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Preface

This Open File is one of a series on detrital and diagenetic mineralogy of the Lower Cretaceous rocks of the Scotian basin resulting from a collaborative program initiated in 2001 between Saint Mary's University and the Geological Survey of Canada. This study was funded by the Nova Scotia Offshore Energy Research Association in order to promote further exploration in the Scotian Basin. The report provides the results of a study of the composition, texture and geochronology of detrital monazite in Lower Cretaceous rocks of the Scotian Basin. It contributes to a growing database on the provenance of the deltaic sediments in the Scotian Basin that host most of the gas reserves. An understanding of provenance is an exploration tool for major sandstone distribution and detrital minerals play an important role in influencing diagenesis and hence reservoir quality.

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ABSTRACT

Geochronology of detrital monazite is a valuable tool for interpreting the detrital petrology of sedimentary basins. Because of its hardness, monazite can be transported long distances by rivers, but because it is susceptible to dissolution under acidic conditions, second cycle monazite is rarely abundant. Monazite geochronology has been applied to sandstones from the latest Jurassic and Lower Cretaceous Missisauga and Logan Canyon formations of the Scotian basin, in order to assess sediment sources and dispersal pathways for the deltaic sandstones. These sandstones are the principal reservoir rocks for oil and gas in the Scotian Basin. A total of 324 detrital monazite grains were identified from Lower Cretaceous sandstones from ten offshore fields or individual wells, providing an east to west transect of the Scotian Basin. Monazite grains were characterized by secondary electron or backscattered electron images, showing external morphology, zoning and inclusions, together with WDS X-ray maps and variations in major element chemistry (REE, Th, Y). From these grains, 688 age determinations with 1σ errors < ±20% were obtained by electron microprobe analysis. Based on all these criteria, about 30 distinct types of monazite grain are recognized, that show distinctive variations in their geographic and stratigraphic distribution and abundance. The one analysed sample from the Naskapi N-30 well appears to have had a discrete river source, draining only the Meguma Terrane. On the one hand, grains with a 440-550 Ma age mode in the central Scotian Basin closely resemble the dominant grain type in the Chaswood Formation in Nova Scotia, suggesting supply from the inboard Appalachian terranes of New Brunswick. On the other hand, the central Scotian Basin also includes common grains with Proterozoic ages that are absent from the Chaswood Formation, suggesting important supply from a river draining through Cabot Strait from western Newfoundland, or perhaps with minor supply from Labrador and the North Shore of Quebec. The Lower Missisauga Formation at Thebaud and Venture has significantly more Neoproterozoic monazites compared with the Upper Missisauga Formation and Cree Member throughout the central Scotian Basin. In the eastern Scotian Basin, Proterozoic grains predominate, but most monazite types are also recognised in the central Scotian Basin. This distribution suggests different dominant river supply to Peskowesk compared with the central Scotian Basin, probably draining the eastern side of the Long Range and the Appalachian rocks of western Newfoundland.

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1. INTRODUCTION

1.1 Study area and goals

Current models for the provenance of the Lower Cretaceous rocks of the offshore Scotian Basin are based on whole-rock geochemistry of both sandstones and mudstones (Pe-Piper et al., 2007; Pe-Piper et al., 2008), detrital minerals and lithic clast petrology (Pe-Piper et al. 2004b; Pe-Piper et al. 2006) and SEM-CL studies of detrital zircon (Triantafyllidis et al., 2008). These studies showed that at least three geographic groups of sandstones are distinguished in the Scotian Basin and suggest that the Lower Cretaceous sediments were deposited by at least two steep rivers draining uplifted areas of Atlantic Canada. The purpose of the present study is to test these models of provenance and sediment dispersion using detrital monazite.

The study of provenance of the Lower Cretaceous deltaic sandstones that form reservoir rocks for gas in the Scotian Basin is important for several reasons. Recognition of the depositional style and distribution of sandstone is an exploration tool. Detrital petrology is an important influence on diagenesis and hence reservoir quality in the basin.

The first study on the use of detrital monazite as a provenance tool in the Scotian Basin was carried out by Pe-Piper and MacKay (2006). Their work was focused on the onshore Nova Scotia Lower Cretaceous sandstones of the Chaswood Formation, yet some preliminary results were also collected for the offshore Lower Cretaceous sandstones, from the Logan Canyon (in Alma K-85, Naskapi N-30) and Missisauga (in Alma K-85, Peskowesk A-99) formations, as well as the Upper Jurassic Mic Mac Formation (in Peskowesk A-99). The results of this study confirm the aforementioned hypothesis that the Lower Cretaceous sediments were deposited by at least two rivers.

1.2. Monazite as a provenance tool

Monazite is a REE-element phosphate with a hardness of 5–5.5. Monazite forms in granites, metamorphic rocks, and during hydrothermal alteration, at temperatures above 300°C (Franz et al. 1996). Individual grains can be dated by the U-Pb method because monazite contains Th and U but insignificant common Pb and chemical analysis can be carried out using an electron microprobe. In contrast to detrital zircon, with a hardness of 7.5 and a crystallization temperature of about 800°C, monazite is less resistant to polycyclic reworking and records lower temperature events in the source area than does zircon (Evans et al. 2001). Monazite has been observed to be susceptible to chemical leaching in permeable facies of the Cretaceous Chaswood Formation (Pe-Piper and MacKay, 2006), suggesting that prolonged chemical weathering will also destroy monazite. Monazite is thus well suited for identifying first-cycle supply of detritus to a sedimentary basin, although some monazite grains may be polycyclic in origin.

Monazite has the nominal composition [LREE]PO_4 and the LREEs (La+Ce+Nd) generally comprise approximately 75% of the total cation proportions (exclusive of P) of most metamorphic monazites (Spear and Pyle, 2002). Lanthanum, Ce and Nd give an average of around 0.2, 0.43 and 0.17 cations/ 4 oxygens, respectively. Most monazites also contain additional Th, U, Si, Ca, HREEs, Y and Pb. Yttrium concentrations up to 0.1 cations/ 4 oxygens have been reported (e.g Heinrich et al., 1997), although HREE concentrations are generally less than 0.2 cations/ 4 oxygens. Uranium concentrations range up to approximately 0.01 cations/ 4 oxygens, but most are less than 0.005 cations/ 4 oxygens. Lead is present in metamorphic monazite, but it is believed that nearly all Pb is radiogenic (e.g. Parrish, 1990). The amount of Pb mainly depends on the initial concentrations of Th and U and the age of the sample.

In nature, monazite is generally a solid solution among three end-members. These end-member are pure REE monazite ([LREE]PO_4), brabantite (Ca(Th,U)PO_4), and huttonite ((Th,U)SiO_4). Substitutions between the end-members account for most chemical variations in natural monazite (Townsend et al., 2000). Trivalent Y substitutes for REEs simply: Y=REE. Thorium and U both have charges of +4 and require coupling to achieve charge balance. Two paired substitutions have been proposed: (1) Th or U+Si = LREE (huttonite) with Si replacing P in the tetrahedral site and (2) Th or U+Ca = 2LREE (brabantite) with Ca replacing an additional REE in the 8-fold site. Furthermore, Burt (1989) proposed the following coupled substitutions for Th: Th + Si = REE + P and Th + 2Si = Ca + 2P.

High concentrations of Th and U coupled with low common Pb make monazite an ideal geochronometer. ThO_2 contents vary from < 1 to 30 wt.% (Overstreet, 1967), although 4-12 wt.% is a more common range (Deer et al., 1992; Stern and Sanborn, 1998). Th-U-Pb geochronology by Electron Probe Microanalysis (EPMA) is essentially a trace-element technique, involving the precise, accurate analysis of Th, U, Pb and Y, any or all of which may be present at levels considerably lower than 1000 ppm (Jercinovic and Williams, 2005). The use of monazite as a geochronometer is based on the following assumptions (Montel et al., 1996):

1. No common Pb is initially present or the amount is below detection limits (Parrish, 1990).
2. The mineral is a closed chemical system, i.e. no partial gain or loss of U, Th or Pb has occurred.
3. The Pb content of the monazite is a product of radioactive decay of Th and U. Knowing the half-life of U and Th, and through a series of complex calculations, the age of the analyzing spot is determined.

Monazite can be the most altered accessory mineral in sedimentary sequences (e.g. Mathieu et al., 2001), as well as in igneous rocks (e.g. Poitrasson et al., 2000). The alteration of monazite can be very variable and Poitrasson et al. (2000) have identified five mechanisms of monazite alteration in sericitized, chloritized and greisenized granites. Each of these mechanisms causes the depletion and enrichment of different elements including U and Th, starting from cation substitution toward the end-members brabantite and huttonite to the dissolution and reprecipitation of hydrothermal monazite. So, it is not surprising to see some erratic variations in Th and U in some monazite grains. It is therefore important to carefully choose monazite grains to be used for dating, since the possibility of unreliable geochronological results is increased by alteration..

Some monazites have distinctive zoning patterns, which inhance the use of this mineral in provenance studies. Poorly defined and low-contrast zoning is relatively common in monazites from low to medium metamorphic grade rocks and generally consists of small irregular patches. Patchy zoning is also common in leucosomes and granites. Well-defined zoning is characteristic of monazites coming from high grade metamorphic rocks and from some granites. Zoning patterns in monazite have been categorized by Zhu and O'Nions (1999a). The most common type is the concentric zoning that may be:

- Simple (core surrounded by a simple rim).
- More complex (core of variable shape enveloped by two or more circular rims that may be discontinuous).

The number of rims varies, but monazite commonly shows one or two rims, and locally three. Cores of zoned monazite exhibit different shapes: euhedral, rounded or with embayments along the grain boundary.

2. GEOLOGICAL SETTING

The Scotian Basin (Fig. 1) developed on the passive continental margin offshore Nova Scotia that rifted in the Late Triassic (McIver, 1972; Given, 1977; Wade and McLean, 1990). During rifting, several sub-basins developed in the Scotian margin, notably the Laurentian sub-basin including the Orpheus graben, the Abenaki sub-basin, and the Sable sub-basin (Wade and McLean, 1990).

The Appalachian orogen forms the basement to the Scotian Basin and on land is exposed in a 500 km wide belt parallel to the length of the basin. It comprises a series of distinct terranes that were deformed and assembled through the latest Neoproterozoic and Paleozoic. The Meguma Terrane, consisting principally of metasedimentary rocks and peraluminous granites, is the most outboard terrane exposed in southern Nova Scotia and on the Scotian Shelf (Fig. 1). Successive inboard terranes are termed Avalon, Gander, Dunnage and Humber, comprising a variety of metasedimentary, metavolcanic and plutonic rocks. The Humber terrane was thrust over the cratonic margin of the Canadian Shield. The medium to high grade metamorphic and plutonic rocks of this part of the Shield belong to the Mesoproterozoic Grenville Province. The Gulf of St Lawrence and adjacent land areas host the thick Maritimes Basin of late Devonian to early Permian age. Most of the contacts between major rock types in the Appalachians are steep, and apatite fission track data suggest no more than 1 km of denudation since the Jurassic (Hendricks et al., 1993; Grist and Zentilli, 2003), suggesting that the modern distribution of rock types (Fig. 1) is a reasonable proxy for Early Cretaceous sources of detrital sediment. The principal difference is that Carboniferous cover rocks may have been more widespread in the Early Carboniferous.

The Lower Cretaceous sedimentary rocks of the offshore Scotian basin comprise fluvial, deltaic and shelf sediments of the Missisauga and Logan Canyon formations (Wade and McLean, 1990) that host most of the gas and oil discoveries of the Scotian basin. The equivalent fluvial rocks on land are known as the Chaswood Formation (Stea and Pullan, 2001). The sandstone-rich Missisauga Formation is of Berriasian to Barremian age (Williams et al., 1990) and passes seaward into the shales of the Verrill Canyon Formation. The Missisauga Formation is divided into three members: Upper, Middle and Lower. The overlying Aptian to Cenomanian Logan Canyon Formation is also predominantly deltaic, comprising two shale units (Naskapi and

Sable members), separated by two sandier units (Cree and Marmora members).

Previous paleogeographic reconstructions (e.g. Jansa and Wade, 1975) have shown a major "Sable delta" on the east Scotian Shelf, supplied by a river flowing through the Cabot Strait. The general deltaic character of the deposits has been confirmed by many subsequent studies (e.g. Drummond, 1992; Cummings et al., 2006), yet detrital petrology (Pe-Piper and MacKay, 2006) suggests that the Lower Cretaceous was deposited by a series of small steep rivers draining reactivated upland areas of Atlantic Canada (Pe-Piper et al., 2007).

3. PURPOSE OF THE STUDY

Detailed studies of detrital petrology, whole-rock geochemistry and detrital zircon mineralogy of the offshore Missisauga and Logan Canyon Formations were carried out in order to define the distribution of rivers supplying sediment to the continental margin in the Early Cretaceous and to identify the provenance of the detrital sediment.

Monazite is a detrital heavy mineral present in the Missisauga and Logan Canyon Formations. It is an important accessory mineral of intermediate- to high grade metapelites and peraluminous granitoid rocks. The use of monazite as a geochronometer has also increased significantly recently due to the advancement of the use of electron microprobe (EMP) chemical dating of monazite.

In this project, detrital monazite grains from the Scotian basin were used as provenance indicators to help provide evidence for or against the paleogeographic models developed by Pe-Piper and MacKay (2006), Pe-Piper et al. (2007), Pe-Piper et al. (2008) and Triantafyllidis et al. (2008).

4. SAMPLE LOCATIONS

Sandstone samples of the Scotian basin have been taken from cores of representative wells. The sampled wells are: Alma K-85, North Triumph G-43, Thebaud C-74, Thebaud 3, Thebaud I-93, Glenelg E-58, Glenelg E-58A, Naskapi N-30, Venture 1, 3 and 4, Peskowesk A-99, and Tantallon M-41 (Figs. 1, 2; Table 1). These wells provide a W-E section along the axis of the basin. Studied samples were collected from both the Logan Canyon and Missisauga Formations. Following completion of the main work, a few samples from the MicMac Formation in the Louisbourg J-47 well and the Logan Canyon Formation in the Hermine E-94 well were analyzed. These are included in only some of the data tables and figures.

In this report, the Western Scotian Basin refers to the Naskapi N-30 well, the Central Scotian Basin refers to the Alma K-85, Thebaud C-74, 3 and I-93, North Triumph G-43, Glenelg E58 and E58A, and Venture 1, 3 and 4 wells, whereas the Eastern Scotian Basin includes the Peskowesk A-99, Tantallon M-41, Louisbourg J-47 and Hermine E-94 wells.

5. ANALYTICAL METHODS

5.1. Introduction

Parrish (1990) was the first paper to draw attention to the use of monazite as a geochronometer . Since this paper, a number of other papers appeared in the literature, notably Suzuki and Adachi (1991), Suzuki et al. (1991), Montel et al. (1996), Williams et al. (1999), Zhu and O'Nions (1999a), Scherrer et al. (2000), Jercinovic and Williams (2002; 2005), Pyle et al. (2005), Crowley et al. (2008) and Spear et al. (2009).

5.2. Operating conditions

Chemical age dating of monazites was carried out at the Regional Electron Microprobe Centre, Dalhousie University, using a JEOL 8200 electron microprobe equipped with 5 wavelength spectrometers and a 131eV Noran Energy Dispersive Detector. For major elemental analysis, the probe was operated with an acceleration voltage of 15kV and probe current of

20nA. A counting time of 20 seconds on the peaks was used with a background time of 10 seconds. P10 gas was used for the flow counters. For trace element analysis, however, the probe was operated at 15kV and 200nA probe current. Peak counting time was 360 seconds and background counting time 180 seconds. The X-ray lines and (proportional counters) used for the trace analysis were PbMa1(Xe), YLa1(flow), ThMa1(flow) and UMb1(Xe). The energy Dispersive Detector was used in the initial locating and identification of the monazite grains.

5.3. Standards

The following standards were used: ThO_2 (crystal PETJ) for Th; UO_2 (crystal PETJ) for U; $LaPO_4$ (crystal PETJ) for La; $CePO_4$ (crystal PETJ) for Ce; Fluor-apatite (crystal PETJ) for P; sanidine (crystal TAP) for Si; kaersutite (crystal PETJ) for Ca; YAG (crystal TAP) for Y; REE2-Drake (crystal LIFH) for Nd and Sm; REE1 (crystal LIFH) for Gd; REE4 (crystal LIFH) for Dy; REE3 (crystal LIFH) for Pr; crocoite (crystal PETH) for Pb.

5.4. Sample preparation

All the studied monazite grains come from polished thin sections either of sandstones or of heavy mineral separates. For the separates from core samples, the original sandstone sample was lightly disaggregated using only the finger tips and sieved. The heavy minerals either of the 63 μm to 250 μm or of the 63 μm to 177 μm fraction were separated using sodium polytungstate (density 2.90) and were then made into polished thin sections.

All thin sections and heavy mineral separate mounts used in this study were polished using loose diamond powders on cloth-covered aluminum laps, eliminating the chance of Pb contamination and therefore possible errors during the calculation of the age. Prior to trace element analysis, all samples were double carbon coated in order to increase the thickness of the carbon on the slide and reduce the effect of the electron beam burning through the coating.

5.5. Procedure for major and trace element analysis

1. Originally, the monazite grains were located by optical microscopy and their position was marked by pen on the thin section. Yet, because of the similar optical properties of monazite and zircon, it is relatively difficult to distinguish between these two minerals.

A more reliable way to identify monazite grains in sandstone polished thin section or heavy mineral separate polished mount is through the use of the back-scattered properties of the mineral. The sample was placed in the vacuum chamber of a Scanning Electron Microscope (SEM) and bombarded by a high-tension electron beam. Two major types of radiation are omitted by the sample: low energy secondary electrons (SE) that give information about the surface of the sample, and high energy back-scattered electrons (BSE) that are related to the composition of the mineral. The second type of radiation is used for the identification of the monazite grains. A particular characteristic of BSE radiation is that the larger the atomic weight of the elements in a mineral, the brighter the image of that specific mineral is. For instance, in sandstone samples, quartz generates relatively dark BSE images, whereas monazite is one of the brightest minerals. Moreover, through this procedure monazite is easily distinguished from zircon that has lower brightness in back-scattered images.

The second stage of the procedure involves the use of the Energy Dispersive Detector (EDS) of the SEM to verify that the mineral is actually a monazite. The spectrum given from the EDS is compared to a spectrum of a typical monazite and the confirmation is made.

2. A few clean monazite grains were analyzed for major and minor elements using the Wavelength Dispersive Detectors. With each batch of analyses a monazite standard (MINM25-53) was run as a control. The average weight percents of the major and minor element analysis are then inserted as fixed weights into the correction program for trace element analysis. These data are required for ZAF correction (corrections for the matrix effect considering atomic number (Z), absorption (A), and characteristic fluorescence (F)) in the trace analysis program. To apply an appropriate ZAF correction, the average major element composition must be calculated for every grain and chemical domain. These values were transformed into element wt % and used as fixed values for mass absorption analysis. The analysis of Pb, U, Th and Y was done simultaneously, so the parameters are the same for each element measured within a single analysis.

3. Prior to trace element analysis, a wavelength scan on Pb, U, Th and Y was performed on the monazite to determine interference free positions to place the backgrounds for these elements.

4. The proper backgrounds were inserted into the trace element analysis program and after careful calibration on the standards, several random points were analysed on each monazite grain, depending on the size of the grain

.

5. Another important consideration in EMP analysis of monazite is the X-ray interference problem. There are many overlaps between lines, although only three require correction. These are Y and Th lines interfering with Pb, and a Th line interfering with U. The effect of overlap is an increase in the measured signal. In the case of the monazite, analyses were done at the Pb-Ma line position on ThO_2 (Th standard) and YAG (Y standard), both Pb-free standards, as well as the U-Mb line position on the ThO_2 (U-free) standard. Because these standards are Pb-free and U-free, there should be no signal at the Pb and U peak positions. Consequently, all counts measured at that position are interpreted as interference. During the past few years of application of the chemical dating method of monazites at the Dalhousie Microprobe Lab, software was developed to calculate the correction factors for the interference of Y and Th on Pb-Ma and Th on U-Mb (Appendix I, Warren C., personal communication). Application of this software, prior to analysis, results in corrected U and Pb values.

6. The trace element data (Pb corrected, U corrected, Th and Y) were then imported into a spread sheet program (Excel) as ppm and the ages were determined. For age calculations, a program developed at the University of Massachusetts was used (Williams and Jercinovich, pers. comm. 2003; Jercinovich and Williams 2005).

7. As a check on precision, and as an instrument control, a monazite sample provided by the Geological Survey of Canada (GSC-8153 monazite; Williams et al, 2006), was analysed prior to each trace element analysis batch run.

5.6. Procedure for X-ray mapping

1. Prior to X-ray mapping, the same standards used for the trace element analyses were run in order to calibrate the machine.
2. The selected monazite grains were relocated and the dimensions (X and Y pixels) of the grid were carefully adjusted, in order to cover the surface of the grain.

3. The necessary dwell time was chosen in order to have duration of approximately 1 hour for each grain.

5.7. Precision and accuracy – error quantification

Precision and accuracy is difficult to determine with samples of unknown ages. However, the GSC-8153 monazite control was analysed prior to each trace element analysis batch run. Thirteen chemical age dates from this monazite yielded an average age of 506 Ma with a standard deviation of 17.13 Ma (3.39%) and a 1 sigma (1σ) standard error of 37.9 Ma (7.51%) (Table 2).

Quantification of errors in monazite chemical analysis is based on counting statistics. This arises from both the nature of X-rays and the functioning of an electron microprobe. The error calculation procedure for this study was based on the work of Pyle et al. (2005) and Gagné (2004) (Appendix II), using the Excel workbook "Error_calculation_formulas.xls". The calculated errors for the trace element analysis are given in Table 3. Errors are principally due to analysis of U and Pb and if these elements are present in very low concentrations, the errors are much higher than those for the GSC-8153 control monazite, regardless of the calculated age.

6. RESULTS

6.1. Trace element data - Geochronology results by analysis

A total of 955 trace element analyses were performed on 309 grains identified in sandstone samples from the studied wells in the main phase of this study (Table 3). At a later date, an additional 13 monazite grains were analysed from the Louisbourg J-47 well and two grains from the Hermine E-94 well. After propagation of errors, analyses with an error larger than 20% were excluded. In addition, a few grains showing signs of dissolution yielded unreasonably old dates, were also left out of our dataset, implying that some other dates within the range found in other grains might also be incorrect. The final dataset used for geochronology studies included 646 trace element analyses. Probability plots combined with histograms were produced for each well and formation (and member when sufficient data was available) using the "Isoplot" add-in for "Excel" (http://www.bgc.org/isoplot_etz/) (Figs. 3 and 4).

6.1.1. Naskapi N-30 well

Samples from the Hauterivian–Barremian Upper Member of the Missisauga Formation (Fig. 2) yielded 52 trace element analyses from 13 monazite grains. Based on the cumulative probability plot (Fig. 3A), two populations are recognized in the Naskapi N-30 well. The major population clusters around 320 Ma (Carboniferous), whereas the second one is smaller and gives ages of around 400 Ma (Devonian) (resolved more clearly in Fig. 4A).

6.1.2. Alma K-85 well

Samples from the Albian Cree Member of the Logan Canyon Formation (Fig. 2) provided 27 trace element analyses from 18 monazite grains. Based on the cumulative probability plot (Fig. 3B), the major population in the Alma K-85 well gives Devonian ages (~ 400 Ma). 5 smaller populations are recognized in the Alma K-85 well: the first at 520 Ma (Cambrian), the second at 1050 Ma (Mesoproterozoic), the third at 1350 Ma (Mesoproterozoic), the fourth at 250 Ma (Permian-Triassic), and finally the smallest population clusters at 1850 Ma (Paleoproterozoic).

6.1.3. Thebaud Field

Samples from the Tithonian Lower member of the Missisauga Formation (Fig. 2) resulted in 128 trace element analyses from 30 monazite grains. Based on the cumulative probability plot (Fig. 3C), there are two major populations in the Thebaud Field. The first one gives Silurian ages (~ 430 Ma) and the second one Devonian ages (~ 390 Ma). Moreover, three smaller populations are recognized. The first one clusters around 580 Ma (Neoproterozoic), the second one at around 1040 Ma (Mesoproterozoic) and the last one at around 1850 Ma (Paleoproterozoic).

6.1.4. Glenelg E-58 well

Samples from the Upper Member of the Missisauga Formation (Fig. 2) yielded 135 trace element analyses from 49 monazite grains. Eight populations are recognized; the major one clusters at approximately 400 Ma (Devonian) (Fig. 3E). The second most important population clusters at 1040 Ma (Mesoproterozoic), and the third at 500 Ma (Cambrian). The five smaller populations cluster at 1680 Ma (Paleoproterozoic), 1160 Ma (Mesoproterozoic), 2680 Ma (Neoarchean), 650 Ma (Neoproterozoic) and 200 Ma (Triassic-Jurassic).

6.1.5. North Triumph G-43 well

Samples from the Cree Member of the Logan Canyon Formation (Fig. 2) provided 43 trace element analyses from 15 monazite grains. A further 43 trace element analyses were made from 16 grains from the Upper Member of the Missisauga Formation. Based on the cumulative probability plot (Fig. 3F), six populations are recognized for the Cree Member of the Logan Canyon Formation. The major one clusters at approximately 330 Ma (Carboniferous), and the five smaller ones at 400 Ma (Devonian), 1640 Ma (Paleoproterozoic), 1860 Ma (Paleoproterozoic), 1040 Ma (Mesoproterozoic) and one analysis 80 Ma (Cretaceous).

For the Missisauga Formation, six populations are recognized and the major one clusters at approximately 380 Ma (Devonian) (Fig. 3G). The second most important population clusters at 450 Ma (Ordovician). The other 4 populations cluster at 520 Ma (Cambrian), 960 Ma (Neoproterozoic), 1520 Ma (Mesoproterozoic) and 250 Ma (Permian-Triassic).

6.1.6. Venture Field

Samples from the Lower Member of the Missisauga Formation resulted in 116 trace element analyses from 26 monazite grains. Based on the cumulative probability plot (Fig. 3H), the major population in the Venture 1 well gives Devonian ages (~ 410 Ma). Five smaller populations are also recognized: the first at 530 Ma (Cambrian), the second at around 1780 Ma (Paleoproterozoic), the third at around 1020 Ma (Mesoproterozoic), the fourth at around 800 Ma (Neoproterozoic), and the fifth with only one analysis at 130 Ma (Cretaceous) (younger than the depositional age).

6.1.7. Peskowesk A-99 well

Samples from the Cree Member of the Logan Canyon Formation resulted in 87 trace element analyses from 23 monazite grains. Based on the cumulative probability plot (Fig. 3I), three populations are recognized, and the first two are the most important. The first population in the Peskowesk A-99 well gives Mesoproterozoic ages (~ 1000 Ma) and the second Paleoproterozoic (~ 1800 Ma). The third and smallest population clusters at approximately 350 Ma (basal Carboniferous).

6.1.8. Tantallon M-41 well

Samples from the Upper and Middle Members of the Missisauga Formation contained only 4 monazite grains resulting in 20 trace element analyses (Fig. 3J and 3K). The major population clusters at 440 Ma (Silurian) approximately. Moreover, two more populations are identified from the Upper Member, clustering at around 320 Ma (Carboniferous) and 400 Ma (Devonian).

6.1.9 Louisbourg J-47 and Hermine E-94 wells

Twelve monazite grains were analysed from the MicMac Formation in Louisbourg J-47, together with one grain from the basal Missisauga Formation, yielding a total of 32 spot ages with precision better than ±20 % (Table 4). In the subsequent text, this data set is referred to the Mic Mac Formation. Ages fall in three clusters around 420 Ma (Silurian), 560 Ma (latest Neoproterozoic) and ~1100 Ga (Mesoproterozoic). Only two monazite grains were found from the Logan Canyon Formation in Hermine E-94, yielding a mean grain age of 403 Ma (early Devonian) and 613 Ma (latest Neoproterozoic) based on 10 spot analyses.

6.2. Trace element data - Geochronology results by grains

The average age of several spot analyses in individual monazite grains was determined. All spot dates with 1σ errors better than ± 20% were accepted and the mean age determined, omitting ages that appeared to be outliers (Table 4). The outliers may represent inherited cores of monazite, or rims or patches that experienced late hydrothermal resetting or imprecise ages due to leaching of U. The mean grain ages are shown in histograms binned at 50 Ma (Fig. 5). Note that 26% of the grains have only a single age determination better than ± 20% and only 58% have three or more age determinations used to estimate the mean. No robust error analysis is possible, so that probabilities are not displayed.

6.3. Major element chemistry

A total of 380 major element analyses were performed on 323 grains identified in sandstone samples from the studied wells (Table 5), and their atomic formulae calculated on the basis of 4 oxygens are given in Table 6.

6.3.1 Variation in REE abundance: classification

C1-chondrite normalized REE patterns were plotted for each well. Based on their morphology, the REE patterns were separated in 6 different types. The distinction of the REE patterns was based on Pe-Piper and Mackay (2006), with two more types distinguished here (Fig. 6). These types are:

- Type A: steady and steep fractionation from the LREE to the HREE.
- Type B: similar to type A, but has slightly higher HREE contents.
- Type C: relatively enriched in the middle REE, Nd and Sm. These patterns are typical for some monazites deriving from igneous rocks (Schandl and Gorton, 2004).
- Type D: shows almost no fractionation of the LREE, but strong fractionation of the HREE. These patterns are typical for some monazites deriving from igneous rocks (Förster, 1998).
- Type E: less strongly fractionated from LREE to HREE than any other type.
- Type F: shows less strong fractionation towards the HREEs, but has low Sm content

The type of REE pattern in each individual grain is presented in Table 7 and example patterns by well in Figure 7. Type of REE pattern is identified on an age histogram for each well in Figure 8. The purpose of this classification is to provide more criteria than simply age determinations for identifying the sources of the detrital monazite grains. At the time of writing, there is a summary of comparative data from potential granite sources in New Brunswick (Hall and Lentz, 2003), but no systematic information for elsewhere in the Canadian Appalachians. It is hoped that these results will stimulate the publication of similar data for monazites from crystalline basement exposed on land.

6.3.2 Geographic variation in REE types

In Naskapi N-30, 45 major element analyses were performed on 33 monazite grains from the Upper Member of the Missisauga Formation. For the Naskapi N-30 well, all monazites give type C and D REE-patterns (Fig. 7).

In Alma K-85, 36 major element analyses were performed on 32 monazite grains from the Cree Member of the Logan Canyon Formation. In the Alma K-85 well, types B and E predominate (Fig. 7) and only few grains give REE patterns of type C and D.

In wells from the Thebaud Field, 41 major element analyses from 41 monazite grains were collected from the Lower Member of the Missisauga Formation. The dominant REE-pattern in the Thebaud Field is type B (Fig. 7), with a few grains of types C, D, E, and F.

At Glenelg E-58, 86 major element analyses were performed on 67 monazite grains from the Upper Member of the Missisauga Formation. In Glenelg E-58, types B and E predominate (Fig. 7).

In North Triumph G-43, 24 major element analyses from 22 monazite grains were collected from the Cree Member of the Logan Canyon Formation. An additional, 47 major element analyses were performed on 44 grains from the Upper Member of the Missisauga Formation. Type E REE patterns predominate in the Cree Member of the Logan Canyon Formation of North Triumph G-43 well (Fig. 7). Moreover, there are a few grains with REE patterns of type A, B and F. For the Upper Member of the Missisauga Formation, type E REE patterns dominate (Fig. 7).

In wells from the Venture Field, 53 major element analyses were performed on 50 monazite grains from the Lower Member of the Missisauga Formation. Type E and B REE patterns are predominant in these monazites (Fig. 7).

At the Peskowesk A-99 well, 42 major element analyses were performed on 34 monazite grains from the Cree Member of the Logan Canyon Formation. Type B REE patterns predominate, followed in abundance by type E patterns (Fig. 7).

In Tantallon M-41, 6 major element analyses were performed on 6 monazite grains from the Upper and Middle Members of the Missisauga Formation. Type E REE patterns predominate in the Tantallon M-41 well (Fig. 7).

6.3.3. Variation in other major elements

Biplots of Y vs. Th (Fig. 9) show coherent behaviour of these two elements on the basis of monazite type recognised on the basis of other criteria (e.g. as presented below in section 6.5). Most monazite grains with irregular or subparallel inclusions have low Y(<0.03 afu) whereas euhedral and subhedral grains commonly have Y in the range 0.03–0.05 afu. Type A and C REE patterns (Fig. 6) commonly have low Th (< 0.03 afu) and Y (<0.02 afu) (Fig. 9B) whereas type B and particularly E tend to have high Y and Th. Yttrium abundance show the expected variation with the heavy REE.

6.4. Chemical zoning of monazite grains: WDS X-ray mapping

Textural features of the monazite grains were also studied, to provide additional criteria that might be used to identify sources. As with major element chemistry, at the time of writing, there is a lack of comparative data for monazites from crystalline basement exposed on land. Textures and chemical zoning were studied using three techniques: secondary electron (SE) imaging, backscattered electron (BSE) imaging, and WDS X-ray mapping. Secondary electron imaging was used when inclusions were present and/or the shape of the monazite is important. Due to the very high brightness of monazite in BSE imaging, the morphology, and the shape of the inclusions is unclear. Therefore, SE imaging was employed.

BSE imaging is a qualitative analytical method that images the relative variation in average atomic number of the observed area. It does not provide information on specific element distribution nor quantitative information on the chemical content. Thus, the zoning in BSE images reflects variation in content of more than one element. On the contrary, WDS X-ray mapping can generate maps of specific elements to characterize their zoning. We used such maps to characterize the variation of specific elements within a single grain.

The chemical zoning of the dated monazites was studied by the use of BSE and SE images (Appendix III) and WDS X-ray maps (Appendix IV). The BSE images show that the dated monazite grains are either relatively homogeneous or zoned. Thus grains from some locations show zones of different composition. X-ray mapping was performed on 44 grains covering the western, eastern and central part of the Scotian Basin, for the trace elements Th, Y, U and Pb, but only Th and Y maps are given in Appendix IV.

6.4.1. X-ray maps: Western part of the Scotian Basin

X-ray mapping for Th, Y, U and Pb was performed on 6 grains from the Naskapi N-30 well. The zoning is only observed for the elements Th and Y. Three types of zoning are identified:

- Well developed oscillatory zoning (for example, grain number* 15)
- Simple zoning (grain number 3)
- No zoning (grain numbers 1, 23, 28, 37)

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* Unique grain identifier in Table 7

6.4.2. X-ray maps: Central part of the basin

X-ray mapping for Th, Y, U and Pb was performed on 32 grains from the central part of the basin. The zoning is observed only for the elements Th and Y. Several types of zoning are identified. Those are:

- Sector zoning (grain number 104)
- Simple zoning with high Th rim (grain numbers 106, 188, 230, 231)
- Simple zoning with high Y rim (grain numbers 64, 76, 83, 84, 89. 93, 162)
- Simple zoning (grain numbers 80, 92, 167. 193, 237)
- Patchy zoning (grain numbers 74, 136, 165, 196, 245)
- No zoning (grain numbers 75, 77, 88, 92, 145, 150, 164, 190, 215, 243, 244)

6.4.3. X-ray maps: Eastern part of the basin

X-ray mapping for Th, Y, U and Pb was performed on 5 grains from the Peskowesk A-99 well. The zoning is observed only for the elements Th and Y. The types of zoning identified are as follows:

- Simple zoning (grain number 273)
- Patchy zoning (grain number 252)
- Sector zoning (grain number 274)
- No zoning (grain numbers 259, 257)

6.5. Textural information from SE and BSE images

Textures and chemical zoning were studied using both secondary electron (SE) imaging and backscattered electron (BSE) imaging (Appendix III). Both are much more rapid methods than WDS X-ray mapping. As noted above, secondary electron imaging was used when inclusions were present and/or the shape of the monazite is important. In contrast to WDS X-ray mapping, the zoning in BSE images reflects variation in content of more than one element.

6.5.1 Morphology

Many analysed grains are euhedral to subhedral with some planar faces meeting at sharp corners (e.g. grain numbers 38, 110, 172). In other cases, such corners appear abraded but the planar faces are preserved (e.g. grain numbers 15, 119). All analyzed grains were classified into the following morphological types (Table 8):

- Euhedral (E), with straight edges, fairly sharp corners, and good crystal form (e.g. pyramidal, prism, etc.)
- Subhedral (SH), with somewhat straight edges, rather rounded corners, and crystal shape not always evident.
- Rounded to subhedral (R-SH), similar to subhedral with one or more fairly straight edges, but most corners are rounded.
- Rounded and irregular (R-IR), characterized by an irregular shape, virtually no straight edges (may show 1 or 2 short straight edges), and virtually no corners related to original crystal form (if present, they are rounded).
- Rounded, lacking straight edges or sharp corners.

Examples of each of these types are shown in Figure 10. The morphology and size of individual monazite grains is presented in Table 7. The age distribution of these different groups of external morphology is shown in Figure 11. Except in the eastern part of the basin, grains with Precambrian age have a disproportionate number of rounded and irregular grains, but some grains of this type and rounded grains are present in many age classes.

6.5.2 Inclusions

Inclusions in selected grains were investigated by scanning electron microscope and semiquantitative chemical analyses of inclusions were made by energy dispersive spectroscopy (Appendix V). In addition, BSE and SE images were systematically examined for the presence of inclusions and pits: results are summarized in Table 7.

Many grains contain no inclusions; some, however, contain a few prismatic inclusions (e.g. Appendix III; grain numbers 123, 149) or more anhedral inclusions (e.g. Appendix III, grain numbers 36, 164, 181). Some distinctive grains contain numerous inclusions, commonly with variable backscattered electron intensity (Appendix IV) that comprise quartz, K-feldspar, muscovite, biotite and chlorite, together with kaolinite interpreted as an early diagenetic alteration product of either feldspar or muscovite (cf. Karim et al. 2010). In many cases, the inclusions show preferred alignment; where not aligned it is unclear whether the thin section was cut parallel to foliation or whether the distribution is random.

6.5.3 Zoning

Detailed information on zoning was provided by X-ray mapping of selected monazite grains, presented in section 6.4 above. Zoning was systematically investigated from BSE and SE images; zoning is generally visible in BSE images but only rarely detectable in SE images. Thus the identification of zoning types summarized in Table 7 is not systematic, because it is generally undetectable in SE images.

6.6 Classification of monazite grain types

The various textural characteristics of individual grains presented in Table 7, together with their age and elemental composition, has been used to distinguish different types of monazite grains. This classification is based primarily on age. Initially, grains from the Western, Central and Eastern parts of the basin were classified separately and examples of each of these types are shown in Figure 13. These classification schemes were then merged into a single scheme for the entire basin (Table 9).

7. DISCUSSION

7.1 Alteration of monazite

Several lines of evidence suggest that some monazite grains have experienced early diagenetic alteration, resulting in ages that either have high errors or are indeterminate. Some grains appear to have Pb below detection, despite high Th, suggesting that Pb (and commonly U) have been leached out (e.g., grain numbers 21, 98). Many grains with inclusions show alteration of muscovite and feldspar to kaolinite (Appendix IV), characteristic of early diagenesis by meteoric water in the Chaswood Formation (Piper et al., 2009) and the Scotian Basin (Karim et al., 2010). Some of the grains with indeterminate ages appear highly corroded and have an irregular external morphology unlikely to have survived transportation, suggesting that it developed after depositional by corrosion (e.g. type C24 grain 163 in Fig. 13).

7.2 Major variation in age modes

Based on the probability plots for ages with errors < ± 20%, a series of discrete age populations are identified that are reasonably consistent from one well or field to another. These age populations are:

1 200–290 Ma

2 290–350 Ma

3 350-440 Ma

4 440-550 Ma

5 550-850 Ma

6 850-1400 Ma

7 1400-1750 Ma

8 1750-2200 Ma

9 > 2200 Ma

In addition, there are many grains with an undeterminable or uncertain age, in which the age error is > ± 20%, or the grain yields a wide range of ages.

In the western part of the Scotian Basin, at the Naskapi N-30 well, most dates fall in group 2 (290–350 Ma), with a secondary mode in group 3 (350–440 Ma). There are no data to evaluate stratigraphic variability.

In the central part of the Scotian Basin, from Alma to Venture, 40–50% of the age determinations fall in group 3 (350–440 Ma), with a secondary mode of 13–33% in group 4 (440–550 Ma). The proportion of dates in this latter mode tends to be lowest in the Cree Member and highest in the Lower Missisauga Formation. All wells except Alma K-85 (where only 27 dates are available) have 7–31% of dates in group 2 (290–350 Ma). There is also a secondary mode of group 5 (550–850 Ma) in the Lower Missisauga Formation at both Venture and Thebaud: this group is absent at higher stratigraphic levels except for a 2.3% presence in the Upper Missisauga Formation at Glenelg. Dates > 850 Ma make up only 12-14% of the Lower Missisauga dates, but 24-26% in the Cree Member, and are highly variable in the Upper Missisauga Formation (4.7% at North Triumph, 32% at Glenelg).

In the eastern part of the Scotian Basin, the abundance of monazite is low and large numbers of dates are available only from the Cree Member at Peskowesk A-99. There, 83% of dates are >850 Ma, with a secondary mode in group 3 (350–440 Ma) with 10% of the dates. The assemblage in the Upper and Middle Missisauga Formation at Tantallon is quite different, although only four grains are available, with no dates > 550 Ma and a strong mode in group 3 (350–440 Ma) with 55% of the dates. The small number of ages obtained from Louisbourg J-47 and Hermine E-94 are mostly 350–650 Ma.

Thus, the Scotian Basin can be separated in at least three major domains based on the monazite geochronological data. In the western part, Carboniferous ages predominate, in the central part the largest monazite populations cluster around 400–440 Ma (Silurian-Devonian), whereas in the eastern part of the basin, Early and Late Proterozoic are abundant relative to Paleozoic dates.

The data base is too small to evaluate stratigraphic variability except in the central part of the Scotian Basin. There, the Lower Missisauga Formation at Thebaud and Venture has an unusually low number of dates > 850 Ma and an unusually high number of dates in group 5 (550-850 Ma) compared with any other stratigraphic level. No systematic variation was detected between the Upper Missisauga Formation and the Cree Member.

Comparison can be made with age determinations from the on-land Lower Cretaceous Chaswood Formation reported by Pe-Piper and MacKay (2006). Although numbers of analyses are small, the age distribution at Naskapi most closely resembles Vinegar Hill, with an important ~400 Ma mode, but at Naskapi there is an additional ~330 Ma mode. On land, borehole RR-97-23 in the Elmsvale Basin and boreholes at Brierly Brook and Diogenes Brook have a dominant mode in group 4, 440-550 Ma. A similar mode is seen at Alma K-85, particularly when the 14 grains (61 analyses) analysed by Pe-Piper and MacKay (2006) are added to the data in this study.

Age modes can also be compared with the results of single-grain $^{40}Ar/^{39}Ar$ dating of muscovite from the Scotian Basin by Reynolds et al. (2009). Muscovite is highly susceptible to physical abrasion and is thus comminuted during river transport. Almost all dated detrital muscovite from the Lower Cretaceous sandstones of the Central Scotian Basin range in age from ~ 420–240 Ma (Reynolds et al., 2009). Muscovite from the Naskapi N-30 well ranges in age from 372 to 350 Ma, whereas the monazite shows two modes centred on 330 Ma and 400 Ma. In both areas, muscovite grains of Carboniferous age (300–360 Ma) were evidently derived from basement metasedimentary rocks of the inner continental shelf that experienced resetting during the Alleghanian orogeny (Pe-Piper et al., 2010). Devonian (360–417 Ma) muscovite grains were derived from metasedimentary rocks and granite plutons of the Acadian orogeny on land. It seems reasonable to suggest that monazite grains with these modal ages have a similar origin. This would imply that the Naskapi well could have been supplied by sediment almost exclusively from the Meguma terrane.

7.3 Are second cycle grains present ?

Although monazite is relatively resistant to mechanical abrasion, it is readily broken down chemically under acid conditions. Monazite may thus have a polycyclic origin, reworked out of older sedimentary rocks, and such polycyclic monazite is more likely to be represented by rounded or rounded-irregular grains. Monazites were classified according to whether they were euhedral, subhedral, rounded or irregular. There is no systematic variation of morphology with age, except that there is a disproportionate number of euhedral grains of middle Paleozoic age, characteristic of the outboard Appalachian terranes, and involving short transport distances. We interpret this variation to mean that most monazite is likely to be of first cycle origin, but the presence of some polycyclic monazite grains cannot be excluded.

7.4 Tentative bedrock sources of monazite grains

In the western part of the Scotian Basin, in the Upper Missisauga Formation of the Naskapi N-30 well, only a few monazite types are present. Monazite grains interpreted to be derived from granites show euhedral to subhedral morphology, commonly with some concentric zoning (grain 15, App. IV). Type 5 grains (W01) have mean ages as young as 315–320 and type B REE patterns, and are interpreted to be derived from inner shelf plutons of similar age to the German Bank pluton which yielded concentrically zoned monazite of similar modal age (Pe-Piper et al. 2010). Types 34 and 35 (W02 and W03) are of similar Late Carboniferous age range and show similar features, except that they have type D and A REE patterns respectively. All have rare euhedral inclusions. All three types are likely of igneous origin.

A subhedral grain of type 36 (W04) has abundant subparallel inclusions and a mid Devonian age with type D REE patterns. On the basis of inclusions it is interpreted as metamorphic in origin, with its age within error similar to that of the South Mountain Batholith. respectively. Type 37 (W05) has an early Devonian age, type B REE patterns and low Y. The mean ages (Table 7) and the probability plot (Fig. 4) are a little older than the 380 Ma emplacement age of the Meguma terrane plutons and the 380–360 Ma age for igneous muscovites (Reynolds et al. 2009). The assemblage of both monazite and muscovite at Naskapi N-30 shows no evidence for Lower Paleozoic monazite that is abundant in the Chaswood Formation of Vinegar Hill and central Nova Scotian (Pe-Piper and MacKay, 2006), suggesting that its source is exclusively from the Meguma terrane. In that case, these monazites probably date from the peak metamorphism of the Meguma terrane at 410–395 Ma (Kontak et al., 1998; Hicks et al., 1999). One grain of type 38 (W06) has abundant subparallel inclusions: it has one spot age of 515 Ma with a 19% 1σ error and two dates of ~ 400 Ma with higher errors: these ages are likely unreliable. Type 28 and 29 monazites (W07, 10) have abundant inclusions, commonly subparallel, and are thus similar to type 38, but have no age determinations with errors better than 20%. Most have very low Th (<0.02 afu) and Y (<0.01 afu), the latter associated with type C REE patterns. Such monazites are the most abundant types at Naskapi N-30. Their textures appear metamorphic and we tentatively ascribe their inconsistent geochronology to the widespread Alleghanian thermal event that reset many metamorphic muscovites (Reynolds et al., 2009).

In the central part of the Scotian Basin, monazite grains with a wide range of ages are present, including euhedral grains of Mesoproterozoic age. This wide range of ages was interpreted by Pe-Piper and MacKay (2006) as indicating a variety of source rocks, including Grenville basement and the more inboard terranes of the Appalachians.

Monazite types 1 and 2 each consists of a single grain <10 μm with a Cretaceous age. These grains are tentatively interpreted as being derived from the Aptian volcanic rocks of the Laurentian sub-basin; detrital zircons of similar age are recognised in at least four wells in the central Scotian Basin (Pe-Piper and Piper, unpublished data).

Types 3 and 4 have ages ranging from Late Triassic to Early Permian and are represented by 5 grains. Their source may lie in the Meguma terrane of the inner Scotian Shelf that experienced Alleghanian reheating: detrital muscovite of a similar age range is found in wells of the central Scotian Basin (Reynolds et al., 2009). Eleven type 5 grains are similar to those found at Naskapi with Late Carboniferous ages and appear to be derived from Alleghanian plutonic rocks. Type 6 grains have a similar age range but have type C or D REE patterns, subparallel inclusions, and characteristically low Y and Th. Type 29, represented by 18 grains in the central

Scotian Basin, is very similar except for a lack of acceptable ages. By analogy with type 29 at Naskapi, both 6 and 29 are interpreted as metamorphic from Alleghanian resetting of Meguma metasedimentary rocks. Type 28, represented by 28 grains, is similar to 29 except that it has type A or B REE patterns. Eleven type 7 grains are texturally similar to type 6, but give mean ages of 354–376 Ma corresponding to the Late Devonian emplacement of the South Mountain Batholith and other granitiod plutons of the Meguma Terrane. Zoning is patchy and REE types include A, B and E. Most or all are probably derived from metasedimentary rocks.

Type 8 grains are also of Late Devonian age, have type C or D REE patterns, and show concentric or patchy zoning. They are interpreted as likely of igneous origin on the basis of their textures.

Grains of types 9–14 have progressively older ages, from mid-Devonian to Early Ordovician. Most of these age groups have some grains with oriented inclusions, suggesting a metasedimentary origin, but others may have an igneous origin. There are variations between types in the abundance of different types of REE patterns: whether these differences are significant is uncertain. Both igneous and metamorphic rocks of this age range are found in the more inboard terranes of the Appalachians – the Gander, Dunnage and Humber terranes. Type 9 grains have mean ages of 380–389 Ma; many have type E REE patterns, and 20% have inclusions that suggest a metamorphic origin. Other grains may be of igneous origin. Igneous emplacement and contact metamorphism of this mid-Devonian age is characteristic of the Meguma terrane. Type 10 grains have mean ages between 390 and 416 Ma, type B, E or F REE, and about 30% contain inclusions, in some cases sub-parallel. Some grains with no inclusions are similar to type 37 at Naskapi and may be derived from peak metamorphism of Meguma metasedimentary rocks. Some of the type 10 grains could be derived from early Devonian plutons farther inboard in the Appalachians. Type 11 is represented by only 3 grains. Type 12 grains are of Silurian age: monazite of this age predominates at the Vinegar Hill locality of the Chaswood Formation, where it appears to be derived from metasedimentary rocks of this age in central New Brunswick. Mid-Ordovician type 13 grains and Early Ordovician type 14 grains may include both metasedimentary and igneous monazites: monazites with Taconic ages are common in the Chaswood Formation of Nova Scotia and likely derived from northern New Brunswick. Source rocks of similar age are present in central Newfoundland.

Types 15–18 monazites have Cambrian to Late Neoproterozoic ages typical of igneous and metamorphic rocks the Avalon terrane of the Appalachians, although similar ages are found in detrital zircons in the Meguma terrane (Murphy and Hamilton, 2002) and in some rocks in the Gander terrane. In most of the monazite grains, there is no evidence for whether the origin is igneous or metamorphic. Type 15 is of mid-Cambrian age and has REE types B and E. Type 16 has ages that cluster around 565 Ma in the latest Neoproterozoic, rather younger than most Avalonian igneous activity, but similar in age to metamorphism and widespread plutonism in the Bras d'Or "terrane" (Gander terrane) of Cape Breton Island. In central Scotian Basin samples, Type 17 is represented by one grain of mean age 587 Ma and type 18 by two grains of mean ages 670 Ma and 795 Ma. Igneous rocks of 795 Ma are not recognised in the Avalon or Gander of Nova Scotia, but are present in southern Newfoundland. The particular grain in question could be a second cycle grain. The Lower Missisauga Formation at Thebaud and Venture has significantly more Neoproterozoic monazites compared with the Upper Missisauga Formation and Cree Member throughout the central Scotian Basin, suggesting a change in source areas through time.

Monazite grains of types 19–26 are of Meso- to Paleo-Proterozoic age, characteristic of rocks of the Grenville province. Most are subhedral or rounded subhedral, with a few euhedral grains. Although some may be second cycle, many are interpreted as first cycle from crystalline bedrock. Grains of types 19 and 20 are common and have yielded mean ages of 947–1051 Ma. Type 19 lacks inclusions, has REE type E, and tends to have higher Y and Th. Type 20 is similar, but has REE types A or B and tends to have low Y and Th. Type 23 is also common, with mean ages of 1520–1686, some grains with concentric zoning, and REE types A, B and E. Grains of Paleoproterozoic types 24–26 are uncommon, but include euhedral and subhedral grains.

In the eastern part of the Scotian Basin, monazite is not a common heavy mineral – no datable monazite was found in samples from the Dauntless D-35 well. Heavy mineral counts by Tsikouras et al. (submitted) from the Peskowesk A-99 and Dauntless D-35 wells show that the average ratio of monazite to zircon is 3, similar to that in the Upper Missisauga and Logan Canyon formations of the central Scotian Basin (4) but lower than in the western Scotian Basin (6) and in the Lower Missisauga of the central Scotian Basin (12). All the types recognised in the eastern Scotian Basin are also present in the central Scotian Basin. The reason for the lower abundance of monazite is uncertain.

Most monazite grain types in the eastern Scotian Basin are represented by 3 or fewer grains. The most abundant types are type 25 (7 grains, ~ 1.8 Ga), type 23 (5 grains, ~1.65 Ga), type 19 (5 grains, ~1.05 Ga) and type 12 (5 grains, Early Devonian–Silurian). In addition, there are 6 grains of type 28, with abundant inclusions suggesting a metamorphic origin, but no reliable age determinations.

7.5 Can igneous and metamorphic detrital monazites be distinguished

Grain texture may provide the best evidence for distinguishing some metamorphic from some igneous monazite. Sub-parallel inclusions, especially if the inclusions are not euhedral, likely indicate a metamorphic origin. Rare euhedral inclusions may indicate an igneous origin. Zoning may be an important tool for discriminating igneous and metamorphic monazites, but it cannot be identified in the SE images collected from most of the analysed monazites. Many monazites with low Y and Th have other characteristics such as inclusions suggesting a metamorphic origin.

7.6 Implications for sediment provenance

In the Chaswood Formation of Nova Scotia, the dominant grains are Ordovician –Silurian, reflecting the effects of Taconic orogeny and early Paleozoic plutonism in the more inboard terranes of the Appalachians. Grains of Devonian age and those derived from the Avalon terrane, with latest Neoproterozoic plutonism, are rare and older Precambrian grains are lacking.

In the two samples from the western Scotian Basin at Naskapi N-30, all reliably dated monazite grains have mean ages younger than 409 Ma. As discussed above, the age range at Naskapi implies a source exclusively from the Meguma terrane (with "Acadian" ages onshore and "Alleghanian" ages offshore). Mass-balance calculations (Reynolds et al., 2009) require a few tens to a few hundreds of metres of exhumation of the inner continental shelf during the Early Cretaceous in order to supply the observed detrital muscovite in the Scotian Basin. At the time of deposition of the analysed sample, the Chaswood rivers draining New Brunswick and northern Nova Scotia did not supply sediment to the western Scotian Basin.

In the central Scotian Basin, most monazite grains are Devonian, but Taconic, latest Neoproterozoic, Mesoproterozoic and Paleoproterozoic grains each make up about 10% of the total monazite assemblage (Figs. 5, 14). No robust stratigraphic changes in relative abundance are apparent. Samples from Alma K-85, the most westerly well of the central Scotian Basin, have the greatest proportion of grains in the 300–400 Ma age range characteristic of a Meguma terrane source.

In contrast, in the eastern Scotian Basin, a higher proportion of monazites (~60%) are of Meso- or Paleoproterozoic age, implying greater importance of Canadian Shield source rocks (Fig. 5). If this source included the Long Range of western Newfoundland, then it could have shed sediment southwestward to a river delivering sediment to the central Scotian Basin and southeastward to a river delivering sediment to the eastern Scotian Basin (Fig. 15).

8. CONCLUSIONS

A total of 324 detrital monazite grains were identified from Lower Cretaceous sandstones from ten offshore fields or individual wells, providing an east to west transect of the Scotian Basin. From these grains, 688 age determinations with 1σ errors < ±20% were obtained. Monazite grains were further characterized by secondary electron or backscattered electron images, showing external morphology, zoning and inclusions, together with WDS X-ray maps and variations in major element chemistry (REE, Th, Y). Based on all these criteria, including age, about 30 distinct types of monazite grain are recognized. Regrettably, comparable data are generally not yet available from potential source rocks in the Canadian Appalachians, making specific identification of sources difficult. However, there are distinctive variations in the geographic and stratigraphic distribution and abundance of these types. The difference in types between the Naskapi N-30 well and elsewhere in the Scotian Basin is so clear that the one analysed sample from the Naskapi N-30 well appears to have had a discrete river source, draining only the Meguma Terrane. On the one hand, the grains with a 440-550 Ma age mode in the central Scotian Basin closely resemble the dominant grain type in the Chaswood Formation in Nova Scotia, suggesting supply from the inboard Appalachian terranes of New Brunswick. On the other hand, the central Scotian Basin also includes common grains with Proterozoic ages that are absent from the Chaswood Formation, suggesting important supply from a river draining through Cabot Strait from western Newfoundland, or perhaps with minor supply from Labrador and the North Shore of Quebec. The Lower Missisauga Formation at Thebaud and Venture has significantly more Neoproterozoic monazites compared with the Upper Missisauga Formation and Cree Member throughout the central Scotian Basin. In the eastern Scotian Basin, Proterozoic grains predominate, but most monazite types are similar to those in the central Scotian Basin. This distribution suggests different dominant river supply to Peskowesk compared with the central Scotian Basin, probably draining the eastern side of the Long Range and the Appalachian rocks of western Newfoundland.

REFERENCES

Burt, D.M., 1989: Compositional and phase relations among rare earth element minerals. In: Lipin, B.R., McKay, G.A. (eds.), Geochemistry and Mineralogy of Rare Earth Elements, vol. 21. Mineralogical Society of America, Reviews in Mineralogy, Washington, D.C., p. 59-307.

Crowley, J.L., Brown, R.L., Gervais, F., Gibson, H.D. , 2008: Assessing inheritance of zircon and monazite in granitic rocks from the monashee complex, Canadian Cordillera. Journal of Petrology, v. 49, p. 1915-1929

Cummings, D.I., Hart, B.S. and Arnott, R.W.C., 2006: Sedimentology and stratigraphy of a thick, really extensive fluvial-marine transition, Missisauga Formation, offshore Nova Scotia, and its correlation with shelf margin and slope strata. Bulletin of Canadian Petroleum Geology, v. 54, p. 152-174.

Deer, W.A., Howie, R.A. and Zussman, J., 1992: An introduction to the rock-forming minerals, 2nd ed. Longman Scientific and Technical Press, United Kingdom, 696 p.

Drummond, K.J., 1992: Geology of Venture, a geopressured gas field, offshore Nova Scotia, in Halbouty, M.T., ed., Giant oil and gas fields of the decade 1978-1988: American Association of Petroleum Geologists, Memoir 54, p. 55-71.

Evans, J.A., Chisholm, J.L. and Leng, M.J., 2001: How U-Pb detrital monazite ages contribute to the interpretation of the Pennine Basin infill. Journal of the Geological Society, v. 158, p. 741-744.

Gagné, S., 2004: Textural, chemical and age variation in monazites of the Paleoproterozoic Longstaff Bluff Formation, Central Baffin Island, Nunavut. M.Sc. Thesis, Dalhousie

University, Halifax, Nova Scotia, Canada, 312 p.

Given, M.M., 1977: Mesozoic and early Cenozoic geology of offshore Nova Scotia. Bulletin of Canadian Petroleum Geology, v. 25, p. 63-91.

Förster, H.J., 1998: The chemical composition of REE-Y-Th-U-rich accessory minerals in peraluminous granites of the Erzgebirge-Fichtelgebirge region, Germany, Part I: The monazite-(Ce)-brabantite solid solution series. American Mineralogist, v. 83, p. 259-272.

Franz, G., Andrehs, G., and Rhede, D., 1996: Crystal chemistry of monazite and xenotime from Saxothuringian-Moldanubian metapelites, N.E. Bavaria, Germany. European Journal of Mineralogy, v. 8, p. 1097–1118.

Hall, D. C. and Lentz, D. R., 2003: Chemical composition and Th-U-Pb chemical ages of monazite in Appalachian granites, New Brunswick, Canada. Abstract, Paper 10-9, Northeastern Section of the Geological Society of America, 38th Annual Meeting, http://gsa.confex.com/gsa/2003NE/finalprogram/abstract_51417.htm

Hicks, R.J., Jamieson, R.A. and Reynolds, P.H., 1999: Detrital and metamorphic $^{40}Ar/^{39}Ar$ ages from muscovite and whole-rock samples, Meguma Supergroup, southern Nova Scotia. Canadian Journal of Earth Sciences, v. 36, p. 23–32.

Jansa, L.F., and Wade, J.A., 1975: Geology of the continental margin off Nova Scotia and Newfoundland: Geological Survey of Canada Paper 74-30, p. 51-105.

Jercinovic, M.J. and Williams, M.L., 2002: Background determination and instrumental parameters in electron microprobe age dating techniques. Abstracts with Program, Geological Society of America, v. 34, p. 67.

Jercinovic, M.J. and Williams, M.L., 2005: Analytical perils (and progress) in electron microprobe trace element analysis applied to geochronology: Background acquisition, interferences, and beam irradiation effects. American Mineralogist, v. 90, p. 526-546.

Karim, A., Pe-Piper, G. and Piper, D.J.W., 2010: Controls on diagenesis of Lower Cretaceous reservoir sandstones in the western Sable Subbasin, offshore Nova Scotia. Sedimentary Geology, v. 224, p. 65–83.

Kontak, D.J., Horne, R.J., Sandeman, H., Archibald, D. and Lee, J.K.W. 1998: $^{40}Ar/^{39}Ar$ dating of ribbon-textured veins and wall-rock material from Meguma lode gold deposits, Nova Scotia: implications for timing and duration of vein formation in slate-belt hosted vein gold deposits. Canadian Journal of Earth Sciences, v. 35, p. 746–761.

MacLean, B.C., and Wade, J.A., 1993: Seismic markers and stratigraphic picks in Scotian Basin wells: Atlantic Geoscience Centre, Geological Survey of Canada

Mathieu, R., Zetterstrom, L., Cuney, M., Gauthier-Lafaye, F. and Hidaka, H., 2001: Alteration of monazite and zircon and lead migration as geochemical tracers of fluid paleocirculations around the Oklo-Okelobondo and Bangombe natural nuclear reaction zones (Franceville basin, Gabon). Chemical Geology, v. 171, p. 147-171.

McIver, N.L., 1972: Mesozoic and Cenozoic stratigraphy of the Nova Scotia shelf: Canadian Journal of Earth Sciences, v. 9, p. 54-70.

Montel, J.M., Foret, S., Veschambre, M., Nicollet, C. and Provost, A., 1996: Electron microprobe dating of monazite. Chemical Geology, v. 131, p. 37-53.

Overstreet, W.C., 1967: The geologic occurrence of monazite. US Geological Survey, Professional Paper 530, p. 1-327.

Parrish, R.R., 1990: U-Pb dating of monazite and its application to geological problems. Canadian Journal of Earth Sciences, v. 27, p. 1431-1450.

Pe-Piper, G. and Mackay, R.M. 2006: Provenance of Lower Cretaceous sandstones onshore and offshore Nova Scotia from electron microprobe geochronology and chemical variation of detrital monazite. Bulletin of Canadian Petroleum Geology, v. 54, p. 366-379.

Pe-Piper, G. and Piper D.J.W., 2004: The geology of the Chaswood Formation of Nova Scotia and New Brunswick: Final Report for ExxonMobil Sable Project, p. 6-7.

Pe-Piper, G. and Piper, D.J.W., 2011: Cretaceous re-activation of the passive-margin Scotian Basin. In: *Recent advances in tectonics of sedimentary basins*, ed. C. Busby and A. Azor, Blackwells (in press).

Pe-Piper, G., Kamo, S.L., and McCall, C., 2010. The German Bank pluton, offshore SW Nova Scotia: petrology, age and regional significance for Alleghanian plutonism. Geological Society of Americain Bulletin, v. 122, p. 690–700.

Pe-Piper, G., Piper, D.J.W., Vaughan, A.D., Shannon, J., and Ingram S., 2004: Sedimentary petrology of Lower Cretaceous rocks of the southwestern Sable sub-basin (North Triumph B-52, Alma K-85 and Glenelg N-49 wells), Scotian Basin: Geological Survey of Canada, Open File 4836, 92 p.

Pe-Piper, G., Piper, D.J.W., Gould, K.M., and Shannon, J., 2006: Depositional environment and provenance analysis of the Lower Cretaceous sedimentary rocks at the Peskowesk A-99 well, Scotian Basin: Geological Survey of Canada, Open File 5383, 171 p.

Pe-Piper, G., Triantafyllidis, S., Piper, D.J.W., Moulton, B., and Hubley, R.F., 2007: A lithogeochemical assessment of the Lower Cretaceous sediments of the Scotian Basin: Geological Survey of Canada, Open File 5644, 140 p.

Pe-Piper, G., Triantafyllidis, S. and Piper, D.J.W., 2008: Geochemical identification of clastic sediment provenance from known sources of similar geology: the Cretaceous Scotian Basin, Canada. Journal of Sedimentary Research, v. 78, p. 595-607.

Piper, D.J.W., Hundert, T., Pe-Piper, G. and Okwese, A.C., 2009: The roles of pedogenesis and diagenesis in clay mineral assemblages: Lower Cretaceous fluvial mudrocks, Nova Scotia, Canada. Sedimentary Geology, v. 213, p. 51-63.

Poitrasson, F., Chenery, F. and Shepherd, T.J., 2000: Electron microprobe and LA-ICP-MS study of monazite hydrothermal alteration: Implications for U-Th-Pb geochronology and nuclear ceramics. Geochimica et Cosmochimica Acta, v. 64, p. 3283-3297.

Pyle, J.M., Spear, F.S., Wark, D.A., Daniel, C.G. and Storm, L.C., 2005: Contributions to precision and accuracy of monazite microprobe ages. American Mineralogist, v. 90, p. 547-577.

Schandl, E.S. and Gorton, M.P., 2004: A textural and geochemical guide to the identification of hydrothermal monazite: criteria for selection of samples for dating epigenetic hydrothermal ore deposits. Economic Geology, v. 99, p. 1027-1035.

Scherrer, N.C., Engi, M., Gnos, E., Jakob, V. and Liechti, A., 2000: Monazite analysis: from sample preparation to microprobe age dating and REE quantification. Schweizerische Mineralogische und Petrographische Mitteilungen, v. 80, p. 93-105.

Spear, F.S., Pyle, J.M., Cherniak, D. 2009 Limitations of chemical dating of monazite. Chemical Geology v. 266 (3-4), p. 227-239

Stea, R. and Pullan, S., 2001: Hidden Cretaceous basins in Nova Scotia: Canadian Journal of Earth Sciences, v. 38, p. 1335-1354.

Stern, R.A. and Sanborn, N., 1998: Monazite U-Pb and Th-Ph geochronology by high-resolution secondary ion mass spectrometry. Radiogenic Age and Isotopic Studies, Report 11, Current Research 1998-F. Geological Survey of Canada, p. 1-18.

Suzuki, K. and Adachi, M., 1991: Precambrian provenance and Silurian metamorphism of the Tsubososawa Paragneiss in the South Kitakami Terrane, Northeast Japan, revealed by the chemical Th-U-total Pb isochron ages of monazite, zircon and xenotime. Geochemical Journal, v. 25, p. 357-376.

Suzuki, K., Adachi, M. and Tanaka, T., 1991: Middle Precambrian provenance of Jurassic sandstone in the Mino Terrane, central Japan; U-Th-total Pb evidence from an electron microprobe monazite study. Sedimentary Geology, v. 75, p. 141-147.

Triantafyllidis, S., Pe-Piper, G., Yang, X. and Hillier, C., 2008: Detrital zircons as provenance indicators in the Lower Cretaceous sedimentary rocks of the Scotian Basin, Eastern Canada: A SEM-CL study of textures: Geological Survey of Canada, Open File 5746, 89 p.

Wade, J.A., and MacLean, B.C., 1990: Aspects of the geology of the Scotian Basin from recent seismic and well data: Geology of Canada, v. 2, p. 190-238.

Williams, G.L., Ascoli, P., Barss, M.S., Bujak, J.P., Davies, E.H., Fensome, R.A., and Williamson, M.A., 1990: Biostratigraphy and related studies: Geology of Canada, v. 2, p. 87-137.

Williams, M.L., Jercinovic, M.J., Goncalves, P. and Mahan, K., 2006: Format and philosophy for collecting, compiling, and reporting microprobe monazite ages. Chemical Geology, v. 225, p. 1-15.

Williams, M.L., Jercinovic, M.J. and Terry, M.P., 1999: Age mapping and dating of monazite on electron microprobe; deconvoluting multistage tectonic histories. Geology, v. 26, p. 1023-1026.

Zhu, X.K. and O'Nions, R.K., 1999: Zonation of monazite in metamorphic rocks and its implications for high temperature thermochronology: a case study from Lewisian terrain. Earth and Planetary Science Letters, v. 171, p. 209-220.

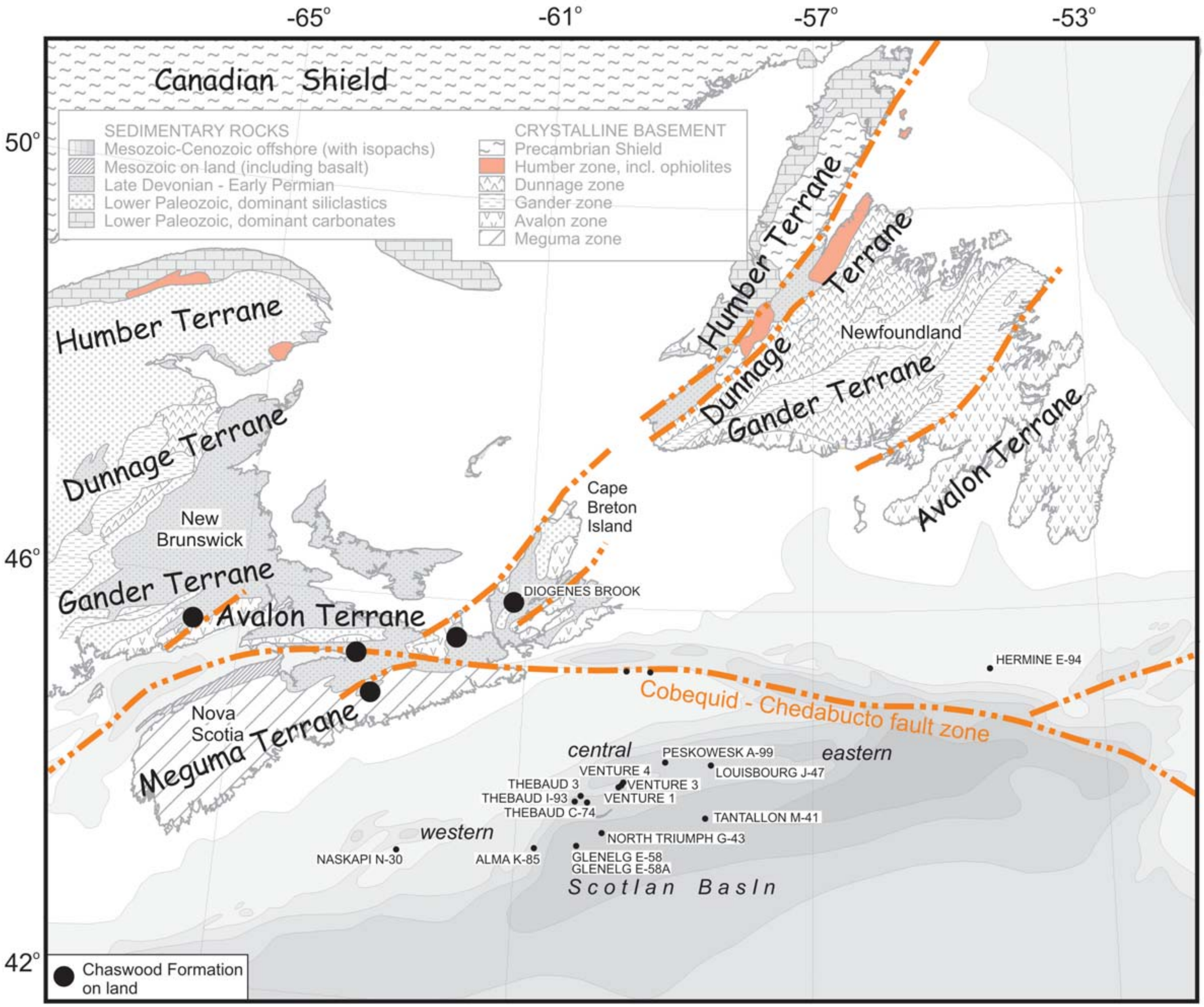


Fig.1. Location map showing wells from which samples were studied. Also shows principal areas of Chaswood Formation on land (solid circles), 2 km isopachs of offshore basins, principal rock types on land, and key paleogeographic elements of the Early Cretaceous. Base map from Williams and Grant (1998).

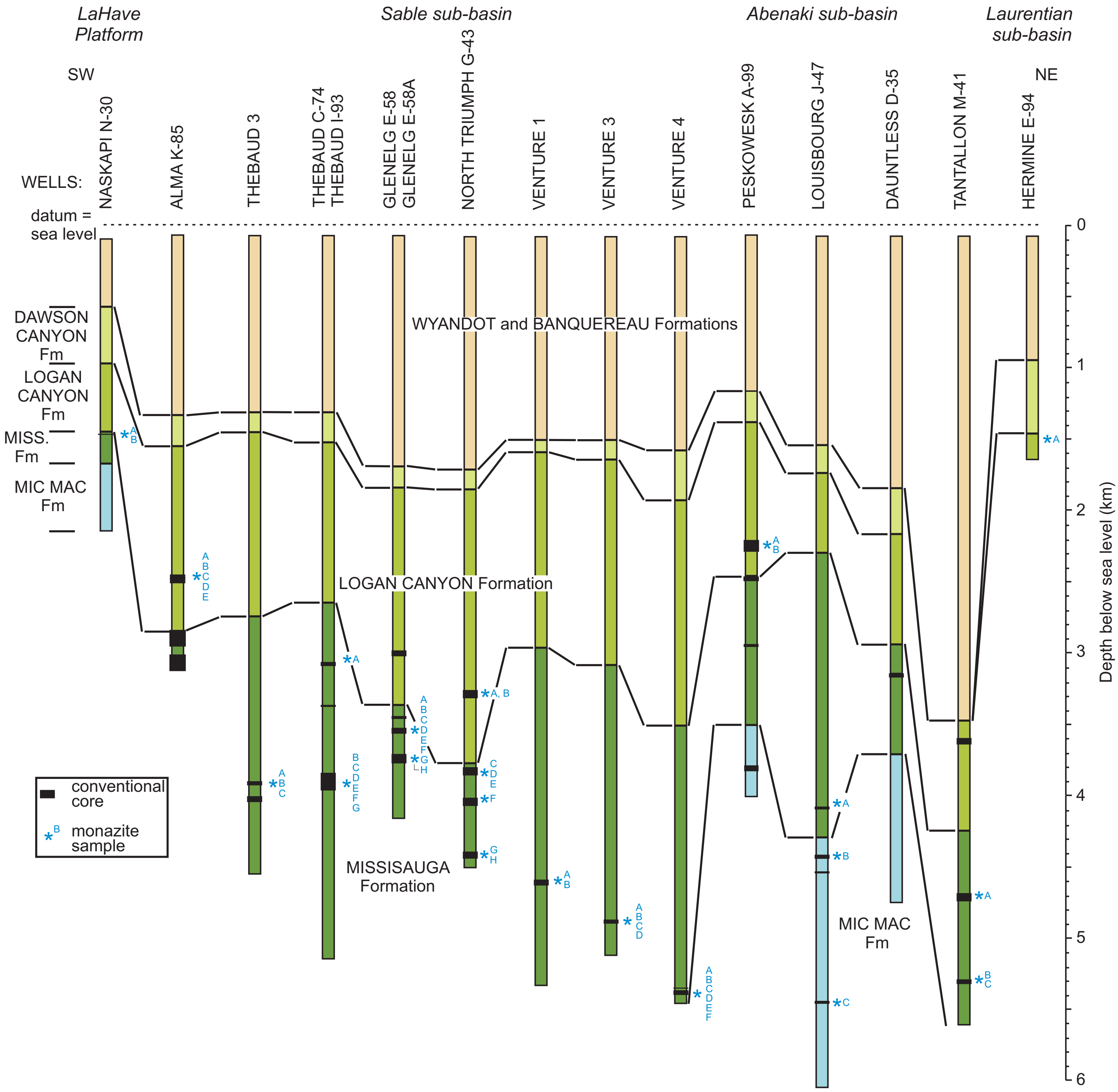


Fig. 2. Stratigraphic columns showing location of analysed samples.

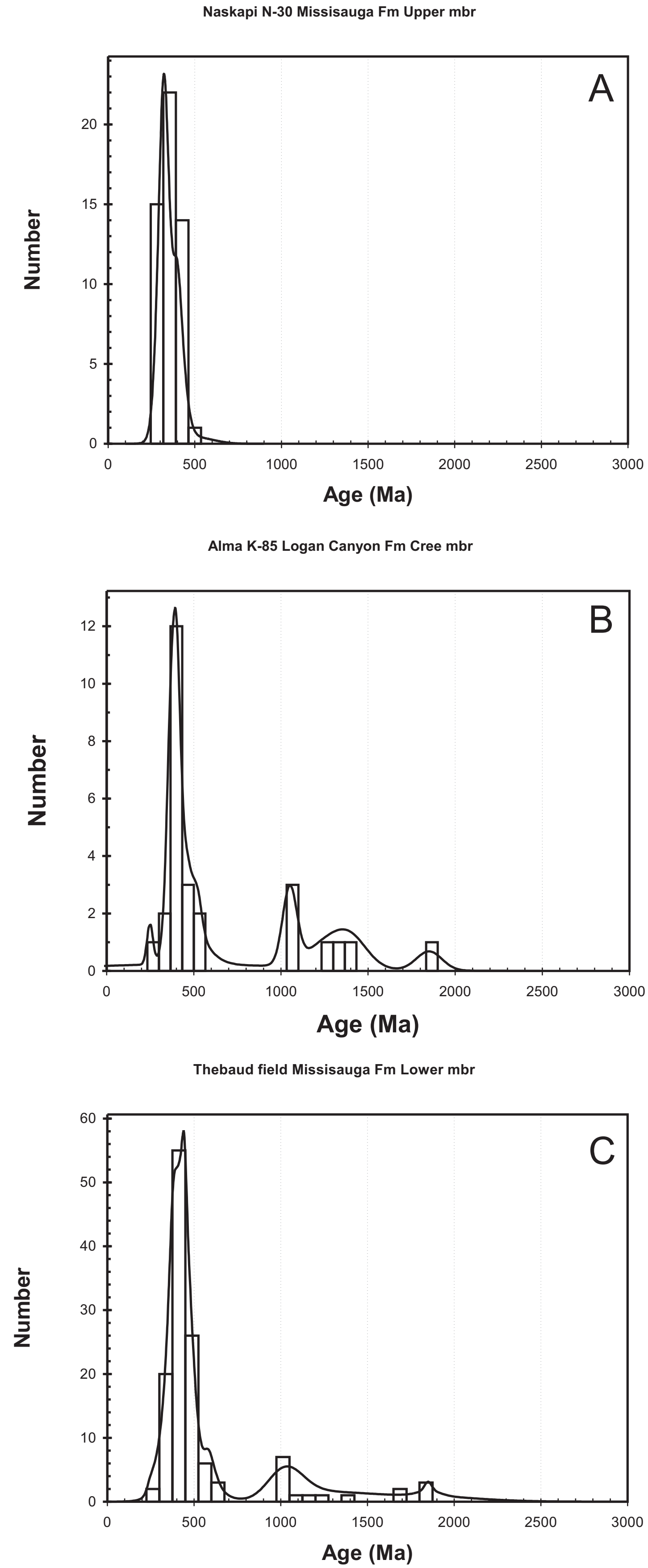
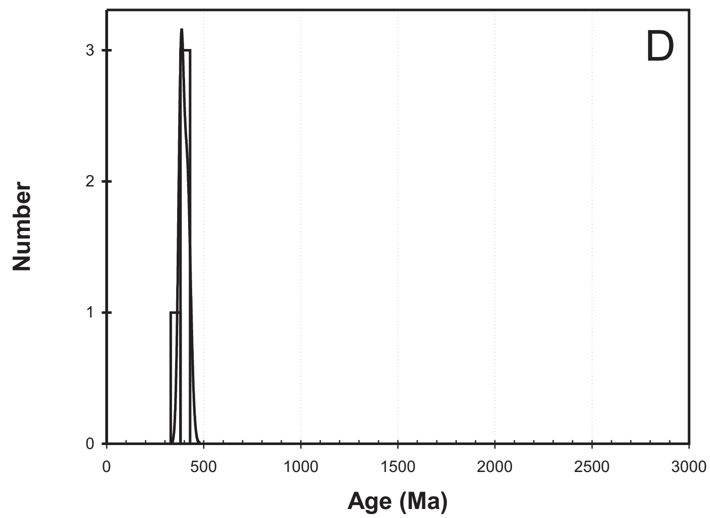
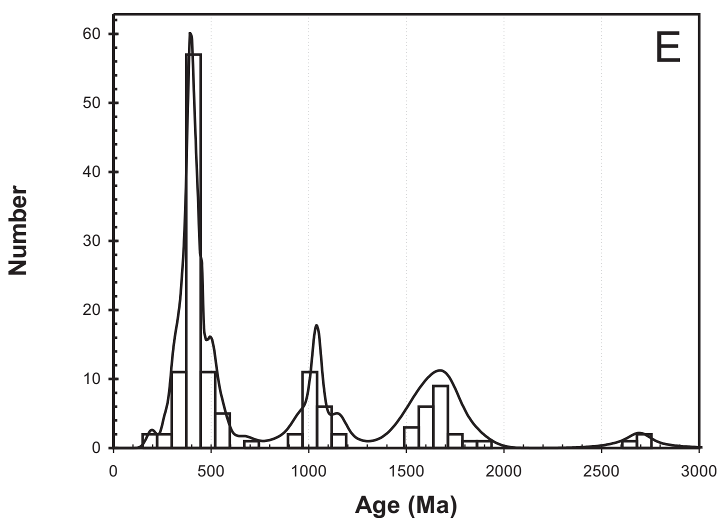


Fig. 3. [*next four pages*] Probability plots and histograms for spot ages with precision better than ± 20% from monazite grains, shown by well/field and stratigraphic level.

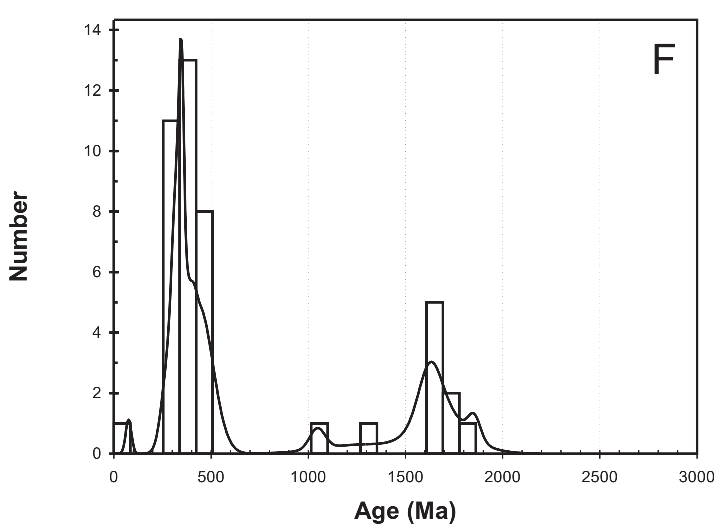
Thebaud I-93 Missisauga Fm Middle mbr



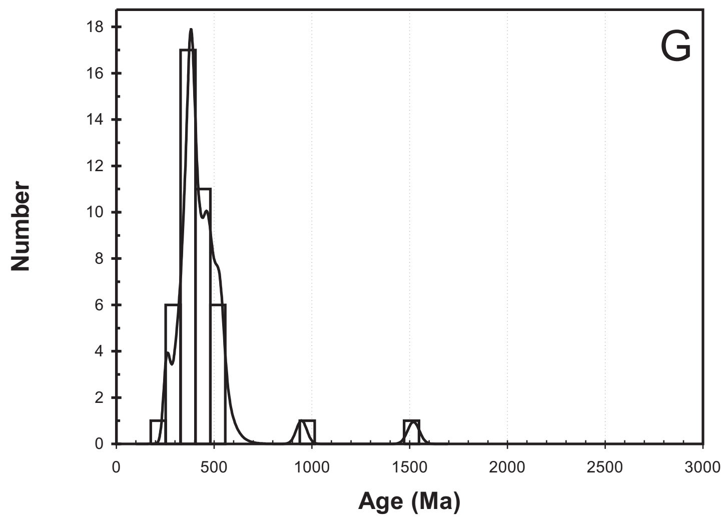
Glenelg field Missisauga Fm Upper mbr



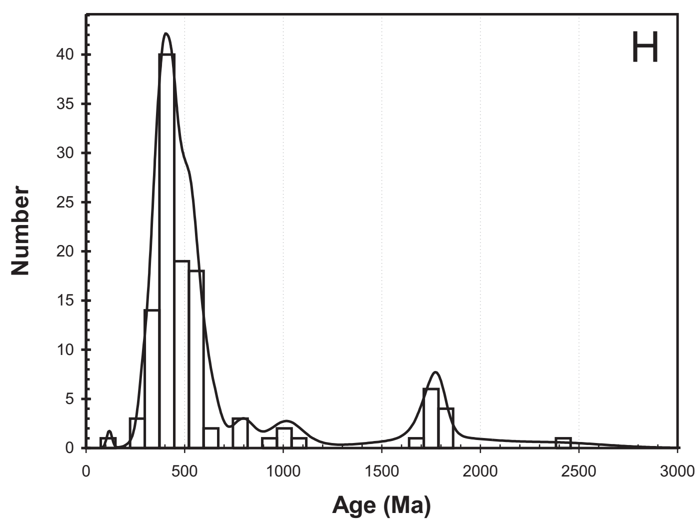
North Triumph G-43 Logan Canyon Fm Cree mbr



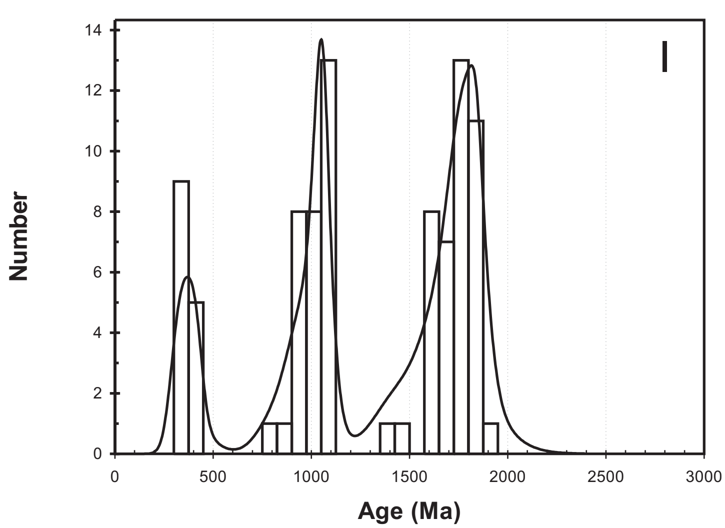
North Triumph G-43 Missisauga Fm Upper mbr



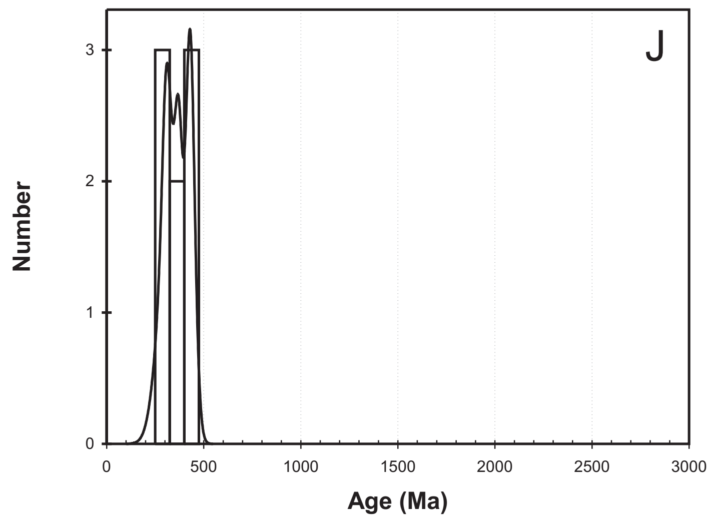
Venture field Missisauga Fm Lower mbr



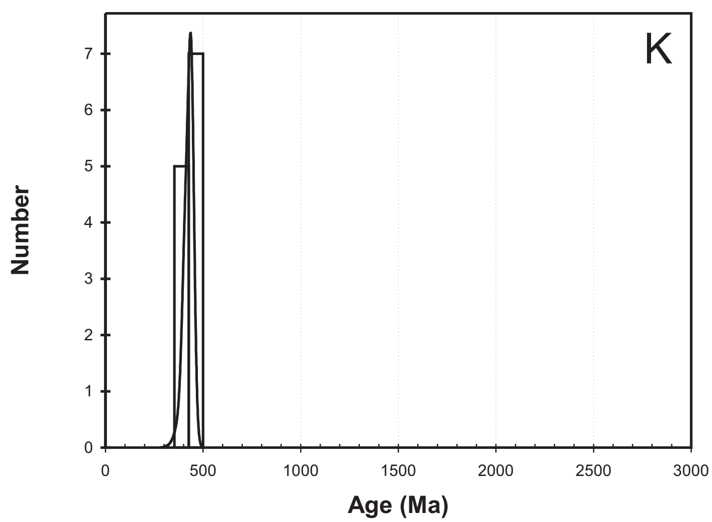
Peskowesk A-99 Logan Canyon Fm Cree mbr



Tantallon M-41 Missisauga Fm Upper mbr



Tantallon M-41 Missisauga Fm Middle mbr



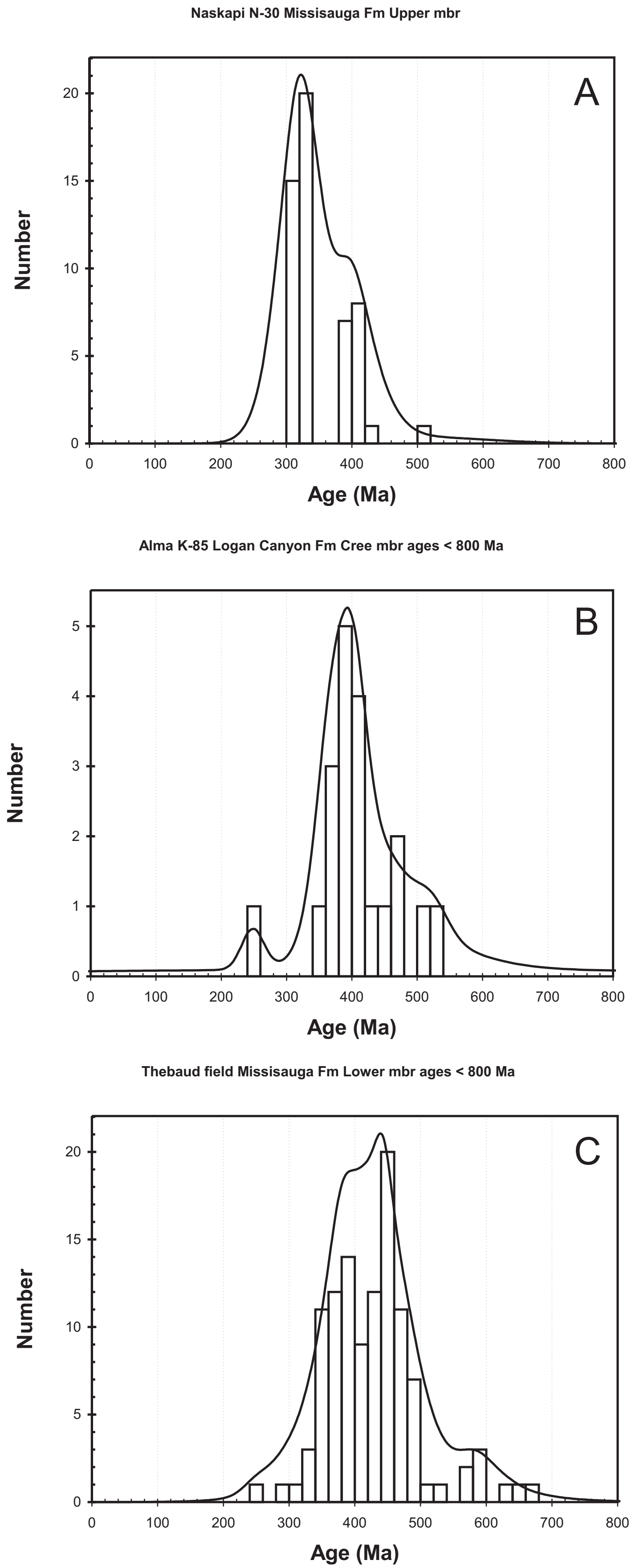
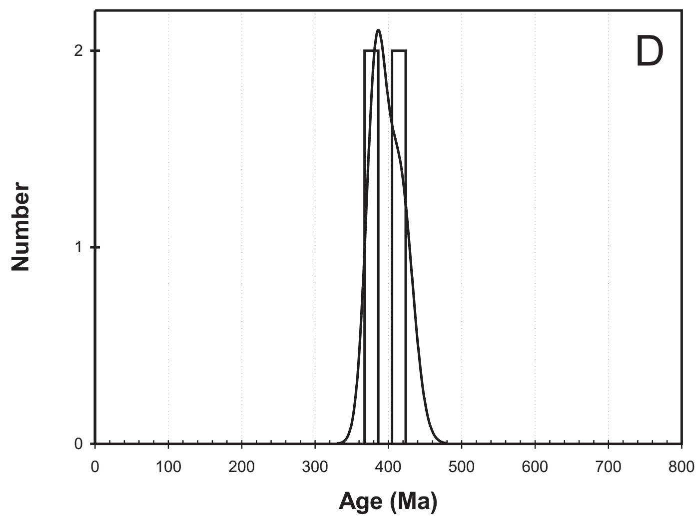
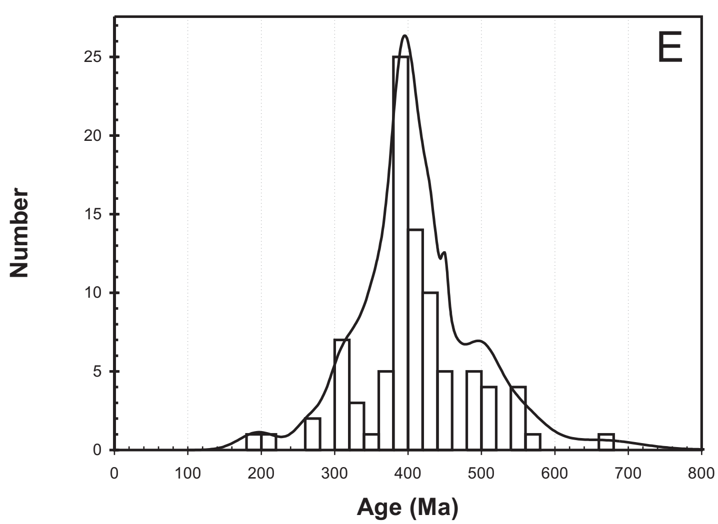


Fig. 4. [*next four pages*] Probability plots and histograms for spot ages in the range 0-800 Ma with precision better than ± 20% from monazite grains, shown by well/field and stratigraphic level.

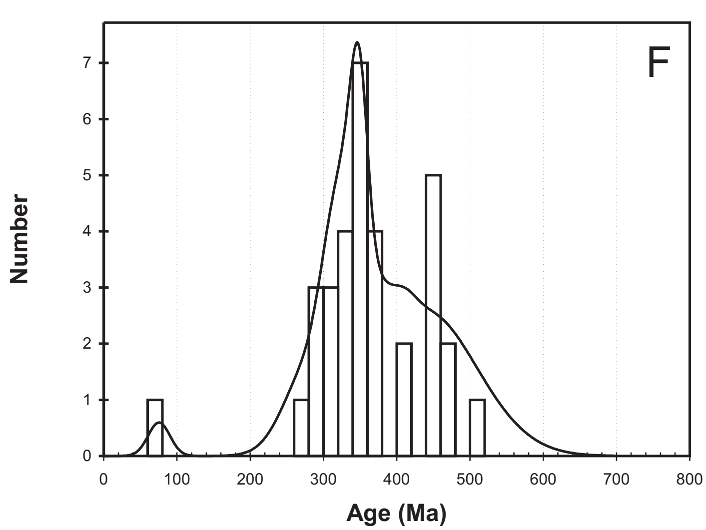
Thebaud I-93 Missisauga Fm Middle mbr ages < 800 Ma



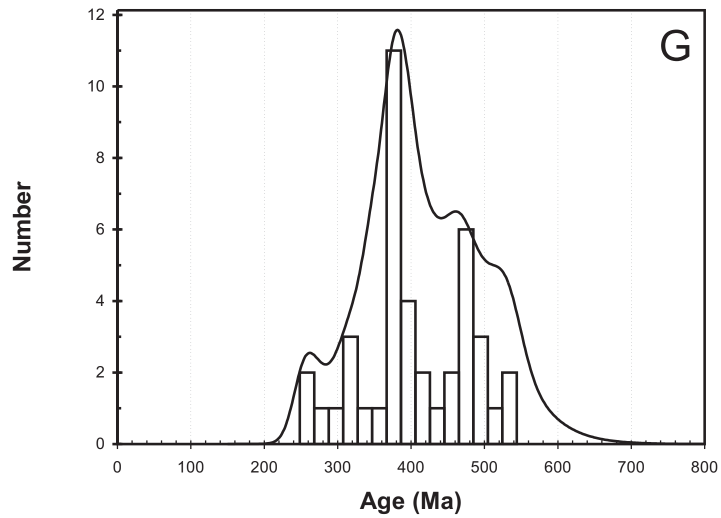
Glenelg field Missisauga Fm Upper mbr ages < 800 Ma



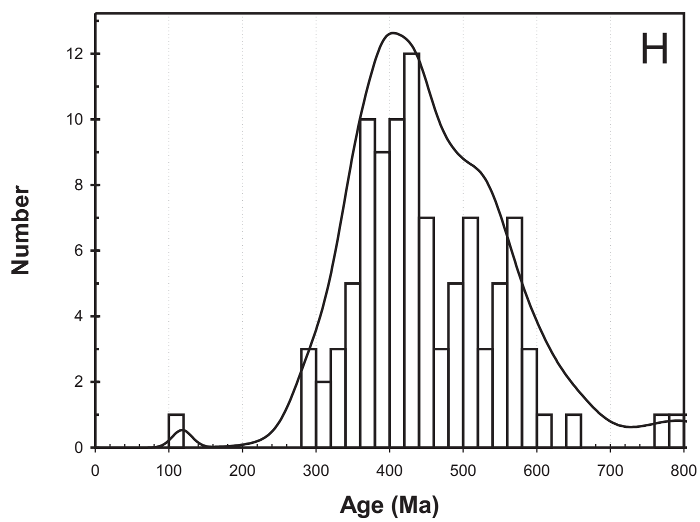
North Triumph G-43 Logan Canyon Fm Cree mbr ages < 800 Ma



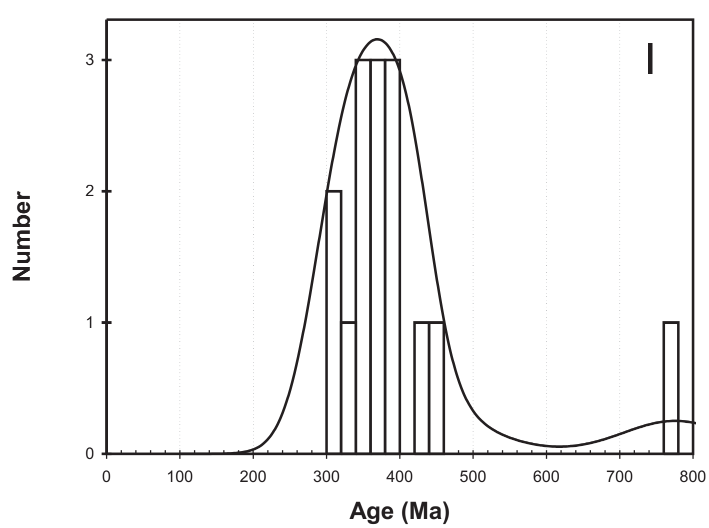
North Triumph G-43 Missisauga Fm Upper mbr ages < 800 Ma



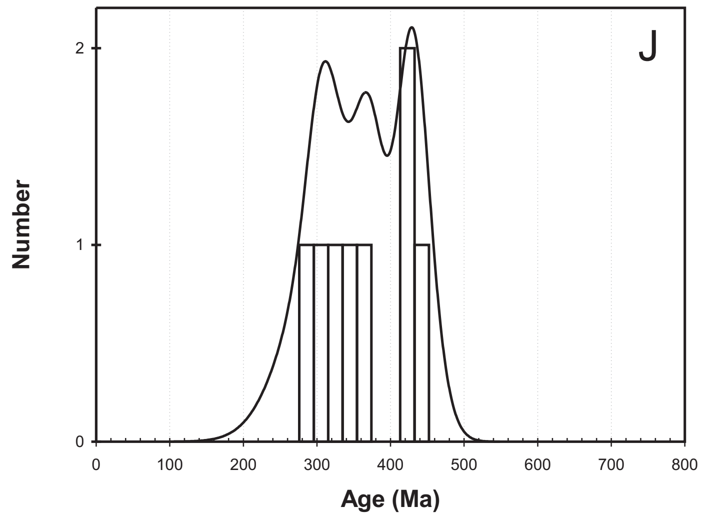
Venture field Missisauga Fm Lower mbr ages < 800 Ma



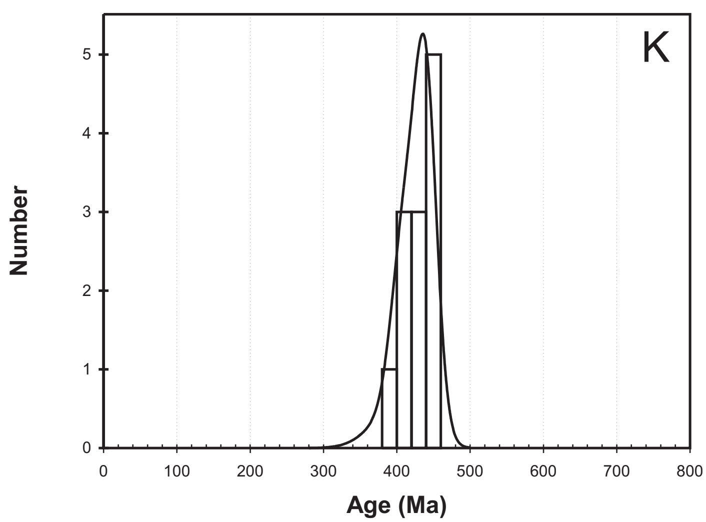
Peskowesk A-99 Logan Canyon Fm Cree mbr ages < 800 Ma



Tantallon M-41 Missisauga Fm Upper mbr



Tantallon M-41 Missisauga Fm Middle mbr



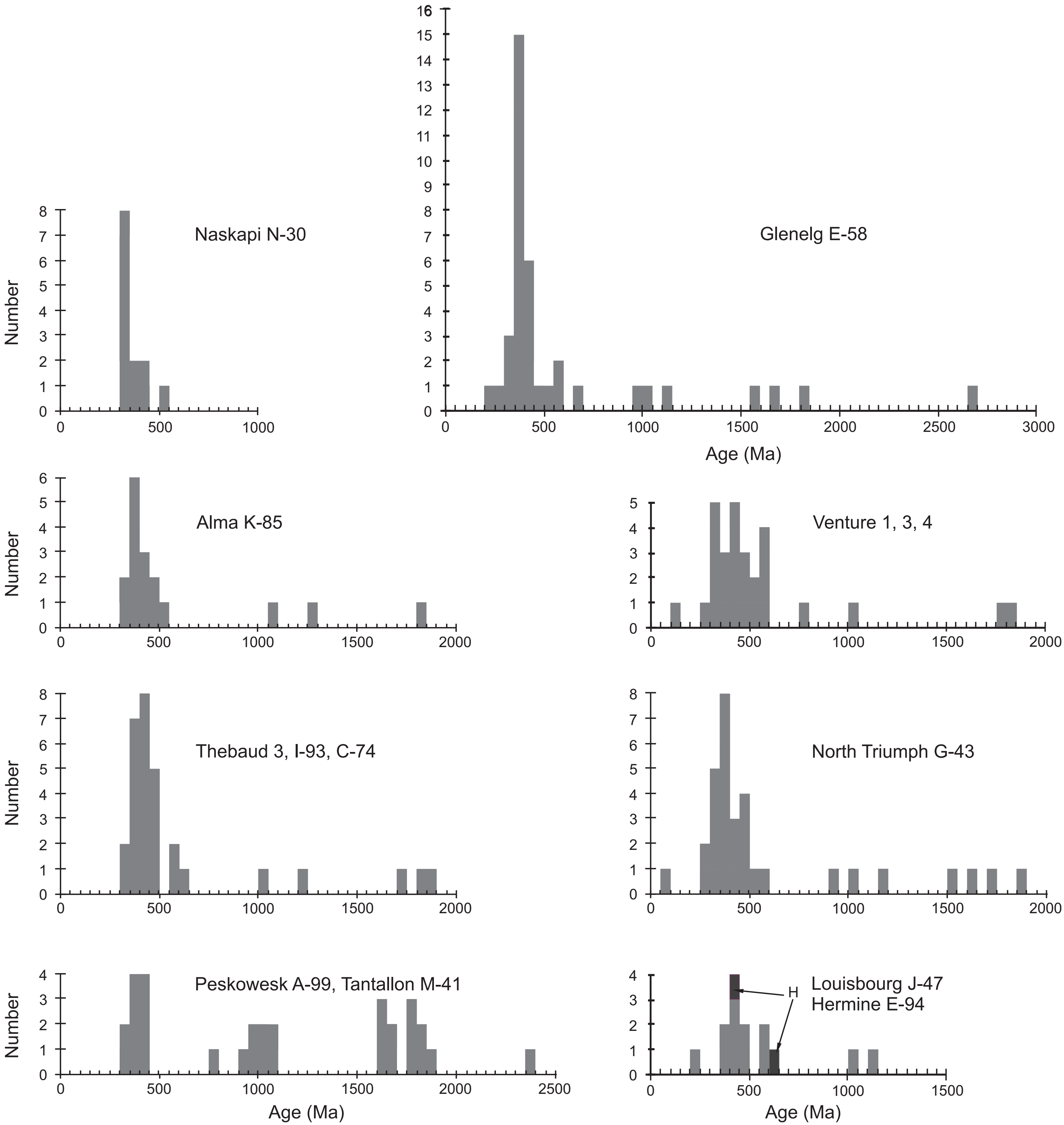


Fig. 5. Histogram of dated grains with age precision on at least one analysis better than ±20% .

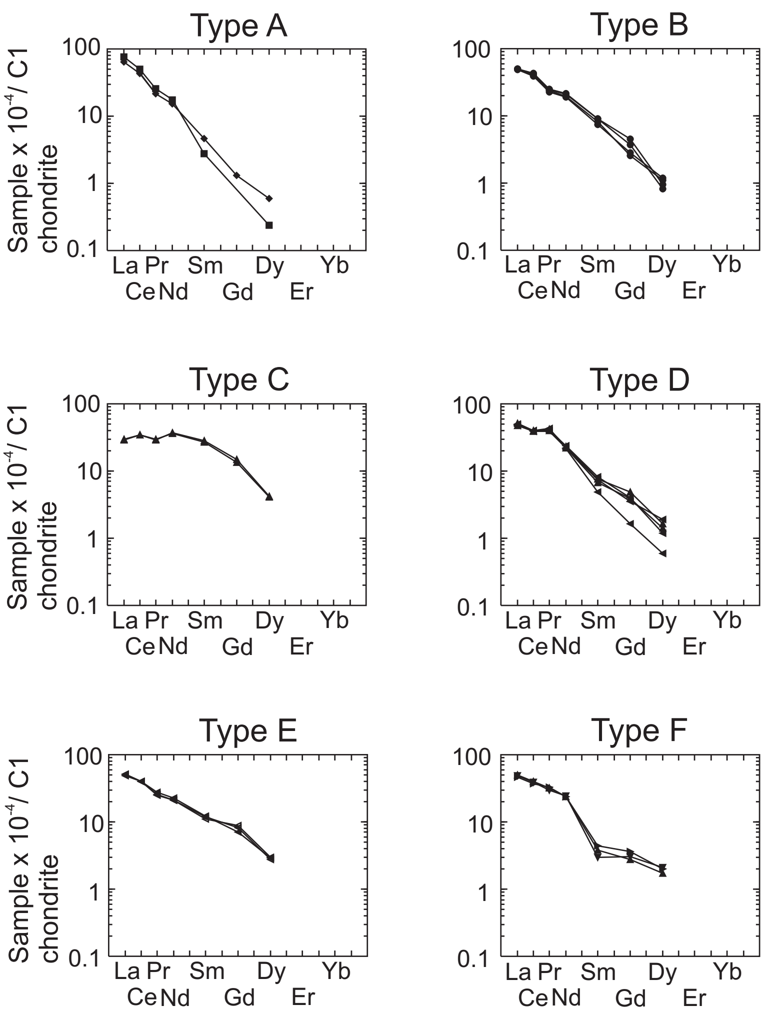


Fig. 6. Types of REE patterns in monazites.

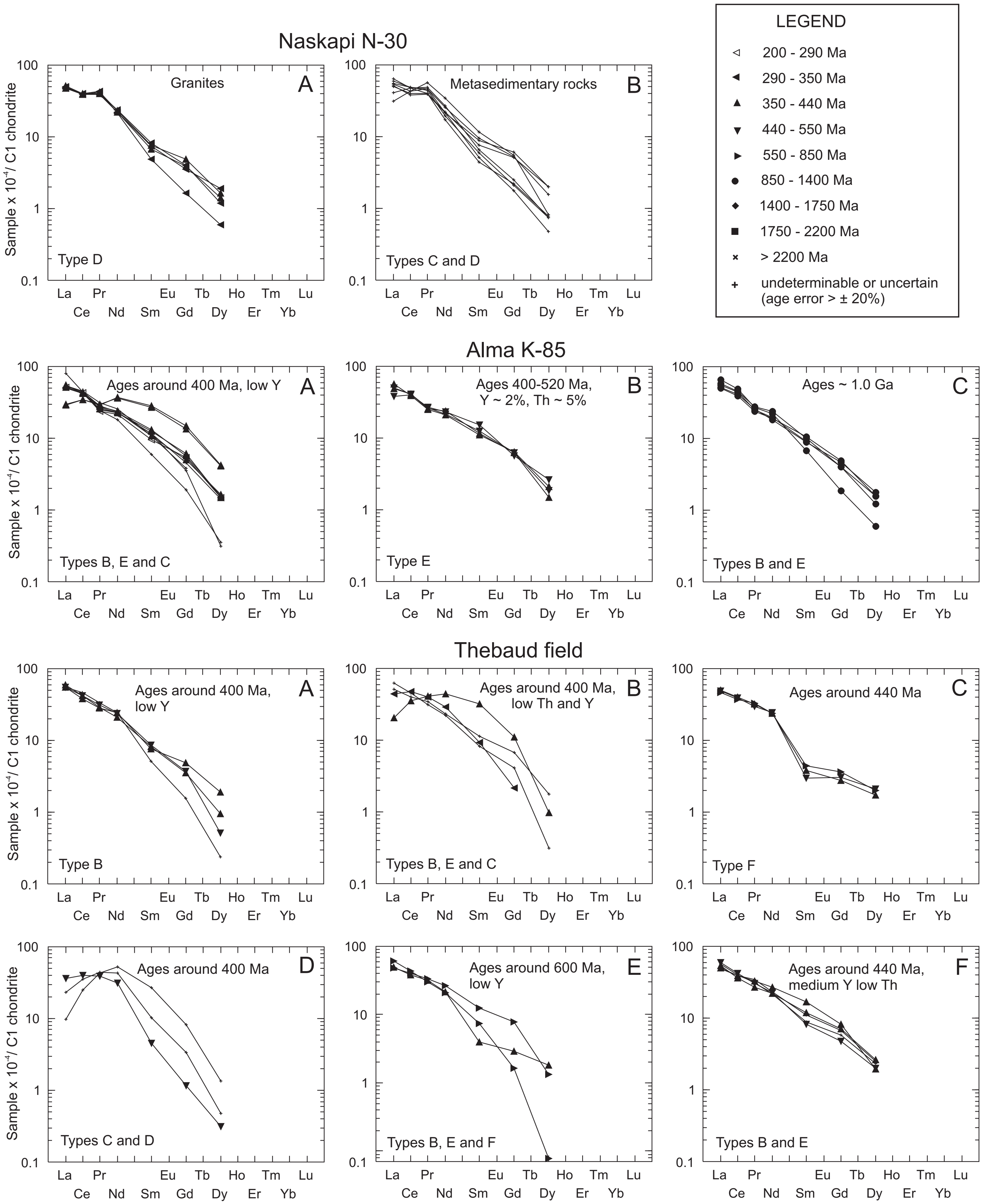
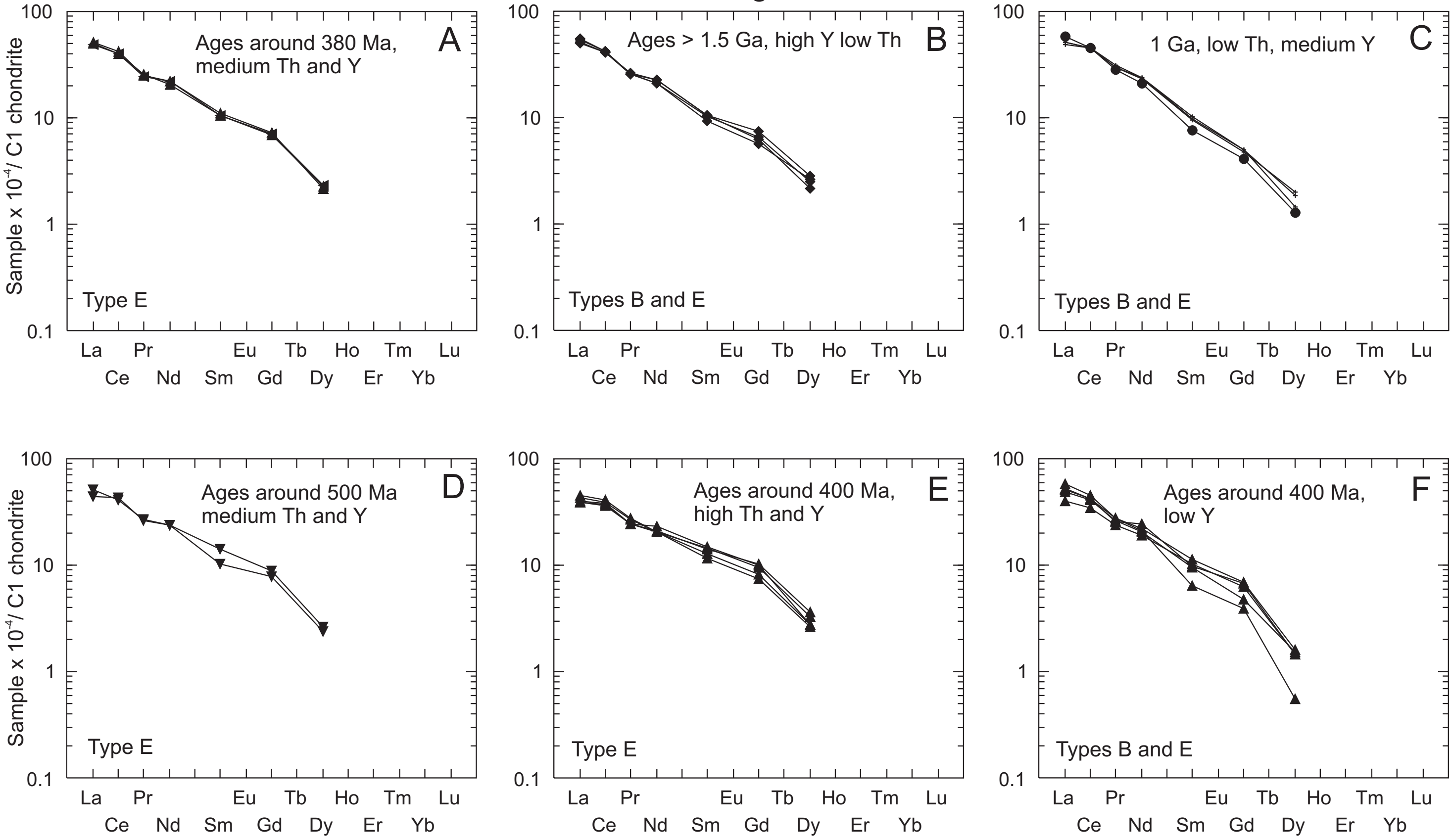
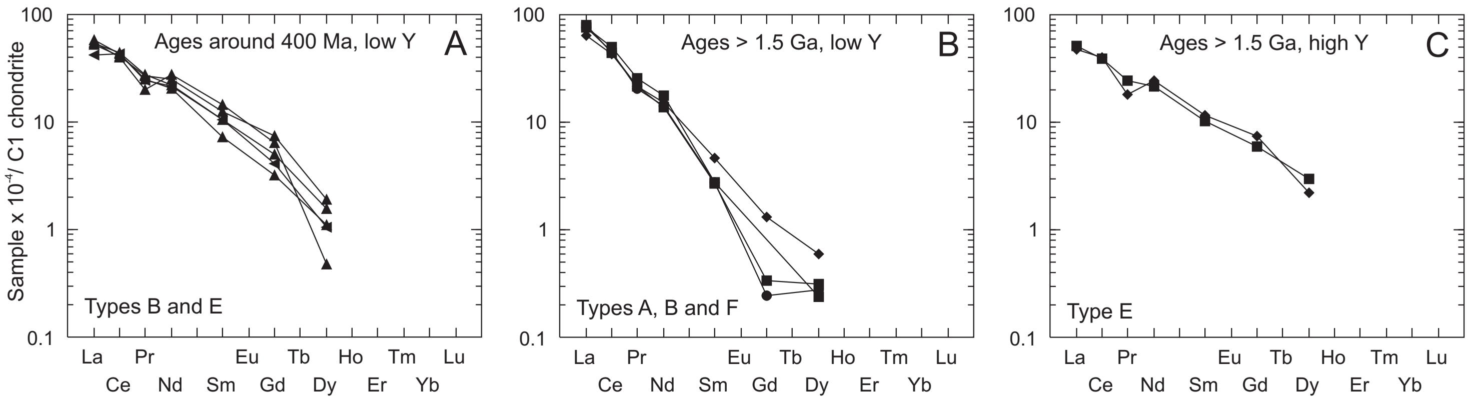


Fig. 7. [*three pages*] Examples of REE patterns in dated monazites.

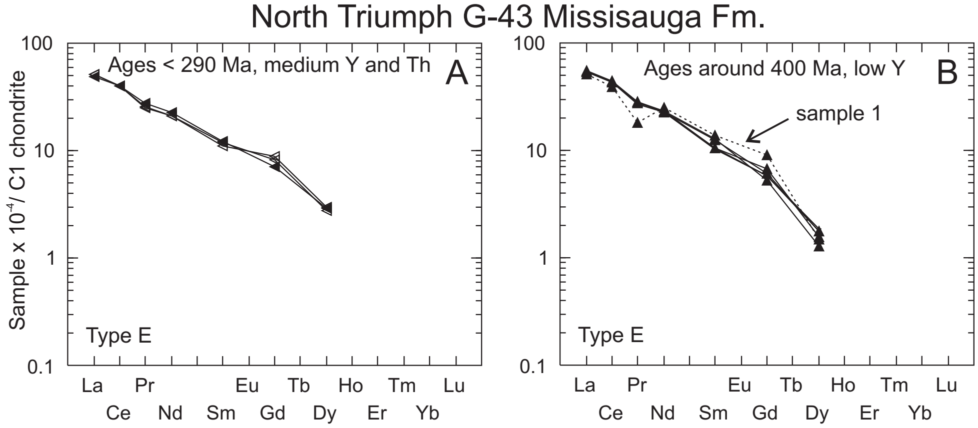
Glenelg E-58

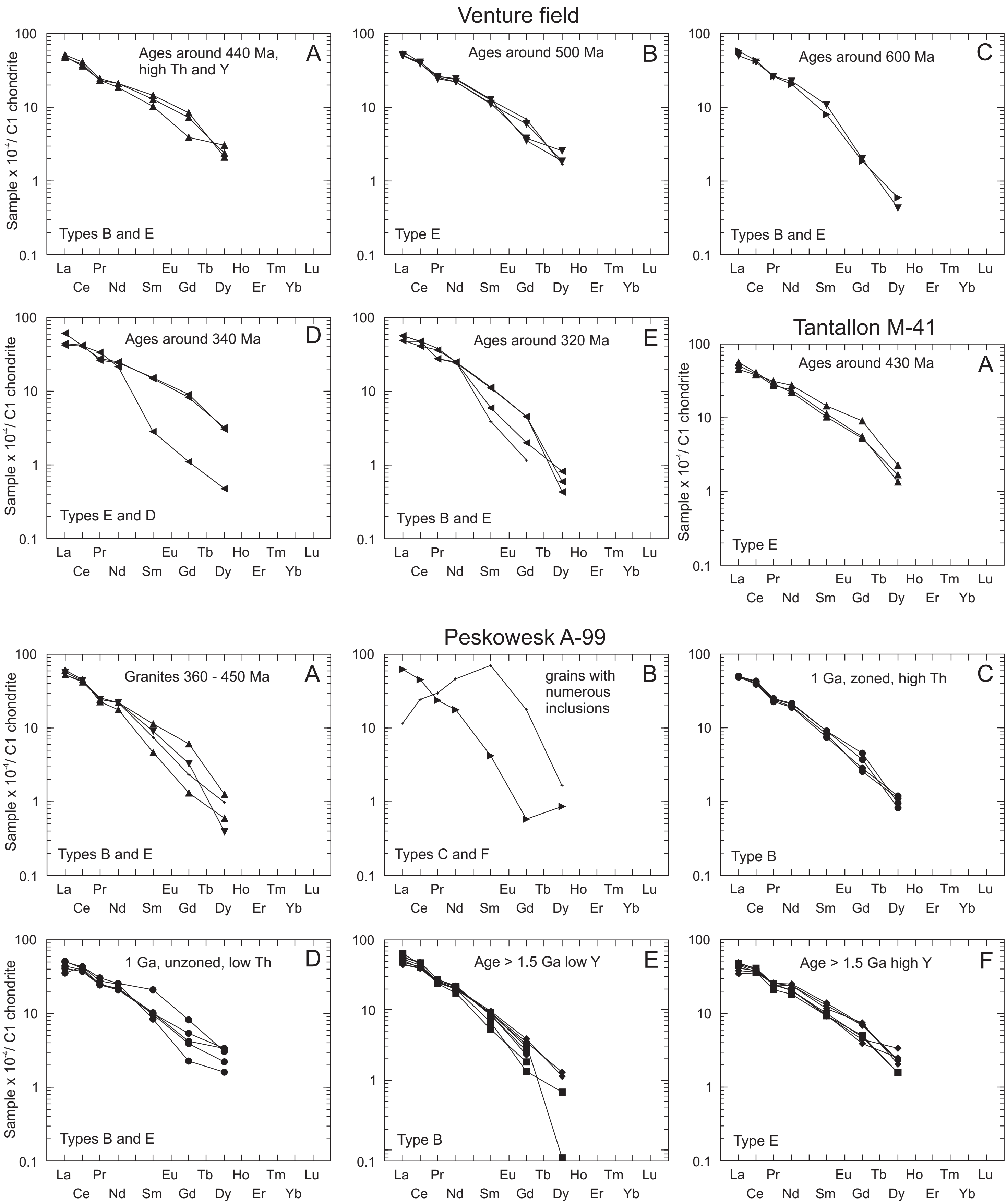


North Triumph G-43 Logan Canyon Fm.



North Triumph G-43 Missisauga Fm.




Venture field
Ages around 440 Ma, high Th and Y
A
Types B and E
Ages around 500 Ma
B
Type E
Ages around 600 Ma
C
Types B and E
Ages around 340 Ma
D
Types E and D
Ages around 320 Ma
E
Types B and E
Tantallon M-41
Ages around 430 Ma
A
Type E
Peskowesk A-99
Granites 360 - 450 Ma
A
Types B and E
grains with numerous inclusions
B
Types C and F
1 Ga, zoned, high Th
C
Type B
1 Ga, unzoned, low Th
D
Types B and E
Age > 1.5 Ga low Y
E
Type B
Age > 1.5 Ga high Y
F
Type E
Sample x 10⁻⁴/ C1 chondrite
100
10
1
0.1
La Ce Pr Nd Sm Eu Gd Tb Dy Ho Er Tm Yb Lu

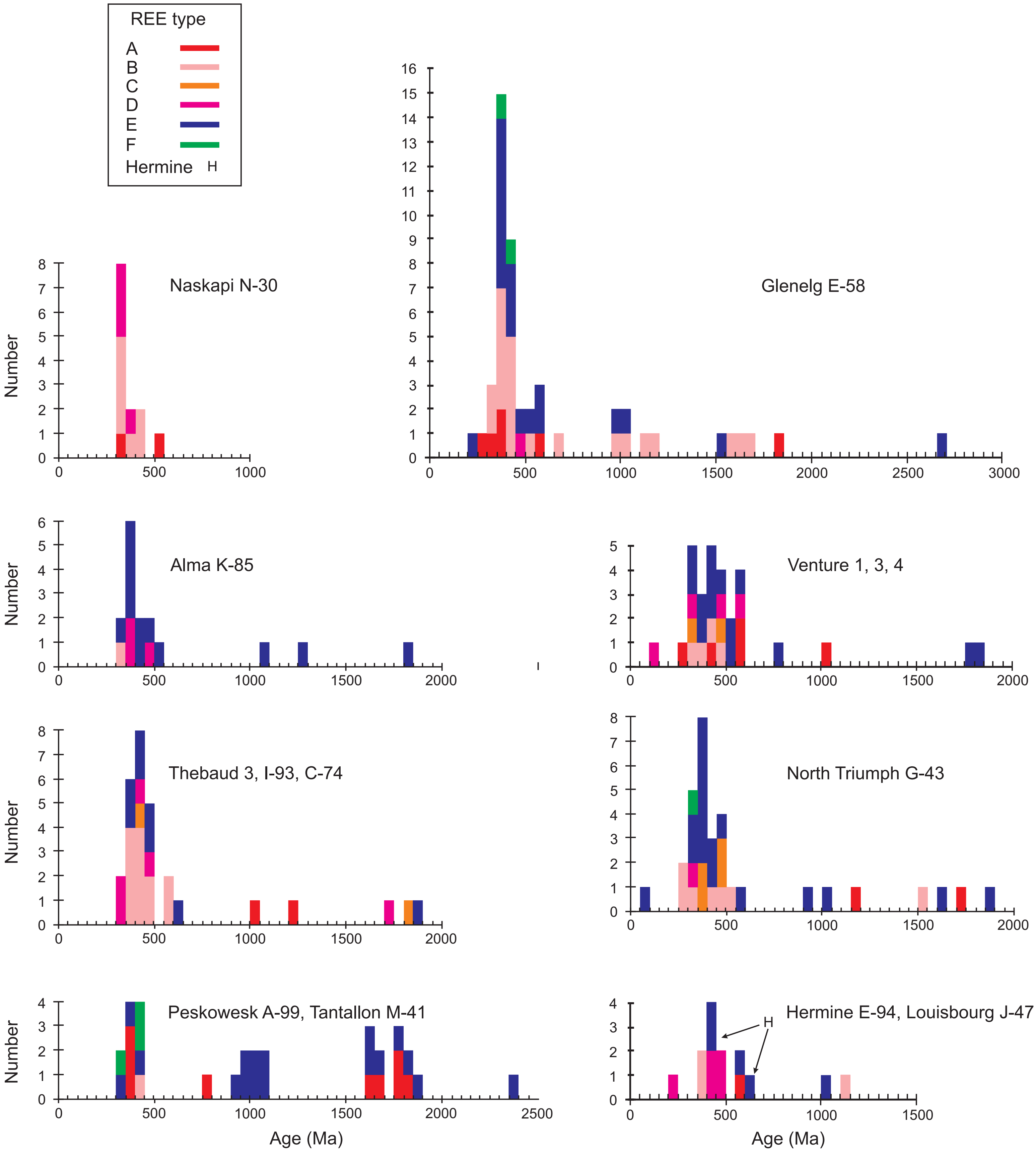
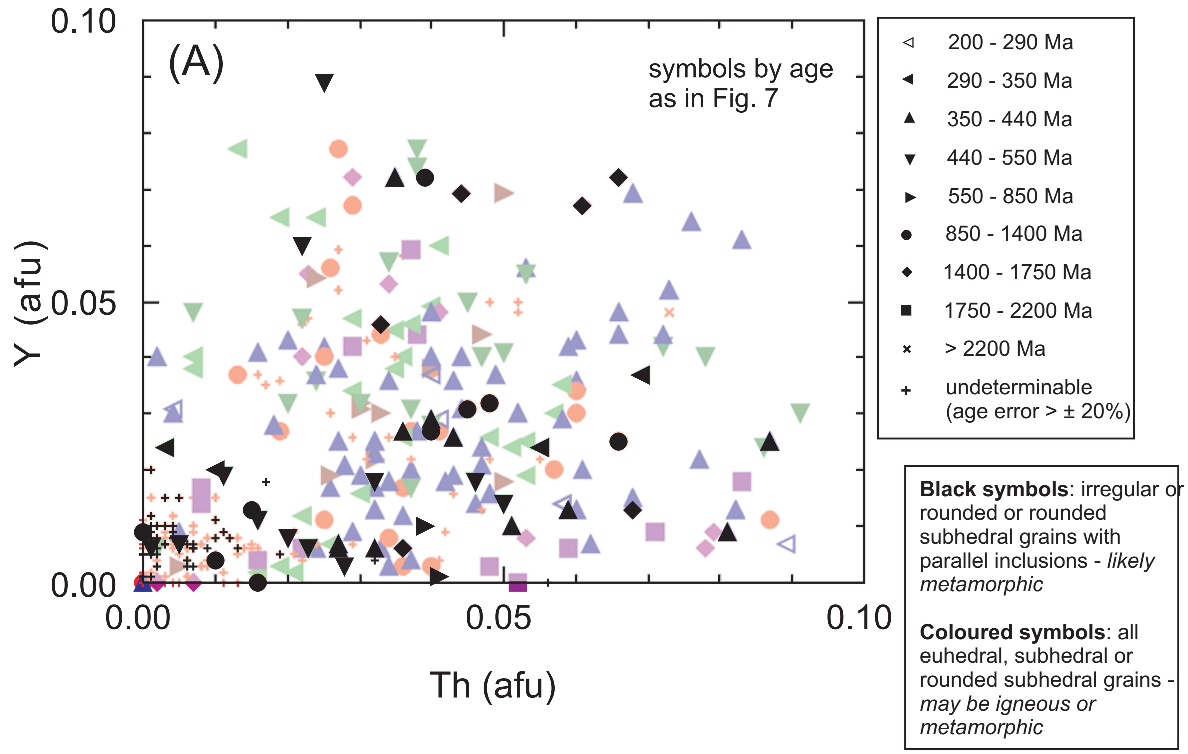


Fig. 8. Type of REE patterns in monazites plotted against age, for grains with age precision better than ±20% .



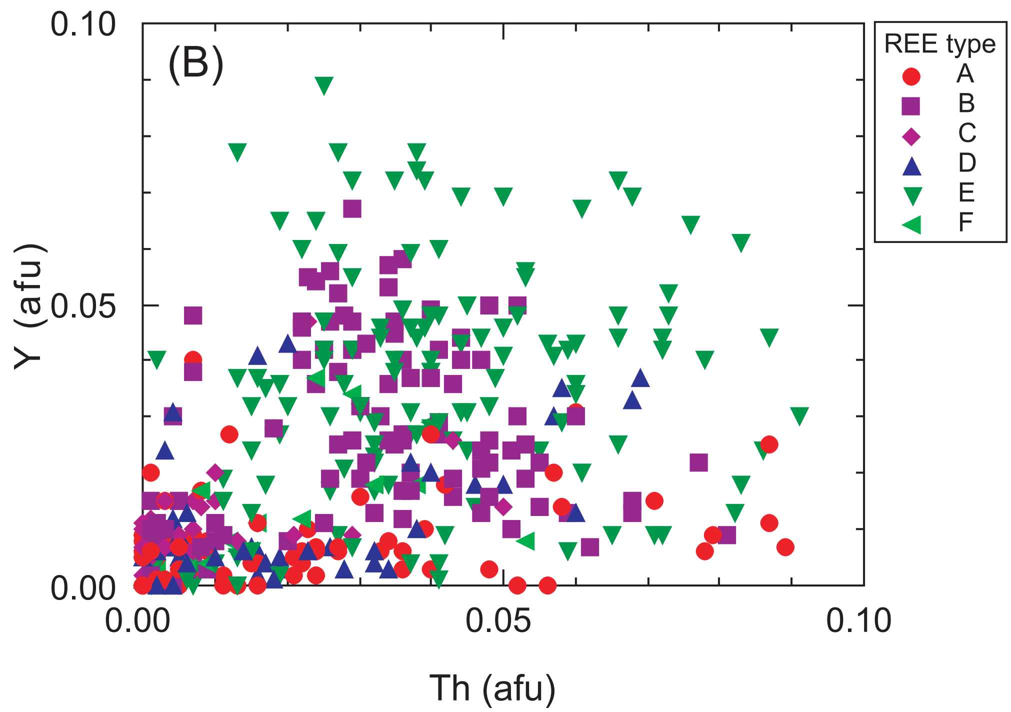


Fig. 9. Variation in Th and Y in monazites (A) by grain textural properties and age; and (B) by REE type.

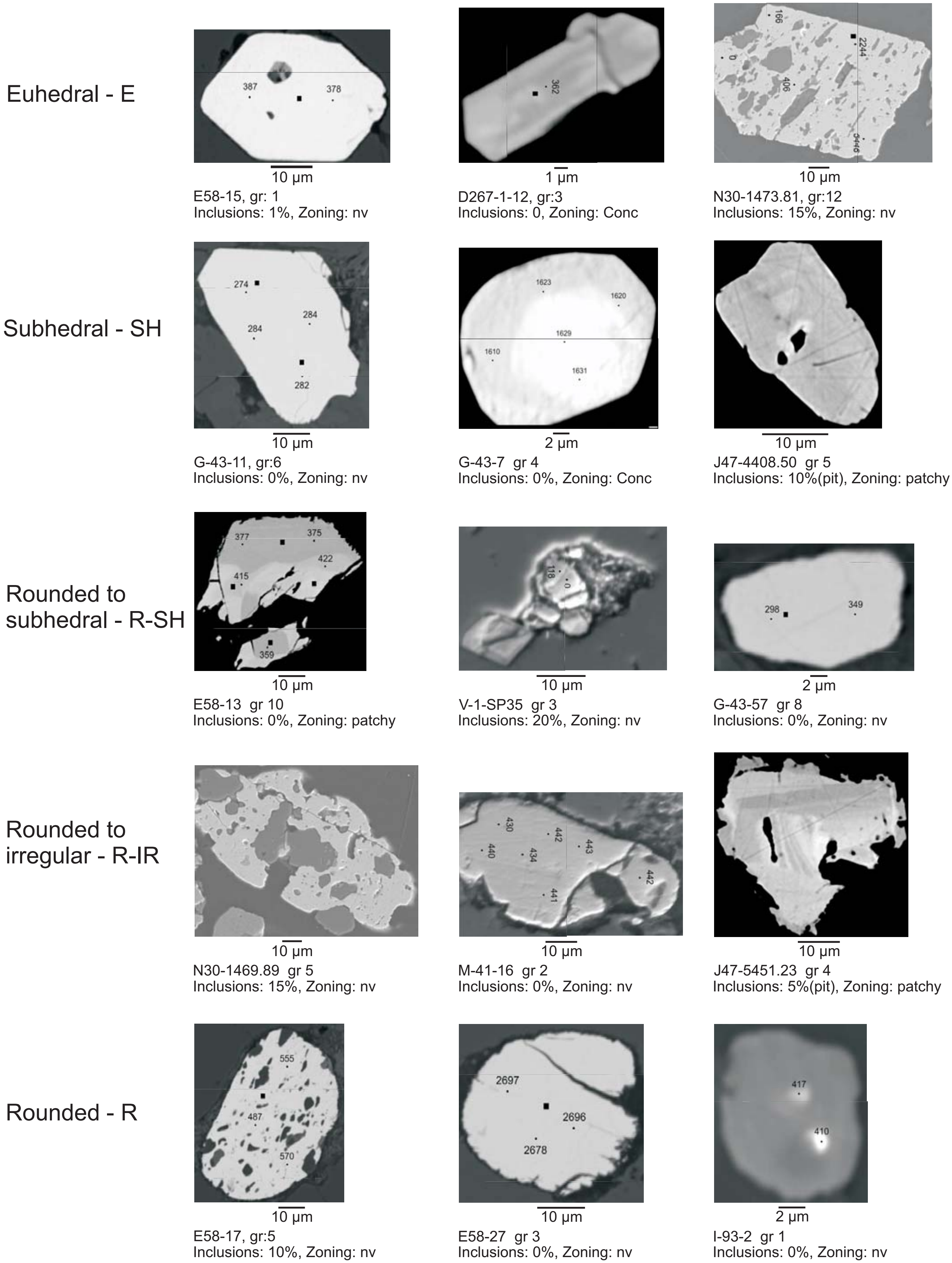


Fig. 10. Examples of types of exterior morphology in monazites shown by back-scattered electron (BSE) images. Also shows examples of inclusions and zoning.

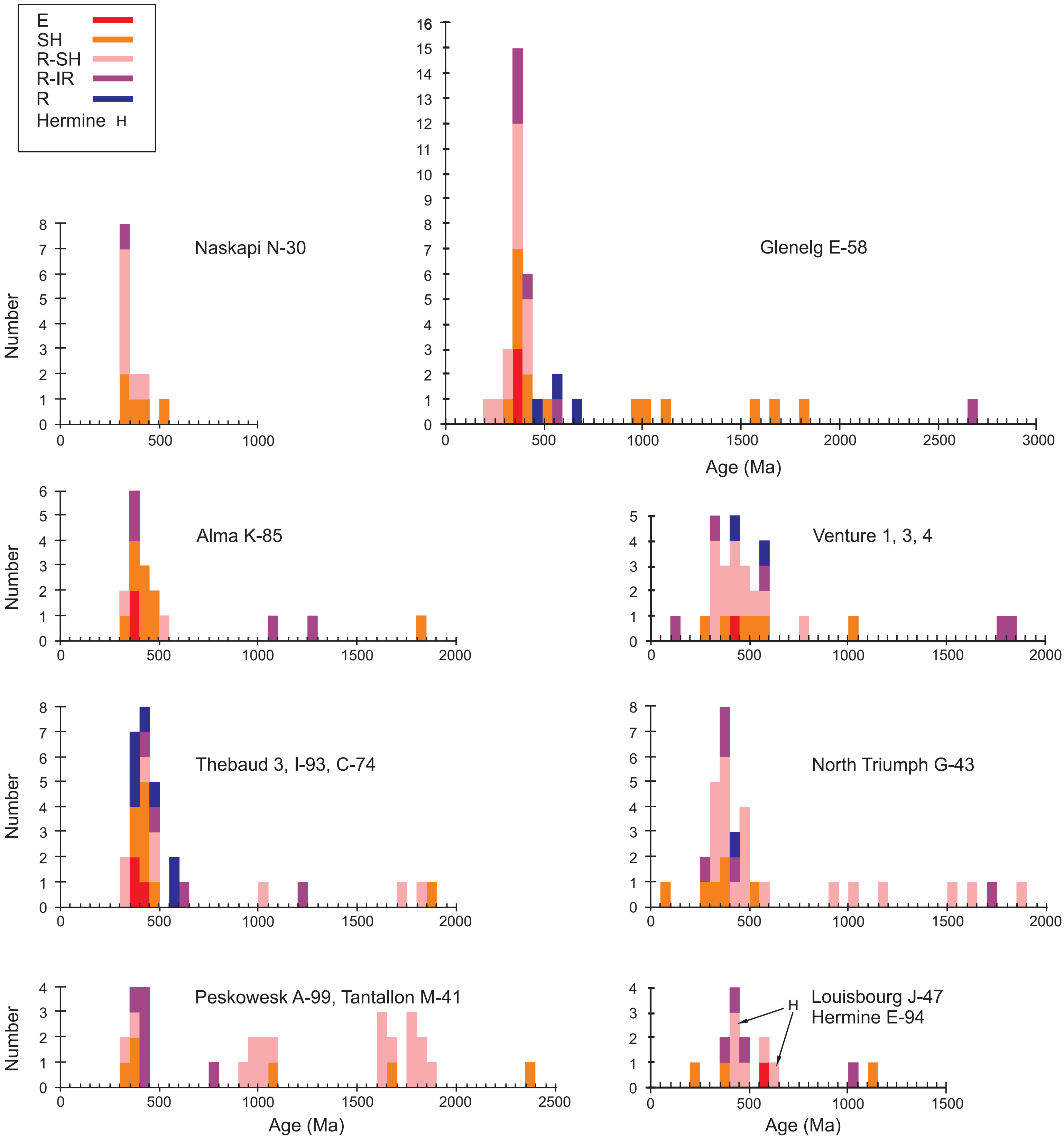


Fig. 11. Type of exterior morphology in monazites plotted against age, for grains with age precision better than ±20% .

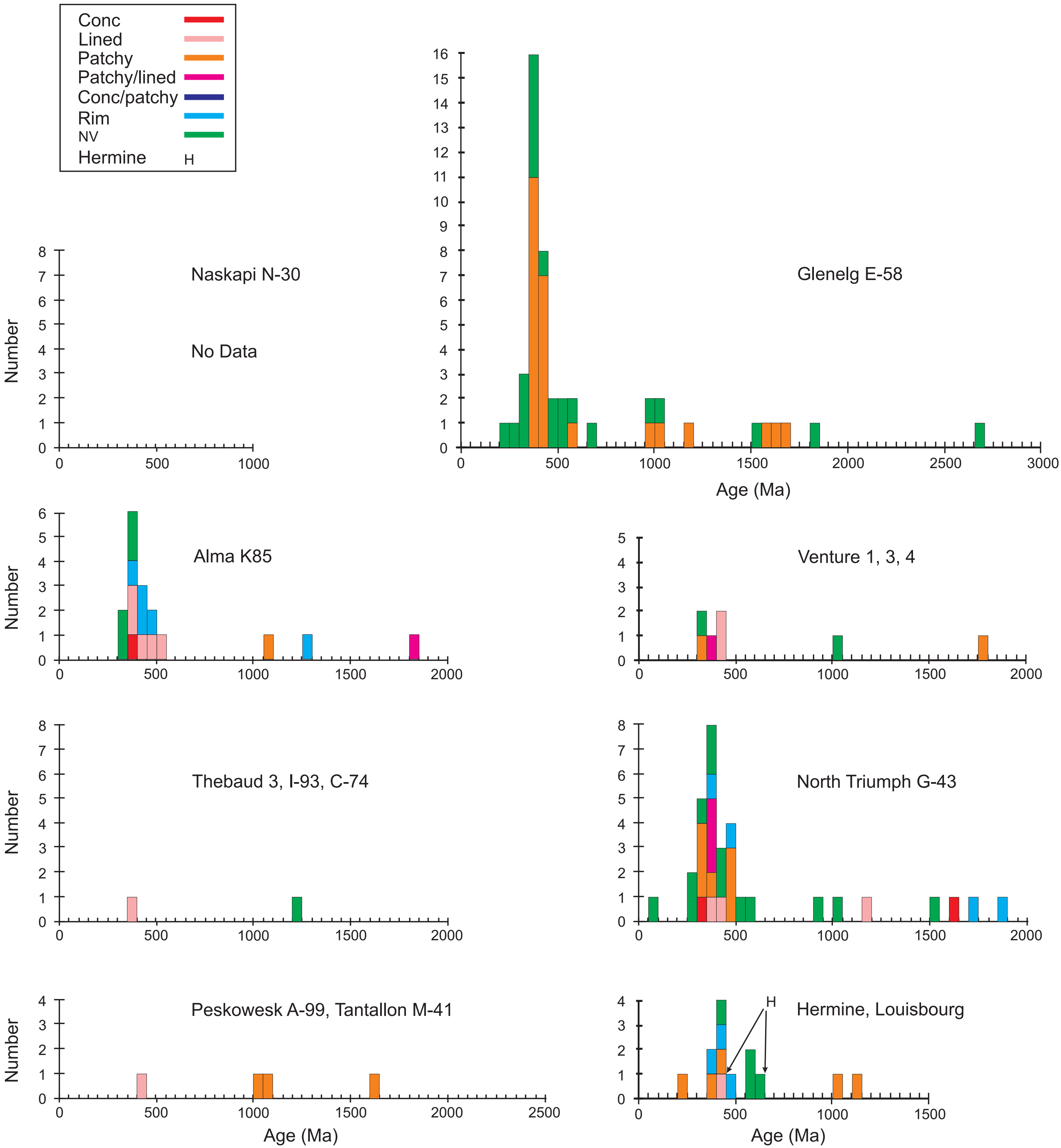
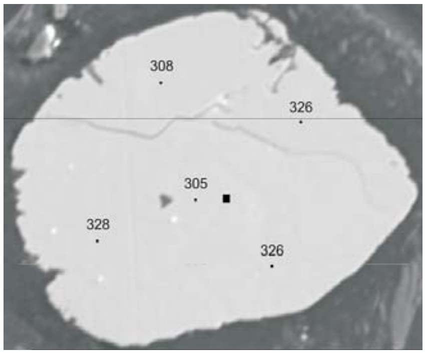


Fig. 12. Type of zoning in monazites plotted against age, for grains with age precision better than ±20% .

Fig. 13. [*next ten pages*] Examples of each monazite type, by region, shown by back-scattered electron (BSE) images.

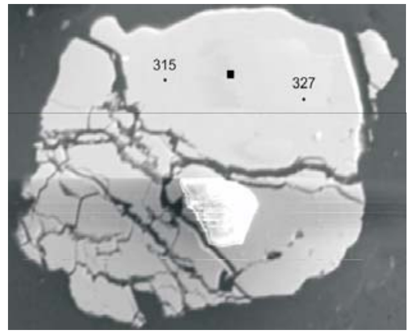
Western Basin

Naskapi N-30



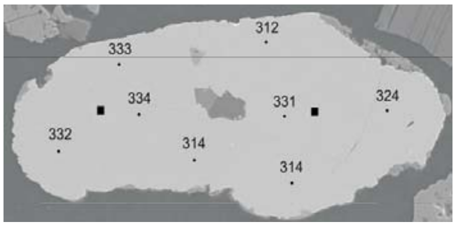
Type: 5 (W01)
U.G.I. #: 19
Sample #: N30 1473.81
Grain #: 4
Morph: R-SH
Incl: 1%
Zoning: nv
REE Type: B
Mean Age: 319

10µm



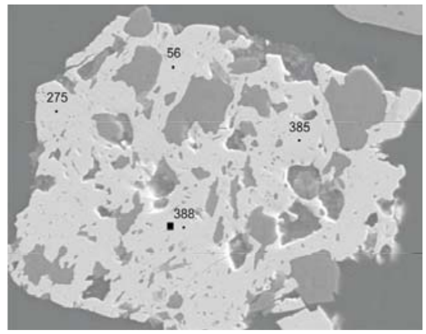
Type: 34 (W02)
U.G.I. #: 22
Sample #: N30 1473.81
Grain #: 7
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: D
Mean Age: 321

10µm



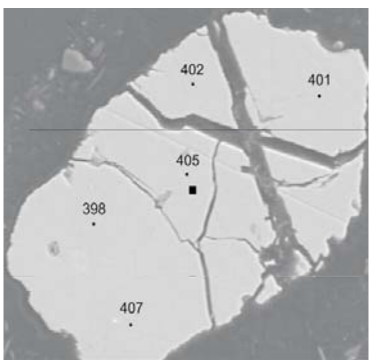
Type: 35 (W03)
U.G.I. #: 31
Sample #: N30 1473.81
Grain #: 17
Morph: R-SH
Incl: 1%
Zoning: nv
REE Type: A
Mean Age: 324

10µm



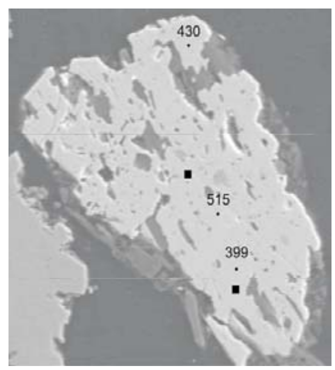
Type: 36 (W04)
U.G.I. #: 29
Sample #: N30 1473.81
Grain #: 14
Morph: SH
Incl: 25%
Zoning: nv
REE Type: D
Mean Age: 388

10µm



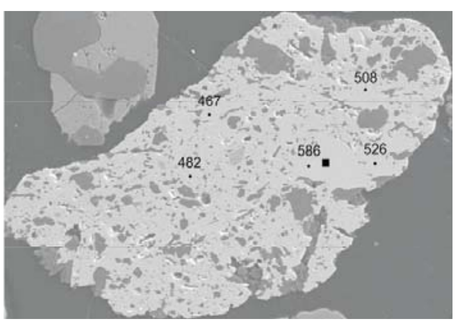
Type: 37 (W05)
U.G.I. #: 8
Sample #: N30 1469.89
Grain #: 9
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 403

10µm



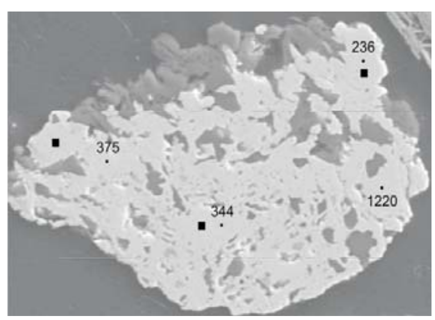
Type: 38 (W06)
U.G.I. #: 9
Sample #: N30 1469.89
Grain #: 10
Morph: R-IR
Incl: 10%
Zoning: nv
REE Type: A
Mean Age: 515

10µm



Type: 29 (W07)
U.G.I. #: 23
Sample #: N30 1473.81
Grain #: 8
Morph: R-SH
Incl: 15%
Zoning: nv
REE Type: C
Mean Age: High Errors

10µm



Type: 28 (W10)
U.G.I. #: 6
Sample #: N30 1469.89
Grain #: 7
Morph: R-SH
Incl: 15%
Zoning: nv
REE Type: B
Mean Age: High Errors

10µm

No Photo

Type: 32 (W11)
U.G.I. #: 1.5
Sample #: N30 1469.89
Grain #: 2
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: D
Mean Age: High Errors

No Photo

Type: 31 (W12)
U.G.I. #: 13.5
Sample #: N30 1469.89
Grain #: 15
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: B
Mean Age: High Errors

Central Basin

Alma K-85

Thebaud #3

Thebaud I-93

Thebaud C-74

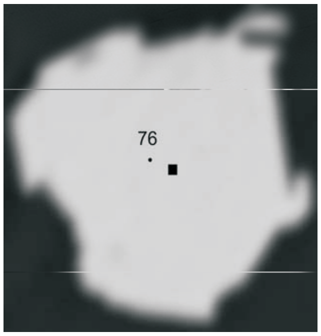
Glenelg E-58

North Triumph G-43

Venture #1

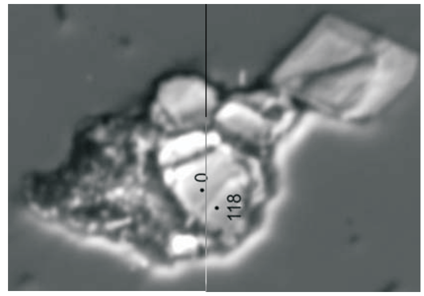
Venture #3

Venture #4



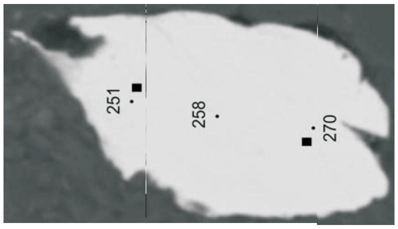
Type: 1 (C01)
U.G.I. #: 170
Sample #: G-43-11
Grain #: 4
Morph: SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 76

1µm



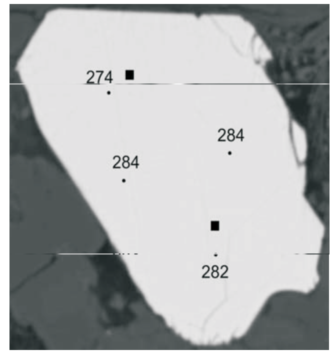
Type: 2 (C1.5)
U.G.I. #: 216
Sample #: V-1-SP35
Grain #: 1
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: D
Mean Age: 118

10µm



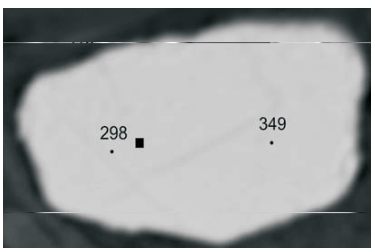
Type: 3 (C02)
U.G.I. #: 215
Sample #: G-43-57
Grain #: 20
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 260

10µm



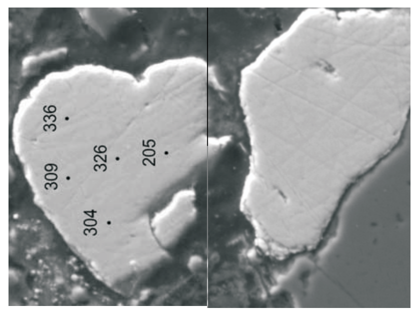
Type: 4 (C03)
U.G.I. #: 172
Sample #: G-43-11
Grain #: 6
Morph: SH
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 281

10µm



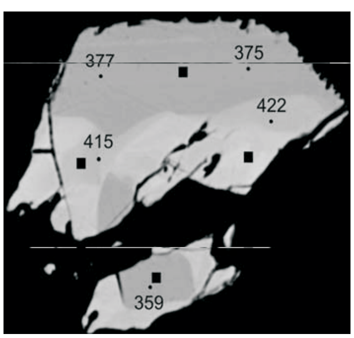
Type: 5 (C04)
U.G.I. #: 203
Sample #: G-43-57
Grain #: 8
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 324

1µm



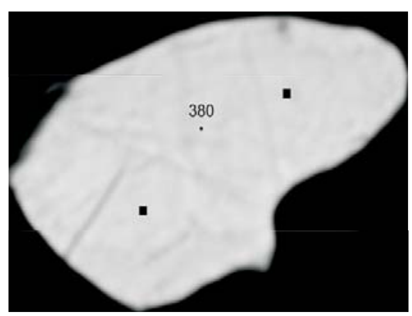
Type: 6 (C04.5)
U.G.I. #: 68
Sample #: TH-3-1
Grain #: 2
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: D
Mean Age: 331

10µm



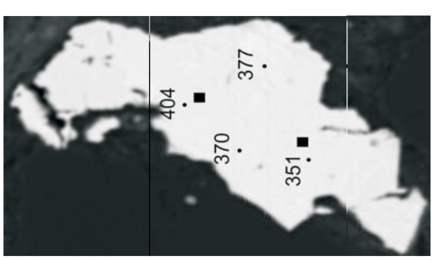
Type: 7 (C05)
U.G.I. #: 104
Sample #: E58-13
Grain #: 10
Morph: R-SH
Incl: 0%
Zoning: Patchy
REE Type: B
Mean Age: 372

10µm



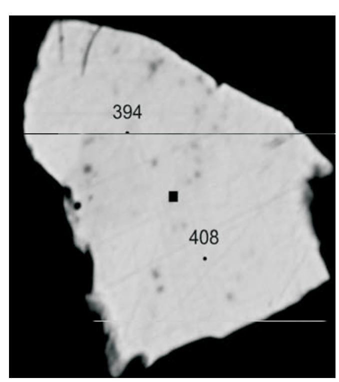
Type: 8 (C06)
U.G.I. #: 44
Sample #: D267_1_8
Grain #: 5
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: D
Mean Age: 380

1µm



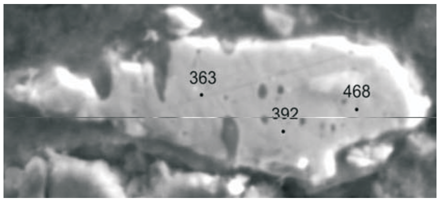
Type: 9 (C07)
U.G.I. #: 202
Sample #: G-43-57
Grain #: 7
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 384

10µm



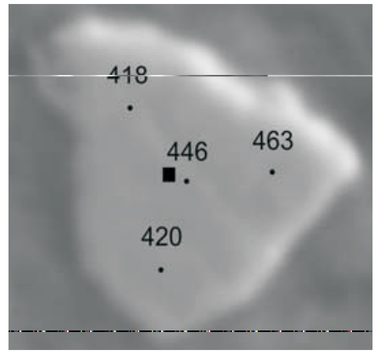
Type: 10 (C08)
U.G.I. #: 63
Sample #: D267_1_9A
Grain #: 4
Morph: SH
Incl: 1%
Zoning: nv
REE Type: E
Mean Age: 401

10µm



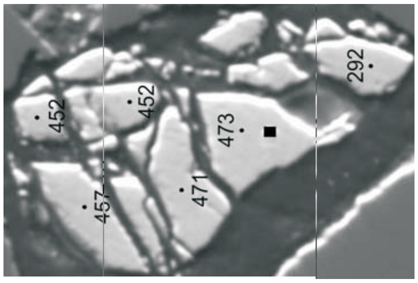
Type: 11 (C09)
U.G.I. #: 69
Sample #: TH-3-1
Grain #: 1
Morph: R-SH
Incl: 1%
Zoning: nv
REE Type: C
Mean Age: 408

10μm



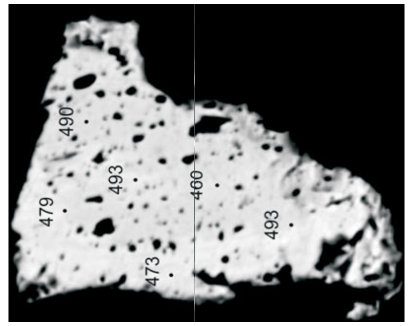
Type: 12 (C10)
U.G.I. #: 231
Sample #: V-3-SP54
Grain #: 19
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 437

1μm



Type: 13 (C11)
U.G.I. #: 84
Sample #: C-74-P18
Grain #: 1
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 461

10μm

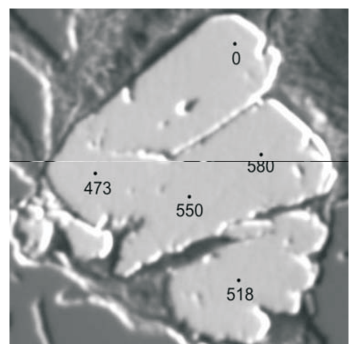


Type: 14 (C12)
U.G.I. #: 192
Sample #: G-43-46
Grain #: 6
Morph: R-SH
Incl: 10%
Zoning: patchy
REE Type: C
Mean Age: 483

10μm

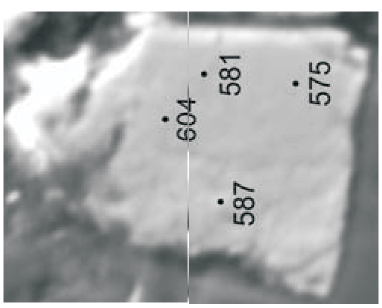
Type: 15 (C13)
U.G.I. #: 255
Sample #: V-3-SP8
Grain #: 1
Morph: SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 520

10μm



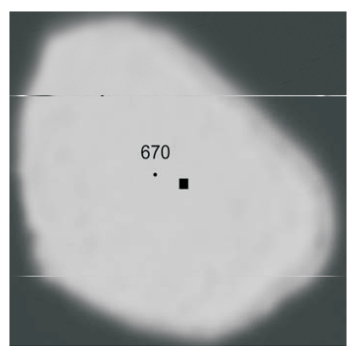
Type: 16 (C14)
U.G.I. #: 227
Sample #: V-3-SP38
Grain #: 1
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 565

10μm



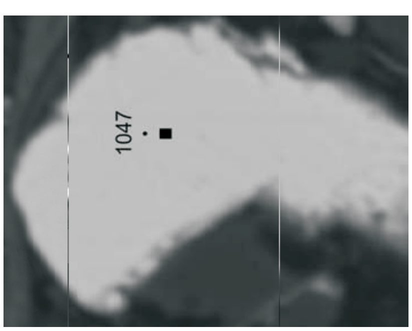
Type: 17 (C14.5)
U.G.I. #: 248
Sample #: V-4-SP87
Grain #: 1
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: D
Mean Age: 587

10μm



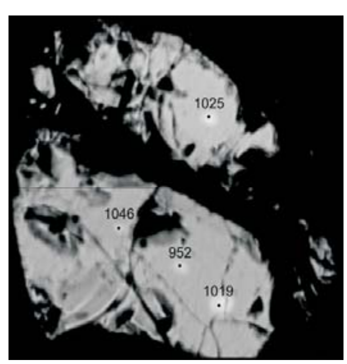
Type: 18 (C15)
U.G.I. #: 100
Sample #: E58-13
Grain #: 6
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 670

1μm



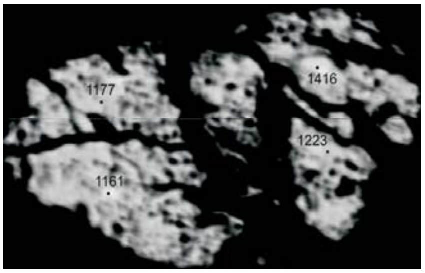
Type: 19 (C16)
U.G.I. #: 179
Sample #: G-43-11
Grain #: 13
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 1047

2μm



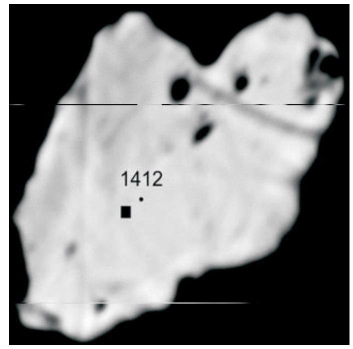
Type: 20 (C17)
U.G.I. #: 234
Sample #: V-4-SP22
Grain #: 1
Morph: R-SH
Incl: 10%
Zoning: nv
REE Type: A
Mean Age: 1011

10μm



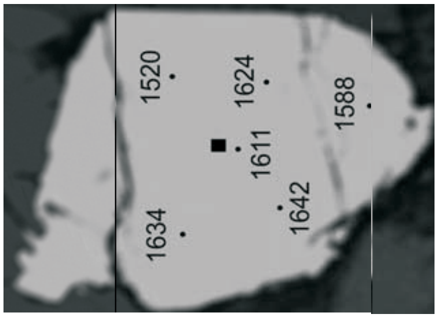
Type: 21 (C18)
U.G.I. #: 88
Sample #: C-74-P11
Grain #: 2
Morph: R-IR
Incl: 25%
Zoning: nv
REE Type: A
Mean Age: 1244

10µm



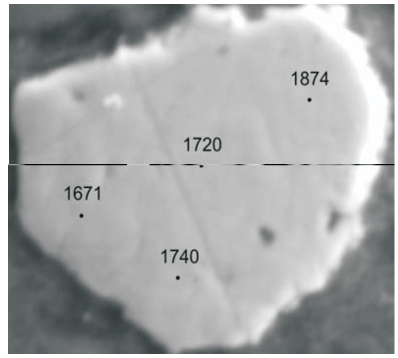
Type: 22 (C18.5)
U.G.I. #: 34
Sample #: D267_1_14
Grain #: 3
Morph: R-SH
Incl: 5%
Zoning: patchy
REE Type: F
Mean Age: 1412

1µm



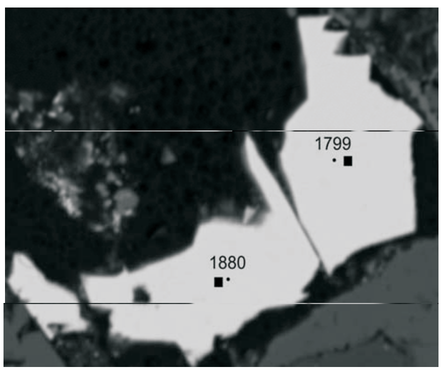
Type: 23 (C19)
U.G.I. #: 152
Sample #: E58-15
Grain #: 4
Morph: SH
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 1603

10µm



Type: 24 (C20)
U.G.I. #: 80
Sample #: I-93-18A
Grain #: 8
Morph: SH
Incl: 1%
Zoning: nv
REE Type: D
Mean Age: 1696

1µm

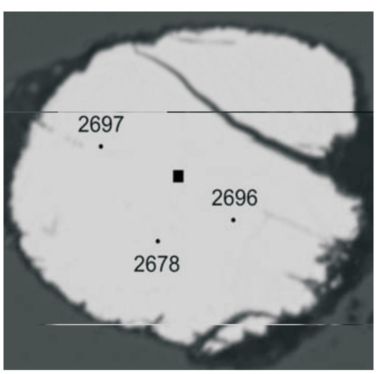


Type: 25 (C21)
U.G.I. #: 140
Sample #: E58-18
Grain #: 5
Morph: SH
Incl: 0%
Zoning: nv
REE Type: A
Mean Age: 1840

10µm

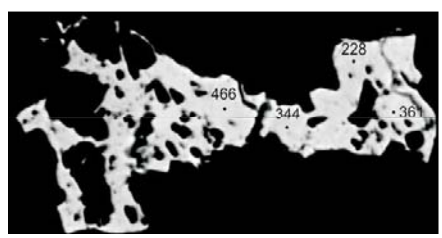
Type: 26 (C22)
U.G.I. #: 236
Sample #: V-4-SP25
Grain #: 2
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 1837

10µm



Type: 27 (C23)
U.G.I. #: 148
Sample #: E58-27
Grain #: 3
Morph: R
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 2690

10µm

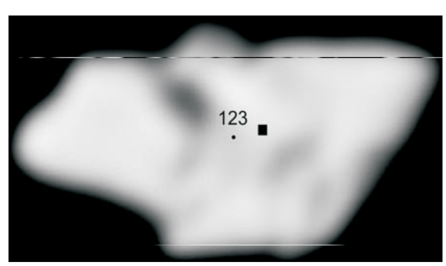


Type: 28 (C24)
U.G.I. #: 163
Sample #: G-43-7
Grain #: 2
Morph: R-SH
Incl: 20%
Zoning: patchy
REE Type: A
Mean Age: High Errors

10µm

Type: 29 (C25)
U.G.I. #: 143
Sample #: E58-18
Grain #: 8
Morph: R-SH
Incl: 30%
Zoning: nv
REE Type: D
Mean Age: High Errors

20µm



Type: 30 (C26)
U.G.I. #: 53
Sample #: D267_1_5
Grain #: 8
Morph: R-SH
Incl: 0%
Zoning: patchy, rim
REE Type: E
Mean Age: High Errors

1µm

No Photo

Type: 31 (C27)
U.G.I. #: 247.5
Sample #: V-4-SP56
Grain #: 1
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: A
Mean Age: High Errors

No Photo

Type: 32 (C28)
U.G.I. #: 68.5
Sample #: TH-3-1
Grain #: 3
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: D
Mean Age: High Errors

No Photo

Type: 33 (C29)
U.G.I. #: 225.5
Sample #: V-3-SP8
Grain #: 2
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: E
Mean Age: High Errors

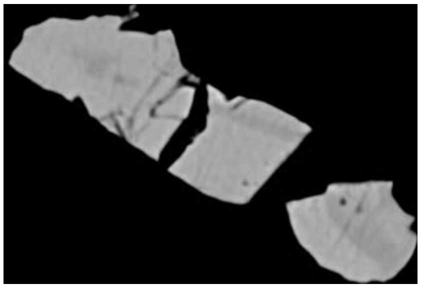
Eastern Basin

Peskowesk A-99

Tantallon M-41

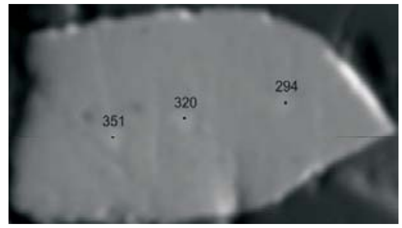
Louisbourg J-47

Hermine E-94



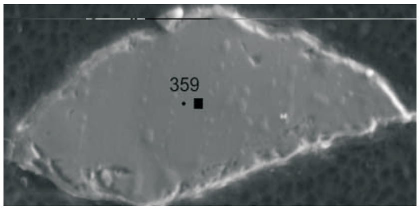
Type: 39 (E01)
U.G.I. #: 289
Sample #: J47-4074-39
Grain #: 4
Morph: SH
Incl: 0%
Zoning: patchy
REE Type: D
Mean Age: 244

10µm



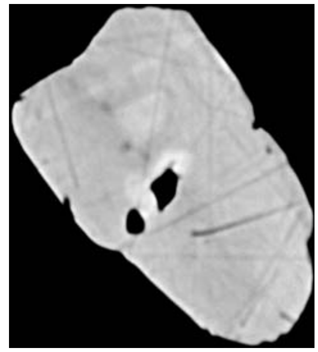
Type: 5 (E02)
U.G.I. #: 283
Sample #: M-41-3
Grain #: 1
Morph: SH
Incl: 0%
Zoning: nv
REE Type: F
Mean Age: 322

10µm



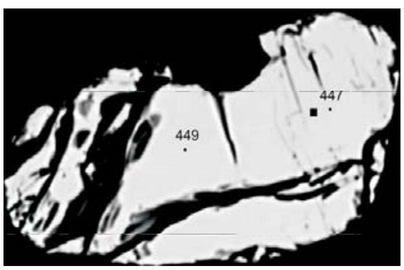
Type: 7 (E03)
U.G.I. #: 263
Sample #: PESK_A99_2238
Grain #: 15
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: A
Mean Age: 359

10µm



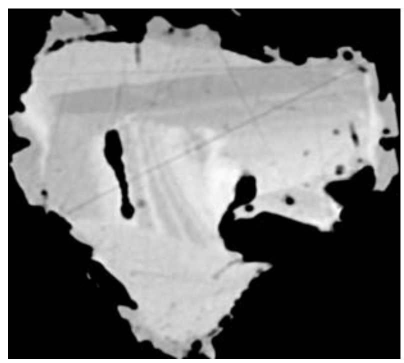
Type: 9 (E04)
U.G.I. #: 294
Sample #: J47-4408-50
Grain #: 5
Morph: SH
Incl: 10%
Zoning: patchy
REE Type: B
Mean Age: 395

10µm



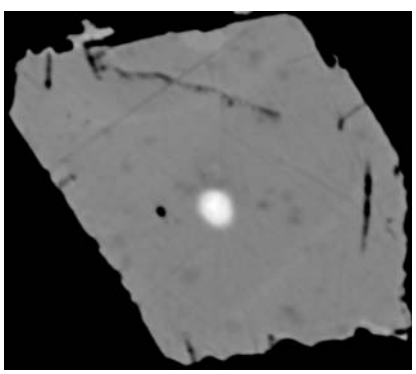
Type: 12 (E05)
U.G.I. #: 269
Sample #: PESK_A99_2228
Grain #: 1
Morph: R-IR
Incl: 20%
Zoning: nv
REE Type: F
Mean Age: 449

10µm



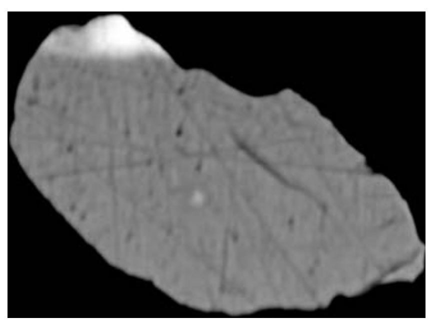
Type: 14 (E06)
U.G.I. #: 301
Sample #: J-47-5451-23
Grain #: 4
Morph: R-IR
Incl: 5%
Zoning: patchy
REE Type: D
Mean Age: 456

10µm



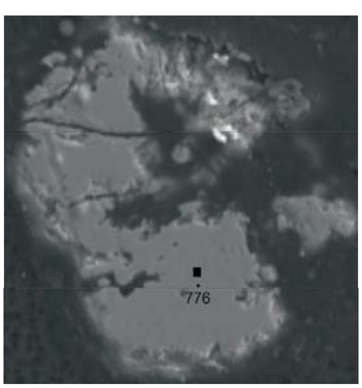
Type: 16 (E07)
U.G.I. #: 292
Sample #: J-47-4408-50
Grain #: 3
Morph: E
Incl: 5%
Zoning: nv
REE Type: A
Mean Age: 564

10µm



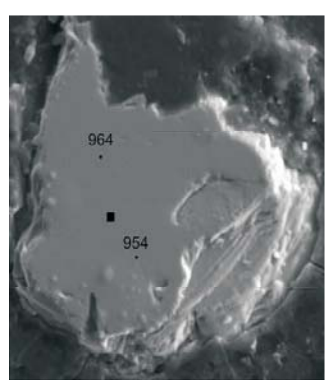
Type: 18 (E08)
U.G.I. #: 288
Sample #: E94-4940
Grain #: 2
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 613

10µm



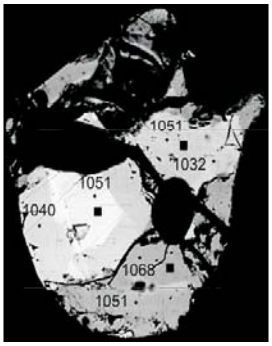
Type: 18 (E08)
U.G.I. #: 254
Sample #: PESK_A99_2238
Grain #: 5
Morph: R-IR
Incl: 3%
Zoning: nv
REE Type: A
Mean Age: 776

10µm



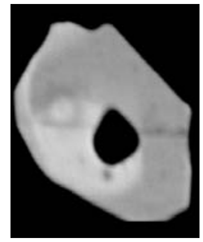
Type: 19 (E10)
U.G.I. #: 256
Sample #: PESK_A99_2238
Grain #: 7
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 959

10µm



Type: 19 (E11)
U.G.I. #: 250
Sample #: PESK_A99_2238
Grain #: 1
Morph: R-SH
Incl: 10%
Zoning: patchy
REE Type: E
Mean Age: 1049

10μm

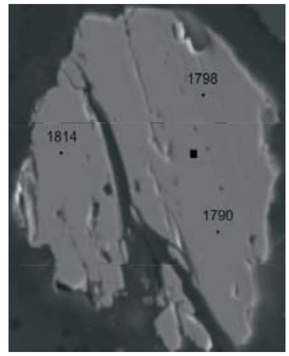


Type: 21 (E12)
U.G.I. #: 298
Sample #: J47-5451-23
Grain #: 1
Morph: E
Incl: 10%
Zoning: patchy
REE Type: B
Mean Age: 1115

10μm

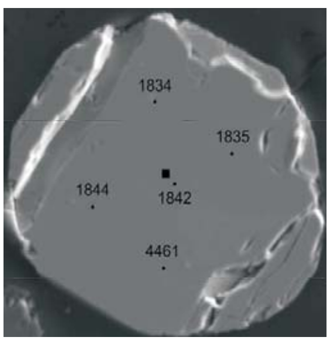
Type: 23 (E13)
U.G.I. #: 274
Sample #: PESK_A99_2228
Grain #: 6
Morph: R-SH
Incl: 1%
Zoning: patchy
REE Type: E
Mean Age: 1645

10μm



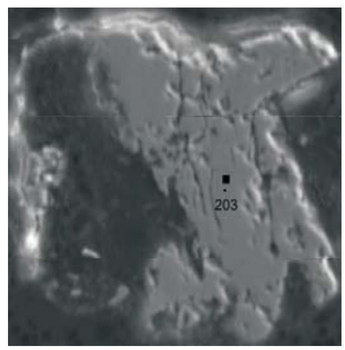
Type: 25 (E14)
U.G.I. #: 280
Sample #: PESK_A99_2228
Grain #: 12
Morph: R-SH
Incl: 1%
Zoning: nv
REE Type: A
Mean Age: 1799

10μm



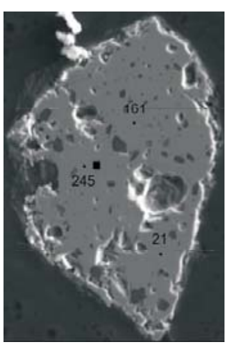
Type: 40 (E15)
U.G.I. #: 273
Sample #: PESK_A99_2228
Grain #: 5
Morph: SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 2363

10μm



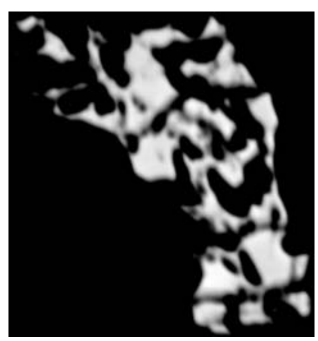
Type: 28 (E16)
U.G.I. #: 262
Sample #: PESK_A99_2238
Grain #: 14
Morph: R-IR
Incl: 10%
Zoning: nv
REE Type: A
Mean Age: High Errors

10μm



Type: 29 (E17)
U.G.I. #: 275
Sample #: PESK_A99_2228
Grain #: 7
Morph: R-SH
Incl: 15%
Zoning: nv
REE Type: A
Mean Age: High Errors

10μm



Type: 30 (E18)
U.G.I. #: 290
Sample #: J47-4408-50
Grain #: 1
Morph: R-IR
Incl: 45%
Zoning: nv
REE Type: F
Mean Age: High Errors

10μm

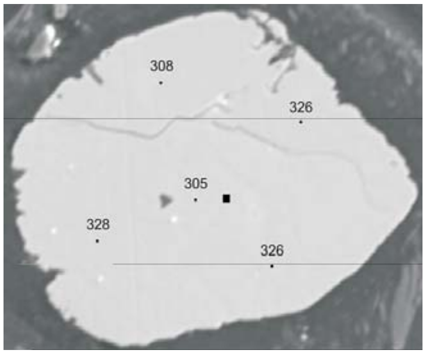
No Photo

Type: 31 (E19)
U.G.I. #: 284.5
Sample #: M-41-3
Grain #: 3
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: E
Mean Age: High Errors

Fig. H. [*next ten pages*] Examples of each monazite type, by region, shown by back-scattered electron (BSE) images.

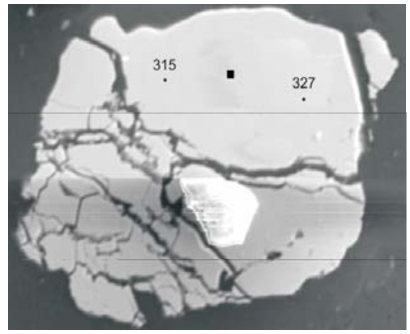
Western Basin

Naskapi N-30



Type: W01
U.G.I. #: 19
Sample #: N30 1473.81
Grain #: 4
Morph: R-SH
Incl: 1%
Zoning: nv
REE Type: B
Mean Age: 319

10µm

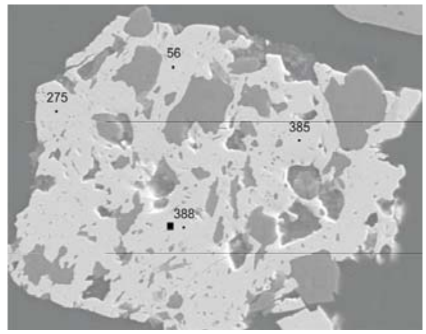


Type: W02
U.G.I. #: 22
Sample #: N30 1473.81
Grain #: 7
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: D
Mean Age: 321

10µm

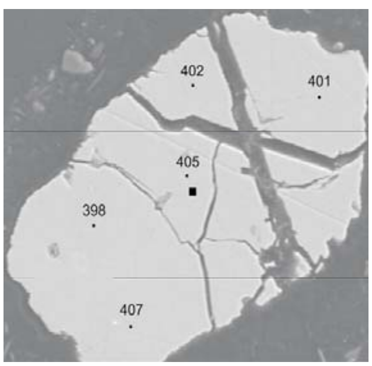
Type: W03
U.G.I. #: 31
Sample #: N30 1473.81
Grain #: 17
Morph: R-SH
Incl: 1%
Zoning: nv
REE Type: A
Mean Age: 324

10µm



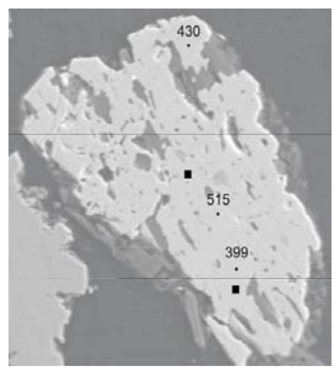
Type: W04
U.G.I. #: 29
Sample #: N30 1473.81
Grain #: 14
Morph: SH
Incl: 25%
Zoning: nv
REE Type: D
Mean Age: 388

10µm



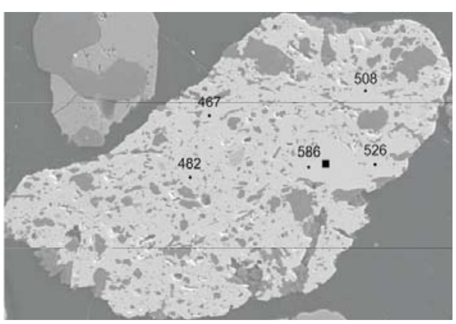
Type: W05
U.G.I. #: 8
Sample #: N30 1469.89
Grain #: 9
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 403

10µm



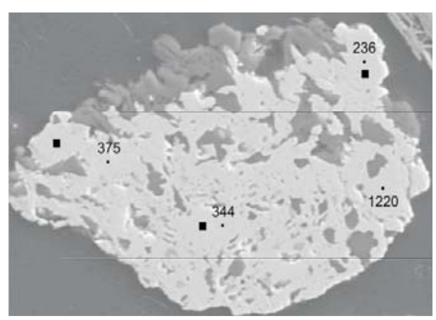
Type: W06
U.G.I. #: 9
Sample #: N30 1469.89
Grain #: 10
Morph: R-IR
Incl: 10%
Zoning: nv
REE Type: A
Mean Age: 515

10µm



Type: W07
U.G.I. #: 23
Sample #: N30 1473.81
Grain #: 8
Morph: R-SH
Incl: 15%
Zoning: nv
REE Type: C
Mean Age: High Errors

10µm



Type: W10
U.G.I. #: 6
Sample #: N30 1469.89
Grain #: 7
Morph: R-SH
Incl: 15%
Zoning: nv
REE Type: B
Mean Age: High Errors

10µm

No Photo

Type: W11
U.G.I. #: 1.5
Sample #: N30 1469.89
Grain #: 2
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: D
Mean Age: High Errors

10µm

No Photo

Type: W12
U.G.I. #: 13.5
Sample #: N30 1469.89
Grain #: 15
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: B
Mean Age: High Errors

10µm

Central Basin

Alma K-85

Thebaud #3

Thebaud I-93

Thebaud C-74

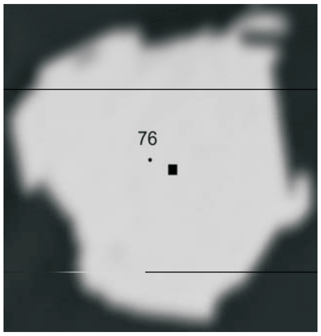
Glenelg E-58

North Triumph G-43

Venture #1

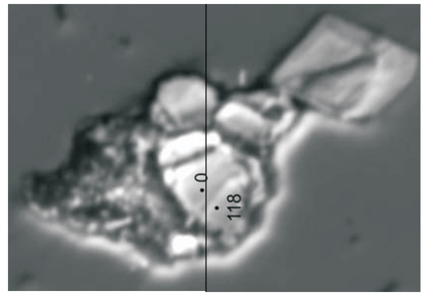
Venture #3

Venture #4



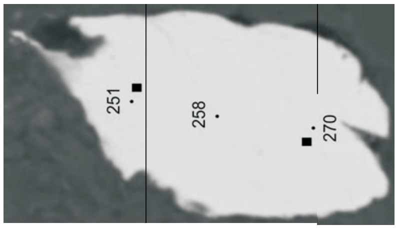
Type: C01
U.G.I. #: 170
Sample #: G-43-11
Grain #: 4
Morph: SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 76

1μm



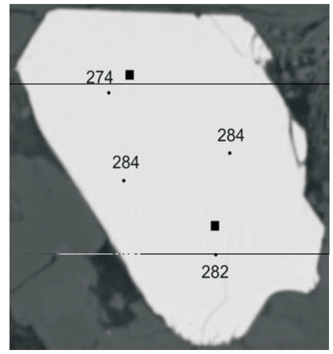
Type: C1.5
U.G.I. #: 216
Sample #: V-1-SP35
Grain #: 1
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: D
Mean Age: 118

10μm



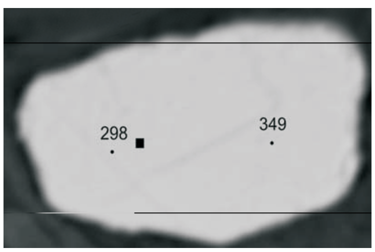
Type: C02
U.G.I. #: 215
Sample #: G-43-57
Grain #: 20
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 260

10μm



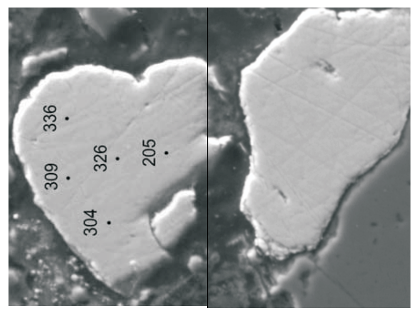
Type: C03
U.G.I. #: 172
Sample #: G-43-11
Grain #: 6
Morph: SH
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 281

10μm



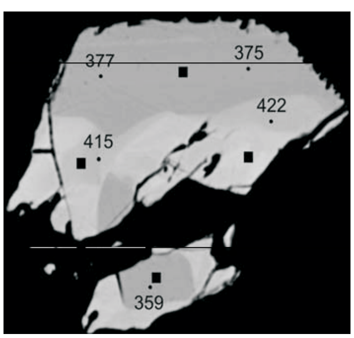
Type: C04
U.G.I. #: 203
Sample #: G-43-57
Grain #: 8
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 324

1μm



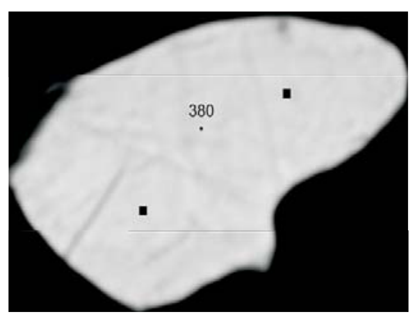
Type: C04.5
U.G.I. #: 68
Sample #: TH-3-1
Grain #: 2
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: D
Mean Age: 331

10μm



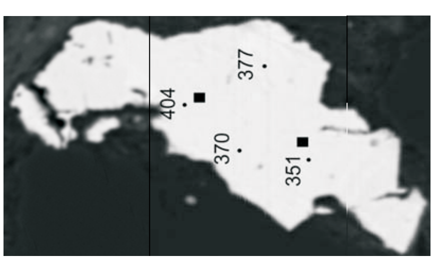
Type: C05
U.G.I. #: 104
Sample #: E58-13
Grain #: 10
Morph: R-SH
Incl: 0%
Zoning: Patchy
REE Type: B
Mean Age: 372

10μm



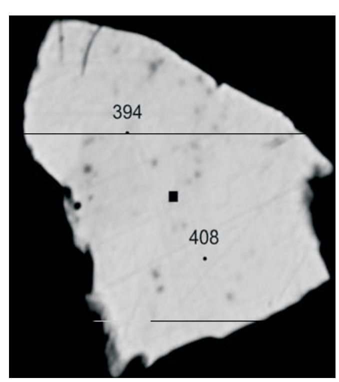
Type: C06
U.G.I. #: 44
Sample #: D267_1_8
Grain #: 5
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: D
Mean Age: 380

1μm



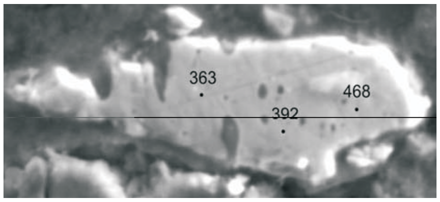
Type: C07
U.G.I. #: 202
Sample #: G-43-57
Grain #: 7
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 384

10μm



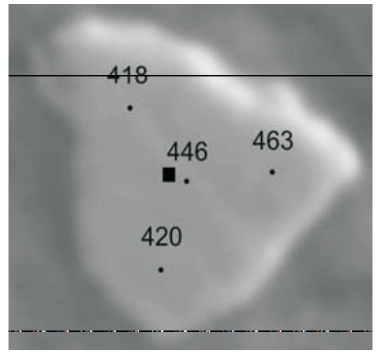
Type: C08
U.G.I. #: 63
Sample #: D267_1_9A
Grain #: 4
Morph: SH
Incl: 1%
Zoning: nv
REE Type: E
Mean Age: 401

10μm



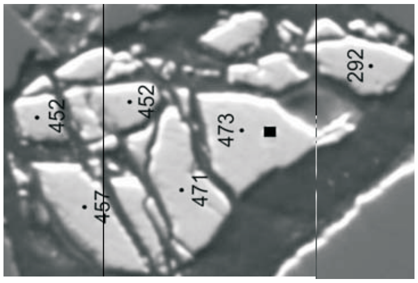
Type: C09
U.G.I. #: 69
Sample #: TH-3-1
Grain #: 1
Morph: R-SH
Incl: 1%
Zoning: nv
REE Type: C
Mean Age: 408

10μm



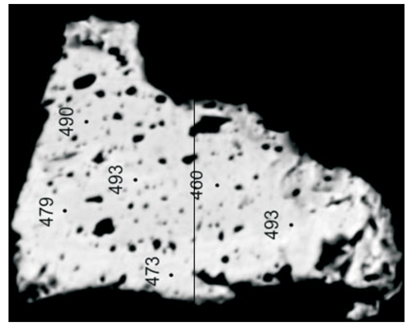
Type: C10
U.G.I. #: 231
Sample #: V-3-SP54
Grain #: 19
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 437

1μm



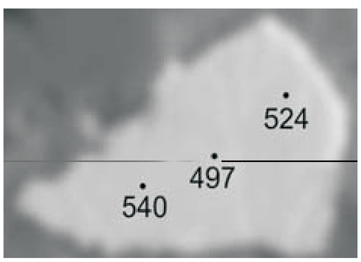
Type: C11
U.G.I. #: 84
Sample #: C-74-P18
Grain #: 1
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 461

10μm



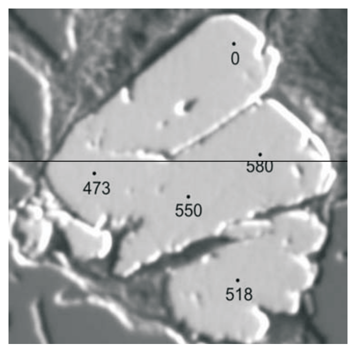
Type: C12
U.G.I. #: 192
Sample #: G-43-46
Grain #: 6
Morph: R-SH
Incl: 10%
Zoning: patchy
REE Type: C
Mean Age: 483

10μm



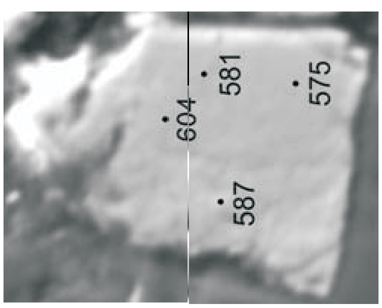
Type: C13
U.G.I. #: 255
Sample #: V-3-SP8
Grain #: 1
Morph: SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 520

10μm



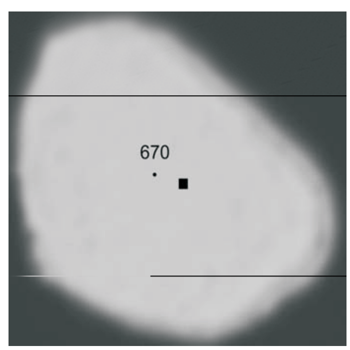
Type: C14
U.G.I. #: 227
Sample #: V-3-SP38
Grain #: 1
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 565

10μm



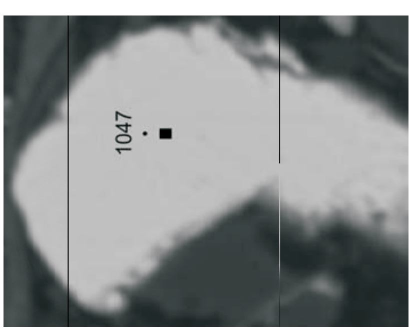
Type: C14.5
U.G.I. #: 248
Sample #: V-4-SP87
Grain #: 1
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: D
Mean Age: 587

10μm



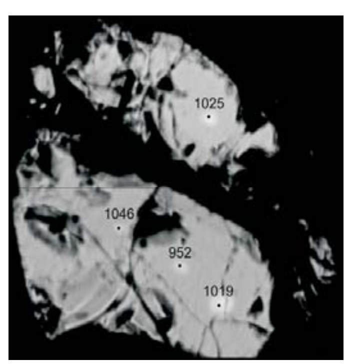
Type: C15
U.G.I. #: 100
Sample #: E58-13
Grain #: 6
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 670

1μm



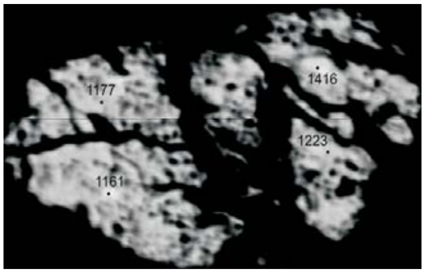
Type: C16
U.G.I. #: 179
Sample #: G-43-11
Grain #: 13
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 1047

2μm



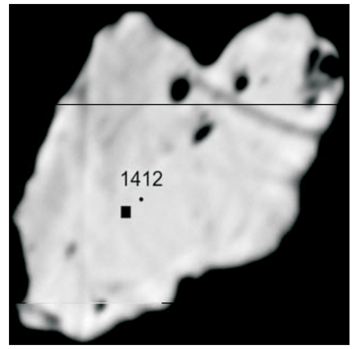
Type: C17
U.G.I. #: 234
Sample #: V-4-SP22
Grain #: 1
Morph: R-SH
Incl: 10%
Zoning: nv
REE Type: A
Mean Age: 1011

10μm



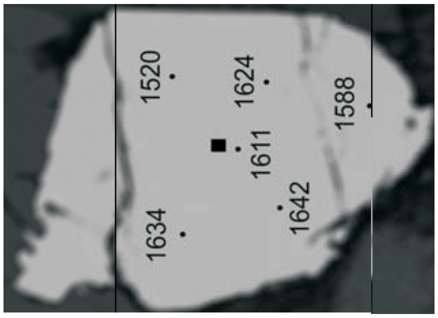
Type: C18
U.G.I. #: 88
Sample #: C-74-P11
Grain #: 2
Morph: R-IR
Incl: 25%
Zoning: nv
REE Type: A
Mean Age: 1244

10μm



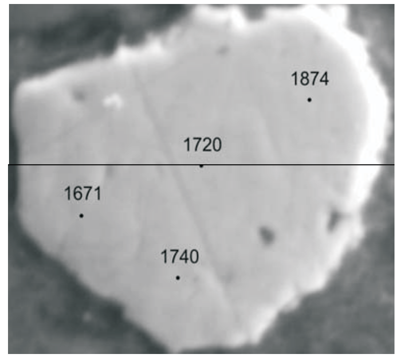
Type: C18.5
U.G.I. #: 34
Sample #: D267_1_14
Grain #: 3
Morph: R-SH
Incl: 5%
Zoning: patchy
REE Type: F
Mean Age: 1412

1μm



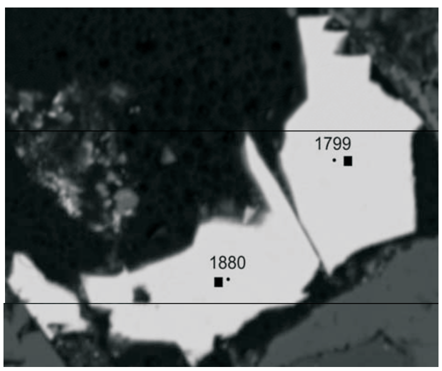
Type: C19
U.G.I. #: 152
Sample #: E58-15
Grain #: 4
Morph: SH
Incl: 0%
Zoning: nv
REE Type: B
Mean Age: 1603

10μm



Type: C20
U.G.I. #: 80
Sample #: I-93-18A
Grain #: 8
Morph: SH
Incl: 1%
Zoning: nv
REE Type: D
Mean Age: 1696

1μm

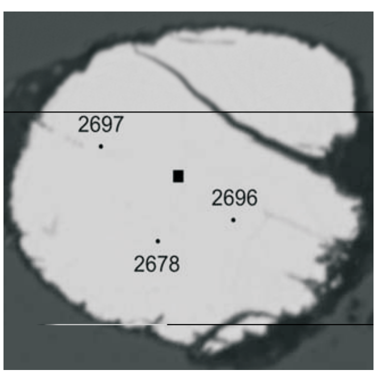


Type: C21
U.G.I. #: 140
Sample #: E58-18
Grain #: 5
Morph: SH
Incl: 0%
Zoning: nv
REE Type: A
Mean Age: 1840

10μm

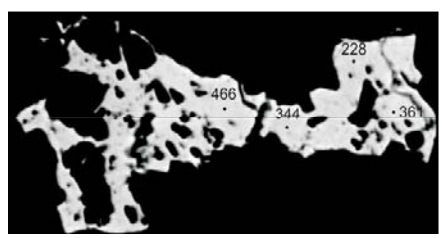
Type: C22
U.G.I. #: 236
Sample #: V-4-SP25
Grain #: 2
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 1837

10μm



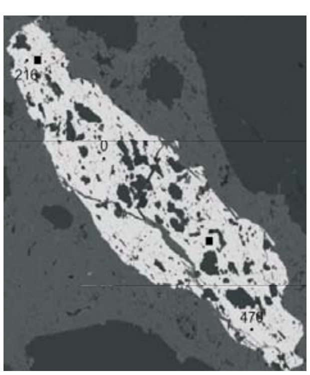
Type: C23
U.G.I. #: 148
Sample #: E58-27
Grain #: 3
Morph: R
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 2690

10μm



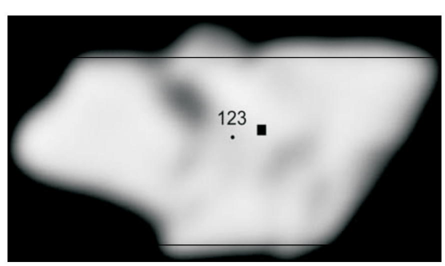
Type: C24
U.G.I. #: 163
Sample #: G-43-7
Grain #: 2
Morph: R-SH
Incl: 20%
Zoning: patchy
REE Type: A
Mean Age: High Errors

10μm



Type: C25
U.G.I. #: 143
Sample #: E58-18
Grain #: 8
Morph: R-SH
Incl: 30%
Zoning: nv
REE Type: D
Mean Age: High Errors

20μm



Type: C26
U.G.I. #: 53
Sample #: D267_1_5
Grain #: 8
Morph: R-SH
Incl: 0%
Zoning: patchy, rim
REE Type: E
Mean Age: High Errors

1μm

No Photo

Type: C27
U.G.I. #: 247.5
Sample #: V-4-SP56
Grain #: 1
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: A
Mean Age: High Errors

No Photo

Type: C28
U.G.I. #: 68.5
Sample #: TH-3-1
Grain #: 3
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: D
Mean Age: High Errors

No Photo

Type: C29
U.G.I. #: 225.5
Sample #: V-3-SP8
Grain #: 2
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: E
Mean Age: High Errors

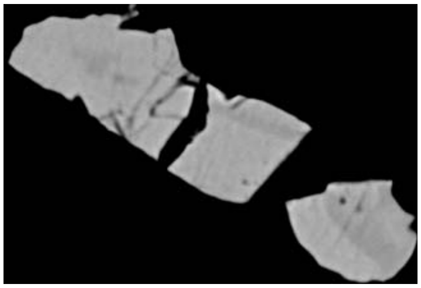
Eastern Basin

Peskowesk A-99

Tantallon M-41

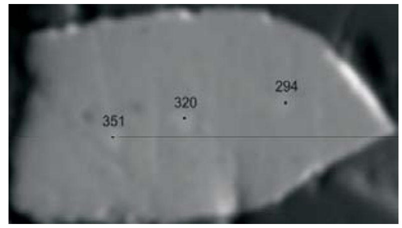
Louisbourg J-47

Hermine E-94



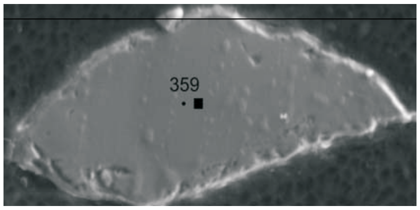
Type: E01
U.G.I. #: 289
Sample #: J47-4074-39
Grain #: 4
Morph: SH
Incl: 0%
Zoning: patchy
REE Type: D
Mean Age: 244

10μm



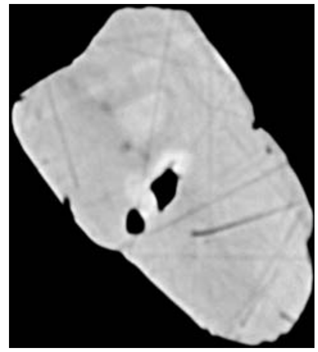
Type: E02
U.G.I. #: 283
Sample #: M-41-3
Grain #: 1
Morph: SH
Incl: 0%
Zoning: nv
REE Type: F
Mean Age: 322

10μm



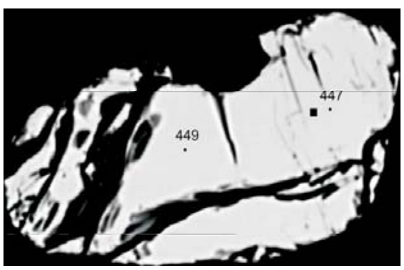
Type: E03
U.G.I. #: 263
Sample #: PESK_A99_2238
Grain #: 15
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: A
Mean Age: 359

10μm



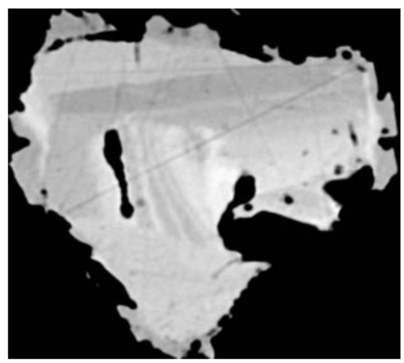
Type: E04
U.G.I. #: 294
Sample #: J47-4408-50
Grain #: 5
Morph: SH
Incl: 10%
Zoning: patchy
REE Type: B
Mean Age: 395

10μm



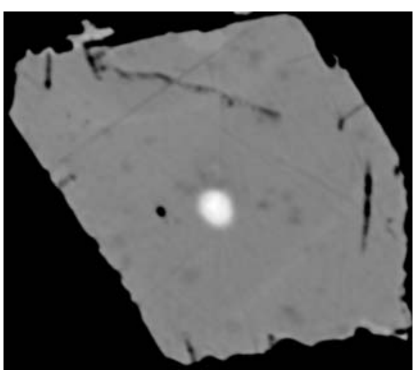
Type: E05
U.G.I. #: 269
Sample #: PESK_A99_2228
Grain #: 1
Morph: R-IR
Incl: 20%
Zoning: nv
REE Type: F
Mean Age: 449

10μm



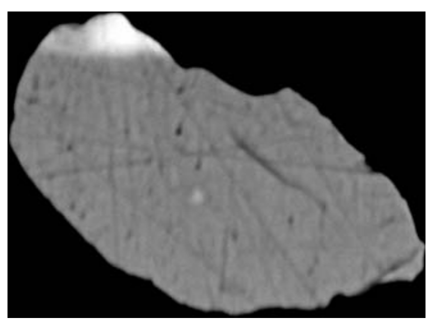
Type: E06
U.G.I. #: 301
Sample #: J-47-5451-23
Grain #: 4
Morph: R-IR
Incl: 5%
Zoning: patchy
REE Type: D
Mean Age: 456

10μm



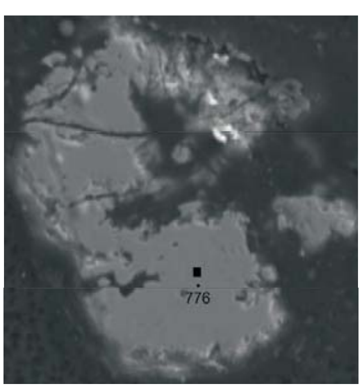
Type: E07
U.G.I. #: 292
Sample #: J-47-4408-50
Grain #: 3
Morph: E
Incl: 5%
Zoning: nv
REE Type: A
Mean Age: 564

10μm



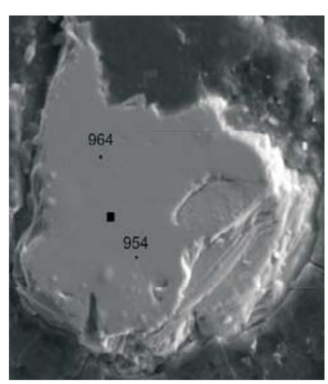
Type: E08
U.G.I. #: 288
Sample #: E94-4940
Grain #: 2
Morph: R-SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 613

10μm



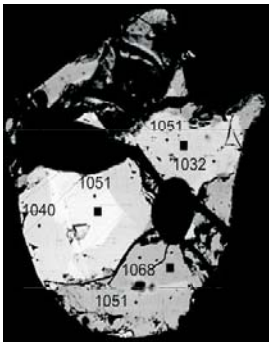
Type: E09
U.G.I. #: 254
Sample #: PESK_A99_2238
Grain #: 5
Morph: R-IR
Incl: 3%
Zoning: nv
REE Type: A
Mean Age: 776

10μm



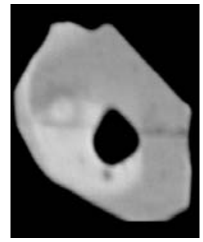
Type: E10
U.G.I. #: 256
Sample #: PESK_A99_2238
Grain #: 7
Morph: R-IR
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 959

10μm



Type: E11
U.G.I. #: 250
Sample #: PESK_A99_2238
Grain #: 1
Morph: R-SH
Incl: 10%
Zoning: patchy
REE Type: E
Mean Age: 1049

10μm

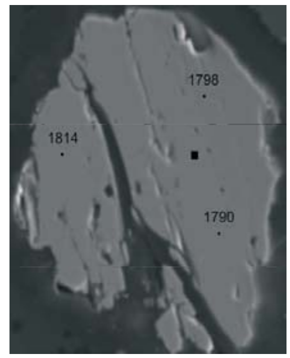


Type: E12
U.G.I. #: 298
Sample #: J47-5451-23
Grain #: 1
Morph: E
Incl: 10%
Zoning: patchy
REE Type: B
Mean Age: 1115

10μm

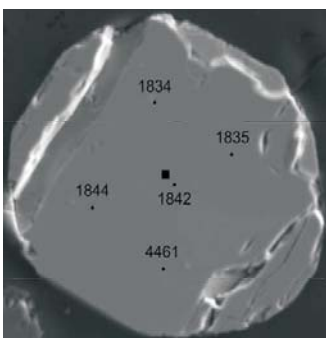
Type: E13
U.G.I. #: 274
Sample #: PESK_A99_2228
Grain #: 6
Morph: R-SH
Incl: 1%
Zoning: patchy
REE Type: E
Mean Age: 1645

10μm



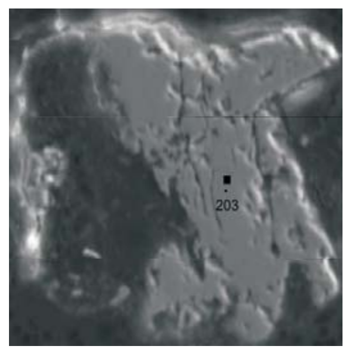
Type: E14
U.G.I. #: 280
Sample #: PESK_A99_2228
Grain #: 12
Morph: R-SH
Incl: 1%
Zoning: nv
REE Type: A
Mean Age: 1799

10μm



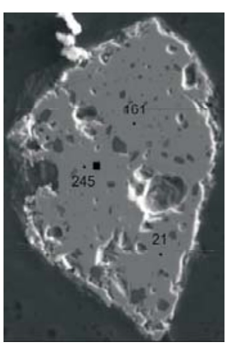
Type: E15
U.G.I. #: 273
Sample #: PESK_A99_2228
Grain #: 5
Morph: SH
Incl: 0%
Zoning: nv
REE Type: E
Mean Age: 2363

10μm



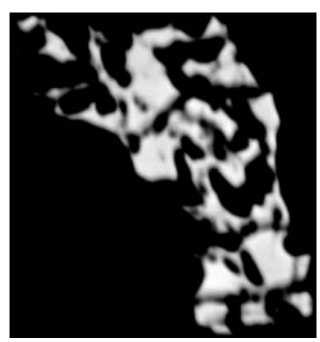
Type: E16
U.G.I. #: 262
Sample #: PESK_A99_2238
Grain #: 14
Morph: R-IR
Incl: 10%
Zoning: nv
REE Type: A
Mean Age: High Errors

10μm



Type: E17
U.G.I. #: 275
Sample #: PESK_A99_2228
Grain #: 7
Morph: R-SH
Incl: 15%
Zoning: nv
REE Type: A
Mean Age: High Errors

10μm



Type: E18
U.G.I. #: 290
Sample #: J47-4408-50
Grain #: 1
Morph: R-IR
Incl: 45%
Zoning: nv
REE Type: F
Mean Age: High Errors

10μm

No Photo

Type: E19
U.G.I. #: 284.5
Sample #: M-41-3
Grain #: 3
Morph: No Photo
Incl: No Photo
Zoning: No Photo
REE Type: E
Mean Age: High Errors

10μm

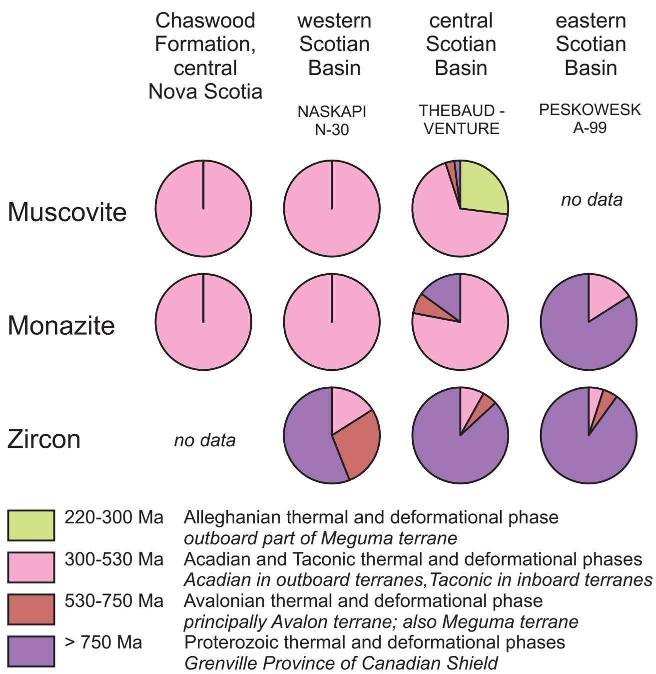


Fig. 14. Relative abundances of different ages of detrital muscovite, monazite and zircon from selected wells in the western, central and eastern Scotian Basin. (Modified from Pe-Piper and Piper, 2011).

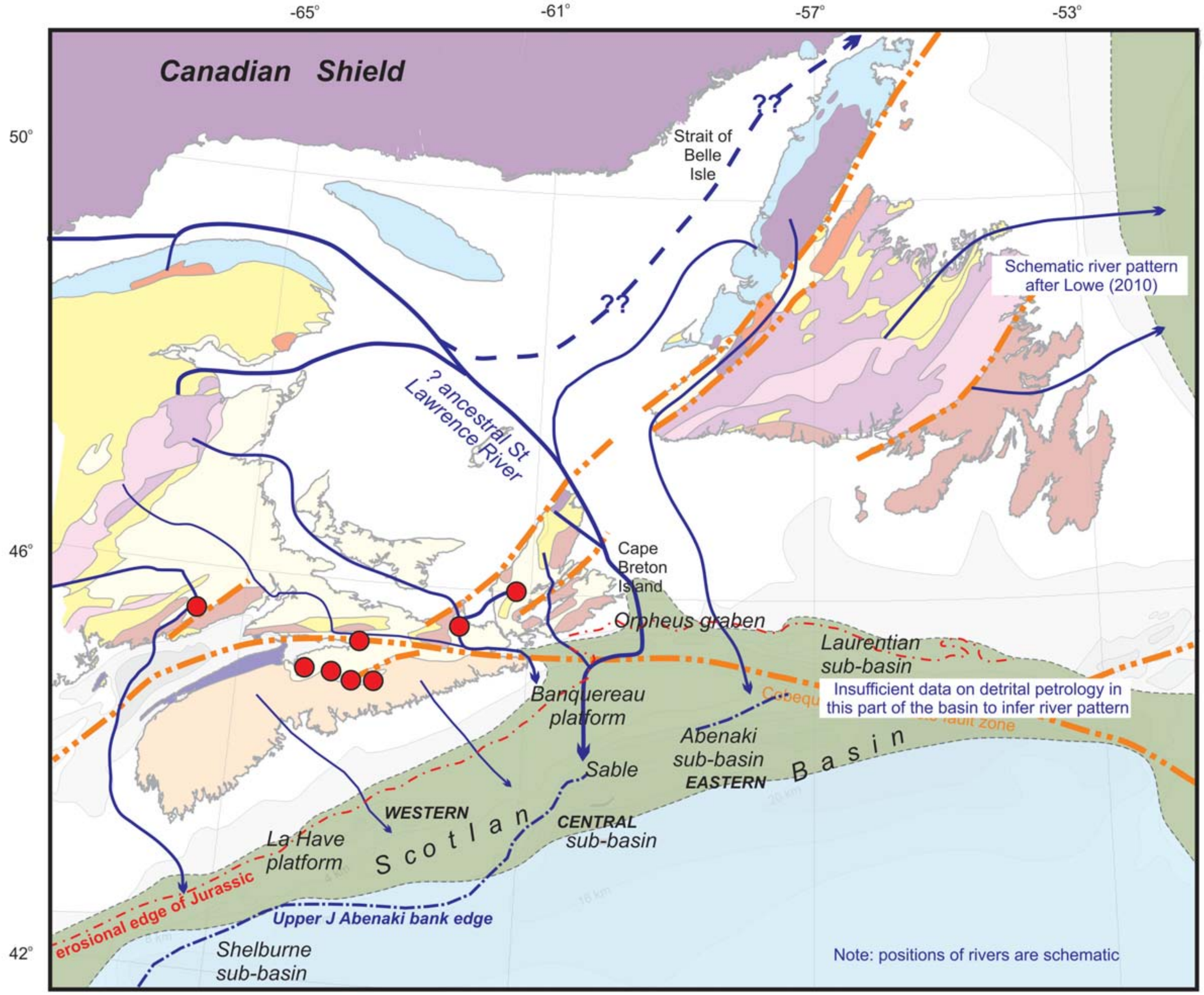


Fig. 15. Schematic interpretation of possible river patterns that could account for the distribution of different types of monazite in the western, central and eastern Scotian Basin.

Table 1. Samples from which monazite was analysed

Grain numbers	Well	Fig. 2	Sample type	Stratigraphic unit	Depth (m)	Sample code
1-14	Naskapi N-30	A	HMS	Upper Missisauga	1469.89	N30 1469.89
15-31	Naskapi N-30	B	HMS	Upper Missisauga	1473.81	N30 1473.81
32-35	Alma K-85	A	RTS	Logan Canyon Cree	2462.91	D267_1_14
36-40	Alma K-85	B	RTS	Logan Canyon Cree	2464.32	D267_1_12
41-45	Alma K-85	C	RTS	Logan Canyon Cree	2465.81	D267_1_8
46-59	Alma K-85	D	RTS	Logan Canyon Cree	2474.79	D267_1_5
60-63	Alma K-85	E	RTS	Logan Canyon Cree	2465.18	D267_1_9A
64-67	Thebaud #3	A	RTS	Lower Missisauga	3911.84	TH-3-5A
68-70	Thebaud #3	B	RTS	Lower Missisauga	3901.75	TH-3-1
70.5	Thebaud #3	C	RTS	Lower Missisauga	3915.04	TH-3-9
71	Thebaud I-93	B	RTS	Lower Missisauga	3950.18	I-93-26
72-73	Thebaud I-93	A	RTS	Middle Missisauga	3068.39	I-93-2
74-83	Thebaud I-93	C	RTS	Lower Missisauga	3936.1	I-93-18A
84-88	Thebaud C-74	D	RTS	Lower Missisauga	3908.65 - 3908.88	C-74-P18
85-86	Thebaud C-74	E	RTS	Lower Missisauga	3921.98 - 3922.20	C-74-P29
87-88	Thebaud C-74	F	RTS	Lower Missisauga	3881.59 - 3881.80	C-74-P11
89-95	Thebaud C-74	G	RTS	Lower Missisauga	3876.72 - 3876.9	C-74-P7
96-116	Glenelg E-58	A	RTS	Upper Missisauga	3525.16	E58-13
117-125	Glenelg E-58	B	RTS	Upper Missisauga	3532.08	E58-17
126-135	Glenelg E-58	C	RTS	Upper Missisauga	3535.83	E58-19
136-145	Glenelg E-58	D	RTS	Upper Missisauga	3532.19	E58-18
146-148	Glenelg E-58	E	RTS	Upper Missisauga	3551.29	E58-27
149-155	Glenelg E-58	F	RTS	Upper Missisauga	3528.21	E58-15
156-158	Glenelg E-58	G	RTS	Upper Missisauga	3536.82	E58-21
159-161	Glenelg E-58A	H	RTS	Upper Missisauga	3733.43	E58A-2
162-167	North Triumph G-43	A	RTS	Logan Canyon Cree	3285.15	G-43-7
167.5-182	North Triumph G-43	B	RTS	Logan Canyon Cree	3289.64	G-43-11
183-186	North Triumph G-43	C	RTS	Upper Missisauga	3828.04	G-43-31
186.1-186.92	North Triumph G-43	H	RTS	Upper Missisauga	4402.95	G-43-56
187-193	North Triumph G-43	D	RTS	Upper Missisauga	4010.25	G-43-46
194-195	North Triumph G-43	E	RTS	Upper Missisauga	3835.78	G-43-34
196	North Triumph G-43	F	RTS	Upper Missisauga	3848.15	G-43-36
197-215	North Triumph G-43	G	RTS	Upper Missisauga	4402.34	G-43-57
216-220	Venture #1	A	RTS	Lower Missisauga	4600.87 - 4601.23	V-1-SP35
221-222	Venture #1	B	RTS	Lower Missisauga	4598.35 - 4598.59	V-1-SP28
223-224	Venture #3	A	RTS	Lower Missisauga	4871.58 - 4871.90	V-3-SP5
225-226	Venture #3	B	RTS	Lower Missisauga	4872.58 - 4872.70	V-3-SP8
227	Venture #3	C	RTS	Lower Missisauga	4882.37 - 4882.68	V-3-SP38
227.5-233	Venture #3	D	RTS	Lower Missisauga	4887.39 - 4888.32	V-3-SP54
234	Venture #4	A	RTS	Lower Missisauga	5371.77 - 5371.97	V-4-SP22
235-241	Venture #4	B	RTS	Lower Missisauga	5372.85 - 5373.18	V-4-SP25
242-244	Venture #4	C	RTS	Lower Missisauga	5391.51 - 5391.83	V-4-80
245-247	Venture #4	D	RTS	Lower Missisauga	5381.34 - 5381.77	V-4-50
247.5	Venture #4	E	RTS	Lower Missisauga	5383.28	V-4-SP56
248-249	Venture #4	F	RTS	Lower Missisauga	5393.96 - 5394.15	V-4-SP87
250-268	Peskowesk A-99	A	HMS	Logan Canyon Cree	2238.65	PESK_A99_2238
269-282	Peskowesk A-99	B	HMS	Logan Canyon Cree	2228.82	PESK_A99_2228
283-284.5	Tantallon M-41	A	RTS	Logan Canyon	4699.1	M-41-3
284.6	Tantallon M-41	B	RTS	Middle Missisauga	5298.37	M-41-15
285-286	Tantallon M-41	C	RTS	Middle Missisauga	5296.24	M-41-16
287-288	Hermine E-94	A	HMS	Logan Canyon Eider	1505.7	E94-4940
289	Louisbourg J-47	A	RTS	Middle Missisauga	4047.39	J47-4074-39
290-297	Louisbourg J-47	B	RTS	MicMac	4408.5	J47-4408-50
298-301	Louisbourg J-47	C	RTS	MicMac	5451.23	J47-5451-23

HMS = heavy mineral separate; RTS = rock thin section

Table 2. Trace element analyses and error calculation for GSC8153 control monazite

Analysis	**Date**	**Y**	**Th**	**U**	**Pb**	**Pb**	**Age (Ma)**	**1σ error (%)**	**1σ error (Ma)**
GSC8153	26-Sep-06	2748	65034	2982	1665	1665	**496**	4.57	22.7
GSC8153-1	17-Oct-06	3552	63729	939	1486	1486	**495**	11.25	55.7
GSC8153-2	17-Oct-06	3301	65371	1345	1665	1665	**531**	9.01	47.8
GSC8153-3	17-Oct-06	3556	66805	1564	1745	1745	**540**	*	*
GSC8153	29-Jan-07	3465	65328	3100	1617	1617	**478**	*	*
GSC8153	27-Feb-07	3313	64168	2955	1704	1705	**514**	*	*
GSC8153	19-Mar-07	19254	41285	3216	1151	1151	**495**	*	*
Control 8153	18-Apr-07	2175	29258	276	696	696	**514**	20.91	107.4
Control 8153	20-Apr-07	2397	45924	540	1018	1018	**476**	13.42	63.8
Control 8153	22-May-07	3331	68516	3129	1774	1774	**502**	4.49	22.5
Control 8153	13-Jun-07	2998	67626	2825	1699	1699	**492**	4.83	23.8
Control 8153	09-Jul-07	3147	67038	2924	1792	1792	**521**	4.67	24.3
Control 8153	05-Nov-07	3281	66465	2699	1745	1745	**516**	4.99	25.7
Control 8153-4	05-Dec-07	3141	63867	2815	1670	1670	**509**	4.91	25.0
Control 8153-3	05-Dec-07	3119	64251	2968	1669	1669	**503**	4.76	23.9
Control 8153-2	05-Dec-07	3250	64297	2891	1660	1660	**501**	4.85	24.3
Control 8153-1	05-Dec-07	3083	63731	2764	1667	1667	**510**	4.97	25.3
Control 8153	05-Dec-07	3229	64285	2916	1714	1714	**517**	*	*
Mean							**506**	**7.51**	**37.9**
Standard Deviation							**17.13**		

* data not saved

Table 3. Trace element analyses (ppm) and nominal ages of monazites.

Well	Depth (m)	Analysis number	Element (ppm)				Age	1σ error (%)
			Y	Th	U	Pb		
Naskapi N-30	1468.89	11gr1-1	2857	3936	22	84	467	173
Naskapi N-30	1468.89	11gr1-2	2178	1983	42	91	943	159
Naskapi N-30	1468.89	11gr1-3	2776	846	47	49	1068	177
Naskapi N-30	1468.89	11gr1-4	2899	3307	125	70	421	68.32
Naskapi N-30	1468.89	11gr1-5	3906	1938	58	80	829	129
Naskapi N-30	1468.89	11gr1-6	2980	4065	25	111	595	158
Naskapi N-30	1468.89	11gr3-1	3880	4106	408	75	310	37.2
Naskapi N-30	1468.89	11gr3-2	2026	1439	343	21	186	87.4
Naskapi N-30	1468.89	11gr3-3	2444	158	180	9	274	131
Naskapi N-30	1468.89	11gr3-4	2852	230	138	12	396	117
Naskapi N-30	1468.89	11gr3-5	3641	1669	70	43	504	113
Naskapi N-30	1468.89	11gr4-1	10218	41559	906	792	397	10.19
Naskapi N-30	1468.89	11gr4-2	10317	44358	959	853	401	9.77
Naskapi N-30	1468.89	11gr4-3	21699	49831	2000	996	395	6.86
Naskapi N-30	1468.89	11gr4-4	11123	52220	1375	1018	401	7.87
Naskapi N-30	1468.89	11gr4-5	9681	42639	844	811	399	10.57
Naskapi N-30	1468.89	11gr4-6	10708	42995	942	825	400	9.92
Naskapi N-30	1468.89	11gr5-1	2640	1495	26	203	2672	235
Naskapi N-30	1468.89	11gr5-2	3355	1931	140	31	291	79.61
Naskapi N-30	1468.89	11gr5-3	2969	1512	0	13	193	
Naskapi N-30	1468.89	11gr5-4	1782	363	22	0		
Naskapi N-30	1468.89	11gr6-1	4111	2365	744	91	425	29.7
Naskapi N-30	1468.89	11gr6-2	2049	837	256	0		
Naskapi N-30	1468.89	11gr6-3	3440	769	752	47	329	47.13
Naskapi N-30	1468.89	11gr6-4	1578	1170	236	28	324	87.07
Naskapi N-30	1468.89	11gr6-5	1609	5317	195	118	442	45.28
Naskapi N-30	1468.89	11gr6-6	3368	2392	398	93	559	35.13
Naskapi N-30	1468.89	11gr7-1	3990	2595	357	214	1220	27.26
Naskapi N-30	1468.89	11gr7-2	3010	7925	351	152	375	28.55
Naskapi N-30	1468.89	11gr7-3	3730	434	369	25	344	66.23
Naskapi N-30	1468.89	11gr7-4	3038	3479	216	44	236	59.57
Naskapi N-30	1468.89	11gr8-1	3164	5578	120	85	319	62.79
Naskapi N-30	1468.89	11gr8-2	4016	4431	168	102	457	50.34
Naskapi N-30	1468.89	11gr8-3	1250	109	170	52	1566	98.32
Naskapi N-30	1468.89	11gr8-4	3814	6616	57	136	446	88.13
Naskapi N-30	1468.89	11gr9-1	5859	40320	987	790	405	9.58
Naskapi N-30	1468.89	11gr9-2	15002	51280	2301	1055	401	6.01
Naskapi N-30	1468.89	11gr9-3	15938	39359	7351	1126	398	4.07
Naskapi N-30	1468.89	11gr9-4	10771	59312	1740	1184	407	6.82
Naskapi N-30	1468.89	11gr9-5	18980	38453	4277	943	402	5.22
Naskapi N-30	1468.89	11gr10-1	3371	5545	814	190	515	18.71
Naskapi N-30	1468.89	11gr10-2	3191	2224	801	93	430	29.99
Naskapi N-30	1468.89	11gr10-3	1499	3243	192	69	399	57.09
Naskapi N-30	1468.89	11gr11-1	2041	1070	68	34	584	135
Naskapi N-30	1468.89	11gr11-2	2668	8647	0	142	367	191
Naskapi N-30	1468.89	11gr11-3	2597	2119	101	39	356	92.2
Naskapi N-30	1468.89	11gr11-4	2150	813	128	0		
Naskapi N-30	1468.89	11gr12-1	11094	45101	1079	899	412	9.08
Naskapi N-30	1468.89	11gr12-2	10552	44799	951	925	431	9.71
Naskapi N-30	1468.89	11gr12-3	9877	48241	1013	938	406	9.4
Naskapi N-30	1468.89	11gr12-4	9693	45166	1031	843	388	9.38
Naskapi N-30	1468.89	11gr13-1	4681	1981	454	64	414	37.92
Naskapi N-30	1468.89	11gr13-2	4899	1485	550	17	118	60.84
Naskapi N-30	1468.89	11gr13-3	5353	3739	584	109	431	26.78
Naskapi N-30	1468.89	11gr13-4	5322	241	859	21	159	60
Naskapi N-30	1468.89	11gr13-5	3312	166	258	14	314	96.56

Naskapi N-30	1468.89	11gr14-1	2831	5408	188	91	**338**	**48.09**
Naskapi N-30	1468.89	11gr14-2	2663	1253	187	27	**325**	**80.43**
Naskapi N-30	1468.89	11gr14-3	3318	1066	393	32	**307**	**60.01**
Naskapi N-30	1468.89	11gr14-4	2376	11879	157	181	**327**	**40.37**
Naskapi N-30	1468.89	11gr16-1	1821	9381	66	144	**336**	**68.65**
Naskapi N-30	1468.89	11gr16-2	2574	3683	406	142	**628**	**28.83**
Naskapi N-30	1473.81	12gr11-1	13099	52181	748	776	**318**	**11.57**
Naskapi N-30	1473.81	12gr11-2	15282	59761	905	902	**322**	**10.24**
Naskapi N-30	1473.81	12gr11-3	9778	47215	723	685	**309**	**11.84**
Naskapi N-30	1473.81	12gr11-4	11584	56265	729	841	**321**	**11.57**
Naskapi N-30	1473.81	12gr11-5	15302	58595	825	894	**326**	**10.79**
Naskapi N-30	1473.81	12gr11-6	15757	59503	942	899	**322**	**10.04**
Naskapi N-30	1473.81	12gr11-7	19354	54779	1137	796	**305**	**9.34**
Naskapi N-30	1473.81	12gr11-8	8595	63904	1919	1045	**333**	**6.55**
Naskapi N-30	1473.81	12gr1-1	7264	59236	650	853	**311**	**12.29**
Naskapi N-30	1473.81	12gr1-2	10412	61622	822	923	**321**	**10.28**
Naskapi N-30	1473.81	12gr1-3	6716	54001	531	779	**313**	**13.87**
Naskapi N-30	1473.81	12gr2-1	13213	63760	1257	995	**328**	**8.32**
Naskapi N-30	1473.81	12gr2-2	15554	64652	1248	984	**320**	**8.47**
Naskapi N-30	1473.81	12gr2-3	9877	53815	849	829	**328**	**10.52**
Naskapi N-30	1473.81	12gr2-4	11302	60910	1023	942	**328**	**9.39**
Naskapi N-30	1473.81	12gr3-1	10005	55029	723	796	**310**	**11.63**
Naskapi N-30	1473.81	12gr3-2	14015	61616	1052	912	**314**	**9.36**
Naskapi N-30	1473.81	12gr3-3	10179	55540	747	802	**310**	**11.43**
Naskapi N-30	1473.81	12gr3-4	13936	66582	1068	1019	**325**	**9.2**
Naskapi N-30	1473.81	12gr4-1	9065	51014	1062	743	**305**	**9.36**
Naskapi N-30	1473.81	12gr4-2	5460	55351	968	806	**308**	**9.73**
Naskapi N-30	1473.81	12gr4-3	22889	54360	3186	947	**328**	**5.91**
Naskapi N-30	1473.81	12gr4-4	5118	51329	945	792	**326**	**9.83**
Naskapi N-30	1473.81	12gr4-5	23207	52579	3183	915	**326**	**6.03**
Naskapi N-30	1473.81	12gr5-1	14744	78022	2598	1226	**317**	**5.57**
Naskapi N-30	1473.81	12gr6-1	2508	1647	0	30	**407**	**71.31**
Naskapi N-30	1473.81	12gr6-2	1873	1645	0	46	**621**	**72.85**
Naskapi N-30	1473.81	12gr6-3	996	2824	0	0		
Naskapi N-30	1473.81	12gr6-4	0	1850	0	0		
Naskapi N-30	1473.81	12gr6-5	1206	1596	0	0		
Naskapi N-30	1473.81	12gr7-1	9768	58552	863	864	**315**	**10.43**
Naskapi N-30	1473.81	12gr7-2	17194	68948	1413	1076	**327**	**7.89**
Naskapi N-30	1473.81	12gr8-1	2485	3714	179	93	**482**	**52.91**
Naskapi N-30	1473.81	12gr8-2	3604	1989	399	87	**586**	**36.44**
Naskapi N-30	1473.81	12gr8-3	1206	642	243	34	**526**	**84.83**
Naskapi N-30	1473.81	12gr8-4	3511	2237	575	94	**508**	**31.61**
Naskapi N-30	1473.81	12gr8-5	2714	3800	342	103	**467**	**36.01**
Naskapi N-30	1473.81	12gr9-1	413	0	0	38	**0**	**111**
Naskapi N-30	1473.81	12gr9-2	3325	980	0	13	**297**	**88.07**
Naskapi N-30	1473.81	12gr9-3	3306	1258	0	778	**10604**	**19.1**
Naskapi N-30	1473.81	12gr9-4	2372	483	0	18	**823**	**102**
Naskapi N-30	1473.81	12gr9-5	2068	0	0	0		
Naskapi N-30	1473.81	12gr10-1	3018	9028	0	165	**408**	**190**
Naskapi N-30	1473.81	12gr10-2	1538	154	0	38	**4914**	**111**
Naskapi N-30	1473.81	12gr10-3	2929	474	0	0		
Naskapi N-30	1473.81	12gr10-4	3165	2893	0	41	**408**	**62.71**
Naskapi N-30	1473.81	12gr10-5	4270	16491	0	297	**4914**	**102**
Naskapi N-30	1473.81	12gr12-1	844	342	0	36	**2244**	**103**
Naskapi N-30	1473.81	12gr12-2	1301	2434	0	18	**166**	**124**
Naskapi N-30	1473.81	12gr12-3	1515	79	0	0		
Naskapi N-30	1473.81	12gr12-4	2117	685	9	13	**406**	**637**
Naskapi N-30	1473.81	12gr12-5	3729	137	0	38	**5448**	**1886**
Naskapi N-30	1473.81	12gr13-1	3686	5875	0	0		
Naskapi N-30	1473.81	12gr13-2	788	13833	0	0		
Naskapi N-30	1473.81	12gr13-3	1837	5967	0	239	**883**	**25.36**
Naskapi N-30	1473.81	12gr14-1	1516	2242	16	40	**389**	**320**

Naskapi N-30	1473.81	12gr14-2	2268	3873	15	42	**240**	**242**
Naskapi N-30	1473.81	12gr14-3	1696	1267	0	6	**106**	**497**
Naskapi N-30	1473.81	12gr14-4	1776	13650	32	249	**404**	**84.3**
Naskapi N-30	1473.81	12gr14-5	3348	5673	88	99	**371**	**77.4**
Naskapi N-30	1473.81	12gr15-1	3640	12604	782	263	**388**	**15.66**
Naskapi N-30	1473.81	12gr15-2	3399	5165	493	83	**275**	**34.56**
Naskapi N-30	1473.81	12gr15-3	2834	3889	646	103	**385**	**29.68**
Naskapi N-30	1473.81	12gr15-4	2048	2833	251	9	**56**	**127**
Naskapi N-30	1473.81	12gr16-1	2081	8412	157	134	**336**	**48.41**
Naskapi N-30	1473.81	12gr16-2	1773	21435	172	309	**314**	**32.85**
Naskapi N-30	1473.81	12gr16-3	2908	19800	238	300	**326**	**28.07**
Naskapi N-30	1473.81	12gr16-4	3396	2052	831	98	**459**	**28.94**
Naskapi N-30	1473.81	12gr16-5	923	21561	0	174	**181**	**245**
Naskapi N-30	1473.81	12gr16-6	2270	15121	0	62	**92**	**46.86**
Naskapi N-30	1473.81	12gr17-1	1321	28490	1462	496	**334**	**8.96**
Naskapi N-30	1473.81	12gr17-2	1744	24655	1130	419	**331**	**10.77**
Naskapi N-30	1473.81	12gr17-3	1200	39816	965	621	**324**	**10.15**
Naskapi N-30	1473.81	12gr17-4	7436	52749	1805	822	**314**	**6.83**
Naskapi N-30	1473.81	12gr17-5	312	21291	1082	368	**332**	**11.89**
Naskapi N-30	1473.81	12gr17-6	7506	49502	1769	770	**312**	**7.01**
Naskapi N-30	1473.81	12gr17-7	746	22436	558	361	**333**	**16.35**
Naskapi N-30	1473.81	12gr17-8	1861	30730	931	473	**314**	**11.18**
Alma K-85	2462.91	ST_D267_1_14gr1	2183	17704	274	351	**421**	**24.14**
Alma K-85	2462.91	ST_D267_1_14gr2	0	9886	0	119	**270**	**29.18**
Alma K-85	2462.91	ST_D267_1_14gr3	3684	47772	1502	3445	**1412**	**6.46**
Alma K-85	2462.91	ST_D267_1_14gr4	0	13258	0	94	**159**	**33.16**
Alma K-85	2464.32	ST_D267_1_12gr1-1	8363	21944	3730	621	**407**	**6.1**
Alma K-85	2464.32	ST_D267_1_12gr1-2	9473	38507	3940	871	**380**	**5.05**
Alma K-85	2464.32	ST_D267_1_12gr2-1	5875	17790	835	1248	**1314**	**9.9**
Alma K-85	2464.32	ST_D267_1_12gr2-2	6341	13868	872	984	**1271**	**9.92**
Alma K-85	2464.32	ST_D267_1_12gr3	8113	84376	5066	1633	**362**	**4.07**
Alma K-85	2464.32	ST_D267_1_12gr4	1729	9030	301	140	**313**	**31.66**
Alma K-85	2464.32	ST_D267_1_12gr5-1	11252	33858	4750	544	**248**	**6.78**
Alma K-85	2464.32	ST_D267_1_12gr5-2	4936	66385	780	1206	**391**	**9.53**
Alma K-85	2465.81	ST_D276_1_8gr1	2456	53977	2899	5563	**1850**	**3.97**
Alma K-85	2465.81	ST_D267_1_8gr2	21309	51271	3465	1467	**521**	**4.74**
Alma K-85	2465.81	ST_D267_1_8gr3	242	228	0	0		
Alma K-85	2465.81	ST_DS67_1_8gr5	15713	17087	2744	442	**380**	**8.55**
Alma K-85	2465.81	ST_D267_1_8gr6	0	28827	2398	615	**375**	**6.88**
Alma K-85	2474.79	ST_D267_1_5gr1	14354	32499	4629	737	**347**	**5.67**
Alma K-85	2474.79	ST_D267_1_5gr2	6723	6095	0	35	**313**	**1908**
Alma K-85	2474.79	ST_D267_1_5gr3	3833	3376	0	0		
Alma K-85	2474.79	ST_D267_1_5gr4	758	19432	0	209	**241**	**66.47**
Alma K-85	2474.79	ST_D267_1_5gr5	3493	13384	809	0		
Alma K-85	2474.79	ST_D267_1_5gr6	10137	36485	2814	792	**388**	**5.87**
Alma K-85	2474.79	ST_D267_1_5gr7-1	3056	11370	114	98	**187**	**51.16**
Alma K-85	2474.79	ST_D267_1_5gr7-2	0.4074	2782	0	0	**0**	
Alma K-85	2474.79	ST_D267_1_5gr8	1223	9316	0	51	**123**	**55.04**
Alma K-85	2474.79	ST_D267_1_5gr9	286	11844	144	223	**404**	**40.84**
Alma K-85	2474.79	ST_D267_1_5gr10	2460	16844	236	320	**406**	**27.09**
Alma K-85	2474.79	ST_D267_1_5gr11-1	6677	33766	296	790	**506**	**19.21**
Alma K-85	2474.79	ST_D267_1_5gr11-2	4876	51343	462	1124	**474**	**14.62**
Alma K-85	2474.79	ST_D267_1_5gr12-1	9096	27413	2936	678	**410**	**6.13**
Alma K-85	2474.79	ST_D267_1_5gr12-2	8343	24390	2560	568	**388**	**6.99**
Alma K-85	2474.79	ST_D267_1_5gr13	16866	39794	667	810	**431**	**12.44**
Alma K-85	2474.79	ST_D267_1_5gr14	14892	37613	544	724	**410**	**14.08**
Alma K-85	2465.18	ST_D267_1_9Agr1	885	7682	4	154	**446**	**138**
Alma K-85	2465.18	ST_D267_1_9Agr2	19909	46051	2583	1131	**463**	**5.98**
Alma K-85	2465.18	ST_D267_1_9Agr3-1	17891	65327	3513	3680	**1045**	**3.86**
Alma K-85	2465.18	ST_D267_1_9Agr3-2	18541	97103	4453	5392	**1054**	**3.77**
Alma K-85	2465.18	ST_D267_1_9Agr3-3	18002	81782	3738	4534	**1053**	**3.98**

Alma K-85	2465.18	ST_D267_1_9Agr4-1	17670	40112	5813	1041	**394**	**4.6**
Alma K-85	2465.18	ST_D267_1_9Agr4-2	18325	36963	7987	1149	**408**	**4.14**
Thebaud 3	3911.84	S13A-g1-1	9487	32321	4439	1241	**588**	**3.75**
Thebaud 3	3911.84	S13A-g1-2	9325	29293	4351	1120	**571**	**3.96**
Thebaud 3	3911.84	S13A-g1-3	4137	30068	5117	1263	**598**	**3.41**
Thebaud 3	3911.84	S13A-g2-2	8112	53345	3426	1648	**567**	**3.98**
Thebaud 3	3911.84	S13A-g2-3	7732	58519	1961	1887	**644**	**5.66**
Thebaud 3	3911.84	S13A-g6-1	6254	72827	2098	1496	**419**	**6**
Thebaud 3	3911.84	S13A-g6-2	5165	95352	2473	2008	**433**	**5.77**
Thebaud 3	3911.84	S13A-g6-3	7902	70836	2535	1490	**420**	**5.31**
Thebaud 3	3911.84	S13A-g6-4	8570	76000	2384	1572	**419**	**5.6**
Thebaud 3	3911.84	S13A-g6-5	5306	74657	2161	1544	**422**	**5.91**
Thebaud 3	3911.84	S13A-g7-1	20346	39843	5887	1289	**486**	**3.98**
Thebaud 3	3911.84	S13A-g7-2	19989	36368	6300	1220	**478**	**4.04**
Thebaud 3	3911.84	S13A-g7-3	21821	27212	4000	867	**480**	**5.54**
Thebaud 3	3911.84	S13A-g7-4	17621	33781	5065	1066	**472**	**4.4**
Thebaud 3	3911.84	S13A-g7-5	18931	23876	3273	683	**441**	**6.38**
Thebaud 3	3901.75	59 gr-2 -1	404	44563	382	667	**326**	**16.8**
Thebaud 3	3901.75	59 gr-2 -2	273	46541	428	721	**336**	**15.72**
Thebaud 3	3901.75	59 gr-2 -3	583	27671	164	390	**309**	**28.35**
Thebaud 3	3901.75	59 gr-2 -4	649	30794	203	427	**304**	**24.93**
Thebaud 3	3901.75	59 gr-2 -5	0	14664	0	134	**205**	**282**
Thebaud 3	3901.75	59 gr-2 -6	90	3605	0	0		
Thebaud 3	3901.75	59 gr-2 -7	0	4800	0	0		
Thebaud 3	3901.75	59 gr-1 -1	3923	10680	882	220	**363**	**16.07**
Thebaud 3	3901.75	59 gr-1 -2	4188	13068	873	279	**392**	**14.2**
Thebaud 3	3901.75	59 gr-1 -3	3895	15079	1037	388	**468**	**11.37**
Thebaud 3	3901.75	59 gr-4 -1	1262	20506	23	472	**511**	**54.88**
Thebaud 3	3901.75	59 gr-4 -2	7946	29362	377	612	**446**	**17.89**
Thebaud 3	3901.75	59 gr-4 -3	3165	20401	52	430	**466**	**47.4**
Thebaud 3	3901.75	59 gr-4 -4	10454	30649	676	981	**662**	**11.89**
Thebaud 3	3901.75	59 gr-4 -5	6430	68551	1777	825	**249**	**7.56**
Thebaud 3	3901.75	59 gr-4 -6	2731	8266	0	131	**354**	**46.41**
Thebaud 3	3901.75	59 gr-4 -7	1856	12011	115	213	**384**	**47.3**
Thebaud 3	3901.75	59 gr-4 -8	910	7530	153	0		
Thebaud I-93	3950.18	S37g1-1	9066	27730	2944	3333	**1856**	**3.42**
Thebaud I-93	3950.18	S37g1-2	14261	36611	14294	7697	**1850**	**1.1**
Thebaud I-93	3068.39	S28g1-1	17536	47540	4654	1170	**417**	**4.35**
Thebaud I-93	3068.39	S28g1-2	18562	40310	4839	1028	**410**	**4.66**
Thebaud I-93	3068.39	S28g2-1	21374	25454	16395	1332	**379**	**3.56**
Thebaud I-93	3068.39	S28g2-2	20406	28138	18037	1491	**385**	**3.18**
Thebaud I-93	3936.1	532A gr-2 -1	16915	41423	678	943	**481**	**12.05**
Thebaud I-93	3936.1	532A gr-2 -2	7544	85479	1490	1878	**463**	**7.9**
Thebaud I-93	3936.1	532A gr-2 -3	7367	73682	1240	1527	**438**	**8.57**
Thebaud I-93	3936.1	532A gr-2 -4	3775	89005	1366	1985	**473**	**8.42**
Thebaud I-93	3936.1	532A gr-2 -5	8019	87355	1438	2005	**485**	**8.11**
Thebaud I-93	3936.1	532A gr-2 -6	7916	61138	392	1105	**395**	**15.83**
Thebaud I-93	3936.1	532A gr-2 -7	5215	60253	530	1316	**473**	**13.58**
Thebaud I-93	3936.1	532A gr-2 -8	6529	38860	431	880	**487**	**15.55**
Thebaud I-93	3936.1	532A gr-3 -1	4802	9680	118	181	**402**	**50.54**
Thebaud I-93	3936.1	532A gr-3 -2	3739	8814	125	151	**366**	**51.39**
Thebaud I-93	3936.1	532A gr-3 -3	4137	10516	173	185	**373**	**39.5**
Thebaud I-93	3936.1	532A gr-3 -4	4927	12392	176	171	**295**	**37.5**
Thebaud I-93	3936.1	532A gr-3 -5	4940	10684	220	190	**372**	**33.53**
Thebaud I-93	3936.1	532A gr-3 -6	5171	9811	257	206	**432**	**30.72**
Thebaud I-93	3936.1	532A gr-4 -1	1277	17160	0	1454	**1825**	**18.02**
Thebaud I-93	3936.1	532A gr-4 -2	1836	24727	3	1559	**1373**	**52.97**
Thebaud I-93	3936.1	532A gr-4 -3	2612	24815	128	1064	**928**	**31.51**
Thebaud I-93	3936.1	532A gr-4 -4	3931	22226	200	995	**956**	**26.71**
Thebaud I-93	3936.1	532A gr-4 -5	2007	23834	203	1440	**1281**	**25.85**

Thebaud I-93	3936.1	532A gr-5 -1	7510	53932	1823	1038	**387**	**6.61**
Thebaud I-93	3936.1	532A gr-5 -2	7591	53489	1951	1018	**380**	**6.38**
Thebaud I-93	3936.1	532A gr-5 -3	7779	56379	2052	1071	**380**	**6.2**
Thebaud I-93	3936.1	532A gr-5 -4	7521	56750	1931	1077	**382**	**6.42**
Thebaud I-93	3936.1	532A gr-5 -5	7289	55332	1919	1052	**382**	**6.43**
Thebaud I-93	3936.1	532A gr-5 -6	7511	49515	1874	945	**380**	**6.55**
Thebaud I-93	3936.1	532A gr-5 -7	7433	52777	1991	1047	**395**	**6.24**
Thebaud I-93	3936.1	532A gr-5 -8	7580	51412	1925	1024	**397**	**6.36**
Thebaud I-93	3936.1	532A gr-5 -9	7375	56890	2008	1098	**387**	**6.24**
Thebaud I-93	3936.1	532A gr-5 -10	7405	53183	1882	1063	**400**	**6.43**
Thebaud I-93	3936.1	532A gr-5 -11	7708	55650	1960	1085	**391**	**6.32**
Thebaud I-93	3936.1	532A gr-6 -1	11802	18535	3006	454	**359**	**7.69**
Thebaud I-93	3936.1	532A gr-6 -2	7895	11271	1199	235	**347**	**13.68**
Thebaud I-93	3936.1	532A gr-6 -3	10086	13175	2211	337	**370**	**9.7**
Thebaud I-93	3936.1	532A gr-7 -1	21092	14288	4033	578	**470**	**7.04**
Thebaud I-93	3936.1	532A gr-7 -2	16128	24841	2881	766	**498**	**5.92**
Thebaud I-93	3936.1	532A gr-7 -3	16412	23995	3196	748	**484**	**5.85**
Thebaud I-93	3936.1	532A gr-7 -4	16123	13678	1584	411	**486**	**9.72**
Thebaud I-93	3936.1	532A gr-7 -5	22422	18572	2814	569	**457**	**7.58**
Thebaud I-93	3936.1	532A gr-7 -6	19586	12971	3321	546	**510**	**7.32**
Thebaud I-93	3936.1	532A gr-7 -7	16126	18753	2453	415	**348**	**8.71**
Thebaud I-93	3936.1	532A gr-8 -1	0	2761	540	377	**1720**	**18.41**
Thebaud I-93	3936.1	532A gr-8 -2	0	1704	218	219	**1874**	**41.92**
Thebaud I-93	3936.1	532A gr-8 -3	0	2391	542	337	**1671**	**18.97**
Thebaud I-93	3936.1	532A gr-8 -4	0	2711	334	317	**1740**	**27.36**
Thebaud I-93	3936.1	532A gr-9 -1	7039	43962	890	918	**437**	**10.07**
Thebaud I-93	3936.1	532A gr-9 -2	4698	47525	835	1002	**445**	**10.42**
Thebaud I-93	3936.1	532A gr-9 -3	4529	44980	691	956	**451**	**11.73**
Thebaud I-93	3936.1	532A gr-9 -4	10298	41724	909	888	**443**	**10**
Thebaud I-93	3936.1	532A gr-9 -5	5923	50798	937	1039	**430**	**9.76**
Thebaud I-93	3936.1	532A gr-9 -6	6152	46419	851	925	**420**	**10.4**
Thebaud I-93	3936.1	532A gr-9 -7	9894	42606	1180	907	**436**	**8.49**
Thebaud I-93	3936.1	532A gr-9 -8	9019	47325	1004	1022	**450**	**9.34**
Thebaud I-93	3936.1	532A gr-9 -9	6991	47233	717	1026	**461**	**11.44**
Thebaud I-93	3936.1	532A gr-10 -1	6001	6143	232	87	**283**	**40.61**
Thebaud I-93	3936.1	532A gr-10 -2	0	14975	585	260	**345**	**18.02**
Thebaud I-93	3936.1	532A gr-10 -3	6623	471	71	0		
Thebaud I-93	3936.1	532A gr-10 -4	3651	791	0	0		
Thebaud I-93	3936.1	532A gr-10 -5	4561	9346	305	142	**308**	**30.16**
Thebaud I-93	3936.1	532A gr-11 -1	0	22633	850	1193	**1027**	**9.95**
Thebaud I-93	3936.1	532A gr-11 -2	0	22374	890	1191	**1030**	**9.62**
Thebaud I-93	3936.1	532A gr-11 -3	0	21737	880	1135	**1009**	**9.75**
Thebaud I-93	3936.1	532A gr-11 -4	1827	618	0	0		
Thebaud I-93	3936.1	532A gr-11 -5	0	22380	906	1167	**1008**	**9.53**
Thebaud I-93	3936.1	532A gr-11 -6	0	22802	829	1193	**1023**	**10.17**
Thebaud I-93	3936.1	532A gr-11 -7	0	22630	914	1246	**1062**	**9.41**
Thebaud I-93	3936.1	532A gr-11 -8	0	22551	892	1190	**1022**	**9.63**
Thebaud I-93	3936.1	532A gr-11 -9	0	22471	904	1202	**1033**	**9.51**
Thebaud I-93	3936.1	532A gr-11 -10	105	580	0	0		
Thebaud C-74	3908.65 - 3908.88	s34-1a	4265	62050	5752	1715	**473**	**3.22**
Thebaud C-74	3908.65 - 3908.88	s34-1b	5488	63746	6426	1789	**471**	**3.06**
Thebaud C-74	3908.65 - 3908.88	s34-1c	8182	52669	6293	1500	**457**	**3.28**
Thebaud C-74	3908.65 - 3908.88	s34-1d	4143	61911	5734	1633	**452**	**3.3**
Thebaud C-74	3908.65 - 3908.88	s34-1e	4015	55882	5256	1479	**452**	**3.49**
Thebaud C-74	3908.65 - 3908.88	s34-1f	7558	16956	3542	370	**292**	**8.85**
Thebaud C-74	3921.98 - 3922.20	544-1	3999	186	0	0		
Thebaud C-74	3921.98 - 3922.20	544-2	2149	8451	93	28	**72**	**88.77**
Thebaud C-74	3921.98 - 3922.20	544-3	2036	11859	0	0		
Thebaud C-74	3921.98 - 3922.20	544-4	4448	40717	642	699	**365**	**13.97**
Thebaud C-74	3921.98 - 3922.20	544-5	4113	38355	541	630	**351**	**15.46**
Thebaud C-74	3921.98 - 3922.20	544-6	3627	32908	521	528	**341**	**16.24**

Thebaud C-74	3921.98 - 3922.20	544-7	4398	40706	739	695	**360**	**12.92**
Thebaud C-74	3921.98 - 3922.20	544-8	5997	37578	751	640	**357**	**12.9**
Thebaud C-74	3921.98 - 3922.20	544-9	4209	38503	650	642	**353**	**13.99**
Thebaud C-74	3921.98 - 3922.20	544-10	5735	40370	563	665	**352**	**15.14**
Thebaud C-74	3881.59 - 3881.80	C-74-P11G1-1	6845	50720	2895	1011	**376**	**5.25**
Thebaud C-74	3881.59 - 3881.80	C-74-P11G1-2	6627	23357	2873	577	**394**	**6.56**
Thebaud C-74	3881.59 - 3881.80	C-74-P11G1-3	6796	18668	2617	458	**377**	**7.76**
Thebaud C-74	3881.59 - 3881.80	C-74-P11G1-4	8691	50733	2775	907	**340**	**5.65**
Thebaud C-74	3881.59 - 3881.80	C-74-P11G2-1	5907	42123	671	2356	**1161**	**11.57**
Thebaud C-74	3881.59 - 3881.80	C-74-P11G2-2	2850	33349	221	1839	**1177**	**22.24**
Thebaud C-74	3881.59 - 3881.80	C-74-P11G2-3	4423	44146	861	2636	**1223**	**9.76**
Thebaud C-74	3881.59 - 3881.80	C-74-P11G2-4	4245	38692	861	2715	**1416**	**9.15**
Thebaud C-74	3876.72-3876.9	526gr1-1	3266	75038	2538	1447	**388**	**5.46**
Thebaud C-74	3876.72-3876.9	526gr1-2	5680	46938	2404	919	**375**	**5.68**
Thebaud C-74	3876.72-3876.9	526gr1-3	4377	44306	2110	812	**355**	**6.25**
Thebaud C-74	3876.72-3876.9	526gr1-4	3675	90165	3170	1708	**380**	**5**
Thebaud C-74	3876.72-3876.9	526gr1-5	960	62842	1824	1092	**355**	**6.65**
Thebaud C-74	3876.72-3876.9	526gr2-1	15937	70439	4430	1608	**423**	**4.06**
Thebaud C-74	3876.72-3876.9	526gr2-2	19775	38012	4370	981	**419**	**5.01**
Thebaud C-74	3876.72-3876.9	526gr2-3	20473	43224	4984	1136	**427**	**4.55**
Thebaud C-74	3876.72-3876.9	526gr2-4	17642	58104	4294	1331	**412**	**4.34**
Thebaud C-74	3876.72-3876.9	526gr2-5	17477	72688	4364	1657	**426**	**4.12**
Thebaud C-74	3876.72-3876.9	526gr2-6	17452	76942	4387	1750	**428**	**4.1**
Thebaud C-74	3876.72-3876.9	526gr3-1	19513	37366	5659	1580	**626**	**3.47**
Thebaud C-74	3876.72-3876.9	526gr3-2	19071	29707	3887	1002	**526**	**4.91**
Thebaud C-74	3876.72-3876.9	526gr3-3	21418	36307	3691	1278	**586**	**4.52**
Thebaud C-74	3876.72-3876.9	526gr4-1	8312	59080	4712	1231	**370**	**4.02**
Thebaud C-74	3876.72-3876.9	526gr5-1	18620	40234	11989	1592	**448**	**3.05**
Thebaud C-74	3876.72-3876.9	526gr5-2	18160	38597	12117	1568	**448**	**3.05**
Thebaud C-74	3876.72-3876.9	526gr5-3	18200	42219	10578	1518	**442**	**3.18**
Thebaud C-74	3876.72-3876.9	526gr5-4	23000	37572	5365	1090	**442**	**4.71**
Thebaud C-74	3876.72-3876.9	526gr5-5	17563	42303	10116	1499	**445**	**3.2**
Thebaud C-74	3876.72-3876.9	526gr5-6	18309	41529	11059	1528	**440**	**3.16**
Thebaud C-74	3876.72-3876.9	526gr5-7	18656	37664	21237	2125	**444**	**2.33**
Thebaud C-74	3876.72-3876.9	526gr5-8	18356	35509	17615	1831	**440**	**2.63**
Thebaud C-74	3876.72-3876.9	526gr5-9	18285	36203	15914	1743	**442**	**2.75**
Thebaud C-74	3876.72-3876.9	526gr8-1	1155	33748	681	641	**398**	**12.19**
Thebaud C-74	3876.72-3876.9	526gr8-2	1778	51392	770	1081	**447**	**10.8**
Thebaud C-74	3876.72-3876.9	526gr8-3	2167	49671	763	1076	**460**	**10.86**
Thebaud C-74	3876.72-3876.9	526gr10-1	9458	34913	5321	963	**412**	**4.28**
Glenelg E-58	3525.16	ST_E58_13gr1-1	10469	89774	11364	2193	**387**	**2.74**
Glenelg E-58	3525.16	ST_E58_13gr1-2	8838	88938	11082	1973	**354**	**2.9**
Glenelg E-58	3525.16	ST_E58_13gr2-1	22755	26033	4060	2118	**1158**	**3.56**
Glenelg E-58	3525.16	ST_E58_13gr2-2	20871	30880	5495	2630	**1156**	**2.81**
Glenelg E-58	3525.16	ST_E58_13gr3-1	3736	1163	227	0		
Glenelg E-58	3525.16	ST_E58_13gr3-2	3560	2619	723	15	**69**	**72.25**
Glenelg E-58	3525.16	ST_E58_13gr4-1	0	0	0	0		
Glenelg E-58	3525.16	ST_E58_13gr5-1	5187	23907	793	1344	**1107**	**10.3**
Glenelg E-58	3525.16	ST_E58_13gr6-1	13098	30814	1514	1083	**670**	**6.99**
Glenelg E-58	3525.16	ST_E58_13gr7-1	13891	14205	0	630	**976**	**149**
Glenelg E-58	3525.16	ST_E58_13gr7-2	14244	15541	284	736	**981**	**23.42**
Glenelg E-58	3525.16	ST_E58_13gr7-3	14525	18170	0	826	**1000**	**43.06**
Glenelg E-58	3525.16	ST_E58_13gr7-4	13010	10842	0	424	**863**	**73.88**
Glenelg E-58	3525.16	ST_E58_13gr7-5	13899	15623	6	757	**1063**	**75.32**
Glenelg E-58	3525.16	ST_E58_13gr8-1	15366	33986	3822	1035	**496**	**4.9**
Glenelg E-58	3525.16	ST_E58_13gr8-2	15166	48472	3502	1332	**495**	**4.61**
Glenelg E-58	3525.16	ST_E58_13gr8-3	15025	47833	3955	1361	**499**	**4.34**
Glenelg E-58	3525.16	ST_E58_13gr8-4	15547	66869	3836	1804	**506**	**4.26**
Glenelg E-58	3525.16	ST_E58_13gr8-5	14309	43469	2946	1193	**500**	**5.05**
Glenelg E-58	3525.16	ST_E58_13gr9-1	7928	54090	2357	1116	**404**	**5.79**
Glenelg E-58	3525.16	ST_E58_13gr9-2	5270	63213	1268	1227	**407**	**8.44**

Glenelg E-58	3525.16	ST_E58_13gr9-3	3483	47755	330	916	**419**	**17.4**
Glenelg E-58	3525.16	ST_E58_13gr10-1	13880	37285	1342	702	**377**	**8.66**
Glenelg E-58	3525.16	ST_E58_13gr10-2	14497	41577	1564	783	**375**	**7.89**
Glenelg E-58	3525.16	ST_E58_13gr10-3	10200	104351	2806	2145	**422**	**5.87**
Glenelg E-58	3525.16	ST_E58_13gr10-4	10169	105001	2772	2118	**415**	**5.94**
Glenelg E-58	3525.16	ST_E58_13gr10-5	4754	35477	197	581	**359**	**23.37**
Glenelg E-58	3525.16	ST_E58_13gr11-1	6542	36807	2792	1995	**949**	**4.1**
Glenelg E-58	3525.16	ST_E58_13gr11-2	10825	40658	1832	2141	**1004**	**5.61**
Glenelg E-58	3525.16	ST_E58_13gr11-3	6697	35055	2201	1972	**1018**	**4.8**
Glenelg E-58	3525.16	ST_E58_13gr12-1	12970	11633	388	568	**965**	**20.02**
Glenelg E-58	3525.16	ST_E58_13gr12-2	13258	12594	340	629	**1006**	**21.68**
Glenelg E-58	3525.16	ST_E58_13gr12-3	15706	11744	663	642	**1008**	**13.52**
Glenelg E-58	3525.16	ST_E58_13gr12-4	10239	13461	0	576	**942**	**92.34**
Glenelg E-58	3525.16	ST_E58_13gr12-5	6122	39601	345	1799	**971**	**16.95**
Glenelg E-58	3525.16	ST_E58_13gr13-1	1671	2848	30	0		
Glenelg E-58	3525.16	ST_E58_13gr13-2	1851	2601	70	0		
Glenelg E-58	3525.16	ST_E58_13gr14-1	18357	66365	1420	1231	**387**	**8.25**
Glenelg E-58	3525.16	ST_E58_13gr14-2	21579	73452	1665	1382	**391**	**7.7**
Glenelg E-58	3525.16	ST_E58_13gr14-3	18477	66066	1557	1251	**393**	**7.81**
Glenelg E-58	3525.16	ST_E58_13gr14-4	21776	73045	1401	1352	**389**	**8.51**
Glenelg E-58	3525.16	ST_E58_13gr14-5	21807	69956	1087	1275	**387**	**9.76**
Glenelg E-58	3525.16	ST_E58_13gr15-1	16049	42777	6397	3042	**1034**	**2.44**
Glenelg E-58	3525.16	ST_E58_13gr15-2	11254	38332	7343	3016	**1044**	**2.16**
Glenelg E-58	3525.16	ST_E58_13gr15-3	10287	40183	6638	2995	**1046**	**2.27**
Glenelg E-58	3525.16	ST_E58_13gr15-4	13164	42222	5821	2938	**1039**	**2.52**
Glenelg E-58	3525.16	ST_E58_13gr15-5	16853	42588	6369	3041	**1038**	**2.46**
Glenelg E-58	3525.16	ST_E58_13gr15-6	16007	39702	6264	2897	**1042**	**2.48**
Glenelg E-58	3525.16	ST_E58_13gr15-7	14879	41149	7220	3113	**1039**	**2.24**
Glenelg E-58	3525.16	ST_E58_13gr15-8	12193	37600	7976	3080	**1043**	**2.08**
Glenelg E-58	3525.16	ST_E58_13gr15-9	11953	37297	7818	3044	**1044**	**2.1**
Glenelg E-58	3525.16	ST_E58_13gr16-1	27124	84447	3784	1739	**401**	**5.15**
Glenelg E-58	3525.16	ST_E58_13gr16-2	24483	88090	3173	1781	**404**	**5.54**
Glenelg E-58	3525.16	ST_E58_13gr16-3	31620	66462	3321	1376	**398**	**5.85**
Glenelg E-58	3525.16	ST_E58_13gr16-4	30117	69851	3115	1412	**394**	**5.9**
Glenelg E-58	3525.16	ST_E58_13gr16-5	20555	67215	2136	1333	**401**	**6.57**
Glenelg E-58	3525.16	ST_E58_13gr17-1	1192	5286	287	120	**430**	**36.79**
Glenelg E-58	3525.16	ST_E58_13gr17-2	562	6308	0	0		
Glenelg E-58	3525.16	ST_E58_13gr18-1	2258	3861	0	42	**244**	**62.07**
Glenelg E-58	3525.16	ST_E58_13gr18-2	1574	3948	0	0		
Glenelg E-58	3525.16	ST_E58_13gr18-3	1144	5380	46	43	**175**	**116**
Glenelg E-58	3525.16	ST_E58_13gr19-1	13632	20504	3600	735	**507**	**5.9**
Glenelg E-58	3525.16	ST_E58_13gr19-2	13185	24865	3407	890	**549**	**5.27**
Glenelg E-58	3525.16	ST_E58_13gr20-1	20327	32062	1265	499	**309**	**10.45**
Glenelg E-58	3525.16	ST_E58_13gr20-2	23797	34475	1900	558	**308**	**9.1**
Glenelg E-58	3525.16	ST_E58_13gr20-3	18234	34059	5505	729	**315**	**6.05**
Glenelg E-58	3525.16	ST_E58_13gr20-4	20109	36600	3978	715	**324**	**6.54**
Glenelg E-58	3525.16	ST_E58_13gr20-5	20926	36117	1244	569	**317**	**10.05**
Glenelg E-58	3525.16	ST_E58_13gr20-6	23573	37014	1761	602	**315**	**8.97**
Glenelg E-58	3525.16	ST_E58_13gr20-7	21060	37124	2598	675	**332**	**7.41**
Glenelg E-58	3525.16	ST_E58_13gr21-1	15312	35766	12622	1329	**387**	**3.44**
Glenelg E-58	3525.16	ST_E58_13gr22-1	16553	46508	14920	1705	**401**	**2.91**
Glenelg E-58	3525.16	ST_E58_13gr22-2	14918	48246	12806	1620	**403**	**2.99**
Glenelg E-58	3525.16	ST_E58_13gr22-3	13613	57213	8575	1528	**401**	**3.31**
Glenelg E-58	3525.16	ST_E58_13gr22-4	15892	46154	14583	1630	**390**	**2.99**
Glenelg E-58	3525.16	ST_E58_13gr22-5	15627	48952	12857	1618	**399**	**3.05**
Glenelg E-58	3525.16	ST_E58_13gr22-6	15509	46375	14216	1631	**394**	**2.98**
Glenelg E-58	3532.08	ST_E58_17gr1-1	2728	1075	295	25	**277**	**73.2**
Glenelg E-58	3532.08	ST_E58_17gr1-2	3409	1878	338	121	**884**	**30.55**
Glenelg E-58	3532.08	ST_E58_17gr1-3	3008	6922	407	109	**296**	**30.37**
Glenelg E-58	3532.08	ST_E58_17gr2-1	17808	25123	2980	790	**505**	**6.11**
Glenelg E-58	3532.08	ST_E58_17gr2-2	15985	25960	3661	851	**500**	**5.44**
Glenelg E-58	3532.08	ST_E58_17gr3-1	4660	39158	3772	4235	**1727**	**2.9**

Glenelg E-58	3532.08	ST_E58_17gr3-2	3229	42492	1154	3568	**1654**	**7.55**
Glenelg E-58	3532.08	ST_E58_17gr3-3	4707	45967	2570	4297	**1680**	**4.08**
Glenelg E-58	3532.08	ST_E58_17gr3-4	4901	45468	2597	4348	**1710**	**4.03**
Glenelg E-58	3532.08	ST_E58_17gr3-5	6278	60805	1443	4994	**1637**	**6.92**
Glenelg E-58	3532.08	ST_E58_17gr3-6	7209	76830	1898	6430	**1661**	**6.15**
Glenelg E-58	3532.08	ST_E58_17gr3-7	7709	43449	3134	4311	**1698**	**3.44**
Glenelg E-58	3532.08	ST_E58_17gr3-8	3620	34903	1346	3175	**1722**	**6.45**
Glenelg E-58	3532.08	ST_E58_17gr4-1	9081	63991	1219	1357	**445**	**8.46**
Glenelg E-58	3532.08	ST_E58_17gr4-2	14424	59346	1801	1261	**431**	**6.74**
Glenelg E-58	3532.08	ST_E58_17gr5-1	3254	29127	615	681	**487**	**12.66**
Glenelg E-58	3532.08	ST_E58_17gr5-2	2385	21571	222	557	**555**	**24.48**
Glenelg E-58	3532.08	ST_E58_17gr5-3	2644	19043	152	501	**570**	**31.23**
Glenelg E-58	3532.08	ST_E58_17gr6-1	11907	30586	3846	810	**420**	**5.26**
Glenelg E-58	3532.08	ST_E58_17gr7-1	5297	61970	2201	1264	**408**	**5.9**
Glenelg E-58	3532.08	ST_E58_17gr7-2	4295	94241	3369	2015	**427**	**4.92**
Glenelg E-58	3532.08	ST_E58_17gr7-3	5590	47321	2275	1047	**427**	**5.68**
Glenelg E-58	3532.08	ST_E58_17gr7-4	5672	50213	2333	1104	**426**	**5.59**
Glenelg E-58	3532.08	ST_E58_17gr7-5	4618	82698	2982	1755	**424**	**5.12**
Glenelg E-58	3532.08	ST_E58_17gr7-6	4186	83122	3119	1782	**426**	**4.97**
Glenelg E-58	3532.08	ST_E58_17gr8-1	8626	75054	1720	1400	**388**	**7.2**
Glenelg E-58	3532.08	ST_E58_17gr9-1	9714	15301	3075	494	**436**	**7.34**
Glenelg E-58	3532.08	ST_E58_17gr9-2	8894	11270	2463	381	**441**	**9**
Glenelg E-58	3532.08	ST_E58_17gr9-3	10158	20197	2668	578	**446**	**6.83**
Glenelg E-58	3535.83	ST_E58_19gr1-1	6463	56187	1211	741	**276**	**9.19**
Glenelg E-58	3535.83	ST_E58_19gr2-1	9703	60073	2997	811	**261**	**6.19**
Glenelg E-58	3535.83	ST_E58_19gr2-2	4524	35553	1034	335	**193**	**12.35**
Glenelg E-58	3535.83	ST_E58_19gr2-3	9250	40579	9029	955	**307**	**4.22**
Glenelg E-58	3535.83	ST_E58_19gr2-4	3619	46457	576	433	**201**	**14.53**
Glenelg E-58	3535.83	ST_E58_19gr3-1	2587	12475	201	8	**14**	**88.94**
Glenelg E-58	3535.83	ST_E58_19gr3-2	3705	10470	0	36	**77**	**1919**
Glenelg E-58	3535.83	ST_E58_19gr4-1	5728	1504	302	0		
Glenelg E-58	3535.83	ST_E58_19gr5-1	35768	27514	4493	720	**382**	**8**
Glenelg E-58	3535.83	ST_E58_19gr6-1	9810	23577	2424	539	**383**	**7.4**
Glenelg E-58	3535.83	ST_E58_19gr7-1	14377	36709	10998	1086	**336**	**4.02**
Glenelg E-58	3535.83	ST_E58_19gr8-1	2631	4195	0	47	**251**	**240**
Glenelg E-58	3535.83	ST_E58_19gr9-1	17534	36676	1997	1061	**546**	**6.29**
Glenelg E-58	3535.83	ST_E58_19gr9-2	16618	38021	2219	1133	**556**	**5.82**
Glenelg E-58	3535.83	ST_E58_19gr10-1	13500	12941	3717	354	**318**	**9.55**
Glenelg E-58	3532.19	ST_E58-18gr1-1	8477	477	1379	134	**594**	**23.24**
Glenelg E-58	3532.19	ST_E58-18gr1-2	952	492	126	44	**1047**	**93.04**
Glenelg E-58	3532.19	ST_E58_18gr2-1	8461	36799	2179	864	**439**	**6.1**
Glenelg E-58	3532.19	ST_E58_18gr3-1	18936	27267	1247	2420	**1647**	**7.18**
Glenelg E-58	3532.19	ST_E58_18gr3-2	20122	28721	1125	2491	**1644**	**7.8**
Glenelg E-58	3532.19	ST_E58_18gr3-3	18855	26747	1023	2346	**1666**	**8.36**
Glenelg E-58	3532.19	ST_E58_18gr4-1	29745	30329	698	1533	**1030**	**11.57**
Glenelg E-58	3532.19	ST_E58_18gr4-2	29224	29221	711	1524	**1057**	**11.42**
Glenelg E-58	3532.19	ST_E58_18gr4-3	30668	32814	757	1668	**1035**	**10.93**
Glenelg E-58	3532.19	ST_E58_18gr5-1	7205	8050	3177	1649	**1799**	**3.77**
Glenelg E-58	3532.19	ST_E58_18gr5-2	8118	7648	3218	1714	**1880**	**3.72**
Glenelg E-58	3532.19	ST_E58_18gr6-1	3528	15689	242	359	**485**	**26.55**
Glenelg E-58	3532.19	ST_E58_18gr6-2	2925	17165	215	431	**537**	**27.32**
Glenelg E-58	3532.19	ST_E58_18gr7-1	0	4758	1878	794	**1504**	**6.55**
Glenelg E-58	3532.19	ST_E58_18gr7-2	0	4590	2575	1014	**1585**	**5.11**
Glenelg E-58	3532.19	ST_E58_18gr8-1	3334	3487	132	0	**0**	
Glenelg E-58	3532.19	ST_E58_18gr8-2	3960	1296	340	23	**216**	**63.38**
Glenelg E-58	3532.19	ST_E58_18gr8-3	3313	3640	162	88	**470**	**53.95**
Glenelg E-58	3532.19	ST_E58_18gr9-1	2655	14150	87	272	**420**	**47.49**
Glenelg E-58	3532.19	ST_E58_18gr10-1	0.034	692	0	82	**2509**	**211**
Glenelg E-58	3551.29	ST_E58_27gr1-1	16371	24580	4897	690	**381**	**5.95**
Glenelg E-58	3551.29	ST_E58_27gr2-1	2650	12515	59	293	**513**	**57.95**
Glenelg E-58	3551.29	ST_E58_27gr2-2	1894	12197	0	242	**442**	**114**
Glenelg E-58	3551.29	ST_E58_27gr3-1	12786	53242	1502	7609	**2697**	**6.64**

Glenelg E-58	3551.29	ST_E58_27gr3-2	17555	53341	7873	10997	**2696**	**1.72**
Glenelg E-58	3551.29	ST_E58_27gr3-3	15961	55528	3578	8929	**2678**	**3.35**
Glenelg E-58	3528.21	ST_E58_15gr1-1	11881	55972	1805	1045	**378**	**6.99**
Glenelg E-58	3528.21	ST_E58_15gr1-2	25745	62065	16336	1993	**387**	**3.05**
Glenelg E-58	3528.21	ST_E58_15gr2-1	11802	40886	874	785	**401**	**10.56**
Glenelg E-58	3528.21	ST_E58_15gr2-2	12449	38057	773	698	**384**	**11.52**
Glenelg E-58	3528.21	ST_E58_15gr3-1	24759	22620	720	1814	**1561**	**11.25**
Glenelg E-58	3528.21	ST_E58_15gr4-1	17299	24632	1421	2214	**1611**	**6.54**
Glenelg E-58	3528.21	ST_E58_15gr4-2	17433	23891	1406	2025	**1520**	**6.66**
Glenelg E-58	3528.21	ST_E58_15gr4-3	16697	22831	1742	2199	**1634**	**5.58**
Glenelg E-58	3528.21	ST_E58_15gr4-4	16626	24536	1596	2300	**1642**	**5.96**
Glenelg E-58	3528.21	ST_E58_15gr4-5	17370	24923	1147	2180	**1624**	**7.73**
Glenelg E-58	3528.21	ST_E58_15gr4-6	18143	29254	1186	2456	**1588**	**7.54**
Glenelg E-58	3528.21	ST_E58_15gr5-1	5450	52125	2485	1028	**382**	**5.72**
Glenelg E-58	3528.21	ST_E58_15gr5-2	6935	41459	910	743	**374**	**10.35**
Glenelg E-58	3528.21	ST_E58_15gr5-3	2068	35196	1840	691	**375**	**7.17**
Glenelg E-58	3528.21	ST_E58_15gr5-4	6413	46299	2379	943	**390**	**5.88**
Glenelg E-58	3528.21	ST_E58_15gr6-1	13107	43117	692	820	**403**	**12.07**
Glenelg E-58	3528.21	ST_E58_15gr7-1	3118	3697	2	30	**182**	**275**
Glenelg E-58	3528.21	ST_E58_15gr7-2	2441	2088	0	0	**0**	
Glenelg E-58	3528.21	ST_E58_15gr7-3	2530	1650	0	0	**0**	
Glenelg E-58	3536.82	ST_E58_21gr1-1	7851	34054	515	632	**395**	**14.52**
Glenelg E-58	3536.82	ST_E58_21gr1-2	16151	37548	958	716	**393**	**10.3**
Glenelg E-58	3536.82	ST_E58_21gr1-3	6719	34046	501	632	**396**	**14.73**
Glenelg E-58	3536.82	ST_E58_21gr1-4	7987	34169	445	631	**396**	**15.76**
Glenelg E-58	3536.82	ST_E58_21gr2-1	1405	24141	368	658	**577**	**18.14**
Glenelg E-58	3536.82	ST_E58_21gr3-1	11617	32406	1737	949	**554**	**6.67**
Glenelg E-58A	3733.43	ST_E58A_2gr1-1	8001	38696	741	713	**387**	**11.67**
Glenelg E-58A	3733.43	ST_E58A_2gr2-1	2990	1288	21	0	**0**	
Glenelg E-58A	3733.43	ST_E58A_2gr3-1	20414	29552	9085	1199	**452**	**4.09**
Glenelg E-58A	3733.43	ST_E58A_2gr3-2	8801	22284	2764	602	**430**	**6.62**
Glenelg E-58A	3733.43	ST_E58A_2gr3-3	21752	32833	11309	1403	**449**	**3.67**
North Triumph G-43	3285.15	5167gr1-1	9527	37142	7017	913	**341**	**4.36**
North Triumph G-43	3285.15	5167gr1-2	3775	45734	10821	1243	**345**	**3.24**
North Triumph G-43	3285.15	5167gr1-3	3190	50768	12287	1419	**351**	**2.91**
North Triumph G-43	3285.15	5167gr1-4	3108	49583	11800	1387	**354**	**2.96**
North Triumph G-43	3285.15	5167gr1-5	2827	45212	10483	1217	**344**	**3.28**
North Triumph G-43	3285.15	5167gr1-6	2406	34723	8359	928	**336**	**4.06**
North Triumph G-43	3285.15	5167gr1-7	2203	32365	7843	905	**351**	**4.16**
North Triumph G-43	3285.15	5167gr1-8	2211	30790	7438	848	**346**	**4.39**
North Triumph G-43	3285.15	5167gr2-1	2464	8518	247	195	**466**	**32.12**
North Triumph G-43	3285.15	5167gr2-2	3031	11633	299	194	**344**	**27.54**
North Triumph G-43	3285.15	5167gr2-3	2523	5452	202	62	**228**	**53.12**
North Triumph G-43	3285.15	5167gr2-4	2212	17081	344	294	**361**	**22.12**
North Triumph G-43	3285.15	5167gr3-1	571	19094	179	823	**921**	**29.39**
North Triumph G-43	3285.15	5167gr3-2	711	17618	112	1296	**1560**	**38.38**
North Triumph G-43	3285.15	5167gr3-3	549	19053	232	811	**901**	**25.16**
North Triumph G-43	3285.15	5167gr3-4	560	18884	244	819	**916**	**24.55**
North Triumph G-43	3285.15	5167gr3-5	494	18007	179	831	**982**	**30.09**
North Triumph G-43	3285.15	5167gr4-1	19179	47663	3308	4488	**1629**	**3.42**
North Triumph G-43	3285.15	5167gr4-2	21140	53555	3220	4878	**1620**	**3.59**
North Triumph G-43	3285.15	5167gr4-3	20484	28243	1206	2423	**1610**	**7.33**
North Triumph G-43	3285.15	5167gr4-4	18529	26993	1716	2489	**1623**	**5.54**
North Triumph G-43	3285.15	5167gr4-5	19802	49186	3305	4607	**1631**	**3.45**
North Triumph G-43	3285.15	5167gr5-1	31388	31574	577	678	**452**	**14.22**
North Triumph G-43	3285.15	5167gr5-2	28099	34022	1019	754	**450**	**10.2**
North Triumph G-43	3285.15	5167gr5-3	31021	33658	980	727	**440**	**10.67**
North Triumph G-43	3285.15	5167gr5-4	34407	31896	584	699	**461**	**14.2**
North Triumph G-43	3285.15	5167gr5-5	35281	33913	647	722	**447**	**13.43**
North Triumph G-43	3285.15	5167gr5-6	29327	28920	562	627	**455**	**14.63**

North Triumph G-43	3285.15	5167gr5-7	34974	33731	663	755	**469**	**13.15**
North Triumph G-43	3285.15	5167gr6-1	10089	37260	8251	922	**323**	**4.28**
North Triumph G-43	3285.15	5167gr6-2	22168	33098	7628	790	**307**	**5.71**
North Triumph G-43	3285.15	5167gr6-3	23538	33793	7887	804	**304**	**5.75**
North Triumph G-43	3285.15	5167gr6-4	17459	35333	8409	903	**324**	**4.8**
North Triumph G-43	3285.15	5167gr6-5	21321	32765	8066	842	**321**	**5.36**
North Triumph G-43	3289.64	ST_G43_11gr2-1	5839	46669	1661	842	**362**	**7.21**
North Triumph G-43	3289.64	ST_G43_11gr3-1	19984	25055	2251	604	**416**	**7.88**
North Triumph G-43	3289.64	ST_G43_11gr4-1	24794	26222	1036	99	**76**	**19.74**
North Triumph G-43	3289.64	ST_G43_11gr5-1	4025	71440	3080	1129	**310**	**5.43**
North Triumph G-43	3289.64	ST_G43_11gr6-1	16717	42053	876	548	**274**	**11.56**
North Triumph G-43	3289.64	ST_G43_11gr6-2	13582	44519	604	586	**282**	**13.53**
North Triumph G-43	3289.64	ST_G43_11gr6-3	15715	44739	921	606	**284**	**11.02**
North Triumph G-43	3289.64	ST_G43_11gr6-4	11596	41107	733	551	**284**	**12.28**
North Triumph G-43	3289.64	ST_G43_11gr7-1	1518	75454	2806	6908	**1740**	**4.53**
North Triumph G-43	3289.64	ST_G43_11gr8-1	8852	46919	3096	953	**374**	**5.28**
North Triumph G-43	3289.64	ST_G43_11gr8-2	6467	35624	1856	682	**366**	**7.13**
North Triumph G-43	3289.64	ST_G43_11gr8-3	8240	38558	2485	766	**367**	**6.15**
North Triumph G-43	3289.64	ST_G43_11gr9-1	0	4899	0	0		
North Triumph G-43	3289.64	ST_G43_11gr10-1	17787	38857	7801	5838	**1854**	**1.74**
North Triumph G-43	3289.64	ST_G43_11gr11-1	319	15590	0	0		
North Triumph G-43	3289.64	ST_G43_11gr12-1	0	3593	231	368	**1786**	**34.56**
North Triumph G-43	3289.64	ST_G43_11gr13-1	13170	35039	3108	2176	**1047**	**3.77**
North Triumph G-43	3289.64	ST_G43_11gr14-1	7435	32721	5711	938	**409**	**4.3**
North Triumph G-43	3289.64	ST_G43_11gr15-1	5035	867	0	0		
North Triumph G-43	3289.64	ST_G43_11gr16-1	870	36249	1100	3317	**1776**	**7.74**
North Triumph G-43	3289.64	ST_G43_11gr16-2	0	20991	0	476	**505**	**12.37**
North Triumph G-43	3289.64	ST_G43_11gr16-3	0	42309	356	2556	**1282**	**16.31**
North Triumph G-43	3828.04	ST_G43_31gr1-1	7660	29153	2885	702	**407**	**5.98**
North Triumph G-43	3828.04	ST_G43_31gr2-1	2734	5275	0	142	**598**	**56.15**
North Triumph G-43	3828.04	ST_G43_31gr3-1	12203	772	639	0	**0**	
North Triumph G-43	3828.04	ST_G43_31gr3-2	13201	4590	13865	849	**383**	**4.82**
North Triumph G-43	3828.04	ST_G43_31gr3-3	11468	1114	811	35	**212**	**32.39**
North Triumph G-43	3828.04	ST_G43_31gr4-1	24481	32458	8788	1461	**531**	**3.81**
North Triumph G-43	3828.04	ST_G43_31gr4-2	26320	34443	9771	1586	**531**	**3.67**
North Triumph G-43	4010.25	537 gr2-1	15799	45911	1908	748	**321**	**7.21**
North Triumph G-43	4010.25	537 gr2 -2	4488	17123	0	0		
North Triumph G-43	4010.25	537 gr2 -3	17477	46300	1981	764	**324**	**7.14**
North Triumph G-43	4010.25	537 gr2 -4	17205	39171	1943	652	**321**	**7.52**
North Triumph G-43	4010.25	537 gr1-1	2171	6474	13	86	**295**	**149**
North Triumph G-43	4010.25	537 gr1 -2	1206	1373	0	0		
North Triumph G-43	4010.25	537 gr1-3	3182	1832	38	0		
North Triumph G-43	4010.25	537 gr3-1	2092	0	122	21	**1099**	**130**
North Triumph G-43	4010.25	537 gr3-2	3167	0	0	0	**0**	
North Triumph G-43	4010.25	537 gr3-3	3683	0	77	0	**0**	
North Triumph G-43	4010.25	537 gr3-4	2888	411	117	9	**257**	**120**
North Triumph G-43	4010.25	537 gr4-1	12897	52282	3076	1293	**463**	**4.74**
North Triumph G-43	4010.25	537 gr4-2	15738	56052	4421	1463	**463**	**3.98**
North Triumph G-43	4010.25	537 gr5-1	2000	11631	164	153	**282**	**41.04**
North Triumph G-43	4010.25	537 gr5-2	2621	13577	153	182	**290**	**39.35**
North Triumph G-43	4010.25	537 gr5-3	2249	10433	114	144	**298**	**52.02**
North Triumph G-43	4010.25	537 gr6-1	3745	20075	257	463	**493**	**24.22**
North Triumph G-43	4010.25	537 gr6-2	2902	28527	284	633	**479**	**20.88**
North Triumph G-43	4010.25	537 gr6-3	4001	11575	93	245	**460**	**51.99**
North Triumph G-43	4010.25	537 gr6-4	3268	43375	461	994	**493**	**14.77**
North Triumph G-43	4010.25	537 gr6-5	5288	2500	209	70	**490**	**49.12**
North Triumph G-43	4010.25	537 gr6-6	1582	42468	520	938	**473**	**13.79**
North Triumph G-43	4010.25	537 gr7-1	3179	37688	710	836	**466**	**11.59**
North Triumph G-43	4010.25	537 gr7-2	3947	64172	1060	1447	**477**	**9.13**
North Triumph G-43	4010.25	537 gr7-3	4476	69257	1239	1569	**477**	**8.38**
North Triumph G-43	4010.25	537 gr7-4	4031	70062	1311	1589	**476**	**8.11**
North Triumph G-43	4010.25	537 gr7-5	3530	27976	613	682	**506**	**13.09**

North Triumph G-43	4010.25	537 gr7-6	4798	56315	937	1327	**498**	**9.66**
North Triumph G-43	4010.25	537 gr7-7	5023	36723	745	873	**497**	**11.18**
North Triumph G-43	4010.25	537 gr7-8	3930	29440	507	605	**434**	**14.87**
North Triumph G-43	3835.78	527gr1-1	10268	42220	4464	980	**386**	**4.59**
North Triumph G-43	3835.78	527gr1-2	10017	64050	3905	1451	**422**	**4.21**
North Triumph G-43	3835.78	527gr1-3	12009	44793	10817	1231	**345**	**3.47**
North Triumph G-43	3835.78	527gr2-1	3278	31752	3583	714	**368**	**5.61**
North Triumph G-43	3835.78	527gr2-2	5021	51373	6652	1288	**394**	**3.48**
North Triumph G-43	3835.78	527gr2-3	2825	40746	3726	900	**381**	**4.86**
North Triumph G-43	3848.15	529gr1-1	19003	41452	2288	830	**379**	**6.65**
North Triumph G-43	3848.15	529gr1-2	12890	32537	4748	809	**377**	**5.14**
North Triumph G-43	3848.15	529gr1-3	16135	32898	13227	1262	**373**	**3.51**
North Triumph G-43	3848.15	529gr1-4	14301	34051	6370	912	**373**	**4.64**
North Triumph G-43	4402.34	ST_G43_57gr2-1	6597	79637	1462	1522	**403**	**8.12**
North Triumph G-43	4402.34	ST_G43_57gr2-2	8056	77790	1392	1459	**396**	**7.69**
North Triumph G-43	4402.34	ST_G43_57gr2-3	7847	88583	1823	1572	**372**	**7.39**
North Triumph G-43	4402.34	ST_G43_57gr3-1	2588	557	162	0		
North Triumph G-43	4402.34	ST_G43_57gr3-2	1834	660	0	0		
North Triumph G-43	4402.34	ST_G43_57gr3-3	0	1437	0	0		
North Triumph G-43	4402.34	ST_G43_57gr4-1	2605	18118	318	370	**431**	**22.17**
North Triumph G-43	4402.34	ST_G43_57gr4-2	922	11280	0	119	**236**	**1917**
North Triumph G-43	4402.34	ST_G43_57gr4-3	506	3071	168	0		
North Triumph G-43	4402.34	ST_G43_57gr5-1	1385	10983	0	205	**416**	**67.69**
North Triumph G-43	4402.34	ST_G43_57gr6-1	7371	18515	0	0		
North Triumph G-43	4402.34	ST_G43_57gr7-1	10522	35396	1246	713	**404**	**8.71**
North Triumph G-43	4402.34	ST_G43_57gr7-2	8337	33746	943	610	**370**	**10.44**
North Triumph G-43	4402.34	ST_G43_57gr7-3	9863	32245	1193	609	**377**	**9.3**
North Triumph G-43	4402.34	ST_G43_57gr7-4	1600	19787	126	317	**351**	**34.92**
North Triumph G-43	4402.34	ST_G43_57gr8-1	15027	31487	2824	541	**298**	**7.7**
North Triumph G-43	4402.34	ST_G43_57gr8-2	20790	34264	3245	699	**349**	**6.96**
North Triumph G-43	4402.34	ST_G43_57gr9-1	0	4383	1308	0		
North Triumph G-43	4402.34	ST_G43_57gr9-2	0	8710	35	0		
North Triumph G-43	4402.34	ST_G43_57gr10-1	0	6400	1161	0		
North Triumph G-43	4402.34	ST_G43_57gr11-1	20791	32987	7700	4237	**1520**	**1.98**
North Triumph G-43	4402.34	ST_G43_57gr12-1	3174	2371	147	0		
North Triumph G-43	4402.34	ST_G43_57gr13-1	13143	59219	5259	3313	**947**	**2.82**
North Triumph G-43	4402.34	ST_G43_57gr14-1	0	12276	2402	0		
North Triumph G-43	4402.34	ST_G43_57gr15-1	0	1686	0	0		
North Triumph G-43	4402.34	ST_G43_57gr16-1	0	0	2938	0		
North Triumph G-43	4402.34	ST_G43_57gr17-1	6263	11367	81	208	**399**	**55.14**
North Triumph G-43	4402.34	ST_G43_57gr17-2	5515	3386	0	0		
North Triumph G-43	4402.34	ST_G43_57gr17-3	4739	5410	0	21	**87**	**945**
North Triumph G-43	4402.34	ST_G43_57gr17-4	6172	5069	0	33	**146**	**140**
North Triumph G-43	4402.34	ST_G43_57gr18-1	3009	1682	23	0		
North Triumph G-43	4402.34	ST_G43_57gr18-2	1472	6467	884	0		
North Triumph G-43	4402.34	ST_G43_57gr18-3	0	21	2885	0		
North Triumph G-43	4402.34	ST_G43_57gr19-1	0	986	369	0		
North Triumph G-43	4402.34	ST_G43_57gr20-1	20261	42413	4771	647	**251**	**5.73**
North Triumph G-43	4402.34	ST_G43_57gr20-2	17718	42417	5186	713	**270**	**6.24**
North Triumph G-43	4402.34	ST_G43_57gr20-3	18051	42761	5319	690	**258**	**6.41**
Venture 1	4600.87 - 4601.23	53-1	15137	55491	1961	324	**118**	**11.46**
Venture 1	4600.87 - 4601.23	53-2	6657	35556	0	0		
Venture 1	4600.87 - 4601.23	53-3	6271	83177	2176	1147	**285**	**7.69**
Venture 1	4600.87 - 4601.23	53-4	2575	30104	0	0		
Venture 1	4600.87 - 4601.23	53-5	4120	1900	0	0		
Venture 1	4600.87 - 4601.23	53-6	1193	6385	0	0		
Venture 1	4600.87 - 4601.23	53-7	0	3697	0	0		
Venture 1	4600.87 - 4601.23	53-8	98	4357	0	0		
Venture 1	4600.87 - 4601.23	53-9	0	18824	0	0		
Venture 1	4600.87 - 4601.23	53-10	0	0	0	0		
Venture 1	4600.87 - 4601.23	53-11	2902	3881	0	0		

Venture 1	4600.87 - 4601.23	53-12	0	3080	0	0		
Venture 1	4600.87 - 4601.23	53-13	24542	65922	1338	997	**318**	**10.05**
Venture 1	4600.87 - 4601.23	53-14	24945	64240	1044	1252	**413**	**11.08**
Venture 1	4600.87 - 4601.23	53-15	22981	75439	1375	1388	**388**	**9.73**
Venture 1	4600.87 - 4601.23	53-16	21983	67914	1250	1201	**373**	**10.11**
Venture 1	4600.87 - 4601.23	53-17	11153	42588	1354	897	**426**	**8.87**
Venture 1	4600.87 - 4601.23	53-18	22869	44925	1949	1798	**773**	**6.59**
Venture 1	4600.87 - 4601.23	53-19	25786	50069	2189	2119	**816**	**6.15**
Venture 1	4600.87 - 4601.23	53-20	25637	50450	2216	2087	**797**	**6.12**
Venture 1	4598.35 - 4598.59	25g1-1	3853	24849	540	375	**316**	**18.14**
Venture 1	4598.35 - 4598.59	25g1-2	578	23712	74	314	**293**	**43.37**
Venture 1	4598.35 - 4598.59	25g1-3	348	11000	0	55	**112**	**185**
Venture 1	4598.35 - 4598.59	25g1-4	980	31648	122	460	**321**	**32.9**
Venture 1	4598.35 - 4598.59	25g1-5	1562	18448	155	194	**230**	**39.33**
Venture 1	4598.35 - 4598.59	25g1-6	394	16430	0	183	**250**	**1015**
Venture 1	4598.35 - 4598.59	25g1-7	735	10077	0	57	**127**	**80.65**
Venture 1	4598.35 - 4598.59	25g2-1	14353	27432	5441	759	**376**	**5.44**
Venture 1	4598.35 - 4598.59	25g2-2	18994	37750	8243	1162	**402**	**4.16**
Venture 1	4598.35 - 4598.59	25g2-3	17215	38373	7452	1090	**389**	**4.3**
Venture 1	4598.35 - 4598.59	25g2-4	13993	28248	5557	770	**372**	**5.35**
Venture 1	4598.35 - 4598.59	25g2-5	14380	28848	5932	839	**390**	**5.03**
Venture 1	4598.35 - 4598.59	25g2-6	15400	34338	6576	976	**392**	**4.57**
Venture 3	4871.58 - 4871.90	56-1	15851	50858	1997	1339	**519**	**6.82**
Venture 3	4871.58 - 4871.90	56-2	16878	47236	1789	888	**374**	**7.91**
Venture 3	4871.58 - 4871.90	56-3	18471	54183	2284	1203	**436**	**6.64**
Venture 3	4871.58 - 4871.90	56-4	14760	48313	1818	964	**397**	**7.61**
Venture 3	4871.58 - 4871.90	56-5	2838	38611	617	683	**376**	**14.36**
Venture 3	4871.58 - 4871.90	56-6	2224	34805	379	650	**403**	**18.83**
Venture 3	4871.58 - 4871.90	56-7	2367	35808	428	659	**396**	**17.58**
Venture 3	4871.58 - 4871.90	56-8	4344	31997	344	567	**382**	**20.19**
Venture 3	4871.58 - 4871.90	56-9	3504	37532	542	730	**415**	**15.38**
Venture 3	4871.58 - 4871.90	56-10	10674	57185	1168	1361	**497**	**9.72**
Venture 3	4872.58 - 4872.70	57-1a	8005	25425	8286	1236	**524**	**3.26**
Venture 3	4872.58 - 4872.70	57-1b	9165	21400	7016	988	**497**	**3.97**
Venture 3	4872.58 - 4872.70	57-1c	9828	25211	3768	911	**540**	**4.75**
Venture 3	4872.58 - 4872.70	57-3a	1121	17185	4658	690	**475**	**5.41**
Venture 3	4872.58 - 4872.70	57-3b	11632	19808	6219	1013	**560**	**4.06**
Venture 3	4872.58 - 4872.70	57-3c	1099	15504	5271	798	**542**	**4.69**
Venture 3	4872.58 - 4872.70	57-3d	1219	18204	5528	971	**596**	**4.02**
Venture 3	4872.58 - 4872.70	57-3e	1377	18999	5615	910	**541**	**4.2**
Venture 3	4872.58 - 4872.70	57-3f	11719	19445	3641	928	**654**	**4.76**
Venture 3	4882.37 - 4882.68	59-1a	4516	31490	587	872	**580**	**12.85**
Venture 3	4882.37 - 4882.68	59-1b	5719	27654	593	732	**550**	**13.11**
Venture 3	4882.37 - 4882.68	59-1c	0	0	0	0	**0**	
Venture 3	4882.37 - 4882.68	59-1c rep	3826	0	0	0	**0**	
Venture 3	4882.37 - 4882.68	59-1d	263	19565	221	431	**473**	**26.26**
Venture 3	4882.37 - 4882.68	59-1e	1488	20826	219	501	**518**	**25.81**
Venture 3	4887.39-4888.32	511gr7-1	0	5952	55	65	**238**	**102**
Venture 3	4887.39-4888.32	511gr7-2	0	6667	87	24	**78**	**132**
Venture 3	4887.39-4888.32	511gr7-3	0	5002	96	25	**106**	**132**
Venture 3	4887.39-4888.32	511gr11-1	9835	18695	3427	457	**343**	**7.63**
Venture 3	4887.39-4888.32	511gr11-2	7482	20209	3143	400	**295**	**8.37**
Venture 3	4887.39-4888.32	511gr11-3	7515	45457	4915	979	**357**	**4.38**
Venture 3	4887.39-4888.32	511gr16-1	3342	4765	819	99	**299**	**27.73**
Venture 3	4887.39-4888.32	511gr16-2	1369	20103	526	438	**448**	**15.54**
Venture 3	4887.39-4888.32	511gr16-3	3638	8792	809	273	**531**	**14.97**
Venture 3	4887.39-4888.32	511gr16-4	5484	704	1087	72	**381**	**31.73**
Venture 3	4887.39-4888.32	511gr19-1	11354	6857	3144	342	**446**	**9.5**
Venture 3	4887.39-4888.32	511gr19-2	12703	6959	3326	332	**418**	**9.75**
Venture 3	4887.39-4888.32	511gr19-3	10988	6806	3077	316	**420**	**10.03**
Venture 3	4887.39-4888.32	511gr19-4	13157	10675	3185	437	**463**	**8.12**

Venture 3	4887.39-4888.32	511gr22-1	3406	0	129	0		
Venture 3	4887.39-4888.32	511gr22-2	4531	0	79	0		
Venture 3	4887.39-4888.32	511gr22-3	4251	0	98	0		
Venture 3	4887.39-4888.32	511gr22-4	3806	27	158	0		
Venture 3	4887.39-4888.32	511gr22-5	3387	435	94	0		
Venture 3	4887.39-4888.32	511gr25-1	9011	77642	2526	1297	**338**	**5.83**
Venture 4	5371.77 - 5371.97	V-4-SP22-1	11230	42388	874	2104	**1019**	**9.65**
Venture 4	5371.77 - 5371.97	V-4-SP22-2	11077	42852	907	1985	**952**	**9.45**
Venture 4	5371.77 - 5371.97	V-4-SP22-3	9627	36553	880	1883	**1046**	**9.55**
Venture 4	5371.77 - 5371.97	V-4-SP22-4	9759	77973	1981	3952	**1025**	**6.13**
Venture 4	5372.85 - 5373.18	514-1	8895	28442	731	671	**485**	**13.06**
Venture 4	5372.85 - 5373.18	514-2	8715	35267	1018	800	**462**	**10.42**
Venture 4	5372.85 - 5373.18	514-3	8788	35313	1051	782	**450**	**10.26**
Venture 4	5372.85 - 5373.18	514-4	4753	14905	13	1371	**1968**	**73.49**
Venture 4	5372.85 - 5373.18	514-5	2296	36876	610	3339	**1837**	**13.63**
Venture 4	5372.85 - 5373.18	514-6	2056	18048	37	1484	**1761**	**56.12**
Venture 4	5372.85 - 5373.18	514-7	10983	21063	733	528	**501**	**13.74**
Venture 4	5372.85 - 5373.18	514-8	11886	44704	1579	1139	**509**	**7.78**
Venture 4	5372.85 - 5373.18	514-9	13531	57499	2012	1417	**493**	**6.89**
Venture 4	5372.85 - 5373.18	514-10	12812	38080	1344	959	**503**	**8.7**
Venture 4	5372.85 - 5373.18	514-11	12356	25347	1057	668	**516**	**10.53**
Venture 4	5372.85 - 5373.18	514-12	13645	28209	1415	818	**554**	**8.59**
Venture 4	5372.85 - 5373.18	514-13	3216	746	0	0		
Venture 4	5372.85 - 5373.18	514-14	2294	19682	0	314	**357**	**338**
Venture 4	5372.85 - 5373.18	514-15	5512	59837	815	1587	**564**	**12.09**
Venture 4	5372.85 - 5373.18	514-16	10034	66848	963	1631	**519**	**11.24**
Venture 4	5372.85 - 5373.18	514-17	5260	65419	917	1765	**573**	**11.44**
Venture 4	5372.85 - 5373.18	514-18	6277	68593	978	1848	**572**	**11.12**
Venture 4	5372.85 - 5373.18	514-19	7575	62921	628	1625	**556**	**14.08**
Venture 4	5372.85 - 5373.18	514-20	14292	42261	1245	824	**397**	**9.65**
Venture 4	5372.85 - 5373.18	514-21	13026	53759	1303	1067	**411**	**9.33**
Venture 4	5372.85 - 5373.18	514-22	12977	32467	1172	813	**499**	**9.73**
Venture 4	5372.85 - 5373.18	514-23	13790	30306	1456	808	**513**	**8.55**
Venture 4	5372.85 - 5373.18	514-24	14995	29928	1438	876	**562**	**8.45**
Venture 4	5372.85 - 5373.18	514-25	18627	49188	1234	1005	**422**	**9.69**
Venture 4	5372.85 - 5373.18	514-26	20738	41804	716	809	**409**	**13.45**
Venture 4	5372.85 - 5373.18	514-27	10150	34835	407	609	**376**	**18.51**
Venture 4	5372.85 - 5373.18	514-28	10908	34276	536	603	**374**	**15.99**
Venture 4	5372.85 - 5373.18	514-29	20308	40771	633	772	**402**	**14.48**
Venture 4	5391.51 - 5391.83	521g1-1	16435	99070	4731	2235	**436**	**5.4**
Venture 4	5391.51 - 5391.83	521g1-2	16097	92534	4416	2088	**435**	**5.55**
Venture 4	5391.51 - 5391.83	521g1-3	15720	87256	4251	1902	**420**	**5.29**
Venture 4	5391.51 - 5391.83	521g1-4	15537	83512	4232	1849	**424**	**5.21**
Venture 4	5391.51 - 5391.83	521g1-5	15367	81545	4075	1836	**432**	**5.28**
Venture 4	5391.51 - 5391.83	521g1-6	15136	76195	3883	1704	**428**	**5.34**
Venture 4	5391.51 - 5391.83	521g2-1	19449	17143	0	2306	**619**	**204**
Venture 4	5391.51 - 5391.83	521g2-2	14820	13041	0	1717	**562**	**142**
Venture 4	5391.51 - 5391.83	521g2-3	15379	13657	0	1722	**542**	**71.2**
Venture 4	5391.51 - 5391.83	521g2-4	14966	13224	0	1742	**596**	**99.5**
Venture 4	5391.51 - 5391.83	521g2-5	13818	20995	0	2822	**541**	**105**
Venture 4	5391.51 - 5391.83	521g2-6	25831	22744	0	3086	**654**	**304**
Venture 4	5391.51 - 5391.83	521g3-1	3246	82304	4575	7981	**1739**	**4.25**
Venture 4	5391.51 - 5391.83	521g3-2	3044	79955	4528	7714	**1726**	**4.22**
Venture 4	5391.51 - 5391.83	521g3-3	419	79691	8277	8985	**1761**	**2.52**
Venture 4	5391.51 - 5391.83	521g3-4	4356	79943	6585	8452	**1752**	**3.08**
Venture 4	5391.51 - 5391.83	521g3-5	10163	38229	131	3050	**1703**	**29.4**
Venture 4	5391.51 - 5391.83	521g3-6	8583	79510	6997	8469	**1739**	**2.92**
Venture 4	5391.51 - 5391.83	521g3-7	8289	85815	8570	9764	**1793**	**2.56**
Venture 4	5391.51 - 5391.83	521g3-8	12732	85030	8680	9712	**1790**	**2.53**
Venture 4	5391.51 - 5391.83	521g3-9	4165	56101	807	4823	**1762**	**12.99**
Venture 4	5391.51 - 5391.83	521g3-10	4515	97292	13275	12126	**1789**	**1.9**

Venture 4	5381.34 - 5381.77	516g1-1	24873	30503	3099	612	**338**	**7.92**
Venture 4	5381.34 - 5381.77	516g1-2	24947	55764	3639	1165	**385**	**5.95**
Venture 4	5381.34 - 5381.77	516g1-3	26912	27591	3193	594	**350**	**8.17**
Venture 4	5381.34 - 5381.77	516g1-4	26537	25865	3200	590	**364**	**8.13**
Venture 4	5381.34 - 5381.77	516g1-5	27709	25196	3462	568	**349**	**8.31**
Venture 4	5381.34 - 5381.77	516g1-6	28199	28812	3224	636	**362**	**7.98**
Venture 4	5381.34 - 5381.77	516g1-7	20632	18901	2829	409	**326**	**9.49**
Venture 4	5381.34 - 5381.77	516g1-8	20720	19190	3102	380	**292**	**9.76**
Venture 4	5381.34 - 5381.77	516g1-9	23811	27617	2752	574	**351**	**8.29**
Venture 4	5381.34 - 5381.77	516g1-10	23020	33934	2747	691	**361**	**7.58**
Venture 4	5381.34 - 5381.77	516g2-1	28457	46186	1381	999	**440**	**9.95**
Venture 4	5381.34 - 5381.77	516g2-2	22646	44758	1095	937	**433**	**11.2**
Venture 4	5381.34 - 5381.77	516g2-3	28675	46467	1317	1000	**439**	**10.25**
Venture 4	5381.34 - 5381.77	516g2-4	27840	46421	1364	1009	**442**	**10**
Venture 4	5381.34 - 5381.77	516g2-5	28891	46795	1301	1024	**447**	**10.29**
Venture 4	5381.34 - 5381.77	516g2-6	25553	46745	1077	1003	**445**	**11.38**
Venture 4	5381.34 - 5381.77	516g2-7	24760	41912	1118	916	**448**	**11.06**
Venture 4	5381.34 - 5381.77	516g3-1	827	28054	49	405	**321**	**42.9**
Venture 4	5381.34 - 5381.77	516g3-2	993	40085	358	752	**407**	**20.38**
Venture 4	5381.34 - 5381.77	516g3-3	781	32707	251	663	**441**	**24.9**
Venture 4	5381.34 - 5381.77	516g3-4	0	38841	1120	4917	**2411**	**9.71**
Venture 4	5381.34 - 5381.77	516g3-5	768	40465	307	710	**382**	**21.82**
Venture 4	5393.96 - 5394.15	522-1	6089	48796	1004	1347	**575**	**10.3**
Venture 4	5393.96 - 5394.15	522-2	5304	40671	606	1128	**587**	**13.96**
Venture 4	5393.96 - 5394.15	522-3	5435	42437	611	1208	**604**	**13.85**
Venture 4	5393.96 - 5394.15	522-4	6092	49978	1002	1392	**581**	**10.33**
Venture 4	5393.96 - 5394.15	522-5	28483	15963	210	239	**321**	**33.27**
Venture 4	5393.96 - 5394.15	522-6	2986	16357	118	204	**273**	**43.2**
Venture 4	5393.96 - 5394.15	522-7	24959	17115	0	320	**417**	**80.9**
Venture 4	5393.96 - 5394.15	522-8	28439	12844	24	146	**253**	**80.07**
Venture 4	5393.96 - 5394.15	522-9	4956	19607	255	255	**280**	**27.93**
Venture 4	5393.96 - 5394.15	522-10	2043	8683	0	28	**73**	**967**
Venture 4	5393.96 - 5394.15	522-11	7516	20320	268	318	**336**	**26.43**
Venture 4	5393.96 - 5394.15	522-12	9656	14011	207	161	**246**	**35.28**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr1-1	5059	90648	4452	5068	**1051**	**3.6**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr1-2	6661	64539	4414	3768	**1040**	**3.17**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr1-3	8997	56568	5704	3642	**1051**	**2.54**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr1-4	9195	61662	5944	3989	**1068**	**2.5**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr1-5	3727	35389	2192	2053	**1051**	**4.79**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr1-6	3809	36775	2275	2092	**1032**	**4.68**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr2-1	19117	36110	809	525	**303**	**12.25**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr2-2	18644	37793	734	552	**308**	**12.66**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr2-3	20182	39127	717	649	**350**	**12.51**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr2-4	18422	37240	710	576	**326**	**12.74**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr3-1	8666	86028	4296	8377	**1775**	**3.51**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr3-2	5725	66753	1686	4602	**1379**	**6.55**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr3-3	5031	77639	2606	6890	**1708**	**4.98**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr4-1	36700	39586	418	3112	**1639**	**15.36**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr4-2	32458	32354	946	2701	**1634**	**9.11**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr4-3	32437	33009	920	2759	**1643**	**9.28**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr4-4	31852	28642	1472	2563	**1633**	**6.58**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr4-5	36312	41579	385	3199	**1612**	**16**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr4-6	31916	35368	1411	3098	**1655**	**6.78**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr4-7	32510	28493	1495	2584	**1649**	**6.52**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr5-1	3490	56868	950	2106	**776**	**9.5**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr6-1	9861	5785	0	234	**892**	**71.34**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr6-2	11013	10533	141	472	**944**	**40.74**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr7-1	16179	28342	1105	1405	**964**	**8.27**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr7-2	15738	28536	1247	1419	**954**	**7.58**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr8-1	5855	81424	3316	7378	**1705**	**4.21**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr8-2	4868	71549	2440	6555	**1757**	**5.05**

Peskowesk A-99	2238.65	ST_PESK_A99_2238gr8-3	4241	87084	2751	7999	**1775**	**5.03**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr8-4	4809	72580	2426	6621	**1754**	**5.11**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr8-5	5651	83635	3713	7904	**1754**	**3.9**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr8-6	5664	72151	1500	5090	**1430**	**7.31**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr9-1	6088	9998	156	0	**0**	
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr9-2	6780	5801	411	0	**0**	
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr9-3	6226	4318	595	0	**0**	
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr10-1	17294	22866	3440	1658	**1052**	**3.94**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr10-2	22506	24418	5072	2022	**1063**	**3.29**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr11-1	2467	25682	507	453	**370**	**15.7**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr11-2	2957	26476	563	451	**356**	**14.73**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr11-3	3174	28770	698	519	**374**	**12.68**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr12-1	17921	35363	1735	3188	**1656**	**5.62**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr13-1	18450	37540	1615	1908	**976**	**6.31**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr14-1	2356	8521	1111	109	**203**	**26.38**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr15-1	6006	40533	622	683	**359**	**12.92**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr16-1	2306	0	0	0	**0**	
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr16-2	768	0	0	0	**0**	
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr17-1	2990	26832	567	481	**375**	**14.49**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr17-2	3162	27684	659	517	**387**	**13.12**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr17-3	3291	27625	661	519	**389**	**13.1**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr18-1	20389	24548	515	1071	**898**	**14.54**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr18-2	17832	25416	697	1228	**973**	**11.59**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr18-3	16277	27147	657	1262	**946**	**12**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr18-4	34781	28450	1200	1394	**944**	**8.48**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr18-5	17211	23969	806	1113	**919**	**10.62**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr18-6	18418	25257	671	1224	**978**	**11.93**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr18-7	32267	30585	1183	1523	**969**	**8.35**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr18-8	33479	28515	1188	1361	**922**	**8.53**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr19-1	7807	76112	4933	7484	**1717**	**2.96**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr19-2	7165	88282	4886	8795	**1785**	**3.2**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr20-1	18809	42471	8977	3545	**1063**	**2.01**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr20-2	21406	32176	5384	2385	**1036**	**2.97**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr20-3	20010	34229	5170	2424	**1027**	**2.97**
Peskowesk A-99	2238.65	ST_PESK_A99_2238gr20-4	15014	102562	4450	5733	**1068**	**3.86**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr1-1	6777	30987	237	637	**447**	**21.99**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr1-2	8250	32567	328	677	**449**	**18.51**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr2-1	3146	510	0	0	**0**	
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr2-2	3352	467	0	0	**0**	
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr2-3	3231	639	0	0	**0**	
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr2-4	2868	455	0	0	**0**	
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr2-5	3484	270	0	0	**0**	
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr3-1	3934	890	0	4	**101**	
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr3-2	4010	907	0	0	**0**	
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr3-3	4031	1068	0	0	**0**	
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr4-1	3571	74999	2754	7249	**1833**	**4.7**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr5-1	22454	77040	14446	11164	**1842**	**1.29**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr5-2	25483	45046	7383	6163	**1834**	**1.94**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr5-3	21765	51492	6319	6414	**1844**	**2.17**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr5-4	18642	24993	4913	12233	**4461**	**3.94**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr5-5	22519	40517	5881	5307	**1835**	**2.24**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr6-1	30192	67696	625	5399	**1669**	**12.47**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr6-2	26718	31842	818	2663	**1655**	**10.08**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr6-3	28304	62727	568	4927	**1646**	**13.02**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr6-4	25089	79574	691	6102	**1610**	**12.14**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr7-1	3952	16795	217	191	**245**	**30.52**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr7-2	4278	10435	130	78	**161**	**51.15**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr7-3	4643	3234	342	4	**21**	**79.06**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr8-1	15615	25863	2937	673	**424**	**6.57**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr8-2	14845	24420	1926	549	**400**	**8.13**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr9-1	1469	16410	0	1299	**1710**	**491**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr9-2	1158	13022	0	1048	**1737**	**483**

Peskowesk A-99	2228.82	ST_PESK_A99_2228gr9-3	5303	20790	1095	2104	**1825**	**7.92**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr10-1	22675	36317	4738	4701	**1876**	**2.6**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr10-2	23341	38333	4621	4819	**1869**	**2.67**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr11-1	5266	994	2902	99	**216**	**25.41**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr12-1	1285	52439	1195	4726	**1793**	**7.86**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr12-2	1329	46628	920	4152	**1790**	**9.28**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr12-3	0	57578	2243	5544	**1814**	**4.99**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr13-1	1032	43666	3061	4585	**1799**	**3.61**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr13-2	966	42572	3086	4482	**1792**	**3.57**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr13-3	1123	44218	3143	4668	**1803**	**3.54**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr13-4	1113	44987	3371	4816	**1808**	**3.53**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr13-5	955	40914	2837	4321	**1812**	**3.79**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr13-6	992	45373	3176	4755	**1796**	**3.53**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr13-7	1031	39785	2792	4159	**1791**	**3.52**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr13-8	1038	47212	3291	4902	**1782**	**3.46**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr14-1	11746	46459	1763	2505	**1048**	**5.91**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr14-2	11026	63097	2892	3522	**1060**	**4.36**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr14-3	10402	63577	2888	3596	**1074**	**4.37**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr14-4	12154	48983	2074	2721	**1065**	**5.27**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr14-5	12515	44853	1992	2491	**1059**	**5.37**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr14-6	12500	43240	1985	2369	**1040**	**5.37**
Peskowesk A-99	2228.82	ST_PESK_A99_2228gr14-7	13171	50700	2178	2812	**1062**	**5.13**
Tantallon M-41	4699.1	S3g1-1	4430	63724	750	1039	**351**	**11.17**
Tantallon M-41	4699.1	S3g1-2	4006	30851	540	467	**320**	**14.53**
Tantallon M-41	4699.1	S3g1-3	249	17044	602	249	**294**	**17**
Tantallon M-41	4699.1	S3g2-1	13428	29466	5675	794	**371**	**4.97**
Tantallon M-41	4699.1	S3g2-2	8310	26796	2538	687	**437**	**6.07**
Tantallon M-41	4699.1	S3g2-3	22049	33610	4343	653	**307**	**6.63**
Tantallon M-41	4699.1	S3g2-4	11964	31409	5588	957	**431**	**4.28**
Tantallon M-41	4699.1	S3g2-5	7925	26023	2451	645	**423**	**6.34**
Tantallon M-41	5298.37	57 gr-1 -1	9822	51014	3357	1174	**423**	**4.61**
Tantallon M-41	5298.37	57 gr-1 -2	9028	32872	1383	661	**395**	**8.21**
Tantallon M-41	5298.37	57 gr-1 -3	16055	42062	5938	1125	**409**	**4.08**
Tantallon M-41	5298.37	57 gr-1 -4	11307	40913	6586	1127	**404**	**3.77**
Tantallon M-41	5298.37	57 gr-1 -5	15922	40642	5615	1089	**413**	**4.19**
Tantallon M-41	5298.37	57 gr-2 -1	14721	77542	6945	1989	**443**	**3.11**
Tantallon M-41	5298.37	57 gr-2 -2	17091	58670	4987	1484	**442**	**3.86**
Tantallon M-41	5298.37	57 gr-2 -3	16903	72047	6632	1856	**442**	**3.26**
Tantallon M-41	5298.37	57 gr-2 -4	19922	83910	8676	2215	**441**	**2.92**
Tantallon M-41	5298.37	57 gr-2 -5	14829	55593	4265	1350	**434**	**4.14**
Tantallon M-41	5298.37	57 gr-2 -6	18810	73988	6975	1864	**430**	**3.28**
Tantallon M-41	5298.37	57 gr-2 -7	16879	73701	6638	1881	**440**	**3.26**

Table 4. Summary of mean age of individual monazite grains

Unique grain identifier	Well	Stratigraphic unit	Depth (m)	Grain no.	age determinations (Ma) (with 1 sigma error < 20%)								mean age (Ma)
1	Naskapi N-30	UM	1469.89	1									
1.5	Naskapi N-30	UM	1469.89	2									
2	Naskapi N-30	UM	1469.89	3									
2	Naskapi N-30	UM	1469.89	3									
2	Naskapi N-30	UM	1469.89	3									
3	Naskapi N-30	UM	1469.89	4	395	397	399	400	401	401			**399**
4	Naskapi N-30	UM	1469.89	5									
5	Naskapi N-30	UM	1469.89	6									
6	Naskapi N-30	UM	1469.89	7									
6	Naskapi N-30	UM	1469.89	7									
6	Naskapi N-30	UM	1469.89	7									
7	Naskapi N-30	UM	1469.89	8									
8	Naskapi N-30	UM	1469.89	9	405	401	398	407	402				**403**
9	Naskapi N-30	UM	1469.89	10	515								**515**
9	Naskapi N-30	UM	1469.89	10	515								**515**
10	Naskapi N-30	UM	1469.89	11									
10	Naskapi N-30	UM	1469.89	11									
11	Naskapi N-30	UM	1469.89	12	412	431	406	388					**409**
12	Naskapi N-30	UM	1469.89	13									
13	Naskapi N-30	UM	1469.89	14									
13.5	Naskapi N-30	UM	1469.89	15									
13.5	Naskapi N-30	UM	1469.89	15									
14	Naskapi N-30	UM	1469.89	16									
15	Naskapi N-30	UM	1473.81	11	318	322	309	321	326	322	305	333	**320**
16	Naskapi N-30	UM	1473.81	1	311	321	313						**315**
17	Naskapi N-30	UM	1473.81	2	328	320	328	328					**326**
18	Naskapi N-30	UM	1473.81	3	310	314	310	325					**315**
19	Naskapi N-30	UM	1473.81	4	305	308	328	326	326				**319**
20	Naskapi N-30	UM	1473.81	5	317								**317**
21	Naskapi N-30	UM	1473.81	6									
21	Naskapi N-30	UM	1473.81	6									
22	Naskapi N-30	UM	1473.81	7	315	327							**321**
23	Naskapi N-30	UM	1473.81	8									
24	Naskapi N-30	UM	1473.81	9									
24	Naskapi N-30	UM	1473.81	9									
25	Naskapi N-30	UM	1473.81	10									
26	Naskapi N-30	UM	1473.81	12									
27	Naskapi N-30	UM	1473.81	13									
28	Naskapi N-30	UM	1473.81	14									
28	Naskapi N-30	UM	1473.81	14									
29	Naskapi N-30	UM	1473.81	15	388								**388**
30	Naskapi N-30	UM	1473.81	16									
30	Naskapi N-30	UM	1473.81	16									
31	Naskapi N-30	UM	1473.81	17	334	331	324	314	332	312	333	314	**324**
31	Naskapi N-30	UM	1473.81	17	334	331	324	314	332	312	333	314	**324**
32	Alma K-85	LCC	2462.91	1									
33	Alma K-85	LCC	2462.91	2									
34	Alma K-85	LCC	2462.91	3	1412								**1412**
35	Alma K-85	LCC	2462.91	4									
36	Alma K-85	LCC	2464.32	1	407	380							**394**
37	Alma K-85	LCC	2464.32	2	1314	1217							**1266**

37	Alma K-85	LCC	2464.32	2	1314	1217										**1266**
38	Alma K-85	LCC	2464.32	3	362											**362**
39	Alma K-85	LCC	2464.32	4												
40	Alma K-85	LCC	2464.32	5	248	391										**320**
41	Alma K-85	LCC	2465.81	1	1850											**1850**
42	Alma K-85	LCC	2465.81	2	521											**521**
43	Alma K-85	LCC	2465.81	3												
44	Alma K-85	LCC	2465.81	5	380											**380**
44	Alma K-85	LCC	2465.81	5	380											**380**
43.5	Alma K-85	LCC	2465.81	4												
45	Alma K-85	LCC	2465.81	6	375											**375**
46	Alma K-85	LCC	2474.79	1	347											**347**
47	Alma K-85	LCC	2474.79	2												
48	Alma K-85	LCC	2474.79	3												
49	Alma K-85	LCC	2474.79	4												
50	Alma K-85	LCC	2474.79	5												
51	Alma K-85	LCC	2474.79	6	388											**388**
52	Alma K-85	LCC	2474.79	7												
53	Alma K-85	LCC	2474.79	8												
54	Alma K-85	LCC	2474.79	9												
55	Alma K-85	LCC	2474.79	10												
56	Alma K-85	LCC	2474.79	11	506	474										**490**
57	Alma K-85	LCC	2474.79	12	410	388										**399**
58	Alma K-85	LCC	2474.79	13	431											**431**
59	Alma K-85	LCC	2474.79	14	410											**410**
60	Alma K-85	LCC	2465.18	1												
61	Alma K-85	LCC	2465.18	2	463											**463**
62	Alma K-85	LCC	2465.18	3	1045	1054	1053									**1051**
62	Alma K-85	LCC	2465.18	3	1045	1054	1053									**1051**
62	Alma K-85	LCC	2465.18	3	1045	1054	1053									**1051**
63	Alma K-85	LCC	2465.18	4	394	408										**401**
64	Thebaud #3	LM	3911.84	1	588	571	598									**586**
65	Thebaud #3	LM	3911.84	2	567	644										**606**
65.5	Thebaud #3	LM	3911.84	4												
65.6	Thebaud #3	LM	3911.84	5												
66	Thebaud #3	LM	3911.84	6	419	433	420	419	422							**423**
67	Thebaud #3	LM	3911.84	7	486	487	480	472	441							**473**
68	Thebaud #3	LM	3901.75	2	326	336										**331**
68.5	Thebaud #3	LM	3901.75	3												
69	Thebaud #3	LM	3901.75	1	363	392	468									**408**
70	Thebaud #3	LM	3901.75	4	446	662	249									**452**
70.5	Thebaud #3	LM	3915.04	1												
70.5	Thebaud #3	LM	3915.04	1												
70.5	Thebaud #3	LM	3915.04	1												
70.5	Thebaud #3	LM	3915.04	1												
71	Thebaud I-93	LM	3950.18	1	1856	1850										**1853**
72	Thebaud I-93	LM	3068.39	1	417	410										**414**
73	Thebaud I-93	LM	3068.39	2	379	385										**382**
74	Thebaud I-93	LM	3936.1	2	481	463	438	473	485	395	473	487				**462**
75	Thebaud I-93	LM	3936.1	3												
76	Thebaud I-93	LM	3936.1	4	1825											**1825**
77	Thebaud I-93	LM	3936.1	5	387	380	380	382	382	380	395	397	387	400	391	**387**
78	Thebaud I-93	LM	3936.1	6	359	347	370									**359**
79	Thebaud I-93	LM	3936.1	7	470	498	484	486	457	510	348					**465**
80	Thebaud I-93	LM	3936.1	8	1720	1671										**1696**
81	Thebaud I-93	LM	3936.1	9	437	445	451	443	430	420	436	450	461			**441**
82	Thebaud I-93	LM	3936.1	10	345											**345**
83	Thebaud I-93	LM	3936.1	11	1027	1030	1009	1008	1023	1062	1022	1033				**1027**
84	Thebaud C-74	LM	3908.65	1	473	471	457	452	452							**461**
84	Thebaud C-74	LM	3908.65	1	473	471	457	452	452							**461**
84	Thebaud C-74	LM	3908.65	1	473	471	457	452	452							**461**
85	Thebaud C-74	LM	3921.98	1												
86	Thebaud C-74	LM	3921.98	2	365	351	341	360	357	353	352					**354**
87	Thebaud C-74	LM	3921.98	1	376	394	377	340								**372**
88	Thebaud C-74	LM	3921.98	2	1161	1177	1223	1416								**1244**

89	Thebaud C-74	LM	3876.72	1	388	375	355	380	355					**371**
90	Thebaud C-74	LM	3876.72	2	423	419	427	412	426	428				**423**
91	Thebaud C-74	LM	3876.72	3	626	526	586							**579**
92	Thebaud C-74	LM	3876.72	4	370									**370**
93	Thebaud C-74	LM	3876.72	5	448	448	442	442	445	440	444	440	442	**443**
93.5	Thebaud C-74	LM	3876.72	6										
94	Thebaud C-74	LM	3876.72	8	398	447	460							**435**
94.5	Thebaud C-74	LM	3876.72	9										
95	Thebaud C-74	LM	3876.72	10	412									**412**
96	Glenelg E-58	UM	3525.16	1	387	354								**371**
97	Glenelg E-58	UM	3525.16	2	1158	1156								**1157**
98	Glenelg E-58	UM	3525.16	3										
98.5	Glenelg E-58	UM	3525.16	4										
99	Glenelg E-58	UM	3525.16	5	1107									**1107**
100	Glenelg E-58	UM	3525.16	6	670									**670**
101	Glenelg E-58	UM	3525.16	7										
101	Glenelg E-58	UM	3525.16	7										
101	Glenelg E-58	UM	3525.16	7										
102	Glenelg E-58	UM	3525.16	8	496	495	499	506	500					**499**
103	Glenelg E-58	UM	3525.16	9	404	407	419							**410**
103	Glenelg E-58	UM	3525.16	9	404	407	419							**410**
104	Glenelg E-58	UM	3525.16	10	377	375	322	415						**372**
104	Glenelg E-58	UM	3525.16	10	377	375	322	415						**372**
104	Glenelg E-58	UM	3525.16	10	377	375	322	415						**372**
104	Glenelg E-58	UM	3525.16	10	377	375	322	415						**372**
105	Glenelg E-58	UM	3525.16	11	949	1004	1018							**990**
105	Glenelg E-58	UM	3525.16	11	949	1004	1018							**990**
106	Glenelg E-58	UM	3525.16	12	1008	971								**990**
107	Glenelg E-58	UM	3525.16	13										
108	Glenelg E-58	UM	3525.16	14	387	391	393	389	387					**389**
108	Glenelg E-58	UM	3525.16	14	387	391	393	389	387					**389**
109	Glenelg E-58	UM	3525.16	15	1034	1044	1046	1039	1038	1042	1039	1043	1044	**1041**
109	Glenelg E-58	UM	3525.16	15	1034	1044	1046	1039	1038	1042	1039	1043	1044	**1041**
110	Glenelg E-58	UM	3525.16	16	401	404	398	394	401					**400**
110	Glenelg E-58	UM	3525.16	16	401	404	398	394	401					**400**
111	Glenelg E-58	UM	3525.16	17										
112	Glenelg E-58	UM	3525.16	18										
113	Glenelg E-58	UM	3525.16	19	507	549								**528**
114	Glenelg E-58	UM	3525.16	20	309	308	315	324	317	315	332			**317**
114	Glenelg E-58	UM	3525.16	20	309	308	315	324	317	315	332			**317**
115	Glenelg E-58	UM	3525.16	21	387									**387**
116	Glenelg E-58	UM	3525.16	22	401	403	401	390	399	394				**398**
116	Glenelg E-58	UM	3525.16	22	401	403	401	390	399	394				**398**
117	Glenelg E-58	UM	3532.08	1										
118	Glenelg E-58	UM	3532.08	2	505	500								**503**
119	Glenelg E-58	UM	3532.08	3	1727	1654	1680	1710	1637	1661	1698	1722		**1686**
119	Glenelg E-58	UM	3532.08	3	1727	1654	1680	1710	1637	1661	1698	1722		**1686**
120	Glenelg E-58	UM	3532.08	4	445	431								**438**
121	Glenelg E-58	UM	3532.08	5	487									**487**
122	Glenelg E-58	UM	3532.08	6	420									**420**
123	Glenelg E-58	UM	3532.08	7	408	427	427	426	424	426				**423**
123	Glenelg E-58	UM	3532.08	7	408	427	427	426	424	426				**423**
124	Glenelg E-58	UM	3532.08	8	388									**388**
125	Glenelg E-58	UM	3532.08	9	436	441	446							**441**
126	Glenelg E-58	UM	3535.83	1	276									**276**
127	Glenelg E-58	UM	3535.83	2	261	193	307	201						**241**
128	Glenelg E-58	UM	3535.83	3										
129	Glenelg E-58	UM	3535.83	4										
130	Glenelg E-58	UM	3535.83	5	832									**382**
131	Glenelg E-58	UM	3535.83	6	383									**383**
132	Glenelg E-58	UM	3535.83	7	336									**336**
133	Glenelg E-58	UM	3535.83	8										
134	Glenelg E-58	UM	3535.83	9	546	556								**551**
135	Glenelg E-58	UM	3535.83	10	318									**318**
136	Glenelg E-58	UM	3532.19	1										

137	Glenelg E-58	UM	3532.19	2	439							**439**
138	Glenelg E-58	UM	3532.19	3	1647	1644	1666					**1652**
138	Glenelg E-58	UM	3532.19	3	1647	1644	1666					**1652**
139	Glenelg E-58	UM	3532.19	4	1030	1057	1035					**1041**
140	Glenelg E-58	UM	3532.19	5	1799	1880						**1840**
140	Glenelg E-58	UM	3532.19	5	1799	1880						**1840**
141	Glenelg E-58	UM	3532.19	6								
142	Glenelg E-58	UM	3532.19	7	1504	1585						**1545**
143	Glenelg E-58	UM	3532.19	8								
143	Glenelg E-58	UM	3532.19	8								
144	Glenelg E-58	UM	3532.19	9								
145	Glenelg E-58	UM	3532.19	10								
146	Glenelg E-58	UM	3551.29	1	381							**381**
147	Glenelg E-58	UM	3551.29	2								
148	Glenelg E-58	UM	3551.29	3	2697	2696	2678					**2690**
149	Glenelg E-58	UM	3528.21	1	378	387						**383**
150	Glenelg E-58	UM	3528.21	2	401	384						**393**
151	Glenelg E-58	UM	3528.21	3	1561							**1561**
152	Glenelg E-58	UM	3528.21	4	1611	1520	1634	1642	1624	1588		**1603**
153	Glenelg E-58	UM	3528.21	5	382	374	375	390				**380**
154	Glenelg E-58	UM	3528.21	6	403							**403**
155	Glenelg E-58	UM	3528.21	7								
155	Glenelg E-58	UM	3528.21	7								
156	Glenelg E-58	UM	3536.82	1	395	393	396	396				**395**
157	Glenelg E-58	UM	3536.82	2	577							**577**
158	Glenelg E-58	UM	3536.82	3	554							**554**
159	Glenelg E-58A	UM	3733.43	1	387							**387**
160	Glenelg E-58A	UM	3733.43	2								
161	Glenelg E-58A	UM	3733.43	3	452	430	449					**444**
161	Glenelg E-58A	UM	3733.43	3	452	430	449					**444**
162	North Triumph G-43	LCC	3285.15	1	341	345	351	354	344	336	351	346	**346**
163	North Triumph G-43	LCC	3285.15	2								
164	North Triumph G-43	LCC	3285.15	3								
165	North Triumph G-43	LCC	3285.15	4	1629	1620	1610	1623	1631			**1623**
166	North Triumph G-43	LCC	3285.15	5	452	450	440	461	447	455	469	**453**
167	North Triumph G-43	LCC	3285.15	6	323	307	304	324	321			**316**
168	North Triumph G-43	LCC	3289.64	1								
168	North Triumph G-43	LCC	3289.64	2	362							**362**
169	North Triumph G-43	LCC	3289.64	3	416							**416**
170	North Triumph G-43	LCC	3289.64	4	76							**76**
171	North Triumph G-43	LCC	3289.64	5	310							**310**
172	North Triumph G-43	LCC	3289.64	6	274	282	284	284				**281**
172	North Triumph G-43	LCC	3289.64	6	274	282	284	284				**281**
173	North Triumph G-43	LCC	3289.64	7	1740							**1740**
174	North Triumph G-43	LCC	3289.64	8	374	366	367					**369**
175	North Triumph G-43	LCC	3289.64	9								
176	North Triumph G-43	LCC	3289.64	10	1854							**1854**
177	North Triumph G-43	LCC	3289.64	11								
178	North Triumph G-43	LCC	3289.64	12								
179	North Triumph G-43	LCC	3289.64	13	1047							**1047**
180	North Triumph G-43	LCC	3289.64	14	409							**409**
181	North Triumph G-43	LCC	3289.64	15								
182	North Triumph G-43	LCC	3289.64	16	505	1776	1282					**1188**
182	North Triumph G-43	LCC	3289.64	16	505	1776	1282					**1188**
183	North Triumph G-43	UM	3828.04	1	407							**407**
184	North Triumph G-43	UM	3828.04	2								
185	North Triumph G-43	UM	3828.04	3	383							**383**
186	North Triumph G-43	UM	3828.04	4	531	531						**531**
186	North Triumph G-43	UM	4402.95	1								
186	North Triumph G-43	UM	4402.95	2								
186	North Triumph G-43	UM	4402.95	3								
186	North Triumph G-43	UM	4402.95	4								
187	North Triumph G-43	UM	4402.95	5								
187	North Triumph G-43	UM	4402.95	6								
187	North Triumph G-43	UM	4402.95	7								

187	North Triumph G-43	UM	4402.95	8									
187	North Triumph G-43	UM	4402.95	9									
187	North Triumph G-43	UM	4402.95	10									
187	North Triumph G-43	UM	4402.95	11									
187	North Triumph G-43	UM	4010.25	1									
188	North Triumph G-43	UM	4010.25	2	321	324	321						**322**
189	North Triumph G-43	UM	4010.25	3									
190	North Triumph G-43	UM	4010.25	4	463	463							**463**
191	North Triumph G-43	UM	4010.25	5									
192	North Triumph G-43	UM	4010.25	6	493	473							**483**
193	North Triumph G-43	UM	4010.25	7	466	477	477	476	506	498	497	434	**479**
194	North Triumph G-43	UM	3835.78	1	386	422	345						**384**
195	North Triumph G-43	UM	3835.78	2	368	394	381						**381**
196	North Triumph G-43	UM	3848.15	1	379	377	373	373					**376**
197	North Triumph G-43	UM	4402.34	2	403	396	372						**390**
198	North Triumph G-43	UM	4402.34	3									
199	North Triumph G-43	UM	4402.34	4									
200	North Triumph G-43	UM	4402.34	5									
201	North Triumph G-43	UM	4402.34	6									
202	North Triumph G-43	UM	4402.34	7	404	370	377						**384**
202	North Triumph G-43	UM	4402.34	7	404	370	377						**384**
203	North Triumph G-43	UM	4402.34	8	298	349							**324**
204	North Triumph G-43	UM	4402.34	9									
205	North Triumph G-43	UM	4402.34	10									
206	North Triumph G-43	UM	4402.34	11	1520								**1520**
207	North Triumph G-43	UM	4402.34	12									
208	North Triumph G-43	UM	4402.34	13	947								**947**
209	North Triumph G-43	UM	4402.34	14									
210	North Triumph G-43	UM	4402.34	15									
211	North Triumph G-43	UM	4402.34	16									
212	North Triumph G-43	UM	4402.34	17									
212	North Triumph G-43	UM	4402.34	17									
213	North Triumph G-43	UM	4402.34	18									
214	North Triumph G-43	UM	4402.34	19									
215	North Triumph G-43	UM	4402.34	20	251	270	258						**260**
215	North Triumph G-43	UM	4402.34	20	251	270	258						**260**
216	Venture #1	LM	4600.87	1	118								**118**
217	Venture #1	LM	4600.87	2	285								**285**
218	Venture #1	LM	4600.87	3									
219	Venture #1	LM	4600.87	4	318	413	388	373	426				**384**
220	Venture #1	LM	4600.87	5	773	816	797						**795**
221	Venture #1	LM	4598.35	1	316								**316**
221	Venture #1	LM	4598.35	1	316								**316**
222	Venture #1	LM	4598.35	2	376	402	389	372	390	392			**387**
222	Venture #1	LM	4598.35	2	376	402	389	372	390	392			**387**
223	Venture #3	LM	4871.58	1	519	374	436	397					**432**
224	Venture #3	LM	4871.58	2	376	403	396	415	497				**417**
225	Venture #3	LM	4872.58	1	524	497	540						**520**
226	Venture #3	LM	4872.58	2									
226	Venture #3	LM	4872.58	3	475	560	542	596	541	654			**561**
227	Venture #3	LM	4882.37	1	580	550							**565**
227	Venture #3	LM	4882.37	1	580	550							**565**
228	Venture #3	LM	4887.39	6									
228	Venture #3	LM	4887.39	7									
229	Venture #3	LM	4887.39	11	343	295	357						**332**
230	Venture #3	LM	4887.39	14									
230	Venture #3	LM	4887.39	15									
230	Venture #3	LM	4887.39	16	448	531							**490**
231	Venture #3	LM	4887.39	18									
231	Venture #3	LM	4887.39	19	446	418	420	463					**437**
232	Venture #3	LM	4887.39	20									
232	Venture #3	LM	4887.39	21									
232	Venture #3	LM	4887.39	22									
233	Venture #3	LM	4887.39	24									
233	Venture #3	LM	4887.39	25	338								**338**

234	Venture #4	LM	5371.77	1	1019	952	1046	1025							**1011**
235	Venture #4	LM	5372.85	1	485	462	450								**466**
235	Venture #4	LM	5372.85	1											
236	Venture #4	LM	5372.85	2	1837										**1837**
237	Venture #4	LM	5372.85	3	501	509	493	503	516	554					**513**
238	Venture #4	LM	5372.85	4											
239	Venture #4	LM	5372.85	5	564	519	573	572	556						**557**
240	Venture #4	LM	5372.85	6	397	411	499	513	562						**476**
241	Venture #4	LM	5372.85	7	422	409	376	374	402						**397**
242	Venture #4	LM	5391.51	1	436	435	420	424	432	428					**429**
242	Venture #4	LM	5391.51	1	436	435	420	424	432	428					**429**
243	Venture #4	LM	5391.51	2											
243	Venture #4	LM	5391.51	2											
244	Venture #4	LM	5391.51	3	1739	1726	1761	1752	1703	1739	1793	1790	1762	1789	**1755**
244	Venture #4	LM	5391.51	3	1739	1726	1761	1752	1703	1739	1793	1790	1762	1789	**1755**
245	Venture #4	LM	5381.34	1	338	385	350	364	349	362	326	292	351	361	**348**
245	Venture #4	LM	5381.34	1	338	385	350	364	349	362	326	292	351	361	**348**
246	Venture #4	LM	5381.34	2	440	433	439	442	447	445	448				**442**
246	Venture #4	LM	5381.34	2	440	433	439	442	447	445	448				**442**
247	Venture #4	LM	5381.34	3											
247	Venture #4	LM	5381.34	3											
248	Venture #4	LM	5383.28	1											
248	Venture #4	LM	5393.96	1	575	587	604	581							**587**
249	Venture #4	LM	5393.96	2											
250	Peskowesk A-99	LCC	2238.65	1	1051	1040	1051	1068	1051	1032					**1049**
250	Peskowesk A-99	LCC	2238.65	1	1051	1040	1051	1068	1051	1032					**1049**
250	Peskowesk A-99	LCC	2238.65	1	1051	1040	1051	1068	1051	1032					**1049**
251	Peskowesk A-99	LCC	2238.65	2	303	308	350	326							**322**
252	Peskowesk A-99	LCC	2238.65	3	1775	1379	1708								**1621**
253	Peskowesk A-99	LCC	2238.65	4	1639	1634	1643	1633	1612	1655	1649				**1638**
254	Peskowesk A-99	LCC	2238.65	5	776										**776**
255	Peskowesk A-99	LCC	2238.65	6											
256	Peskowesk A-99	LCC	2238.65	7	964	954									**959**
257	Peskowesk A-99	LCC	2238.65	8	1705	1757	1775	1754	1754	1430					**1696**
258	Peskowesk A-99	LCC	2238.65	9											
258	Peskowesk A-99	LCC	2238.65	10	1052	1063									**1058**
259	Peskowesk A-99	LCC	2238.65	11	370	356	374								**367**
260	Peskowesk A-99	LCC	2238.65	12	1656										**1656**
261	Peskowesk A-99	LCC	2238.65	13	976										**967**
262	Peskowesk A-99	LCC	2238.65	14											
263	Peskowesk A-99	LCC	2238.65	15	359										**359**
264	Peskowesk A-99	LCC	2238.65	16											
265	Peskowesk A-99	LCC	2238.65	17	375	387	389								**384**
266	Peskowesk A-99	LCC	2238.65	18	898	973	946	944	919	978	969	922			**944**
267	Peskowesk A-99	LCC	2238.65	19	1717	1785									**1751**
268	Peskowesk A-99	LCC	2238.65	20	1063	1036	1027	1068							**1049**
269	Peskowesk A-99	LCC	2228.82	1	449										**449**
270	Peskowesk A-99	LCC	2228.82	2											
270	Peskowesk A-99	LCC	2228.82	2											
271	Peskowesk A-99	LCC	2228.82	3											
272	Peskowesk A-99	LCC	2228.82	4	1833										**1833**
273	Peskowesk A-99	LCC	2228.82	5	1842	1834	1844	4461	1835						**2363**
274	Peskowesk A-99	LCC	2228.82	6	1669	1655	1646	1610							**1645**
274	Peskowesk A-99	LCC	2228.82	6	1669	1655	1646	1610							**1645**
274	Peskowesk A-99	LCC	2228.82	6	1669	1655	1646	1610							**1645**
275	Peskowesk A-99	LCC	2228.82	7											
276	Peskowesk A-99	LCC	2228.82	8	424	400									**412**
277	Peskowesk A-99	LCC	2228.82	9	1825										**1825**
277	Peskowesk A-99	LCC	2228.82	9	1825										**1825**
278	Peskowesk A-99	LCC	2228.82	10	1876	1869									**1873**
279	Peskowesk A-99	LCC	2228.82	11											
280	Peskowesk A-99	LCC	2228.82	12	1793	1790	1814								**1799**
281	Peskowesk A-99	LCC	2228.82	13	1799	1792	1803	1808	1812	1796	1791	1782			**1798**
282	Peskowesk A-99	LCC	2228.82	14	1048	1060	1074	1065	1059	1040	1062				**1058**
282	Peskowesk A-99	LCC	2228.82	14	1048	1060	1074	1065	1059	1040	1062				**1058**

282	Peskowesk A-99	LCC	2228.82	14	1048	1060	1074	1065	1059	1040	1062	**1058**
283	Tantallon M-41	UM	4699.1	1	351	320	294					**322**
284	Tantallon M-41	UM	4699.1	2	371	437	307	431	423			**394**
285	Tantallon M-41	UM	4699.1	3								
285	Tantallon M-41	MM	5296.24	1								
285	Tantallon M-41	MM	5298.37	1	423	395	409	404	413			**409**
286	Tantallon M-41	MM	5298.37	2	443	442	442	441	434	430	440	**439**
287	Hermine	LC	4940	1	450	405	391	392	379			**403**
288	Hermine	LC	4940	2	620	614	610	607	612			**613**
289	Louisbourg	MicMac	4047.39	4	203	245	283					**244**
290	Louisbourg	MicMac	4408.5	1								
291	Louisbourg	MicMac	4408.5	2	514	408						**461**
292	Louisbourg	MicMac	4408.5	3	557	585	549	566	564			**564**
293	Louisbourg	MicMac	4408.5	4	517	575	571	552	551	552		**553**
294	Louisbourg	MicMac	4408.5	5	386	416	407	370				**395**
295	Louisbourg	MicMac	4408.5	6	426	414	411					**417**
296	Louisbourg	MicMac	4408.5	7	419	300						**360**
297	Louisbourg	MicMac	4408.5	8	431	380						**406**
298	Louisbourg	MicMac	5451.23	1	1133	1097						**1115**
299	Louisbourg	MicMac	5451.23	2	1028							**1028**
300	Louisbourg	MicMac	5451.23	3	559	681	354	326				**480**
301	Louisbourg	MicMac	5451.23	4	472	452	445					**456**

Table 5. Summary of microprobe analyses of major elements in monazite grains

								Electron microprobe chemical analyses (oxides, wt %)													
Unique grain identifier	**Well**	**Stratigraphic unit**	**Depth (m)**	**Grain no.**	**Type**	**mean age (Ma)**	**# of analysis per grain**	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Gd_2O_3	Dy_2O_3	Y_2O_3	ThO_2	UO_2	P_2O_5	SiO_2	CaO	**Total**
1	Naskapi N-30	UM	1469.89	1	W07			5.27	21.97	5.37	19.19	2.61	1.52	0.19	0.35	0.40	0.24	25.72	3.97	0.18	**86.99**
1.5	Naskapi N-30	UM	1469.89	2	W11			15.35	34.27	5.07	11.68	0.90	0.41	0.14	0.33	0.42	0.19	30.35	0.16	0.10	**99.37**
2	Naskapi N-30	UM	1469.89	3	W07		3	6.38	25.75	6.06	20.74	3.50	2.53	0.59	0.58	0.09	0.21	29.50	0.16	0.20	**96.29**
2	Naskapi N-30	UM	1469.89	3	W07		3	6.81	27.36	6.18	20.20	3.04	1.93	0.38	0.34	0.36	0.17	29.24	0.11	0.22	**96.35**
2	Naskapi N-30	UM	1469.89	3	W07		3	6.23	25.82	6.23	19.94	3.02	2.02	0.41	0.46	0.47	0.25	29.01	0.33	0.23	**94.40**
3	Naskapi N-30	UM	1469.89	4	W05	**399**		14.12	28.63	4.45	11.84	1.17	0.91	0.41	1.17	5.28	0.23	29.82	0.40	0.74	**99.16**
4	Naskapi N-30	UM	1469.89	5	W10			11.89	32.34	5.34	14.97	1.17	0.73	0.34	0.51	0.20	0.19	29.95	0.16	0.18	**97.96**
5	Naskapi N-30	UM	1469.89	6	W07			8.54	30.29	6.08	18.40	2.01	1.29	0.24	0.26	0.76	0.22	29.77	0.11	0.07	**98.04**
6	Naskapi N-30	UM	1469.89	7	W10		3	14.48	29.85	4.93	13.31	1.60	1.18	0.44	0.44	0.23	0.27	29.05	0.06	0.07	**95.93**
6	Naskapi N-30	UM	1469.89	7	W10			14.46	29.31	4.77	12.82	1.57	1.11	0.48	0.41	1.15	0.29	29.38	0.48	0.24	**96.48**
6	Naskapi N-30	UM	1469.89	7	W10			14.80	30.19	4.91	12.82	1.54	1.08	0.46	0.47	0.32	0.16	29.29	0.08	0.10	**96.23**
7	Naskapi N-30	UM	1469.89	8	W10			17.08	33.33	4.31	9.17	0.76	0.52	0.22	0.31	0.87	0.24	29.52	0.50	0.22	**97.04**
8	Naskapi N-30	UM	1469.89	9	W05	**403**		14.65	28.74	4.49	12.48	1.30	0.89	0.35	0.74	5.28	0.26	28.62	0.37	0.84	**99.01**
9	Naskapi N-30	UM	1469.89	10	W06	**515**	2	15.27	33.42	4.64	10.62	1.09	0.59	0.25	0.28	0.09	0.22	29.44	0.03	0.15	**96.09**
9	Naskapi N-30	UM	1469.89	10	W06	**515**		15.78	33.62	4.76	10.19	1.00	0.48	0.21	0.34	0.53	0.30	29.36	0.03	0.22	**96.82**
10	Naskapi N-30	UM	1469.89	11	W07		2	4.83	24.11	6.42	23.57	3.36	2.21	0.43	0.37	0.96	0.22	29.00	0.31	0.22	**96.01**
10	Naskapi N-30	UM	1469.89	11	W07			6.56	27.17	6.36	19.94	2.75	1.86	0.41	0.36	0.32	0.17	29.57	0.16	0.24	**95.87**
11	Naskapi N-30	UM	1469.89	12	W05	**409**		12.99	27.49	4.57	12.19	1.31	1.14	0.47	1.42	5.65	0.20	28.95	0.39	0.80	**97.58**
12	Naskapi N-30	UM	1469.89	13	W07			4.39	21.80	5.91	23.05	4.22	2.82	0.62	0.67	1.10	0.12	29.04	0.19	0.40	**94.33**
13	Naskapi N-30	UM	1469.89	14	W10			12.91	28.58	5.04	14.50	2.10	2.09	0.55	0.70	0.52	0.20	28.99	0.10	0.11	**96.38**
13.5	Naskapi N-30	UM	1469.89	15	W12			14.12	26.72	4.27	11.60	1.53	1.40	0.58	1.03	6.07	0.36	29.31	0.30	0.99	**98.27**
13.5	Naskapi N-30	UM	1469.89	15	W12			13.64	28.04	4.33	11.63	1.33	1.20	0.57	1.02	5.32	0.30	29.24	0.28	0.90	**97.78**
14	Naskapi N-30	UM	1469.89	16	W07			11.23	33.35	5.40	14.47	1.14	0.60	0.22	0.31	1.69	0.27	29.68	0.25	0.21	**98.82**
15	Naskapi N-30	UM	1473.81	11	W01	**319.5**		12.21	27.03	4.27	12.60	1.21	0.82	0.35	1.17	5.12	0.12	28.76	0.20	0.93	**94.80**
16	Naskapi N-30	UM	1473.81	1	W01	**315**		13.44	27.42	4.17	11.29	1.26	0.81	0.29	0.85	5.63	0.04	28.17	0.30	0.83	**94.48**
17	Naskapi N-30	UM	1473.81	2	W02	**326**		13.42	27.41	4.25	11.72	1.28	0.82	0.54	1.39	6.22	0.15	28.92	0.42	0.83	**97.37**
18	Naskapi N-30	UM	1473.81	3	W01	**315**		12.37	27.21	4.48	11.86	1.26	0.89	0.44	1.16	5.77	0.10	29.06	0.26	0.84	**95.69**
19	Naskapi N-30	UM	1473.81	4	W01	**319**		13.02	27.64	4.26	12.41	1.42	0.92	0.34	1.11	5.53	0.03	29.25	0.19	0.95	**97.05**
20	Naskapi N-30	UM	1473.81	5	W02	**317**		12.68	27.71	4.67	11.30	0.84	0.38	0.17	1.70	7.44	0.17	28.12	0.77	0.79	**96.73**
21	Naskapi N-30	UM	1473.81	6	W10		2	16.56	31.38	4.26	9.04	0.87	0.26	0.17	0.39	0.09	0.01	28.52	0.06	0.09	**91.70**
21	Naskapi N-30	UM	1473.81	6	W10			17.11	32.42	4.26	8.71	0.64	0.13	0.06	0.21	0.26	0.00	28.26	0.08	0.16	**92.29**
22	Naskapi N-30	UM	1473.81	7	W02	**321**		12.93	26.83	4.22	11.50	1.19	0.71	0.42	1.62	6.28	0.10	28.53	0.37	0.93	**95.63**
23	Naskapi N-30	UM	1473.81	8	W07			8.82	30.32	6.13	17.19	1.54	0.73	0.12	0.22	0.13	0.03	28.65	0.06	0.03	**93.98**
24	Naskapi N-30	UM	1473.81	9	W07		2	14.49	34.24	4.96	12.00	0.87	0.17	0.00	0.05	0.00	0.05	28.96	0.05	0.01	**95.85**
24	Naskapi N-30	UM	1473.81	9	W07			11.94	33.79	5.27	13.40	1.10	0.22	0.06	0.22	0.00	0.00	29.74	0.08	0.09	**95.91**
25	Naskapi N-30	UM	1473.81	10	W07			11.86	32.97	5.15	12.93	0.96	0.21	0.11	0.32	0.31	0.06	29.02	0.37	0.14	**94.42**
26	Naskapi N-30	UM	1473.81	12	W07			5.68	25.17	6.33	20.52	3.28	1.77	0.21	0.10	0.00	0.02	28.67	0.12	0.04	**91.90**
27	Naskapi N-30	UM	1473.81	13	W10			13.27	28.54	4.63	11.61	1.65	1.22	0.23	0.14	0.91	0.06	27.84	0.45	0.16	**90.72**
28	Naskapi N-30	UM	1473.81	14	W07		2	3.32	17.36	5.36	25.66	6.20	2.88	0.34	0.31	0.00	0.09	28.75	0.14	0.08	**90.49**
28	Naskapi N-30	UM	1473.81	14	W07			7.94	27.71	5.47	18.45	2.42	1.74	0.31	0.45	0.70	0.01	29.21	0.16	0.19	**94.76**
29	Naskapi N-30	UM	1473.81	15	W04	**388**		10.95	31.94	5.09	13.56	1.11	0.45	0.32	0.41	0.54	0.11	28.69	0.93	0.13	**94.25**
30	Naskapi N-30	UM	1473.81	16	W10		2	12.62	27.65	4.63	14.97	1.80	1.27	0.27	0.38	1.07	0.05	29.02	0.14	0.14	**94.01**
30	Naskapi N-30	UM	1473.81	16	W10			12.61	27.52	4.73	13.43	2.00	1.60	0.41	0.52	1.11	0.00	29.24	0.15	0.15	**93.47**
31	Naskapi N-30	UM	1473.81	17	W03	**324.3**	2	16.59	31.83	4.50	10.14	0.60	0.21	0.03	0.08	2.23	0.10	29.28	0.12	0.47	**96.16**
31	Naskapi N-30	UM	1473.81	17	W03	**324.3**		14.41	29.14	4.28	11.55	1.08	0.55	0.22	0.76	3.33	0.04	29.70	0.17	0.66	**95.90**
32	Alma K-85	LCC	2462.91	1	C24			21.77	30.58	2.66	9.65	1.02	0.44	0.10	0.23	2.24	0.25	28.03	0.30	0.32	**97.59**
33	Alma K-85	LCC	2462.91	2	C26			16.17	27.27	2.17	9.19	1.20	0.34	0.00	0.05	0.58	0.00	25.20	0.11	0.27	**82.54**
34	Alma K-85	LCC	2462.91	3	C18.5	**1412**		12.39	28.89	3.19	13.83	2.06	1.10	0.20	0.36	5.65	0.16	27.36	0.51	0.78	**96.49**
35	Alma K-85	LCC	2462.91	4	C26			15.36	31.79	3.31	15.13	1.79	0.78	0.13	0.19	0.99	0.13	27.95	0.81	0.15	**98.49**
36	Alma K-85	LCC	2464.32	1	C08	**394**		14.46	30.81	3.01	12.31	1.85	1.15	0.46	0.96	3.00	0.23	27.29	0.16	0.88	**96.58**
37	Alma K-85	LCC	2464.32	2	C18	**1266**	2	16.08	32.47	3.05	12.69	1.74	0.95	0.36	0.59	1.66	0.05	28.58	0.27	0.60	**99.10**
37	Alma K-85	LCC	2464.32	2	C18	**1266**		18.08	34.67	2.98	11.94	1.18	0.44	0.17	0.18	1.05	0.02	28.27	0.19	0.50	**99.70**
38	Alma K-85	LCC	2464.32	3	C06	**362**		10.52	28.15	3.14	14.80	2.40	1.01	0.21	0.62	6.55	0.28	29.04	0.41	1.24	**98.38**
39	Alma K-85	LCC	2464.32	4	C25			12.74	32.77	3.38	14.85	2.32	1.09	0.17	0.23	1.09	0.03	29.47	0.14	1.27	**99.55**
40	Alma K-85	LCC	2464.32	5	C04	**320**		14.09	30.81	2.63	11.75	1.70	1.27	0.44	1.24	4.12	0.34	30.50	0.08	1.10	**100.06**
41	Alma K-85	LCC	2465.81	1	C22	**1850**		12.68	29.14	2.99	13.36	1.97	0.89	0.02	0.28	6.33	0.22	28.05	0.73	0.91	**97.56**
42	Alma K-85	LCC	2465.81	2	C13	**521**		10.35	27.46	2.92	12.22	2.63	1.30	0.75	2.58	5.78	0.28	29.16	0.29	1.07	**96.79**
43	Alma K-85	LCC	2465.81	3	C24			17.35	34.27	3.02	12.28	1.21	0.08	0.00	0.11	0.13	0.00	28.00	0.54	0.24	**97.22**
44	Alma K-85	LCC	2465.81	5	C06	**380**	2	7.83	24.00	3.20	19.24	4.66	3.09	1.15	1.98	2.15	0.19	29.04	0.17	0.44	**97.15**
44	Alma K-85	LCC	2465.81	5	C06	**380**		8.17	23.99	3.20	19.67	4.92	3.41	1.19	1.92	1.76	0.24	29.09	0.15	0.40	**98.11**
43.5	Alma K-85	LCC	2465.81	4	C28			13.56	29.70	2.77	12.19	2.05	1.06	0.41	1.06	4.11	0.54	29.29	0.86	0.88	**98.46**
45	Alma K-85	LCC	2465.81	6	C05	**375**		14.95	32.04	2.97	12.36	2.03	0.83	0.10	0.17	4.09	0.24	28.73	0.21	0.73	**99.45**

46	Alma K-85	LCC	2474.79	1	C04	**347**		14.04	29.53	2.81	12.32	2.01	1.61	0.69	1.79	3.81	0.64	28.84	0.28	0.74	**99.12**
47	Alma K-85	LCC	2474.79	2	C25			16.58	32.24	2.99	12.67	1.75	0.81	0.27	0.55	0.43	0.00	27.43	0.28	0.15	**96.17**
48	Alma K-85	LCC	2474.79	3	C25			6.87	29.45	4.37	21.95	3.54	0.91	0.24	0.58	0.62	0.00	28.02	0.36	0.10	**97.02**
49	Alma K-85	LCC	2474.79	4	C26			15.97	30.38	3.00	12.68	1.65	0.52	0.00	0.10	2.08	0.14	27.54	1.61	0.31	**95.99**
50	Alma K-85	LCC	2474.79	5	C25			6.54	46.65	0.89	4.10	0.41	0.02	0.00	0.36	1.39	0.25	27.10	0.58	2.42	**90.71**
51	Alma K-85	LCC	2474.79	6	C07	**388**		13.84	29.79	2.75	11.92	2.13	1.40	0.42	1.33	4.33	0.49	27.39	0.41	0.72	**96.91**
52	Alma K-85	LCC	2474.79	7	C25			18.53	33.48	2.83	10.19	1.09	0.54	0.00	0.45	0.37	0.07	26.97	0.32	0.88	**95.71**
53	Alma K-85	LCC	2474.79	8	C26			10.55	31.01	3.78	16.29	2.63	1.17	0.00	0.25	1.62	0.17	26.72	0.92	0.45	**95.56**
54	Alma K-85	LCC	2474.79	9	C26			11.99	33.76	3.64	15.77	1.87	0.48	0.00	0.00	1.40	0.13	27.29	0.29	0.12	**96.72**
55	Alma K-85	LCC	2474.79	10	C26			14.01	31.77	3.33	13.53	1.83	0.87	0.00	0.32	3.10	0.18	27.37	0.42	0.29	**97.01**
56	Alma K-85	LCC	2474.79	11	C12	**490**		12.27	28.79	2.93	13.57	2.62	1.68	0.31	0.79	4.70	0.29	26.18	0.66	0.35	**95.14**
57	Alma K-85	LCC	2474.79	12	C08	**399**		14.85	29.46	2.95	12.64	2.25	1.29	0.45	1.11	3.39	0.48	27.30	0.17	0.57	**96.89**
58	Alma K-85	LCC	2474.79	13	C10	**431**		13.09	28.31	2.79	12.56	2.02	1.44	0.43	1.98	4.74	0.22	28.35	0.37	0.73	**97.03**
59	Alma K-85	LCC	2474.79	14	C09	**410**															
60	Alma K-85	LCC	2465.18	1	C25			18.54	35.15	2.94	10.28	1.39	0.68	0.00	0.17	0.65	0.09	27.91	0.15	1.23	**99.16**
61	Alma K-85	LCC	2465.18	2	C11	**463**		13.44	28.43	2.87	11.56	2.17	1.46	0.53	2.34	4.91	0.48	28.08	0.61	1.09	**97.96**
62	Alma K-85	LCC	2465.18	3	C16	**1051**	3	14.91	30.57	2.69	10.33	1.58	0.93	0.45	1.85	6.02	0.54	26.31	1.18	0.43	**97.79**
62	Alma K-85	LCC	2465.18	3	C16	**1051**		14.05	28.64	2.77	9.74	1.52	1.08	0.51	1.96	9.16	0.61	25.29	1.86	0.41	**97.61**
62	Alma K-85	LCC	2465.18	3	C16	**1051**		13.58	27.22	2.62	10.07	1.84	1.14	0.45	1.99	11.03	0.69	25.02	2.16	0.49	**98.30**
63	Alma K-85	LCC	2465.18	4	C08	**401**		15.18	27.34	2.68	10.95	1.92	1.48	0.58	2.20	4.32	1.16	27.85	0.07	0.99	**96.71**
64	Thebaud #3	LM	3911.84	1	C14	**586**		13.23	28.47	3.65	14.22	2.20	1.82	0.39	0.89	2.89	0.14	29.84	0.20	0.87	**98.82**
65	Thebaud #3	LM	3911.84	2	C14	**606**		16.71	30.72	3.25	11.18	1.28	0.38	0.02	0.04	4.48	0.09	28.05	0.90	0.71	**97.81**
65.5	Thebaud #3	LM	3911.84	4	C27			15.19	32.68	3.75	13.10	0.91	0.37	0.06	0.33	2.70	0.10	29.00	0.67	0.68	**99.55**
65.6	Thebaud #3	LM	3911.84	5	C27			19.06	34.39	3.30	10.91	0.78	0.24	0.07	0.03	0.20	0.02	28.34	0.44	0.10	**97.90**
66	Thebaud #3	LM	3911.84	6	C10	**423**		14.93	27.24	2.83	10.97	1.38	0.93	0.30	0.93	6.66	0.16	28.62	0.72	1.36	**97.03**
67	Thebaud #3	LM	3911.84	7	C11	**473**		11.78	27.87	3.14	13.72	2.19	2.08	0.65	2.80	2.46	0.18	29.26	0.26	0.75	**97.15**
68	Thebaud #3	LM	3901.75	2	C04.5	**331**		11.99	33.64	4.36	15.57	1.62	0.50	0.00	0.07	1.94	0.11	28.42	0.71	0.02	**98.96**
68.5	Thebaud #3	LM	3901.75	3	C28			19.86	32.17	3.53	11.89	1.21	0.32	0.00	0.00	0.47	0.04	29.13	0.31	0.01	**98.95**
69	Thebaud #3	LM	3901.75	1	C09	**408**		5.71	25.17	4.55	23.99	5.57	2.58	0.28	0.41	0.53	0.08	29.56	0.58	0.13	**99.14**
70	Thebaud #3	LM	3901.75	4	C24	**452**		16.98	31.22	3.38	11.65	1.42	0.94	0.09	0.36	2.20	0.09	28.06	0.82	0.22	**97.43**
70.5	Thebaud #3	LM	3915.04	1	C27			15.24	28.27	3.39	11.36	1.54	1.34	0.66	2.18	2.43	0.11	30.11	0.08	1.25	**97.96**
70.5	Thebaud #3	LM	3915.04	1	C27			14.43	28.51	3.95	12.80	1.95	1.62	0.52	1.24	3.32	0.10	30.42	0.15	0.85	**99.87**
70.5	Thebaud #3	LM	3915.04	1	C27			13.49	27.77	3.79	12.51	1.93	1.57	0.73	2.49	3.08	0.08	30.49	0.10	0.85	**98.87**
70.5	Thebaud #3	LM	3915.04	1	C27			14.00	28.23	3.74	12.52	1.96	1.59	0.51	1.06	3.47	0.04	30.29	0.07	0.86	**98.35**
71	Thebaud I-93	LM	3950.18	1	C22	**1853**		13.35	26.97	3.20	12.31	1.88	1.19	0.52	2.00	3.21	0.37	29.53	0.23	1.58	**96.33**
72	Thebaud I-93	LM	3068.39	1	C08	**414**		12.89	26.69	3.19	12.72	2.33	1.55	0.68	2.16	4.25	0.22	29.09	0.51	1.07	**97.34**
73	Thebaud I-93	LM	3068.39	2	C07	**382**		14.20	24.93	2.85	11.36	2.02	1.59	0.73	2.57	3.21	0.62	29.57	0.20	1.80	**95.65**
74	Thebaud I-93	LM	3936.1	2	C12	**462**		11.44	30.28	3.99	15.54	2.06	1.10	0.15	0.26	2.52	0.15	29.33	0.26	0.66	**97.75**
75	Thebaud I-93	LM	3936.1	3	C24			13.95	27.16	3.29	12.84	1.85	1.35	0.38	1.99	3.34	0.17	28.97	0.53	0.70	**96.53**
76	Thebaud I-93	LM	3936.1	4	C20	**1825**		5.00	22.80	4.46	23.94	6.45	3.68	0.40	0.66	0.92	0.13	29.50	0.17	0.28	**98.38**
77	Thebaud I-93	LM	3936.1	5	C07	**387**		15.92	29.00	3.17	11.21	1.42	0.83	0.27	0.89	4.73	0.16	28.36	0.72	0.82	**97.50**
78	Thebaud I-93	LM	3936.1	6	C05	**359**		13.65	27.25	3.56	14.38	2.91	1.88	0.56	1.50	1.65	0.14	29.49	0.19	0.52	**97.68**
79	Thebaud I-93	LM	3936.1	7	C11	**465**		15.86	29.08	3.28	12.03	1.43	1.07	0.56	2.26	0.79	0.11	29.23	0.16	0.76	**96.61**
80	Thebaud I-93	LM	3936.1	8	C20	**1696**		16.39	34.12	3.44	11.84	1.64	0.37	0.00	0.00	0.22	0.06	28.67	0.09	0.14	**96.98**
81	Thebaud I-93	LM	3936.1	9	C10	**441**		14.83	29.80	3.37	12.55	1.51	0.86	0.15	0.81	4.06	0.16	28.47	1.14	0.31	**98.03**
82	Thebaud I-93	LM	3936.1	10	C04.5	**345**		9.38	28.03	4.16	18.69	3.25	1.86	0.27	1.12	0.31	0.08	28.50	0.14	0.27	**96.06**
83	Thebaud I-93	LM	3936.1	11	C17	**1027**		15.07	30.00	3.51	12.88	1.56	0.57	0.00	0.00	1.75	0.11	27.83	0.22	1.77	**95.28**
84	Thebaud C-74	LM	3908.65	1	C11	**461**	3	12.83	26.95	2.69	11.55	1.77	1.13	0.39	1.13	9.29	0.71	26.46	2.49	0.58	**97.98**
84	Thebaud C-74	LM	3908.65	1	C11	**461**		12.71	26.86	2.75	11.40	1.77	1.17	0.40	1.41	9.86	0.70	26.60	2.31	0.56	**98.49**
84	Thebaud C-74	LM	3908.65	1	C11	**461**		12.31	26.51	2.71	12.00	1.97	1.45	0.52	1.88	8.45	0.66	27.19	1.96	0.62	**98.23**
85	Thebaud C-74	LM	3921.98	1	C26																
86	Thebaud C-74	LM	3921.98	2	C05	**354**															
87	Thebaud C-74	LM	3921.98	1	C05	**372**		14.43	26.07	2.96	12.46	1.30	1.10	0.53	0.97	5.00	0.14	28.72	0.40	0.72	**94.80**
88	Thebaud C-74	LM	3921.98	2	C18	**1244**		11.82	27.03	3.39	13.15	1.28	0.79	0.52	1.27	4.35	0.05	28.39	1.59	0.36	**93.99**
89	Thebaud C-74	LM	3876.72	1	C05	**371**		16.16	27.63	3.10	9.95	0.31	0.27	0.05	0.35	7.36	0.16	32.44	1.49	1.20	**100.48**
90	Thebaud C-74	LM	3876.72	2	C10	**423**		13.72	27.35	3.46	11.86	0.71	0.67	0.50	2.01	5.15	0.10	31.94	1.67	0.62	**99.76**
91	Thebaud C-74	LM	3876.72	3	C14	**579**		12.99	27.27	3.66	13.17	0.78	0.86	0.60	2.84	2.94	0.17	34.99	0.27	1.00	**101.54**
92	Thebaud C-74	LM	3876.72	4	C05	**370**		13.61	27.64	3.54	11.91	0.70	0.68	0.52	1.29	4.21	0.08	34.29	0.72	1.15	**100.33**
93	Thebaud C-74	LM	3876.72	5	C10	**443**		13.63	27.77	3.34	13.24	0.52	0.72	0.62	2.42	2.65	0.15	34.13	0.19	1.18	**100.56**
93.5	Thebaud C-74	LM	3876.72	6	C28			6.30	25.21	4.83	22.86	1.78	0.78	0.14	0.29	1.65	0.06	32.85	0.67	1.01	**98.43**
94	Thebaud C-74	LM	3876.72	8	C09	**435**		10.10	28.86	4.31	16.90	0.81	0.27	0.10	0.30	3.76	0.16	32.97	0.56	0.56	**99.66**
94.5	Thebaud C-74	LM	3876.72	9	C28			2.52	16.75	4.43	26.47	4.47	1.82	0.37	0.44	2.31	0.07	31.85	0.58	1.13	**93.20**
95	Thebaud C-74	LM	3876.72	10	C08	**412**		14.24	29.25	3.63	13.17	0.69	0.67	0.51	1.45	2.21	0.09	34.62	0.34	0.89	**101.75**
96	Glenelg E-58	UM	3525.16	1	C05	**371**		12.67	26.63	2.34	8.38	2.16	1.95	0.49	1.19	9.67	1.77	29.56	0.40	2.00	**99.20**
97	Glenelg E-58	UM	3525.16	2	C18	**1157**		12.61	27.71	2.99	12.70	2.32	1.95	0.88	2.67	2.89	1.07	29.47	0.10	0.76	**98.11**
98	Glenelg E-58	UM	3525.16	3	C24			13.17	32.15	3.33	12.97	1.56	0.78	0.31	0.45	0.14	0.12	28.57	0.12	0.10	**93.76**
98.5	Glenelg E-58	UM	3525.16	4	C24			25.36	32.81	2.47	7.41	0.59	0.20	0.00	0.00	0.00	0.00	29.33	0.05	0.06	**98.27**
99	Glenelg E-58	UM	3525.16	5	C18	**1107**		14.92	31.52	2.99	11.64	1.25	0.78	0.21	0.52	2.71	0.12	27.86	0.63	0.88	**96.05**
100	Glenelg E-58	UM	3525.16	6	C15	**670**		13.93	29.74	2.86	11.71	1.92	1.46	0.65	1.42	3.67	0.34	29.32	0.39	0.58	**98.01**
101	Glenelg E-58	UM	3525.16	7	C26		3	13.40	30.47	3.16	11.96	1.61	1.06	0.55	1.67	1.68	0.02	27.01	1.00	1.15	**94.73**
101	Glenelg E-58	UM	3525.16	7	C26			13.47	30.92	3.13	12.25	1.65	1.12	0.41	1.60	1.85	0.06	26.94	1.01	1.06	**95.46**
101	Glenelg E-58	UM	3525.16	7	C26			12.86	30.87	3.36	12.34	1.75	1.13	0.52	1.64	2.00	0.07	27.03	1.02	0.99	**95.57**
102	Glenelg E-58	UM	3525.16	8	C13	**499**		12.14	25.22	2.56	11.16	1.83	1.57	0.65	1.93	7.81	0.63	28.75	0.46	1.25	**95.97**
103	Glenelg E-58	UM	3525.16	9	C08	**410**	2	14.02	30.81	2.96	11.56	1.62	1.09	0.32	1.35	4.38	0.28	28.17	0.93	0.23	**97.72**
103	Glenelg E-58	UM	3525.16	9	C08	**410**		15.27	30.75	2.92	10.81	1.28	0.89	0.21	0.61	6.47	0.17	27.64	1.39	0.27	**98.67**
104	Glenelg E-58	UM	3525.16	10	C05	**372**	4	13.20	30.00	3.08	11.78	1.85	1.37	0.65	1.69	4.68	0.33	28.18	0.97	0.26	**98.04**

104	Glenelg E-58	UM	3525.16	10	C05	**372**		13.38	29.02	2.84	11.07	1.65	1.11	0.44	1.01	8.26	0.36	26.90	1.80	0.30	**98.14**
104	Glenelg E-58	UM	3525.16	10	C05	**372**		11.05	24.59	2.57	10.11	1.76	1.45	0.41	1.26	16.23	0.82	24.18	3.58	0.38	**98.40**
104	Glenelg E-58	UM	3525.16	10	C05	**372**		15.75	31.84	2.98	11.19	1.13	0.90	0.16	0.57	3.93	0.07	28.73	0.54	0.46	**98.24**
105	Glenelg E-58	UM	3525.16	11	C17	**990**	2	15.31	30.32	2.89	11.39	1.36	0.95	0.28	0.78	3.90	0.33	28.54	0.58	0.45	**97.06**
105	Glenelg E-58	UM	3525.16	11	C17	**990**		15.26	30.47	2.75	10.86	1.34	1.05	0.40	1.25	4.50	0.23	28.75	0.62	0.49	**97.97**
106	Glenelg E-58	UM	3525.16	12	C16	**990**		15.37	31.14	3.02	10.87	1.31	0.94	0.36	1.71	1.39	0.09	28.63	0.22	0.81	**95.88**
107	Glenelg E-58	UM	3525.16	13	C25			7.26	29.29	4.25	20.08	3.67	1.92	0.25	0.12	0.19	0.00	29.88	0.10	0.13	**97.14**
108	Glenelg E-58	UM	3525.16	14	C07	**389**	2	12.09	28.60	2.98	10.86	2.00	1.72	0.74	2.02	7.06	0.33	26.83	1.70	0.47	**97.39**
108	Glenelg E-58	UM	3525.16	14	C07	**389**		11.75	27.41	2.89	10.89	2.19	1.89	0.79	2.38	7.80	0.29	26.67	1.92	0.41	**97.29**
109	Glenelg E-58	UM	3525.16	15	C16	**1041**	2	13.79	27.34	2.91	11.34	1.87	1.72	0.66	1.76	4.33	1.02	29.12	0.27	0.87	**97.00**
109	Glenelg E-58	UM	3525.16	15	C16	**1041**		13.72	27.61	2.94	11.44	1.96	1.67	0.61	1.27	4.02	1.05	29.40	0.21	0.85	**96.75**
110	Glenelg E-58	UM	3525.16	16	C08	**400**	2	10.49	25.32	2.64	10.89	2.52	2.19	0.93	2.85	9.03	0.60	27.85	1.35	0.79	**97.44**
110	Glenelg E-58	UM	3525.16	16	C08	**400**		10.36	25.40	2.61	11.00	2.39	2.35	1.03	3.19	7.39	0.53	28.26	0.98	0.76	**96.26**
111	Glenelg E-58	UM	3525.16	17	C24			17.31	31.64	3.11	12.33	1.59	0.69	0.11	0.16	0.75	0.07	29.00	0.14	0.14	**97.04**
112	Glenelg E-58	UM	3525.16	18	C25			6.73	28.56	4.21	19.45	4.37	2.58	0.25	0.33	0.62	0.07	29.59	0.14	0.20	**97.09**
113	Glenelg E-58	UM	3525.16	19	C13	**528**		13.96	28.92	2.95	12.88	2.45	2.06	0.76	1.53	2.20	0.53	29.53	0.16	0.43	**98.36**
114	Glenelg E-58	UM	3525.16	20	C04	**317**	2	13.38	28.41	2.84	11.93	1.93	1.72	0.72	2.21	3.17	0.24	29.38	0.05	1.26	**97.24**
114	Glenelg E-58	UM	3525.16	20	C04	**317**		12.43	27.22	2.85	11.55	2.13	1.88	0.85	2.26	4.34	0.24	29.04	0.09	1.17	**96.06**
115	Glenelg E-58	UM	3525.16	21	C07	**387**		13.59	28.04	2.76	10.91	1.80	1.59	0.64	1.68	3.71	1.88	29.50	0.09	1.02	**97.21**
116	Glenelg E-58	UM	3525.16	22	C08	**398**	2	11.76	25.28	2.82	11.66	2.29	2.16	0.85	2.00	6.53	1.51	29.72	0.21	1.24	**98.02**
116	Glenelg E-58	UM	3525.16	22	C08	**398**		12.08	27.15	2.81	11.40	2.11	1.75	0.75	1.76	5.43	2.00	29.83	0.16	1.19	**98.41**
117	Glenelg E-58	UM	3532.08	1	C24			12.79	33.81	3.18	13.16	1.71	1.00	0.29	0.37	0.07	0.00	29.36	0.09	0.07	**95.92**
118	Glenelg E-58	UM	3532.08	2	C13	**503**		11.69	29.42	2.83	12.45	1.74	1.77	0.67	1.68	2.65	0.56	29.67	0.20	0.55	**95.88**
119	Glenelg E-58	UM	3532.08	3	C19	**1686**	2	14.35	31.78	2.94	11.39	1.37	0.69	0.16	0.30	3.88	0.13	28.80	0.63	0.39	**96.80**
119	Glenelg E-58	UM	3532.08	3	C19	**1686**		12.81	28.99	2.61	10.65	1.11	0.83	0.17	0.62	7.39	0.26	28.99	0.48	1.12	**96.02**
120	Glenelg E-58	UM	3532.08	4	C10	**438**		11.15	27.44	2.61	10.87	1.76	1.73	0.71	2.20	7.06	0.40	28.21	0.71	0.94	**95.78**
121	Glenelg E-58	UM	3532.08	5	C12	**487**		8.26	31.58	3.89	17.10	1.94	1.30	0.20	0.15	3.02	0.00	28.25	0.54	0.22	**96.45**
122	Glenelg E-58	UM	3532.08	6	C10	**420**		12.48	28.87	2.73	12.24	1.99	1.78	0.57	1.18	2.98	0.47	29.09	0.52	0.57	**95.47**
123	Glenelg E-58	UM	3532.08	7	C10	**423**	2	13.63	30.90	2.76	10.78	1.29	0.72	0.18	0.47	5.52	0.30	28.27	0.83	0.70	**96.35**
123	Glenelg E-58	UM	3532.08	7	C10	**423**		12.67	29.88	2.77	10.26	1.16	0.65	0.12	0.42	8.60	0.45	26.58	1.78	0.88	**96.23**
124	Glenelg E-58	UM	3532.08	8	C07	**388**		13.37	29.16	2.72	10.67	1.33	0.81	0.19	0.71	7.38	0.18	28.11	0.99	0.78	**96.39**
125	Glenelg E-58	UM	3532.08	9	C10	**441**		13.17	31.27	3.03	12.83	1.86	1.25	0.42	0.89	1.18	0.38	29.29	0.16	0.40	**96.12**
126	Glenelg E-58	UM	3535.83	1	C03	**276**		15.24	29.38	2.83	11.54	1.41	0.94	0.22	0.64	6.29	0.22	27.89	0.94	0.66	**98.20**
127	Glenelg E-58	UM	3535.83	2	C02	**241**		13.12	28.48	2.79	11.42	2.11	1.69	0.52	1.10	5.90	1.56	27.94	0.61	0.95	**98.17**
128	Glenelg E-58	UM	3535.83	3	C26			14.47	28.02	3.02	14.18	2.73	2.51	0.57	0.51	1.68	0.04	27.98	0.26	0.28	**96.26**
129	Glenelg E-58	UM	3535.83	4	C25			3.40	17.39	3.50	26.33	8.96	5.07	0.59	0.70	0.79	0.16	27.97	0.42	0.16	**95.44**
130	Glenelg E-58	UM	3535.83	5	C07	**382**		12.21	27.18	2.48	11.18	1.74	1.65	0.83	3.25	3.67	0.70	27.75	0.45	0.69	**93.80**
131	Glenelg E-58	UM	3535.83	6	C07	**383**		14.61	30.39	2.78	11.45	1.62	1.27	0.51	1.09	1.64	0.55	27.93	0.46	0.60	**94.89**
132	Glenelg E-58	UM	3535.83	7	C04	**336**		13.22	27.81	2.62	11.52	1.82	1.63	0.65	1.88	3.88	1.66	28.57	0.68	1.03	**96.96**
133	Glenelg E-58	UM	3535.83	8	C26			13.33	31.61	2.82	13.61	2.26	1.34	0.18	0.25	0.38	0.00	27.03	0.37	0.37	**93.53**
134	Glenelg E-58	UM	3535.83	9	C14	**551**		12.83	28.14	2.94	12.60	2.11	1.87	0.79	1.77	4.30	0.26	28.09	0.55	0.52	**96.77**
135	Glenelg E-58	UM	3535.83	10	C04	**318**		15.97	30.70	2.92	12.02	1.79	1.31	0.47	1.83	0.76	0.44	28.18	0.48	0.28	**97.14**
136	Glenelg E-58	UM	3532.19	1	C24			15.67	31.73	3.12	12.75	1.72	1.27	0.49	0.92	0.13	0.20	29.00	0.13	0.21	**97.33**
137	Glenelg E-58	UM	3532.19	2	C10	**439**		14.11	29.34	2.95	11.75	1.96	1.60	0.46	0.92	3.99	0.18	28.83	0.23	0.70	**97.00**
138	Glenelg E-58	UM	3532.19	3	C19	**1652**	2	14.57	28.98	2.77	10.94	1.73	1.49	0.71	1.97	3.15	0.14	29.12	0.16	0.95	**96.69**
138	Glenelg E-58	UM	3532.19	3	C19	**1652**		14.85	28.75	2.78	11.07	1.58	1.30	0.74	1.97	3.11	0.20	29.12	0.14	0.86	**96.45**
139	Glenelg E-58	UM	3532.19	4	C17	**1041**		13.11	27.61	2.74	11.35	1.57	1.51	0.84	3.16	3.14	0.18	29.43	0.30	0.87	**95.82**
140	Glenelg E-58	UM	3532.19	5	C21	**1840**	2	17.72	30.91	3.07	11.98	1.35	0.61	0.36	0.82	0.93	0.38	29.49	0.05	0.47	**98.14**
140	Glenelg E-58	UM	3532.19	5	C21	**1840**		16.62	31.15	3.04	12.22	1.36	0.76	0.26	0.78	0.90	0.30	29.28	0.08	0.54	**97.29**
141	Glenelg E-58	UM	3532.19	6	C25			6.89	28.45	4.41	21.09	3.00	1.33	0.22	0.26	1.68	0.00	28.48	0.72	0.26	**96.77**
142	Glenelg E-58	UM	3532.19	7	C19	**1545**		16.27	33.34	3.26	12.73	1.48	0.43	0.00	0.00	0.71	0.22	29.03	0.12	0.18	**97.77**
143	Glenelg E-58	UM	3532.19	8	C25		2	10.71	33.92	3.96	16.33	1.88	0.86	0.10	0.14	0.18	0.00	28.92	0.16	0.09	**97.24**
143	Glenelg E-58	UM	3532.19	8	C25			7.31	29.35	4.03	19.59	3.29	2.09	0.38	0.42	0.39	0.05	29.16	0.27	0.19	**96.52**
144	Glenelg E-58	UM	3532.19	9	C25			10.02	30.17	3.87	17.81	2.32	0.46	0.08	0.24	2.00	0.00	28.85	0.18	0.33	**96.33**
145	Glenelg E-58	UM	3532.19	10	C24			13.94	36.56	3.52	12.34	1.20	0.54	0.16	0.05	0.14	0.00	28.88	0.08	0.10	**97.51**
146	Glenelg E-58	UM	3551.29	1	C07	**381**		13.99	29.72	2.77	11.77	1.93	1.69	0.63	1.84	3.06	0.65	29.86	0.42	0.65	**98.98**
147	Glenelg E-58	UM	3551.29	2	C26			12.93	33.74	3.25	13.67	1.76	1.04	0.12	0.26	1.40	0.00	29.16	0.23	0.28	**97.83**
148	Glenelg E-58	UM	3551.29	3	C23	**2690**		13.31	27.21	2.58	10.52	1.60	1.22	0.59	2.02	6.13	1.05	28.88	0.54	1.19	**96.82**
149	Glenelg E-58	UM	3528.21	1	C07	**383**		10.96	26.90	2.70	12.38	2.58	2.35	0.79	1.72	6.69	0.58	29.53	0.55	1.16	**98.90**
150	Glenelg E-58	UM	3528.21	2	C08	**393**		14.44	29.03	2.80	11.97	1.72	1.23	0.44	1.23	4.71	0.16	29.25	0.37	0.76	**98.12**
151	Glenelg E-58	UM	3528.21	3	C19	**1561**		13.49	28.83	2.75	12.13	1.83	1.71	0.81	2.60	2.53	0.23	29.85	0.19	0.61	**97.57**
152	Glenelg E-58	UM	3528.21	4	C19	**1603**		13.47	28.35	2.81	11.79	1.80	1.44	0.60	1.86	2.45	0.24	29.59	0.09	0.94	**95.45**
153	Glenelg E-58	UM	3528.21	5	C07	**380**		13.28	34.52	3.35	12.44	1.27	0.50	0.08	0.26	2.93	0.05	28.36	0.66	0.15	**97.85**
154	Glenelg E-58	UM	3528.21	6	C08	**403**		13.47	28.58	2.87	12.76	1.92	1.56	0.49	1.47	4.86	0.18	29.55	0.36	0.75	**98.82**
155	Glenelg E-58	UM	3528.21	7	C24		2	13.98	33.75	3.31	13.76	1.50	0.63	0.14	0.29	0.21	0.02	28.93	0.16	0.11	**96.78**
155	Glenelg E-58	UM	3528.21	7	C24			17.14	34.60	3.09	11.41	1.24	0.44	0.07	0.25	0.10	0.07	29.42	0.13	0.19	**98.14**
156	Glenelg E-58	UM	3536.82	1	C08	**395**		14.04	29.10	2.77	12.93	1.71	1.57	0.42	1.25	3.92	0.11	28.98	0.28	0.65	**97.73**
157	Glenelg E-58	UM	3536.82	2	C14	**577**		17.37	33.92	2.97	11.28	0.88	0.43	0.13	0.10	2.59	0.00	28.05	1.09	0.17	**98.98**
158	Glenelg E-58	UM	3536.82	3	C14	**554**		15.62	30.56	2.67	11.48	1.50	1.10	0.36	1.04	3.54	0.23	29.26	0.38	0.53	**98.27**
159	Glenelg E-58A	UM	3733.43	1	C07	**387**		14.61	30.76	3.03	12.83	1.65	1.33	0.29	0.82	4.16	0.18	27.85	0.82	0.17	**98.49**
160	Glenelg E-58A	UM	3733.43	2	C24			15.75	30.69	2.73	11.53	1.27	0.50	0.15	0.22	0.76	0.09	27.82	8.18	0.17	**99.86**
161	Glenelg E-58A	UM	3733.43	3	C10	**444**	2	13.98	28.58	2.64	11.85	1.83	1.63	0.74	2.22	2.93	1.06	29.74	0.10	0.75	**98.06**
161	Glenelg E-58A	UM	3733.43	3	C10	**444**		13.24	27.38	2.78	11.89	1.72	1.78	0.89	2.20	3.84	1.53	29.64	0.10	0.93	**97.91**
162	North Triumph G-43	LCC	3285.15	1	C04.5	**346**		14.75	27.95	2.18	14.50	2.48	1.49	0.13	0.35	2.88	0.15	29.57	0.23	0.83	**97.51**
163	North Triumph G-43	LCC	3285.15	2	C24			14.78	32.37	2.29	14.78	1.83	0.78	0.07	0.38	0.99	0.00	29.52	0.15	0.16	**98.10**
164	North Triumph G-43	LCC	3285.15	3	C24			19.10	32.45	1.96	10.74	0.82	0.26	0.04	0.18	1.65	0.04	28.49	0.56	0.23	**96.52**

165	North Triumph G-43	LCC	3285.15	4	C19	**1623**		12.71	27.55	1.95	12.78	1.98	1.70	0.61	2.21	4.43	0.07	28.16	0.57	0.94	**95.66**
166	North Triumph G-43	LCC	3285.15	5	C11	**453**		12.36	25.72	1.94	14.91	2.31	2.17	0.82	4.16	2.79	0.00	28.99	0.23	0.76	**97.15**
167	North Triumph G-43	LCC	3285.15	6	C04	**316**		13.51	26.92	1.90	13.38	2.21	1.89	0.42	1.58	3.16	0.17	29.40	0.14	1.06	**95.73**
168	North Triumph G-43	LCC	3289.64	1	C27			16.07	31.01	3.04	12.35	1.58	0.68	0.23	0.25	2.36	0.04	28.07	0.48	0.27	**96.43**
168	North Triumph G-43	LCC	3289.64	2	C05	**362**		15.64	29.78	2.69	10.97	1.26	0.74	0.31	0.64	5.03	0.27	28.42	0.92	0.91	**97.58**
169	North Triumph G-43	LCC	3289.64	3	C08	**416**		13.13	26.79	2.69	12.38	1.95	1.49	0.77	2.14	2.70	0.46	27.98	0.41	1.25	**94.17**
170	North Triumph G-43	LCC	3289.64	4	C01	**76**		10.61	28.74	3.20	13.40	1.98	1.74	0.87	2.66	2.88	0.21	26.70	1.30	0.76	**95.04**
171	North Triumph G-43	LCC	3289.64	5	C04	**310**		11.57	30.32	2.69	11.58	1.84	0.96	0.30	0.40	7.85	0.42	28.64	0.63	1.18	**98.37**
172	North Triumph G-43	LCC	3289.64	6	C03	**281**	2	13.99	27.72	2.81	12.33	1.88	1.40	0.65	1.71	4.42	0.24	29.06	0.38	0.69	**97.28**
172	North Triumph G-43	LCC	3289.64	6	C03	**281**		14.56	29.19	2.79	12.12	1.63	1.07	0.48	1.35	4.51	0.26	28.90	0.47	0.65	**97.96**
173	North Triumph G-43	LCC	3289.64	7	C21	**1740**		17.42	30.07	2.34	8.17	0.81	0.31	0.17	0.29	8.43	0.36	27.33	1.61	0.72	**98.02**
174	North Triumph G-43	LCC	3289.64	8	C05	**369**		14.38	30.25	2.99	11.72	1.80	1.16	0.44	0.77	3.43	0.33	28.64	0.30	0.53	**96.74**
175	North Triumph G-43	LCC	3289.64	9	C24			18.17	35.22	2.82	10.48	0.38	0.00	0.09	0.00	0.58	0.03	27.46	0.32	0.56	**96.12**
176	North Triumph G-43	LCC	3289.64	10	C22	**1854**		13.51	27.07	2.63	11.30	1.74	1.35	0.83	2.07	4.14	1.00	29.06	0.38	1.08	**96.15**
177	North Triumph G-43	LCC	3289.64	11	C26			13.77	28.31	2.78	11.99	1.85	1.36	0.80	1.92	3.90	0.39	29.08	1.58	0.65	**98.38**
178	North Triumph G-43	LCC	3289.64	12	C24			20.12	33.99	2.72	9.23	0.47	0.00	0.06	0.00	0.36	0.10	27.92	0.53	0.65	**96.15**
179	North Triumph G-43	LCC	3289.64	13	C16	**1047**		13.35	28.66	2.86	12.55	2.05	1.37	0.67	1.33	3.48	0.45	29.02	0.26	0.75	**96.79**
180	North Triumph G-43	LCC	3289.64	14	C08	**409**		14.26	28.99	2.91	13.22	2.17	1.73	0.55	0.81	2.80	0.93	29.09	0.20	0.59	**98.25**
181	North Triumph G-43	LCC	3289.64	15	C26			13.26	30.37	3.34	15.02	2.58	1.70	0.44	0.39	0.20	0.04	28.91	0.16	0.12	**96.53**
182	North Triumph G-43	LCC	3289.64	16	C24	**1188**	2	21.22	30.46	2.29	7.31	0.46	0.08	0.09	0.12	4.31	0.15	28.26	0.35	1.38	**96.47**
182	North Triumph G-43	LCC	3289.64	16	C24	**1188**		20.57	31.20	2.23	7.53	0.47	0.05	0.07	0.13	3.89	0.23	28.47	0.34	1.45	**96.64**
183	North Triumph G-43	UM	3828.04	1	C08	**407**		14.48	29.53	3.06	12.10	1.78	1.55	0.45	0.89	3.24	0.36	28.20	0.24	0.67	**96.56**
184	North Triumph G-43	UM	3828.04	2	C26			15.43	30.50	2.82	11.90	2.00	1.64	0.57	0.83	1.76	0.00	27.93	0.18	0.44	**96.00**
185	North Triumph G-43	UM	3828.04	3	C07	**383**		14.85	30.63	2.91	13.27	2.44	1.99	0.61	1.83	0.23	0.10	28.01	0.20	0.10	**97.18**
186	North Triumph G-43	UM	3828.04	4	C13	**531**		13.80	27.43	2.61	11.16	1.65	1.73	0.83	2.60	3.65	1.16	28.18	0.12	0.85	**95.76**
186	North Triumph G-43	UM	4402.95	1	C29			13.65	31.38	3.44	14.78	2.33	1.24	0.28	0.12	0.22	0.01	29.36	0.16	0.07	**97.04**
186	North Triumph G-43	UM	4402.95	2	C27			15.33	28.89	2.64	9.00	1.13	0.65	0.37	1.45	6.60	1.00	29.17	0.26	1.22	**97.72**
186	North Triumph G-43	UM	4402.95	3	C27			13.47	29.76	3.01	12.60	1.71	1.25	0.35	0.59	5.06	0.12	28.41	0.58	0.69	**97.61**
186	North Triumph G-43	UM	4402.95	4	C27			14.78	32.93	2.69	10.26	0.89	0.50	0.05	0.02	1.11	0.00	27.60	0.39	0.47	**91.69**
187	North Triumph G-43	UM	4402.95	5	C27			15.18	34.04	2.77	9.49	0.88	0.67	0.23	0.66	0.13	0.00	27.57	0.10	0.41	**92.14**
187	North Triumph G-43	UM	4402.95	6	C27			12.41	33.53	3.51	13.46	1.45	0.77	0.16	0.28	0.68	0.03	28.68	0.94	0.12	**96.03**
187	North Triumph G-43	UM	4402.95	7	C27			13.38	27.28	2.66	10.77	1.69	1.66	0.85	2.37	5.75	0.37	29.48	0.30	0.95	**97.51**
187	North Triumph G-43	UM	4402.95	8	C27			15.84	30.43	2.97	11.11	1.37	0.92	0.30	0.77	4.70	0.35	28.20	0.92	0.46	**98.33**
187	North Triumph G-43	UM	4402.95	9	C27			30.36	31.27	1.92	5.01	0.18	0.01	0.00	0.02	0.51	0.00	29.25	0.07	0.04	**98.65**
187	North Triumph G-43	UM	4402.95	10	C29			16.96	31.72	3.18	12.61	1.78	0.96	0.25	0.13	0.93	0.06	29.36	0.15	0.11	**98.20**
187	North Triumph G-43	UM	4402.95	11	C29			17.77	31.21	2.83	10.22	0.96	0.40	0.14	0.17	4.45	0.23	28.32	0.54	0.46	**97.71**
187	North Triumph G-43	UM	4010.25	1	C24			13.89	32.37	2.56	16.56	1.93	0.69	0.09	0.30	0.29	0.06	28.28	0.13	0.17	**97.31**
188	North Triumph G-43	UM	4010.25	2	C04	**322**		12.61	26.69	2.21	15.25	2.44	2.02	0.45	2.14	3.90	0.03	29.27	0.14	1.06	**98.21**
189	North Triumph G-43	UM	4010.25	3	C24			16.12	32.58	2.13	12.92	1.52	0.56	0.11	0.35	0.04	0.00	28.72	0.31	0.16	**95.53**
190	North Triumph G-43	UM	4010.25	4	C11	**463**		15.35	26.16	1.90	11.96	1.71	1.37	0.53	1.85	5.09	0.11	28.74	0.70	1.11	**96.57**
191	North Triumph G-43	UM	4010.25	5	C26			13.02	29.93	2.17	14.68	2.27	1.24	0.14	0.37	1.19	0.00	26.31	1.10	0.48	**92.89**
192	North Triumph G-43	UM	4010.25	6	C12	**483**		5.15	24.25	2.74	25.08	5.53	2.85	0.14	0.49	1.67	0.03	27.80	0.47	0.48	**96.69**
193	North Triumph G-43	UM	4010.25	7	C12	**479**		6.53	24.89	2.71	20.59	3.77	2.85	0.31	0.63	5.39	0.11	27.80	0.63	0.88	**97.11**
194	North Triumph G-43	UM	3835.78	1	C06	**384**		13.66	27.00	1.94	13.20	2.34	2.07	0.42	1.21	4.62	0.10	28.68	0.33	1.08	**96.65**
195	North Triumph G-43	UM	3835.78	2	C06	**381**		13.83	27.40	2.09	14.42	2.45	2.12	0.28	0.41	3.12	0.18	28.43	0.16	0.86	**95.74**
196	North Triumph G-43	UM	3848.15	1	C05	**376**		13.21	26.22	2.00	13.59	2.21	1.82	0.65	2.30	3.91	0.10	29.63	0.10	1.10	**96.84**
197	North Triumph G-43	UM	4402.34	2	C08	**390**		14.08	29.40	2.83	10.05	1.41	0.94	0.31	0.60	8.64	0.32	26.38	1.33	0.74	**97.03**
198	North Triumph G-43	UM	4402.34	3	C24			21.58	33.04	2.25	7.48	0.64	0.19	0.14	0.23	0.00	0.00	27.84	0.38	0.11	**93.89**
199	North Triumph G-43	UM	4402.34	4	C24			19.04	35.40	3.02	9.68	0.77	0.49	0.14	0.00	0.44	0.00	28.16	0.11	0.04	**97.29**
200	North Triumph G-43	UM	4402.34	5	C26			14.49	29.44	3.00	11.69	1.79	1.33	0.50	1.36	2.77	0.34	28.41	0.30	0.54	**95.95**
201	North Triumph G-43	UM	4402.34	6	C24			13.81	27.33	2.72	10.96	1.88	1.92	1.03	2.70	3.94	1.04	28.36	0.69	0.91	**97.28**
202	North Triumph G-43	UM	4402.34	7	C07	**384**	2	14.69	30.57	3.07	12.08	2.15	1.40	0.51	1.07	3.47	0.16	27.23	1.03	0.14	**97.56**
202	North Triumph G-43	UM	4402.34	7	C07	**384**		14.95	31.12	3.01	12.39	2.21	1.23	0.37	0.84	3.66	0.15	27.28	0.98	0.12	**98.30**
203	North Triumph G-43	UM	4402.34	8	C04	**324**		13.01	27.41	2.93	11.70	2.08	1.62	0.81	2.13	3.96	0.34	29.00	0.26	0.73	**95.99**
204	North Triumph G-43	UM	4402.34	9	C26			16.31	32.36	3.25	13.70	1.81	0.96	0.15	0.02	0.01	0.00	28.25	0.20	0.07	**97.09**
205	North Triumph G-43	UM	4402.34	10	C26			11.89	27.11	2.91	11.66	2.17	1.72	0.84	2.21	5.59	0.33	28.33	0.44	0.96	**96.17**
206	North Triumph G-43	UM	4402.34	11	C19	**1520**		13.26	27.50	2.93	11.54	1.90	1.73	0.83	2.43	3.69	0.50	28.47	0.16	1.19	**96.15**
207	North Triumph G-43	UM	4402.34	12	C24			16.24	34.32	3.06	11.16	1.42	0.92	0.22	0.15	0.63	0.00	28.41	0.16	0.11	**96.80**
208	North Triumph G-43	UM	4402.34	13	C16	**947**		12.98	27.48	2.77	11.13	1.87	1.45	0.59	1.59	6.56	0.84	28.72	0.32	1.28	**97.58**
209	North Triumph G-43	UM	4402.34	14	C24			14.25	29.46	2.88	11.76	1.76	1.34	0.52	1.21	3.66	0.11	28.41	0.32	0.73	**96.40**
210	North Triumph G-43	UM	4402.34	15	C25			6.07	26.62	4.39	22.48	4.59	2.39	0.43	0.29	0.10	0.10	28.22	0.18	0.06	**95.91**
211	North Triumph G-43	UM	4402.34	16	C26			14.13	29.57	3.04	12.28	2.22	1.76	0.52	0.42	4.45	0.00	27.42	0.57	0.50	**96.88**
212	North Triumph G-43	UM	4402.34	17	C26		2	15.71	31.00	3.21	13.11	2.31	1.64	0.58	0.69	1.17	0.02	28.12	0.32	0.06	**97.94**
212	North Triumph G-43	UM	4402.34	17	C26			15.04	31.55	3.08	13.05	2.05	1.54	0.40	0.78	0.83	0.09	28.64	0.28	0.05	**97.39**
213	North Triumph G-43	UM	4402.34	18	C24			14.87	34.39	3.26	12.42	1.20	0.94	0.32	0.28	0.70	0.00	28.11	0.13	0.14	**96.77**
214	North Triumph G-43	UM	4402.34	19	C25			22.78	15.80	5.99	19.38	1.16	0.34	0.07	0.21	0.09	0.00	26.71	0.28	0.24	**93.05**
215	North Triumph G-43	UM	4402.34	20	C02	**260**	2	13.87	27.69	2.75	11.24	1.91	2.03	0.84	2.04	4.76	0.76	28.44	0.29	0.82	**97.42**
215	North Triumph G-43	UM	4402.34	20	C02	**260**		13.84	27.82	2.74	11.26	2.04	1.88	0.78	1.94	4.48	0.71	28.74	0.32	0.82	**97.34**
216	Venture #1	LM	4600.87	1	C01.5	**118**		14.38	26.30	2.52	10.31	1.82	0.58	0.43	1.47	7.14	0.70	26.88	0.73	1.25	**94.52**
217	Venture #1	LM	4600.87	2	C03	**285**		14.56	27.53	2.58	9.29	0.98	0.28	0.08	0.31	9.53	0.28	27.94	1.34	1.15	**95.86**
218	Venture #1	LM	4600.87	3	C25			7.78	29.09	4.10	19.50	3.49	0.74	0.25	0.34	0.79	0.29	29.47	0.04	0.22	**96.11**
219	Venture #1	LM	4600.87	4	C07	**384**		12.96	24.34	2.42	9.61	1.72	0.88	0.85	2.95	8.14	0.30	28.63	0.31	1.47	**94.56**
220	Venture #1	LM	4600.87	5	C15	**795**		11.84	25.60	2.52	10.95	1.97	0.98	1.06	3.22	5.40	1.03	29.03	0.18	1.47	**95.24**
221	Venture #1	LM	4598.35	1	C04.5	**316**	2	14.87	32.38	2.93	12.52	1.84	1.01	0.12	0.09	1.65	0.08	26.26	0.58	0.19	**94.52**
221	Venture #1	LM	4598.35	1	C04.5	**316**		14.75	32.41	2.92	12.85	1.89	1.02	0.16	0.13	1.91	0.12	26.02	0.66	0.14	**94.98**
222	Venture #1	LM	4598.35	2	C07	**387**	2	13.89	28.22	2.70	12.31	1.96	1.61	0.64	1.85	2.60	0.11	26.78	0.17	0.93	**93.76**

222	Venture #1	LM	4598.35	2	C07	**387**		14.00	27.43	2.68	11.85	2.15	1.73	0.61	2.09	2.89	0.20	26.41	0.22	0.96	**93.21**
223	Venture #3	LM	4871.58	1	C10	**432**		11.66	25.76	2.59	11.96	2.36	0.87	0.68	2.61	5.72	0.89	28.99	0.20	1.44	**95.73**
224	Venture #3	LM	4871.58	2	C10	**417**		18.71	29.89	2.66	10.40	0.87	0.22	0.00	0.25	3.51	0.13	27.22	0.86	0.32	**95.04**
225	Venture #3	LM	4872.58	1	C13	**520**		13.92	27.49	2.81	11.69	1.93	1.39	0.52	1.49	4.15	0.75	30.20	0.14	1.33	**97.81**
226	Venture #3	LM	4872.58	2	C29			15.04	33.04	3.25	13.92	1.74	0.48	0.11	0.19	0.26	0.11	30.14	0.01	0.56	**98.85**
226	Venture #3	LM	4872.58	3	C14	**561**		16.68	30.44	2.98	11.88	1.41	0.75	0.09	0.47	2.56	0.49	29.83	0.11	0.95	**98.63**
227	Venture #3	LM	4882.37	1	C14	**565**	2	15.39	28.52	2.89	12.77	2.16	1.61	0.48	1.51	3.24	0.08	28.92	0.41	0.36	**98.35**
227	Venture #3	LM	4882.37	1	C14	**565**		15.00	28.87	2.97	12.84	2.17	1.54	0.52	1.47	3.35	0.05	29.04	0.40	0.34	**98.57**
228	Venture #3	LM	4887.39	6	C27			15.26	31.97	3.97	12.07	0.55	0.42	0.03	0.19	2.55	0.18	32.47	0.85	0.27	**100.77**
228	Venture #3	LM	4887.39	7	C25			12.13	27.33	3.85	14.24	1.00	0.89	0.61	2.39	2.76	0.19	33.21	0.65	0.63	**99.87**
229	Venture #3	LM	4887.39	11	C04.5	**332**		13.90	30.13	4.06	13.93	1.06	0.48	0.24	1.05	1.21	0.18	34.68	0.18	0.48	**101.59**
230	Venture #3	LM	4887.39	14	C28			13.27	34.48	4.23	13.57	0.70	0.28	0.00	0.23	0.58	0.02	33.07	0.38	0.13	**100.93**
230	Venture #3	LM	4887.39	15	C27			14.16	30.98	4.31	14.71	1.03	0.78	0.22	0.45	0.35	0.19	34.21	0.30	0.22	**101.92**
230	Venture #3	LM	4887.39	16	C12	**490**		14.23	32.85	4.53	13.41	0.54	0.00	0.00	0.34	0.24	0.11	33.22	2.37	0.12	**101.95**
231	Venture #3	LM	4887.39	18	C27			19.44	32.82	3.32	10.11	0.42	0.00	0.00	0.04	0.34	0.00	35.96	0.29	0.21	**102.95**
231	Venture #3	LM	4887.39	19	C10	**437**		14.37	30.65	3.93	13.75	1.05	0.86	0.39	1.53	0.51	0.13	34.34	0.12	0.26	**101.89**
232	Venture #3	LM	4887.39	20	C28			12.95	29.29	4.21	14.69	1.01	0.48	0.12	0.35	0.54	0.05	32.23	1.31	0.33	**97.55**
232	Venture #3	LM	4887.39	21	C27			13.21	28.17	4.19	13.50	0.98	0.79	0.53	1.46	2.18	0.07	34.48	0.20	0.78	**100.56**
232	Venture #3	LM	4887.39	22	C25			4.80	23.31	5.34	25.45	3.85	1.90	0.09	0.43	0.00	0.08	33.53	0.16	0.17	**99.12**
233	Venture #3	LM	4887.39	24	C28			2.91	18.13	5.39	30.24	4.63	2.52	0.28	0.58	0.00	0.08	34.82	0.21	0.11	**99.93**
233	Venture #3	LM	4887.39	25	C04	**338**		16.97	29.93	3.81	11.90	0.50	0.27	0.14	1.95	0.80	0.09	34.00	0.25	0.57	**101.20**
234	Venture #4	LM	5371.77	1	C17	**1011**		18.78	33.09	3.30	10.75	0.34	0.18	0.03	0.43	0.00	0.06	31.83	0.67	0.45	**99.91**
235	Venture #4	LM	5372.85	1	C11	**466**		14.33	29.04	3.38	13.00	0.86	0.69	0.26	1.49	3.21	0.05	28.33	1.08	0.37	**96.08**
235	Venture #4	LM	5372.85	1	C12			6.50	23.25	3.43	23.69	8.08	1.19	0.29	0.45	0.01	0.11	28.63	0.14	0.04	**95.84**
236	Venture #4	LM	5372.85	2	C22	**1837**		14.22	30.31	3.13	12.37	1.97	0.41	0.33	0.38	2.76	0.18	27.05	0.78	0.05	**93.93**
237	Venture #4	LM	5372.85	3	C13	**513**		13.32	27.13	2.60	11.49	1.95	0.88	0.72	1.89	5.47	0.75	28.88	0.28	1.14	**96.51**
238	Venture #4	LM	5372.85	4	C24			16.78	32.74	2.98	10.88	1.34	0.35	0.12	0.43	0.74	0.16	28.84	0.36	0.18	**95.89**
239	Venture #4	LM	5372.85	5	C14	**557**		13.14	27.69	2.81	11.80	1.81	0.45	0.12	0.69	7.45	0.26	27.15	0.71	1.19	**95.26**
240	Venture #4	LM	5372.85	6	C11	**476**		13.24	28.35	2.79	12.70	2.21	0.80	0.52	1.27	4.27	0.43	28.46	0.43	0.76	**96.20**
241	Venture #4	LM	5372.85	7	C08	**397**		14.12	28.38	2.84	12.33	2.01	0.73	0.51	1.87	4.27	0.17	28.38	0.37	0.76	**96.74**
242	Venture #4	LM	5391.51	1	C10	**429**	2	12.67	26.25	2.47	11.00	2.43	1.90	0.59	2.00	7.66	0.13	26.24	2.23	0.44	**96.02**
242	Venture #4	LM	5391.51	1	C10	**429**		13.33	27.39	2.56	10.79	2.12	1.62	0.66	1.91	6.18	0.14	25.27	1.87	0.40	**94.23**
243	Venture #4	LM	5391.51	2	C24		2	17.25	33.51	2.74	10.79	0.99	0.19	0.00	0.07	1.09	0.00	26.21	0.48	1.02	**94.35**
243	Venture #4	LM	5391.51	2	C24			18.96	32.53	2.42	9.60	0.72	0.17	0.00	0.00	1.30	0.00	26.35	0.46	0.83	**93.32**
244	Venture #4	LM	5391.51	3	C22	**1755**	2	15.16	28.51	2.56	10.14	1.21	0.65	0.07	0.37	6.62	0.13	24.86	1.80	0.56	**92.64**
244	Venture #4	LM	5391.51	3	C22	**1755**		15.25	29.91	2.67	11.08	1.54	1.02	0.37	1.39	3.04	0.06	26.37	0.62	0.31	**93.63**
245	Venture #4	LM	5381.34	1	C04	**348**	2	11.11	27.90	2.90	12.73	2.52	1.85	0.87	2.95	2.59	0.10	27.90	0.16	0.74	**94.33**
245	Venture #4	LM	5381.34	1	C04	**348**		11.63	28.97	2.83	12.76	2.58	2.04	0.86	3.00	2.07	0.03	28.42	0.19	0.60	**95.97**
246	Venture #4	LM	5381.34	2	C10	**442**	2	12.11	25.78	2.55	12.12	2.16	2.00	0.77	3.49	4.05	0.05	27.61	0.21	1.02	**93.92**
246	Venture #4	LM	5381.34	2	C10	**442**		11.81	25.88	2.73	12.77	2.46	2.13	0.87	3.31	3.95	0.10	27.25	0.27	0.99	**94.51**
247	Venture #4	LM	5381.34	3	C24		2	18.27	28.76	2.23	9.13	1.32	0.37	0.00	0.02	5.72	0.14	25.53	1.81	0.34	**93.63**
247	Venture #4	LM	5381.34	3	C25			8.25	28.33	3.46	17.69	3.54	1.84	0.21	0.17	3.27	0.12	26.92	0.56	0.36	**94.73**
248	Venture #4	LM	5383.28	1	C27			16.61	35.17	3.27	12.08	1.32	0.54	0.27	0.27	0.00	0.00	29.67	0.12	0.24	**99.56**
248	Venture #4	LM	5393.96	1	C14.5	**587**		15.77	30.45	2.89	10.87	1.40	0.43	0.17	0.82	5.51	0.27	28.13	1.19	0.48	**98.39**
249	Venture #4	LM	5393.96	2	C26			12.71	28.12	2.93	14.05	2.49	0.94	0.93	3.63	1.40	0.07	28.98	0.76	0.25	**97.26**
250	Peskowesk A-99	LCC	2238.65	1	E11	**1049**	3	13.66	28.11	2.57	10.47	1.32	0.68	0.35	0.53	9.98	0.46	30.56	1.28	1.10	**101.06**
250	Peskowesk A-99	LCC	2238.65	1	E11	**1049**		15.77	31.83	2.88	11.25	1.35	0.50	0.30	0.38	4.02	0.27	32.49	0.10	0.82	**101.95**
250	Peskowesk A-99	LCC	2238.65	1	E11	**1049**		13.85	28.44	2.66	10.66	1.43	0.61	0.32	0.99	6.59	0.58	32.07	0.27	1.22	**99.71**
251	Peskowesk A-99	LCC	2238.65	2	E02	**322**		11.39	27.62	2.90	12.48	2.21	1.63	0.97	3.04	4.88	0.14	33.09	0.21	0.83	**101.37**
252	Peskowesk A-99	LCC	2238.65	3	E13	**1621**		12.37	27.65	2.71	10.90	1.61	0.81	0.37	0.65	11.19	0.56	27.48	2.81	0.37	**99.48**
253	Peskowesk A-99	LCC	2238.65	4	E13	**1638**		12.76	27.62	2.67	11.04	1.61	1.03	0.97	3.60	3.35	0.16	32.34	0.07	1.36	**98.59**
254	Peskowesk A-99	LCC	2238.65	5	E08	**776**		17.23	31.83	2.64	9.39	0.74	0.14	0.25	0.46	4.40	0.13	29.50	1.43	0.62	**98.75**
255	Peskowesk A-99	LCC	2238.65	6	E16			13.77	30.86	3.02	13.54	1.49	0.54	0.47	1.32	1.43	0.09	31.33	0.44	0.95	**99.23**
256	Peskowesk A-99	LCC	2238.65	7	E10	**959**		14.31	29.68	2.82	11.69	1.75	0.94	0.65	1.82	3.26	0.24	32.79	0.14	0.79	**100.88**
257	Peskowesk A-99	LCC	2238.65	8	E13	**1696**		13.95	28.43	2.65	10.54	1.15	0.31	0.19	0.41	8.75	0.37	28.28	2.27	0.60	**97.89**
258	Peskowesk A-99	LCC	2238.65	9	E19			13.38	28.05	2.59	11.04	1.20	0.50	0.26	0.70	0.37	0.10	30.08	0.44	2.31	**91.02**
258	Peskowesk A-99	LCC	2238.65	10	E11	**1058**		9.96	30.86	3.40	13.99	3.75	1.94	0.91	1.34	2.18	0.22	32.01	0.38	0.23	**101.16**
259	Peskowesk A-99	LCC	2238.65	11	E03	**367**		17.22	32.81	2.59	9.80	0.79	0.24	0.12	0.29	2.80	0.12	31.85	0.39	1.05	**100.06**
260	Peskowesk A-99	LCC	2238.65	12	E13	**1656**		13.39	28.59	2.74	11.19	1.68	0.91	0.72	2.32	3.82	0.28	32.81	0.07	1.22	**99.75**
261	Peskowesk A-99	LCC	2238.65	13	E10	**967**		11.09	26.07	2.62	11.83	1.77	0.97	0.96	3.56	4.50	0.20	31.94	0.30	1.53	**97.32**
262	Peskowesk A-99	LCC	2238.65	14	E16			17.53	33.50	2.76	10.23	0.90	0.21	0.11	0.28	1.00	0.15	31.27	0.16	1.11	**99.21**
263	Peskowesk A-99	LCC	2238.65	15	E03	**359**		13.03	33.92	3.29	12.53	1.75	0.73	0.31	0.92	4.90	0.14	31.39	0.95	0.17	**104.05**
264	Peskowesk A-99	LCC	2238.65	16	E16			20.79	34.66	2.65	8.97	0.70	0.00	0.02	0.27	0.04	0.06	32.61	0.17	0.13	**101.08**
265	Peskowesk A-99	LCC	2238.65	17	E04	**384**		17.19	32.85	2.53	9.79	0.83	0.31	0.17	0.34	3.19	0.12	32.19	0.37	1.18	**101.06**
266	Peskowesk A-99	LCC	2238.65	18	E10	**944**		12.30	28.15	2.73	11.49	1.78	1.29	0.98	3.92	3.26	0.30	33.55	0.10	0.93	**100.78**
267	Peskowesk A-99	LCC	2238.65	19	E14	**1751**		12.70	28.84	2.86	11.28	1.71	0.92	0.34	0.89	9.49	0.65	29.15	2.39	0.28	**101.50**
268	Peskowesk A-99	LCC	2238.65	20	E11	**1049**		13.26	28.68	2.73	11.78	1.91	1.25	0.64	2.22	3.94	0.97	33.20	0.20	0.85	**101.62**
269	Peskowesk A-99	LCC	2228.82	1	E05	**449**		15.49	30.98	2.67	11.84	1.58	0.76	0.11	0.84	3.48	0.12	29.38	0.31	0.57	**98.13**
270	Peskowesk A-99	LCC	2228.82	2	E16		2	17.28	34.68	3.13	11.40	1.07	0.58	0.00	0.45	0.06	0.06	29.93	0.08	0.08	**98.81**
270	Peskowesk A-99	LCC	2228.82	2	E16			16.25	33.91	3.13	11.66	1.32	0.76	0.00	0.37	0.24	0.10	29.71	0.07	0.08	**97.60**
271	Peskowesk A-99	LCC	2228.82	3	E16			17.25	33.67	2.96	11.34	1.24	0.48	0.00	0.47	0.22	0.10	29.09	0.50	0.36	**97.68**
272	Peskowesk A-99	LCC	2228.82	4	E14	**1833**		12.94	28.93	2.74	10.93	1.55	0.69	0.00	0.43	7.80	0.37	28.99	0.90	1.04	**97.31**
273	Peskowesk A-99	LCC	2228.82	5	E14	**2363**		12.16	25.03	2.26	9.58	1.59	1.15	0.45	2.31	8.11	1.37	30.48	0.23	1.93	**96.65**
274	Peskowesk A-99	LCC	2228.82	6	E13	**1645**	3	9.39	24.58	2.75	13.24	2.40	1.62	0.65	3.41	7.33	0.22	29.53	0.86	1.01	**96.99**
274	Peskowesk A-99	LCC	2228.82	6	E13	**1645**		11.15	26.28	2.64	12.52	1.99	1.70	0.58	3.30	4.98	0.13	30.43	0.38	0.95	**97.02**
274	Peskowesk A-99	LCC	2228.82	6	E13	**1645**		10.19	25.31	2.76	12.52	2.22	1.59	0.64	3.23	6.83	0.13	30.11	0.61	1.05	**97.19**

275	Peskowesk A-99	LCC	2228.82	7	E16			13.19	32.81	2.97	12.50	1.66	0.57	0.00	0.55	1.78	0.14	29.98	0.84	0.59	**97.59**
276	Peskowesk A-99	LCC	2228.82	8	E05	**412**		14.46	29.66	2.65	11.85	2.00	1.41	0.37	1.77	2.77	0.34	30.90	0.08	0.60	**98.87**
277	Peskowesk A-99	LCC	2228.82	9	E14	**1825**	2	15.40	34.11	2.98	11.83	1.51	0.54	0.00	0.18	1.76	0.12	30.14	0.44	0.07	**99.10**
277	Peskowesk A-99	LCC	2228.82	9	E14	**1825**		15.59	33.46	3.02	11.75	1.58	0.77	0.02	0.29	2.49	0.13	29.97	0.59	0.10	**99.75**
278	Peskowesk A-99	LCC	2228.82	10	E14	**1873**		12.84	28.55	2.70	10.97	1.72	1.12	0.44	2.83	4.12	0.60	30.37	0.38	0.91	**97.55**
279	Peskowesk A-99	LCC	2228.82	11	E17			3.05	16.42	3.15	24.15	11.86	3.95	0.46	0.72	0.28	0.36	30.61	0.03	0.17	**95.20**
280	Peskowesk A-99	LCC	2228.82	12	E14	**1799**		14.62	30.50	2.80	11.64	1.47	0.61	0.00	0.00	5.77	0.25	29.49	0.93	0.58	**98.67**
281	Peskowesk A-99	LCC	2228.82	13	E14	**1798**		17.76	32.09	2.62	9.48	0.94	0.42	0.00	0.13	5.31	0.46	29.09	1.18	0.31	**99.79**
282	Peskowesk A-99	LCC	2228.82	14	E11	**1058**	3	13.40	29.62	2.73	11.24	1.57	1.05	0.27	1.44	4.89	0.25	28.07	1.51	0.91	**96.94**
282	Peskowesk A-99	LCC	2228.82	14	E11	**1058**		13.19	28.45	2.57	10.69	1.52	0.83	0.13	1.15	7.08	0.45	27.22	1.88	0.95	**96.10**
282	Peskowesk A-99	LCC	2228.82	14	E11	**1058**		13.58	29.41	2.61	10.99	1.58	0.85	0.23	1.48	5.24	0.36	28.19	1.56	0.90	**96.98**
283	Tantallon M-41	UM	4699.1	1	E02	**322**		11.21	30.62	4.01	16.30	2.31	1.37	0.28	0.54	2.43	0.12	28.76	0.17	0.55	**98.67**
284	Tantallon M-41	UM	4699.1	2	E04	**394**		12.27	27.07	3.42	14.90	2.51	2.11	0.66	2.00	2.72	0.13	29.35	0.20	0.84	**98.16**
285	Tantallon M-41	UM	4699.1	3	E19			13.73	31.78	3.76	14.72	1.90	1.03	0.11	0.22	1.39	0.10	29.21	0.30	0.76	**99.01**
285	Tantallon M-41	MM	5296.24	1	E19			12.10	26.68	3.02	12.28	1.69	1.29	0.51	2.37	5.29	0.15	29.82	0.40	1.32	**96.92**
285	Tantallon M-41	MM	5298.37	1	E05	**409**		13.93	27.19	3.00	12.41	1.95	1.26	0.38	1.14	4.93	0.07	28.96	0.37	1.20	**96.79**
286	Tantallon M-41	MM	5298.37	2	E05	**439**		15.03	28.22	3.11	11.65	1.75	1.21	0.48	1.72	4.03	0.18	27.67	1.22	0.29	**96.56**
287	Hermine	LC	4940	1		**403**		12.78	29.40	4.03	13.97	2.35	1.50	0.43	1.28	4.22	0.17	29.41	0.56	0.25	**100.37**
288	Hermine	LC	4940	2		**613**		12.60	26.55	3.30	11.93	2.24	1.80	0.80	2.12	5.21	0.21	30.10	0.16	0.99	**98.00**
289	Louisbourg	MicMac	4047.39	4		**244**		10.93	22.29	4.02	19.25	5.45	3.55	0.77	1.48	0.46	0.12	30.34	0.12	0.55	**99.35**
290	Louisbourg	MicMac	4408.5	1				13.40	26.09	3.18	11.70	1.80	0.99	0.25	0.22	0.76	0.00	26.15	15.48	0.20	**100.21**
291	Louisbourg	MicMac	4408.5	2		**461**		11.72	31.08	4.44	15.88	2.25	1.27	0.12	0.21	1.90	0.09	29.93	0.21	0.38	**99.49**
292	Louisbourg	MicMac	4408.5	3		**564**		19.14	31.13	3.27	10.08	1.24	0.57	0.00	0.15	0.50	0.22	29.30	0.04	0.32	**95.95**
293	Louisbourg	MicMac	4408.5	4		**553**		14.07	27.60	3.40	11.56	1.95	1.61	0.80	2.18	5.57	0.14	28.92	0.70	0.54	**99.04**
294	Louisbourg	MicMac	4408.5	5		**395**		16.54	30.32	3.64	12.93	1.49	0.91	0.21	0.64	3.60	0.12	29.12	0.75	0.16	**100.44**
295	Louisbourg	MicMac	4408.5	6		**417**		10.43	24.50	3.53	11.71	2.55	1.75	0.60	1.27	5.93	0.40	27.69	0.18	0.93	**91.47**
296	Louisbourg	MicMac	4408.5	7		**360**		15.23	28.93	3.53	11.78	1.59	0.96	0.28	0.67	6.26	0.16	29.96	0.59	1.01	**100.95**
297	Louisbourg	MicMac	4408.5	8		**406**		13.43	28.80	3.88	12.92	1.90	0.92	0.13	0.12	3.64	0.15	28.82	0.29	0.54	**95.53**
298	Louisbourg	MicMac	5451.23	1		**1115**		11.18	26.34	3.92	14.67	2.45	2.03	0.63	1.40	6.56	0.10	28.39	1.04	0.50	**99.22**
299	Louisbourg	MicMac	5451.23	2		**1028**		12.06	27.39	3.89	14.60	2.77	2.07	0.66	1.90	2.79	0.20	30.11	0.30	0.58	**99.32**
300	Louisbourg	MicMac	5451.23	3		**480**		9.05	26.75	4.36	17.42	3.03	1.72	0.50	0.97	4.45	0.08	30.20	0.18	0.89	**99.59**
301	Louisbourg	MicMac	5451.23	4		**456**		11.52	30.00	4.45	15.10	2.12	1.24	0.34	0.47	4.27	0.04	30.26	0.34	0.70	**100.86**

Table 6. Atomic formulae of the monazite analyses based on 4 oxygens

Well	Sample	Depth	Formation	Analysis	La	Ce	Pr	Nd	Sm	Gd	Dy	Y	Th	U	P	Si	Ca	Total for 4 O
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr2	0.195	0.395	0.061	0.165	0.017	0.011	0.007	0.029	0.056	0.001	0.964	0.016	0.035	1.953
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr1	0.195	0.395	0.060	0.159	0.017	0.011	0.004	0.018	0.050	0.000	0.939	0.011	0.035	1.895
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr3	0.180	0.392	0.064	0.167	0.017	0.012	0.006	0.024	0.052	0.001	0.969	0.010	0.035	1.929
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr4	0.189	0.399	0.061	0.175	0.019	0.012	0.004	0.023	0.050	0.000	0.975	0.007	0.040	1.954
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr5	0.184	0.400	0.067	0.159	0.011	0.005	0.002	0.036	0.067	0.001	0.937	0.030	0.033	1.933
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr6-1	0.241	0.452	0.061	0.127	0.012	0.003	0.002	0.008	0.001	0.000	0.951	0.002	0.004	1.865
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr6-2	0.249	0.467	0.061	0.123	0.009	0.002	0.001	0.004	0.002	0.000	0.942	0.003	0.007	1.870
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr7	0.188	0.387	0.060	0.162	0.016	0.009	0.005	0.034	0.056	0.001	0.951	0.015	0.039	1.924
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr8	0.128	0.437	0.088	0.242	0.021	0.009	0.002	0.005	0.001	0.000	0.955	0.002	0.001	1.892
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr9-1	0.211	0.494	0.071	0.169	0.012	0.002	0.000	0.001	0.000	0.000	0.965	0.002	0.001	1.928
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr9-2	0.174	0.487	0.076	0.188	0.015	0.003	0.001	0.005	0.000	0.000	0.992	0.003	0.004	1.946
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr10	0.172	0.475	0.074	0.182	0.013	0.003	0.001	0.007	0.003	0.001	0.968	0.014	0.006	1.919
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr11	0.177	0.390	0.061	0.177	0.016	0.011	0.005	0.024	0.046	0.001	0.959	0.008	0.039	1.915
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr12	0.083	0.363	0.091	0.289	0.044	0.023	0.003	0.002	0.000	0.000	0.956	0.005	0.001	1.859
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr13	0.193	0.412	0.066	0.163	0.022	0.016	0.003	0.003	0.008	0.001	0.928	0.017	0.007	1.840
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr14-1	0.048	0.250	0.077	0.361	0.084	0.038	0.004	0.007	0.000	0.001	0.958	0.005	0.004	1.837
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr14-2	0.115	0.400	0.078	0.260	0.033	0.023	0.004	0.009	0.006	0.000	0.974	0.006	0.008	1.916
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr15	0.159	0.461	0.073	0.191	0.015	0.006	0.004	0.009	0.005	0.001	0.956	0.036	0.005	1.921
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr16-1	0.183	0.399	0.066	0.211	0.024	0.017	0.003	0.008	0.010	0.000	0.968	0.005	0.006	1.900
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr16-2	0.183	0.397	0.068	0.189	0.027	0.021	0.005	0.011	0.010	0.000	0.975	0.006	0.007	1.898
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr17-1	0.241	0.459	0.065	0.143	0.008	0.003	0.000	0.002	0.020	0.001	0.976	0.005	0.020	1.941
Naskapi N-30	N30 1473.81 (hms)	1473.81	Missisauga Upper	12gr17-2	0.209	0.420	0.061	0.162	0.015	0.007	0.003	0.016	0.030	0.000	0.990	0.007	0.028	1.949
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr1	0.077	0.317	0.077	0.270	0.035	0.020	0.002	0.007	0.004	0.002	0.858	0.154	0.008	1.830
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr2	0.223	0.494	0.073	0.164	0.012	0.005	0.002	0.007	0.004	0.002	1.012	0.006	0.004	2.008
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr3-1	0.093	0.371	0.087	0.292	0.047	0.033	0.008	0.012	0.001	0.002	0.984	0.006	0.009	1.944
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr3-2	0.099	0.394	0.089	0.284	0.041	0.025	0.005	0.007	0.003	0.001	0.975	0.004	0.009	1.938
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr3-3	0.090	0.372	0.089	0.280	0.041	0.026	0.005	0.010	0.004	0.002	0.967	0.013	0.010	1.911
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr4	0.205	0.413	0.064	0.167	0.016	0.012	0.005	0.024	0.047	0.002	0.994	0.015	0.031	1.996
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr5	0.173	0.466	0.077	0.211	0.016	0.010	0.004	0.011	0.002	0.002	0.998	0.006	0.007	1.982
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr6	0.124	0.437	0.087	0.259	0.027	0.017	0.003	0.006	0.007	0.002	0.992	0.004	0.003	1.968
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr7-1	0.210	0.430	0.071	0.187	0.022	0.015	0.006	0.009	0.002	0.002	0.969	0.002	0.003	1.929
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr7-2	0.210	0.423	0.068	0.180	0.021	0.014	0.006	0.009	0.010	0.003	0.980	0.019	0.010	1.954
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr7-3	0.215	0.435	0.070	0.180	0.021	0.014	0.006	0.010	0.003	0.001	0.977	0.003	0.004	1.940
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr8	0.248	0.481	0.062	0.129	0.010	0.007	0.003	0.007	0.008	0.002	0.984	0.020	0.009	1.969
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr9	0.213	0.414	0.064	0.176	0.018	0.012	0.004	0.016	0.047	0.002	0.954	0.014	0.035	1.970
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr10-1	0.222	0.482	0.067	0.149	0.015	0.008	0.003	0.006	0.001	0.002	0.981	0.001	0.006	1.943
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr10-2	0.229	0.485	0.068	0.143	0.014	0.006	0.003	0.007	0.005	0.003	0.979	0.001	0.009	1.952
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr11-1	0.070	0.348	0.092	0.332	0.046	0.029	0.006	0.008	0.009	0.002	0.967	0.012	0.009	1.928
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr11-2	0.095	0.392	0.091	0.280	0.037	0.024	0.005	0.007	0.003	0.001	0.986	0.006	0.010	1.940
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr12	0.189	0.396	0.066	0.172	0.018	0.015	0.006	0.030	0.051	0.002	0.965	0.015	0.034	1.958
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr13	0.064	0.314	0.085	0.324	0.057	0.037	0.008	0.014	0.010	0.001	0.968	0.008	0.017	1.907
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr14	0.188	0.412	0.072	0.204	0.028	0.027	0.007	0.015	0.005	0.002	0.966	0.004	0.005	1.935
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr15-1	0.205	0.385	0.061	0.163	0.021	0.018	0.007	0.021	0.054	0.003	0.977	0.012	0.042	1.971
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr15-2	0.198	0.404	0.062	0.164	0.018	0.016	0.007	0.021	0.048	0.003	0.975	0.011	0.038	1.964
Naskapi N-30	N30 1469.89 (hms)	1469.89	Missisauga Upper	11gr16	0.163	0.481	0.078	0.203	0.016	0.008	0.003	0.007	0.015	0.002	0.990	0.010	0.009	1.983
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr1	0.204	0.426	0.040	0.173	0.027	0.021	0.009	0.038	0.034	0.006	0.961	0.011	0.031	1.982
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr2	0.241	0.465	0.043	0.178	0.024	0.011	0.003	0.012	0.004	0.000	0.914	0.011	0.007	1.912
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr3	0.100	0.425	0.063	0.309	0.048	0.012	0.003	0.012	0.006	0.000	0.934	0.014	0.004	1.929
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr4	0.232	0.438	0.043	0.178	0.022	0.007	0.000	0.002	0.019	0.001	0.918	0.063	0.013	1.937
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr5	0.095	0.673	0.013	0.058	0.006	0.000	0.000	0.008	0.012	0.002	0.904	0.023	0.102	1.894
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr6	0.201	0.430	0.039	0.168	0.029	0.018	0.005	0.028	0.039	0.004	0.913	0.016	0.030	1.921
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr7	0.269	0.483	0.041	0.143	0.015	0.007	0.000	0.009	0.003	0.001	0.899	0.012	0.037	1.920

Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr8	0.153	0.447	0.054	0.229	0.036	0.015	0.000	0.005	0.015	0.001	0.891	0.036	0.019	1.902
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr9	0.174	0.487	0.052	0.222	0.025	0.006	0.000	0.000	0.013	0.001	0.910	0.011	0.005	1.906
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr10	0.204	0.458	0.048	0.190	0.025	0.011	0.000	0.007	0.028	0.002	0.913	0.016	0.012	1.913
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr11	0.178	0.415	0.042	0.191	0.036	0.022	0.004	0.017	0.042	0.003	0.873	0.026	0.015	1.862
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr12	0.216	0.425	0.042	0.178	0.030	0.017	0.006	0.023	0.030	0.004	0.910	0.006	0.024	1.912
Alma K-85	D267-1-5 (pts)	2474.79	Logan Canyon Cree	ST_D267-1-5gr13	0.190	0.408	0.040	0.177	0.027	0.019	0.005	0.041	0.042	0.002	0.945	0.014	0.031	1.943
Alma K-85	D267-1-9A (pts)	2465.18	Logan Canyon Cree	ST_D267-1-9Agr1	0.269	0.507	0.042	0.145	0.019	0.009	0.000	0.003	0.006	0.001	0.930	0.006	0.052	1.989
Alma K-85	D267-1-9A (pts)	2465.18	Logan Canyon Cree	ST_D267-1-9Agr2	0.195	0.410	0.041	0.163	0.030	0.019	0.007	0.049	0.044	0.004	0.936	0.024	0.046	1.967
Alma K-85	D267-1-9A (pts)	2465.18	Logan Canyon Cree	ST_D267-1-9Agr3-1	0.217	0.441	0.039	0.145	0.021	0.012	0.006	0.039	0.054	0.005	0.877	0.046	0.018	1.919
Alma K-85	D267-1-9A (pts)	2465.18	Logan Canyon Cree	ST_D267-1-9Agr3-2	0.204	0.413	0.040	0.137	0.021	0.014	0.006	0.041	0.082	0.005	0.843	0.073	0.017	1.897
Alma K-85	D267-1-9A (pts)	2465.18	Logan Canyon Cree	ST_D267-1-9Agr3-3	0.197	0.393	0.038	0.142	0.025	0.015	0.006	0.042	0.099	0.006	0.834	0.084	0.021	1.900
Alma K-85	D267-1-9A (pts)	2465.18	Logan Canyon Cree	ST_D267-1-9Agr4	0.221	0.394	0.038	0.154	0.026	0.019	0.007	0.046	0.039	0.010	0.929	0.003	0.042	1.928
Alma K-85	D267-1-14 (pts)	2462.91	Logan Canyon Cree	ST_D267-1-14gr1	0.316	0.441	0.038	0.136	0.014	0.006	0.001	0.005	0.020	0.002	0.935	0.012	0.013	1.939
Alma K-85	D267-1-14 (pts)	2462.91	Logan Canyon Cree	ST_D267-1-14gr2	0.235	0.393	0.031	0.129	0.016	0.004	0.000	0.001	0.005	0.000	0.840	0.004	0.011	1.671
Alma K-85	D267-1-14 (pts)	2462.91	Logan Canyon Cree	ST_D267-1-14gr3	0.180	0.417	0.046	0.195	0.028	0.014	0.003	0.008	0.051	0.001	0.912	0.020	0.033	1.906
Alma K-85	D267-1-14 (pts)	2462.91	Logan Canyon Cree	ST_D267-1-14gr4	0.223	0.458	0.047	0.213	0.024	0.010	0.002	0.004	0.009	0.001	0.932	0.031	0.006	1.961
Alma K-85	D267-1-12 (pts)	2464.32	Logan Canyon Cree	ST_D267-1-12gr1	0.210	0.444	0.043	0.173	0.025	0.015	0.006	0.020	0.027	0.002	0.910	0.006	0.037	1.919
Alma K-85	D267-1-12 (pts)	2464.32	Logan Canyon Cree	ST_D267-1-12gr2-1	0.234	0.468	0.044	0.179	0.024	0.012	0.005	0.012	0.015	0.000	0.953	0.010	0.025	1.981
Alma K-85	D267-1-12 (pts)	2464.32	Logan Canyon Cree	ST_D267-1-12gr2-2	0.263	0.500	0.043	0.168	0.016	0.006	0.002	0.004	0.009	0.000	0.943	0.008	0.021	1.982
Alma K-85	D267-1-12 (pts)	2464.32	Logan Canyon Cree	ST_D267-1-12gr3	0.153	0.406	0.045	0.208	0.033	0.013	0.003	0.013	0.059	0.002	0.968	0.016	0.052	1.971
Alma K-85	D267-1-12 (pts)	2464.32	Logan Canyon Cree	ST_D267-1-12gr4	0.185	0.473	0.048	0.209	0.031	0.014	0.002	0.005	0.010	0.000	0.983	0.005	0.054	2.019
Alma K-85	D267-1-12 (pts)	2464.32	Logan Canyon Cree	ST_D267-1-12gr5	0.205	0.444	0.038	0.165	0.023	0.017	0.006	0.026	0.037	0.003	1.017	0.003	0.046	2.029
Alma K-85	D267-1-8 (pts)	2465.81	Logan Canyon Cree	ST_D267_1_8gr1	0.184	0.420	0.043	0.188	0.027	0.012	0.000	0.006	0.057	0.002	0.935	0.028	0.039	1.940
Alma K-85	D267-1-8 (pts)	2465.81	Logan Canyon Cree	ST_D267_1_8gr2	0.150	0.396	0.042	0.172	0.036	0.017	0.009	0.054	0.052	0.002	0.972	0.011	0.045	1.959
Alma K-85	D267-1-8 (pts)	2465.81	Logan Canyon Cree	ST_D267_1_8gr3	0.252	0.494	0.043	0.173	0.016	0.001	0.000	0.002	0.001	0.000	0.934	0.021	0.010	1.948
Alma K-85	D267-1-8 (pts)	2465.81	Logan Canyon Cree	ST_D267_1_8gr4	0.197	0.428	0.040	0.171	0.028	0.014	0.005	0.022	0.037	0.005	0.976	0.033	0.037	1.994
Alma K-85	D267-1-8 (pts)	2465.81	Logan Canyon Cree	ST_D267_1_8gr5-1	0.114	0.346	0.046	0.271	0.063	0.040	0.015	0.041	0.019	0.002	0.968	0.007	0.018	1.951
Alma K-85	D267-1-8 (pts)	2465.81	Logan Canyon Cree	ST_D267_1_8gr5-2	0.119	0.346	0.046	0.277	0.067	0.045	0.015	0.040	0.016	0.002	0.970	0.006	0.017	1.964
Alma K-85	D267-1-8 (pts)	2465.81	Logan Canyon Cree	ST_D267_1_8gr6	0.217	0.462	0.043	0.174	0.028	0.011	0.001	0.003	0.037	0.002	0.958	0.008	0.031	1.975
Thebaud 3	TH-3-5A (pts)	3911.84	Missisauga Lower	S13A-g1	0.192	0.411	0.052	0.200	0.030	0.024	0.005	0.019	0.026	0.001	0.995	0.008	0.037	1.999
Thebaud 3	TH-3-5A (pts)	3911.84	Missisauga Lower	S13A-g2	0.243	0.443	0.047	0.157	0.017	0.005	0.000	0.001	0.040	0.001	0.935	0.035	0.030	1.954
Thebaud 3	TH-3-5A (pts)	3911.84	Missisauga Lower	S13A-g4	0.221	0.471	0.054	0.184	0.012	0.005	0.001	0.007	0.024	0.001	0.967	0.026	0.029	2.002
Thebaud 3	TH-3-5A (pts)	3911.84	Missisauga Lower	S13A-g5	0.277	0.496	0.047	0.154	0.011	0.003	0.001	0.001	0.002	0.000	0.945	0.017	0.004	1.957
Thebaud 3	TH-3-5A (pts)	3911.84	Missisauga Lower	S13A-g6	0.217	0.393	0.041	0.154	0.019	0.012	0.004	0.020	0.060	0.001	0.954	0.028	0.057	1.959
Thebaud 3	TH-3-5A (pts)	3911.84	Missisauga Lower	S13A-g7	0.171	0.402	0.045	0.193	0.030	0.027	0.008	0.059	0.022	0.002	0.975	0.010	0.032	1.976
Thebaud 3	TH-3-1 (pts)	3901.75	Missisauga Lower	59g1	0.083	0.363	0.065	0.337	0.076	0.034	0.004	0.009	0.005	0.001	0.986	0.023	0.006	1.989
Thebaud 3	TH-3-1 (pts)	3901.75	Missisauga Lower	59g2	0.174	0.485	0.063	0.219	0.022	0.007	0.000	0.001	0.017	0.001	0.948	0.028	0.001	1.965
Thebaud 3	TH-3-1 (pts)	3901.75	Missisauga Lower	59g3	0.289	0.464	0.051	0.167	0.016	0.004	0.000	0.000	0.004	0.000	0.971	0.012	0.001	1.980
Thebaud 3	TH-3-1 (pts)	3901.75	Missisauga Lower	59g4	0.247	0.450	0.048	0.164	0.019	0.012	0.001	0.008	0.020	0.001	0.935	0.032	0.009	1.947
Thebaud 3	Th-3-9 (hms)	3915.04	Missisauga Lower	9gr1-1	0.221	0.408	0.049	0.160	0.021	0.017	0.008	0.046	0.022	0.001	1.004	0.003	0.053	2.012
Thebaud 3	Th-3-9 (hms)	3915.04	Missisauga Lower	9gr1-2	0.210	0.411	0.057	0.180	0.026	0.021	0.007	0.026	0.030	0.001	1.014	0.006	0.036	2.024
Thebaud 3	Th-3-9 (hms)	3915.04	Missisauga Lower	9gr1-3	0.196	0.400	0.054	0.176	0.026	0.020	0.009	0.052	0.028	0.001	1.017	0.004	0.036	2.020
Thebaud 3	Th-3-9 (hms)	3915.04	Missisauga Lower	9gr1-4	0.203	0.407	0.054	0.176	0.027	0.021	0.006	0.022	0.031	0.000	1.010	0.003	0.036	1.997
Thebaud I-93	I-93-26 (pts)	3950.18	Missisauga Lower	S37-g1	0.194	0.389	0.046	0.173	0.025	0.016	0.007	0.042	0.029	0.003	0.984	0.009	0.066	1.983
Thebaud I-93	I-93-2 (pts)	3068.39	Missisauga Middle	S28-g1	0.187	0.385	0.046	0.179	0.032	0.020	0.009	0.045	0.038	0.002	0.970	0.020	0.045	1.977
Thebaud I-93	I-93-2 (pts)	3068.39	Missisauga Middle	S28-g2	0.206	0.359	0.041	0.160	0.027	0.021	0.009	0.054	0.029	0.005	0.986	0.008	0.076	1.982
Thebaud I-93	I-93-18A (pts)	3936.1	Missisauga Lower	532Ag2	0.166	0.437	0.057	0.219	0.028	0.014	0.002	0.006	0.023	0.001	0.978	0.010	0.028	1.968
Thebaud I-93	I-93-18A (pts)	3936.1	Missisauga Lower	532Ag3	0.203	0.392	0.047	0.181	0.025	0.018	0.005	0.042	0.030	0.001	0.966	0.020	0.030	1.959
Thebaud I-93	I-93-18A (pts)	3936.1	Missisauga Lower	532Ag4	0.073	0.329	0.064	0.337	0.087	0.048	0.005	0.014	0.008	0.001	0.984	0.006	0.012	1.968
Thebaud I-93	I-93-18A (pts)	3936.1	Missisauga Lower	532Ag5	0.231	0.418	0.045	0.158	0.019	0.011	0.003	0.019	0.042	0.001	0.946	0.028	0.035	1.957
Thebaud I-93	I-93-18A (pts)	3936.1	Missisauga Lower	532Ag6	0.198	0.393	0.051	0.202	0.039	0.025	0.007	0.031	0.015	0.001	0.983	0.007	0.022	1.975
Thebaud I-93	I-93-18A (pts)	3936.1	Missisauga Lower	532Ag7	0.230	0.419	0.047	0.169	0.019	0.014	0.007	0.047	0.007	0.001	0.974	0.006	0.032	1.974
Thebaud I-93	I-93-18A (pts)	3936.1	Missisauga Lower	532Ag8	0.238	0.492	0.049	0.166	0.022	0.005	0.000	0.000	0.002	0.001	0.956	0.004	0.006	1.941
Thebaud I-93	I-93-18A (pts)	3936.1	Missisauga Lower	532Ag9	0.216	0.430	0.048	0.177	0.021	0.011	0.002	0.017	0.036	0.001	0.949	0.044	0.013	1.965
Thebaud I-93	I-93-18A (pts)	3936.1	Missisauga Lower	532Ag10	0.136	0.404	0.060	0.263	0.044	0.024	0.003	0.024	0.003	0.001	0.950	0.005	0.011	1.929
Thebaud I-93	I-93-18A (pts)	3936.1	Missisauga Lower	532Ag11	0.219	0.433	0.050	0.181	0.021	0.007	0.000	0.000	0.016	0.001	0.928	0.009	0.075	1.940

Thebaud C-74	C-74-P18 (pts)	3908.65 - 3908.88	Missisauga Lower	S34-1a	0.186	0.389	0.039	0.162	0.024	0.015	0.005	0.024	0.083	0.006	0.882	0.097	0.024	1.936
Thebaud C-74	C-74-P18 (pts)	3908.65 - 3908.88	Missisauga Lower	S34-2a	0.185	0.387	0.039	0.160	0.024	0.015	0.005	0.029	0.088	0.006	0.887	0.090	0.023	1.940
Thebaud C-74	C-74-P18 (pts)	3908.65 - 3908.88	Missisauga Lower	S34-3a	0.179	0.382	0.039	0.169	0.027	0.019	0.007	0.039	0.076	0.006	0.907	0.076	0.026	1.951
Thebaud C-74	C-74-P11 (pts)	3881.59 - 3881.80	Missisauga Lower	C-74-P11-g1	0.210	0.376	0.042	0.175	0.018	0.014	0.007	0.020	0.045	0.001	0.957	0.015	0.031	1.912
Thebaud C-74	C-74-P11 (pts)	3881.59 - 3881.80	Missisauga Lower	C-74-P11-g2	0.172	0.390	0.049	0.185	0.017	0.010	0.007	0.027	0.039	0.000	0.946	0.062	0.015	1.919
Thebaud C-74	C-74-P7 (pts)	3876.72-3876.90	Missisauga Lower	526gr1	0.235	0.398	0.045	0.140	0.004	0.004	0.001	0.007	0.066	0.001	1.082	0.058	0.051	2.091
Thebaud C-74	C-74-P7 (pts)	3876.72-3876.90	Missisauga Lower	526gr2	0.199	0.394	0.050	0.167	0.010	0.009	0.006	0.042	0.046	0.001	1.065	0.065	0.026	2.080
Thebaud C-74	C-74-P7 (pts)	3876.72-3876.90	Missisauga Lower	526gr3	0.189	0.393	0.053	0.185	0.011	0.011	0.008	0.060	0.026	0.002	1.166	0.010	0.042	2.156
Thebaud C-74	C-74-P7 (pts)	3876.72-3876.90	Missisauga Lower	526gr4	0.198	0.399	0.051	0.167	0.009	0.009	0.007	0.027	0.038	0.001	1.143	0.028	0.048	2.124
Thebaud C-74	C-74-P7 (pts)	3876.72-3876.90	Missisauga Lower	526gr5	0.198	0.400	0.048	0.186	0.007	0.009	0.008	0.051	0.024	0.001	1.138	0.007	0.050	2.128
Thebaud C-74	C-74-P7 (pts)	3876.72-3876.90	Missisauga Lower	526gr6	0.092	0.364	0.069	0.321	0.024	0.010	0.002	0.006	0.015	0.001	1.095	0.026	0.043	2.067
Thebaud C-74	C-74-P7 (pts)	3876.72-3876.90	Missisauga Lower	526gr8	0.147	0.416	0.062	0.238	0.011	0.004	0.001	0.006	0.034	0.001	1.099	0.022	0.024	2.064
Thebaud C-74	C-74-P7 (pts)	3876.72-3876.90	Missisauga Lower	526gr9	0.037	0.241	0.064	0.372	0.061	0.024	0.005	0.009	0.021	0.001	1.062	0.023	0.048	1.966
Thebaud C-74	C-74-P7 (pts)	3876.72-3876.90	Missisauga Lower	526gr10	0.207	0.422	0.052	0.185	0.009	0.009	0.006	0.030	0.020	0.001	1.154	0.013	0.038	2.146
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr1	0.184	0.384	0.034	0.118	0.029	0.025	0.006	0.025	0.087	0.015	0.986	0.016	0.085	1.993
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr2	0.183	0.400	0.043	0.179	0.032	0.025	0.011	0.056	0.026	0.009	0.983	0.004	0.032	1.982
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr3	0.191	0.464	0.048	0.182	0.021	0.010	0.004	0.009	0.001	0.001	0.952	0.004	0.004	1.893
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr4	0.369	0.473	0.035	0.104	0.008	0.003	0.000	0.000	0.000	0.000	0.978	0.002	0.003	1.974
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr5	0.217	0.455	0.043	0.164	0.017	0.010	0.003	0.011	0.024	0.001	0.929	0.025	0.037	1.935
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr6	0.202	0.429	0.041	0.165	0.026	0.019	0.008	0.030	0.033	0.003	0.977	0.015	0.025	1.974
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr7-1	0.195	0.439	0.045	0.168	0.022	0.014	0.007	0.035	0.015	0.000	0.900	0.039	0.048	1.928
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr7-2	0.196	0.446	0.045	0.172	0.022	0.015	0.005	0.034	0.017	0.000	0.898	0.039	0.045	1.934
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr7-3	0.187	0.445	0.048	0.174	0.024	0.015	0.007	0.034	0.018	0.001	0.901	0.040	0.042	1.934
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr8	0.176	0.364	0.037	0.157	0.025	0.021	0.008	0.041	0.070	0.006	0.959	0.018	0.053	1.933
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr9-1	0.204	0.444	0.042	0.163	0.022	0.014	0.004	0.028	0.039	0.002	0.939	0.036	0.010	1.948
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr9-2	0.222	0.443	0.042	0.152	0.017	0.012	0.003	0.013	0.058	0.001	0.922	0.054	0.011	1.950
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr10-1	0.192	0.433	0.044	0.166	0.025	0.018	0.008	0.035	0.042	0.003	0.939	0.038	0.011	1.954
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr10-2	0.195	0.419	0.041	0.156	0.022	0.014	0.006	0.021	0.074	0.003	0.897	0.070	0.013	1.929
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr10-3	0.161	0.354	0.037	0.142	0.024	0.019	0.005	0.026	0.145	0.007	0.806	0.139	0.016	1.883
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr10-4	0.229	0.459	0.043	0.157	0.015	0.012	0.002	0.012	0.035	0.001	0.958	0.021	0.019	1.963
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr11-1	0.222	0.437	0.041	0.160	0.018	0.012	0.004	0.016	0.035	0.003	0.952	0.022	0.019	1.943
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr11-2	0.222	0.439	0.040	0.153	0.018	0.014	0.005	0.026	0.040	0.002	0.958	0.024	0.021	1.962
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr12	0.223	0.449	0.043	0.153	0.018	0.012	0.005	0.036	0.012	0.001	0.955	0.009	0.034	1.950
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr13	0.105	0.422	0.061	0.282	0.050	0.025	0.003	0.003	0.002	0.000	0.996	0.004	0.005	1.959
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr14-1	0.176	0.412	0.043	0.153	0.027	0.022	0.009	0.042	0.063	0.003	0.895	0.066	0.020	1.931
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr14-2	0.171	0.395	0.042	0.153	0.030	0.025	0.010	0.050	0.070	0.003	0.889	0.075	0.017	1.929
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr15-1	0.200	0.394	0.042	0.159	0.025	0.022	0.008	0.037	0.039	0.009	0.971	0.010	0.037	1.955
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr15-2	0.199	0.398	0.042	0.161	0.027	0.022	0.008	0.027	0.036	0.009	0.980	0.008	0.036	1.953
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr16-1	0.152	0.365	0.038	0.153	0.034	0.029	0.012	0.060	0.081	0.005	0.928	0.052	0.033	1.943
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr16-2	0.150	0.366	0.038	0.155	0.032	0.031	0.013	0.067	0.066	0.005	0.942	0.038	0.032	1.935
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr17	0.252	0.456	0.045	0.173	0.022	0.009	0.001	0.003	0.007	0.001	0.967	0.005	0.006	1.947
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr18	0.098	0.412	0.060	0.274	0.059	0.034	0.003	0.007	0.006	0.001	0.986	0.006	0.008	1.953
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr19	0.203	0.417	0.042	0.181	0.033	0.027	0.010	0.032	0.020	0.005	0.984	0.006	0.018	1.978
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr20-1	0.194	0.410	0.041	0.168	0.026	0.023	0.009	0.046	0.028	0.002	0.980	0.002	0.053	1.982
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr20-2	0.181	0.392	0.041	0.163	0.029	0.025	0.011	0.047	0.039	0.002	0.968	0.003	0.049	1.950
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr21	0.198	0.404	0.040	0.153	0.024	0.021	0.008	0.035	0.033	0.016	0.983	0.004	0.043	1.963
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr22-1	0.171	0.364	0.041	0.164	0.031	0.028	0.011	0.042	0.059	0.013	0.991	0.008	0.052	1.975
Glenelg E-58	E-58-13 (pts)	3525.16	Missisauga Upper	gr22-2	0.175	0.391	0.040	0.160	0.029	0.023	0.009	0.037	0.049	0.017	0.994	0.006	0.050	1.983
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr1	0.228	0.457	0.045	0.179	0.023	0.017	0.006	0.019	0.001	0.002	0.967	0.005	0.009	1.958
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr2	0.205	0.423	0.042	0.165	0.027	0.021	0.006	0.019	0.036	0.002	0.961	0.009	0.029	1.945
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr3-1	0.212	0.418	0.040	0.154	0.024	0.020	0.009	0.041	0.028	0.001	0.971	0.006	0.040	1.963
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr3-2	0.216	0.415	0.040	0.156	0.021	0.017	0.009	0.041	0.028	0.002	0.971	0.005	0.036	1.957
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr4	0.191	0.398	0.039	0.160	0.021	0.020	0.011	0.066	0.028	0.002	0.981	0.012	0.037	1.965
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr5-1	0.258	0.446	0.044	0.169	0.018	0.008	0.005	0.017	0.008	0.003	0.983	0.002	0.020	1.981
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr5-2	0.242	0.449	0.044	0.172	0.018	0.010	0.003	0.016	0.008	0.003	0.976	0.003	0.023	1.967
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr6	0.100	0.410	0.063	0.297	0.041	0.017	0.003	0.005	0.015	0.000	0.949	0.028	0.011	1.940

Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr7	0.236	0.481	0.047	0.179	0.020	0.006	0.000	0.000	0.006	0.002	0.968	0.005	0.008	1.957
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr8-1	0.156	0.489	0.057	0.230	0.026	0.011	0.001	0.003	0.002	0.000	0.964	0.006	0.004	1.948
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr8-2	0.106	0.423	0.058	0.276	0.045	0.027	0.005	0.009	0.003	0.000	0.972	0.011	0.008	1.943
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr9	0.146	0.435	0.056	0.251	0.031	0.006	0.001	0.005	0.018	0.000	0.962	0.007	0.014	1.931
Glenelg E-58	E-58-18 (pts)	3532.19	Missisauga Upper	gr10	0.203	0.527	0.050	0.174	0.016	0.007	0.002	0.001	0.001	0.000	0.963	0.003	0.004	1.952
Glenelg E-58	E-58-17 (pts)	3532.08	Missisauga Upper	gr1	0.186	0.488	0.046	0.185	0.023	0.013	0.004	0.008	0.001	0.000	0.979	0.004	0.003	1.938
Glenelg E-58	E-58-17 (pts)	3532.08	Missisauga Upper	gr2	0.170	0.424	0.041	0.175	0.024	0.023	0.008	0.035	0.024	0.005	0.989	0.008	0.023	1.949
Glenelg E-58	E-58-17 (pts)	3532.08	Missisauga Upper	gr3-1	0.208	0.458	0.042	0.160	0.019	0.009	0.002	0.006	0.035	0.001	0.960	0.025	0.016	1.942
Glenelg E-58	E-58-17 (pts)	3532.08	Missisauga Upper	gr3-2	0.186	0.418	0.037	0.150	0.015	0.011	0.002	0.013	0.066	0.002	0.967	0.019	0.047	1.933
Glenelg E-58	E-58-17 (pts)	3532.08	Missisauga Upper	gr4	0.162	0.396	0.037	0.153	0.024	0.023	0.009	0.046	0.063	0.003	0.941	0.028	0.039	1.924
Glenelg E-58	E-58-17 (pts)	3532.08	Missisauga Upper	gr5	0.120	0.455	0.056	0.240	0.026	0.017	0.003	0.003	0.027	0.000	0.942	0.021	0.009	1.920
Glenelg E-58	E-58-17 (pts)	3532.08	Missisauga Upper	gr6	0.181	0.416	0.039	0.172	0.027	0.023	0.007	0.025	0.027	0.004	0.970	0.020	0.024	1.936
Glenelg E-58	E-58-17 (pts)	3532.08	Missisauga Upper	gr7-1	0.198	0.445	0.040	0.152	0.017	0.009	0.002	0.010	0.050	0.003	0.943	0.032	0.030	1.930
Glenelg E-58	E-58-17 (pts)	3532.08	Missisauga Upper	gr7-2	0.184	0.431	0.040	0.144	0.016	0.009	0.002	0.009	0.077	0.004	0.886	0.069	0.037	1.907
Glenelg E-58	E-58-17 (pts)	3532.08	Missisauga Upper	gr8	0.194	0.420	0.039	0.150	0.018	0.011	0.002	0.015	0.066	0.002	0.937	0.038	0.033	1.926
Glenelg E-58	E-58-17 (pts)	3532.08	Missisauga Upper	gr9	0.191	0.451	0.043	0.180	0.025	0.016	0.005	0.019	0.011	0.003	0.976	0.006	0.017	1.945
Glenelg E-58	E-58-19 (pts)	3535.83	Missisauga Upper	gr1	0.221	0.424	0.041	0.162	0.019	0.012	0.003	0.013	0.056	0.002	0.930	0.037	0.028	1.948
Glenelg E-58	E-58-19 (pts)	3535.83	Missisauga Upper	gr2	0.191	0.411	0.040	0.161	0.029	0.022	0.007	0.023	0.053	0.014	0.931	0.024	0.040	1.944
Glenelg E-58	E-58-19 (pts)	3535.83	Missisauga Upper	gr3	0.210	0.404	0.043	0.200	0.037	0.033	0.007	0.011	0.015	0.000	0.933	0.010	0.012	1.915
Glenelg E-58	E-58-19 (pts)	3535.83	Missisauga Upper	gr4	0.049	0.251	0.050	0.370	0.122	0.066	0.007	0.015	0.007	0.001	0.933	0.016	0.007	1.895
Glenelg E-58	E-58-19 (pts)	3535.83	Missisauga Upper	gr5	0.178	0.392	0.036	0.157	0.024	0.022	0.011	0.068	0.033	0.006	0.925	0.017	0.029	1.897
Glenelg E-58	E-58-19 (pts)	3535.83	Missisauga Upper	gr6	0.212	0.438	0.040	0.161	0.022	0.017	0.007	0.023	0.015	0.005	0.931	0.018	0.025	1.913
Glenelg E-58	E-58-19 (pts)	3535.83	Missisauga Upper	gr7	0.192	0.401	0.038	0.162	0.025	0.021	0.008	0.039	0.035	0.015	0.952	0.026	0.043	1.958
Glenelg E-58	E-58-19 (pts)	3535.83	Missisauga Upper	gr8	0.194	0.456	0.041	0.191	0.031	0.017	0.002	0.005	0.003	0.000	0.901	0.014	0.015	1.871
Glenelg E-58	E-58-19 (pts)	3535.83	Missisauga Upper	gr9	0.186	0.406	0.042	0.177	0.029	0.024	0.010	0.037	0.039	0.002	0.937	0.021	0.022	1.932
Glenelg E-58	E-58-19 (pts)	3535.83	Missisauga Upper	gr10	0.232	0.443	0.042	0.169	0.024	0.017	0.006	0.038	0.007	0.004	0.940	0.019	0.012	1.952
Glenelg E-58	E-58-15 (pts)	3528.21	Missisauga Upper	gr1	0.159	0.388	0.039	0.174	0.035	0.031	0.010	0.036	0.060	0.005	0.984	0.022	0.049	1.992
Glenelg E-58	E-58-15 (pts)	3528.21	Missisauga Upper	gr2	0.210	0.419	0.040	0.168	0.023	0.016	0.006	0.026	0.042	0.001	0.975	0.015	0.032	1.973
Glenelg E-58	E-58-15 (pts)	3528.21	Missisauga Upper	gr3	0.196	0.416	0.040	0.171	0.025	0.022	0.010	0.055	0.023	0.002	0.995	0.007	0.026	1.987
Glenelg E-58	E-58-15 (pts)	3528.21	Missisauga Upper	gr4	0.196	0.409	0.040	0.166	0.024	0.019	0.008	0.039	0.022	0.002	0.987	0.004	0.040	1.955
Glenelg E-58	E-58-15 (pts)	3528.21	Missisauga Upper	gr5	0.193	0.498	0.048	0.175	0.017	0.007	0.001	0.005	0.026	0.000	0.946	0.026	0.006	1.948
Glenelg E-58	E-58-15 (pts)	3528.21	Missisauga Upper	gr6	0.196	0.412	0.041	0.179	0.026	0.020	0.006	0.031	0.044	0.002	0.985	0.014	0.032	1.988
Glenelg E-58	E-58-15 (pts)	3528.21	Missisauga Upper	gr7-1	0.203	0.487	0.047	0.194	0.020	0.008	0.002	0.006	0.002	0.000	0.964	0.006	0.005	1.945
Glenelg E-58	E-58-15 (pts)	3528.21	Missisauga Upper	gr7-2	0.249	0.499	0.044	0.160	0.017	0.006	0.001	0.005	0.001	0.001	0.981	0.005	0.008	1.977
Glenelg E-58	E-58-27 (pts)	3551.29	Missisauga Upper	gr1	0.203	0.428	0.040	0.165	0.026	0.022	0.008	0.039	0.027	0.006	0.996	0.016	0.028	2.004
Glenelg E-58	E-58-27 (pts)	3551.29	Missisauga Upper	gr2	0.188	0.486	0.047	0.192	0.024	0.014	0.002	0.005	0.013	0.000	0.972	0.009	0.012	1.963
Glenelg E-58	E-58-27 (pts)	3551.29	Missisauga Upper	gr3	0.193	0.392	0.037	0.148	0.022	0.016	0.007	0.042	0.055	0.009	0.963	0.021	0.050	1.956
Glenelg E-58	E-58-21 (pts)	3536.82	Missisauga Upper	gr1	0.204	0.420	0.040	0.182	0.023	0.020	0.005	0.026	0.035	0.001	0.966	0.011	0.027	1.961
Glenelg E-58	E-58-21 (pts)	3536.82	Missisauga Upper	gr2	0.252	0.489	0.043	0.159	0.012	0.006	0.002	0.002	0.023	0.000	0.935	0.042	0.007	1.972
Glenelg E-58	E-58-21 (pts)	3536.82	Missisauga Upper	gr3	0.227	0.441	0.038	0.161	0.020	0.014	0.005	0.022	0.032	0.002	0.976	0.015	0.022	1.975
Glenelg E-58A	E-58A-2 (pts)	3733.43	Missisauga Upper	gr1	0.212	0.444	0.043	0.180	0.022	0.017	0.004	0.017	0.037	0.002	0.928	0.032	0.007	1.947
Glenelg E-58A	E-58A-2 (pts)	3733.43	Missisauga Upper	gr2	0.229	0.442	0.039	0.162	0.017	0.007	0.002	0.005	0.007	0.001	0.927	0.318	0.007	2.163
Glenelg E-58A	E-58A-2 (pts)	3733.43	Missisauga Upper	gr3-1	0.203	0.412	0.038	0.167	0.025	0.021	0.009	0.047	0.026	0.009	0.992	0.004	0.032	1.985
Glenelg E-58A	E-58A-2 (pts)	3733.43	Missisauga Upper	gr3-2	0.192	0.395	0.040	0.167	0.023	0.023	0.011	0.046	0.034	0.013	0.988	0.004	0.039	1.977
North Triumph G-43	G-43-7 (pts)	3285.15	Logan Canyon Cree	G5167-g1	0.214	0.403	0.031	0.204	0.034	0.019	0.002	0.007	0.026	0.001	0.986	0.009	0.035	1.972
North Triumph G-43	G-43-7 (pts)	3285.15	Logan Canyon Cree	G5167-g2	0.215	0.467	0.033	0.208	0.025	0.010	0.001	0.008	0.009	0.000	0.984	0.006	0.007	1.972
North Triumph G-43	G-43-7 (pts)	3285.15	Logan Canyon Cree	G5167-g3	0.278	0.468	0.028	0.151	0.011	0.003	0.001	0.004	0.015	0.000	0.950	0.022	0.010	1.940
North Triumph G-43	G-43-7 (pts)	3285.15	Logan Canyon Cree	G5167-g4	0.185	0.397	0.028	0.180	0.027	0.022	0.008	0.046	0.040	0.001	0.939	0.022	0.040	1.934
North Triumph G-43	G-43-7 (pts)	3285.15	Logan Canyon Cree	G5167-g5	0.180	0.371	0.028	0.210	0.031	0.028	0.010	0.087	0.025	0.000	0.966	0.009	0.032	1.978
North Triumph G-43	G-43-7 (pts)	3285.15	Logan Canyon Cree	G5167-g6	0.196	0.388	0.027	0.188	0.030	0.025	0.005	0.033	0.028	0.001	0.980	0.005	0.045	1.953
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr1	0.234	0.447	0.044	0.174	0.021	0.009	0.003	0.005	0.021	0.000	0.936	0.019	0.011	1.924
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr2	0.227	0.429	0.039	0.154	0.017	0.010	0.004	0.013	0.045	0.002	0.947	0.036	0.038	1.963
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr3	0.191	0.386	0.039	0.174	0.027	0.019	0.010	0.045	0.024	0.004	0.933	0.016	0.053	1.921
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr4	0.154	0.414	0.046	0.188	0.027	0.023	0.011	0.056	0.026	0.002	0.890	0.051	0.032	1.920
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr5	0.168	0.437	0.039	0.163	0.025	0.012	0.004	0.008	0.070	0.004	0.955	0.024	0.050	1.959
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr6-1	0.203	0.400	0.040	0.173	0.026	0.018	0.008	0.036	0.040	0.002	0.969	0.015	0.029	1.959

North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr6-2	0.212	0.421	0.040	0.170	0.022	0.014	0.006	0.028	0.040	0.002	0.964	0.018	0.027	1.965
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr7	0.253	0.434	0.034	0.115	0.011	0.004	0.002	0.006	0.076	0.003	0.911	0.063	0.030	1.941
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr8	0.209	0.436	0.043	0.165	0.024	0.015	0.006	0.016	0.031	0.003	0.955	0.011	0.023	1.937
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr9	0.264	0.508	0.041	0.147	0.005	0.000	0.001	0.000	0.005	0.000	0.916	0.012	0.024	1.923
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr10	0.196	0.390	0.038	0.159	0.024	0.018	0.011	0.043	0.037	0.009	0.969	0.015	0.046	1.953
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr11	0.200	0.408	0.040	0.169	0.025	0.018	0.010	0.040	0.035	0.003	0.969	0.061	0.028	2.007
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr12	0.292	0.490	0.039	0.130	0.006	0.000	0.001	0.000	0.003	0.001	0.931	0.021	0.028	1.942
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr13	0.194	0.413	0.041	0.176	0.028	0.018	0.009	0.028	0.031	0.004	0.967	0.010	0.032	1.951
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr14	0.207	0.418	0.042	0.186	0.029	0.023	0.007	0.017	0.025	0.008	0.970	0.008	0.025	1.965
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr15	0.193	0.438	0.048	0.211	0.035	0.022	0.006	0.008	0.002	0.000	0.964	0.006	0.005	1.938
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr16-1	0.308	0.439	0.033	0.103	0.006	0.001	0.001	0.002	0.039	0.001	0.942	0.014	0.058	1.948
North Triumph G-43	G-43-11 (pts)	3289.64	Logan Canyon Cree	gr16-2	0.299	0.450	0.032	0.106	0.006	0.001	0.001	0.003	0.035	0.002	0.949	0.013	0.061	1.958
North Triumph G-43	G-43-31 (pts)	3828.04	Missisauga Upper	gr1	0.210	0.426	0.044	0.170	0.024	0.020	0.006	0.019	0.029	0.003	0.940	0.010	0.028	1.929
North Triumph G-43	G-43-31 (pts)	3828.04	Missisauga Upper	gr2	0.224	0.440	0.040	0.167	0.027	0.021	0.007	0.017	0.016	0.000	0.931	0.007	0.019	1.917
North Triumph G-43	G-43-31 (pts)	3828.04	Missisauga Upper	gr3	0.216	0.442	0.042	0.187	0.033	0.026	0.008	0.038	0.002	0.001	0.934	0.008	0.004	1.940
North Triumph G-43	G-43-31 (pts)	3828.04	Missisauga Upper	gr4	0.201	0.395	0.037	0.157	0.022	0.023	0.011	0.054	0.033	0.010	0.940	0.005	0.036	1.923
North Triumph G-43	G-43-56 (pts)	4402.95	Missisauga Upper	gr1	0.198	0.453	0.049	0.208	0.032	0.016	0.004	0.003	0.002	0.000	0.979	0.006	0.003	1.952
North Triumph G-43	G-43-56 (pts)	4402.95	Missisauga Upper	gr2	0.223	0.417	0.038	0.127	0.015	0.008	0.005	0.030	0.059	0.009	0.973	0.010	0.052	1.965
North Triumph G-43	G-43-56 (pts)	4402.95	Missisauga Upper	gr3	0.196	0.429	0.043	0.177	0.023	0.016	0.004	0.012	0.045	0.001	0.947	0.022	0.029	1.947
North Triumph G-43	G-43-56 (pts)	4402.95	Missisauga Upper	gr4	0.215	0.475	0.039	0.144	0.012	0.006	0.001	0.000	0.010	0.000	0.920	0.015	0.020	1.858
North Triumph G-43	G-43-56 (pts)	4402.95	Missisauga Upper	gr5	0.221	0.491	0.040	0.133	0.012	0.009	0.003	0.014	0.001	0.000	0.919	0.004	0.017	1.864
North Triumph G-43	G-43-56 (pts)	4402.95	Missisauga Upper	gr6	0.180	0.483	0.050	0.189	0.020	0.010	0.002	0.006	0.006	0.000	0.956	0.037	0.005	1.945
North Triumph G-43	G-43-56 (pts)	4402.95	Missisauga Upper	gr7	0.194	0.393	0.038	0.152	0.023	0.022	0.011	0.050	0.052	0.003	0.983	0.012	0.040	1.972
North Triumph G-43	G-43-56 (pts)	4402.95	Missisauga Upper	gr8	0.230	0.439	0.043	0.156	0.019	0.012	0.004	0.016	0.042	0.003	0.940	0.036	0.019	1.959
North Triumph G-43	G-43-56 (pts)	4402.95	Missisauga Upper	gr9	0.441	0.451	0.028	0.071	0.002	0.000	0.000	0.000	0.005	0.000	0.975	0.003	0.002	1.977
North Triumph G-43	G-43-56 (pts)	4402.95	Missisauga Upper	gr10	0.246	0.457	0.046	0.177	0.024	0.013	0.003	0.003	0.008	0.000	0.979	0.006	0.004	1.967
North Triumph G-43	G-43-56 (pts)	4402.95	Missisauga Upper	gr11	0.258	0.450	0.041	0.144	0.013	0.005	0.002	0.004	0.040	0.002	0.944	0.021	0.019	1.943
North Triumph G-43	G-43-34 (pts)	3835.78	Missisauga Upper	527-g1	0.199	0.389	0.028	0.186	0.032	0.027	0.005	0.025	0.041	0.001	0.956	0.013	0.046	1.948
North Triumph G-43	G-43-34 (pts)	3835.78	Missisauga Upper	527-g2	0.201	0.395	0.030	0.203	0.033	0.028	0.003	0.009	0.028	0.002	0.948	0.006	0.036	1.922
North Triumph G-43	G-43-36 (pts)	3848.15	Missisauga Upper	529-g1	0.192	0.378	0.029	0.191	0.030	0.024	0.008	0.048	0.035	0.001	0.988	0.004	0.046	1.974
North Triumph G-43	G-43-46 (pts)	4010.25	Missisauga Upper	537-g1	0.202	0.467	0.037	0.233	0.026	0.009	0.001	0.006	0.003	0.001	0.943	0.005	0.007	1.939
North Triumph G-43	G-43-46 (pts)	4010.25	Missisauga Upper	537-g2	0.183	0.385	0.032	0.214	0.033	0.026	0.006	0.045	0.035	0.000	0.976	0.005	0.045	1.985
North Triumph G-43	G-43-46 (pts)	4010.25	Missisauga Upper	537-g3	0.234	0.470	0.031	0.182	0.021	0.007	0.001	0.007	0.000	0.000	0.957	0.012	0.007	1.930
North Triumph G-43	G-43-46 (pts)	4010.25	Missisauga Upper	537-g4	0.223	0.377	0.027	0.168	0.023	0.018	0.007	0.039	0.046	0.001	0.958	0.027	0.047	1.961
North Triumph G-43	G-43-46 (pts)	4010.25	Missisauga Upper	537-g5	0.189	0.432	0.031	0.206	0.031	0.016	0.002	0.008	0.011	0.000	0.877	0.043	0.020	1.865
North Triumph G-43	G-43-46 (pts)	4010.25	Missisauga Upper	537-g6	0.075	0.350	0.039	0.353	0.075	0.037	0.002	0.010	0.015	0.000	0.927	0.018	0.020	1.922
North Triumph G-43	G-43-46 (pts)	4010.25	Missisauga Upper	537-g7	0.095	0.359	0.039	0.290	0.051	0.037	0.004	0.013	0.048	0.001	0.927	0.025	0.037	1.926
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr2	0.205	0.424	0.041	0.141	0.019	0.012	0.004	0.013	0.077	0.003	0.880	0.052	0.031	1.901
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr3	0.314	0.476	0.032	0.105	0.009	0.002	0.002	0.005	0.000	0.000	0.928	0.015	0.005	1.893
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr4	0.277	0.510	0.043	0.136	0.010	0.006	0.002	0.000	0.004	0.000	0.939	0.004	0.002	1.934
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr5	0.211	0.425	0.043	0.164	0.024	0.017	0.006	0.029	0.025	0.003	0.947	0.012	0.023	1.928
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr6	0.201	0.394	0.039	0.154	0.026	0.025	0.013	0.057	0.035	0.009	0.945	0.027	0.038	1.963
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr7-1	0.213	0.441	0.044	0.170	0.029	0.018	0.006	0.022	0.031	0.001	0.908	0.040	0.006	1.931
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr7-2	0.217	0.449	0.043	0.174	0.030	0.016	0.005	0.018	0.033	0.001	0.910	0.038	0.005	1.939
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr8	0.189	0.395	0.042	0.165	0.028	0.021	0.010	0.045	0.036	0.003	0.967	0.010	0.031	1.942
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr9	0.237	0.467	0.047	0.193	0.025	0.012	0.002	0.000	0.000	0.000	0.942	0.008	0.003	1.935
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr10	0.173	0.391	0.042	0.164	0.029	0.022	0.011	0.046	0.050	0.003	0.945	0.017	0.041	1.934
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr11	0.193	0.397	0.042	0.162	0.026	0.023	0.011	0.051	0.033	0.004	0.949	0.006	0.050	1.947
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr12	0.236	0.495	0.044	0.157	0.019	0.012	0.003	0.003	0.006	0.000	0.947	0.006	0.004	1.933
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr13	0.189	0.396	0.040	0.157	0.025	0.019	0.007	0.033	0.059	0.007	0.958	0.012	0.054	1.956
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr14	0.207	0.425	0.041	0.165	0.024	0.017	0.007	0.025	0.033	0.001	0.947	0.012	0.031	1.936
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr15	0.088	0.384	0.063	0.316	0.062	0.031	0.005	0.006	0.001	0.001	0.941	0.007	0.003	1.908
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr16	0.205	0.426	0.044	0.173	0.030	0.023	0.007	0.009	0.040	0.000	0.914	0.022	0.021	1.914
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr17-1	0.228	0.447	0.046	0.184	0.031	0.021	0.007	0.014	0.010	0.000	0.938	0.013	0.003	1.944
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr17-2	0.219	0.455	0.044	0.184	0.028	0.020	0.005	0.016	0.007	0.001	0.955	0.011	0.002	1.947
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr18	0.216	0.496	0.047	0.175	0.016	0.012	0.004	0.006	0.006	0.000	0.937	0.005	0.006	1.927
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr19	0.331	0.228	0.086	0.273	0.016	0.004	0.001	0.004	0.001	0.000	0.891	0.011	0.010	1.855
North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr20-1	0.202	0.399	0.039	0.158	0.026	0.026	0.011	0.043	0.043	0.007	0.948	0.011	0.035	1.947

North Triumph G-43	G-43-57 (pts)	4402.34	Missisauga Upper	gr20-2	0.201	0.401	0.039	0.158	0.028	0.025	0.010	0.041	0.040	0.006	0.958	0.012	0.034	1.954
Venture 1	V-1-SP28 (pts)	4598.35 - 4598.59	Missisauga Lower	25-g1	0.216	0.467	0.042	0.176	0.025	0.013	0.002	0.002	0.015	0.001	0.876	0.023	0.008	1.864
Venture 1	V-1-SP28 (pts)	4598.35 - 4598.59	Missisauga Lower	25-g1	0.214	0.467	0.042	0.181	0.026	0.013	0.002	0.003	0.017	0.001	0.868	0.026	0.006	1.865
Venture 1	V-1-SP28 (pts)	4598.35 - 4598.59	Missisauga Lower	25-g2	0.202	0.407	0.039	0.173	0.027	0.021	0.008	0.039	0.023	0.001	0.893	0.007	0.039	1.878
Venture 1	V-1-SP28 (pts)	4598.35 - 4598.59	Missisauga Lower	25-g2	0.203	0.395	0.039	0.167	0.029	0.023	0.008	0.044	0.026	0.002	0.881	0.009	0.040	1.864
Venture 1	V-1-SP35 (pts)	4600.87 - 4601.23	Missisauga Lower	53-1	0.209	0.379	0.036	0.145	0.025	0.008	0.005	0.031	0.064	0.006	0.896	0.028	0.053	1.886
Venture 1	V-1-SP35 (pts)	4600.87 - 4601.23	Missisauga Lower	53-2	0.212	0.397	0.037	0.131	0.013	0.004	0.001	0.006	0.085	0.002	0.931	0.052	0.049	1.921
Venture 1	V-1-SP35 (pts)	4600.87 - 4601.23	Missisauga Lower	53-3	0.113	0.419	0.059	0.274	0.047	0.010	0.003	0.007	0.007	0.003	0.982	0.002	0.009	1.936
Venture 1	V-1-SP35 (pts)	4600.87 - 4601.23	Missisauga Lower	53-4	0.188	0.351	0.035	0.135	0.023	0.011	0.011	0.062	0.073	0.003	0.954	0.012	0.062	1.921
Venture 1	V-1-SP35 (pts)	4600.87 - 4601.23	Missisauga Lower	53-5	0.172	0.369	0.036	0.154	0.027	0.013	0.013	0.067	0.048	0.009	0.968	0.007	0.062	1.946
Venture 3	V-3-SP5 (pts)	4871.58 - 4871.90	Missisauga Lower	56-1	0.170	0.371	0.037	0.168	0.032	0.011	0.009	0.055	0.051	0.008	0.966	0.008	0.061	1.947
Venture 3	V-3-SP5 (pts)	4871.58 - 4871.90	Missisauga Lower	56-2	0.272	0.431	0.038	0.146	0.012	0.003	0.000	0.005	0.031	0.001	0.908	0.033	0.013	1.894
Venture 3	V-3-SP8 (pts)	4872.58 - 4872.70	Missisauga Lower	57-1	0.202	0.396	0.040	0.164	0.026	0.018	0.007	0.031	0.037	0.007	1.007	0.005	0.056	1.998
Venture 3	V-3-SP8 (pts)	4872.58 - 4872.70	Missisauga Lower	57-2	0.219	0.476	0.047	0.196	0.024	0.006	0.001	0.004	0.002	0.001	1.005	0.000	0.024	2.005
Venture 3	V-3-SP8 (pts)	4872.58 - 4872.70	Missisauga Lower	57-3c	0.242	0.439	0.043	0.167	0.019	0.010	0.001	0.010	0.023	0.004	0.995	0.004	0.040	1.997
Venture 3	V-3-SP25 (pts)	4878.62 - 4878.80	Missisauga Lower	V-3-SP25-g1	0.208	0.419	0.049	0.183	0.012	0.009	0.003	0.031	0.029	0.000	0.944	0.042	0.016	1.945
Venture 3	V-3-SP38 (pts)	4882.37 - 4882.68	Missisauga Lower	59-1a	0.224	0.411	0.041	0.180	0.029	0.021	0.006	0.032	0.029	0.001	0.964	0.016	0.015	1.969
Venture 3	V-3-SP38 (pts)	4882.37 - 4882.68	Missisauga Lower	59-1b	0.218	0.416	0.043	0.181	0.029	0.020	0.007	0.031	0.030	0.000	0.968	0.016	0.014	1.973
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr6	0.222	0.461	0.057	0.170	0.007	0.006	0.000	0.004	0.023	0.002	1.082	0.033	0.011	2.078
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr7	0.176	0.394	0.055	0.200	0.014	0.012	0.008	0.050	0.025	0.002	1.107	0.025	0.026	2.094
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr11	0.202	0.434	0.058	0.196	0.014	0.006	0.003	0.022	0.011	0.002	1.156	0.007	0.020	2.132
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr14	0.193	0.497	0.061	0.191	0.009	0.004	0.000	0.005	0.005	0.000	1.102	0.015	0.005	2.087
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr15	0.206	0.447	0.062	0.207	0.014	0.010	0.003	0.009	0.003	0.002	1.141	0.012	0.009	2.124
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr16	0.207	0.474	0.065	0.189	0.007	0.000	0.000	0.007	0.002	0.001	1.108	0.092	0.005	2.156
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr18	0.282	0.473	0.048	0.142	0.006	0.000	0.000	0.001	0.003	0.000	1.199	0.011	0.009	2.174
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr19	0.209	0.442	0.056	0.193	0.014	0.011	0.005	0.032	0.005	0.001	1.145	0.005	0.011	2.129
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr20	0.188	0.422	0.060	0.207	0.014	0.006	0.002	0.007	0.005	0.000	1.074	0.051	0.014	2.051
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr21	0.192	0.406	0.060	0.190	0.013	0.010	0.007	0.031	0.020	0.001	1.149	0.008	0.033	2.120
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr22	0.070	0.336	0.077	0.358	0.052	0.025	0.001	0.009	0.000	0.001	1.118	0.006	0.007	2.060
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr24	0.042	0.261	0.077	0.425	0.063	0.033	0.004	0.012	0.000	0.001	1.161	0.008	0.005	2.093
Venture 3	V-3-SP54 (pts)	4887.39-4888.32	Missisauga Lower	511gr25	0.247	0.432	0.055	0.167	0.007	0.004	0.002	0.041	0.007	0.001	1.134	0.010	0.024	2.129
Venture 4	V-4-SP22 (pts)	5371.77 - 5371.97	Missisauga Lower	V-4-SP22-g1	0.273	0.477	0.047	0.151	0.005	0.002	0.000	0.009	0.000	0.001	1.061	0.026	0.019	2.072
Venture 4	V-4-SP25 (pts)	5372.85 - 5373.18	Missisauga Lower	514-1	0.095	0.335	0.049	0.333	0.110	0.015	0.004	0.010	0.000	0.001	0.955	0.006	0.002	1.914
Venture 4	V-4-SP25 (pts)	5372.85 - 5373.18	Missisauga Lower	514-2	0.207	0.437	0.045	0.174	0.027	0.005	0.004	0.008	0.025	0.002	0.902	0.030	0.002	1.867
Venture 4	V-4-SP25 (pts)	5372.85 - 5373.18	Missisauga Lower	514-3	0.194	0.391	0.037	0.162	0.027	0.011	0.009	0.040	0.049	0.007	0.963	0.011	0.048	1.948
Venture 4	V-4-SP25 (pts)	5372.85 - 5373.18	Missisauga Lower	514-4	0.244	0.472	0.043	0.153	0.018	0.005	0.002	0.009	0.007	0.001	0.962	0.014	0.007	1.936
Venture 4	V-4-SP25 (pts)	5372.85 - 5373.18	Missisauga Lower	514-5	0.191	0.399	0.040	0.166	0.025	0.006	0.002	0.014	0.067	0.002	0.905	0.028	0.050	1.895
Venture 4	V-4-SP25 (pts)	5372.85 - 5373.18	Missisauga Lower	514-6	0.192	0.409	0.040	0.179	0.030	0.010	0.007	0.027	0.038	0.004	0.949	0.017	0.032	1.933
Venture 4	V-4-SP25 (pts)	5372.85 - 5373.18	Missisauga Lower	514-7	0.205	0.409	0.041	0.173	0.027	0.010	0.006	0.039	0.038	0.001	0.946	0.014	0.032	1.943
Venture 4	V-4-50 (pts)	5381.34 - 5381.77	Missisauga Lower	516-g1	0.162	0.402	0.042	0.179	0.034	0.024	0.011	0.062	0.023	0.001	0.930	0.006	0.031	1.908
Venture 4	V-4-50 (pts)	5381.34 - 5381.77	Missisauga Lower	516-g1	0.169	0.418	0.041	0.179	0.035	0.027	0.011	0.063	0.019	0.000	0.947	0.007	0.025	1.941
Venture 4	V-4-50 (pts)	5381.34 - 5381.77	Missisauga Lower	516-g2	0.176	0.372	0.037	0.171	0.029	0.026	0.010	0.073	0.036	0.000	0.920	0.008	0.043	1.901
Venture 4	V-4-50 (pts)	5381.34 - 5381.77	Missisauga Lower	516-g2	0.172	0.373	0.039	0.180	0.033	0.028	0.011	0.069	0.035	0.001	0.908	0.010	0.042	1.902
Venture 4	V-4-50 (pts)	5381.34 - 5381.77	Missisauga Lower	516-g3	0.265	0.415	0.032	0.128	0.018	0.005	0.000	0.000	0.051	0.001	0.851	0.070	0.014	1.852
Venture 4	V-4-50 (pts)	5381.34 - 5381.77	Missisauga Lower	516-g3	0.120	0.409	0.050	0.249	0.048	0.024	0.003	0.004	0.029	0.001	0.898	0.022	0.015	1.870
Venture 4	V-4-SP56 (pts)	5383.28 - 5383.56	Missisauga Lower	S17-1	0.241	0.507	0.047	0.170	0.018	0.007	0.003	0.006	0.000	0.000	0.989	0.005	0.010	2.003
Venture 4	V-4-80 (pts)	5391.51 - 5391.83	Missisauga Lower	521-g1	0.184	0.378	0.035	0.155	0.033	0.025	0.008	0.042	0.069	0.001	0.875	0.087	0.019	1.910
Venture 4	V-4-80 (pts)	5391.51 - 5391.83	Missisauga Lower	521-g1	0.194	0.395	0.037	0.152	0.029	0.021	0.008	0.040	0.055	0.001	0.842	0.073	0.017	1.864
Venture 4	V-4-80 (pts)	5391.51 - 5391.83	Missisauga Lower	521-g2	0.251	0.483	0.039	0.152	0.013	0.003	0.000	0.001	0.010	0.000	0.874	0.019	0.043	1.888
Venture 4	V-4-80 (pts)	5391.51 - 5391.83	Missisauga Lower	521-g2	0.275	0.469	0.035	0.135	0.010	0.002	0.000	0.000	0.012	0.000	0.878	0.018	0.035	1.869
Venture 4	V-4-80 (pts)	5391.51 - 5391.83	Missisauga Lower	521-g3	0.220	0.411	0.037	0.143	0.016	0.009	0.001	0.008	0.059	0.001	0.829	0.070	0.023	1.827
Venture 4	V-4-80 (pts)	5391.51 - 5391.83	Missisauga Lower	521-g3	0.222	0.431	0.038	0.156	0.021	0.013	0.005	0.029	0.027	0.001	0.879	0.024	0.013	1.859
Venture 4	V-4-SP87 (pts)	5393.96 - 5394.15	Missisauga Lower	522-1	0.229	0.439	0.041	0.153	0.019	0.006	0.002	0.017	0.049	0.002	0.938	0.046	0.020	1.963
Venture 4	V-4-SP87 (pts)	5393.96 - 5394.15	Missisauga Lower	522-2	0.185	0.405	0.042	0.198	0.034	0.012	0.012	0.076	0.013	0.001	0.966	0.029	0.011	1.983

Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr1	0.225	0.447	0.038	0.167	0.021	0.010	0.001	0.018	0.031	0.001	0.979	0.012	0.024	1.975
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr2-1	0.251	0.500	0.045	0.160	0.015	0.008	0.000	0.010	0.001	0.000	0.998	0.003	0.004	1.994
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr2-2	0.236	0.489	0.045	0.164	0.018	0.010	0.000	0.008	0.002	0.001	0.990	0.003	0.004	1.969
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr3	0.251	0.485	0.043	0.159	0.017	0.006	0.000	0.010	0.002	0.001	0.970	0.020	0.015	1.978
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr4	0.188	0.417	0.039	0.154	0.021	0.009	0.000	0.009	0.070	0.003	0.967	0.035	0.044	1.956
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr5	0.177	0.361	0.032	0.135	0.022	0.015	0.006	0.048	0.073	0.012	1.016	0.009	0.081	1.987
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr6-1	0.136	0.354	0.039	0.186	0.033	0.021	0.008	0.072	0.066	0.002	0.985	0.034	0.043	1.978
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr6-2	0.162	0.379	0.038	0.176	0.027	0.022	0.007	0.069	0.045	0.001	1.014	0.015	0.040	1.996
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr6-3	0.148	0.365	0.040	0.176	0.030	0.021	0.008	0.068	0.061	0.001	1.004	0.024	0.044	1.989
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr7	0.192	0.473	0.043	0.176	0.023	0.007	0.000	0.012	0.016	0.001	1.000	0.033	0.025	1.999
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr8	0.210	0.428	0.038	0.167	0.027	0.018	0.005	0.037	0.025	0.003	1.030	0.003	0.025	2.017
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr9-1	0.224	0.492	0.043	0.166	0.020	0.007	0.000	0.004	0.016	0.001	1.005	0.017	0.003	1.998
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr9-2	0.227	0.482	0.043	0.165	0.021	0.010	0.000	0.006	0.022	0.001	0.999	0.023	0.004	2.005
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr10	0.187	0.412	0.039	0.154	0.023	0.015	0.006	0.059	0.037	0.005	1.012	0.015	0.039	2.002
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr11	0.044	0.237	0.045	0.340	0.161	0.052	0.006	0.015	0.003	0.003	1.020	0.001	0.007	1.934
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr12	0.212	0.440	0.040	0.164	0.020	0.008	0.000	0.000	0.052	0.002	0.983	0.036	0.025	1.982
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr13	0.258	0.463	0.038	0.133	0.013	0.005	0.000	0.003	0.048	0.004	0.970	0.046	0.013	1.993
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr14-1	0.195	0.427	0.039	0.158	0.021	0.014	0.003	0.030	0.044	0.002	0.936	0.059	0.038	1.966
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr14-2	0.192	0.410	0.037	0.150	0.021	0.011	0.002	0.024	0.063	0.004	0.907	0.073	0.040	1.934
Peskowesk A-99	PESK-A99-2228.82 (hms)	2228.82	Logan Canyon Cree	ST_PESK_A99_2228gr14-3	0.197	0.424	0.037	0.155	0.021	0.011	0.003	0.031	0.047	0.003	0.940	0.061	0.038	1.969
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr1-1	0.199	0.405	0.037	0.147	0.018	0.009	0.004	0.011	0.089	0.004	1.019	0.050	0.046	2.039
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr1-2	0.229	0.459	0.041	0.158	0.018	0.007	0.004	0.008	0.036	0.002	1.083	0.004	0.034	2.084
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr1-3	0.201	0.410	0.038	0.150	0.019	0.008	0.004	0.021	0.059	0.005	1.069	0.011	0.052	2.047
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr2	0.166	0.398	0.042	0.175	0.030	0.021	0.012	0.064	0.044	0.001	1.103	0.008	0.035	2.099
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr3	0.180	0.399	0.039	0.153	0.022	0.011	0.005	0.014	0.100	0.005	0.916	0.109	0.015	1.968
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr4	0.185	0.398	0.038	0.155	0.022	0.013	0.012	0.075	0.030	0.001	1.078	0.003	0.057	2.070
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr5	0.250	0.459	0.038	0.132	0.010	0.002	0.003	0.010	0.039	0.001	0.983	0.056	0.026	2.010
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr6	0.200	0.445	0.043	0.190	0.020	0.007	0.006	0.028	0.013	0.001	1.044	0.017	0.040	2.055
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr7	0.208	0.428	0.040	0.164	0.024	0.012	0.008	0.038	0.029	0.002	1.093	0.005	0.034	2.087
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr8	0.203	0.410	0.038	0.148	0.016	0.004	0.002	0.009	0.078	0.003	0.943	0.088	0.025	1.968
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr9	0.194	0.404	0.037	0.155	0.016	0.007	0.003	0.015	0.003	0.001	1.003	0.017	0.098	1.954
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr10	0.145	0.445	0.049	0.197	0.051	0.025	0.012	0.028	0.020	0.002	1.067	0.015	0.010	2.064
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr11	0.250	0.473	0.037	0.138	0.011	0.003	0.002	0.006	0.025	0.001	1.062	0.015	0.044	2.067
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr12	0.195	0.412	0.039	0.157	0.023	0.012	0.009	0.049	0.034	0.002	1.094	0.003	0.051	2.081
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr13	0.161	0.376	0.038	0.166	0.024	0.013	0.012	0.075	0.040	0.002	1.065	0.012	0.064	2.047
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr14	0.255	0.483	0.040	0.144	0.012	0.003	0.001	0.006	0.009	0.001	1.042	0.006	0.047	2.049
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr15	0.189	0.489	0.047	0.176	0.024	0.010	0.004	0.019	0.044	0.001	1.047	0.037	0.007	2.095
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr16	0.302	0.500	0.038	0.126	0.010	0.000	0.000	0.006	0.000	0.001	1.087	0.007	0.006	2.082
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr17	0.250	0.474	0.036	0.138	0.011	0.004	0.002	0.007	0.029	0.001	1.073	0.014	0.050	2.089
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr18	0.179	0.406	0.039	0.162	0.024	0.017	0.012	0.082	0.029	0.003	1.118	0.004	0.039	2.114
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr19	0.185	0.416	0.041	0.159	0.023	0.012	0.004	0.019	0.085	0.006	0.972	0.093	0.012	2.026
Peskowesk A-99	PESK-A99-2238.65 (hms)	2238.65	Logan Canyon Cree	ST_PESKA99_2238gr20	0.193	0.414	0.039	0.166	0.026	0.016	0.008	0.046	0.035	0.008	1.107	0.008	0.036	2.102
Tantallon M-41	M-41-3 (pts)	4699.1	Missisauga Upper	S3-g1	0.163	0.442	0.058	0.229	0.031	0.018	0.004	0.011	0.022	0.001	0.959	0.007	0.023	1.967
Tantallon M-41	M-41-3 (pts)	4699.1	Missisauga Upper	S3-g2	0.178	0.390	0.049	0.210	0.034	0.028	0.008	0.042	0.024	0.001	0.978	0.008	0.035	1.986
Tantallon M-41	M-41-3 (pts)	4699.1	Missisauga Upper	S3-g3	0.199	0.458	0.054	0.207	0.026	0.013	0.001	0.005	0.012	0.001	0.974	0.012	0.032	1.995
Tantallon M-41	M41-15 (pts)	5296.24	Missisauga Middle	56g1	0.176	0.385	0.043	0.173	0.023	0.017	0.007	0.050	0.047	0.001	0.994	0.016	0.055	1.987
Tantallon M-41	M-41-16 (pts)	5298.37	Missisauga Middle	57g1	0.202	0.392	0.043	0.175	0.026	0.016	0.005	0.024	0.044	0.001	0.966	0.014	0.051	1.959
Tantallon M-41	M-41-16 (pts)	5298.37	Missisauga Middle	57g2	0.218	0.407	0.045	0.164	0.024	0.016	0.006	0.036	0.036	0.002	0.923	0.047	0.012	1.935

pts: polished thin section of sandstone
hms: polished thin section of heavy mineral separates

Table 7. Summary of morphology and age of grains

							Internal features										
							Inclusions, pitting					Size					
Unique grain identifier	**Well**	**Stratigraphic unit**	**Depth (m)**	**Grain no.**	**Image type**	**External morphology**	abundance %	size 90%ile	form	alignment	**Zoning**	a axis (microns)	b axis (microns)	REE type	Type (by region)	Sub-types	**mean age (Ma)**
1	Naskapi N-30	UM	1469.89	1	SEI	R-SH	10	8	flat irr	subp	nv	90	70	C	W07		
1.5	Naskapi N-30	UM	1469.89	2										D	W11		
2	Naskapi N-30	UM	1469.89	3	SEI	R-SH	8	7	flat irr	subp	nv	150	80	C	W07		
2	Naskapi N-30	UM	1469.89	3	SEI	R-SH	8	7	flat irr	subp	nv	150	80	C	W07		
2	Naskapi N-30	UM	1469.89	3	SEI	R-SH	8	7	flat irr	subp	nv	150	80	C	W07		
3	Naskapi N-30	UM	1469.89	4	SEI	R-SH	0				nv	70	50	B	W05		**399**
4	Naskapi N-30	UM	1469.89	5	SEI	R-IR	15	15	subh	none	nv	110	50	B	W10		
5	Naskapi N-30	UM	1469.89	6	SEI	R-IR	25	10	irr	subp	nv	120	50	C	W07		
6	Naskapi N-30	UM	1469.89	7	SEI	R-SH	15	12	irr	subp	nv	80	50	B	W10		
6	Naskapi N-30	UM	1469.89	7	SEI	R-SH	15	12	irr	subp	nv	80	50	B	W10		
6	Naskapi N-30	UM	1469.89	7	SEI	R-SH	15	12	irr	subp	nv	80	50	B	W10		
7	Naskapi N-30	UM	1469.89	8	SEI	SH	20	20	flat irr	none	nv	190	80	B	W10		
8	Naskapi N-30	UM	1469.89	9	SEI	R-SH	0				nv	75	45	B	W05		**403**
9	Naskapi N-30	UM	1469.89	10	SEI	R-IR	10	5	flat irr	none	nv	70	40	A	W06		**515**
9	Naskapi N-30	UM	1469.89	10	SEI	R-IR	10	5	flat irr	none	nv	70	40	A	W06		**515**
10	Naskapi N-30	UM	1469.89	11	SEI	SH	10	20	flat irr	none	nv	110	50	C	W07		
10	Naskapi N-30	UM	1469.89	11	SEI	SH	10	20	flat irr	none	nv	110	50	C	W07		
11	Naskapi N-30	UM	1469.89	12	SEI	R-SH	0				nv	80	30	B	W05		**409**
12	Naskapi N-30	UM	1469.89	13	SEI	SH	15	10	irr	none	nv	70	40	C	W07		
13	Naskapi N-30	UM	1469.89	14	SEI	R-SH	20	15	flat irr	none	nv	125	35	B	W10		
13.5	Naskapi N-30	UM	1469.89	15										B	W12		
13.5	Naskapi N-30	UM	1469.89	15										B	W12		
14	Naskapi N-30	UM	1469.89	16	SEI	SH	30	25	irr	none	nv	75	65	D	W07		
15	Naskapi N-30	UM	1473.81	11	SEI	E	3				nv	100	95	B	W01		**320**
16	Naskapi N-30	UM	1473.81	1	SEI	R-SH	0				nv	105	50	B	W01		**315**
17	Naskapi N-30	UM	1473.81	2	SEI	R-SH	0				nv	50	40	D	W02		**326**
18	Naskapi N-30	UM	1473.81	3	SEI	R-SH	1				nv	105	55	B	W01		**315**
19	Naskapi N-30	UM	1473.81	4	SEI	R-SH	1				nv	70	60	B	W01		**319**
20	Naskapi N-30	UM	1473.81	5	SEI	R-SH	1	3	flat irr	none	patchy	35	30	D	W02		**317**
21	Naskapi N-30	UM	1473.81	6	SEI	R-IR	15	10	irr	none	nv	150	130	A	W10		
21	Naskapi N-30	UM	1473.81	6	SEI	R-IR	15	10	irr	none	nv	150	130	A	W10		
22	Naskapi N-30	UM	1473.81	7	SEI	R-SH	0				nv	90	70	D	W02		**321**
23	Naskapi N-30	UM	1473.81	8	SEI	R-SH	15	15	irr	none	nv	205	110	C	W07		
24	Naskapi N-30	UM	1473.81	9	SEI	R-SH	10	10	irr	none	nv	100	55	D	W07		
24	Naskapi N-30	UM	1473.81	9	SEI	R-SH	10	10	irr	none	nv	100	55	D	W07		
25	Naskapi N-30	UM	1473.81	10	SEI	R-SH	10	10	flat irr	none	nv	130	95	D	W07		
26	Naskapi N-30	UM	1473.81	12	SEI	E	15	10	flat irr	none	nv	75	60	C	W07		
27	Naskapi N-30	UM	1473.81	13	SEI	SH	20	10	irr	none	nv	110	45	B	W10		
28	Naskapi N-30	UM	1473.81	14	SEI	R-SH	5	10	subh	none	nv	140	70	C	W07		
28	Naskapi N-30	UM	1473.81	14	SEI	R-SH	5	10	subh	none	nv	140	70	C	W07		
29	Naskapi N-30	UM	1473.81	15	SEI	SH	25	15	irr	none	nv	120	90	D	W04		**388**
30	Naskapi N-30	UM	1473.81	16	SEI	R-SH	10	15	flat	none	nv	140	130	B	W10		
30	Naskapi N-30	UM	1473.81	16	SEI	R-SH	10	15	flat	none	nv	140	130	B	W10		
31	Naskapi N-30	UM	1473.81	17	SEI	R-SH	1	10	subh	none	nv	210	80	A	W03		**324**
31	Naskapi N-30	UM	1473.81	17	SEI	R-SH	1	10	subh	none	nv	210	80	A	W03		**324**
32	Alma K-85	LCC	2462.91	1	COMP	R-SH	0				patchy	7	5	A	C24		
33	Alma K-85	LCC	2462.91	2	COMP	SH	0				patchy	9.5	2.5	E	C26		
34	Alma K-85	LCC	2462.91	3	COMP	R-SH	5	0.8	rnd	none	patchy	11	10	F	C18.5		**1412**
35	Alma K-85	LCC	2462.91	4	COMP	R-SH	5	0.5	rnd	none	patchy	3.5	3.5	F	C26		

36	Alma K-85	LCC	2464.32	1	COMP	R-SH	3	1	rnd	none	nv	11	9	E	C08	a	**394**
37	Alma K-85	LCC	2464.32	2	COMP	R-IR	1	0.6	rnd	subp	rim	18	5.5	E	C18		**1266**
37	Alma K-85	LCC	2464.32	2	COMP	R-IR	1	0.6	rnd	subp	rim	18	5.5	E	C18		**1266**
38	Alma K-85	LCC	2464.32	3	COMP	E	0				conc	12	5	D	C06		**362**
39	Alma K-85	LCC	2464.32	4	COMP	E	0				patchy	4	4	D	C25		
40	Alma K-85	LCC	2464.32	5	COMP	R-SH	0				nv	11	10	B	C04		**320**
41	Alma K-85	LCC	2465.81	1	COMP	SH	5	1.2	rnd	none	patchy	18	12	E	C22		**1850**
42	Alma K-85	LCC	2465.81	2	COMP	SH	1	0.7	rnd	parr	nv	14	13	E	C13	a	**521**
43	Alma K-85	LCC	2465.81	3	COMP	R-SH	0				nv	14	10	B	C24		
44	Alma K-85	LCC	2465.81	5	COMP	R-SH	0				nv	17	11	D	C06		**380**
44	Alma K-85	LCC	2465.81	5	COMP	R-SH	0				nv	17	11	D	C06		**380**
43.5	Alma K-85	LCC	2465.81	4										D	C28		
45	Alma K-85	LCC	2465.81	6	COMP	R-SH	0				patchy	27	22	E	C05	c	**375**
46	Alma K-85	LCC	2474.79	1	COMP	SH	0				nv	14	6	E	C04		**347**
47	Alma K-85	LCC	2474.79	2	COMP	R-SH	5	0.5	rnd	none	rim	7	6.5	D	C25		
48	Alma K-85	LCC	2474.79	3	COMP	R-IR	3	0.6	rnd	none	rim	8	6	D	C25		
49	Alma K-85	LCC	2474.79	4	COMP	R-IR	1	0	rnd	none	patchy r	5	3	E	C26		
50	Alma K-85	LCC	2474.79	5	COMP	SH	0				patchy	7	4	C	C25		
51	Alma K-85	LCC	2474.79	6	COMP	R-IR	0				rim	10	2.5	E	C07		**388**
52	Alma K-85	LCC	2474.79	7	COMP	R-SH	1	0.5	rnd	parr	rim	10	8	D	C25		
53	Alma K-85	LCC	2474.79	8	COMP	R-SH	0				patchy r	5.5	2.5	E	C26		
54	Alma K-85	LCC	2474.79	9	COMP	E	0				nv	7	5	E	C26		
55	Alma K-85	LCC	2474.79	10	COMP	SH	1	0.3	rnd	subp	rim	7.5	2.5	E	C26		
56	Alma K-85	LCC	2474.79	11	COMP	R-SH	1	0.3	rnd	parr	nv	12	5.5	D	C12	a	**490**
57	Alma K-85	LCC	2474.79	12	COMP	SH	10	4	rnd	subp	nv	30	13	E	C08	a	**399**
58	Alma K-85	LCC	2474.79	13	COMP	R-IR	0				nv	13	7	E	C10	c	**431**
59	Alma K-85	LCC	2474.79	14	COMP	R-SH	0				nv	13	5		C09		**410**
60	Alma K-85	LCC	2465.18	1	COMP	E	0				patchy	7	3.5	D	C25		
61	Alma K-85	LCC	2465.18	2	COMP	SH	0				nv	5	4.5	E	C11	b	**463**
62	Alma K-85	LCC	2465.18	3	COMP	R-IR	0				patchy	75	60	E	C16		**1051**
62	Alma K-85	LCC	2465.18	3	COMP	R-IR	0				patchy	75	60	E	C16		**1051**
62	Alma K-85	LCC	2465.18	3	COMP	R-IR	0				patchy	75	60	E	C16		**1051**
63	Alma K-85	LCC	2465.18	4	COMP	SH	1	1	rnd	none	nv	25	21	E	C08	a	**401**
64	Thebaud #3	LM	3911.84	1	SEI	R-SH	0				nv	55	20	B	C14		**586**
65	Thebaud #3	LM	3911.84	2	SEI	R-IR	5	3	irr	none	nv	40	25	E	C14		**606**
65.5	Thebaud #3	LM	3911.84	4										A	C27		
65.6	Thebaud #3	LM	3911.84	5										A	C27		
66	Thebaud #3	LM	3911.84	6	SEI	SH	0				nv	34	32	E	C10	c	**423**
67	Thebaud #3	LM	3911.84	7	SEI	R	1	4	rnd	parr	nv	40	33	E	C11	b	**473**
68	Thebaud #3	LM	3901.75	2	SEI	R-IR	0				nv	40	29	D	C04.5		**331**
68.5	Thebaud #3	LM	3901.75	3										D	C28		
69	Thebaud #3	LM	3901.75	1	SEI	R-SH	1	1	rnd	none	nv	40	10	C	C09		**408**
70	Thebaud #3	LM	3901.75	4	SEI	R-IR	10	8	flat irr	subp	nv	75	50	B	C11		**452**
70.5	Thebaud #3	LM	3915.04	1										B	C27		
70.5	Thebaud #3	LM	3915.04	1										B	C27		
70.5	Thebaud #3	LM	3915.04	1										B	C27		
70.5	Thebaud #3	LM	3915.04	1										B	C27		
71	Thebaud I-93	LM	3950.18	1	SEI	E	0				nv	18	13	E	C22		**1853**
72	Thebaud I-93	LM	3068.39	1	SEI	R	0				nv	9	9	E	C08	b	**414**
73	Thebaud I-93	LM	3068.39	2	SEI	R	0				nv	15	11	E	C07		**382**
74	Thebaud I-93	LM	3936.1	2	SEI	R-SH	1	2	flat	subp	nv	40	25	D	C12	a	**462**
75	Thebaud I-93	LM	3936.1	3	SEI	R-SH	5	1	subh	none	nv	30	20	B	C24		
76	Thebaud I-93	LM	3936.1	4	SEI	R-SH	3	1	subh	none	nv	31	20	C	C20		**1825**
77	Thebaud I-93	LM	3936.1	5	SEI	E	0				nv	60	32	B	C07		**387**
78	Thebaud I-93	LM	3936.1	6	SEI	R-IR	5				nv	28	9	E	C05	a	**359**
79	Thebaud I-93	LM	3936.1	7	SEI	R-SH	0				nv	30	25	B	C11	a	**465**
80	Thebaud I-93	LM	3936.1	8	SEI	SH	1	1	subh	subp	nv	16	14	D	C20		**1696**
81	Thebaud I-93	LM	3936.1	9	SEI	SH	0				nv	35	35	B	C10	b	**441**
82	Thebaud I-93	LM	3936.1	10	SEI	R-SH	10	3	irr	none	nv	30	23	D	C04.5		**345**
83	Thebaud I-93	LM	3936.1	11	SEI	R-SH	1	3	irr	none	nv	29	28	A	C17		**1027**
84	Thebaud C-74	LM	3908.65	1	SEI	R-SH	0				nv	100	60	E	C11	b	**461**
84	Thebaud C-74	LM	3908.65	1	SEI	R-SH	0				nv	100	60	E	C11	b	**461**
84	Thebaud C-74	LM	3908.65	1	SEI	R-SH	0				nv	100	60	E	C11	b	**461**

85	Thebaud C-74	LM	3921.98	1	SEI	R-SH	0				nv	40	13		C26		
86	Thebaud C-74	LM	3921.98	2	SEI	R	0				nv	90	65		C05	a	**354**
87	Thebaud C-74	LM	3921.98	1	COMP	E	10	8	flat	subp	nv	75	40	B	C05	b	**372**
88	Thebaud C-74	LM	3921.98	2	COMP	R-IR	25	3	irr	none	nv	51	22	A	C18		**1244**
89	Thebaud C-74	LM	3876.72	1	SEI	SH	0				nv	45	25	B	C05	b	**371**
90	Thebaud C-74	LM	3876.72	2	SEI	R-SH	0				nv	55	30	B	C10	b	**423**
91	Thebaud C-74	LM	3876.72	3	SEI	R-SH	0				nv	13	13	B	C14		**579**
92	Thebaud C-74	LM	3876.72	4	SEI	R	0				nv	9	9	B	C05	a	**370**
93	Thebaud C-74	LM	3876.72	5	SEI	E	1	3			nv	50	32	B	C10	b	**443**
93.5	Thebaud C-74	LM	3876.72	6										D	C28		
94	Thebaud C-74	LM	3876.72	8	SEI	R-IR	1	3	irr	none	nv	18	14	D	C09		**435**
94.5	Thebaud C-74	LM	3876.72	9										C	C28		
95	Thebaud C-74	LM	3876.72	10	SEI	SH	0				nv	10	3	B	C08	a	**412**
96	Glenelg E-58	UM	3525.16	1	COMP	R-SH	5	4	irr	subp	nv	60	52	A	C05	b	**371**
97	Glenelg E-58	UM	3525.16	2	COMP	R-SH	0				nv	40	37	B	C18		**1157**
98	Glenelg E-58	UM	3525.16	3	COMP	R-IR	20	8	flat irr	subp	nv	50	20	B	C24		
98.5	Glenelg E-58	UM	3525.16	4										A	C24		
99	Glenelg E-58	UM	3525.16	5	COMP	SH	0				patchy	100	40	B	C18		**1107**
100	Glenelg E-58	UM	3525.16	6	COMP	R-SH	0				nv	12	8.5	B	C15	a	**670**
101	Glenelg E-58	UM	3525.16	7	COMP	E	0				nv	55	25	E	C26		
101	Glenelg E-58	UM	3525.16	7	COMP	E	0				nv	55	25	E	C26		
101	Glenelg E-58	UM	3525.16	7	COMP	E	0				nv	55	25	E	C26		
102	Glenelg E-58	UM	3525.16	8	COMP	R-SH	0				nv	70	70	E	C13	a	**499**
103	Glenelg E-58	UM	3525.16	9	COMP	R-SH	3	4	irr	none	nv	65	35	F	C08	a	**410**
103	Glenelg E-58	UM	3525.16	9	COMP	R-SH	3	4	irr	none	nv	65	35	B	C08	a	**410**
104	Glenelg E-58	UM	3525.16	10	COMP	R-SH	0				patchy	50	35	B	C05	c	**372**
104	Glenelg E-58	UM	3525.16	10	COMP	R-SH	0				patchy	50	35	B	C05	c	**372**
104	Glenelg E-58	UM	3525.16	10	COMP	R-SH	0				patchy	50	35	B	C05	c	**372**
104	Glenelg E-58	UM	3525.16	10	COMP	R-SH	0				patchy	50	35	B	C05	c	**372**
105	Glenelg E-58	UM	3525.16	11	COMP	SH	0				nv	53	22	B	C17		**990**
105	Glenelg E-58	UM	3525.16	11	COMP	SH	0				nv	53	22	B	C17		**990**
106	Glenelg E-58	UM	3525.16	12	COMP	R-SH	0				nv	40	30	E	C16		**990**
107	Glenelg E-58	UM	3525.16	13	COMP	SH	10	4	flat irr	none	nv	42	21	D	C25		
108	Glenelg E-58	UM	3525.16	14	COMP	R-SH	0				nv	31	30	E	C07		**389**
108	Glenelg E-58	UM	3525.16	14	COMP	R-SH	0				nv	31	30	E	C07		**389**
109	Glenelg E-58	UM	3525.16	15	COMP	SH	0				nv	90	72	E	C16		**1041**
109	Glenelg E-58	UM	3525.16	15	COMP	SH	0				nv	90	72	E	C16		**1041**
110	Glenelg E-58	UM	3525.16	16	COMP	SH	0				nv	94	40	E	C08	a	**400**
110	Glenelg E-58	UM	3525.16	16	COMP	SH	0				nv	94	40	E	C08	a	**400**
111	Glenelg E-58	UM	3525.16	17	COMP	R-IR	20	8	irr	none	nv	50	45	A	C24		
112	Glenelg E-58	UM	3525.16	18	COMP	R-SH	10	5	flat irr	none	nv	65	30	D	C25		
113	Glenelg E-58	UM	3525.16	19	COMP	SH	1	2	euh	none	nv	35	25	E	C13	a	**528**
114	Glenelg E-58	UM	3525.16	20	COMP	SH	0				nv	80	50	B	C04		**317**
114	Glenelg E-58	UM	3525.16	20	COMP	SH	0				nv	80	50	B	C04		**317**
115	Glenelg E-58	UM	3525.16	21	COMP	R-SH	0				nv	40	18	B	C07		**387**
116	Glenelg E-58	UM	3525.16	22	COMP	SH	0				nv	60	40	E	C08	a	**398**
116	Glenelg E-58	UM	3525.16	22	COMP	SH	0				nv	60	40	E	C08	a	**398**
117	Glenelg E-58	UM	3532.08	1	COMP	R-IR	25	20	flat irr	none	nv	85	30	A	C24		
118	Glenelg E-58	UM	3532.08	2	COMP	SH	0				nv	30	14	B	C13	b	**503**
119	Glenelg E-58	UM	3532.08	3	COMP	R-SH	1	10	flat	none	nv	115	70	A	C19		**1686**
119	Glenelg E-58	UM	3532.08	3	COMP	R-SH	1	10	flat	none	nv	115	70	B	C19		**1686**
120	Glenelg E-58	UM	3532.08	4	COMP	R-SH	1				nv	30	18	E	C10	c	**438**
121	Glenelg E-58	UM	3532.08	5	COMP	R	10	8	irr	none	nv	55	35	D	C12	a	**487**
122	Glenelg E-58	UM	3532.08	6	COMP	SH	1	0	rnd	none	nv	27	22	B	C10	b	**420**
123	Glenelg E-58	UM	3532.08	7	COMP	R-SH	1	0	subh	subp	nv	70	70	B	C10	b	**423**
123	Glenelg E-58	UM	3532.08	7	COMP	R-SH	1	0	subh	subp	nv	70	70	B	C10	b	**423**
124	Glenelg E-58	UM	3532.08	8	COMP	E	0				nv	90	50	B	C07		**388**
125	Glenelg E-58	UM	3532.08	9	COMP	R-SH	1	1	subh	subp	nv	34	29	E	C10	c	**441**
126	Glenelg E-58	UM	3535.83	1	COMP	R-SH	0				nv	14	12	A	C03	a	**276**
127	Glenelg E-58	UM	3535.83	2	COMP	R-SH	1	1	rnd	subp	nv	31	28	E	C02		**241**
128	Glenelg E-58	UM	3535.83	3	COMP	R-IR	5	2	rnd	none	nv	30	20	F	C26		
129	Glenelg E-58	UM	3535.83	4	COMP	SH	3	1	rnd	none	nv	8	5	C	C25		
130	Glenelg E-58	UM	3535.83	5	COMP	R-SH	1	2	flat	none	nv	13	10	E	C07		**382**

131	Glenelg E-58	UM	3535.83	6	COMP	R-IR	0				nv	13	10	E	C07		**383**
132	Glenelg E-58	UM	3535.83	7	COMP	R-SH	3				nv	11	8	B	C04		**336**
133	Glenelg E-58	UM	3535.83	8	COMP	E	0				nv	25	7	F	C26		
134	Glenelg E-58	UM	3535.83	9	COMP	R-SH	0				nv	23	12	E	C14		**551**
135	Glenelg E-58	UM	3535.83	10	COMP	R-SH	0				nv	11	11	A	C04		**318**
136	Glenelg E-58	UM	3532.19	1	COMP	R-SH	10	3	flat	none	nv	21	16	A	C24		
137	Glenelg E-58	UM	3532.19	2	COMP	R-SH	0				nv	14	10	B	C10	b	**439**
138	Glenelg E-58	UM	3532.19	3	COMP	R-SH	0				nv	70	60	B	C19		**1652**
138	Glenelg E-58	UM	3532.19	3	COMP	R-SH	0				nv	70	60	B	C19		**1652**
139	Glenelg E-58	UM	3532.19	4	COMP	R-SH	0				nv	70	25	B	C17		**1041**
140	Glenelg E-58	UM	3532.19	5	COMP	SH	0				nv	50	15	A	C21		**1840**
140	Glenelg E-58	UM	3532.19	5	COMP	SH	0				nv	50	15	A	C21		**1840**
141	Glenelg E-58	UM	3532.19	6	COMP	SH	10	9	irr	none	nv	55	40	D	C25		
142	Glenelg E-58	UM	3532.19	7	COMP	SH	0				nv	30	15	E	C19		**1545**
143	Glenelg E-58	UM	3532.19	8	COMP	R-SH	30	10	irr	subp	nv	215	50	D	C25		
143	Glenelg E-58	UM	3532.19	8	COMP	R-SH	30	10	irr	subp	nv	215	50	D	C25		
144	Glenelg E-58	UM	3532.19	9	COMP	R-SH	3	1	irr	none	nv	12	11	D	C25		
145	Glenelg E-58	UM	3532.19	10	COMP	R-IR	5	3	flat irr	none	nv	30	20	A	C24		
146	Glenelg E-58	UM	3551.29	1	COMP	E	3				nv	12	10	B	C07		**381**
147	Glenelg E-58	UM	3551.29	2	COMP	R-SH	25	11	irr	none	nv	65	40	F	C26		
148	Glenelg E-58	UM	3551.29	3	COMP	R	0				nv	38	30	E	C23		**2690**
149	Glenelg E-58	UM	3528.21	1	COMP	E	1	1	subh	subp	nv	45	27	E	C07		**383**
150	Glenelg E-58	UM	3528.21	2	COMP	SH	0				nv	44	20	E	C08	a	**393**
151	Glenelg E-58	UM	3528.21	3	COMP	SH	0				nv	25	21	B	C19		**1561**
152	Glenelg E-58	UM	3528.21	4	COMP	SH	0				nv	55	45	B	C19		**1603**
153	Glenelg E-58	UM	3528.21	5	COMP	R-SH	5	10	irr	none	nv	100	40	A	C07		**380**
154	Glenelg E-58	UM	3528.21	6	COMP	E	0				nv	25	25	E	C08	a	**403**
155	Glenelg E-58	UM	3528.21	7	COMP	R-SH	10	6	flat irr	subp	patchy	51	41	A	C24		
155	Glenelg E-58	UM	3528.21	7	COMP	R-SH	10	6	flat irr	subp	patchy	51	41	A	C24		
156	Glenelg E-58	UM	3536.82	1	COMP	R-IR	1	0.5	subh	subp	nv	40	30	B	C08	b	**395**
157	Glenelg E-58	UM	3536.82	2	COMP	R-IR	0				patchy	21	13	A	C14		**577**
158	Glenelg E-58	UM	3536.82	3	COMP	R-SH	0				nv	35	20	E	C14		**554**
159	Glenelg E-58A	UM	3733.43	1	COMP	R-IR	0				nv	16	9	F	C07		**387**
160	Glenelg E-58A	UM	3733.43	2	COMP	R-IR	5	1.1	irr	none	nv	17	8	A	C24		
161	Glenelg E-58A	UM	3733.43	3	COMP	R-IR	1				nv	40	35	B	C10	b	**444**
161	Glenelg E-58A	UM	3733.43	3	COMP	R-IR	1				nv	40	35	B	C10	b	**444**
162	North Triumph G-43	LCC	3285.15	1	COMP	R-SH	0				patchy	51	21	D	C04.5		**346**
163	North Triumph G-43	LCC	3285.15	2	COMP	R-SH	20	6	subh	none	patchy	50	10	A	C24		
164	North Triumph G-43	LCC	3285.15	3	COMP	R-IR	1	1	rnd	none	nv	29	20	A	C24		
165	North Triumph G-43	LCC	3285.15	4	COMP	SH	0				conc	21	15	E	C19		**1623**
166	North Triumph G-43	LCC	3285.15	5	COMP	R-IR	3	1	subh	subp	nv	40	23	E	C11	b	**453**
167	North Triumph G-43	LCC	3285.15	6	COMP	R-SH	0				patchy	24	13	F	C04		**316**
168	North Triumph G-43	LCC	3289.64	1										A	C27		
168	North Triumph G-43	LCC	3289.64	2	COMP	R-SH	0				nv	21	4	E	C05	a	**362**
169	North Triumph G-43	LCC	3289.64	3	COMP	R-IR	0				nv	13	5	E	C08	b	**416**
170	North Triumph G-43	LCC	3289.64	4	COMP	SH	0				nv	8	7.5	E	C01		**76**
171	North Triumph G-43	LCC	3289.64	5	COMP	R-IR	0				nv	22	12	E	C04		**310**
172	North Triumph G-43	LCC	3289.64	6	COMP	SH	0				nv	40	32	B	C03	b	**281**
172	North Triumph G-43	LCC	3289.64	6	COMP	SH	0				nv	40	32	B	C03	b	**281**
173	North Triumph G-43	LCC	3289.64	7	COMP	R-SH	0				nv	19	11	A	C21		**1740**
174	North Triumph G-43	LCC	3289.64	8	COMP	SH	0				patchy	55	20	E	C05	a	**369**
175	North Triumph G-43	LCC	3289.64	9	COMP	R-IR	0				nv	12	7	A	C24		
176	North Triumph G-43	LCC	3289.64	10	COMP	SH	0				nv	16	6	E	C22		**1854**
177	North Triumph G-43	LCC	3289.64	11	COMP	E	0				nv	8	4	E	C26		
178	North Triumph G-43	LCC	3289.64	12	COMP	SH	0				nv	10	8	A	C24		
179	North Triumph G-43	LCC	3289.64	13	COMP	R-IR	0				nv	17	10	E	C16		**1047**
180	North Triumph G-43	LCC	3289.64	14	COMP	R-SH	0				nv	20	16	E	C08	a	**409**
181	North Triumph G-43	LCC	3289.64	15	COMP	R-SH	30	3	subh	none	nv	30	22	E	C26		
182	North Triumph G-43	LCC	3289.64	16	COMP	R-SH	0				nv	32	24	A	C18		**1188**
182	North Triumph G-43	LCC	3289.64	16	COMP	R-SH	0				nv	32	24	A	C18		**1188**
183	North Triumph G-43	UM	3828.04	1	COMP	SH	0				nv	9	7	B	C08	a	**407**
184	North Triumph G-43	UM	3828.04	2	COMP	R-IR	30	13	irr	none	nv	30	22	E	C26		
185	North Triumph G-43	UM	3828.04	3	COMP	R-SH	0				nv	29	22	E	C07		**383**

186	North Triumph G-43	UM	3828.04	4	COMP	SH	0				nv	22	21	B	C13	b	**531**
186	North Triumph G-43	UM	4402.95	1										F	C29		
186	North Triumph G-43	UM	4402.95	2										A	C27		
186	North Triumph G-43	UM	4402.95	3										B	C27		
186	North Triumph G-43	UM	4402.95	4										A	C27		
187	North Triumph G-43	UM	4402.95	5										B	C27		
187	North Triumph G-43	UM	4402.95	6										A	C27		
187	North Triumph G-43	UM	4402.95	7										B	C27		
187	North Triumph G-43	UM	4402.95	8										B	C27		
187	North Triumph G-43	UM	4402.95	9										A	C27		
187	North Triumph G-43	UM	4402.95	10										E	C29		
187	North Triumph G-43	UM	4402.95	11										E	C29		
187	North Triumph G-43	UM	4010.25	1	COMP	R-SH	20	6	irr	none	patchy	44	20	A	C24		
188	North Triumph G-43	UM	4010.25	2	COMP	SH	5	1	rnd	subp	rim	23	21	B	C04		**322**
189	North Triumph G-43	UM	4010.25	3	COMP	R-SH	40	18	irr	none	patchy	60	58	A	C24		
190	North Triumph G-43	UM	4010.25	4	COMP	E	0				patchy	16	6	B	C11	a	**463**
191	North Triumph G-43	UM	4010.25	5	COMP	R-SH	1	1	rnd	subp	nv	14	12	F	C26		
192	North Triumph G-43	UM	4010.25	6	COMP	R-SH	10	6	irr	none	patchy	39	21	C	C12	b	**483**
193	North Triumph G-43	UM	4010.25	7	COMP	R-SH	5	10	irr/roun	none	patchy	71	70	C	C12	b	**479**
194	North Triumph G-43	UM	3835.78	1	COMP	R-SH	3	2	irr	none	patchy	30	12	C	C06		**384**
195	North Triumph G-43	UM	3835.78	2	COMP	R-SH	0				nv	29	17	C	C06		**381**
196	North Triumph G-43	UM	3848.15	1	COMP	R-IR	1				patchy	25	15	E	C05	c	**376**
197	North Triumph G-43	UM	4402.34	2	COMP	SH	0				nv	26	13	E	C08	a	**390**
198	North Triumph G-43	UM	4402.34	3	COMP	R-SH	10	8	irr	none	nv	26	12	A	C24		
199	North Triumph G-43	UM	4402.34	4	COMP	R-SH	1	1	subh	none	nv	18	13	B	C24		
200	North Triumph G-43	UM	4402.34	5	COMP	R-SH	0					12	10	E	C26		
201	North Triumph G-43	UM	4402.34	6	COMP	SH	1	0	rnd	none	nv	10	7	B	C24		
202	North Triumph G-43	UM	4402.34	7	COMP	R-SH	0				nv	50	18	E	C07		**384**
202	North Triumph G-43	UM	4402.34	7	COMP	R-SH	0				nv	50	18	E	C07		**384**
203	North Triumph G-43	UM	4402.34	8	COMP	R-SH	0				nv	19	10	E	C04		**324**
204	North Triumph G-43	UM	4402.34	9	COMP	R-IR	0				nv	12	8	F	C26		
205	North Triumph G-43	UM	4402.34	10	COMP	SH	0				nv	20	16	E	C26		
206	North Triumph G-43	UM	4402.34	11	COMP	R-SH	0				nv	16	10	B	C19		**1520**
207	North Triumph G-43	UM	4402.34	12	COMP	R-IR	15	2	irr	none	nv	50	20	B	C24		
208	North Triumph G-43	UM	4402.34	13	COMP	R-SH	0				nv	30	7	E	C16		**947**
209	North Triumph G-43	UM	4402.34	14	COMP	R-SH	0				nv	14	5	B	C24		
210	North Triumph G-43	UM	4402.34	15	COMP	SH	10	2	rnd	subp	nv	22	15	C	C25		
211	North Triumph G-43	UM	4402.34	16	COMP	SH	0				nv	14	7	E	C26		
212	North Triumph G-43	UM	4402.34	17	COMP	R-IR	0				nv	41	23	E	C26		
212	North Triumph G-43	UM	4402.34	17	COMP	R-IR	0				nv	41	23	F	C26		
213	North Triumph G-43	UM	4402.34	18	COMP	R-SH	3	2	irr	none	nv	30	20	B	C24		
214	North Triumph G-43	UM	4402.34	19	COMP	R-SH	0				nv	13	10	D	C25		
215	North Triumph G-43	UM	4402.34	20	COMP	R-IR	0				nv	32	23	B	C02		**260**
215	North Triumph G-43	UM	4402.34	20	COMP	R-IR	0				nv	32	23	B	C02		**260**
216	Venture #1	LM	4600.87	1	SEI	R-IR	0				nv	10	4	D	C01.5		**118**
217	Venture #1	LM	4600.87	2	SEI	SH	0				nv	12	9	A	C03	a	**285**
218	Venture #1	LM	4600.87	3	SEI	R-SH	20	5	flat	subp	nv	85	50	C	C25		
219	Venture #1	LM	4600.87	4	SEI	R-SH	0				nv	34	17	E	C07		**384**
220	Venture #1	LM	4600.87	5	SEI	R-SH	0				nv	28	14	E	C15	b	**795**
221	Venture #1	LM	4598.35	1	COMP	R-SH	1	1	rnd	none	patchy	32	28	D	C04.5		**316**
221	Venture #1	LM	4598.35	1	COMP	R-SH	1	1	rnd	none	patchy	32	28	D	C04.5		**316**
222	Venture #1	LM	4598.35	2	COMP	R-IR	1	0	rnd	none	nv	30	22	B	C07		**387**
222	Venture #1	LM	4598.35	2	COMP	R-IR	1	0	rnd	none	nv	30	22	B	C07		**387**
223	Venture #3	LM	4871.58	1	SEI	SH	1	1	rnd	none	nv	30	19	E	C10	c	**432**
224	Venture #3	LM	4871.58	2	SEI	R-SH	0				nv	35	30	A	C10	a	**417**
225	Venture #3	LM	4872.58	1	SEI	SH	0				nv	25	16	E	C13	a	**520**
226	Venture #3	LM	4872.58	2										E	C29		
226	Venture #3	LM	4872.58	3	SEI	R	1	5	subh	none	nv	66	40	A	C14		**561**
227	Venture #3	LM	4882.37	1	SEI	R-SH	0				nv	64	42	E	C14		**565**
227	Venture #3	LM	4882.37	1	SEI	R-SH	0				nv	64	42	E	C14		**565**
228	Venture #3	LM	4887.39	6										A	C27		
228	Venture #3	LM	4887.39	7	SEI	E	0				nv	36	5	C	C25		
229	Venture #3	LM	4887.39	11	SEI	R-IR	5	1.5	irr	none	nv	12	10	C	C04.5		**332**

230	Venture #3	LM	4887.39	14										D	C28		
230	Venture #3	LM	4887.39	15										A	C27		
230	Venture #3	LM	4887.39	16	SEI	R-SH	0				nv	10	8	D	C12	a	**490**
231	Venture #3	LM	4887.39	18										A	C27		
231	Venture #3	LM	4887.39	19	SEI	R-SH	0				nv	7	7	B	C10	b	**437**
232	Venture #3	LM	4887.39	20										D	C28		
232	Venture #3	LM	4887.39	21										A	C27		
232	Venture #3	LM	4887.39	22	SEI	E	0				nv	18	6	C	C25		
233	Venture #3	LM	4887.39	24										C	C28		
233	Venture #3	LM	4887.39	25	SEI	R-SH	0				nv	7	4	B	C04		**338**
234	Venture #4	LM	5371.77	1	COMP	R-SH	10	9	irr	none	nv	50	40	A	C17		**1011**
235	Venture #4	LM	5372.85	1	SEI	R-SH	0				nv	29	11	B	C11	a	**466**
235	Venture #4	LM	5372.85	1		R-SH								C	C12	b	
236	Venture #4	LM	5372.85	2	SEI	R-IR	0				nv	21	17	E	C22		**1837**
237	Venture #4	LM	5372.85	3	SEI	R-SH	3				nv	52	35	E	C13	a	**513**
238	Venture #4	LM	5372.85	4	SEI	R-SH	0				nv	13	10	A	C24		
239	Venture #4	LM	5372.85	5	SEI	R-IR	0				nv	23	14	A	C14		**557**
240	Venture #4	LM	5372.85	6	SEI	SH	0				nv	41	16	E	C11	b	**476**
241	Venture #4	LM	5372.85	7	SEI	E	0				nv	41	35	E	C08	a	**397**
242	Venture #4	LM	5391.51	1	COMP	E	0				nv	95	29	E	C10	c	**429**
242	Venture #4	LM	5391.51	1	COMP	E	0				nv	95	29	E	C10	c	**429**
243	Venture #4	LM	5391.51	2	COMP	SH	1	0	flat	none	nv	42	35	A	C24		
243	Venture #4	LM	5391.51	2	COMP	SH	1	0	flat	none	nv	42	35	A	C24		
244	Venture #4	LM	5391.51	3	COMP	R-IR	10	15	subh	none	patchy	80	71	E	C22		**1755**
244	Venture #4	LM	5391.51	3	COMP	R-IR	10	15	subh	none	patchy	80	71	E	C22		**1755**
245	Venture #4	LM	5381.34	1	COMP	R-SH	5	1	rnd	none	nv	55	30	E	C04		**348**
245	Venture #4	LM	5381.34	1	COMP	R-SH	5	1	rnd	none	nv	55	30	E	C04		**348**
246	Venture #4	LM	5381.34	2	COMP	R-SH	0				nv	21	20	E	C10	c	**442**
246	Venture #4	LM	5381.34	2	COMP	R-SH	0				nv	21	20	E	C10	c	**442**
247	Venture #4	LM	5381.34	3	COMP	R-IR	15	6	irr	none	patchy	33	27	A	C24		
247	Venture #4	LM	5381.34	3	COMP	R-IR	15	6	irr	none	patchy	33	27	D	C25		
248	Venture #4	LM	5383.28	1										A	C27		
248	Venture #4	LM	5393.96	1	SEI	R-SH	0				nv	15	15	D	C14.5		**587**
249	Venture #4	LM	5393.96	2	SEI	R-SH	25	5	subh	none	nv	51	40	E	C26		
250	Peskowesk A-99	LCC	2238.65	1	COMP	R-SH	10	15	rnd	none	patchy	100	78	E	E11		**1049**
250	Peskowesk A-99	LCC	2238.65	1	COMP	R-SH	10	15	rnd	none	patchy	100	78	E	E11		**1049**
250	Peskowesk A-99	LCC	2238.65	1	COMP	R-SH	10	15	rnd	none	patchy	100	78	E	E11		**1049**
251	Peskowesk A-99	LCC	2238.65	2	SEI	R-SH	0				nv	82	35	E	E02		**322**
252	Peskowesk A-99	LCC	2238.65	3	SEI	R-SH	5				nv	111	40	A	E13		**1621**
253	Peskowesk A-99	LCC	2238.65	4	SEI	R-SH	0				nv	100	80	E	E13		**1638**
254	Peskowesk A-99	LCC	2238.65	5	SEI	R-IR	3	3	irr	none	nv	55	30	A	E09		**776**
255	Peskowesk A-99	LCC	2238.65	6	SEI	R-IR	0				nv	55	45	A	E16	a	
256	Peskowesk A-99	LCC	2238.65	7	SEI	R-IR	0				nv	77	55	E	E10	b	**959**
257	Peskowesk A-99	LCC	2238.65	8	SEI	R-SH	0				nv	60	45	A	E13		**1696**
258	Peskowesk A-99	LCC	2238.65	9										A	E19		
258	Peskowesk A-99	LCC	2238.65	10	SEI	R-SH	0				nv	71	25	E	E11		**1058**
259	Peskowesk A-99	LCC	2238.65	11	SEI	SH	5	10	flat	subp	nv	100	55	A	E03	a	**367**
260	Peskowesk A-99	LCC	2238.65	12	SEI	R-SH	5	6	flat	parr	nv	25	20	E	E13		**1656**
261	Peskowesk A-99	LCC	2238.65	13	SEI	R-IR	3	6	flat	subp	nv	44	24	E	E10	b	**967**
262	Peskowesk A-99	LCC	2238.65	14	SEI	R-IR	10	20	flat	subp	nv	47	20	A	E16	a	
263	Peskowesk A-99	LCC	2238.65	15	SEI	R-SH	0				nv	80	30	A	E03	a	**359**
264	Peskowesk A-99	LCC	2238.65	16	SEI	R-IR	15	9	irr	none	nv	40	35	A	E16	a	
265	Peskowesk A-99	LCC	2238.65	17	SEI	R-SH	10	60	flat	parr	nv	111	91	A	E04		**384**
266	Peskowesk A-99	LCC	2238.65	18	SEI	SH	0				nv	150	120	E	E10	a	**944**
267	Peskowesk A-99	LCC	2238.65	19	SEI	R-SH	0				nv	80	42	E	E14		**1751**
268	Peskowesk A-99	LCC	2238.65	20	SEI	SH	0				nv	115	75	E	E11		**1049**
269	Peskowesk A-99	LCC	2228.82	1	COMP	R-IR	20	25	flat	none	nv	51	20	F	E05	a	**449**
270	Peskowesk A-99	LCC	2228.82	2	SEI	R	5	10	flat irr	none	nv	130	70	B	E16	b	
270	Peskowesk A-99	LCC	2228.82	2	SEI	R	5	10	flat irr	none	nv	130	70	B	E16	b	
271	Peskowesk A-99	LCC	2228.82	3	SEI	R-SH	0				nv	70	45	A	E17	a	
272	Peskowesk A-99	LCC	2228.82	4	SEI	R-SH	0				nv	29	15	E	E14		**1833**
273	Peskowesk A-99	LCC	2228.82	5	SEI	SH	0				nv	58	52	E	E15		**2363**
274	Peskowesk A-99	LCC	2228.82	6	COMP	R-SH	1	3	irr	none	patchy	70	50	E	E13		**1645**

274	Peskowesk A-99	LCC	2228.82	6	COMP	R-SH	1	3	irr	none	patchy	70	50	E	E13		**1645**
274	Peskowesk A-99	LCC	2228.82	6	COMP	R-SH	1	3	irr	none	patchy	70	50	E	E13		**1645**
275	Peskowesk A-99	LCC	2228.82	7	SEI	R-SH	15	10	subh	none	nv	83	70	A	E17	a	
276	Peskowesk A-99	LCC	2228.82	8	SEI	R-SH	0				nv	35	30	F	E05	b	**412**
277	Peskowesk A-99	LCC	2228.82	9	SEI	R-SH	0				nv	55	30	A	E14		**1825**
277	Peskowesk A-99	LCC	2228.82	9	SEI	R-SH	0				nv	55	30	A	E14		**1825**
278	Peskowesk A-99	LCC	2228.82	10	SEI	R-SH	0	0	subh	none	nv	30	30	E	E14		**1873**
279	Peskowesk A-99	LCC	2228.82	11	SEI	R-IR	10	10	irr	none	nv	50	39	C	E18		
280	Peskowesk A-99	LCC	2228.82	12	SEI	R-SH	1	1	subh	none	nv	50	40	A	E14		**1799**
281	Peskowesk A-99	LCC	2228.82	13	SEI	SH	0				nv	103	41	A	E14		**1798**
282	Peskowesk A-99	LCC	2228.82	14	COMP	R-SH	1	10	flat	subp	patchy	130	65	E	E11		**1058**
282	Peskowesk A-99	LCC	2228.82	14	COMP	R-SH	1	10	flat	subp	patchy	130	65	E	E11		**1058**
282	Peskowesk A-99	LCC	2228.82	14	COMP	R-SH	1	10	flat	subp	patchy	130	65	E	E11		**1058**
283	Tantallon M-41	UM	4699.1	1	SEI	SH	0				nv	40	20	F	E02		**322**
284	Tantallon M-41	UM	4699.1	2	SEI	SH	0				nv	24	22	E	E04		**394**
285	Tantallon M-41	UM	4699.1	3										E	E19		
285	Tantallon M-41	MM	5296.24	1										B	E19		
285	Tantallon M-41	MM	5298.37	1	SEI	R-IR	0				nv	55	30	E	E05	a	**409**
286	Tantallon M-41	MM	5298.37	2	SEI	R-IR	0				nv	65	35	B	E05	a	**439**
287	Hermine E-94	LC	4940	1	COMP	R-SH	0	0			lined	51	30	E	E06		**403**
288	Hermine E-94	LC	4940	2	COMP	R-SH	0	0			nv	36	19	E	E08		**613**
289	Louisbourg J-47	MicMac	4047.39	4	COMP	SH	0	0			patchy	36	10	D	E01		**244**
290	Louisbourg J-47	MicMac	4408.5	1	COMP	R-IR	45	0			nv	31	13	F	E18		
291	Louisbourg J-47	MicMac	4408.5	2	COMP	R-IR	20				patchy	34	17	D	E06		**461**
292	Louisbourg J-47	MicMac	4408.5	3	COMP	E	5				nv	50	35	A	E07		**564**
293	Louisbourg J-47	MicMac	4408.5	4	COMP	R-IR	5				nv	61	26	E	E07		**553**
294	Louisbourg J-47	MicMac	4408.5	5	COMP	SH	10				patchy	29	17	B	E04		**395**
295	Louisbourg J-47	MicMac	4408.5	6	COMP	R-SH	0				nv	25	11	E	E05		**417**
296	Louisbourg J-47	MicMac	4408.5	7	COMP	R-IR	35				patchy	20	12	B	E03		**360**
297	Louisbourg J-47	MicMac	4408.5	8	COMP	R-SH	3				nv	15	11	D	E06		**406**
298	Louisbourg J-47	MicMac	5451.23	1	COMP	E	10				patchy	17	11	B	E12		**1115**
299	Louisbourg J-47	MicMac	5451.23	2	COMP	R-SH	0				patchy	12	3	E	E11		**1028**
300	Louisbourg J-47	MicMac	5451.23	3	COMP	R-IR	3				rim	25	17	D	E06		**480**
301	Louisbourg J-47	MicMac	5451.23	4	COMP	R-IR	5				patchy	44	39	D	E06		**456**

Table 8. Classification of external morphology of monazite grains

Group		Distinguishing features
E	Euhedral	Straight edges, fairly sharp corners, good crystal shape (i.e. pyramidal, prism, etc.)
SH	Subhedral	Somewhat straight edges, rather rounded corners, crystal shape is not always evident
R-SH	Rounded - subhedral	One or more fairly straight edges, most corners are rounded
R-IR	Rounded - irregular	Virtually no straight edges (may contain 1 or 2 tiny straight edges), virtually no corners (if present, they are rounded), irregular shape.
R	Rounded	No straight edges or corners

Table 9. Summary of types of monazites

Type	Reg-ional Type	similar to	No of grains	Age (range or mean)	Morphology	predom. REE type	Inclusions/ pitting	zoning	Interpretation
					Western basin				
5	W01	35	4	315-319.5	R-SH, E	B	none or rare	n.d.	Igneous offshore, late Carboniferous
34	W02		3	317, 321, 326	R-SH, SH	D	none or rare	1 patchy	Igneous offshore, late Carboniferous
35	W03	5	1	324.3	R-SH	A	minor	n.d.	Igneous offshore, late Carboniferous
36	W04		1	388	SH	D	25%	n.d.	mid Devonian
37	W05		3	399-409	R-SH	B	none	n.d.	Early Devonian, ?metamorphic
38	W06		1	515	R-IR	A	10%	n.d.	mid Cambrian age, likely not real
29	W07		11	high errors	E, SH, R-SH, R-IR	C, D	abt	n.d.	Low-grade metamorphic
28	W10		7	high errors	SH, R-SH, R-IR	A, B	abt	n.d.	Low-grade metamorphic
32	W11		1	high errors	no images	D			Low-grade metamorphic
31	W12		1	high errors	no images	B			Low-grade metamorphic
					Central basin				
1	C01		1	76	SH	E	none	n.d.	?Cretaceous volcanics
2	C01.5		1	118	R-IR	D	none	n.d.	?Cretaceous volcanics
3	C02		2	241-260	R-SH, R-IR	B, E	none or rare		Early Triassic to Late Permian
4	C03		3	276-285	SH, R-SH	A, B			Mid Permian
5	C04	35	11	310-348	SH, R-SH, R-IR	A, B, E, F	minor	patchy, rim	Igneous offshore; Carboniferous
6	C04.5		5	316-346	R-SH, R-IR	C, D	1, 5, 10%	patchy	Metasedimentary offshore; Carboniferous
7	C05		11	354-376	E, SH, R-SH +	A, B, E, N/A	1, 5, 10%	patchy	Late Devonian metamorphic
8	C06		4	362-384	E, R-SH	C, D	none or rare	conc, patchy	Late Devonian igneous
9	C07		16	380-389	E, R-SH, R-IR, R	A, B, E, F	1, 3, 5%	patchy, rim	Mid Devonian, at least some metamorphic
10	C08	12	16	390-416	E, SH, R-SH +	B, E, F	1, 3, 10%	n.d.	Early Devonian, at least some metamorphic
11	C09	14	3	408, 410, 435	R-SH, R-IR	C, D, N/A	2 w 1%	n.d.	Early Devonian to Silurian
12	C10	10	16	417-444	E, SH, R-SH, R-IR	A, B, E	8 w 1%	n.d.	Silurian, at least some metamorphic
13	C11		8	453-476	E, SH, R-SH +	B, E	1, 3, 10%	1 patchy	mid Ordovician
14	C12	11	7	462-490	R-SH, R	C, D	some	2 patchy	Early Ordovician
15	C13		7	499-531	SH, R-SH	B, E	2 w 1%	n.d.	Cambrian
16	C14		9	551-606	R-SH, R-IR, R	A, B, E	1, 5%	1 patchy	Late Neoproterozoic
17	C14.5		1	587	R-SH	D	none	n.d.	Late Neoproterozoic
18	C15		2	670, 795	R-SH	B, E	none	n.d.	Late to Mid Neoproterozoic

19	C16	20	5	947-1051	R-SH, R-SH, R-IR	E	none	1 patchy	Grenville, Late Mesoproterozoic
20	C17	19	4	990-1041	SH, R-SH	A, B	1, 10%	n.d.	Grenville, Late Mesoproterozoic
21	C18		4	1107-1266	SH, R-SH, R-IR	A, B, E	1, 25%	1patchy, 1 rim	mid Mesoproterozoic
22	C18.5		1	1412	R-SH	F	5%	patchy	Early Mesoproterozoic
23	C19		7	1520-1686	SH, R-SH	A, B, E	1%	1 conc	fresh northern Grenville; Early Mesoproterozoic to Late Paleoproterozoic
24	C20		2	1696, 1825	SH, R-SH	C, D	1, 3%	n.d.	Late Paleoproterozoic
25	C21		2	1740-1840	SH, R-SH	A	none	n.d.	Late Paleoproterozoic
26	C22		5	1755-1854	E, SH, R-IR	E	5, 10%	patchy	Late Paleoproterozoic
27	C23		1	2690	R	E	none	n.d.	reworked, Archean
28	C24		28	high errors	SH, R-SH, R-IR	A, B	abt	patchy	
29	C25		18	high errors	E, SH, R-SH, R-IR	C, D	abt	patchy, rim	
30	C26		21	high errors	E, SH, R-SH, R-IR	E, F, N/A	9 gr	patchy	
31	C27		17	high errors	no photos	A, B			
32	C28		7	high errors	no photos	C, D			
33	C29		4	high errors	no photos	E, F			
						Eastern basin			
39	E01		1	244	SH	D	none	patchy	Early Triassic
5	E02	35	2	322	SH, R-SH	E, F	none	n.d.	mid Carboniferous
7	E03		3	359-367	SH, R-SH, R-IR	A, B	35%, 5%	1 patchy	Late Devonian
9	E04		3	384-395	SH, R-SH	A, B, E	2 with 10%	1 patchy	mid Devonian
12	E05	10	5	409-449	R-SH, R-IR	B, E, F	1 with 20%	n.d.	Early Devonian-Silurian
14	E06	11	4	406, 480	R-SH, R-IR	D	3, 10, 20%	rim, patchy	Early Devonian to Early Ordovician
16	E07		2	553, 564	R-IR, E	A, E	2 with 5%	n.d.	Late Neoproterozoic
18	E08		1	776	R-IR	A	3%	n.d.	mid Neoproterozoic
19	E10	20	3	944-967	SH, R-IR	E	1 with 3%	n.d.	Late Mesoproterozoic
19	E11	20	5	1028-1058	SH, R-SH	E	1%, 10%	3- patchy	Late Mesoproterozoic
21	E12		1	1115	E	B	10%	patchy	Late Mesoproterozoic
23	E13		5	1621-1696	R-SH	A, E	1, 5, 5%	1 patchy	fresh southern Grenville; Late Paleoproterozoic
25	E14		7	1751-1873	SH, R-SH	A, E	1%	n.d.	fresh southern Grenville; Late Paleoproterozoic
28	E16		6	high errors	R-SH, R-IR, R	A, B	abt	n.d.	
29	E17		1	high errors	R-IR	C	10%	n.d.	
30	E18		1	high errors	R-IR	F	45%	n.d.	
31	E19		3	high errors	no photos	A, B, E			

APPENDIX I

Correction Factor Procedure

After calibrating, the correction factors for the interference of Th and Y on the Pb peak, and Th on the U peak need to be calculated. These are measured by measuring (e.g.) the Pb peak on the Pb standard, then the counts on the same peak position but on the Th standard, then measuring the Th peak on the Th standard. The JEOL software then calculates the correction factor, which it applies to the Pb counts on the unknown monazite grain to take into account the Th interference on that peak. Data can be calculated at a later stage with or without that correction factor, but new correction factors should be measured every time a calibration procedure occurs.

- In "Quantitative analysis", go to "Mnz CF", and load the "Mnz CF" condition trace element measuring settings. Check ("Quant Analysis" → "Measurement" → "Element condition") that the 40/20 time is selected, and that the background corrections are the same as for the standards. Also check that the baseline, HV and Gain are the same. If not, correct the offending elements, and re-save the condition so that it can be loaded next time.
- In "Standard" → "Measurement" → "Pos Input" check that the number of accumulations = 1 not 3.
- Go to crocoite (Pb standard) and ThO2 (Th standard) and make sure that good points are picked on the crystals, in "Standard" ("Stage cond." → "Pos. Input" → "Read & Apply"). Make sure that focusing is good.
- Back in "Quantitative Analysis" go to "Additional function", and type in the elements as below. Then click "Calibrate". It will measure the peak of the element on its own standard, then it will measure the peak of the other standard, and finally measure the 2^{nd} peak.
- Repeat for Y on Pb and Th on U.

APPENDIX II

Error Calculation Procedure

Quantification of errors in monazite chemical analysis is based on counting statistics. This arises from both the nature of X-rays and the functioning of an electron microprobe. The following section describes each step in assessing error through the monazite dating procedure. Radiation produced through beam excitation is recorded by counters in EMP. X-ray emission is a random phenomenon occurring through time, which obeys Poisson statistics (Scott and Love, 1983). The standard deviation (σ) of a typical Poisson distribution is equal to $\sqrt{N}$, where N is the number of counts. During a typical quantitative analysis, a spectrometer records a number of counts at the peak (N_p) through a length of time t_p. The standard deviation for peak measurement can be reported as $\sqrt{N_p}/t_p$. The spectrometer also measures counts from the background (N_b) during the length of time t_b, from which a standard deviation can also be calculated of the form $\sqrt{N_b}/t_b$.

Measurement values are reported as intensity (I) expressed in counts per second (cps). The intensities from peak and background correspond to the following equations:

$$I_p = N_p/t_p \text{ and } I_b = N_b/t_b$$

Where: I_p, I_b = intensity (cps) at both peak and background positions
N_p, N_b = total measured counts at both peak and background positions
t_p, t_b = measuring time (s) at both peak and background positions

Because continuum X-rays and other phenomena produce a continuous background radiation through the whole X-ray spectrum, the intensity measured at the peak must be corrected for background noise. The net intensity is simply obtained by subtracting background intensity from the peak value.

$$I_{net} = I_p - I_b$$

Hence, error on the net intensity is calculated by summing the error from both peak and background. Note here that N/t can be replaced by I, especially if data are given on the print-out as intensity values.

General equations for standard deviation for peak and background,

$$\Sigma_{p\text{-}b} = \sqrt{(I_p/t_p + I_b/t_b)}$$

and relative standard deviation:

$$\varepsilon_{p\text{-}b} = \sqrt{(I_p/t_p + I_b/t_b)}/(I_p\text{-}I_b)$$

$$\varepsilon_{p\text{-}b} = \sigma_{p\text{-}b}/I_{net} x100$$

However, background intensity cannot be directly measured underneath the peak, because peak and background signals are merged together and are indistinguishable from each other. This difficulty is overcome by measuring background intensities on both sides of the peak at interference-free positions and a linear interpolation allows estimation of the value under the peak position. Interpolated background is calculated through equation:

$$I_b = (I_{bL} \text{ x } L_{bH} + I_{bH} \text{ x } L_{bH})/(L_{bL} + L_{bH})$$

I_{bL} = Count intensity (cps) measured at the low background position
I_{bH} = Count intensity (cps) measured at the high background position
L_{bL} = Distance (mm) of the low background position to the peak
L_{bH} = Distance (mm) of the high background position to the peak

Because the interpolated background value (I_b) is a function of two independent measurements (I_{bL} and I_{bH}), the error inherent in each measurement must be incorporated into the I_b value before error is calculated on the net intensity (I_{net}). This can be done through the following equation by summing the standard deviation on both backgrounds:

$$\sigma_{Ib} = \sqrt{(\sigma^2 I_{bL} + \sigma^2 I_{bH})}$$

The equation for calculating error on $I_{net}(\sigma_{p\text{-}b})$ then becomes:

$$\sigma_{p\text{-}b} = \sqrt{(\sigma^2 I_p + \sigma^2 I_{bL} + \sigma^2 I_{bH})}$$

Both factors that are used to normalize the counts (N), which are background distances from peak and counting time, must also be squared to preserve the unit relationship. Replacing the terms in the previous equation gives equation:

$$\sigma_{p\text{-}b} = \sqrt{[I_p/t_p + (L_{bL}/L_{bL} + L_{bH})^2 \text{ x } (I_{bL}/t_{bL}) + (L_{bH}/L_{bL} + L_{bH})^2 \text{ x } (I_{bH}/t_{bH})]}$$

Once the error has been calculated on the net intensity (I_{net}) in the unknown, the error arising from standardization must also be added. This is important because the EMP software uses the k-ratio (intensity unknown/ intensity standard) to measure the proportion that a specific element contributes to the unknown sample. Therefore, the error on the k-ratio is the combination of the error on both peak and background from the standard and the unknown. Errors on I_{net} from the standard are calculated the same way as for the unknown. Relative standard errors are added in quadrature through equation:

$$E_{p\text{-}b,\ k\text{-}ratio} = \sqrt{(\varepsilon^2_{p\text{-}b,k\text{-}ratio} + \varepsilon^2_{p\text{-}b,unk})}$$

Correction from interference also introduces error due to uncertainty in the correction factor itself and on the measurement made for the interfering element in the unknown. The error on corrected values is calculated the following way (Pyle et al., 2003):

Error on corrected U:

$$\sigma^2_{U,corr,unk} = \sigma^2_{U,uncorr,unk} + \sigma^2_{U,Th\text{-}std}[(\text{-}Th,_{Th^0\text{-}std})(Th,_{unk})/(U,_{U\text{-}std})(Th,_{Th\text{-}std})]^2 +$$

$$+ \sigma^2_{U,U\text{-}std}[(U,_{Th\text{-}std})(Th,_{Th^0\text{-}std})(Th,_{unk})/(U,_{U\text{-}std})^2(Th,_{Th\text{-}std})]^2 +$$

$$+ \sigma^2_{Th,Th\text{-}std}[(U,_{Th\text{-}std})(Th,_{Th^0\text{-}std})(Th,_{unk})/(U,_{U\text{-}std})(Th,_{Th\text{-}std})^2]^2 +$$

$$+\sigma^2_{Th,Th^0\text{-}std}[(-U,_{Th\text{-}std})(Th,_{unk})/(U,_{U\text{-}std})(Th,_{Th\text{-}std})]^2 +$$

$$+ \sigma^2_{Th,unk}[(-U,_{Th\text{-}std})(Th,_{Th^0\text{-}std})/(U,_{U\text{-}std})(Th,_{Th\text{-}std})]^2$$

Error in corrected Pb:

$$\sigma^2_{Pb,corr,unk} = \sigma^2_{Pb,uncorr,unk} + \sigma^2_{Pb,Th\text{-}std}[(-Th,_{Th^0\text{-}std})(Th,_{unk})/(Pb,_{Pb\text{-}std})(Th,_{Th\text{-}std})]^2 +$$

$$+ \sigma^2_{Pb,Pb\text{-}std}[((Pb,_{Th\text{-}std})(Th,_{Th^0\text{-}std})(Th,_{unk})/(Pb,_{Pb\text{-}std})^2(Th,_{Th\text{-}std})) +$$

$$+ ((Pb,_{Y\text{-}std})(Y,_{Y^0\text{-}std})(Y,_{unk})/(Pb,_{Pb\text{-}std})^2(Y,_{Y\text{-}std}))]^2 +$$

$$+ \sigma^2_{Th,unk}[(-Pb,_{Th\text{-}std})(Th,_{Th^0\text{-}std})/(Pb,_{Pb\text{-}std})(Th,_{Th\text{-}std})]^2 +$$

$$+ \sigma^2_{Th,Th\text{-}std}[(Pb,_{Th\text{-}std})(Th,_{Th^0\text{-}std})(Th,_{unk})/(Pb,_{Pb\text{-}std})(Th,_{Th\text{-}std})^2]^2 +$$

$$+ \sigma^2_{Th,Th^0\text{-}std}[(-Pb,_{Th\text{-}std})(Th,_{unk})/(Pb,_{Pb\text{-}std})(Th,_{Th\text{-}std})]^2 +$$

$$+ \sigma^2_{Pb,Y\text{-}std}[(-Y,_{Y^0\text{-}std})(Y,_{unk})/(Pb,_{Pb\text{-}std})(Y,_{Y\text{-}std})]^2 +$$

$$+ \sigma^2_{Y,Y\text{-}std}[(-Pb,_{Y\text{-}std})(Y,_{Y^0\text{-}std})(Y,_{unk})/(Pb,_{Pb\text{-}std})(Y,_{Y\text{-}std})^2]^2 +$$

$$+ \sigma^2_{Y,Y^0\text{-}std}[(-Pb,_{Y\text{-}std})(Y,_{unk})/(Pb,_{Pb\text{-}std})(Y,_{Y\text{-}std})]^2 +$$

$$+ \sigma^2_{Y,unk}[(-Pb,_{Y\text{-}std})(Y,_{Y^0\text{-}std})/(Pb,_{Pb\text{-}std})(Y,_{Y\text{-}std})]^2$$

where each term is the value in counts per second (cps) measured in the specific standard. The superscript ^{0} indicates calibration measurements done at 200nA. All standard deviation values are also in counts per second (cps).

Error is propagated through the age equation using the following equation:

$$\varepsilon_{age} = \sqrt{(\varepsilon^2_{Ucorr} + \varepsilon^2_{Th} + \varepsilon^2_{Pbcorr})}$$

The Excel workbook “*Error_calculation_formulas.xls*” was used for the calculation of the error.

The data that need to be imported in the spreadsheet are:

- The net counts and background position counts for the standards (Th, Y, Pb and U in columns B:10-B:13, C:10-C:13, D:10-D:13).
- The net counts and background position counts for the unknown (Th, Y, Pb and U in columns B:17-B:20, C:17-C:20, D:17-D:20).

When all this data are imported, the final error is given in line 8 (box K-L:29-30)

Measurement conditions				
Element	**Peak**	**Back**	**BG_L**	**BG_U**
Th	360	180	2.000	2.000
U	360	180	2.500	4.000
Y	360	180	1.000	1.000
Pb	360	180	2.000	2.000

Correction factors (CF)	
Y L on Pb Ma	0.0053
Th (M2-04 +MZ1-2) on Pb M	0.0015
Th Mg on U Mb	0.0094

	Intensity (cps)	SD)cps)
Pb,Th,std	56.8	4.78
Th,Th,std	13164.9	18.48
Th,Th^{o},std	13193.2	18.525
Pb,Y,std	203.3	3.46
Y,Y,std	48137.8	37.24
Y,Y^{o},std	48618.25	37.06
U,Th,std	199.6	5.89

Standard data					
Element	**Net (cps)**	**BG- (cps)**	**BG+ (cps)**	**Mass %**	**Mass (ppm)**
Th	12989.1	182.9	155.6	87.88	878800
U	21614.4	433.4	437.5	87.15	871500
Y	47672.5	4048	582.8	44.93	449300
Pb	38125.5	528.4	202.7	64.11	641100

Unknown specimen							
Element	**Net (cps)**	**BG- (cps)**	**BG+ (cps)**	**Mass %**	**Mass (ppm)**	**K-raw %**	**ZAF**
Th	339.5	73.1	71.8	2.8773	28773	2.6127	1.2532
U	103	230.8	191.6	0.51	5100	0.4765	1.228
Y	1328.3	958.4	673.7	1.4231	14231	2.7848	1.1373
Pb	190.1	167.6	148.3	0.4125	4125	0.4984	1.2912

1. Interpolated background

	Th	**U**	**Y**	**Pb**
Standard	169.25	435.45	2315.4	336.81176
Unknown	72.45	206.6769	816.05	157.95

2. Intensity of peak

	Th	**U**	**Y**	**Pb**
Standard	13158.35	22049.85	49987.9	38462.312
Unknown	411.95	309.6769	2144.35	348.05

3. SD on both peak and BG

	Th	**U**	**Y**	**Pb**
Standard	18.3690296	23.93781	36.95223268	31.26549
Unknown	1.24370638	1.426025	3.238848389	1.361143

4. Relative SD on peak and BG (%)

	Th	**U**	**Y**	**Pb**
Standard	0.1414188	0.110749	0.077512681	0.082007
Unknown	0.36633472	1.38449	0.243834103	0.716014

5. Relative SD on K-ratio

Th	**U**	**Y**	**Pb**
0.3926836	1.388913	0.255858	0.72069525

6. Correction Factor (CF) for interference of Y and Th lines on Pb Ma, and Th lines on U Mb

Pb $_{corr}$	**U** $_{corr}$
3970.3816	4837.165

7. Relative SD on corrected Pb and U

Error on corrected Pb	Error on corrected U
1.852711	2.033547009
0.0018196	0.008595852
3.947E-05	1.21077E-05
3.448E-06	1.94513E-05
5.063E-07	1.94624E-05
5.066E-07	0.000132476
0.0148231	
3.063E-05	
2.974E-05	
0.0003043	
1.8697622	2.042326358
0.7193017	1.387475574
Relative SD on corrected Pb	**Relative SD on corrected U**
1.0149244	1.960076927

8. Propagation of error including error for Pb and U correction

2.237448129

9. Propagation of error without Pb and U correction error

1.601152945

Directions

Import original unknown data in the boxes with this fill color

Import original standard data in the boxes with this fill color

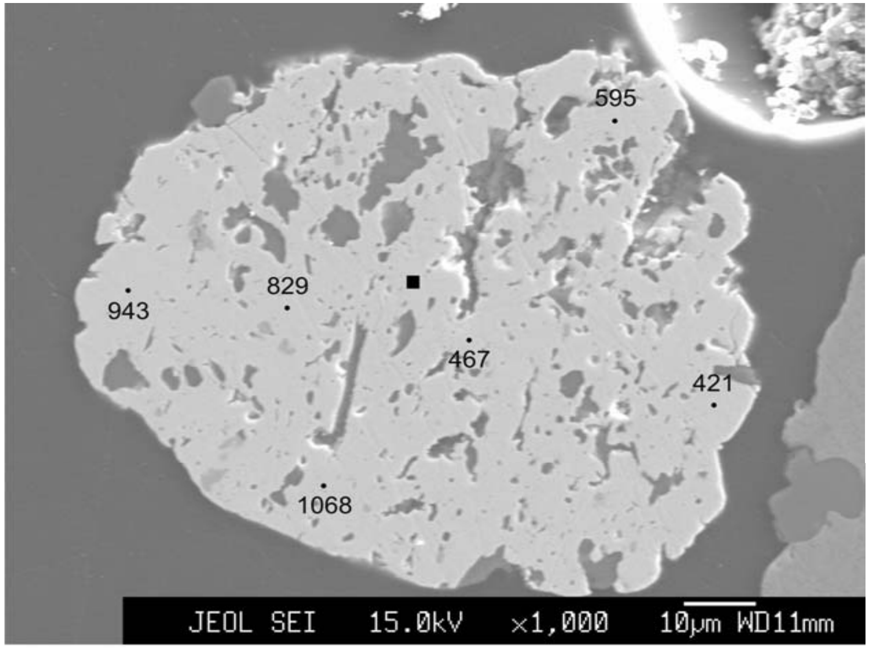
Import original unknown data in the boxes with this color tou calculate the corrected Pb and U concentrations

APPENDIX III

Back-scattered (BSE) (denoted as COMP in the images in the appendix) and Secondary (SE) images of monazite grains with trace element analyses and calculated ages and errors

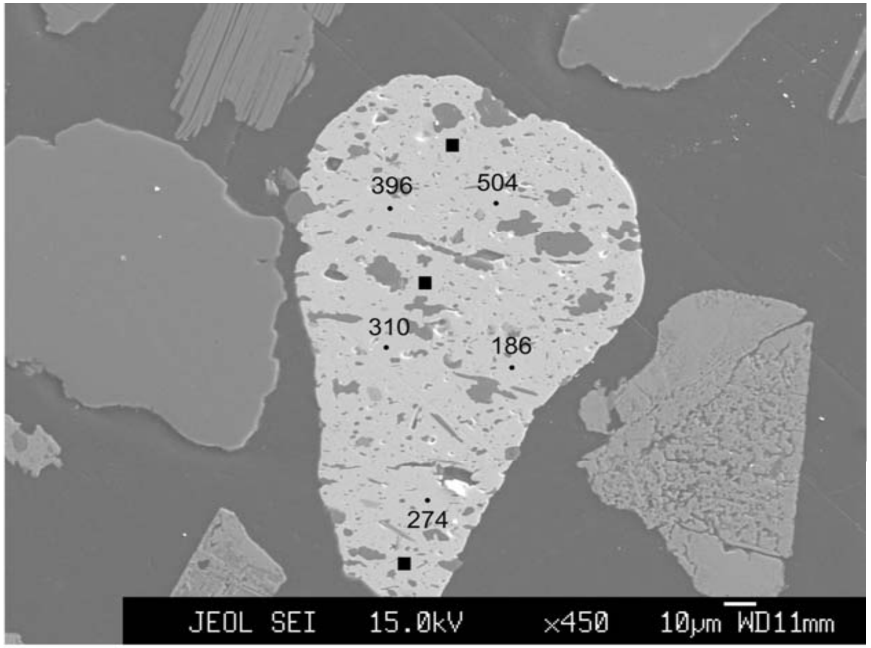
Naskapi N-30

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	1	2857	3936	22	84	84	467	173
Naskapi	Missisauga	9/7/2007	N30 1469.89	1	2178	1983	42	91	91	943	159
Naskapi	Missisauga	9/7/2007	N30 1469.89	1	2776	846	47	49	49	1068	177
Naskapi	Missisauga	9/7/2007	N30 1469.89	1	2899	3307	125	70	70	421	68
Naskapi	Missisauga	9/7/2007	N30 1469.89	1	3906	1938	58	80	80	829	129
Naskapi	Missisauga	9/7/2007	N30 1469.89	1	2980	4065	25	111	111	595	158



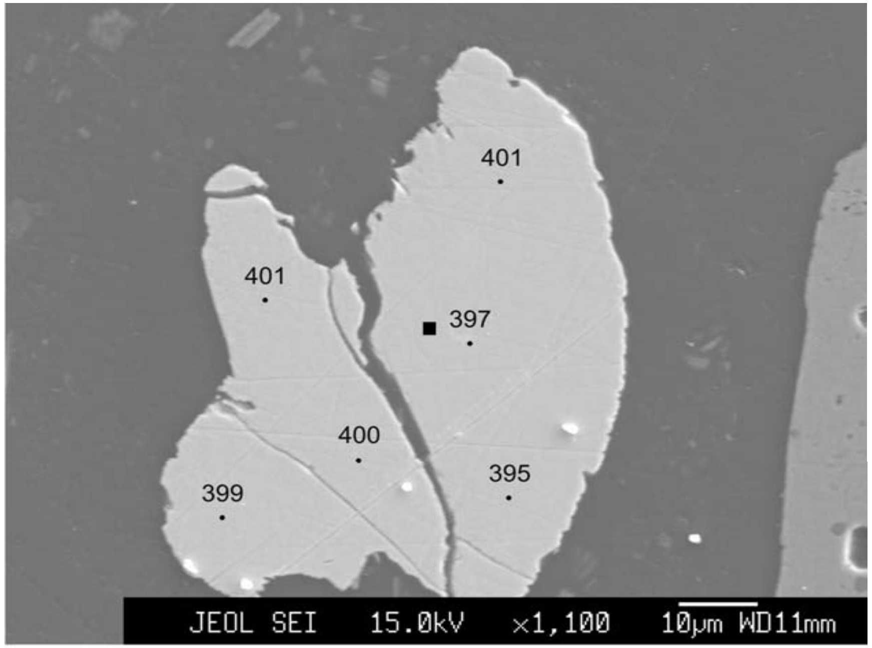
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	3	3880	4106	408	75	75	310	37.2
Naskapi	Missisauga	9/7/2007	N30 1469.89	3	2026	1439	343	21	21	186	87.4
Naskapi	Missisauga	9/7/2007	N30 1469.89	3	2444	158	180	9	9	274	131
Naskapi	Missisauga	9/7/2007	N30 1469.89	3	2852	230	138	12	12	396	117
Naskapi	Missisauga	9/7/2007	N30 1469.89	3	3641	1669	70	43	43	504	113



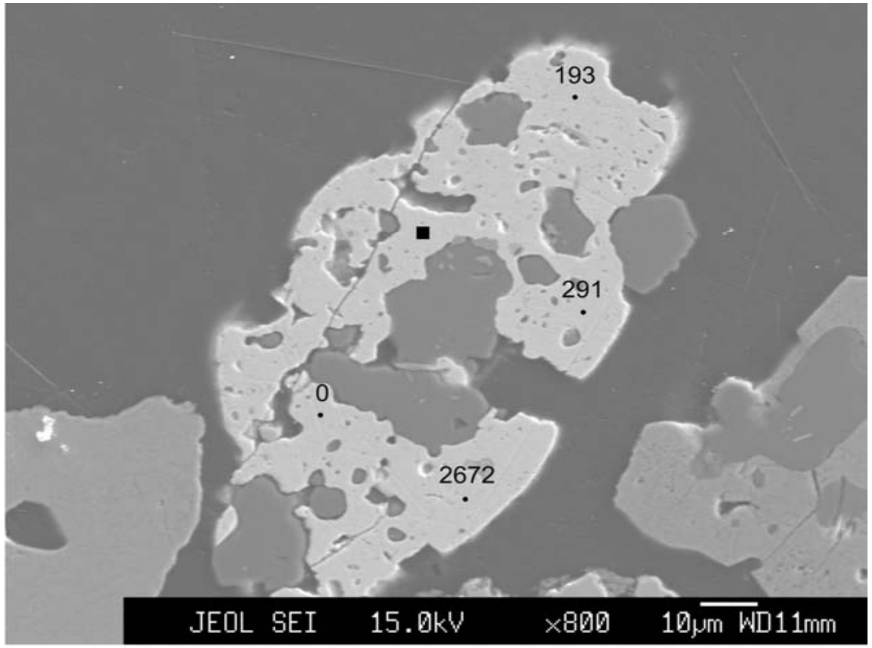
Rectangles denote points of major elements analyses

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	4	10218	41559	906	792	792	397	10.19
Naskapi	Missisauga	9/7/2007	N30 1469.89	4	10317	44358	959	853	853	401	9.77
Naskapi	Missisauga	9/7/2007	N30 1469.89	4	21699	49831	2000	996	996	395	6.86
Naskapi	Missisauga	9/7/2007	N30 1469.89	4	11123	52220	1375	1018	1018	401	7.87
Naskapi	Missisauga	9/7/2007	N30 1469.89	4	9681	42639	844	811	811	399	10.57
Naskapi	Missisauga	9/7/2007	N30 1469.89	4	10708	42995	942	825	825	400	9.92



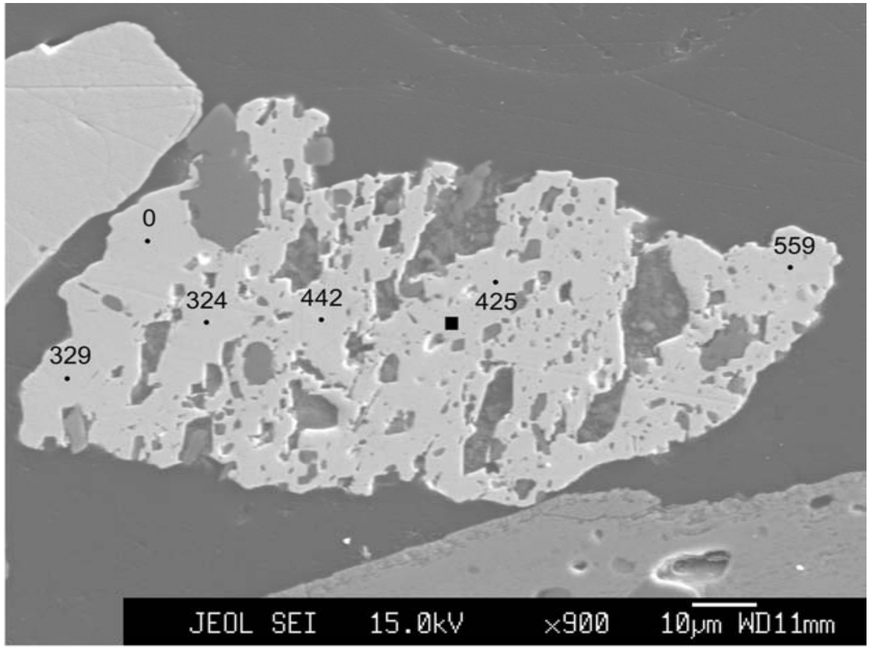
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	5	2640	1495	26	203	203	2672	235
Naskapi	Missisauga	9/7/2007	N30 1469.89	5	3355	1931	140	31	31	291	79.61
Naskapi	Missisauga	9/7/2007	N30 1469.89	5	2969	1512	0	13	13	193	*
Naskapi	Missisauga	9/7/2007	N30 1469.89	5	1782	363	22	0	0	0	*



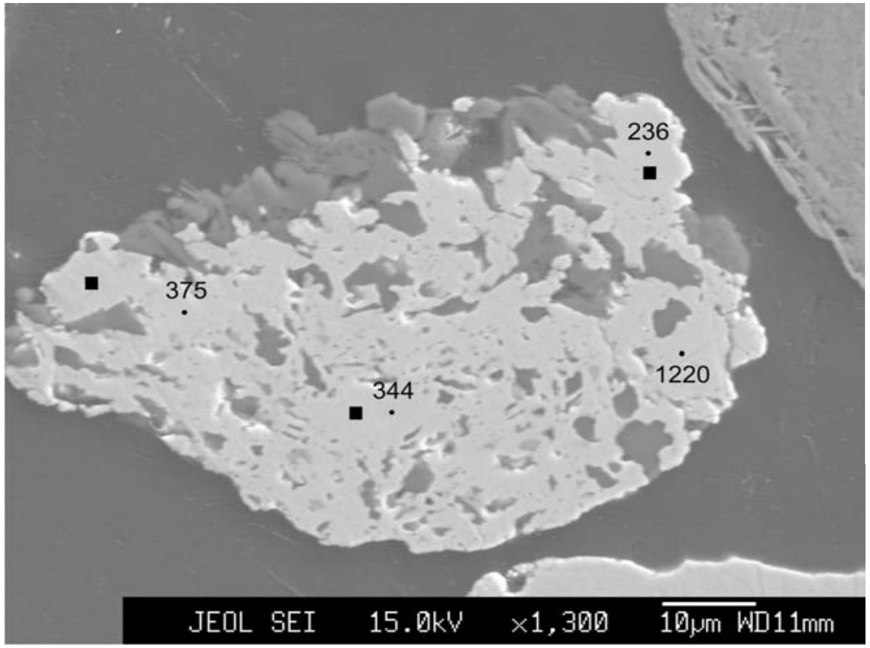
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	6	4111	2365	744	91	91	425	29.7
Naskapi	Missisauga	9/7/2007	N30 1469.89	6	2049	837	256	0	0	0	*
Naskapi	Missisauga	9/7/2007	N30 1469.89	6	3440	769	752	47	47	329	47.13
Naskapi	Missisauga	9/7/2007	N30 1469.89	6	1578	1170	236	28	28	324	87.07
Naskapi	Missisauga	9/7/2007	N30 1469.89	6	1609	5317	195	118	118	442	45.28
Naskapi	Missisauga	9/7/2007	N30 1469.89	6	3368	2392	398	93	93	559	35.13



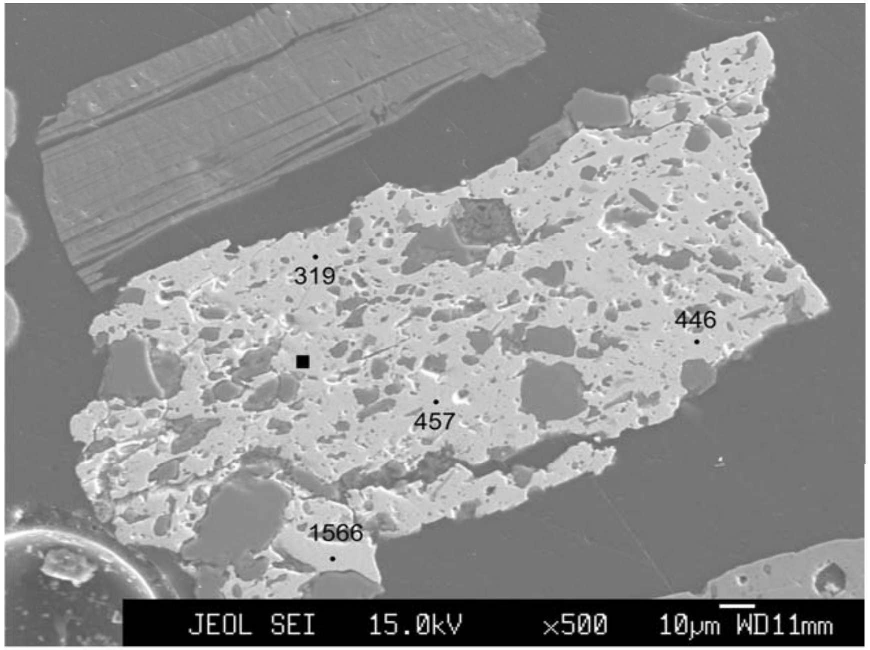
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	7	3990	2595	357	214	214	1220	27.26
Naskapi	Missisauga	9/7/2007	N30 1469.89	7	3010	7925	351	152	152	375	28.55
Naskapi	Missisauga	9/7/2007	N30 1469.89	7	3730	434	369	25	25	344	66.23
Naskapi	Missisauga	9/7/2007	N30 1469.89	7	3038	3479	216	44	44	236	59.57



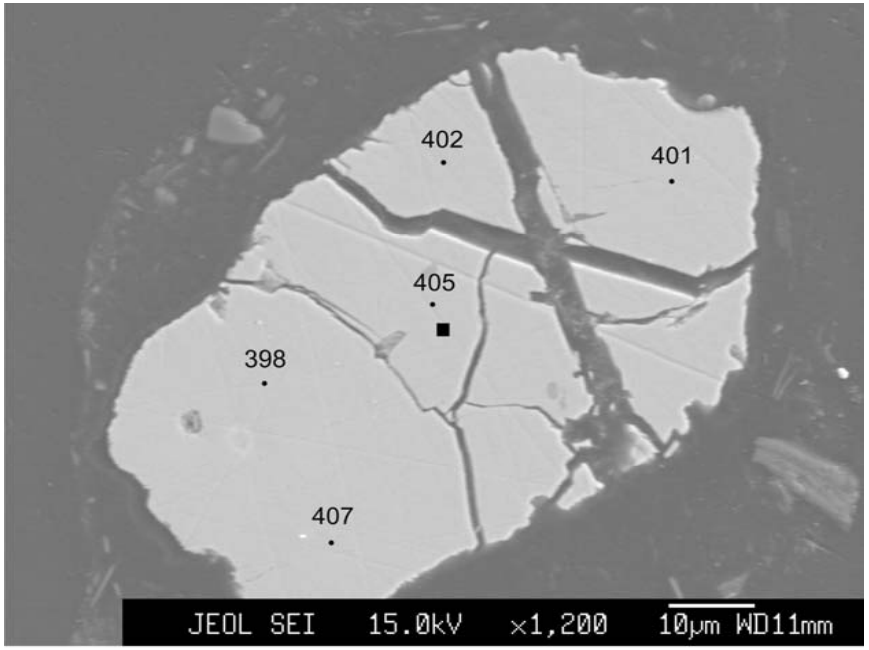
Rectangles denote points of major elements analyses

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	8	3164	5578	120	85	85	319	62.79
Naskapi	Missisauga	9/7/2007	N30 1469.89	8	4016	4431	168	102	102	457	50.34
Naskapi	Missisauga	9/7/2007	N30 1469.89	8	1250	109	170	52	52	1566	98.32
Naskapi	Missisauga	9/7/2007	N30 1469.89	8	3814	6616	57	136	136	446	88.13



Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	9	5859	40320	987	790	790	405	9.58
Naskapi	Missisauga	9/7/2007	N30 1469.89	9	15002	51280	2301	1055	1055	401	6.01
Naskapi	Missisauga	9/7/2007	N30 1469.89	9	15938	39359	7351	1126	1126	398	4.07
Naskapi	Missisauga	9/7/2007	N30 1469.89	9	10771	59312	1740	1184	1184	407	6.82
Naskapi	Missisauga	9/7/2007	N30 1469.89	9	18980	38453	4277	943	943	402	5.22



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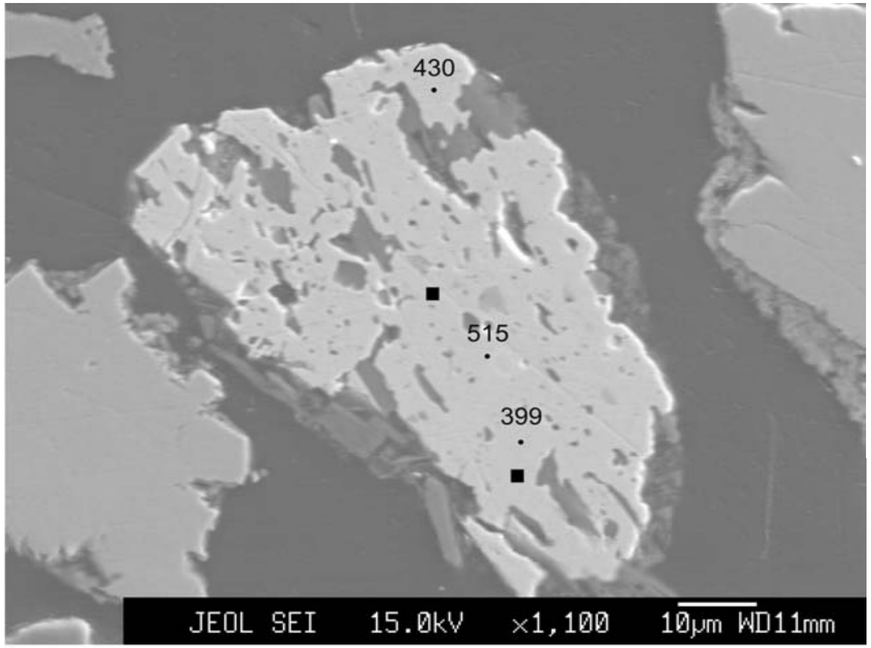
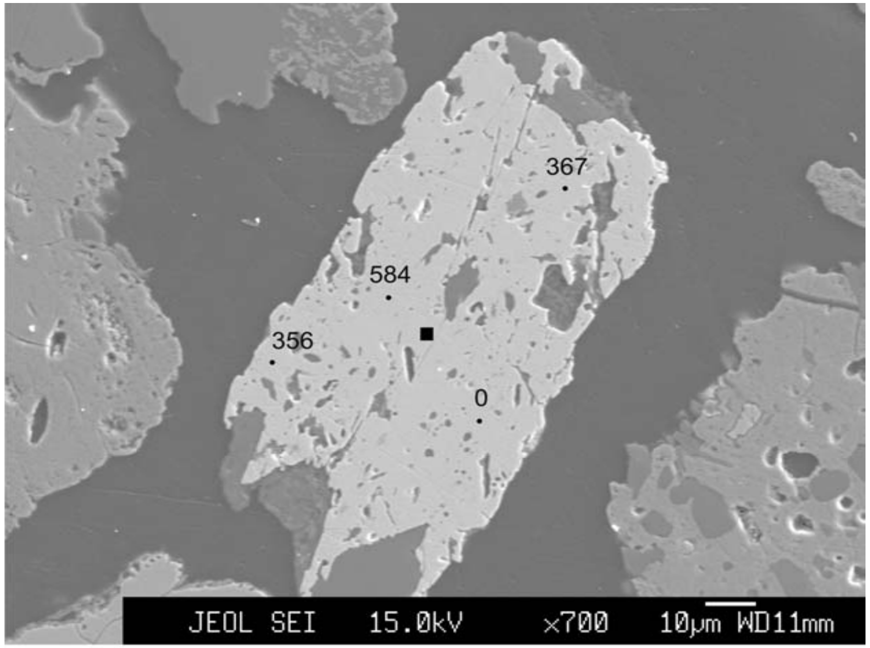
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	10	5859	3371	5545	814	190	515	18.71
Naskapi	Missisauga	9/7/2007	N30 1469.89	10	15002	3191	2224	801	93	430	29.99
Naskapi	Missisauga	9/7/2007	N30 1469.89	10	18980	1499	3243	192	69	399	57.09



Rectangles denote points of major elements analyses

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	11	2041	1070	68	34	34	584	135
Naskapi	Missisauga	9/7/2007	N30 1469.89	11	2668	8647	0	142	142	367	191
Naskapi	Missisauga	9/7/2007	N30 1469.89	11	2597	2119	101	39	39	356	92.2
Naskapi	Missisauga	9/7/2007	N30 1469.89	11	2150	813	128	0	0	0	*



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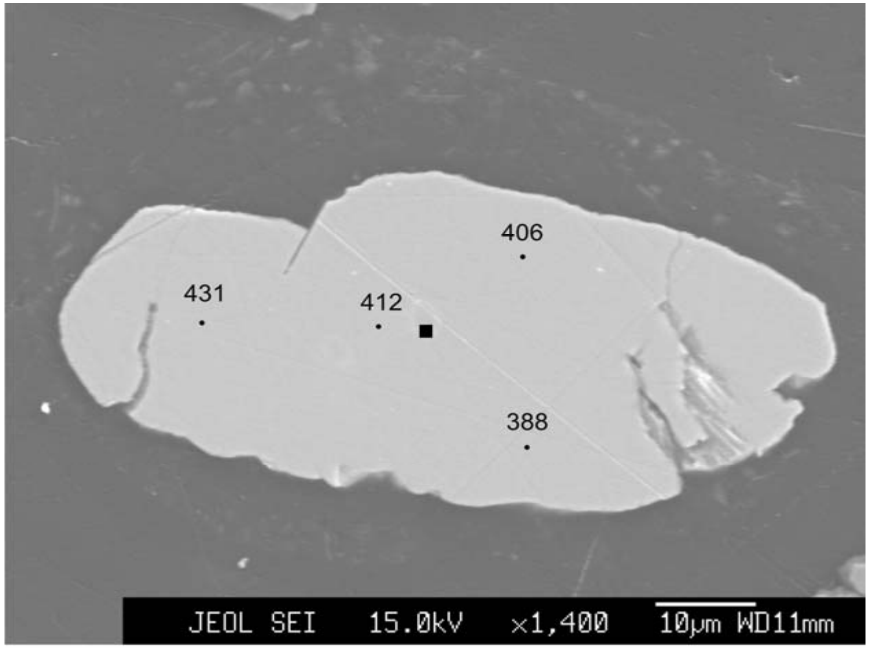
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	12	11094	45101	1079	899	899	412	9.08
Naskapi	Missisauga	9/7/2007	N30 1469.89	12	10552	44799	951	925	925	431	9.71
Naskapi	Missisauga	9/7/2007	N30 1469.89	12	9877	48241	1013	938	938	406	9.4
Naskapi	Missisauga	9/7/2007	N30 1469.89	12	9693	45166	1031	843	843	388	9.38



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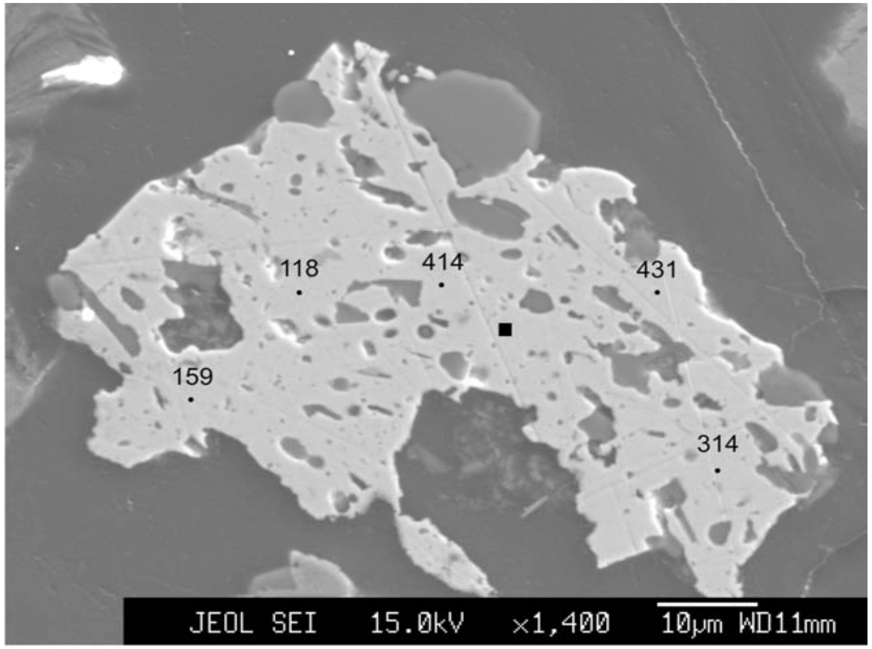
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	13	4681	1981	454	64	64	414	37.92
Naskapi	Missisauga	9/7/2007	N30 1469.89	13	4899	1485	550	17	17	118	60.84
Naskapi	Missisauga	9/7/2007	N30 1469.89	13	5353	3739	584	109	109	431	26.78
Naskapi	Missisauga	9/7/2007	N30 1469.89	13	5322	241	859	21	21	159	60
Naskapi	Missisauga	9/7/2007	N30 1469.89	13	3312	166	258	14	14	314	96.56



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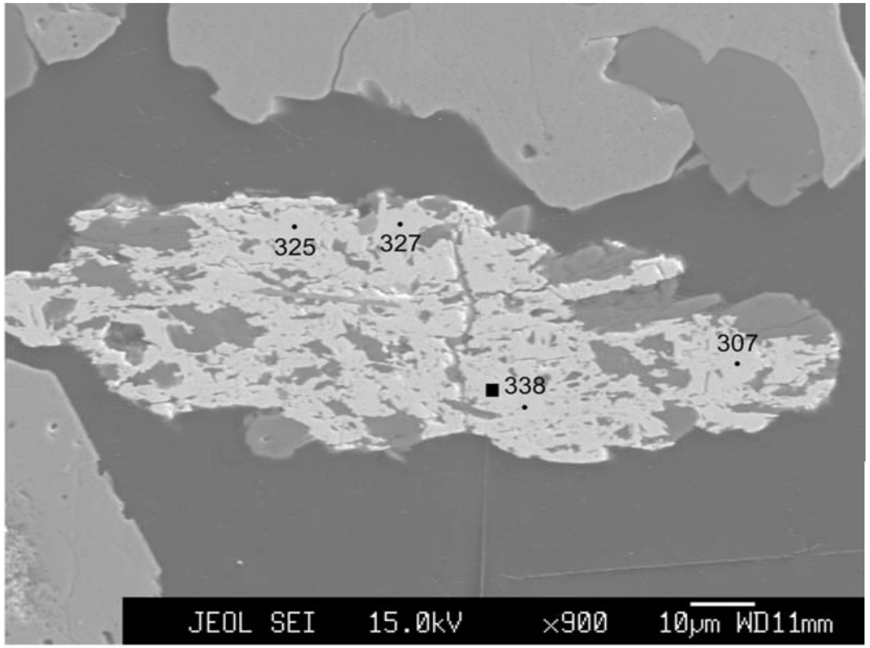
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	14	2831	5408	188	91	91	338	48.09
Naskapi	Missisauga	9/7/2007	N30 1469.89	14	2663	1253	187	27	27	325	80.43
Naskapi	Missisauga	9/7/2007	N30 1469.89	14	3318	1066	393	32	32	307	60.01
Naskapi	Missisauga	9/7/2007	N30 1469.89	14	2376	11879	157	181	181	327	40.37



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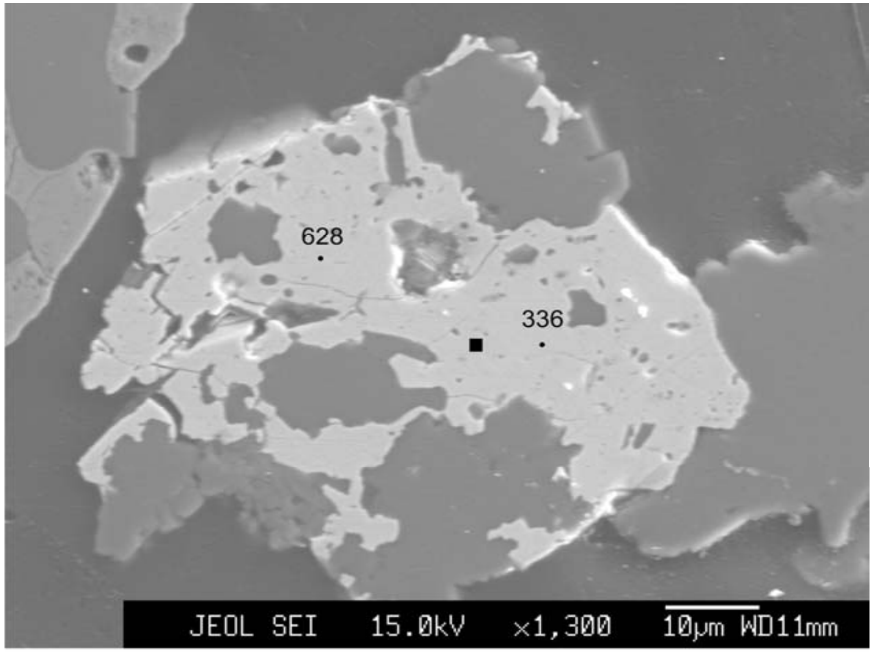
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	9/7/2007	N30 1469.89	16	1821	9381	66	144	144	336	68.65
Naskapi	Missisauga	9/7/2007	N30 1469.89	16	2574	3683	406	142	142	628	28.83



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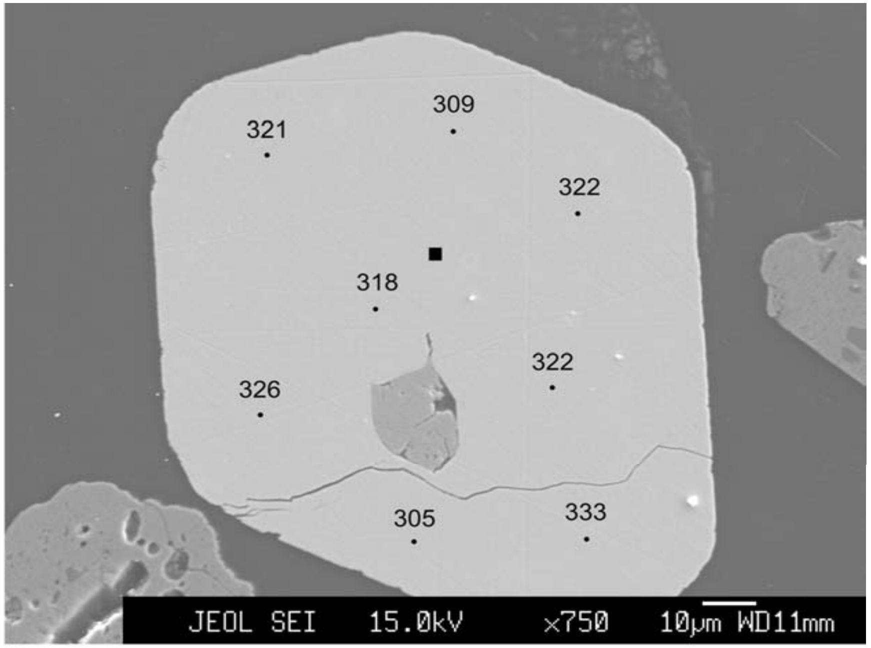
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	11	13099	52181	748	776	776	318	11.57
Naskapi	Missisauga	10/7/2007	N30 1473.81	11	15282	59761	905	902	902	322	10.24
Naskapi	Missisauga	10/7/2007	N30 1473.81	11	9778	47215	723	685	685	309	11.84
Naskapi	Missisauga	10/7/2007	N30 1473.81	11	11584	56265	729	841	841	321	11.57
Naskapi	Missisauga	10/7/2007	N30 1473.81	11	15302	58595	825	894	894	326	10.79
Naskapi	Missisauga	10/7/2007	N30 1473.81	11	15757	59503	942	899	899	322	10.04
Naskapi	Missisauga	10/7/2007	N30 1473.81	11	19354	54779	1137	796	796	305	9.34
Naskapi	Missisauga	10/7/2007	N30 1473.81	11	8595	63904	1919	1045	1045	333	6.55



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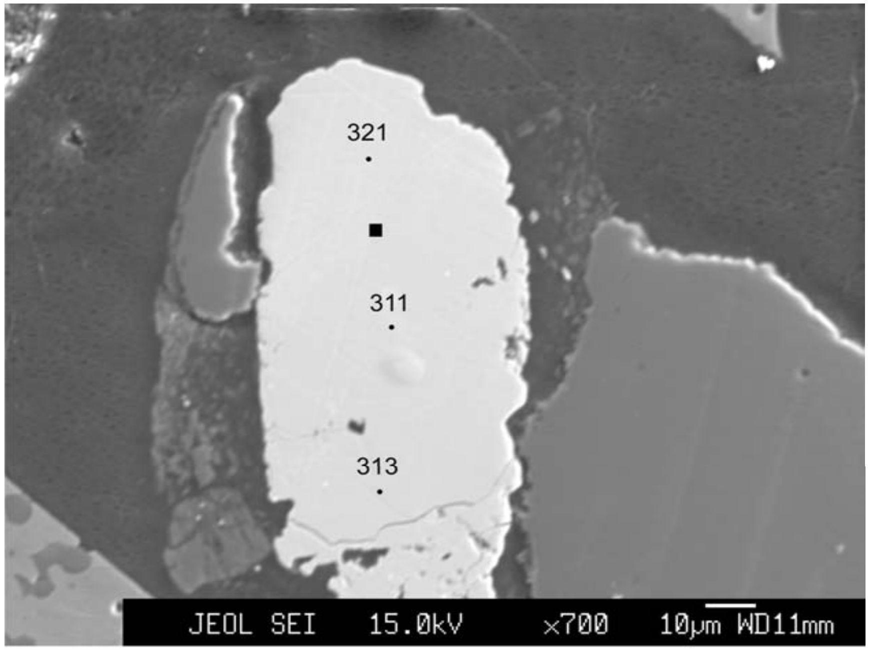
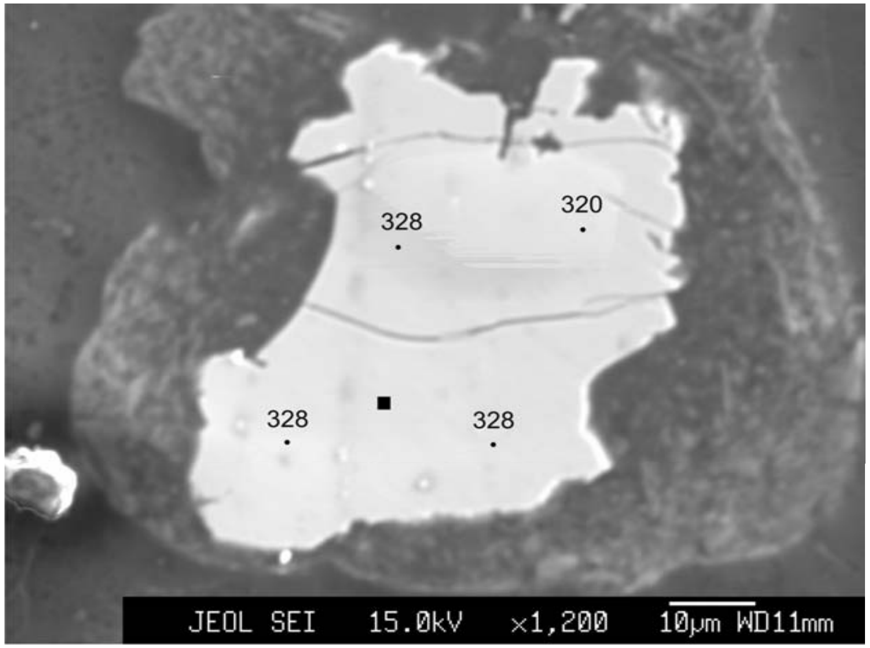
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	1	7264	59236	650	853	853	311	12.29
Naskapi	Missisauga	10/7/2007	N30 1473.81	1	10412	61622	822	923	923	321	10.28
Naskapi	Missisauga	10/7/2007	N30 1473.81	1	6716	54001	531	779	779	313	13.87



Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	2	13213	63760	1257	995	995	328	8.32
Naskapi	Missisauga	10/7/2007	N30 1473.81	2	15554	64652	1248	984	984	320	8.47
Naskapi	Missisauga	10/7/2007	N30 1473.81	2	9877	53815	849	829	829	328	10.52
Naskapi	Missisauga	10/7/2007	N30 1473.81	2	11302	60910	1023	942	942	328	9.39



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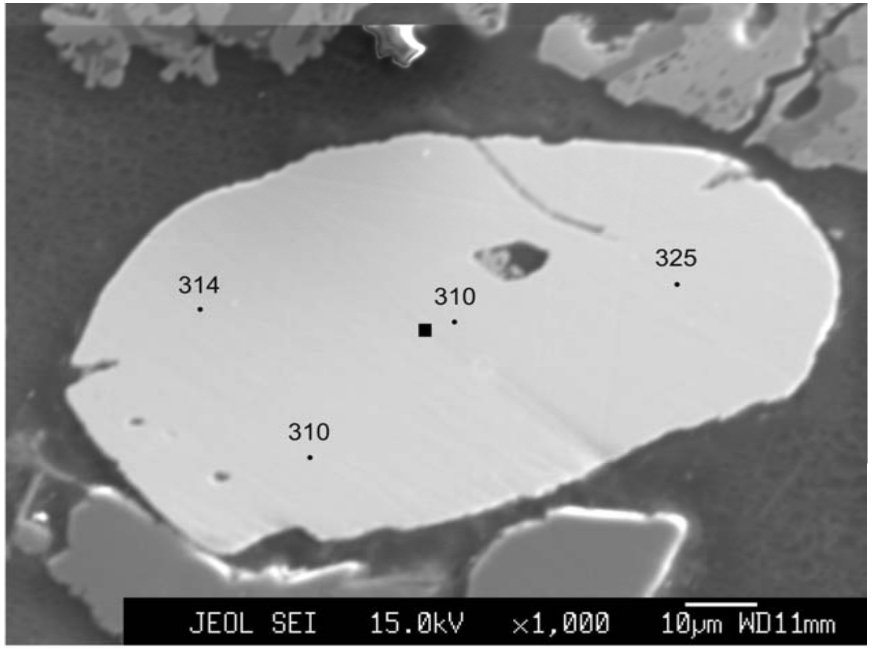
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	3	10005	55029	723	796	796	310	11.63
Naskapi	Missisauga	10/7/2007	N30 1473.81	3	14015	61616	1052	912	912	314	9.36
Naskapi	Missisauga	10/7/2007	N30 1473.81	3	10179	55540	747	802	802	310	11.43
Naskapi	Missisauga	10/7/2007	N30 1473.81	3	13936	66582	1068	1019	1019	325	9.2



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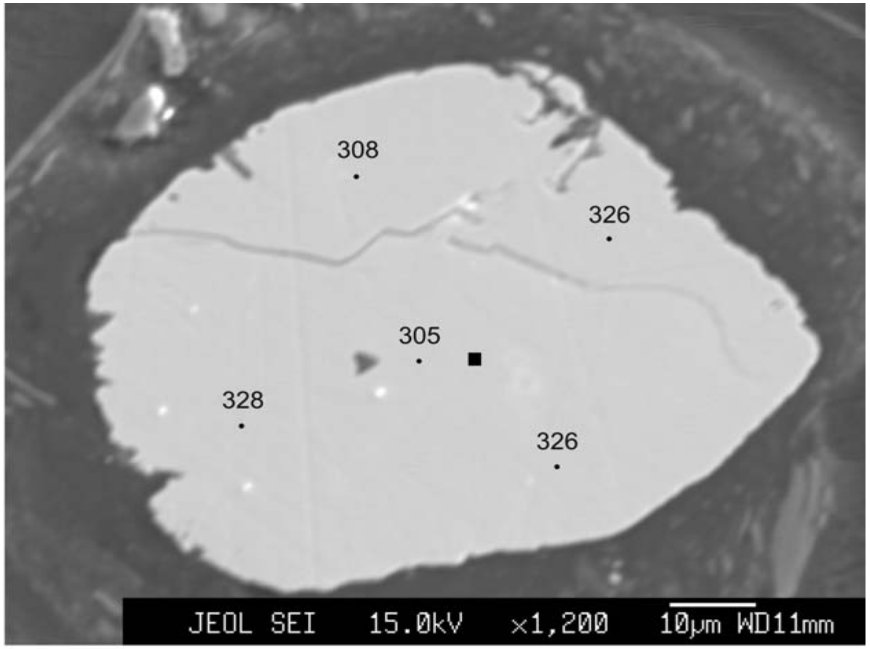
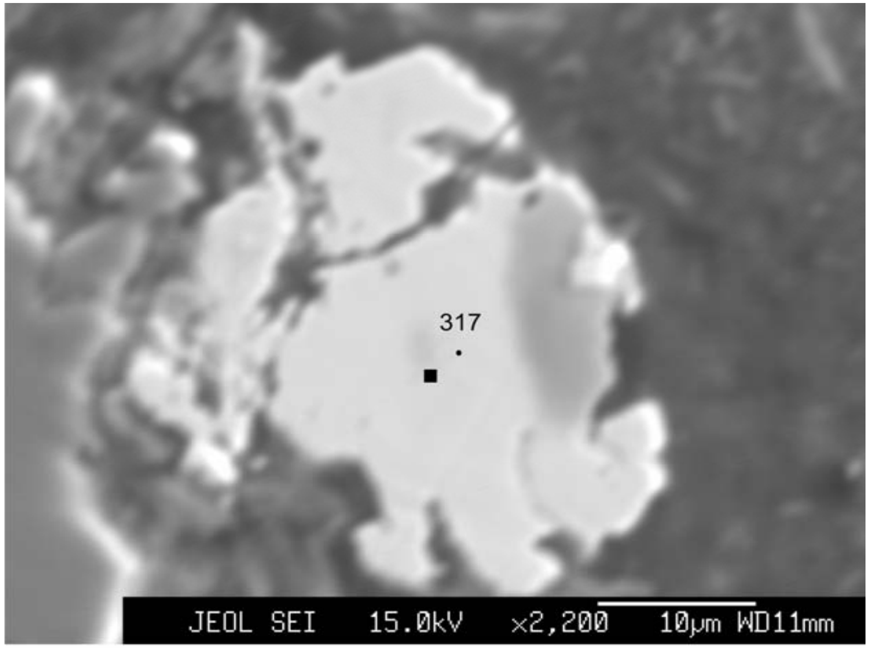
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	4	9065	51014	1062	743	743	305	9.36
Naskapi	Missisauga	10/7/2007	N30 1473.81	4	5460	55351	968	806	806	308	9.73
Naskapi	Missisauga	10/7/2007	N30 1473.81	4	22889	54360	3186	947	947	328	5.91
Naskapi	Missisauga	10/7/2007	N30 1473.81	4	5118	51329	945	792	792	326	9.83
Naskapi	Missisauga	10/7/2007	N30 1473.81	4	23207	52579	3183	915	915	326	6.03



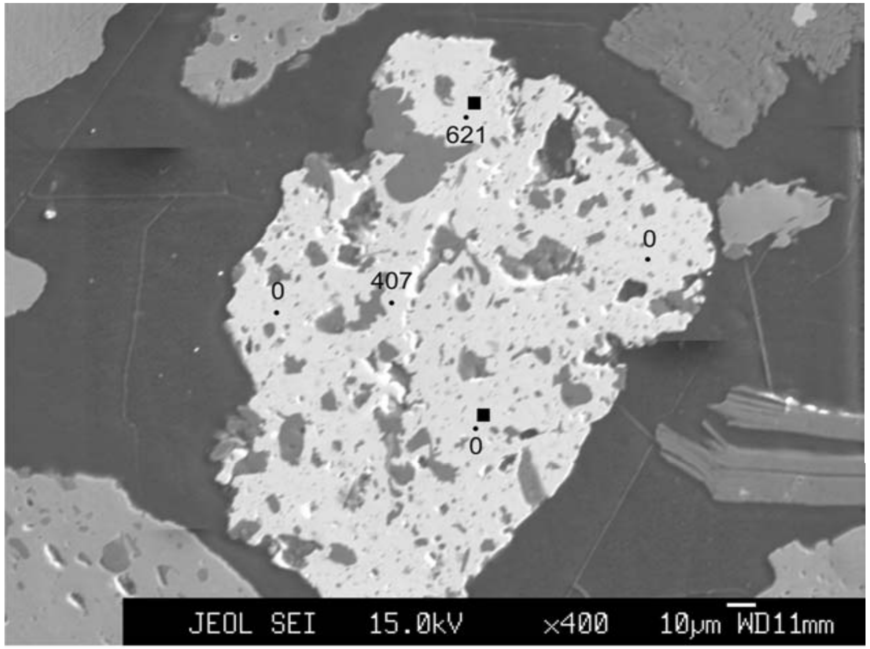
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	**1σ error (%)**
Naskapi	Missisauga	10/7/2007	N30 1473.81	5	14744	78022	2598	1226	1226	317	5.57



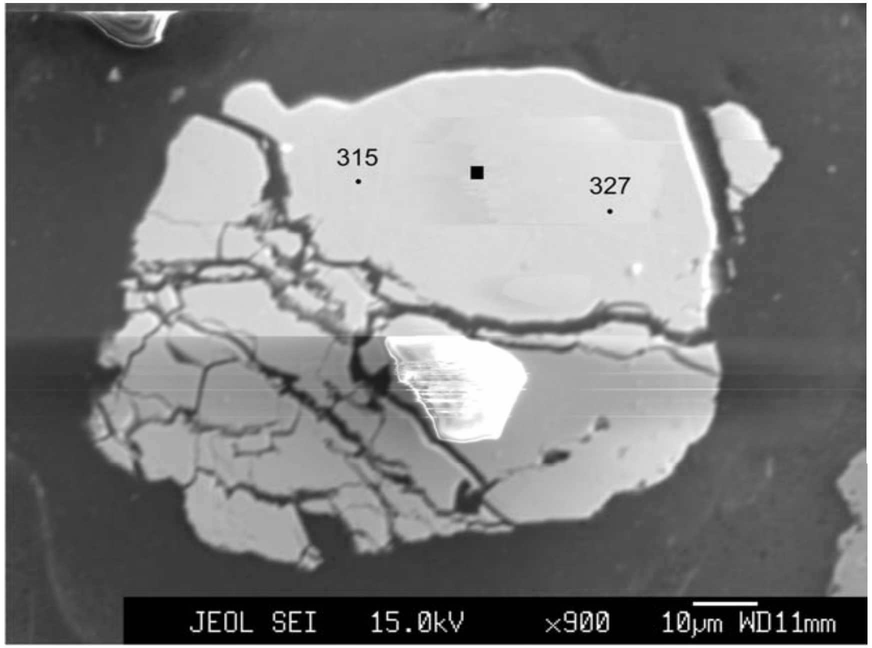
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	6	2508	1647	0	30	30	407	71.31
Naskapi	Missisauga	10/7/2007	N30 1473.81	6	1873	1645	0	46	46	621	72.85
Naskapi	Missisauga	10/7/2007	N30 1473.81	6	996	2824	0	0	0	0	*
Naskapi	Missisauga	10/7/2007	N30 1473.81	6	0	1850	0	0	0	0	*
Naskapi	Missisauga	10/7/2007	N30 1473.81	6	1206	1596	0	0	0	0	*



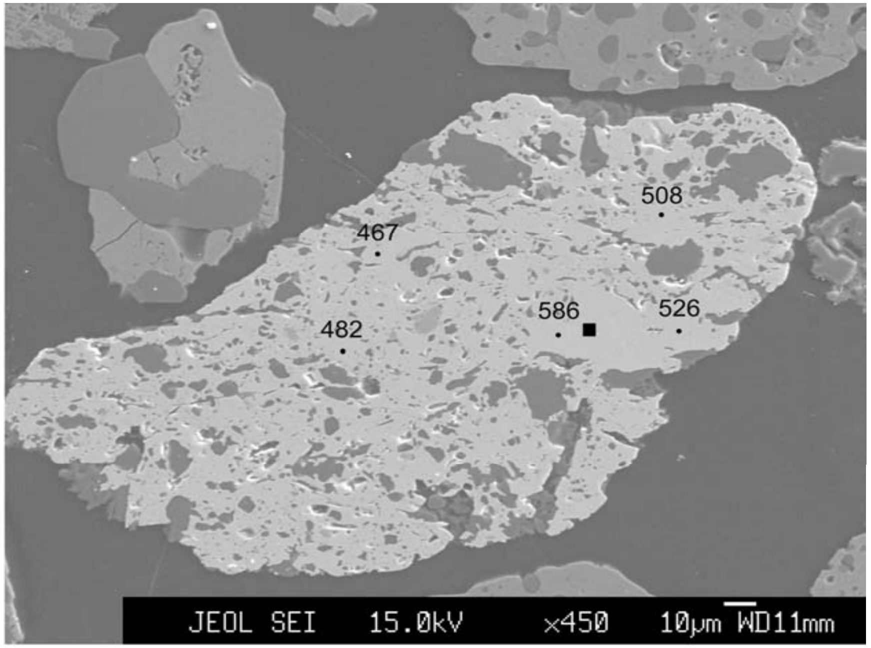
Rectangles denote points of major elements analyses

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	7	9768	58552	863	864	864	315	10.43
Naskapi	Missisauga	10/7/2007	N30 1473.81	7	17194	68948	1413	1076	1076	327	7.89



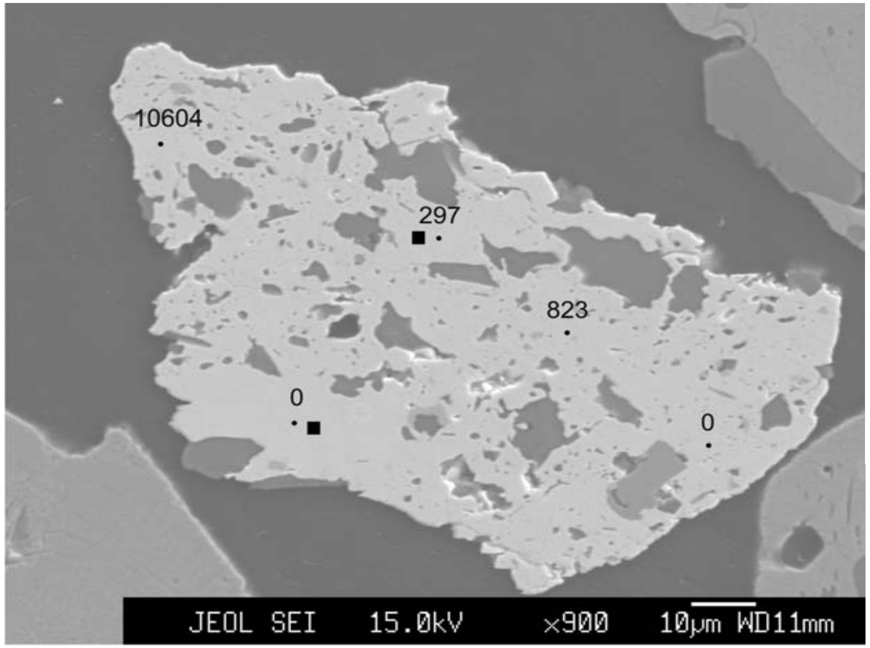
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	8	2485	3714	179	93	93	482	52.91
Naskapi	Missisauga	10/7/2007	N30 1473.81	8	3604	1989	399	87	87	586	36.44
Naskapi	Missisauga	10/7/2007	N30 1473.81	8	1206	642	243	34	34	526	84.83
Naskapi	Missisauga	10/7/2007	N30 1473.81	8	3511	2237	575	94	94	508	31.61
Naskapi	Missisauga	10/7/2007	N30 1473.81	8	2714	3800	342	103	103	467	36.01



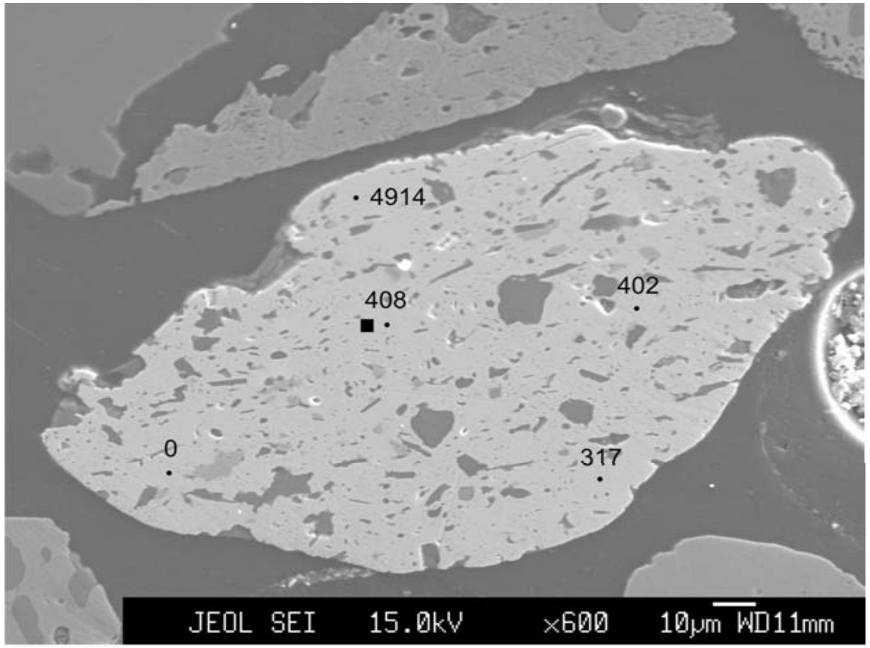
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	**1σ error (%)**
Naskapi	Missisauga	10/7/2007	N30 1473.81	9	413	0	0	38	38	0	111
Naskapi	Missisauga	10/7/2007	N30 1473.81	9	3325	980	0	13	13	297	88.07
Naskapi	Missisauga	10/7/2007	N30 1473.81	9	3306	1258	0	778	778	10604	19.1
Naskapi	Missisauga	10/7/2007	N30 1473.81	9	2372	483	0	18	18	823	102
Naskapi	Missisauga	10/7/2007	N30 1473.81	9	2068	0	0	0	0	0	*



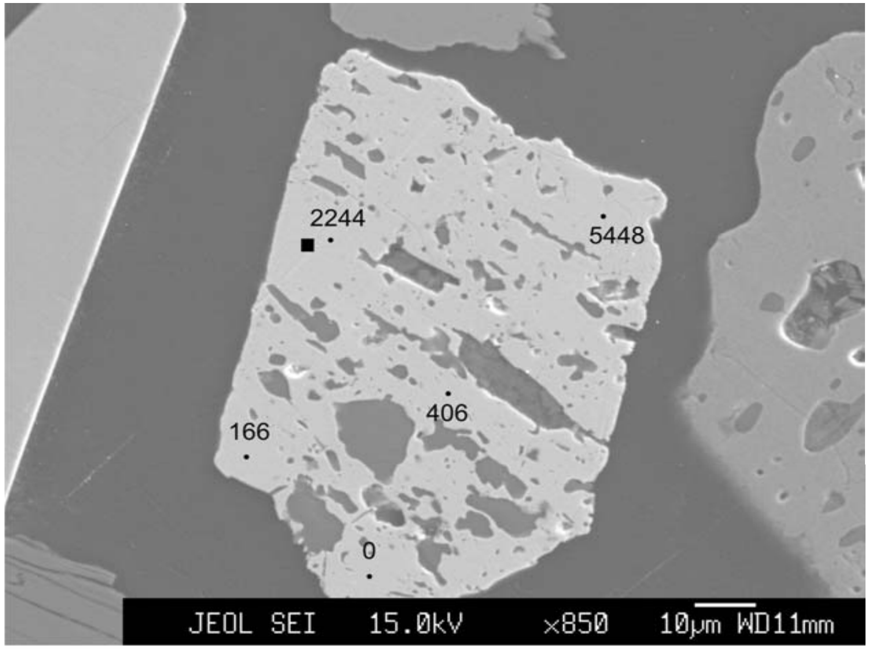
Rectangles denote points of major elements analyses

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	10	3018	9028	0	165	165	408	190
Naskapi	Missisauga	10/7/2007	N30 1473.81	10	1538	154	0	38	38	4914	111
Naskapi	Missisauga	10/7/2007	N30 1473.81	10	2929	474	0	0	0	0	*
Naskapi	Missisauga	10/7/2007	N30 1473.81	10	3165	2893	0	41	41	317	62.71
Naskapi	Missisauga	10/7/2007	N30 1473.81	10	4270	16491	0	297	297	402	102



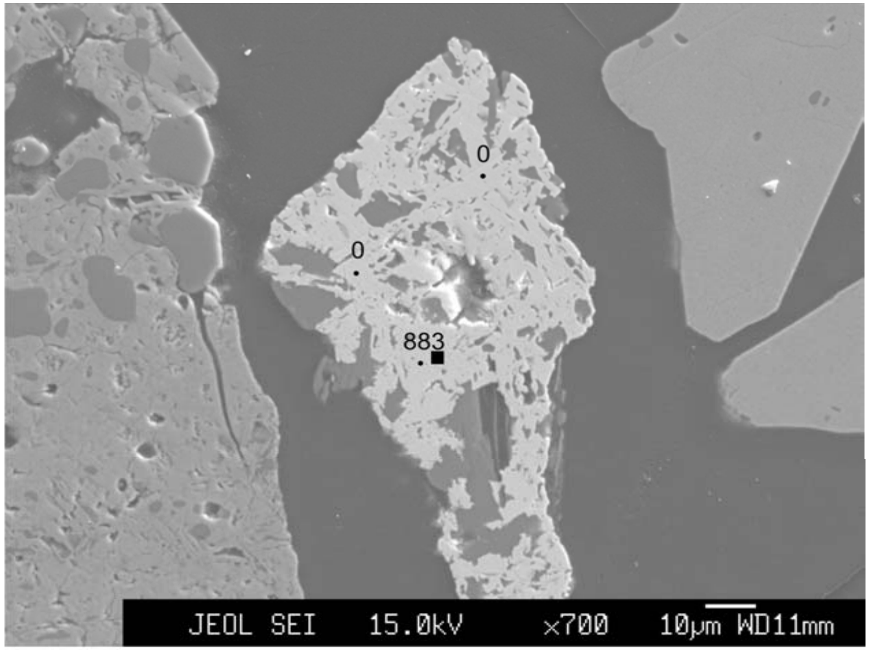
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	12	844	342	0	36	36	2244	103
Naskapi	Missisauga	10/7/2007	N30 1473.81	12	1301	2434	0	18	18	166	124
Naskapi	Missisauga	10/7/2007	N30 1473.81	12	1515	79	0	0	0	0	*
Naskapi	Missisauga	10/7/2007	N30 1473.81	12	2117	685	9	13	13	406	637
Naskapi	Missisauga	10/7/2007	N30 1473.81	12	3729	137	0	38	38	5448	1886



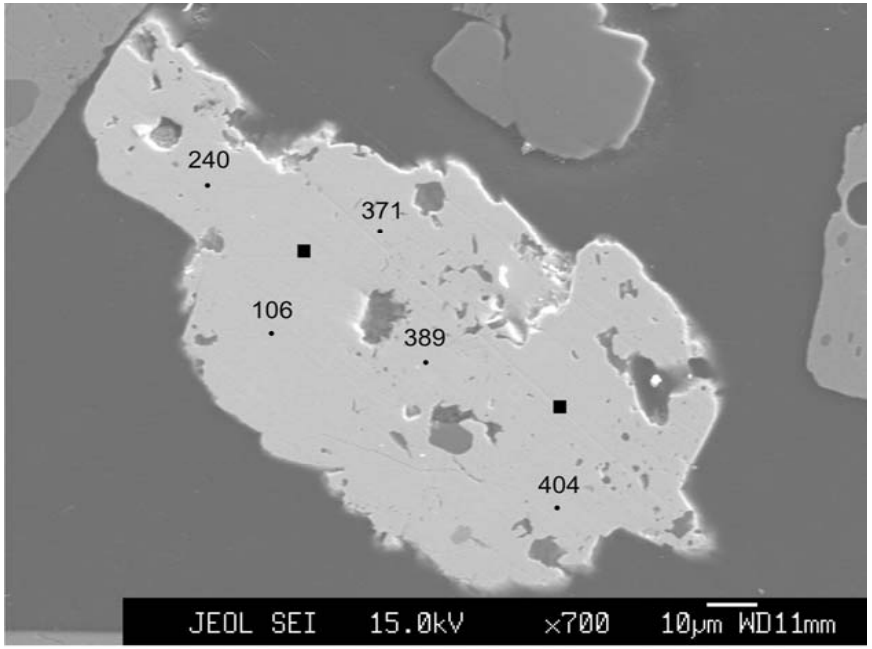
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	13	3686	5875	0	0	0	0	*
Naskapi	Missisauga	10/7/2007	N30 1473.81	13	788	13833	0	0	0	0	*
Naskapi	Missisauga	10/7/2007	N30 1473.81	13	1837	5967	0	239	239	883	25.36



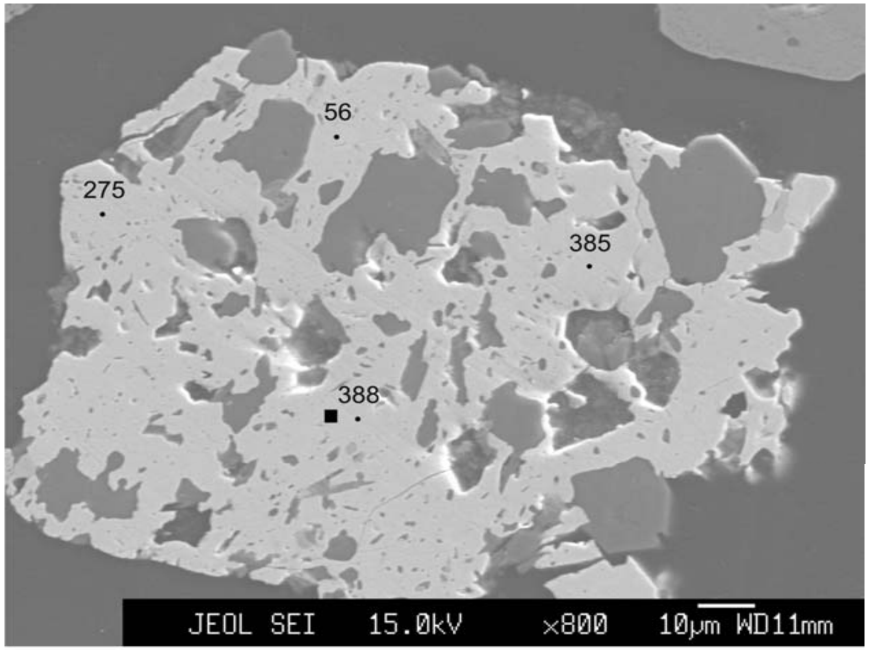
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	14	1516	2242	16	40	40	389	320
Naskapi	Missisauga	10/7/2007	N30 1473.81	14	2268	3873	15	42	42	240	242
Naskapi	Missisauga	10/7/2007	N30 1473.81	14	1696	1267	0	6	6	106	497
Naskapi	Missisauga	10/7/2007	N30 1473.81	14	1776	13650	32	249	249	404	84.3
Naskapi	Missisauga	10/7/2007	N30 1473.81	14	3348	5673	88	99	99	371	77.4



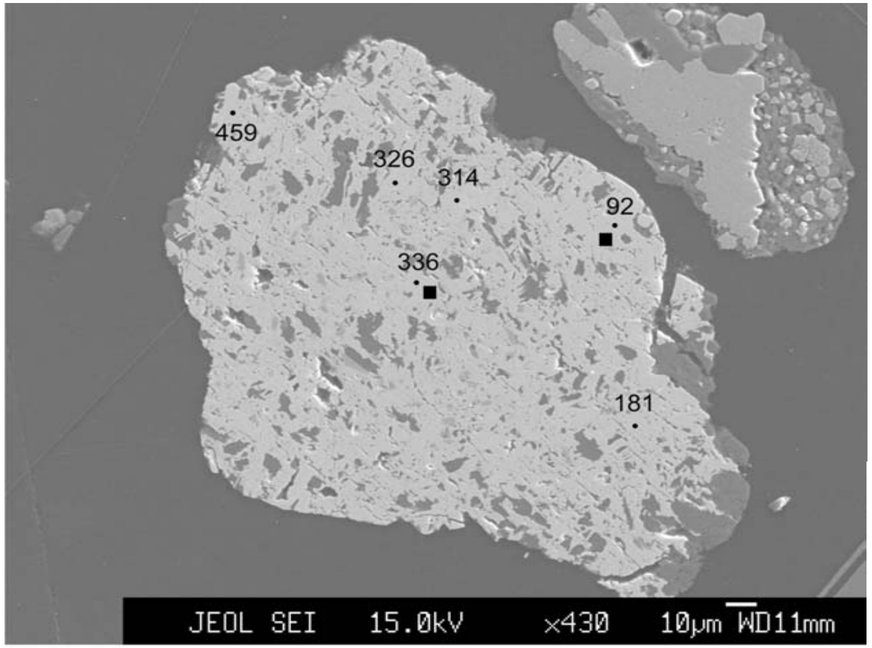
Rectangles denote points of major elements analyses

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	15	3640	12604	782	263	263	388	15.66
Naskapi	Missisauga	10/7/2007	N30 1473.81	15	3399	5165	493	83	83	275	34.56
Naskapi	Missisauga	10/7/2007	N30 1473.81	15	2834	3889	646	103	103	385	29.68
Naskapi	Missisauga	10/7/2007	N30 1473.81	15	2048	2833	251	9	9	56	127



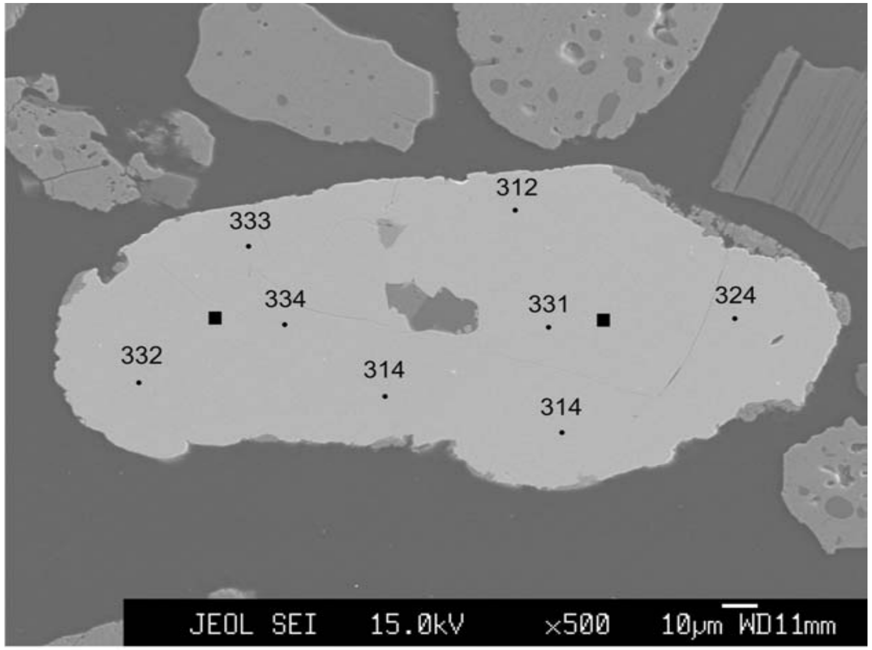
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	16	2081	8412	157	134	134	336	48.41
Naskapi	Missisauga	10/7/2007	N30 1473.81	16	1773	21435	172	309	309	314	32.85
Naskapi	Missisauga	10/7/2007	N30 1473.81	16	2908	19800	238	300	300	326	28.07
Naskapi	Missisauga	10/7/2007	N30 1473.81	16	3396	2052	831	98	98	459	28.94
Naskapi	Missisauga	10/7/2007	N30 1473.81	16	923	21561	0	174	174	181	245
Naskapi	Missisauga	10/7/2007	N30 1473.81	16	2270	15121	0	62	62	92	46.86



Rectangles denote points of major elements analyses

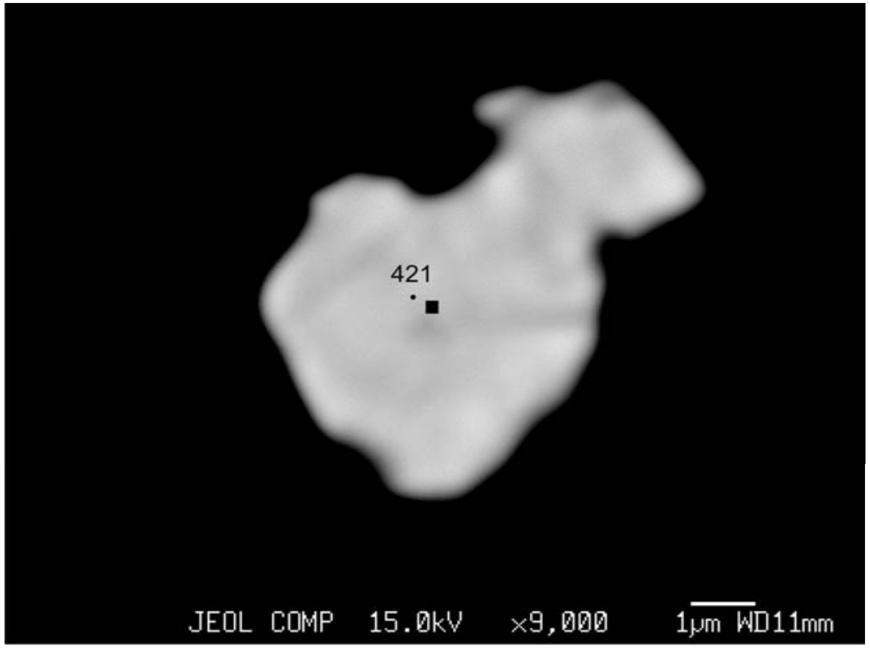
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Naskapi	Missisauga	10/7/2007	N30 1473.81	17	1321	28490	1462	496	496	334	8.96
Naskapi	Missisauga	10/7/2007	N30 1473.81	17	1744	24655	1130	419	419	331	10.77
Naskapi	Missisauga	10/7/2007	N30 1473.81	17	1200	39816	965	621	621	324	10.15
Naskapi	Missisauga	10/7/2007	N30 1473.81	17	7436	52749	1805	822	822	314	6.83
Naskapi	Missisauga	10/7/2007	N30 1473.81	17	312	21291	1082	368	368	332	11.89
Naskapi	Missisauga	10/7/2007	N30 1473.81	17	7506	49502	1769	770	770	312	7.01
Naskapi	Missisauga	10/7/2007	N30 1473.81	17	746	22436	558	361	361	333	16.35
Naskapi	Missisauga	10/7/2007	N30 1473.81	17	1861	30730	931	473	473	314	11.18



Rectangles denote points of major elements analyses

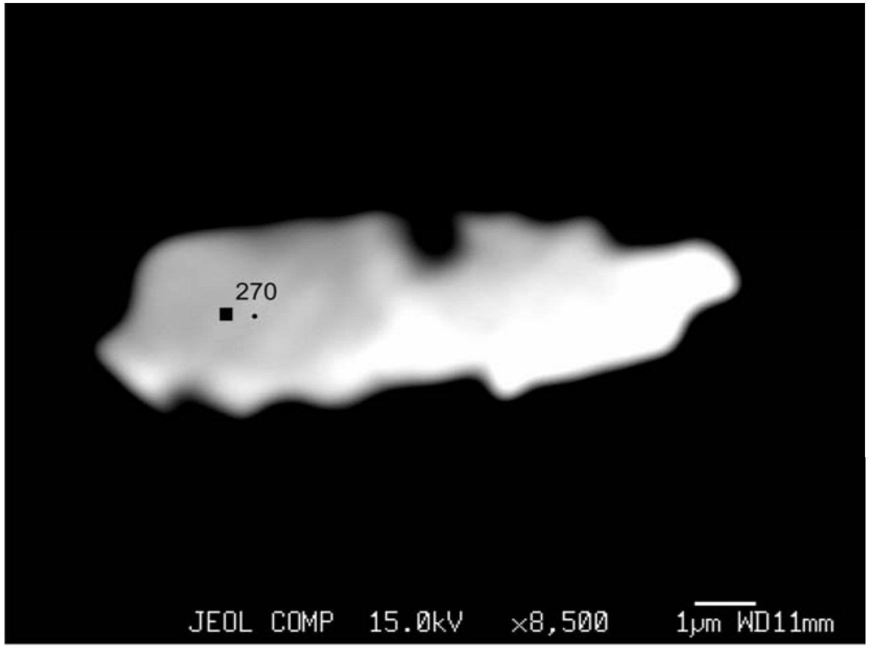
Alma K-85

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2462.91	12/5/2007	D267_1_14	1	2183	17704	274	351	351	421	24.14



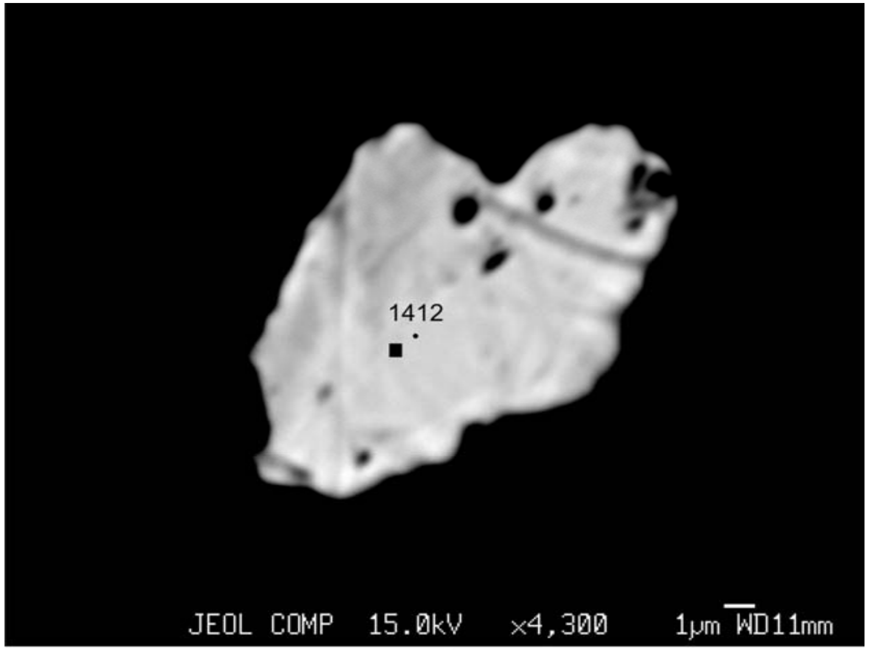
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2462.91	12/5/2007	D267_1_14	2	0	9886	0	119	119	270	29.18



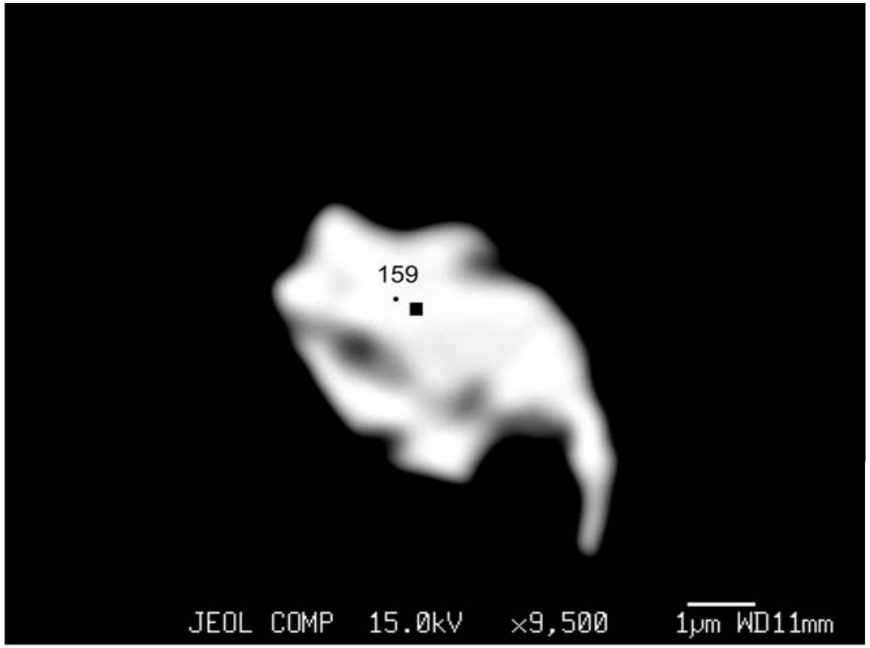
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2462.91	12/5/2007	D267_1_14	3	3684	47772	1502	3445	3445	1412	6.46



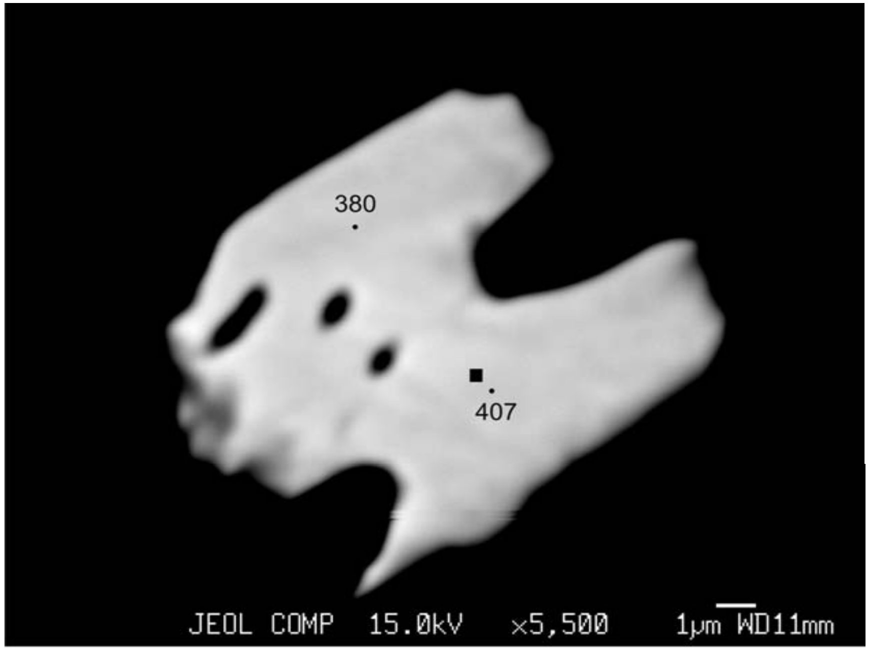
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2462.91	12/5/2007	D267_1_14	4	0	13258	0	94	94	159	33.16



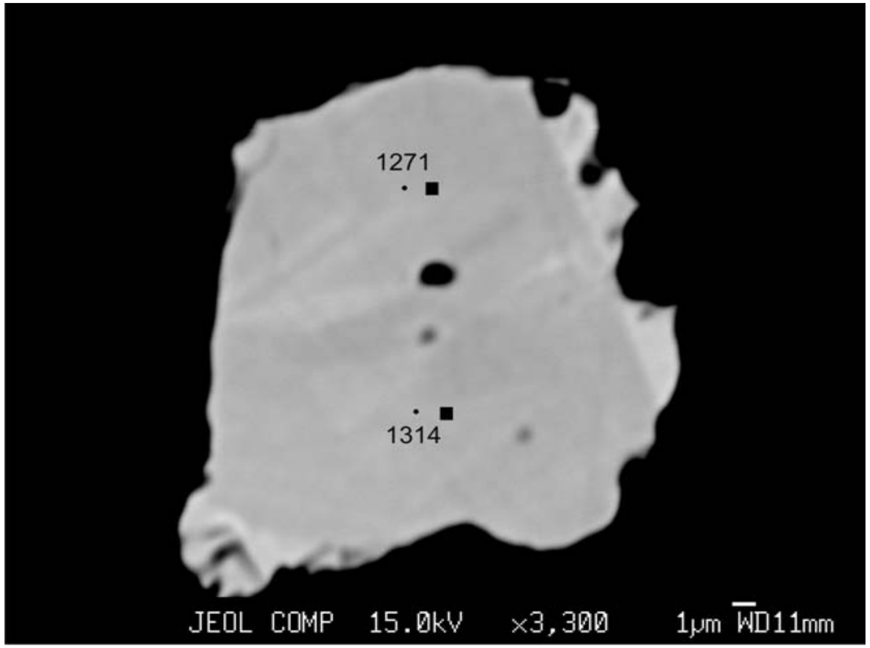
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2464.32	12/5/2007	D267_1_12	1	8363	21944	3730	621	621	407	6.1
ALMA K-85	2464.32	12/5/2007	D267_1_12	1	9473	38507	3940	871	871	380	5.05



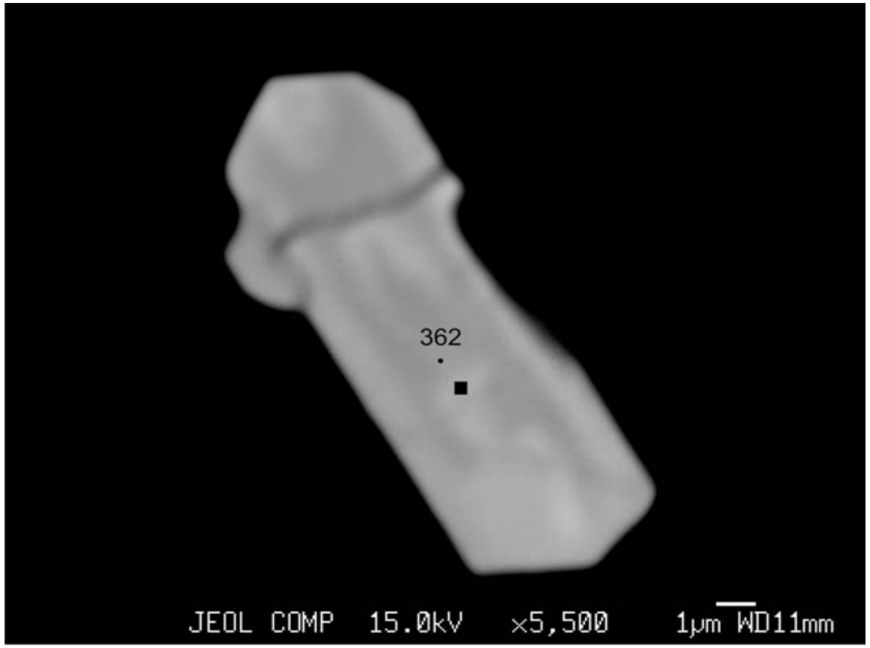
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2464.32	12/5/2007	D267_1_12	2	5875	17790	835	1248	1248	1314	9.9
ALMA K-85	2464.32	12/5/2007	D267_1_12	2	6341	13868	872	984	984	1271	9.92



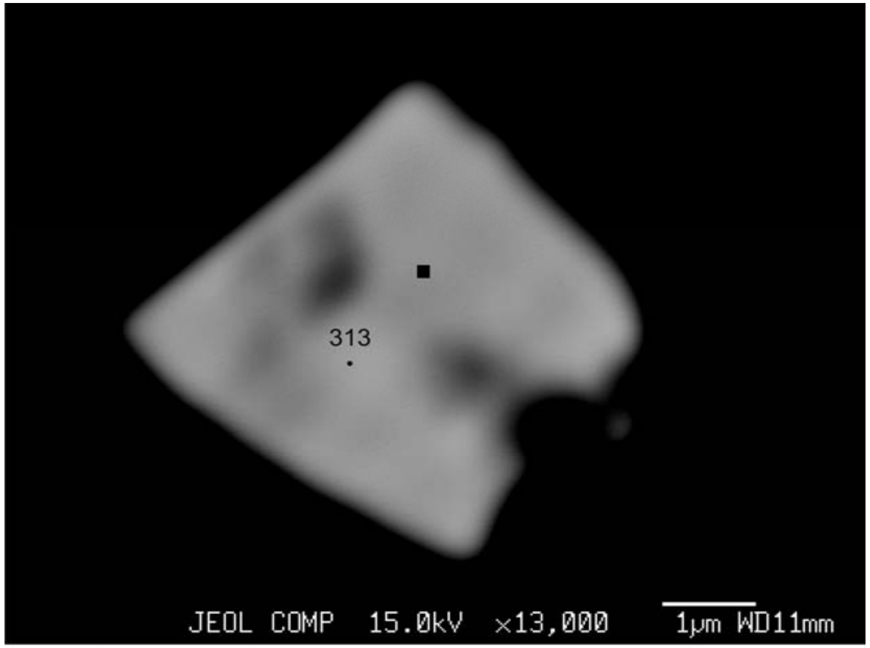
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2464.32	12/5/2007	D267_1_12	3	8113	84376	5066	1633	1633	362	4.07



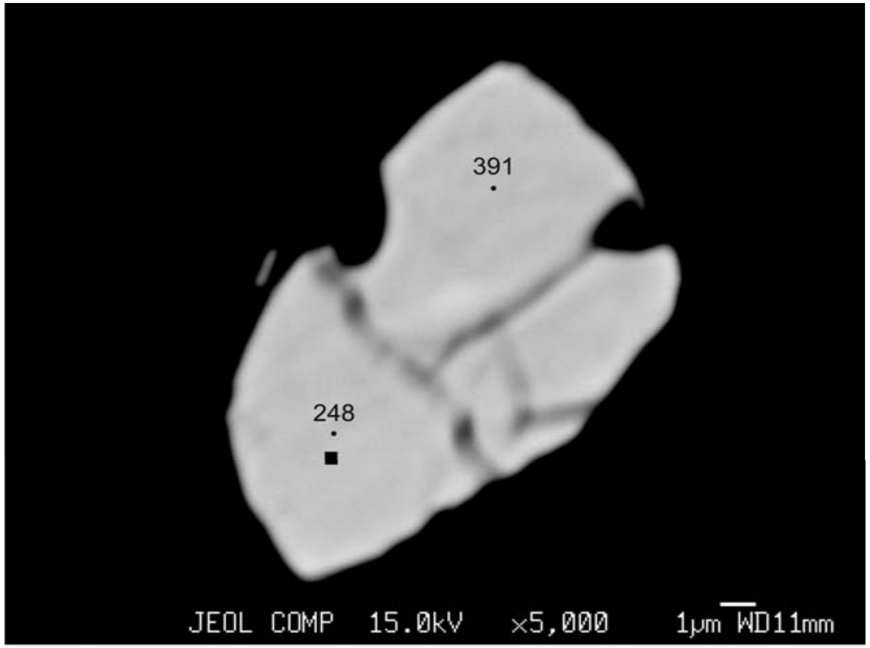
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2464.32	12/5/2007	D267_1_12	4	1729	9030	301	140	140	313	31.66



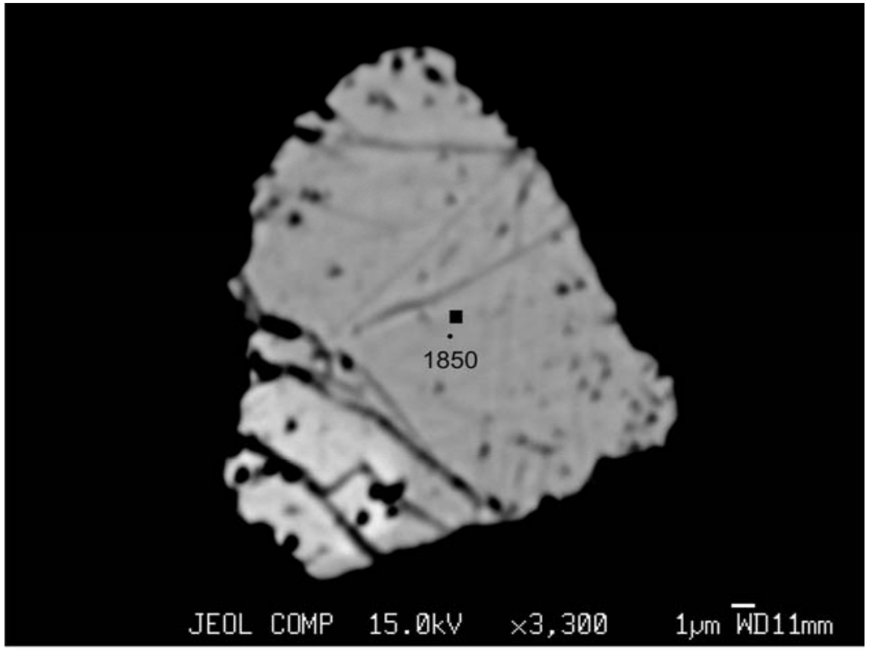
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2464.32	12/5/2007	D267_1_12	5	11252	33858	4750	544	544	248	6.78
ALMA K-85	2464.32	12/5/2007	D267_1_12	5	4936	66385	780	1206	1206	391	9.53



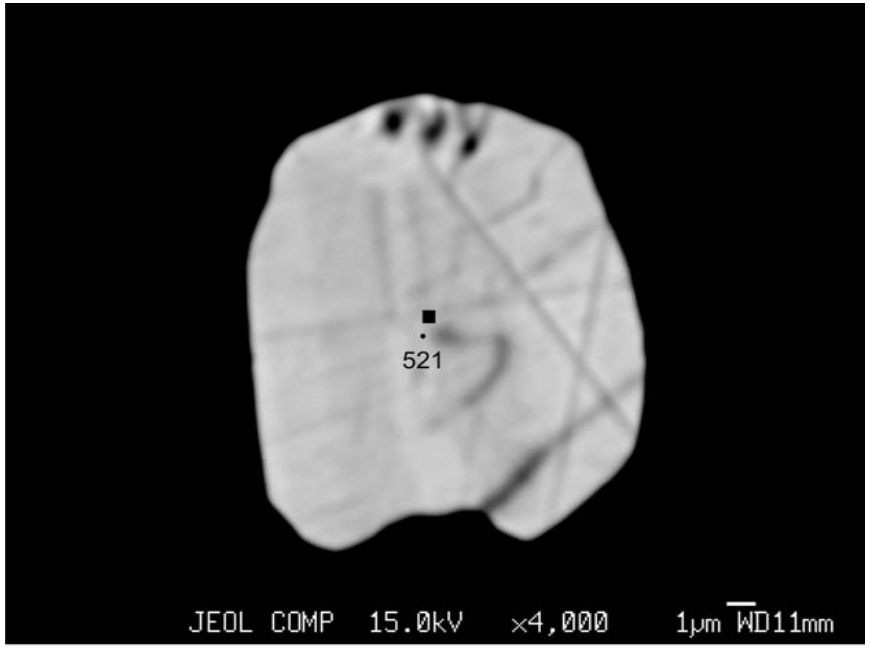
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2465.81	12/5/2007	D267_1_8	1	2456	53977	2899	5563	5563	1850	3.97



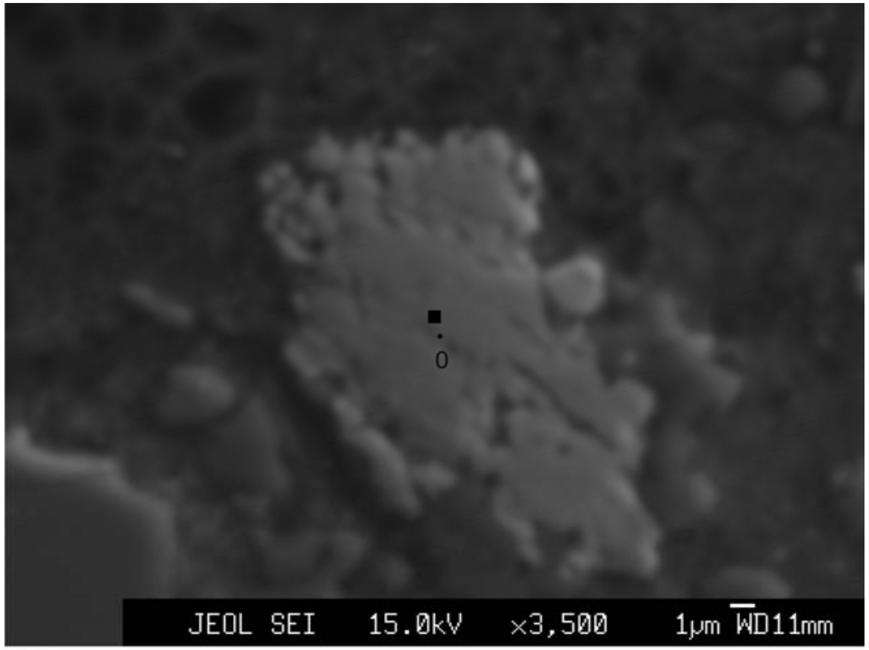
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2465.81	12/5/2007	D267_1_8	2	21309	51271	3465	1467	1467	521	4.74



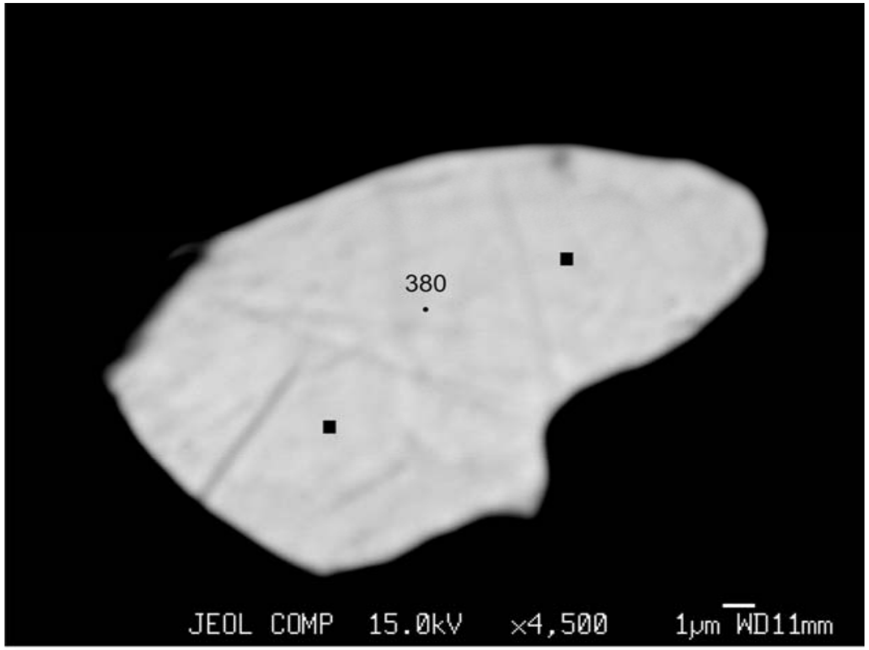
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2465.81	12/5/2007	D267_1_8	3	242	228	0	0	0	0	*



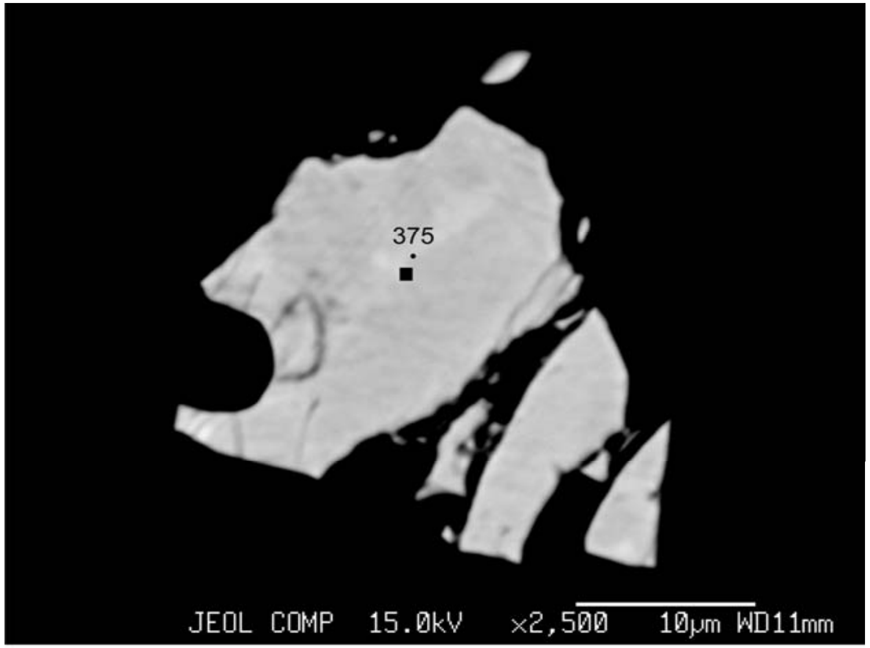
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2465.81	12/5/2007	D267_1_8	5	15713	17087	2744	442	442	380	8.55



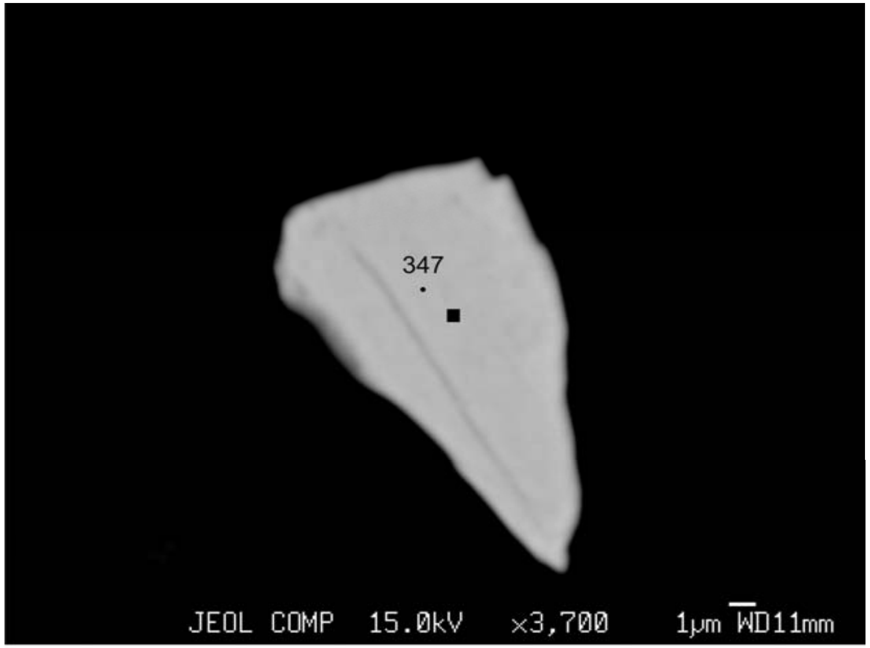
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2465.81	12/5/2007	D267_1_8	6	0	28827	2398	615	615	375	6.88



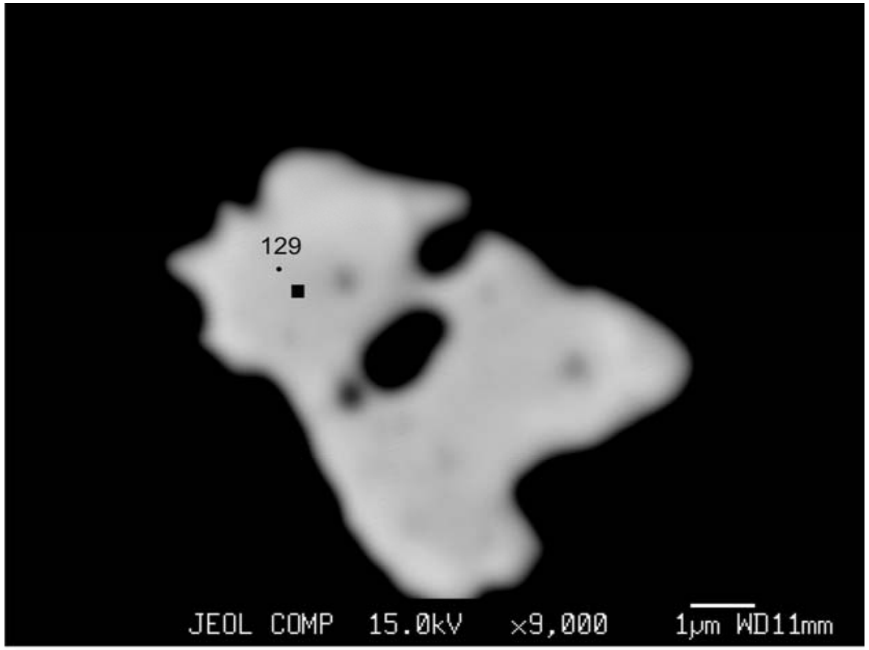
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	1	14354	32499	4629	737	737	347	5.67



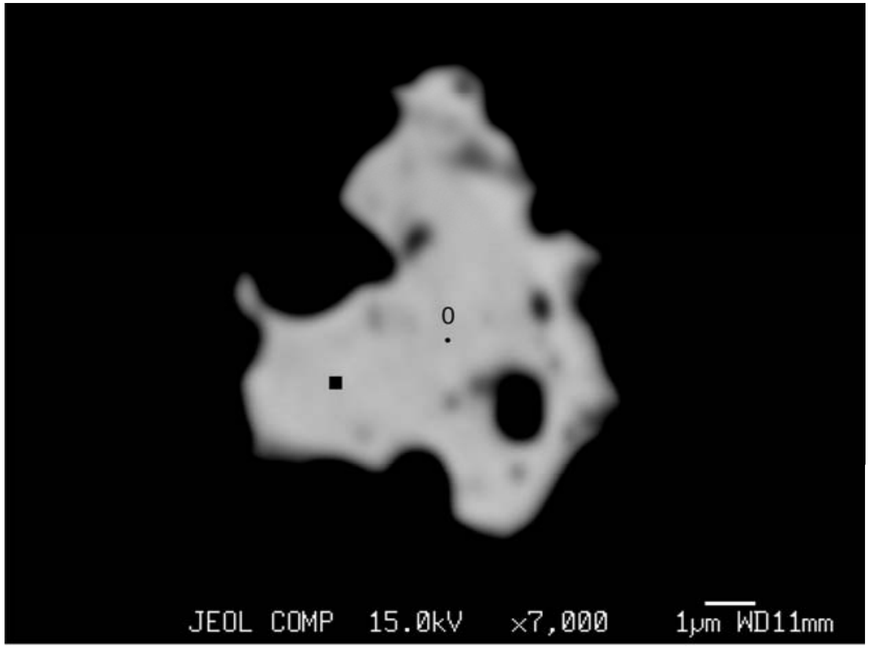
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	2	6723	6095	0	35	35	129	1908



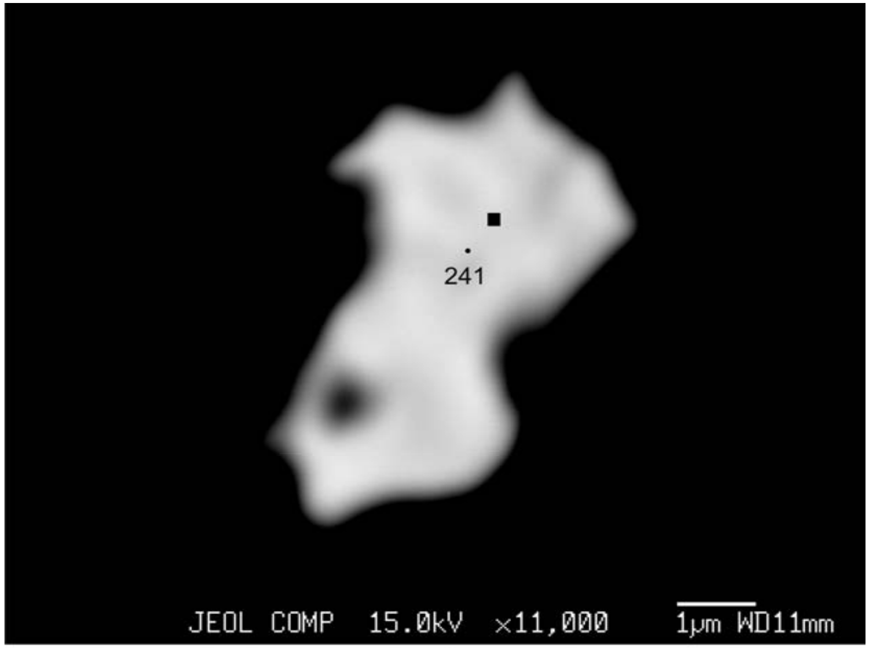
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	3	3833	3376	0	0	0	0	*



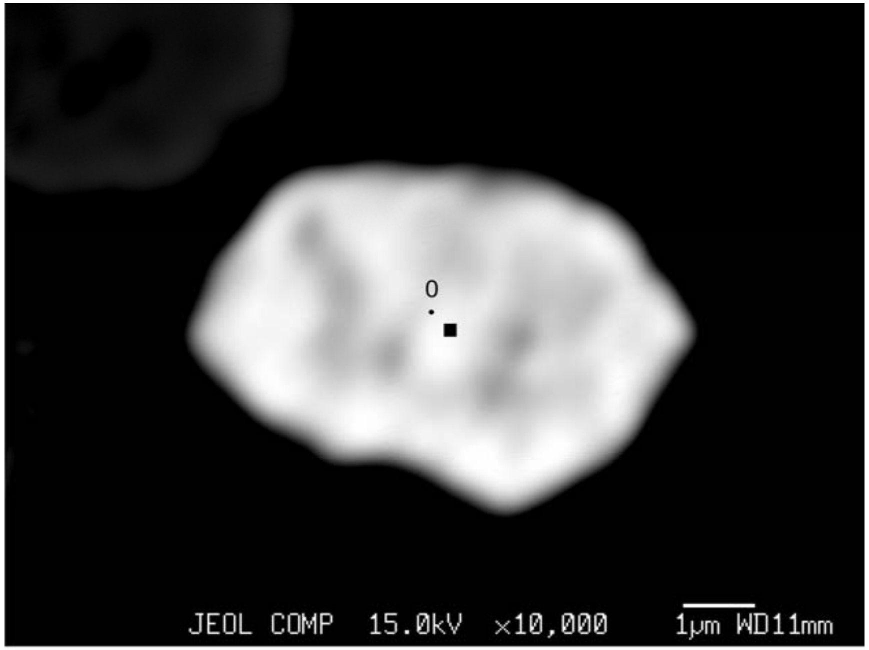
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	4	758	19432	0	209	209	241	66.47



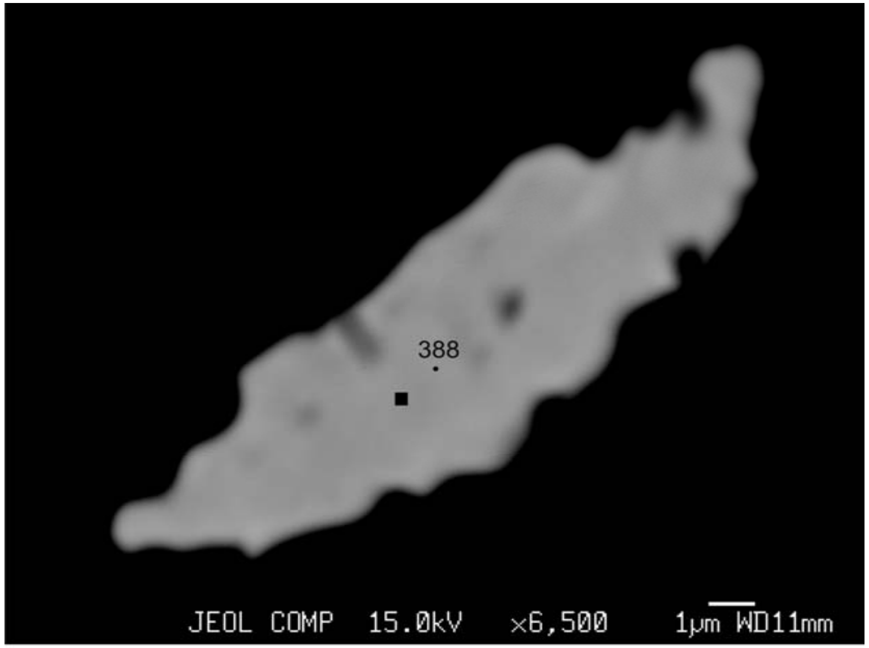
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	5	3493	13384	809	0	0	0	*



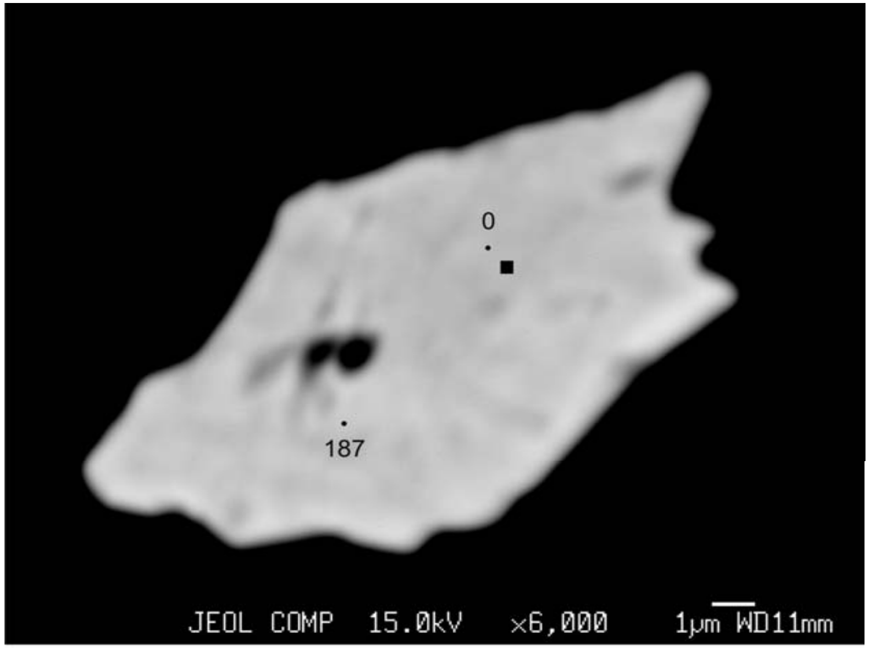
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	6	10137	36485	2814	792	792	388	5.87



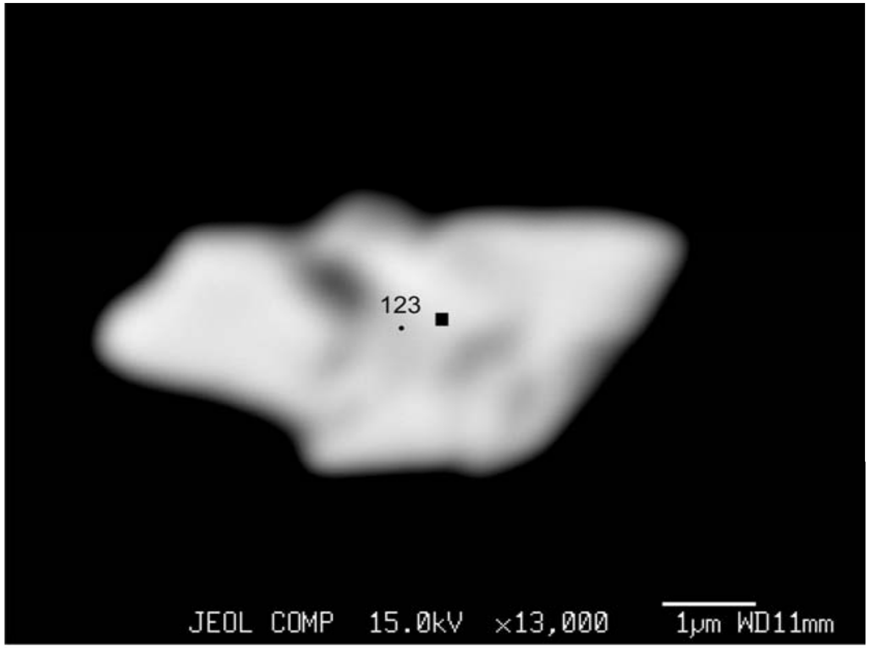
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	7	3056	11370	114	98	98	187	51.16
ALMA K-86	2475.79	12/6/2007	D267_1_5	7	0.4074	2782	0	0	0	0	*



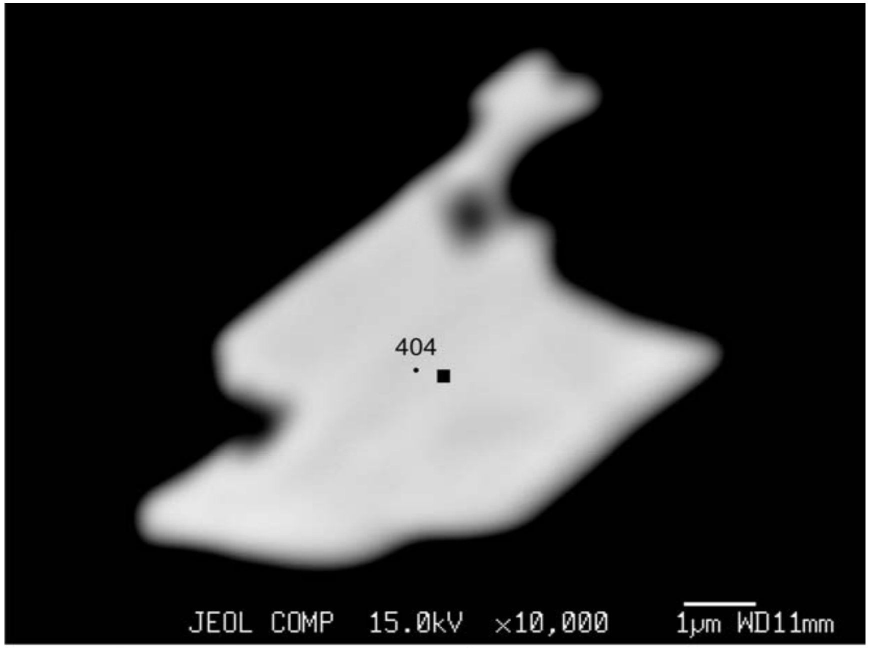
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	8	1223	9316	0	51	51	123	55.04



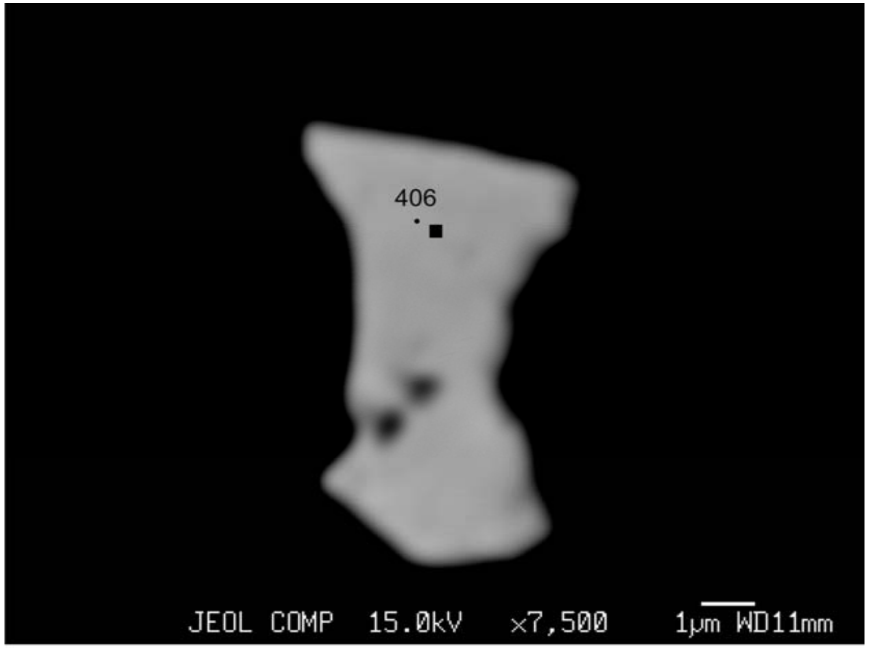
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	9	286	11844	144	223	223	404	40.84



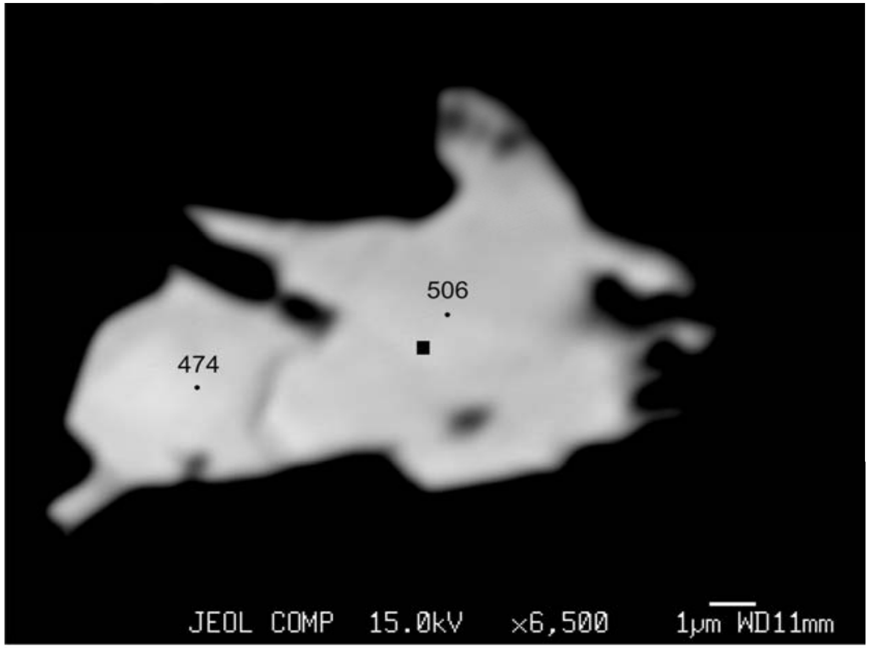
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	10	2460	16844	236	320	320	406	27.09



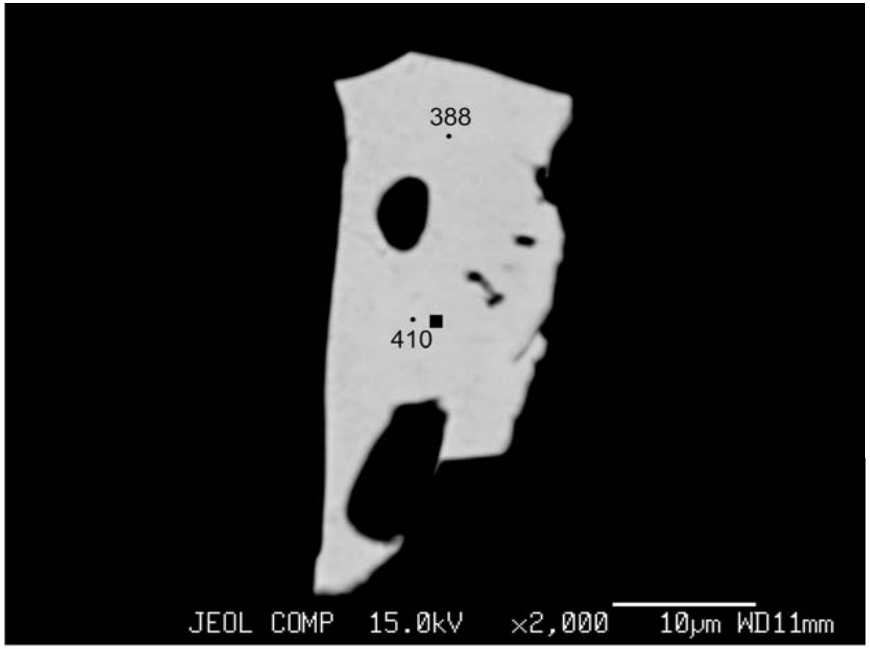
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	11	6677	33766	296	790	790	506	19.21
ALMA K-85	2474.79	12/5/2007	D267_1_5	11	4876	51343	462	1124	1124	474	14.62



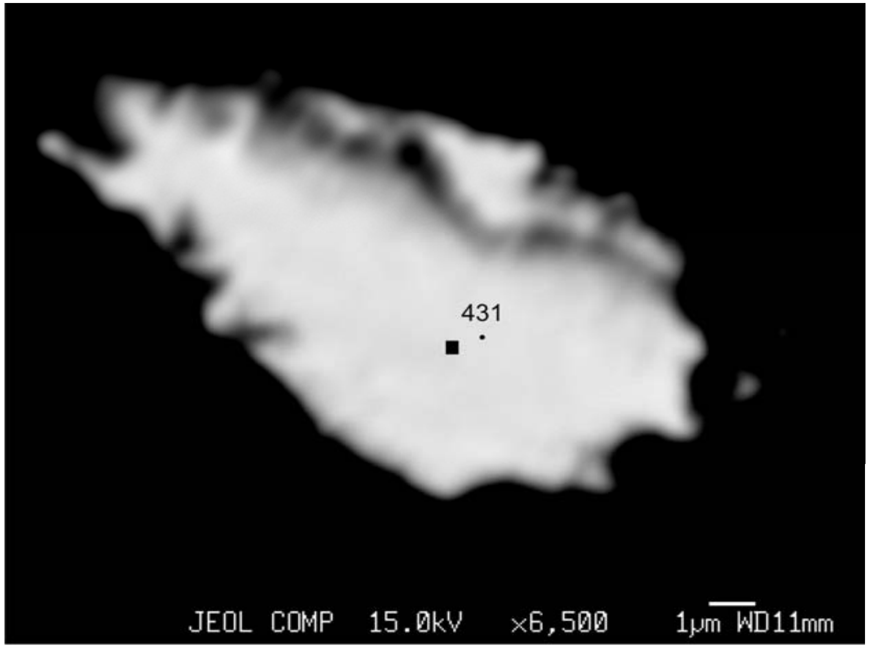
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	12	9096	27413	2936	678	678	410	6.13
ALMA K-85	2474.79	12/5/2007	D267_1_5	12	8343	24390	2560	568	568	388	6.99



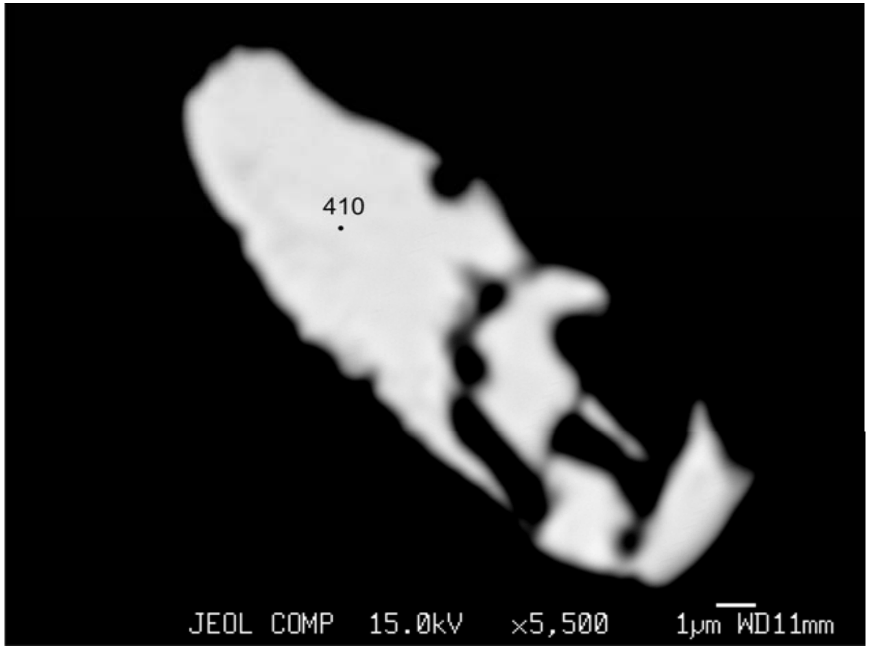
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	13	16866	39794	667	810	810	431	12.44

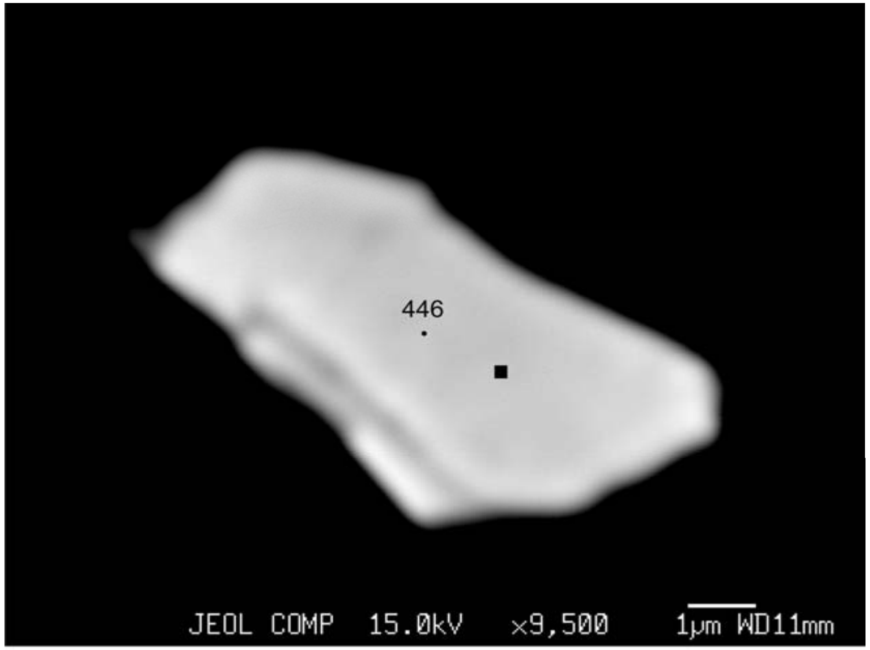


Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2474.79	12/5/2007	D267_1_5	14	14892	37613	544	724	724	410	14.08

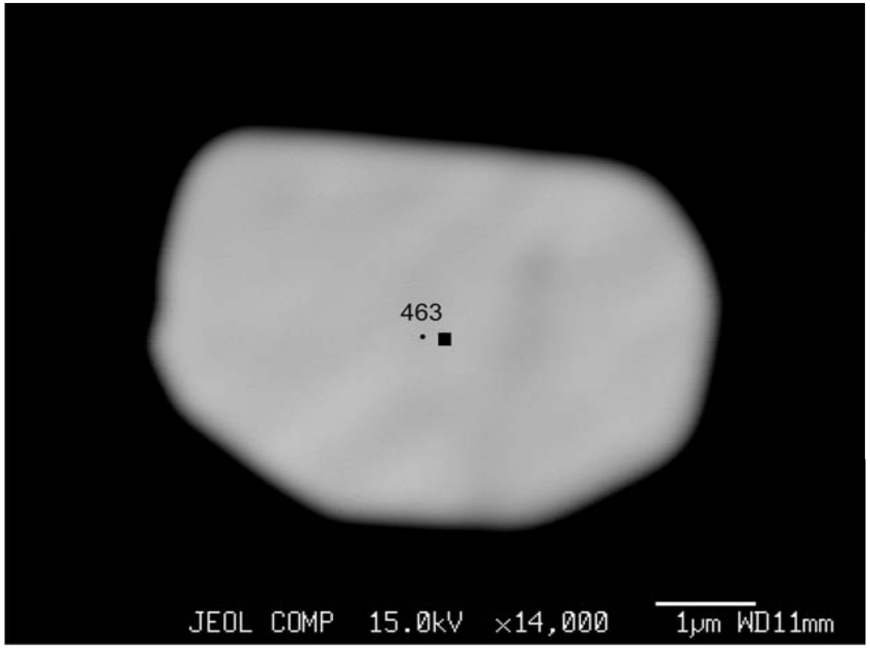


Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2465.18	12/5/2007	D267_1_9A	1	885	7682	4	154	154	446	138



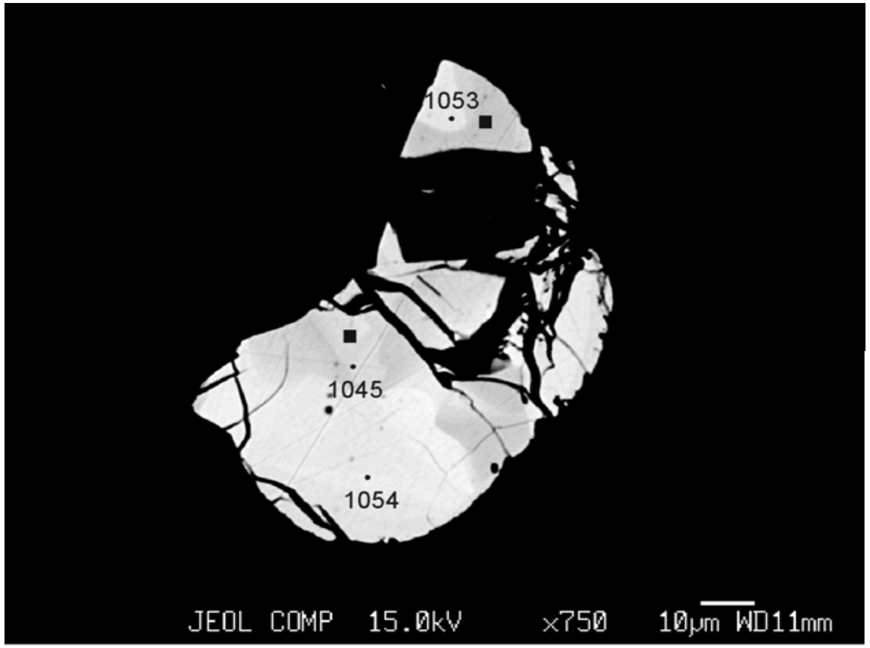
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2465.18	12/5/2007	D267_1_9A	2	19909	46051	2583	1131	1131	463	5.98



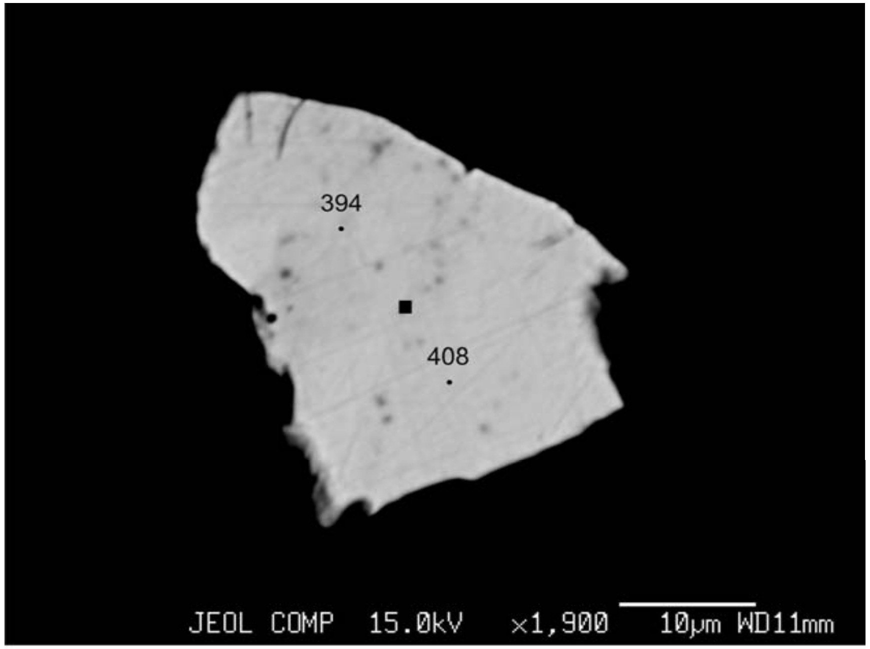
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2465.18	12/5/2007	D267_1_9A	3	17891	65327	3513	3680	3680	1045	3.86
ALMA K-85	2465.18	12/5/2007	D267_1_9A	3	18541	97103	4453	5392	5392	1054	3.77
ALMA K-85	2465.18	12/5/2007	D267_1_9A	3	18002	81782	3738	4534	4534	1053	3.98



Rectagles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
ALMA K-85	2465.18	12/5/2007	D267_1_9A	4	17670	40112	5813	1041	1041	394	4.6
ALMA K-85	2465.18	12/5/2007	D267_1_9A	4	18325	36963	7987	1149	1149	408	4.14

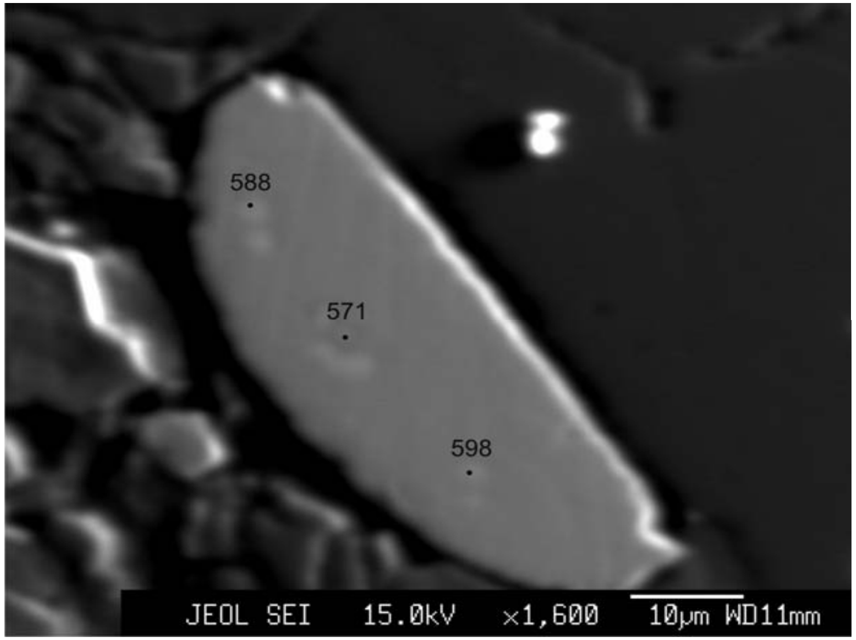


Rectangle denotes point of major elements analysis

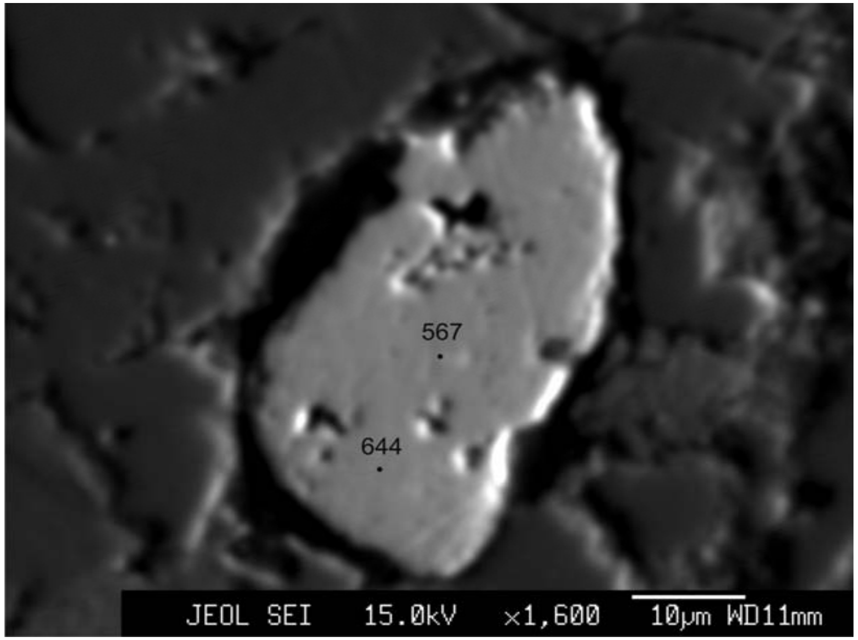
Thebaud Field

(Thebaud 3, I-93 and C-74)

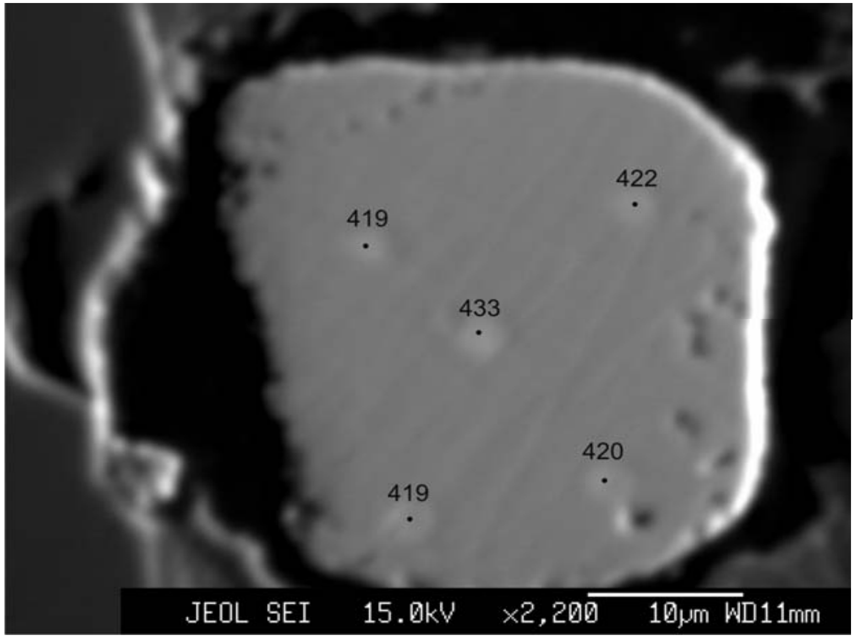
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	3/19/2007	TH-3-5A	1	9487	32321	4439	1241	1241	588	3.75
Thebaud	Missisauga	3/19/2007	TH-3-5A	1	9325	29293	4351	1120	1120	571	3.96
Thebaud	Missisauga	3/19/2007	TH-3-5A	1	4137	30068	5117	1263	1263	598	3.41



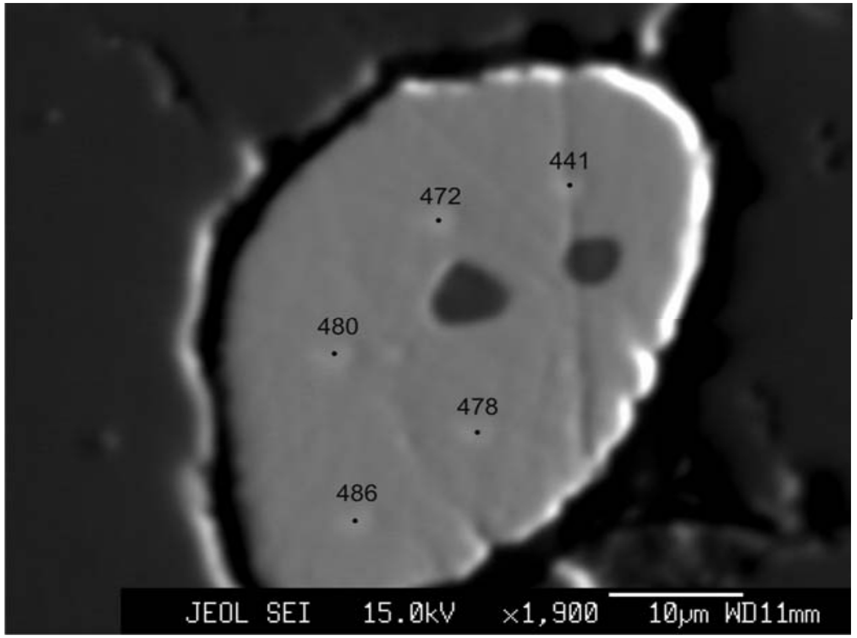
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	3/19/2007	TH-3-5A	2	8112	53345	3426	1648	1648	567	3.98
Thebaud	Missisauga	3/19/2007	TH-3-5A	2	7732	58519	1961	1887	1887	644	5.66



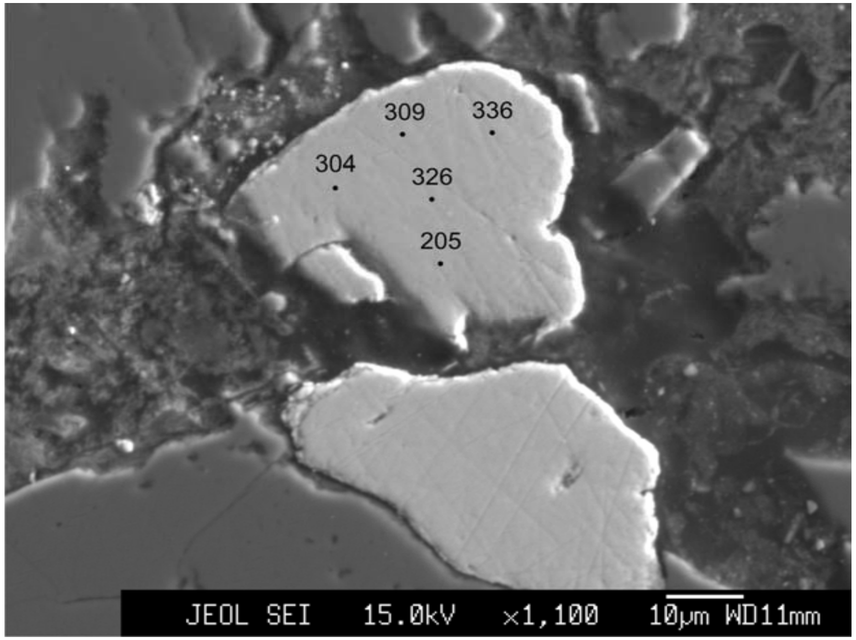
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	3/19/2007	TH-3-5A	6	6254	72827	2098	1496	1496	419	6
Thebaud	Missisauga	3/19/2007	TH-3-5A	6	5165	95352	2473	2008	2008	433	5.77
Thebaud	Missisauga	3/19/2007	TH-3-5A	6	7902	70836	2535	1490	1490	420	5.31
Thebaud	Missisauga	3/19/2007	TH-3-5A	6	8570	76000	2384	1572	1572	419	5.6
Thebaud	Missisauga	3/19/2007	TH-3-5A	6	5306	74657	2161	1544	1544	422	5.91



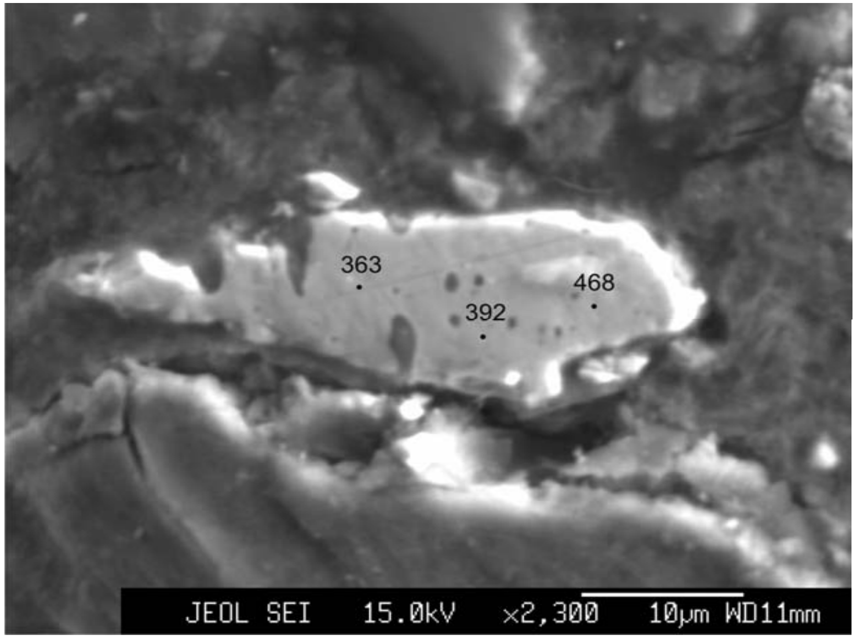
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	3/19/2007	TH-3-5A	7	20346	39843	5887	1289	1289	486	3.98
Thebaud	Missisauga	3/19/2007	TH-3-5A	7	19989	36368	6300	1220	1220	478	4.04
Thebaud	Missisauga	3/19/2007	TH-3-5A	7	21821	27212	4000	867	867	480	5.54
Thebaud	Missisauga	3/19/2007	TH-3-5A	7	17621	33781	5065	1066	1066	472	4.4
Thebaud	Missisauga	3/19/2007	TH-3-5A	7	18931	23876	3273	683	683	441	6.38



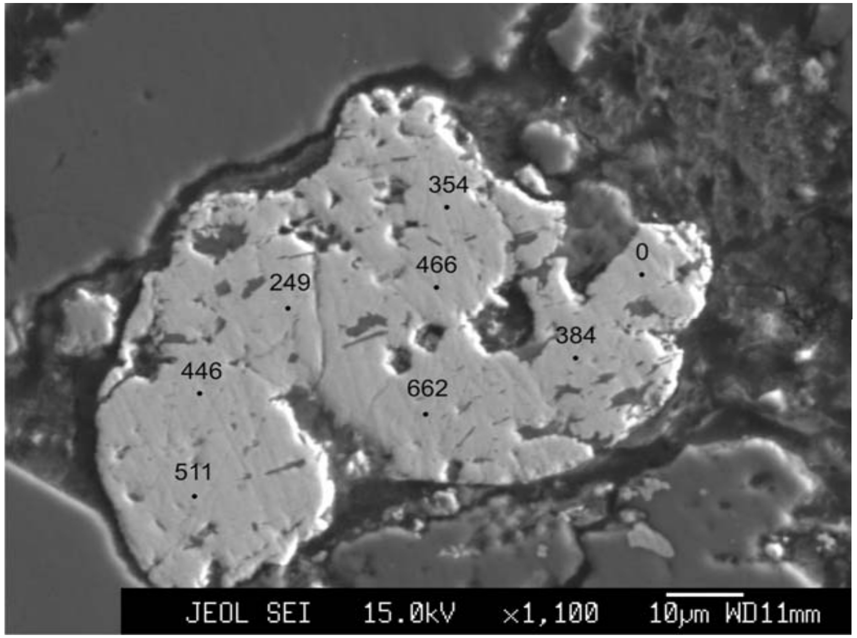
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	TH-3-1	2	404	44563	382	667	667	326	16.8
Thebaud	Missisauga	4/18/2007	TH-3-1	2	273	46541	428	721	721	336	15.72
Thebaud	Missisauga	4/18/2007	TH-3-1	2	583	27671	164	390	390	309	28.35
Thebaud	Missisauga	4/18/2007	TH-3-1	2	649	30794	203	427	427	304	24.93
Thebaud	Missisauga	4/18/2007	TH-3-1	2	0	14664	0	134	134	205	282



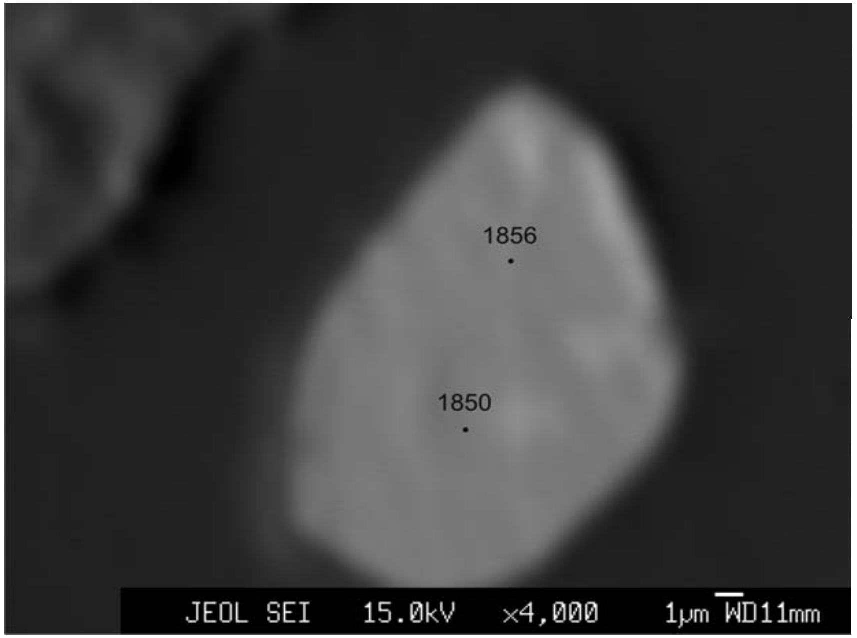
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	TH-3-1	1	3923	10680	882	220	220	363	16.07
Thebaud	Missisauga	4/18/2007	TH-3-1	1	4188	13068	873	279	279	392	14.2
Thebaud	Missisauga	4/18/2007	TH-3-1	1	3895	15079	1037	388	388	468	11.37



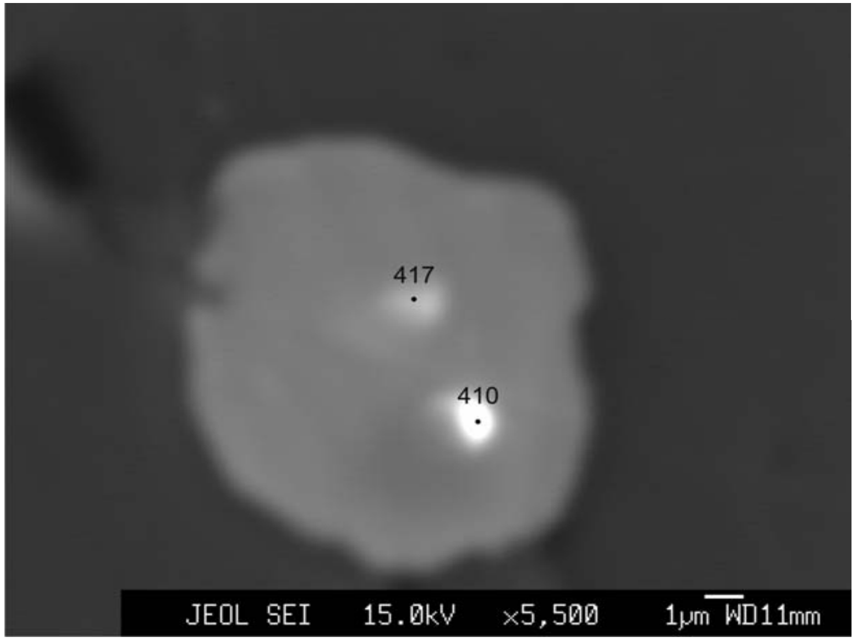
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	TH-3-1	4	1262	20506	23	472	472	511	54.88
Thebaud	Missisauga	4/18/2007	TH-3-1	4	7946	29362	377	612	612	446	17.89
Thebaud	Missisauga	4/18/2007	TH-3-1	4	3165	20401	52	430	430	466	47.4
Thebaud	Missisauga	4/18/2007	TH-3-1	4	10454	30649	676	981	981	662	11.89
Thebaud	Missisauga	4/18/2007	TH-3-1	4	6430	68551	1777	825	825	249	7.56
Thebaud	Missisauga	4/18/2007	TH-3-1	4	2731	8266	0	131	131	354	46.41
Thebaud	Missisauga	4/18/2007	TH-3-1	4	1856	12011	115	213	213	384	47.3
Thebaud	Missisauga	4/18/2007	TH-3-1	4	910	7530	153	0	0	0	*



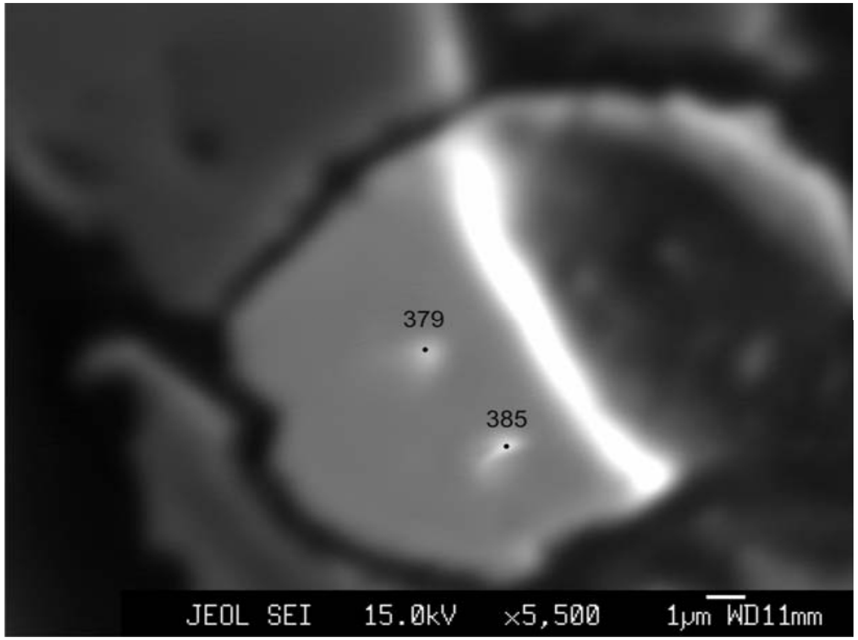
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	3/19/2007	I-93-26	1	9066	27730	2944	3333	3333	1856	3.42
Thebaud	Missisauga	3/19/2007	I-93-26	1	14261	36611	14294	7697	7697	1850	1.1



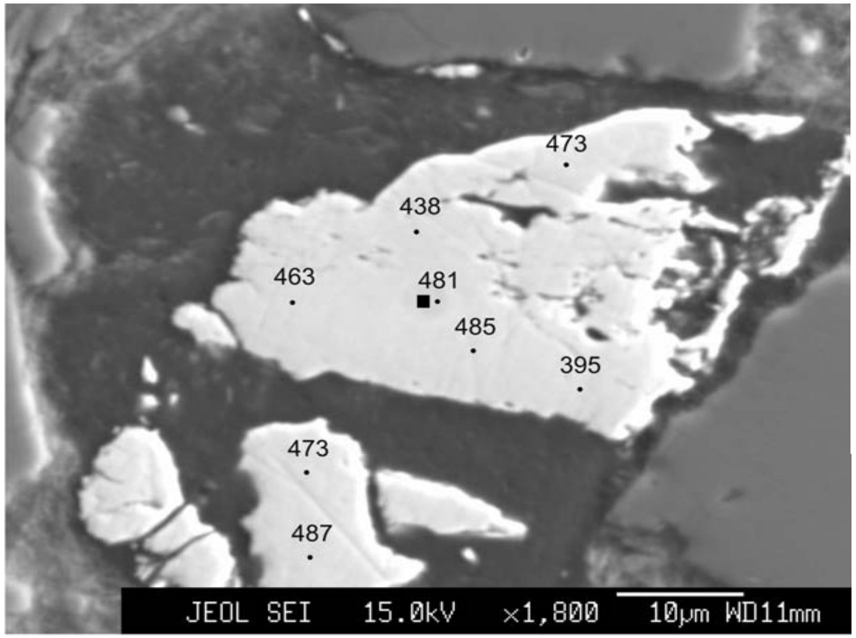
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	3/19/2007	I-93-2	1	17536	47540	4654	1170	1170	417	4.35
Thebaud	Missisauga	3/19/2007	I-93-2	1	18562	40310	4839	1028	1028	410	4.66



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	3/19/2007	I-93-2	2	21374	25454	16395	1332	1332	379	3.56
Thebaud	Missisauga	3/19/2007	I-93-2	2	20406	28138	18037	1491	1491	385	3.18

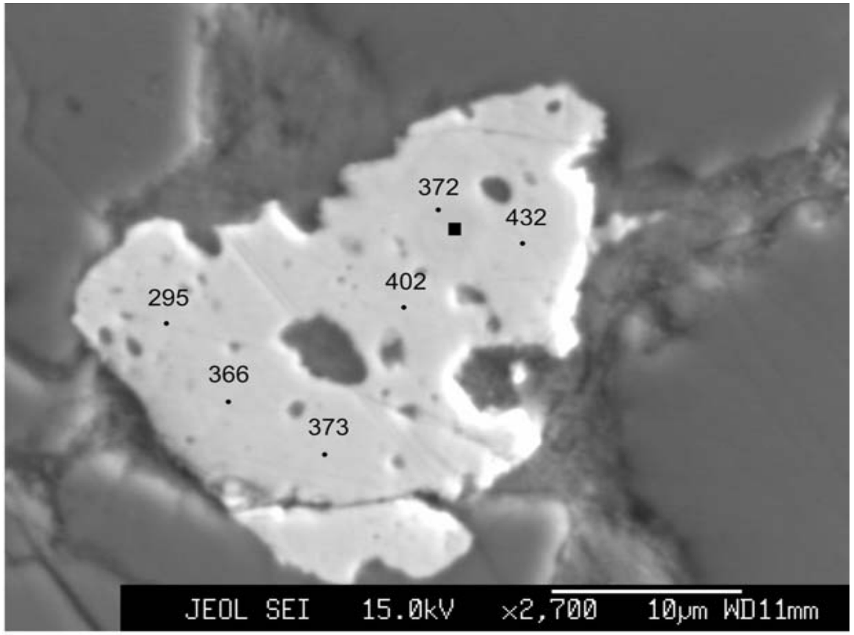


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	I-93-18A	2	16915	41423	678	943	943	481	12.05
Thebaud	Missisauga	4/18/2007	I-93-18A	2	7544	85479	1490	1878	1878	463	7.9
Thebaud	Missisauga	4/18/2007	I-93-18A	2	7367	73682	1240	1527	1527	438	8.57
Thebaud	Missisauga	4/18/2007	I-93-18A	2	3775	89005	1366	1985	1985	473	8.42
Thebaud	Missisauga	4/18/2007	I-93-18A	2	8019	87355	1438	2005	2005	485	8.11
Thebaud	Missisauga	4/18/2007	I-93-18A	2	7916	61138	392	1105	1105	395	15.83
Thebaud	Missisauga	4/18/2007	I-93-18A	2	5215	60253	530	1316	1316	473	13.58
Thebaud	Missisauga	4/18/2007	I-93-18A	2	6529	38860	431	880	880	487	15.55



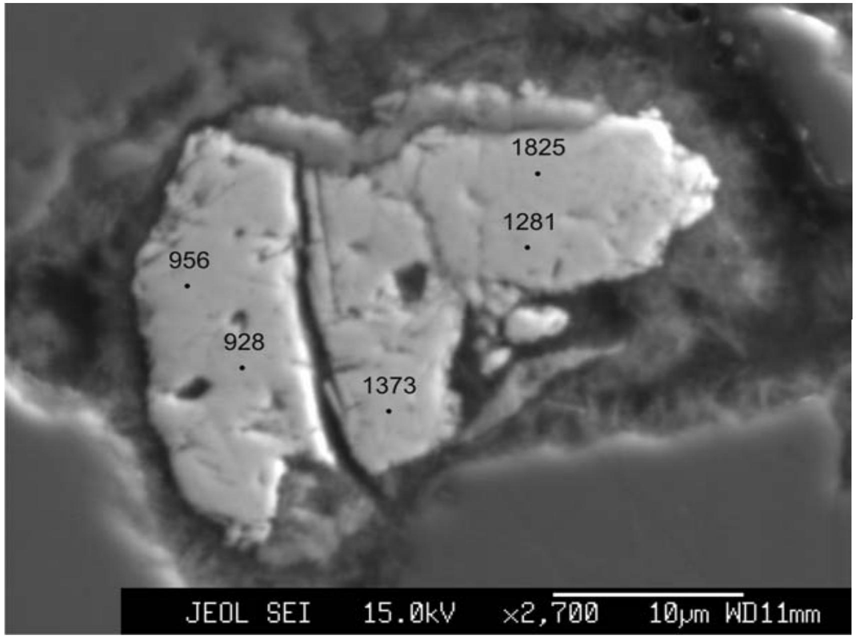
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	I-93-18A	3	4802	9680	118	181	181	402	50.54
Thebaud	Missisauga	4/18/2007	I-93-18A	3	3739	8814	125	151	151	366	51.39
Thebaud	Missisauga	4/18/2007	I-93-18A	3	4137	10516	173	185	185	373	39.5
Thebaud	Missisauga	4/18/2007	I-93-18A	3	4927	12392	176	171	171	295	37.5
Thebaud	Missisauga	4/18/2007	I-93-18A	3	4940	10684	220	190	190	372	33.53
Thebaud	Missisauga	4/18/2007	I-93-18A	3	5171	9811	257	206	206	432	30.72

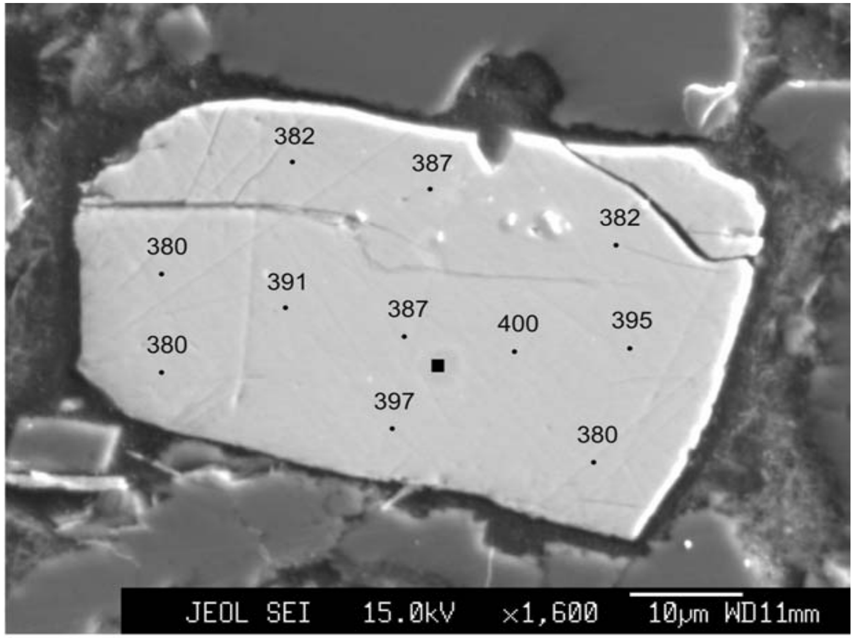


Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	I-93-18A	4	1277	17160	0	1454	1454	1825	18.02
Thebaud	Missisauga	4/18/2007	I-93-18A	4	1836	24727	3	1559	1559	1373	52.97
Thebaud	Missisauga	4/18/2007	I-93-18A	4	2612	24815	128	1064	1064	928	31.51
Thebaud	Missisauga	4/18/2007	I-93-18A	4	3931	22226	200	995	995	956	26.71
Thebaud	Missisauga	4/18/2007	I-93-18A	4	2007	23834	203	1440	1440	1281	25.85

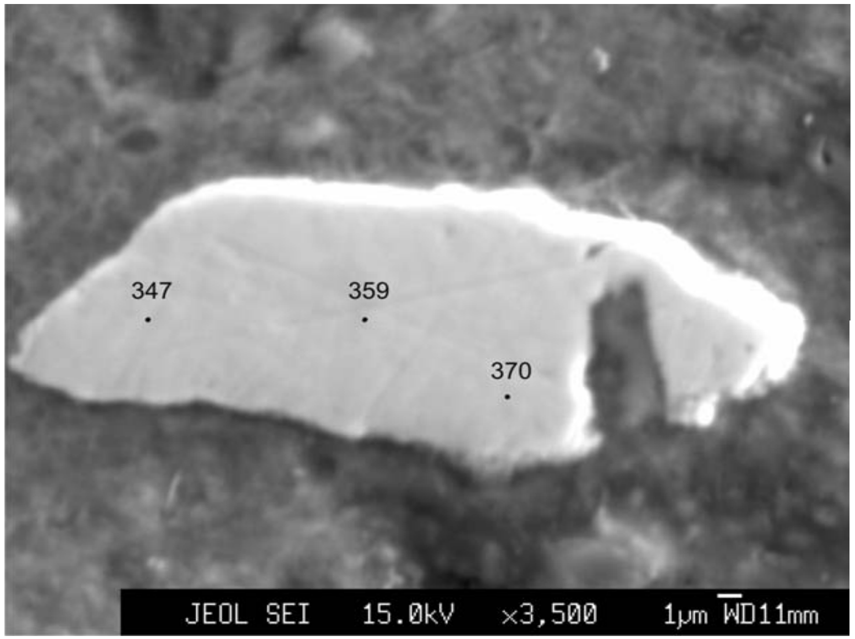


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	I-93-18A	5	7510	53932	1823	1038	1038	387	6.61
Thebaud	Missisauga	4/18/2007	I-93-18A	5	7591	53489	1951	1018	1018	380	6.38
Thebaud	Missisauga	4/18/2007	I-93-18A	5	7779	56379	2052	1071	1071	380	6.2
Thebaud	Missisauga	4/18/2007	I-93-18A	5	7521	56750	1931	1077	1077	382	6.42
Thebaud	Missisauga	4/18/2007	I-93-18A	5	7289	55332	1919	1052	1052	382	6.43
Thebaud	Missisauga	4/18/2007	I-93-18A	5	7511	49515	1874	945	945	380	6.55
Thebaud	Missisauga	4/18/2007	I-93-18A	5	7433	52777	1991	1047	1047	395	6.24
Thebaud	Missisauga	4/18/2007	I-93-18A	5	7580	51412	1925	1024	1024	397	6.36
Thebaud	Missisauga	4/18/2007	I-93-18A	5	7375	56890	2008	1098	1098	387	6.24
Thebaud	Missisauga	4/18/2007	I-93-18A	5	7405	53183	1882	1063	1063	400	6.43
Thebaud	Missisauga	4/18/2007	I-93-18A	5	7708	55650	1960	1085	1085	391	6.32

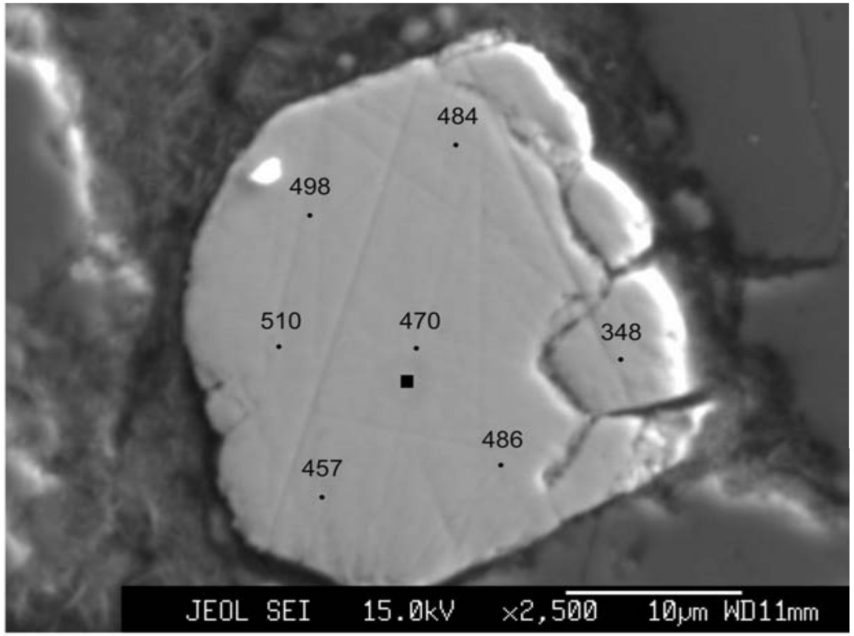


Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	I-93-18A	6	11802	18535	3006	454	454	359	7.69
Thebaud	Missisauga	4/18/2007	I-93-18A	6	7895	11271	1199	235	235	347	13.68
Thebaud	Missisauga	4/18/2007	I-93-18A	6	10086	13175	2211	337	337	370	9.7

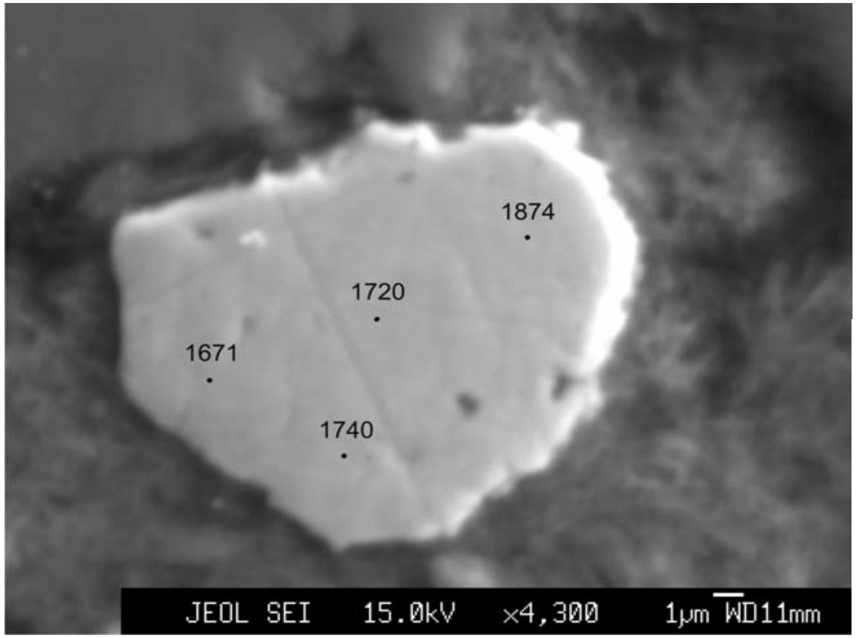


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	I-93-18A	7	21092	14288	4033	578	578	470	7.04
Thebaud	Missisauga	4/18/2007	I-93-18A	7	16128	24841	2881	766	766	498	5.92
Thebaud	Missisauga	4/18/2007	I-93-18A	7	16412	23995	3196	748	748	484	5.85
Thebaud	Missisauga	4/18/2007	I-93-18A	7	16123	13678	1584	411	411	486	9.72
Thebaud	Missisauga	4/18/2007	I-93-18A	7	22422	18572	2814	569	569	457	7.58
Thebaud	Missisauga	4/18/2007	I-93-18A	7	19586	12971	3321	546	546	510	7.32
Thebaud	Missisauga	4/18/2007	I-93-18A	7	16126	18753	2453	415	415	348	8.71

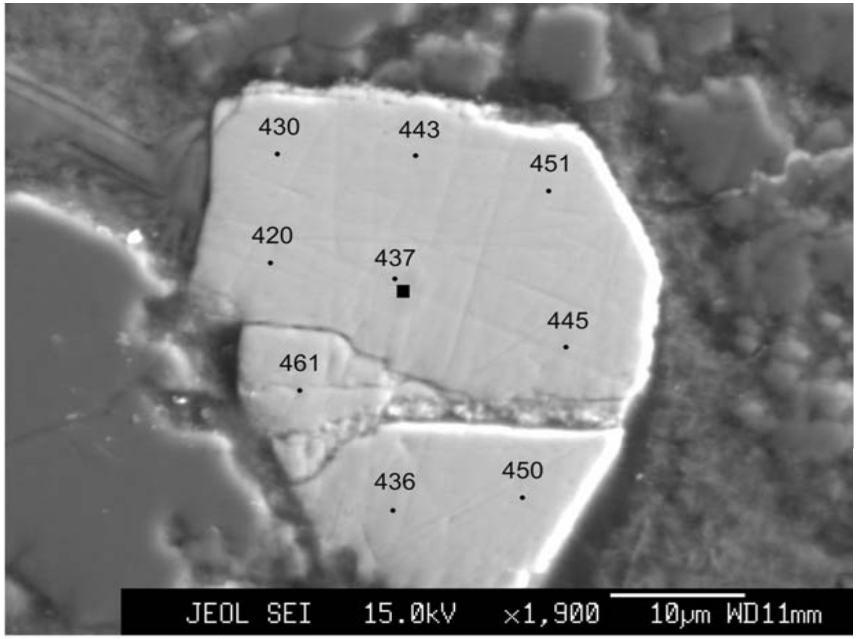


Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	I-93-18A	8	0	2761	540	377	377	1720	18.41
Thebaud	Missisauga	4/18/2007	I-93-18A	8	0	1704	218	219	219	1874	41.92
Thebaud	Missisauga	4/18/2007	I-93-18A	8	0	2391	542	337	337	1671	18.97
Thebaud	Missisauga	4/18/2007	I-93-18A	8	0	2711	334	317	317	1740	27.36

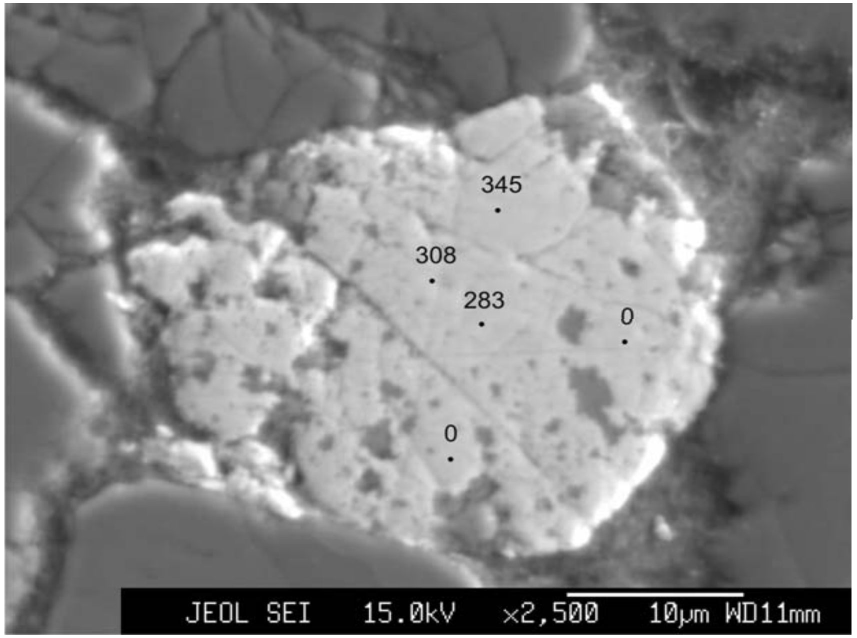


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	I-93-18A	9	7039	43962	890	918	918	437	10.07
Thebaud	Missisauga	4/18/2007	I-93-18A	9	4698	47525	835	1002	1002	445	10.42
Thebaud	Missisauga	4/18/2007	I-93-18A	9	4529	44980	691	956	956	451	11.73
Thebaud	Missisauga	4/18/2007	I-93-18A	9	10298	41724	909	888	888	443	10
Thebaud	Missisauga	4/18/2007	I-93-18A	9	5923	50798	937	1039	1039	430	9.76
Thebaud	Missisauga	4/18/2007	I-93-18A	9	6152	46419	851	925	925	420	10.4
Thebaud	Missisauga	4/18/2007	I-93-18A	9	9894	42606	1180	907	907	436	8.49
Thebaud	Missisauga	4/18/2007	I-93-18A	9	9019	47325	1004	1022	1022	450	9.34
Thebaud	Missisauga	4/18/2007	I-93-18A	9	6991	47233	717	1026	1026	461	11.44

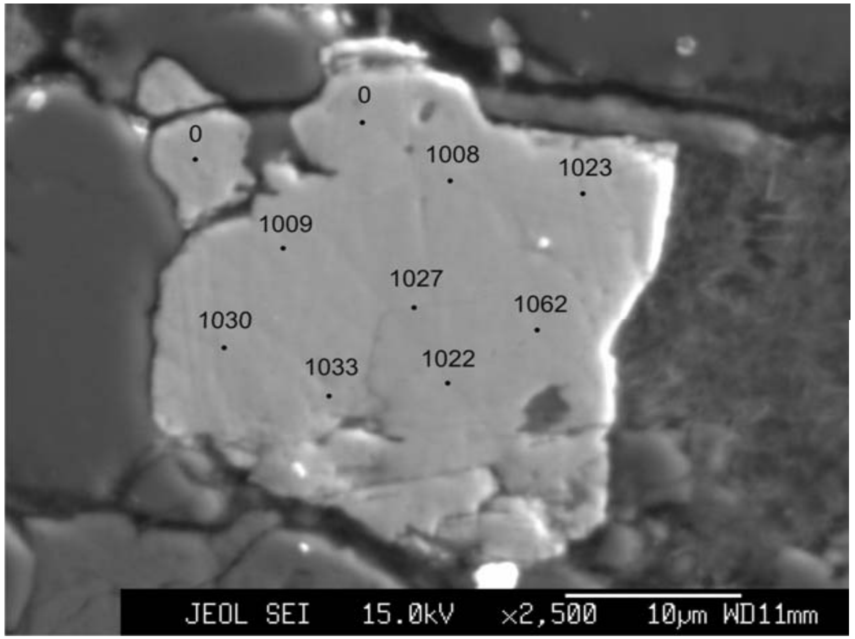


Rectangle denotes point of major elements analysis

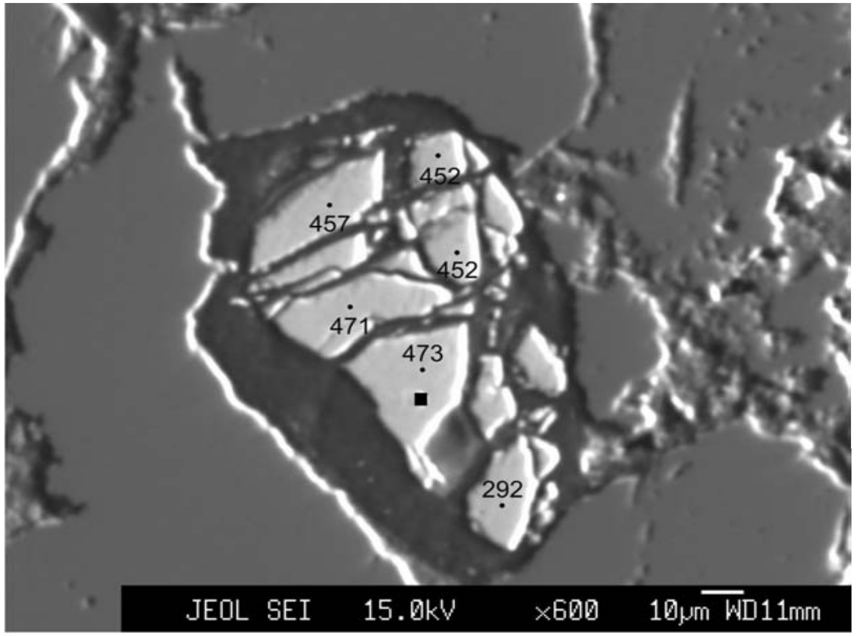
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	I-93-18A	10	6001	6143	232	87	87	283	40.61
Thebaud	Missisauga	4/18/2007	I-93-18A	10	0	14975	585	260	260	345	18.02
Thebaud	Missisauga	4/18/2007	I-93-18A	10	6623	471	71	0	0	0	*
Thebaud	Missisauga	4/18/2007	I-93-18A	10	3651	791	0	0	0	0	*
Thebaud	Missisauga	4/18/2007	I-93-18A	10	4561	9346	305	142	142	308	30.16



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	4/18/2007	I-93-18A	11	0	22633	850	1193	1193	1027	9.95
Thebaud	Missisauga	4/18/2007	I-93-18A	11	0	22374	890	1191	1191	1030	9.62
Thebaud	Missisauga	4/18/2007	I-93-18A	11	0	21737	880	1135	1135	1009	9.75
Thebaud	Missisauga	4/18/2007	I-93-18A	11	1827	618	0	0	0	0	*
Thebaud	Missisauga	4/18/2007	I-93-18A	11	0	22380	906	1167	1167	1008	9.53
Thebaud	Missisauga	4/18/2007	I-93-18A	11	0	22802	829	1193	1193	1023	10.17
Thebaud	Missisauga	4/18/2007	I-93-18A	11	0	22630	914	1246	1246	1062	9.41
Thebaud	Missisauga	4/18/2007	I-93-18A	11	0	22551	892	1190	1190	1022	9.63
Thebaud	Missisauga	4/18/2007	I-93-18A	11	0	22471	904	1202	1202	1033	9.51
Thebaud	Missisauga	4/18/2007	I-93-18A	11	105	580	0	0	0	0	*

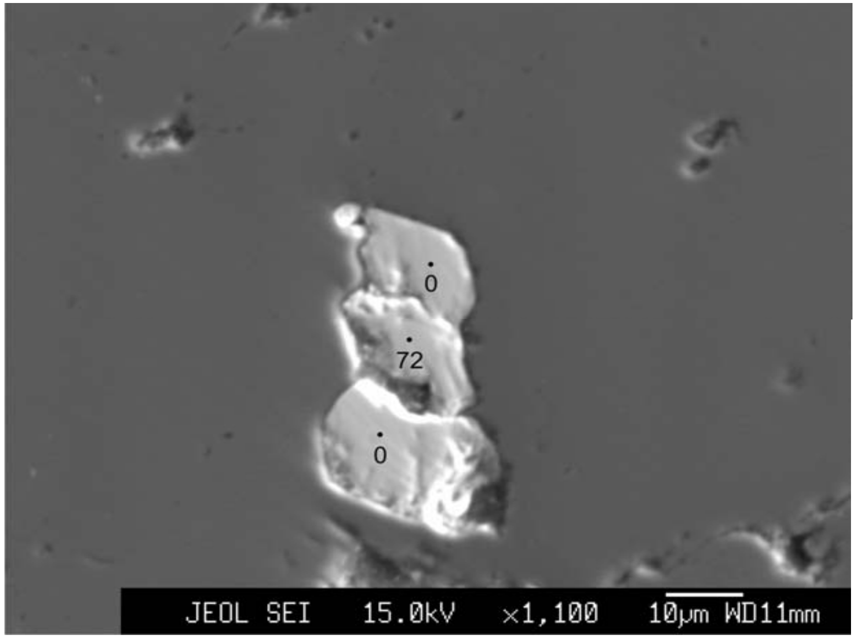


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	9/26/2006	C-74-P18	1	4265	62050	5752	1715	1715	473	3.22
Thebaud	Missisauga	9/26/2006	C-74-P18	1	5488	63746	6426	1789	1789	471	3.06
Thebaud	Missisauga	9/26/2006	C-74-P18	1	8182	52669	6293	1500	1500	457	3.28
Thebaud	Missisauga	9/26/2006	C-74-P18	1	4143	61911	5734	1633	1633	452	3.3
Thebaud	Missisauga	9/26/2006	C-74-P18	1	4015	55882	5256	1479	1479	452	3.49
Thebaud	Missisauga	9/26/2006	C-74-P18	1	7558	16956	3542	370	370	292	8.85

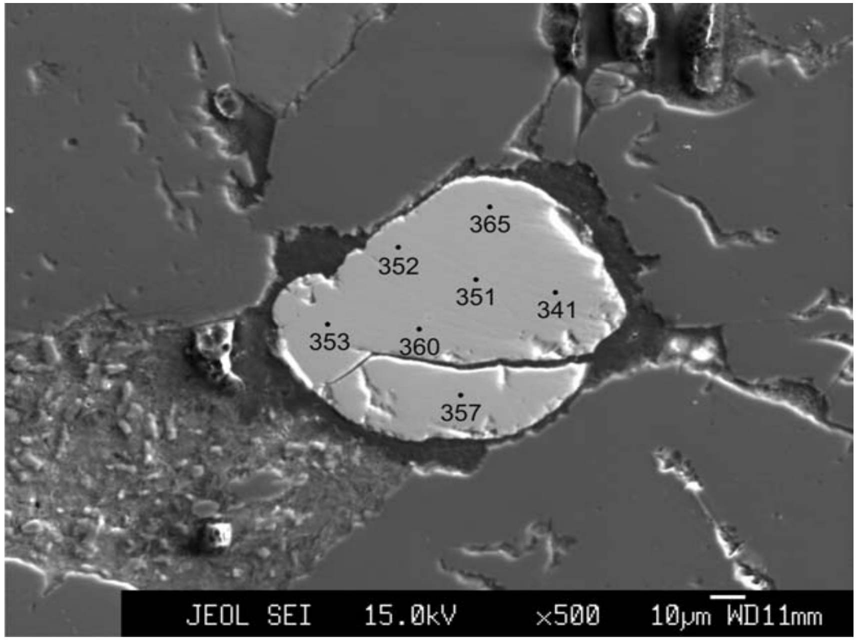


Rectangle denotes point of major elements analysis

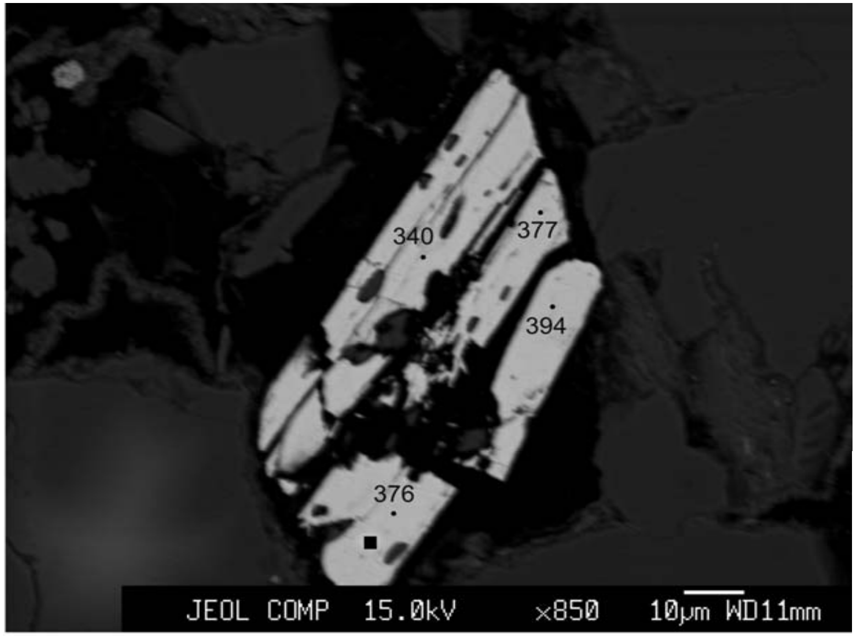
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	10/17/2006	C-74-P29	1	3999	186	0	0	0	0	*
Thebaud	Missisauga	10/17/2006	C-74-P29	1	2149	8451	93	28	28	72	88.77
Thebaud	Missisauga	10/17/2006	C-74-P29	1	2036	11859	0	0	0	0	*



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	10/17/2006	C-74-P29	2	4448	40717	642	699	699	365	13.97
Thebaud	Missisauga	10/17/2006	C-74-P29	2	4113	38355	541	630	630	351	15.46
Thebaud	Missisauga	10/17/2006	C-74-P29	2	3627	32908	521	528	528	341	16.24
Thebaud	Missisauga	10/17/2006	C-74-P29	2	4398	40706	739	695	695	360	12.92
Thebaud	Missisauga	10/17/2006	C-74-P29	2	5997	37578	751	640	640	357	12.9
Thebaud	Missisauga	10/17/2006	C-74-P29	2	4209	38503	650	642	642	353	13.99
Thebaud	Missisauga	10/17/2006	C-74-P29	2	5735	40370	563	665	665	352	15.14

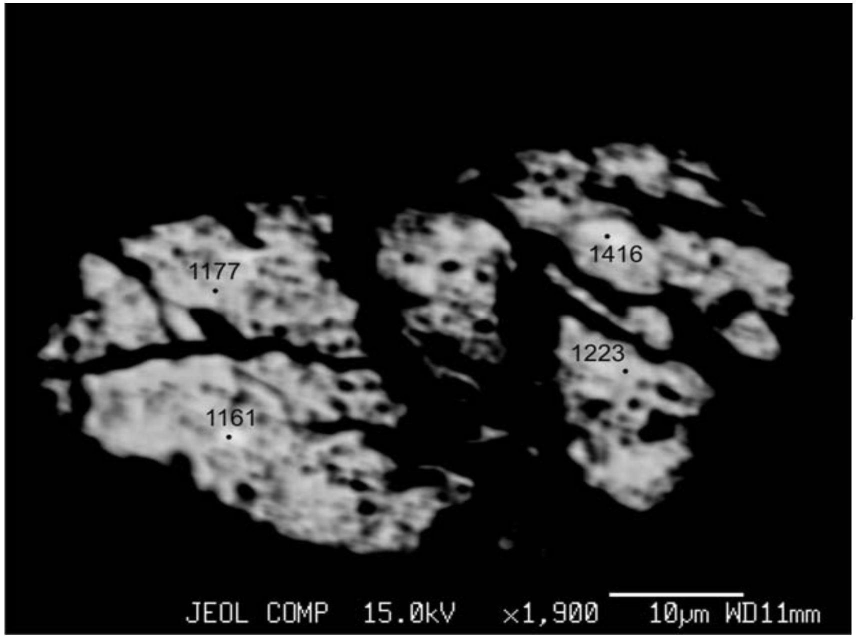


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	2/27/2007	C-74-P11	1	6845	50720	2895	1011	1011	376	5.25
Thebaud	Missisauga	2/27/2007	C-74-P11	1	6627	23357	2873	577	577	394	6.56
Thebaud	Missisauga	2/27/2007	C-74-P11	1	6798	18668	2617	458	458	377	7.76
Thebaud	Missisauga	2/27/2007	C-74-P11	1	8691	50733	2775	907	907	340	5.65

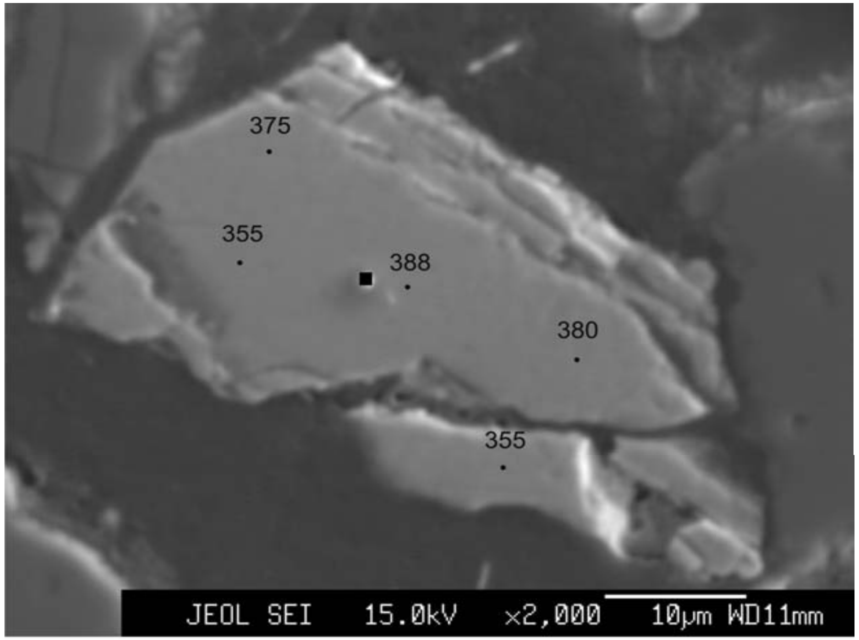


Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	2/27/2007	C-74-P11	2	5907	42123	671	2356	2356	1161	11.57
Thebaud	Missisauga	2/27/2007	C-74-P11	2	2850	33449	221	1839	1839	1177	22.24
Thebaud	Missisauga	2/27/2007	C-74-P11	2	4423	44146	861	2636	2636	1223	9.76
Thebaud	Missisauga	2/27/2007	C-74-P11	2	4245	38692	861	2715	2715	1416	9.15



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	6/13/2007	C-74-P7	1	3266	75038	2538	1447	1447	388	5.46
Thebaud	Missisauga	6/13/2007	C-74-P7	1	5680	46938	2404	919	919	375	5.68
Thebaud	Missisauga	6/13/2007	C-74-P7	1	4377	44306	2110	812	812	355	6.25
Thebaud	Missisauga	6/13/2007	C-74-P7	1	3675	90165	3170	1708	1708	380	5
Thebaud	Missisauga	6/13/2007	C-74-P7	1	960	62842	1824	1092	1092	355	6.65



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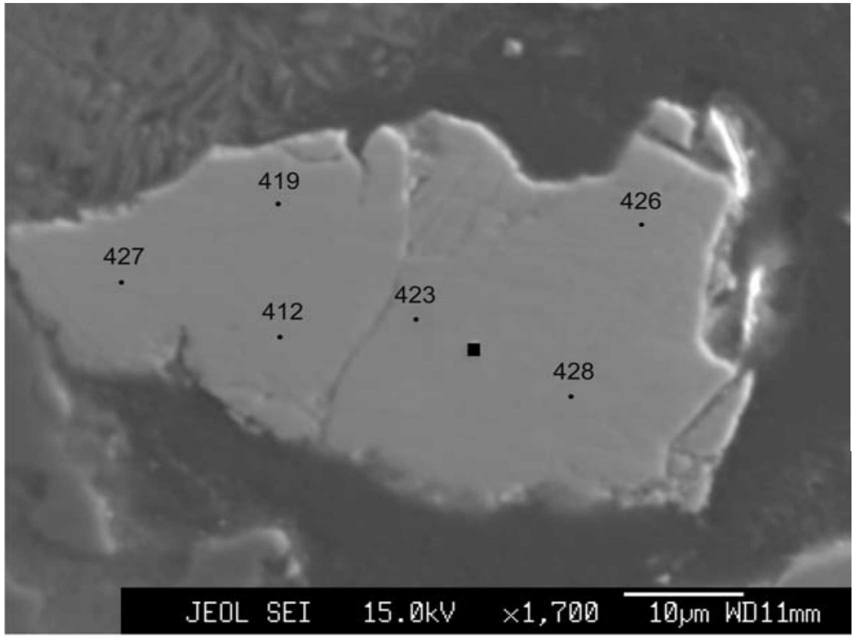
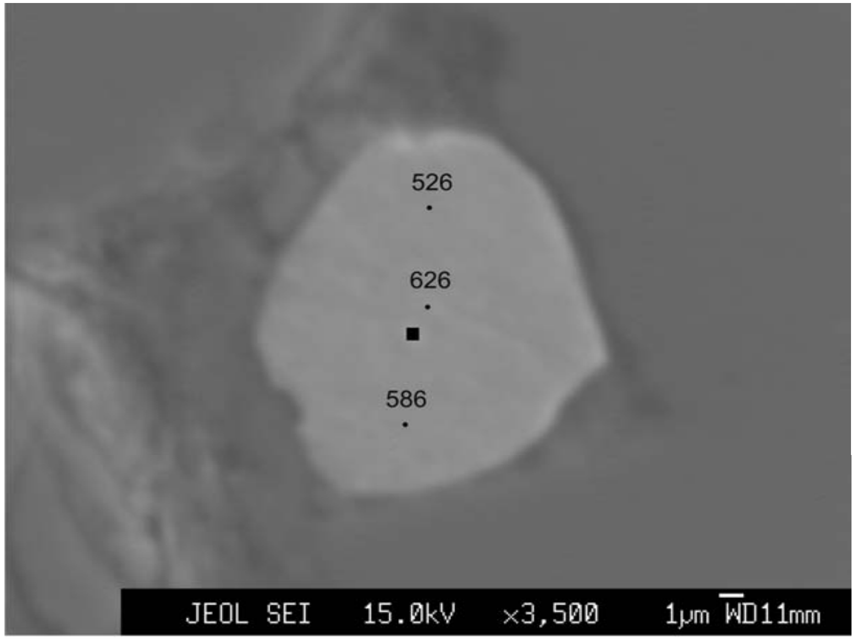
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	6/13/2007	C-74-P7	2	15937	70439	4430	1608	1608	423	4.06
Thebaud	Missisauga	6/13/2007	C-74-P7	2	19775	38012	4370	981	981	419	5.01
Thebaud	Missisauga	6/13/2007	C-74-P7	2	20473	43224	4984	1136	1136	427	4.55
Thebaud	Missisauga	6/13/2007	C-74-P7	2	17642	58104	4294	1331	1331	412	4.34
Thebaud	Missisauga	6/13/2007	C-74-P7	2	17477	72688	4364	1657	1657	426	4.12
Thebaud	Missisauga	6/13/2007	C-74-P7	2	17452	76942	4387	1750	1750	428	4.1



Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	6/13/2007	C-74-P7	3	19513	37366	5659	1580	1580	626	3.47
Thebaud	Missisauga	6/13/2007	C-74-P7	3	19071	29707	3887	1002	1002	526	4.91
Thebaud	Missisauga	6/13/2007	C-74-P7	3	21418	36307	3691	1278	1278	586	4.52



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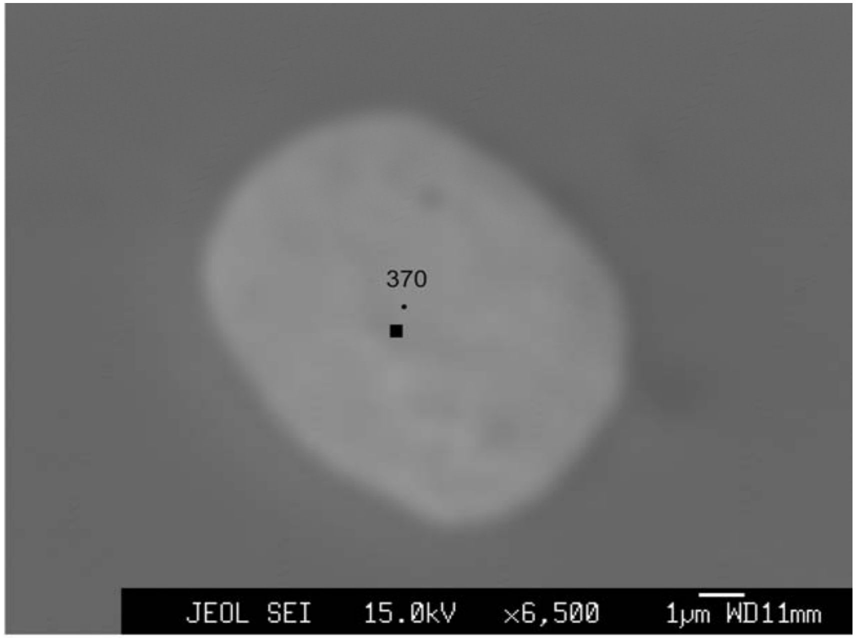
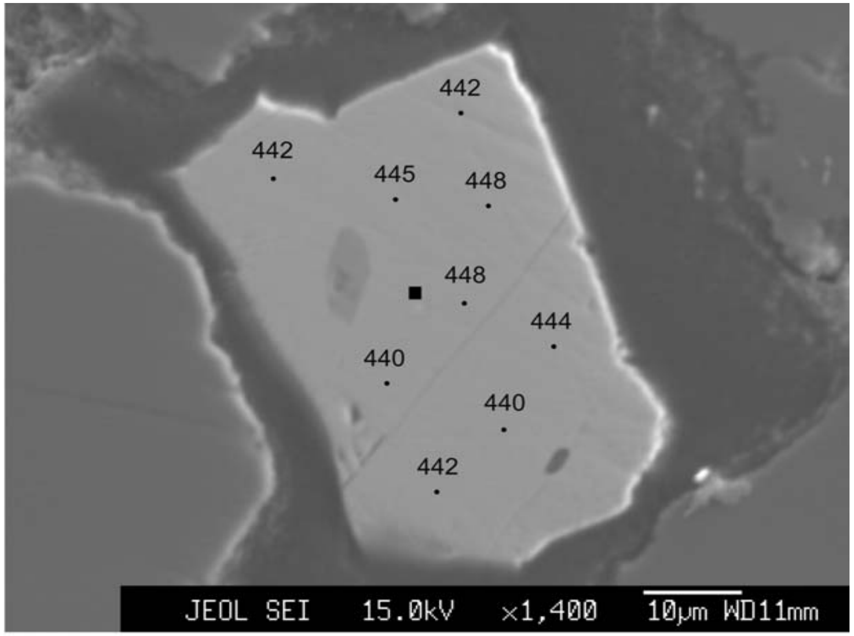
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	6/13/2007	C-74-P7	4	8312	59080	4712	1231	1231	370	4.02



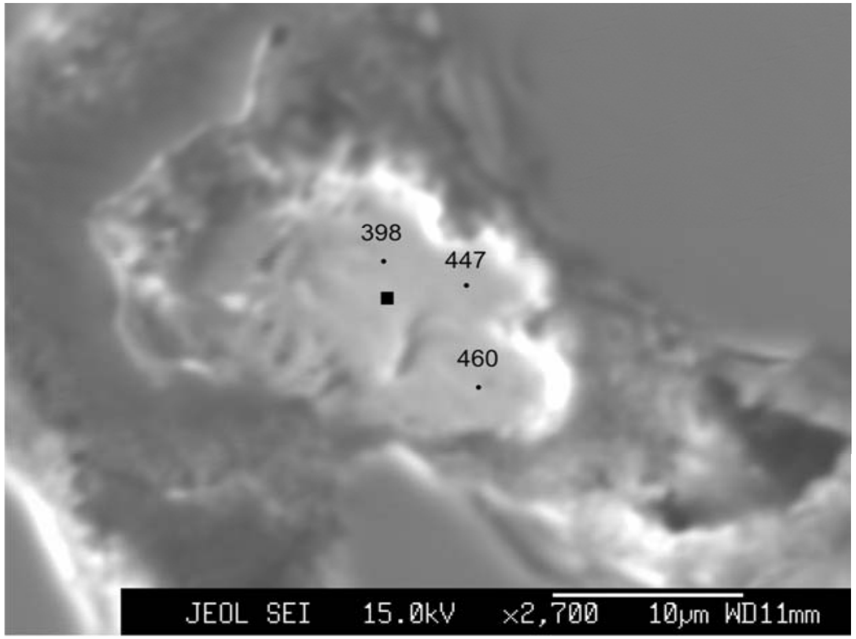
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	6/13/2007	C-74-P7	5	18620	40234	11989	1592	1592	448	3.05
Thebaud	Missisauga	6/13/2007	C-74-P7	5	18160	38597	12117	1568	1568	448	3.05
Thebaud	Missisauga	6/13/2007	C-74-P7	5	18200	42219	10578	1518	1518	442	3.18
Thebaud	Missisauga	6/13/2007	C-74-P7	5	23000	37572	5365	1090	1090	442	4.71
Thebaud	Missisauga	6/13/2007	C-74-P7	5	17563	42303	10116	1499	1499	445	3.2
Thebaud	Missisauga	6/13/2007	C-74-P7	5	18309	41529	11059	1528	1528	440	3.16
Thebaud	Missisauga	6/13/2007	C-74-P7	5	18656	37664	21237	2125	2125	444	2.33
Thebaud	Missisauga	6/13/2007	C-74-P7	5	18356	35509	17615	1831	1831	440	2.63
Thebaud	Missisauga	6/13/2007	C-74-P7	5	18285	36203	15914	1743	1743	442	2.75



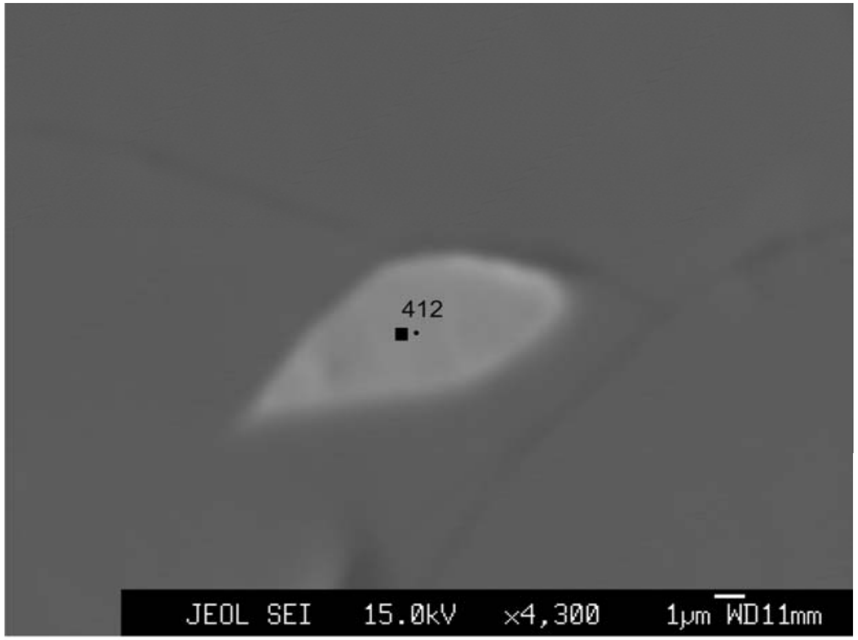
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	6/13/2007	C-74-P7	8	1155	33748	681	641	641	398	12.19
Thebaud	Missisauga	6/13/2007	C-74-P7	8	1778	51392	770	1081	1081	447	10.8
Thebaud	Missisauga	6/13/2007	C-74-P7	8	2167	49671	763	1076	1076	460	10.86



Rectangle denotes point of major elements analysis

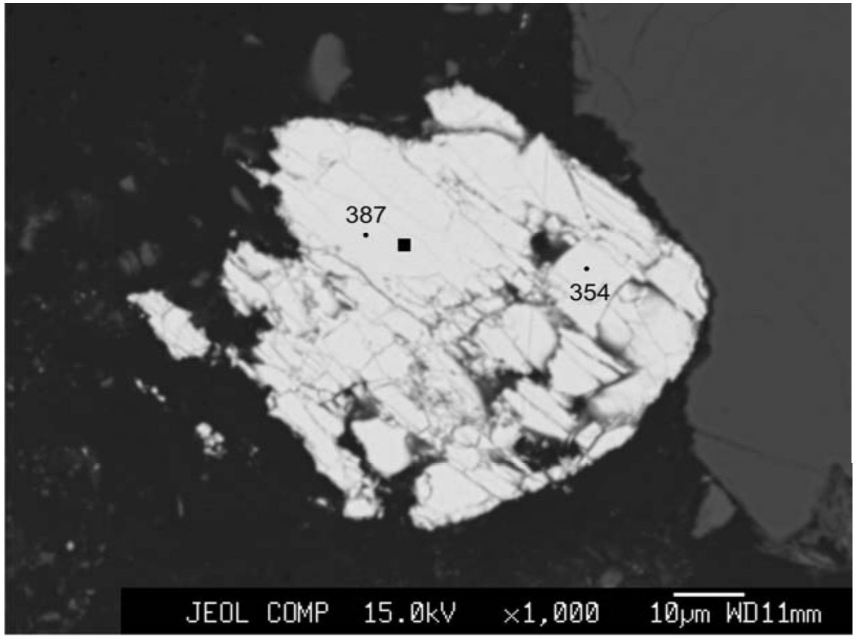
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Thebaud	Missisauga	6/13/2007	C-74-P7	10	9458	34913	5321	963	963	412	4.28



Rectangle denotes point of major elements analysis

Glenelg E-58

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	1	10469	89774	11364	2193	2193	387	2.74
E58	3525.16	5/11/2007	E58-13	1	8838	88938	11082	1973	1973	354	2.9



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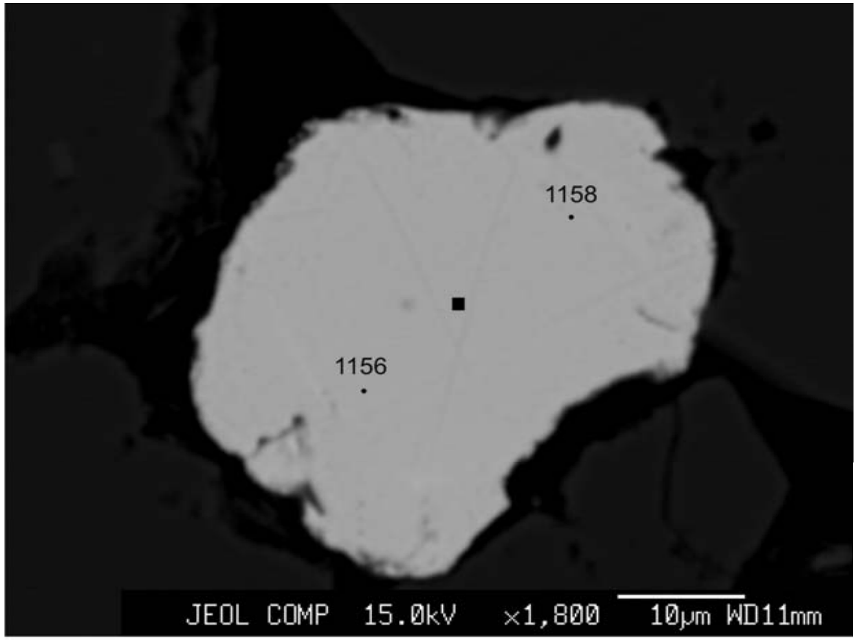
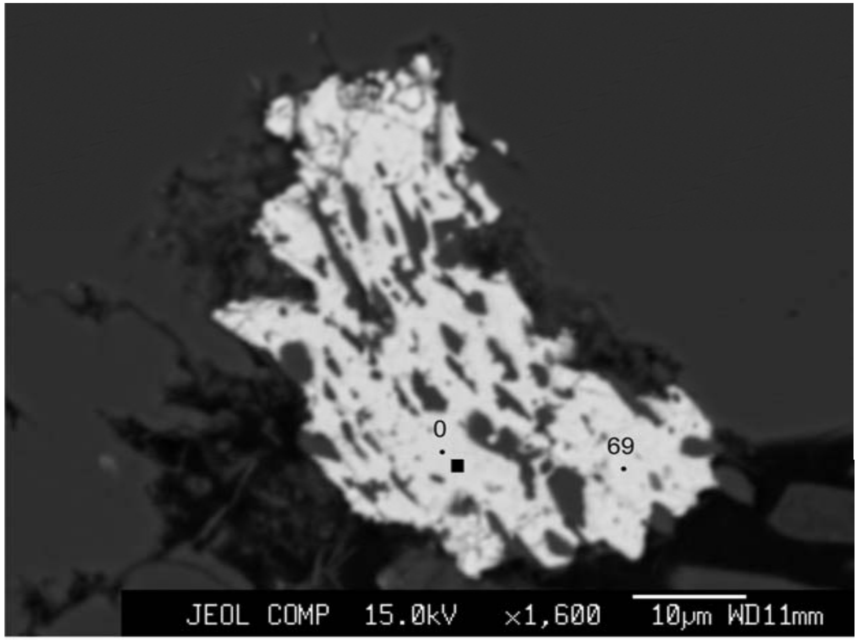
Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	2	22755	26033	4060	2118	2118	1158	3.56
E58	3525.16	5/11/2007	E58-13	2	20871	30880	5495	2630	2630	1156	2.81



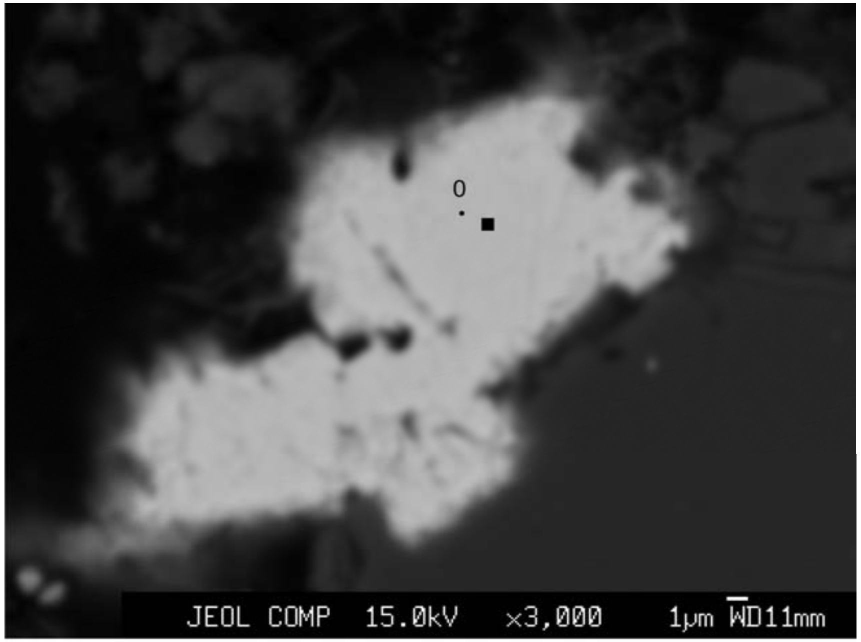
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	3	3736	1163	227	0	0	0	*
E58	3525.16	5/11/2007	E58-13	3	3560	2619	723	15	15	69	72.25



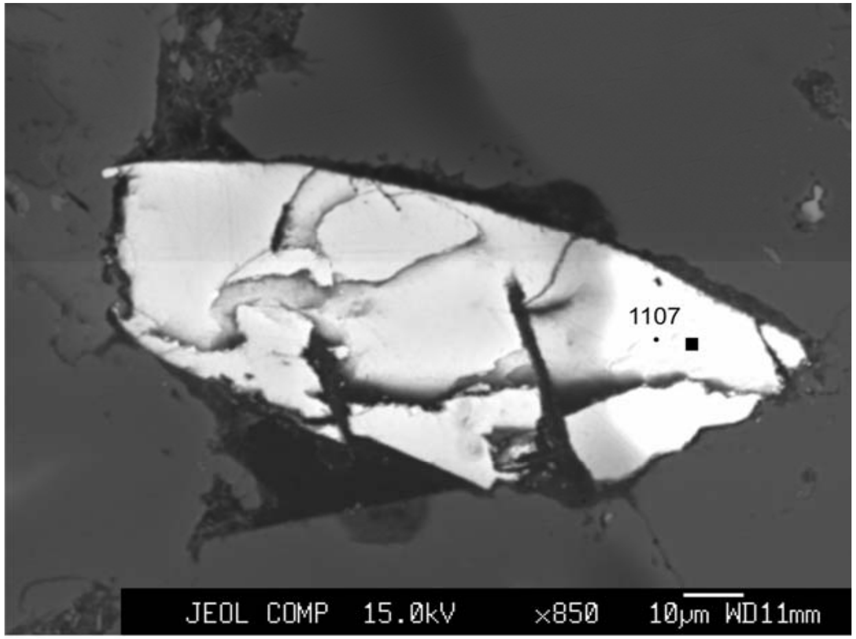
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	4	0	0	0	0	0	0	*



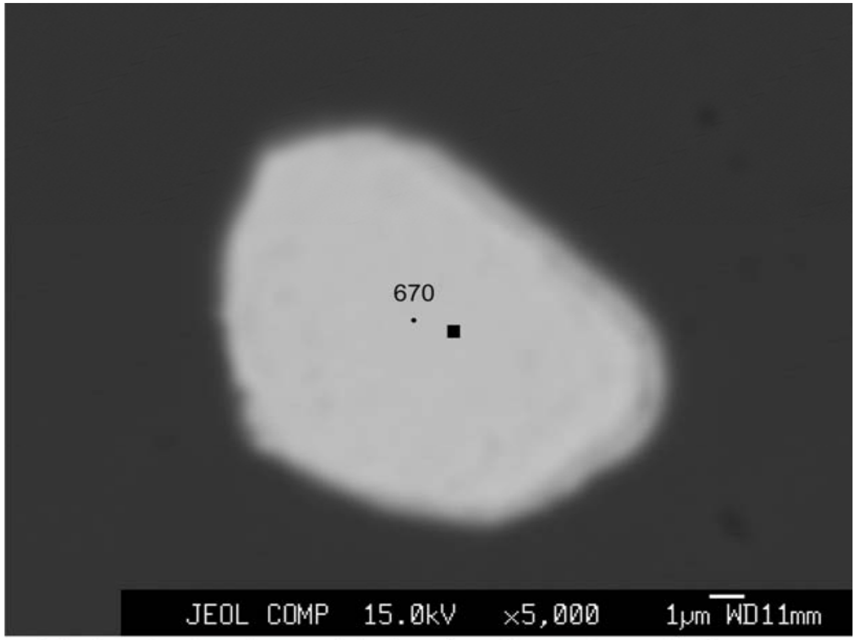
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	5	5187	23907	793	1344	1344	1107	10.3



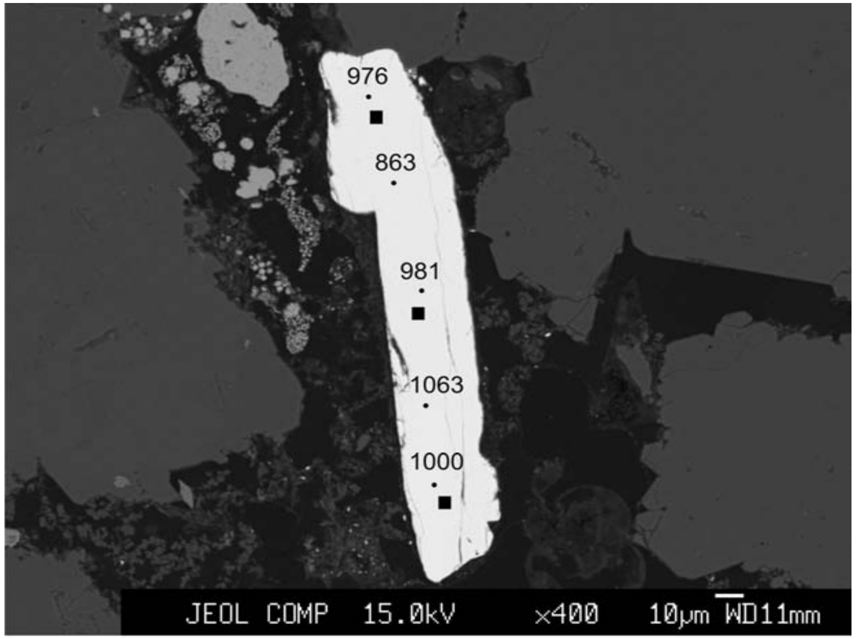
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	6	13098	30814	1514	1083	1083	670	6.99



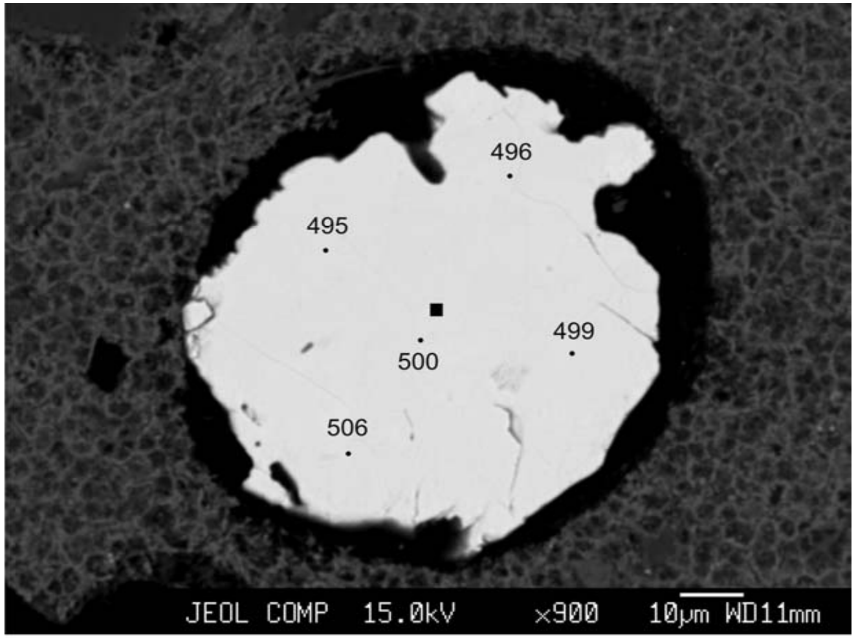
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	7	13891	14205	0	630	630	976	149
E58	3525.16	5/11/2007	E58-13	7	14244	15541	284	736	736	981	23.42
E58	3525.16	5/11/2007	E58-13	7	14525	18170	0	826	826	1000	43.06
E58	3525.16	5/11/2007	E58-13	7	13010	10842	0	424	424	863	73.88
E58	3525.16	5/11/2007	E58-13	7	13899	15623	6	757	757	1063	75.32



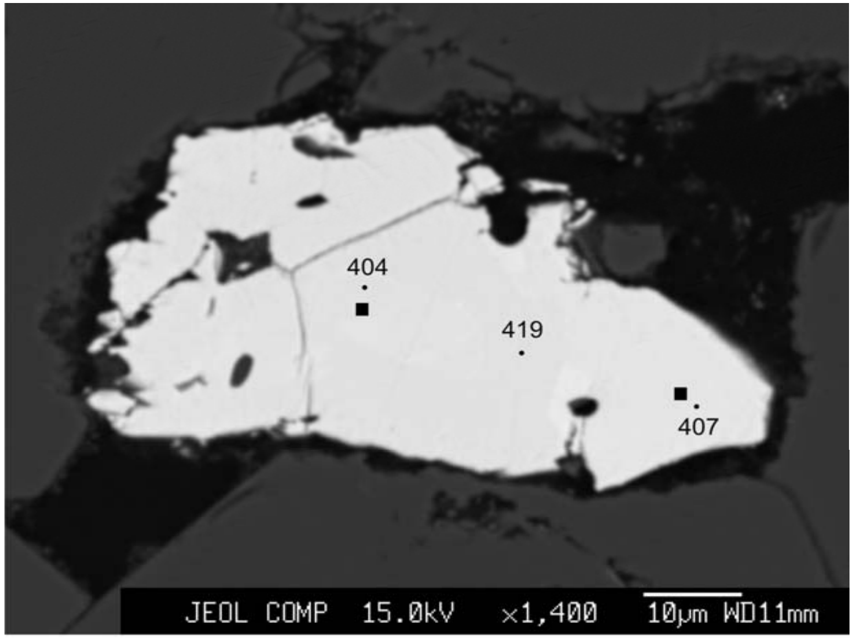
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	8	15366	33986	3822	1035	1035	496	4.9
E58	3525.16	5/11/2007	E58-13	8	15166	48472	3502	1332	1332	495	4.61
E58	3525.16	5/11/2007	E58-13	8	15025	47833	3955	1361	1361	499	4.34
E58	3525.16	5/11/2007	E58-13	8	15547	66869	3836	1804	1804	506	4.26
E58	3525.16	5/11/2007	E58-13	8	14309	43469	2946	1193	1193	500	5.05



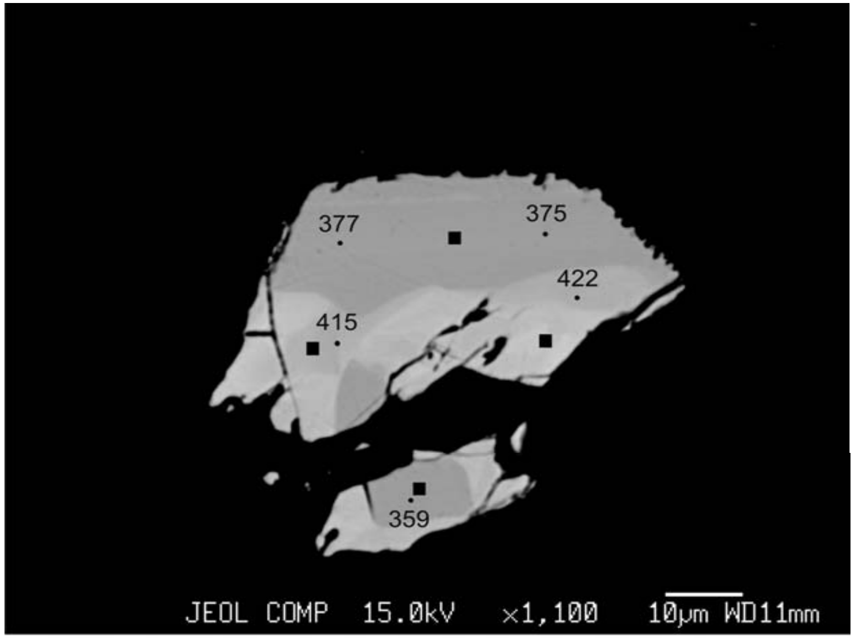
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	9	7928	54090	2357	1116	1116	404	5.79
E58	3525.16	5/11/2007	E58-13	9	5270	63213	1268	1227	1227	407	8.44
E58	3525.16	5/11/2007	E58-13	9	3483	47755	330	916	916	419	17.4



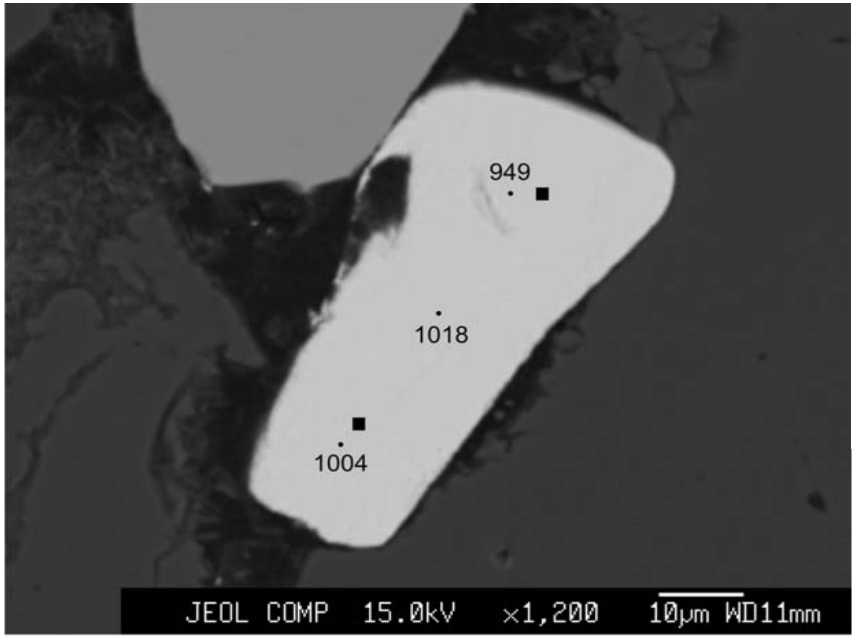
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	10	13880	37285	1342	702	702	377	8.66
E58	3525.16	5/11/2007	E58-13	10	14497	41577	1564	783	783	375	7.89
E58	3525.16	5/11/2007	E58-13	10	10200	104351	2806	2145	2145	422	5.87
E58	3525.16	5/11/2007	E58-13	10	10169	105001	2772	2118	2118	415	5.94
E58	3525.16	5/11/2007	E58-13	10	4754	35477	197	581	581	359	23.37



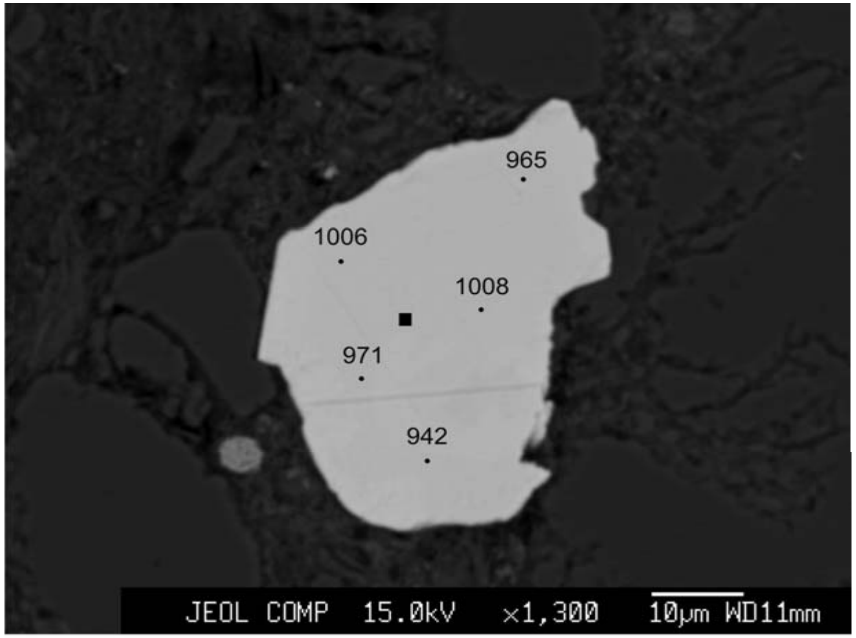
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	11	6542	36807	2792	1995	1995	949	4.1
E58	3525.16	5/11/2007	E58-13	11	10825	40658	1832	2141	2141	1004	5.61
E58	3525.16	5/11/2007	E58-13	11	6697	35055	2201	1972	1972	1018	4.8



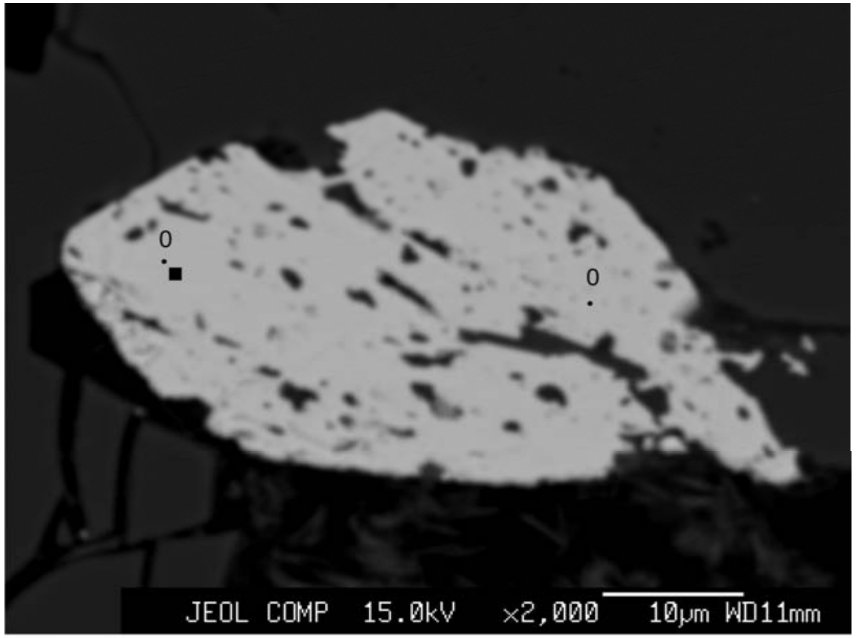
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	12	12970	11633	388	568	568	965	20.02
E58	3525.16	5/11/2007	E58-13	12	13258	12594	340	629	629	1006	21.68
E58	3525.16	5/11/2007	E58-13	12	15706	11744	663	642	642	1008	13.52
E58	3525.16	5/11/2007	E58-13	12	10239	13461	0	576	576	942	92.34
E58	3525.16	5/11/2007	E58-13	12	6122	39601	345	1799	1799	971	16.95



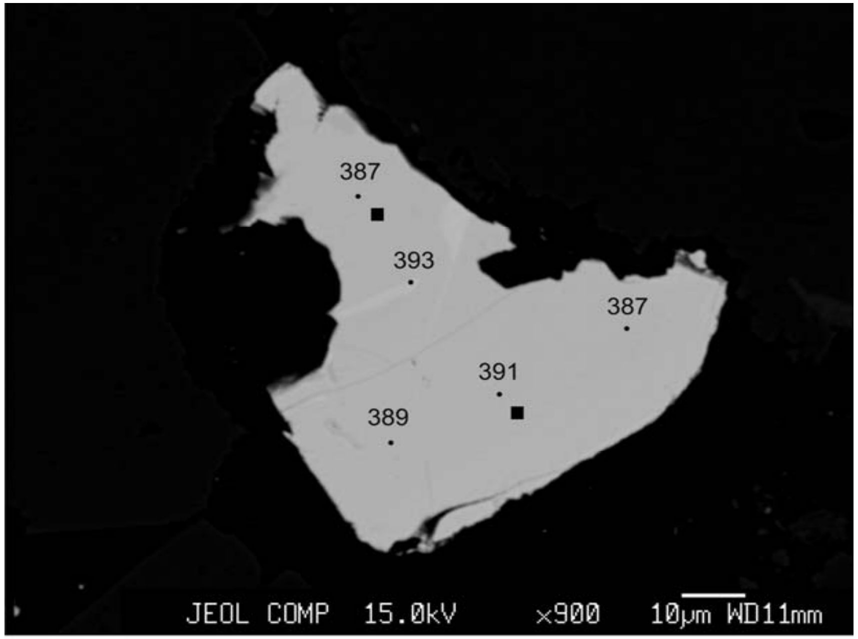
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	13	1671	2848	30	0	0	0	*
E58	3525.16	5/11/2007	E58-13	13	1851	2601	70	0	0	0	*



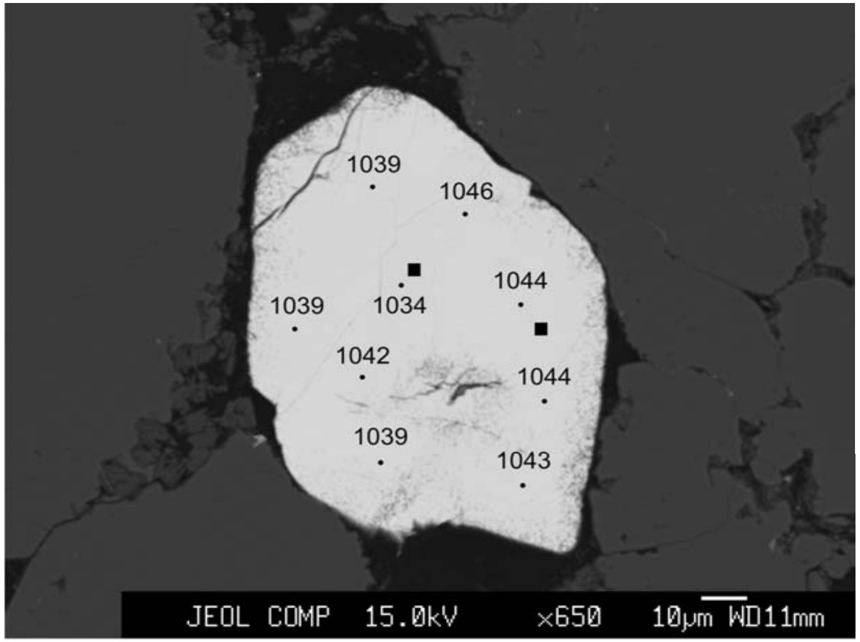
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	14	18357	66365	1420	1231	1231	387	8.25
E58	3525.16	5/11/2007	E58-13	14	21579	73452	1665	1382	1382	391	7.7
E58	3525.16	5/11/2007	E58-13	14	18477	66066	1557	1251	1251	393	7.81
E58	3525.16	5/11/2007	E58-13	14	21776	73045	1401	1352	1352	389	8.51
E58	3525.16	5/11/2007	E58-13	14	21807	69956	1087	1275	1275	387	9.76



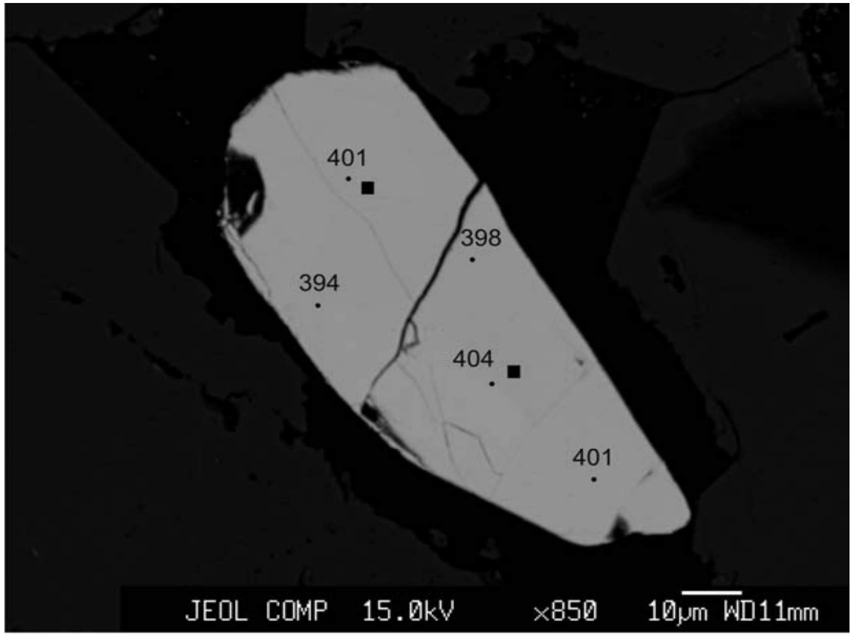
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	15	16049	42777	6397	3042	3042	1034	2.44
E58	3525.16	5/11/2007	E58-13	15	11254	38332	7343	3016	3016	1044	2.16
E58	3525.16	5/11/2007	E58-13	15	10287	40183	6638	2995	2995	1046	2.27
E58	3525.16	5/11/2007	E58-13	15	13164	42222	5821	2938	2938	1039	2.52
E58	3525.16	5/11/2007	E58-13	15	16853	42588	6369	3041	3041	1038	2.46
E58	3525.16	5/11/2007	E58-13	15	16007	39702	6264	2897	2897	1042	2.48
E58	3525.16	5/11/2007	E58-13	15	14879	41149	7220	3113	3113	1039	2.24
E58	3525.16	5/11/2007	E58-13	15	12193	37600	7976	3080	3080	1043	2.08
E58	3525.16	5/11/2007	E58-13	15	11953	37297	7818	3044	3044	1044	2.1



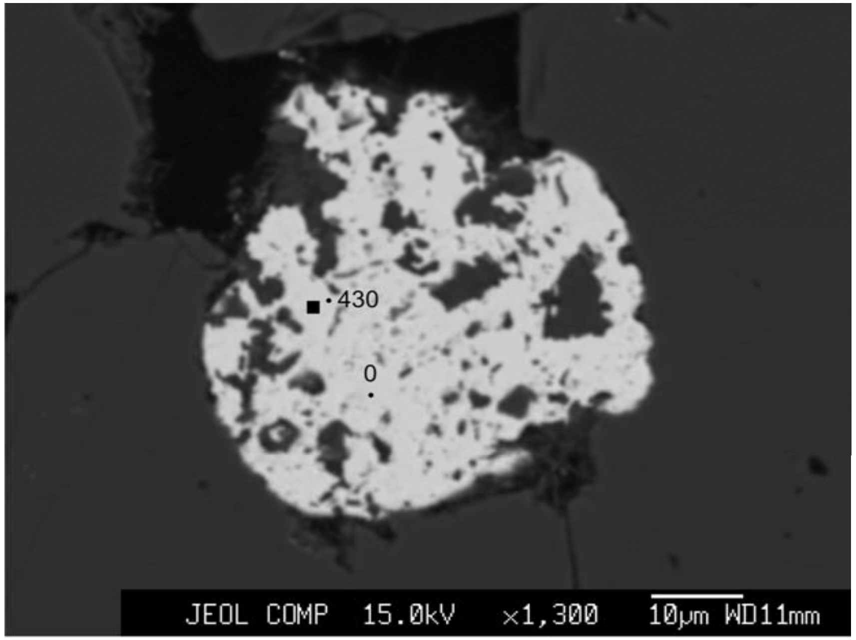
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	16	27124	84447	3784	1739	1739	401	5.15
E58	3525.16	5/11/2007	E58-13	16	24483	88090	3173	1781	1781	404	5.54
E58	3525.16	5/11/2007	E58-13	16	31620	66462	3321	1376	1376	398	5.85
E58	3525.16	5/11/2007	E58-13	16	30117	69851	3115	1412	1412	394	5.9
E58	3525.16	5/11/2007	E58-13	16	20555	67215	2136	1333	1333	401	6.57



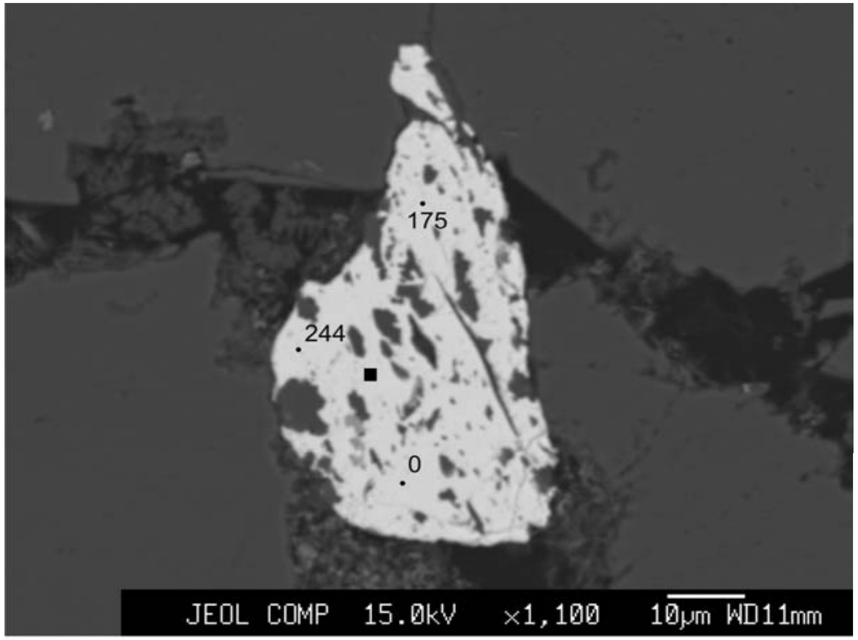
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	17	1192	5286	287	120	120	430	36.79
E58	3525.16	5/11/2007	E58-13	17	562	6308	0	0	0	0	*



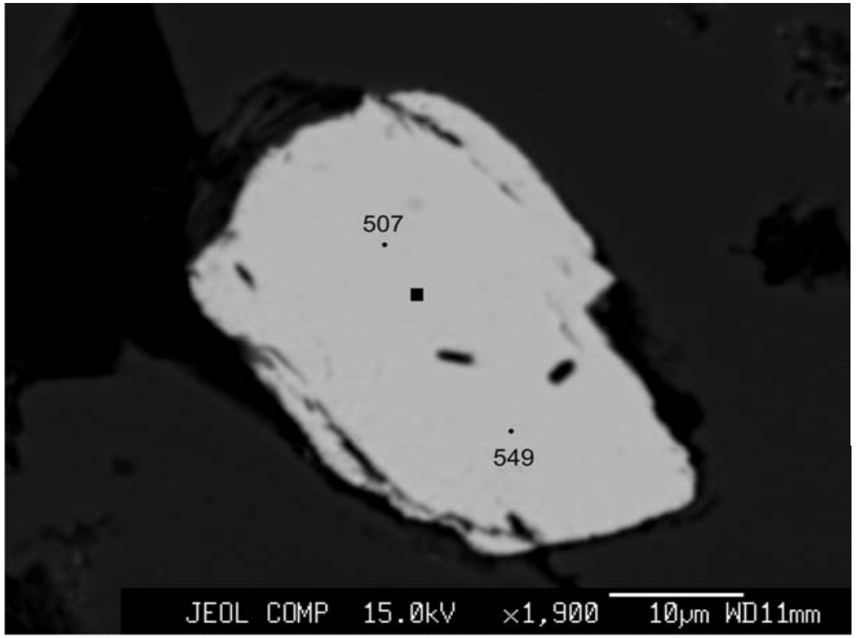
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	18	2258	3861	0	42	42	244	62.07
E58	3525.16	5/11/2007	E58-13	18	1574	3948	0	0	0	0	*
E58	3525.16	39213	E58-13	18	1144	5380	46	43	43	175	116



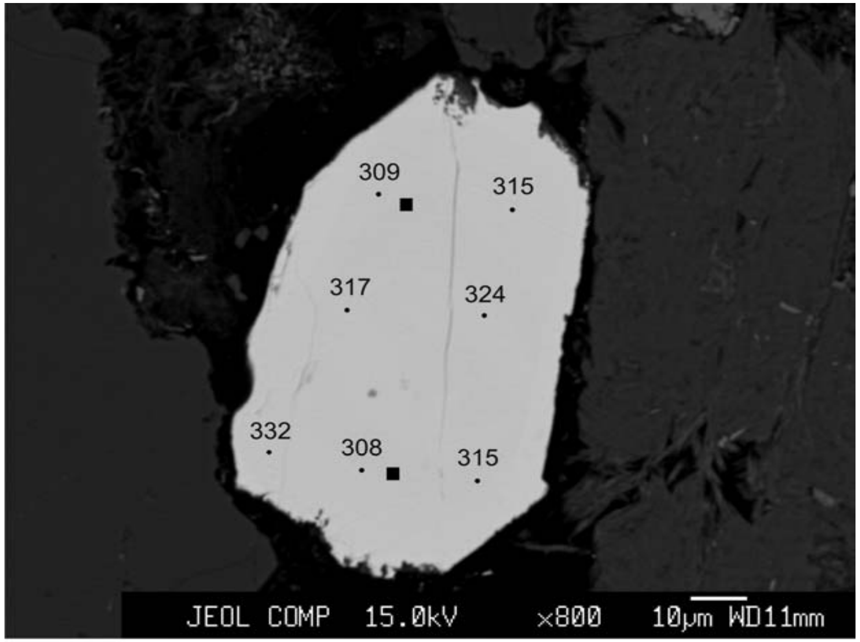
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	19	13632	20504	3600	735	735	507	5.9
E58	3525.16	5/11/2007	E58-13	19	13185	24865	3407	890	890	549	5.27



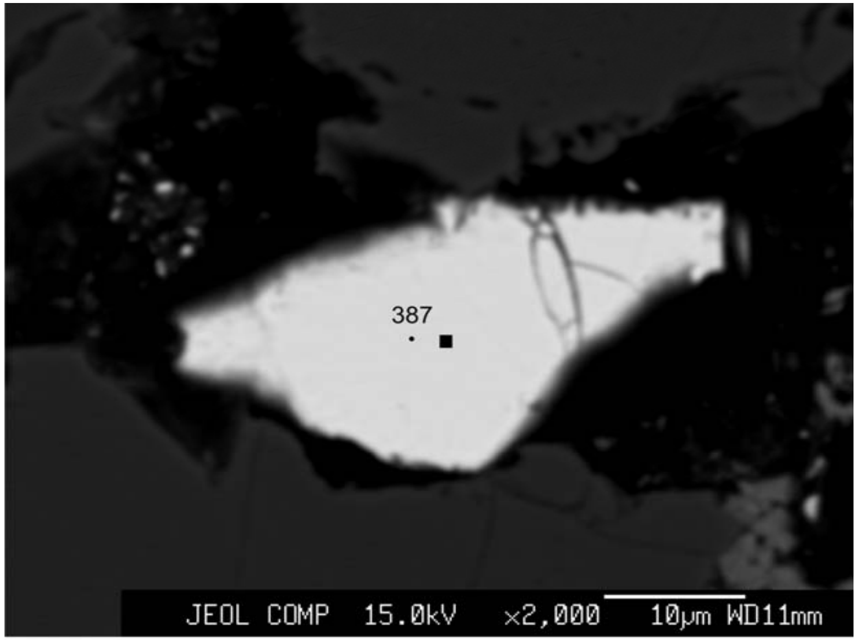
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	20	20327	32062	1265	499	499	309	10.45
E58	3525.16	5/11/2007	E58-13	20	23797	34475	1900	558	558	308	9.1
E58	3525.16	5/11/2007	E58-13	20	18234	34059	5505	729	729	315	6.05
E58	3525.16	5/11/2007	E58-13	20	20109	36600	3978	715	715	324	6.54
E58	3525.16	5/11/2007	E58-13	20	20926	36117	1244	569	569	317	10.05
E58	3525.16	5/11/2007	E58-13	20	23573	37014	1761	602	602	315	8.97
E58	3525.16	5/11/2007	E58-13	20	21060	37124	2598	675	675	332	7.41



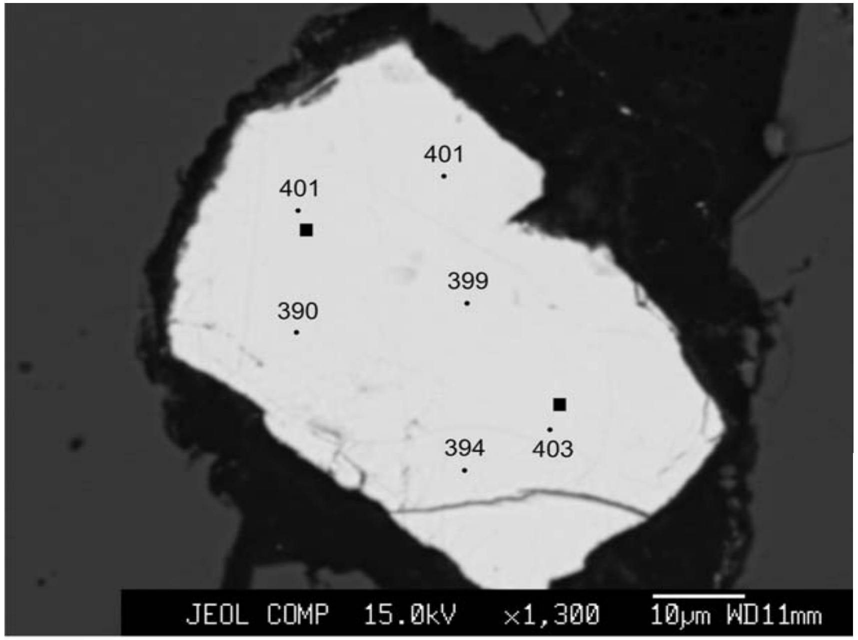
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	21	15312	35766	12622	1329	1329	387	3.44



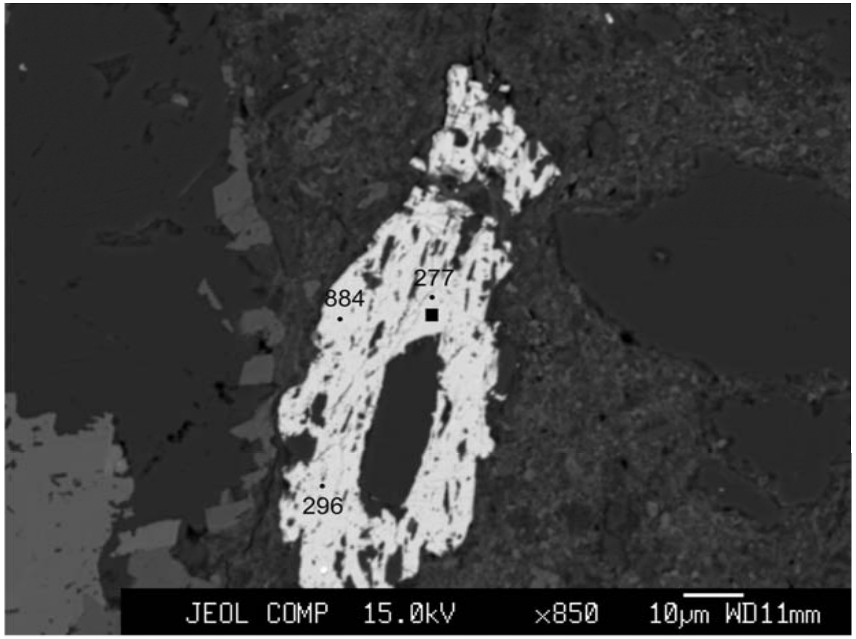
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3525.16	5/11/2007	E58-13	22	16553	46508	14920	1705	1705	401	2.91
E58	3525.16	5/11/2007	E58-13	22	14918	48246	12806	1620	1620	403	2.99
E58	3525.16	5/11/2007	E58-13	22	13613	57213	8575	1528	1528	401	3.31
E58	3525.16	5/11/2007	E58-13	22	15892	46154	14583	1630	1630	390	2.99
E58	3525.16	5/11/2007	E58-13	22	15627	48952	12857	1618	1618	399	3.05
E58	3525.16	5/11/2007	E58-13	22	15509	46375	14216	1631	1631	394	2.98



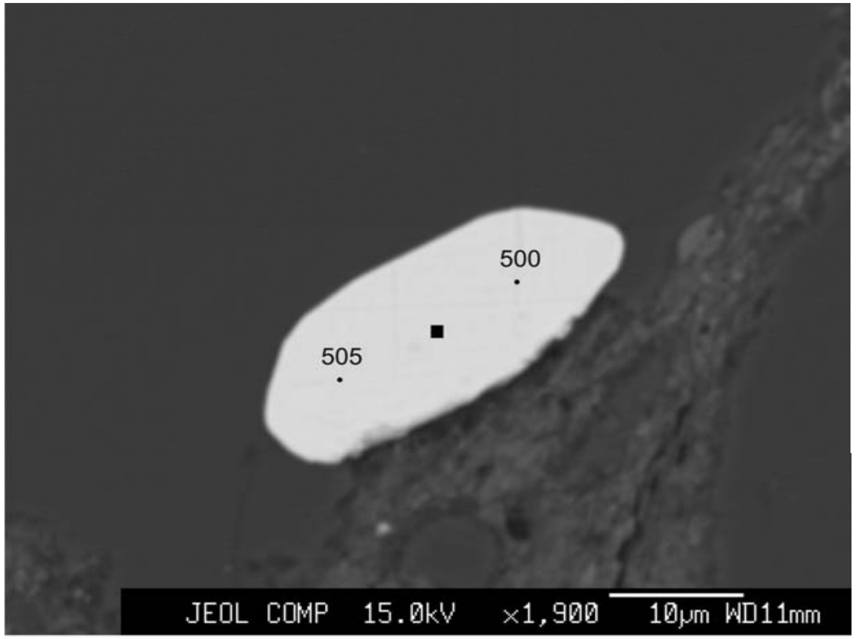
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.08	6/11/2007	E58-17	1	2728	1075	295	25	25	277	73.2
E58	3532.08	6/11/2007	E58-17	1	3409	1878	338	121	121	884	30.55
E58	3532.08	6/11/2007	E58-17	1	3008	6922	407	109	109	296	30.37



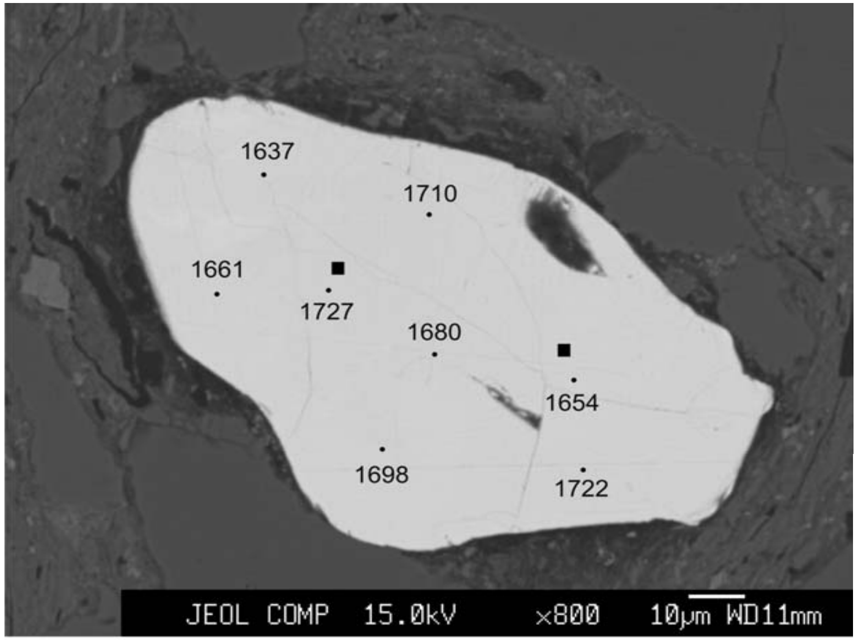
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.08	6/11/2007	E58-17	2	17808	25123	2980	790	790	505	6.11
E58	3532.08	6/11/2007	E58-17	2	15985	25960	3661	851	851	500	5.44



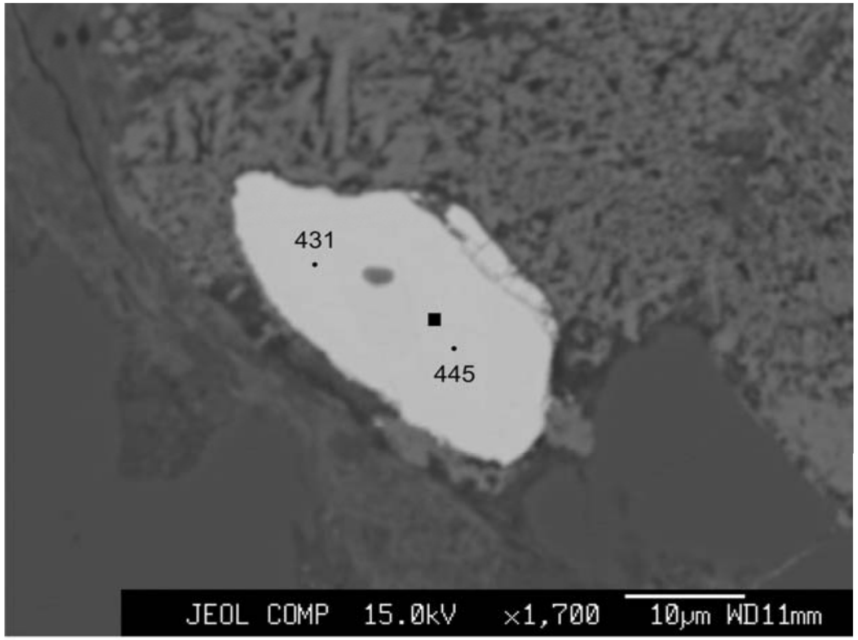
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.08	6/11/2007	E58-17	3	4660	39158	3772	4235	4235	1727	2.9
E58	3532.08	6/11/2007	E58-17	3	3229	42492	1154	3568	3568	1654	7.55
E58	3532.08	6/11/2007	E58-17	3	4707	45967	2570	4297	4297	1680	4.08
E58	3532.08	6/11/2007	E58-17	3	4901	45468	2597	4348	4348	1710	4.03
E58	3532.08	6/11/2007	E58-17	3	6278	60805	1443	4994	4994	1637	6.92
E58	3532.08	6/11/2007	E58-17	3	7209	76830	1898	6430	6430	1661	6.15
E58	3532.08	6/11/2007	E58-17	3	7709	43449	3134	4311	4311	1698	3.44
E58	3532.08	6/11/2007	E58-17	3	3620	34903	1346	3175	3175	1722	6.45



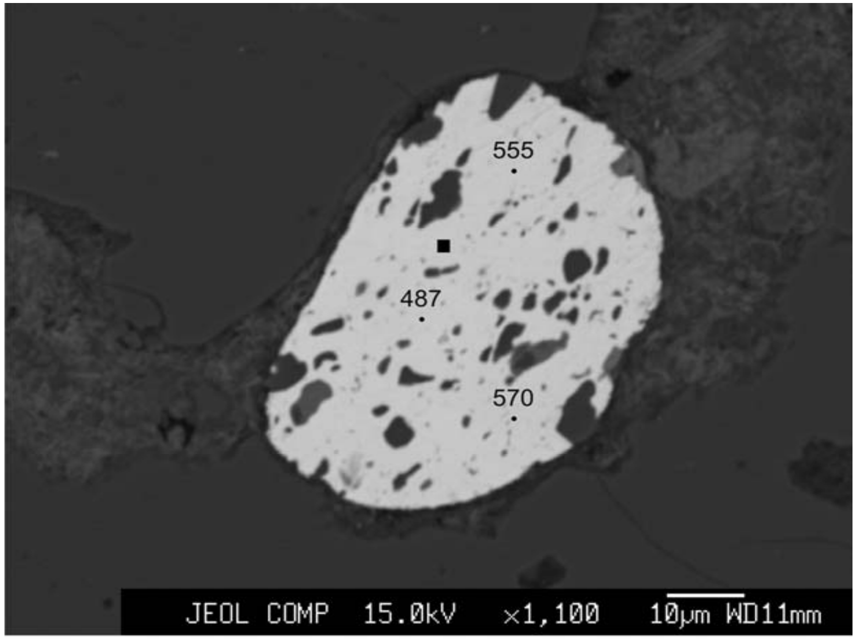
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.08	6/11/2007	E58-17	4	9081	63991	1219	1357	1357	445	8.46
E58	3532.08	6/11/2007	E58-17	4	14424	59346	1801	1261	1261	431	6.74



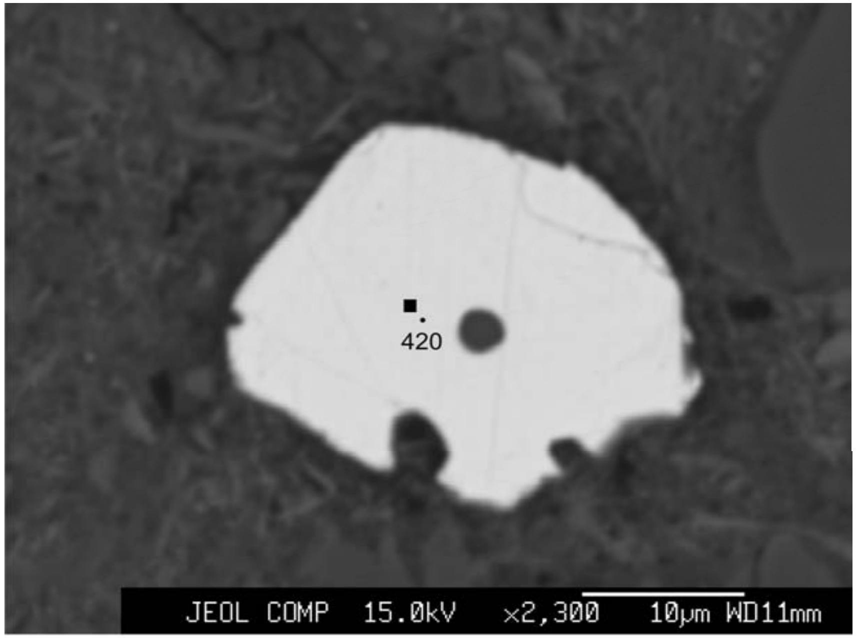
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.08	6/11/2007	E58-17	5	3254	29127	615	681	681	487	12.66
E58	3532.08	6/11/2007	E58-17	5	2385	21571	222	557	557	555	24.48
E58	3532.08	6/11/2007	E58-17	5	2644	19043	152	501	501	570	31.23



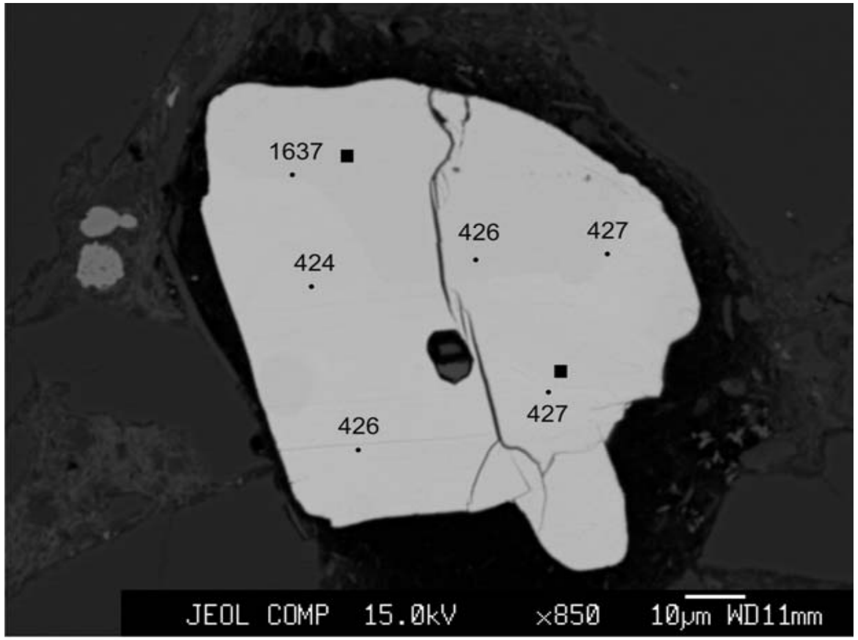
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.08	6/11/2007	E58-17	6	11907	30586	3846	810	810	420	5.26



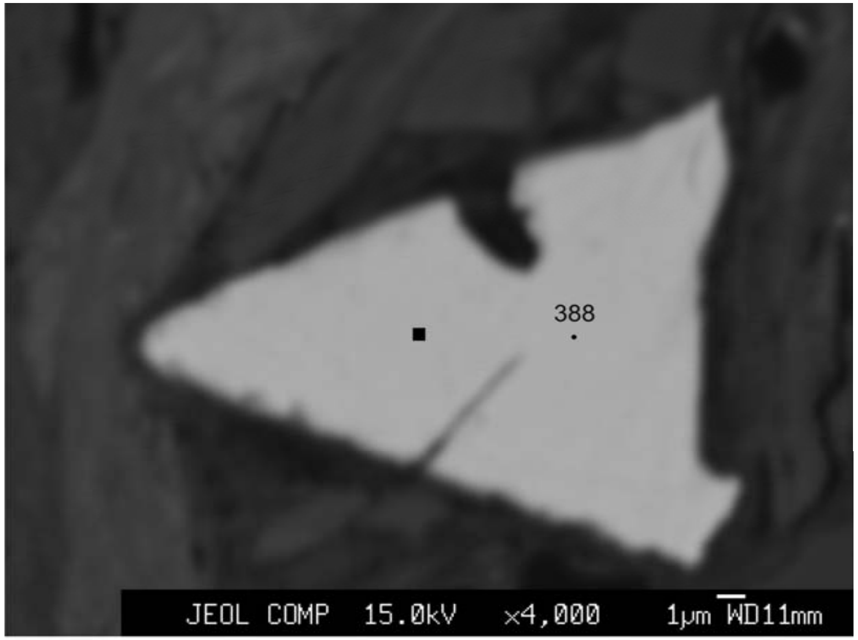
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.08	6/11/2007	E58-17	7	5297	61970	2201	1264	1264	408	5.9
E58	3532.08	6/11/2007	E58-17	7	4295	94241	3369	2015	2015	427	4.92
E58	3532.08	6/11/2007	E58-17	7	5590	47321	2275	1047	1047	427	5.68
E58	3532.08	6/11/2007	E58-17	7	5672	50213	2333	1104	1104	426	5.59
E58	3532.08	6/11/2007	E58-17	7	4618	82698	2982	1755	1755	424	5.12
E58	3532.08	6/11/2007	E58-17	7	4186	83122	3119	1782	1782	426	4.97



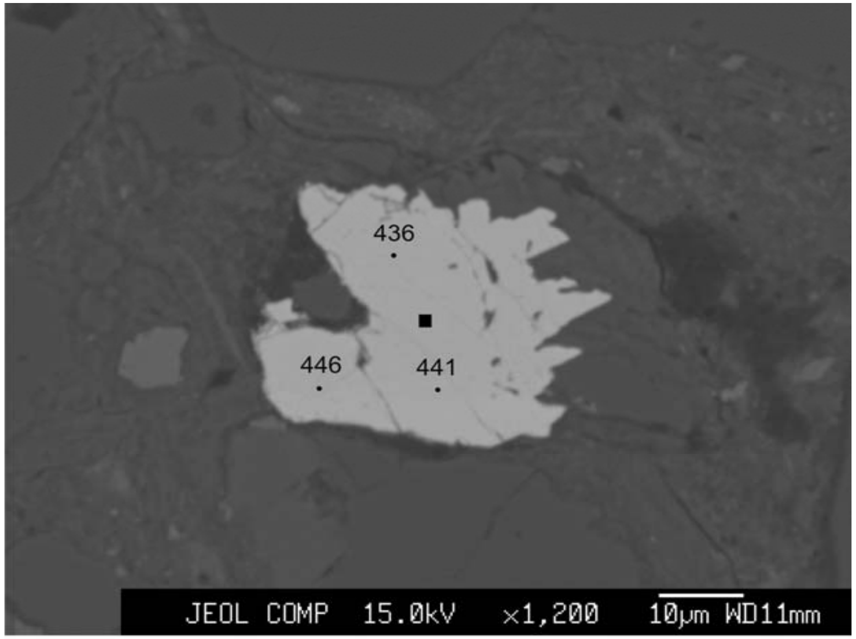
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.08	6/11/2007	E58-17	8	8626	75054	1720	1400	1400	388	7.2



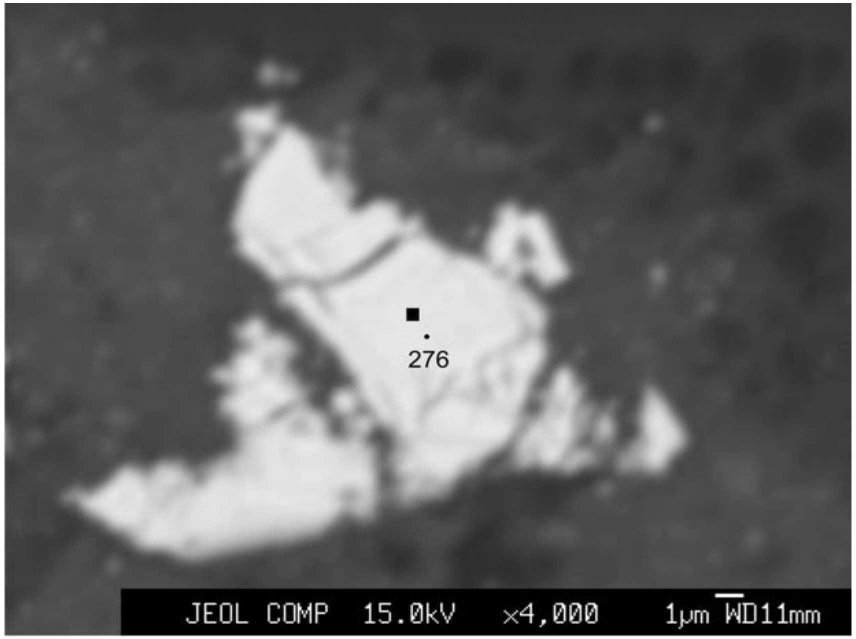
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.08	6/11/2007	E58-17	9	9714	15301	3075	494	494	436	7.34
E58	3532.08	6/11/2007	E58-17	9	8894	11270	2463	381	381	441	9
E58	3532.08	6/11/2007	E58-17	9	10158	20197	2668	578	578	446	6.83



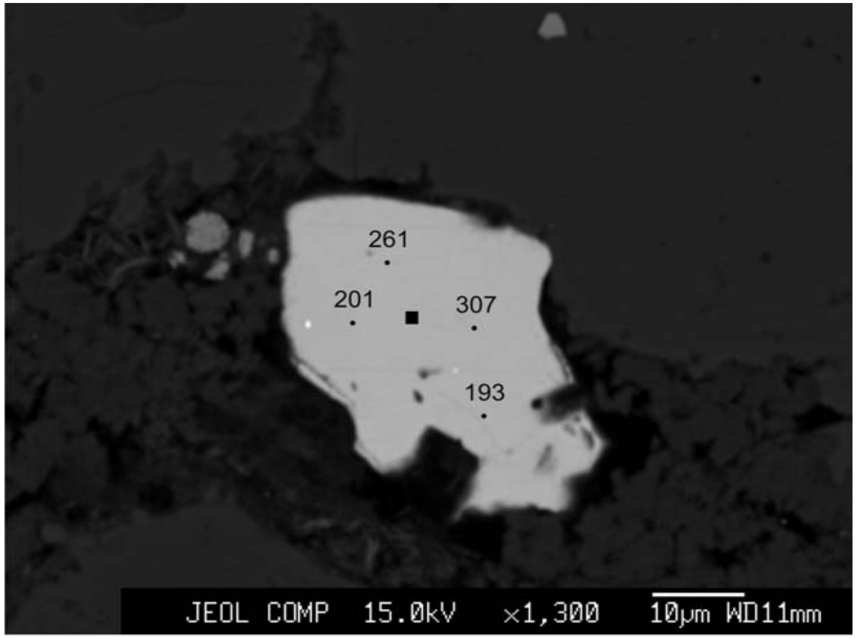
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3535.83	6/11/2007	E58-19	1	6463	56187	1211	741	741	276	9.19



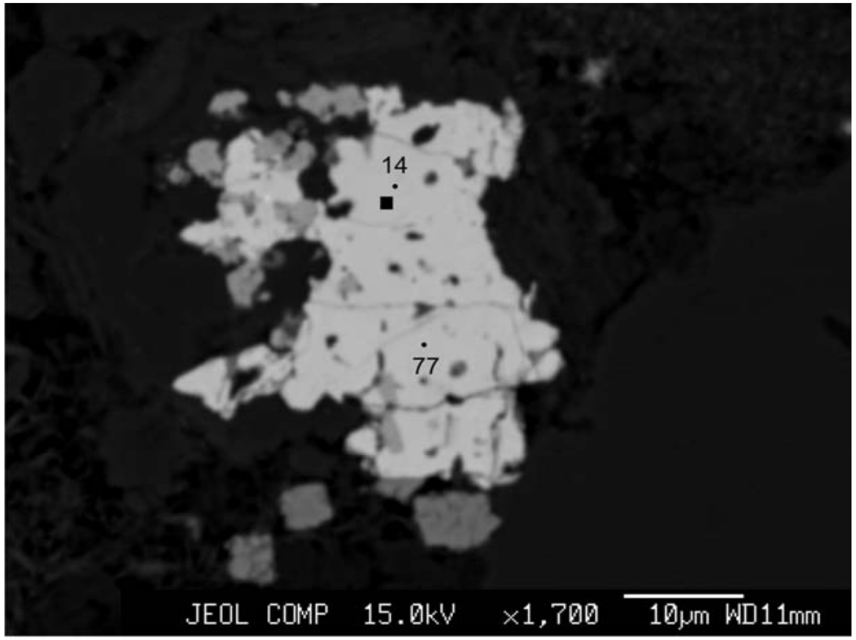
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3535.83	6/11/2007	E58-19	2	9703	60073	2997	811	811	261	6.19
E58	3535.83	6/11/2007	E58-19	2	4524	35553	1034	335	335	193	12.35
E58	3535.83	6/11/2007	E58-19	2	9250	40579	9029	955	955	307	4.22
E58	3535.83	6/11/2007	E58-19	2	3619	46457	576	433	433	201	14.53



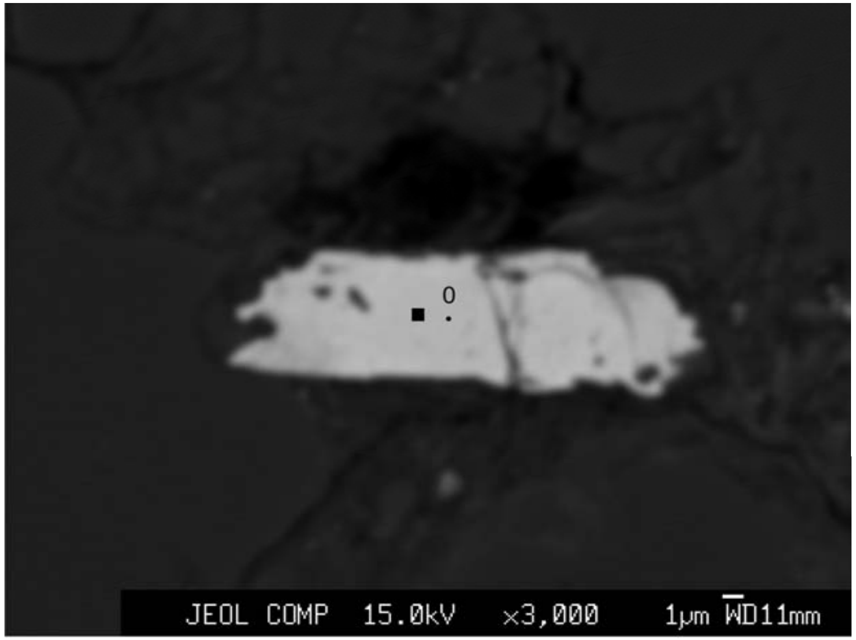
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3535.83	6/11/2007	E58-19	3	2587	12475	201	8	8	14	88.94
E58	3535.83	6/11/2007	E58-19	3	3705	10470	0	36	36	77	1919



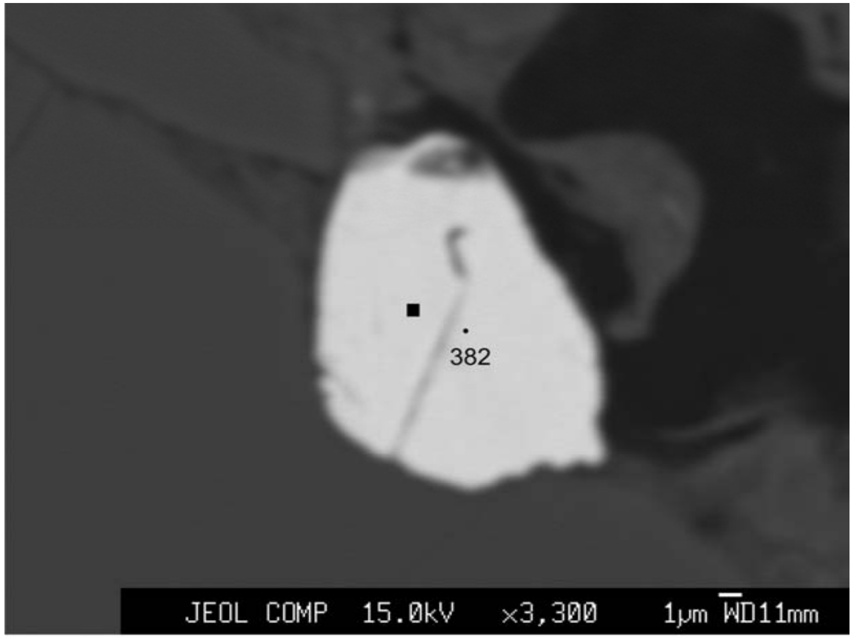
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3535.83	6/11/2007	E58-19	4	5728	1504	302	0	0	0	*



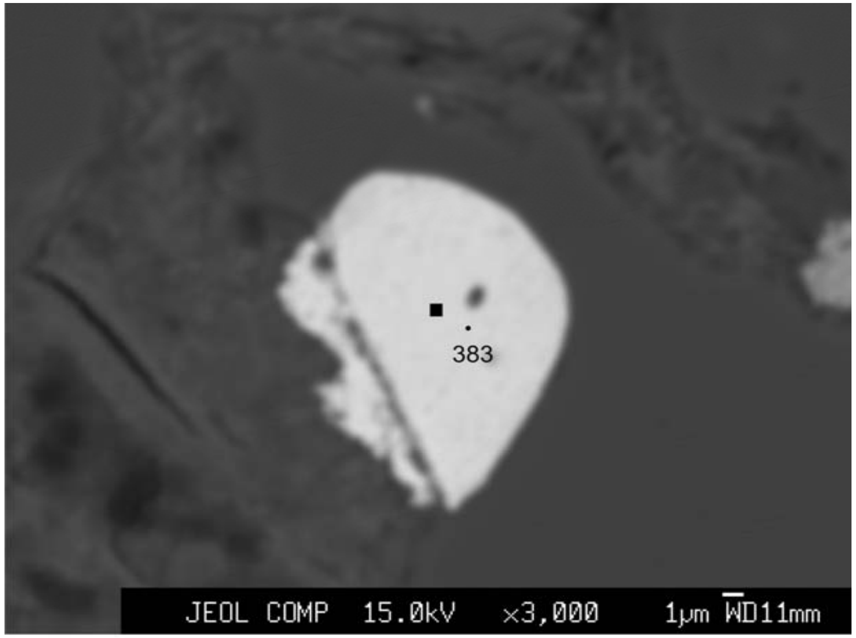
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3535.83	6/11/2007	E58-19	5	35768	27514	4493	720	720	382	8



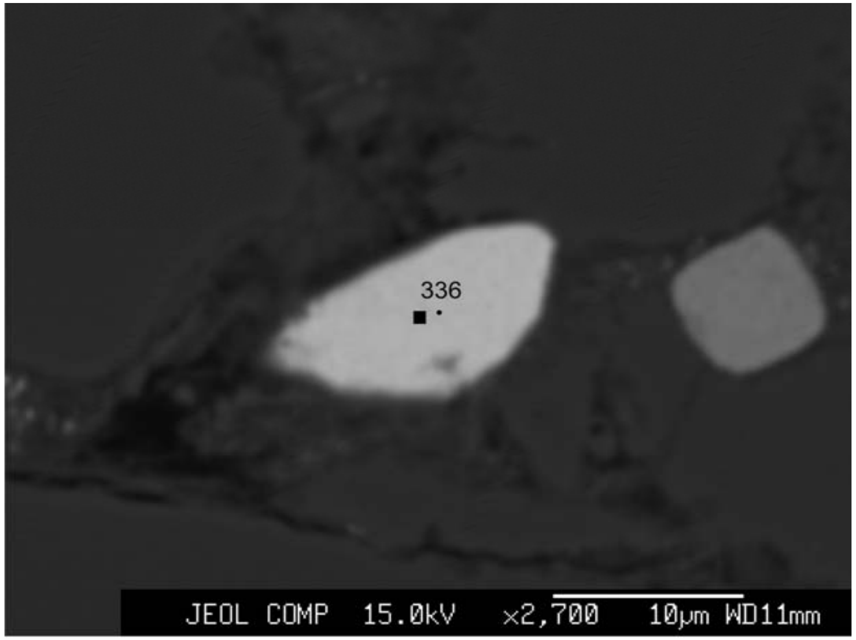
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3535.83	6/11/2007	E58-19	6	9810	23577	2424	539	539	383	7.4



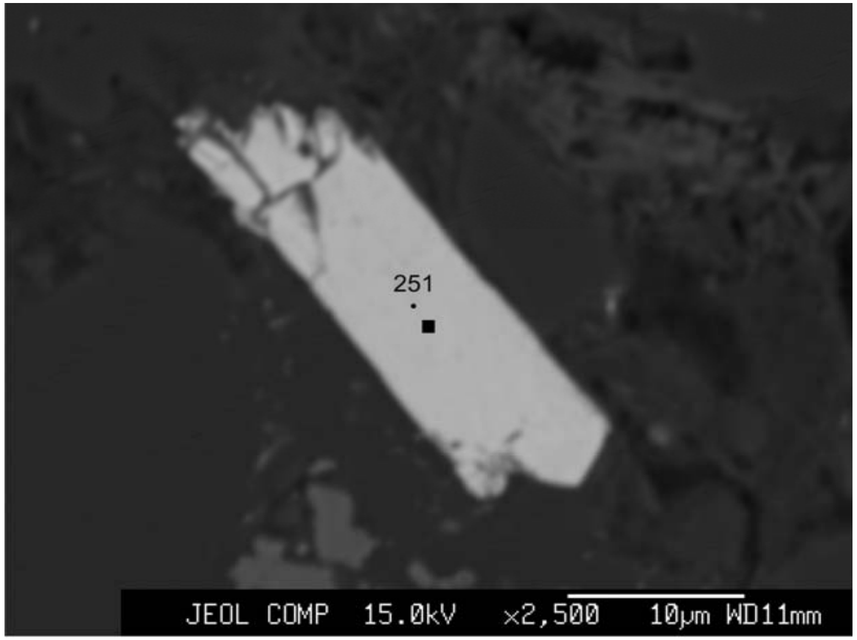
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3535.83	6/11/2007	E58-19	7	14377	36709	10998	1086	1086	336	4.02



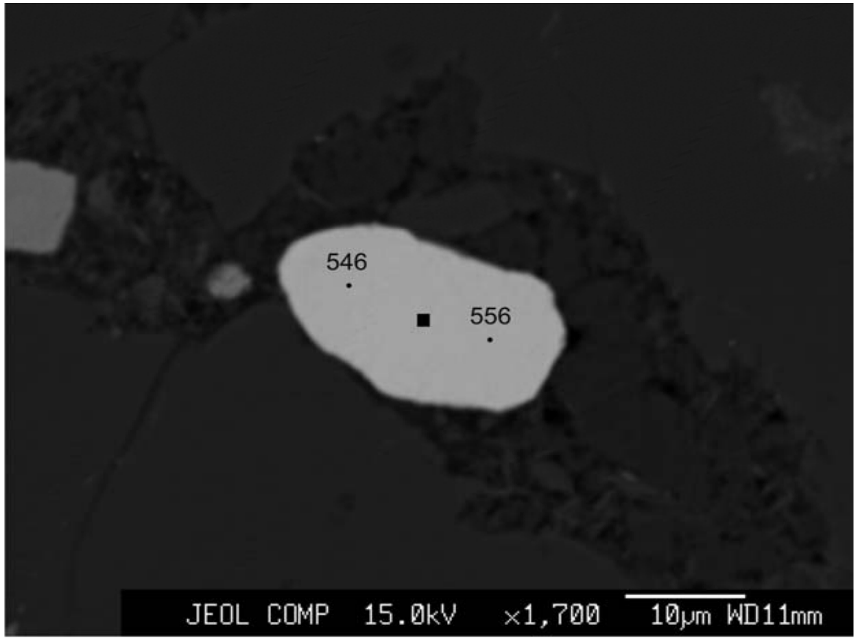
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3535.83	6/11/2007	E58-19	8	2631	4195	0	47	47	251	240



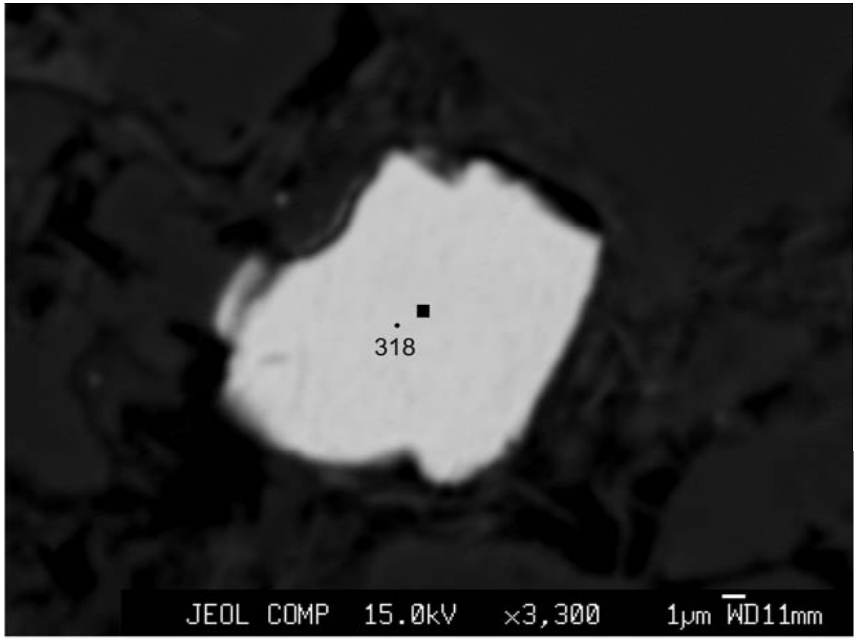
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3535.83	6/11/2007	E58-19	9	17534	36676	1997	1061	1061	546	6.29
E58	3535.83	6/11/2007	E58-19	9	16618	38021	2219	1133	1133	556	5.82



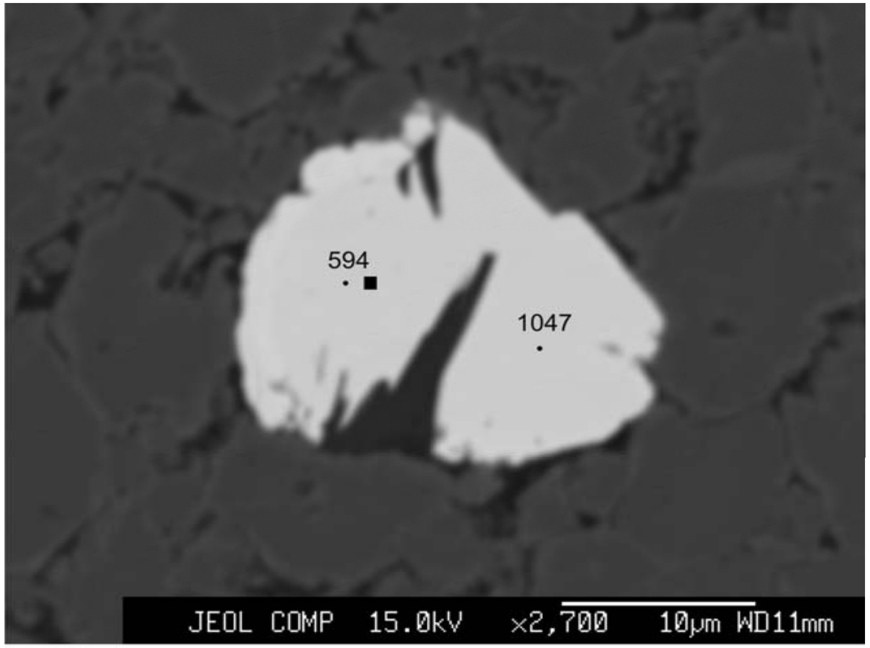
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3535.83	6/11/2007	E58-19	10	13500	12941	3717	354	354	318	9.55



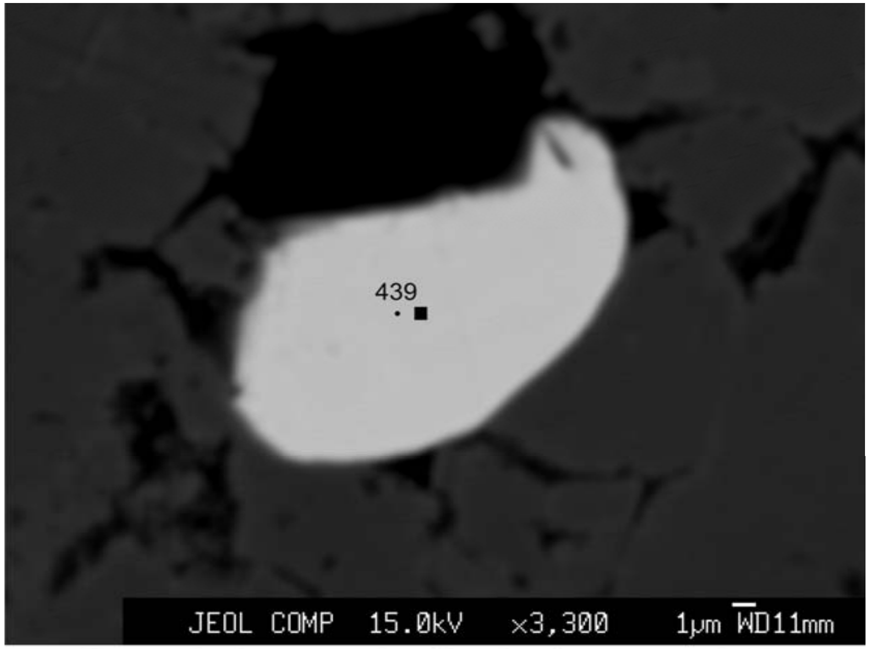
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.19	12/6/2007	E58-18	1	8477	477	1379	134	134	594	23.24
E58	3532.19	12/6/2007	E58-18	1	952	492	126	44	44	1047	93.04



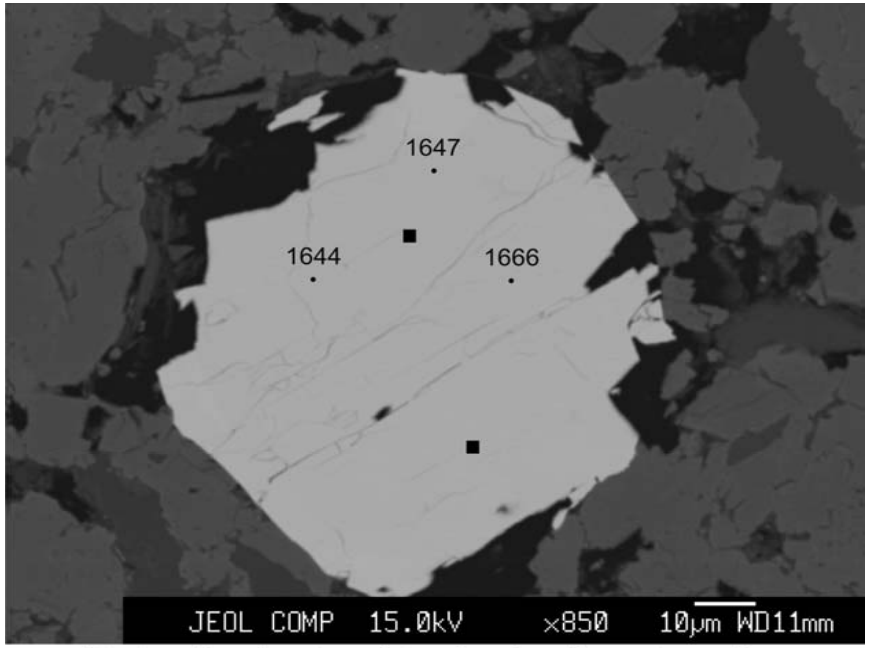
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.19	12/6/2007	E58-18	2	8461	36799	2179	864	864	439	6.1



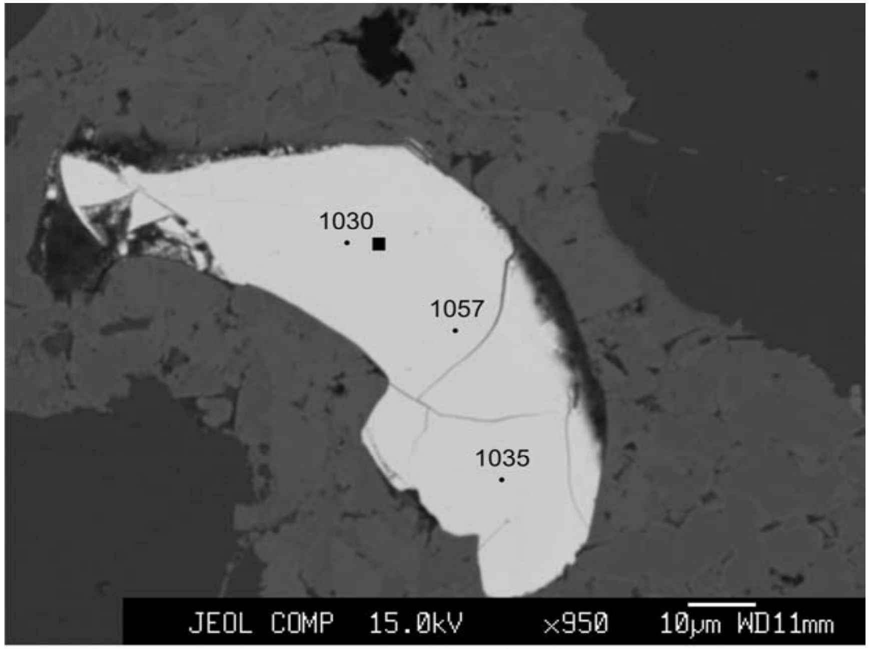
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.19	12/6/2007	E58-18	3	18936	27267	1247	2420	2420	1647	7.18
E58	3532.19	12/6/2007	E58-18	3	20122	28721	1125	2491	2491	1644	7.8
E58	3532.19	12/6/2007	E58-18	3	18855	26747	1023	2346	2346	1666	8.36



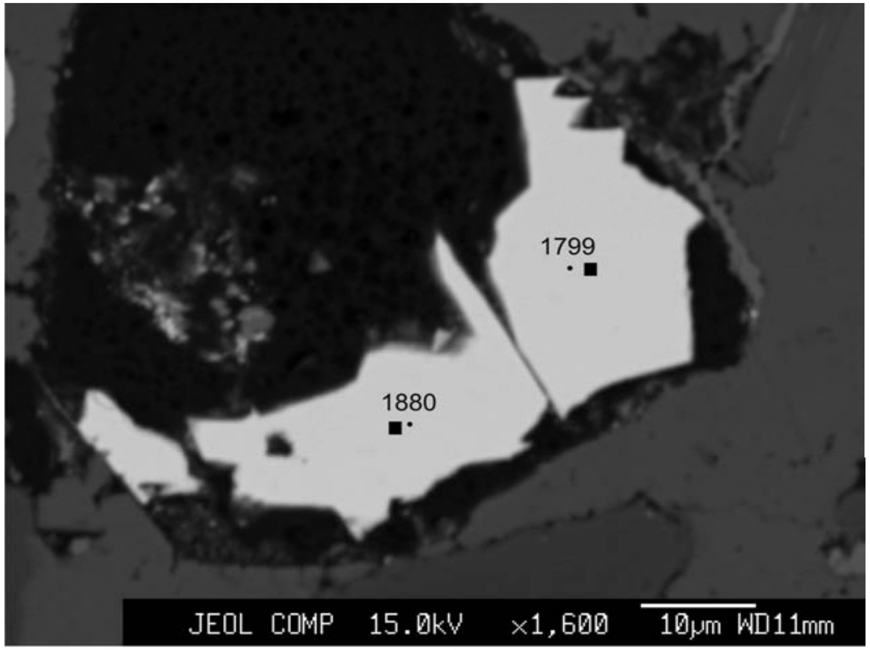
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.19	12/6/2007	E58-18	4	29745	30329	698	1533	1533	1030	11.57
E58	3532.19	12/6/2007	E58-18	4	29224	29221	711	1524	1524	1057	11.42
E58	3532.19	12/6/2007	E58-18	4	30668	32814	757	1668	1668	1035	10.93



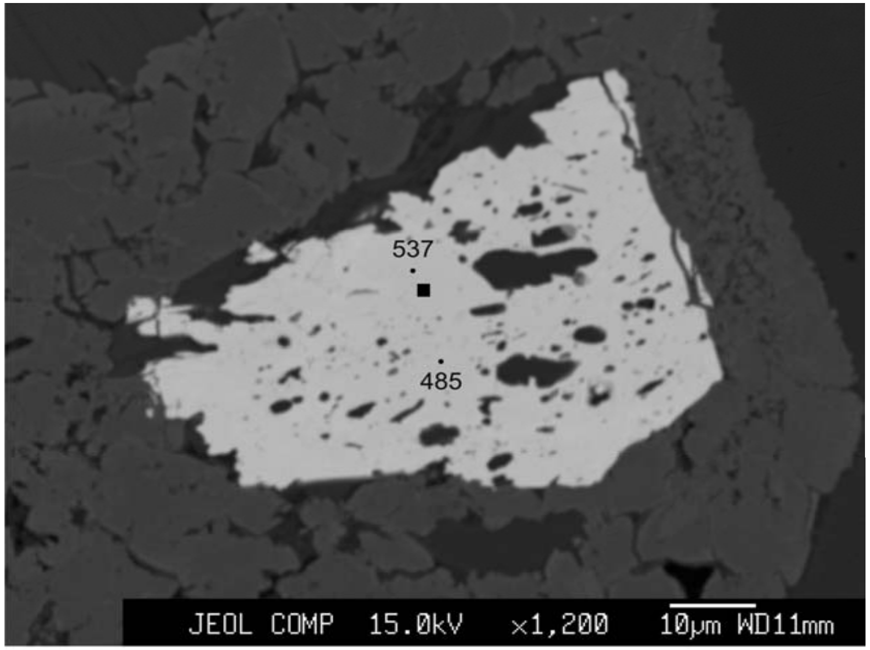
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.19	12/6/2007	E58-18	5	7205	8050	3177	1649	1649	1799	3.77
E58	3532.19	12/6/2007	E58-18	5	8118	7648	3218	1714	1714	1880	3.72



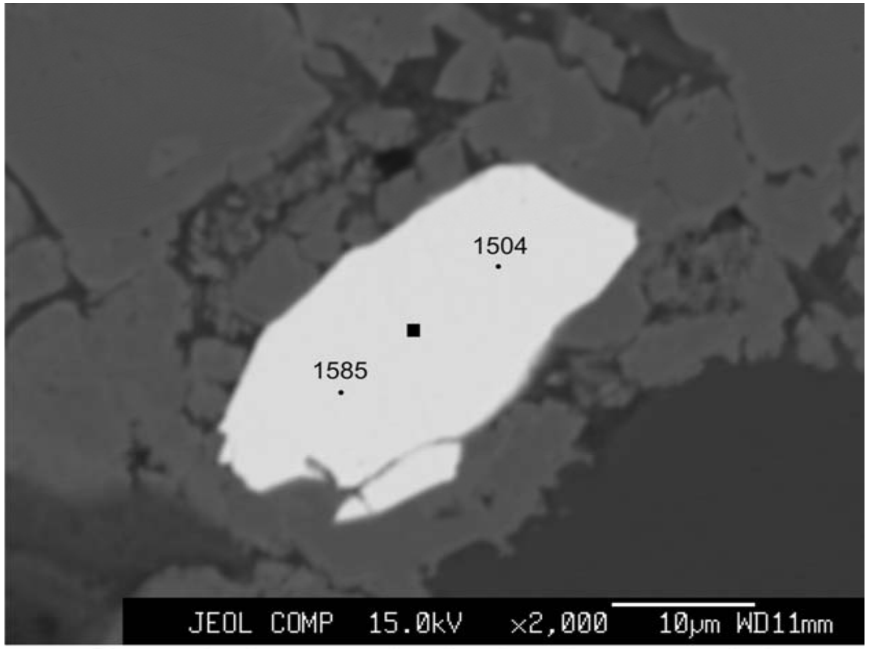
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.19	12/6/2007	E58-18	6	3528	15689	242	359	359	485	26.55
E58	3532.19	12/6/2007	E58-18	6	2925	17165	215	431	431	537	27.32



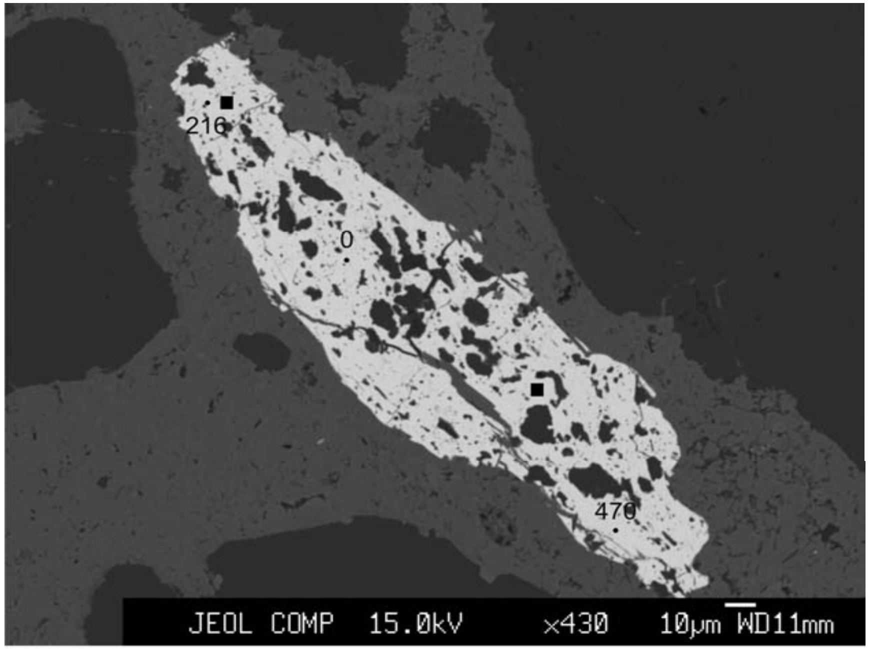
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.19	12/6/2007	E58-18	7	0	4758	1878	794	794	1504	6.55
E58	3532.19	12/6/2007	E58-18	7	0	4590	2575	1014	1014	1585	5.11



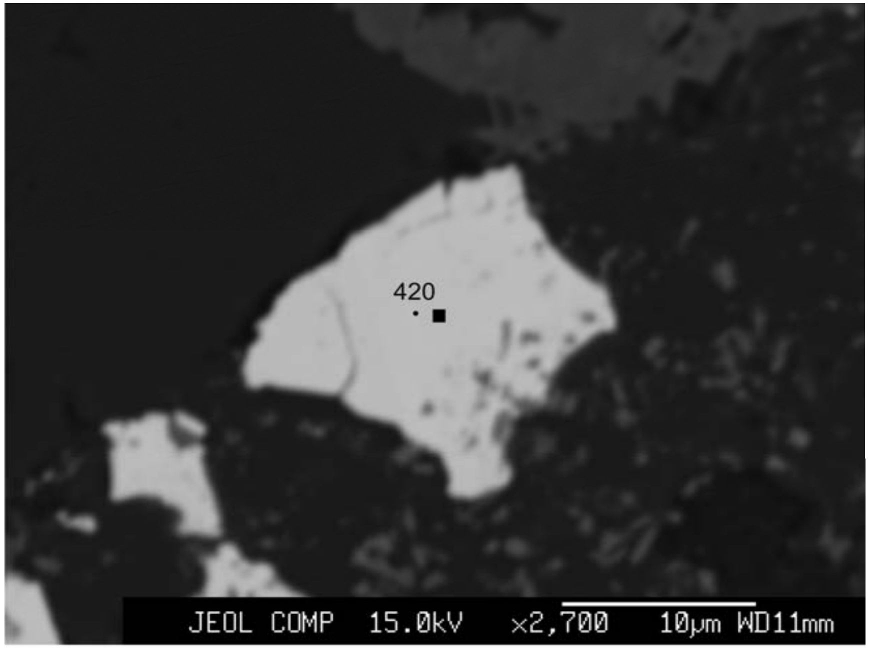
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.19	12/6/2007	E58-18	8	3334	3487	132	0	0	0	*
E58	3532.19	12/6/2007	E58-18	8	3960	1296	340	23	23	216	63.38
E58	3532.19	12/6/2007	E58-18	8	3313	3640	162	88	88	470	53.95



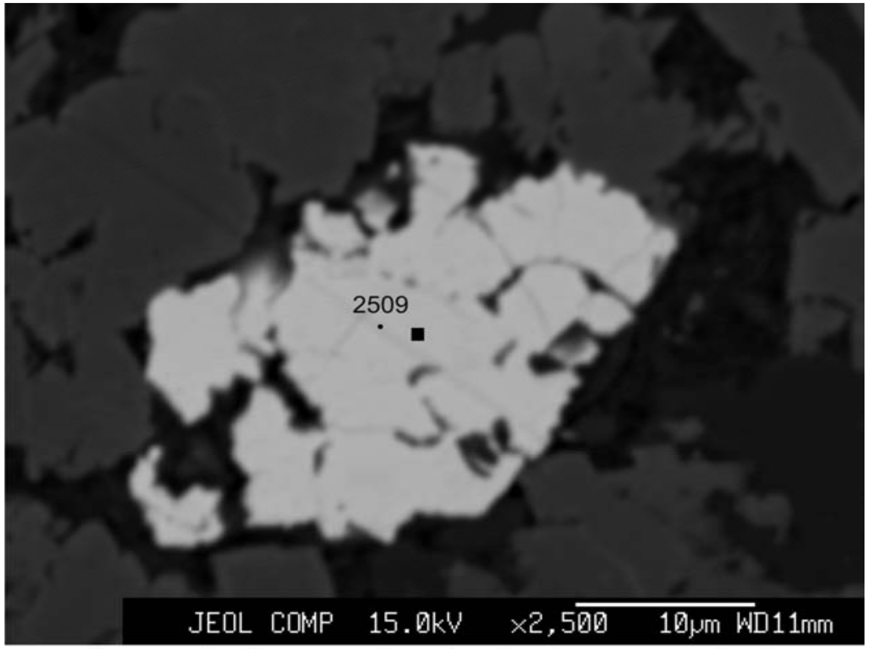
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.19	12/6/2007	E58-18	9	2655	14150	87	272	272	420	47.49



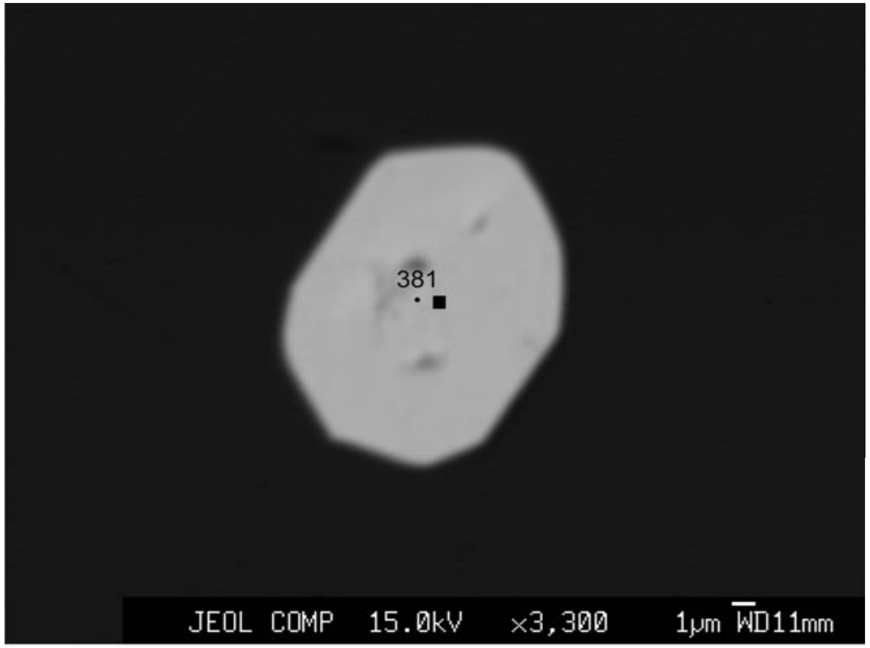
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3532.19	12/6/2007	E58-18	10	337	692	0	82	82	2509	211



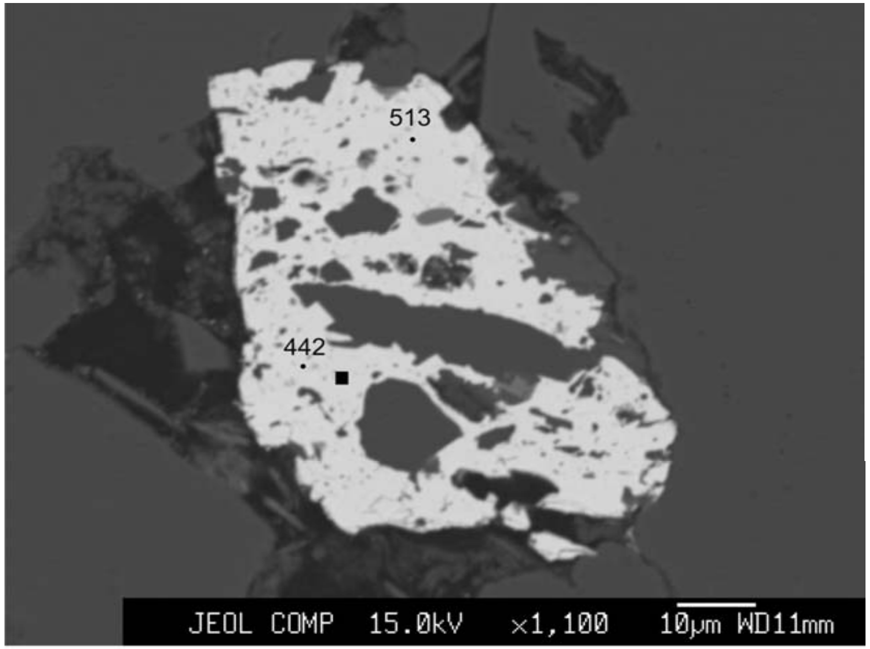
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3551.29	12/6/2007	E58-27	1	16371	24580	4897	690	690	381	5.95



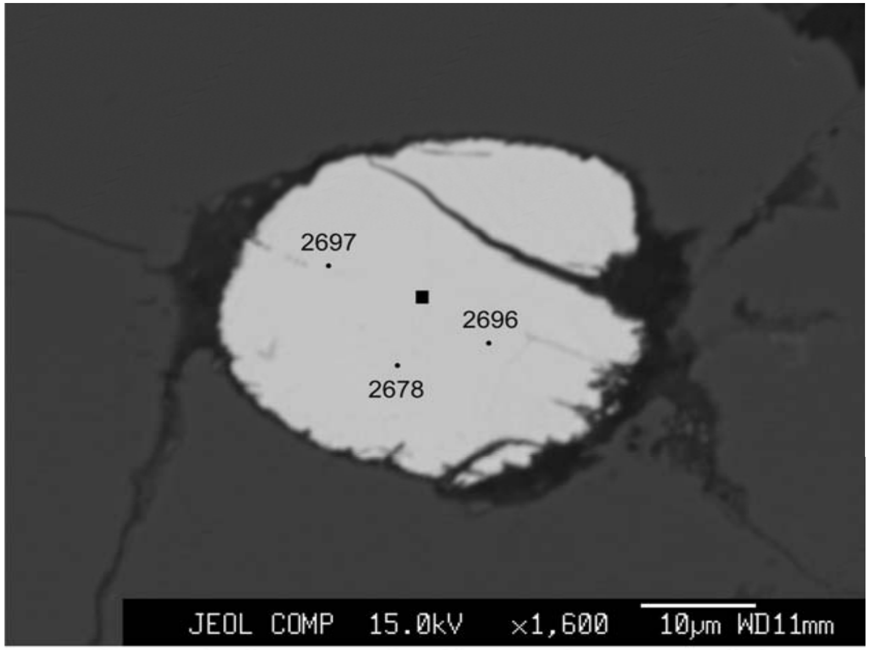
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3551.29	12/6/2007	E58-27	2	2650	12515	59	293	293	513	57.95
E58	3551.29	12/6/2007	E58-27	2	1894	12197	0	242	242	442	114



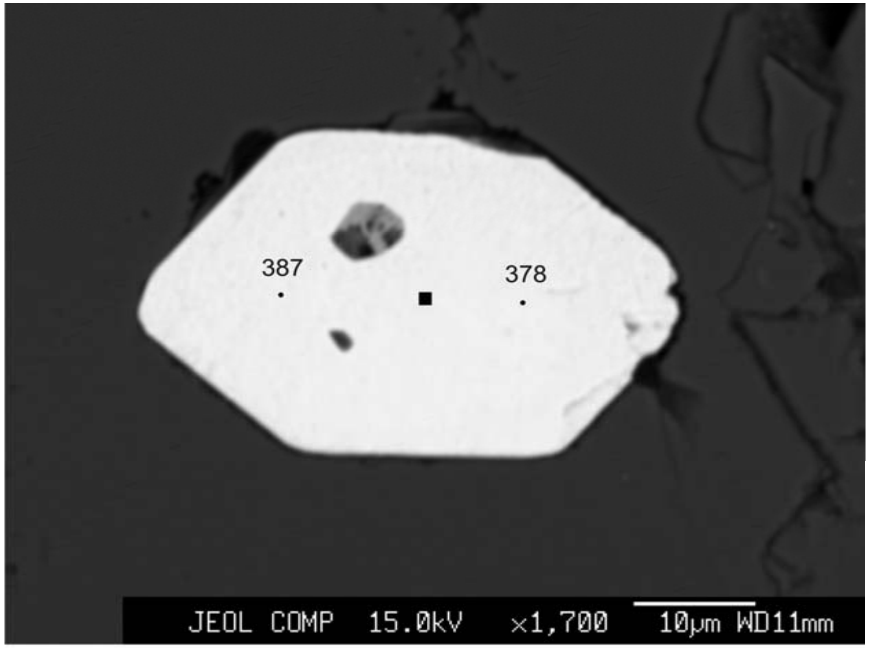
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3551.29	12/6/2007	E58-27	3	12786	53242	1502	7609	7609	2697	6.64
E58	3551.29	12/6/2007	E58-27	3	17555	53341	7873	10997	10997	2696	1.72
E58	3551.29	12/6/2007	E58-27	3	15961	55528	3578	8929	8929	2678	3.35



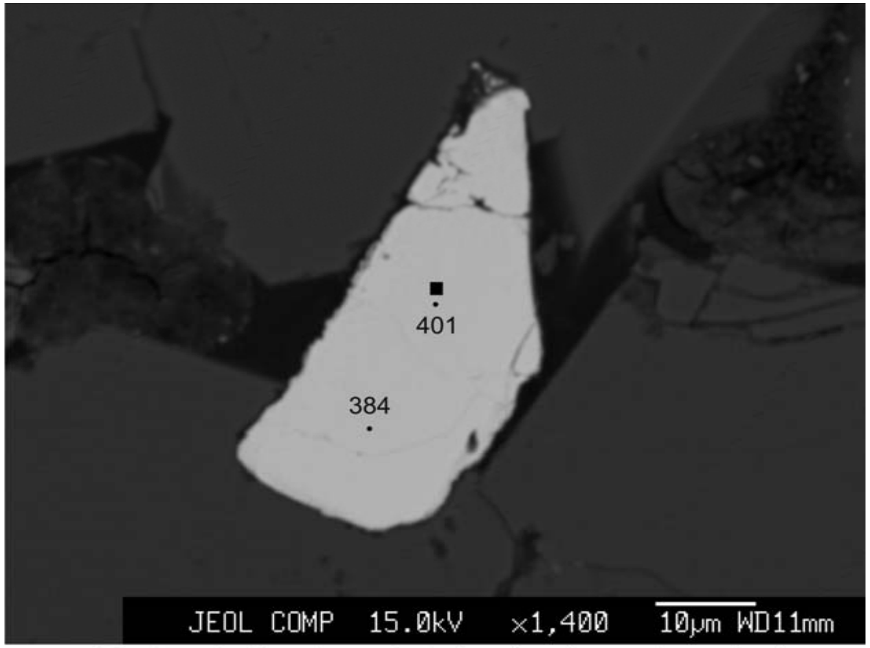
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3528.21	12/6/2007	E58-15	1	11881	55972	1805	1045	1045	378	6.99
E58	3528.21	12/6/2007	E58-15	1	25745	62065	16336	1993	1993	387	3.05



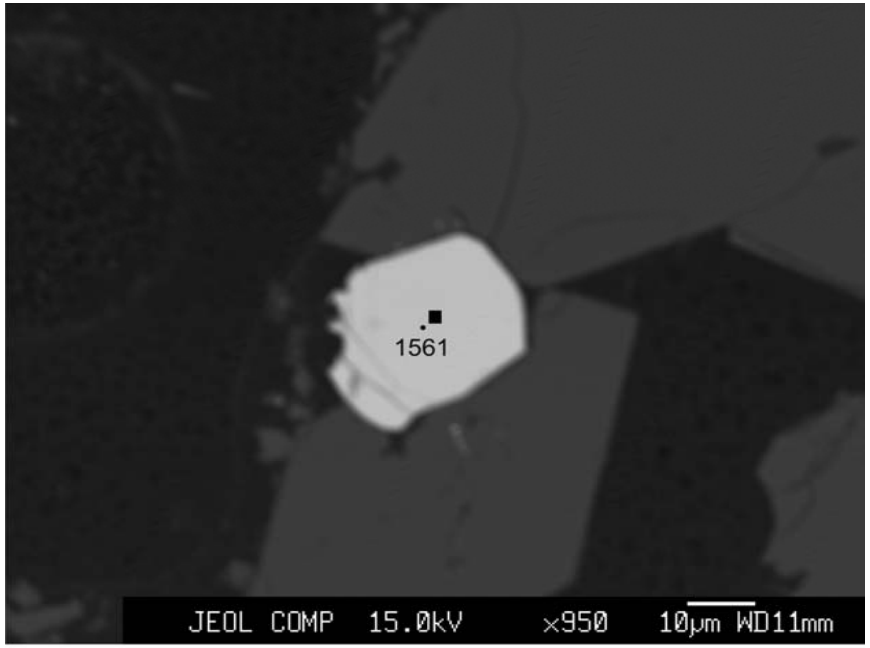
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3528.21	12/6/2007	E58-15	2	11802	40886	874	785	785	401	10.56
E58	3528.21	12/6/2007	E58-15	2	12449	38057	773	698	698	384	11.52



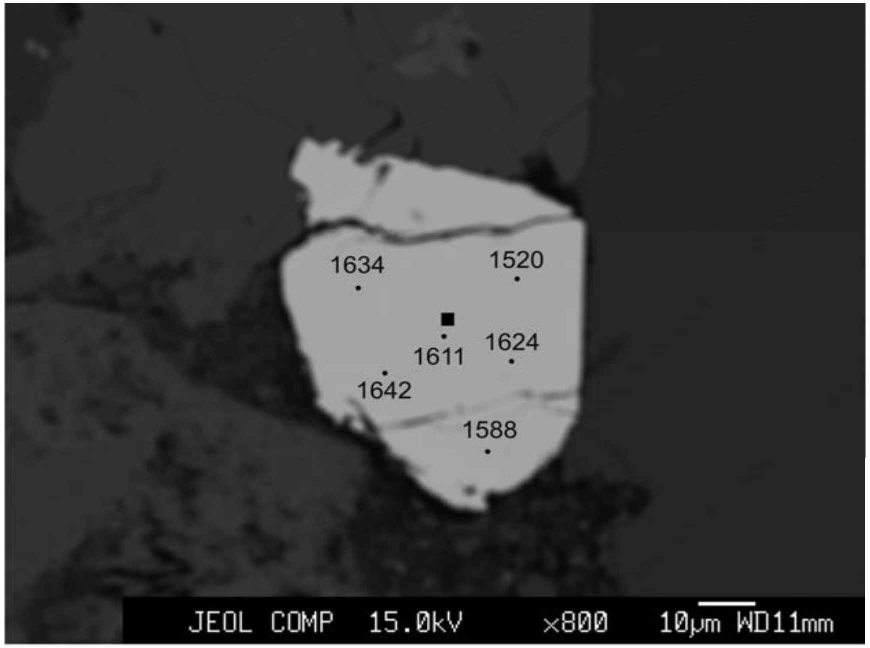
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3528.21	12/6/2007	E58-15	3	24759	22620	720	1814	1814	1561	11.25



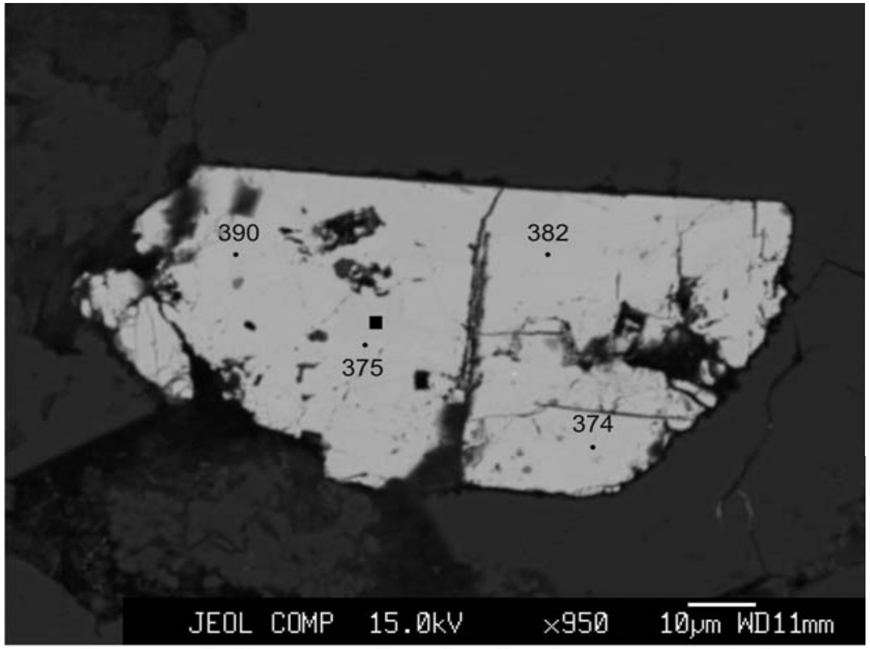
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3528.21	12/6/2007	E58-15	4	17299	24632	1421	2214	2214	1611	6.54
E58	3528.21	12/6/2007	E58-15	4	17433	23891	1406	2025	2025	1520	6.66
E58	3528.21	12/6/2007	E58-15	4	16697	22831	1742	2199	2199	1634	5.58
E58	3528.21	12/6/2007	E58-15	4	16626	24536	1596	2300	2300	1642	5.96
E58	3528.21	12/6/2007	E58-15	4	17370	24923	1147	2180	2180	1624	7.73
E58	3528.21	12/6/2007	E58-15	4	18143	29254	1186	2456	2456	1588	7.54



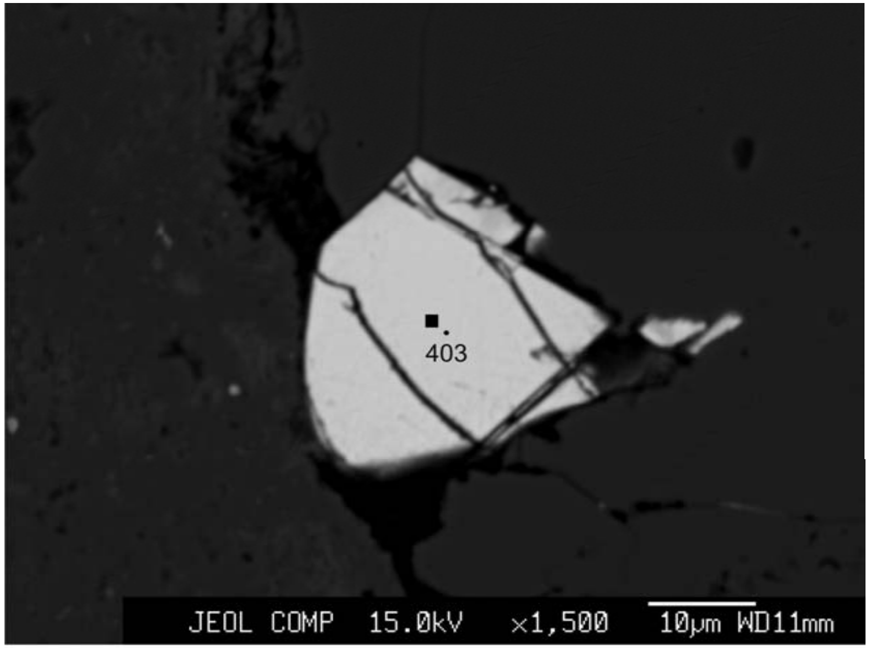
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3528.21	12/6/2007	E58-15	5	5450	52125	2485	1028	1028	382	5.72
E58	3528.21	12/6/2007	E58-15	5	6935	41459	910	743	743	374	10.35
E58	3528.21	12/6/2007	E58-15	5	2068	35196	1840	691	691	375	7.17
E58	3528.21	12/6/2007	E58-15	5	6413	46299	2379	943	943	390	5.88



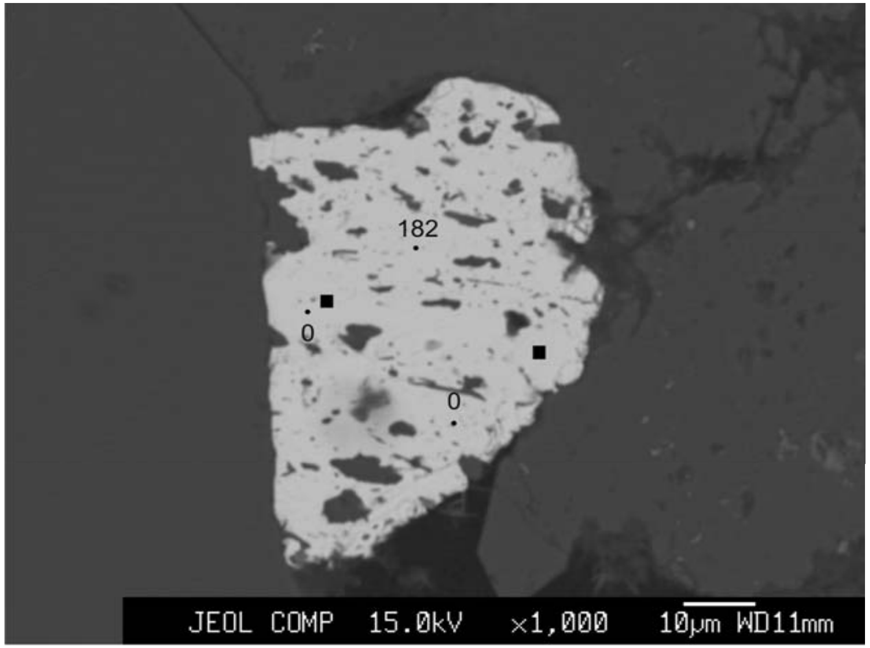
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3528.21	12/6/2007	E58-15	6	13107	43117	692	820	820	403	12.07



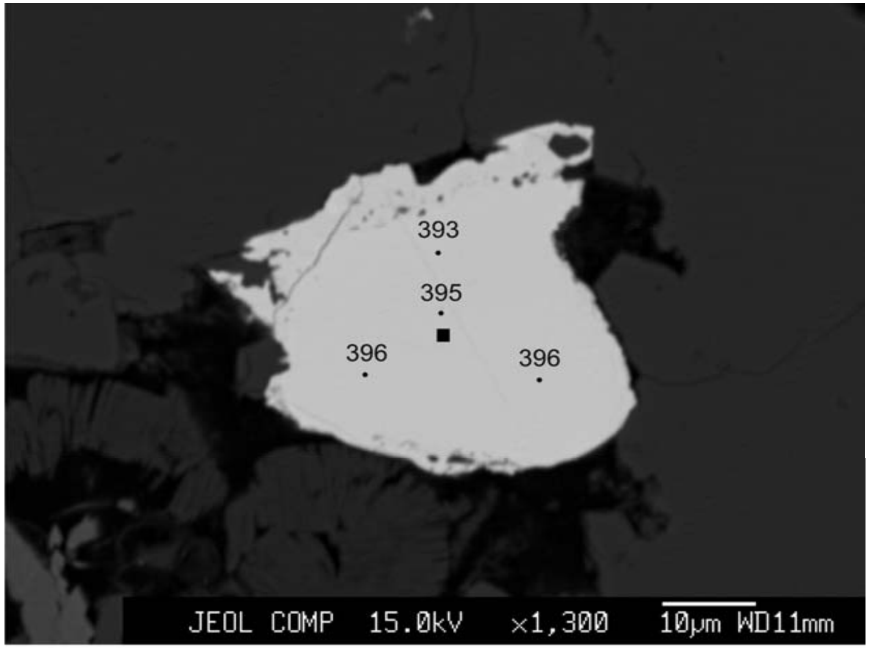
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3528.21	12/6/2007	E58-15	7	3118	3697	2	30	30	182	275
E58	3528.21	12/6/2007	E58-15	7	2441	2088	0	0	0	0	*
E58	3528.21	12/6/2007	E58-15	7	2530	1650	0	0	0	0	*



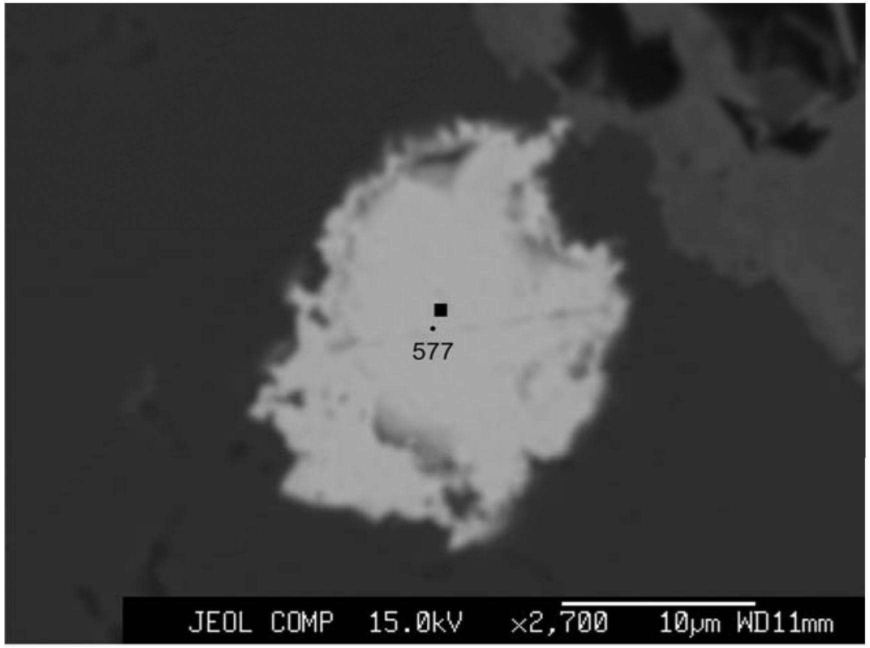
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3536.82	12/6/2007	E58-21	1	7851	34054	515	632	632	395	14.52
E58	3536.82	12/6/2007	E58-21	1	16151	37548	958	716	716	393	10.3
E58	3536.82	12/6/2007	E58-21	1	6719	34046	501	632	632	396	14.73
E58	3536.82	12/6/2007	E58-21	1	7987	34169	445	631	631	396	15.76



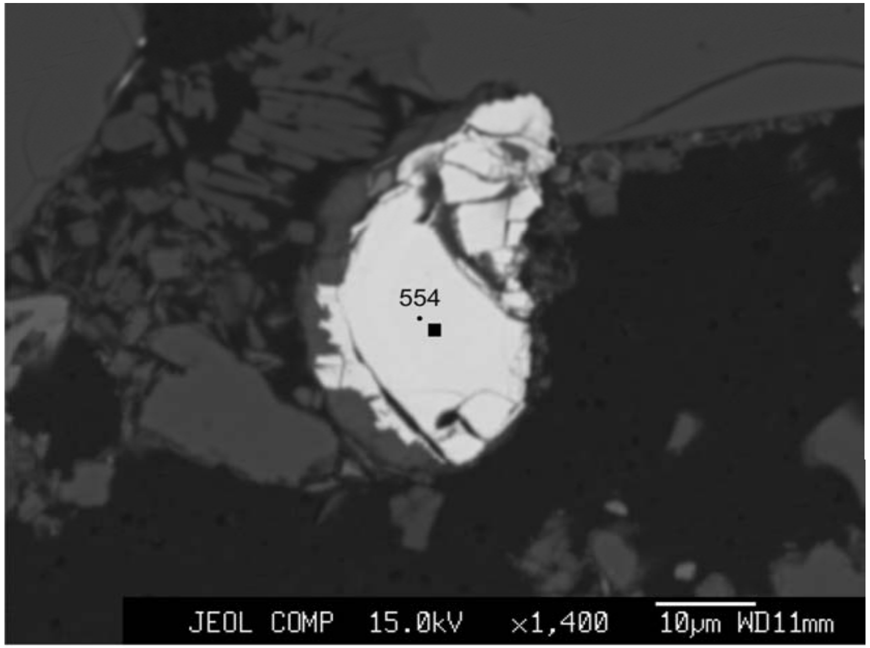
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3536.82	12/6/2007	E58-21	2	1405	24141	368	658	658	577	18.14



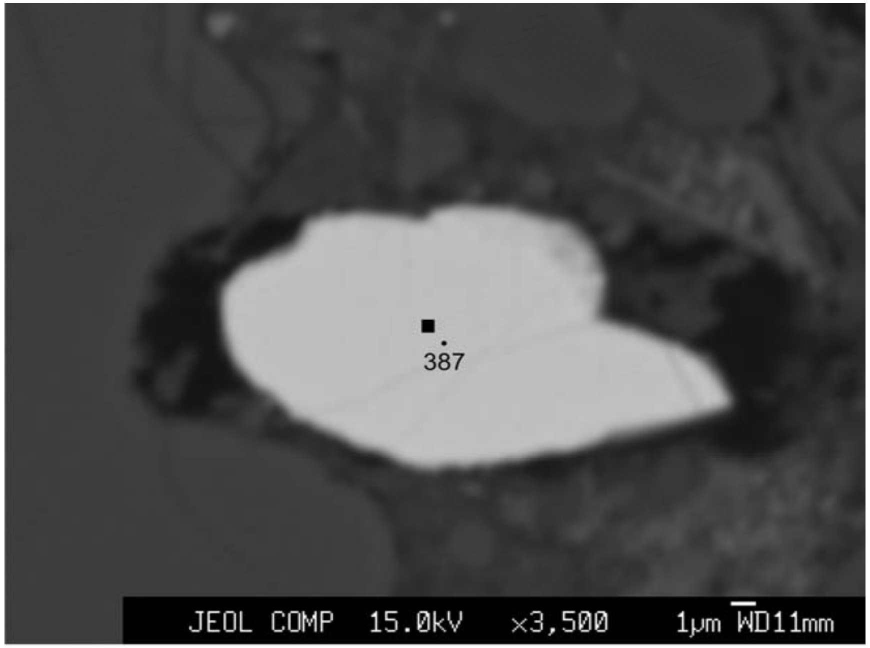
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58	3536.82	12/6/2007	E58-21	3	11617	32406	1737	949	949	554	6.67



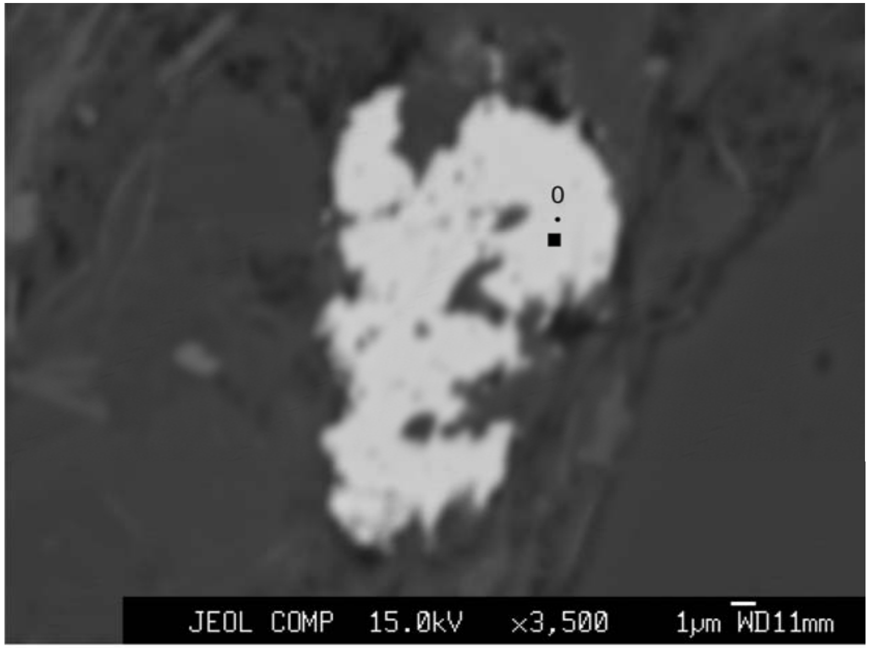
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58A	3733.43	12/6/2007	E58A-2	1	8001	38696	741	713	713	387	11.67



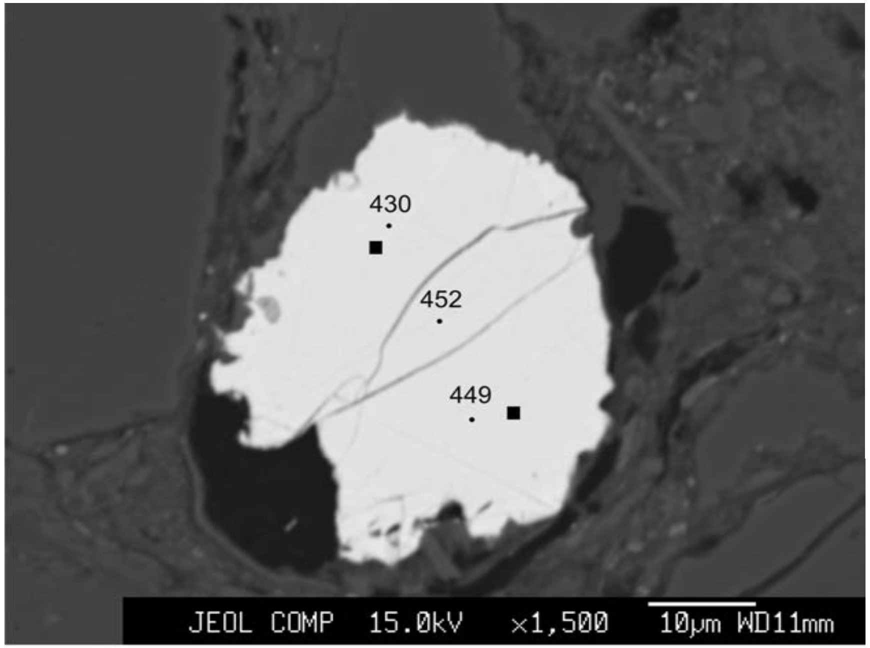
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58A	3733.43	12/6/2007	E58A-2	2	2990	1288	21	0	0	0	*



Rectangle denotes point of major elements analysis

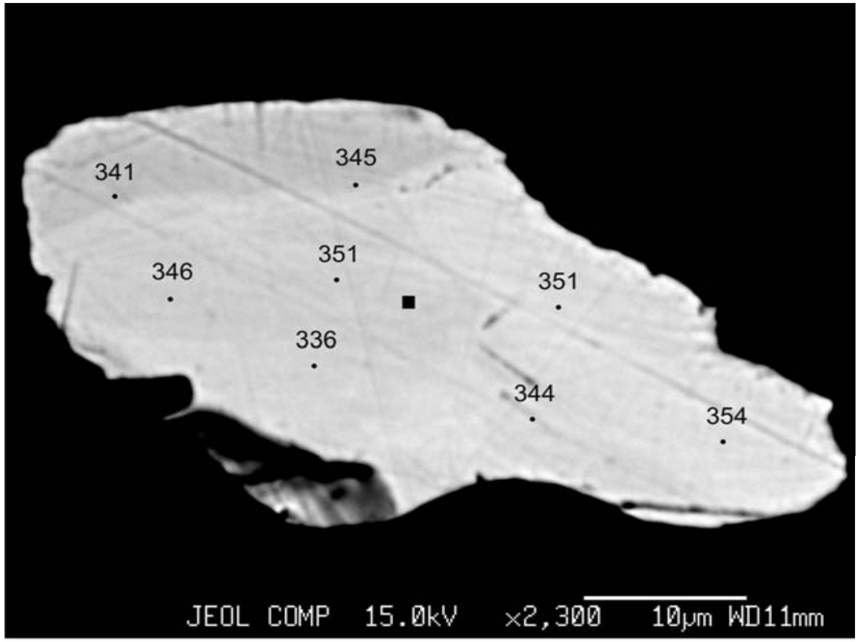
Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
E58A	3733.43	12/6/2007	E58A-2	3	20414	29552	9085	1199	1199	452	4.09
E58A	3733.43	12/6/2007	E58A-2	3	8801	22284	2764	602	602	430	6.62
E58A	3733.43	12/6/2007	E58A-2	3	21752	32833	11309	1403	1403	449	3.67



Rectangle denotes point of major elements analysis

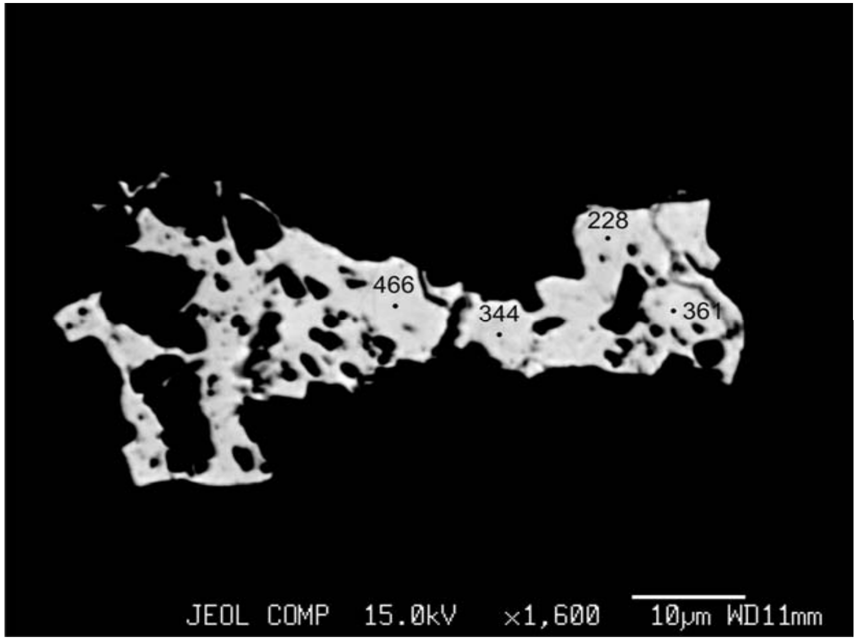
North Triumph G-43

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Logan Canyon	5/22/2007	G-43-7	1	9527	37142	7017	913	913	341	4.36
N.Triumph	Logan Canyon	5/22/2007	G-43-7	1	3775	45734	10821	1243	1243	345	3.24
N.Triumph	Logan Canyon	5/22/2007	G-43-7	1	3190	50768	12287	1419	1419	351	2.91
N.Triumph	Logan Canyon	5/22/2007	G-43-7	1	3108	49583	11800	1387	1387	354	2.96
N.Triumph	Logan Canyon	5/22/2007	G-43-7	1	2827	45212	10483	1217	1217	344	3.28
N.Triumph	Logan Canyon	5/22/2007	G-43-7	1	2406	34723	8359	928	928	336	4.06
N.Triumph	Logan Canyon	5/22/2007	G-43-7	1	2203	32365	7843	905	905	351	4.16
N.Triumph	Logan Canyon	5/22/2007	G-43-7	1	2211	30790	7438	848	848	346	4.39

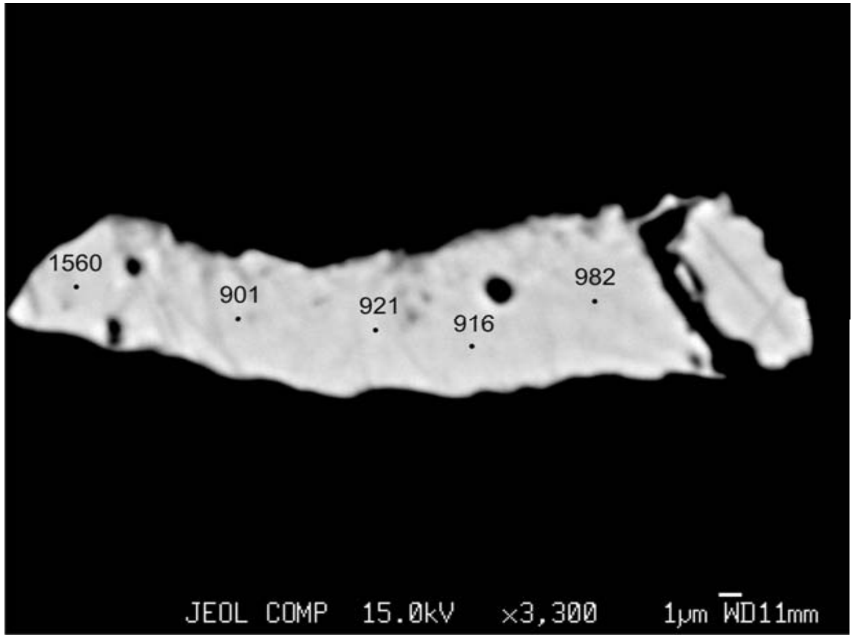


Rectangle denotes point of major elements analysis

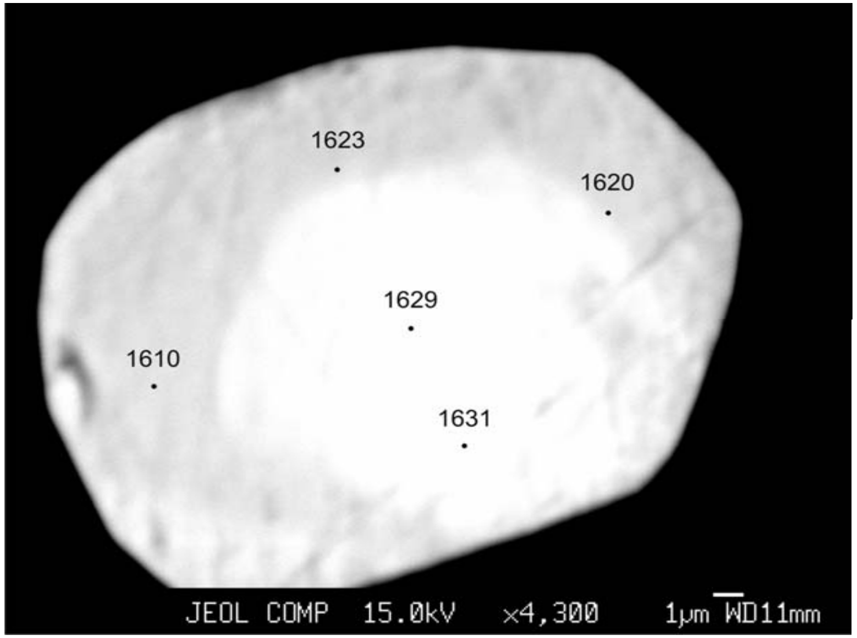
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Logan Canyon	5/22/2007	G-43-7	2	2464	8518	247	195	195	466	32.12
N.Triumph	Logan Canyon	5/22/2007	G-43-7	2	3031	11633	299	194	194	344	27.54
N.Triumph	Logan Canyon	5/22/2007	G-43-7	2	2523	5452	202	62	62	228	53.12
N.Triumph	Logan Canyon	5/22/2007	G-43-7	2	2212	17081	344	294	294	361	22.12



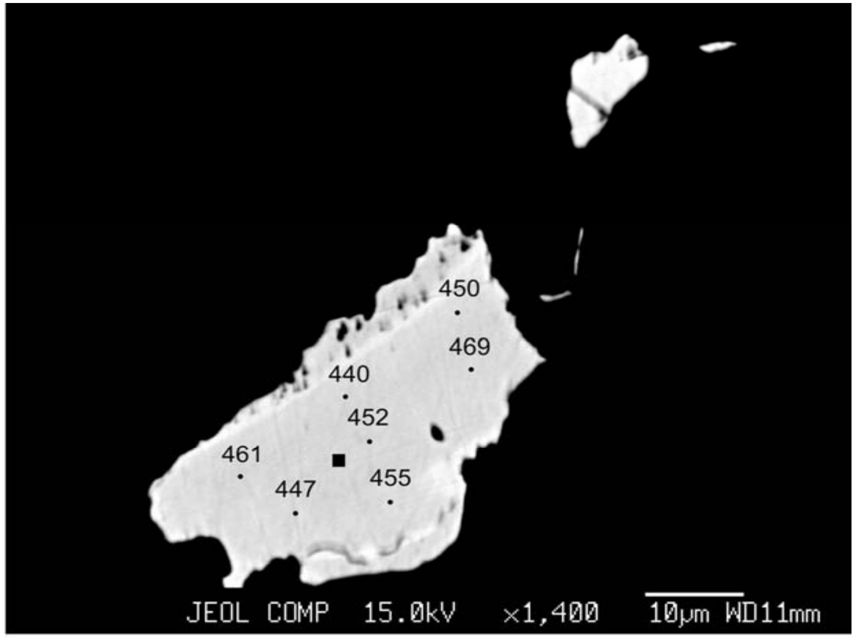
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Logan Canyon	5/22/2007	G-43-7	3	571	19094	179	823	823	921	29.39
N.Triumph	Logan Canyon	5/22/2007	G-43-7	3	711	17618	112	1296	1296	1560	38.38
N.Triumph	Logan Canyon	5/22/2007	G-43-7	3	549	19053	232	811	811	901	25.16
N.Triumph	Logan Canyon	5/22/2007	G-43-7	3	560	18884	244	819	819	916	24.55
N.Triumph	Logan Canyon	5/22/2007	G-43-7	3	494	18007	179	831	831	982	30.09



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Logan Canyon	5/22/2007	G-43-7	4	19179	47663	3308	4488	4488	1629	3.42
N.Triumph	Logan Canyon	5/22/2007	G-43-7	4	21140	53555	3220	4878	4878	1620	3.59
N.Triumph	Logan Canyon	5/22/2007	G-43-7	4	20484	28243	1206	2423	2423	1610	7.33
N.Triumph	Logan Canyon	5/22/2007	G-43-7	4	18529	26993	1716	2489	2489	1623	5.54
N.Triumph	Logan Canyon	5/22/2007	G-43-7	4	19802	49186	3305	4607	4607	1631	3.45

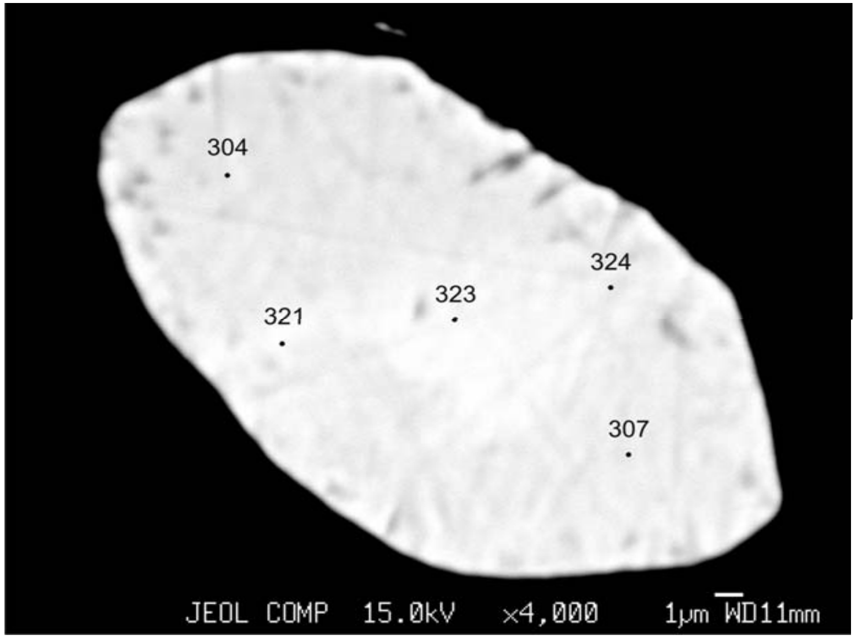


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Logan Canyon	5/22/2007	G-43-7	5	31388	31574	577	678	678	452	14.22
N.Triumph	Logan Canyon	5/22/2007	G-43-7	5	28099	34022	1019	754	754	450	10.2
N.Triumph	Logan Canyon	5/22/2007	G-43-7	5	31021	33658	980	727	727	440	10.67
N.Triumph	Logan Canyon	5/22/2007	G-43-7	5	34407	31896	584	699	699	461	14.2
N.Triumph	Logan Canyon	5/22/2007	G-43-7	5	35281	33913	647	722	722	447	13.43
N.Triumph	Logan Canyon	5/22/2007	G-43-7	5	29327	28920	562	627	627	455	14.63
N.Triumph	Logan Canyon	5/22/2007	G-43-7	5	34974	33731	663	755	755	469	13.15

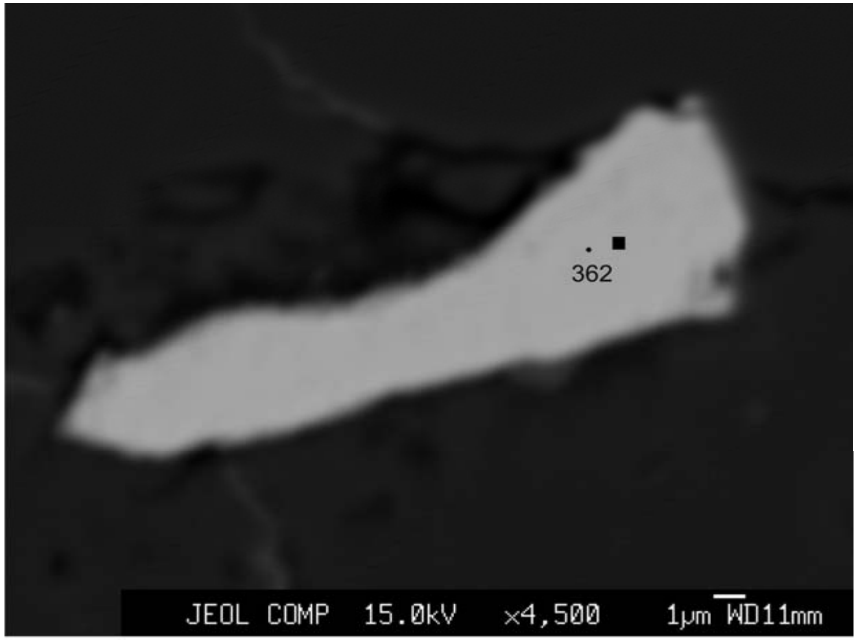


Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Logan Canyon	5/22/2007	G-43-7	6	10089	37260	8251	922	922	323	4.28
N.Triumph	Logan Canyon	5/22/2007	G-43-7	6	22168	33098	7628	790	790	307	5.71
N.Triumph	Logan Canyon	5/22/2007	G-43-7	6	23538	33793	7887	804	804	304	5.75
N.Triumph	Logan Canyon	5/22/2007	G-43-7	6	17459	35333	8409	903	903	324	4.8
N.Triumph	Logan Canyon	5/22/2007	G-43-7	6	21321	32765	8066	842	842	321	5.36

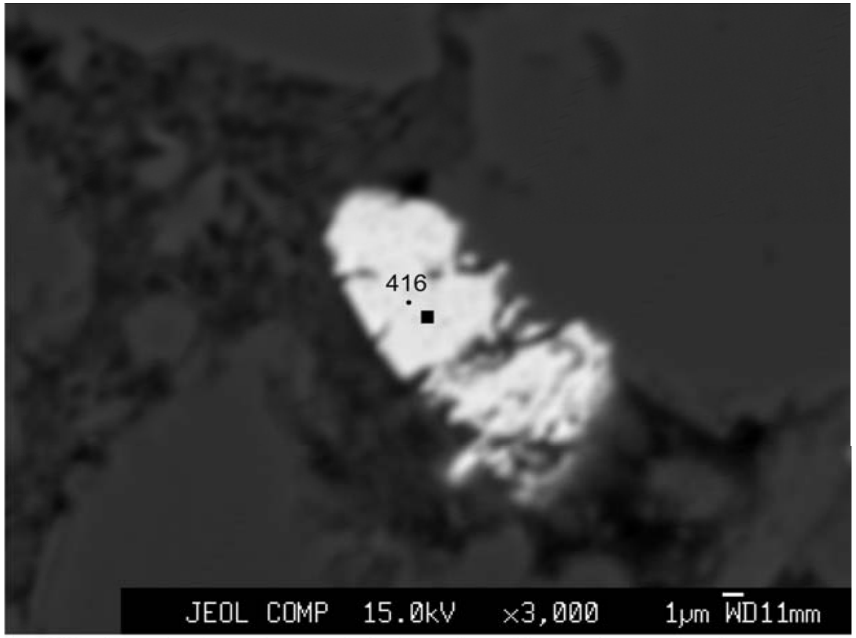


Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	2	5839	46669	1661	842	842	362	7.21



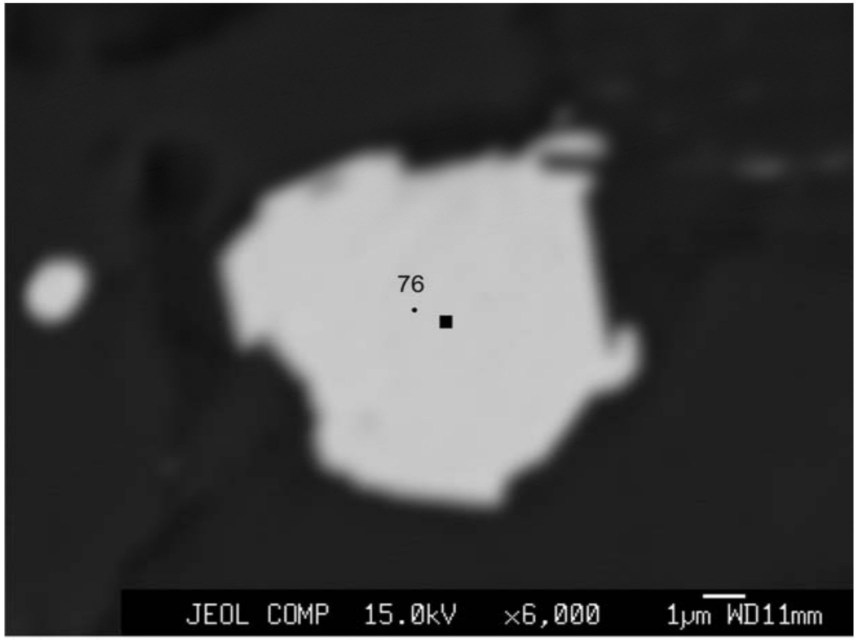
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	3	19984	25055	2251	604	604	416	7.88



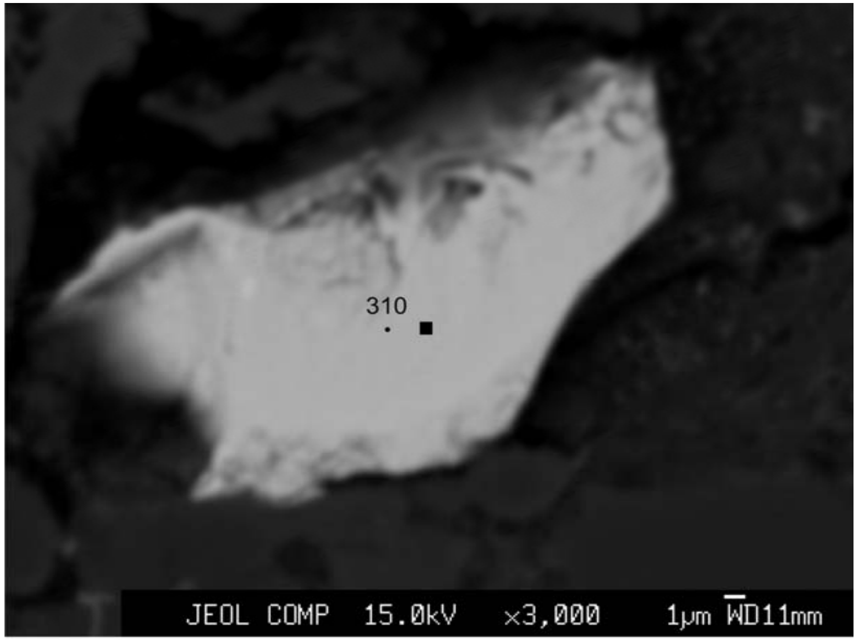
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	4	24794	26222	1036	99	99	76	19.74



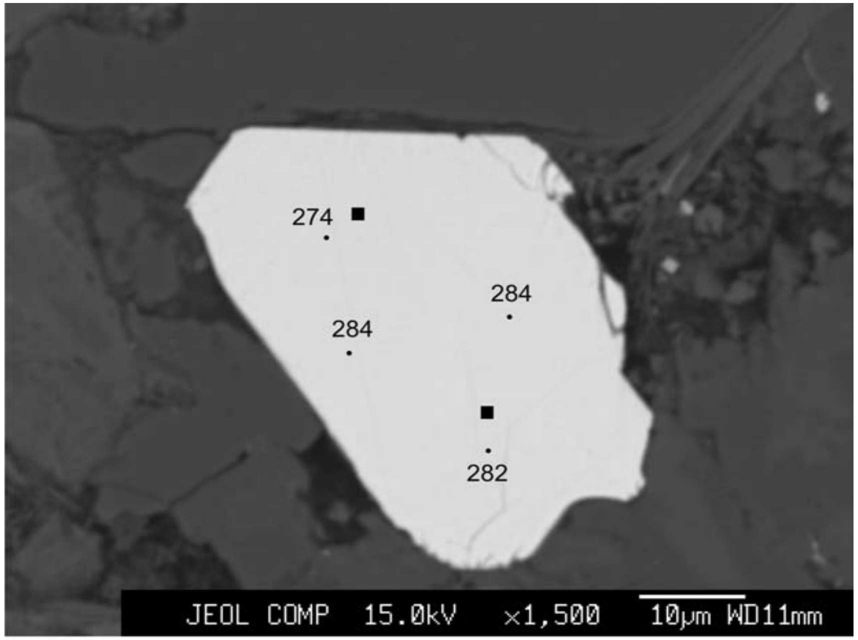
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	5	4025	71440	3080	1129	1129	310	5.43



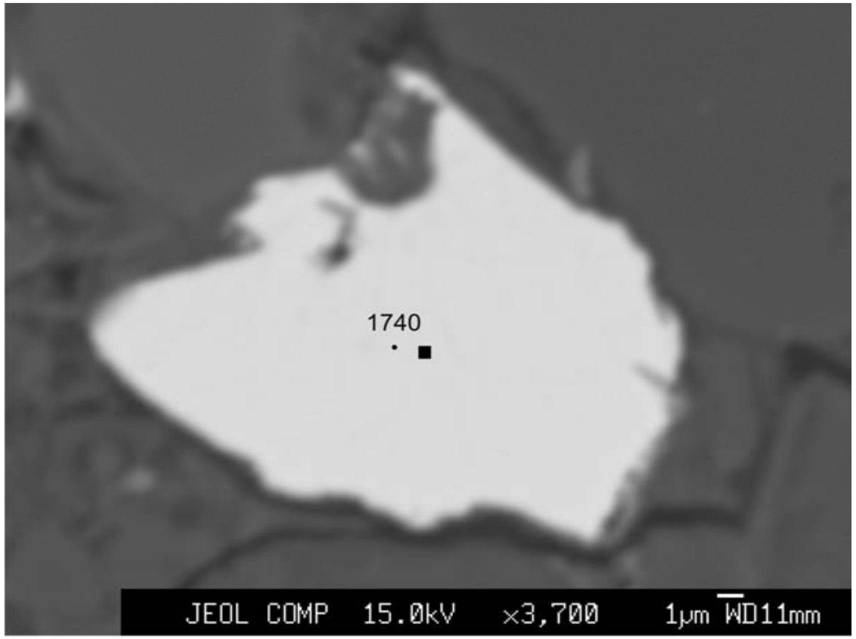
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	6	16717	42053	876	548	548	274	11.56
G43	3289.64	5/11/2007	G43-11	6	13582	44519	604	586	586	282	13.53
G43	3289.64	5/11/2007	G43-11	6	15715	44739	921	606	606	284	11.02
G43	3289.64	5/11/2007	G43-11	6	11596	41107	733	551	551	284	12.28



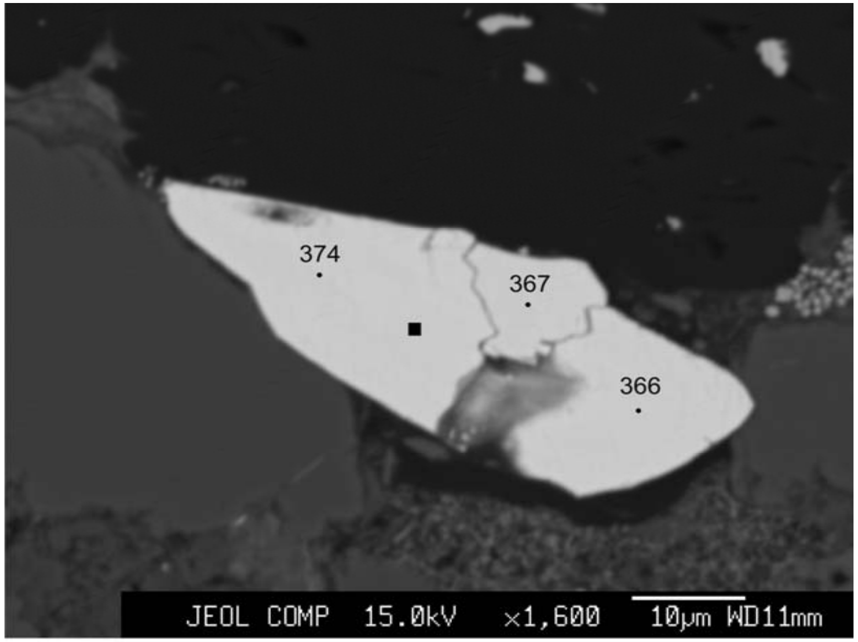
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	7	1518	75454	2806	6908	6908	1740	4.53



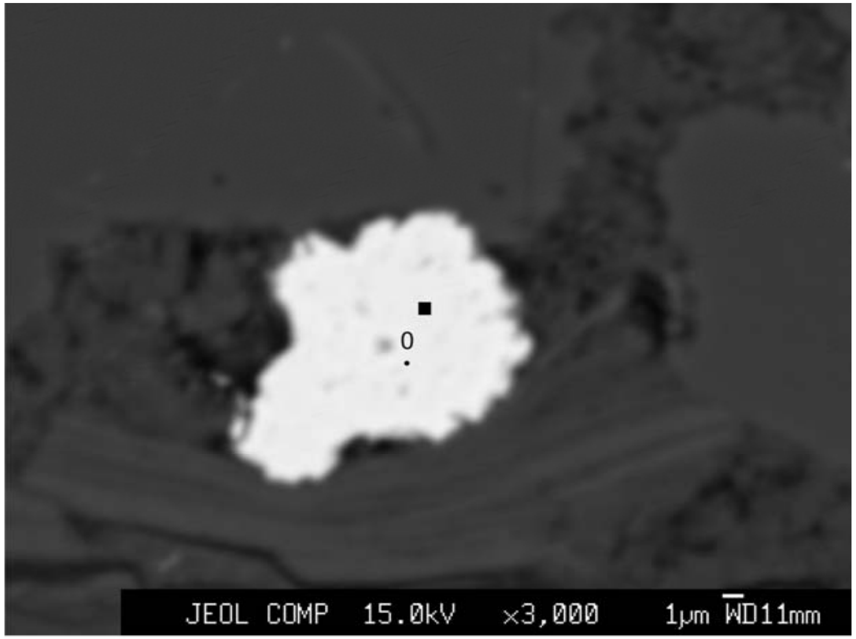
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	8	8852	46919	3096	953	953	374	5.28
G43	3289.64	5/11/2007	G43-11	8	6467	35624	1856	682	682	366	7.13
G43	3289.64	5/11/2007	G43-11	8	8240	38558	2485	766	766	367	6.15



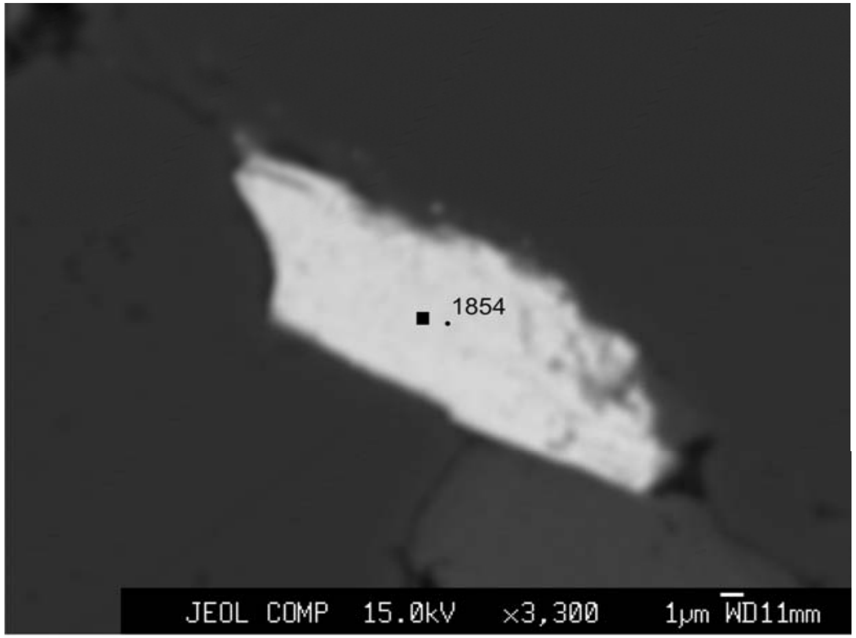
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	9	0	4899	0	0	0	0	*



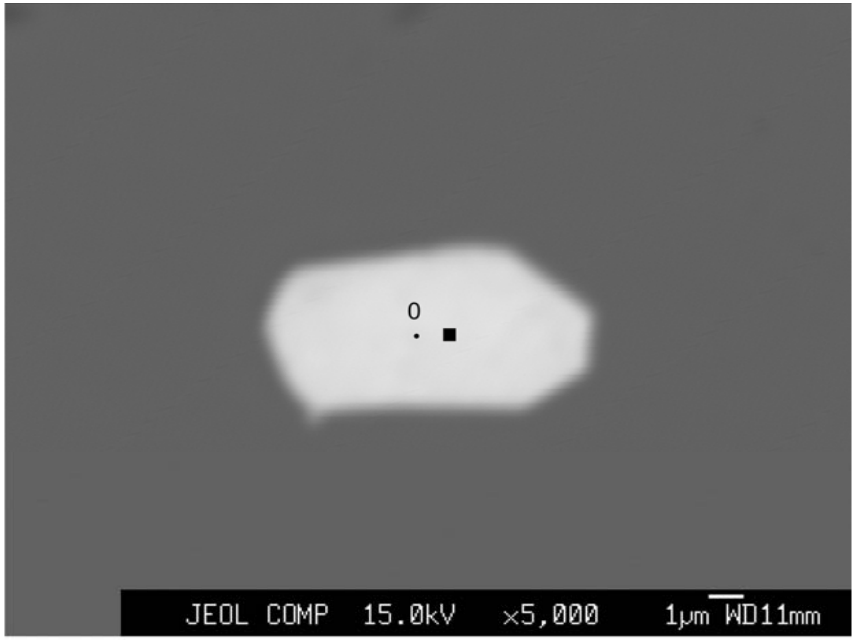
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	10	17787	38857	7801	5838	5838	1854	1.74



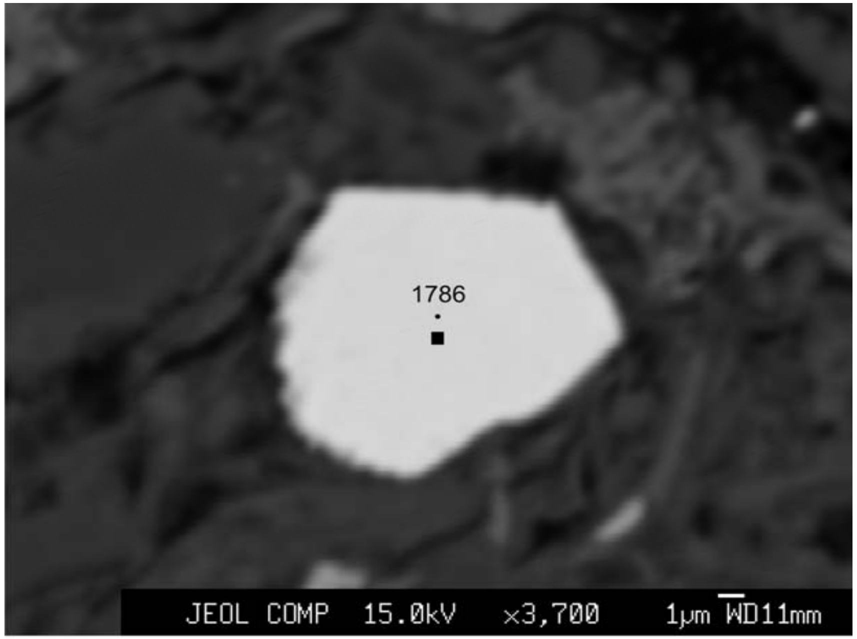
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	11	319	15590	0	0	0	0	*



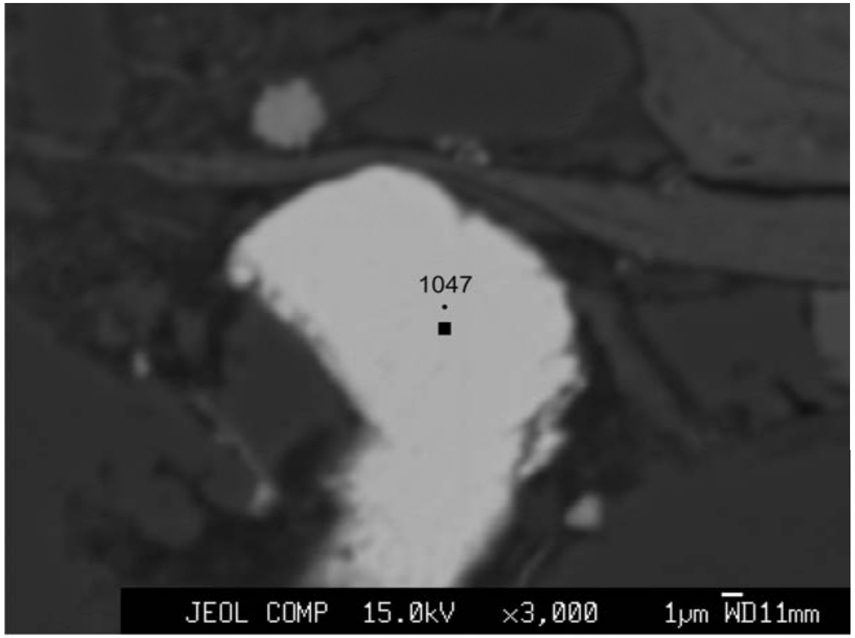
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	12	0	3593	231	368	368	1786	34.56



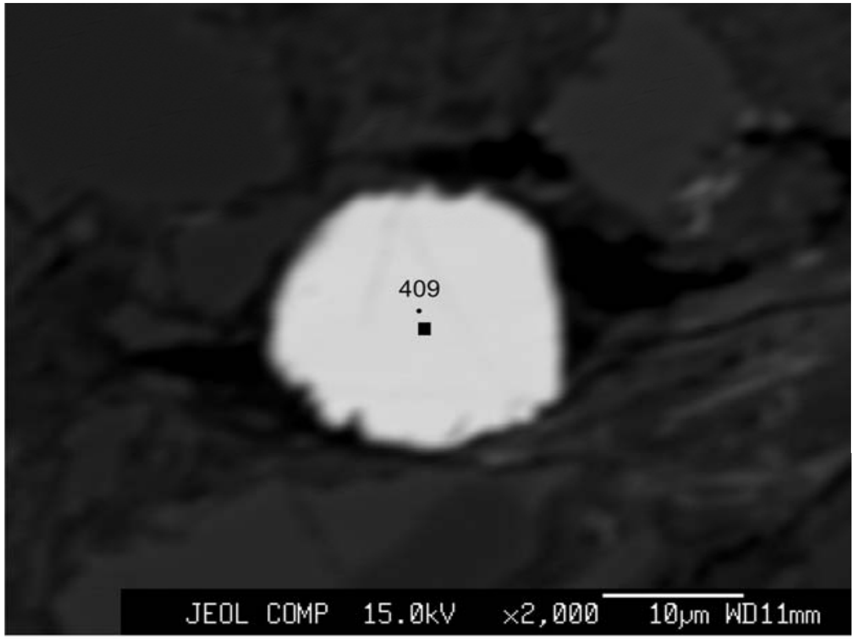
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	13	13170	35039	3108	2176	2176	1047	3.77



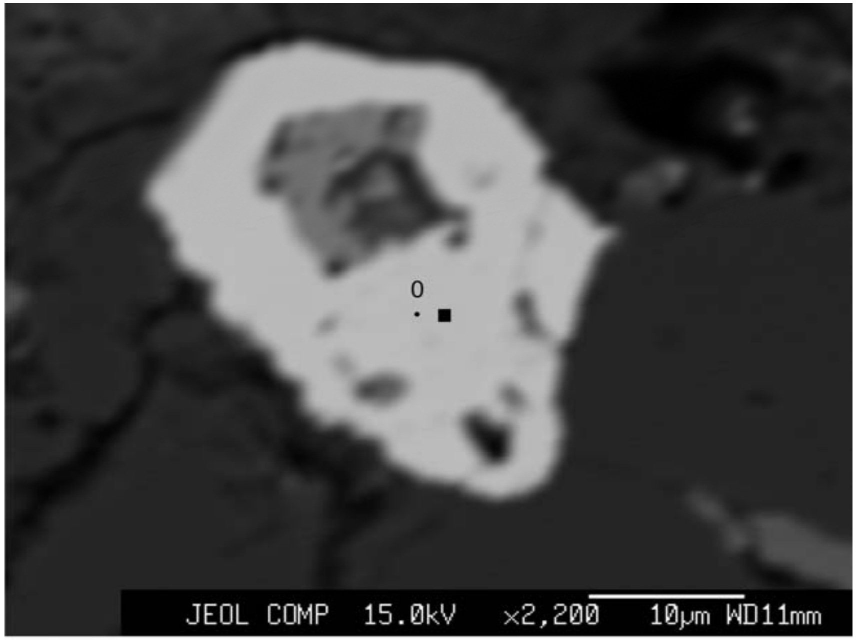
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	14	7435	32721	5711	938	938	409	4.3



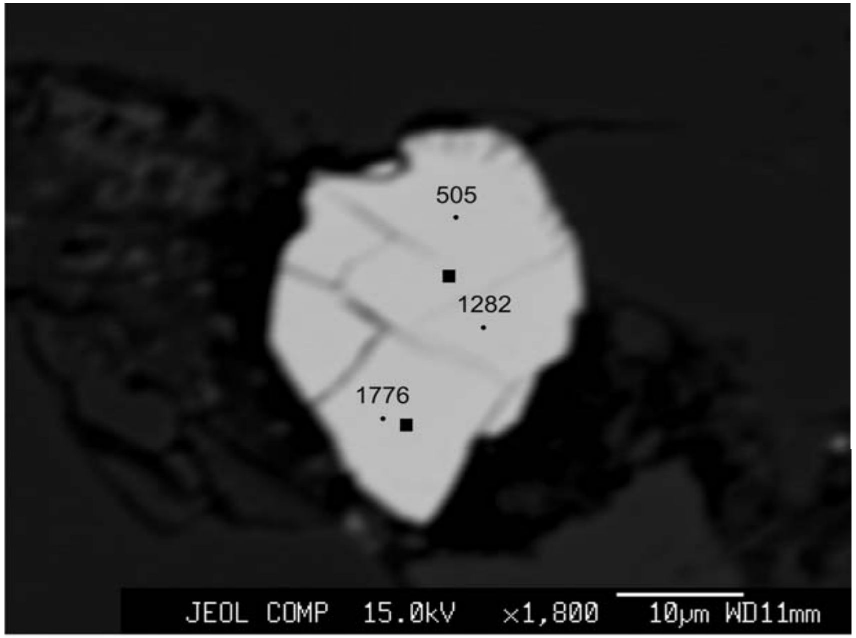
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	15	5035	867	0	0	0	0	*



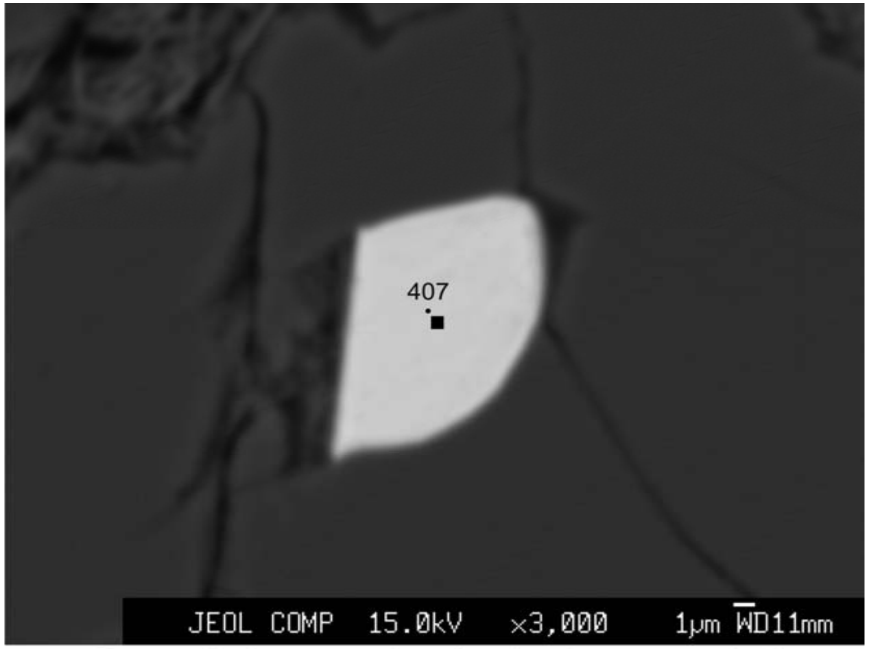
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3289.64	5/11/2007	G43-11	16	870	36249	1100	3317	3317	1776	7.74
G43	3289.64	5/11/2007	G43-11	16	0	20991	0	476	476	505	12.37
G43	3289.64	5/11/2007	G43-11	16	0	42309	356	2556	2556	1282	16.31



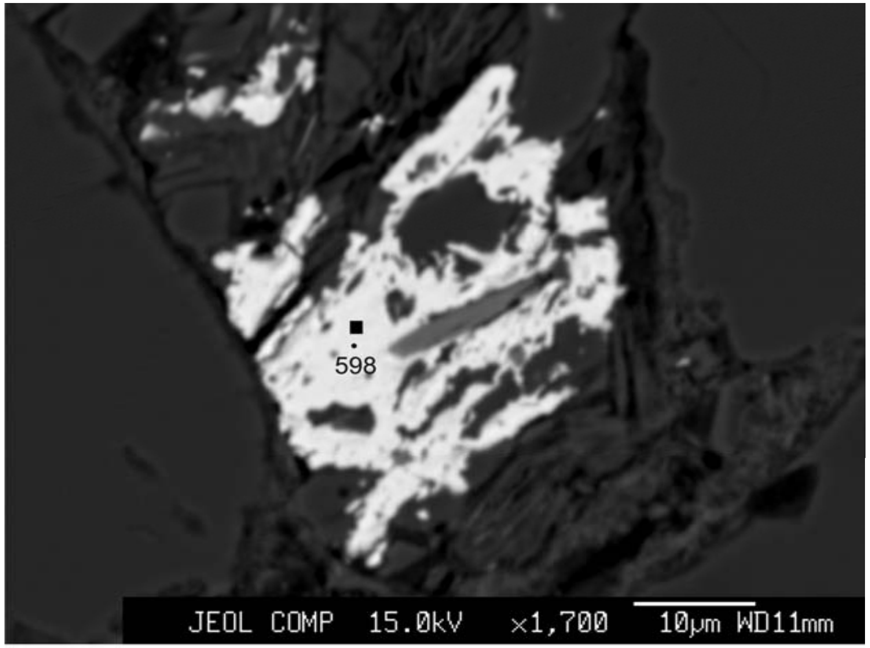
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3828.04	12/6/2007	G43-31	1	7660	29153	2885	702	702	407	5.98



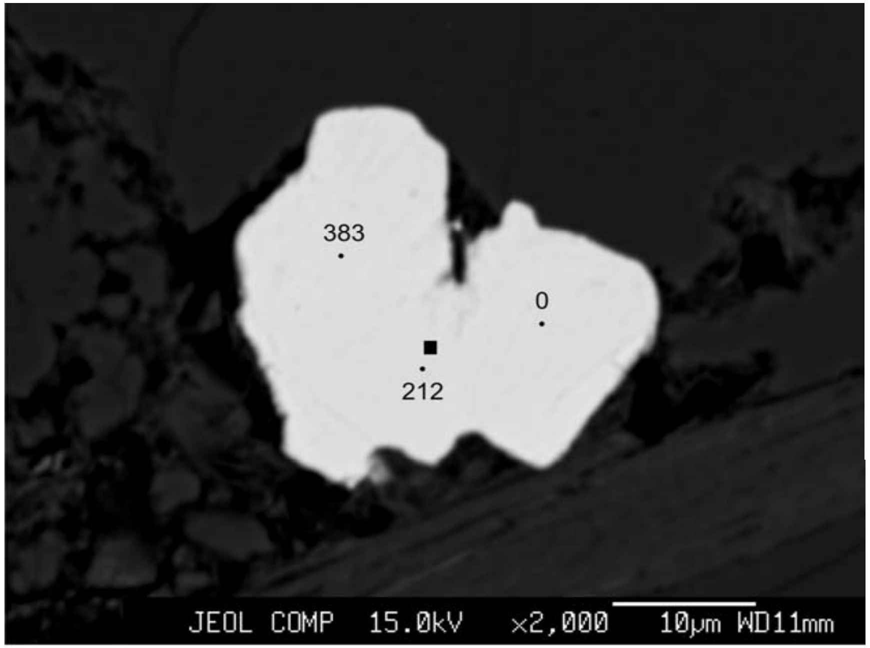
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3828.04	12/6/2007	G43-31	2	2734	5275	0	142	142	598	56.15



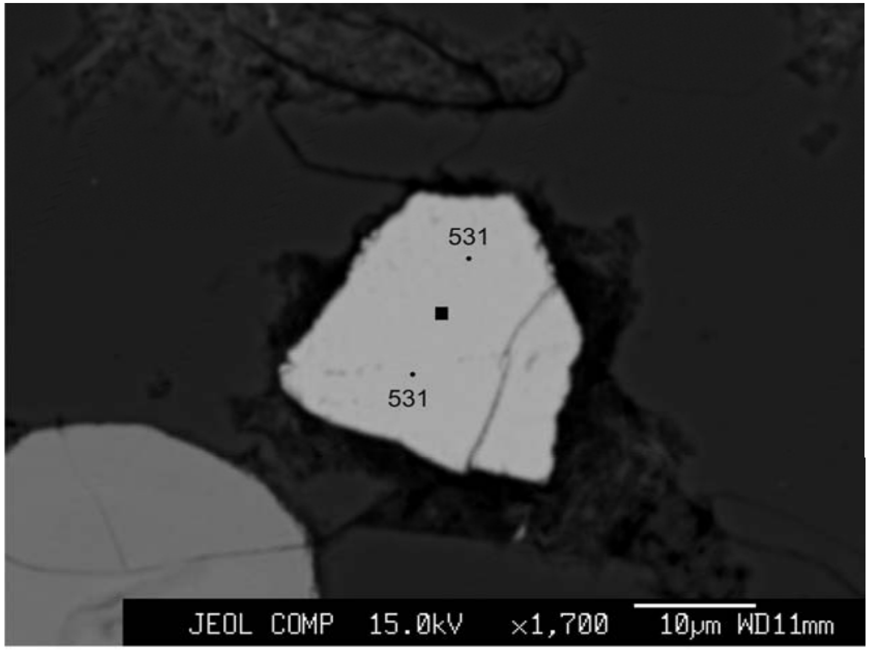
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3828.04	12/6/2007	G43-31	3	12203	772	639	0	0	0	
G43	3828.04	12/6/2007	G43-31	3	13201	4590	13865	849	849	383	4.82
G43	3828.04	12/6/2007	G43-31	3	11468	1114	811	35	35	212	32.39



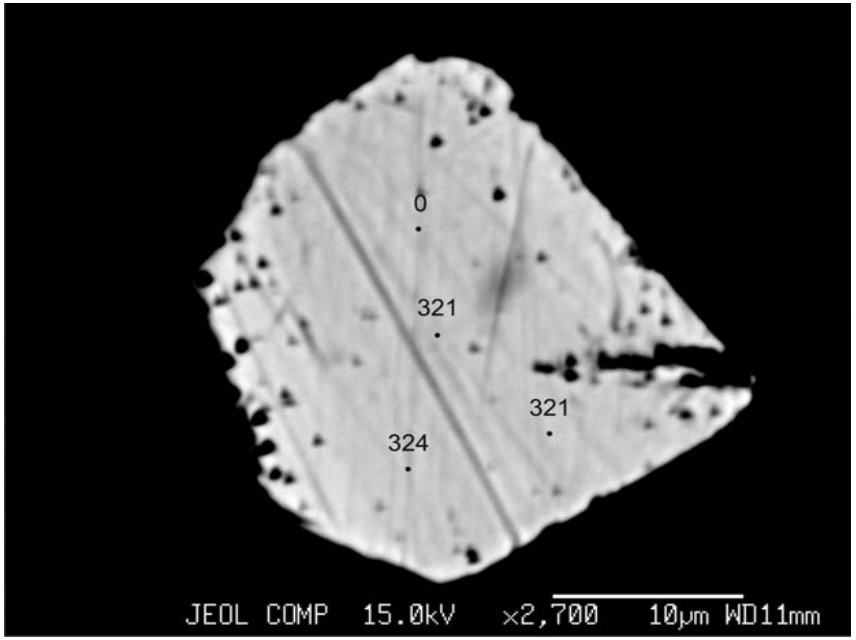
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	3828.04	12/6/2007	G43-31	4	24481	32458	8788	1461	1461	531	3.81
G43	3828.04	12/6/2007	G43-31	4	26320	34443	9771	1586	1586	531	3.67

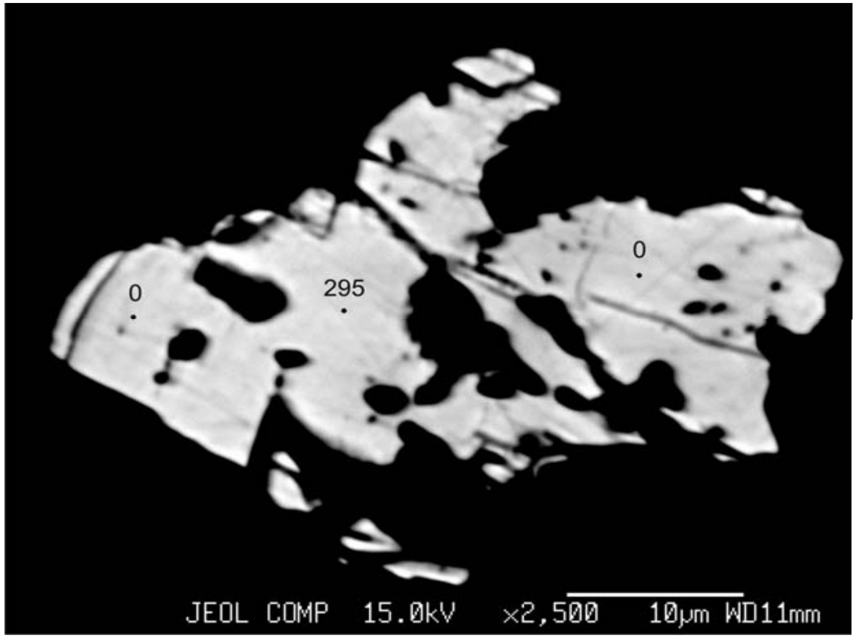


Rectangle denotes point of major elements analysis

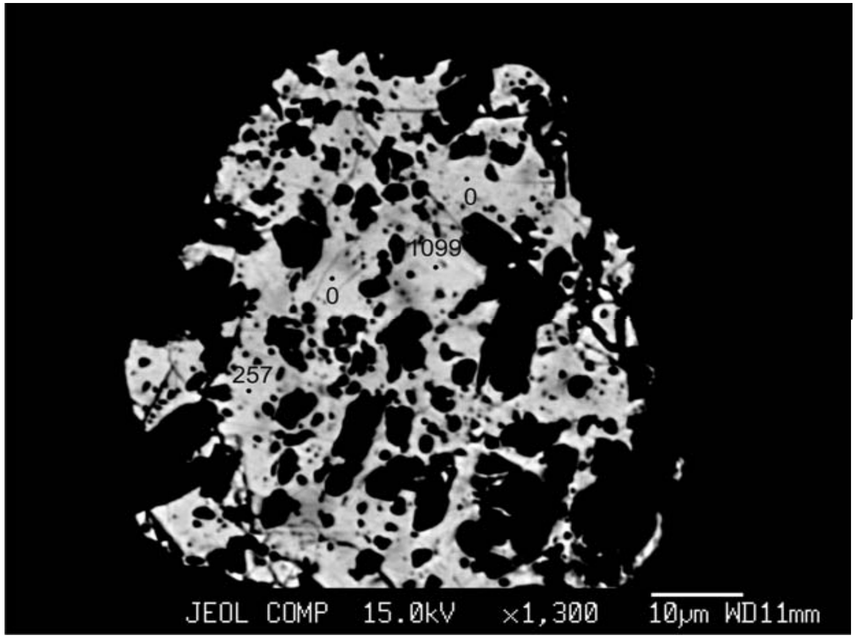
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Missisauga	4/20/2007	G-43-46	2	15799	45911	1908	748	748	321	7.21
N.Triumph	Missisauga	4/20/2007	G-43-46	2	4488	17123	0	0	0	0	*
N.Triumph	Missisauga	4/20/2007	G-43-46	2	17477	46300	1981	764	764	324	7.14
N.Triumph	Missisauga	4/20/2007	G-43-46	2	17205	39171	1943	652	652	321	7.52



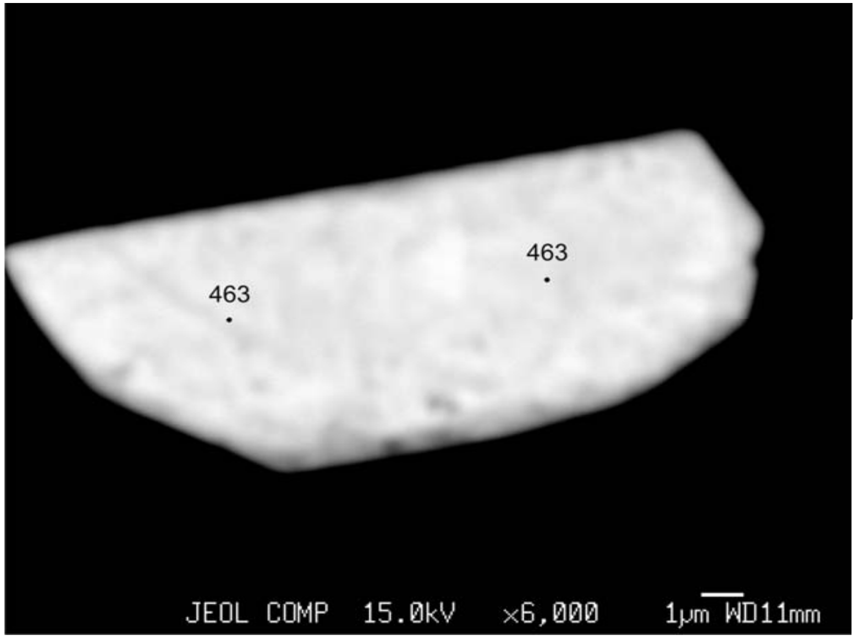
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Missisauga	4/20/2007	G-43-46	1	2171	6474	13	86	86	295	149
N.Triumph	Missisauga	4/20/2007	G-43-46	1	1206	1373	0	0	0	0	*
N.Triumph	Missisauga	4/20/2007	G-43-46	1	3182	1832	38	0	0	0	*



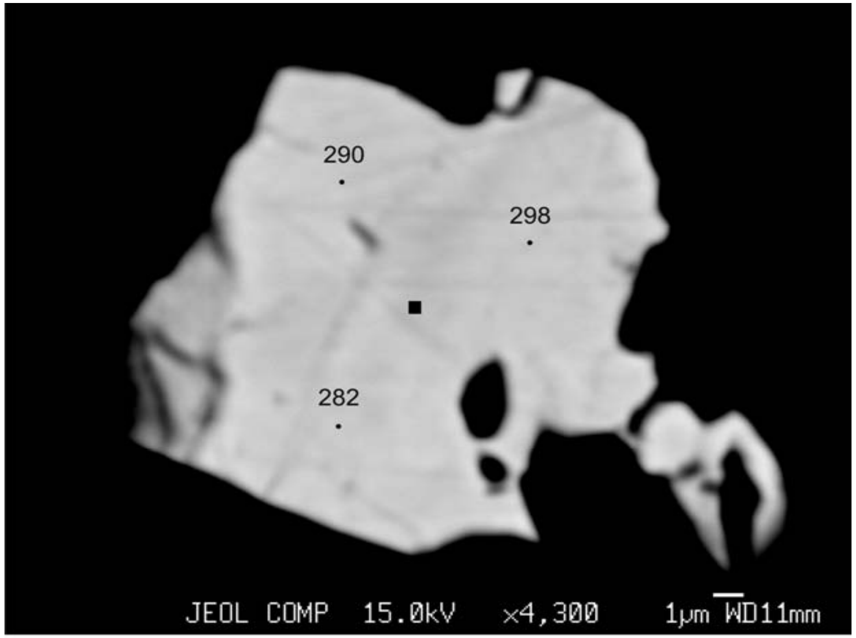
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Missisauga	4/20/2007	G-43-46	3	2092	0	122	21	21	1099	130
N.Triumph	Missisauga	4/20/2007	G-43-46	3	3167	0	0	0	0	0	*
N.Triumph	Missisauga	4/20/2007	G-43-46	3	3683	0	77	0	0	0	*
N.Triumph	Missisauga	4/20/2007	G-43-46	3	2888	411	117	9	9	257	120



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Missisauga	4/20/2007	G-43-46	4	12897	52282	3076	1293	1293	463	4.74
N.Triumph	Missisauga	4/20/2007	G-43-46	4	15738	56052	4421	1463	1463	463	3.98

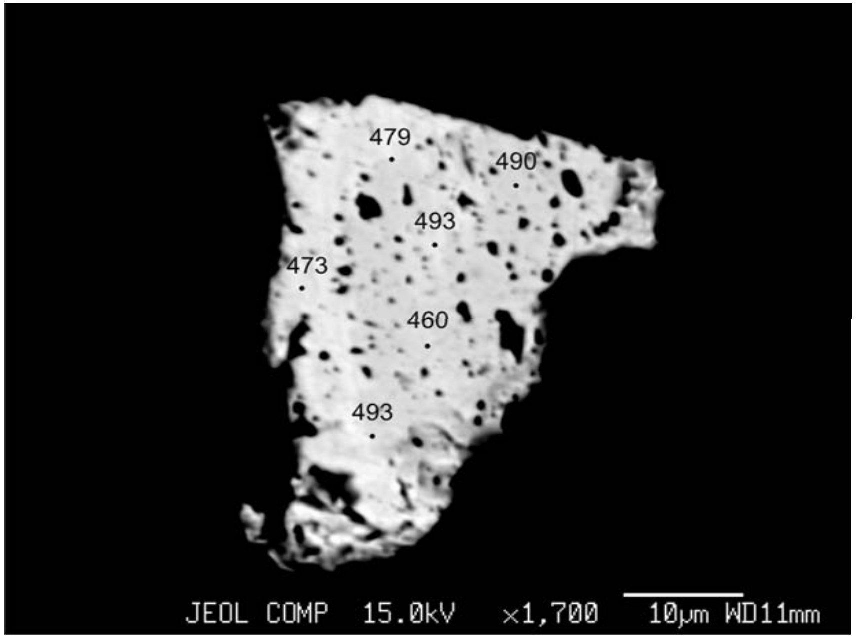


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Missisauga	4/20/2007	G-43-46	5	2000	11631	164	153	153	282	41.04
N.Triumph	Missisauga	4/20/2007	G-43-46	5	2621	13577	153	182	182	290	39.35
N.Triumph	Missisauga	4/20/2007	G-43-46	5	2249	10433	114	144	144	298	52.02

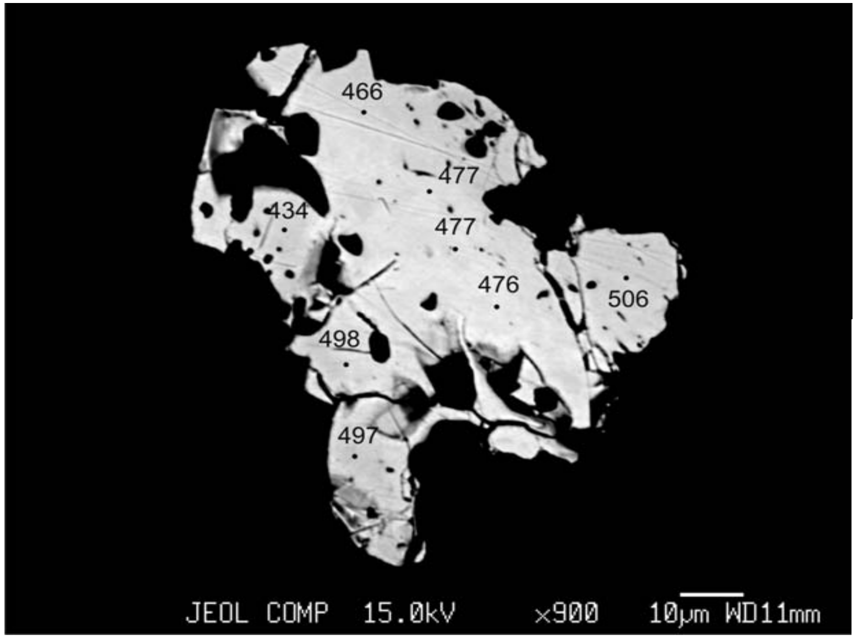


Rectangle denotes point of major elements analysis

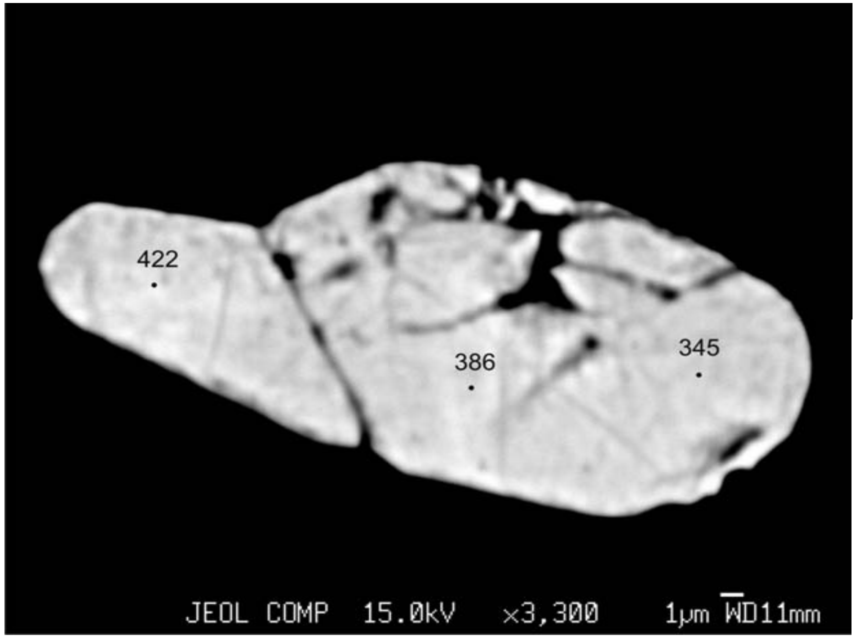
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Missisauga	4/20/2007	G-43-46	6	3745	20075	257	463	463	493	24.22
N.Triumph	Missisauga	4/20/2007	G-43-46	6	2902	28527	284	633	633	479	20.88
N.Triumph	Missisauga	4/20/2007	G-43-46	6	4001	11575	93	245	245	460	51.99
N.Triumph	Missisauga	4/20/2007	G-43-46	6	3268	43375	461	994	994	493	14.77
N.Triumph	Missisauga	4/20/2007	G-43-46	6	5288	2500	209	70	70	490	49.12
N.Triumph	Missisauga	4/20/2007	G-43-46	6	1582	42468	520	938	938	473	13.79



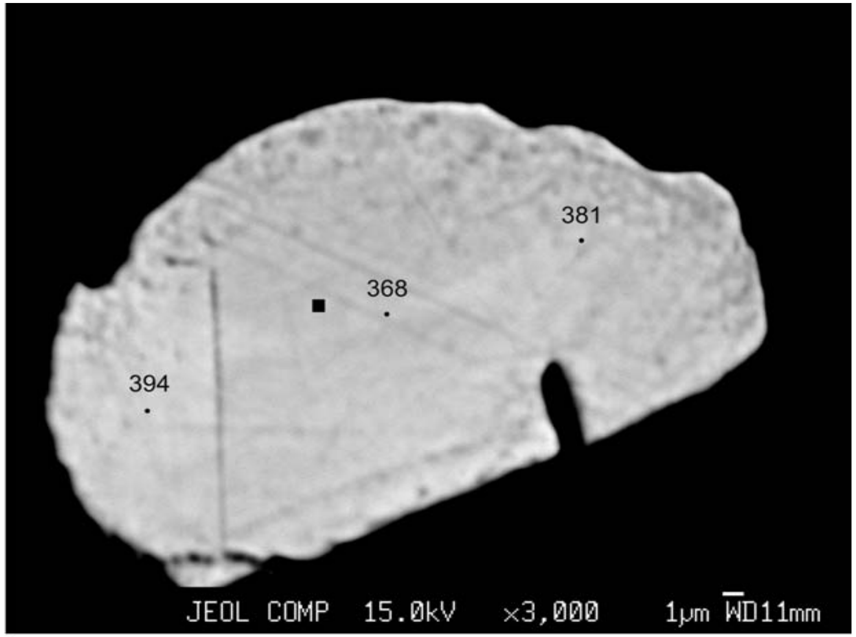
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Missisauga	4/20/2007	G-43-46	7	3179	37688	710	836	836	466	11.59
N.Triumph	Missisauga	4/20/2007	G-43-46	7	3947	64172	1060	1447	1447	477	9.13
N.Triumph	Missisauga	4/20/2007	G-43-46	7	4476	69257	1239	1569	1569	477	8.38
N.Triumph	Missisauga	4/20/2007	G-43-46	7	4031	70062	1311	1589	1589	476	8.11
N.Triumph	Missisauga	4/20/2007	G-43-46	7	3530	27976	613	682	682	506	13.09
N.Triumph	Missisauga	4/20/2007	G-43-46	7	4798	56315	937	1327	1327	498	9.66
N.Triumph	Missisauga	4/20/2007	G-43-46	7	5023	36723	745	873	873	497	11.18
N.Triumph	Missisauga	4/20/2007	G-43-46	7	3930	29440	507	605	605	434	14.87



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	**1σ error (%)**
N.Triumph	Missisauga	5/22/2007	G-43-34	1	10268	42220	4464	980	980	386	4.59
N.Triumph	Missisauga	5/22/2007	G-43-34	1	10017	64050	3905	1451	1451	422	4.21
N.Triumph	Missisauga	5/22/2007	G-43-34	1	12009	44793	10817	1231	1231	345	3.47

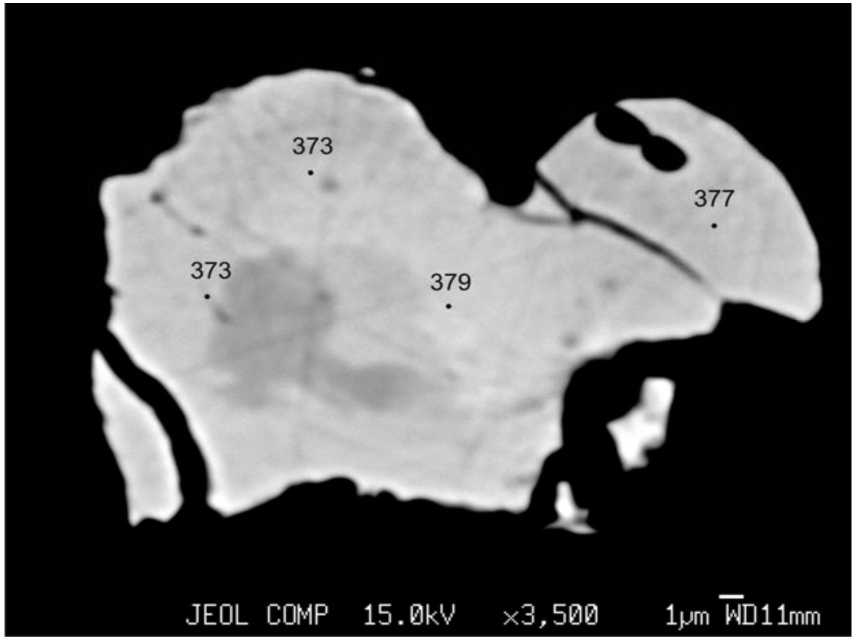


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Missisauga	5/22/2007	G-43-34	2	3278	31752	3583	714	714	368	5.61
N.Triumph	Missisauga	5/22/2007	G-43-34	2	5021	51373	6652	1288	1288	394	3.48
N.Triumph	Missisauga	5/22/2007	G-43-34	2	2825	40746	3726	900	900	381	4.86

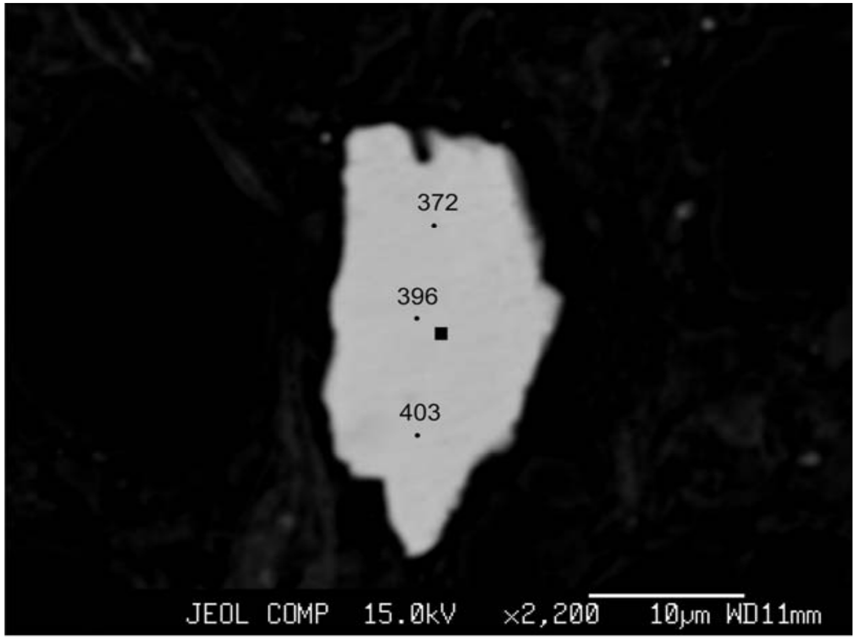


Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
N.Triumph	Missisauga	5/22/2007	G-43-36	1	19003	41452	2288	830	830	379	6.65
N.Triumph	Missisauga	5/22/2007	G-43-36	1	12890	32537	4748	809	809	377	5.14
N.Triumph	Missisauga	5/22/2007	G-43-36	1	16135	32898	13227	1262	1262	373	3.51
N.Triumph	Missisauga	5/22/2007	G-43-36	1	14301	34051	6370	912	912	373	4.64

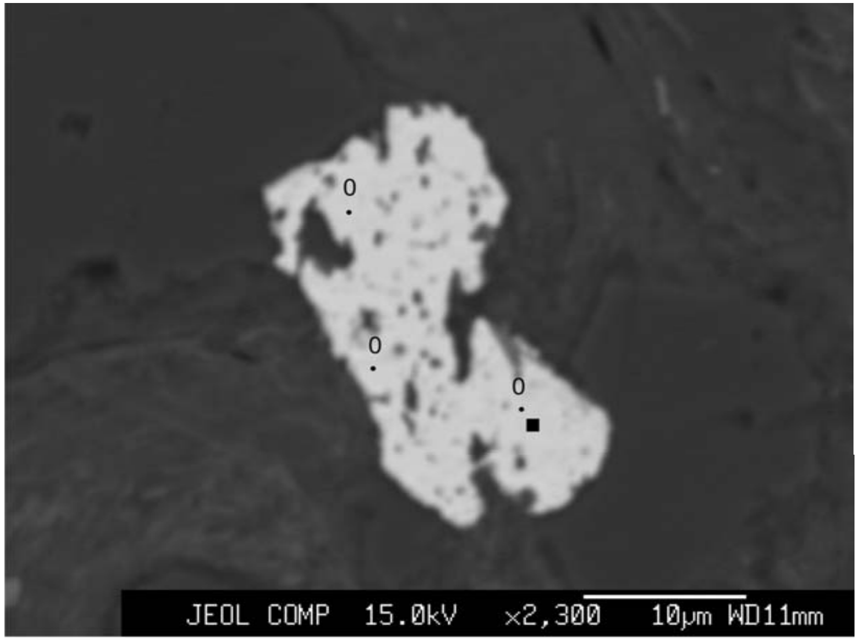


Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	2	6597	79637	1462	1522	1522	403	8.12
G43	4402.34	5/11/2007	G43-57	2	8056	77790	1392	1459	1459	396	7.69
G43	4402.34	5/11/2007	G43-57	2	7847	88583	1823	1572	1572	372	7.39



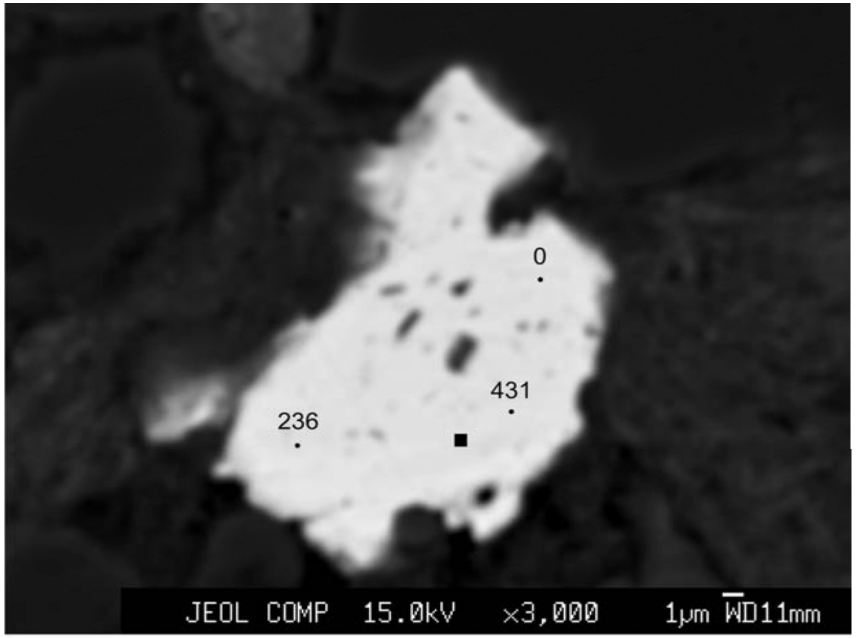
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	3	2588	557	162	0	0	0	*
G43	4402.34	5/11/2007	G43-57	3	1834	660	0	0	0	0	*
G43	4402.34	5/11/2007	G43-57	3	0	1437	0	0	0	0	*



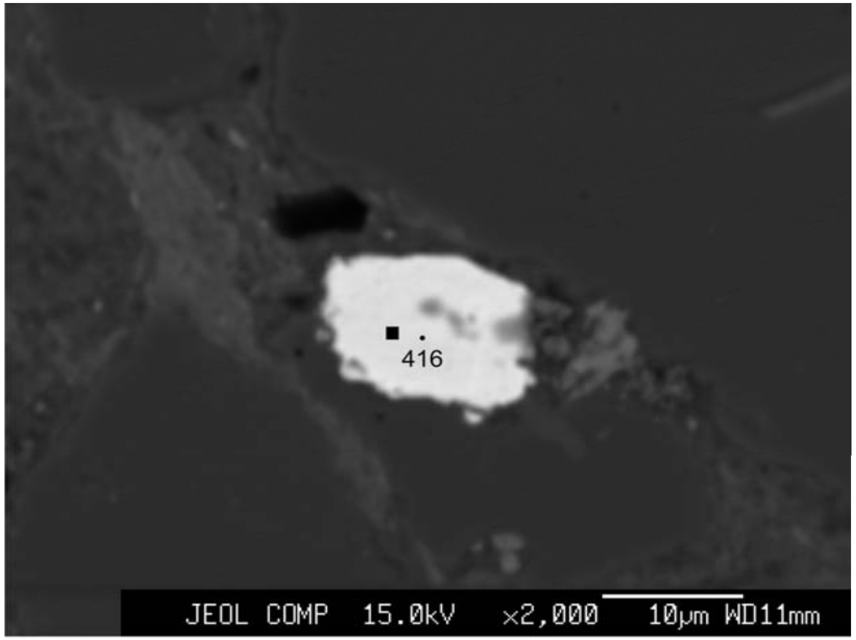
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	4	2605	18118	318	370	370	431	22.17
G43	4402.34	5/11/2007	G43-57	4	922	11280	0	119	119	236	1917
G43	4402.34	5/11/2007	G43-57	4	506	3071	168	0	0	0	*



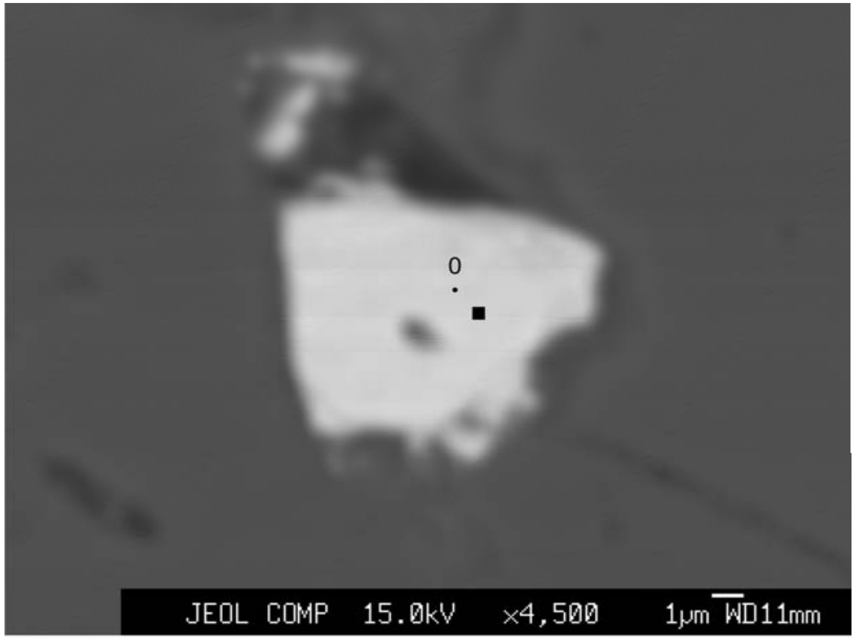
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	5	1385	10983	0	205	205	416	67.69



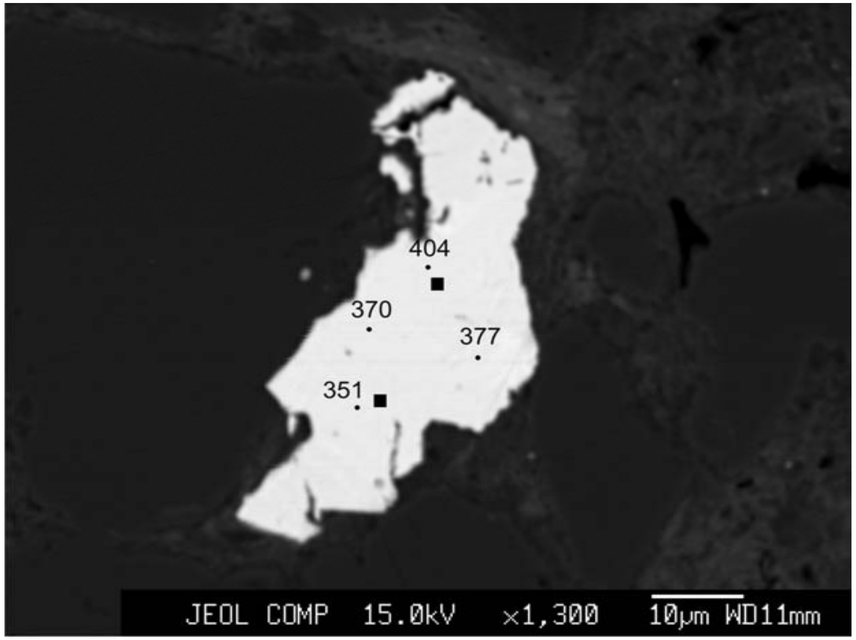
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	6	7371	18515	0	0	0	0	*



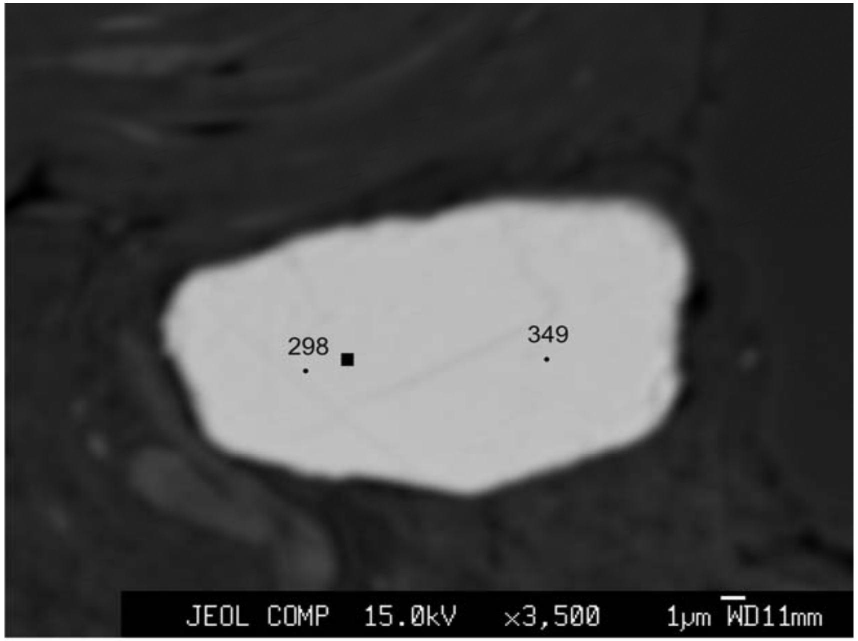
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	7	10522	35396	1246	713	713	404	8.71
G43	4402.34	5/11/2007	G43-57	7	8337	33746	943	610	610	370	10.44
G43	4402.34	5/11/2007	G43-57	7	9863	32245	1193	609	609	377	9.3
G43	4402.34	5/11/2007	G43-57	7	1600	19787	126	317	317	351	34.92



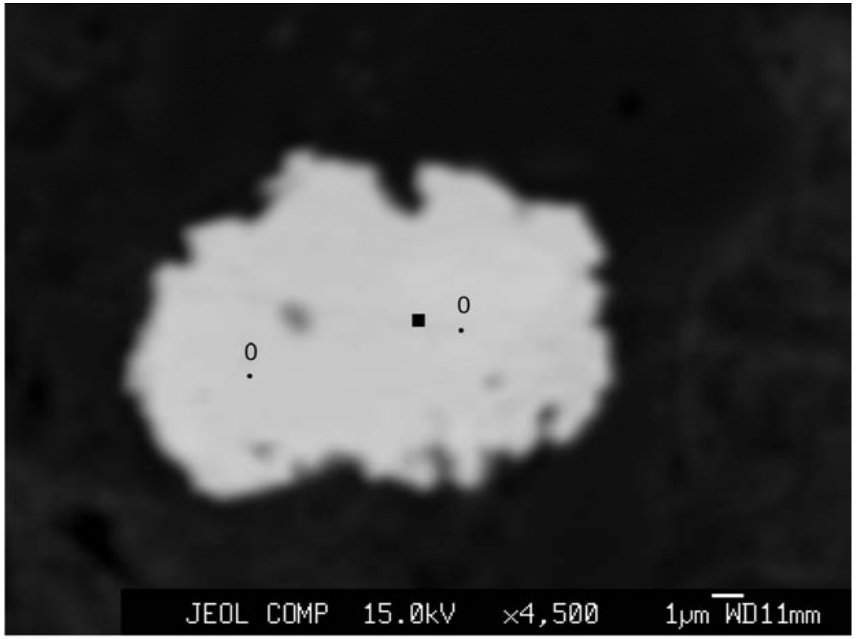
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	8	15027	31487	2824	541	541	298	7.7
G43	4402.34	5/11/2007	G43-57	8	20790	34264	3245	699	699	349	6.96



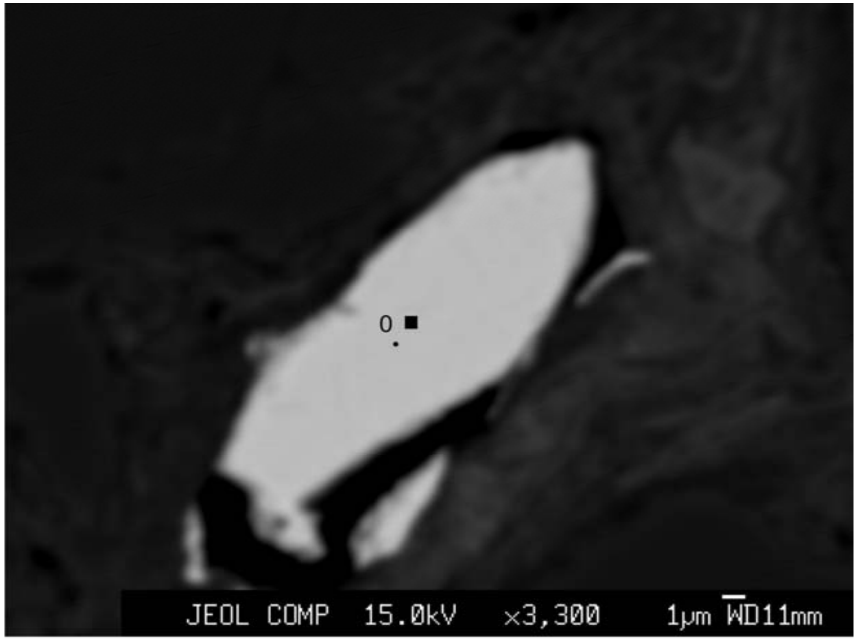
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	9	0	4383	1308	0	0	0	*
G43	4402.34	5/11/2007	G43-57	9	0	8710	35	0	0	0	*



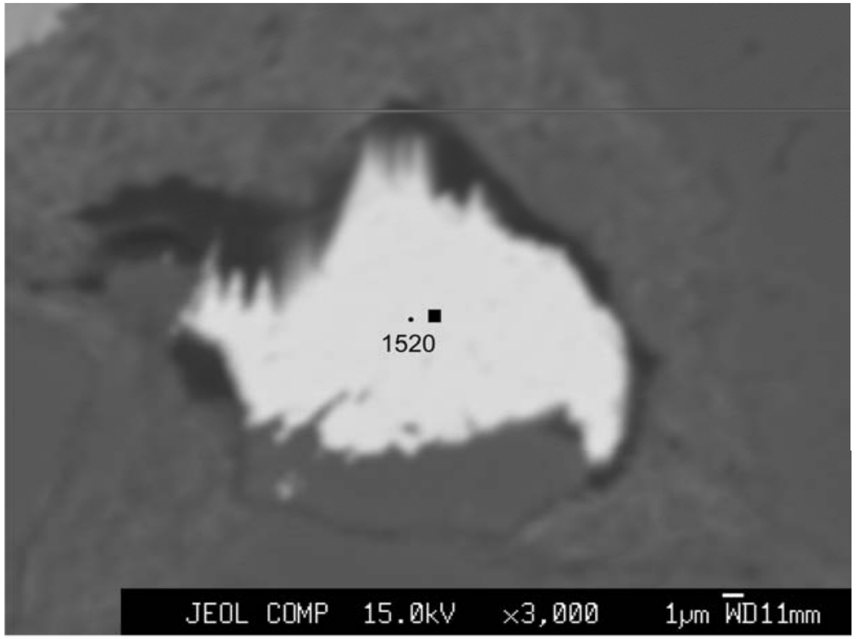
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	10	0	6400	1161	0	0	0	*



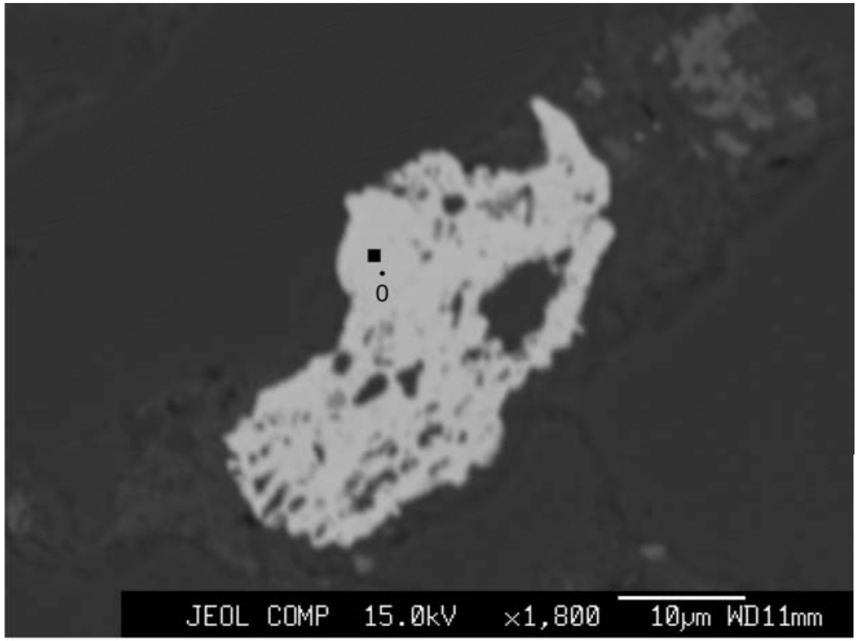
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	11	20791	32987	7700	4237	4237	1520	1.98



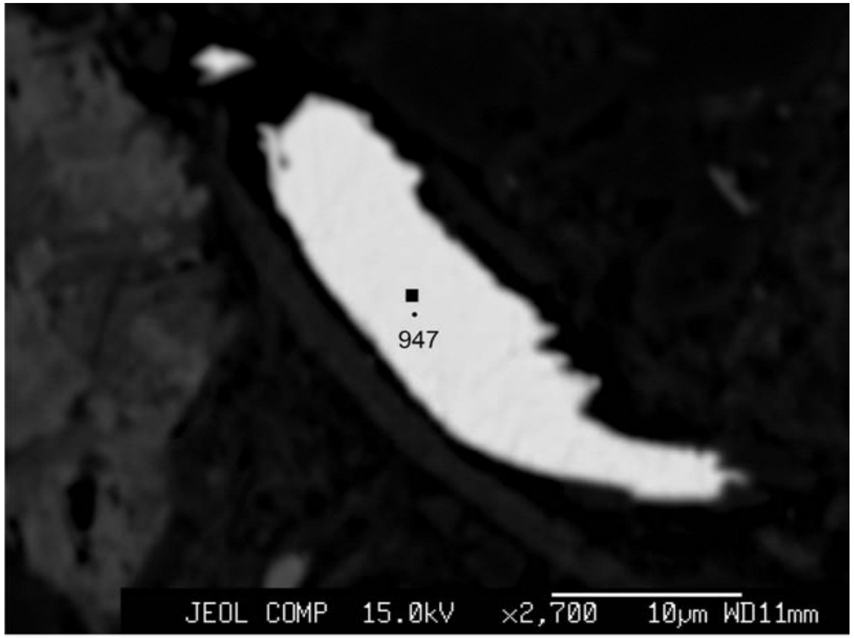
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	12	3174	2371	147	0	0	0	*



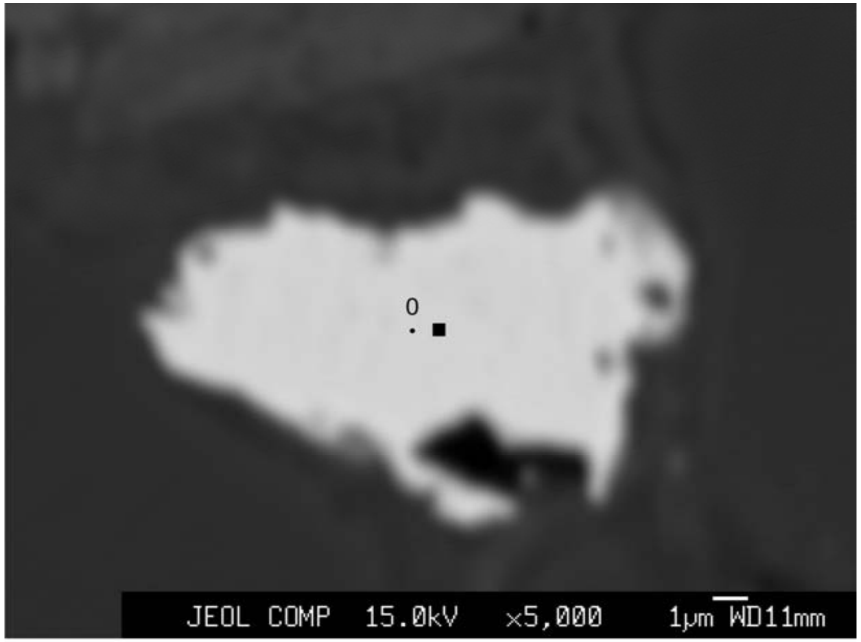
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	13	13143	59219	5259	3313	3313	947	2.82



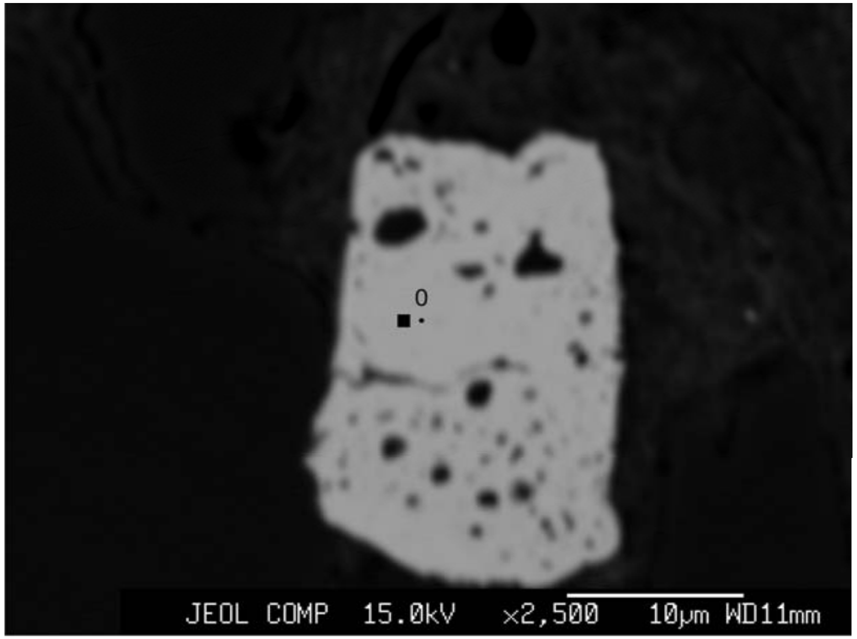
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	14	0	12276	2402	0	0	0	*



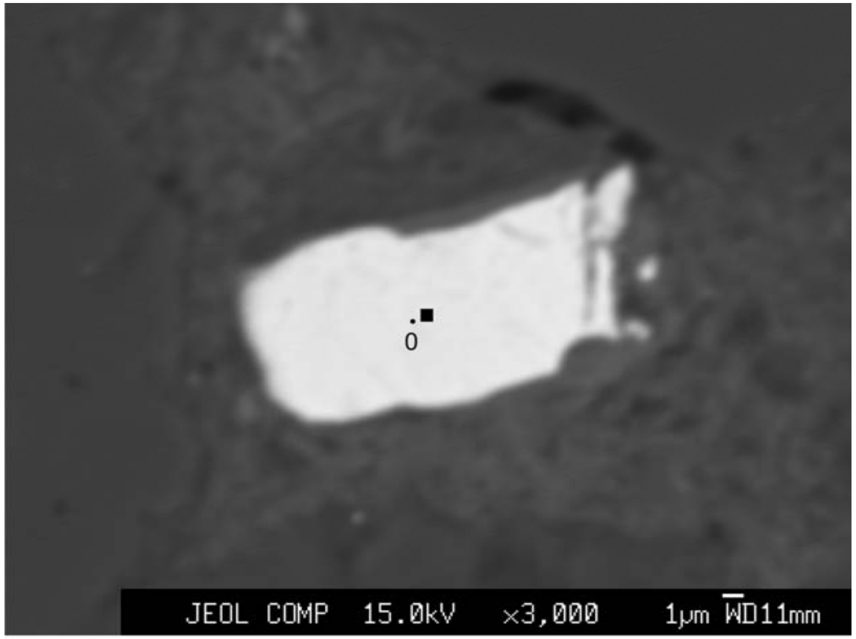
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	15	0	1686	0	0	0	0	*



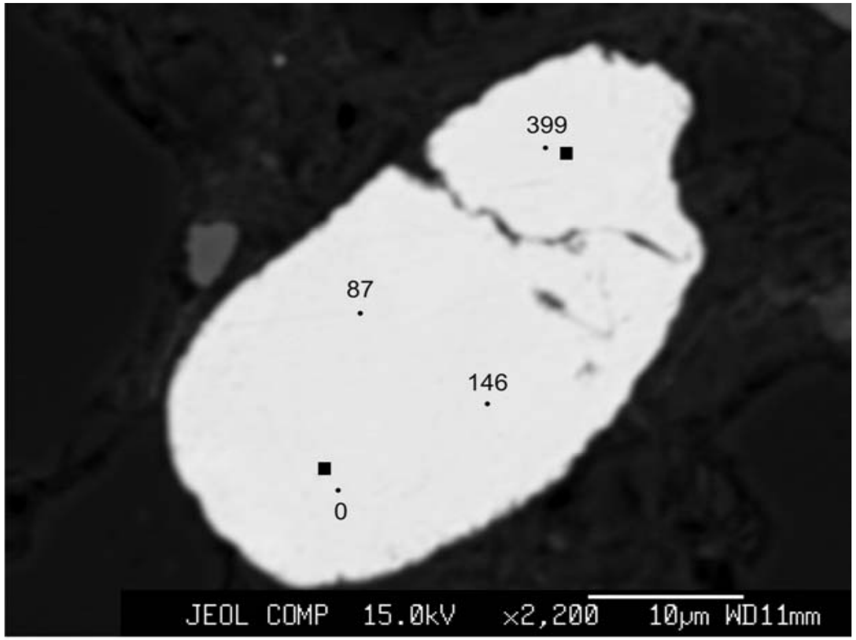
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	16	0	0	2938	0	0	0	*



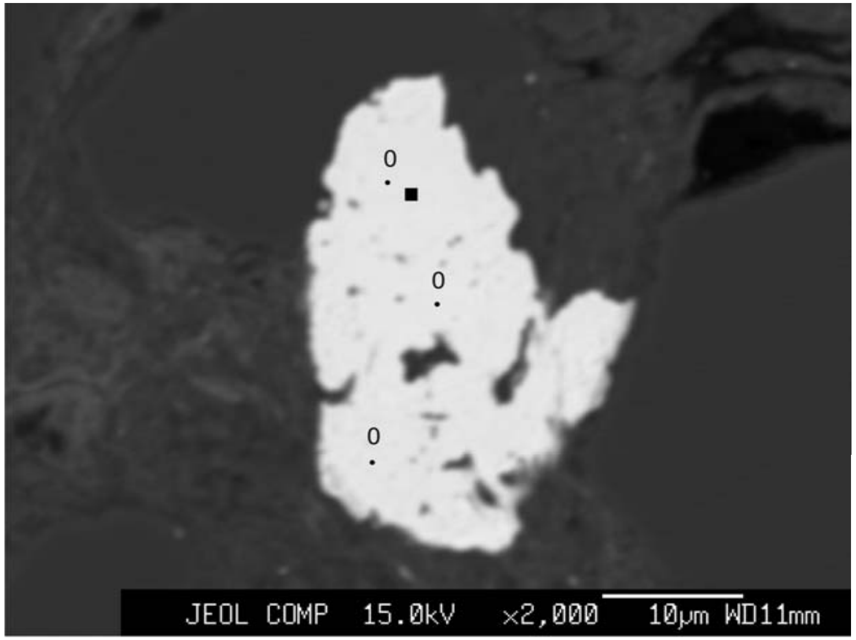
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	17	6263	11367	81	208	208	399	55.14
G43	4402.34	5/11/2007	G43-57	17	5515	3386	0	0	0	0	*
G43	4402.34	5/11/2007	G43-57	17	4739	5410	0	21	21	87	945
G43	4402.34	5/11/2007	G43-57	17	6172	5069	0	33	33	146	140



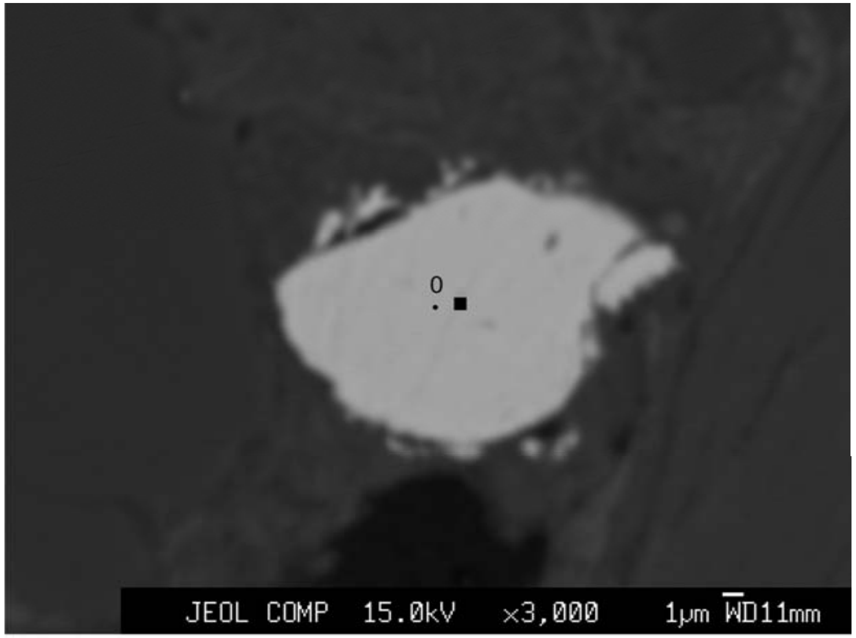
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	18	3009	1682	23	0	0	0	*
G43	4402.34	5/11/2007	G43-57	18	1472	6467	884	0	0	0	*
G43	4402.34	5/11/2007	G43-57	18	0	21	2885	0	0	0	*



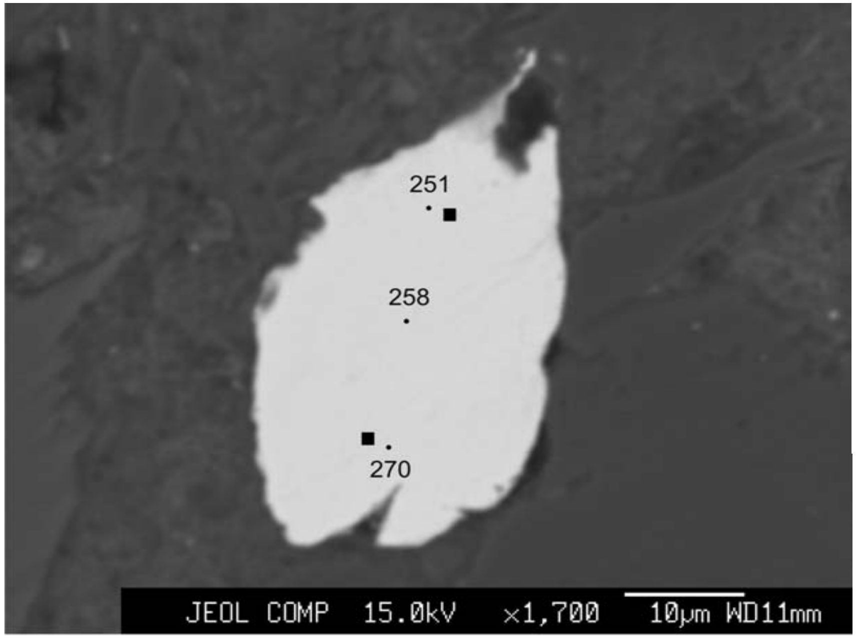
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	19	0	986	369	0	0	0	*



Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
G43	4402.34	5/11/2007	G43-57	20	20261	42413	4771	647	647	251	5.73
G43	4402.34	5/11/2007	G43-57	20	17718	42417	5186	713	713	270	6.24
G43	4402.34	5/11/2007	G43-57	20	18051	42761	5319	690	690	258	6.41

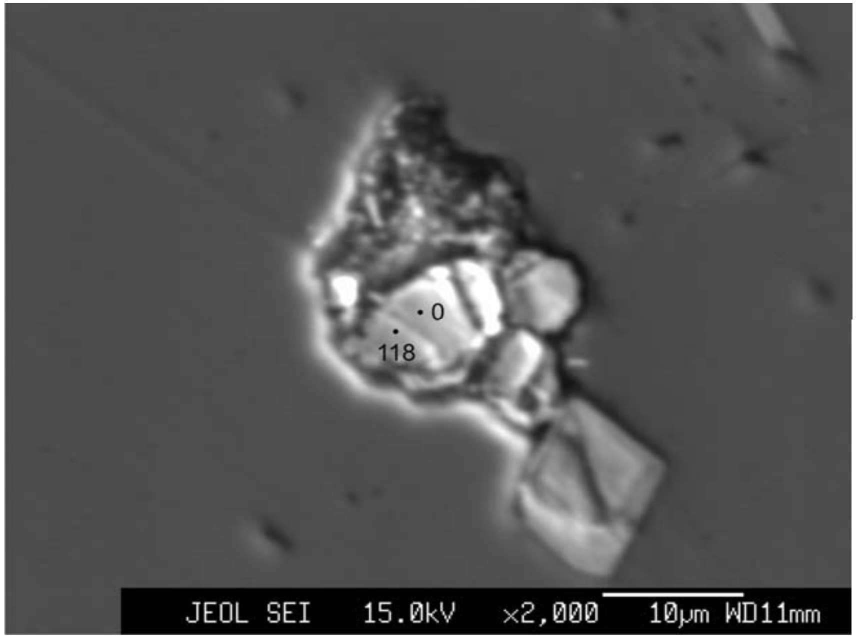


Rectangles denote points of major elements analyses

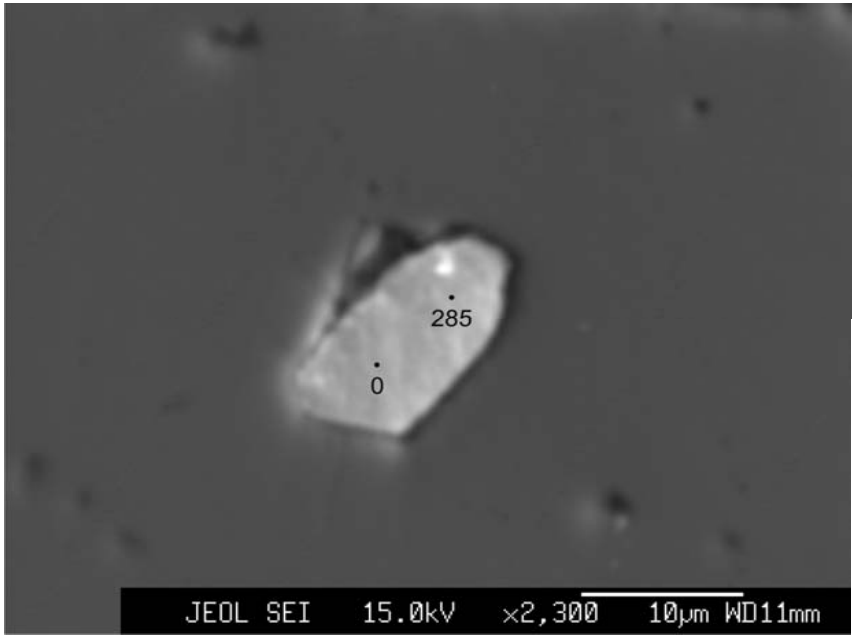
Venture Field

(Venture 1, 3 and 4)

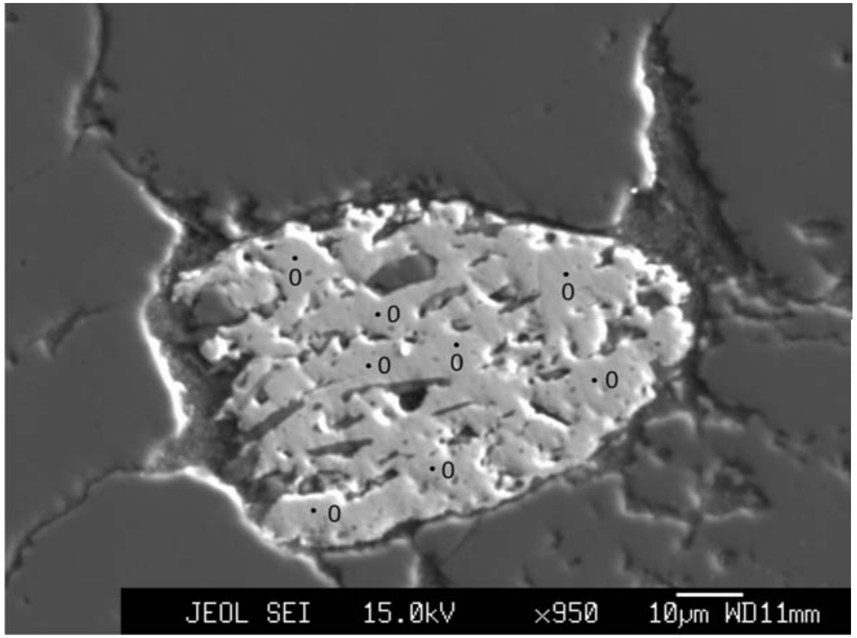
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-1-SP35	1	15137	55491	1961	324	324	118	11.46
Venture	Missisauga	10/17/2006	V-1-SP35	1	6657	35556	0	0	0	0	*



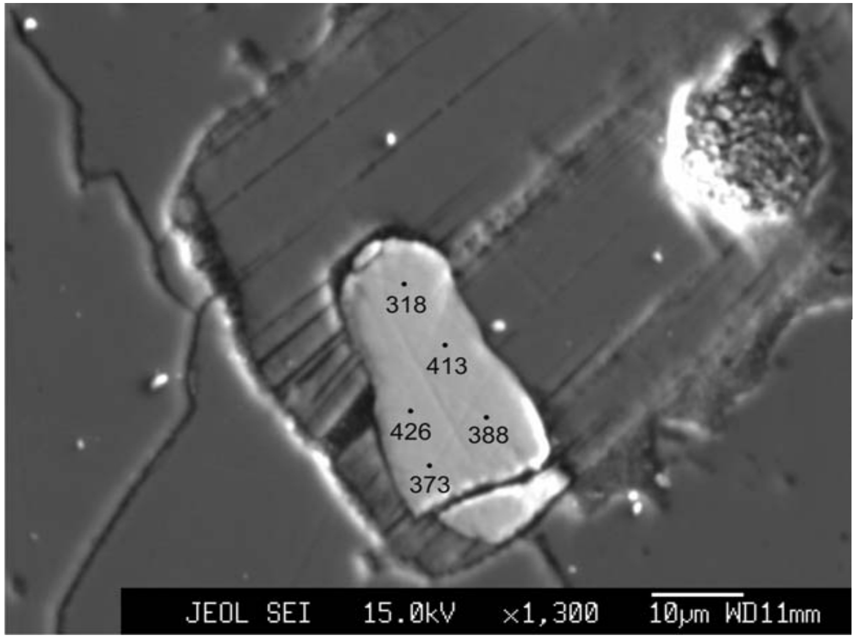
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-1-SP35	2	6271	83177	2176	1147	1147	285	7.69
Venture	Missisauga	10/17/2006	V-1-SP35	2	2575	30104	0	0	0	0	*



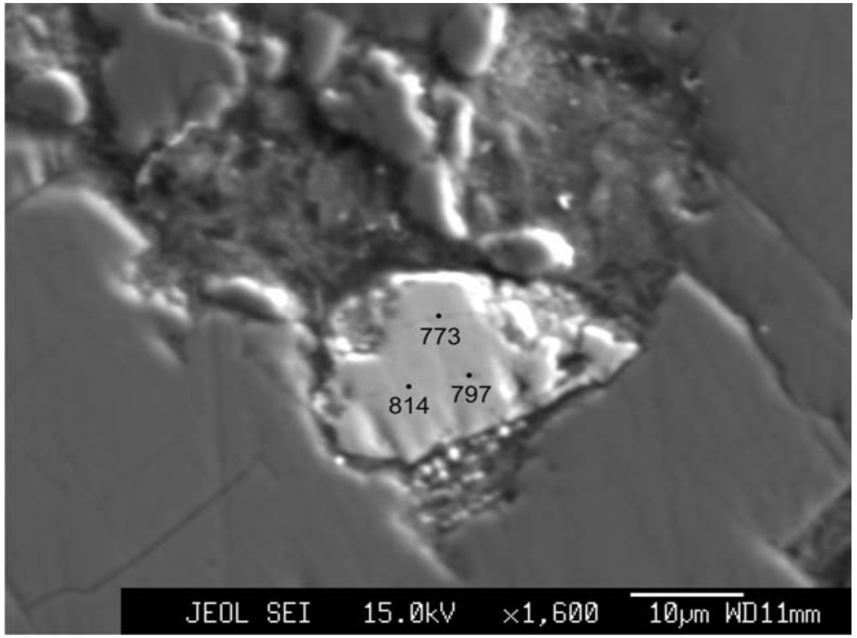
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-1-SP35	3	4120	1900	0	0	0	0	*
Venture	Missisauga	10/17/2006	V-1-SP35	3	1193	6385	0	0	0	0	*
Venture	Missisauga	10/17/2006	V-1-SP35	3	0	3697	0	0	0	0	*
Venture	Missisauga	10/17/2006	V-1-SP35	3	98	4357	0	0	0	0	*
Venture	Missisauga	10/17/2006	V-1-SP35	3	0	18824	0	0	0	0	*
Venture	Missisauga	10/17/2006	V-1-SP35	3	0	0	0	0	0	0	*
Venture	Missisauga	10/17/2006	V-1-SP35	3	2902	3881	0	0	0	0	*
Venture	Missisauga	10/17/2006	V-1-SP35	3	0	3080	0	0	0	0	*



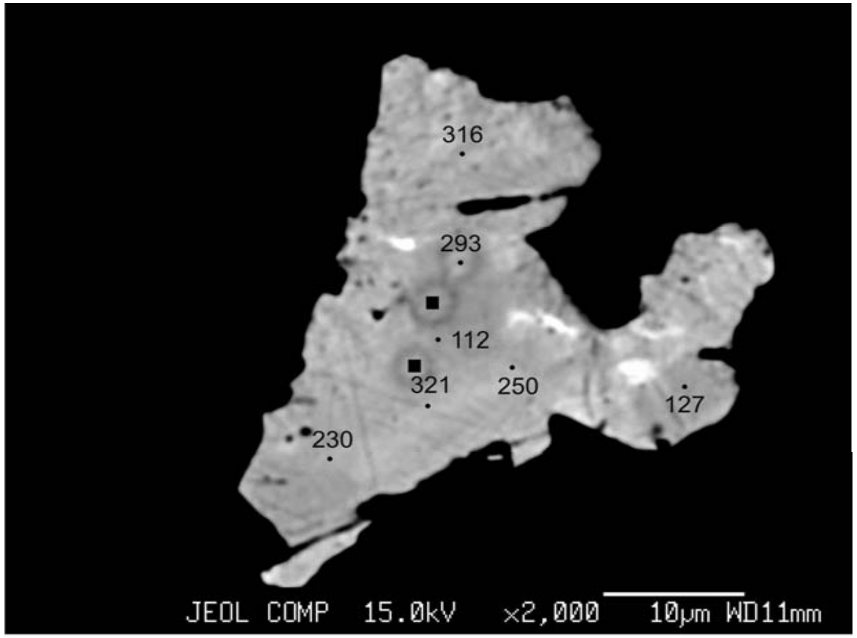
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-1-SP35	4	24542	65922	1338	997	997	318	10.05
Venture	Missisauga	10/17/2006	V-1-SP35	4	24945	64240	1044	1252	1252	413	11.08
Venture	Missisauga	10/17/2006	V-1-SP35	4	22981	75439	1375	1388	1388	388	9.73
Venture	Missisauga	10/17/2006	V-1-SP35	4	21983	67914	1250	1201	1201	373	10.11
Venture	Missisauga	10/17/2006	V-1-SP35	4	11153	42588	1354	897	897	426	8.87



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-1-SP35	5	22869	44925	1949	1798	1798	773	6.59
Venture	Missisauga	10/17/2006	V-1-SP35	5	25786	50069	2189	2119	2119	816	6.15
Venture	Missisauga	10/17/2006	V-1-SP35	5	25637	50450	2216	2087	2087	797	6.12

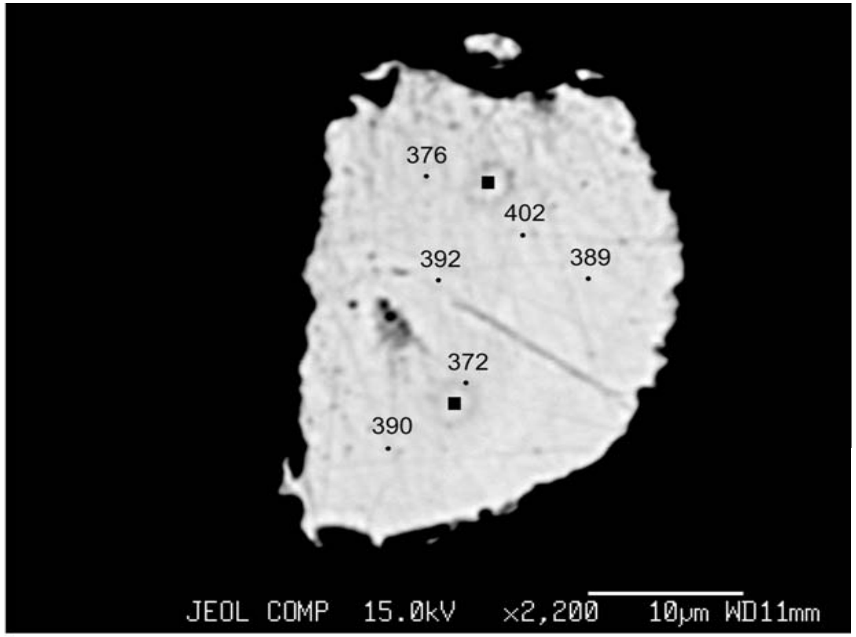


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	1/29/2007	V-1-SP28	1	3853	24849	540	375	375	316	18.14
Venture	Missisauga	1/29/2007	V-1-SP28	1	578	23712	74	314	314	293	43.37
Venture	Missisauga	1/29/2007	V-1-SP28	1	348	11000	0	55	55	112	185
Venture	Missisauga	1/29/2007	V-1-SP28	1	980	31648	122	460	460	321	32.9
Venture	Missisauga	1/29/2007	V-1-SP28	1	1562	18448	155	194	194	230	39.33
Venture	Missisauga	1/29/2007	V-1-SP28	1	394	16430	0	183	183	250	1015
Venture	Missisauga	1/29/2007	V-1-SP28	1	735	10077	0	57	57	127	80.65



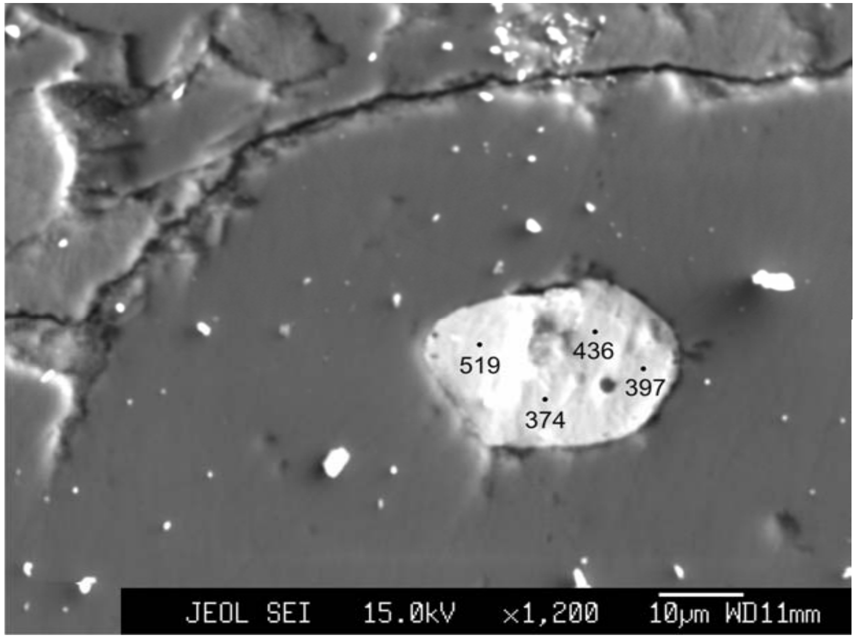
Rectangles denote points of major elements analyses

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	1/29/2007	V-1-SP28	2	14353	27432	5441	759	759	376	5.44
Venture	Missisauga	1/29/2007	V-1-SP28	2	18994	37750	8243	1162	1162	402	4.16
Venture	Missisauga	1/29/2007	V-1-SP28	2	17215	38373	7452	1090	1090	389	4.3
Venture	Missisauga	1/29/2007	V-1-SP28	2	13993	28248	5557	770	770	372	5.35
Venture	Missisauga	1/29/2007	V-1-SP28	2	14380	28848	5932	839	839	390	5.03
Venture	Missisauga	1/29/2007	V-1-SP28	2	15400	34338	6576	976	976	392	4.57

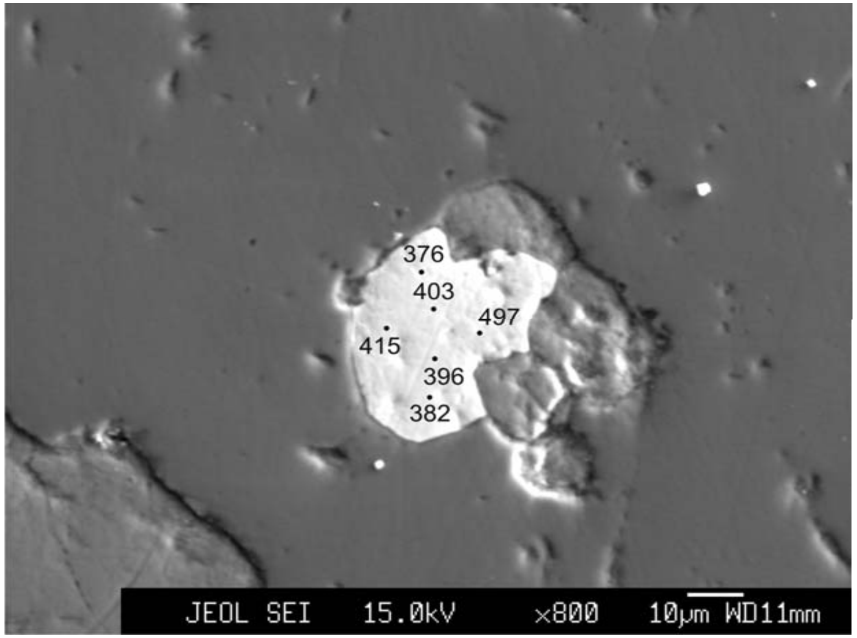


Rectangles denote points of major elements analyses

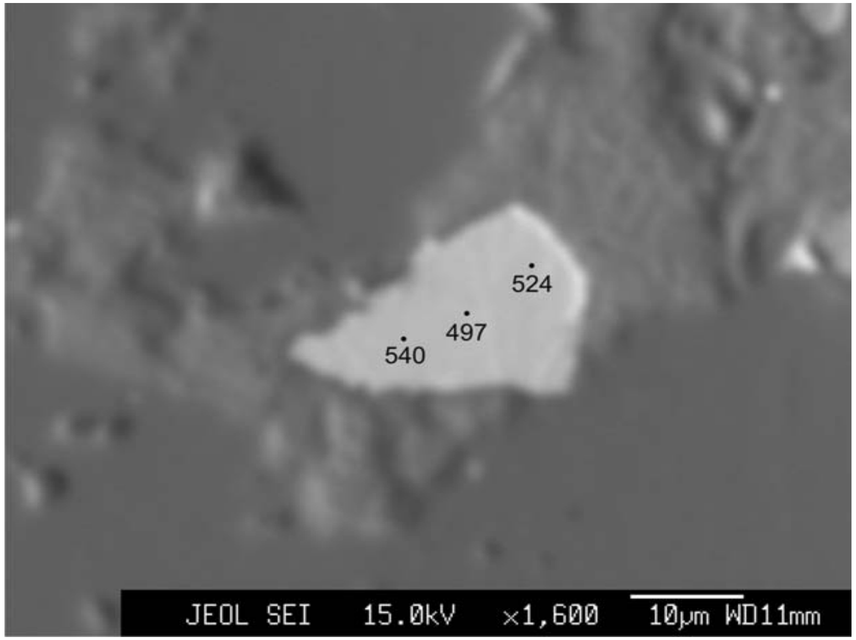
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-3-SP5	1	15851	50858	1997	1339	1339	519	6.82
Venture	Missisauga	10/17/2006	V-3-SP5	1	16878	47236	1789	888	888	374	7.91
Venture	Missisauga	10/17/2006	V-3-SP5	1	18471	54183	2284	1203	1203	436	6.64
Venture	Missisauga	10/17/2006	V-3-SP5	1	14760	48313	1818	964	964	397	7.61



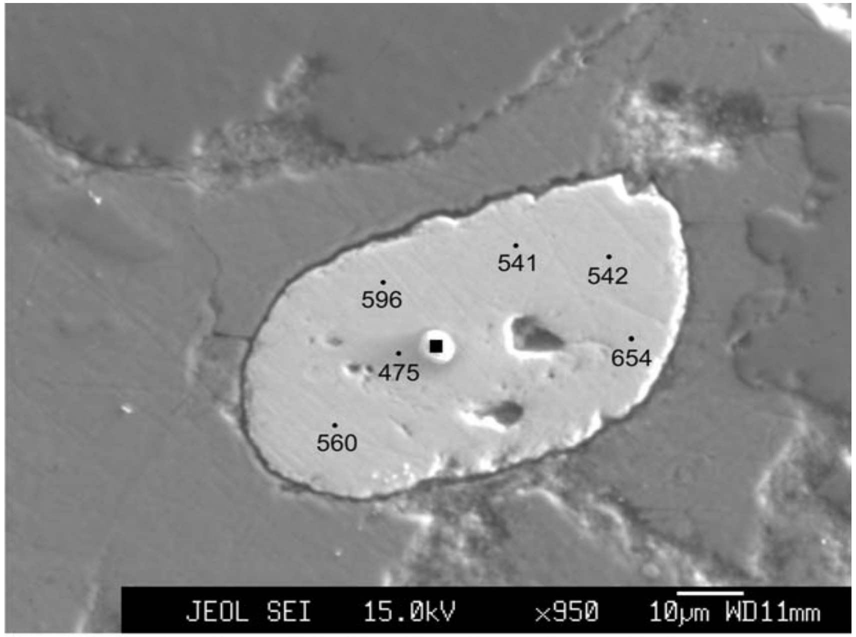
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-3-SP5	2	2838	38611	617	683	683	376	14.36
Venture	Missisauga	10/17/2006	V-3-SP5	2	2224	34805	379	650	650	403	18.83
Venture	Missisauga	10/17/2006	V-3-SP5	2	2367	35808	428	659	659	396	17.58
Venture	Missisauga	10/17/2006	V-3-SP5	2	4344	31997	344	567	567	382	20.19
Venture	Missisauga	10/17/2006	V-3-SP5	2	3504	37532	542	730	730	415	15.38
Venture	Missisauga	10/17/2006	V-3-SP5	2	10674	57185	1168	1361	1361	497	9.72



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	9/26/2006	V-3-SP8	1	8005	25425	8286	1236	1236	524	3.26
Venture	Missisauga	9/26/2006	V-3-SP8	1	9165	21400	7016	988	988	497	3.97
Venture	Missisauga	9/26/2006	V-3-SP8	1	9828	25211	3768	911	911	540	4.75

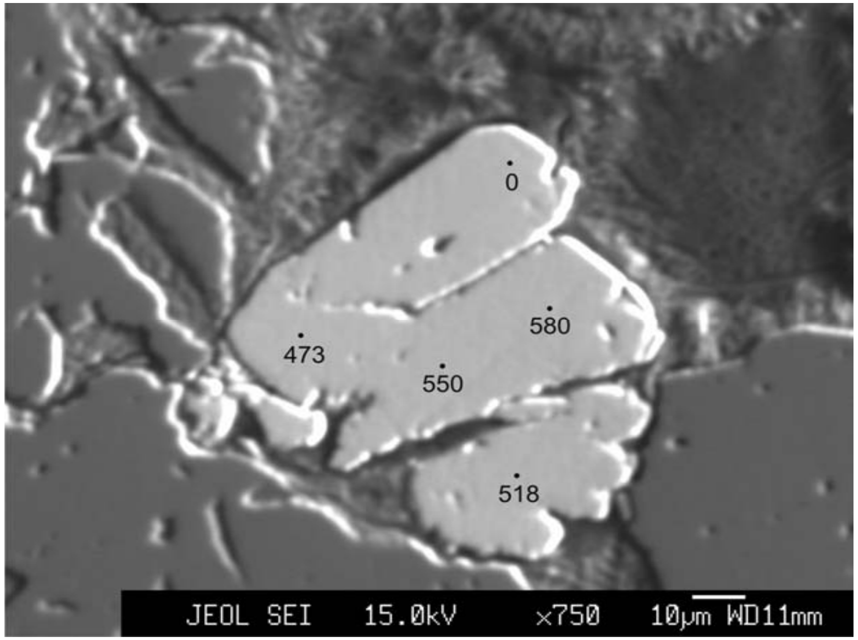


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	9/26/2006	V-3-SP8	3	1121	17185	4658	690	690	475	5.41
Venture	Missisauga	9/26/2006	V-3-SP8	3	11632	19808	6219	1013	1013	560	4.06
Venture	Missisauga	9/26/2006	V-3-SP8	3	1099	15504	5271	798	798	542	4.69
Venture	Missisauga	9/26/2006	V-3-SP8	3	1219	18204	5528	971	971	596	4.02
Venture	Missisauga	9/26/2006	V-3-SP8	3	1377	18999	5615	910	910	541	4.2
Venture	Missisauga	9/26/2006	V-3-SP8	3	11719	19445	3641	928	928	654	4.76

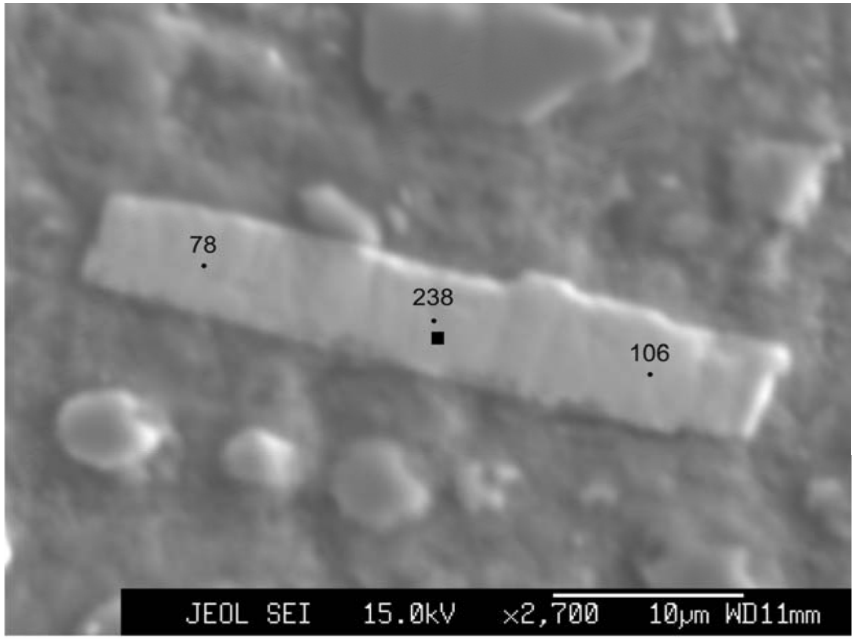


Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	9/26/2006	V-3-SP38	1	4516	31490	587	872	872	580	12.85
Venture	Missisauga	9/26/2006	V-3-SP38	1	5719	27654	593	732	732	550	13.11
Venture	Missisauga	9/26/2006	V-3-SP38	1	3826	0	0	0	0	0	*
Venture	Missisauga	9/26/2006	V-3-SP38	1	263	19565	221	431	431	473	26.26
Venture	Missisauga	9/26/2006	V-3-SP38	1	1488	20826	219	501	501	418	25.81

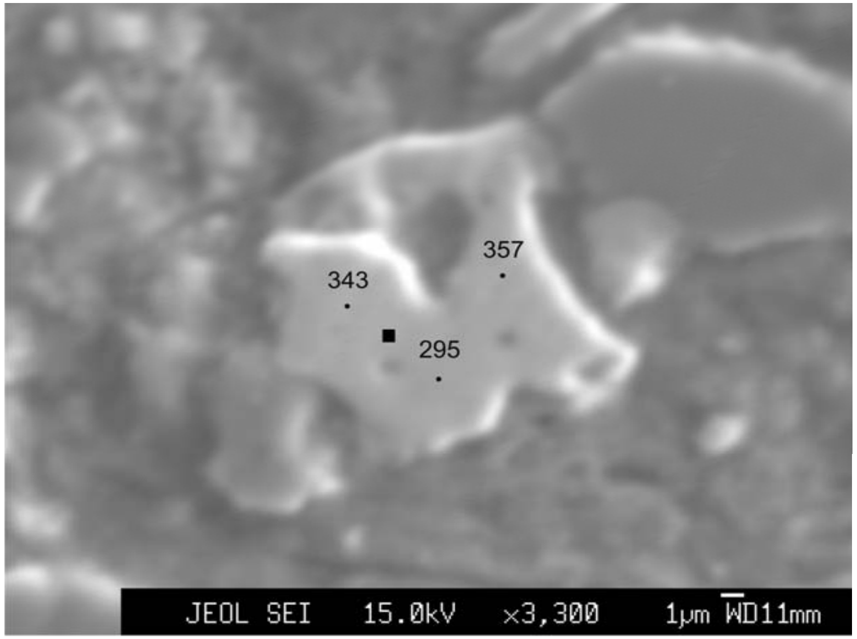


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	6/13/2007	V3-SP-54	7	0	5952	55	65	65	238	102
Venture	Missisauga	6/13/2007	V3-SP-54	7	0	6667	87	24	24	78	132
Venture	Missisauga	6/13/2007	V3-SP-54	7	0	5002	96	25	25	106	132



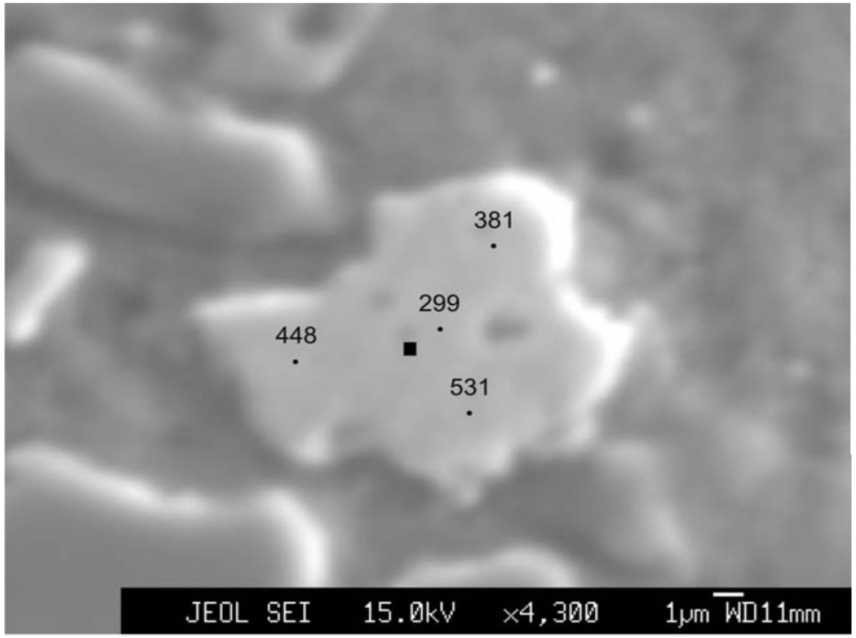
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	6/13/2007	V3-SP-54	11	9835	18695	3427	457	457	343	7.63
Venture	Missisauga	6/13/2007	V3-SP-54	11	7482	20209	3143	400	400	295	8.37
Venture	Missisauga	6/13/2007	V3-SP-54	11	7515	45457	4915	979	979	357	4.38



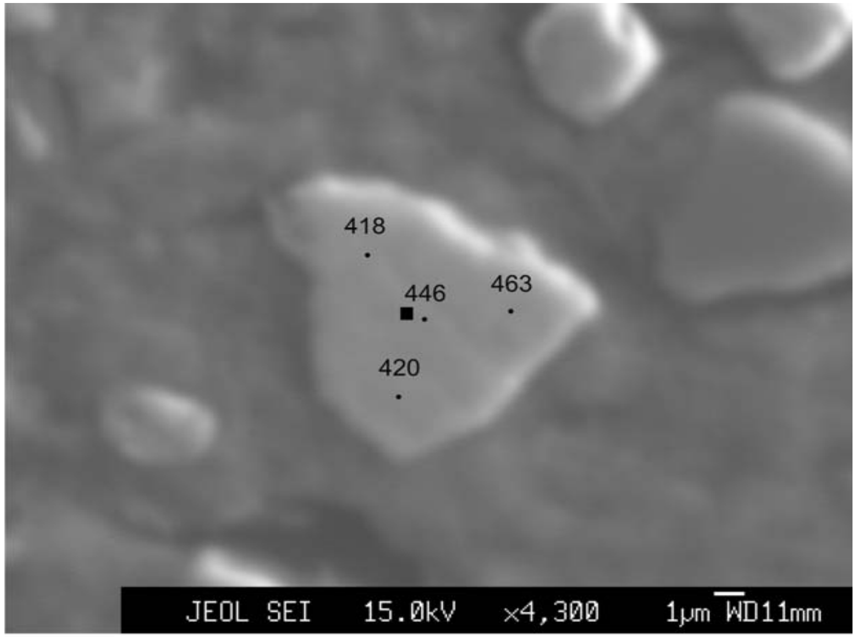
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	6/13/2007	V3-SP-54	16	3342	4765	819	99	99	299	27.73
Venture	Missisauga	6/13/2007	V3-SP-54	16	1369	20103	526	438	438	448	15.54
Venture	Missisauga	6/13/2007	V3-SP-54	16	3638	8792	809	273	273	531	14.97
Venture	Missisauga	6/13/2007	V3-SP-54	16	5484	704	1087	72	72	381	31.73



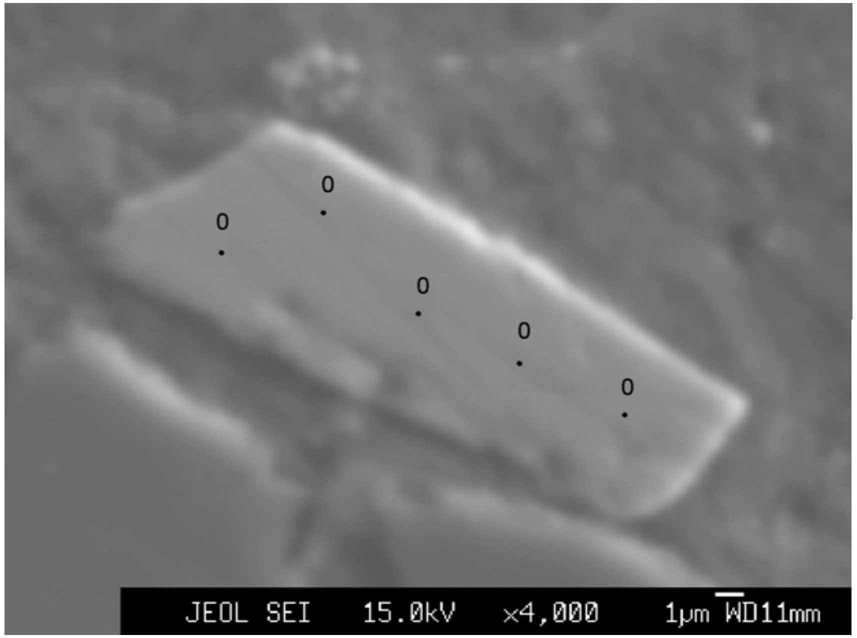
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	6/13/2007	V3-SP-54	19	11354	6857	3144	342	342	446	9.5
Venture	Missisauga	6/13/2007	V3-SP-54	19	12703	6959	3326	332	332	418	9.75
Venture	Missisauga	6/13/2007	V3-SP-54	19	10988	6806	3077	316	316	420	10.03
Venture	Missisauga	6/13/2007	V3-SP-54	19	13157	10675	3185	437	437	463	8.12

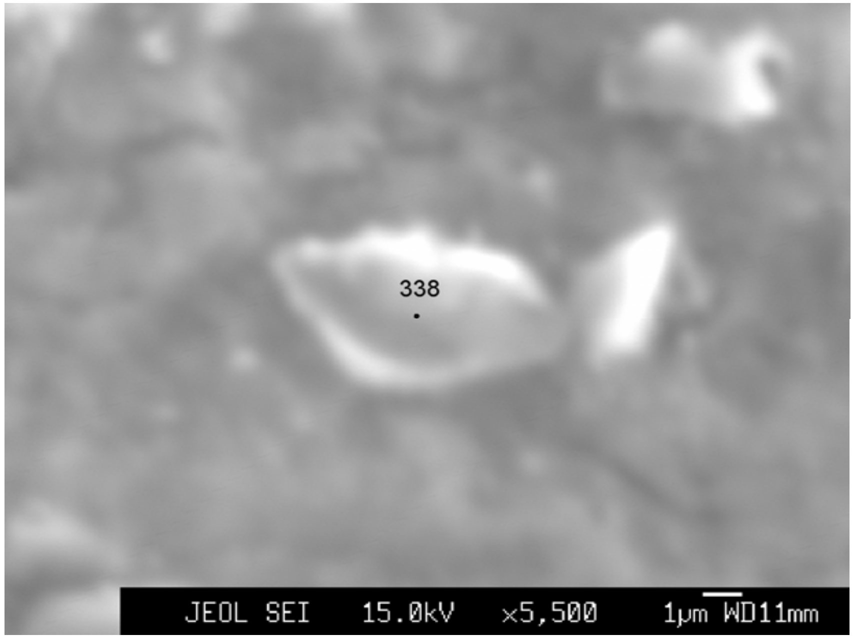


Rectangle denotes point of major elements analysis

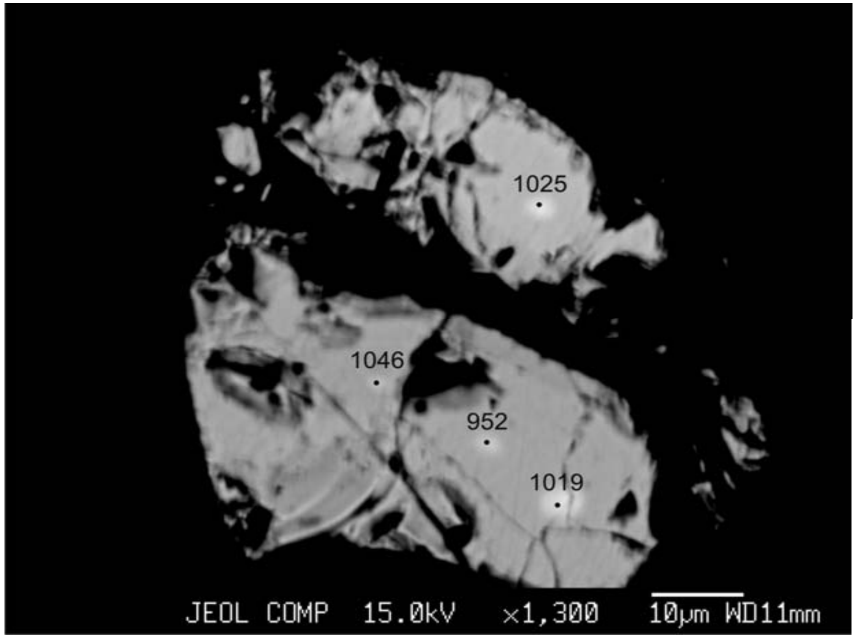
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	6/13/2007	V3-SP-54	22	3406	0	129	0	0	0	*
Venture	Missisauga	6/13/2007	V3-SP-54	22	4531	0	79	0	0	0	*
Venture	Missisauga	6/13/2007	V3-SP-54	22	4251	0	98	0	0	0	*
Venture	Missisauga	6/13/2007	V3-SP-54	22	3806	27	158	0	0	0	*
Venture	Missisauga	6/13/2007	V3-SP-54	22	3387	435	94	0	0	0	*



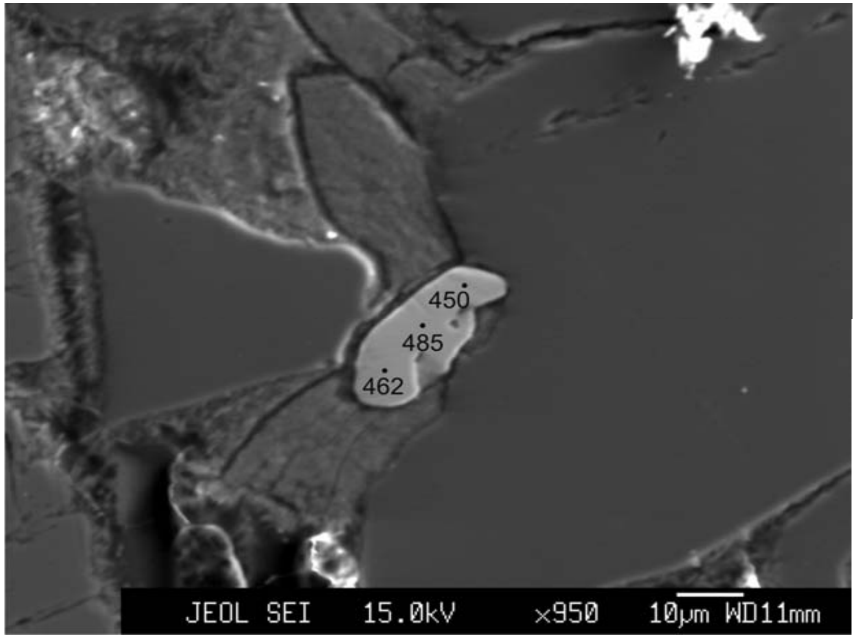
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	6/13/2007	V3-SP-54	25	9011	77642	2526	1297	1297	338	5.83



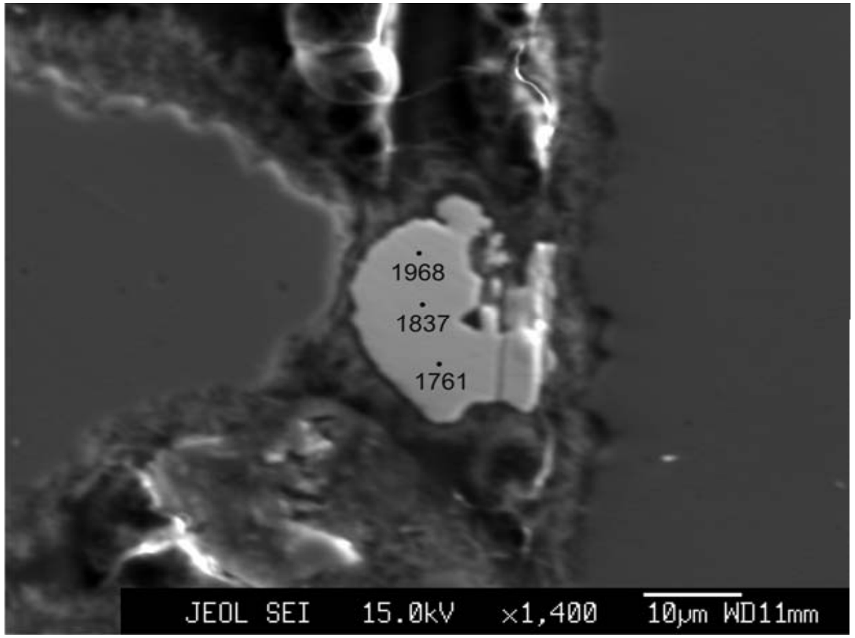
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	2/27/2007	V-4-SP22	1	11230	42388	874	2104	2104	1019	9.65
Venture	Missisauga	2/27/2007	V-4-SP22	1	11077	42852	907	1985	1985	952	9.45
Venture	Missisauga	2/27/2007	V-4-SP22	1	9627	36553	880	1883	1883	1046	9.55
Venture	Missisauga	2/27/2007	V-4-SP22	1	9759	77973	1981	3952	3952	1025	6.13



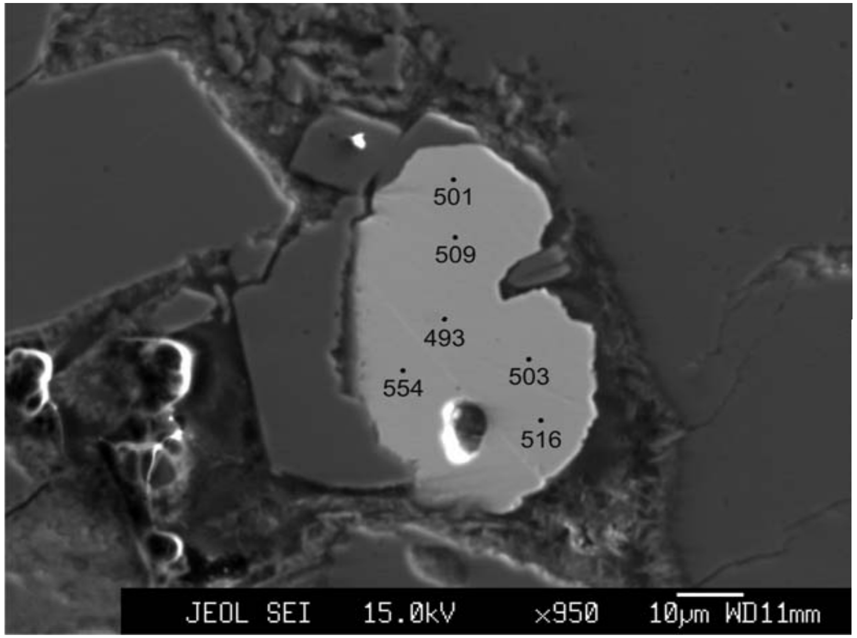
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-4-SP25	1	8895	28442	731	671	671	485	13.06
Venture	Missisauga	10/17/2006	V-4-SP25	1	8715	35267	1018	800	800	462	10.42
Venture	Missisauga	10/17/2006	V-4-SP25	1	8788	35313	1051	782	782	450	10.26



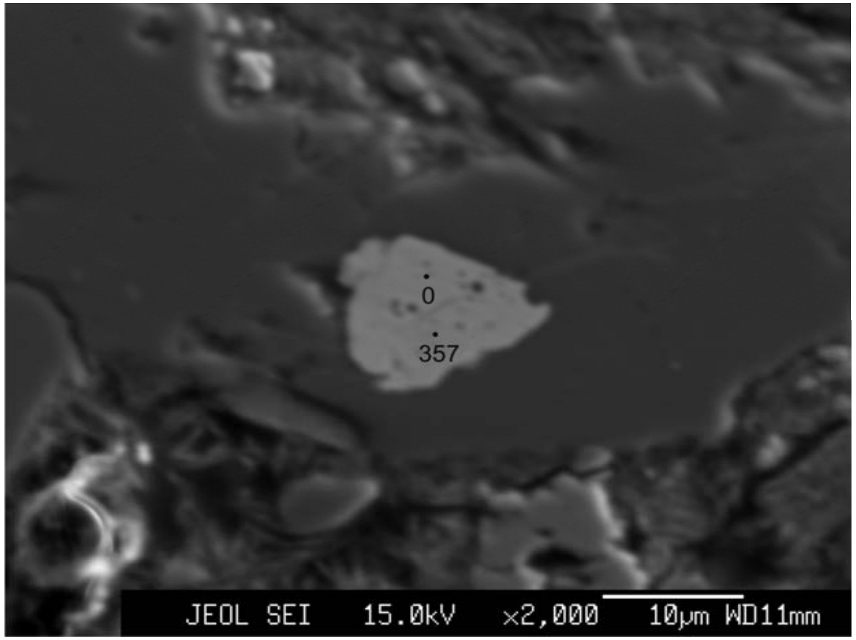
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-4-SP25	2	4753	14905	13	1371	1371	1968	73.49
Venture	Missisauga	10/17/2006	V-4-SP25	2	2296	36876	610	3339	3339	1837	13.63
Venture	Missisauga	10/17/2006	V-4-SP25	2	2056	18048	37	1484	1484	1761	56.12



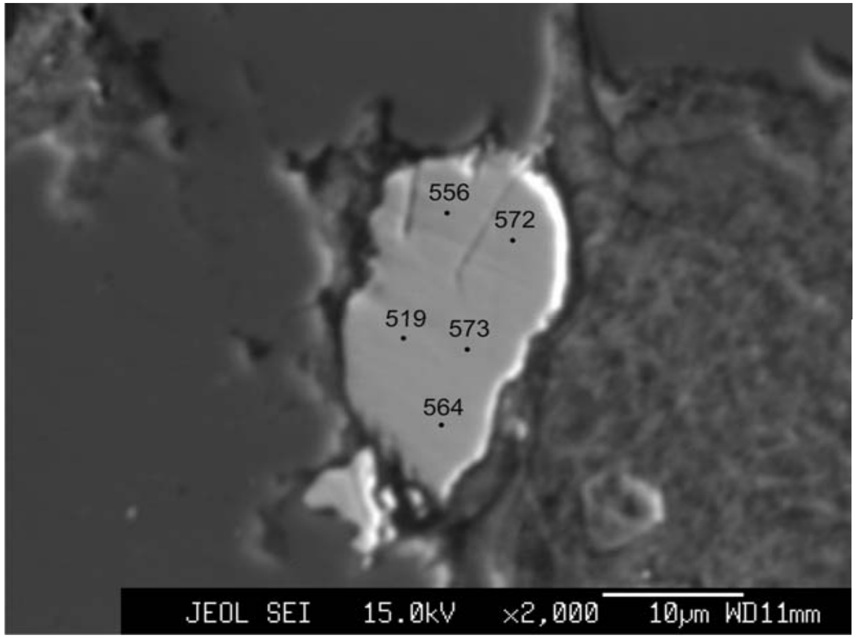
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-4-SP25	3	10983	21063	733	528	528	501	13.74
Venture	Missisauga	10/17/2006	V-4-SP25	3	11886	44704	1579	1139	1139	509	7.78
Venture	Missisauga	10/17/2006	V-4-SP25	3	13531	57499	2012	1417	1417	493	6.89
Venture	Missisauga	10/17/2006	V-4-SP25	3	12812	38080	1344	959	959	503	8.7
Venture	Missisauga	10/17/2006	V-4-SP25	3	12356	25347	1057	668	668	516	10.53
Venture	Missisauga	10/17/2006	V-4-SP25	3	13645	28209	1415	818	818	554	8.59



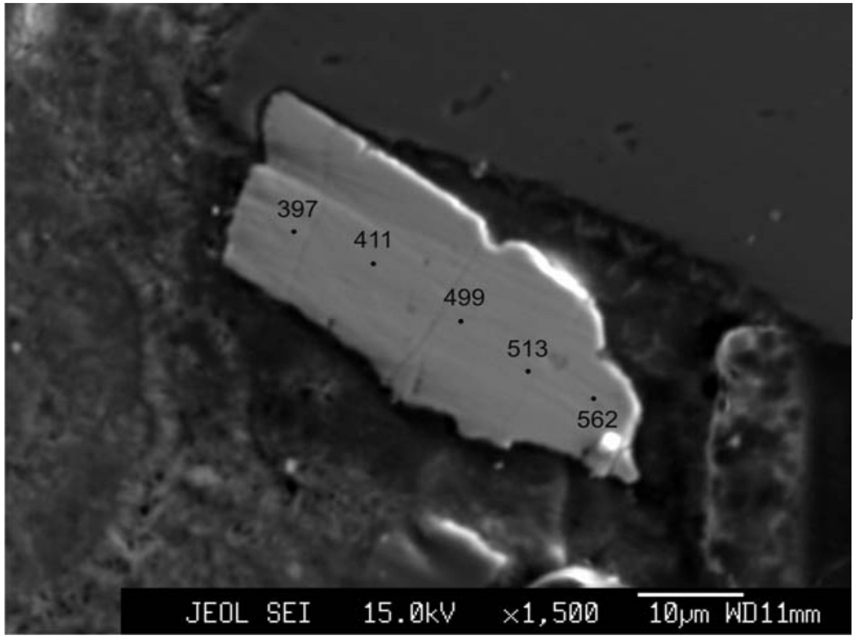
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-4-SP25	4	3216	746	0	0	0	0	*
Venture	Missisauga	10/17/2006	V-4-SP25	4	2294	19682	0	314	314	357	338



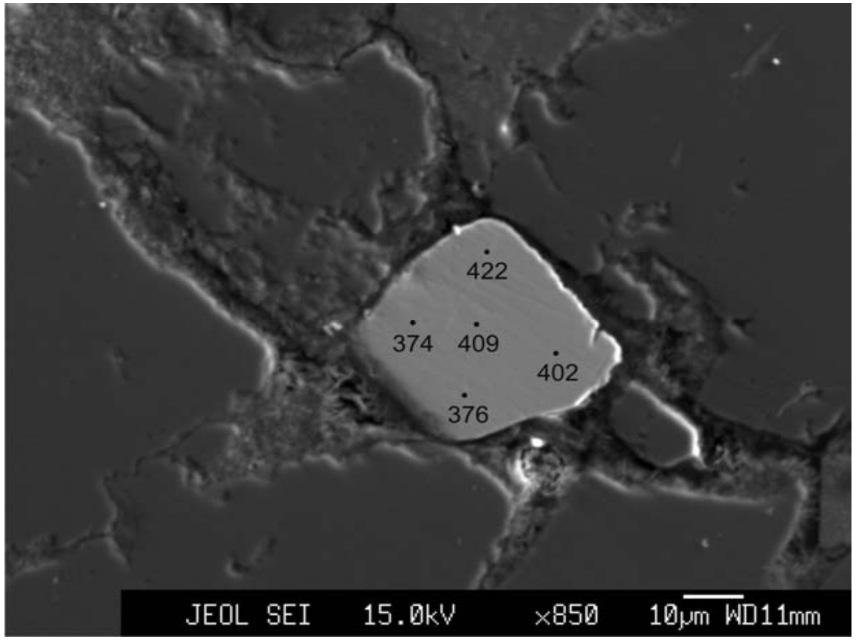
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-4-SP25	5	5512	59837	815	1587	1587	564	12.09
Venture	Missisauga	10/17/2006	V-4-SP25	5	10034	66848	963	1631	1631	519	11.24
Venture	Missisauga	10/17/2006	V-4-SP25	5	5260	65419	917	1765	1765	573	11.44
Venture	Missisauga	10/17/2006	V-4-SP25	5	6277	68593	978	1848	1848	572	11.12
Venture	Missisauga	10/17/2006	V-4-SP25	5	7575	62921	628	1625	1625	556	14.08



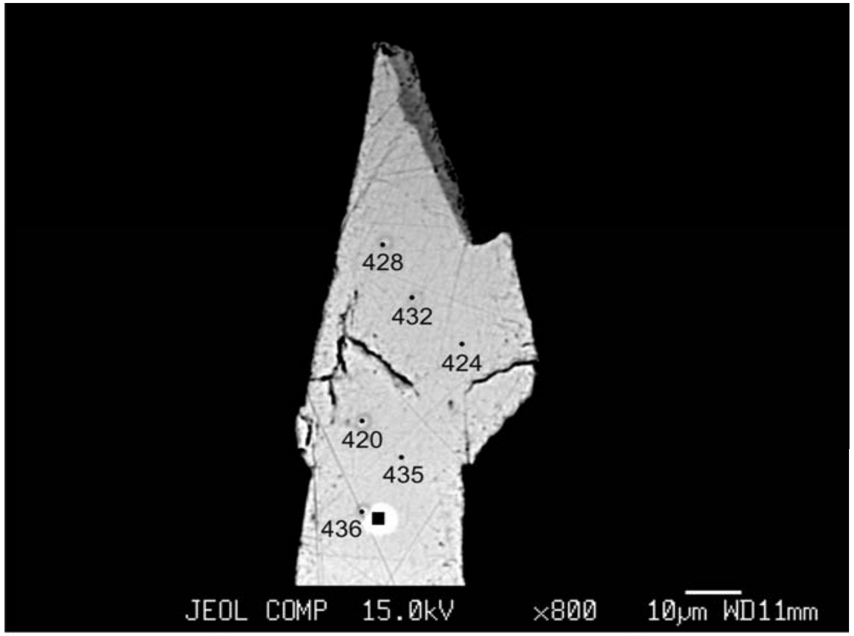
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-4-SP25	6	14292	42261	1245	824	824	397	9.65
Venture	Missisauga	10/17/2006	V-4-SP25	6	13026	53759	1303	1067	1067	411	9.33
Venture	Missisauga	10/17/2006	V-4-SP25	6	12977	32467	1172	813	813	499	9.73
Venture	Missisauga	10/17/2006	V-4-SP25	6	13790	30306	1456	808	808	513	8.55
Venture	Missisauga	10/17/2006	V-4-SP25	6	14995	29928	1438	876	876	562	8.45



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-4-SP25	7	18627	49188	1234	1005	1005	422	9.69
Venture	Missisauga	10/17/2006	V-4-SP25	7	20738	41804	716	809	809	409	13.45
Venture	Missisauga	10/17/2006	V-4-SP25	7	10150	34835	407	609	609	376	18.51
Venture	Missisauga	10/17/2006	V-4-SP25	7	10908	34276	536	603	603	374	15.99
Venture	Missisauga	10/17/2006	V-4-SP25	7	20308	40771	633	772	772	402	14.48

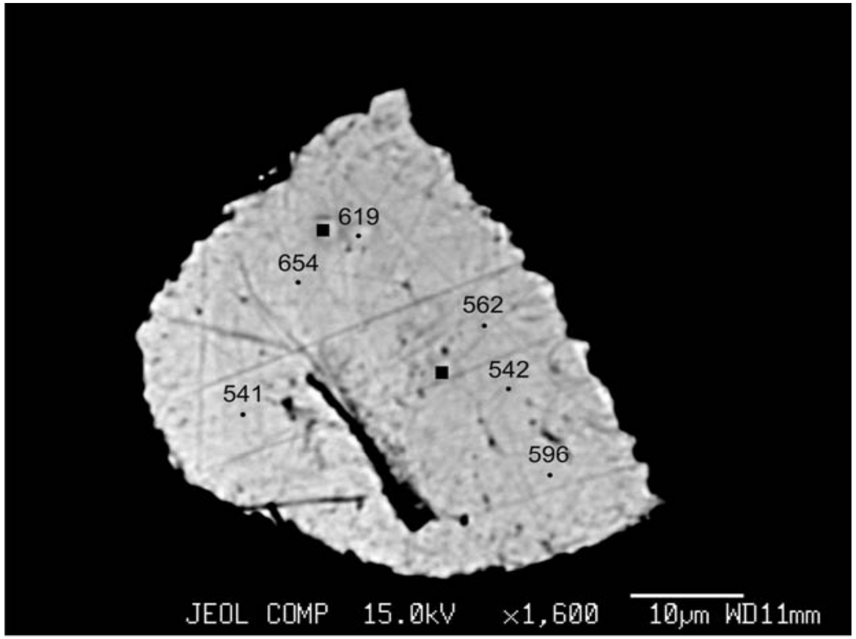


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	1/29/2007	V-4-80	1	16403	99070	4731	2235	2235	436	5.4
Venture	Missisauga	1/29/2007	V-4-80	1	16097	92534	4416	2088	2088	435	5.55
Venture	Missisauga	1/29/2007	V-4-80	1	15720	87256	4251	1902	1902	420	5.29
Venture	Missisauga	1/29/2007	V-4-80	1	15537	83512	4232	1849	1849	424	5.21
Venture	Missisauga	1/29/2007	V-4-80	1	15367	81545	4075	1836	1836	432	5.28
Venture	Missisauga	1/29/2007	V-4-80	1	15136	76195	3883	1704	1704	428	5.34



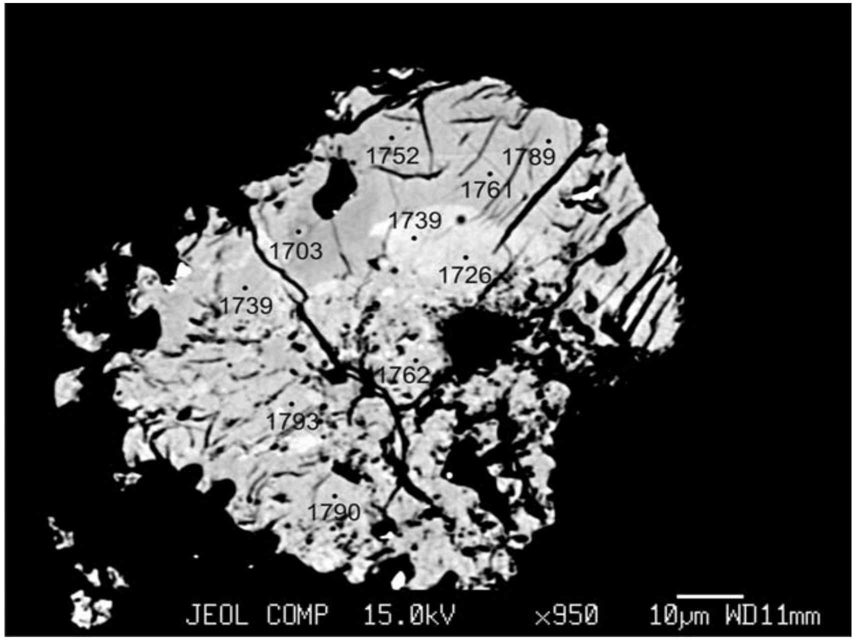
Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	1/29/2007	V-4-80	2	1.9449	17143	0	2306	2306	619	204
Venture	Missisauga	1/29/2007	V-4-80	2	1.482	13041	0	1717	1717	562	142
Venture	Missisauga	1/29/2007	V-4-80	2	1.5379	13657	0	1722	1722	542	71.2
Venture	Missisauga	1/29/2007	V-4-80	2	1.4966	13224	0	1742	1742	596	99.5
Venture	Missisauga	1/29/2007	V-4-80	2	2.3818	20995	0	2822	2822	541	105
Venture	Missisauga	1/29/2007	V-4-80	2	2.5831	22744	0	3086	3086	654	304

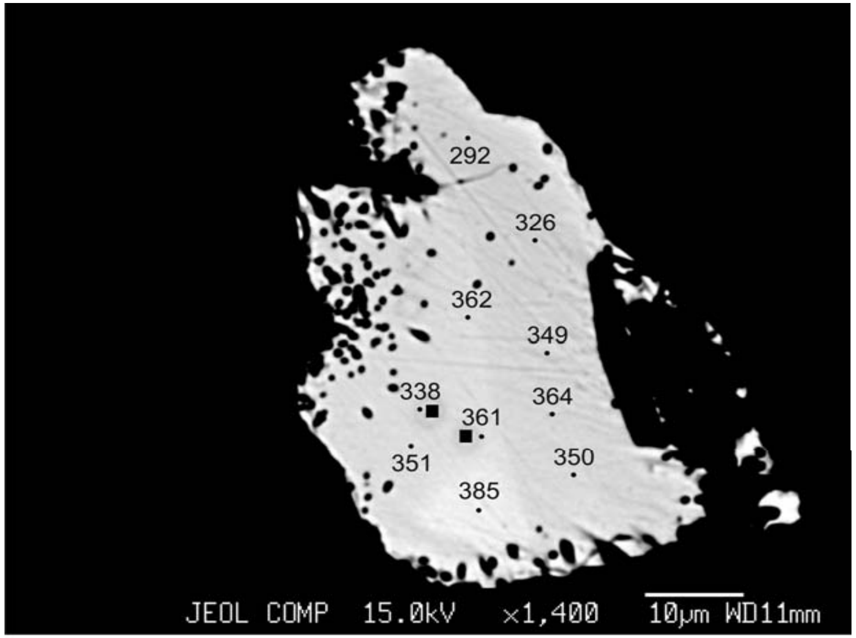


Rectangles denote points of major elements analyses

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	1/29/2007	V-4-80	3	3246	82304	4575	7981	7981	1739	4.25
Venture	Missisauga	1/29/2007	V-4-80	3	3044	79955	4528	7714	7714	1726	4.22
Venture	Missisauga	1/29/2007	V-4-80	3	419	79691	8277	8985	8985	1761	2.52
Venture	Missisauga	1/29/2007	V-4-80	3	4356	79943	6585	8452	8452	1752	3.08
Venture	Missisauga	1/29/2007	V-4-80	3	10163	38229	131	3050	3050	1703	29.4
Venture	Missisauga	1/29/2007	V-4-80	3	8583	79510	6997	8469	8469	1739	2.92
Venture	Missisauga	1/29/2007	V-4-80	3	8289	85815	8570	9764	9764	1793	2.56
Venture	Missisauga	1/29/2007	V-4-80	3	12732	85030	8680	9712	9712	1790	2.53
Venture	Missisauga	1/29/2007	V-4-80	3	4165	56101	807	4823	4823	1762	12.99
Venture	Missisauga	1/29/2007	V-4-80	3	4515	97292	13275	12126	12126	1789	1.9

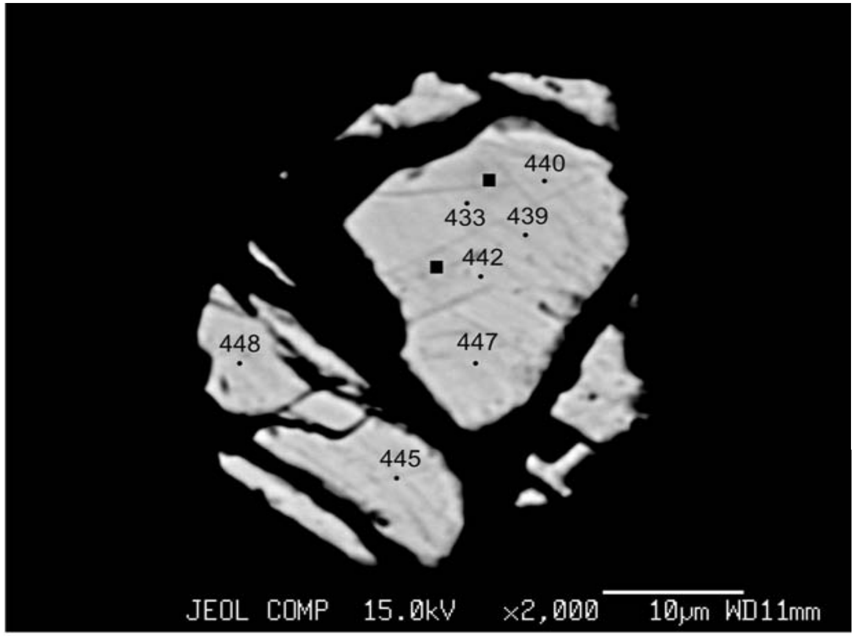


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	1/29/2007	V-4-50	1	24873	30503	3099	612	612	338	7.92
Venture	Missisauga	1/29/2007	V-4-50	1	24947	55764	3639	1165	1165	385	5.95
Venture	Missisauga	1/29/2007	V-4-50	1	26912	27591	3193	594	594	350	8.17
Venture	Missisauga	1/29/2007	V-4-50	1	26537	25865	3200	590	590	364	8.13
Venture	Missisauga	1/29/2007	V-4-50	1	27709	25196	3462	568	568	349	8.31
Venture	Missisauga	1/29/2007	V-4-50	1	28199	28812	3224	636	636	362	7.98
Venture	Missisauga	1/29/2007	V-4-50	1	20632	18901	2829	409	409	326	9.49
Venture	Missisauga	1/29/2007	V-4-50	1	20720	19190	3102	380	380	292	9.76
Venture	Missisauga	1/29/2007	V-4-50	1	23811	27617	2752	574	574	351	8.29
Venture	Missisauga	1/29/2007	V-4-50	1	23020	33934	2747	691	691	361	7.58



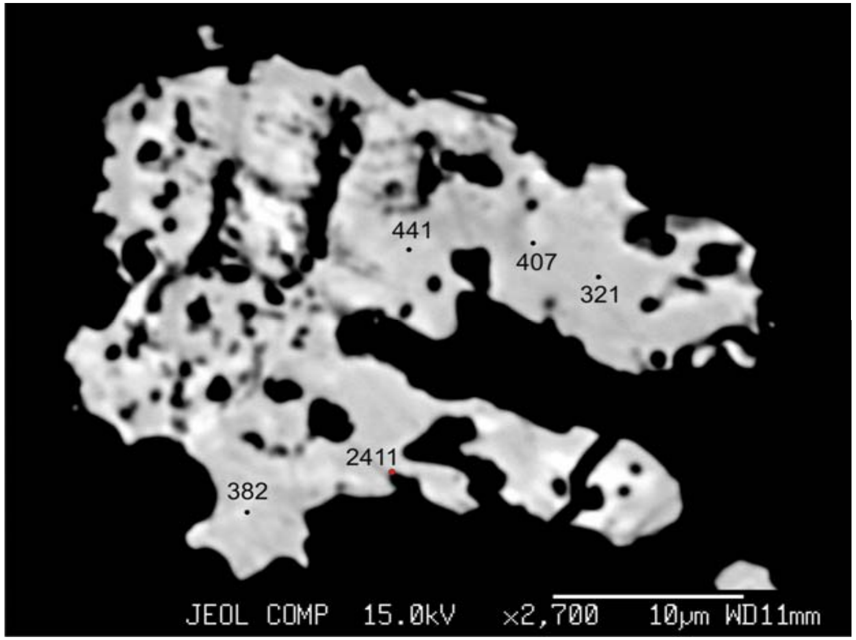
Rectangles denote points of major elements analyses

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	1/29/2007	V-4-50	2	28457	46186	1381	999	999	440	9.95
Venture	Missisauga	1/29/2007	V-4-50	2	22646	44758	1095	937	937	433	11.2
Venture	Missisauga	1/29/2007	V-4-50	2	28675	46467	1317	1000	1000	439	10.25
Venture	Missisauga	1/29/2007	V-4-50	2	27840	46421	1364	1009	1009	442	10
Venture	Missisauga	1/29/2007	V-4-50	2	28891	46795	1301	1024	1024	447	10.29
Venture	Missisauga	1/29/2007	V-4-50	2	25553	46745	1077	1003	1003	445	11.38
Venture	Missisauga	1/29/2007	V-4-50	2	24760	41912	1118	916	916	448	11.06

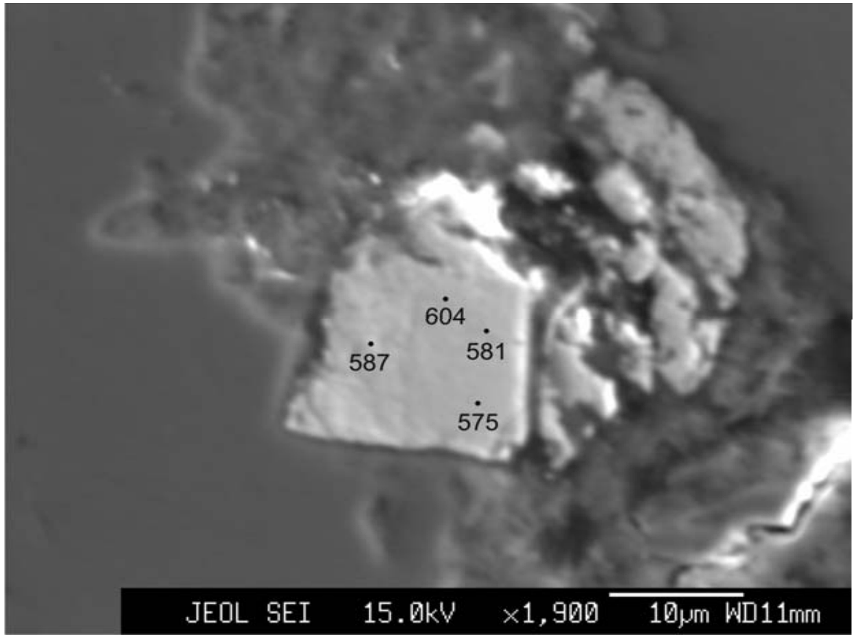


Rectangles denote points of major elements analyses

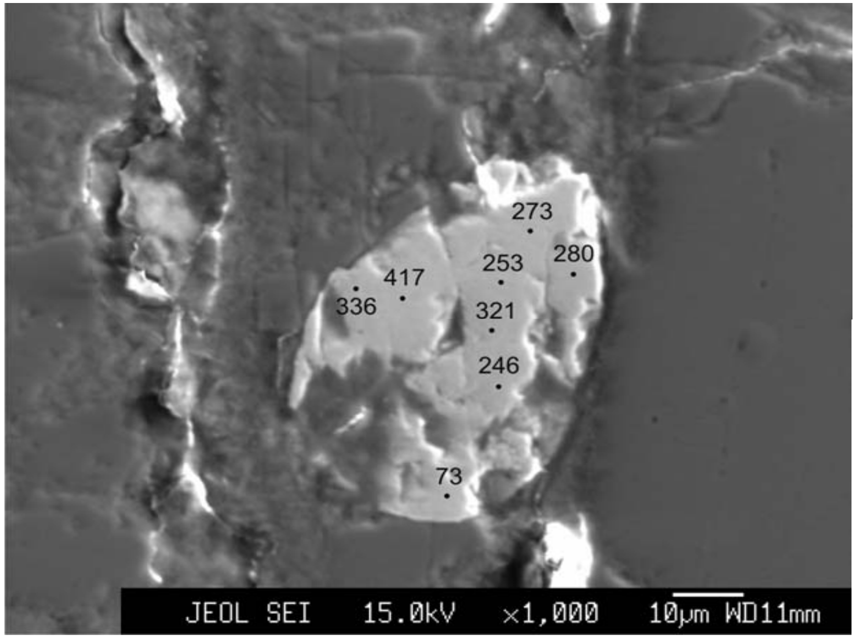
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	1/29/2007	V-4-50	3	827	28054	49	405	405	321	42.9
Venture	Missisauga	1/29/2007	V-4-50	3	993	40085	358	752	752	407	20.38
Venture	Missisauga	1/29/2007	V-4-50	3	781	32707	251	663	663	441	24.9
Venture	Missisauga	1/29/2007	V-4-50	3	0	38841	1120	4917	4917	2411	9.71
Venture	Missisauga	1/29/2007	V-4-50	3	768	40465	307	710	710	382	21.82



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-4-SP87	1	6089	48796	1004	1347	1347	575	10.3
Venture	Missisauga	10/17/2006	V-4-SP87	1	5304	40671	606	1128	1128	587	13.96
Venture	Missisauga	10/17/2006	V-4-SP87	1	5435	42437	611	1208	1208	604	13.85
Venture	Missisauga	10/17/2006	V-4-SP87	1	6092	49978	1002	1392	1392	581	10.33

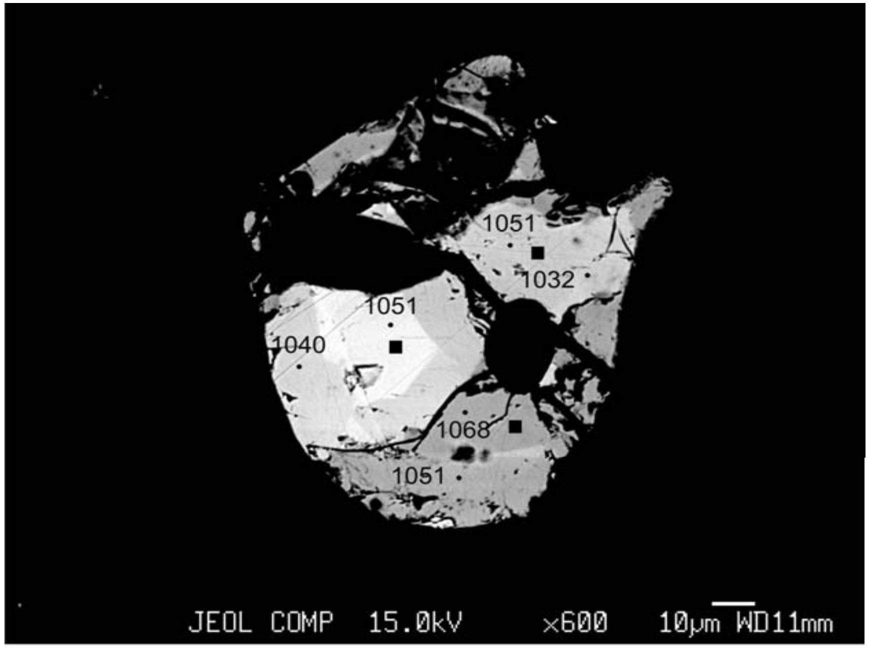


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Venture	Missisauga	10/17/2006	V-4-SP87	2	28483	15963	210	239	239	321	33.27
Venture	Missisauga	10/17/2006	V-4-SP87	2	2986	16357	118	204	204	273	43.2
Venture	Missisauga	10/17/2006	V-4-SP87	2	24959	17115	0	320	320	417	80.9
Venture	Missisauga	10/17/2006	V-4-SP87	2	28439	12844	24	146	146	253	80.07
Venture	Missisauga	10/17/2006	V-4-SP87	2	4956	19607	255	255	255	280	27.93
Venture	Missisauga	10/17/2006	V-4-SP87	2	2043	8683	0	28	28	73	967
Venture	Missisauga	10/17/2006	V-4-SP87	2	7516	20320	268	318	318	336	26.43
Venture	Missisauga	10/17/2006	V-4-SP87	2	9656	14011	207	161	161	246	35.28



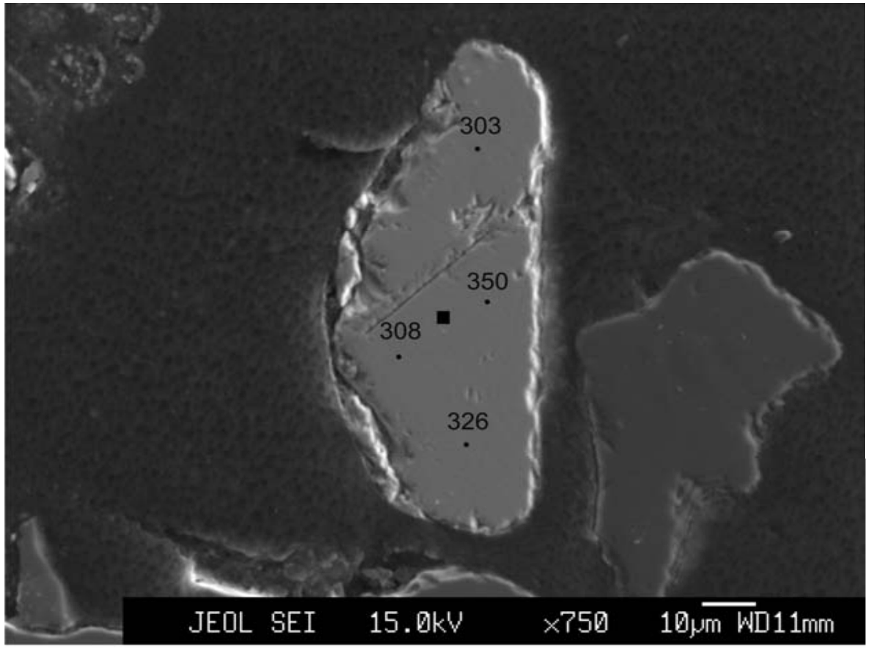
Peskowesk A-99

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	1	5059	90648	4452	5068	5068	1051	3.6
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	1	6661	64539	4414	3768	3768	1040	3.17
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	1	8997	56568	5704	3642	3642	1051	2.54
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	1	9195	61662	5944	3989	3989	1068	2.5
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	1	3727	35389	2192	2053	2053	1051	4.79
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	1	3809	36775	2275	2092	2092	1032	4.68



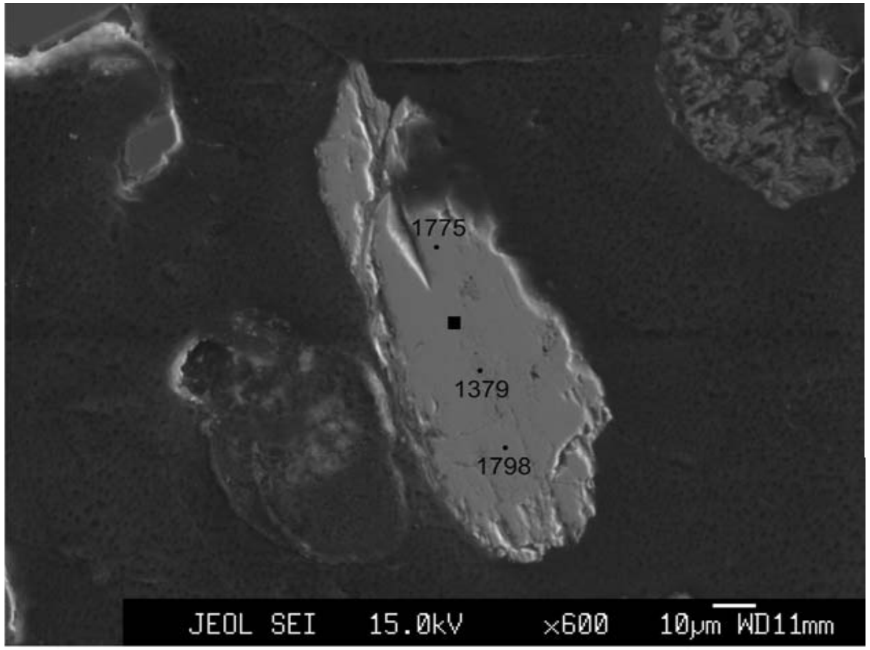
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	2	19117	36110	809	525	525	303	12.25
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	2	18644	37793	734	552	552	308	12.66
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	2	20182	39127	717	649	649	350	12.51
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	2	18422	37240	710	576	576	326	12.74



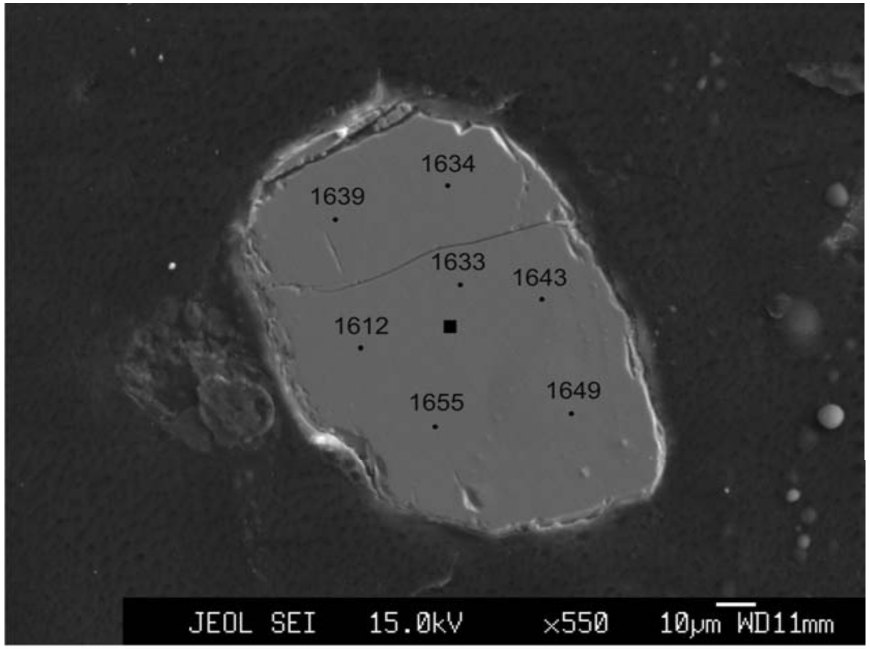
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	3	8666	86028	4296	8377	8377	1775	3.51
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	3	5725	66753	1686	4602	4602	1379	6.55
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	3	5031	77639	2606	6890	6890	1708	4.98



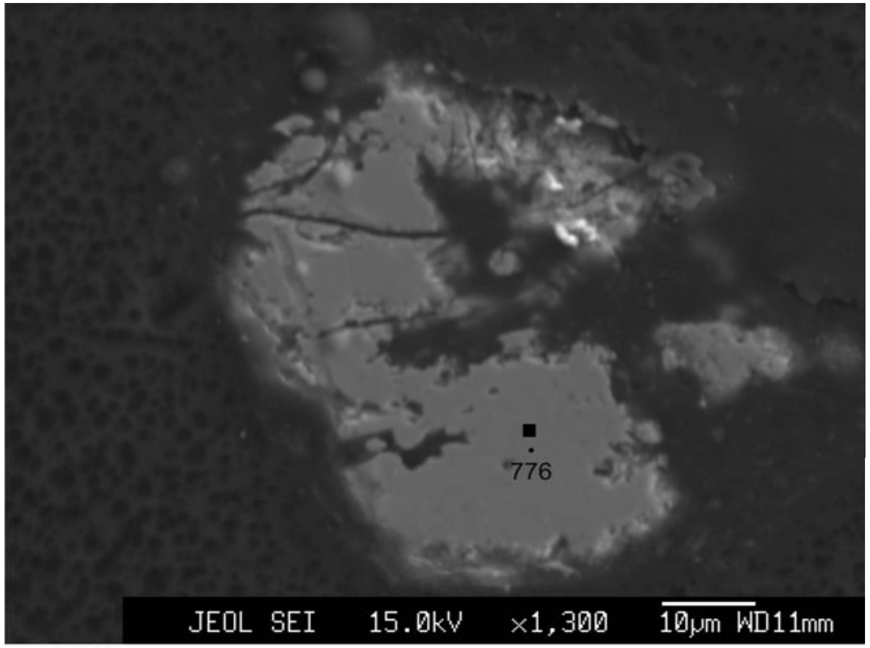
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	4	36700	39586	418	3112	3112	1639	15.36
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	4	32458	32354	946	2701	2701	1634	9.11
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	4	32437	33009	920	2759	2759	1643	9.28
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	4	31852	28642	1472	2563	2563	1633	6.58
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	4	36312	41579	385	3199	3199	1612	16
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	4	31916	35368	1411	3098	3098	1655	6.78
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	4	32510	28493	1495	2584	2584	1649	6.52



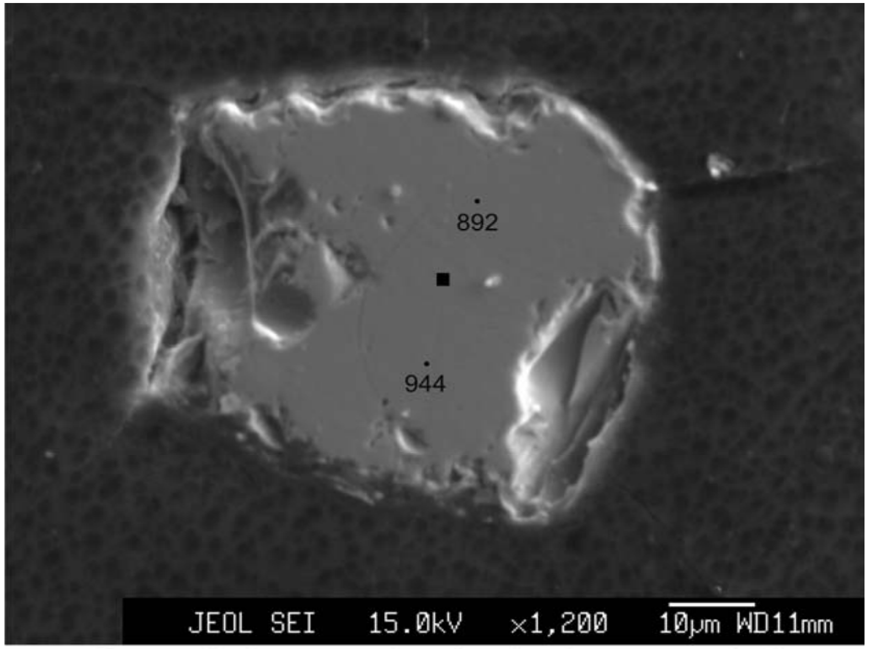
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	5	3490	56868	950	2106	2106	776	9.5



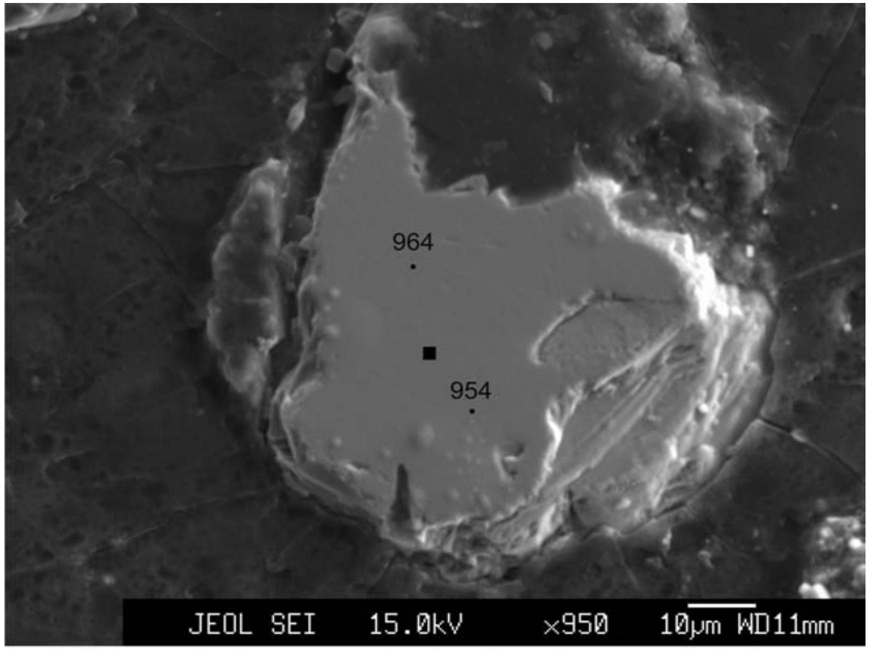
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	6	9861	5785	0	234	234	892	71.34
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	6	11013	10533	141	472	472	944	40.74



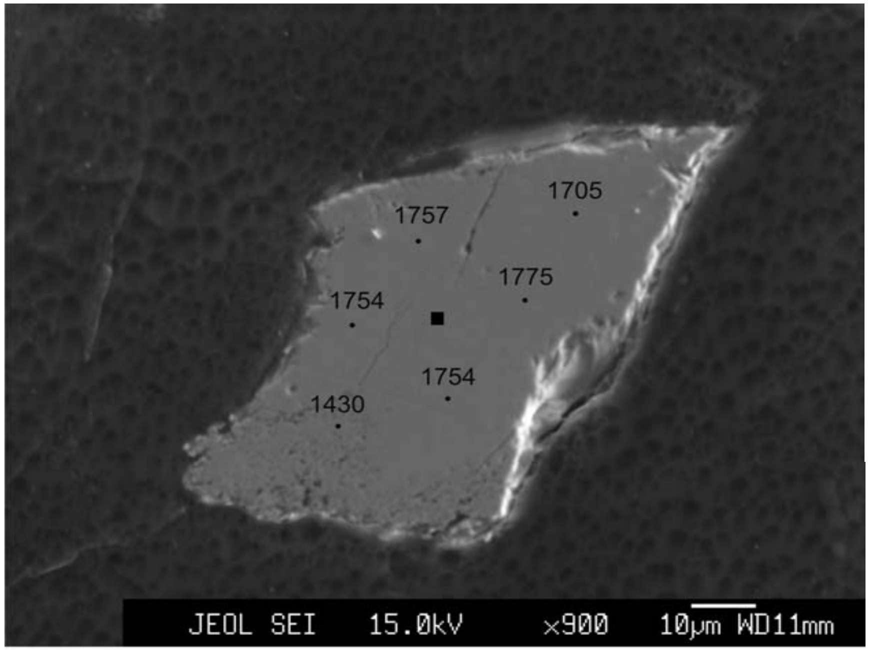
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	7	16179	28342	1105	1405	1405	964	8.27
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	7	15738	28536	1247	1419	1419	954	7.58



Rectangle denotes point of major elements analysis

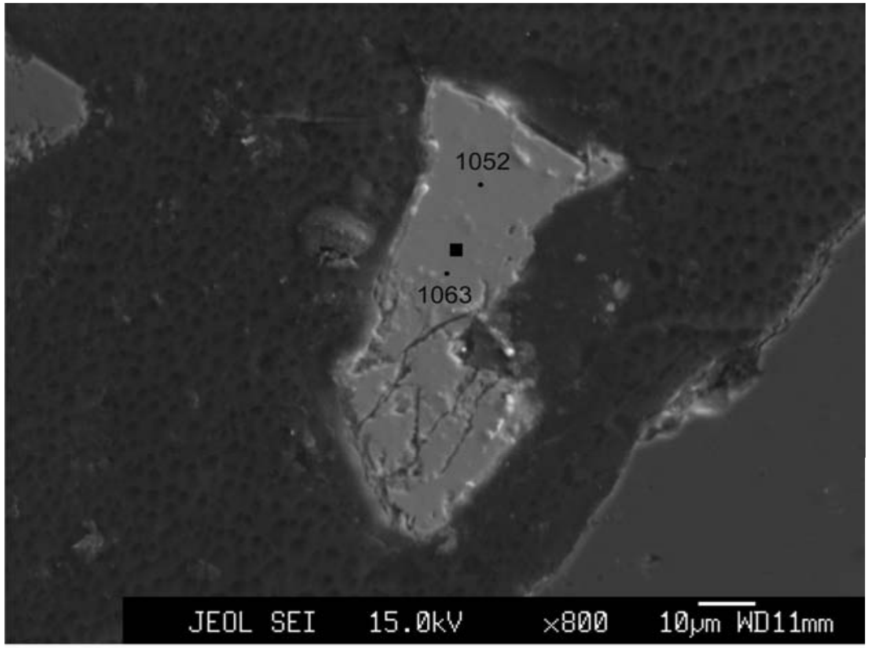
Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	8	5855	81424	3316	7378	7378	1705	4.21
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	8	4868	71549	2440	6555	6555	1757	5.05
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	8	4241	87084	2751	7999	7999	1775	5.03
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	8	4809	72580	2426	6621	6621	1754	5.11
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	8	5651	83635	3713	7904	7904	1754	3.9
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	8	5664	72151	1500	5090	5090	1430	7.31



Rectangle denotes point of major elements analysis

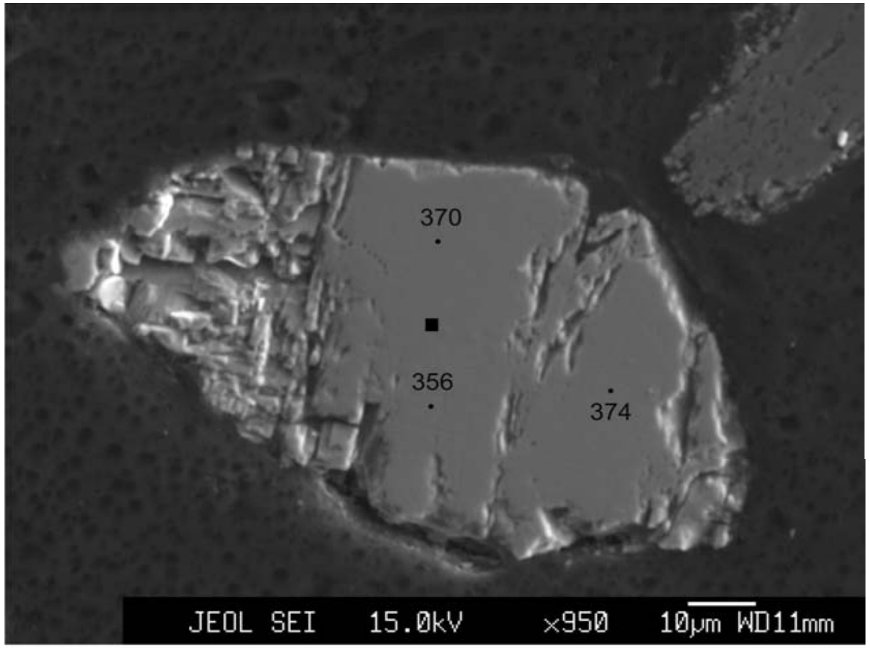
Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	9	6088	9998	156	0	0	0	*
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	9	6780	5801	411	0	0	0	*
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	9	6226	4318	595	0	0	0	*

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	10	17294	22866	3440	1658	1658	1052	3.94
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	10	22506	24418	5072	2022	2022	1063	3.29



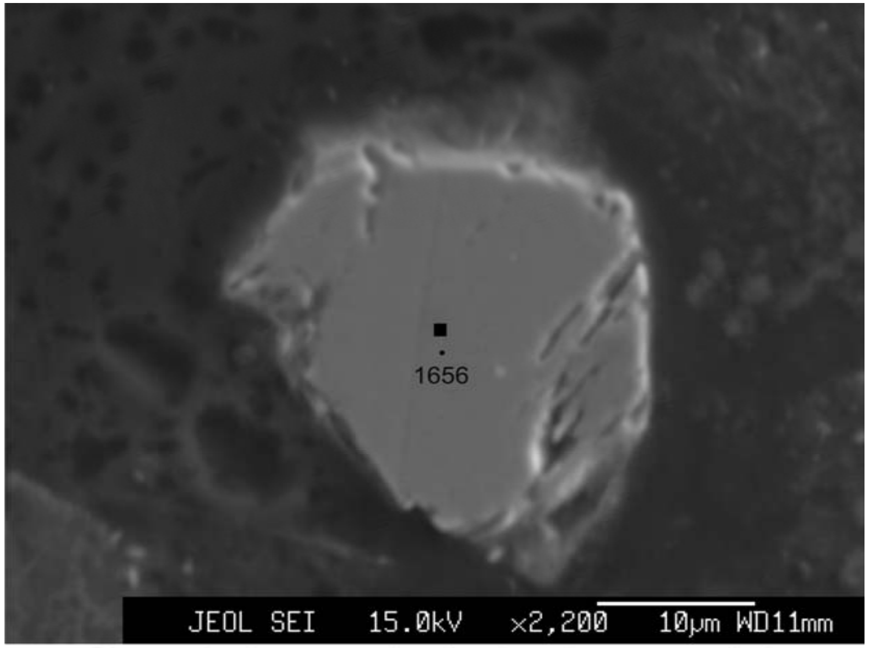
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	11	2467	25682	507	453	453	370	15.7
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	11	2957	26476	563	451	451	356	14.73
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	11	3174	28770	698	519	519	374	12.68



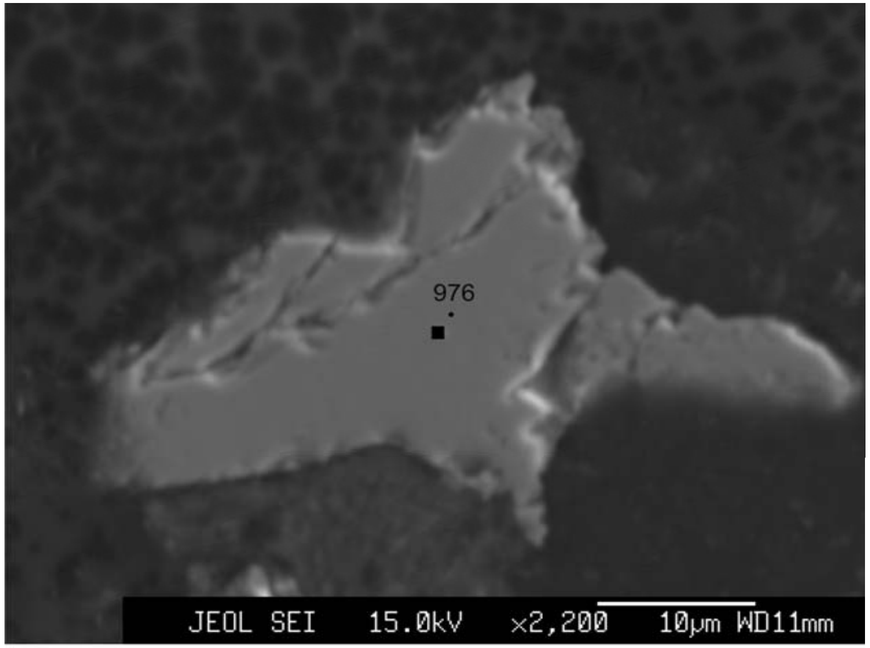
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	12	17921	35363	1735	3188	3188	1656	5.62



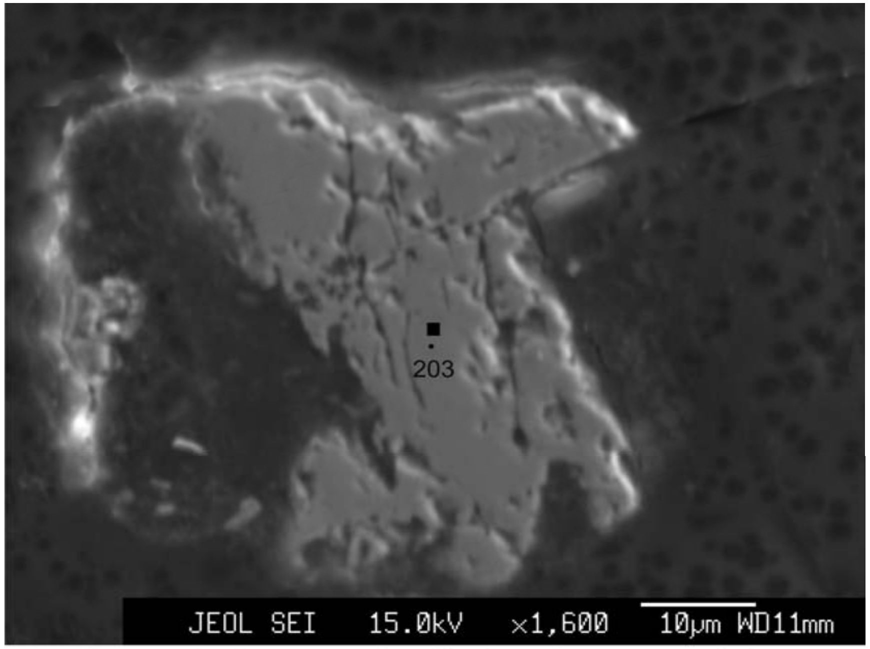
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	13	18450	37540	1615	1908	1908	976	6.31



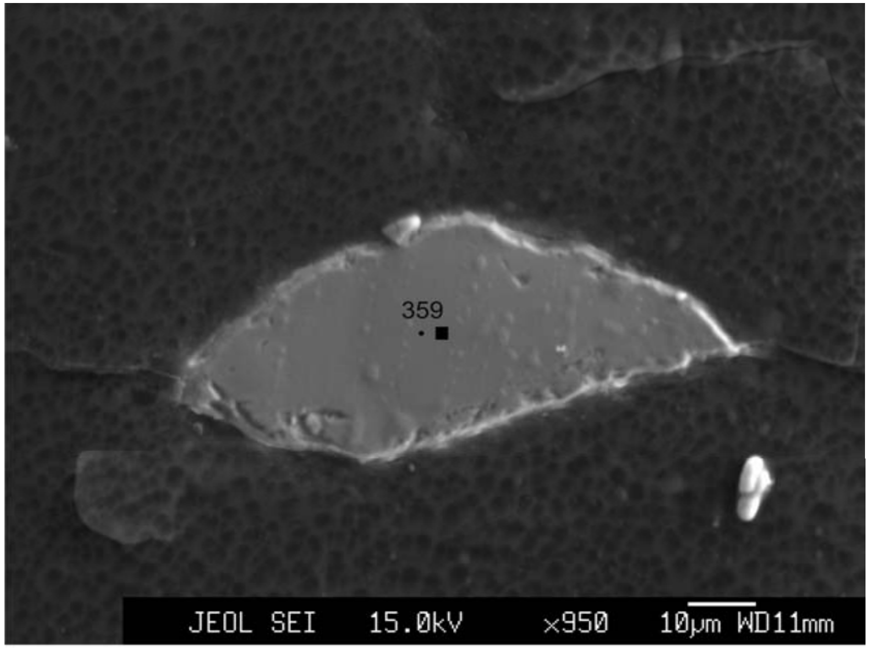
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	14	2356	8521	1111	109	109	203	26.38



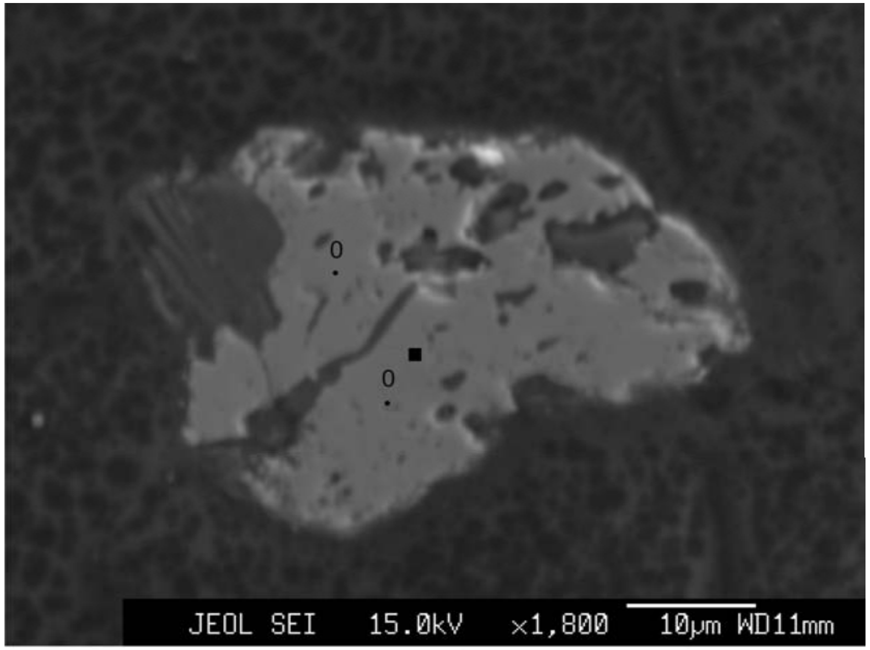
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	15	6006	40533	622	683	683	359	12.92



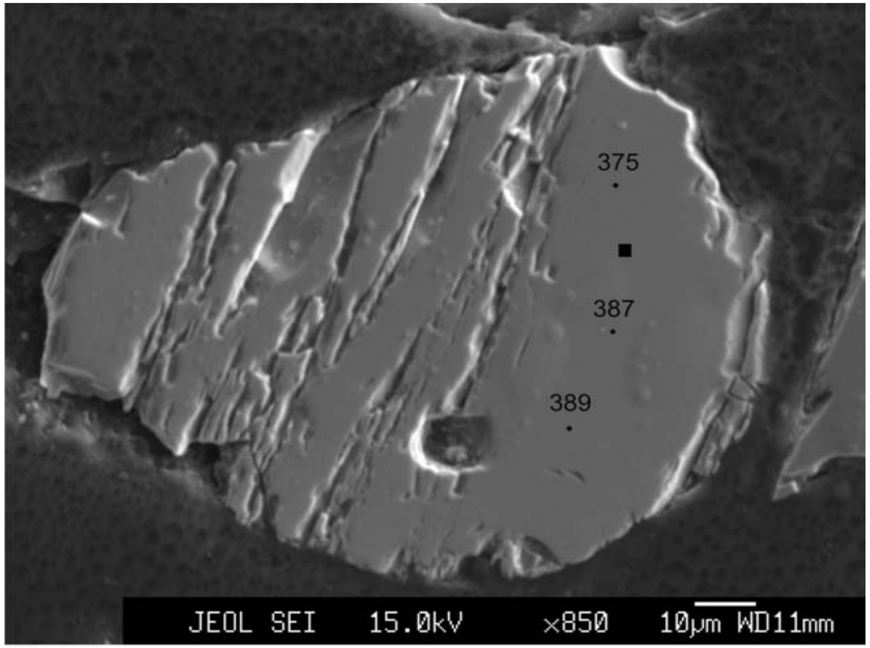
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	16	2306	0	0	0	0	0	*
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	16	768	0	0	0	0	0	*



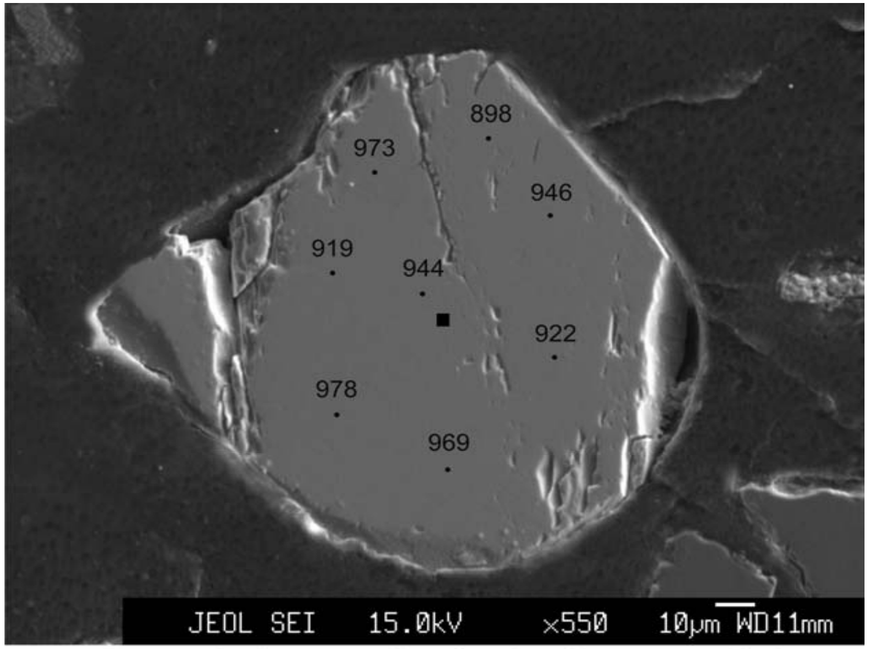
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	17	2990	26832	567	481	481	375	14.49
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	17	3162	27684	659	517	517	387	13.12
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	17	3291	27625	661	519	519	389	13.1



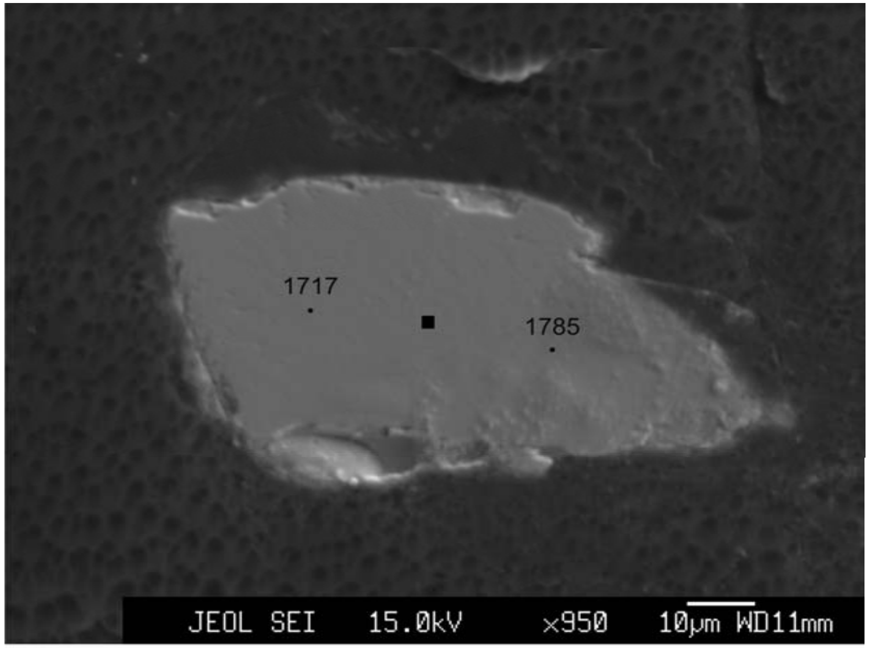
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	18	20389	24548	515	1071	1071	898	14.54
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	18	17832	25416	697	1228	1228	973	11.59
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	18	16277	27147	657	1262	1262	946	12
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	18	34781	28450	1200	1394	1394	944	8.48
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	18	17211	23969	806	1113	1113	919	10.62
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	18	18418	25257	671	1224	1224	978	11.93
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	18	32267	30585	1183	1523	1523	969	8.35
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	18	33479	28515	1188	1361	1361	922	8.53



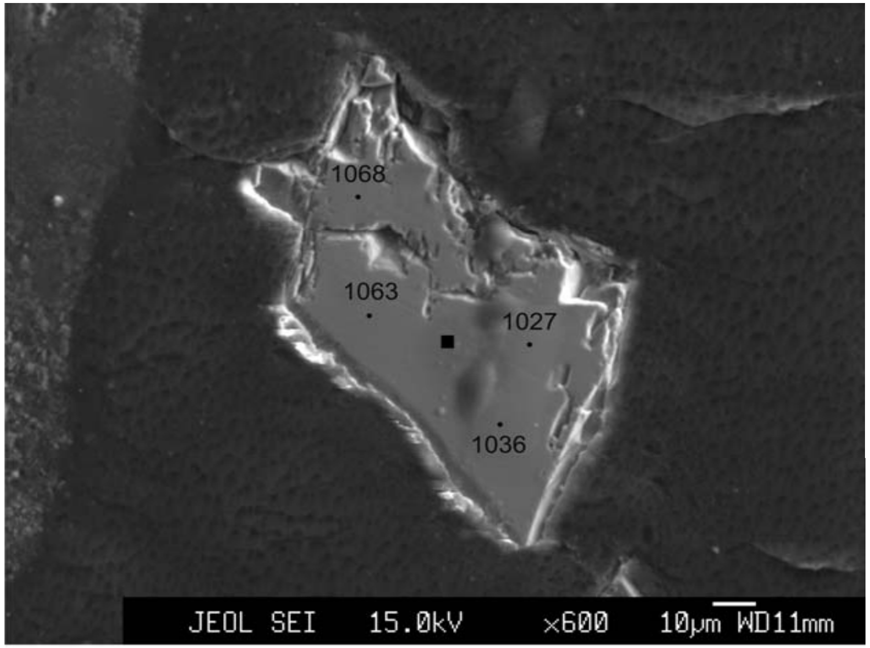
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	19	7807	76112	4933	7484	7484	1717	2.96
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	19	7165	88282	4886	8795	8795	1785	3.2



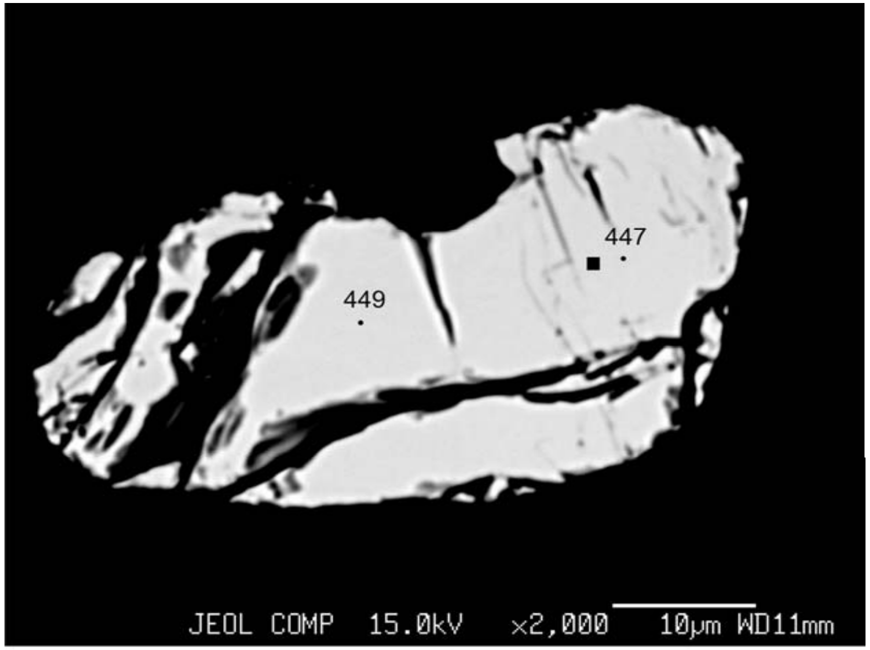
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	20	18809	42471	8977	3545	3545	1063	2.01
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	20	21406	32176	5384	2385	2385	1036	2.97
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	20	20010	34229	5170	2424	2424	1027	2.97
Peskowesk A99	2238.65	12/5/2007	PESK_A99_2238	20	15014	102562	4450	5733	5733	1068	3.86



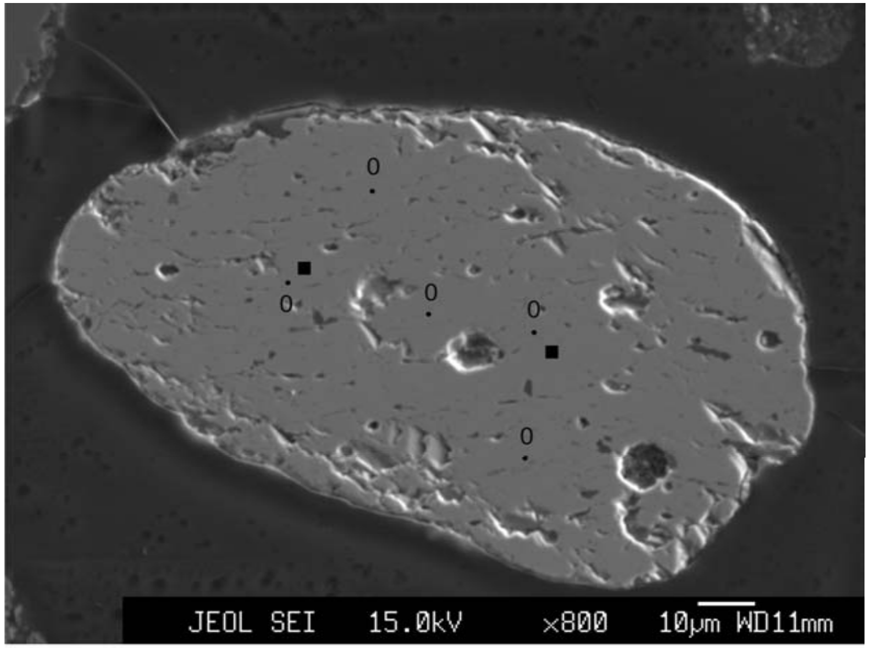
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	1	6777	30987	237	637	637	447	21.99
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	1	8250	32567	328	677	677	449	18.51



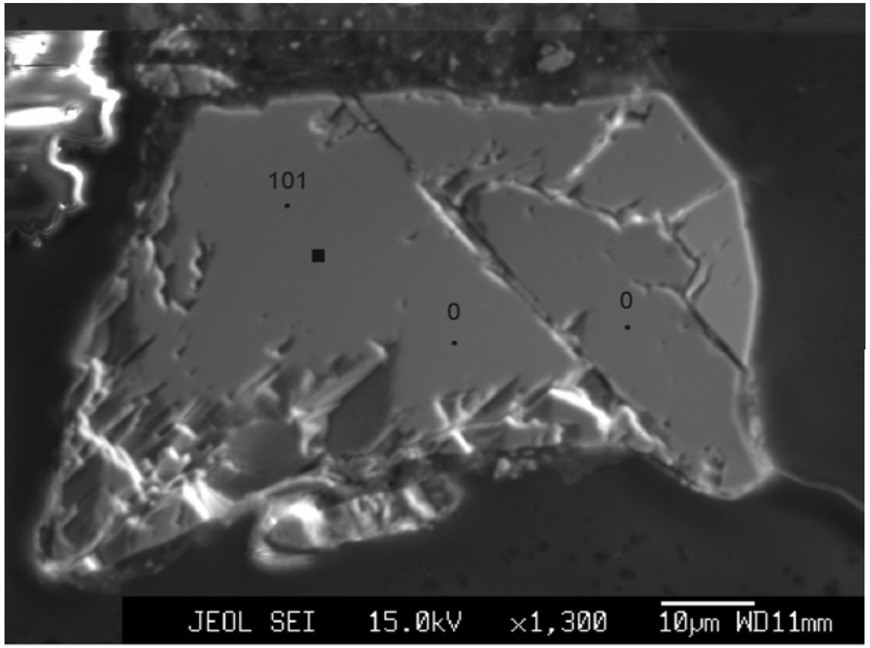
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	2	3146	510	0	0	0	0	*
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	2	3352	467	0	0	0	0	*
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	2	3231	639	0	0	0	0	*
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	2	2868	455	0	0	0	0	*
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	2	3484	270	0	0	0	0	*



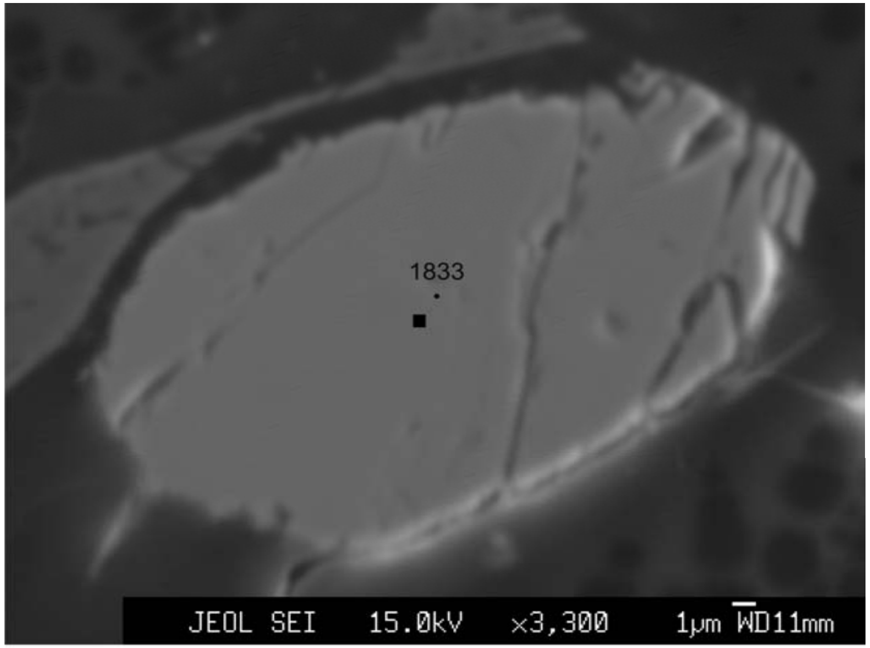
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	3	3934	890	0	4	4	101	*
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	3	4010	907	0	0	0	0	*
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	3	4031	1068	0	0	0	0	*



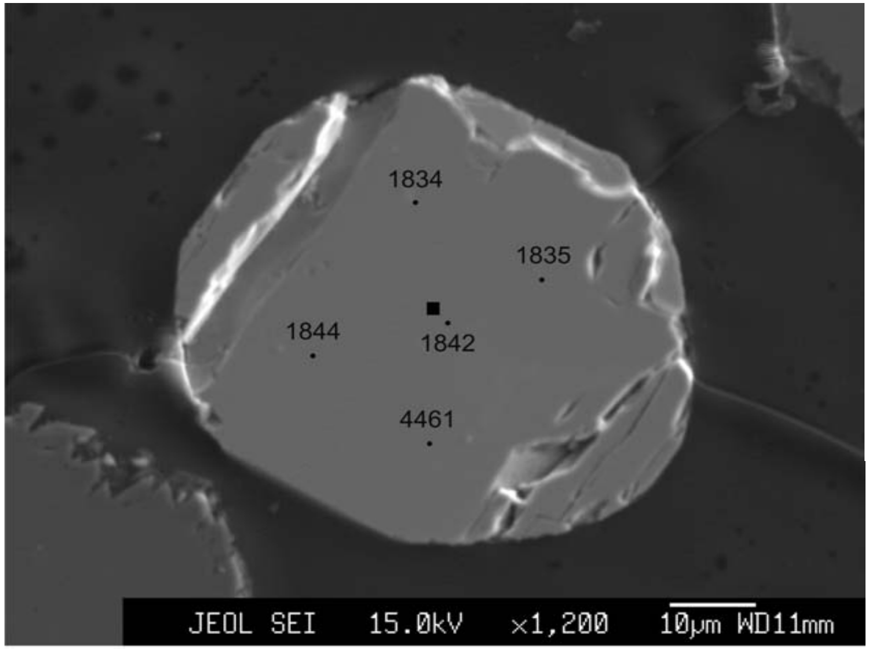
Rectagle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	4	3571	74999	2754	7249	7249	1833	4.7



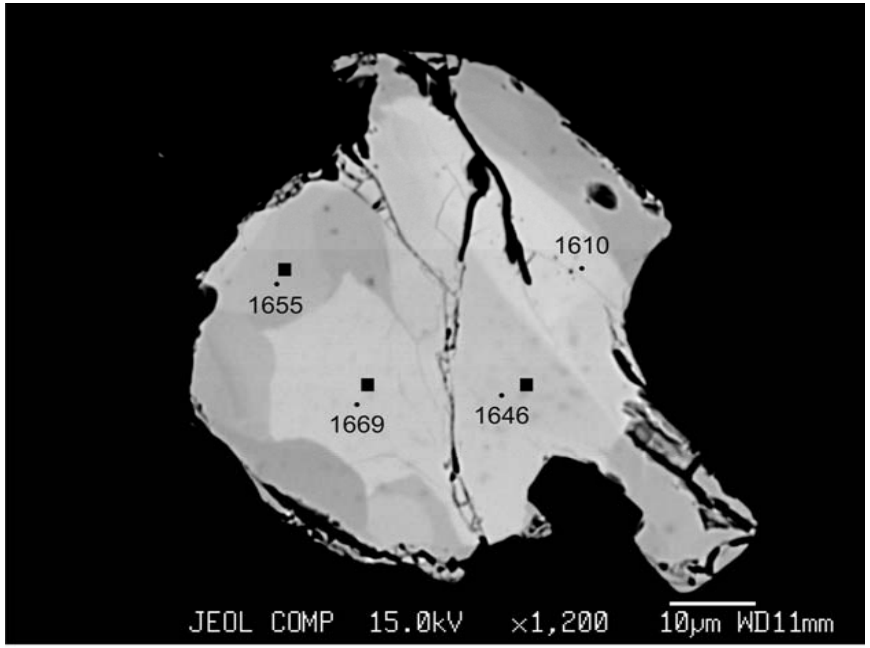
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	5	22454	77040	14446	11164	11164	1842	1.29
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	5	25483	45046	7383	6163	6163	1834	1.94
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	5	21765	51492	6319	6414	6414	1844	2.17
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	5	18642	24993	4913	12233	12233	4461	3.94
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	5	22519	40517	5881	5307	5307	1835	2.24



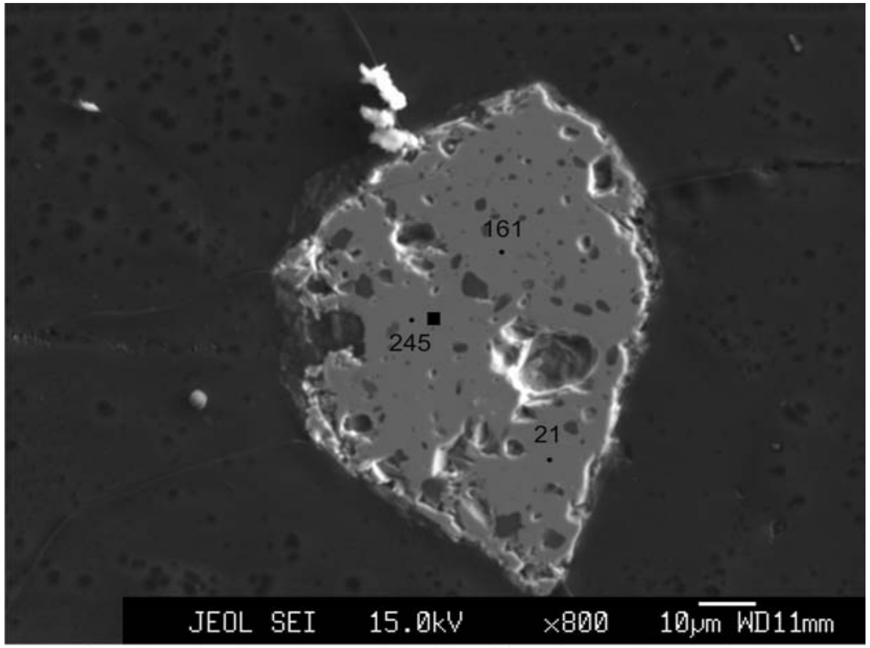
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	6	30192	67696	625	5399	5399	1669	12.47
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	6	26718	31842	818	2663	2663	1655	10.08
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	6	28304	62727	568	4927	4927	1646	13.02
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	6	25089	79574	691	6102	6102	1610	12.14



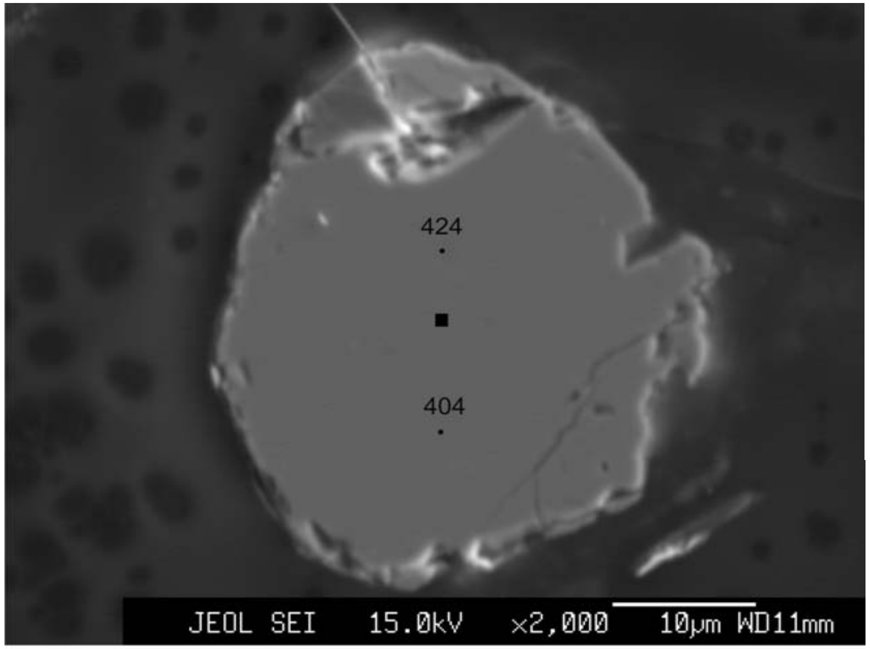
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	7	3952	16795	217	191	191	245	30.52
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	7	4278	10435	130	78	78	161	51.15
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	7	4643	3234	342	4	4	21	79.06



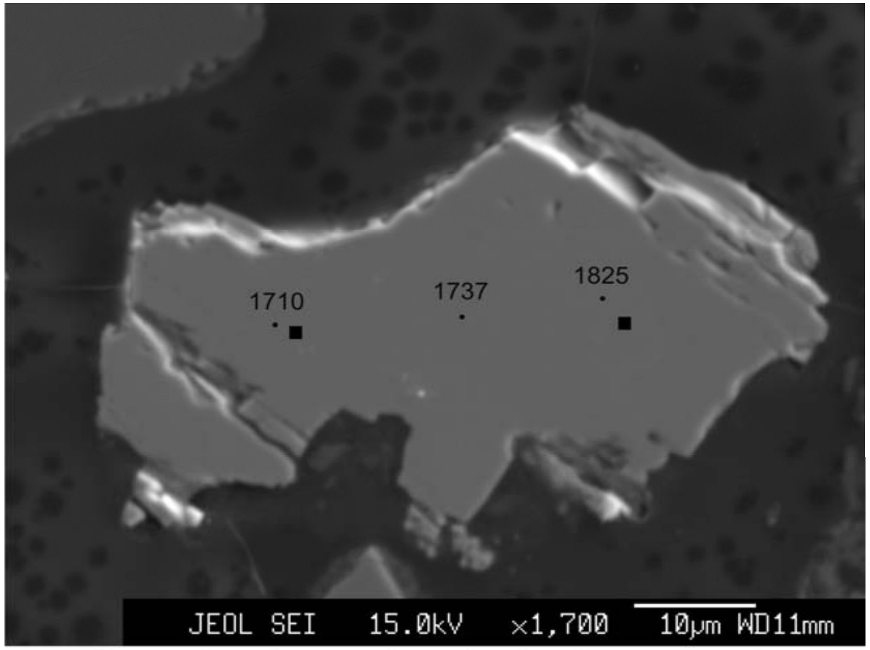
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	8	15615	25863	2937	673	673	424	6.57
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	8	14845	24420	1926	549	549	400	8.13



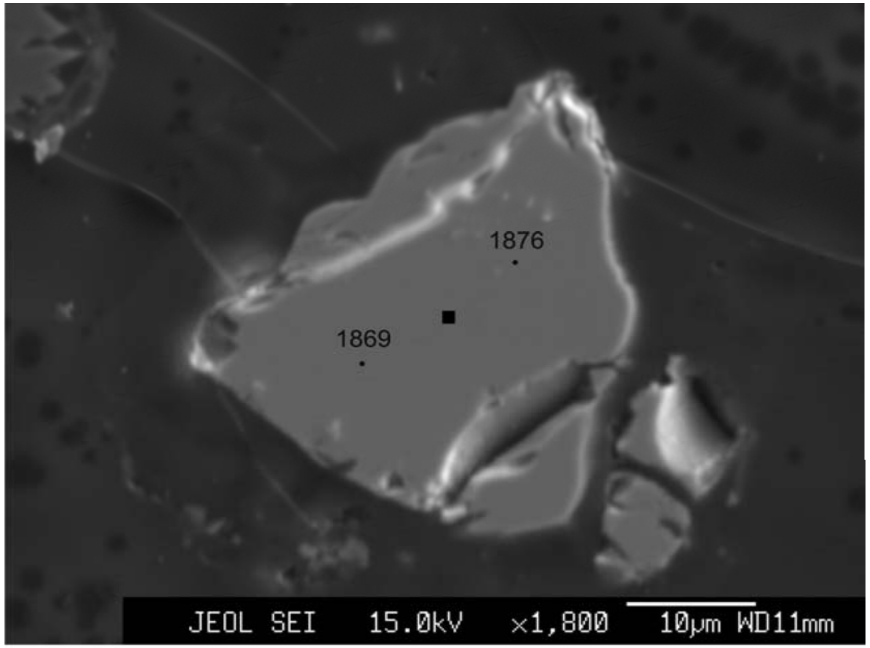
Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	9	1469	16410	0	1299	1299	1710	491
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	9	1158	13022	0	1048	1048	1737	483
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	9	5303	20790	1095	2104	2104	1825	7.92



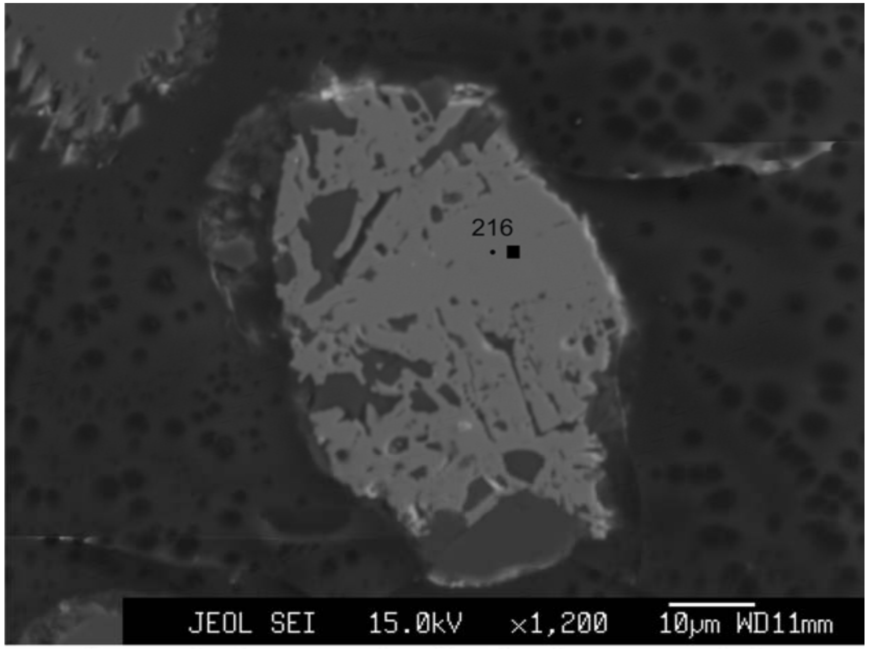
Rectangles denote points of major elements analyses

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	10	22675	36317	4738	4701	4701	1876	2.6
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	10	23341	38333	4621	4819	4819	1869	2.67



Rectangle denotes point of major elements analysis

Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	11	5266	994	2902	99	99	216	25.41



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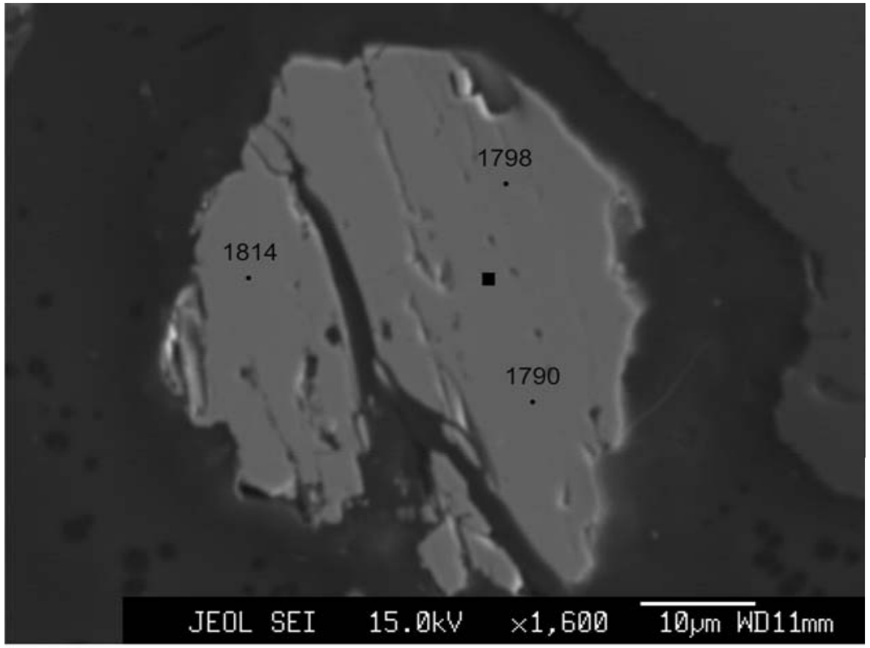
Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	12	1285	52439	1195	4726	4726	1793	7.86
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	12	1329	46628	920	4152	4152	1790	9.28
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	12	0	57578	2243	5544	5544	1814	4.99



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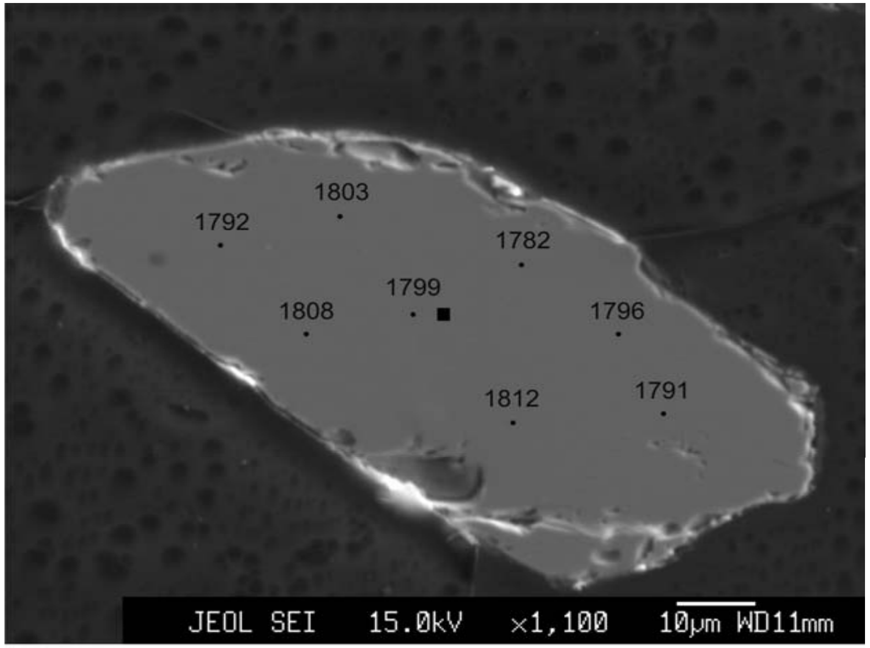
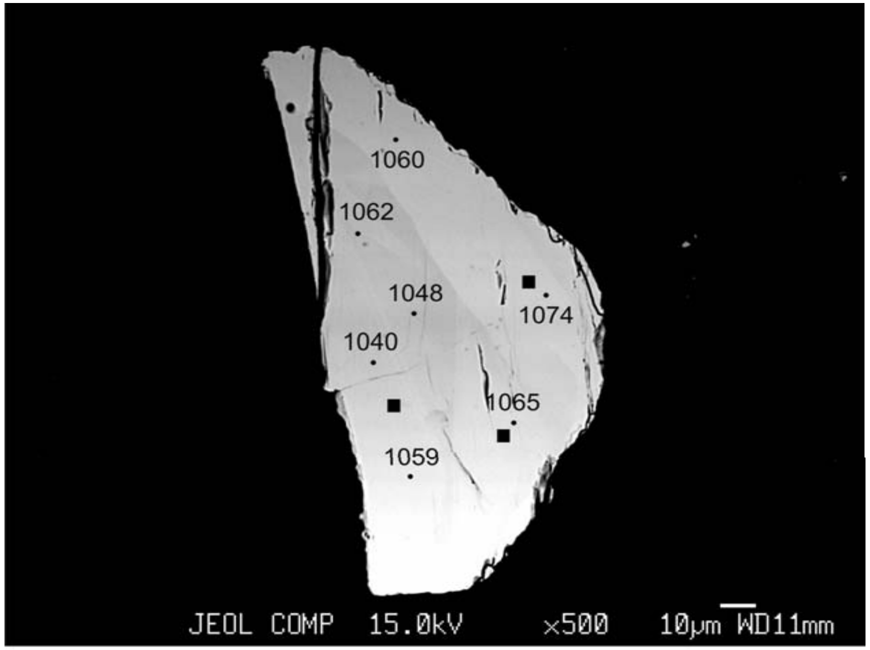
Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	13	1032	43666	3061	4585	4585	1799	3.61
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	13	966	42572	3086	4482	4482	1792	3.57
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	13	1123	44218	3143	4668	4668	1803	3.54
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	13	1113	44987	3371	4816	4816	1808	3.53
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	13	955	40914	2837	4321	4321	1812	3.79
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	13	992	45373	3176	4755	4755	1796	3.53
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	13	1031	39785	2792	4159	4159	1791	3.52
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	13	1038	47212	3291	4902	4902	1782	3.46



Rectangle denotes point of major elements analysis

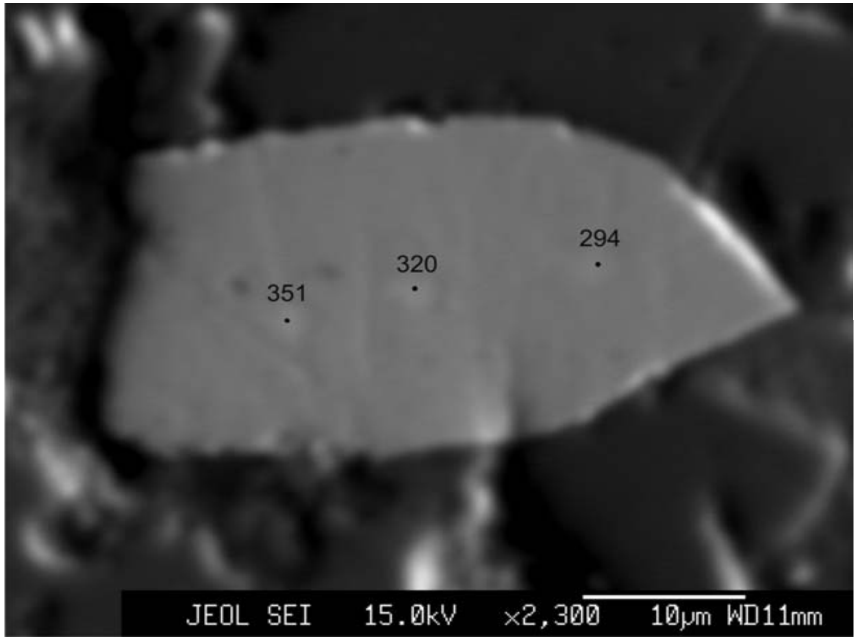
Well	Depth (m)	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	14	11746	46459	1763	2505	2505	1048	5.91
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	14	11026	63097	2892	3522	3522	1060	4.36
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	14	10402	63577	2888	3596	3596	1074	4.37
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	14	12154	48983	2074	2721	2721	1065	5.27
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	14	12515	44853	1992	2491	2491	1059	5.37
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	14	12500	43240	1985	2369	2369	1040	5.37
Peskowesk A99	2228.82	12/6/2007	PESK_A99_2228	14	13171	50700	2178	2812	2812	1062	5.13



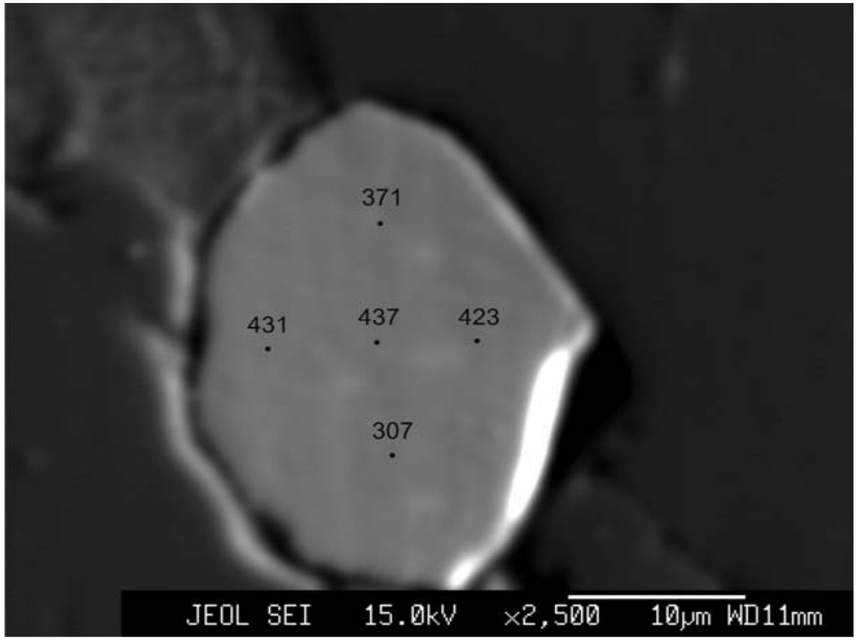
Rectangles denote points of major elements analyses

Tantallon M-41

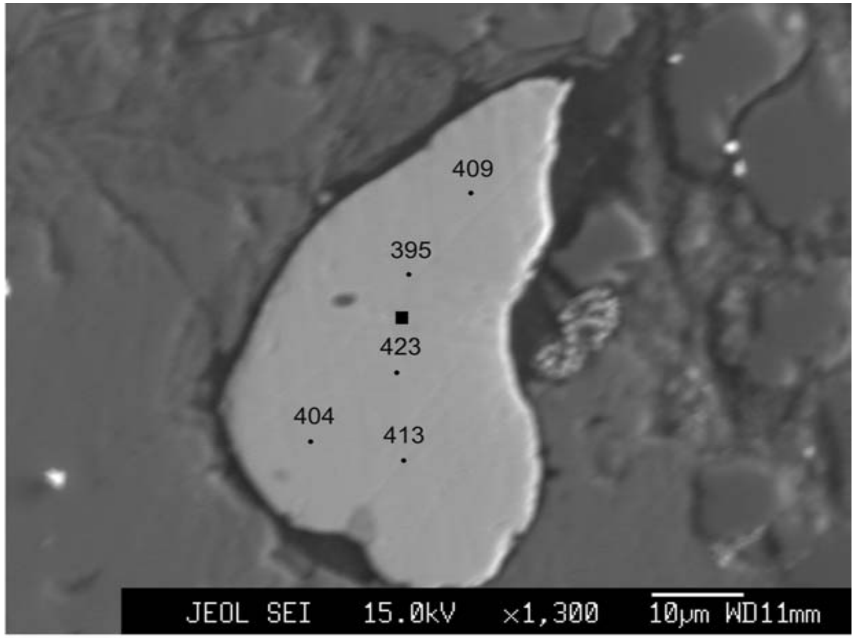
Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Tantallon	Missisauga	3/19/2007	M-41-3	1	4430	63724	750	1039	1039	351	11.17
Tantallon	Missisauga	3/19/2007	M-41-3	1	4006	30851	540	467	467	320	14.53
Tantallon	Missisauga	3/19/2007	M-41-3	1	3995	17044	602	249	249	294	17



Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Tantallon	Missisauga	3/19/2007	M-41-3	2	13428	29466	5675	794	794	371	4.97
Tantallon	Missisauga	3/19/2007	M-41-3	2	8310	26796	2538	687	687	437	6.07
Tantallon	Missisauga	3/19/2007	M-41-3	2	22049	33610	4343	653	653	307	6.63
Tantallon	Missisauga	3/19/2007	M-41-3	2	11964	31409	5588	957	957	431	4.28
Tantallon	Missisauga	3/19/2007	M-41-3	2	7925	26023	2451	645	645	423	6.34

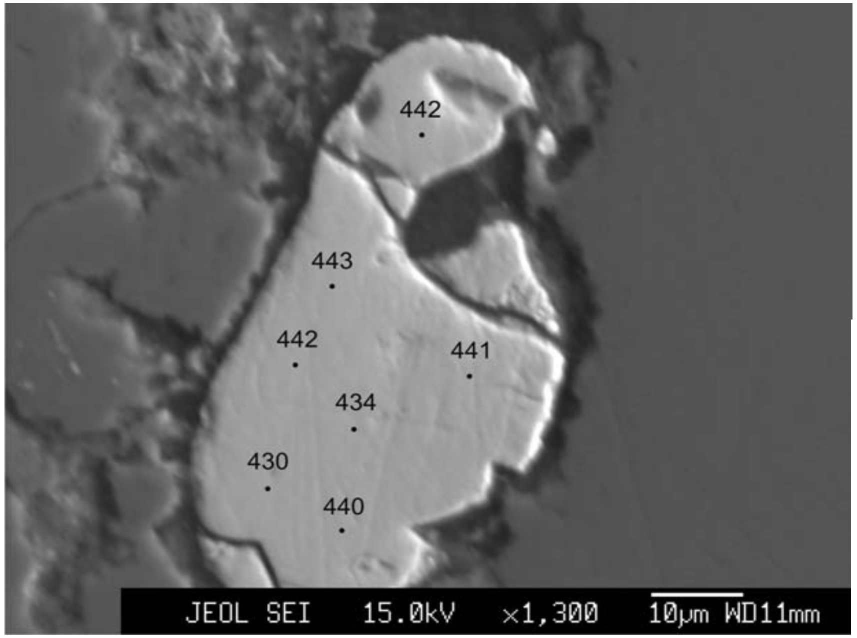


Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Tantallon	Missisauga	4/18/2007	M-41-16	1	9822	51014	3357	1174	1174	423	4.61
Tantallon	Missisauga	4/18/2007	M-41-16	1	9028	32872	1383	661	661	395	8.21
Tantallon	Missisauga	4/18/2007	M-41-16	1	16055	42062	5938	1125	1125	409	4.08
Tantallon	Missisauga	4/18/2007	M-41-16	1	11307	40913	6586	1127	1127	404	3.77
Tantallon	Missisauga	4/18/2007	M-41-16	1	15922	40642	5615	1089	1089	413	4.19



Rectangle denotes point of major elements analysis

Well	Stratigraphic unit	Date analysed	Sample number	Grain	Y (ppm)	Th (ppm)	U (ppm)	Pb cor (ppm)	Calc Pb (ppm)	Age (Ma)	1σ error (%)
Tantallon	Missisauga	4/18/2007	M-41-16	2	14721	77542	6945	1989	1989	443	3.11
Tantallon	Missisauga	4/18/2007	M-41-16	2	17091	58670	4987	1484	1484	442	3.86
Tantallon	Missisauga	4/18/2007	M-41-16	2	16903	72047	6632	1856	1856	442	3.26
Tantallon	Missisauga	4/18/2007	M-41-16	2	19922	83910	8676	2215	2215	441	2.92
Tantallon	Missisauga	4/18/2007	M-41-16	2	14829	55593	4265	1350	1350	434	4.14
Tantallon	Missisauga	4/18/2007	M-41-16	2	18810	73988	6975	1864	1864	430	3.28
Tantallon	Missisauga	4/18/2007	M-41-16	2	16879	73701	6638	1881	1881	440	3.26

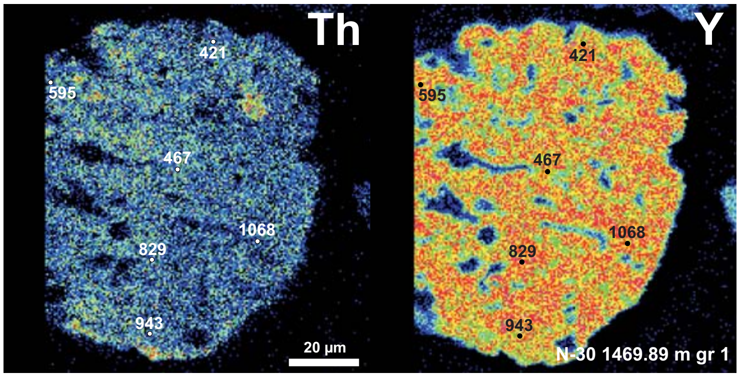


Appendix IV

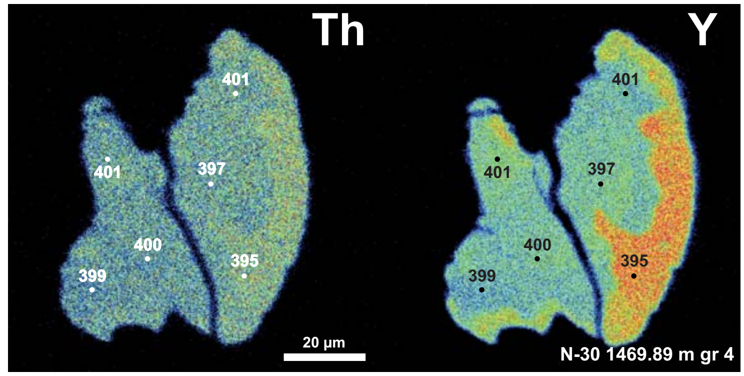
WDS X-ray maps of Th and Y in selected monazite grains

Images show:
UGI = unique grain identifier (Tables 4, 7), mean age (Tables 4, 7), and type (Table 9).

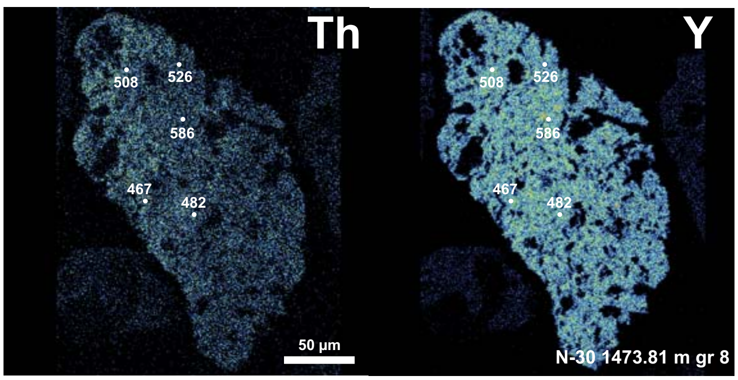
Naskapi N-30



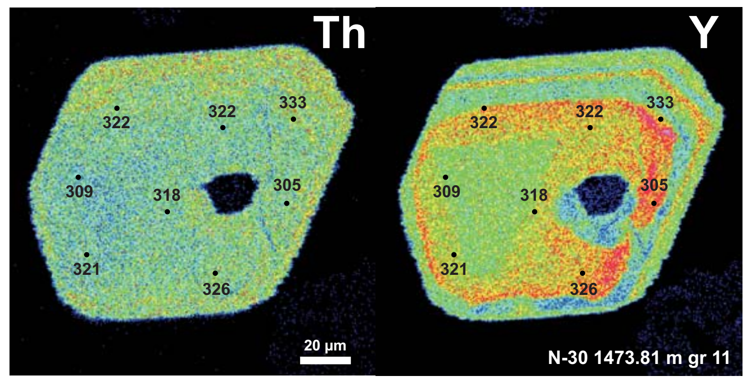
UGI: 1 Age: N/A Type 29



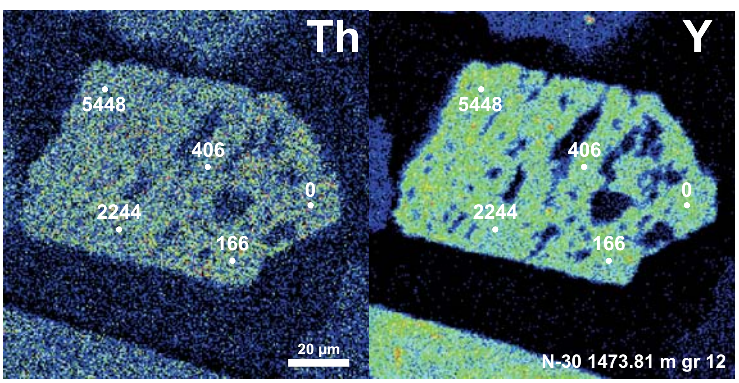
UGI: 3 Age: 399 Ma Type 37



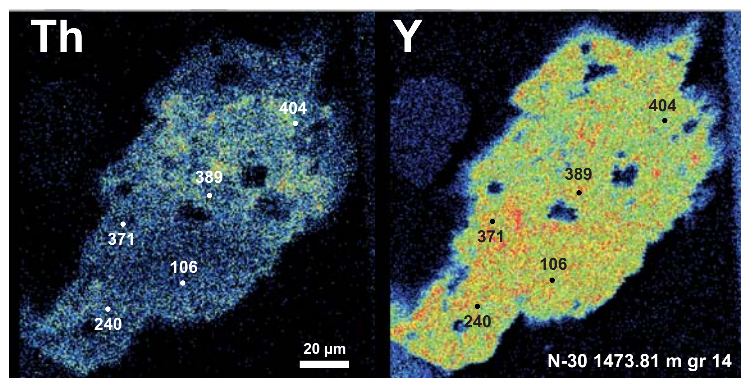
UGI: 23 Age: N/A Type 29



UGI: 15 Age: 319.5 Ma Type 5

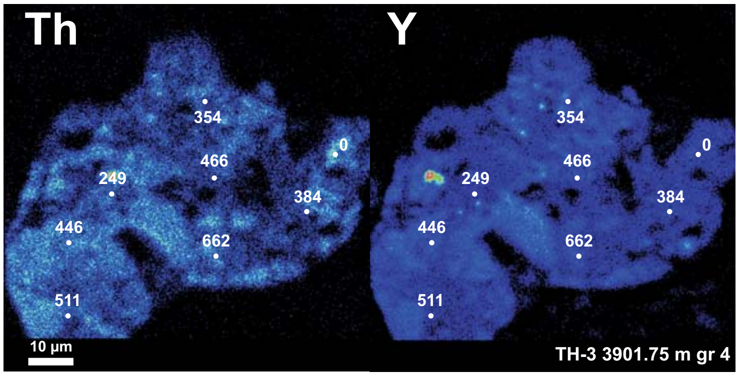


UGI: 26 Age: N/A Type 29

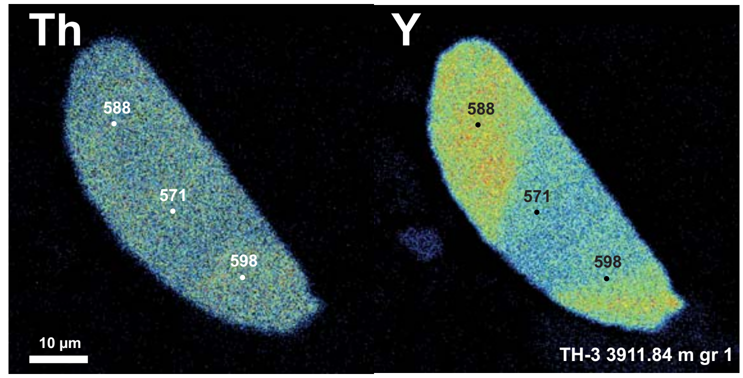


UGI: 28 Age: N/A Type 29

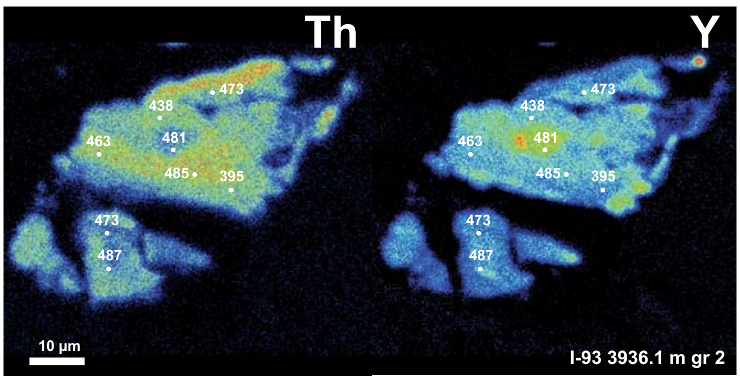
Thebaud Field



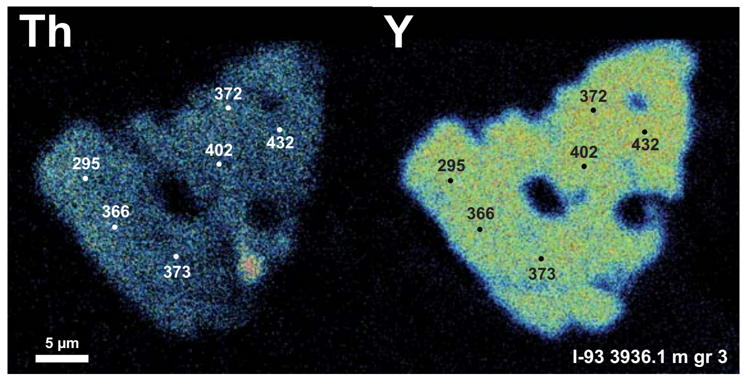
UGI: 70 Age: 452 Ma Type 13



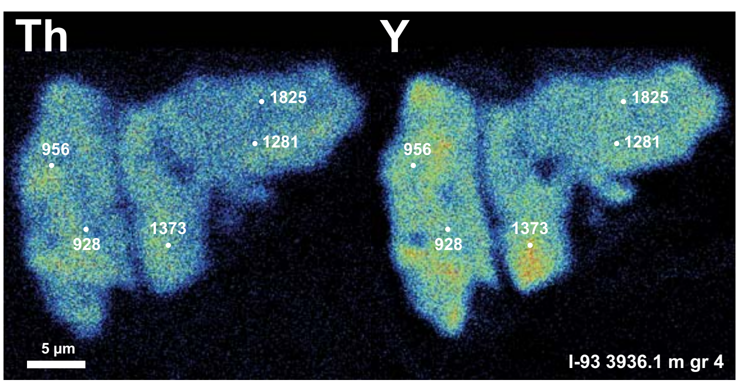
UGI: 64 Age: 586 Ma Type 16



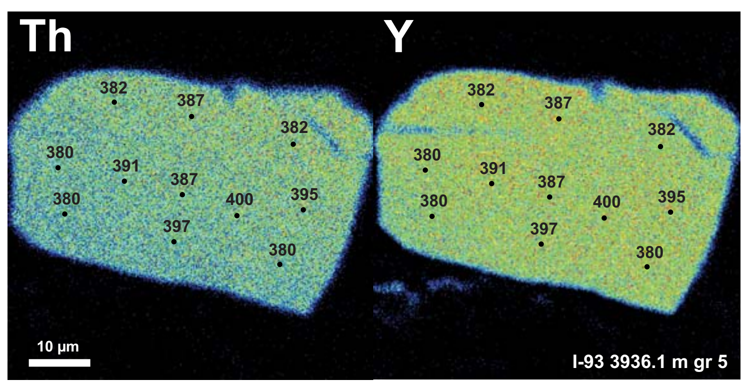
UGI: 74 Age: 462 Ma Type 14



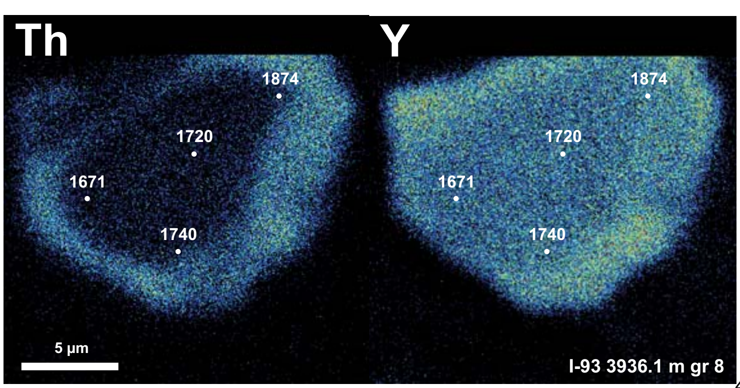
UGI: 75 Age: N/A Type 28



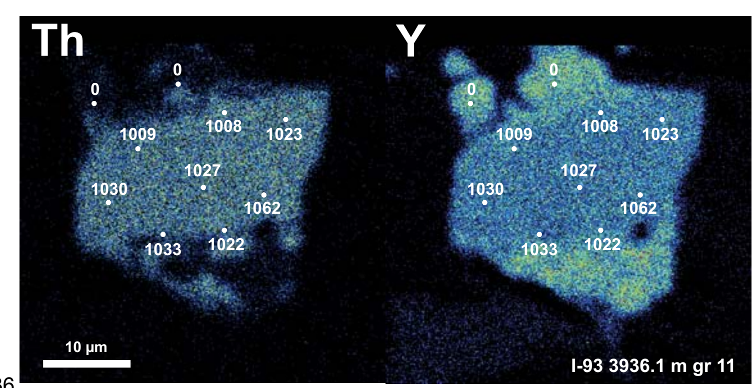
UGI: 76 Age: 1825 Ma Type 24



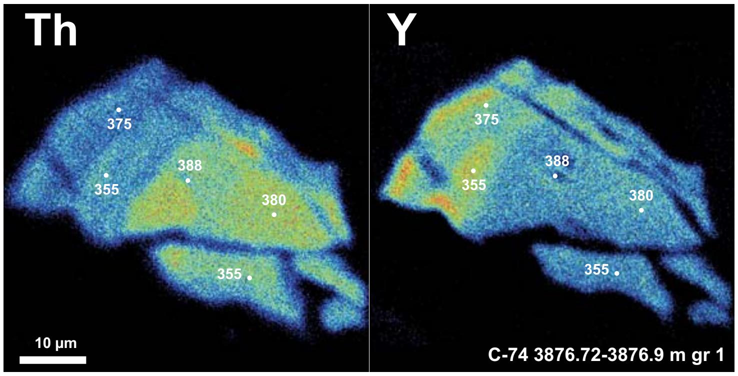
UGI: 77 Age: 387 Ma Type 9



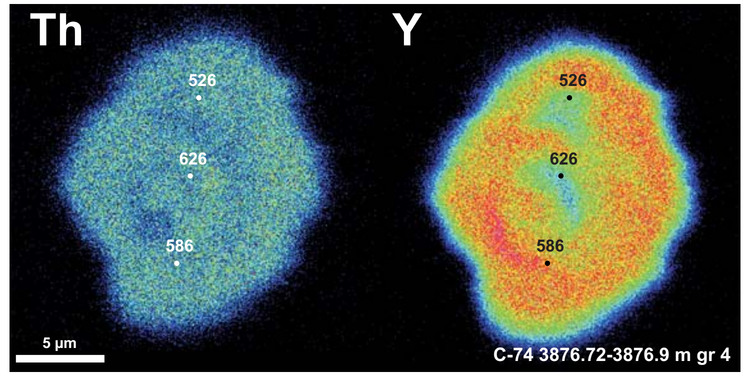
UGI: 80 Age: 1696 Ma Type 24



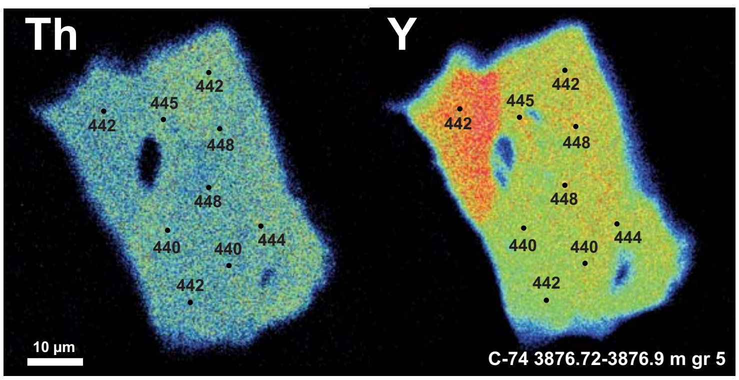
UGI: 83 Age: 1027 Ma Type 20



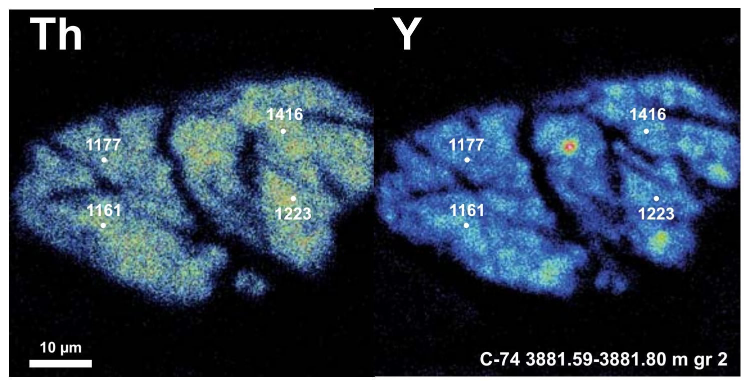
UGI: 89 Age: 371 Ma Type 7



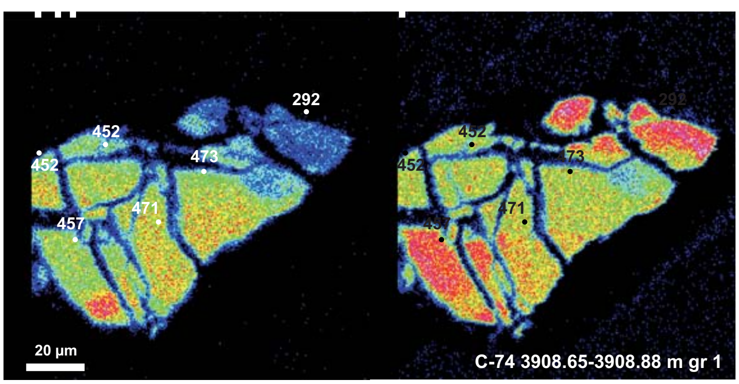
UGI: 92 Age: 370 Ma Type 7



UGI: 93 Age: 443 Ma Type 12

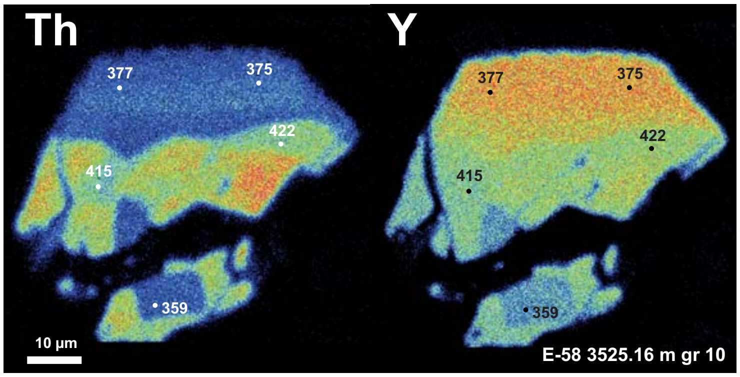


UGI: 88 Age: 1244 Ma Type 21

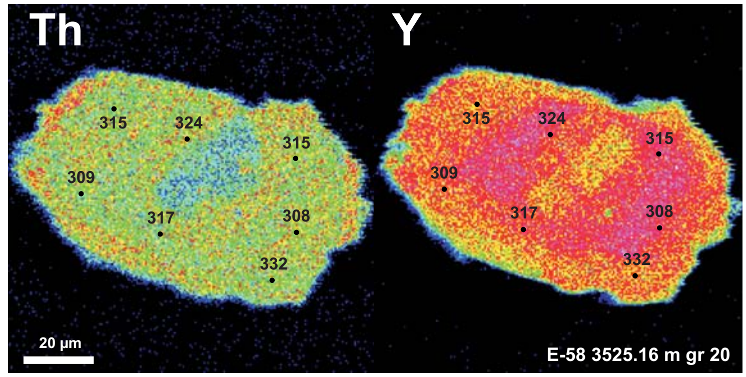


UGI: 84 Age: 461 Ma Type 13

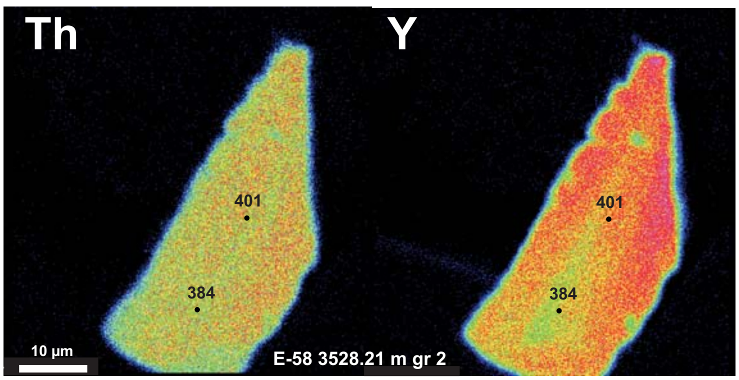
Glenelg E-58



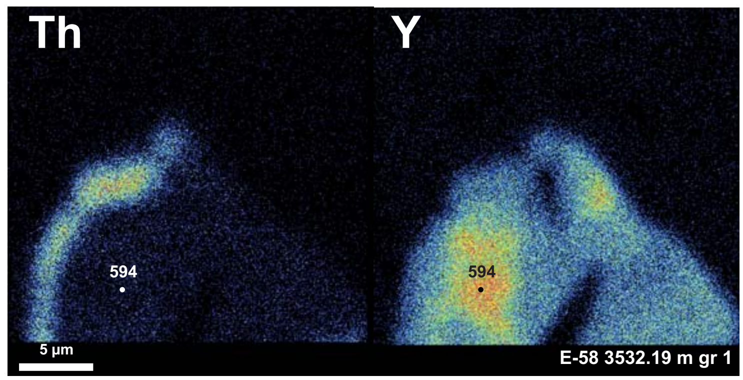
UGI: 104 Age: 372 Ma Type 7



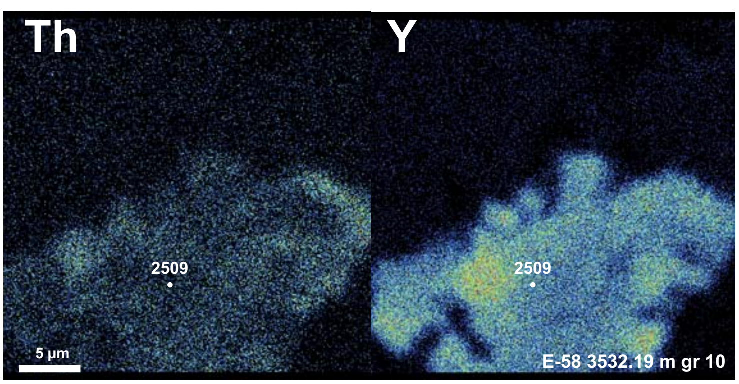
UGI: 114 Age: 317 Ma Type 5



UGI: 150 Age: 393 Ma Type 10

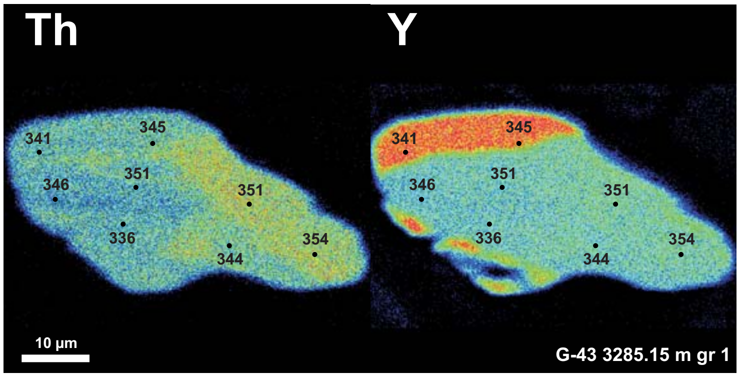


UGI: 136 Age: N/A Type 28

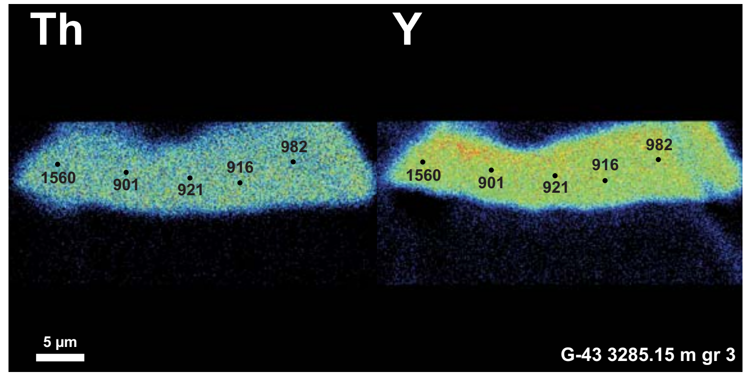


UGI: 145 Age: N/A Type 28

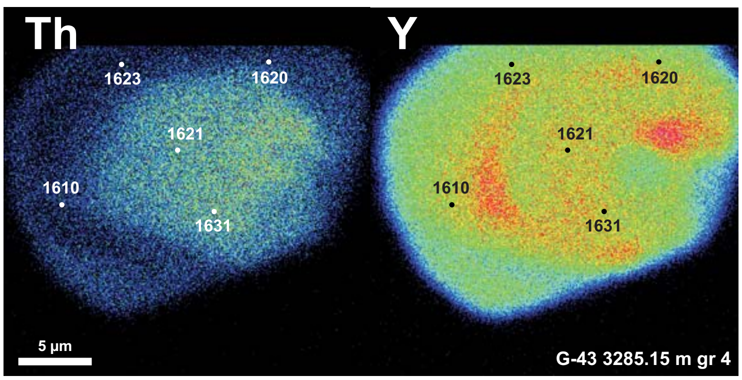
North Triumph G-43



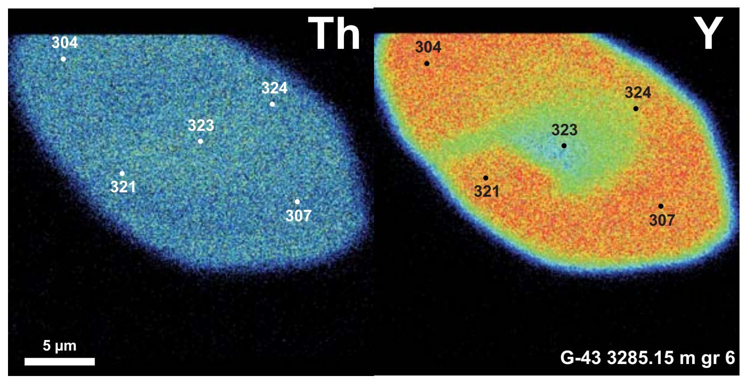
UGI: 162 Age: 346 Ma Type 6



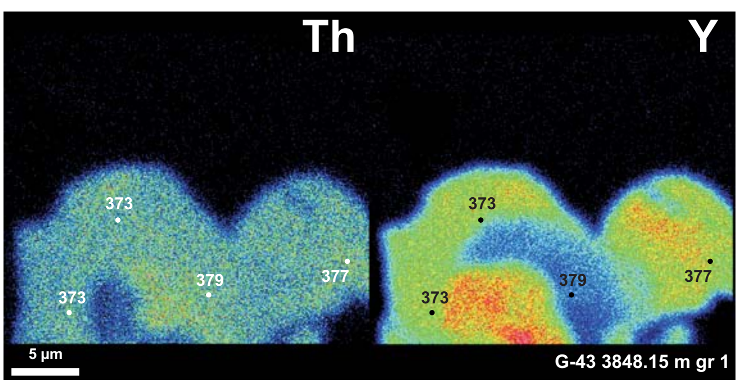
UGI: 164 Age: N/A Type 28



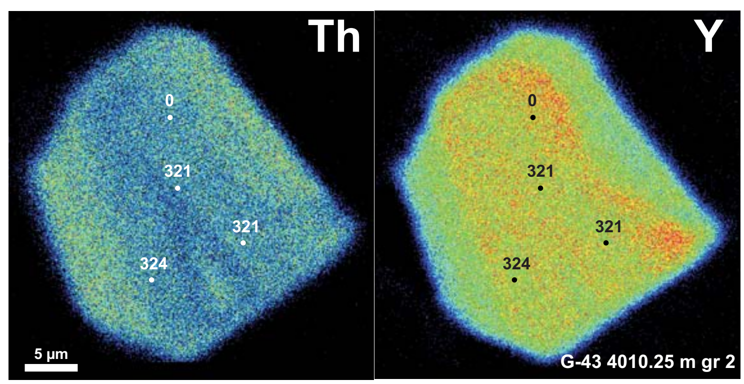
UGI: 165 Age: 1623 Ma Type 4



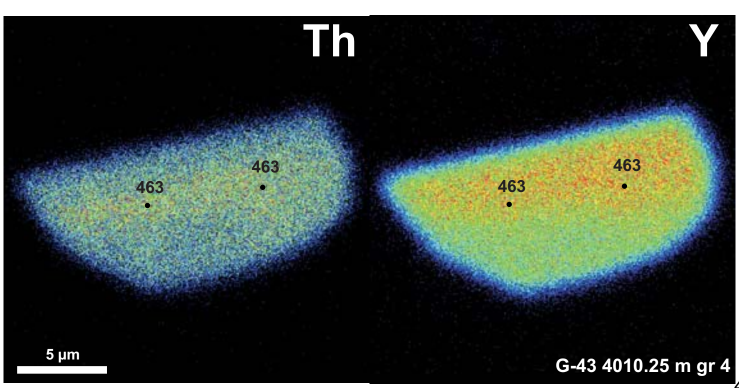
UGI: 167 Age: 316 Ma Type 5



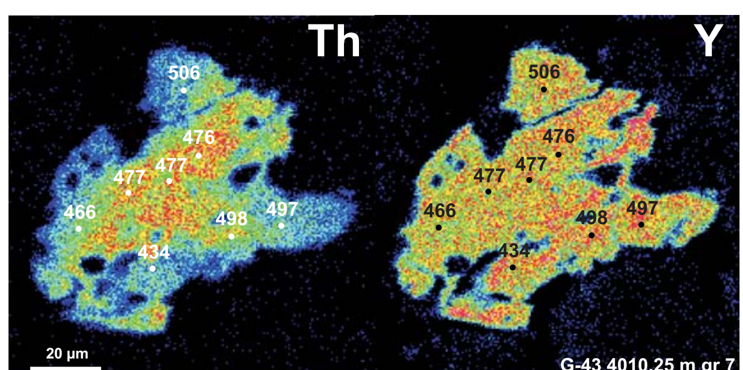
UGI: 196 Age: 376 Ma Type 1



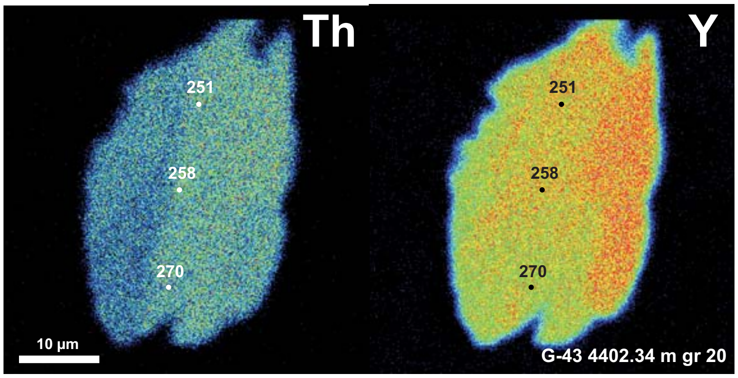
UGI: 188 Age: 322 Ma Type 5



UGI: 190 Age: 463 Ma Type 13

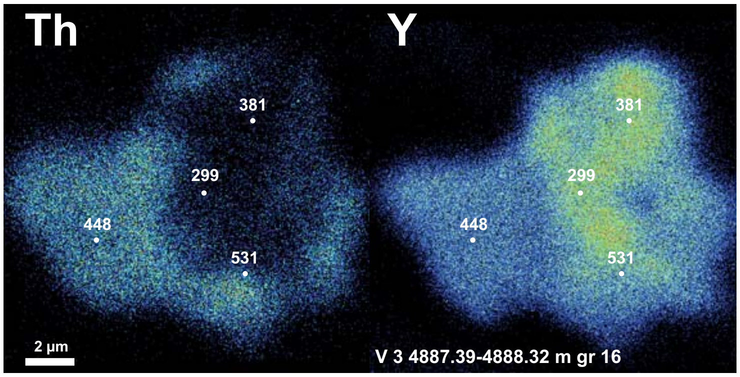


UGI: 193 Age: 479 Ma Type 7

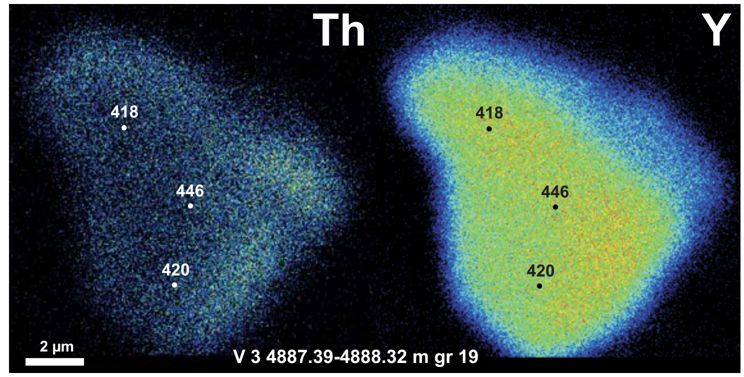


UGI: 215 Age: 260 Ma Type 3

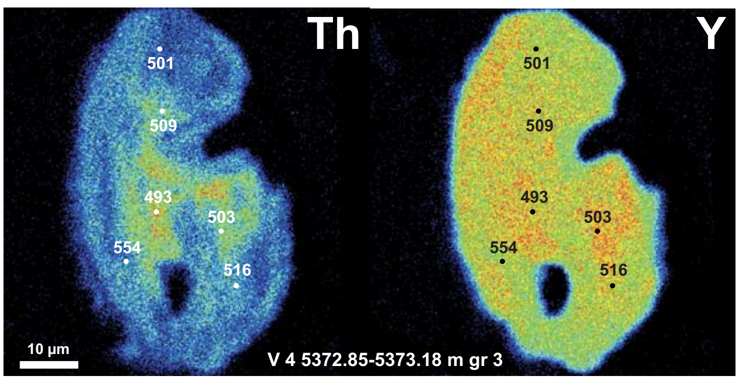
Venture Field



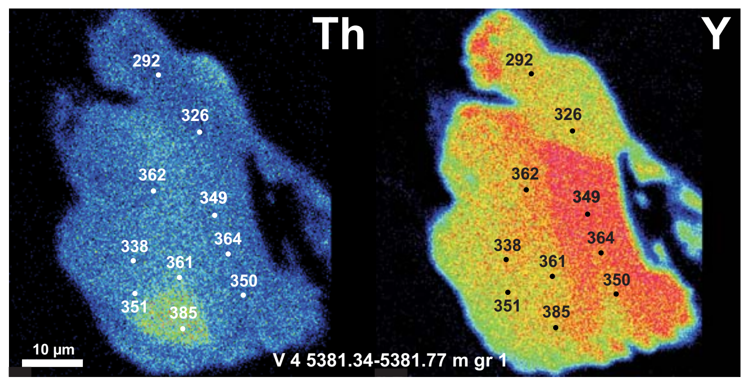
UGI: 230 Age: 490 Ma Type 14



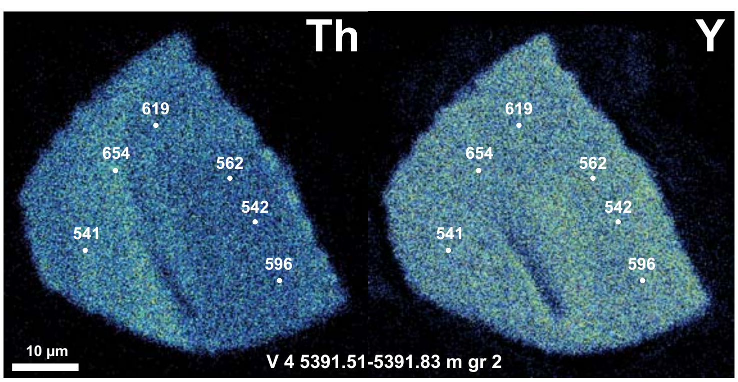
UGI: 231 Age: 437 Ma Type 12



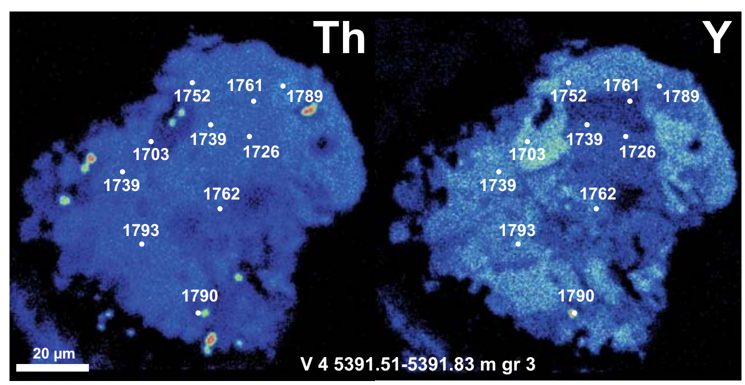
UGI: 237 Age: 513 Ma Type 15



UGI: 245 Age: 348 Ma Type 5

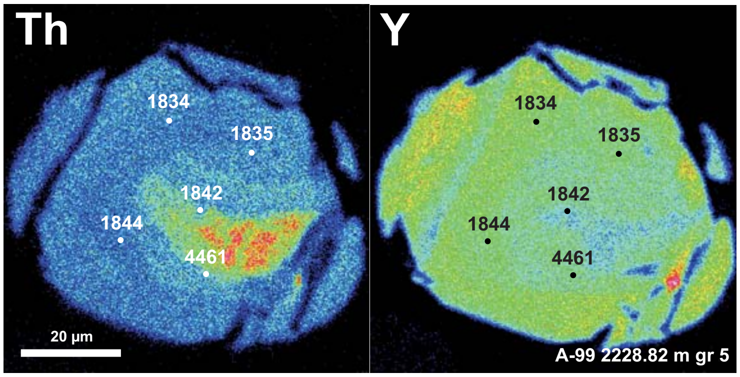


UGI: 243 Age: N/A Type 28

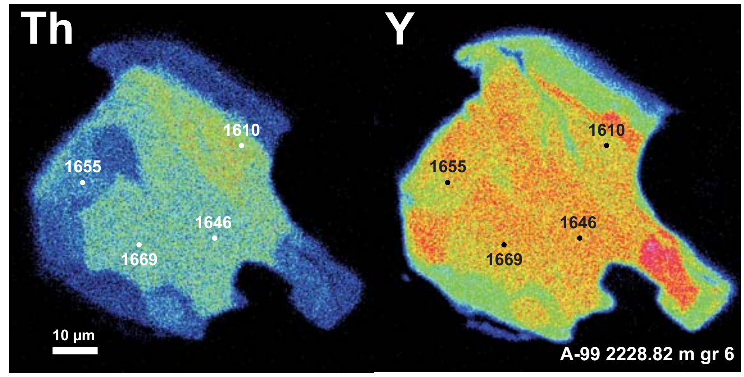


UGI: 244 Age: 1755 Ma Type 26

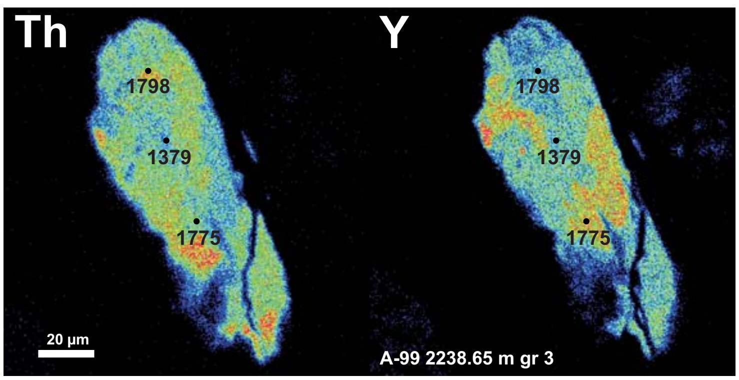
Peskowesk A-99



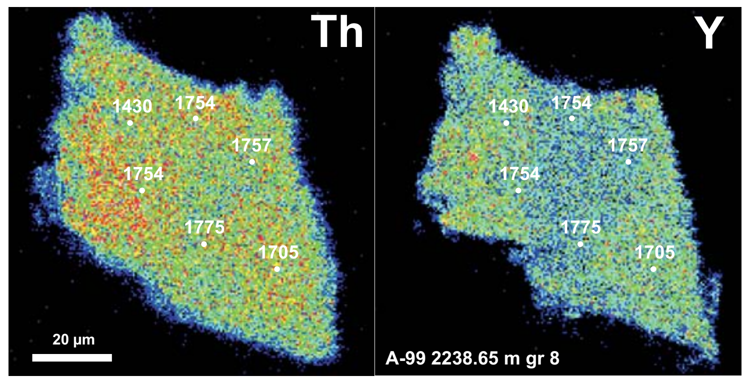
UGI: 273 Age: 2363 Ma Type 40



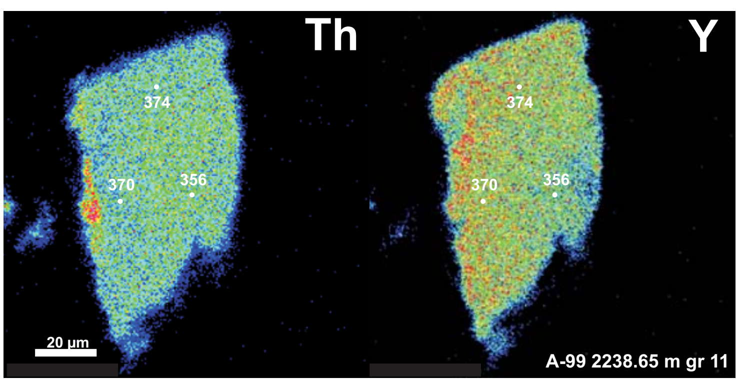
UGI: 274 Age: 1645 Ma Type 23



UGI: 252 Age: 1621 Ma Type 23



UGI: 257 Age: 1696 Ma Type 8



UGI: 259 Age: 367 Ma Type 7

Appendix V

Secondary electron (SEI) and backscattered electron (COMP) images of monazite grains with SEM EDS analyses used to identify the mineralogy of inclusions, from Naskapi N-30, Glenelg E-58 and Peskowesk A-99

NASKAPI N-30

Relative abundance

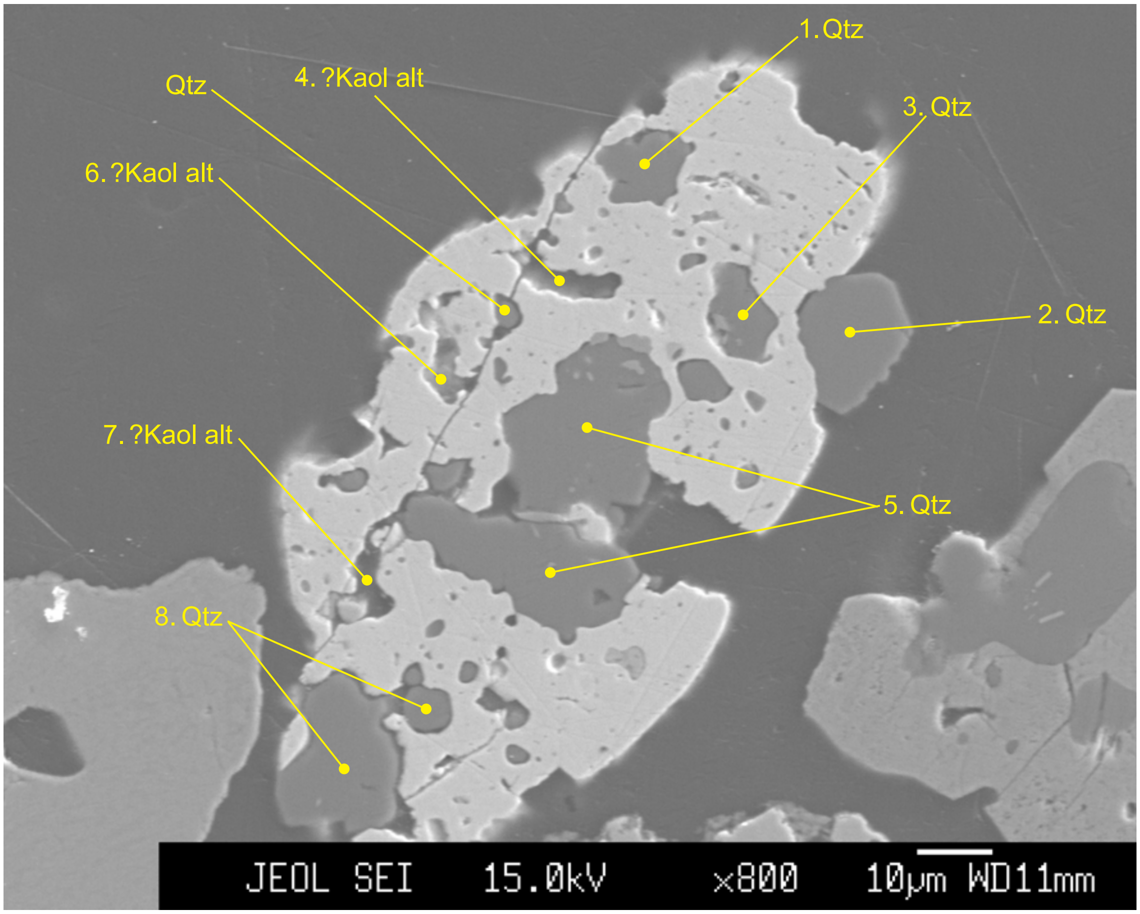
Sample #	Grain #	Position	O	Si	Al	K	Fe	Mg	Na	Ti	S	Ca	Cl	F	Ni	C	Ag	As	V	Mo	Mn	W	Br	Y	U	P	La	Nd	Ce	Sm	Pr	Gd	totals	potential minerals	notes
N30 1469.89	5	1	57.66	50.61																													108.26	Quartz	
N30 1469.89	5	2	58.15	51.04																													109.2	Quartz	
N30 1469.89	5	3	54.6	47.62						0.53																							102.75	Quartz	
N30 1469.89	5	4	10.7	6.84	3.27																												20.82	Kaol alt?	
N30 1469.89	5	5	58.8	51.61																													110.41	Quartz	
N30 1469.89	5	6	4.4	2.52	1.72																												8.63	Kaol alt?	
N30 1469.89	5	7	12.79	9.73	1.91																												24.44	Kaol alt?	
N30 1469.89	5	8	54.61	47.93																													102.54	Quartz	
N30 1469.89	6	1	57.81	50.74																													108.55	Quartz	
N30 1469.89	6	2	32.96	28.93																													61.88	Quartz+	
N30 1469.89	6	3	14.16	8.44	4.98	0.55																											28.13	Kaol (after Ms?)	
N30 1469.89	6	4	32.54	17.81	13.12					0.21	0.29																						63.98	Kaol +TiO2	
N30 1469.89	6	5	42.54	22.51	17.13	6.33	0.4		0.71																								89.61	Mica? (Ms)	
N30 1469.89	6	6	22.95	12.82	9.32	0.28																											45.37	Kaol (alt Ms?)	
N30 1469.89	6	7	9.32	5.29	3.33						0.22																						18.16	Kaol (It)	
N30 1469.89	6	8	23.14	12.9	8.5	3.4	0.63																										48.58	Ms (It)	
N30 1469.89	6	9	45.95	39.71	0.8																												86.46	Quartz	
N30 1469.89	6	10	33.32	18.53	12.65	3.18	1.09																										68.77	Ms	
N30 1469.89	6	11	10.46	5.9	3.97	0.6	0.26																										21.2	Kaol (VLT)	
N30 1469.89	6	12	30.4	16.92	12.17	0.91	0.43																										60.83	Ms?	
N30 1469.89	6	13	37.78	0.26						55.63									0.4														94.08	Rutile (after Illmanite)	
N30 1473.81	12	1	26.56	14.29	11.51				0.14																								52.49	Kaol (after Albite)	
N30 1473.81	12	2	55.93	49.09																													105.01	Quartz	
N30 1473.81	12	3	39.74	21.42	16.9		0.8		0.23																								79.09	Kaol	
N30 1473.81	12	4	32.24	17.62	11.49	5.89	1.6	0.44																									69.28	Ms	
N30 1473.81	12	5	25.06	17.59	11.16	5.93	1.59	0.42																									61.75	Quartz	
N30 1473.81	12	6	23.26	13.25	7.53	4.02	0.92	0.58																									49.56	Ms	6 & 9 are from one incl
N30 1473.81	12	7	30.27	16.21	11.59	5.23	1.48																										64.78	?	
N30 1473.81	12	9	39.93	21.73	16.59	0.32	0.87		0.3																								79.73	MS?	6 & 9 are from one incl

GLENELG E-58

Sample #	Grain #	Position	O	Si	Al	K	Fe	Mg	Na	Ti	S	Ca	Cl	F	Ni	C	Ag	As	V	Mo	Mn	W	Br	Y	U	P	La	Nd	Ce	Sm	Pr	Gd	totals	potential minerals	notes
E58-13	3	1	35.46	30.9	0.24	0.19																											66.78	Quartz+	
E58-13	3	2	41.67	35.17	0.61	0.12				1.55																							79.12	Quartz	
E58-13	3	3	27.71	15.43	8.48	5.46	2.46	0.51		0.64																							60.69	Ms	
E58-13	3	4	34.1	29.93																													64.03	Quartz	
E58-13	3	5	27.35	15.78	7.48	5.14	3.91	0.83						2.05																			62.55	Ms?/ Alt Bt	
E58-13	3	6	53.05	45.01	0.64		1.27			1.26																							101.24	Quartz + Fe + Ti?	
E58-13	3	7	47.14	40.75	0.63		0.5																										89.02	Quartz	
E58-13	3	8	16.49	8.96	4.97	3.35	1.34													1.58													36.69	Ms? Alt	
E58-13	3	9	24.96	21.91																													46.87	Quartz	
E58-13	3	10	22.86	12.82	8.33	4.15																											48.16	Ms / K-Fds	
E58-13	3	11	33.3	29.23																													62.52	Quartz	
E58-13	3	12	48.62	42.68																													91.3	Quartz	
E58-13	3	13	34.99	30.72																													65.71	Quartz	
E58-13	3	14	33.94	29.2	0.48		0.89																										64.51	Quartz+	
E58-13	3	15	30.79	25.31	1.77	0.69	0.84																										59.38	Quartz+	
E58-13	13	1	19.1	10.93	6.62	2.96		0.22																									39.83	Quartz (VLT)	
E58-13	13	2	8.5	3.35	1.88	0.25	0.84			3.89		0.31																					19.03	VLT	
E58-13	13	3	55.5	47.25	1.13	0.26	2.13																										106.26	Quartz + Al + Fe?	
E58-13	13	4	20.98	14.43	2.52	0.54	6.2	0.42				0.36	0.2																				45.65	Quartz+	
E58-13	13	5	32.29	28.34																													60.64	Quartz	
E58-13	13	6	8.67	4.5	2.58	0.63	2.79	0.26				0.36																					19.79	VvLT	
E58-13	13	7	3.35	2.29	0.7	0.56																											6.9	VvLt	
E58-13	13	8	33.2	29.14																													62.34	Quartz	
E58-13	13	9	30.59	17.06	11.19	5.07	0.6																										64.51	Ms	
E58-13	13	10	35.19	30.85		0.19																											66.22	Quartz	
E58-13	13	11	57.52	1.12	0.31		39.53				29.23							2.76															130.48	Pyt	
E58-13	13	12	23.97	18.12			1.28			2.23	0.98																						46.57	Quartz + Ti + Fe?	
E58-13	17	1	58.4	45.78	6.41	2.14			0.3																								113.02	Quartz + Kaol	
E58-13	17	2	27.06	20.57	3.45	1.4		0.26				0.25																					52.99	Quartz +	
E58-13	17	3	49.67	43.05	0.63	0.29																											93.64	Quartz?	
E58-13	17	4	43.9	38.53																													82.43	Quartz	
E58-13	17	5	24.23	13.29	7.22	2.68	4.18	0.73	0.45			0.71	0.38																				53.87	Kaol	
E58-13	17	6	38.75	34.01																													72.76	Quartz	
E58-13	17	7	25.97	15.46	8.29	4.8																											54.42	K-Fds	
E58-13	17	8	48.18	42.29																													90.47	Quartz	
E58-13	17	9	62.07	54.48																													116.56	Quartz	
E58-13	17	10	40.56	34.27	1.33	0.86	0.55																										77.56	Quartz +	
E58-13	17	11	33.07	18.51	10.84	3.91	2.58	0.65	0.56			0.48	0.52	2.32																			73.44	K-Fds + Kaol	
E58-13	17	12	21.63	13.33	3.21	0.33	9.33	0.65	0.58			0.46	0.85				0.44																50.83	Chl / Chltzed Fds?	
E58-13	17	13	33.82	28.93	0.84	0.54																											64.13	Kaol + / Alt K-Fds?	
E58-13	17	14	21.35	18																1.68													41.03	Quartz	
E58-13	17	15	19.47	12.26	5.2	2.3	0.65	0.34																									40.22	K-Fds/ Ms	
E58-13	17	16	26.47	22.48	0.86	0.46																											50.27	Quartz+	
E58-13	17	17	29.57	12.58	7.46	1.85	20.55	2.4				1.36	0.73								0.75												77.25	?	
E58-13	17	18	24.95	15.01	8.23	2.53																											50.72	?	

PESKOWESK A-99

Sample #	Grain #	Position	O	Si	Al	K	Fe	Mg	Na	Ti	S	Ca	Cl	F	Ni	C	Ag	As	V	Mo	Mn	W	Br	Y	U	P	La	Nd	Ce	Sm	Pr	Gd	totals	potential minerals	notes
PESK-A99-2228	7	1	69.34	60.86																													130.2	Quartz	
PESK-A99-2228	7	2	63.26	55.52																													118.78	Quartz	
PESK-A99-2228	7	3	73.06	64.13																													137.19	Quartz	
PESK-A99-2228	7	4	5.43	3.19	1.63							0.64																					10.79	???	
PESK-A99-2228	7	5	10.82																							2.05	13.94		33.69				60.49	Pitting	
PESK-A99-2228	7	6	44.27	30.54	7.99				6.79																								89.59	Albite	
PESK-A99-2228	7	7	47.83	41.89																													89.81	Quartz	
PESK-A99-2228	7	8	40.54	35.51																													76.13	Quartz	
PESK-A99-2228	7	9	56.72	49.78																													106.5	Quartz	
PESK-A99-2228	7	10	48.07	33.14	8.94				6.8																								96.94	Albite	
PESK-A99-2228	7	11	71.38	49.71	12.91				8.82			0.48																					143.3	Albite	
PESK-A99-2228	7	12	77.99	68.45																													146.44	Quartz	
PESK-A99-2228	7	13	23.18	12.89	8.68	0.28	0.8					1.22	0.37																				47.42	Kaol +	
PESK-A99-2228	7	14	42.47	20.63	13.6		1.93	0.7	0.46	8.08		0.72	0.69																				89.28	Kaol + Opaques	
PESK-A99-2228	7	15	45.15	24.69	17.95	0.55	0.75			0.45		1.08	0.95																				91.55	Kaol	
PESK-A99-2228	7	16	70.09	56.08	5.34	0.98	1.18			1.35																							135.03	Quartz + Kaol++	
PESK-A99-2228	11	1	74.78	34.97	30		15.66	4.73	1.91																								162.05	Fds + Chl	
PESK-A99-2228	11	2	45.67	37.65			1.7				1.25	0.76					1.39																88.41	Quartz	
PESK-A99-2228	11	3	56.38	49.37								0.35																					106.1	Quartz +	
PESK-A99-2228	11	4	36.69	19.07	14.11	1.14	1.23				1.15	0.26																					73.65	Ms / Fds	
PESK-A99-2228	11	5	14.2	6.88	4.06	0.68	1.91				1.21	0.61																					29.56	???	
PESK-A99-2228	11	6	104.27													24.76						3.49		2.76		14.78	7.89	41.03	32.45	17.25		7.04	255.7	Pitting	
PESK-A99-2228	11	7	74.02	63.98							0.64					0.44																	139.08	Quartz	
PESK-A99-2228	11	8	14.8	11.4													3.09					6.06											35.34	Quartz??	
PESK-A99-2228	11	9	5.69	3.39								0.48					0.32					3.62		0.84	1.83								17.16	Quartz? + Monazite	
PESK-A99-2228	11	10	57.67	50.62																													108.29	Quartz	
PESK-A99-2228	11	11	4.37	1.82							1.36					0.64							0.6										8.79	???	
PESK-A99-2228	11	12	44.42	33.71	3.91	0.38	1.24				1.21	0.48			0.36																		85.7	Quartz +	
PESK-A99-2238	16	1	71.31	37.39	28.83	10.07	0.86		1.17	0.53																							150.17	Ms	
PESK-A99-2238	16	2	69.15	36.06	27.41	8.92	2.49		0.76	1.33																							146.12	Ms	
PESK-A99-2238	16	3	7.24	2.85	1.86	0.63						0.65	2.24		7.15																		22.61	???	
PESK-A99-2238	16	4	11.89	10	0.48	0.33																											22.71	???	
PESK-A99-2238	16	5	43.67	34.92	4.03	1.46																											84.08	Quartz + Fds	
PESK-A99-2238	16	6	13.8	11.9								0.6																					26.3	Quartz	
PESK-A99-2238	16	7	62.23	41.71	15.42	2.73	0.57		0.83				0.5																				123.97	K-Fds	
PESK-A99-2238	16	8	16.54	8.57	5.72	0.48						0.56	0.92		5.04																		37.83	Kaol	
PESK-A99-2238	16	9	92.16													21.05						2.19				13.84	33.72	11.94	53.98		3.43		232.31	Monazite	
PESK-A99-2238	16	10	4.94	1.5	0.84	0.49							2.9		8.74																		19.41	???	



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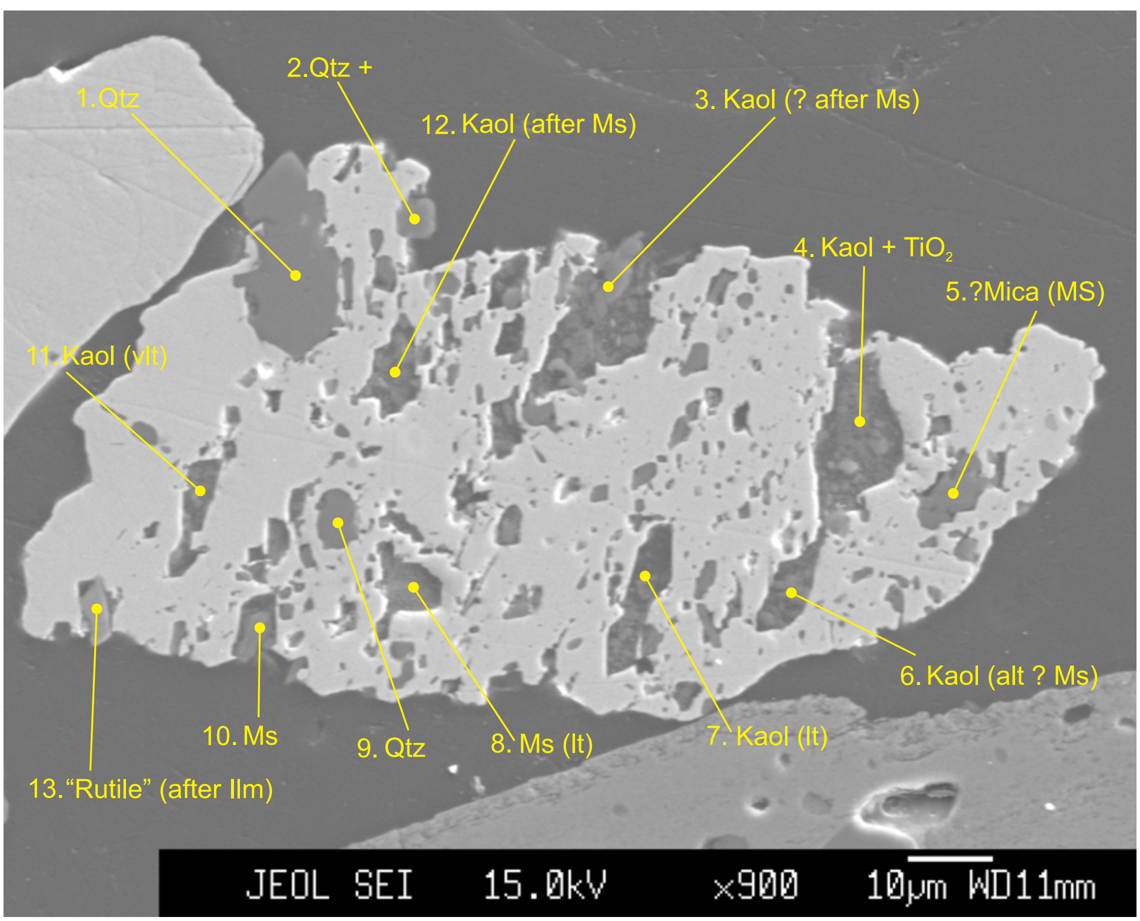

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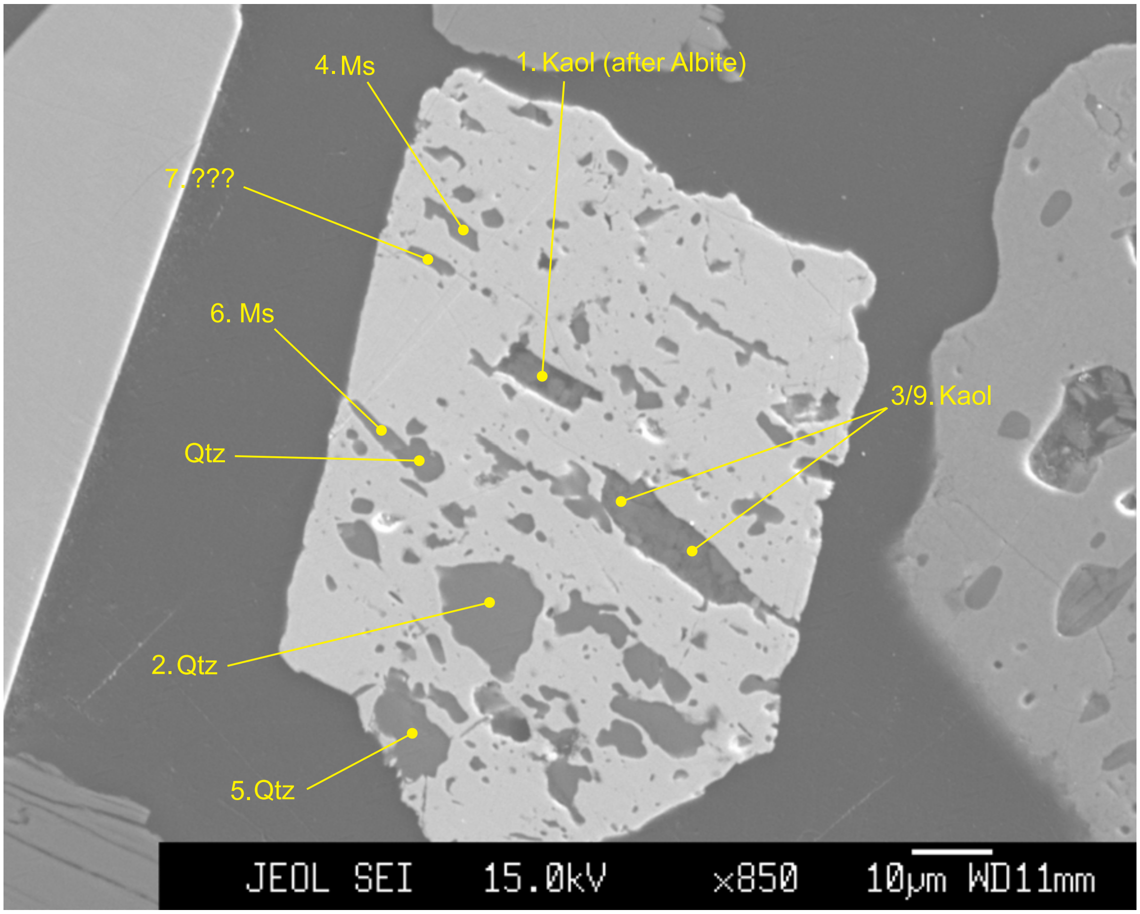

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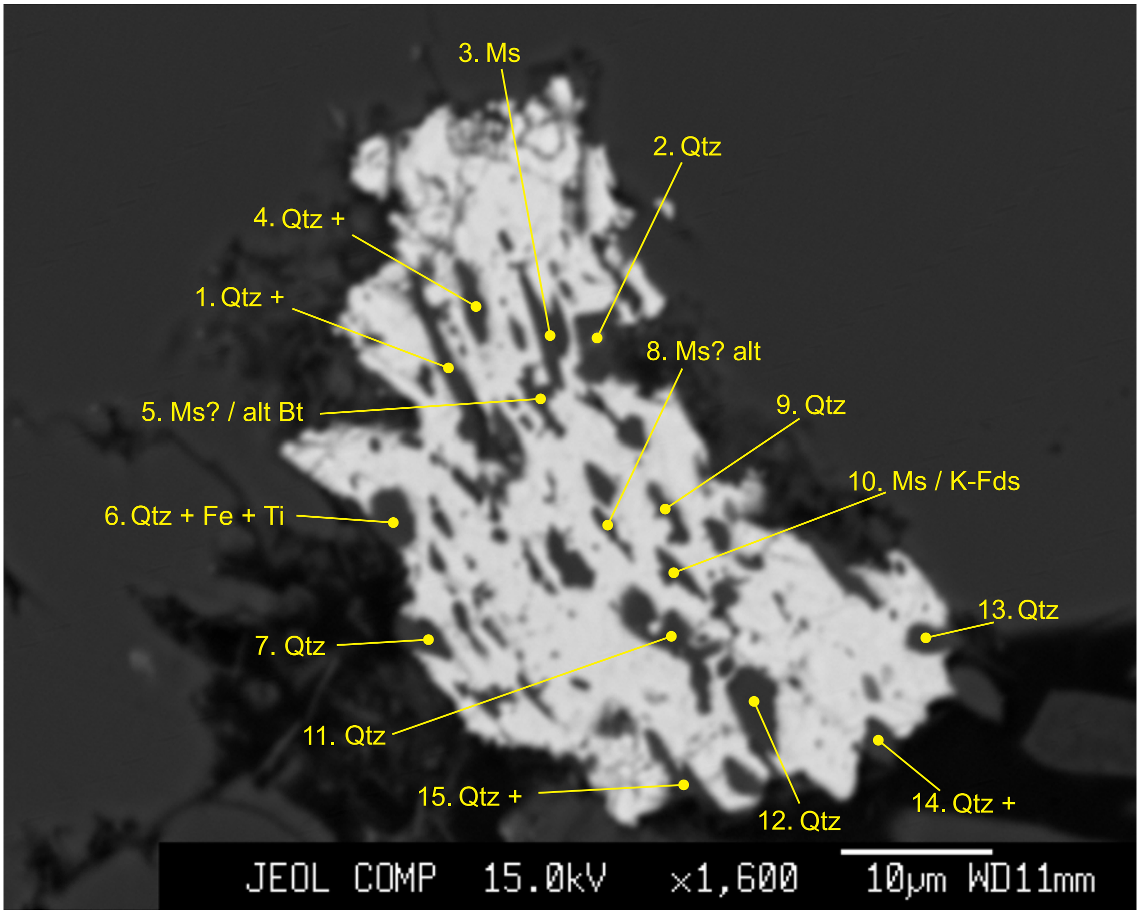
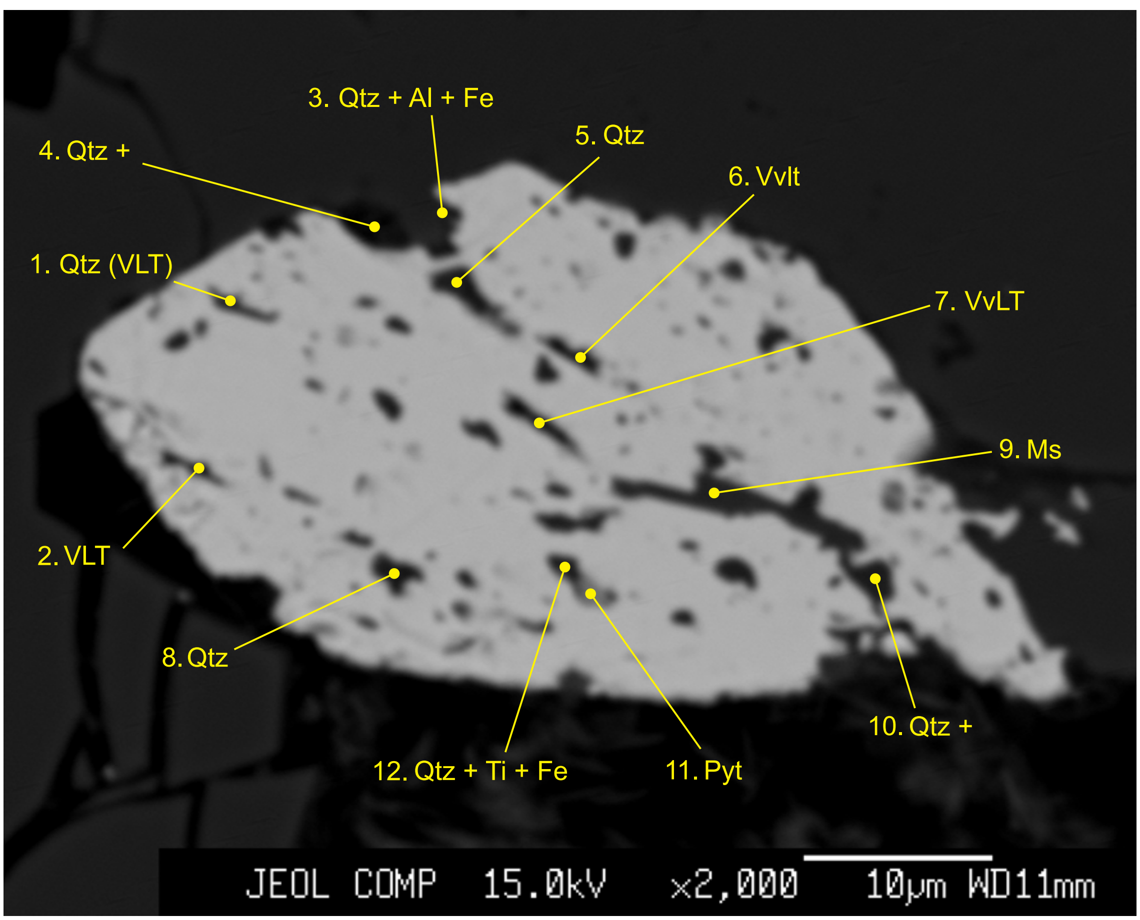
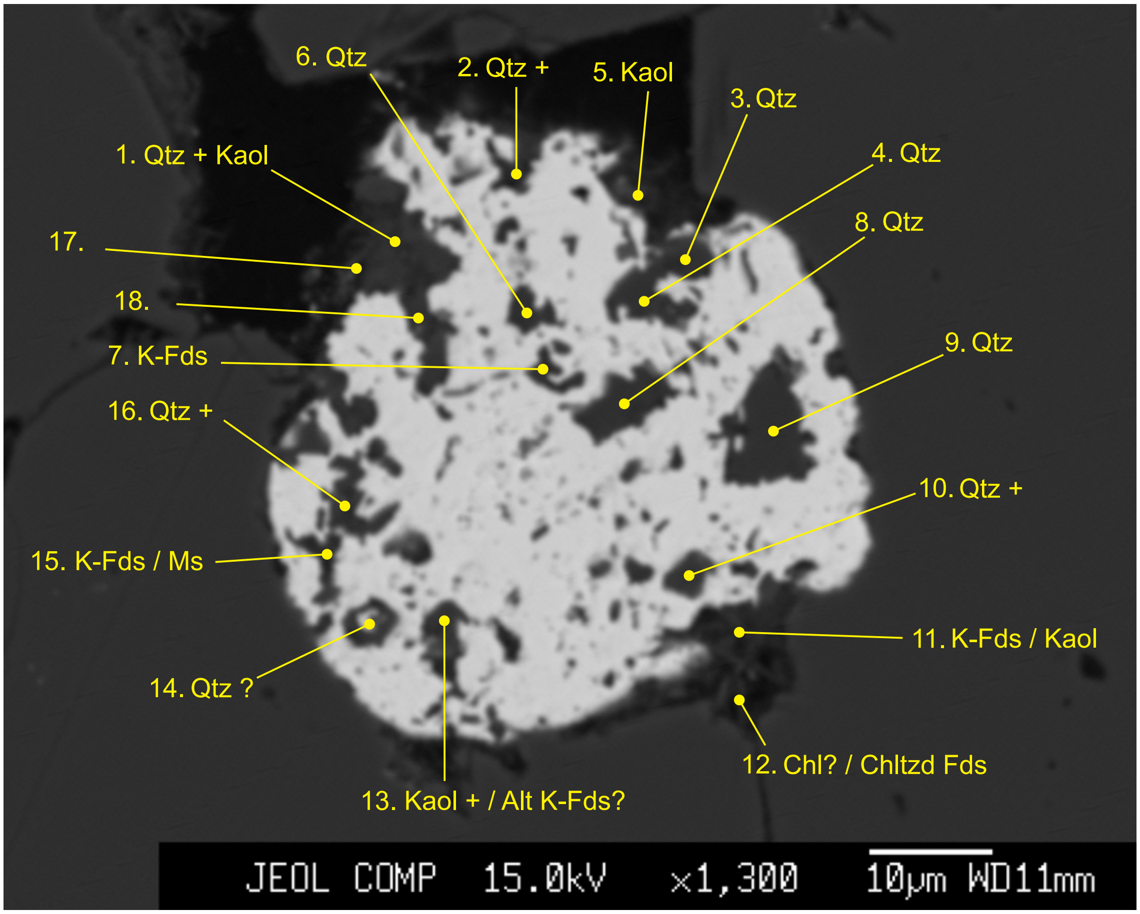


E58-13 gr 3

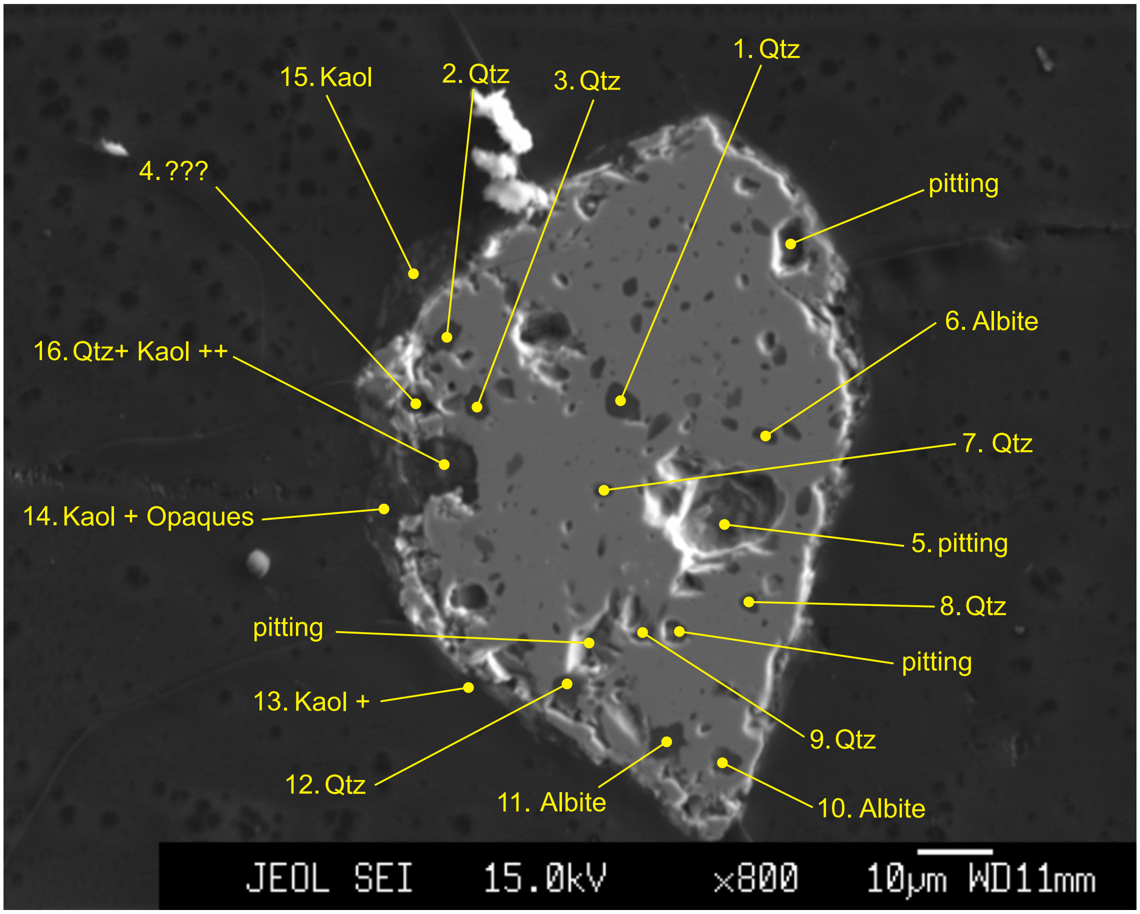


E58-13 gr 13



6. Qtz
2. Qtz +
5. Kaol
3. Qtz
4. Qtz
1. Qtz + Kaol
17.
8. Qtz
18.
7. K-Fds
9. Qtz
16. Qtz +
10. Qtz +
15. K-Fds / Ms
11. K-Fds / Kaol
14. Qtz ?
12. Chl? / Chltzd Fds
13. Kaol + / Alt K-Fds?
JEOL COMP 15.0kV ×1,300 10μm WD11mm

E58-13 gr 17



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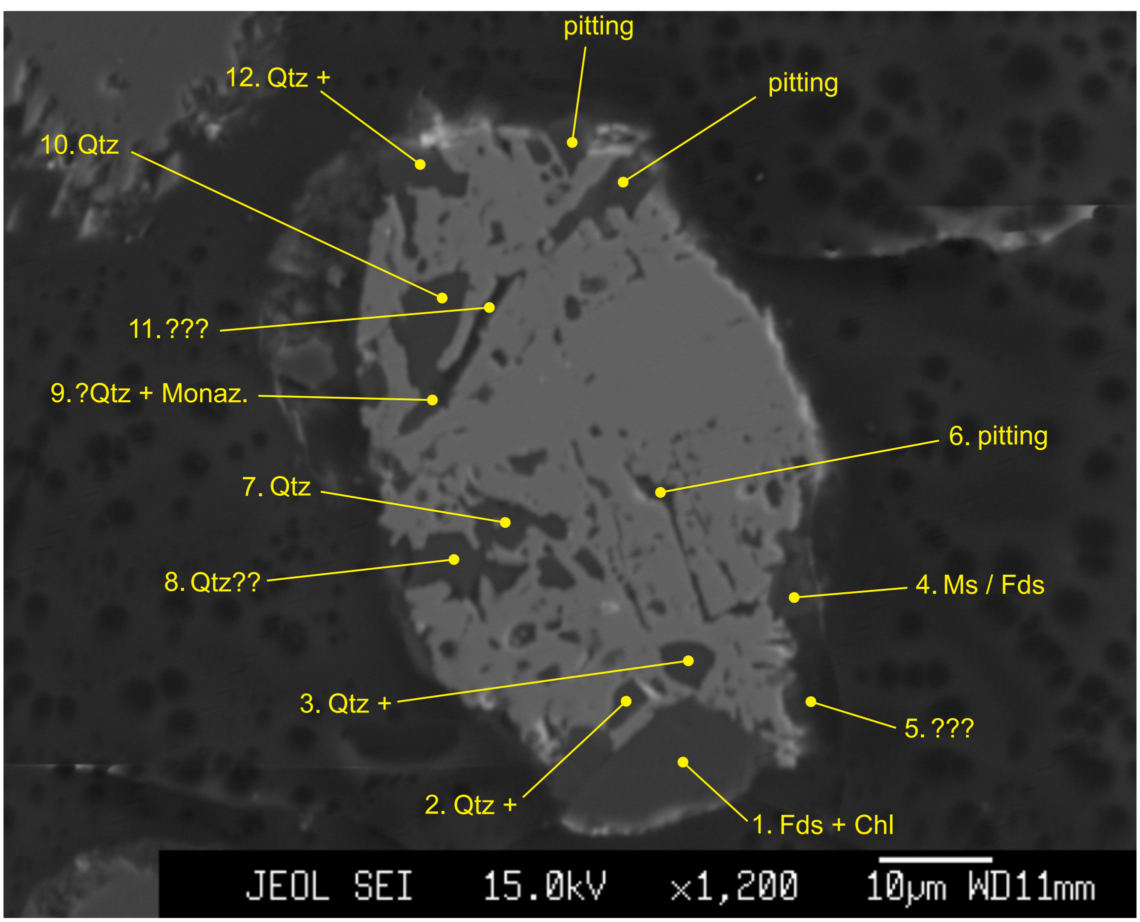

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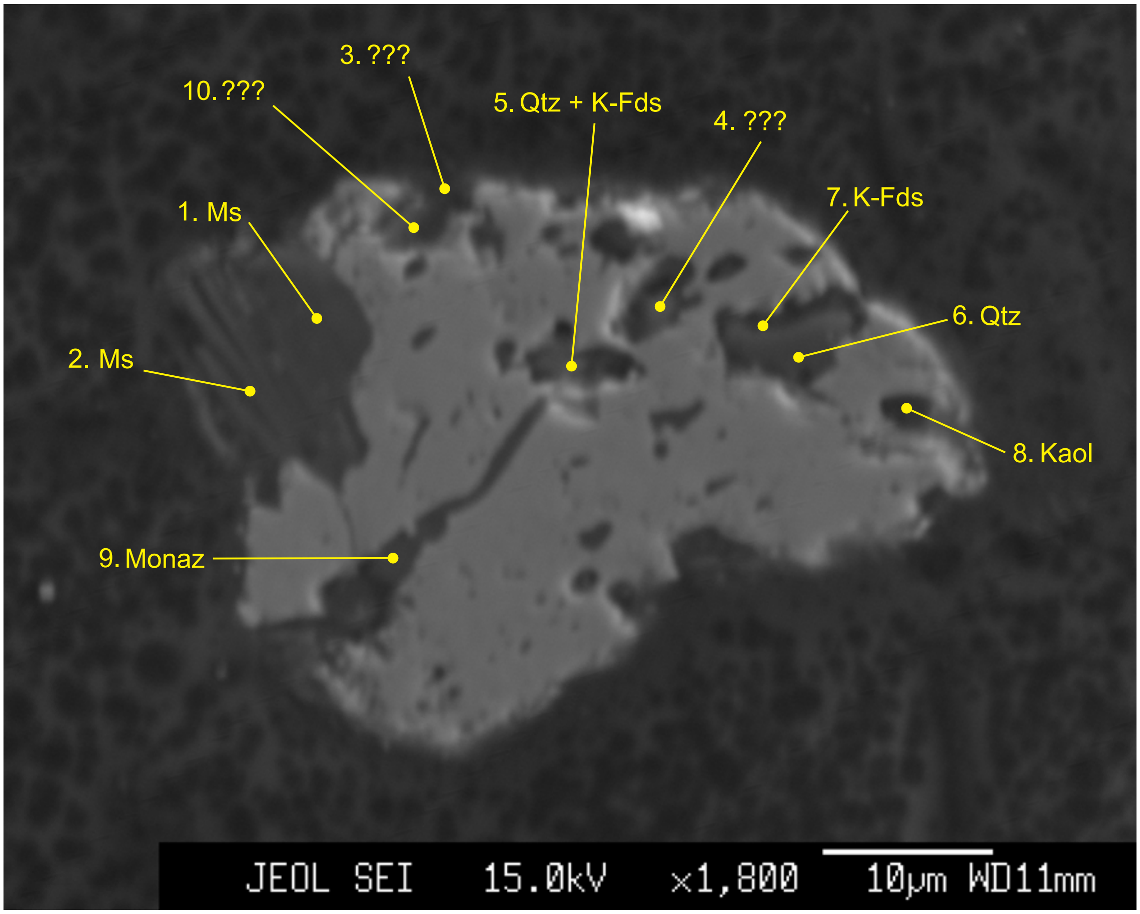

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