FINAL REPORT

EAGLE NEST MINES LTD. OPTION

## 31F4W

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## SUMMARY

The Eagle Nest Mines Ltd. property is located in the Hastings Highlands Gneiss Complex which is composed of highly metamorphosed Grenville metasediments which have been intruded and replaced by granitic and syenitic rocks.

Uranium mineralization is found in three main environments:

1) Pegmatite deposits
2) Metasomatic deposits in marble
3) Hydrothermal vein deposits in pyroxenite (biotite - calcite apatite) veins.

Seven main radiometric zones were detected from scintillometer and geological surveys.

## Zone I

A narrow zone, 1900 feet long by 75 feet wide, which was tested by 5 diamond drill holes during 1956 by Eagle Nest Mines. The zone is underlain in part by a pegmatite dike which dips steeply to the south and attains a maximum thickness of two feet. The best assays obtained from uranothorite mineralization in the dike were $0.01 \% \mathrm{U} 30_{8} / 0.35 \% \mathrm{ThO}_{2}$ and $0.02 \% \mathrm{U}_{3} 08 / 0.22 \% \mathrm{Th} \mathrm{T}_{2}$.

Most of the anomaly appears to have been caused by the mass effects of steep outcroppings of pink leucogranite and not from uranium mineralization.

This zone was not drilled in 1975.

## Zone II

This is a small radioactive zone 100 feet long by 20 feet wide which is underlain by marble. A surface sample of marble assayed $0.03 \% \mathrm{U}_{3} 08$. The anomaly lies near the marble-paragneiss contact which strikes for over 2,000 feet and is largely covered by overburden.

The anomalous zone was tested by borehole 51522 which intersected $0.081 \% \mathrm{U} 308$ over 0.8 feet, $0.183 \% \mathrm{U}_{3} 08$ over 0.3 feet, and $0.128 \% \mathrm{U}_{3} 08$ over 0.4 feet. The radioactive zones were confined to the upper 16 feet.

## Zone III \& IV

Zone III and IV can be treated as a single zone of interest.

Summary (Cont'd)
Zone III is a radiometric zone 100 feet long by 50 feet wide which is underlain by hybrid syenite rocks and is located near the syenite-granite contact. Uranium mineralization is found in a pegmatite dike and in pyroxenite veins. Assays of $0.09 \% \mathrm{U}_{3} \mathrm{O}_{8} / 0.23 \% \mathrm{ThO}_{2}$, and $0.02 \% \mathrm{U}_{3} 08 / 0.02 \%$ $\mathrm{ThO}_{2}$ were obtained from the pegmatite. Pyroxenite veins showed less than $0.01 \% \mathrm{U}_{3} 08$.

Zone IV is a roughly triangular shaped area 50-200 feet long by 10-200 feet wide. It is underlain by granite near the syenite-granite contact. Radioactive minerals occur mostly in pyroxenite veins with $0.01 \% \mathrm{U}_{3} 0_{8}$ and $0.01 \% \mathrm{ThO}_{2}$ being the best assay obtained.

Both zone III and zone IV appear to be associated with the contacts of a hybrid syenite body. The contacts of the syenite were not determined accurately due to the poor outcrop exposure. The two zones were crosssectioned with boreholes 51523, 51524, and 51527 to test zone III and the intervening area between zones III and IV. The best assays obtained from the drill core were $0.03 \% \mathrm{U}_{3} \mathrm{O}_{8}$ over 0.6 feet, $0.047 \% \mathrm{U}_{3} 08$ over 0.8 feet, and $0.041 \% \mathrm{U}_{3} 08$ over 0.6 feet from boreholes 51523,24 and 27 respectively.

## Zone V

Zone $V$ is a 200 foot long by 100 feet wide radiometric anomaly which is underlain by granite and paragneiss rocks. The uranium mineralization occurs in cross-cutting pyroxenite (calcite-apatite) veins up to a foot wide. The best assay result obtained from surface sampling was $1.35 \% \mathrm{U}_{3} 08$ and $6.62 \% \mathrm{ThO}_{2}$. The showing was tested by borehole 51526 which intersected $0.014 \% \mathrm{U}_{3} \mathrm{O}_{8}$ over 0.8 feet and $0.021 \% \mathrm{U}_{3} 08$ over 0.7 feet, in a pyroxenite vein and a lense of ruggy sulphides respectively. Numerous stringers of secondary pyrite were encountered in this hole and were analysed for copper, nickel and gold. The best assays obtained for copper, nickel and gold were $0.326 \%, 0.063 \%$ and $0.002 \mathrm{oz} /$ ton respectively.

## Zone VI

Zone VI consists of three separate radiometric anomalies which together occupy an area 400 feet long by 50-300 feet wide. The zone is underlain by leucogranite with scattered occurrences of uranium in pegmatite and pyroxenite veins. Surface sampling of a small pegmatite dike produced assays of $0.02 \%$ $\mathrm{U}_{3} 08$ and $0.06 \% \mathrm{ThO}_{2}$ but the main target was the broad anomalous zone covered by overburden. The zone was cross-sectioned by boreholes 51528 and 51529. Diamond drill core assays showed maximum results of $0.013 \% \mathrm{U}_{3} \mathrm{O}_{8}$ over 2 feet and $0.065 \% \mathrm{U}_{3} 0_{8}$ over 5 feet in boreholes 51528 and 51529 respectively.

Summary (Cont'd)

## Zone VII

Zone VII consists of three separate radiometric zones which together occupy an area 700 feet long by 50 to 100 feet wide. Surface sampling produced assays from $0.01 \%$ to $0.05 \% \mathrm{U}_{3} \mathrm{O}_{8}$ in uranothorite or thorianite mineralization in pegmatite dikes. The anomaly was tested by borehole 51525. Assay results from the drill core were less than $0.002 \%$ U308.

## CONCLUSIONS

Most of the assays from drill core obtained from the six radioactive anomalies tested were less than $0.005 \% \mathrm{U}_{3} \mathrm{O}_{8}$, and only narrow intersections of better grade material were obtained by the drilling. It is therefore concluded that no economically exploitable deposit exists on the Eagle Nest Mines Ltd. property.

## RECOMMENDATIONS

It is recommended that the option be dropped and that no further work be undertaken.

## INTRODUCTION

In April 1975, an option agreement was signed between the Canadian Nickel Company Limited and Eagle Nest Mines Ltd., on their uranium property near Bancroft, Ontario. The property includes 10 patented lots, parts of 6 patented lots and 6 staked claims in Dungannon Township, and 2 patented lots in Faraday Township.

Field work began on May 19, 1975 with the establishment of 42.2 miles of grid for control. Cross lines 100 feet apart were cut over areas of known radioactive occurrences and 400 feet apart over the remainder of the property. Ground surveys consisting of geological mapping, scintillometer and magnetometer surveys were completed using the grid system for control. Seven radioactive zones of interest outlined by the ground surveys were tested by nine short diamond drill holes totalling 1515 feet.

## LOCATION AND ACCESS

The property is located one mile north-east of the village of Bancroft and is readily accessible by numerous secondary roads.

## PROPERTY DESCRIPTION

The "Eagle Nest" property is comprised of 12 patented lots, parts of 6 patented lots, and 6 unpatented claims in Dungannon and Faraday Townships. (See fig. 1). The mining rights for these patented and unpatented claims are owned by Eagle Nest Mines Ltd., excepting lot 30, concession 15, Dungannon Township which is owned by the Township of Dungannon. Field operations during the months of May, to October, 1975 covered the following claims:

Patented Claims: Faraday Twp. Lots 69, 70
Dungennon Twp: Lots 66, 69, 70, 71, 72, 73, 74; Lots 28, 29, 30 Concession XV; N $1 / 2$ Lot 27, Concession XV; N $1 / 2$ Lot 27, Concession XV; $51 / 2$ Lots $26,27,28,29,30$, Concession XVI.

Unpatented Claims: Dungannon Twp.; E0414113, 14, 15, 16, 17 and 18.

## PREVIOUS WORK

## Government

The property was included in the O.D.M. 1 " $=1 / 2$ mi. mapping programs in Dungannon and Faraday Townships in 1955 and 1956 respectively. J. Satterly visited the property briefly in 1.957 and found the occurrences to be small and widely spaced with a high thorium/uranium ratio (15:1). An airborne radiometric response was delineated on the property by the G.S.C. in 1969.

## Private

The property was located in 1956 by Arthur H. Shore the discoverer of the Faraday Uranium Mine. Eagle Nest Mines Ltd., was incorporated in 1956 and large amounts of stripping, rock trenching and 17 diamond drill holes were completed during 1956-57. Six radioactive zones in the north and south sections were discovered. The South section consists of the Mountain, Pinnacle and Weimer zones and the North section consists of the Mica, Gossan and Field zones.

During May, 1958, the property was re-evaluated by D. M. Mackeracher who found the Pinnacle Area of most interest and recommended further work. The Pinnacle area was also visited briefly in 1958 by consultants J. J. Harris, P.Eng. and A. E. Tyson P.Eng. both of Toronto. They collected samples which averaged $2.37 \% \mathrm{U}_{3} 08$ and $2.5 \% \mathrm{U}_{3} 08$ respectively from the Pinnacle area and both recommended further work.

Previous Work (Cont'd)
D. M. Mackeracher re-visited the property in 1967 and under his recommendation more blasting, sampling and the preparation of a rough scintillometer map was undertaken. In 1968, Watts Exploration Services undertook a magnetometer survey over the unpatented ground, presumably for assessment purposes. This survey was not complete. C. F. Ennis reevaluated the south section in 1970 and completed a scintillometer survey over the Mountain, Pinnacle and Weimer Zones. He reported that the scintillometer results were probably dampened by the effects of a one foot snow cover at the time of survey.

## GEOLOGY

## General Geology

The Eagle Nest property is located in the Hastings Highlands Gneiss Complex (D. F. Hewitt, 1956) which is composed of highly metamorphosed Grenville metasediments which have been intruded and replaced by granitic and syenitic rocks.

The geology is shown on the accompanying geology plans at a scale of $l^{\prime \prime}=100$ feet. Picket lines used for the geophysical surveys were used for mapping control.

## Granitic Rocks

Pegmatite
This is a typical coarse grained, pink pegmatite with accessory magnetite, biotite, hornblende, pyroxene and pyrite.

Radioactive pegmatites differ from non-radioactive pegmatites in that they are distinctively blood red in colour, contain coarse inclusions of magnetite and pyroxene, and often have a sheared appearance.

Granite Gneiss
This is a medium grained pink granite gneiss which strikes from 20 to 70 degrees east of north, and shows an average dip of about 30 degrees to the south. Mineralogically it is composed of quartz and silicic feldspars with accessory biotite and magnetite. The foliation is predominantly caused from the orientation of quartz lenticles. Occasional conformable relicts and inclusions were found but overall the rock is fairly uniform in composition.

Geology (Cont'd)

## Granite

The granite unit is a fine to medium grained pink leucogranite that is massive to very weakly foliated. It forms a conformable band about 70 feet thick that dips to the south at 10 to 30 degrees. It is composed mainly of silicic feldspars, granular quartz and minor magnetite up to 10 percent. Accessory biotite and occasional specks of pyrite are also found. Relict bands and inclusions of sedimentary rock (including Lit par Lit gneiss) are common near the upper and lower contacts of the unit.

## Syenitic Rocks

## Syenite

The syenite group includes all plutonic rocks consisting primarily of feldspar, which are of intrusive or metasomatic origin. Two main types of syenite were distinguished on the Eagle Nest property: a leucocratic syenite and a hybrid syenite.

The leucocratic syenite is fine to medium grained, pink in colour and is non foliated. It is devoid of mafic minerals except accessory magnetite, and rarely biotite. Locally it grades to a monzonitic composition.

Hybrid syenite is a medium grained, yellow brown, massive rock with up to 30 percent biotite or pyroxene.

## Metasediments

Marble
The marble unit is a medium to coarse grained, white to blue grey crystalline limestone or dolomite. It is friable on the weathered surface and contains accessory phlogopite, graphite, apatite and diopside. Near its contacts, the marble unit contains salmon pink calcite.

This unit was found to be radioactive in a boulder located on line 15E at $8+20 \mathrm{~N}$.

## Paragneiss

The most common paragneiss found on the grid area is composed primarily of biotite quartz and plagioclase. It is a medium grained, equigranular rock with a pronounced banded or bedded texture. Magnetite, and sometimes garnet, is present as accessories. This unit is often found with conformable or irregular granitic injections and is sometimes present in its granitized or syenitized equivalents.

Geology (Cont'd)
Paragneisses (Cont'd)
Amphibole - (biotite) - plagioclase gneisses are the second most common paragneiss found on the property. These are medium grained, equigranular rocks with moderate to strong foliation.

## Structure

The rocks show a basic east-west (grid) to northeast (grid) strike. Dips average about 20 degrees to the south. There are no very obvious faults or folds, except a possible fault, between $24+50 \mathrm{E} / 10 \mathrm{~N}$ and $20+50 \mathrm{E} / 0$. Field evidence for this is (1) change in direction of the strike of foliation from grid north-east to the west of line 23E, to a more northerly direction to the east of line 23E; (2) an apparent displacement of the granite - paragneiss contact.

## GEOPHYSICS

## Spectrometer Survey

An integral count scintillometer survey was completed over the grid using a McPhar TV-3 spectrometer. Readings were taken at ten foot intervals on lines one hundred feet apart and at twenty foot intervals on lines four hundred feet apart. The sensor was held at waist level for all observations.

The contoured data is show on the accompanying Radiometric Survey plans on a scale of $I^{\prime \prime}=100$ feet. For simplicity in plotting, the field data was divided by 1000. The reduced readings (in c.p.m.) were contoured using a semi-logarithmic contour interval. The contour lines are shown as follows: $100,000 \mathrm{cpm}$ - heavy solid, $25,000 \mathrm{cpm}$ - heavy broken, and $10,000,15,000$ and $50,000 \mathrm{cpm}$ as a thin solid line. Due to the sporadic and patchy nature of the radioactive occurrence, line to line contouring is questionable, especially between lines spaced four hundred feet apart.

Numerous radioactive highs were detected on the grid area but after ground checking, only seven were considered to be important. These seven anomalous zones have been numbered randomly and not according to importance. The plans on which they may be found are as follows:

## Geophysics (Cont'd)

Spectrometer Survey (Cont'd)

| Zone | Sheet |
| ---: | :--- |
| II | $1 \& 2$ |
| III | 4 |
| IV | 4 |
| V | 5 |
| VI | 4 |
| VII | $5 \& 9$ |
|  | $4 \& 10$ |

Each of the above radioactive zones are discussed under Mineralization and Economic Potential.

## Magnetometer Survey

A magnetometer survey was completed over the grid area as an aid to geological mapping to detect possible faults or cross-cutting magnetite rich pegmatites.

Readings were taken at twenty foot intervals using a Sharpe MF-2 fluxgate magnetometer. The contoured data is shown on the accompanying Magnetic Survey plans on a scale of $1^{\prime \prime}=100$ feet. For simplicity in plotting, the last digit of each station's magnetic value has been omitted. Contour intervels are as follows: 200 garmas - light solid line, l,000 gammas heavy solid line, and 5,000 gammas - heavy broken line.

The contoured magnetic data shows a basic east-west (grid) trend and is marked by numerous highs and lows which are caused by a variable magnetite content in the mainiy granitic rocks.

A slight break in the magnetic contours on Sheet 4 between $24+50 \mathrm{E} / 10 \mathrm{~N}$ and $20+50 \mathrm{E} / \mathrm{ON}$ appears to confirm the mapping indications of a fault in this area.

## DIAMOND DRILLING

Nine short holes totalling 1515 feet were drilled by Canico Winkie crews during October 1975. The borehole locations, and statistics are summarized in table l. It should be noted that borehole 51530 was drilled for assessment credits.

## TABLE 1

| B.H.\# | Location | Azimuth | Dip | Overburden | Depth |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 51522 | $8 \mathrm{~N} / 15+10 \mathrm{E}$ | $296{ }^{\circ}$ | -55 ${ }^{\circ}$ | 2.5 | 102 |
| 51523 | $0+70 \mathrm{~N} / 19+70 \mathrm{E}$ | $296{ }^{\circ}$ | $-45^{\circ}$ | 5.0 | 182 |
| 51524 | $0+305 / 20+70 \mathrm{E}$ | $296{ }^{\circ}$ | $-45^{\circ}$ | 5.0 | 205 |
| 51525 | 10+40N/37+00E | $298{ }^{\circ}$ | -45 ${ }^{\circ}$ | 16.0 | 203 |
| 51526 | $1+20 N / 31+00 E$ | $298{ }^{\circ}$ | $-45^{\circ}$ | 2.0 | 192 |
| 51527 | $1+25 \mathrm{~S} / 21+60 \mathrm{E}$ | $296{ }^{\circ}$ | $-45^{\circ}$ | 2.0 | 201 |
| 51528 | $4+10 s / 38+50 E$ | $310^{\circ}$ | $-45^{\circ}$ | 6.1 | 158 |
| 51529 | $5+30 \mathrm{~S} / 39+20 \mathrm{E}$ | $310^{\circ}$ | $-45^{\circ}$ | 2.7 | 171 |
| 51530 | 13+90S/56+90E | $345^{\circ}$ | $-80^{\circ}$ | 0.0 | 101 |
|  | Total 9 Holes |  |  | 1515 feet |  |

## Diamond Drilling (Cont'd)

All of the core was cut in half with a diamond saw. One half of the core was analysed for $U 308$ with a maximum sample length of 10 feet used. The remaining half of the core is in storage at Copper Cliff. In borehole 51526 where pyrite was encountered, additional analyses of copper, nickel and gold were completed over selected sections of core.

The borehole logs, sections, and a list of common abbreviations used are appended. The assay results are discussed under "Mineralization and Economic Potential".

## MINERALIZATION AND ECONOMIC POTENTIAL

Uranium mineralization occurs in the following three environments on the Eagle Nest property:

1) Pegmatite deposits
2) Metasomatic deposits in marble
3) Hydrothermal Vein deposits in pyroxenite (biotite - calcite - apatite) veins.

The radioactive occurrences are too numerous to mention individually, therefore only the major radiometric zones numbered from I to VII on the radiometric plans will be discussed. Assay results from surface grab samples are plotted on the Geology plans.

## Zone I

This is a narrow radiometric zone 1900 feet long with an average width of 75 feet which strikes between $6 \mathrm{~W} / 1 \mathrm{~S}$ and 13E/3S. It corresponds to the "Mountain Zone" which was tested by 5 diamond drill holes during 1956 by Eagle Nest Mines. It is underlain, in part, by a pegmatite dike which outcrops in trenches at $4+50 \mathrm{~W} / 1 \mathrm{~S}$, and between $3+80 \mathrm{E} / 2+205$ and $5 E / 2+30 \mathrm{~S}$.

The pegmatite is blood red in colour, has a sheared appearance and contains coarse inclusions of magnetite and some pyroxene. It appears to dip steeply to the south. The width is variable over short distances, attaining a maximum thickness of two feet. Uranothorite is the major uranium mineral with the best assays obtained from surface sampling being $0.01 \% \mathrm{U}_{3} \mathrm{O}_{8} / 0.35 \%$ $\mathrm{ThO}_{2}$, and $0.02 \% \mathrm{U}_{3} \mathrm{O}_{8} / 0.22 \% \mathrm{ThO}_{2}$.

## Mineralization \& Economic Potential (Cont'd)

## Zone I (Cont'd)

As noted previously the pegmatite outcrops in only two locations. The remainder of the radioactive anomaly delineated by zone I appears to have been caused by the mass effect of potassium radiation emminating from steep outcroppings of pink leucogranite and not from uranium mineralization. The area between $5+50 \mathrm{E}$ and $12+50 \mathrm{E}$, is covered by water. Zone $I$, is therefore, of very limited tonnage potential and since the uranium mineralization sampled contains only sub-economic amounts of uranium, this zone was not drilled.

## Zone II

This is a small radioactive zone 100 feet long by 20 feet wide. It is underlain by marble but it is near the marble-migmatite and paragneiss contact. Encouragement was given by one sample of marble which contained $0.03 \% \mathrm{U}_{3} 08$. The marble-paragneiss contact strikes for over 2,000 feet and is mostly covered by overburden. The showing was tested with borehole 51522. (See table 2).

Uranium mineralization grading $0.081 \%, 0.183 \%$ and $0.128 \% \mathrm{U}_{3} 08$ was detected over core lengths of $0.8,0.3$ and 0.4 feet respectively. The radioactive zones were all confined to the upper 15.6 feet.

Even though ore grades were obtained, they are over narrow widths and contained in too limited an area to have any tonnage potential.

Zone III and Zone IV
Zones III and IV can be treated as a single zone of interest. They are a part of the "Pinnacle Zone" worked during 1956 by Eagle Nest Mines.

Zone III is a 100 foot by 50 foot radiometric anomaly, which is underlain by hybrid syenite rocks and is located near the syenite - granite contact. Unfortunately old blasting has contaminated the area with radioactive fly rock. Radioactive minerals occur in pyroxenite - (calcite - apatite - biotite) veins and a pegmatite dike. The pyroxene veins vary from 3 to 12 inches in thickness, and the longest vein outcrops discontinuously over 30 feet. The pegmatite dike is blood red in colour, with coarse pyroxene inclusions. It outcrops over 22 feet but its true thickness could not be determined. Assays of $0.09 \% \mathrm{U}_{3} 08 / 0.23 \% \mathrm{Th}_{2}$ and $0.02 \% \mathrm{U}_{3} \mathrm{O}_{8} / 0.02 \% \mathrm{Th} \mathrm{T}_{2}$ were obtained from the pegmatite. Assays from the pyroxenite veins showed less than $0.01 \%$ U308.

Mineralization \& Economic Potential (Cont'd)
Zone III \& IV (Cont'd)
Zone IV is a roughly triangular shaped area 50-200 feet long by 10-200 feet wide. It is underlain by granite with the radioactive minerals occurring mainly in pyroxenite veins. The best assay obtained from surface sampling was $0.01 \% \mathrm{U}_{3} 08$ and $0.01 \% \mathrm{ThO}_{2}$. The radioactivity in zone IV is also hard to interpret because of the presence of fly rock contamination from blasting.

As noted, zones III and IV seem to be associated with the contacts of a syenite body which only outcrops sporadically between the two zones. It was decided to test the possibility of a large tonnage, low grade deposit in the area between the two zones by boreholes 51523,51524 and 51527. The assay results are tabulated in table 2.

The best assays obtained from the diamond drill core were $0.03 \% \mathrm{U}_{3} 08$ over 0.6 feet, $0.047 \% U_{3} 08$ over 0.8 feet, and $0.041 \% U_{3} 08$ over 0.6 feet, from boreholes 51523,51524 and 51527 respectively. The radioactivity is over very narrow widths which do not offer large tonnage capabilities.

## Zone V

Zone $V$ is a 200 foot by 100 foot radiometric anomaly which is also part of the "Pinnacle Zone" worked by Eagle Nest Mines. It is underlain by granite and paragneiss rocks. The most important part of the showing was underlain by paragneiss with the uranium mineralization occurring in crosscutting pyroxenite (calcite - apatite) veins up to a foot wide. The best assay obtained in surface sampling was $1.35 \% \mathrm{U}_{3} 08$ and $6.62 \% \mathrm{Th} \mathrm{O}_{2}$ in uranothorite mineralization in a pyroxene - calcite - apatite vein. Interpretation of this showing is also hampered by rubble and fly rock contamination.

The showing was tested by borehole 51526 to a depth of 192 feet. Uranium assays of $0.014 \% \mathrm{U}_{3} 08$ over 0.8 feet and $0.021 \% \mathrm{U}_{3} 08$ over 0.7 feet were obtained from the core in a pyroxenite vein and a lense of vaggy sulphides respectively. Numerous stringers of secondary pyrite were encountered in the core and these were analysed for copper, nickel, gold. The best assays obtained for copper, nickel and gold were $0.326 \%, 0.063 \%$ and $0.002 \mathrm{oz} / \mathrm{ton}$ respectively.

The assays do not indicate any potential for a viable uranium deposit.

## Zone VI

Zone VI is made up of three separate radioactive anomalies which together occupy an area 400 feet long by 50-300 feet wide which corresponds to the "Weimer Zone" worked by Eagle Nest Mines during 1956. It is underlain by

## Mineralization \& Economic Potential (Cont'd)

## Zone VI (Cont'd)

leucogranite with scattered occurrences of uranium mineralization in pegmatite and pyroxenite veins. Surface sampling of a small pegmatite dike produced assays of only $0.02 \% \mathrm{U}_{3} \mathrm{O}_{8}$ and $0.06 \% \mathrm{ThO}_{2}$ but it was felt that since most of the anomalous zone was covered by areas of overburden, it should be cross-sectioned by two diamond drill holes to test the overall potential of the underlying rocks. The anomaly was tested by boreholes 51528 and 51529.

Assay results from the diamond drill core (see table 2) showed maximum results of $0.013 \% \mathrm{U}_{3} \mathrm{O}_{8}$ over 2 feet, and $0.065 \% \mathrm{U}_{3} \mathrm{O}_{8}$ over 5 feet in boreholes 51528 and 51529 respectively. The overall $\mathrm{U}_{3} 0_{8}$ background was very low with only 3 samples from B.H. 51528 and 2 samples from B.H. 51529 showing assays over $0.005 \% \mathrm{U}_{3} 08$.

## Zone VII

Zone VII consists of 3 separate radiometric anomalies which are discontinuous over a total area 700 feet long by 50 to 100 feet wide. The zone corresponds to the "Mica Zone" which was tested by three holes by Eagle Nest Mines during 1956. Assays from surface sampling varied from $0.01 \%$ to $0.05 \% \mathrm{U}_{3} \mathrm{O}_{8}$ from uranothorite or thorianite mineralization in pegmatites. Most of the area was covered with overburden and the known showings were contaminated with fly rock and rubble, so it was decided to drill the zone. Borehole 51525 was completed and did not intersect values greater than $0.002 \% \mathrm{U}_{3} 0_{8}$.
D. Freckelton/nk January 28, 1976.


## TABLE 2



ABBREVIATIONS FOR USE
IN LOGGING BORE HOLES

| ABUNDANT | ABNT |
| :---: | :---: |
| ACCESSORY | ASSR |
| ACID DYKE | ACDK |
| ACICULAR | ACLR |
| ACIDIC | AC |
| ACID HORNFELS | ACHF |
| ACTINOLITE | ACT |
| ACTINOLITIC | ACTC |
| AGGLOMERATE | AGLM |
| ALBITIZATION | ALBZ |
| ALASKITE | ALSK |
| ALTERATION | ALTN |
| ALTERED | ALTD |
| ALTERNATING | ALR |
| AMORPHOUS | AMRP |
| AMOUNT | AMT |
| AMPHIBOLE | AMPB |
| AMPHIBOLITE | AMPH |
| AMPHIBOLITIC | AMPC |
| AMYGDALOIDAL | AMYG |
| AMYGDULE | AMGD |
| ANDESITE | ANDS |
| ANGULAR | AGLR |
| ANHEDRAL | ADRL |
| ANORTHOSITE | AN |
| ANORTHOSITIC | ANIC |
| ANORTHOPHYLLITE | ANPL |
| APHANITIC | APNC |
| APLITE | APL |
| APLITIC | APLC |
| APPEARANCE | APRC |
| APPROXIMATE | APRX |
| ARGILLACEOUS | AGLC |
| ARKOSE | ARK |
| ARSENIDE | ARSD |
| ASBESTOS | AB |
| ATTITUDE | ATID |
| ATTENUATED | ATND |
| AUGEN | AGN |


| BAND | BND |
| :--- | :--- |
| BANDED | BNDD |
| BANDS | BNDS |
| BARREN | BRN |
| BASAL | BSL |
| BASALT | BSLT |
| BASIC DYKE | BCDK |
| BASIC HORNFELS | BAHF |
| BEARING | BRG |
| BECOMING | BCMG |
| BED | BD |
| BEDDING | BDG |
| BIOTITE | BIOT |
| BLACK | BK |
| BLEBS | BLBS |
| BLEBY | BLBY |
| BLOCKY | BCKY |
| BLOTCHY GABBRO | BGAB |
| BORNITE | BN |
| BOULDER | BLDR |
| BOULDERS | BLDS |
| BREAK | BRK |
| BRECCIA | BX |
| BRECCIATED | BXTD |
| BRECCIA MATRIX | BXMX |
| BRECCIA SULPHIDE | BXSU |
| BRITTLE | BRTL |
| BROWN | BRWN |


| CALCAREOUS | CLCR |
| :--- | :--- |
| CALCIC | CLC |
| CALCITE | CALC |
| CARBONATE | CARB |
| CARBONATED | CRBD |
| CARBONATE ROCK | CBRK |
| CARBONATITE | CBNT |
| CASING | CAS |
| CAVITIES | CVTS |
| CEMENTED | CMTD |
| CHALCOPYRITE | CP |
| CHERT | CHRT |
| CHERTY | CHTY |
| CHICKEN -TRACK | CKTK |
| CHILLED | CHID |


| CHLORITE | CHL |
| :---: | :---: |
| CHLORITIC | CHLC |
| CLASTS | CLTS |
| CLEAVAGE | CLVG |
| CLUSTER | CLSR |
| COARSE GRAINED | CG |
| COARSER | CRSR |
| COMPLEX | CPIX |
| COMPOSED | CMPD |
| COMPOSITION | CPSN |
| CONCENTRATION | CCTN |
| CONCHOIDAL | CNDL |
| CONCORDANT | CCRD |
| CONCRETION | CRTN |
| CONDUCTOR | CDCR |
| CONDUCTIVE | CDCV |
| CONFORMABLE | CFMB |
| CONGLOMERATE | CONG |
| CONSTITUENT | CONS |
| CONTACT | CT |
| LOWER CONTACT | LCT |
| UPPER CONTACT | UCT |
| CONTENT | CNTN |
| CONTORTED | CNRD |
| CORE | CORE |
| CRUSHED CORE | CC |
| BROKEN CORE | BC |
| GROUND CORE | GC |
| LOST CORE | LC |
| CORONA | CRN |
| COUNTRY ROCK | CTRK |
| CRINKIES | CNKS |
| CROSS BEDS | XBDS |
| CROSS BEDED | XBDD |
| CROSS BEDDING | XBDG |
| CROSS CUTTING | XCTG |
| CROSSFIBER | CSFB |
| CRYSTAL | XTL |
| CRYSTALS | XTLS |
| CRYSTALLINE | XLLS |
| LIMESTONE |  |
| CUBANITE | CUB |


| DACITE | DCT |
| :--- | :--- |
| DARK | DK |
| DECREASE | DCRS |
| DECREASING | DCRG |
| DEGREE | DEG |
| DENSE | DS |
| DEPOSITION | DPSN |
| DEPOSITIONAL | DPSL |
| DEVELOP | DVLP |
| DEVELOPED | DVPD |
| DIABASE | DIA |
| DIABASIC | DIAC |
| DIORITE | DIO |
| DISPLACEMENT | DPCM |
| DISSEMINATED | DISS |
| DISSOLUTION | DSLT |
| DISTINCT | DSNC |
| DISTINCTLY | DSCL |
| DOLOMITE | DLMT |
| DOWNWARDS | BRDS |
| DOWN HOLE | DH |
| DRILLED | DRLD |
| DUNITE | DNT |


| ELONGATED | ELGD |
| :--- | :--- |
| ENRICHED | ERCD |
| EPIDOTE | EPID |
| EPIDOTIZED | EPDZ |
| EQUIGRANULAR | EQGR |
| ESTIMATE | EST |
| ESTIMATED | ESTD |
| ESTIMATION | ESTN |
| EXTREMELY | EXML |
| EUHEDRAL - SEE |  |
|  |  |
| EXPIANATION |  |
| EXTENSIVE | EXPL |


| FABRIC | FBRC |
| :--- | :--- |
| FAINT | FNT |
| FAULT | FLT |
| FAULTED | FLTD |
| FELDSPAR | FSP |
| FELDSPATHIC | FSPC |
| FELDSPAR | FDPR |
| PORPHYRY |  |
| FELSIC | FLSC |
| FELSITE | FELS |
| FIBROUS | FBRS |
| FILLING | FLLG |
| FINE | FN |
| FINE GRAINED | FG |
| FLECKS | FLCK |
| FOLIATED | FOTD |
| FOLIATION | FOTN |
| FOLLOWING | FLNG |
| FOOTWALL | FW |
| FOOT OF HOLE | FOH |
| FRACTURE | FRCT |
| FRACTURED | FRCD |
| FRACTURES | FRCS |
| FRAGMENT | FRGM |
| FRAGMENTAL | FRML |
| FRAGMENTS | FGMS |
| FREQUENT | FRQN |
| FRIABLE | FRBL |

GABBRO GAB
GABBROIC GBIC
GAIENA GAI
GARNET GAR
GARNETIFEROUS GRFR
GERSDORFFITE GERS
GLASSY GLSY
GNEISS GN
ORTHOGNEISS ORGN
PARAGNEISS PRGN
GNEISSIC GNSC
GRADATIONAL GRNLX
GRADING GRDG
GRAIN G
GRAINS GRNS

GRANITE GR
GRANITE BRECCIA GR BX
GRANITE GNEISS GRGN
GRANITIC GRNC
GRANITIZED GRZD
GRANITIZATION GRZN
GRANODIORITE GRDR
GRANOPHYRE GRP
GRANOPHYRIC GRPR
GRANULAR GRLR
GRANULITE GRNL
GRAPHIC GPHC
GRAPHITE GRPT
GRAPHITIC GRPC
GRAVEL GRVL.
GREEN GRN
GREENSTONE GS
GREY GY
GREYWACKE GWKE

HABIT HBT
HALOS HLOS
HANGINGWALL HW
HEMATITE HEM
HETEROGENEOUS HNGS
HIGHLY HLY
HOMOGENEOUS HMGS
HORNBLENDE HBL
HORNBLENDITE HBLT
HORNFELS HRFL
HOST ROCK HSRK
HYPIDIOMORPAIC HPMC

| IMPURE | IMP | LIGHT | LT |
| :---: | :---: | :---: | :---: |
| IMPURITIES | IMPR | LIGHTER | LGTR |
| INCLUSION | INCL | LOCALLY | LOCL |
| INCLUSIONS | INCS | LOWER | LOWR |
| INCREASED | ICRD | LUNATE | LNT |
| INCREASING | ICRG | LUSTER | LSTR |
| INDISTINCT | IDSC |  |  |
| INTENSE | INTS |  |  |
| INTERCALATED | IRTD |  |  |
| INTERGRANULAR | IRGL |  |  |
| INTERGROWN | IRGR |  |  |
| INTERGROWTH | IRGH |  |  |
| INTERMEDIATE | IRMD |  |  |
| INTERSTITIAL SULPHIDE | INSU |  |  |
| INTRUSIVE | INTR | MAFIC | MFC |
| IRREGULAR | IREG | MAFICS | MFCS |
| IRON FORMATION | IF | MAGNETIC | MTC |
|  |  | MAGNETITE | MT |
|  |  | MARBLE | MRBL |
|  |  | MARGINAL | MGNL |
|  |  | MASSIVE | MASS |
|  |  | MASSIVE SULPHIDE | MASU |
|  |  | MATERIAL | MTRL |
|  |  | MATRIX | MTX |
|  |  | MEDIUM | MED |
|  |  | MEDIUM GRAINED | MG |
| JOINT | JT | MEIANOCRATIC | MLNC |
| JOINTED | JTD | METACRYST | MTCR |
| JOINTING | JTGG | METADIABASE | MTDB |
| JOINTS | JTS | METADIORITE | MTDR |
|  |  | METAGABBRO | MTGB |
|  |  | METAMORPHIC | MTMC |
|  |  | METAMORPHOSED | MMPD |
|  |  | METASEDIMENT | MTSD |
|  |  | MICACEOUS | MICS |
|  |  | MIGMATITE | MGMT |
|  |  | MIGMATITIC | MGMC |
|  |  | MILIERITE | MLT |
|  |  | MINERAL | MIN |
| LAMELLAR | LMLR | MINERALIZED | M |
| LAMINATED | LMND | MINERALIZED STRONGLY | MS |
| LAMINATION | LMNN | MINERALIZED WEAKLY | MW |
| LAMPROPHYRE | LAMP | MINERALIZED VERY | MVW |
| LAPPILLI_TUFF | LPTF | WEAKLY |  |
| LEFT | LFT | MINERALIZED VERY VERY |  |
| LENS | LNS | WEAKLY | MVVW |
| LENSES | LNSS | MINOR | MNOR |
| LEUCOCRATIC | LCR' | MODERATE | MOD |
| LIMONITE | LIM | MODERATELY | MODY |
| LIMESTONE | LS | MONZONITE | MONZ |
| LINEAMENT | LNMT | MOTTLED | MTLD |
| LINEATED | LNTD | MUSKEG | MSKG |
| LINEATION | LNTN | MYLONITE | MYL |


| MYLONITIC | MYLC |
| :--- | :--- |
| MYLONITIZED | MYID |
| NEMATOBLASTIC | NMBC |
| NICCOLITE | NC |
| NODULES | NDLS |
| NUMEROUS | NMRS |
| NUMBERS | NMBS |


| OCCASIONAI | OCC |
| :--- | :--- |
| OFFSET | OFST |
| OLIVINE | OLVN |
| OLIVINE DIABASE | OD |
| OPHITIC | OPTC |
| ORBICULAR | OBCL |
| ORE BODY | OBDY |
| OUTCROP | OC |
| OVERBURDEN | OB |
| OXIDIZATION | OXDN |
| OXIDIZED | OXDD |


| PANDIOMORPHIC | PNMC |
| :--- | :--- |
| PARALLEL | PLL |
| PART | PRT |
| PARTING | PRNG |
| PARTLY | PTLY |
| PEBBLE | PBL |
| PEBBLES | PBLS |
| PEGMATITE | PEG |
| PEGMATITIC | PGTC |
| PENTLANDITE | PN |
| PERCENT | PCNT |
| PERCRYSTALLINE | PRCL |
| PERIDOTITE | PRDT |
| PERMAFROST | PRMF |
| PERPENDICULAR | PPDC |
| PHENOCRYSTS | PHCR |
| PHILOGOPITE | PHLG |
| PHYLLITE | PILT |
| PICROLITE | PCLT |


| PINK | PK |
| :--- | :--- |
| PLAGIOCLASE | PLAG |
| POLYMICTIC | PIMC |
| POROUS | POR |
| PORPHYROBIAST | PRBT |
| PROPHYROBLASTIC | PPBC |
| PORFHYRITIC | PRPC |
| PORPHYRY | PRPH |
| POSSIBLE | PSBL |
| POSSIBLY | PSBLY |
| PREDOMINANT | PRDM |
| PREDOMINANTLY | PRDL |
| PRESENT | PRSN |
| PRIMARY | PRM |
| PROGRESSIVE | PRGS |
| PTYGMATIC | PGMC |
| PTYGMATICALLY | PGMY |
| PYRITE | PY |
| PYRITIC | PYC |
| PYROCLASTIC | PCLC |
| PYROXENE | PRXN |
| PYROXENITE | PXT |
| PYRRHOTITE | PO. |
|  |  |

QUARTZ ..... QTZ
QUARTZITE ..... QTE
QUARTZ DIABASE ..... QDIA
QUARTZ DIORITE ..... QD

| RADIOACTIVE | RDCV |
| :--- | :--- |
| NONRADIOACTIVE | NDCV |
| RADIOMETRIC | RDMC |
| RAGGED | RGD |
| RECRYSTALLIZED | RCZD |
| RELATIVEIY | RLVI |
| RELICT | RICT |
| REMNANT | RMNT |
| REMNANTS | RMNS |
| RHYODACITE | RDCT |
| RHYOLITE | RIY |
| RIGHT | RT |
| ROCK | RK |
| ROCKS | RX |
| ROSETTE | RST |
| ROUND | RND |
| ROUNDED | RNDD |
| RUDACEOUS | RDCS |
| RUSTY | TSTY |

SALIC SLC
SANDSTONE SS
SATURATED SATD
SAUSSURITIZED SRZD
SCATTERED SCTD
SCHIST SCH
SCHISTED SCIDD
SCHISTING SCHG
SCHISTS SCHS
SCHISTOSE SCSS
SCHISTOSITY SCSY
SEDIMENT SED
SEDIMENTARY SDMR
SEDIMENTS SEDS
SECTION SCTN
SEGMENT SGMTT
SEGMENTED SGMD
SEGMENTS SGMS
SEGREGATED SGGD
SEGREGATION SGN
SEGREGATIONS SGNS
SERICITE SRCT

| SERICITIC | SRCC |
| :---: | :---: |
| SERPENTINE | SRPN |
| SERPENINITE | SRPT |
| SERPENTINIZED | SRPD |
| SERPENTINIZED |  |
| PERIDOTITE | SPPD |
| SEVERAL | SVRL |
| SHALE | SHL |
| SHARDS | SRDS |
| SHEAR | SHR |
| SHEARED | SHRD |
| SHEARING | SHRG |
| SILICEOUS | SLCS |
| SILICIFIED | SLFD |
| SILTSTONE | SLTS |
| SILLIMANITE | SLMN |
| SKARN | SKN |
| SKELETAL | SKLL |
| SLATE | SLT |
| SLICKENSIDED | SCKD |
| SLIKESIDES | SCKS |
| SLIGHT | SLI |
| SLIGHTLY | SLLY |
| SLIPS | SLPS |
| SLUDGE | SLDG |
| SMALL | SML |
| SLUMPING | SMPG |
| SOLUTION | SLTN |
| SPECKS | SPK |
| SPECKS | SPKS |
| SPHALERITE | SPH |
| STAINING | SNNG |
| Steatite | STTT |
| STEATIZED | STZD |
| Streak | STK |
| STREAKS | STKS |
| STRINGER | STR |
| STRINGERS | STRS |
| STRONG | STRG |
| STRONGLY | STGL |
| STRUCTURE | STRT |
| SUBHEDRAL | SBRL |
| SULPHIDE | SULP |
| SURROUND | SRND |
| SURROUNDED | SRDD |
| SURROUNDING | SRDG |
| SYENITE | SYNT |
| AUGITE SYENITE | ASYN |
| NEPHELINE SYENITE | NSYN |


| IEXTURE |  |
| :--- | :--- |
| THROUGHOUT | TXTR |
| TRACE | TRGT |
| TRACHYTE | TRCT |
| TRANSITION | TRNS |
| TREMOLITE | TREM |
| TREMOLITIC | TRMC |
| TOURMALINE | TMLN |
| TOURQUOIS | TRQS |
| TUFFACEOUS | TFCS |
| TUFFITE | TUFI |
| UFIEDRAI | UDRI |
| ULTRABASIC | UB |
| ULTRAMAFIC | UM |
| UNDULATING | UDLG |
| UPWARDS | UPRD |
| UPHOLE | UH |

VEINLETS
vEINING
VERY COARSE
GRAINED
VESICUIAR
violarite
,
VITREOUS
VOLCANIC
VTRS
VOLC

YEAK WK
WEAKLY TKKLY
WHITE WHT

YFLLOW
YLW




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