricban
Mines Limited in 1958 intersected granodiorite and
marble. A narrow pegmatite assayed 0.004% U₃O₈
over 2.8 feet.

NAME AND LOCATION

BELRA

Lots 19-24, con. XV,

Lots 17-22, con. XVI and XVII,

Galway Tp.

Lat. 44.788, Long. 78.512

REFERENCES

OGS, AFRO, Toronto: Tech. file 63.2337

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

Spotty radioactivity occurs in two northeast-trending zones of coarse-grained granite pegmatite intruding hybrid granite gneiss. Two samples of fresh pegmatite did not yield an appreciable uranium content. In 1968, Belra Explorations Limited conducted a reconnaissance scintillometer survey, and put down two pits.

Galway Township

(NTS 31D/9, 31D/10, 31D/15, 31D/16)

NAME AND LOCATION

TRITON

Lot 9, con. XVIII,

Chandos Tp.

Lat. 44.884, Long. 78.077

REFERENCES

ODM 1956, Vol. 65, pt.6, p.75-76.

ODM Map 2019 Chandos Township. Coordinates derived from NTS sheet.

REMARKS

During 1954-58 geological and scintillometer surveys, trenching, and drilling of one hole for 147 feet were performed by Triton Uranium Mines Limited. Low radioactivity was reported within a leucogranite pegmatite intruding biotite - hornblende gneiss.

NAME AND LOCATION

A.J. GODFREY

Lots 33(S $\frac{1}{2}$), 34, con. XVI, Galway Tp.

Lot 2(S $\frac{1}{2}$), con. XVI, Cavendish Tp.

Lot 44.771, Long. 78.625

REFERENCES

ODM 1956, Vol. 65, pt.6, p.171

OGS, AFRO, Toronto: Cavendish Township Drill

Report No. 17

: Galway Township Drill

Report No. 15

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet

REMARKS

Pegmatites intrude marble striking north-northeast and dipping steeply east-southeast.

Weak radioactivity in the pegmatites is sometimes associated with magnetite.

A.J. Godfrey put down pits, trenches, and four drill holes (208 feet) in 1955, and three drill holes (131 feet) in 1956-57.

NAME AND LOCATION

F. HALAS

Lots 25 - 29, Con. IV,

N $\frac{1}{2}$ lot 28, Con. III,

Galway Tp.

Lat. 44.698, Long. 78.449

REFERENCES

OGS, AFRO, Toronto: Tech. file 2.67

: Galway Township Drill Report

No. 21

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

In 1970, F. Halas carried out magnetic, radiometric and geological surveys. Readings averaged 1.5 to 2 times background, with spot highs to 50 times. From 1970 to 1973, 33 holes totalling 3200 feet were drilled, intersecting gneiss and coarse, red pegmatite.

NAME AND LOCATION

C.A. McWILLIAMS - LIMESTONE

S $\frac{1}{2}$ lot 27, con. VII,

Galway Tp.

Lat. 44.731, Long. 78.465.

REFERENCES

ODM, 1956, Vol. 65, pt.6, p.172.

ODM Map 1957b, Haliburton-Bamcroft Area.

Coordinates derived from NTS sheet.

REMARKS

In 1956, Newkirk Mining Corporation Limited, conducted stripping and trenching at 12 places over an erratically mineralized biotite marble. The zone extends 1600 feet. A grab sample assayed 0.15% U₃O₈ (chemical).

NAME AND LOCATION

NESBITT - LABINE,
Lots 24 - 26, con. XII,
Galway Tp.
Lat. 44.767, Long. 78.494.

REFERENCES

OGS, AFRO, Toronto: Tech. files 63A.251, 2.2403 (Rayrock
Mines Limited).
ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

Coarse-grained granite pegmatites conformably intrude
biotite schist and marble striking N20°E and dipping
25-50°E. Geological and scintillometer surveys by
Nesbitt - Labine Uranium Mines Limited in 1955
revealed uranothorite in the margins of the
pegmatites. In 1976, Rayrock Mines Limited performed
a scintillometer survey and reconnaissance geology.
Chip samples from trenches containing magnetite and
uranophane assayed 0.103 and 0.027% U₃O₈ fluorimetrically.

NAME AND LOCATION

F. PAYCE

Lot 40, con. A,

Galway Tp.

Lat. 44.733, Long. 78.517

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16,

2nd ed., p.261.

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from Gazetteer of
Canada.

REMARKS

A radioactive occurrence in granitic
rock is reported. No other data. The
reported location "lot 40, con. A" does
not exist, coordinates are given for
the township centre.

NAME AND LOCATION

J. TAIT

Lot 7, con. XIII

Galway Tp.

Lat. 44.756, Long. 78.592.

REFERENCES

ODM 1971, OFR 5057, p.77.

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinated derived from NTS sheet.

REMARKS

A granite and granite pegmatite ridge, 150 feet wide by 750 feet long, trends N40°E and cuts through marble. Samples from a pit and trench cut by J. Tait in 1957 assayed 0.11% U_3O_8 and 0.02% U_3O_8 (radiometric). The pit exposes leucogranite with sparse uranitized pyroxene, zircon and uraninite.

Harvey Township
(NTS 31D/9, 31D/10)

NAME AND LOCATION

L. CADESKY

W₂ lot 26, con. XVI,

Harvey Tp.

Lat 44.612, Long. 78.520

REFERENCES

ODM 1956, Vol. 65, pt.6, p.174

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinated derived from NTS sheet

REMARKS

Biotite granite gneiss is cut by a dike
up to 7 feet wide which trends N25°E.

The dike is pink to red leucogranite
containing abundant magnetite with
radiometric readings averaging 10 times
background. Stripping, trenching and a
geiger survey were carried out in 1956.

NAME AND LOCATION

R.M. CLARK

Lot 26, concession XVII,

Harvey Tp.

Lat 44.610, Long. 78.531

REFERENCES

GSC 1952, Econ. Geol. Ser. No.16, p.146.

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

R.M. Clark collected a sample assaying

0.23% U_3O_8 (radiometric).

NAME AND LOCATION

GRAY WOLF - LAVERY LAKE,
Lots 31 and 32, con. XIV,
Lot 32, con. XIII, Harvey Tp.
Lots 16-21, con. I and II, Galway Tp.
Lat. 44.653, Long. 78.492.

REFERENCES

OGS, AFRO, Toronto: Harvey Township Drill
Report No. 10.
ODM Map 1957b, Haliburton-Bancroft Area.
Coordinates derived from NTS sheet.

REMARKS

Pegmatite and granite were intersected in one hole
for 28 feet in NE $\frac{1}{4}$ lot 32, concession XIV, Harvey
Township, drilled by Gray Wolf Exploration Company
Limited in 1956.

NAME AND LOCATION

IMPERIAL OIL

Lot 20, con. XII,

Harvey Tp.

Lat. 44.597, Long. 78.430.

REFERENCES

OGS, AFRO: Tech. file 2.2245 .

ODM Map 1957b, Haliburton-Bancroft Area.

Coordinates derived from NTS sheet.

REMARKS

A few lenses of radioactive granite

pegmatite occur in quartz feldspar paragneiss.

In 1975, Imperial Oil Limited carried out

geological and radiometric surveys

NAME AND LOCATION

SILANCO

Mississagua Lake,

Harvey Tp.,

Lat. 44.700, Long. 78.333.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16.

2nd ed., p.263.

ODM Map 1957b, Halliburton - Bancroft Area.

Coordinates derived from NTS map sheet.

REMARKS

Allanite in granitic rock is reported.

No other data.

NAME AND LOCATION

WEBER-SCHRIEBL

Lot 19, con. I and II,

Harvey Tp.

Lat. 44.635, Long. 78.260.

REFERENCES

OGS, AFRO, Toronto: Harvey Township Drill Report No. 11.

ODM Map 1957b, Haliburton - Bancroft Area. Coordinates
derived from NTS sheet.

REMARKS

In 1956, 10 diamond drill holes for 1756 feet
were put down by A. E. Tyson. Slightly radioactive
granite pegmatite bodies intrude hybrid granite gneiss
and pegmatitic granite. Minor sulphides and allanite
occur locally.

RENFREW COUNTY

Brougham Township

(NTS 31F/2, 31F/6, 31F/7)

LEGRIS OCCURRENCE

COMMODITY Uranium, thorium, niobium, tantalum

RADIOACTIVE MINERALS Uranothorite, pyrochlore, allanite, zircon

LOCATION Lot 31, concession XVIII,
Brougham Township.
Latitude 45.332, Longitude 77.048.
Map Reference: ODM P.2240, Khartum Area (Imperial Oil).

GEOLOGY A zoned pink granite pegmatite intrudes a sequence of calc-silicate gneisses, biotite gneiss, quartzo-feldspathic gneiss, hornblende syenite gneiss, and syenite. The gneisses trend northeast and dip 48-60°SE. Pyrochlore, uranothorite, allanite, and zircon occur in the central part of the pegmatite dike, often associated with magnetite, pyroxene and hematitization.

ECONOMIC FEATURES The pegmatite is about 20 meters wide and over 300 meters long. Trench samples averaged 0.02 to 0.025% U₃O₈ and 0.35 to 0.40% Th. The best drill intersection assayed 0.025% U₃O₈ over 1.8 meters.

HISTORY OF DEVELOPMENT 1950's: Prospecting by H.A. Legris.
1976-77: Geological and radiometric surveys, sampling, 3 drill holes for 414 feet by Imperial Oil Limited.

PRINCIPAL REFERENCES OGS 1980, OFR 5294, ~~Manuscript~~. p. 13-16
OGS, AFRO, Toronto: Tech. file 2.2177 (Imperial Oil Limited).

Griffith Township

(NTS 31F/6)

SPAIN MOLYBDENITE MINE OCCURRENCE

COMMODITY Molybdenum, uranium, thorium

RADIOACTIVE MINERALS Uranothorite

LOCATION Lot 31, concession IV,
Griffith Township.
Latitude 45.279, Longitude 77.070.
Map Reference: ODM P.2240, Khartum Area (J.R. Lill).

GEOLOGY The country rocks are granitic gneiss, hedenbergite gneiss, pegmatite, hornblende gneiss, and marble. Molybdenum and uranium mineralization occur in pegmatites intruding hedenbergite gneiss. Mineralized pegmatites are very coarse-grained, rusty-weathering, and comprise smoky quartz, hedenbergite, microcline, plagioclase, pyrite, pyrrhotite, molybdenite and uranothorite.

ECONOMIC FEATURES Grade of uranium mineralization is undetermined.

HISTORY OF DEVELOPMENT 1912: Molybdenum mine opened by J. Legree.
1915-19: Large open pit; shaft to 50 feet; 8,065 pounds of pure molybdenite produced by W.J. Spain and Steel Alloys Corporation.
1939: Stripping, trenching, and 4,000 feet of diamond drilling by North American Molybdenite Corporation Limited.
1965-66: Drilling and sampling by New Far North Exploration Limited.

PRINCIPAL REFERENCES Eardley-Wilmot, V.L. (1925) Molybdenum. Report 592, Mines Branch, Ottawa, p. 101-103.
OGS 1980, OFR 5294. Manuscript.

Raglan Township

(NTS 31F/3, 31F/4, 31F/5, 31F/6)

MARQUARDT (HENDERSON) OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Uranophane, uraninite, uranothorite

LOCATION Lots 30-35, Range V and VI,
Raglan Township.
Latitude 45.222, Longitude 77.410.
Map Reference: ODM 1953-2, Brudenell-Raglan Area. Coordinates
derived from NTS sheet.

GEOLOGY Several parallel pegmatite dikes and/or sills
trend $N25^{\circ}E$ to $N35^{\circ}E$ through a main pegmatitic sill
which trends $N30^{\circ}E$ and reaches a maximum width of
500 feet. The pegmatites intrude a complex of
granite, granitic gneiss and metasediments.
Uraninite, uranothorite and uranophane occur in
siliceous, biotite-rich, sheared granite pegmatite.
Showings designated as Numbers 1 to 5 represent
5 radioactive dikes.

ECONOMIC FEATURES Showing No. 1 comprises 2 zones, 25 and 10 feet wide,
with samples assaying 0.035 to 0.079% U_3O_8 . Showing
No. 2 is exposed along 6 by 500 feet and gives geiger
readings of 5,000 to 15,000 cpm. Showing No. 3 has a
possible length of 700 feet; a chip sample over 6 feet
returned 0.15% U_3O_8 . Showing No. 4 is a zone 40 by
150 feet; a representative grab sample assayed 0.22%
 U_3O_8 . A representative grab sample from Showing No.
5 assayed 0.65% U_3O_8 .

HISTORY OF DEVELOPMENT 1954-58: Stripping and trenching; geological,
scintillometer, magnetometer and geiger surveys;
4 drill holes for 161 feet by Henderson Uranium
Mines Limited.
1968: Trenching and 11 drill holes for 3,085 feet
by Merland Oil Company of Canada Limited.

PRINCIPAL REFERENCES OGS 1980, OFR 5294, ~~Manuscript~~. p. 203-205
OGS, AFRO, Toronto: Tech. file 63.798 (Henderson Uranium
Mines Limited).

Sebastopol Township

(NTS 31F/6)

OPEONGO MINE OCCURRENCE

COMMODITY Uranium, thorium, titanium, zirconium, cesium,
niobium, yttrium, silver

RADIOACTIVE MINERALS Uranothorite, thorite, allanite, sphene

LOCATION Lot 39, Range C North,
Sebastopol Township.
Latitude 45.421, Longitude 77.218.
Map Reference: ODM P.1560, Clontarf Area.

GEOLOGY Mineralized pyroxene veins and pyroxene-sphene
pegmatite intrude gneissic albite-quartz monzonite.
Allanite and thorite often occur as small in-
clusions in sphene. Accessory minerals include
uranothorite, biotite, pyrite, apatite, zircon,
garnet and magnetite.

ECONOMIC FEATURES The occurrence is of limited area. A 450-pound
bulk sample assayed 0.048% U_3O_8 (chemical), 0.38%
 ThO_2 (chemical), 10.9% Ti, 1.30% ZrO_2 and 0.035 oz.
Ag per ton.

HISTORY OF DEVELOPMENT 1955-56: Pitting, blasting, trenching; 450-pound
bulk sample for analysis and mill tests. Work by
Opeongo Mines Limited.

PRINCIPAL REFERENCES OGS 1980, OFR 5294, ~~Manuscript~~. p. 217-221

RENFREW COUNTY MINOR
OCCURRENCES

Admaston Township

(NTS 31F/7)

NAME AND LOCATION

N. DUDGEON,
Lot 8, con. XI,
Admaston Tp.
Lat. 45.382, Long. 76.839.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~ p.1-2
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

Weakly radioactive white granite pegmatite dikes
cut paragneisses and marble striking N60-90°E and
dipping 20 - 30°SE. In 1958, chip and grab samples
collected by N. Dudgeon assayed 0.012% U₃O₈
(radiometric equivalent).

NAME AND LOCATION

J. MASK,

Lot 7, con. XI,

Admaston Tp.

Lat. 45.374, Long. 76.832.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 246.

ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

An occurrence of radioactive float is reported.

No other data.

Alice Township

(NTS 31F/14)

NAME AND LOCATION

R. McCOSHEN,
Lot 13, con. XV,
Alice Tp.
Lat. 45.811, Long. 77.272.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~. p. 337
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

A radioactive mineral of the euxenite-polycrase series
occurs in small pink granite pegmatite dikes 0.5 to 3
meters wide. The pegmatites intrude quartzo-feldspathic
gneisses and minor hornblende-biotite gneiss.

NAME AND LOCATION

WOERMKE NO. 1A,
Lot 30, con. VII,
Alice Tp.
Lat. 45.771, Long. 77.160.

REFERENCES

OGS 1980, OFR 5294, *Manuscript*, p. 237
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

Granite and pegmatitic granite intrude hornblende-
biotite gneiss and migmatite. Radioactivity is confined
to small fractures and biotite-rich portions of the
pegmatite. A chip sample collected by E.R. Woermke in
1954 assayed 0.09% U_3O_8 (radiometric) and contained
priorite.

NAME AND LOCATION

WOERMKE NO. 1B,
Lot 30, con. XII,
Alice Tp.
Lat. 45.810, Long. 77.184.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~ p. 237
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

Weak radioactivity is associated with magnetite-bearing
granite pegmatite dikes intruding migmatitic
hornblende-biotite gneisses. A sample submitted to
the Radioactivity Laboratory in Ottawa by E.R.
Woermke in 1954 assayed 0.15% U_3O_8 (radiometric),
and contained euxenite, thorite, allanite, and zircon.

Bagot Township
(NTS 31F/7)

NAME AND LOCATION

N. BOICEY,
Lot 28, con. V,
Bagot Tp.
Lat. 45.387, Long. 76.713.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~. p. 3-4
ODM Map 53b, Renfrew Area.

REMARKS

Anomalous radioactivity occurs over an area of three square meters in a pink granite pegmatite dike cutting biotite-hornblende gneiss and amphibolite. Circa 1940, molybdenum in the pegmatite was tested by a pit 3 by 3 by 1.5 meters deep. In 1959, a sample collected by N. Boicey assayed 0.07% U_3O_8 (radiometric).

NAME AND LOCATION

D. QUILTY,
Lot 31, con. VII,
Bagot Tp.
Lat. 45.340, Long. 76.809.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript.~~ p. 237
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

Three samples collected by D. Quilty in 1954-55 from
a rusty part of a granite pegmatite 0.6 to 1.2 meters
wide, assayed 0.025, 0.016, and 0.80% U_3O_8 (radiometric).

NAME AND LOCATION

A. ZAVITSKI,

Lot 22, con. VI,

Bagot Tp.

Lat. 45.354, Long. 76.691.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~. p. 237

ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

A weakly radioactive pink granite pegmatite dike
intrudes a sequence of marble, metasilstone,
biotite-hornblende gneiss and amphibolite. In
1956, A. Zavitski collected three samples assaying
0.067, 0.045 and 0.029% U_3O_8 equivalent.

NAME AND LOCATION

ZENITH MINE,
W $\frac{1}{2}$ lot 28, con. IV,
Bagot Tp.
Lat. 45.392, Long.76.708.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~. p.5-6
ODM Map 53b, Renfrew Area.

REMARKS

Uraninite occurs in pegmatite where it intersects molybdenum-rich metapyroxenite skarn. In 1915, M.J. Paterson and A.W. Taylor produced 4,500 pounds of molybdenite ore from several pits. From 1935 to 1943, Phoenix Molybdenum Corporation Limited developed the mine and produced 9,073 tons of molybdenite ore. In 1955, Goldyke Mines investigated the uranium potential by drilling 11 holes for 336 feet on the 175-foot level. They reported grades of 0.06 to 0.42% U₃O₈.

Blithfield Township

(NTS 31F/2, 31F/7)

NAME AND LOCATION

NICHOLAS AXIOTIS,
Lots 5 - 12, con. IV - VIII,
Blithfield Tp.
Lat. 45.193, Long. 76.762.

REFERENCES

OGS, AFRO, Toronto: Tech files 2.2265, 2.2700.
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

N. Axiotis conducted an airborne spectrometer survey
in 1976 which detected two wide bands of anomalous
radioactivity, and an airborne magnetometer survey
in 1978.

Bromley Township

(NTS 31F/10, 31F/11)

NAME AND LOCATION

WOERMKE NO. 2,
Lot 30, con. VI,
Bromley Tp.
Lat. 45.639, Long. 77.044.

REFERENCES

OGS 1980, OFR 5294, *Manuscript*. p. 239
ODM Map 53b, Renfrew Area. Coordinates derived
from NTS sheet.

REMARKS

Thorite, allanite and cyrtolite occur in granite
pegmatite intruding quartzo-feldspathic gneiss and
hornblende-biotite gneiss. A zone 0.3 by 0.25 meters
gave geiger readings of 5 to 7 times background.
A sample collected by E.R. Woermke in 1954 assayed
0.09% U_3O_8 (radiometric).

Brougham Township

(NTS 31F/2, 31F/6, 31F/7)

NAME AND LOCATION

MUD LAKE (A. Legris),
Lot 18, con. IX,
Brougham Tp.
Lat. 45.277, Long. 76.950.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~, p. 234
GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p.249.
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

A radioactive occurrence in granitic rock was reported
by Lang (GSC 1962) but field work by Masson (1978)
encountered no radioactivity. Country rocks are
hornblende-plagioclase gneiss (granodiorite)
containing simple granite pegmatite.

NAME AND LOCATION

TOOEY'S LAKE,
S $\frac{1}{2}$ lot 26, con. XVIII,
Brougham Tp.
Lat. 45.338, Long. 77.026.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~, p. 17-18
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

Pyrochlore occurs in a pink granite pegmatite
intruding marble and pyritic siliceous gneisses.
The pegmatite is exposed over a strike length of
40 meters and widths up to 6 meters. Two samples
collected by E.R. Woermke in 1955 assayed 0.16 and
0.18% U₃O₈ (radiometric).

Brudenell Township

(NTS 31F/6)

NAME AND LOCATION

GORMAN LAKE,
On an island at the west end of Gorman Lake,
Lot 21, con. X,
Brudenell Tp.
Lat. 45.428, Long. 77.432.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~ p. 19-21
ODM Map 1953-2, Brudenell-Raglan Area.

REMARKS

Allanite and uraninite occur in granite pegmatite cutting biotitic quartzo-feldspathic gneiss. Radioactive minerals occur in a 3 by 6 meter zone of fractures carrying epidote, scapolite, and minor hematite and pyrite. In 1954, D.J. Drohan put in two trenches.

NAME AND LOCATION

W. C. MURRAY,
Lot 34, con. IV,
Brudenell Tp.
Lat. 45.363, Long. 77.468.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~ p. 139
ODM Map 1953-2, Brudenell-Raglan Area.

REMARKS

Pink granite pegmatite intrudes hornblende syenite gneiss and albite-corundum syenite pegmatite. Circa 1900, a small pit was opened for corundum. In 1955, W.C. Murray collected three samples which assayed 0.048, 0.003 and 0.053% U_3O_8 equivalent. Magnetite may have been mistaken for allanite.

NAME AND LOCATION

A. E. QUADE,
Lot 26, con. VI,
Brudenell Tp.
Lat. 45.386, Long. 77.438.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~. p. 23-24
ODM Map 1953-2, Brudenell-Raglan Area. Coordinates derived
from NTS sheet.

REMARKS

Weak radioactivity occurs near the centre of a
pink granite pegmatite which crosscuts amphibolite
gneiss, biotite gneiss and calc-silicate gneiss.
Radioactivity is associated with sphene, magnetite,
hematitization and fracturing. Stripping, pitting,
and some drilling were carried out in the 1950's
by A.E. Quade.

NAME AND LOCATION

ROCKINGHAM,
Lot 24, con. X,
Brudenell Tp.
Lat. 45.422, Long. 77.442.

REFERENCES

OGS 1980, OFR 5294, *Manuscript*. p. 25-26
ODM Map 1953-2, Brudenell-Raglan Area. Coordinates
derived from NTS sheet.

REMARKS

Uraninite and uranothorite occur in biotite-diopside
marble, and in metamorphic skarn which represents
the contact between marble and overlying rusty
gneiss. In 1955, Rockingham Mines Limited performed
stripping, pitting, trenching, and limited diamond
drilling, exposing intermittent uranium mineralization
over an area 200 by 700 feet. One grab sample
assayed 0.17% U_3O_8 and 0.17% ThO_2 .

Fraser Township

(NTS 31F/11, 31F/14)

NAME AND LOCATION

BARR FELDSPAR QUARRY,

N $\frac{1}{2}$ lot 24, con. XVI,

Fraser Tp.

Lat. 45.779, Long. 77.463.

REFERENCES

OGS 1980, OFR 5294, *Manuscript*. p 95-99

ODM Map 53b, Renfrew Area.

REMARKS

Rare allanite, uraninite, fergusonite, and pyrochlore occur in a zoned pink granite pegmatite intruding biotitic gneisses. In 1934-36, W.J. Burr mined 1,107 tons of feldspar. Samples collected by E.R. Woernke in 1954 assayed 0.51 and 0.55% U₃O₈ (radiometric).

Grattan Township

(NTS 31F/6)

NAME AND LOCATION

COLAUTTI FELDSPAR,
Lot 22, con. VIII,
Grattan Tp.
Lat. 45.427, Long. 77.046.

REFERENCES

OGS 1980, OFR 5296, p.399-401 (Keyfortmore)
ODM Map P.1560, Clontarf Area.

REMARKS

Country rocks of amphibolite, quartz-plagioclase paragneiss, and marble are intruded by a zoned tourmaline-bearing granite pegmatite. In 1942-43, G. Colautti produced 1,174 tons of feldspar from the pegmatite. Although the workings are designated as a radioactive occurrence on ODM P. 1560 (1978), detailed work later in 1978 (Storey) detected no radioactivity.

NAME AND LOCATION

GRATTAN TOWNSHIP,
Lots 16 - 22, con. XIII - XVI,
Grattan Tp.
Lat. 45.476, Long. 77.097.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~. p. 241
ODM Map P. 1560, Clontarf Area.

REMARKS

Uranothorite occurs in pyroxene veins within
pegmatites cutting massive leucocratic quartz
monzonite bodies. These granite bodies intrude
meta-arkose, marble, and amphibole-quartz-plagioclase
gneiss. A selected sample assayed 0.075% U_3O_8 .

NAME AND LOCATION

O. PERCY,
Lot 67, South Range,
Grattan Tp.
Lat. 45.401, Long. 77.100.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~ p. 241
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

A sample selected by O. Percy in 1956 assayed
0.22% U_3O_8 equivalent.

Griffith Township

(NTS 31F/6)

NAME AND LOCATION

CONRAD,
Lot 30, con. V,
Griffith Tp.
Lat. 45.288, Long. 77.079.

REFERENCES

OGS, AFRO, Toronto: Griffith Township Drill Report No. 10.
ODM Map P.2240, Khartum Area.

REMARKS

Country rocks of granodiorite, marble, and amphibole-plagioclase paragneiss are intruded by simple granite pegmatite. Sphene, tourmaline, and anatase occur in the vicinity. In 1957, Conrad Uranium Mines Limited drilled five holes (262 feet). Scintillometer readings of core indicated no radioactivity.

NAME AND LOCATION

JEFFERS LAKE AREA,
Lot 33, con. V,
Griffith Tp.
Lat. 45.294, Long. 77.063.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript.~~ p. 243
ODM Map P.2240, Khartum Area.

REMARKS

Pyrite, molybdenite and scapolite occur in country
rocks of marble, quartzo-feldspathic paragneiss,
amphibole-plagioclase paragneiss, and syenite.
Uranothorite is reported in metapuroxenite skarn.
Geological and scintillometer surveys were performed
in 1978 by the Ontario Geological Survey.

NAME AND LOCATION

J. LAMBERT,
Lot 17, con. X,
Griffith Tp.
Lat. 45.312, Long. 77.169.

REFERENCES

OGS 1980, OFR 5294. ~~Manuscript.~~ p. 243
ODM Map P.2240, Khartum Area. Coordinates derived from
NTS sheet.

REMARKS

Hornblende-biotite-plagioclase gneiss is intruded
by pink granite pegmatites with radioactivity levels
up to 4 times background. A sample collected by
J. Lambert in 1956 assayed 0.56% U_3O_8 (radiometric).

NAME AND LOCATION

G. A. MAUCHEL,

Seven miles north of Madawaska Bridge at Griffith
on Highway 41,

Griffith Tp.

Lat. 45.30, Long. 77.16.

REFERENCES

GSC, Rad. Res. Div. File 31F/6-8.

ODM Map 53b, Renfrew Area. Coordinates given are for
township centre, derived from Gazetteer of Canada.

REMARKS

Samples of granite collected by G.A. Mauchel in
1955 assayed 0.063 and 0.06% U_3O_8 (radiometric).

NAME AND LOCATION

MERCHANDS LAKE AREA,
Lot 34, con. IV,
Griffith Tp.
Lat. 45.281, Long. 77.054.

REFERENCES

Themistocleous, S. ODM Prelim. map P.2240, Khartum Area.
Marginal notes.
ODM P.2240, Khartum Area.

REMARKS

Country rocks of marble, quartzo-feldspathic paragneiss and syenite are intruded by simple granite pegmatite. The Haley Lake Fault passes through the immediate area. A grab sample assayed 0.11% U_3O_8 and 5.0% Th. Geological and scintillometer surveys were conducted by the Ontario Geological Survey in 1978.

NAME AND LOCATION

O. PERCY,
Lot 22, con. II,
Griffith Tp.
Lat. 45.260, Long. 77.106.

REFERENCES

OGS 1980, OFR 5294, Manuscript: p. 101-102
ODM Map P.2240, Khartum Area. Coordinates derived
from NTS sheet.

REMARKS

A weakly radioactive pink granite pegmatite dike,
0.35 meters wide and exposed for a length of 4 meters,
crosscuts apatite-biotite syenite. Uraniferous zircon
occurs in the pegmatite core with very red feldspar,
quartz, and minor magnetite.

Hagarty Township

(NTS 31F/6, 31F/11, 31F/12)

NAME AND LOCATION

ROCHEFORT,

Lot 13, con. A,

Hagarty Tp.

Lat. 45.500, Long. 77.426.

REFERENCES

GSC 1960, Paper 59-10, p. 37.

ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

Allanite is reported in meta-arkose.

Horton Township
(NTS 31F/7)

NAME AND LOCATION

J. S. DEMPSEY,
Lot 1, con. III,
Horton Tp.
Lat. 45.447, Long. 76.612.

REFERENCES

OGS 1980, OFR 5294. ~~Manuscript~~. p. 113-114
ODM Map 53b, Renfrew Area, Coordinates derived from
NTS sheet.

REMARKS

Uranothorite and allanite occur with abundant hornblende,
sphene, and anatase in a granite pegmatite cutting
hornblende-biotite gneiss, biotite schist, and marble.
The dike is at least 25 feet wide and 100 feet long.
Around 1950, J.S. Dempsey carried out pitting and
trenching. One sample assayed 0.02% U_3O_8 (radiometric).

NAME AND LOCATION

GOSHEN A,
Approximately 5 km southeast of Renfrew on
Highway 417, and 1.3 km south of the CNR bridge.
Horton Tp.
Lat. 45.450, Long. 76.604.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~, p 115-116
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

Anomalous radioactivity is restricted to a fracture
in a pink granite pegmatite dike, 2 to 3 meters wide,
intruding biotite-hornblende-plagioclase gneiss and
hornblende-biotite schist. Radioactive pegmatite is
composed of quartz, microcline, biotite, chlorite,
zircon, and magnetite, and displays hematitization.

NAME AND LOCATION

GOSHEN B,
Approximately 5 km southeast of Renfrew on Highway 417,
and 1.5 km south of the CNR bridge.
Horton Tp.
Lat. 45.449, Long. 76.598.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~. p. 17-18
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

Widespread but lean radioactivity occurs in well-developed
joints and fractures in granite pegmatite intruding
migmatitic hornblende-plagioclase gneiss. Pegmatite
contains biotite, magnetite, and some tourmaline.
Radioactivity is associated with marked hematitization
and also with calcite-feldspar veins cutting the
pegmatite.

Jones Township

(NTS 31F/5, 31F/12)

NAME AND LOCATION

G. BOLAND,
Lots 11 and 12, con. IX,
Jones Tp.
Lat. 45.480, Long. 77.823.

REFERENCES

GSC, Rad. Res. Div. File 31F/5-1.
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

In 1956, G. Boland obtained five samples from
pegmatite, which assayed 0.077, 0.021, 0.039, 0.19,
and 0.12% U_3O_8 (radiometric).

Lyndoch Township

(NTS 31F/6)

NAME AND LOCATION

T. B. CALDWELL,
Lot 23, con. XV,
Lyndoch Tp.
Lat. 45.329, Long. 77.391.

REFERENCES

GSC 1932, Econ. Geol. Ser. No. 11, p. 228-229.
ODM Map 1953-2, Brudenell-Raglan Area.

REMARKS

In 1926, T.B. Caldwell opened a pegmatite dike over
100 by 10 by 6 feet deep, and extracted between 2
and 4 tons of beryl crystals. The dike comprises
microcline, amazonite, albite, and quartz, with
accessory beryl, columbite, lyndochite, cyrtolite,
monazite, garnet, fluorite, and tourmaline.

NAME AND LOCATION

CANADIAN BERYLLIUM,
Lots 30 and 31, con. XV,
Lyndoch Tp.
Lat. 45.319, Long. 77.425.

REFERENCES

ODM 1953, Vol. 62, pt. 5, p. 42-45.
ODM Map 1953-2, Brudenell-Raglan Area.

REMARKS

A beryl granite pegmatite, exposed over an area of 600 by 100 to 150 feet, intrudes hornblende granite gneiss and leucogranite gneiss. Columbite and euxenite, often associated with magnetite, and cyrtolite occur in the pegmatite. In 1935-36, Renfrew Minerals Limited produced 675 tons of feldspar from two large pits. In 1948-49, Canadian Beryllium Mines and Alloys produced 300 tons of feldspar and 57,100 pounds of beryl concentrate from another large open cut.

NAME AND LOCATION

R. J. CRAWFORD,
Lot 34, con. II,
Lyndoch Tp.
Lat. 45.205, Long. 77.383.

REFERENCES

Regional Geologist's Files, OMNR, Huntsville: File
Lyndoch Township No. 9.
ODM Map 1953-2, Brudenell-Raglan Area. Coordinates derived
from NTS sheet.

REMARKS

In 1976, R.J. Crawford carried out stripping.

NAME AND LOCATION

W. A. DAVIES,
Lots 30(S $\frac{1}{2}$) and 31, con. VII,
Lyndoch Tp.
Lat. 45.250, Long. 77.396.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 266.
ODM Map 1953-2, Brudenell-Raglan Area. Coordinates derived
from NTS sheet.

REMARKS

A radioactive occurrence, probably in pegmatitic rock,
is reported. No other data.

NAME AND LOCATION

JAMIESON MINE,
Lots 5 and 6, con. VIII,
Lyndoch Tp.
Lat. 45.296, Long. 77.273.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~. p. 123-126
ODM Map 1953-2, Brudenell-Raglan Area.

REMARKS

Uraninite occurs in a calcite-pyroxenite vein containing pyrrhotite and abundant molybdenite, which intrudes silica-deficient granitic gneisses. Minor uraninite also occurs with biotite in biotite marble. Calcite-mica-pyroxenite pegmatites were worked for molybdenum by R.A. Jamieson in 1907, and in 1915-16 by the International Molybdenum Company Limited, who put in a large open cut, a shaft and pits. In all, 12,760 pounds of pure molybdenite were produced from 285 tons of ore.

NAME AND LOCATION

E. C. PRICE,
Lot 23, con. XV,
Lyndoch Tp.
Lat. 45.332, Long. 77.391.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~, p. 117-119
ODM Map 1953-2, Brudenell - Raglan Area.

REMARKS

A zoned beryl granite pegmatite dike, up to 34 feet wide and exposed for a length of 245 feet, intrudes hornblende granite gneiss and leucogranite gneiss. Accessory minerals in the dike include lyndochite, containing inclusions of columbite and intergrown with magnetite, allanite, columbite, monazite, cyrtolite, columbian anatase, and euxenite. In 1926, Canadian Beryllium Mines and Alloys Limited reopened the property for beryl, enlarging the cut to 245 by 50 by 20 feet deep.

NAME AND LOCATION

UNIVERSAL LIGHT METALS,
Lot 25, con. XV,
Lyndoch Tp.
Lat. 45.331, Long. 77.396.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~ p. 131-133
ODM Map 1953-2, Brudenell - Raglan Area.

REMARKS

Allanite, zircon, and titanite are common accessories
in pink granite pegmatite, and in the granitic gneisses
it intrudes. One pegmatite zone, 12 by 4 feet in area,
contains 10 to 15% allanite. In 1943 and 1952,
Universal Light Metals Company carried out stripping,
pitting and trenching.

Raglan Township

(NTS 31F/3, 31F/4, 31F/5, 31F/6)

NAME AND LOCATION

CRAIGMONT,

Lots 3 and 4, con. XVIII,

Raglan Tp.

Lat. 45.304, Long. 77.613.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~, p. 197-199

ODM Map 1953-2, Brudenell - Raglan Area.

REMARKS

Radioactivity occurs in a zoned pegmatite with granitic core and syenitic borders which cuts corundum-bearing syenite pegmatite. Allanite in the pegmatite core is associated with magnetite, biotite, and pyroxene. Euxenite and uraninite are reported on the dump. The Craig Mine was worked for corundum from 1900 to 1907 by the Canada Corundum Company Limited, 1908 to 1913 by Manufacturers Corundum Company, and 1919 to 1921 by Corundum, Limited. Total production was 18,526 tons of graded grain.

NAME AND LOCATION

DODD,

Lots 6 and 7, con. IV,

Raglan Tp.

Lat. 45.176, Long. 77.534.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~, p. 201-202

ODM Map 1953-2, Brudenell - Raglan Area. Coordinates
derived from NTS sheet.

REMARKS

A pink biotite granite pegmatite cutting metagabbro
is about 7 meters wide and is exposed along 800 meters.
Uranothorite occurs in the pegmatite, especially near
the contacts and where biotite is abundant. Samples
obtained by E. Price in 1955 assayed 0.02% U_3O_8 (radiometric).

NAME AND LOCATION

J. H. WEBSTER (Liedtke Molybdenum Mine),
Lot 27, con. IX,
Raglan Tp.
Lat. 45.254, Long. 77.460.

REFERENCES

ODM 1944, Vol. 53, pt. 3, p. 87.
ODM Map 1953-2. Brudenell - Raglan Area.

REMARKS

Radioactive fractures cut a granite pegmatite in a pyroxenite zone along the contact between marble and quartzo-feldspathic paragneiss. The fractures are 5 to 10 cm wide and contain quartz, calcite, pyroxene, molybdenite, and pyrrhotite. A sample collected by J.H. Webster in 1952 assayed 0.58% U_3O_8 (radiometric). Edgemont Mines Limited shipped out 27 tons of hand-cobbed ore averaging 0.75% MoS_2 in 1942.

Richards Township

(NTS 31F/11, 31F/12, 31F/13)

NAME AND LOCATION

E. BETZ,
Lot 2, con. XIV,
RichardsTp.
Lat. 45.758, Long. 77.508.

REFERENCES

GSC 1960, Paper 59-10, p. 39.
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

Euxenite, fergusonite and uraninite are reported
to occur in pegmatite.

Ross Township

(NTS 31F/10)

NAME AND LOCATION

H. CHEVRIER,
Lot 4, Range I,
Ross Tp.
Lat. 45.650, Long. 76.870.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~ p. 247
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

Uranothorite was identified in a sample collected by
H. Chevrier in 1955. The area is underlain by
intercalated calc-silicate gneisses and quartzo-
feldspathic gneisses.

NAME AND LOCATION

FORESTER FALLS,
Lots 6 and 7, con. IX,
Ross Tp.
Lat. 45.677, Long. 76.751.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~. p. 207-208
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

A hornblende pegmatite dike intruding hornblende-
biotite granitic gneiss is 0.3 meters wide, and
contains local uranothorite associated with biotite
and hornblende. A sample assayed 0.015% U_3O_8 and
0.16% Th. In 1954, the area was prospected by
L. Vaughan.

NAME AND LOCATION

L. VAUGHAN,
Lots 2 and 3, con. VII,
Ross Tp.
Lat. 45.704, Long. 76.786.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript.~~ p 29-40
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

A railway cut exposes a large pink syenite pegmatite dike cutting hornblende-plagioclase gneiss. The pegmatite has irregular patches and veins of apatite-fluorite-carbonate with accessory pyrite, pyroxene and uranothorite. One sample assayed 0.53% U_3O_8 and 1.51% Th. The occurrence was discovered in 1954 by L. Vaughan.

NAME AND LOCATION

D. WAITE,
Lots 2,3, con. VII,
Lots 6,7, con. IX,
Ross Tp.
Lat. 45.688, Long. 76.789.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 277.
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

A radioactive occurrence is reported. No other data.

NAME AND LOCATION

WOERMKE NO. 4,
NW $\frac{1}{4}$ lot 7, con. II,
Ross Tp.
Lat. 45.620, Long. 77.862.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~, p. 211-215 212
ODM Map 53b, Renfrew Area. Coordinates derived from
NTS sheet.

REMARKS

An apatite-fluorite-calcite vein intruding biotite-
hornblende calc-silicate gneiss is radioactive over
a small area. Sparse uranothorite and rare pyrite occur
in the vein, as well as abundant diopside, sphene,
hornblende, and biotite. A sample collected by E.R.
Woermke in 1954 assayed 0.06% U_3O_8 and 0.5% ThO_2
(calculated).

Sebastopol Township

(NTS 31F/6)

NAME AND LOCATION

G. BOLAND,
Sebastopol Tp.
Lat. 45.41, Long. 77.23.

REFERENCES

GSC, Rad. Res. Div. File 31F/6-14.
ODM Map 53b, Renfrew Area. Coordinates given are for
township centre, from the Gazetteer of Canada.

REMARKS

In 1955, G. Boland collected six samples assaying
from 0.003 to 3.62% U_3O_8 equivalent (radiometric).
Radioactivity was due mainly to thorium. The reported
location, "lot 35, con. VI", does not exist.

NAME AND LOCATION

LAKE CLEAR,
Lots 31 - 34, con. XI and XII,
Sebastopol Tp.
Lat. 45.471, Long. 77.163.

REFERENCES

OGS 1980, OFR 5294. ~~Manuscript.~~ p. 23-25
ODM Map P.1560, Clontarf Area.

REMARKS

Numerous wide-spread radioactive zones, usually less than a square meter, occur within a large body of gneissic pink quartz monzonite. Mineralization also occurs in granite pegmatite and pyroxene veins, especially associated with fracturing. The radioactive minerals are throite, uranothorite, and allanite.

NAME AND LOCATION

A. J. O'HARA,
Lot 49, Range C North,
Sebastopol Tp.
Lat. 45.417, Long. 77.178.

REFERENCES

OGS 1980, OFR 5294, ~~Manuscript~~ p. 247
ODM Map P.1560, Clontarf Area. Coordinates derived from
NTS sheet.

REMARKS

A sample collected from a pegmatite dike by A,J, O'Hara
in 1956 assayed 0.11% U_3O_8 (radiometric).

Wilberforce Township

(NTS 31F/11)

NAME AND LOCATION

JAMES,

Lots 6 and 7, con. III,

Wilberforce Tp.

Lat. 45.513, Long. 77.103.

REFERENCES

OGS 1980, OFR 5294. Manuscript.

ODM Map 53b, Renfrew Area. Coordinates derived from

NTS sheet.

REMARKS

Thorite and magnetite occur in the border zone of a three-foot wide pink granite pegmatite crosscutting felsic gneiss.

DISTRICT OF SUDBURY

MINOR OCCURRENCES

Awrey and Street Townships

(NTS 41-I/7, 41-I/10)

NAME AND LOCATION

L. L. PEER,
14 miles east of Sudbury on Highway 17,
Awray and Street Tps.
Lat. 46.533, Long. 80.700.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 248.
ODM Map 48m, Ashigami Lake Area. Coordinates
derived from Gazetteer of Canada.

REMARKS

An occurrence of allanite in granitic rock is
reported. Trenching and airborne geophysical work
were performed. No other data.

Bigwood Township
(NTS 41-I/2)

NAME AND LOCATION

FRENCH RIVER,
South side of Main Channel,
Bigwood Tp.
Lat. 46.017, Long. 80.617.

REFERENCES

ODM 1975, G.R. 116, p. 132.
ODM Map 1960f, Bigwood Area. Coordinates derived from
NTS sheet.

REMARKS

Crystals and seams of allanite occur with abundant
red alkalic feldspar in an intensely hematitized
pegmatite dike.

NAME AND LOCATION

J. F. HOWARD,
Lot 3, con. VIII,
Bigwood Tp.
Lat. 46.103, Long. 80.584.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 249.
ODM Map 1960f, Bigwood Area. Coordinates derived from
NTS sheet.

REMARKS

Trenching on a radioactive occurrence is reported.
No other data. The reported location, "lot 3, con. VIII"
does not exist; coordinates are given for lot 3, con. VI.

NAME AND LOCATION

RAE LAKE,

Bigwood Twp

Lat. 46.054, 80. 639.

REFERENCES

ODM 1975, G.R. 116, p. 132.

ODM Map 1960f, Bigwood Area.

REMARKS

Shallow pits in pink syenite and granite expose
crystals and veinlets of allanite.

Dill Township
(NTS 41-I/7)

NAME AND LOCATION

Con. II and III, Lot 2,

Dill Tp.

Lat. 46.393, Long. 80.831.

REFERENCES

ODM 1975, G.R. 116, p. 135.

ODM Map 2017, Broder, Dill, Neelon, and Dryden

Townships. Coordinates derived from MTS sheet.

REMARKS

Allanite occurs in zoned granite pegmatite dikes

intruding garnetiferous biotite gneiss.

NAME AND LOCATION

Con. III, Lot 4,

Dill Tp.

Lat. 46.399, Long. 80.853.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 142.

ODM Map 2017, Broder, Dill, Neelon, and Dryden

Townships. Coordinates derived from NTS sheet.

REMARKS

A pegmatite dike formerly worked for feldspar
contains toddite, a mineral similar to columbite
in which some manganese and iron have been
replaced by iron.

NAME AND LOCATION

ELIZABETH FELDSPAR,
Lots 1 and 2, con. III and IV,
Dill Tp.
Lat. 46.405, Long. 80.829.

REFERENCES

ODM 1975, G.R. 116, p. 134.
ODM Map 2271, Burwash.

REMARKS

A pegmatite dike, about 300 feet long and up to 110 feet wide, intrudes metasandstone cut by metagabbro. The dike comprises feldspar, quartz, and mica, with local garnet, apatite, zircon, and smoky quartz. Local small, intensely hematitized patches of the pegmatite are slightly radioactive. In 1925-26, Elizabeth Feldspar Mines Limited produced about 6,000 tons of feldspar from an inclined cut 150 by 15 feet.

NAME AND LOCATION

HIGHWAY 69,
West side of highway in southeastern Dill Tp.
Lat. 46.367, Long. 80.850.

REFERENCES

ODM 1975, G.R. 116, p. 132.
ODM Map 2017, Broder, Dill, Neelon, and Dryden
Townships. Coordinates derived from NTS sheet.

REMARKS

Locally abundant allanite blades occur in
pegmatite dikes within gneissic granite of the
Wanup pluton.

NAME AND LOCATION

D. MACKAY,

N $\frac{1}{2}$ lot 1, con. I,

Dill Tp.

Lat. 46.373, Long. 80.821.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 258.

ODM Map 2017, Broder, Dill, Neelon, and Dryden

Townships. Coordinates derived from NTS sheet.

REMARKS

A radioactive occurrence in pegmatitic rock is reported. No other data.

NAME AND LOCATION

STEEL, CUSHING AND LARSON,

Lot 6, con. III,

Dill Tp.

Lat. 46.399, Long. 80.874.

REFERENCES

GSC 1962, Econ. Geol. Ser. No. 16, 2nd ed., p. 258.

ODM Map 2017, Broder, Dill, Neelon, and Dryden

Townships. Coordinates derived from NTS sheet.

REMARKS

A radioactive occurrence in pegmatitic rock
is reported.

NAME AND LOCATION

WANUP FELDSPAR,
Lots 2 and 3, con. II,
Dill Tp.
Lat. 46.386, Long. 80.838.

REFERENCES

ODM 1975, G.R. 116, p. 136.
ODM Map 2271, Burwash.

REMARKS

An irregular pegmatite dike, trending northwest and dipping vertically, intrudes metagabbro. In 1925-28, Wanup Feldspar Mines Limited produced 10,000 tons of feldspar from a pit 60 by 15 by 27 meters. Traces of allanite, pyrochlore, euxenite, and allsworthite are reported.
Cubar Uranium Mines Limited drilled almost 3000 feet during 1954 to test the uranium content of the dike.

Loughrin Township

(NTS 41-I/9, 41-I/10)

NAME AND LOCATION

J. PLEXMAN,
About 20 miles east of Capreol,
Loughrin Tp.
Lat. 46.583, Long. 80.483.

REFERENCES

GSC 1952, Econ. Geol. Ser. No. 16, p. 148.
ODM Map 48m, Ashigami Lake Area. Coordinates given
are for township centre, from the Gazetteer
of Canada.

REMARKS

In 1949, radioactivity was detected for a length of
350 feet near an old feldspar pit on a property
held by J. Plexman.

Scollard Township
(NTS 41 - I / 1)

NAME AND LOCATION

C. W. WILSON,

Lot 3, con. IV,

Scollard Tp.

Lat. 46.084, Long. 80.205.

REFERENCES

ODM 1975, G.R. 116, p. 132.

ODM Map 2271, Burwash.

REMARKS

A pink alkalic feldspar and quartz dike contains rare allanite crystals. In 1956, trenches and ten drill holes were put down by C.W. Wilson.

Servos Township

(NTS 41-I/2, 41-I/7)

NAME AND LOCATION

GRAHAM LAKE MINING,

Lot 6, con. VI,

Servos Tp.

Lat. 46.269, Long. 80.749.

REFERENCES

ODM 1975, G.R. 116, p. 136.

ODM Map 2271, Burwash.

REMARKS

A pegmatite dike trending $N55^{\circ}E$ and dipping $80^{\circ}SE$ intrudes feldspathic gneiss with minor biotite gneiss and calc-silicate gneiss. The dike is intensely hematitized, and is composed mainly of alkalic feldspar, quartz, minor muscovite, biotite, iron-titanium oxide minerals, rare earth minerals, and erratic masses of euxenite-polycrase.

VICTORIA COUNTY

Somerville Township

(NTS 31D/10)

JOREX OCCURRENCE

COMMODITY Uranium, thorium

RADIOACTIVE MINERALS Thorian uraninite

LOCATION Lots 16-18, concession XIII,
Lots 63-72, Front Range,
Somerville Township.
Latitude 44.736, Longitude 78.785.
Map Reference: ODM 52a, Haliburton Area. Coordinates
derived from NTS sheet.

GEOLOGY The property lies within a northeasterly-trending
belt of marble and paragneiss, intruded by granite
and pegmatite. The metasediments dip 25-30° SE.
The southeastern part of the property is underlain
by Paleozoic limestone.
Thorian uraninite is disseminated throughout the
upper part of a massive, white, crystalline limestone
bed which contains brown phlogopite mica. Radioactive
mineralization is generally associated with large crystals
of pink calcite, phlogopite-rich zones, and proximity to
pegmatite intrusions. The marble is overlain by
quartzite and is exposed for 500 feet.

ECONOMIC FEATURES Random chip samples ranged from 0.10 to 1.60 lb/ton
U₃O₈, with a U/Th ratio of 2:1. One drill hole cut
a section grading 0.92 lb/ton U₃O₈ over 15.5 feet.

HISTORY OF DEVELOPMENT 1977: Scintillometer prospecting by R. Newman.
1977-79: Prospecting, trenching, sampling, geological
and scintillometer surveys by Jorex Limited.
1978: 8 diamond drill holes for 1647 feet by
E & B Explorations Limited.

REFERENCES OGS, AFRO, Toronto: Tech. file 63.3587.

VICTORIA COUNTY

MINOR OCCURRENCES

1. [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear]

NAME AND LOCATION

R. N. CLOUGHLEY,
Lot 30(S $\frac{1}{2}$), 31, con. XII,
Dalton Tp.
Lat. 44.786, Long. 79.200.

REFERENCES

Regional Geologist's Files, OMNR, Huntsville:
File Dalton No. 1.
ODM Map 52a, Haliburton Area. Coordinates derived from
NTS sheet.

REMARKS

In 1976, R. Cloughley drilled one hole (153 feet)
intersecting granite and "kyanite". No radioactivity.

NAME AND LOCATION

Con. XII, Lot 25,
Dalton Tp.
Lat. 44.803, Long. 79.178.

REFERENCES

GSC 1915 , Memoir 74, p. 9.
ODM Map 52a, Haliburton Area. Coordinates derived from
NTS sheet.

REMARKS

Johnston in GSC Memoir 74 lists an occurrence of
allanite in a pegmatitic deposit. No other data.

NAME AND LOCATION

TEXAS KIDD,
Lot 5, con. XI,
Laxton Tp.
Lat. 44.722, Long. 78.813.

REFERENCES

OGS, AFRO, Toronto: Laxton Township Drill Report No. 11
(Rio Tinto Mines Limited).
Regional Geologist's Files, OMNR, Huntsville: File
Laxton Township No. 3.
ODM Map 52a, Haliburton Area. Coordinates derived from
NTS sheet.

REMARKS

The country rocks are granite gneiss and mica gneiss.
Pyrite and molybdenite occur in a rusty pyroxenite
vein. In 1916, the Horscroft Mine shipped out 864
pounds of molybdenum from a trench 70 by 20 by 10 feet
deep. D. Ponton and A.J.H. Russel put down a shaft
nearby, 7 by 9 by 50 feet deep. Diamond drilling of
six holes by Rio Tinto Mines Limited in 1955-56
indicated mineralization over a strike length of
200 feet. Three of these holes, totalling 1043 feet,
intersected marble, biotite gneiss, and granite.
Drill core sections included 23 inches assaying 4.56%
MoS₂ and 0.23% U₃O₈, and 36 inches assaying 0.385%
MoS₂ and 0.007% U₃O₈. In 1965 Texas Kidd Mining
Corporation carried out stripping, trenching, and
further sampling.

Quantitative Analysis

100 - 30 = 70

NAME AND LOCATION

H. LUNDBERG,
Lot 17, con. V,
Somerville Tp.
Lat. 44.651, Long. 78.726.

REFERENCES

Northern Miner, July 27, 1978, p. A17 (E & B Explorations
Limited).
OGS, AFRO, Toronto: Tech. file 63.556.
ODM Map 52a, Haliburton Area. Coordinates derived from
NTS sheet.

REMARKS

In 1954, H. Lundberg ran an airborne radiometric
survey. Drilling by E & B Explorations Limited in
1978 yielded an assay of 0.046% U_3O_8 over 4.73 meters.

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Frontenac Counties, Ontario Department of Mines colour map, scale 1 inch
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1943: Haliburton Area, Province of Ontario; Ontario Department of Mines
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- ODM 53b Satterly, J.
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