

Geochronological analysis of the
McArthur and Tawallah Groups,
McArthur Basin: age constraints,
provenance and implications for basin
evolution

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GEOCHRONOLOGICAL ANALYSIS OF THE MCARTHUR AND TAWALLAH GROUPS, MCARTHUR BASIN: AGE CONSTRAINTS, PROVENANCE AND IMPLICATION FOR BASIN EVOLUTION

GEOCHRONOLOGICAL CONSTRAINTS OF THE MCARTHUR AND TAWALLAH GROUPS

ABSTRACT

The informally termed greater McArthur Basin records nearly a billion years of Earth's history in the Northern Territory. The basin comprises of sedimentary successions that includes evidence of their provenance, age constraints and implications on how the basin evolve through time. Although several previous studies have looked at the age and deposition of the upper Glyde Package, very little is known for the lower Glyde and upper Redbank Packages. By using LA-ICP-MS detrital zircon U–Pb and rare earth element (REE) analyses, the maximum depositional age and age of major detrital input will be constrained. These ages will determine the provenance source and constrain the evolution of the basin. Using the youngest, near-concordant, zircon grain from sandstones, the maximum depositional age of the target formation is established. The following maximum depositional age constraint have been obtained from this study: Mallapunyah Formation (1740 ± 28 Ma), Masterton Sandstone (1709 ± 28 Ma), Wollogorang Formation (1746 ± 29 Ma), Wuraliwuntya Member (1745 ± 38 Ma), and Wununmantlyala Sandstone (1712 ± 39 Ma). REE suggests that the samples grew in a garnet and plagioclase bearing melt. Provenance shows that the main source of sediments is coming from the Aileron Province. Magmatic and orogenic event of the Aileron Province is coeval with the Stafford (ca. 1810 to 1800 Ma), Yambah (ca. 1790 to 1770 Ma), and Strangways (ca. 1740 to 1690 Ma) Events. This is believed to be the product of a long-lived subduction zone in the southern margin of the North Australian Craton.

KEYWORDS

Geochronology, McArthur Group, Tawallah Group, McArthur Basin, North Australian Craton

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INTRODUCTION

A series of ‘intracratonic’ volcano-sedimentary basins formed in the Proterozoic throughout the North Australian Craton (Betts & Giles, 2006). These basins record several hundreds of million years-worth of sedimentary and volcanic sequences. These sequences can be used to help work out the complex evolution of their sedimentary systems; the provenance, sediment pathways, and from this, the tectonic evolution of the sediment hinterland.

One of the better known North Australian Craton basins is the Palaeoproterozoic to Mesoproterozoic McArthur Basin *sensu stricto* (Figure 1), which covers a major portion of the Northern Territory with approximately 5 to 15 km-thick un-metamorphosed sedimentary and lesser volcanic rock layers (Rawlings, 1999). The informally termed greater McArthur Basin (Close, 2014) extends the original basin area to include sedimentary successions from the McArthur Basin, Birrindudu Basin and the Tomkinson Province. This covers nearly a billion years of Earth’s history from 1.82 to 0.9 Ga (Ahmad & Munson, 2013; Munson, 2016; Munson, 2019; Rawlings, 1999; Yang et al., 2018) and it comprises five Palaeoproterozoic to Neoproterozoic sedimentary packages; the Redbank, Goyder, Glyde, Favenc, and Wilton Packages (Rawlings, 1999). The Tawallah and McArthur Groups (Rawlings, 1999) from the Redbank and Glyde Packages, respectively, form the subject of this study. These are chosen because there is a gap in our knowledge about these groups, and they are the units present in the drill core samples.

By using detrital zircons, the maximum depositional age, ages of major detrital input, and subsequently, the provenance of the original sands in the McArthur Basin can assist to work out the evolution of the basin. Here we report the U–Pb age and Rare Earth

Element (REE) chemistry of the detrital zircons in sandstones and minor volcanic units within the lower McArthur and Tawallah Groups to address the origin, age and tectonic setting of the North Australian Craton (NAC) at this time.

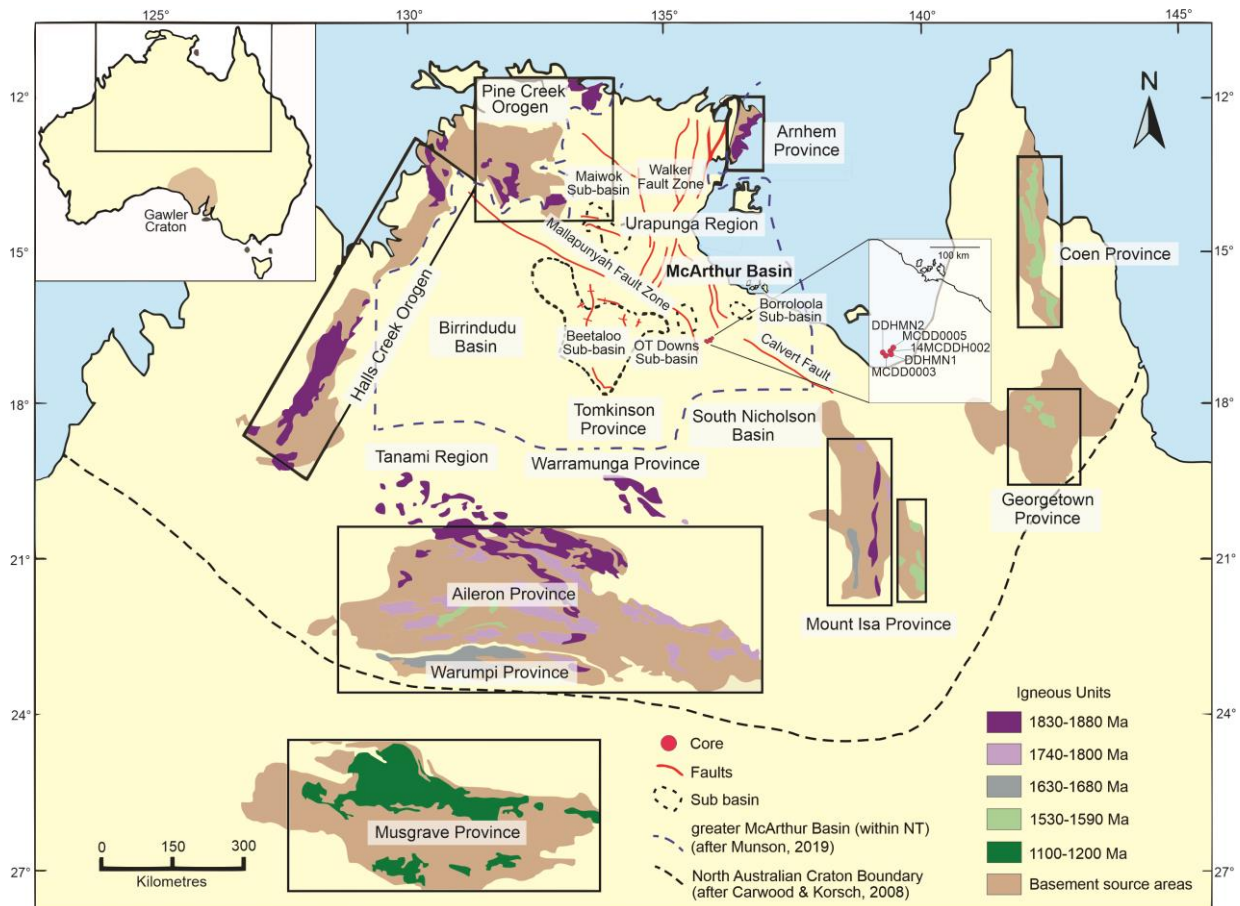


Figure 1: Map showing the location of drill holes used in this study, boundary of the greater McArthur Basin, and the surrounding regions within the North Australian Craton boundary (modified after Yang et al., 2018).

Based on ages from grains of zircon, the maximum depositional age for associated units are established. In addition, the spread of data is compared to existing data from other studies to determine possible source areas from the hinterland of the basin. These age provenance profiles are then compared with Rare Earth Elements (REE) patterns. This will be an additional geochemical fingerprint for the zircon to refine sediment and understand the petrogenesis of the source regions. The combined data are then used to

build a picture of the sedimentary system history for the lower succession of the McArthur Basin. Stratigraphic changes in provenance will be used to try and understand the tectonic evolution of the source regions.

BACKGROUND AND GEOLOGICAL SETTINGS

Proterozoic North Australian Craton

The North Australian Craton (NAC) is predominantly made of Archaean to Palaeoproterozoic rocks that are highly metamorphosed and deformed. These comprises the basement to the greater McArthur Basin (Munson, 2019). Yang et al. (2019) suggested that the West Australian Craton (WAC) collided with the North Australian Craton (NAC), which at the time was amalgamated with the South Australian Craton (SAC: Cawood & Korsch, 2008), at about ca. 1.4 to 1.3 Ga. Prior to this time, a combination of slab rollback and back stepping of a subduction system behind accreted continental terranes resulted the southward migration of plate margin. This is thought to have led to the Palaeoproterozoic to Mesoproterozoic extension of the North Australian Craton (Betts & Giles, 2006). In addition, arc magmatism was also prominent during early development of the NAC (Cawood & Korsch, 2008). At about the same time, in the late Palaeoproterozoic, divergence and exhumation along the eastern NAC was occurring as a result of lithospheric extension associated with the rifting of Proterozoic Australia and Laurentia in Nuna (Foster & Ehlers, 1998; Yang et al., 2019). This eventually led to formation of series of basins and sedimentary units along the eastern boundary of North Australian Craton including the Leichhardt, Calvert, and Isa Superbasins (Jackson et al., 2000; Cawood & Korsch, 2008).

Greater McArthur Basin

The informally termed greater McArthur Basin (Close, 2014) is a Palaeoproterozoic to Mesoproterozoic basin. It includes the sedimentary succession of the ‘McArthur basin’ itself, which is exposed over an area of 180 000 km² in the eastern margin of the NAC (Figure 1: Ahmad & Munson, 2013). In addition, it also includes the Tomkinson Province and the Birrindudu Basin (Figure 1). The basin is a product of series of intracratonic rifting events that occurred approximately ca. 1750 to 1710 Ma and ca. 1640 to 1600 Ma (Myers, Shaw, & Tyler, 1996). The greater McArthur Basin is subdivided into five stratigraphic sedimentary packages. These packages were formerly known as supersequences, and are now classified as: the Redbank, Goyder, Glyde, Favenc, and Wilton Packages (Rawlings, 1999). The greater McArthur Basin unconformably overlies the NAC as an intracontinental basin. The three basal stratigraphic sequences are the Redbank (ca. 1815 to 1710 Ma), Goyder (ca. 1710 to 1670 Ma), and Glyde (ca. 1640 to 1600 Ma) Packages (Rawlings, 1999). These packages are summarised by Ahmad and Munson (2013) as coeval units with the Mount Isa Province ‘superbasins’ from Jackson et al. (2000), which includes the Leichhardt (ca. 1800 to 1750 Ma), Calvert (ca. 1730 to 1670 Ma), and Isa (ca. 1668 to 1590 Ma) Superbasins. Thus, in the late Palaeoproterozoic, the region of the greater McArthur Basin was being extended from the rollback in the south and rifting in the east.

Redbank Package

The basal unit of the greater McArthur Basin is the Redbank Package. In the McArthur Basin *sensu stricto* this is represented by the Tawallah Group, which comprises shallow-marine to fluvial sandstone, with minor mudstone, dolostone, and mafic and felsic volcanic rocks, with both coeval and younger intrusive bodies (Ahmad &

Munson, 2013). The Tawallah Group unconformably overlies basement rocks of the Murphy Province and Scrutton Inlier (Ahmad & Wygralak, 1989; Pietsch et al., 1991). The Tawallah Group is correlated with the Katherine River Group in the subsurface to the north-western and south-western part of the basin (Ahmad & Munson, 2013). Similarly, it has been inferred that; Tomkinson Creek group of the Tomkinson Creek Province to the south (Figure 1), the Birrindudu, and possibly part of the Limbunya Groups of the Birrindudu Basin to the west (Figure 1), and the Haslingden Group of the Leichhardt Superbasin to the southeast are correlative sequences of the lower half of the Tawallah Group (Plumb & Wellman, 1987; Pietsch et al., 1994; Jackson et al., 2000). Geochronological results are documented in Page et. al. (2000), Page and Sweet (1998) and Rawlings (2002), these includes Sensitive High-Resolution Ion Microprobe (SHRIMP) ages. U-Pb zircon crystallisation ages for the Wollogorang Formation (ca. 1730 to 1725 Ma), Hobblechain Rhyolite and Packsaddle Microgranite (ca. 1725 Ma), Tanumbirini Rhyolite (ca. 1715 Ma) are reported. A maximum depositional age from a sandstone in Nyanantu Formation (ca. 1708 Ma) is also established.

The Redbank Package and Glyde Packages are separated throughout the McArthur Basin by a regional unconformity characterised by the Parsons Range Group (ca. 1710 to 1670 Ma) of the Goyder Package (Ahmad & Munson, 2013; Rawlings, 1999). These excludes the conformable and continuous Walker Fault Zone, Donydji and Balma Groups.

Glyde Package

The Glyde Package in the McArthur Basin *sensu stricto* is represented by the McArthur Group, which unconformably overlies the Tawallah Group. The McArthur Group comprises stromatolitic to evaporitic dolostone, with siliciclastic and minor tuffaceous

rocks (Rawlings, 1999). These were deposited in shallow to moderately deep marine and locally emergent environments, confined between the Batten and Walker fault zones (Ahmad & Munson, 2013; Winefield, 1999). Rawlings (1999) divided the group into two subgroups. The lower, Umbolooga Subgroup includes the basal Masterton Sandstone up to the Reward Dolostone. This is overlain by the Batten Subgroup, with a possible unconformity based on locally observed palaeoregolith above the Reward Dolostone (Ahmad & Munson, 2013). The age of basal units of the Umbolooga Subgroup are poorly constrained by the crystallisation age of the underlying Tanumbirini Rhyolite (1713 ± 7 Ma) within the Tawallah Group (Munson, 2019; Page & Sweet, 1998). The Masterton Sandstone has yielded a maximum depositional age of ca. 1755 Ma, which is thought not to well constrain its depositional age (Hollis et al., 2010; Kositcin et al., 2017; Munson, 2019). Nevertheless, a maximum depositional age of 1653 ± 17 Ma (Page et al., 2000; Munson, 2019) from the overlying Mallapunyah Formation provides a reasonable constraint on the depositional age of this formation. Surrounding the basin are other Palaeoproterozoic to Mesoproterozoic terrains that could be possible sources of sediment. Compilation of provenance interpretations for the source region of the younger Mesoproterozoic Wilton Package (McArthur Basin) from Munson (2016) and Yang et al. (2019), suggest potential source regions contain zircons with ages ranging from 2500 to 1700 Ma. In the proximal NAC and SAC, these includes the Tanami Region, Aileron Province, Mount Isa Province, Pine Creek Orogen, Halls Creek Orogen, Arnhem Province, Warramunga Province, Musgrave Province, Georgetown Province, Coen Province, and Gawler Craton (Figure 1).

METHODS

Group	Formation	Core ID	Sample No.	Depth (metres)		Coordinates (MGA94 Z53)
McArthur Group	Mallapunyah Formation	MCDD0005	SST-04	298.86	299.13	599179 (E), 8113578 (N)
		MCDD0005	SST-05	338.65	339.24	
	Masterton Sandstone	DDHMN2	SST-01	7.29	7.68	595950 (E), 8110475 (N)
		MCDD0005	SST-06	358.19	358.64	599179 (E), 8113578 (N)
		MCDD0005	SST-08	376.56	377.02	
		MCDD0005	SST-09	389.58	390.18	
		MCDD0005	SST-10	397.76	398.22	
		MCDD0005	SST-13	424.62	424.98	
MCDD0005	SST-15	452.70	453.19			
Tawallah Group	Wollogorang Formation	14MCDDH002	SST-01	2.64	2.95	594575 (E), 8108475 (N)
		DDHMN1	SST-02	55.38	56.19	594225 (E), 8107980 (N)
		MCDD0005	SST-16	469.07	469.42	599179 (E), 8113578 (N)
	Wuraliwuntya Member	MCDD0003	SST-01	230.20	230.85	591370 (E), 8106448 (N)
	Wununmantyala Sandstone	MCDD0003	SST-06	363.58	364.07	
		MCDD0003	SST-12	510.45	511.09	

Table 1: Sample lists for U–Pb detrital zircon geochronology and REE analyses. Where possible samples were collected from the upper, middle and lower parts of each formation.

Sample Selection

Sandstone samples were collected from five drill cores shown in figure 2; MCDD0003 and MCDD0005 (Todd River Resources), 14MCDDH002, DDHMN1, and DDHMN2 (Northern Territory Geological Survey). All samples were stored in the NTGS Darwin Core Library, Northern Territory, Australia. The location and coordinate of the samples can be seen in Figure 1 and Table 1, respectively.

Geochronological constraints of the McArthur and Tawallah Groups

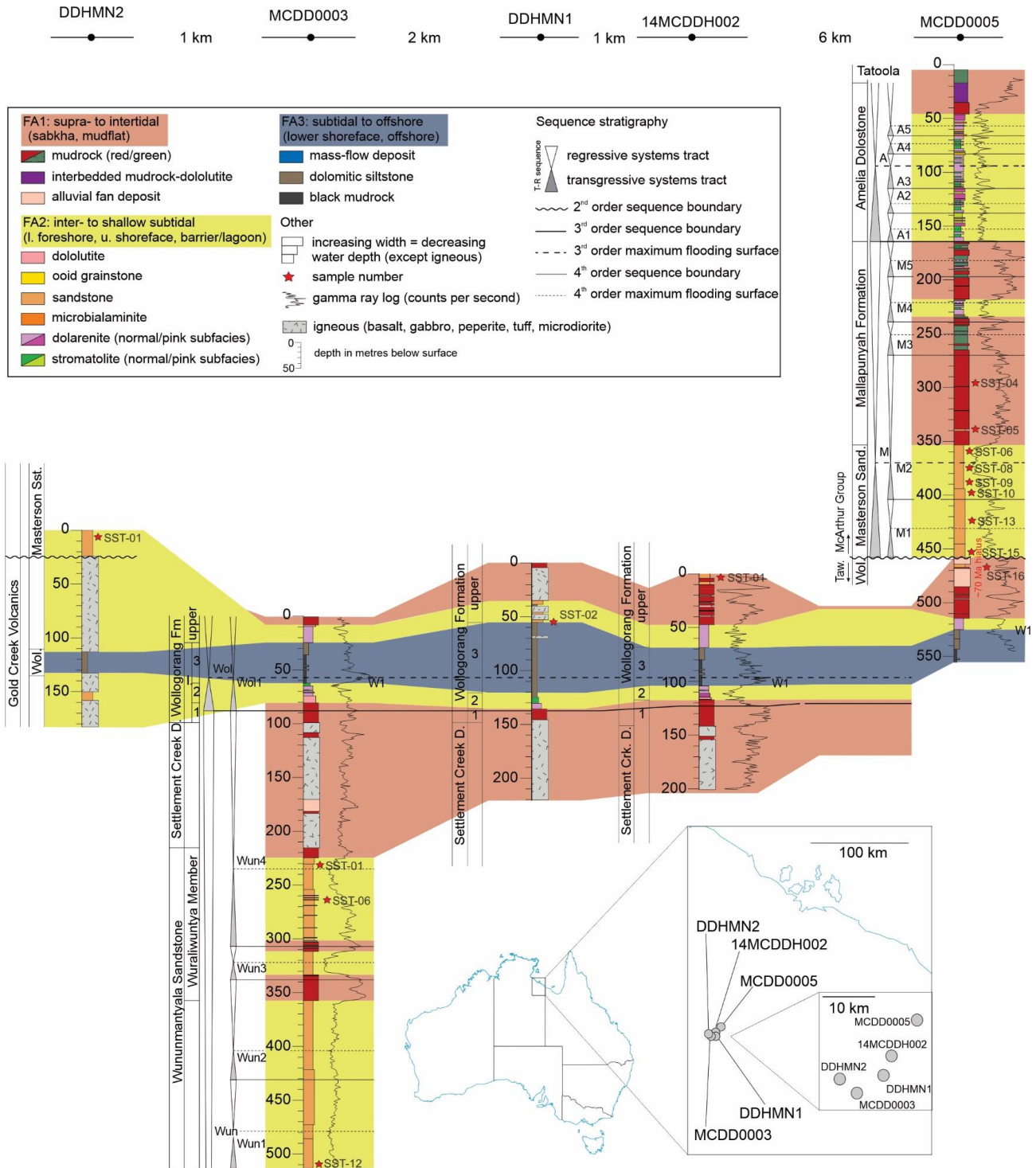


Figure 2: High resolution sequence stratigraphy cross-section (M. Kunzmann, personal communication, June 26, 2019) showing the five drill cores used in this study, and the samples collected from individual cores with their sample number. Different depositional environment at specific depth is represented by their assigned colour. Blow out diagram at the bottom right corner shows the spatial positioning of the drill cores in McArthur Basin, Northern Territory.

U-Pb Detrital Zircon Geochronology

In preparation for U-Pb geochronology, the samples were crushed, separated, and passed through a hand magnet, leaving only the fraction that included zircons. At least, three-hundred grains of zircons per-sample were handpicked and mounted in epoxy resin, without any physical characteristic preferences including size, colour, and shape. The mounts were polished, and carbon coated in preparation for imaging. Zircon grains were imaged in Adelaide Microscopy, The University of Adelaide, using cathodoluminescence (CL) on a FEI Quanta 600 Scanning Electron Microscope (SEM) with an attached Gatan CL detector to find zoning within the grains for future analysis. The ASI 213nm Nd-YAG laser coupled with an Agilent 7500cs Inductively Coupled Plasma Mass Spectrometer (ICP-MS) at Adelaide Microscopy, The University of Adelaide, was used to for zircon U–Pb isotope analysis. The cores of grains were specifically targeted with a 30 μm spot size laser. The laser operated with a frequency of 5Hz with 70% intensity and 30 seconds ablation period.

A GEMOC GJ-1 zircon was used as a primary standard to correct instrumental fractionation. This has a published, $^{207}\text{Pb}/^{206}\text{Pb}$ age of 607.7 ± 4.3 Ma, $^{206}\text{Pb}/^{238}\text{U}$ age of 600.7 ± 1.1 Ma and $^{207}\text{Pb}/^{235}\text{U}$ age of 602.0 ± 1.0 Ma (Jackson et al., 2004). To assess the analytical accuracy, a sample of Plešovice zircon was used as an internal standard, with a published $^{206}\text{Pb}/^{238}\text{U}$ age of 337.13 ± 0.37 Ma (Sláma et al., 2008). Plešovice analyses in this study yielded a weighted average mean slightly older than the published value. The results are calculated per analytical session and summarised in Table 2. The software package Iolite version 3.0 (Chew et al., 2014) was used for data processing. ISOPLOT 4.15 for excel (Ludwig, 2009) was used for generating the concordia diagram and weighted mean calculation. The ‘R’ software package was used to calculate

Multidimensional Scaling (MDS) plots and Kernel Density Estimates (KDE)
(Vermeesch, 2013).

Analytical Session	$^{206}\text{Pb}/^{238}\text{U}$	$^{207}\text{Pb}/^{206}\text{Pb}$
1	338.9 ± 0.48 (n=60, MSWD=0.83)	331.5 ± 7.7 (n=60, MSWD=0.95)
2	340.7 ± 0.49 (n=58, MSWD=1.40)	331.6 ± 8.4 (n=58, MSWD=1.40)
3	339.7 ± 0.76 (n=28, MSWD=1.90)	316.8 ± 10 (n=28, MSWD=0.58)
4	342.3 ± 2.30 (n=5, MSWD=1.70)	318.0 ± 28 (n=5, MSWD=0.04)

Table 2: Weighted mean of Plešovice zircon $^{206}\text{Pb}/^{238}\text{U}$ and $^{207}\text{Pb}/^{206}\text{Pb}$ ages from this study. All data were taken in four different analytical session.

Zircon REE Analysis

Along with U-Pb zircon analysis, the abundance of 21 elemental masses were measured: ^{31}P , ^{49}Ti , ^{89}Y , ^{90}Zr , ^{139}La , ^{140}Ce , ^{141}Pr , ^{146}Nd , ^{147}Sm , ^{153}Eu , ^{157}Gd , ^{159}Tb , ^{163}Dy , ^{165}Ho , ^{166}Er , ^{169}Tm , ^{172}Yb , ^{175}Lu , ^{178}Hf , ^{202}Hg and ^{232}Th . Trace element data were collected simultaneously with U–Pb isotopic ratios and standardised with the primary standard NIST610, and secondary standard 91500. Results were normalised to chondrite values (Taylor & McLennan, 1985) and plotted in excel as spider plots to distinguish any variation in REE trends per formation.

OBSERVATIONS AND RESULTS

U-Pb Detrital Zircon Geochronology

U-Pb data were collected from 15 detrital samples (Table 1). These were imaged in cathodoluminescence (CL) (Figure 3). A concordance cut-off greater than 90% are plotted in Wetherill concordia plot along with its corresponding Kernel Density Estimate plot (Figure 4, 5, and 6). A compilation of Kernel Density Estimate (KDE) were also plotted to demonstrate variation stratigraphically (Figure 7). Figure 8 shows probability density plot, as per Eglington (2016), of the formation within the McArthur and Tawallah Groups. To represent the maximum depositional age of the samples, both the youngest zircon grain and the youngest population ($n>3$) have been quoted in Table 5. We interpret the maximum depositional age to be best represented by the youngest, statistically discrete, near-concordant grain (Spencer & Kirkland, 2016). Because of the antiquity of zircons, all ages quoted are from $^{207}\text{Pb}/^{206}\text{Pb}$ ages. Sandstone and minor volcanic samples are listed below in stratigraphic order, from the oldest to youngest formation based on Rawlings (1999) and Ahmad and Munson (2013). Majority of the detrital zircon grains vary in shape and size, with some that are; broken and fractured, contain inclusions, and possess complex zoning. A complete summary of the detrital zircon morphology within the formation are shown in Table 3. The maximum depositional ages and the peak detritus gets older with younger stratigraphic age (Table 5 and Figure 7).

WUNUNMANTYALA SANDSTONE

Sample: MCDD0003-SST-12

A total of 121 U-Pb and REE analyses were undertaken targeting mainly the core, if possible, along with several outer rim targets. Thirty-seven of the analyses are within the >90% concordance with a range of $^{207}\text{Pb}/^{206}\text{Pb}$ ages from ca. 2600 to 1712 Ma (Figure 6E). Summarised in Table 4 are the youngest single concordant grains and youngest population, 1712 ± 39 Ma and 1736 ± 13 Ma ($n=5$, $\text{MSWD}=0.52$), respectively. There is a major peak at ca. 1760 Ma along with three minor peaks at ca. 1850 Ma, 2100, and 2530 Ma (Figure 7E).

Sample: MCDD0003-SST-06

Fifty-eight spots were analysed with 16 concordant analyses, with $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging from ca. 2713 to 1730 Ma (Figure 6E). The youngest single concordant grain yielded 1730 ± 12 Ma, while the youngest population recorded 1833 ± 12 Ma ($n=4$, $\text{MSDW}=0.02$). The KDE plots show a major peak recorded at ca. 1830 Ma, along with one younger (ca. 1740 Ma) and three older (ca. 2050, 2450, and 2650 Ma) minor peaks (Figure 7E).

WURALIWUNTYA MEMBER

Sample: MCDD0003-SST-01

Out of 121 analyses, 35 sits within >90% concordance, with ranging $^{207}\text{Pb}/^{206}\text{Pb}$ ages of ca. 2657 to 1745 Ma (Figure 6D). One major peak at ca. 1850 Ma can be observed in the KDE plot along with two older (ca. 2000 and 2450 Ma) minor peaks (Figure 7D).

The youngest concordant grain recorded 1745 ± 38 Ma, and youngest population of 1751 ± 18 Ma ($n=3$, $MSWD=0.14$).

WOLLOGORANG FORMATION

Sample: MCDD0005-SST-16

Out of 134 analyses within MCDD0005-SST-16, 19 are classified >90% concordant with $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging from ca. 2546 to 1746 Ma (Figure 5C). The youngest concordant grain is 1746 ± 29 Ma, with the youngest population of 1754 ± 10 Ma ($n=5$, $MSWD=0.31$). Major peak at ca. 1850 Ma can be observed in the KDE plot along with one minor peak at ca. 2000 Ma (Figure 7C).

Sample: DDHMN1-SST-02

Out of 102 analyses, 35 are >90% concordant and give a $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging from ca. 2526 to 1753 Ma (Figure 5C). The youngest concordant grain is 1753 ± 28 Ma, along with the youngest population of 1770 ± 9 Ma ($n=12$, $MSWD=0.69$). The KDE plot shows a major peak at ca. 1790 Ma and three older, minor peaks at ca. 1850, 2100, 2500 Ma (Figure 7C).

Sample: 14MCDDH002-SST-01

One hundred twenty-one analyses were undertaken, 23 of which are >90% concordant with $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging from ca. 2880 to 1761 Ma (Figure 5C). The youngest concordant grain and population yielded 1761 ± 42 Ma and 1767 ± 24 Ma ($n=3$,

MSWD=0.16), respectively. There is a major peak at ca. 1800 Ma observed in the KDE plot and three minor peaks at ca. 2300, 2550, and 2900 Ma (Figure 7C).

MASTERTON SANDSTONE

Sample: MCDD0005-SST-15

Out of 121 analyses, 32 are >90% concordant with $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging from ca. 2791 to 1740 Ma (Figure 5B). The youngest concordant grain and population gathered 1740 \pm 21 Ma and 1754 \pm 7 Ma (n=16, MSWD=0.54), respectively. The KDE plot shows major peak at ca. 1790 Ma, with two older (ca. 2000 and 2550 Ma), minor peaks (Figure 7B).

Sample: MCDD0005-SST-13

One hundred twenty-seven analyses were undertaken and 58 are >90% concordant. Analyses yield $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging from ca. 2821 to 1746 Ma (Figure 5B). The youngest concordant grain gave an age of 1746 \pm 39 Ma, with youngest population of 1760 \pm 19 Ma (n=5, MSWD=0.19). The KDE plots highlight a major peak at ca. 1800 Ma with two older (ca. 2000 and 2550 Ma), minor peaks (Figure 7B).

Sample: MCDD0005-SST-10

Two hundred fifty-seven analyses were collected from MCDD0005-SST-10 and of these 125 analyses are >90% concordant. These data have $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging from ca. 3068 to 1716 Ma (Figure 5B). The youngest concordant grain and population yielded 1716 \pm 48 Ma and 1734 \pm 11 Ma (n=6, MSWD=0.21), respectively. The KDE plot shows major peak at ca. 1790 Ma with three older (ca. 1880, 2200, and 2500 Ma) minor peaks (Figure 7B).

Sample: MCDD0005-SST-09

Out of 267 analyses, 113 are >90% concordant within MCDD0005-SST-09 with $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging from ca. 2683 to 1709 Ma (Figure 4B). The youngest concordant grain and population yielded 1709 ± 28 Ma and 1730 ± 9 Ma ($n=7$, $\text{MSWD}=0.52$), respectively. KDE shows a major peak at ca. 1780 Ma with two older (ca. 1870 and 2500 Ma), minor peaks (Figure 7B).

Sample: MCDD0005-SST-08

Out of 159 analyses, 72 are >90% concordant with $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging between ca. 2790 to 1714 Ma (Figure 4B). The youngest concordant grain and population yielded 1714 ± 45 Ma and 1732 ± 11 Ma ($n=6$, $\text{MSWD}=0.36$), respectively. Major peak at ca. 1780 Ma are highlighted in the KDE plot along with two older (ca. 1850 and 2450 Ma), minor peaks (Figure 7B).

Sample: MCDD0005-SST-06

Sixty-five analyses were undertaken, of these 29 of are >90% concordant with $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging from ca. 2680 Ma to 1766 Ma (Figure 4B). The youngest concordant grain and population yielded 1766 ± 43 Ma and 1774 ± 14 Ma ($n=8$, $\text{MSWD}=0.14$), respectively. There is major peak at ca. 1800 Ma and two older (ca. 2300 and 2700 Ma), minor peaks shown in the KDE plot (Figure 7B).

Sample: DDHMN2-SST-01

Out of 72 analyses, DDHMN2-SST-01 have 24 analyses that are >90% concordant. The data have $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging from ca. 2864 to 1715 Ma (Figure 4B). The youngest concordant grain and population are 1715 ± 50 Ma and 1724 ± 26 Ma ($n=3$,

MSWD=0.11), respectively. KDE plot shows a major peak at ca. 1780 Ma and three older, minor peaks at ca. 2030, 2520, and 2700 Ma (Figure 7B).

MALLAPUNYAH FORMATION

Sample: MCDD0005-SST-05

Out of 112 analyses, 58 are >90% concordant with $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging between 2886 to 1740 Ma (Figure 4A). The youngest concordant grain and population are 1740 ± 28 Ma and 1746 ± 15 Ma ($n=3$, MSWD=0.36), respectively. There is a major peak at ca. 1880 Ma with one younger (ca. 1780 Ma) and older (ca. 2550 Ma), minor peaks (Figure 7A).

Sample: MCDD0005-SST-04

Out of 22 analyses, 8 are >90% concordant with $^{207}\text{Pb}/^{206}\text{Pb}$ ages ranging between ca. 2557 to 1794 Ma (Figure 4A). The youngest concordant grain and population are 1794 ± 43 Ma and 1941 ± 18 Ma ($n=5$, MSWD=1.11), respectively. KDE plot shows a major peak at ca. 1930 Ma with one younger (ca. 1780 Ma) and two older (ca. 2200 and 2550 Ma), minor peaks (Figure 7A).

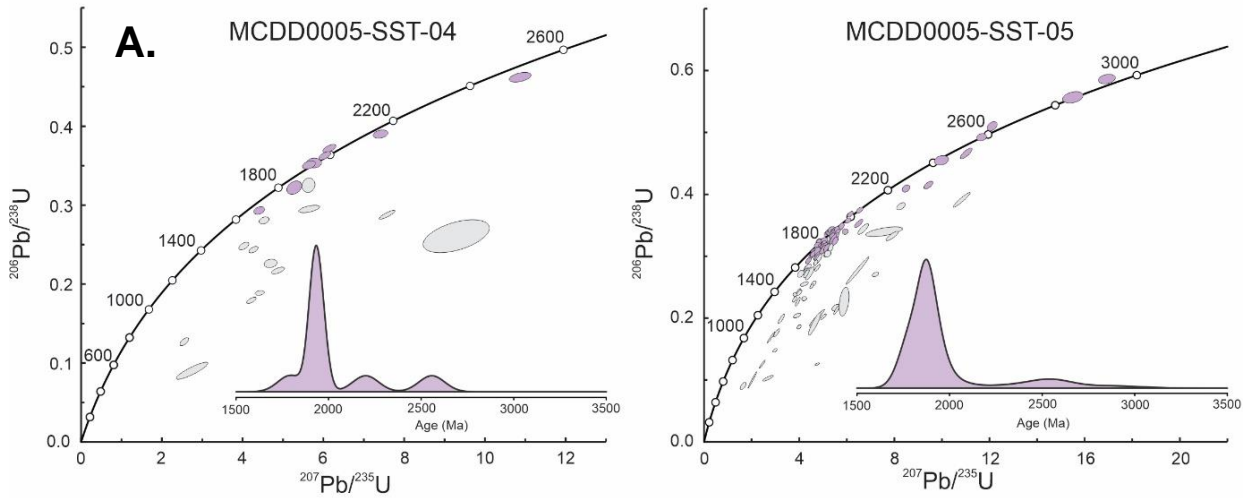
Formation	Zonation and Features	Aspect Ratio (height:width)
Mallapunyah Formation	Irregular shape with sub-rounded and minimal elongated grains. Contains inclusions. Heterogeneous composition in cores followed by complex and oscillatory zoning. Predominantly lighter colour. Relatively small grains ranging from 30 to 100 μm with few 200 μm grains.	1.5:1 , 2:1, 3:1
Masterton Sandstone	Consistently rounded and elongated with abundant prismatic grains. Predominantly lighter in colour but shows alternating light and dark rims in significant number of grains. Homogeneous core composition followed by oscillatory zoning, with minor complex zoning in some of the samples. Relatively larger grains ranging from 50 to 300 μm .	1:1, 1.5:1, 2:1.5 , 3:1, 3.5:1.5
Wollogorang Formation	Sub-rounded and elongated shape. Abundant number of inclusions within heterogeneous core. Predominantly complex with minor oscillatory zonation. Darker in colour. Grains range from 30 to 200 μm .	1:0.5, 1:1, 1.5:1 , 2:1, 2.5:1
Wuraliwuntya Member	Relatively darker colour, with a prominent occurrence of alternating dark and light rims. Homogeneous core followed by mostly complex and minor oscillatory zonation. Rounded and slightly elongated grains. Consistently large grains ranging from 50 to 250 μm .	1:0.5, 1:1, 1.5:1 , 2:1
Wununmantyala Sandstone	Lighter colour with some alternating light and dark rims. Homogeneous core followed by oscillatory and few complex zonings. Sub-rounded and slightly elongated grains. Size varies from 30 to 200 μm .	1:0.5 , 1:1, 1.5:1, 2:1, 2.5:1.5

Table 3: Zircon morphologies within the formation. Zoning and features within the grains are described along with the aspect ratios of the long (height) and short (width) axis of the zircon. Dominant ratio is in bold.



Figure 3: Cathodoluminescence (CL) images of the youngest, near-concordant, detrital zircon grain from the McArthur and Tawallah Groups with their analysis number and $^{207}\text{Pb}/^{206}\text{Pb}$ age values. Samples are from drill core (A.) MCDD0005, (B.) MCDD0003, (C.) 14MCDDH002, (D.) DDHMN1, and (E.) DDHMN2. U–Pb and REE analyses were taken simultaneously, marked by the red spot in the grains.

Mallapunyah Formation



Masterton Sandstone

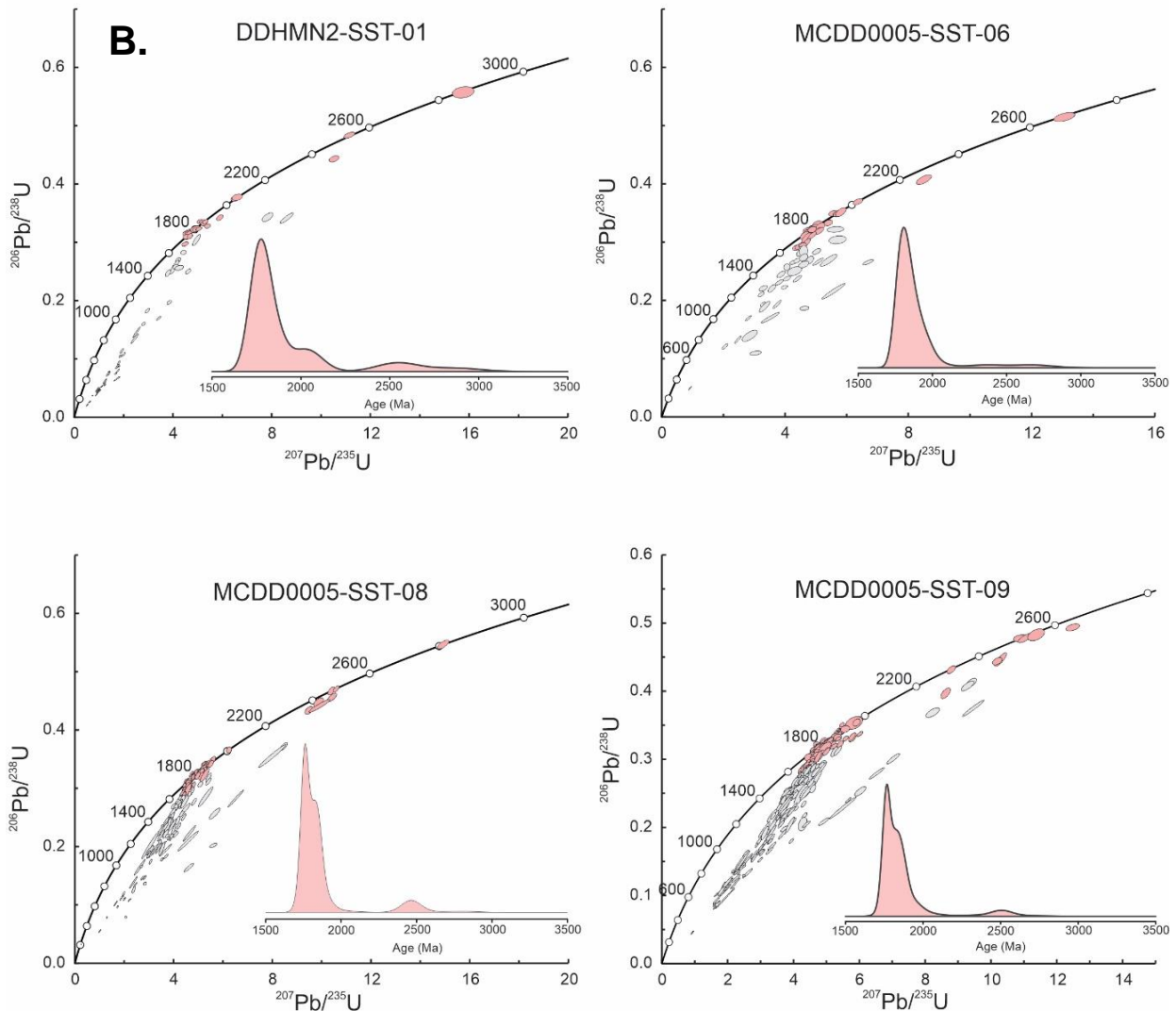


Figure 4: U-Pb Wetherill Concordia plots of samples from (A.) Mallapunyah Formation (MCDD0005) and (B.) Masterton Sandstone (DDHMN2 and MCDD0005). Coloured ellipses represent >90% concordant grains in contrast with grey, discordant grains. Kernel Density Estimate (KDE) plots from >90% concordant grains are also coloured accordingly, showing major and minor detrital zircon age peaks.

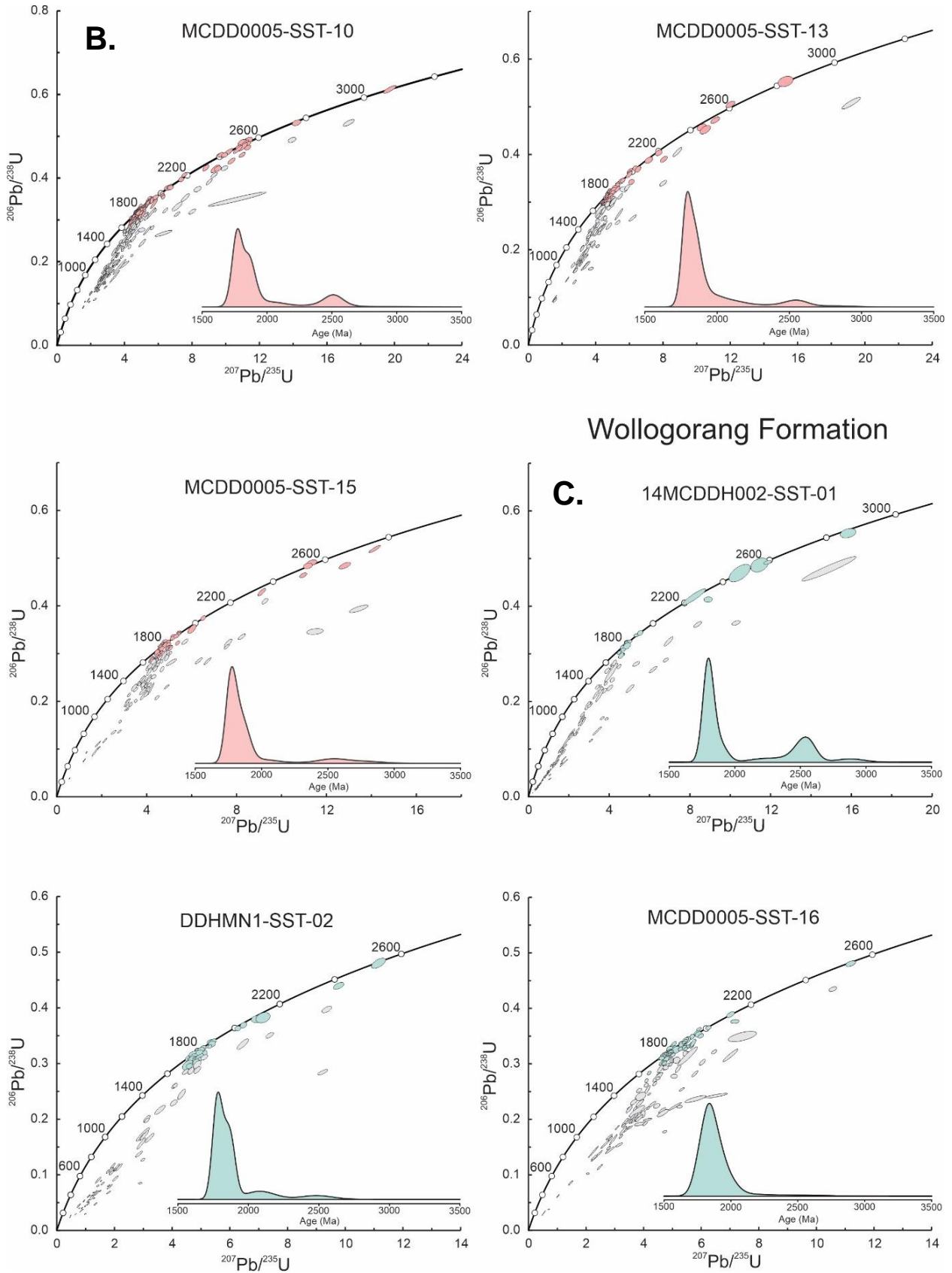


Figure 5: U-Pb Wetherill Concordia plots of samples from (B.) Masterton Sandstone (MCDD0005) and (C.) Wollogorang Formation (14MCDDH002, DDHMN1 and MCDD0005). Coloured ellipses represent >90% concordant grains in contrast with grey, discordant grains. Kernel Density Estimate (KDE) plots from >90% concordant grains are also coloured accordingly, showing major and minor detrital zircon age peaks.

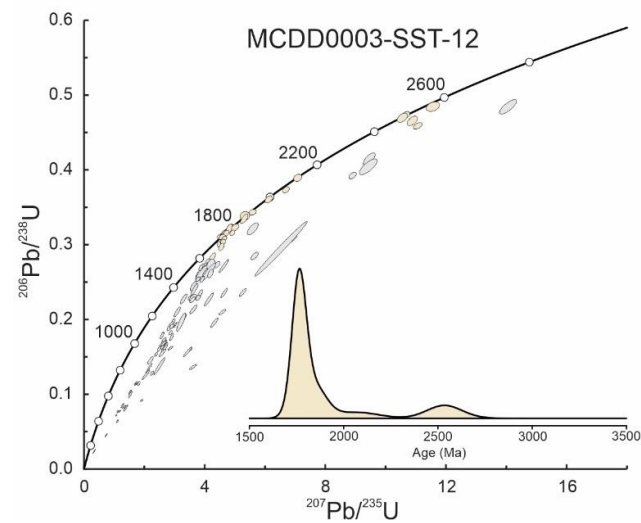
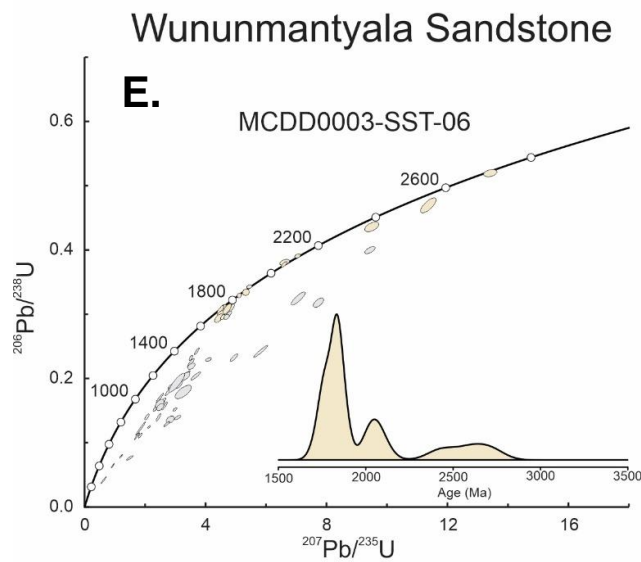
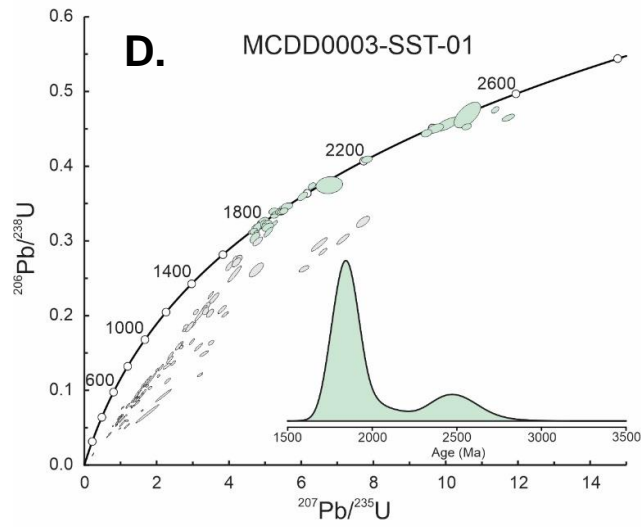


Figure 6: U-Pb Wetherill Concordia plots of samples from (D.) Wuraliwuntya Member and (E.) Wununmantyala Sandstone (MCDD0003). Coloured ellipses represent >90% concordant grains in contrast with grey, discordant grains. Kernel Density Estimate (KDE) plots from >90% concordant grains are also coloured accordingly, showing major and minor detrital zircon age peaks.

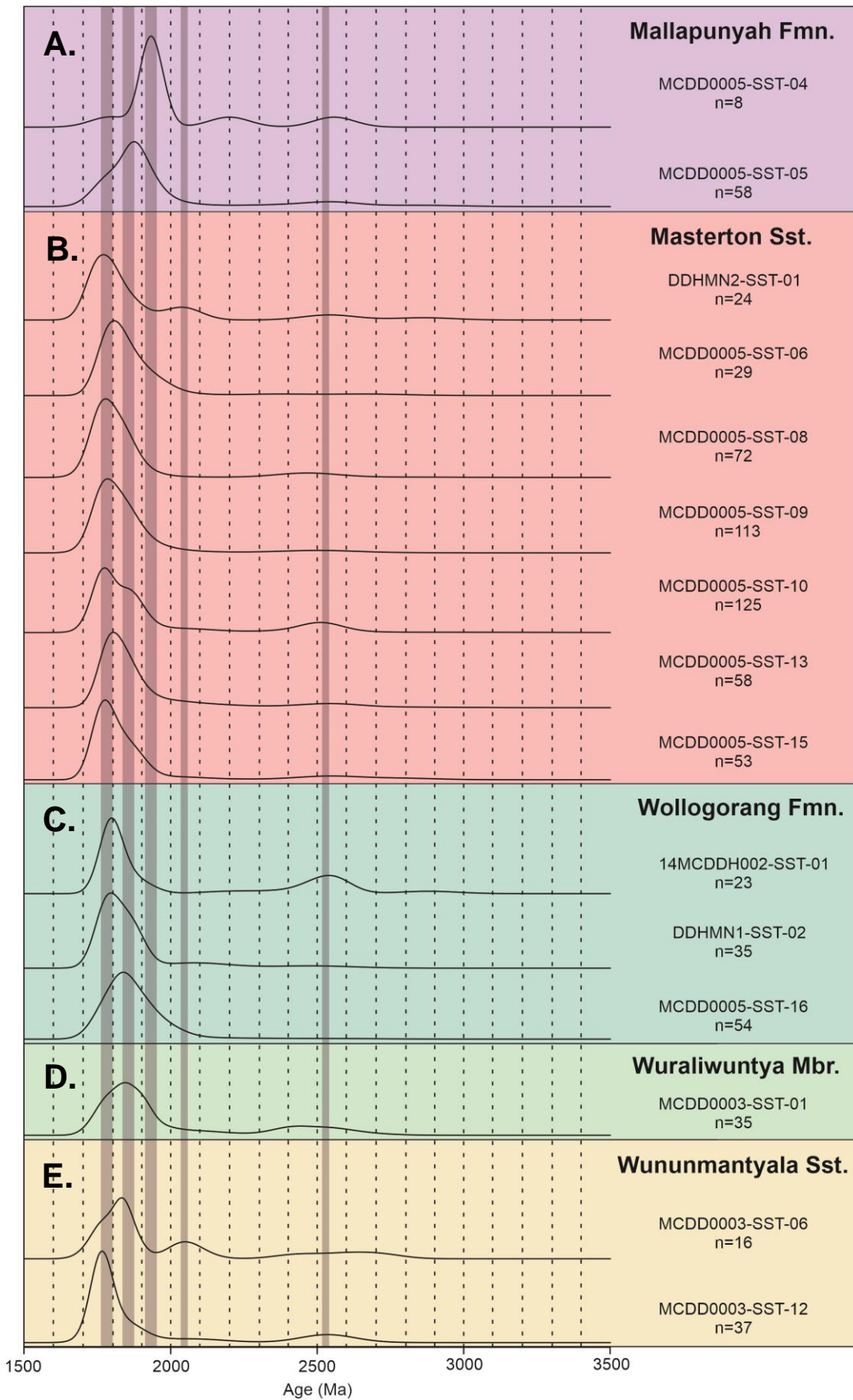


Figure 7: Compilation of Kernel Density Estimate (KDE) plots for samples within McArthur Group: (A.) Mallapunyah Formation and (B.) Masterton Sandstone, and Tawallah Group: (C.) Wologorang Formation, (D.) Wuraliwuntya Member, and (E.) Wununmantyala Sandstone. Major peaks are highlighted with thick vertical line, while minor peaks are highlighted with thin vertical line. All data used are within >90% concordant grains.

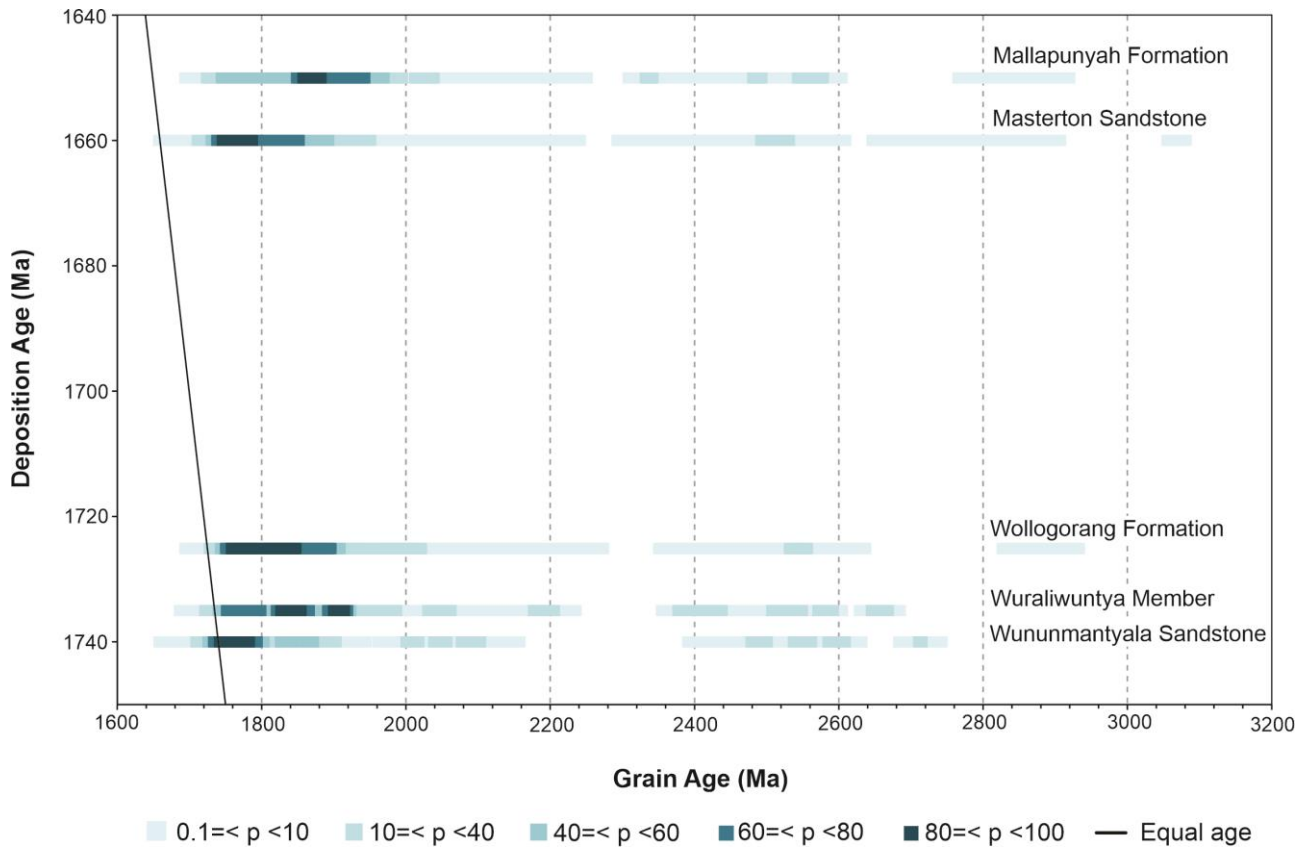


Figure 8: Multiple independent probability density plot as per Eglinton (2016) of the McArthur and Tawallah Groups based on their stratigraphic age hierarchy. Equal age line represents the correlated values between estimated deposition age in (Ma) and estimated grain age in (Ma). The plot shows the distribution of dominant population peaks within the target units.

REE Analysis

Recorded simultaneously with the U-Pb are the REE abundances in the detrital zircons. The REE composition of the zircon reflects the composition of the magma in which they grew (Dabard et al., 1996). Therefore, by studying the abundances of REE within the samples, it can determine the nature of the magma it grew in and compare it with the possible source in the hinterland of the basin. Fifteen samples were analysed for REE and only >90% concordant data are used. These data were normalised using Taylor and McLennan (1985) and plotted in spider plots to show their variances with concordance (Figure 9 and 10) and age in Ma (Figure 11 and 12). Correlation with age in figure 11 and 12 shows higher normalised REE values are predominantly from samples that tend towards younger age (>1700 Ma). Light REE (La–Gd) are generally low abundance compared to heavy REE (Tb–Lu) for all samples. Curvature and increasing trend in HREE can be observed. Positive values for Ce and negative values for Eu are present for all samples. Middle REE/light REE (Gd/La normalised), heavy REE/middle REE (Lu/Gd normalised), heavy REE/light REE (Lu/La normalised), Eu* and Ce* anomalies are calculated (Table 4) and plotted in X-Y scatter plot (Figure 13) to show partition in abundances based on each formation in this study. All formation tend to have Eu anomalies (Table 4) lower than the significant values based on Hoskin and Ireland (2000) which is >0.59. Mallapunya Formation (Figure 13A) shows a more scattered data compare to Masterton Sandstone (Figure 13B) and Wollogorang Formation (Figure 13C). However, this could just be due to fewer data in the Mallapunya Formation.

Formation	Gd/La_N	Lu/Gd_N	Lu/La_N	Eu*_N	Ce*_N
Mallapunyah Formation	1.03 to 1258.14 (Average of 127.88)	0.98 to 42.62 (Average of 12.67)	8.67 to 23434.60 (Average of 1879.20)	0.04 to 0.63 (Average of 0.29)	0.10 to 122.72 (Average of 11.80)
Masterton Sandstone	0.22 to 5996.73 (Average of 406.51)	0.70 to 97.81 (Average of 13.84)	0.74 to 95450.10 (Average of 6526.95)	0.01 to 0.85 (Average of 0.39)	0.47 to 414.97 (Average of 17.77)
Wollogorang Formation	0.94 to 4734.42 (Average of 521.25)	0.29 to 53.16 (Average of 17.17)	8.64 to 125552.63 (Average of 9273.37)	0.01 to 0.75 (Average of 0.31)	0.88 to 525.17 (Average of 30.11)
Wuraliwuntya Member	1.31 to 2534.98 (Average of 245.01)	1.09 to 25.53 (Average of 14.98)	6.64 to 43460.53 (Average of 3935.76)	0.02 to 0.79 (Average of 0.34)	0.63 to 400.67 (Average of 27.12)
Wununmantlyala Sandstone	1.99 to 2666.45 (Average of 447.36)	2.25 to 46.82 (Average of 15.62)	11.48 to 44135.54 (Average of 7609.99)	0.05 to 0.74 (Average of 0.38)	1.03 to 217.92 (Average of 26.90)

Table 4: Lists of REE slope values and average including middle REE/light REE (Gd/La normalised), heavy REE/middle REE (Lu/Gd normalised), and heavy REE/light REE (Lu/La normalised) within the formation to show the slope of the data. Range of europium and cerium anomalies are also listed with its calculated average values.

Geochronological constraints of the McArthur and Tawallah Groups

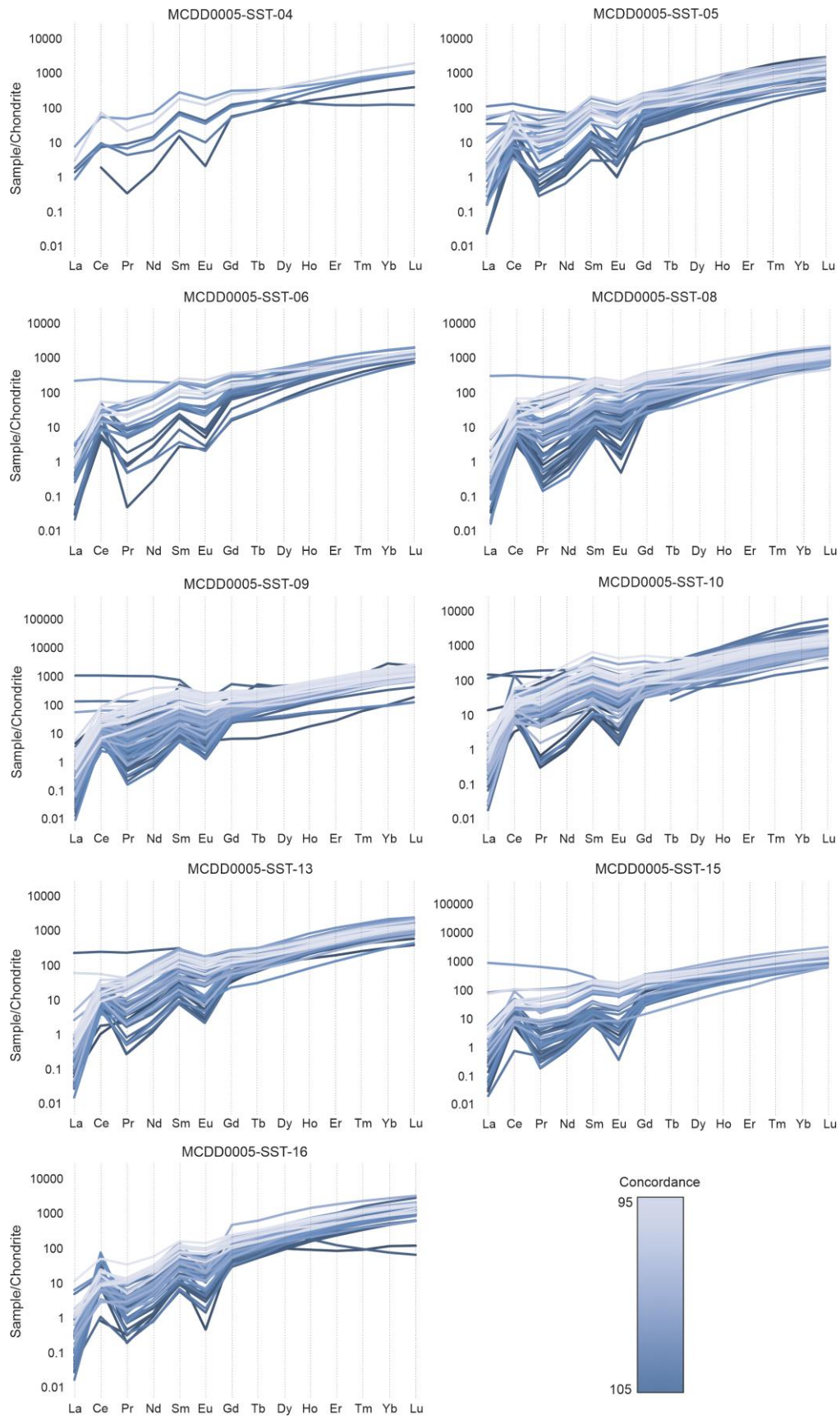


Figure 9: REE concentration plot of targeted samples from McArthur and Tawallah Groups within drill core MCDD0005. Element concentration is normalised with chondrite values from Taylor & McLennan (1985). Trends are coloured based on concordance; dark blue indicates more concordant data while light blue represents less concordant data. Data >95% concordance are used.

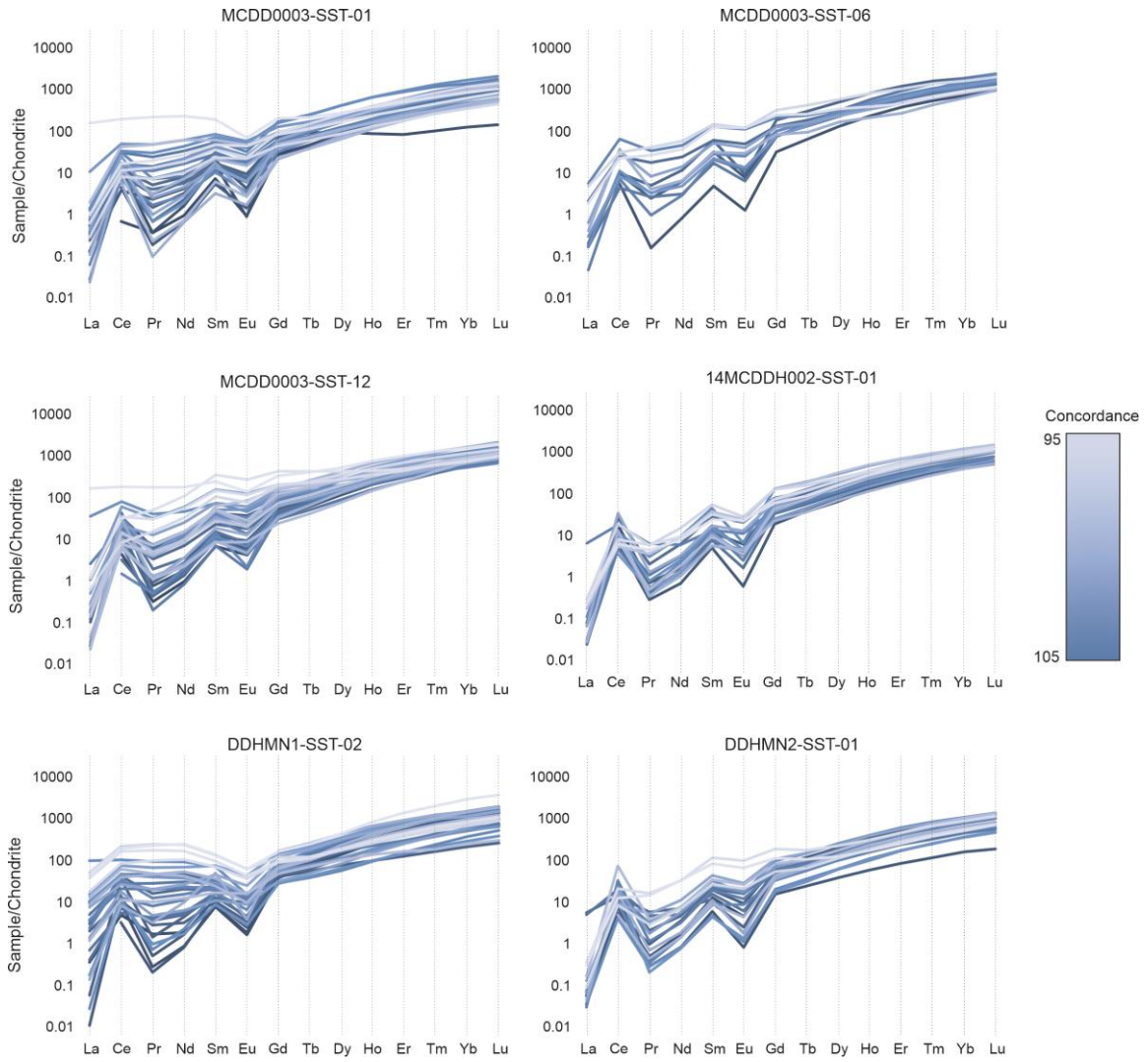


Figure 10: REE concentration plot of targeted samples from McArthur and Tawallah Groups within drill core MCDD0003, 14MCDDH002, DDMHMN1 and DDHMN2. Element concentration is normalised with chondrite values from Taylor & McLennan (1985). Trends are coloured based on concordance; dark blue indicates more concordant data while light blue represents less concordant data. Data >95% concordance are used.

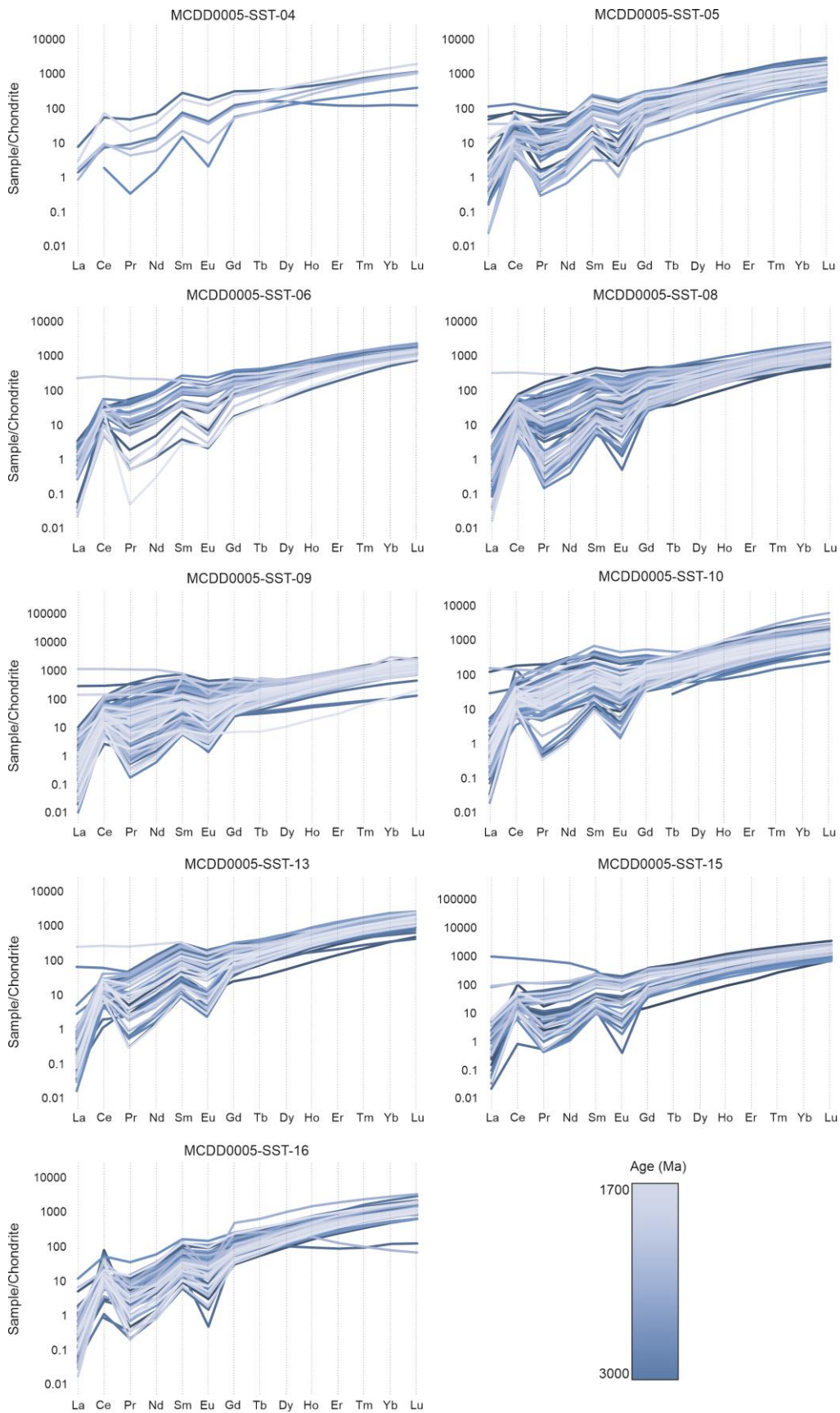


Figure 11: REE concentration plot of targeted samples from McArthur and Tawallah Groups within drill core MCDD0005. Element concentration is normalised with chondrite values from Taylor & McLennan (1985). Trends are coloured based on age (Ma); dark blue indicates older ages while light blue represents younger ages. Data >95% concordance are used.

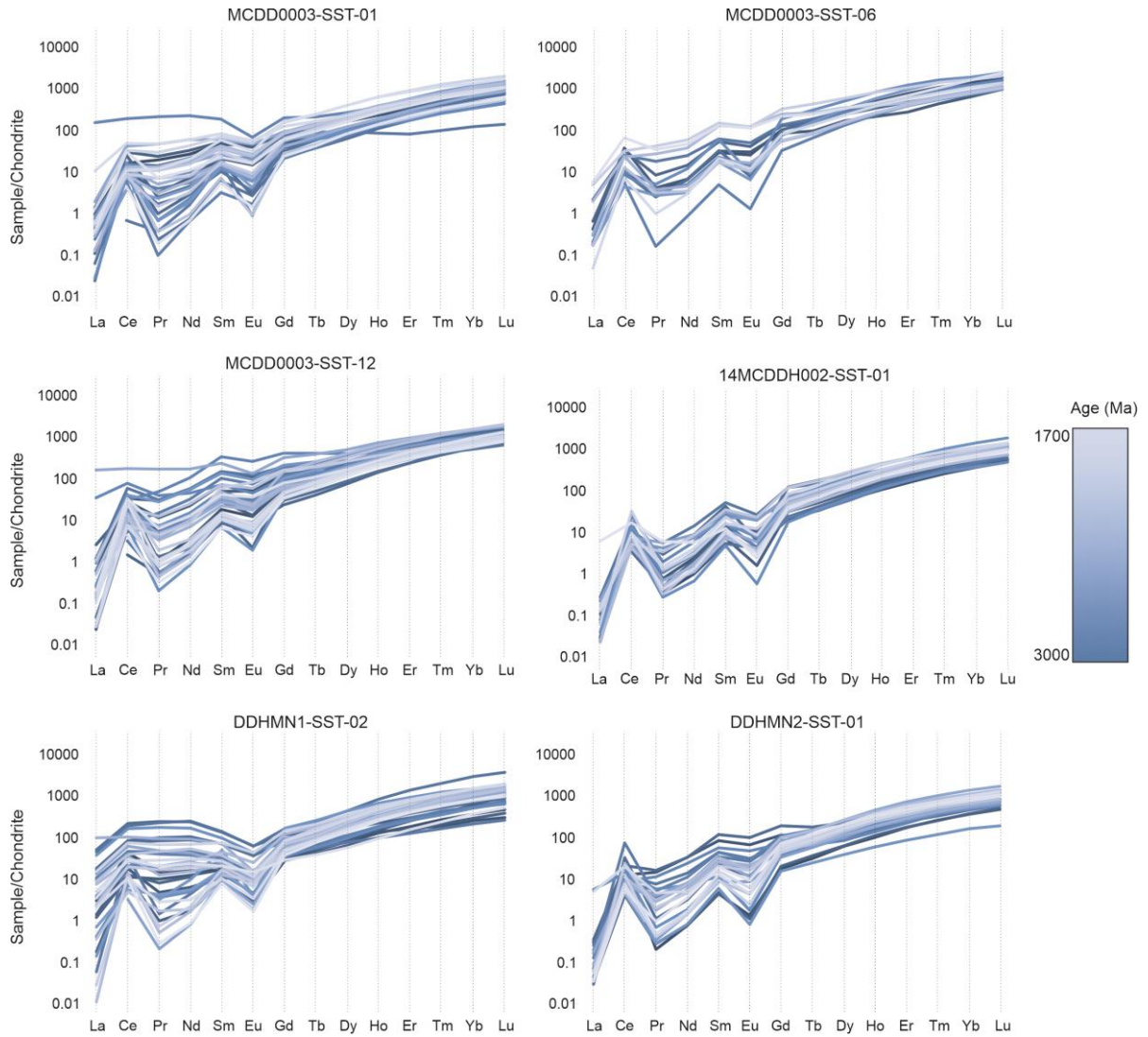


Figure 12: REE concentration plot of targeted samples from McArthur and Tawallah Groups within drill core MCDD0003, 14MCDDH002, DDHMN1 and DDHMN2. Element concentration is normalised with chondrite values from Taylor & McLennan (1985). Trends are coloured based on age (Ma); dark blue indicates older ages while light blue represents younger ages. Data >95% concordance are used.

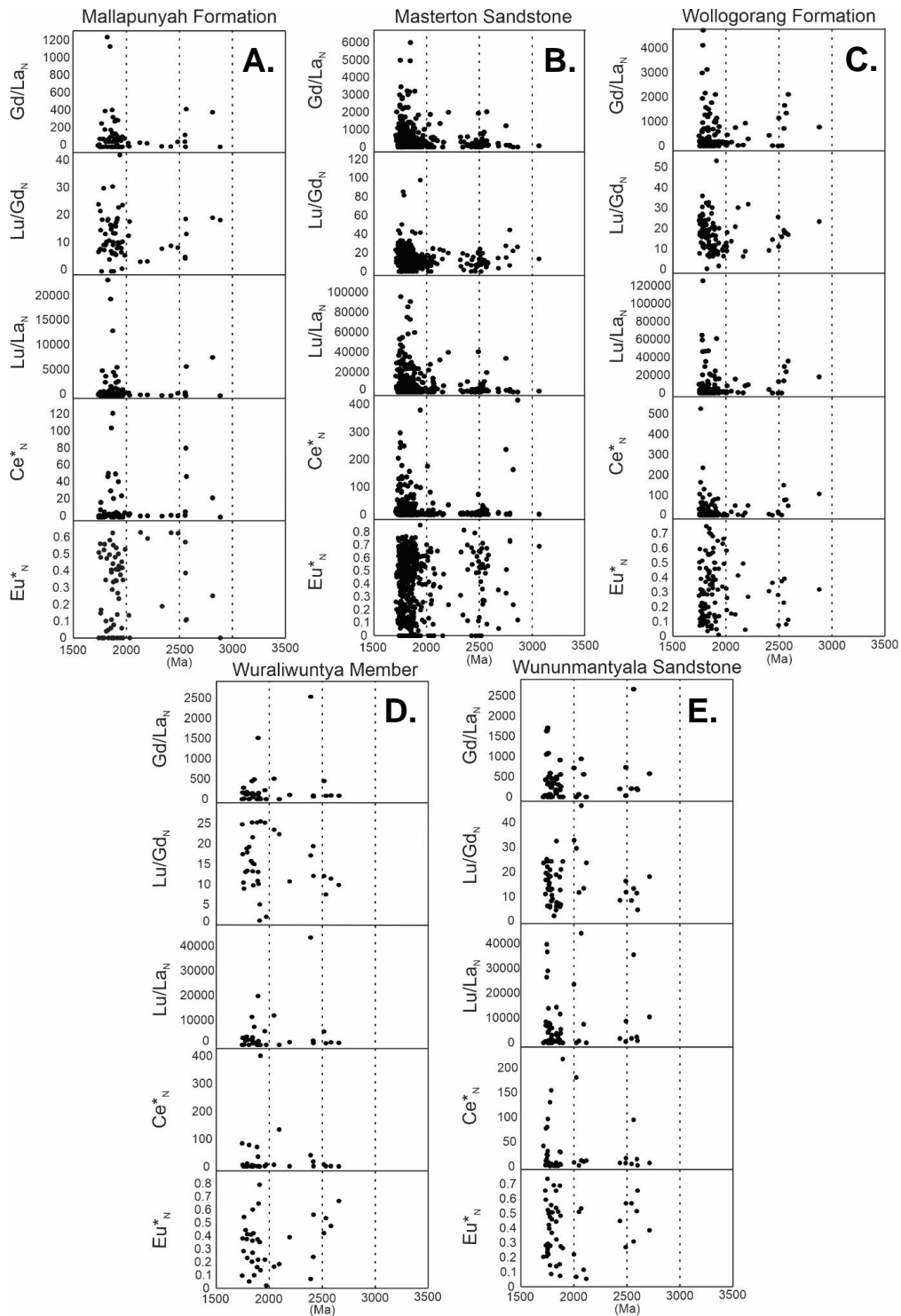


Figure 13: Calculated REE's Eu^* and Ce^* values using equation from Tostevin et al. (2016), as well as heavy REE/light REE (Lu/La), heavy REE/medium REE (Lu/Gd), and medium REE/light REE (Gd/La) values plotted against age (Ma), all using normalised REE values.

Group	Formation	Core ID	Sample No.	Depth (m)		No. concordant grains	Age Peaks (Ma)	Youngest single concordant age (Ma)	Youngest concordant population age (Ma)	MSWD
McArthur Group	Mallapunyah Formation	MCDD0005	SST-04	298.86	299.13	8	1780 Ma, 1930 Ma , 2200 Ma, 2550 Ma	1794 ± 43	1941 ± 18 (5)	1.11
		MCDD0005	SST-05	338.65	339.24	58	1780 Ma, 1880 Ma , 2550 Ma	1740 ± 28	1746 ± 15 (3)	0.36
	Masterton Sandstone	DDHMN2	SST-01	7.29	7.68	24	1780 Ma , 2030 Ma, 2520 Ma, 2700 Ma	1715 ± 50	1724 ± 26 (3)	0.11
		MCDD0005	SST-06	358.19	358.64	29	1800 Ma , 2300 Ma, 2700 Ma	1766 ± 43	1774 ± 14 (8)	0.14
		MCDD0005	SST-08	376.56	377.02	72	1780 Ma , 1850 Ma, 2450 Ma	1714 ± 45	1732 ± 11 (6)	0.36
		MCDD0005	SST-09	389.58	390.18	113	1780 Ma , 1870 Ma, 2500 Ma	1709 ± 28	1730 ± 9 (7)	0.52
		MCDD0005	SST-10	397.76	398.22	125	1790 Ma , 1880 Ma, 2200 Ma, 2500 Ma	1716 ± 48	1734 ± 11 (6)	0.21
		MCDD0005	SST-13	424.62	424.98	58	1800 Ma , 2000 Ma, 2550 Ma	1746 ± 39	1760 ± 19 (5)	0.19
		MCDD0005	SST-15	452.70	453.19	32	1790 Ma , 2000 Ma, 2550 Ma	1740 ± 21	1754 ± 7 (16)	0.54
Tawallah Group	Wollogorang Formation	14MCDDH002	SST-01	2.64	2.95	23	1800 Ma , 2300 Ma, 2550 Ma, 2900 Ma	1761 ± 42	1767 ± 24 (3)	0.16
		DDHMN1	SST-02	55.38	56.19	35	1790 Ma , 1850 Ma, 2100 Ma, 2500 Ma	1753 ± 28	1770 ± 9 (12)	0.69
		MCDD0005	SST-16	469.07	469.42	19	1850 Ma , 2000 Ma	1746 ± 29	1754 ± 10 (5)	0.31
	Wuraliwuntya Member	MCDD0003	SST-01	230.20	230.85	35	1850 Ma , 2000 Ma, 2450 Ma	1745 ± 38	1751 ± 18 (3)	0.14
	Wunnumantyalaa Sandstone	MCDD0003	SST-06	363.58	364.07	16	1740 Ma, 1830 Ma , 2050 Ma, 2450 Ma, 2650 Ma	1730 ± 21	1833 ± 12 (4)	0.02
		MCDD0003	SST-12	510.45	511.09	37	1760 Ma , 1850 Ma, 2100 Ma, 2530 Ma	1712 ± 39	1736 ± 13 (5)	0.52

Table 5: Sample list for U-Pb and REE analyses. Samples taken from upper, middle and lower part of the Formations present within the cores for possible spatial and lateral disparities. Major ²⁰⁷Pb/²⁰⁶Pb age peaks are in bold fonts. Maximum depositional age from the youngest, statistically discrete, concordant grain and population, and its MSWD values are also summarised.

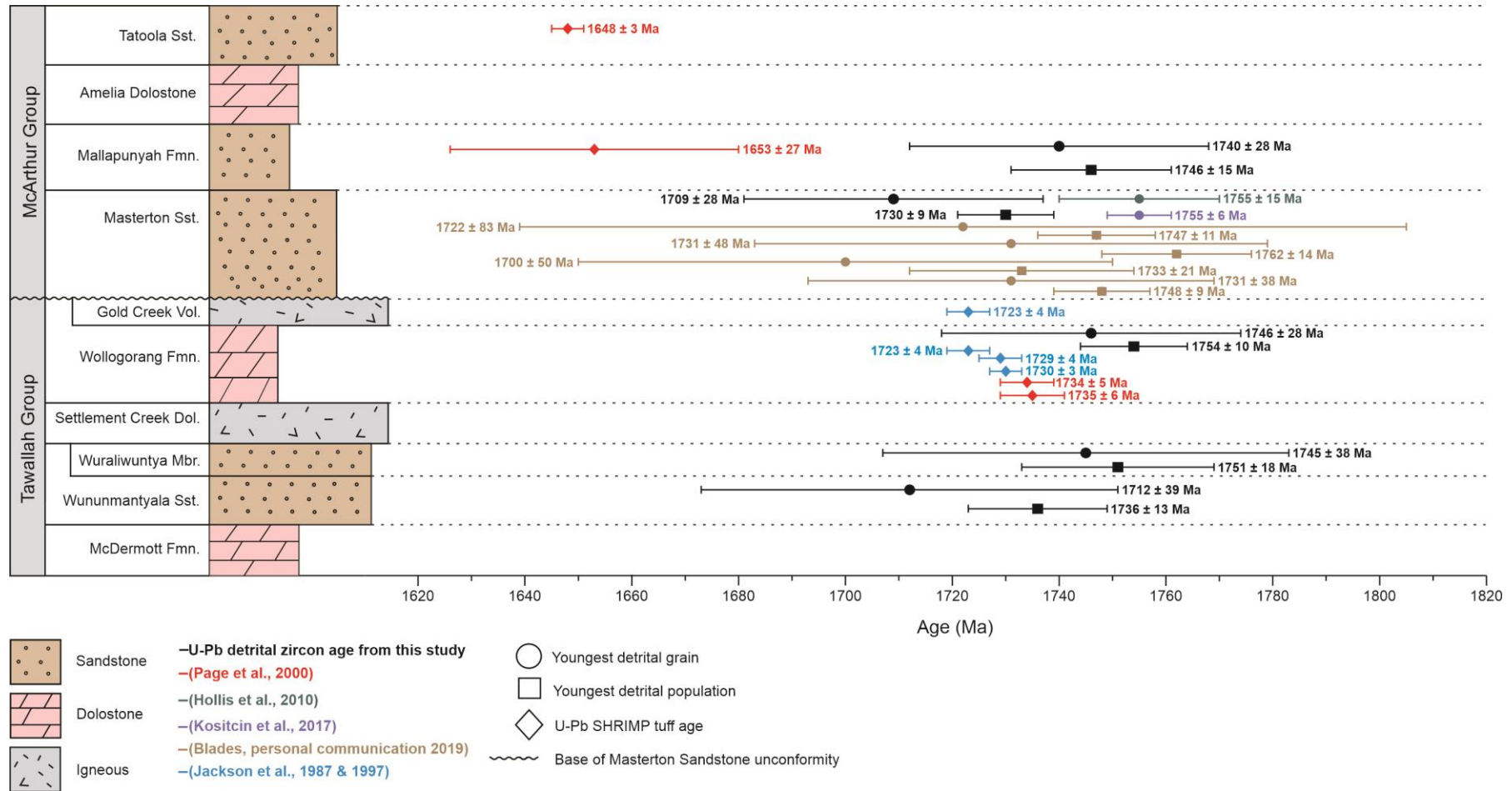


Figure 14: Compilation of U–Pb detrital and tuff ages within the McArthur and Tawallah Groups. Detrital ages are represented by youngest, near-concordant, grain (circle) and population (square) from this study (black), Hollis et al. (dark green: 2010), Kositsin et al. (purple: 2017), and M. L. Blades (Brown: personal communication, September 6, 2019). U-Pb SHRIMP tuff (diamond) ages from Page et al. (Red: 2000) and Jackson et al. (Blue: 1987 & 1997) are also listed.

DISCUSSION

DEPOSITIONAL AGE CONSTRAINTS

New constraints for maximum depositional ages based on the youngest, near-concordant grain and population are summarised in table 5 and figure 14. The maximum depositional age for the Wunnumantya Sandstone from this study is 1712 ± 39 Ma. Overlying is the Wuraliwuntya Member with a maximum depositional age of 1745 ± 38 Ma. These ages provide the first constraints for these units. The unit above is the Wollogorang Formation which yield a maximum depositional age of 1746 ± 29 Ma. These are the samples from the Tawallah Group. Unconformably overlying the Wollogorang Formation is the Masterton Sandstone with a maximum depositional age of 1709 ± 28 Ma. The unit above is the Mallapunyah Formation which record a maximum depositional age of 1740 ± 28 Ma. These are the samples from the McArthur Group.

Jackson et al. (1997) assigned three U–Pb SHRIMP zircon crystallisation ages from tuffs within the Wollogorang Formation (Figure 14: 1730 ± 3 Ma, 1729 ± 4 Ma, and 1723 ± 4 Ma). Similarly, Page et al. (2000) have constrained crystallisation ages of 1735 ± 6 and 1734 ± 5 Ma (Figure 14). These are slightly younger compare to the ages from this study. Detrital U-Pb data from M. L. Blades (personal communication, September 6, 2019) provides maximum depositional age for the Masterton Sandstone using the youngest, near-concordant, grain (Figure 14: 1731 ± 38 , 1700 ± 50 , 1731 ± 48 , and 1722 ± 83 Ma). In addition, Kositcin et al. (2017) and Hollis et al. (2010) also provided a maximum depositional age of 1755 ± 6 and 1755 ± 15 Ma, respectively (Figure 14). These are slightly older than the maximum depositional constraint from this

study. The Mallapunyah Formation is assigned with U-Pb SHRIMP crystallisation ages of 1653 ± 3 Ma from tuff ages by Page et al. (2000). This is a lot younger than the constraint from this study but given that it is taken from the upper Mallapunyah Formation and with different techniques, it may have influenced the differences between the data.

In addition, some of the samples in this study are categorised into different formation on their initial well completion report compare to the recent findings from a high-resolution sequence stratigraphy cross-section (Figure 2: M. Kunzmann, personal communication, June 26, 2019). These samples include: MCDD0005 (SST-10, SST-13, SST-15, and SST-16: Grey, 2018), 14MCDDH002 (SST-01: Grey, 2014), and DDHMN1 (SST-02: Wetherley, 2014) which was assigned to Warramana and Gold Creek Volcanics prior to recent findings. These changes are made due to consideration of unconformity within the base of the Warramana Sandstone in the well completion report. According to M. Kunzmann (personal communication, June 26, 2019) the initial drill core log considers the unconformity as contact between the Warramana and Masterton Sandstone, though it does not reach the requirements to become facies contact since it occurs in the middle of the sandstone layer (Figure 15). Instead it should be considered as the base of the McArthur Group unconformity (Figure 2).



Figure 15: Drill core image from MCDD0005 at around 460 metre depth. Unconformity at the base of Masterton Sandstone (McArthur Group) marked by red arrows (M. Kunzmann, personal communication, June 26, 2019).

PROVENANCE VARIATION AND BASIN EVOLUTION

To show the age distribution per drill holes and per formation, Kernel Density Estimate (KDE) plot (Figure 7) and multiple independent probability plot (Figure 8) is used to represent the major and minor peak detritus from this study. Three major peaks (ca. 1770, 1850, and 1930 Ma) and two minor peaks (ca. 2030 and 2520 Ma) can be observed in figure 7. These peaks are consistent throughout the sequence, however major peaks shift to older ages up-stratigraphy (Figure 7 and 8). This may suggest that younger rocks are sourcing differently from older rocks. To show the changes in provenance within the samples, a multidimensional scaling (MDS) plot is used to compare the resemblance and difference of U-Pb ages. These samples are compared

with proposed sources of provenance in the northern (Pine Creek and Halls Creek Orogens magmatic and detrital zircon), southern (Aileron Province and Tanami Region detrital and magmatic zircon), and eastern (Mount Isa Orogen detrital zircon) surrounding of the basin (Figure 1 and 16). Data shows a lot of similarities between the Aileron Province detrital and the combined samples per formation. However, data from each drill core samples shows variation in provenance sources. A shift of provenance source from the Aileron Province detrital towards the Pine Creek Orogen magmatic and detrital can be observed without any relevant order in relation to their stratigraphic hierarchy (Figure 1 and 16). Data from other study (Drill core WE1 and MY YOUNG: M. L. Blades, personal communication, September 6, 2019) is also added into the MDS plot which show similar trend (Figure 16). This suggests that the sediments may be simultaneously sourced from these two regions. There's also a possibility that they may all be sourcing from different age rocks in the Aileron Province.

Trace elements geochemistry from detrital zircon has been used in early study to explore the provenance and parental melts of zircon grains (Rubatto, 2002). Heavy REE depletion in zircon reflects its competition with garnet during crystallisation, a common pattern observed in igneous melts accompanied by positive Ce and negative Eu anomalies (Hoskin & Schaltegger, 2003). A negative Eu anomaly in zircon infer its coexistence with plagioclase, it is a known sink for Eu during crystallisation (Rubatto, 2002). Figure 13 shows cluster of data at lower Lu/Gd_N concentration which infers that HREE are relatively depleted, suggesting that they are sourced from a garnet bearing granite. Consistent negative Eu anomalies are also observed which infer presence of plagioclase in the melt.

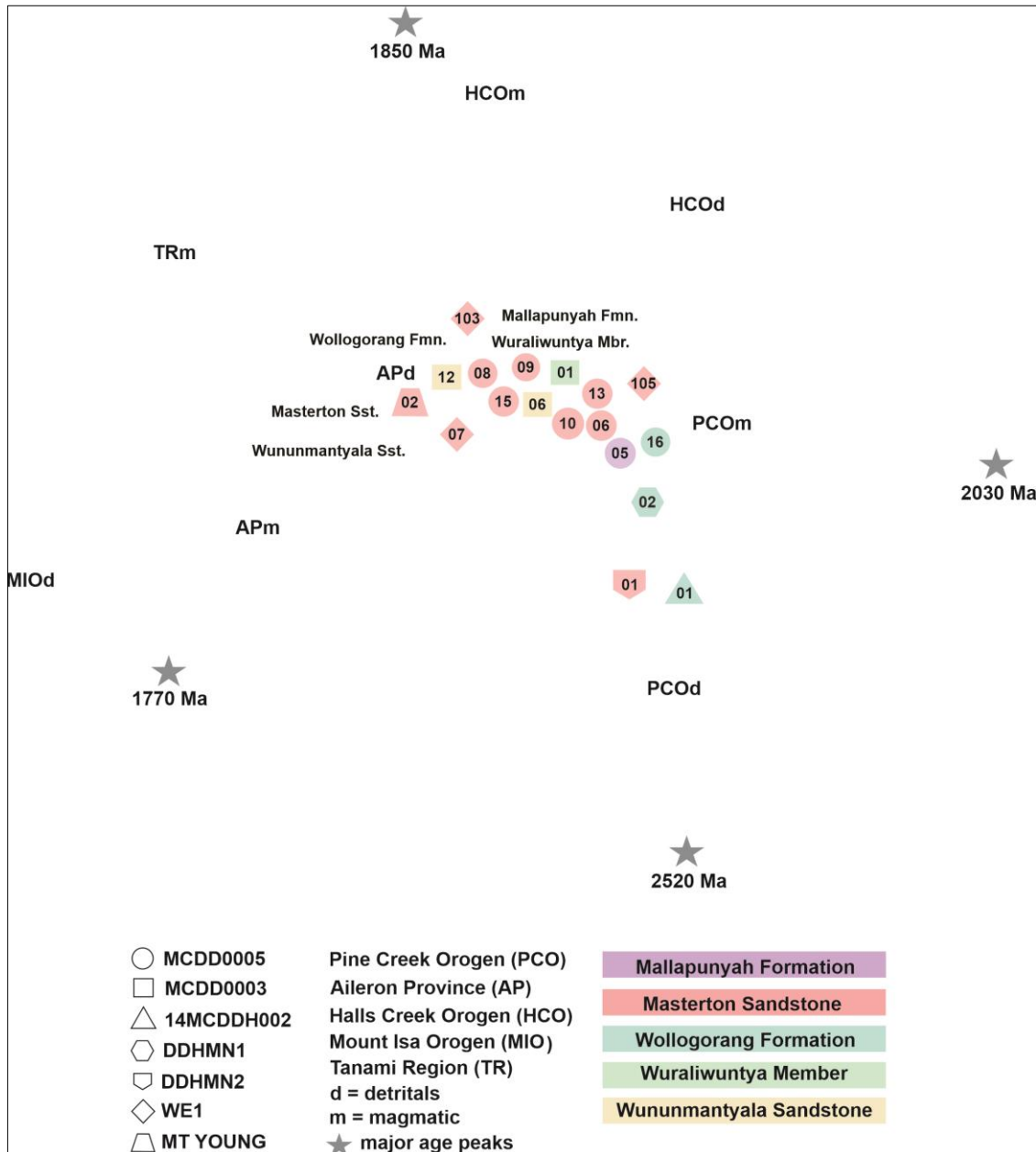


Figure 16: Non-parametric multidimensional scaling (MDS) plot of sandstone samples. The McArthur Group includes the Mallapunyah Formation (purple) and Masterton Sandstone (red). The Tawallah Group includes the Wollogorang Formation (cyan blue), Wuraliwuntya Member (light green), and Wununmantlyala Sandstone (light yellow). Each drill cores are represented with unique symbols, while provenance sources are represented by their abbreviation. Samples from drill core WE1 and MT YOUNG are from M. L. Blades (personal communication, September 6, 2019). Similar samples plot near each other while opposite is true for dissimilar samples.

The Aileron Province (Figure 1) is known to have undergone episodes of orogenic building and magmatism (Claoué-Long & Hoatson, 2005). The earliest magmatism was part of the Stafford (ca. 1810 to 1800 Ma) and Yambah (ca. 1790 to 1770 Ma) Events (Cawood & Korsch, 2008). Cawood and Korsch (2008) suggested that a continuous subduction off the southern margin of the North Australian Craton prompted these events (Figure 17). Continental rifting and a west-dipping subduction zone were also present at ca. 1790 to 1760 Ma between the eastern margin of the North Australian Craton and north-western margin of the Laurentia continent (Figure 17: Blaikie et al., 2017). Presumably, these events are interpreted to have driven the uplifting and exposure of different age rocks from the Aileron Province which prompted the deposition of detritus to the McArthur Basin *sensu stricto*. Hence, it is possible that all samples are sourcing from the Aileron Province with variation in sediment ages due to the episodes of magmatism and orogenic event at the time of deposition.

A continuous east-dipping subduction off the southern margin of the North Australian Craton prompted the Strangways Event (ca. 1740 to 1690 Ma: Cawood & Korsch, 2008) in the Aileron Province (Figure 1 and 17). Coevally, the Leichhardt Event in the Mount Isa Orogen began at ca. 1740 to 1710 Ma (Blaikie et al., 2017). The Strangways Event is still believed to be influencing the exposure and erosion of different age rocks in the Aileron Province at the time. On the eastern margin of the North Australian Craton is the Laurentia continent (Figure 17). At ca. 1650 Ma, backarc rifting between the Georgetown Inlier and Laurentia has formed due to the development of an east-dipping subduction zone (Figure 17: Nordsvan et al., 2018). This prompted the separation of Georgetown Inlier from Laurentia. Continuous subduction has driven the amalgamation and accretion of the Georgetown Inlier to the North Australian Craton at

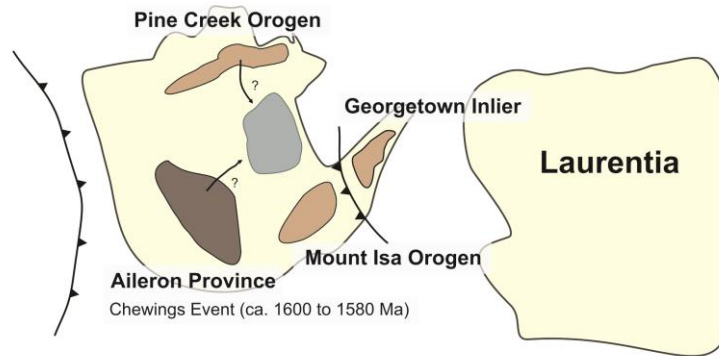
ca. 1600 Ma (Figure 17: Pourteau et al., 2018). The Chewings Event (Figure 17) in the Aileron Province occurred at ca. 1600 to 1580 Ma, driven by an east-dipping subduction zone south of the North Australian Craton (Cawood & Korsch, 2008).

Munson (2019) suggested that the succession within the McArthur Basin *sensu stricto* is mostly deposited in a shallow-marine to emergent, lesser continental/fluvial environment.

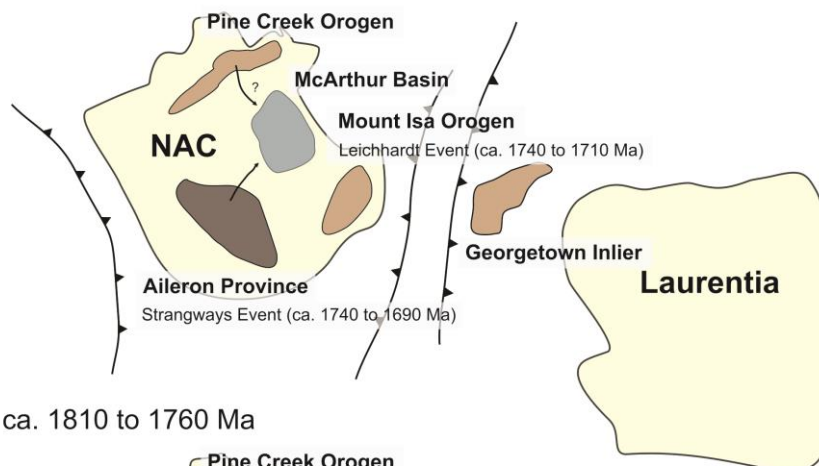
M. Kunzmann (personal communication, June 26, 2019) summarised the lithofacies and depositional environment of the samples used in this study (Figure 2). The Mallapunyah Formation is predominantly deposited in a supra- to intertidal environment (i.e. sabkha and mudflat: Figure 2). The Masterton Sandstone is deposited in an inter- to shallow subtidal environment ranging from foreshore, shoreface, and barrier settings (Figure 2).

In addition, the Wollogorang Formation varies with predominantly subtidal to offshore environment from a lower shoreface to offshore settings (Figure 2). The Wuraliwuntya Member and Wununmantyala Sandstone are both deposited in an inter- to shallow subtidal environment (i.e. foreshore, shoreface, and barrier settings: Figure 2).

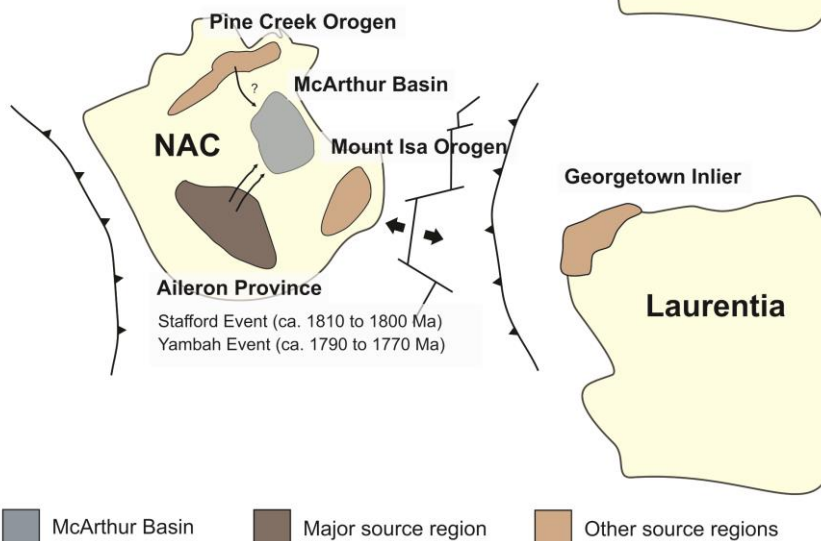
(A) ca. 1600 Ma



(B) ca. 1740 to 1650 Ma



(C) ca. 1810 to 1760 Ma



McArthur Basin
 Major source region
 Other source regions

Figure 17: Tectonic geography and reconstruction of the North Australian Craton and Laurentia from ca. 1810 to 1600 Ma. Major source region is the Aileron Province (brown) with indication of sediment inputs towards the McArthur Basin. (A) amalgamation and accretion of the Georgetown Inlier to the North Australian Craton (NAC) at ca. 1600 Ma (Pourteau et al., 2018) and the occurrence of the Chewings Event in the Aileron Province at ca. 1600 to 1580 Ma caused by an east-dipping subduction zone in the western margin of the NAC (Cawood & Korsch, 2008). (B) backarc rifting between the Georgetown Inlier and Laurentia due to development of an east-dipping subduction zone off the western part of Laurentia (Nordsvan et al., 2018). Complete separation of the Georgetown Inlier by ca. 1650 Ma. Beginning of the Strangways Event in the Aileron Province at ca. 1740 to 1690 Ma (Cawood & Korsch, 2008) caused by an east-dipping subduction zone off the western part of the NAC and the coeval Leichhardt Event in the Mount Isa Orogen at ca. 1740 to 1710 Ma (Blaikie et al., 2017) caused by the west dipping subduction zone off the eastern boundary of the NAC. (C) continental rifting and a west-dipping subduction zone at ca. 1790 to 1760 Ma (Blaikie et al., 2017) off the eastern margin of the NAC. Continuous subduction off the western margin of the NAC which prompted the Stafford (ca. 1810 to 1800 Ma) and Yambah (ca. 1790 to 1770 Ma) Events (Cawood & Korsch, 2008).

CONCLUSIONS

Using data from U–Pb detrital zircon and REE analysis, the maximum depositional age of the sandstone units within the McArthur and Tawallah Groups and their provenance are constrained. The evolution of the basin around the time of deposition is also discussed.

- U–Pb detrital zircon age provide maximum depositional age (MDA) of the units within the McArthur and Tawallah Groups based on the youngest, near-concordant grain. The two lower units of the McArthur Group includes; the Mallapunyah Formation (MDA of 1740 ± 28 Ma), and the Masterton Sandstone (MDA of 1709 ± 28 Ma). The three upper units of the Tawallah Group includes the Wollogorang Formation (MDA of 1746 ± 29 Ma), the Wuraliwuntya Member (MDA of 1745 ± 38 Ma), and the Wununmantlyala Sandstone (MDA of 1712 ± 39 Ma). The sequence demonstrates an age shift up-stratigraphy from younger to older maximum depositional age and peak detritus.
- REE analyses provide insights on the nature of the magma where the zircon grew. Overall, the samples from the McArthur and Tawallah Groups demonstrated a depleted heavy REE which suggests that they grew from a garnet bearing source. Negative Eu anomalies for all sample indicate the presence of plagioclase during the crystallisation of zircon.
- Provenance source are presumed to be coming from the Aileron Province. The deposition of sediments has been related to the major magmatic and orogenic events that happened in the Aileron Province between ca. 1810 to 1800 Ma (Stafford Event), ca. 1790 to 1770 Ma (Yambah Event), and ca. 1740 to 1690 Ma (Strangways Event). These events are interpreted to be driven by a long-

lived subduction zone off the southern margin of the North Australian Craton. The boundary between the eastern North Australian Craton and north-western Laurentia has experienced rifting, backarc, and subduction settings from ca. 1810 to 1600 Ma. The subduction lead to the amalgamation and accretion of the Georgetown Inlier to the North Australian Craton at ca. 1600 Ma.

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APPENDIX

Detrital zircon preparation

Mineral Preparation

1. Sanitise bench top, jaw crusher, disc mill and ring mill prior and after use with ethanol and compressed air gun. Place butcher paper on the bench to minimise contamination.
2. Crush rock using jaw crusher with butcher paper placed on the tray.
3. Transfer the samples from the butcher paper into the disc mill, then placed it on a new butcher paper.
4. Separate samples using sieve with $>479\ \mu\text{m}$ and $<79\ \mu\text{m}$ mesh using Endcotts EPL2000 super shaker.
5. Placed samples that are $>479\ \mu\text{m}$ to the tungsten ring mill for 15 seconds and sieve them back on the shaker. Repeat until the amount of sample $>479\ \mu\text{m}$ is less than a handful.
6. Store the samples into three different plastic bag ($>479\ \mu\text{m}$, zircon fraction, and $<79\ \mu\text{m}$) and label accordingly with their grain fraction.

Mineral Separation

1. Sanitise the room and benches with ethanol and vacuum the floor. Clean the apparatus that will be used with tap water.
2. Place zircon fraction into a small pan and set up a larger pan in the sink. Proceed panning the samples to separate light and heavy grains. Place the separated light grain from the large pan into a funnel with filter paper for future purpose. Proceed until the portion left in the pan is about a 'fingernail' size.
3. Place the remaining portion into a filter paper in a funnel to remove water.
4. Dry in a hotplate at 50°C .
5. Use FRANZ magnetic to separate heavy and magnetic grains.
6. Transfer the remaining grain into a vial and label accordingly.

Zircon Picking and Mount Preparation

1. Clean petri dish with ethanol. Place under microscope. Transfer grains from the vial into the petri dish.
2. Use a pick to take zircon and place onto Teflon mount based with double sided tape.
3. Repeat process until there are approximately 300 grains.
4. Reconnect Teflon base into casing that's been coated with Vaseline to ease removal in the future.
5. Mix epoxy resin with approximately 5 g of epoxy and 0.5 g hardener, then place into the mount slowly, ensuring air pocket do not form.
6. Heat resin for less than 30 seconds on a 50°C hotplate to eliminate bubbles if it formed. Let it cool for 24 hours afterwards.
7. Remove the mounts from the Teflon case and polish using sandpaper and polishing laps until zircon grains are exposed enough for U–Pb analyses.

U-Pb data

All U-Pb data for Mallapunyah Formation

Analysis	207Pb/235U	Error	206Pb/238U	Error	rho	Concordance	206Pb/238U	Error	207Pb/206Pb	Error
CC01_04 - 20	no value	NAN	no value	NAN	NaN	#VALUE!	no value	NAN	no value	NAN
CC01_04 - 9	6.161	0.13	0.3722	0.0042	0.61385	104.2966752	2039	20	1955	34
CC01_04 - 4	6.044	0.12	0.363	0.0042	0.62361	101.7848037	1996	20	1961	34
CC01_04 - 16	5.78	0.15	0.3538	0.005	0.028394	101.7726799	1952	24	1918	50
CC01_04 - 5	5.655	0.13	0.3514	0.0043	0.4012	101.0411244	1941	20	1921	40
CC01_04 - 3	7.425	0.15	0.3904	0.0042	0.28675	96.54545455	2124	20	2200	36
CC01_04 - 18	10.88	0.22	0.4625	0.005	0.44697	95.81540868	2450	22	2557	33
CC01_04 - 17	5.29	0.15	0.3225	0.0069	0.31884	93.60706861	1801	34	1924	47
CC01_04 - 8	4.424	0.11	0.2936	0.0039	0.32723	92.47491639	1659	19	1794	43
CC01_04 - 15	5.643	0.13	0.3256	0.0074	0.097824	89.23832924	1816	36	2035	54
CC01_04 - 2	4.543	0.1	0.281	0.0036	0.32693	83.64779874	1596	18	1908	38
CC01_04 - 19	5.66	0.21	0.2955	0.0038	0.55774	75.31588448	1669	19	2216	53
CC01_04 - 14	4.041	0.1	0.2485	0.0039	0.55776	74.92146597	1431	20	1910	41
CC01_04 - 6	4.282	0.091	0.244	0.0033	0.55562	68.66764275	1407	17	2049	36
CC01_04 - 11	7.587	0.16	0.2882	0.0046	0.86926	59.173314	1632	23	2758	33
CC01_04 - 1	4.703	0.13	0.2265	0.0043	0.18554	56.4882227	1319	23	2335	52
CC01_04 - 13	4.89	0.13	0.2175	0.0035	0.64233	50.65920895	1268	19	2503	41
CC01_04 - 21	9.3	0.67	0.261	0.017	0.49326	46.64576803	1488	88	3190	110
CC01_04 - 7	4.434	0.093	0.1891	0.0024	0.25646	43.61860102	1116.2	13	2559	36
CC01_04 - 12	4.23	0.094	0.1797	0.0032	0.68278	41.31109387	1065	18	2578	35
CC01_04 - 10	2.568	0.088	0.1273	0.0041	0.65553	34.11400795	772	23	2263	54
CC01_04 - 22	2.76	0.32	0.0904	0.0088	0.88649	18.88397414	555	51	2939	44
CC02_05 - 105	no value	NAN	no value	NAN	NaN	#VALUE!	no value	NAN	no value	NAN
CC02_05 - 106	no value	NAN	no value	NAN	NaN	#VALUE!	no value	NAN	no value	NAN
CC02_05 - 95	1220	150	10.8	1.3	0.99324	310.5390185	15440	740	4972	20
CC02_05 - 47	195	32	2.01	0.29	0.99905	141.8274327	6690	390	4717	29

CC02_05 - 34	5.112	0.074	0.3369	0.0034	0.406	104.753915	1873	16	1788	18
CC02_05 - 32	6.12	0.1	0.3685	0.0036	0.56191	104.1731066	2022	17	1941	17
CC02_05 - 35	12.08	0.17	0.5106	0.006	0.39402	103.5449942	2658	26	2567	17
CC02_05 - 79	16.9	0.29	0.5869	0.0062	0.25327	103.1185031	2976	25	2886	23
CC02_05 - 42	5.21	0.099	0.3399	0.0037	0.40369	103.0601093	1886	18	1830	25
CC02_05 - 16	5.244	0.087	0.3384	0.0037	0.15733	102.9025192	1879	18	1826	29
CC02_05 - 6	5.36	0.14	0.3426	0.0045	0.071785	102.4824609	1899	21	1853	49
CC02_05 - 24	4.758	0.086	0.3202	0.0035	0.31491	101.8782015	1790	17	1757	26
CC02_05 - 18	4.84	0.12	0.3227	0.0046	0.017362	101.8654607	1802	22	1769	43
CC02_05 - 37	5.406	0.1	0.3403	0.0037	0.18072	101.5599785	1888	18	1859	30
CC02_05 - 23	15.47	0.35	0.5573	0.0075	0.31918	101.4570007	2855	31	2814	34
CC02_05 - 19	6.515	0.11	0.3749	0.0038	0.52272	101.4335146	2052	18	2023	18
CC02_05 - 45	5.431	0.09	0.3421	0.0035	0.45258	101.2813668	1897	17	1873	22
CC02_05 - 14	4.729	0.1	0.3183	0.0035	0.26446	101.1931818	1781	17	1760	34
CC02_05 - 12	5.428	0.094	0.3397	0.0033	0.40718	101.0182208	1885	16	1866	24
CC02_05 - 97	11.63	0.17	0.4928	0.0048	0.22331	100.8590394	2583	21	2561	19
CC02_05 - 40	5.02	0.12	0.3255	0.0041	0.29947	100.4972376	1819	19	1810	38
CC02_05 - 99	5.402	0.1	0.3394	0.0037	0.44134	100.48	1884	18	1875	27
CC02_05 - 44	6.021	0.097	0.3581	0.0035	0.41611	100.305033	1973	17	1967	22
CC02_05 - 21	9.95	0.24	0.4554	0.0062	0.23015	100.1651528	2426	28	2422	39
CC02_05 - 36	5.74	0.097	0.3484	0.0047	0.44879	99.89631934	1927	22	1929	26
CC02_05 - 70	4.571	0.083	0.3082	0.0033	0.12811	99.54022989	1732	16	1740	30
CC02_05 - 104	5.566	0.086	0.3434	0.0039	0.11631	99.37336815	1903	19	1915	26
CC02_05 - 15	5.406	0.1	0.336	0.004	0.014634	99.30851064	1867	19	1880	35
CC02_05 - 10	5.39	0.14	0.3349	0.0047	0.23145	98.83165162	1861	23	1883	45
CC02_05 - 61	4.88	0.11	0.3171	0.0042	0.60065	98.3924612	1775	20	1804	28
CC02_05 - 69	4.659	0.084	0.3098	0.0039	0.33773	98.0270575	1739	19	1774	24
CC02_05 - 11	5.38	0.13	0.3327	0.0043	0.25644	97.52370917	1851	21	1898	39
CC02_05 - 62	5.016	0.1	0.3206	0.0035	0.085907	97.39130435	1792	17	1840	37
CC02_05 - 53	5.56	0.12	0.3381	0.0052	0.80922	97.30430275	1877	25	1929	18
CC02_05 - 20	4.804	0.089	0.3129	0.0026	0.30095	97.11676812	1754.9	13	1807	23
CC02_05 - 100	5.378	0.08	0.3339	0.0033	0.31666	97.07266074	1857	16	1913	22
CC02_05 - 111	4.532	0.075	0.3017	0.0037	0.5582	96.97661152	1700	19	1753	23
CC02_05 - 85	10.99	0.2	0.4667	0.007	0.78736	96.75146771	2472	30	2555	15
CC02_05 - 8	4.473	0.077	0.3013	0.0047	0.55952	96.58508822	1697	23	1757	25
CC02_05 - 109	4.987	0.093	0.3199	0.0044	0.58296	96.2345347	1789	22	1859	26
CC02_05 - 66	4.969	0.089	0.3164	0.0034	0.3925	96.14758546	1772	17	1843	26

CC02_05 - 52	4.554	0.097	0.3042	0.0041	0.60615	95.69591951	1712	20	1789	28
CC02_05 - 28	4.739	0.1	0.309	0.0049	0.3536	95.64498346	1735	24	1814	34
CC02_05 - 81	4.36	0.093	0.2931	0.0039	0.5385	95.22988506	1657	19	1740	28
CC02_05 - 94	5.227	0.077	0.3227	0.0031	0.56473	94.79495268	1803	15	1902	16
CC02_05 - 30	8.46	0.13	0.4099	0.0047	0.33437	94.73684211	2214	22	2337	19
CC02_05 - 22	5.03	0.11	0.3162	0.005	0.69472	94.40298507	1771	24	1876	26
CC02_05 - 53	5.41	0.19	0.327	0.0097	0.82772	93.77572016	1823	47	1944	33
CC02_05 - 41	5.005	0.091	0.3133	0.0036	0.22222	93.65671642	1757	18	1876	28
CC02_05 - 53	5.39	0.13	0.3284	0.007	0.85091	93.60613811	1830	34	1955	22
CC02_05 - 96	5.909	0.1	0.3402	0.0036	0.13108	92.86417323	1887	17	2032	26
CC02_05 - 73	5.013	0.086	0.3125	0.0032	0.38654	92.60433175	1753	16	1893	24
CC02_05 - 80	4.853	0.098	0.3054	0.0054	0.8116	91.81818182	1717	27	1870	19
CC02_05 - 39	5.09	0.14	0.312	0.0056	0.8017	91.81102362	1749	27	1905	33
CC02_05 - 13	4.76	0.11	0.3026	0.0045	0.63944	91.76090468	1704	22	1857	29
CC02_05 - 92	4.98	0.13	0.3108	0.0063	0.76457	91.59663866	1744	31	1904	29
CC02_05 - 60	5.383	0.097	0.3218	0.0034	0.42191	91.56075241	1801	17	1967	24
CC02_05 - 2	6.471	0.14	0.3534	0.0052	0.76765	91.42053446	1950	25	2133	34
CC02_05 - 74	5.16	0.13	0.3137	0.0054	0.47118	91.32467532	1758	27	1925	40
CC02_05 - 54	5.483	0.1	0.325	0.0053	0.49281	91.24748491	1814	26	1988	25
CC02_05 - 67	4.706	0.093	0.2984	0.0038	0.63372	90.43524987	1683	19	1861	24
CC02_05 - 93	9.4	0.15	0.4155	0.005	0.62252	90.06835545	2240	23	2487	16
CC02_05 - 110	4.271	0.071	0.2811	0.004	0.51695	89.46778711	1597	20	1785	25
CC02_05 - 55	5.264	0.096	0.3127	0.0039	0.74089	89.26208651	1754	19	1965	17
CC02_05 - 49	4.34	0.11	0.2825	0.0044	0.59095	89.11111111	1604	22	1800	32
CC02_05 - 57	5.299	0.082	0.3144	0.0051	0.4294	88.81048387	1762	25	1984	26
CC02_05 - 3	4.779	0.11	0.2981	0.0054	0.67765	88.61360042	1681	27	1897	41
CC02_05 - 5	4.037	0.11	0.272	0.0046	0.436	88.37606838	1551	23	1755	47
CC02_05 - 90	4.79	0.11	0.2958	0.0065	0.79544	87.71008403	1670	32	1904	27
CC02_05 - 59	5.121	0.092	0.3044	0.0045	0.54988	86.95431472	1713	22	1970	22
CC02_05 - 102	4.67	0.07	0.2899	0.0038	0.48693	86.68779715	1641	19	1893	17
CC02_05 - 108	8.25	0.15	0.3812	0.0047	0.53932	86.31840796	2082	22	2412	22
CC02_05 - 71	4.302	0.083	0.2778	0.0029	0.28977	85.91625884	1580	15	1839	32
CC02_05 - 7	5.167	0.11	0.3044	0.0042	0.19663	85.73573574	1713	21	1998	36
CC02_05 - 4	6.66	0.18	0.3444	0.0069	0.80892	85.4390681	1907	33	2232	36
CC02_05 - 86	4.339	0.076	0.2768	0.0035	0.52481	84.58646617	1575	17	1862	22
CC02_05 - 76	4.42	0.15	0.2726	0.0086	0.81758	82.42166755	1552	44	1883	33
CC02_05 - 26	4.271	0.095	0.272	0.0053	0.7544	82.27176221	1550	27	1884	23

CC02_05 - 48	7.54	0.63	0.34	0.0064	0.61017	81.11587983	1890	31	2330	120
CC02_05 - 31	4.736	0.093	0.2817	0.0044	0.79123	80.11022044	1599	22	1996	19
CC02_05 - 89	4.19	0.14	0.2554	0.0029	0.59426	75.82644628	1468	15	1936	47
CC02_05 - 51	10.8	0.29	0.3915	0.0098	0.95142	75.72089712	2127	46	2809	19
CC02_05 - 29	3.806	0.073	0.2387	0.0025	0.17428	73.99463807	1380	13	1865	30
CC02_05 - 84	3.948	0.075	0.2435	0.0036	0.68908	73.39593114	1407	18	1917	20
CC02_05 - 1	7.88	0.21	0.3332	0.0061	0.84572	71.98912199	1853	29	2574	34
CC02_05 - 78	3.975	0.09	0.2413	0.0039	0.68151	71.84765826	1396	20	1943	24
CC02_05 - 58	4.577	0.089	0.2561	0.0035	0.59857	70.84337349	1470	18	2075	22
CC02_05 - 98	3.779	0.072	0.2307	0.0036	0.63168	70.42475092	1343	18	1907	24
CC02_05 - 68	4.502	0.064	0.2518	0.003	0.63098	69.38188788	1448	15	2087	16
CC02_05 - 107	36.2	8.2	0.532	0.051	0.6951	67.65432099	2740	220	4050	240
CC02_05 - 72	3.914	0.085	0.227	0.0058	0.8456	65.21523998	1318	31	2021	22
CC02_05 - 27	4.183	0.082	0.2318	0.0028	-0.20787	63.69668246	1344	15	2110	37
CC02_05 - 101	6.42	0.39	0.277	0.018	0.98392	61.18703631	1567	90	2561	17
CC02_05 - 75	3.22	0.11	0.1992	0.0064	0.86415	60.40268456	1170	34	1937	29
CC02_05 - 112	7.175	0.11	0.269	0.0028	0.42305	55.53145336	1536	14	2766	17
CC02_05 - 82	3.88	0.12	0.2045	0.0031	0.58887	54.79890311	1199	17	2188	42
CC02_05 - 65	34.5	4.2	0.438	0.035	0.99148	53.06308358	2330	160	4391	58
CC02_05 - 25	3.025	0.1	0.1765	0.0053	0.83687	52.37618809	1047	29	1999	27
CC02_05 - 43	2.79	0.13	0.1691	0.0073	0.96994	51.61787365	1005	40	1947	19
CC02_05 - 50	5.52	0.14	0.2174	0.0043	0.44821	47.52623688	1268	23	2668	39
CC02_05 - 63	5.543	0.1	0.2135	0.0061	0.8869	46.36128556	1255	31	2707	22
CC02_05 - 91	4.72	0.26	0.201	0.011	0.97122	46.34433962	1179	58	2544	15
CC02_05 - 33	5.86	0.17	0.227	0.019	0.37941	46.2633452	1300	100	2810	130
CC02_05 - 103	3.969	0.07	0.1862	0.0027	0.43768	45.95158598	1101	15	2396	25
CC02_05 - 56	4.987	0.098	0.2025	0.0038	0.84904	45.36082474	1188	20	2619	16
CC02_05 - 64	4.62	0.21	0.191	0.015	0.90171	42.21635884	1120	84	2653	74
CC02_05 - 83	2.954	0.07	0.1482	0.0025	0.55674	39.18385257	893	14	2279	32
CC02_05 - 17	2.422	0.098	0.1259	0.0052	0.95178	34.40036069	763	30	2218	20
CC02_05 - 87	1.617	0.1	0.0906	0.0047	0.63081	26.45803698	558	28	2109	62
CC02_05 - 9	2	0.15	0.1	0.011	0.98593	25.42726136	610	64	2399	67
CC02_05 - 77	2.66	0.18	0.1031	0.0037	0.85467	23.72372372	632	22	2664	67
CC02_05 - 46	4.734	0.073	0.1259	0.0017	0.62589	23.04098855	764.5	9.9	3318	16

All U–Pb data for Masterton Sandstone

Analysis	207Pb/235U	Error	206Pb/238U	Error	rho	Concordance	206Pb/238U	Error	207Pb/206Pb	Error
CC06_01N - 2	no value	NAN	no value	NAN	NaN	#VALUE!	no value	NAN	no value	NAN
CC06_01N - 49	4.651	0.099	0.3191	0.003	0.35637	103.4782609	1785	15	1725	44
CC06_01N - 68	5.118	0.099	0.3362	0.003	0.31754	103.2614704	1868	14	1809	44
CC06_01N - 48	4.55	0.11	0.3152	0.0036	0.027485	102.9737609	1766	18	1715	50
CC06_01N - 67	4.594	0.081	0.3167	0.0024	0.081656	102.1301094	1774	12	1737	44
CC06_01N - 27	4.687	0.084	0.3178	0.0027	0.16052	101.7734554	1779	13	1748	46
CC06_01N - 28	5.209	0.095	0.3356	0.0031	0.22	101.6348774	1865	15	1835	45
CC06_01N - 15	4.64	0.098	0.3137	0.0029	0.33452	101.6175621	1759	14	1731	47
CC06_01N - 66	11.16	0.18	0.4843	0.0042	0.58624	101.3131715	2546	18	2513	33
CC06_01N - 70	6.53	0.13	0.3753	0.0037	0.25082	100.9336609	2054	17	2035	47
CC06_01N - 33	4.92	0.16	0.3231	0.0048	0.37642	100.5574136	1804	24	1794	63
CC06_01N - 26	4.691	0.082	0.3134	0.0032	0.35512	100.2279202	1759	16	1755	41
CC06_01N - 63	6.62	0.17	0.3778	0.0045	0.30573	100.1940805	2065	21	2061	50
CC06_01N - 41	15.77	0.36	0.5578	0.0079	0.23197	99.72067039	2856	33	2864	47
CC06_01N - 32	4.666	0.095	0.3152	0.0037	0.37561	99.71767363	1766	18	1771	46
CC06_01N - 19	5.26	0.099	0.3326	0.003	0.05134	99.56966111	1851	15	1859	44
CC06_01N - 6	4.92	0.083	0.3224	0.0031	0.30259	99.50276243	1801	15	1810	39
CC06_01N - 39	4.57	0.12	0.3097	0.0034	0.12661	99.37142857	1739	17	1750	53
CC06_01N - 30	5.327	0.091	0.3356	0.0032	0.44397	99.14938862	1865	15	1881	39
CC06_01N - 55	4.702	0.09	0.311	0.0036	0.36595	97.26867336	1745	18	1794	45
CC06_01N - 1	5.069	0.095	0.3236	0.0027	0.44978	97.2027972	1807	13	1859	41
CC06_01N - 65	5.42	0.1	0.3284	0.0031	0.2623	94	1833	15	1950	43
CC06_01N - 14	4.51	0.11	0.2976	0.0032	0.48708	93.90380313	1679	16	1788	51
CC06_01N - 40	5.915	0.11	0.3429	0.0039	0.48759	93.00048948	1900	19	2043	42
CC06_01N - 44	10.54	0.16	0.4436	0.0043	0.43028	92.06225681	2366	19	2570	35
CC06_01N - 21	4.97	0.13	0.3044	0.008	0.83279	88.3324729	1711	40	1937	40
CC06_01N - 37	4.445	0.086	0.283	0.0031	0.19871	86.43702906	1606	16	1858	46
CC06_01N - 38	4.228	0.092	0.2698	0.0036	0.47801	83.24324324	1540	18	1850	45
CC06_01N - 54	4.08	0.15	0.2581	0.0099	0.86774	78.95299145	1478	51	1872	49
CC06_01N - 56	4.117	0.085	0.2588	0.0032	0.42205	78.67374005	1483	17	1885	44
CC06_01N - 22	3.815	0.086	0.2475	0.0045	0.59756	77.74140753	1425	23	1833	48
CC06_01N - 52	7.85	0.18	0.3437	0.0061	0.63076	76.21145374	1903	29	2497	42
CC06_01N - 57	4.27	0.14	0.2567	0.0034	-0.36394	75.1914242	1473	17	1959	75
CC06_01N - 50	8.63	0.22	0.3421	0.0073	0.89843	70.6935123	1896	35	2682	33
CC06_01N - 71	4.633	0.087	0.2506	0.0035	0.59594	67.11690731	1441	18	2147	38
CC06_01N - 69	2.983	0.071	0.1831	0.0034	0.72386	55.31154239	1083	19	1958	41
CC06_01N - 31	3.864	0.075	0.1975	0.0027	0.57162	52.03761755	1162	14	2233	40

CC06_01N - 72	2.823	0.054	0.1605	0.0025	0.56339	47.05593719	959	14	2038	43
CC06_01N - 42	3.442	0.072	0.1702	0.0028	0.85949	44.08181027	1013	15	2298	34
CC06_01N - 17	2.54	0.12	0.1461	0.0075	0.97234	42.73879142	877	42	2052	40
CC06_01N - 16	2.47	0.12	0.1353	0.0067	0.95719	38.2739212	816	38	2132	37
CC06_01N - 58	1.945	0.055	0.1143	0.0033	0.83595	34.59057072	697	19	2015	40
CC06_01N - 43	2.018	0.057	0.1082	0.0029	0.82877	30.86247086	662	17	2145	39
CC06_01N - 8	1.885	0.042	0.1052	0.0019	0.67048	30.7435653	645	11	2098	38
CC06_01N - 29	1.829	0.044	0.0943	0.0027	0.84293	25.83370387	581	16	2249	39
CC06_01N - 18	1.788	0.044	0.0892	0.0021	0.86294	24.04013962	551	12	2292	36
CC06_01N - 53	1.73	0.039	0.0856	0.0017	0.71955	22.99000435	529	10	2301	40
CC06_01N - 45	1.431	0.028	0.0786	0.0011	0.6658	22.96278851	487.5	6.7	2123	39
CC06_01N - 23	1.838	0.03	0.088	0.0011	0.69258	22.94514768	543.8	6.3	2370	34
CC06_01N - 51	1.424	0.048	0.0753	0.0028	0.88784	21.29208371	468	17	2198	41
CC06_01N - 35	1.366	0.041	0.0736	0.0023	0.91076	21.10599078	458	14	2170	37
CC06_01N - 11	1.764	0.068	0.079	0.0035	0.96352	19.7740113	490	21	2478	37
CC06_01N - 60	1.688	0.038	0.0752	0.0011	0.63181	18.91585761	467.6	6.7	2472	40
CC06_01N - 7	1.281	0.025	0.063	0.0013	0.82082	16.95951766	393.8	7.7	2322	36
CC06_01N - 64	1.269	0.056	0.0627	0.0029	0.93428	16.87473095	392	18	2323	39
CC06_01N - 61	1.238	0.041	0.0594	0.0017	0.74752	15.93147752	372	10	2335	41
CC06_01N - 25	1.75	0.1	0.0665	0.003	0.96883	15.37329901	418	19	2719	37
CC06_01N - 10	1.239	0.023	0.05803	0.00073	0.65788	15.21338912	363.6	4.4	2390	35
CC06_01N - 34	1.253	0.034	0.0557	0.0014	0.85728	14.14337789	349.2	8.7	2469	38
CC06_01N - 46	1.13	0.034	0.0533	0.0014	0.88377	14.02515723	334.5	8.7	2385	39
CC06_01N - 59	1.017	0.027	0.0495	0.0017	0.82533	13.34763948	311	10	2330	43
CC06_01N - 36	0.951	0.049	0.0481	0.0031	0.94725	13.11902693	302	19	2302	47
CC06_01N - 3	0.974	0.041	0.0457	0.0018	0.9521	12.04516939	288	11	2391	36
CC06_01N - 20	0.993	0.02	0.0455	0.00094	0.80529	11.79276316	286.8	5.8	2432	34
CC06_01N - 9	0.996	0.056	0.0458	0.003	0.97502	11.750306	288	19	2451	41
CC06_01N - 4	1.057	0.026	0.0462	0.0017	0.90033	11.57978512	291	10	2513	42
CC06_01N - 5	0.969	0.034	0.0439	0.0015	0.87528	11.24594156	277.1	9	2464	40
CC06_01N - 62	0.761	0.014	0.03747	0.0007	0.7768	10.25962787	237.1	4.3	2311	36
CC06_01N - 12	0.939	0.044	0.0402	0.0025	0.97995	9.837335399	254	15	2582	39
CC06_01N - 24	0.674	0.016	0.02752	0.0007	0.83431	6.697282817	175	4.4	2613	35
CC06_01N - 13	0.642	0.027	0.0268	0.0013	0.95434	6.557566423	170.3	8.3	2597	38
CC06_01N - 47	0.55	0.035	0.0218	0.0018	0.94766	5.20639643	140	12	2689	53
CC01_06 - 41	5.562	0.11	0.3498	0.0038	0.40168	103.2	1935	19	1875	35
CC01_06 - 7	5.074	0.13	0.331	0.0046	0.28555	102.6169265	1843	22	1796	48
CC01_06 - 45	4.797	0.11	0.3212	0.0041	0.11412	101.6987542	1796	20	1766	43
CC01_06 - 33	4.764	0.13	0.3198	0.0046	0.1759	101.2450481	1789	23	1767	52
CC01_06 - 8	6.38	0.13	0.3699	0.0041	0.51276	100.4952947	2029	19	2019	34
CC01_06 - 59	4.806	0.097	0.3195	0.0036	0.13786	100.2805836	1787	18	1782	39

CC01_06 - 50	4.724	0.098	0.3163	0.0039	0.22495	100.0564653	1772	19	1771	38
CC01_06 - 22	13.08	0.28	0.5152	0.0062	0.52054	99.92537313	2678	27	2680	34
CC01_06 - 58	4.913	0.1	0.3225	0.0036	0.48824	99.83379501	1802	18	1805	37
CC01_06 - 36	4.966	0.11	0.3252	0.0045	0.44379	99.45205479	1815	22	1825	38
CC01_06 - 63	5.736	0.13	0.3496	0.0046	0.34446	99.43386516	1932	22	1943	39
CC01_06 - 26	5.739	0.13	0.3495	0.0043	0.61006	99.17864476	1932	21	1948	35
CC01_06 - 32	4.664	0.1	0.3128	0.0043	0.27228	99.15206331	1754	21	1769	42
CC01_06 - 53	4.673	0.12	0.3118	0.0049	0.53798	98.92533937	1749	24	1768	40
CC01_06 - 49	4.909	0.12	0.3219	0.0041	0.26538	98.90049478	1799	20	1819	44
CC01_06 - 54	5.826	0.14	0.3518	0.0062	0.60442	98.52941176	1943	30	1972	39
CC01_06 - 23	4.638	0.11	0.3121	0.0053	0.68843	98.26038159	1751	26	1782	39
CC01_06 - 60	5.168	0.12	0.3277	0.0047	0.44305	97.54404698	1827	23	1873	41
CC01_06 - 13	5.424	0.11	0.3336	0.0041	0.29695	95.96690796	1856	20	1934	37
CC01_06 - 56	4.7	0.12	0.3078	0.007	0.78598	94.84366429	1729	35	1823	40
CC01_06 - 39	5.097	0.1	0.32	0.0043	0.564	94.70619375	1789	21	1889	35
CC01_06 - 18	5.111	0.13	0.3192	0.0049	0.65172	93.79926432	1785	24	1903	40
CC01_06 - 42	4.895	0.11	0.3118	0.0051	0.75957	93.62955032	1749	25	1868	35
CC01_06 - 25	8.52	0.2	0.4077	0.0068	0.67384	93.62786746	2204	31	2354	35
CC01_06 - 5	4.382	0.1	0.2907	0.0039	0.33978	92.20852018	1645	19	1784	41
CC01_06 - 29	4.468	0.11	0.2927	0.0039	0.4655	91.43173024	1654	19	1809	38
CC01_06 - 57	4.704	0.11	0.2992	0.006	0.75746	91.33261105	1686	30	1846	37
CC01_06 - 6	4.565	0.1	0.2958	0.0034	0.36504	90.914037	1671	17	1838	40
CC01_06 - 38	4.599	0.097	0.2948	0.0035	0.12475	90.34183397	1665	18	1843	38
CC01_06 - 28	5.65	0.22	0.3222	0.004	0.19155	88.66995074	1800	19	2030	62
CC01_06 - 1	4.583	0.11	0.2889	0.0043	0.41222	87.06070288	1635	21	1878	45
CC01_06 - 46	4.512	0.1	0.2823	0.0053	0.4772	84.67230444	1602	27	1892	43
CC01_06 - 19	4.618	0.11	0.2848	0.0079	0.098709	83.06742151	1614	40	1943	65
CC01_06 - 55	5.72	0.23	0.3043	0.0056	0.21611	80.03740065	1712	28	2139	55
CC01_06 - 11	4.284	0.094	0.2656	0.0029	0.47669	79.75315126	1518.5	15	1904	38
CC01_06 - 65	4.407	0.089	0.2687	0.0032	0.44403	79.19463087	1534	16	1937	36
CC01_06 - 31	4.078	0.084	0.2575	0.0045	-0.10857	78.93048128	1476	23	1870	45
CC01_06 - 34	4.622	0.11	0.2739	0.005	0.3555	78.31084458	1567	25	2001	45
CC01_06 - 43	5.038	0.11	0.2843	0.004	0.56549	77.51081211	1613	20	2081	40
CC01_06 - 37	3.89	0.11	0.245	0.0046	0.65688	75.99569429	1412	24	1858	41
CC01_06 - 3	4.821	0.1	0.2696	0.0054	0.42166	73.69429804	1538	27	2087	40
CC01_06 - 10	4.62	0.14	0.262	0.0049	0.49216	72.63922518	1500	25	2065	47
CC01_06 - 62	3.311	0.11	0.2211	0.0038	0.5491	71.65924276	1287	20	1796	55
CC01_06 - 12	4.32	0.19	0.2506	0.0063	0.40617	70.0729927	1440	32	2055	75
CC01_06 - 30	5.09	0.14	0.2668	0.0051	0.90363	69.3042292	1524	26	2199	37
CC01_06 - 15	3.833	0.11	0.2313	0.004	0.77582	68.38347782	1341	21	1961	40
CC01_06 - 40	4.081	0.097	0.2378	0.0036	0.57121	68.1030213	1375	19	2019	39

CC01_06 - 52	3.242	0.079	0.2106	0.0035	0.68858	67.69230769	1232	19	1820	41
CC01_06 - 27	5.43	0.22	0.269	0.0083	0.85489	66.92844677	1534	42	2292	36
CC01_06 - 2	3.59	0.1	0.2209	0.0053	0.66456	66.59761781	1286	28	1931	43
CC01_06 - 4	4.418	0.11	0.2375	0.0048	0.84196	63.74187558	1373	25	2154	34
CC01_06 - 9	3.993	0.085	0.223	0.0026	0.40603	62.20201053	1299.4	13	2089	37
CC01_06 - 20	3.304	0.071	0.1933	0.0034	0.55392	56.90084704	1142	20	2007	41
CC01_06 - 47	6.711	0.14	0.2659	0.0037	0.78611	56.75877521	1520	19	2678	31
CC01_06 - 24	3.35	0.14	0.1894	0.0077	0.83377	53.47056008	1117	42	2089	54
CC01_06 - 61	2.826	0.075	0.1695	0.0036	0.87898	51.45334013	1009	20	1961	34
CC01_06 - 44	3.759	0.11	0.1935	0.0059	0.91825	50.87092452	1139	32	2239	35
CC01_06 - 51	5.59	0.31	0.216	0.011	0.96502	46.26700993	1258	56	2719	35
CC01_06 - 64	3.54	0.24	0.1706	0.0074	0.95094	43.29632792	1014	40	2342	54
CC01_06 - 21	4.644	0.12	0.1868	0.0028	-0.19556	41.42589118	1104	15	2665	50
CC01_06 - 35	2.485	0.086	0.1328	0.0051	0.92105	37.57604118	803	29	2137	38
CC01_06 - 14	2.068	0.081	0.1211	0.0038	0.82886	36.64843362	737	22	2011	44
CC01_06 - 16	2.87	0.2	0.1395	0.0078	0.69658	34.69640644	840	44	2421	97
CC01_06 - 48	3.06	0.15	0.1098	0.003	0.36174	23.6453202	672	17	2842	73
CC01_06 - 17	0.935	0.036	0.0496	0.0025	0.96533	14.12403803	312	15	2209	45
CC03_08 - 25	5.32	0.14	0.341	0.0048	0.17057	104.5253863	1894	24	1812	41
CC03_08 - 133	4.769	0.089	0.3228	0.0052	0.23704	104.3402778	1803	25	1728	35
CC03_08 - 136	4.98	0.11	0.328	0.0043	0.23407	103.8046564	1828	21	1761	45
CC03_08 - 129	4.849	0.096	0.3235	0.0042	0.26129	102.9059829	1806	20	1755	35
CC03_08 - 42	4.814	0.065	0.3226	0.0038	0.50458	102.7952082	1802	19	1753	22
CC03_08 - 89	5.3	0.1	0.3401	0.004	0.08135	102.7218291	1887	19	1837	37
CC03_08 - 60	5.405	0.068	0.3429	0.0041	0.30183	102.590394	1901	20	1853	23
CC03_08 - 96	5.568	0.084	0.3474	0.0043	0.34281	102.2340426	1922	21	1880	23
CC03_08 - 17	4.57	0.1	0.3121	0.0042	0.26719	102.1586931	1751	20	1714	45
CC03_08 - 13	4.969	0.078	0.3274	0.0042	0.014802	102.0681945	1826	20	1789	33
CC03_08 - 128	5.626	0.077	0.3502	0.0042	0.47369	101.7885324	1935	20	1901	23
CC03_08 - 79	5.359	0.079	0.3403	0.0038	0.32582	101.396348	1888	19	1862	25
CC03_08 - 31	4.8	0.11	0.3194	0.0046	0.34631	101.3620885	1786	23	1762	40
CC03_08 - 53	4.724	0.079	0.3163	0.0041	0.33723	101.2	1771	20	1750	30
CC03_08 - 105	5.22	0.17	0.3352	0.0059	0.78392	101.1950027	1863	29	1841	23
CC03_08 - 73	5.138	0.057	0.3302	0.0039	0.3358	101.1551155	1839	19	1818	20
CC03_08 - 140	5.31	0.057	0.3369	0.0036	0.092557	101.1345219	1872	17	1851	21
CC03_08 - 20	4.813	0.069	0.3204	0.005	0.79217	101.0152284	1791	24	1773	16
CC03_08 - 112	4.798	0.085	0.3192	0.0036	0.11032	100.9609949	1786	18	1769	35
CC03_08 - 84	5.068	0.08	0.3288	0.0042	0.29699	100.8810573	1832	20	1816	30
CC03_08 - 101	14.94	0.19	0.5473	0.0062	0.70034	100.8602151	2814	26	2790	13
CC03_08 - 23	5.276	0.082	0.3347	0.0041	0.21665	100.8125677	1861	20	1846	30
CC03_08 - 87	4.631	0.073	0.3118	0.0036	0.07021	100.8069164	1749	18	1735	32

CC03_08 - 41	4.671	0.07	0.3135	0.0053	0.57478	100.6289308	1760	25	1749	25
CC03_08 - 9	4.73	0.11	0.3165	0.0081	0.90396	100.5107832	1771	39	1762	20
CC03_08 - 35	4.682	0.089	0.3136	0.0042	0.16178	100.4571429	1758	21	1750	34
CC03_08 - 52	4.687	0.079	0.3132	0.0038	0.11972	100.4571429	1758	18	1750	34
CC03_08 - 106	4.789	0.09	0.3183	0.0066	0.85124	100.3937008	1785	31	1778	24
CC03_08 - 77	4.708	0.076	0.3159	0.0057	0.63996	100.340329	1769	28	1763	25
CC03_08 - 61	5.097	0.084	0.3284	0.0037	0.2821	100.3289474	1830	18	1824	29
CC03_08 - 141	4.572	0.056	0.3099	0.0038	0.41201	100.1727116	1740	19	1737	21
CC03_08 - 12	10.41	0.11	0.4676	0.0057	0.56072	100.1214575	2473	25	2470	15
CC03_08 - 7	4.612	0.078	0.3114	0.0036	0.36297	100.1146132	1747	18	1745	28
CC03_08 - 80	5.305	0.059	0.3374	0.0041	0.30933	100.1068376	1874	20	1872	22
CC03_08 - 139	6.266	0.084	0.3661	0.0044	0.22289	100.099552	2011	21	2009	25
CC03_08 - 30	4.579	0.084	0.3108	0.0039	0.33309	100.0573394	1745	19	1744	35
CC03_08 - 8	4.642	0.067	0.3131	0.0045	0.45669	100.0570125	1755	22	1754	28
CC03_08 - 68	5.23	0.093	0.3331	0.0058	0.59784	100.0539957	1853	28	1852	28
CC03_08 - 29	5.142	0.091	0.33	0.0047	0.38508	99.89130435	1838	23	1840	28
CC03_08 - 76	4.612	0.063	0.3106	0.0035	0.1994	99.77142857	1746	16	1750	27
CC03_08 - 116	10.6	0.098	0.4708	0.0046	0.6486	99.75932611	2487	20	2493	12
CC03_08 - 153	4.811	0.051	0.3202	0.0041	0.47383	99.66611018	1791	20	1797	21
CC03_08 - 148	4.469	0.066	0.3045	0.0034	0.15576	99.65116279	1714	17	1720	29
CC03_08 - 118	5.528	0.088	0.3426	0.0049	0.56643	99.47616553	1899	24	1909	22
CC03_08 - 109	5.075	0.064	0.3277	0.0043	0.4946	99.18566775	1827	21	1842	22
CC03_08 - 149	5.258	0.089	0.3315	0.004	0.4291	99.14024718	1845	19	1861	26
CC03_08 - 146	5.19	0.074	0.3298	0.0039	0.49346	99.13653535	1837	19	1853	23
CC03_08 - 98	4.573	0.074	0.3092	0.004	0.49199	99.08727895	1737	20	1753	27
CC03_08 - 43	4.464	0.054	0.3053	0.0033	0.2188	98.90616005	1718	16	1737	23
CC03_08 - 150	5.163	0.08	0.3299	0.0037	0.49051	98.65807837	1838	18	1863	24
CC03_08 - 137	4.999	0.083	0.3221	0.0051	0.57277	98.63013699	1800	25	1825	28
CC03_08 - 36	4.629	0.093	0.3101	0.004	0.12005	98.36158192	1741	20	1770	36
CC03_08 - 154	9.89	0.16	0.4481	0.0063	0.58301	97.66775777	2387	28	2444	26
CC03_08 - 50	4.662	0.061	0.3074	0.0046	0.6619	97.40698985	1728	23	1774	21
CC03_08 - 86	4.589	0.078	0.3052	0.0047	0.61529	96.78510998	1716	23	1773	23
CC03_08 - 138	10.44	0.15	0.4565	0.0058	0.69808	96.57370518	2424	26	2510	16
CC03_08 - 132	9.5	0.13	0.4342	0.0055	0.50812	96	2328	24	2425	22
CC03_08 - 64	9.93	0.35	0.442	0.0091	0.94142	95.97069597	2358	41	2457	25
CC03_08 - 57	4.438	0.058	0.2985	0.0039	0.58796	95.95902106	1686	20	1757	22
CC03_08 - 130	4.457	0.064	0.298	0.0035	0.38174	95.18686297	1681	18	1766	25
CC03_08 - 72	4.6	0.11	0.3015	0.0068	0.89679	95.07002801	1697	33	1785	19
CC03_08 - 121	5.128	0.073	0.321	0.0056	0.65428	94.12381952	1794	27	1906	19
CC03_08 - 83	4.673	0.074	0.303	0.0039	0.31733	93.53070175	1706	19	1824	30
CC03_08 - 127	5.28	0.15	0.3232	0.0095	0.83948	93.03405573	1803	46	1938	33

CC03_08 - 117	4.5	0.07	0.2948	0.0043	0.54549	92.96482412	1665	21	1791	25
CC03_08 - 124	4.68	0.054	0.3016	0.0042	0.41493	92.85324604	1702	20	1833	23
CC03_08 - 27	4.59	0.12	0.2977	0.0088	0.76387	92.66004415	1679	44	1812	31
CC03_08 - 97	4.842	0.059	0.3071	0.0035	0.36097	92.1516284	1726	17	1873	22
CC03_08 - 100	4.361	0.088	0.29	0.0065	0.72771	91.72259508	1640	33	1788	25
CC03_08 - 88	4.453	0.055	0.2902	0.0043	0.45103	90.9342178	1645	22	1809	23
CC03_08 - 65	4.427	0.075	0.2884	0.0049	0.63419	90.47091413	1633	25	1805	26
CC03_08 - 111	4.33	0.06	0.2849	0.0032	0.11238	90.02785515	1616	16	1795	27
CC03_08 - 113	4.34	0.062	0.2836	0.0033	0.14269	89.34517203	1610	17	1802	29
CC03_08 - 90	5.439	0.096	0.3192	0.0059	0.81398	89.11632551	1785	29	2003	18
CC03_08 - 115	5.102	0.079	0.3073	0.0039	0.49781	89.06652914	1727	19	1939	24
CC03_08 - 147	4.255	0.082	0.281	0.0053	0.68016	88.9632107	1596	26	1794	26
CC03_08 - 78	4.176	0.067	0.277	0.0041	0.57807	88.05803571	1578	20	1792	24
CC03_08 - 120	4.766	0.077	0.2951	0.0057	0.84421	87.59200841	1666	28	1902	16
CC03_08 - 158	4.666	0.06	0.2907	0.0036	0.43985	87.1754107	1645	18	1887	22
CC03_08 - 34	4.35	0.11	0.2772	0.0094	0.70716	86.73637865	1576	47	1817	42
CC03_08 - 10	4.019	0.078	0.2695	0.0038	0.55552	86.61417323	1540	19	1778	24
CC03_08 - 143	5.427	0.092	0.3122	0.0052	0.80518	85.04128218	1751	25	2059	18
CC03_08 - 94	4.301	0.062	0.2764	0.0044	0.7913	84.79784367	1573	22	1855	19
CC03_08 - 67	4.18	0.12	0.2709	0.0077	0.78478	84.3715847	1544	39	1830	32
CC03_08 - 134	4.11	0.076	0.268	0.0044	0.46723	83.88157895	1530	22	1824	32
CC03_08 - 126	4.277	0.051	0.2721	0.0036	0.63661	83.61185984	1551	18	1855	18
CC03_08 - 85	4.47	0.13	0.2772	0.0089	0.86926	82.89473684	1575	45	1900	34
CC03_08 - 11	8.48	0.12	0.3721	0.0055	0.73673	81.04133545	2039	26	2516	17
CC03_08 - 107	3.92	0.16	0.254	0.011	0.90344	80.93922652	1465	56	1810	32
CC03_08 - 51	8.02	0.45	0.356	0.016	0.97859	79.20551277	1954	77	2467	31
CC03_08 - 74	3.864	0.081	0.2486	0.0058	0.68789	78.9618995	1430	30	1811	26
CC03_08 - 22	3.884	0.056	0.2473	0.0038	0.67044	77.77170945	1424	19	1831	19
CC03_08 - 104	3.677	0.072	0.2401	0.0042	0.80962	77.22717149	1387	22	1796	22
CC03_08 - 46	3.92	0.11	0.2498	0.0076	0.8705	77.19203873	1435	39	1859	23
CC03_08 - 24	3.753	0.055	0.2435	0.0035	0.52825	76.92728267	1407	18	1829	25
CC03_08 - 155	4.846	0.084	0.2772	0.0051	0.81004	76.91556857	1576	26	2049	18
CC03_08 - 110	3.694	0.099	0.2416	0.0073	0.87239	76.7964893	1400	36	1823	26
CC03_08 - 125	3.893	0.051	0.2473	0.0033	0.40026	76.64155005	1424	17	1858	25
CC03_08 - 48	5.32	0.24	0.286	0.014	0.95132	75.79588015	1619	74	2136	31
CC03_08 - 99	3.572	0.053	0.2345	0.003	0.40965	75.48638132	1358	15	1799	25
CC03_08 - 142	4.49	0.16	0.2647	0.0079	0.9063	74.74048443	1512	40	2023	23
CC03_08 - 69	3.93	0.064	0.2428	0.0047	0.63979	74.32360743	1401	24	1885	28
CC03_08 - 19	3.66	0.11	0.2353	0.0075	0.89689	73.64718615	1361	40	1848	24
CC03_08 - 152	4.344	0.075	0.2564	0.0044	0.73255	73.51324338	1471	23	2001	22
CC03_08 - 26	3.5	0.12	0.2273	0.0069	0.87846	71.84095861	1319	36	1836	29

CC03_08 - 151	3.79	0.11	0.236	0.011	0.81856	71.82727751	1364	55	1899	44
CC03_08 - 119	3.63	0.15	0.2306	0.0095	0.94256	71.79763186	1334	50	1858	24
CC03_08 - 33	4.18	0.089	0.245	0.0062	0.68779	70.70605909	1412	32	1997	30
CC03_08 - 95	3.97	0.14	0.2371	0.0086	0.93405	69.79113602	1370	45	1963	21
CC03_08 - 62	4.429	0.075	0.2509	0.0049	0.83015	69.17545542	1443	26	2086	24
CC03_08 - 37	3.51	0.12	0.2198	0.0083	0.93858	67.13910761	1279	44	1905	23
CC03_08 - 14	3.699	0.096	0.2223	0.0059	0.76474	65.5347187	1293	31	1973	25
CC03_08 - 66	3.08	0.28	0.203	0.019	0.97875	65.08549366	1180	100	1813	24
CC03_08 - 32	4.233	0.066	0.2355	0.0044	0.79989	64.84300666	1363	23	2102	19
CC03_08 - 75	6.54	0.26	0.283	0.012	0.98701	63.65805169	1601	60	2515	10
CC03_08 - 157	3.766	0.057	0.219	0.0029	0.57341	63.51888668	1278	15	2012	20
CC03_08 - 28	3.99	0.11	0.225	0.012	0.91924	62.93975904	1306	61	2075	48
CC03_08 - 81	3.474	0.049	0.2084	0.003	0.44211	62.75720165	1220	16	1944	25
CC03_08 - 5	3.96	0.16	0.22	0.007	0.94193	61.88405797	1281	37	2070	26
CC03_08 - 114	5.68	0.18	0.2569	0.0078	0.8576	61.56716418	1485	42	2412	26
CC03_08 - 159	3.113	0.086	0.1958	0.0054	0.7892	61.50560598	1152	29	1873	29
CC03_08 - 3	2.985	0.064	0.1913	0.0046	0.77749	61.4044638	1128	25	1837	25
CC03_08 - 102	3.941	0.061	0.2185	0.0034	0.55121	60.60894386	1274	18	2102	13
CC03_08 - 93	4.106	0.083	0.2213	0.0041	0.80248	59.42830798	1289	22	2169	19
CC03_08 - 2	3.014	0.051	0.19	0.003	0.60334	59.375	1121	16	1888	27
CC03_08 - 59	3.28	0.1	0.1959	0.0076	0.93654	58.80551302	1152	41	1959	22
CC03_08 - 4	3.49	0.078	0.2014	0.0045	0.94323	58.45697329	1182	24	2022	13
CC03_08 - 108	3.006	0.041	0.1872	0.0024	0.69039	58.21052632	1106	13	1900	16
CC03_08 - 47	3.611	0.097	0.2041	0.0044	0.95838	58.16326531	1197	24	2058	16
CC03_08 - 122	3.025	0.069	0.1866	0.005	0.88154	57.54569191	1102	27	1915	23
CC03_08 - 55	3.43	0.11	0.1979	0.0075	0.94491	57.50861645	1168	40	2031	18
CC03_08 - 6	3.14	0.1	0.1892	0.0065	0.961	57.31895223	1116	35	1947	18
CC03_08 - 18	4.66	0.21	0.223	0.011	0.97464	54.76493011	1293	56	2361	17
CC03_08 - 63	3.55	0.099	0.197	0.0093	0.8427	54.67863894	1157	50	2116	48
CC03_08 - 92	3.7	0.2	0.1945	0.0085	0.97871	52.97098111	1150	47	2171	26
CC03_08 - 1	2.65	0.18	0.165	0.011	0.9754	52.71359484	981	63	1861	24
CC03_08 - 54	2.716	0.037	0.1661	0.0023	0.52414	52.10304942	991	13	1902	17
CC03_08 - 131	3.084	0.045	0.1744	0.0034	0.75582	50.46273746	1036	18	2053	23
CC03_08 - 156	4.61	0.34	0.21	0.014	0.98285	50.20525452	1223	74	2436	25
CC03_08 - 39	3.711	0.071	0.1836	0.0034	0.86386	47.48798602	1087	18	2289	17
CC03_08 - 123	3.547	0.04	0.1785	0.0023	0.58187	46.87915007	1059	13	2259	16
CC03_08 - 145	5.63	0.12	0.2025	0.003	0.66718	42.17807733	1189	16	2819	22
CC03_08 - 49	2.39	0.13	0.1388	0.0085	0.97718	41.2142152	835	47	2026	19
CC03_08 - 82	2.766	0.058	0.1468	0.0032	0.87534	40.7475773	883	18	2167	17
CC03_08 - 103	2.85	0.051	0.1473	0.0029	0.86166	39.72172352	885	16	2228	15
CC03_08 - 58	2.464	0.054	0.1349	0.0033	0.92458	38.33177132	818	18	2134	15

CC03_08 - 15	1.987	0.049	0.1183	0.0042	0.85145	36.29032258	720	24	1984	29
CC03_08 - 71	2.86	0.053	0.1369	0.0022	0.38682	35.14662133	827	13	2353	35
CC03_08 - 16	2.4	0.054	0.1263	0.0046	0.6518	35.07326007	766	26	2184	51
CC03_08 - 70	4.64	0.16	0.1646	0.0061	0.91197	34.60183228	982	34	2838	24
CC03_08 - 38	1.917	0.061	0.1126	0.0036	0.94582	34.59214502	687	21	1986	18
CC03_08 - 45	1.673	0.054	0.103	0.0033	0.97362	32.69430052	631	19	1930	12
CC03_08 - 91	2.03	0.039	0.1107	0.0024	0.88593	31.84383819	677	14	2126	14
CC03_08 - 56	0.2846	0.004	0.03311	0.00059	0.85118	31.15727003	210	3.7	674	22
CC03_08 - 44	1.75	0.025	0.0972	0.0018	0.66948	28.89855072	598.2	11	2070	18
CC03_08 - 40	2.234	0.047	0.1086	0.0022	0.90579	28.44311377	665	13	2338	14
CC03_08 - 135	1.314	0.018	0.0788	0.0014	0.62892	24.88040712	488.9	8.3	1965	23
CC03_08 - 21	2.084	0.034	0.0795	0.0015	0.1433	18.10275229	493.3	9.1	2725	36
CC03_08 - 144	1.03	0.044	0.0556	0.0024	0.98181	16.27689429	348	14	2138	12
CC03_09 - 27	no value	NAN	no value	NAN	NaN	#VALUE!	no value	NAN	no value	NAN
CC03_09 - 180	4.671	0.07	0.3226	0.0029	0.17254	105.5588063	1804	14	1709	28
CC03_09 - 168	5.461	0.056	0.3509	0.0026	0.31899	105.0379198	1939	12	1846	21
CC03_09 - 170	5.403	0.05	0.346	0.0021	0.45841	104.1326808	1915	10	1839	17
CC03_09 - 43	4.901	0.079	0.3289	0.0026	0.38978	103.559322	1833	13	1770	28
CC03_09 - 181	4.7	0.056	0.3204	0.0022	0.44341	103.2276657	1791	11	1735	18
CC03_09 - 202	5.345	0.057	0.3416	0.0036	0.23944	102.2678186	1894	17	1852	21
CC03_09 - 176	5.293	0.066	0.3386	0.0032	0.25595	102.062975	1880	15	1842	24
CC03_09 - 187	4.879	0.074	0.3239	0.0042	0.37761	101.8018018	1808	20	1776	28
CC03_09 - 129	4.72	0.11	0.3177	0.0039	0.17785	101.7744705	1778	19	1747	43
CC03_09 - 182	4.78	0.094	0.3197	0.0034	0.11904	101.6467916	1790	17	1761	39
CC03_09 - 59	5.757	0.059	0.3533	0.0023	0.38727	101.5096304	1950	11	1921	19
CC03_09 - 254	4.613	0.05	0.3129	0.0039	0.4458	101.5037594	1755	19	1729	19
CC03_09 - 19	5.46	0.091	0.3425	0.003	0.088425	101.3881474	1899	14	1873	32
CC03_09 - 222	4.718	0.066	0.3172	0.0038	0.27916	101.3120365	1776	19	1753	28
CC03_09 - 102	4.671	0.05	0.3149	0.0023	0.44888	101.0882016	1765	11	1746	18
CC03_09 - 198	4.675	0.059	0.315	0.0043	0.72607	101.0882016	1765	21	1746	16
CC03_09 - 131	10.88	0.18	0.4781	0.0042	0.26098	101.083902	2518	18	2491	29
CC03_09 - 185	5.839	0.069	0.3557	0.0026	0.53492	101.0819165	1962	12	1941	19
CC03_09 - 140	4.724	0.055	0.3162	0.0026	0.42032	101.0268112	1771	13	1753	19
CC03_09 - 148	5.477	0.086	0.3431	0.003	0.40334	100.8488064	1901	14	1885	26
CC03_09 - 24	4.768	0.096	0.3173	0.0045	0.81535	100.7373795	1776	22	1763	20
CC03_09 - 120	5.42	0.1	0.3407	0.0042	0.38216	100.6925946	1890	20	1877	33
CC03_09 - 244	4.566	0.066	0.3104	0.0036	0.29533	100.6351039	1743	18	1732	23
CC03_09 - 235	4.748	0.079	0.3163	0.0039	0.33795	100.625	1771	19	1760	27
CC03_09 - 126	4.728	0.057	0.3172	0.0027	0.35586	100.6232295	1776	13	1765	22
CC03_09 - 259	5.331	0.073	0.3374	0.0056	0.7713	100.5904455	1874	27	1863	19
CC03_09 - 12	11.03	0.19	0.4787	0.0058	0.78347	100.5183413	2521	25	2508	16

CC03_09 - 218	4.78	0.11	0.3188	0.0041	0.2	100.5073281	1783	20	1774	39
CC03_09 - 50	5.207	0.081	0.3327	0.003	0.34726	100.4880694	1853	15	1844	28
CC03_09 - 241	5.319	0.069	0.3362	0.0037	0.012639	100.4841313	1868	18	1859	27
CC03_09 - 2	5.437	0.076	0.3405	0.0031	0.4168	100.4787234	1889	15	1880	28
CC03_09 - 266	5.95	0.11	0.3567	0.0055	0.38382	100.4085802	1966	26	1958	35
CC03_09 - 263	4.674	0.073	0.3137	0.004	0.4697	100.3995434	1759	19	1752	25
CC03_09 - 175	4.591	0.078	0.3097	0.0036	0.5344	100.3462204	1739	17	1733	27
CC03_09 - 111	5.053	0.068	0.3284	0.0029	0.32342	100.3289474	1830	14	1824	24
CC03_09 - 80	5.417	0.076	0.3394	0.0042	0.70882	100.319659	1883	20	1877	18
CC03_09 - 249	5.82	0.21	0.3537	0.0076	0.38634	100.2562788	1956	37	1951	57
CC03_09 - 37	4.716	0.097	0.3171	0.0034	0.24133	100.1693002	1775	17	1772	38
CC03_09 - 164	4.775	0.064	0.3182	0.0032	0.55979	100.1124227	1781	16	1779	20
CC03_09 - 58	4.562	0.062	0.3091	0.0025	0.076936	99.8849252	1736	12	1738	28
CC03_09 - 99	5.096	0.06	0.3291	0.0027	0.20633	99.78237214	1834	13	1838	24
CC03_09 - 66	4.608	0.096	0.3137	0.0038	0.2585	99.77311401	1759	19	1763	38
CC03_09 - 84	11.35	0.21	0.4832	0.0071	0.44748	99.72516686	2540	31	2547	31
CC03_09 - 228	4.611	0.052	0.3106	0.0033	0.37148	99.71412236	1744	16	1749	21
CC03_09 - 144	8.77	0.11	0.432	0.0048	0.61462	99.65546942	2314	21	2322	17
CC03_09 - 123	4.938	0.066	0.3231	0.0026	0.40848	99.61368653	1805	13	1812	23
CC03_09 - 121	5.24	0.1	0.3333	0.0038	0.11835	99.57035446	1854	18	1862	41
CC03_09 - 46	4.854	0.061	0.3213	0.0032	0.48443	99.55654102	1796	16	1804	21
CC03_09 - 60	4.837	0.076	0.3194	0.003	0.15294	99.55406912	1786	14	1794	33
CC03_09 - 151	5.02	0.11	0.3251	0.0037	0.37104	99.50630828	1814	18	1823	35
CC03_09 - 267	5.895	0.091	0.3543	0.0044	0.37226	99.4404883	1955	21	1966	26
CC03_09 - 55	5.55	0.11	0.3448	0.004	0.22951	99.37532535	1909	19	1921	37
CC03_09 - 68	5.369	0.059	0.3374	0.0024	0.44401	99.36373277	1874	11	1886	20
CC03_09 - 230	4.569	0.065	0.3089	0.0035	0.38184	99.31310819	1735	17	1747	22
CC03_09 - 30	5.089	0.076	0.3284	0.0041	0.58562	99.29462832	1830	20	1843	23
CC03_09 - 209	4.854	0.069	0.3182	0.0054	0.40993	99.27495817	1780	26	1793	23
CC03_09 - 154	4.936	0.067	0.3236	0.0045	0.68351	99.17672887	1807	22	1822	23
CC03_09 - 81	5.03	0.09	0.3262	0.004	0.32249	99.12854031	1820	20	1836	35
CC03_09 - 113	5.32	0.1	0.3323	0.0042	0.14245	98.93276414	1854	19	1874	39
CC03_09 - 92	4.64	0.099	0.3128	0.0075	0.80676	98.87260428	1754	37	1774	29
CC03_09 - 171	4.473	0.083	0.3052	0.0031	0.15276	98.84858952	1717	15	1737	34
CC03_09 - 221	4.68	0.064	0.3114	0.004	0.27946	98.81288864	1748	20	1769	31
CC03_09 - 82	4.699	0.078	0.3125	0.0038	0.41561	98.75986471	1752	19	1774	29
CC03_09 - 232	5.004	0.079	0.3242	0.0042	0.38861	98.7452264	1810	20	1833	25
CC03_09 - 77	5.021	0.084	0.3246	0.003	0.132	98.53181077	1812	14	1839	35
CC03_09 - 203	4.577	0.093	0.3093	0.0043	0.51537	98.52524107	1737	21	1763	34
CC03_09 - 72	4.689	0.083	0.3118	0.0034	0.35293	98.36895388	1749	17	1778	30
CC03_09 - 48	4.535	0.082	0.306	0.004	0.3434	98.34285714	1721	20	1750	36

CC03_09 - 118	4.862	0.084	0.3187	0.0037	0.54484	98.2369146	1783	18	1815	27
CC03_09 - 262	4.947	0.08	0.3184	0.004	0.38263	98.07374794	1782	20	1817	27
CC03_09 - 135	4.511	0.065	0.3039	0.0033	0.5947	97.88208357	1710	16	1747	22
CC03_09 - 4	4.783	0.077	0.3134	0.0025	0.2136	97.61111111	1757	12	1800	30
CC03_09 - 38	4.721	0.08	0.3135	0.0043	0.52592	97.39467849	1757	21	1804	27
CC03_09 - 70	4.7	0.07	0.3121	0.0025	0.15617	97.27777778	1751	12	1800	30
CC03_09 - 128	4.427	0.091	0.3033	0.0042	0.23581	97.2095672	1707	21	1756	41
CC03_09 - 184	5.337	0.066	0.3303	0.0028	0.54609	97.2002113	1840	13	1893	18
CC03_09 - 127	4.573	0.064	0.3043	0.0027	0.48554	96.94397284	1713	13	1767	23
CC03_09 - 226	4.574	0.056	0.3039	0.0037	0.32249	96.71945701	1710	18	1768	24
CC03_09 - 145	4.652	0.087	0.3057	0.0045	0.61293	96.62731872	1719	22	1779	31
CC03_09 - 152	12.46	0.17	0.4942	0.0043	0.47929	96.49645919	2589	19	2683	18
CC03_09 - 174	4.855	0.085	0.3136	0.0029	0.30571	96.22331691	1758	14	1827	34
CC03_09 - 160	5.04	0.12	0.3241	0.0072	0.8232	96.1722488	1809	35	1881	30
CC03_09 - 10	5.159	0.084	0.3237	0.0031	0.2774	95.76719577	1810	15	1890	30
CC03_09 - 177	4.94	0.15	0.3175	0.0065	0.64183	95.33261803	1777	32	1864	42
CC03_09 - 116	4.553	0.065	0.3012	0.0029	0.53288	95.28354857	1697	14	1781	22
CC03_09 - 238	10.27	0.15	0.4468	0.0082	0.82975	95.27622098	2380	37	2498	18
CC03_09 - 197	5.202	0.06	0.3223	0.0036	0.27415	94.98945148	1801	17	1896	23
CC03_09 - 49	4.417	0.065	0.2953	0.004	0.63601	94.61145774	1668	20	1763	21
CC03_09 - 101	10.17	0.12	0.4445	0.0044	0.48113	94.08495435	2370	20	2519	19
CC03_09 - 147	4.845	0.066	0.3094	0.0037	0.27063	94.04761905	1738	18	1848	31
CC03_09 - 97	4.381	0.061	0.2915	0.003	0.37245	92.79684862	1649	15	1777	28
CC03_09 - 9	5.211	0.088	0.3194	0.0034	0.67269	92.68292683	1786	17	1927	20
CC03_09 - 243	4.424	0.065	0.2914	0.0038	0.50857	92.59259259	1650	18	1782	22
CC03_09 - 61	5.561	0.067	0.3309	0.0031	0.54585	92.56281407	1842	15	1990	18
CC03_09 - 67	4.974	0.05	0.3128	0.004	0.71611	92.26722777	1754	20	1901	18
CC03_09 - 172	4.978	0.092	0.3114	0.0046	0.74811	92.23864836	1747	23	1894	24
CC03_09 - 210	4.547	0.059	0.2966	0.0039	0.52276	92.12988442	1674	19	1817	22
CC03_09 - 250	5.401	0.078	0.3225	0.0043	0.55989	91.89189189	1802	21	1961	24
CC03_09 - 150	4.772	0.078	0.3027	0.005	0.82209	91.85983827	1704	25	1855	17
CC03_09 - 134	4.28	0.13	0.2873	0.0068	0.76563	91.81715576	1627	34	1772	34
CC03_09 - 216	5.773	0.097	0.3325	0.0054	0.58679	91.81141439	1850	26	2015	27
CC03_09 - 208	4.261	0.052	0.2865	0.004	0.47513	91.79864253	1623	20	1768	22
CC03_09 - 157	4.721	0.094	0.3033	0.0076	0.80451	91.76976869	1706	38	1859	25
CC03_09 - 110	4.48	0.1	0.2921	0.0049	0.54917	91.31637168	1651	24	1808	27
CC03_09 - 44	4.435	0.083	0.2901	0.0058	0.81015	91.21734297	1641	29	1799	20
CC03_09 - 88	5.76	0.088	0.3333	0.0048	0.71176	91.2125675	1858	22	2037	19
CC03_09 - 256	4.376	0.079	0.2903	0.005	0.53217	91.17157135	1642	25	1801	29
CC03_09 - 64	5.998	0.071	0.3376	0.0031	0.69272	90.66731141	1875	15	2068	15
CC03_09 - 192	4.185	0.041	0.279	0.0029	0.058622	90.65142857	1586.4	15	1750	21

CC03_09 - 91	4.518	0.061	0.2939	0.0032	0.49838	90.61647572	1661	16	1833	20
CC03_09 - 193	8.6	0.12	0.3973	0.0064	0.63454	90.36043588	2156	29	2386	20
CC03_09 - 41	4.383	0.058	0.2875	0.0037	0.59481	90.29933481	1629	18	1804	22
CC03_09 - 117	4.436	0.069	0.2888	0.0029	0.48887	90.29233315	1637	14	1813	24
CC03_09 - 234	9.38	0.13	0.4128	0.0054	0.61208	89.65378422	2227	25	2484	17
CC03_09 - 31	4.23	0.12	0.2787	0.0079	0.92391	89.26966292	1589	39	1780	21
CC03_09 - 252	4.53	0.11	0.2883	0.007	0.8571	89.25845147	1637	34	1834	22
CC03_09 - 231	5.223	0.088	0.3114	0.006	0.72126	88.90585242	1747	29	1965	23
CC03_09 - 255	4.353	0.066	0.2835	0.0034	0.44818	88.69900772	1609	17	1814	27
CC03_09 - 223	9.27	0.16	0.4082	0.006	0.76583	88.48776574	2206	27	2493	21
CC03_09 - 251	4.428	0.051	0.2851	0.0048	0.36355	88.45101259	1616	24	1827	29
CC03_09 - 178	4.176	0.091	0.2745	0.0057	0.72805	88.05633803	1563	29	1775	28
CC03_09 - 233	4.48	0.062	0.2855	0.004	0.68028	87.46623447	1619	20	1851	20
CC03_09 - 260	4.638	0.049	0.2911	0.0032	0.2148	87.42038217	1647	16	1884	23
CC03_09 - 213	5.324	0.099	0.3127	0.0056	0.84542	87.38783649	1753	28	2006	17
CC03_09 - 205	4.207	0.093	0.2758	0.004	0.40155	87.27070595	1570	20	1799	35
CC03_09 - 42	4.38	0.11	0.2821	0.0075	0.90245	86.81497558	1600	38	1843	20
CC03_09 - 18	4.585	0.077	0.2879	0.0051	0.78235	86.56399363	1630	26	1883	21
CC03_09 - 32	4.114	0.055	0.272	0.0027	0.18925	86.31051753	1551	14	1797	31
CC03_09 - 96	4.734	0.073	0.2899	0.0031	0.34874	85.73667712	1641	15	1914	29
CC03_09 - 137	4.119	0.077	0.27	0.0068	0.82222	85.65072303	1540	35	1798	29
CC03_09 - 188	4.039	0.094	0.2662	0.0061	0.65111	85.63380282	1520	31	1775	33
CC03_09 - 248	4.192	0.046	0.2719	0.0034	0.58024	84.93150685	1550	17	1825	19
CC03_09 - 76	4.861	0.09	0.2934	0.0043	0.61595	84.76482618	1658	21	1956	27
CC03_09 - 201	4.227	0.081	0.2714	0.0045	0.71163	84.13043478	1548	23	1840	24
CC03_09 - 112	4.096	0.091	0.2661	0.006	0.83444	83.47062054	1520	31	1821	21
CC03_09 - 104	3.774	0.069	0.2546	0.0031	0.67773	82.92682927	1462	16	1763	25
CC03_09 - 114	4.799	0.095	0.2887	0.0062	0.80544	82.73417722	1634	31	1975	25
CC03_09 - 206	4.183	0.057	0.267	0.003	0.34901	82.67460747	1527	16	1847	23
CC03_09 - 257	4.228	0.041	0.2681	0.0033	0.3008	82.57820928	1531	17	1854	18
CC03_09 - 130	3.876	0.055	0.2563	0.0035	0.60577	82.22470654	1471	18	1789	21
CC03_09 - 11	8.21	0.17	0.3689	0.0057	0.67372	81.87702265	2024	27	2472	23
CC03_09 - 108	4.368	0.087	0.2714	0.0062	0.38337	81.72722486	1552	32	1899	40
CC03_09 - 186	3.862	0.058	0.2559	0.0024	0.53304	81.70189099	1469	12	1798	23
CC03_09 - 132	4.47	0.14	0.2734	0.0086	0.6785	81.50078166	1564	45	1919	26
CC03_09 - 196	4.268	0.079	0.2691	0.0058	0.89355	81.31286395	1536	30	1889	27
CC03_09 - 28	4.216	0.071	0.2671	0.0056	0.65364	81.20340788	1525	29	1878	28
CC03_09 - 149	4.66	0.11	0.2816	0.0056	0.80027	81.04409529	1599	28	1973	25
CC03_09 - 78	4.037	0.059	0.2587	0.0029	0.3394	80.59782609	1483	15	1840	24
CC03_09 - 215	3.73	0.11	0.2493	0.0067	0.86482	80.29115342	1434	35	1786	26
CC03_09 - 189	3.9	0.12	0.2531	0.0075	0.88858	80.12081274	1459	37	1821	23

CC03_09 - 239	3.969	0.094	0.254	0.0056	0.87509	79.62861824	1458	29	1831	27
CC03_09 - 124	4.25	0.14	0.2644	0.0077	0.91137	79.61011591	1511	39	1898	21
CC03_09 - 90	4.28	0.1	0.2662	0.0071	0.90655	79.12545549	1520	36	1921	21
CC03_09 - 224	3.935	0.065	0.2513	0.0053	0.67544	79.04814004	1445	28	1828	25
CC03_09 - 258	4.29	0.13	0.2642	0.0083	0.91253	79.0052356	1509	43	1910	20
CC03_09 - 47	4.04	0.11	0.2552	0.007	0.93614	78.45659164	1464	36	1866	18
CC03_09 - 89	4.17	0.12	0.26	0.0058	0.85416	78.28601472	1489	30	1902	31
CC03_09 - 20	3.681	0.077	0.2429	0.0027	0.43813	78.05013928	1401	14	1795	35
CC03_09 - 74	4.111	0.064	0.2582	0.0038	0.78165	77.93575566	1480	19	1899	19
CC03_09 - 13	4.69	0.25	0.277	0.016	0.98492	77.86069652	1565	84	2010	22
CC03_09 - 236	3.73	0.15	0.244	0.0083	0.90984	77.67955801	1406	44	1810	31
CC03_09 - 5	4.04	0.11	0.2524	0.0064	0.84135	77.54010695	1450	33	1870	28
CC03_09 - 65	3.771	0.07	0.2439	0.0044	0.73904	76.92728267	1407	23	1829	29
CC03_09 - 53	9.44	0.27	0.3753	0.0099	0.97394	76.51291994	2052	47	2681.9	9.6
CC03_09 - 261	4.16	0.15	0.2563	0.0058	0.51575	76.4033264	1470	30	1924	50
CC03_09 - 133	4.569	0.079	0.2672	0.003	0.60162	76.07178465	1526	15	2006	25
CC03_09 - 173	3.663	0.077	0.2393	0.0062	0.7651	75.64313082	1382	32	1827	31
CC03_09 - 159	3.835	0.063	0.2443	0.0035	0.82157	75.34759358	1409	18	1870	20
CC03_09 - 242	4.402	0.068	0.2627	0.004	0.69442	75.03744383	1503	21	2003	19
CC03_09 - 212	3.996	0.096	0.2476	0.0063	0.81738	74.76390346	1425	32	1906	25
CC03_09 - 87	3.903	0.064	0.2446	0.0035	0.74253	74.68220339	1410	18	1888	19
CC03_09 - 237	4.57	0.22	0.264	0.016	0.95949	74.17447018	1505	81	2029	32
CC03_09 - 169	4.044	0.077	0.2479	0.0047	0.76934	73.89953392	1427	24	1931	28
CC03_09 - 75	4.313	0.074	0.2552	0.0035	0.73696	73.65510307	1465	18	1989	22
CC03_09 - 98	3.552	0.064	0.2301	0.0043	0.73005	73.51321586	1335	23	1816	25
CC03_09 - 138	4.42	0.16	0.258	0.012	0.92876	73.32672286	1479	60	2017	30
CC03_09 - 23	3.776	0.077	0.2369	0.0061	0.72478	72.91112294	1370	32	1879	31
CC03_09 - 35	4.2	0.17	0.248	0.013	0.86044	72.40325866	1422	65	1964	44
CC03_09 - 56	3.7	0.16	0.234	0.01	0.95889	72.26082309	1352	52	1871	19
CC03_09 - 119	4.3	0.11	0.2523	0.0069	0.89443	71.64031621	1450	36	2024	21
CC03_09 - 3	4.42	0.19	0.254	0.011	0.95715	71.63958641	1455	58	2031	23
CC03_09 - 265	4.569	0.074	0.257	0.0048	0.54385	70.79731028	1474	25	2082	28
CC03_09 - 122	3.33	0.12	0.2176	0.0077	0.90579	70.03869541	1267	41	1809	25
CC03_09 - 194	3.367	0.064	0.2174	0.0039	0.75983	69.82378855	1268	21	1816	25
CC03_09 - 62	3.71	0.12	0.2281	0.0083	0.93428	68.00411523	1322	44	1944	24
CC03_09 - 95	3.61	0.27	0.223	0.018	0.98664	67.15252473	1290	96	1921	26
CC03_09 - 21	7.01	0.16	0.3012	0.0062	0.90578	66.87697161	1696	31	2536	15
CC03_09 - 240	3.508	0.045	0.2164	0.0028	0.32984	66.05648536	1263	15	1912	23
CC03_09 - 163	3.64	0.12	0.221	0.0067	0.93085	66.0164271	1286	35	1948	21
CC03_09 - 183	3.511	0.075	0.2143	0.0055	0.89513	64.51779268	1251	29	1939	15
CC03_09 - 217	4.292	0.064	0.2347	0.004	0.76082	64.34659091	1359	21	2112	18

CC03_09 - 219	3.505	0.049	0.2144	0.0033	0.75957	64.30405752	1252	17	1947	17
CC03_09 - 136	3.74	0.14	0.2192	0.0077	0.87895	64.13862381	1277	41	1991	31
CC03_09 - 63	4.046	0.065	0.2279	0.0027	0.69571	63.75903614	1323	14	2075	19
CC03_09 - 191	3.88	0.18	0.223	0.011	0.97086	63.57843137	1297	56	2040	17
CC03_09 - 71	3.909	0.097	0.2235	0.0054	0.91713	63.16812439	1300	29	2058	16
CC03_09 - 155	3.679	0.089	0.2148	0.0053	0.82291	62.5748503	1254	28	2004	28
CC03_09 - 29	6.51	0.19	0.2797	0.007	0.96318	62.3871221	1589	35	2547	14
CC03_09 - 167	3.337	0.07	0.2032	0.0038	0.76336	61.88992731	1192	21	1926	23
CC03_09 - 156	3.09	0.14	0.1965	0.0093	0.95211	61.85622318	1153	50	1864	25
CC03_09 - 247	3.31	0.13	0.201	0.0087	0.91366	61.6024974	1184	47	1922	27
CC03_09 - 14	3.611	0.068	0.2086	0.005	0.8139	60.62562066	1221	27	2014	22
CC03_09 - 6	3.176	0.072	0.1939	0.0035	0.47463	59.32467532	1142	19	1925	35
CC03_09 - 83	3.108	0.094	0.1919	0.0082	0.82824	58.39793282	1130	45	1935	43
CC03_09 - 165	3.603	0.08	0.205	0.0045	0.87071	58.24442289	1201	24	2062	24
CC03_09 - 106	6.01	0.14	0.2533	0.0057	0.75385	57.06436421	1454	29	2548	22
CC03_09 - 153	3.3	0.13	0.1927	0.0089	0.95276	56.50224215	1134	48	2007	21
CC03_09 - 73	3.93	0.11	0.2074	0.0056	0.8967	56.31067961	1218	29	2163	20
CC03_09 - 200	4.316	0.063	0.2177	0.0035	0.70073	56.0760053	1269	19	2263	20
CC03_09 - 253	2.926	0.065	0.179	0.0046	0.83135	54.74716202	1061	25	1938	24
CC03_09 - 45	3.86	0.12	0.203	0.01	0.92707	54.42052222	1188	55	2183	36
CC03_09 - 79	5.643	0.073	0.2403	0.0035	0.93766	54.329106	1388	18	2554.8	9.8
CC03_09 - 143	3.691	0.081	0.1979	0.0035	0.75499	54.11436541	1164	19	2151	22
CC03_09 - 146	3.243	0.069	0.1859	0.0029	0.85861	54.08464567	1099	16	2032	20
CC03_09 - 7	2.864	0.042	0.174	0.0027	0.83094	53.10734463	1034	15	1947	21
CC03_09 - 158	3.215	0.099	0.1837	0.0056	0.84453	52.59079903	1086	30	2065	32
CC03_09 - 245	2.528	0.071	0.1617	0.0043	0.8847	52.42980562	971	22	1852	23
CC03_09 - 86	5.48	0.33	0.229	0.013	0.98637	51.17624373	1327	68	2593	15
CC03_09 - 199	3.3	0.092	0.1831	0.0064	0.90924	51.08490566	1083	35	2120	20
CC03_09 - 162	4.26	0.11	0.2052	0.0082	0.39055	51.0403397	1202	44	2355	47
CC03_09 - 93	3.082	0.075	0.1755	0.0051	0.89922	50.97847358	1042	28	2044	23
CC03_09 - 40	3.644	0.097	0.19	0.0056	0.92916	50.74762121	1120	30	2207	18
CC03_09 - 214	3.271	0.06	0.18	0.0028	0.80802	50.2354049	1067	15	2124	17
CC03_09 - 115	4.37	0.1	0.2049	0.004	0.89956	49.97919268	1201	21	2403	16
CC03_09 - 125	4.9	0.13	0.2088	0.0046	0.89607	48.20512821	1222	24	2535	17
CC03_09 - 105	2.36	0.12	0.1492	0.0082	0.96287	47.55319149	894	46	1880	26
CC03_09 - 229	2.89	0.16	0.164	0.01	0.97887	47.5449684	978	58	2057	23
CC03_09 - 139	14.4	1.5	0.3	0.017	0.90914	47.54237288	1683	85	3540	100
CC03_09 - 246	2.81	0.11	0.1614	0.0058	0.96201	47.43842365	963	32	2030	16
CC03_09 - 8	2.927	0.043	0.1626	0.0023	0.68615	46.90821256	971	13	2070	23
CC03_09 - 1	3.02	0.071	0.165	0.0029	0.65669	46.61297963	984	16	2111	35
CC03_09 - 39	3.33	0.1	0.1729	0.0049	0.92612	46.34476534	1027	27	2216	18

CC03_09 - 166	2.41	0.2	0.149	0.014	0.98648	45.74358974	892	77	1950	28
CC03_09 - 34	2.52	0.17	0.1498	0.0097	0.98581	45.45454545	895	55	1969	17
CC03_09 - 15	3.022	0.057	0.1629	0.0036	0.87167	45.08348794	972	20	2156	29
CC03_09 - 179	2.785	0.075	0.1556	0.0054	0.90827	44.54545455	931	30	2090	25
CC03_09 - 100	3.254	0.088	0.166	0.0044	0.91874	44.2556996	990	24	2237	23
CC03_09 - 17	3.917	0.059	0.1803	0.003	0.82873	44.05940594	1068	16	2424	15
CC03_09 - 141	2.14	0.036	0.1356	0.0022	0.77237	43.85026738	820	13	1870	21
CC03_09 - 36	2.432	0.077	0.143	0.005	0.89202	42.92123629	861	28	2006	27
CC03_09 - 107	2.477	0.044	0.1433	0.0018	0.71736	42.57523434	863	10	2027	24
CC03_09 - 227	2.235	0.054	0.1354	0.0028	0.88049	41.78571429	819	16	1960	22
CC03_09 - 142	2.181	0.031	0.1321	0.0015	0.59531	40.99436187	799.8	8.7	1951	22
CC03_09 - 264	2.972	0.059	0.1529	0.0029	0.85461	40.90098127	917	16	2242	18
CC03_09 - 54	2.214	0.034	0.1328	0.0021	0.67637	40.46300956	804	12	1987	22
CC03_09 - 190	2.314	0.032	0.1333	0.0021	0.70388	40.13909588	808	12	2013	15
CC03_09 - 85	2.23	0.11	0.1251	0.0049	0.94089	36.68438859	759	28	2069	20
CC03_09 - 25	2.066	0.065	0.1211	0.0037	0.9427	36.66666667	737	21	2010	18
CC03_09 - 220	2.58	0.12	0.1327	0.0056	0.9507	36.25678119	802	32	2212	22
CC03_09 - 161	1.861	0.048	0.1148	0.0044	0.83083	36.11971104	700	25	1938	32
CC03_09 - 94	1.94	0.15	0.1173	0.0089	0.96476	35.90909091	711	51	1980	26
CC03_09 - 26	2.47	0.036	0.1297	0.0013	0.12874	35.83219334	785.8	7.4	2193	24
CC03_09 - 22	1.971	0.055	0.1136	0.002	0.81854	34.35643564	694	11	2020	28
CC03_09 - 207	1.874	0.049	0.1095	0.0028	0.86005	33.75314861	670	16	1985	23
CC03_09 - 33	2.21	0.12	0.1181	0.0066	0.9805	33.62997658	718	38	2135	18
CC03_09 - 204	2.002	0.065	0.1123	0.004	0.95933	33.06181121	690	24	2087	17
CC03_09 - 57	1.633	0.049	0.1014	0.0024	0.92381	32.85789752	622	14	1893	19
CC03_09 - 109	1.787	0.082	0.1065	0.0053	0.85195	32.22936233	652	31	2023	41
CC03_09 - 211	1.855	0.057	0.1042	0.0031	0.97476	30.75072185	639	18	2078	15
CC03_09 - 225	2.154	0.028	0.1096	0.0016	0.57646	29.63748895	670.4	9.3	2262	20
CC03_09 - 103	1.65	0.096	0.0939	0.0053	0.96998	27.96897722	577	32	2063	23
CC03_09 - 51	1.703	0.038	0.0908	0.0018	0.88852	25.66452796	560	11	2182	19
CC03_09 - 195	1.581	0.042	0.0866	0.0023	0.9314	25.57361377	535	14	2092	18
CC03_09 - 16	1.88	0.21	0.095	0.011	0.99533	25.44091711	577	64	2268	15
CC03_09 - 69	1.592	0.033	0.0829	0.0023	0.86188	23.16027088	513	14	2215	21
CC03_09 - 52	0.907	0.038	0.0457	0.0021	0.94258	12.6984127	288	13	2268	26
CC02_10 - 224	5.537	0.11	0.3522	0.0039	0.38279	104.7388261	1945	19	1857	30
CC02_10 - 155	4.961	0.091	0.3326	0.0049	0.55132	104.4582393	1851	24	1772	23
CC02_10 - 245	5.43	0.079	0.3454	0.0034	0.44434	103.4613304	1913	16	1849	17
CC02_10 - 246	5.42	0.089	0.3448	0.004	0.047127	103.3567948	1909	19	1847	30
CC02_10 - 255	4.92	0.12	0.3269	0.004	0.28519	103.3446712	1823	20	1764	38
CC02_10 - 70	4.702	0.1	0.3204	0.0035	0.36003	103.1663788	1792	17	1737	33
CC02_10 - 42	5.495	0.089	0.3453	0.0042	0.45567	102.6852846	1912	20	1862	21

CC02_10 - 2	7.57	0.13	0.4081	0.0045	0.61558	102.5092937	2206	20	2152	21
CC02_10 - 46	11.31	0.2	0.4894	0.0056	0.23631	102.3515345	2568	24	2509	29
CC02_10 - 220	5.01	0.14	0.3266	0.0049	0.29001	102.1885522	1821	24	1782	46
CC02_10 - 69	4.77	0.14	0.3214	0.0068	0.77549	102.1627775	1795	34	1757	29
CC02_10 - 50	4.835	0.096	0.3231	0.0039	0.25046	102.1505376	1805	19	1767	32
CC02_10 - 228	4.689	0.084	0.3156	0.0054	0.71623	102.0196192	1768	26	1733	22
CC02_10 - 184	10.974	0.15	0.4847	0.005	0.46195	101.88	2547	22	2500	17
CC02_10 - 13	4.95	0.16	0.3264	0.0055	0.643	101.8466704	1820	27	1787	51
CC02_10 - 154	4.781	0.077	0.3217	0.0031	0.36654	101.8120045	1798	15	1766	23
CC02_10 - 37	5.277	0.09	0.3369	0.0034	0.53045	101.7944535	1872	16	1839	21
CC02_10 - 241	5.39	0.13	0.3412	0.0046	0.53819	101.7204301	1892	22	1860	33
CC02_10 - 73	5.685	0.11	0.3504	0.0041	0.10997	101.6272966	1936	20	1905	33
CC02_10 - 218	4.99	0.11	0.3265	0.0036	0.4001	101.6183036	1821	17	1792	32
CC02_10 - 106	4.644	0.078	0.3151	0.0034	0.28829	101.6110472	1766	17	1738	22
CC02_10 - 147	4.717	0.086	0.3186	0.0039	0.20122	101.5954416	1783	19	1755	30
CC02_10 - 233	9.73	0.14	0.4562	0.0048	0.48714	101.4656616	2423	21	2388	17
CC02_10 - 125	11.35	0.21	0.4899	0.0068	0.46577	101.4607185	2570	30	2533	25
CC02_10 - 55	5.221	0.084	0.3346	0.0035	0.34423	101.3616558	1861	17	1836	22
CC02_10 - 257	11.06	0.21	0.4818	0.0064	0.21911	101.36	2534	28	2500	31
CC02_10 - 223	5.449	0.11	0.3425	0.0053	0.40302	101.3347571	1898	26	1873	33
CC02_10 - 98	4.737	0.072	0.3176	0.0031	0.37613	101.3105413	1778	15	1755	19
CC02_10 - 129	5.33	0.12	0.3383	0.0058	0.82419	101.1308562	1878	28	1857	21
CC02_10 - 36	11.04	0.23	0.4837	0.0078	0.28227	101.1133201	2543	34	2515	31
CC02_10 - 230	5.644	0.1	0.3469	0.0043	0.33028	101.1029412	1925	19	1904	28
CC02_10 - 3	5.078	0.08	0.3296	0.0036	0.4084	101.1013216	1836	18	1816	23
CC02_10 - 151	4.894	0.082	0.3233	0.0039	0.54362	101.0638298	1805	19	1786	23
CC02_10 - 171	5.428	0.081	0.3423	0.0035	0.34097	101.0117146	1897	17	1878	21
CC02_10 - 26	4.87	0.086	0.3212	0.0033	0.26631	100.955593	1796	16	1779	26
CC02_10 - 64	4.86	0.11	0.3226	0.0041	0.48154	100.952381	1802	20	1785	35
CC02_10 - 196	5.578	0.11	0.3451	0.0044	0.44086	100.9508716	1911	21	1893	26
CC02_10 - 226	6.61	0.18	0.3771	0.0048	0.26938	100.9300049	2062	23	2043	44
CC02_10 - 213	5.42	0.1	0.3408	0.0041	0.081086	100.6925946	1890	20	1877	33
CC02_10 - 231	4.609	0.075	0.3125	0.0034	0.45397	100.689259	1753	17	1741	23
CC02_10 - 11	6.69	0.13	0.3798	0.005	0.69082	100.6304559	2075	23	2062	20
CC02_10 - 221	5.829	0.1	0.3534	0.0044	0.43735	100.6188757	1951	21	1939	25
CC02_10 - 229	5.577	0.11	0.345	0.0045	0.22129	100.5789474	1911	22	1900	26
CC02_10 - 68	5.154	0.1	0.3308	0.0039	0.26481	100.5458515	1842	19	1832	29
CC02_10 - 48	19.74	0.31	0.6128	0.0076	0.82967	100.5215124	3084	31	3068	11
CC02_10 - 10	5.274	0.088	0.335	0.0041	0.63224	100.4856989	1862	20	1853	21
CC02_10 - 128	5.85	0.15	0.3542	0.0049	0.57867	100.4110997	1954	24	1946	35
CC02_10 - 138	4.67	0.084	0.315	0.0047	0.80826	100.3981797	1765	23	1758	17

CC02_10 - 210	4.696	0.09	0.3144	0.0035	0.27922	100.3416856	1762	17	1756	27
CC02_10 - 137	4.728	0.086	0.3165	0.0038	0.2068	100.3397508	1772	19	1766	31
CC02_10 - 56	11.1	0.22	0.4812	0.0092	0.87952	100.3170828	2531	40	2523	16
CC02_10 - 43	10.1	0.28	0.4601	0.0092	0.87918	100.2878289	2439	41	2432	27
CC02_10 - 189	5.247	0.09	0.3338	0.0034	0.42322	100.2699784	1857	16	1852	23
CC02_10 - 253	5.639	0.087	0.3469	0.0057	0.50821	100.2088773	1919	27	1915	26
CC02_10 - 216	4.453	0.11	0.3051	0.0043	0.16223	100.1748252	1719	22	1716	48
CC02_10 - 74	4.856	0.093	0.3209	0.0043	0.3882	100.1675042	1794	21	1791	28
CC02_10 - 167	10.8	0.16	0.474	0.0047	0.48643	100.1601922	2501	20	2497	17
CC02_10 - 110	4.804	0.094	0.3178	0.0041	0.32271	100.056243	1779	20	1778	30
CC02_10 - 191	4.723	0.08	0.3142	0.0037	0.49157	100	1761	18	1761	21
CC02_10 - 126	14.22	0.21	0.5328	0.0057	0.40551	99.96368918	2753	24	2754	21
CC02_10 - 61	6.75	0.14	0.378	0.0043	0.20912	99.9516441	2067	20	2068	34
CC02_10 - 145	4.575	0.083	0.31	0.0046	0.72296	99.94266055	1743	23	1744	19
CC02_10 - 18	4.607	0.078	0.3096	0.0031	0.14133	99.94252874	1739	15	1740	27
CC02_10 - 195	9.95	0.15	0.456	0.0044	0.21699	99.87628866	2422	19	2425	22
CC02_10 - 109	4.92	0.07	0.3216	0.0037	0.23615	99.77790117	1797	18	1801	21
CC02_10 - 41	4.507	0.079	0.3064	0.0032	0.17963	99.76838448	1723	16	1727	28
CC02_10 - 127	5.078	0.11	0.327	0.0034	0.24531	99.72662657	1824	17	1829	31
CC02_10 - 142	7.38	0.12	0.3971	0.0045	0.23579	99.72235076	2155	21	2161	27
CC02_10 - 252	4.61	0.086	0.3112	0.0046	0.43597	99.65753425	1746	23	1752	24
CC02_10 - 130	11.31	0.16	0.4829	0.0044	0.44954	99.52978056	2540	19	2552	14
CC02_10 - 239	4.72	0.1	0.3152	0.0048	0.54309	99.49295775	1766	23	1775	29
CC02_10 - 95	4.605	0.071	0.31	0.003	0.52324	99.48571429	1741	15	1750	18
CC02_10 - 8	11.04	0.23	0.4752	0.0083	0.8208	99.28656361	2505	36	2523	17
CC02_10 - 115	6.241	0.097	0.3645	0.0034	0.45101	99.25668979	2003	16	2018	19
CC02_10 - 124	4.53	0.071	0.3072	0.0038	0.58743	99.02522936	1727	19	1744	18
CC02_10 - 256	5.3	0.19	0.334	0.011	0.91373	98.82791689	1855	55	1877	22
CC02_10 - 99	5.315	0.079	0.3332	0.0036	0.41343	98.72272485	1855	17	1879	20
CC02_10 - 90	4.713	0.092	0.3116	0.0039	0.14964	98.53438557	1748	19	1774	35
CC02_10 - 161	4.607	0.083	0.3099	0.0035	0.26415	98.52774632	1740	17	1766	29
CC02_10 - 58	10.75	0.22	0.4691	0.008	0.87687	98.45115171	2479	35	2518	15
CC02_10 - 243	4.7	0.12	0.313	0.0049	0.48624	98.42961301	1755	24	1783	39
CC02_10 - 134	5.046	0.082	0.3251	0.0031	0.3941	98.42733189	1815	15	1844	20
CC02_10 - 140	4.543	0.094	0.3043	0.0032	0.1205	98.27784156	1712	16	1742	33
CC02_10 - 63	4.763	0.088	0.3148	0.0039	0.33497	98.21826281	1764	19	1796	31
CC02_10 - 157	4.6	0.11	0.3082	0.0049	0.050408	98.18491208	1731	24	1763	47
CC02_10 - 100	4.632	0.066	0.3085	0.0034	0.18709	97.90960452	1733	17	1770	23
CC02_10 - 165	5.264	0.08	0.3301	0.0036	0.78383	97.87120809	1839	18	1879	17
CC02_10 - 77	4.689	0.11	0.3099	0.0038	0.2864	97.86276715	1740	19	1778	40
CC02_10 - 234	4.566	0.088	0.3085	0.004	0.47099	97.68883878	1733	20	1774	31

CC02_10 - 62	4.634	0.077	0.3095	0.0036	0.58552	97.47616377	1738	18	1783	26
CC02_10 - 38	4.628	0.1	0.3088	0.0038	0.059174	97.36251403	1735	19	1782	40
CC02_10 - 85	8.84	0.15	0.4249	0.0061	0.66354	97.35494881	2282	27	2344	21
CC02_10 - 249	4.89	0.15	0.3161	0.0056	0.28525	97.09270433	1770	27	1823	51
CC02_10 - 158	4.438	0.088	0.2988	0.0038	0.51613	97.00633276	1685	19	1737	23
CC02_10 - 141	4.481	0.082	0.3023	0.0035	0.30857	96.92482916	1702	17	1756	27
CC02_10 - 123	11.323	0.15	0.4734	0.0048	0.49453	96.78419217	2498	21	2581	13
CC02_10 - 199	6.284	0.1	0.3586	0.0035	0.20204	96.67156143	1975	17	2043	23
CC02_10 - 12	4.479	0.067	0.3002	0.0031	0.31769	96.46522235	1692	15	1754	22
CC02_10 - 23	5.13	0.14	0.3225	0.0084	0.92282	95.48832272	1799	41	1884	17
CC02_10 - 82	4.567	0.08	0.3016	0.0037	0.23685	95.02237136	1699	18	1788	31
CC02_10 - 17	4.724	0.081	0.3086	0.0035	0.19662	94.96166484	1734	17	1826	31
CC02_10 - 200	4.407	0.086	0.295	0.0035	0.44049	94.76678043	1666	17	1758	24
CC02_10 - 66	4.738	0.1	0.3072	0.0033	0.55688	94.42318207	1727	16	1829	32
CC02_10 - 21	4.397	0.085	0.2942	0.005	0.68493	94.37819421	1662	25	1761	24
CC02_10 - 78	6.317	0.091	0.3552	0.0039	0.42203	94.31872894	1959	19	2077	19
CC02_10 - 39	5.78	0.17	0.3392	0.0097	0.91574	94.25	1885	47	2000	18
CC02_10 - 54	5.196	0.083	0.3212	0.0041	0.56098	94.12690089	1795	20	1907	18
CC02_10 - 44	5.112	0.084	0.3171	0.0034	0.49076	93.76650819	1775	17	1893	20
CC02_10 - 159	10.998	0.15	0.4563	0.0051	0.68334	93.73307544	2423	22	2585	11
CC02_10 - 103	4.96	0.13	0.3138	0.0082	0.87718	93.41126461	1758	41	1882	27
CC02_10 - 111	10.36	0.18	0.4411	0.0061	0.72068	93.00947867	2355	27	2532	18
CC02_10 - 35	4.599	0.11	0.2996	0.007	0.7948	92.95542102	1689	35	1817	26
CC02_10 - 80	4.633	0.081	0.2993	0.0028	0.25794	92.6963207	1688	14	1821	26
CC02_10 - 215	9.41	0.22	0.4227	0.0077	0.71382	92.12981744	2271	35	2465	23
CC02_10 - 20	4.79	0.1	0.3031	0.0041	0.47876	91.96765499	1706	20	1855	31
CC02_10 - 107	9.55	0.17	0.423	0.005	0.36845	91.80460234	2274	23	2477	25
CC02_10 - 14	4.79	0.084	0.303	0.0037	0.5495	91.63538874	1709	19	1865	24
CC02_10 - 178	4.906	0.097	0.3074	0.0047	0.54854	91.61803714	1727	23	1885	28
CC02_10 - 114	4.96	0.093	0.3084	0.0037	0.38132	91.54780771	1733	18	1893	24
CC02_10 - 176	5.139	0.11	0.3139	0.0065	0.8441	91.09269808	1759	32	1931	20
CC02_10 - 139	4.309	0.078	0.2854	0.0041	0.46639	90.6442577	1618	20	1785	27
CC02_10 - 186	4.732	0.076	0.3009	0.0034	0.64951	90.59326563	1695	17	1871	17
CC02_10 - 169	4.769	0.09	0.2977	0.0039	0.49423	90.27404621	1680	19	1861	27
CC02_10 - 198	4.33	0.11	0.2832	0.0082	0.87704	90.13927577	1618	41	1795	24
CC02_10 - 84	4.745	0.073	0.2991	0.0028	0.35967	90.02666667	1688	14	1875	20
CC02_10 - 164	13.95	0.19	0.4918	0.005	0.44596	89.98254799	2578	22	2865	14
CC02_10 - 60	9.95	0.16	0.4243	0.0047	0.48337	89.86992511	2280	21	2537	18
CC02_10 - 47	17.31	0.27	0.5328	0.0066	0.75732	89.46684005	2752	28	3076	12
CC02_10 - 143	4.48	0.091	0.2894	0.0039	0.53327	89.1671203	1638	20	1837	28
CC02_10 - 193	4.05	0.1	0.2731	0.004	0.46847	88.91428571	1556	20	1750	39

CC02_10 - 173	4.074	0.096	0.2733	0.0044	0.52211	88.86986301	1557	22	1752	32
CC02_10 - 206	4.615	0.1	0.292	0.003	0.1319	88.66809882	1651	15	1862	38
CC02_10 - 104	5.319	0.098	0.314	0.0042	0.77014	88.6203424	1760	21	1986	17
CC02_10 - 192	4.185	0.081	0.2781	0.0039	0.71268	88.52183651	1581	20	1786	21
CC02_10 - 174	4.508	0.089	0.2878	0.0038	0.52257	88.36580087	1633	18	1848	27
CC02_10 - 201	5.28	0.11	0.3123	0.0035	0.65231	88.35098336	1752	17	1983	24
CC02_10 - 188	4.222	0.067	0.2767	0.0036	0.52925	87.98211291	1574	18	1789	23
CC02_10 - 24	4.754	0.083	0.2938	0.0031	0.49568	87.8771837	1660	15	1889	22
CC02_10 - 238	4.843	0.097	0.2973	0.0048	0.21589	87.87245165	1681	23	1913	38
CC02_10 - 202	9.33	0.16	0.4075	0.0053	0.75409	87.45533942	2203	24	2519	16
CC02_10 - 244	4.786	0.086	0.2956	0.0046	0.62259	86.79147166	1669	23	1923	23
CC02_10 - 247	5.81	0.087	0.3237	0.0037	0.35226	86.31378159	1810	18	2097	19
CC02_10 - 148	5.59	0.22	0.316	0.011	0.96428	86.06916707	1767	54	2053	21
CC02_10 - 156	4.54	0.12	0.2842	0.0073	0.87997	86.05769231	1611	37	1872	24
CC02_10 - 116	4.067	0.076	0.2663	0.0035	0.43821	85.74647887	1522	18	1775	30
CC02_10 - 49	5.04	0.082	0.3005	0.0036	0.66683	85.16842634	1694	18	1989	18
CC02_10 - 102	9.04	0.15	0.3914	0.0059	0.82547	84.71945881	2129	27	2513	13
CC02_10 - 205	4.049	0.067	0.2668	0.0032	0.61481	84.66666667	1524	16	1800	19
CC02_10 - 144	4.047	0.075	0.2655	0.0033	0.29111	84.61538462	1518	17	1794	27
CC02_10 - 153	5.323	0.1	0.3059	0.0055	0.80421	84.52088452	1720	27	2035	17
CC02_10 - 166	8.35	0.18	0.374	0.0053	0.53653	83.62596978	2048	25	2449	27
CC02_10 - 197	4.84	0.11	0.2913	0.0045	0.88057	83.48530902	1648	23	1974	18
CC02_10 - 175	4.828	0.081	0.2886	0.0044	0.62189	83.02845528	1634	22	1968	26
CC02_10 - 40	4.348	0.093	0.2746	0.0053	0.78963	83.00584174	1563	27	1883	20
CC02_10 - 250	4.348	0.083	0.2733	0.0041	0.72365	82.6433121	1557	21	1884	21
CC02_10 - 91	4.159	0.073	0.266	0.003	0.17069	82.42950108	1520	15	1844	29
CC02_10 - 242	4.65	0.11	0.2777	0.0049	0.87413	80.8499744	1579	25	1953	20
CC02_10 - 208	4.498	0.1	0.2721	0.0045	0.51031	80.52959502	1551	23	1926	33
CC02_10 - 248	7.63	0.2	0.3537	0.0078	0.85571	79.99179992	1951	37	2439	25
CC02_10 - 92	4.532	0.087	0.272	0.0042	0.76149	79.9896854	1551	21	1939	21
CC02_10 - 9	3.801	0.079	0.2484	0.0041	0.7039	79.75460123	1430	21	1793	23
CC02_10 - 7	6.44	0.12	0.3228	0.005	0.79613	79.3224813	1803	25	2273	17
CC02_10 - 88	4.19	0.17	0.26	0.012	0.97513	77.71993753	1493	63	1921	29
CC02_10 - 232	7.14	0.25	0.3322	0.0089	0.82956	77	1848	43	2400	31
CC02_10 - 235	4.366	0.098	0.2614	0.0049	0.82623	76.85611879	1501	26	1953	21
CC02_10 - 71	4.299	0.11	0.2603	0.0056	0.818	76.57611481	1494	29	1951	24
CC02_10 - 222	4.05	0.073	0.2508	0.0032	0.11584	75.86750789	1443	16	1902	33
CC02_10 - 25	3.663	0.072	0.2381	0.0039	0.71264	75.729224	1376	20	1817	21
CC02_10 - 217	3.98	0.11	0.2499	0.0074	0.8972	75.51234892	1437	38	1903	22
CC02_10 - 209	5.02	0.18	0.2763	0.0041	-0.33892	75.13101477	1577	20	2099	67
CC02_10 - 149	4.771	0.094	0.2701	0.0037	0.60479	74.87852284	1541	19	2058	25

CC02_10 - 168	4.157	0.073	0.2505	0.003	0.53473	73.59550562	1441	16	1958	22
CC02_10 - 187	3.861	0.09	0.2401	0.0041	0.53446	73.15400844	1387	21	1896	30
CC02_10 - 67	3.58	0.11	0.2303	0.0074	0.84857	72.9907053	1335	39	1829	27
CC02_10 - 79	3.4	0.11	0.2238	0.0073	0.85739	72.22222222	1300	38	1800	30
CC02_10 - 146	4.143	0.065	0.2458	0.0035	0.67055	71.9654647	1417	18	1969	18
CC02_10 - 203	3.567	0.083	0.2285	0.0046	0.86731	71.83783784	1329	24	1850	17
CC02_10 - 236	10.7	1.4	0.35	0.014	0.95895	71.37037037	1927	67	2700	180
CC02_10 - 121	3.723	0.095	0.2335	0.0054	0.90166	70.97112861	1352	28	1905	17
CC02_10 - 118	4.55	0.12	0.2549	0.0062	0.8789	70.62801932	1462	32	2070	21
CC02_10 - 204	7.14	0.14	0.3142	0.0048	0.81669	70.49639712	1761	24	2498	17
CC02_10 - 133	5.37	0.18	0.2749	0.0085	0.96001	70.3870387	1564	43	2222	17
CC02_10 - 93	4.161	0.07	0.2429	0.0034	0.45156	69.92518703	1402	18	2005	25
CC02_10 - 72	4.25	0.12	0.2445	0.0071	0.96195	69.10250123	1409	37	2039	18
CC02_10 - 170	5.661	0.097	0.2815	0.004	0.68895	69.08776481	1598	20	2313	17
CC02_10 - 1	3.91	0.068	0.2325	0.0037	0.48748	68.74043855	1348	19	1961	28
CC02_10 - 45	4.111	0.088	0.2375	0.0037	0.78683	68.07139316	1373	19	2017	20
CC02_10 - 177	8.04	0.17	0.3204	0.0051	0.76188	67.22972973	1791	25	2664	18
CC02_10 - 5	3.907	0.061	0.2282	0.0029	0.46046	66.08478803	1325	15	2005	22
CC02_10 - 219	3.42	0.15	0.2124	0.0083	0.93886	65.99254923	1240	44	1879	26
CC02_10 - 212	3.607	0.092	0.2168	0.0048	0.8829	64.90507953	1265	26	1949	21
CC02_10 - 117	4.309	0.073	0.236	0.0043	0.43804	64.72261735	1365	22	2109	33
CC02_10 - 152	3.628	0.063	0.2171	0.003	0.74503	64.03641882	1266	16	1977	17
CC02_10 - 31	3.582	0.057	0.2128	0.0029	0.86829	63.0831643	1244	15	1972	15
CC02_10 - 172	2.881	0.072	0.1875	0.0038	0.8388	61.70568562	1107	21	1794	19
CC02_10 - 227	3.307	0.082	0.201	0.0039	0.90033	61.58663883	1180	21	1916	23
CC02_10 - 135	3.028	0.071	0.192	0.0036	0.82664	61.55519304	1132	20	1839	22
CC02_10 - 183	5.08	0.16	0.2454	0.0074	0.90537	60.86769759	1417	38	2328	21
CC02_10 - 65	6.34	0.41	0.2682	0.0061	0.87824	60.60965954	1531	31	2526	75
CC02_10 - 240	3.127	0.091	0.1925	0.0047	0.91633	59.0625	1134	25	1920	21
CC02_10 - 180	3.863	0.067	0.2122	0.0031	0.58907	58.90995261	1243	16	2110	24
CC02_10 - 34	2.981	0.07	0.1857	0.0034	0.81917	58.41741901	1100	19	1883	22
CC02_10 - 76	3.416	0.082	0.1978	0.0045	0.90409	57.97607178	1163	24	2006	16
CC02_10 - 96	3.42	0.11	0.1963	0.0058	0.92429	56.89739813	1159	31	2037	20
CC02_10 - 190	3.46	0.13	0.1979	0.0058	0.89266	56.67641326	1163	31	2052	29
CC02_10 - 101	3.56	0.14	0.1983	0.0067	0.94263	56.25301787	1165	36	2071	20
CC02_10 - 81	2.945	0.07	0.1805	0.0032	0.43675	56.18448637	1072	17	1908	36
CC02_10 - 207	2.753	0.068	0.1762	0.0035	0.79686	56.17615467	1046	19	1862	26
CC02_10 - 112	3.116	0.062	0.1846	0.0025	0.77505	54.95722194	1092	13	1987	22
CC02_10 - 15	2.88	0.15	0.1749	0.0088	0.9456	54.64994775	1046	50	1914	29
CC02_10 - 94	3.662	0.1	0.1983	0.0055	0.95608	54.43510738	1166	30	2142	14
CC02_10 - 28	2.965	0.06	0.1787	0.0027	0.8336	54.38686506	1060	15	1949	19

CC02_10 - 59	4.461	0.068	0.2152	0.0024	0.59211	53.74411639	1256	13	2337	18
CC02_10 - 33	3.014	0.069	0.1805	0.0036	0.62508	53.74183827	1070	20	1991	28
CC02_10 - 181	3.417	0.056	0.1895	0.0023	0.67109	53.18744053	1118	12	2102	17
CC02_10 - 150	2.719	0.049	0.1667	0.0023	0.61092	51.6900676	994	13	1923	25
CC02_10 - 182	3.2	0.14	0.1809	0.0079	0.97725	51.61601544	1070	43	2073	16
CC02_10 - 30	2.853	0.058	0.169	0.0035	0.89229	50.80808081	1006	19	1980	15
CC02_10 - 19	2.889	0.056	0.1693	0.0027	0.7761	50.52631579	1008	15	1995	18
CC02_10 - 131	2.576	0.08	0.1595	0.0052	0.88561	49.60957834	953	29	1921	24
CC02_10 - 87	3.059	0.053	0.1727	0.0023	0.61764	49.58957026	1027	12	2071	22
CC02_10 - 75	3.342	0.054	0.18	0.002	0.81703	49.58643123	1067.1	11	2152	13
CC02_10 - 86	2.531	0.075	0.1569	0.0048	0.87978	49.57716702	938	27	1892	25
CC02_10 - 251	3.99	0.24	0.193	0.0072	0.934	49.47780679	1137	39	2298	55
CC02_10 - 211	2.76	0.12	0.1633	0.0056	0.97021	49.36644703	974	31	1973	21
CC02_10 - 185	3.33	0.075	0.1779	0.0028	0.78129	49.09260121	1055	15	2149	20
CC02_10 - 194	3.73	0.31	0.188	0.015	0.98083	48.65103936	1100	80	2261	28
CC02_10 - 162	2.81	0.12	0.1643	0.008	0.9768	48.61523244	983	44	2022	17
CC02_10 - 32	2.731	0.044	0.1614	0.0019	0.4084	48.52615694	964.7	11	1988	23
CC02_10 - 179	2.628	0.058	0.1573	0.0038	0.87212	48.15762538	941	21	1954	20
CC02_10 - 113	3.117	0.081	0.1693	0.0041	0.88472	47.19101124	1008	23	2136	20
CC02_10 - 27	2.682	0.046	0.1572	0.002	0.54482	47.03148426	941.1	11	2001	25
CC02_10 - 136	2.608	0.065	0.1544	0.0034	0.88667	46.57603223	925	19	1986	17
CC02_10 - 120	3.096	0.088	0.1668	0.0037	0.90063	46.3619403	994	20	2144	21
CC02_10 - 97	2.517	0.076	0.1501	0.0036	0.80805	46.06339468	901	20	1956	27
CC02_10 - 225	2.77	0.22	0.155	0.013	0.97976	44.22709924	927	75	2096	25
CC02_10 - 53	2.36	0.085	0.1406	0.004	0.90974	43.53182752	848	23	1948	22
CC02_10 - 254	2.531	0.045	0.1451	0.0019	0.69824	42.69305963	873.5	10	2046	19
CC02_10 - 22	2.308	0.048	0.1368	0.0023	0.88794	42.14285714	826	13	1960	20
CC02_10 - 237	2.805	0.081	0.1509	0.003	0.92367	41.73192077	906	17	2171	20
CC02_10 - 51	3.45	0.24	0.165	0.012	0.98598	41.0041841	980	65	2390	21
CC02_10 - 83	2.44	0.16	0.1375	0.0079	0.94414	40.54848188	828	45	2042	31
CC02_10 - 6	2.024	0.058	0.1261	0.0032	0.90711	40.34810127	765	18	1896	22
CC02_10 - 160	2.779	0.042	0.147	0.0018	0.71127	40.31919745	884.2	10	2193	14
CC02_10 - 57	2.876	0.043	0.1486	0.0024	0.64712	39.99104344	893	13	2233	24
CC02_10 - 108	2.483	0.051	0.1373	0.0025	0.75938	39.45740124	829	14	2101	21
CC02_10 - 132	2.33	0.089	0.1332	0.0047	0.92127	39.39393939	806	27	2046	22
CC02_10 - 16	2.428	0.048	0.1347	0.0021	0.76431	39.39101015	815	12	2069	20
CC02_10 - 52	2.034	0.074	0.124	0.0039	0.93006	38.85448916	753	22	1938	21
CC02_10 - 89	2.439	0.062	0.1329	0.0027	0.83517	37.71106942	804	15	2132	21
CC02_10 - 29	2.477	0.081	0.1309	0.0027	0.91928	36.51012891	793	16	2172	25
CC02_10 - 119	2.905	0.07	0.1394	0.0029	0.88229	36.01713062	841	16	2335	17
CC02_10 - 105	1.69	0.031	0.1049	0.0013	0.74395	33.70739381	642.8	7.7	1907	19

CC02_10 - 122	1.875	0.063	0.1084	0.0039	0.97029	32.45227606	663	23	2043	16
CC02_10 - 163	1.938	0.041	0.1045	0.002	0.88377	29.92052361	640	11	2139	16
CC02_10 - 4	2.275	0.077	0.1102	0.0022	0.81486	29.12705272	674	13	2314	33
CC02_10 - 214	1.586	0.041	0.0922	0.003	0.94868	27.85679255	568	18	2039	20
CC01_13 - 6	no value	NAN	no value	NAN	NaN	#VALUE!	no value	NAN	no value	NAN
CC01_13 - 26	12.029	0.22	0.5055	0.0055	0.58833	102.6837806	2640	25	2571	30
CC01_13 - 21	6.053	0.13	0.3657	0.0043	0.63367	102.5523226	2009	20	1959	34
CC01_13 - 97	6.369	0.12	0.3716	0.004	0.25805	101.3937282	2037	19	2009	35
CC01_13 - 8	4.757	0.1	0.3191	0.0035	0.29927	101.1331445	1785	17	1765	38
CC01_13 - 13	6.042	0.12	0.3612	0.004	0.49173	100.657562	1990	18	1977	34
CC01_13 - 50	15.3	0.37	0.5537	0.0089	0.32572	100.6380716	2839	37	2821	41
CC01_13 - 55	5.52	0.14	0.3436	0.0045	0.43683	100.3161222	1904	22	1898	41
CC01_13 - 4	4.725	0.11	0.3169	0.0039	0.37245	100.2826456	1774	19	1769	42
CC01_13 - 25	4.739	0.11	0.3173	0.004	0.39144	100.2823264	1776	19	1771	39
CC01_13 - 18	5.328	0.11	0.3382	0.0041	0.41414	100.2669514	1878	20	1873	38
CC01_13 - 107	4.608	0.11	0.311	0.0034	0.44014	100	1746	17	1746	39
CC01_13 - 103	4.778	0.097	0.3183	0.0037	0.57914	99.94388328	1781	18	1782	34
CC01_13 - 59	4.872	0.12	0.3209	0.0041	0.39113	99.88864143	1794	20	1796	43
CC01_13 - 44	4.826	0.1	0.3204	0.0039	0.11879	99.83277592	1791	19	1794	42
CC01_13 - 9	5.631	0.11	0.3458	0.0041	0.3809	99.79144943	1914	19	1918	35
CC01_13 - 117	5.303	0.11	0.3351	0.0046	0.37887	99.78575254	1863	22	1867	40
CC01_13 - 41	4.711	0.1	0.316	0.0039	0.29167	99.71830986	1770	19	1775	43
CC01_13 - 51	5.149	0.13	0.3298	0.0045	0.26934	99.62039046	1837	22	1844	44
CC01_13 - 124	4.749	0.11	0.3159	0.0036	0.551	99.55005624	1770	18	1778	38
CC01_13 - 73	7.18	0.19	0.3885	0.0054	0.46125	99.48283968	2116	25	2127	39
CC01_13 - 22	6.01	0.15	0.358	0.0056	0.74901	99.44640161	1976	26	1987	37
CC01_13 - 72	7.77	0.17	0.4039	0.0049	0.42126	99.09379248	2187	22	2207	35
CC01_13 - 122	4.713	0.11	0.3127	0.0046	0.39009	98.8745076	1757	22	1777	41
CC01_13 - 5	4.7	0.1	0.3129	0.0047	0.48255	98.76195836	1755	23	1777	37
CC01_13 - 84	5.085	0.12	0.3247	0.0037	0.47073	98.5326087	1813	18	1840	39
CC01_13 - 20	6.535	0.14	0.3694	0.0054	0.52768	98.11138015	2026	26	2065	38
CC01_13 - 60	4.984	0.11	0.3242	0.0038	0.36918	98.04983749	1810	19	1846	37
CC01_13 - 75	5.11	0.15	0.325	0.0051	0.17433	97.78975741	1814	25	1855	55
CC01_13 - 39	10.32	0.23	0.4572	0.0059	0.39578	97.31247493	2426	26	2493	36
CC01_13 - 2	11.122	0.22	0.4723	0.0055	0.64492	97.07943925	2493	24	2568	31
CC01_13 - 127	4.863	0.1	0.315	0.0037	0.42183	96.76535088	1765	18	1824	37
CC01_13 - 115	4.651	0.1	0.307	0.0035	0.080856	96.69652856	1727	16	1786	41
CC01_13 - 91	4.721	0.11	0.3111	0.0046	0.70104	96.67774086	1746	23	1806	38
CC01_13 - 7	4.47	0.14	0.3002	0.0039	0.36423	96.24573379	1692	20	1758	52
CC01_13 - 106	4.508	0.12	0.2997	0.0045	0.47861	95.96590909	1689	22	1760	45
CC01_13 - 23	5.323	0.12	0.3281	0.0047	0.69581	95.76581286	1832	23	1913	35

CC01_13 - 66	4.93	0.18	0.315	0.0086	0.77897	95.19697787	1764	43	1853	49
CC01_13 - 85	10.53	0.26	0.4524	0.0074	0.5666	95.02173054	2405	33	2531	36
CC01_13 - 77	4.663	0.1	0.3047	0.0036	0.25628	94.5394374	1714	18	1813	38
CC01_13 - 112	4.898	0.1	0.3123	0.0035	0.3467	94.49838188	1752	17	1854	36
CC01_13 - 101	4.907	0.12	0.3133	0.0041	0.49676	94.0546331	1756	20	1867	39
CC01_13 - 10	4.845	0.11	0.3081	0.004	0.68153	93.87201735	1731	20	1844	38
CC01_13 - 27	4.484	0.11	0.2964	0.0039	0.29111	93.46368715	1673	19	1790	46
CC01_13 - 99	4.694	0.092	0.304	0.0036	0.28511	93.44620426	1711	18	1831	35
CC01_13 - 116	4.448	0.092	0.2946	0.0036	0.51783	93.2735426	1664	18	1784	36
CC01_13 - 37	4.599	0.099	0.3	0.0045	0.62402	93.01430143	1691	22	1818	37
CC01_13 - 17	4.446	0.093	0.2931	0.0045	0.50239	92.26057906	1657	23	1796	38
CC01_13 - 43	4.592	0.096	0.2967	0.0035	0.23216	92.23568282	1675	17	1816	41
CC01_13 - 30	8.07	0.17	0.3904	0.0053	0.6405	91.27632144	2124	24	2327	34
CC01_13 - 119	4.488	0.1	0.2942	0.0042	0.60933	91.26853377	1662	21	1821	40
CC01_13 - 86	4.92	0.18	0.3053	0.0043	0.59779	91.03923648	1717	21	1886	55
CC01_13 - 61	4.453	0.1	0.2913	0.0035	0.47975	90.89906233	1648	17	1813	39
CC01_13 - 33	4.32	0.13	0.286	0.0063	0.64938	90.8632287	1621	32	1784	48
CC01_13 - 98	4.72	0.14	0.2995	0.0041	0.56686	90.3640257	1688	20	1868	51
CC01_13 - 36	6.143	0.13	0.3427	0.0046	0.27898	90.34253092	1899	22	2102	37
CC01_13 - 65	4.348	0.095	0.2867	0.0038	0.59193	90.2276513	1625	19	1801	37
CC01_13 - 47	4.89	0.15	0.3051	0.0097	0.90289	90.1208618	1715	48	1903	39
CC01_13 - 58	4.797	0.11	0.3022	0.0055	0.58956	90.10058232	1702	27	1889	37
CC01_13 - 100	5.68	0.18	0.3272	0.0046	0.049913	89.68058968	1825	22	2035	59
CC01_13 - 120	8.88	0.22	0.4055	0.008	0.88803	89.61994279	2193	37	2447	31
CC01_13 - 123	5.034	0.11	0.3071	0.0048	0.70182	89.10686629	1726	24	1937	38
CC01_13 - 81	4.474	0.11	0.2872	0.005	0.51398	89.00437637	1627	25	1828	38
CC01_13 - 57	4.716	0.12	0.2957	0.0047	0.48787	88.60625331	1672	23	1887	44
CC01_13 - 87	4.3	0.24	0.28	0.011	0.65444	88.56664808	1588	56	1793	60
CC01_13 - 38	5.886	0.13	0.3308	0.0051	0.70207	88.38771593	1842	25	2084	36
CC01_13 - 93	5.05	0.13	0.3033	0.0047	0.71587	87.18079673	1707	23	1958	39
CC01_13 - 14	4.376	0.11	0.2805	0.0054	0.80187	86.8119891	1593	27	1835	37
CC01_13 - 16	5.022	0.13	0.3001	0.0049	0.44277	85.96046629	1696	26	1973	44
CC01_13 - 111	4.487	0.11	0.2829	0.0059	0.73598	85.50879062	1605	29	1877	39
CC01_13 - 104	5.479	0.12	0.3124	0.0048	0.77041	85.50512445	1752	24	2049	35
CC01_13 - 108	4.984	0.11	0.2969	0.0064	0.36514	85.45918367	1675	32	1960	49
CC01_13 - 118	4.171	0.099	0.272	0.0043	0.75884	85.4315558	1554	23	1819	40
CC01_13 - 80	5.06	0.17	0.3014	0.0072	0.821	84.89244622	1697	36	1999	43
CC01_13 - 11	4.792	0.1	0.2881	0.0035	0.35186	82.71667511	1632	17	1973	36
CC01_13 - 28	4.127	0.092	0.2611	0.0036	0.439	79.81847304	1495	18	1873	39
CC01_13 - 68	19.2	0.45	0.5081	0.01	0.88949	79.77697408	2647	43	3318	30
CC01_13 - 102	4.49	0.13	0.2666	0.0046	0.73297	76.72544081	1523	23	1985	40

CC01_13 - 79	4.585	0.098	0.2666	0.0039	0.39699	75.1727542	1523	20	2026	40
CC01_13 - 95	4.146	0.11	0.2521	0.0045	0.80495	75.03875969	1452	24	1935	39
CC01_13 - 46	3.705	0.11	0.2385	0.0041	0.30881	74.90494297	1379	21	1841	48
CC01_13 - 90	3.84	0.19	0.243	0.011	0.96284	74.89293362	1399	59	1868	36
CC01_13 - 89	8.03	0.17	0.3399	0.005	0.72797	73.35667056	1886	24	2571	32
CC01_13 - 54	3.7	0.19	0.234	0.012	0.86874	72.87405813	1354	60	1858	43
CC01_13 - 45	3.62	0.13	0.2312	0.0066	0.85248	70.6969377	1339	35	1894	42
CC01_13 - 76	4	0.17	0.2375	0.0072	0.47963	70.68521381	1372	38	1941	74
CC01_13 - 114	4.593	0.1	0.2572	0.0034	0.77779	70.57416268	1475	18	2090	32
CC01_13 - 113	3.62	0.085	0.2273	0.0032	0.72928	69.65699208	1320	17	1895	36
CC01_13 - 29	4.375	0.11	0.248	0.0037	0.64503	69.11907067	1428	19	2066	39
CC01_13 - 49	3.988	0.098	0.2366	0.0048	0.74073	69.10651186	1369	25	1981	38
CC01_13 - 42	5.4	0.19	0.2749	0.0097	0.96169	68.97616946	1563	49	2266	32
CC01_13 - 83	4.41	0.18	0.247	0.0069	0.92281	68.49710983	1422	36	2076	40
CC01_13 - 34	4.262	0.096	0.2429	0.0029	0.52306	68.35689907	1402	15	2051	36
CC01_13 - 67	4.452	0.12	0.2463	0.006	0.92128	67.31499051	1419	31	2108	33
CC01_13 - 12	4.282	0.11	0.2424	0.0053	0.80246	66.87380497	1399	27	2092	38
CC01_13 - 126	3.521	0.082	0.2152	0.0047	0.87417	65.14522822	1256	25	1928	37
CC01_13 - 52	4.81	0.14	0.2501	0.0059	0.82362	65.00904159	1438	30	2212	35
CC01_13 - 96	4.239	0.086	0.2355	0.0031	0.47541	64.96663489	1363	16	2098	36
CC01_13 - 110	3.236	0.084	0.2056	0.0038	0.79412	64.68062265	1205	20	1863	35
CC01_13 - 109	3.219	0.096	0.203	0.0051	0.79865	64.41319632	1191	27	1849	40
CC01_13 - 78	5.327	0.12	0.2574	0.0037	0.71009	63.23907455	1476	19	2334	33
CC01_13 - 31	3.725	0.078	0.2143	0.0027	0.81648	61.05417277	1251	14	2049	32
CC01_13 - 35	3.605	0.096	0.2073	0.0032	0.43741	60.27736503	1217	18	2019	44
CC01_13 - 19	6.22	0.18	0.2668	0.0054	0.89022	59.88212181	1524	27	2545	33
CC01_13 - 62	3.85	0.12	0.2133	0.0051	0.73708	59.30509281	1246	27	2101	42
CC01_13 - 15	3.35	0.14	0.195	0.0068	0.97019	56.92307692	1147	36	2015	35
CC01_13 - 64	3.889	0.09	0.2082	0.0031	0.85198	56.5136764	1219	16	2157	33
CC01_13 - 88	3.15	0.19	0.1867	0.0099	0.97821	56.14482407	1101	53	1961	35
CC01_13 - 69	3.44	0.15	0.195	0.0078	0.88436	55.6851312	1146	42	2058	35
CC01_13 - 40	4.143	0.086	0.208	0.0025	0.53237	53.57677079	1217.8	13	2273	33
CC01_13 - 125	2.681	0.1	0.1679	0.0047	0.82264	52.99417064	1000	26	1887	41
CC01_13 - 53	3.26	0.16	0.1839	0.0074	0.9806	52.58829221	1087	40	2067	34
CC01_13 - 105	2.957	0.094	0.1735	0.0048	0.89117	51.44710579	1031	26	2004	38
CC01_13 - 63	3.465	0.099	0.1862	0.0038	0.91668	51.13583681	1103	20	2157	33
CC01_13 - 48	3.34	0.17	0.1811	0.0073	0.96358	50.163781	1072	40	2137	37
CC01_13 - 1	2.93	0.21	0.166	0.011	0.98178	47.67891683	986	60	2068	36
CC01_13 - 24	3.149	0.089	0.1704	0.0043	0.91858	47.27272727	1014	24	2145	33
CC01_13 - 32	2.859	0.066	0.1596	0.0027	0.76639	45.88744589	954	15	2079	35
CC01_13 - 94	2.827	0.1	0.1565	0.0043	0.80385	45.30120482	940	25	2075	47

CC01_13 - 92	3.38	0.18	0.1663	0.0077	0.98119	43.21041215	996	44	2305	32
CC01_13 - 56	3.47	0.18	0.1673	0.0073	0.94934	42.77777778	1001	39	2340	39
CC01_13 - 3	2.327	0.083	0.1378	0.0044	0.96753	41.63326653	831	25	1996	33
CC01_13 - 70	3.74	0.12	0.1606	0.0026	0.50361	37.57338552	960	14	2555	52
CC01_13 - 121	2.761	0.083	0.1326	0.0034	0.75782	34.02630462	802	19	2357	37
CC01_13 - 82	1.57	0.12	0.0978	0.006	0.99292	31.74603175	600	35	1890	41
CC01_13 - 71	1.644	0.051	0.097	0.0026	0.91847	30.06042296	597	15	1986	36
CC01_13 - 74	1.608	0.088	0.0944	0.0039	0.85992	29.82546201	581	23	1948	46
CC04_15 - 66	4.84	0.1	0.3251	0.0039	0.19928	103.1267766	1814	19	1759	40
CC04_15 - 58	4.737	0.08	0.3205	0.0037	0.1066	102.8064147	1795	18	1746	37
CC04_15 - 115	5.207	0.097	0.3366	0.0032	0.23086	102.4657534	1870	16	1825	35
CC04_15 - 112	5.491	0.06	0.3449	0.0027	0.12289	101.9754405	1910	13	1873	24
CC04_15 - 82	4.67	0.12	0.3159	0.0036	0.26963	101.6666667	1769	18	1740	44
CC04_15 - 63	11.37	0.18	0.4911	0.0048	0.40018	101.6179953	2575	21	2534	25
CC04_15 - 40	5.46	0.084	0.344	0.0035	0.17373	101.5450186	1906	17	1877	30
CC04_15 - 44	4.78	0.08	0.3192	0.0022	0.33789	101.4188422	1787	11	1762	26
CC04_15 - 42	4.81	0.1	0.32	0.0031	0.18238	101.3597734	1789	15	1765	35
CC04_15 - 57	5.412	0.07	0.3419	0.003	0.53773	101.3368984	1895	15	1870	20
CC04_15 - 89	4.692	0.06	0.316	0.002	0.12448	101.1485714	1770.1	9.6	1750	25
CC04_15 - 22	4.755	0.062	0.3191	0.0028	0.069474	101.0758777	1785	14	1766	21
CC04_15 - 43	4.676	0.07	0.3154	0.0027	0.41602	100.9714286	1767	13	1750	25
CC04_15 - 25	4.854	0.06	0.3218	0.002	0.31129	100.9539843	1799	10	1782	25
CC04_15 - 113	11.19	0.16	0.4844	0.0048	0.25096	100.7120253	2546	21	2528	26
CC04_15 - 3	5.455	0.058	0.3419	0.0031	0.50983	100.4769475	1896	15	1887	18
CC04_15 - 84	5.175	0.093	0.3328	0.0034	0.34533	100.3794038	1852	16	1845	32
CC04_15 - 2	4.697	0.088	0.3162	0.0031	0.34883	100.3399433	1771	15	1765	36
CC04_15 - 75	4.87	0.084	0.3209	0.0033	0.25005	100.3355705	1794	16	1788	33
CC04_15 - 100	5.017	0.04	0.326	0.0025	0.32667	100.3309432	1819	12	1813	16
CC04_15 - 47	6.529	0.092	0.3749	0.0042	0.48787	100.2442599	2052	20	2047	25
CC04_15 - 105	4.579	0.062	0.3104	0.0021	0.37241	100.1724138	1743	11	1740	22
CC04_15 - 91	4.991	0.071	0.3251	0.0026	0.31702	100.1103753	1814	13	1812	25
CC04_15 - 74	4.747	0.057	0.3164	0.0022	0.22505	99.83098592	1772	11	1775	21
CC04_15 - 110	5.334	0.093	0.3371	0.0031	0.36866	99.78678038	1872	15	1876	28
CC04_15 - 62	4.827	0.057	0.3187	0.0024	0.28324	99.77616116	1783	12	1787	22
CC04_15 - 121	4.825	0.084	0.3178	0.0052	0.63921	98.6681465	1778	25	1802	29
CC04_15 - 73	4.544	0.075	0.3065	0.0032	0.19142	98.62621637	1723	16	1747	32
CC04_15 - 120	4.517	0.077	0.3052	0.0031	0.31375	97.89053592	1717	15	1754	33
CC04_15 - 60	4.993	0.079	0.3196	0.0032	0.19675	97.17698154	1790	15	1842	33
CC04_15 - 26	4.685	0.088	0.3108	0.0038	0.40239	96.94274597	1744	19	1799	36
CC04_15 - 23	4.513	0.076	0.3031	0.0034	0.56871	96.76687465	1706	17	1763	28
CC04_15 - 80	14.16	0.21	0.5196	0.0062	0.89799	96.63203153	2697	27	2791	18

CC04_15 - 83	9.14	0.14	0.4295	0.0065	0.80704	96.40016743	2303	29	2389	17
CC04_15 - 107	10.98	0.13	0.4646	0.0043	0.60178	96.20649198	2460	19	2557	16
CC04_15 - 104	6.03	0.15	0.3517	0.0077	0.68814	96.08910891	1941	37	2020	24
CC04_15 - 116	4.475	0.09	0.302	0.0053	0.3636	96.04743083	1701	26	1771	39
CC04_15 - 71	4.495	0.062	0.298	0.0024	0.43123	94.38517687	1681	12	1781	23
CC04_15 - 4	4.569	0.049	0.3004	0.0021	0.38227	94.31754875	1693	10	1795	21
CC04_15 - 76	4.21	0.089	0.2882	0.006	0.83387	93.73563218	1631	30	1740	21
CC04_15 - 34	4.311	0.074	0.2901	0.0031	0.67196	93.66799772	1642	16	1753	21
CC04_15 - 78	4.669	0.05	0.3033	0.0027	0.54708	93.5890411	1708	13	1825	19
CC04_15 - 68	5.023	0.058	0.3145	0.0031	0.46728	93.18181818	1763	15	1892	21
CC04_15 - 85	4.98	0.1	0.3123	0.0041	0.42909	93.14194577	1752	20	1881	37
CC04_15 - 97	4.934	0.072	0.3114	0.0038	0.85113	92.93680297	1750	18	1883	13
CC04_15 - 59	4.257	0.084	0.2875	0.0044	0.77698	92.51276234	1631	22	1763	21
CC04_15 - 79	12.83	0.21	0.4848	0.0058	0.66146	92.38302503	2547	25	2757	20
CC04_15 - 48	4.409	0.071	0.2898	0.0026	0.43851	91.82530795	1640	13	1786	26
CC04_15 - 54	4.612	0.059	0.2963	0.003	0.42266	91.62102957	1673	15	1826	20
CC04_15 - 86	5.08	0.074	0.3118	0.0047	0.73482	91.52276295	1749	23	1911	21
CC04_15 - 32	5.389	0.077	0.3225	0.0038	0.56119	90.88161209	1804	18	1985	22
CC04_15 - 46	4.552	0.053	0.2931	0.0023	0.34589	90.39825423	1657	11	1833	22
CC04_15 - 77	4.752	0.076	0.2994	0.0052	0.45262	90.3640257	1688	26	1868	32
CC04_15 - 12	4.41	0.1	0.2871	0.0031	0.15543	89.88950276	1627	16	1810	44
CC04_15 - 30	4.363	0.068	0.2862	0.0027	0.49194	89.86710963	1623	13	1806	24
CC04_15 - 61	9.28	0.11	0.4104	0.0048	0.65147	88.92455859	2216	22	2492	17
CC04_15 - 94	4.31	0.1	0.2811	0.0064	0.49177	88.3231876	1596	32	1807	37
CC04_15 - 92	4.628	0.077	0.2912	0.0036	0.56454	88.07486631	1647	18	1870	25
CC04_15 - 117	5.72	0.12	0.3254	0.0048	0.76117	88.06404658	1815	24	2061	19
CC04_15 - 6	4.78	0.12	0.2959	0.0084	0.88825	87.19958203	1669	41	1914	23
CC04_15 - 15	4.087	0.082	0.271	0.0052	0.69759	86.846543	1545	26	1779	34
CC04_15 - 10	4.169	0.094	0.2739	0.0041	0.56019	86.36112645	1564	20	1811	33
CC04_15 - 65	5.06	0.065	0.3014	0.0028	0.57268	86.14916286	1698	14	1971	20
CC04_15 - 45	4.975	0.045	0.299	0.0023	0.4117	85.80152672	1686	11	1965	17
CC04_15 - 1	4.32	0.1	0.2757	0.0057	0.90828	84.98644986	1568	29	1845	15
CC04_15 - 81	4.551	0.071	0.2836	0.0033	0.59492	84.90765172	1609	16	1895	24
CC04_15 - 8	4.908	0.081	0.2917	0.0052	0.63924	83.52703386	1653	25	1979	23
CC04_15 - 87	4.682	0.055	0.2842	0.003	0.41774	83.33333333	1615	16	1938	18
CC04_15 - 70	4.487	0.073	0.2762	0.0037	0.53975	82.51968504	1572	19	1905	29
CC04_15 - 72	4.39	0.088	0.2709	0.004	0.7762	80.72100313	1545	20	1914	24
CC04_15 - 88	4.135	0.097	0.2628	0.0067	0.84533	79.90430622	1503	34	1881	30
CC04_15 - 102	4.39	0.077	0.2678	0.0042	0.6717	78.97727273	1529	22	1936	24
CC04_15 - 106	3.77	0.13	0.2437	0.0088	0.93938	76.33297062	1403	45	1838	20
CC04_15 - 7	3.667	0.055	0.2387	0.0028	0.65288	76.28524046	1380	14	1809	20

CC04_15 - 118	3.86	0.1	0.2441	0.008	0.90509	75.46967257	1406	41	1863	20
CC04_15 - 114	3.46	0.1	0.2292	0.0058	0.76556	75.3968254	1330	30	1764	37
CC04_15 - 18	5.12	0.19	0.2824	0.0059	0.88648	75.11715089	1603	30	2134	32
CC04_15 - 93	4.702	0.071	0.2677	0.0045	0.58356	74.40389294	1529	23	2055	24
CC04_15 - 13	3.698	0.054	0.2362	0.0029	0.47582	74.36175991	1369	15	1841	25
CC04_15 - 39	4.05	0.15	0.2451	0.0095	0.94239	73.41968912	1417	48	1930	23
CC04_15 - 36	3.867	0.067	0.2391	0.0034	0.62283	72.31815803	1382	18	1911	23
CC04_15 - 64	4.326	0.087	0.2522	0.0037	0.48474	72.01789264	1449	19	2012	32
CC04_15 - 98	4.108	0.089	0.2445	0.0054	0.79658	71.90209077	1410	28	1961	21
CC04_15 - 24	8.25	0.13	0.3358	0.0049	0.8049	70.95057034	1866	24	2630	15
CC04_15 - 55	7.64	0.14	0.3228	0.0066	0.81689	70.5399061	1803	32	2556	17
CC04_15 - 20	3.521	0.081	0.2252	0.0036	0.73267	70.03745318	1309	19	1869	25
CC04_15 - 29	3.235	0.056	0.214	0.0033	0.71387	69.87143656	1250	18	1789	21
CC04_15 - 49	3.851	0.074	0.2346	0.0044	0.39599	69.35648621	1358	23	1958	33
CC04_15 - 90	3.998	0.055	0.2347	0.0037	0.79438	68.32579186	1359	19	1989	17
CC04_15 - 41	13.45	0.34	0.3944	0.0064	0.78682	68.17026684	2146	30	3148	23
CC04_15 - 5	7.578	0.094	0.3148	0.004	0.80032	67.9245283	1764	20	2597	13
CC04_15 - 109	3.975	0.052	0.233	0.0033	0.62584	67.19761075	1350	17	2009	20
CC04_15 - 53	3.863	0.049	0.2279	0.0035	0.49299	66.58278812	1323	18	1987	25
CC04_15 - 38	4.137	0.073	0.2348	0.0038	0.73093	66.09922179	1359	20	2056	23
CC04_15 - 16	6.33	0.13	0.2854	0.0053	0.87992	65.55915721	1618	27	2468	15
CC04_15 - 108	6.72	0.13	0.2844	0.0061	0.93578	63.37254902	1616	30	2550	11
CC04_15 - 69	3.85	0.13	0.2214	0.0061	0.90368	63.3546483	1288	32	2033	24
CC04_15 - 95	4.066	0.072	0.2266	0.0033	0.83066	63.07471264	1317	17	2088	16
CC04_15 - 67	3.163	0.066	0.201	0.0037	0.80981	62.89978678	1180	20	1876	19
CC04_15 - 50	11.5	0.3	0.3467	0.005	0.29775	61.61259235	1918	24	3113	40
CC04_15 - 33	3.15	0.11	0.1976	0.0067	0.94085	61.61187699	1162	36	1886	23
CC04_15 - 9	4.21	0.11	0.227	0.01	0.96262	60.69284065	1314	54	2165	35
CC04_15 - 52	3.156	0.067	0.1933	0.0037	0.89652	59.35383012	1139	20	1919	16
CC04_15 - 99	3.89	0.13	0.2129	0.008	0.91253	58.91840607	1242	42	2108	23
CC04_15 - 103	4.001	0.083	0.2156	0.0046	0.7356	58.45724907	1258	24	2152	20
CC04_15 - 19	3.533	0.057	0.2014	0.0025	0.29958	58.05977462	1185	14	2041	30
CC04_15 - 96	3.308	0.063	0.1939	0.0039	0.67646	56.7312469	1142	21	2013	28
CC04_15 - 35	4.91	0.086	0.231	0.0037	0.90669	56.0904144	1340	19	2389	12
CC04_15 - 56	3.157	0.093	0.1859	0.0046	0.9441	54.75834579	1099	25	2007	18
CC04_15 - 111	3.169	0.038	0.1837	0.0018	0.75434	54.21446384	1087	9.8	2005	15
CC04_15 - 27	4.477	0.079	0.208	0.004	0.7828	50.37220844	1218	21	2418	20
CC04_15 - 37	2.835	0.046	0.1578	0.0023	0.45942	45.47641963	945	13	2078	26
CC04_15 - 119	2.545	0.088	0.1355	0.0034	0.81959	38.41463415	819	19	2132	34
CC04_15 - 21	2.804	0.066	0.1372	0.003	0.85411	35.67125645	829	17	2324	19
CC04_15 - 14	1.85	0.098	0.111	0.005	0.9731	34.53897096	678	29	1963	25

CC04_15 - 51	1.339	0.025	0.0933	0.0016	0.82387	34.15083135	575.1	9.3	1684	20
CC04_15 - 11	2.155	0.074	0.1182	0.0042	0.95016	34.12322275	720	24	2110	19
CC04_15 - 17	1.855	0.081	0.1015	0.0036	0.95539	29.45626478	623	21	2115	23
CC04_15 - 28	1.72	0.12	0.0941	0.0074	0.9756	27.1321462	579	43	2134	35
CC04_15 - 31	1.236	0.049	0.0765	0.003	0.97843	24.79123173	475	18	1916	14
CC04_15 - 101	0.584	0.021	0.0386	0.0013	0.96101	13.52549889	244	8.4	1804	20

All U-Pb data for Wollogorang Formation

Analysis	207Pb/235U	Error	206Pb/238U	Error	rho	Concordance	206Pb/238U	Error	207Pb/206Pb	Error
CC06_01 - 119	8.22	0.47	0.42	0.014	0.9213	102.0823902	2255	63	2209	51
CC06_01 - 92	5.36	0.1	0.3395	0.0026	0.20026	101.0729614	1884	12	1864	42
CC06_01 - 7	5	0.12	0.3256	0.0032	0.42992	100.7764836	1817	16	1803	48
CC06_01 - 84	4.738	0.084	0.3166	0.003	0.30785	100.567215	1773	15	1763	43
CC06_01 - 114	5.583	0.087	0.3452	0.0027	0.27808	100.4731861	1911	13	1902	40
CC06_01 - 101	11.56	0.16	0.4908	0.0036	0.22059	100.2336449	2574	15	2568	34
CC06_01 - 20	5.548	0.11	0.3441	0.0042	0.31696	100.1576458	1906	20	1903	46
CC06_01 - 104	4.879	0.081	0.3228	0.0035	0.24689	100.1110494	1803	17	1801	43
CC06_01 - 86	4.673	0.075	0.3144	0.0023	0.0028203	100.0567859	1762	11	1761	42
CC06_01 - 47	11.46	0.35	0.487	0.012	0.31169	100	2552	52	2552	64
CC06_01 - 71	10.75	0.17	0.473	0.0046	0.38651	99.95995194	2496	20	2497	36
CC06_01 - 18	11.86	0.15	0.4924	0.0033	0.48269	99.76807112	2581	14	2587	34
CC06_01 - 29	10.48	0.43	0.47	0.015	0.60544	99.43820225	2478	66	2492	63
CC06_01 - 1	4.798	0.094	0.3172	0.0032	0.30393	99.05186838	1776	16	1793	45
CC06_01 - 23	4.697	0.099	0.3141	0.0036	0.28932	98.93198426	1760	18	1779	44
CC06_01 - 113	15.85	0.32	0.5538	0.008	0.31343	98.71527778	2843	33	2880	41
CC06_01 - 38	4.849	0.1	0.3174	0.0042	0.082767	98.61265261	1777	21	1802	52
CC06_01 - 83	4.709	0.1	0.3092	0.0029	0.21095	96.98324022	1736	14	1790	51
CC06_01 - 60	4.9	0.14	0.3172	0.0054	0.35052	96.782988	1775	26	1834	51
CC06_01 - 105	4.517	0.083	0.3031	0.0031	0.469	96.05855856	1706	15	1776	40
CC06_01 - 55	8.92	0.17	0.4145	0.0046	0.093034	93.05901912	2239	20	2406	43

CC06_01 - 48	4.689	0.084	0.2996	0.0026	0.069694	92.49726177	1689	13	1826	41
CC06_01 - 64	4.608	0.11	0.2968	0.0051	0.57811	91.48006554	1675	25	1831	45
CC06_01 - 91	4.191	0.092	0.2769	0.0027	0.40585	87.45141588	1575	14	1801	47
CC06_01 - 13	4.248	0.1	0.2792	0.0068	0.70078	86.6193337	1586	34	1831	45
CC06_01 - 78	3.914	0.099	0.2648	0.0046	0.6212	85.77903683	1514	23	1765	44
CC06_01 - 70	4.17	0.077	0.2712	0.0041	0.512	85.03850385	1546	21	1818	42
CC06_01 - 102	14.9	1.1	0.479	0.021	0.95631	84.38337802	2518	92	2984	68
CC06_01 - 24	4.509	0.078	0.2737	0.0037	0.65248	79.98973833	1559	19	1949	38
CC06_01 - 90	4.12	0.26	0.261	0.016	0.94189	79.59401709	1490	81	1872	42
CC06_01 - 66	8.4	0.16	0.3622	0.0052	0.77758	78.64192657	1992	25	2533	33
CC06_01 - 53	6.96	0.18	0.3264	0.0081	0.88317	76.12687813	1824	39	2396	36
CC06_01 - 2	3.53	0.08	0.2328	0.0024	0.48724	75.44742729	1349	12	1788	45
CC06_01 - 110	3.434	0.08	0.2306	0.0038	0.62044	75.36640361	1337	20	1774	45
CC06_01 - 59	5.36	0.14	0.2793	0.0042	0.72159	72.07084469	1587	21	2202	41
CC06_01 - 65	3.848	0.066	0.2381	0.0031	0.57301	71.86847599	1377	16	1916	38
CC06_01 - 63	4.172	0.088	0.2457	0.0038	0.42499	70.97744361	1416	19	1995	41
CC06_01 - 5	10.3	0.17	0.3653	0.004	0.55153	70.32235459	2007	19	2854	34
CC06_01 - 49	3.647	0.063	0.2276	0.0026	0.27424	69.91010048	1322	14	1891	40
CC06_01 - 121	3.37	0.13	0.2151	0.0079	0.93131	68.36127637	1264	40	1849	39
CC06_01 - 41	3.788	0.092	0.223	0.0042	0.62046	65.20864756	1297	22	1989	43
CC06_01 - 31	3.55	0.16	0.213	0.011	0.94321	64.19057377	1253	56	1952	43
CC06_01 - 39	6.819	0.11	0.2874	0.0034	0.63563	63.32166472	1628	17	2571	37
CC06_01 - 36	4.05	0.12	0.2289	0.0048	0.72014	63.23809524	1328	26	2100	47
CC06_01 - 34	3.071	0.063	0.1974	0.0022	0.36024	62.75675676	1161	12	1850	42
CC06_01 - 72	3.107	0.062	0.1947	0.0022	0.60356	61.0106383	1147	12	1880	39
CC06_01 - 52	6.19	0.16	0.2672	0.0057	0.88416	60.29237456	1526	29	2531	34
CC06_01 - 73	2.96	0.11	0.1915	0.0072	0.78493	60.06389776	1128	39	1878	55
CC06_01 - 62	3.034	0.073	0.191	0.0031	0.62963	59.91493886	1127	17	1881	42
CC06_01 - 69	2.696	0.083	0.1729	0.0044	0.8472	55.46580506	1030	24	1857	41
CC06_01 - 61	5.05	0.16	0.2275	0.0068	0.86328	53.85556916	1320	36	2451	42
CC06_01 - 68	2.682	0.069	0.1651	0.0029	0.80369	51.38236828	985	16	1917	40
CC06_01 - 98	2.68	0.1	0.1641	0.0066	0.91606	51.17739403	978	37	1911	43
CC06_01 - 17	2.695	0.081	0.1632	0.0042	0.87087	50.07712082	974	23	1945	39
CC06_01 - 107	2.616	0.086	0.1594	0.0047	0.8404	48.97225077	953	26	1946	45
CC06_01 - 97	2.72	0.11	0.1581	0.007	0.92615	47.16699801	949	39	2012	42
CC06_01 - 118	2.584	0.088	0.1545	0.0047	0.84425	46.78806272	925	26	1977	43
CC06_01 - 116	2.18	0.11	0.1347	0.0068	0.94317	42.18181818	812	38	1925	43

CC06_01 - 81	2.454	0.074	0.1402	0.004	0.88439	41.07924161	845	23	2057	40
CC06_01 - 82	2.09	0.1	0.1296	0.006	0.90068	40.76963079	784	34	1923	49
CC06_01 - 43	3.673	0.085	0.1652	0.0027	0.76833	39.74979822	985	15	2478	38
CC06_01 - 10	2.146	0.099	0.1277	0.0061	0.91983	39.25850686	773	35	1969	44
CC06_01 - 54	2.38	0.072	0.1318	0.0031	0.8743	38.58800774	798	18	2068	41
CC06_01 - 44	2.326	0.066	0.1309	0.0025	0.62377	38.25373854	793	14	2073	45
CC06_01 - 35	3.889	0.067	0.1638	0.0021	0.43095	37.96583851	978	12	2576	39
CC06_01 - 87	1.95	0.19	0.12	0.012	0.98482	37.64278297	725	70	1926	42
CC06_01 - 103	1.874	0.046	0.1079	0.0023	0.83523	32.49754179	661	14	2034	38
CC06_01 - 112	3.42	0.18	0.1382	0.0075	0.9739	31.68505135	833	43	2629	36
CC06_01 - 32	1.6	0.088	0.0984	0.0054	0.94458	31.32780083	604	32	1928	41
CC06_01 - 115	1.729	0.05	0.1008	0.0026	0.86255	30.91908092	619	15	2002	39
CC06_01 - 96	1.621	0.06	0.0983	0.0036	0.83955	30.83205717	604	21	1959	41
CC06_01 - 79	1.695	0.067	0.0993	0.0046	0.94456	29.74158947	610	27	2051	38
CC06_01 - 30	1.753	0.029	0.0965	0.001	0.4752	28.20902613	593.8	6.1	2105	37
CC06_01 - 42	1.759	0.067	0.0945	0.0041	0.83604	26.80792262	582	24	2171	50
CC06_01 - 9	3.116	0.069	0.1184	0.0025	0.8256	26.45444566	723	15	2733	38
CC06_01 - 109	1.506	0.034	0.085	0.002	0.73056	25.53398058	526	12	2060	41
CC06_01 - 11	1.487	0.061	0.0828	0.0037	0.92921	24.79577126	516	22	2081	41
CC06_01 - 25	1.47	0.23	0.08	0.014	0.99344	23.20541761	514	89	2215	51
CC06_01 - 89	1.245	0.048	0.0696	0.0024	0.91213	20.42352941	434	15	2125	46
CC06_01 - 80	8.77	0.51	0.1378	0.0065	0.96851	20.20447907	830	37	4108	35
CC06_01 - 106	1.141	0.034	0.066	0.0024	0.85765	20.03900536	411	14	2051	42
CC06_01 - 94	1.765	0.094	0.079	0.0043	0.97982	19.84609154	490	26	2469	34
CC06_01 - 4	1.36	0.14	0.0692	0.0075	0.97823	19.08566356	430	46	2253	50
CC06_01 - 22	1.365	0.036	0.0682	0.0018	0.89942	18.67311072	425	11	2276	36
CC06_01 - 88	1.656	0.038	0.0703	0.0015	0.91617	17.15405723	437.6	9.1	2551	31
CC06_01 - 27	1.77	0.16	0.0711	0.0065	0.99014	16.5851824	441	39	2659	35
CC06_01 - 77	0.975	0.041	0.0529	0.0024	0.89626	15.82459485	332	15	2098	50
CC06_01 - 75	1.09	0.041	0.0559	0.0024	0.83764	15.63896336	350	15	2238	45
CC06_01 - 15	1.017	0.023	0.0526	0.0015	0.65353	14.79390681	330.2	9	2232	46
CC06_01 - 50	0.993	0.049	0.0503	0.0029	0.95658	13.98230088	316	18	2260	42
CC06_01 - 19	1	0.052	0.05	0.0031	0.96254	13.64624076	314	19	2301	42
CC06_01 - 33	0.928	0.078	0.0476	0.0038	0.98137	13.39005822	299	24	2233	39
CC06_01 - 58	0.93	0.048	0.0467	0.0024	0.9018	12.93444787	294	15	2273	51
CC06_01 - 56	0.84	0.018	0.04356	0.00083	0.72795	12.46258503	274.8	5.1	2205	39
CC06_01 - 93	0.897	0.027	0.0446	0.0014	0.7823	12.30398598	280.9	8.5	2283	44

CC06_01 - 37	0.8	0.017	0.042	0.00073	0.69953	12.09854015	265.2	4.5	2192	40
CC06_01 - 16	0.834	0.094	0.0429	0.0054	0.99379	12.00892857	269	33	2240	43
CC06_01 - 21	1.082	0.038	0.0459	0.0019	0.86088	11.21459061	289	12	2577	46
CC06_01 - 28	0.851	0.015	0.04014	0.00055	0.71786	10.74089754	253.7	3.4	2362	35
CC06_01 - 99	0.733	0.015	0.03533	0.00073	0.69847	9.511262218	223.8	4.6	2353	39
CC06_01 - 6	0.693	0.026	0.0343	0.0015	0.92992	9.317596567	217.1	9.3	2330	38
CC06_01 - 57	1.078	0.043	0.0378	0.0015	0.93044	8.257863809	238.9	9.4	2893	36
CC06_01 - 51	0.618	0.037	0.0287	0.0022	0.93038	7.392363932	182	14	2462	49
CC06_01 - 45	0.628	0.02	0.02812	0.00086	0.88711	7.191146881	178.7	5.4	2485	36
CC06_01 - 76	0.569	0.016	0.0269	0.001	0.8938	7.142857143	171	6.5	2394	42
CC06_01 - 108	0.549	0.019	0.0255	0.0009	0.91767	6.692783505	162.3	5.7	2425	37
CC06_01 - 12	0.499	0.019	0.02408	0.00091	0.92122	6.580866581	153.4	5.8	2331	39
CC06_01 - 74	0.49	0.024	0.0236	0.0013	0.95124	6.342182891	150.5	8.2	2373	41
CC06_01 - 100	0.544	0.049	0.025	0.0029	0.97186	6.245090338	159	18	2546	49
CC06_01 - 40	0.568	0.017	0.0246	0.0008	0.86535	6.211820706	156.6	5	2521	38
CC06_01 - 3	0.484	0.015	0.0225	0.00083	0.84656	6.007540846	143.4	5.2	2387	46
CC06_01 - 67	0.47	0.012	0.02112	0.00074	0.87064	5.438029875	134.7	4.7	2477	39
CC06_01 - 111	0.4306	0.01	0.0196	0.0004	0.76926	5.129151292	125.1	2.5	2439	37
CC06_01 - 117	0.3785	0.011	0.01808	0.00039	0.74666	4.919080068	115.5	2.4	2348	40
CC06_01 - 46	0.48	0.039	0.019	0.0018	0.98329	4.401600582	121	12	2749	43
CC06_01 - 95	0.418	0.024	0.0177	0.0012	0.97142	4.392523364	112.8	7.8	2568	44
CC06_01 - 85	0.3348	0.0082	0.01589	0.00045	0.94916	4.272497897	101.6	2.9	2378	38
CC06_01 - 14	0.383	0.027	0.0152	0.0012	0.98433	3.562247521	97	7.9	2723	41
CC06_01 - 26	0.4095	0.0084	0.01526	0.00033	0.73791	3.529837251	97.6	2.1	2765	39
CC06_01 - 120	0.3295	0.0057	0.01294	0.00011	0.33288	3.088301043	82.89	0.72	2684	36
CC06_01 - 8	0.2255	0.0095	0.00835	0.00047	0.94461	1.914969632	53.6	3	2799	44
CC05_02 - 37	4.854	0.06	0.3216	0.0026	0.26256	101.0686164	1797	13	1778	24
CC05_02 - 15	4.7	0.069	0.316	0.0026	0.26889	100.9697661	1770	13	1753	28
CC05_02 - 65	5.043	0.098	0.3272	0.0035	0.38718	100.8278146	1827	18	1812	32
CC05_02 - 90	4.851	0.079	0.3209	0.0034	0.31736	100.6169377	1794	17	1783	32
CC05_02 - 66	5.35	0.13	0.3395	0.0035	0.31123	100.3729355	1884	17	1877	42
CC05_02 - 62	4.701	0.082	0.3139	0.0029	0.16894	100.2849003	1760	14	1755	32
CC05_02 - 64	11.13	0.2	0.4806	0.0075	0.61382	100.1187648	2529	33	2526	27
CC05_02 - 26	5.36	0.12	0.3385	0.005	0.62737	100.106553	1879	24	1877	28
CC05_02 - 27	5.056	0.082	0.329	0.003	0.36953	99.94547437	1833	15	1834	26
CC05_02 - 16	4.983	0.095	0.3246	0.0041	0.33554	99.9448428	1812	20	1813	34
CC05_02 - 43	4.658	0.066	0.3137	0.0031	0.28191	99.88642817	1759	15	1761	24

CC05_02 - 100	5.36	0.1	0.3354	0.0044	0.23485	99.67914439	1864	21	1870	36
CC05_02 - 79	6.259	0.083	0.3634	0.0035	0.1374	99.50199203	1998	17	2008	28
CC05_02 - 89	4.784	0.079	0.3165	0.003	0.43798	99.27293065	1775	14	1788	26
CC05_02 - 93	4.54	0.087	0.3101	0.0042	0.5762	99.2018244	1740	21	1754	36
CC05_02 - 84	4.714	0.074	0.3138	0.0027	0.29003	99.15445321	1759	13	1774	30
CC05_02 - 61	4.73	0.14	0.3164	0.0051	0.29928	98.82877858	1772	25	1793	55
CC05_02 - 55	6.453	0.091	0.3693	0.0043	0.32586	98.7810824	2026	20	2051	25
CC05_02 - 8	5.284	0.062	0.3307	0.0029	0.34857	98.45002672	1842	14	1871	23
CC05_02 - 53	4.616	0.073	0.3086	0.0028	0.030412	98.29931973	1734	14	1764	34
CC05_02 - 56	6.91	0.15	0.3799	0.0051	0.11794	98.1551561	2075	24	2114	39
CC05_02 - 38	4.74	0.12	0.3121	0.0047	0.18199	98.04031355	1751	23	1786	48
CC05_02 - 25	4.94	0.11	0.3197	0.004	0.17271	97.86535304	1788	19	1827	42
CC05_02 - 58	4.671	0.089	0.3082	0.0048	0.33654	97.4128234	1732	23	1778	38
CC05_02 - 83	4.785	0.067	0.3102	0.0024	0.19328	96.61674986	1742	12	1803	27
CC05_02 - 48	7.13	0.2	0.3827	0.0076	0.29916	96.57724329	2088	36	2162	44
CC05_02 - 67	9.75	0.15	0.44	0.0051	0.57038	96.47396474	2353	23	2439	20
CC05_02 - 34	5.111	0.073	0.3187	0.0039	0.22209	94.73963868	1783	19	1882	29
CC05_02 - 101	4.52	0.15	0.2977	0.0071	0.51966	94.5915493	1679	35	1775	52
CC05_02 - 92	4.82	0.11	0.3076	0.0044	0.40254	93.81107492	1728	22	1842	43
CC05_02 - 91	4.8	0.097	0.3048	0.0044	0.49696	92.65262021	1715	22	1851	31
CC05_02 - 40	4.93	0.13	0.3102	0.006	0.56376	92.11640212	1741	29	1890	38
CC05_02 - 44	4.94	0.065	0.3079	0.0034	0.33602	91.29287599	1730	17	1895	27
CC05_02 - 70	4.577	0.088	0.2958	0.0039	0.29813	91.15720524	1670	19	1832	35
CC05_02 - 5	4.808	0.087	0.3031	0.0045	0.38301	90.84132055	1706	22	1878	31
CC05_02 - 46	5.093	0.097	0.3114	0.004	0.53858	89.40634596	1747	19	1954	27
CC05_02 - 99	4.85	0.11	0.2986	0.0057	0.59187	87.70833333	1684	28	1920	34
CC05_02 - 94	4.446	0.092	0.2855	0.004	0.66713	87.32470334	1619	20	1854	29
CC05_02 - 80	4.633	0.09	0.2871	0.0049	0.56061	85.5865334	1627	25	1901	29
CC05_02 - 29	9.34	0.14	0.3975	0.0049	0.62926	84.62142016	2157	22	2549	21
CC05_02 - 51	6.43	0.16	0.3351	0.0077	0.81529	83.64044944	1861	37	2225	25
CC05_02 - 73	4.851	0.097	0.2887	0.005	0.68325	82.40040343	1634	25	1983	28
CC05_02 - 102	7.36	0.11	0.3511	0.0042	0.66316	82.37791932	1940	20	2355	21
CC05_02 - 41	4.058	0.073	0.26	0.004	0.67219	80.92391304	1489	20	1840	26
CC05_02 - 24	4.086	0.069	0.2607	0.0033	0.54333	80.09656652	1493	17	1864	30
CC05_02 - 14	19.64	0.52	0.471	0.012	0.90628	71.85249208	2494	53	3471	19
CC05_02 - 20	4.31	0.11	0.2451	0.0075	0.78269	68	1411	39	2075	31
CC05_02 - 68	3.56	0.15	0.217	0.0068	0.83707	65.27347781	1265	36	1938	38

CC05_02 - 21	4.04	0.1	0.2297	0.0045	0.60437	64.16184971	1332	24	2076	38
CC05_02 - 50	3.104	0.094	0.2008	0.0052	0.80401	63.69529984	1179	28	1851	32
CC05_02 - 60	3.106	0.064	0.1982	0.0035	0.66581	63.5032538	1171	20	1844	29
CC05_02 - 22	9.2	0.14	0.2847	0.004	0.78128	52.41961676	1614	20	3079	16
CC05_02 - 45	2.97	0.19	0.173	0.01	0.94128	50.22048016	1025	56	2041	39
CC05_02 - 4	2.957	0.099	0.169	0.0059	0.88361	49.24353343	1009	33	2049	27
CC05_02 - 75	3.02	0.12	0.1713	0.0069	0.91317	48.9894129	1018	38	2078	29
CC05_02 - 11	3.2	0.13	0.1666	0.0069	0.90719	44.78555305	992	38	2215	28
CC05_02 - 17	2.92	0.13	0.1567	0.0085	0.94072	43.90697674	944	46	2150	32
CC05_02 - 88	1.92	0.069	0.1156	0.0047	0.91833	35.9367024	704	27	1959	26
CC05_02 - 95	2.83	0.1	0.1374	0.0045	0.88764	35.7635893	829	26	2318	27
CC05_02 - 18	1.854	0.051	0.1093	0.0036	0.81891	33.97761953	668	21	1966	33
CC05_02 - 63	1.751	0.042	0.106	0.0026	0.80163	32.87740628	649	15	1974	25
CC05_02 - 3	2.047	0.092	0.1127	0.0059	0.94577	31.96835738	687	34	2149	27
CC05_02 - 74	1.88	0.065	0.107	0.0048	0.92252	31.89738625	659	27	2066	35
CC05_02 - 54	2.14	0.093	0.1135	0.0053	0.92935	31.67048055	692	31	2185	27
CC05_02 - 35	2.004	0.038	0.1093	0.0015	0.70489	31.42857143	668.8	8.6	2128	23
CC05_02 - 72	2.969	0.054	0.1273	0.0024	0.6465	30.34591195	772	14	2544	24
CC05_02 - 33	1.885	0.064	0.1038	0.0033	0.8807	30.02832861	636	19	2118	28
CC05_02 - 78	1.417	0.08	0.0906	0.0046	0.94238	29.83957219	558	27	1870	29
CC05_02 - 71	1.518	0.024	0.0894	0.0013	0.75435	27.78952669	551.9	7.6	1986	18
CC05_02 - 28	1.411	0.038	0.0808	0.0016	0.64007	24.43142997	500.6	9.7	2049	30
CC05_02 - 49	1.574	0.046	0.0847	0.0023	0.8891	24.42890443	524	14	2145	21
CC05_02 - 39	2.016	0.082	0.0935	0.004	0.90874	24.02001668	576	24	2398	28
CC05_02 - 10	1.785	0.036	0.0808	0.0017	0.85823	20.43691303	500.5	9.9	2449	17
CC05_02 - 32	1.255	0.02	0.06833	0.00088	0.71098	20.02820874	426	5.3	2127	19
CC05_02 - 52	1.328	0.045	0.0694	0.0023	0.88391	19.66317706	432	14	2197	24
CC05_02 - 76	1.817	0.078	0.0787	0.0035	0.95122	19.43448825	488	21	2511	20
CC05_02 - 19	1.124	0.02	0.06338	0.0009	0.44584	19.2655642	396.1	5.5	2056	28
CC05_02 - 2	1.487	0.03	0.0712	0.001	0.74777	18.92156863	443.9	6.1	2346	24
CC05_02 - 82	1.376	0.054	0.0677	0.0033	0.9206	18.39581517	422	20	2294	34
CC05_02 - 59	1.07	0.029	0.0608	0.0014	0.82009	18.17964644	380.5	8.8	2093	29
CC05_02 - 96	1.22	0.033	0.0629	0.0015	0.86581	17.62331839	393	9.4	2230	24
CC05_02 - 12	1.193	0.021	0.0623	0.0011	0.62488	17.60957976	389.7	6.5	2213	28
CC05_02 - 6	2.875	0.052	0.0852	0.0012	0.29281	16.88240948	526.9	6.9	3121	35
CC05_02 - 47	1.23	0.049	0.0616	0.0027	0.86786	16.69557676	385	16	2306	34
CC05_02 - 13	0.929	0.028	0.0533	0.0018	0.90288	16.34943875	335	11	2049	24

CC05_02 - 77	1.191	0.049	0.0591	0.0033	0.78395	15.94827586	370	20	2320	44
CC05_02 - 87	1.778	0.055	0.0684	0.0022	0.91045	15.60102302	427	13	2737	21
CC05_02 - 81	1.272	0.024	0.05809	0.00092	0.69219	14.93027071	364	5.6	2438	22
CC05_02 - 7	0.766	0.03	0.0458	0.002	0.896	14.73899693	288	13	1954	32
CC05_02 - 23	1.068	0.04	0.0531	0.0023	0.90549	14.71498011	333	14	2263	35
CC05_02 - 42	0.732	0.033	0.0439	0.0021	0.84809	14.17682927	279	13	1968	35
CC05_02 - 9	1.084	0.021	0.0511	0.001	0.78479	13.45332775	321.4	6.2	2389	21
CC05_02 - 69	1.065	0.039	0.0477	0.002	0.93228	12.1901666	300	12	2461	24
CC05_02 - 36	0.765	0.016	0.04002	0.00081	0.82766	11.50591447	252.9	5	2198	22
CC05_02 - 97	0.964	0.021	0.044	0.0011	0.83414	11.41563786	277.4	6.9	2430	23
CC05_02 - 31	0.857	0.026	0.0404	0.0013	0.93583	10.91492091	255.3	7.9	2339	38
CC05_02 - 1	1.324	0.039	0.0477	0.0021	0.90431	10.53001053	300	13	2849	30
CC05_02 - 57	0.84	0.047	0.036	0.0022	0.9693	8.898471188	227	14	2551	23
CC05_02 - 86	0.469	0.019	0.0269	0.0011	0.91736	8.447849728	170.9	6.7	2023	29
CC05_02 - 30	0.639	0.023	0.02965	0.00098	0.95578	7.819767442	188.3	6.1	2408	17
CC05_02 - 85	0.444	0.013	0.02379	0.00059	0.8451	7.02690167	151.5	3.7	2156	29
CC05_02 - 98	0.972	0.022	0.03	0.001	0.7277	6.19759506	190.7	6.3	3077	35
CC02_16 - 72	5.064	0.07	0.3364	0.0033	0.57083	105.2957746	1869	16	1775	23
CC02_16 - 82	4.974	0.057	0.3311	0.0024	0.35373	104.6538025	1844	12	1762	19
CC02_16 - 48	5.934	0.065	0.363	0.0024	0.50653	103.3661315	1996	11	1931	17
CC02_16 - 31	4.94	0.1	0.3272	0.0039	0.056864	102.2994952	1824	19	1783	43
CC02_16 - 58	5.875	0.089	0.3558	0.0037	0.3836	101.975052	1962	18	1924	27
CC02_16 - 122	5.317	0.07	0.3379	0.0026	0.31992	101.6793066	1877	13	1846	23
CC02_16 - 57	7.03	0.11	0.3892	0.0043	0.57606	101.4846743	2119	20	2088	24
CC02_16 - 29	5.387	0.086	0.3388	0.0039	0.58436	101.3469828	1881	19	1856	23
CC02_16 - 101	5.079	0.051	0.3306	0.0021	0.31499	101.1538462	1841	10	1820	17
CC02_16 - 35	4.78	0.1	0.3183	0.003	0.19665	101.1357183	1781	15	1761	43
CC02_16 - 25	5.692	0.071	0.3493	0.0038	0.40529	101.0465725	1931	18	1911	24
CC02_16 - 96	4.674	0.066	0.3145	0.003	0.20135	100.9163803	1762	15	1746	29
CC02_16 - 61	4.818	0.069	0.3205	0.0029	0.52757	100.6176305	1792	14	1781	23
CC02_16 - 60	5.404	0.072	0.3374	0.0033	0.43681	100.5904455	1874	16	1863	25
CC02_16 - 68	5.517	0.085	0.3435	0.0037	0.62596	100.3162889	1903	18	1897	21
CC02_16 - 97	5.521	0.097	0.3435	0.005	0.42352	100.3162889	1903	24	1897	32
CC02_16 - 85	6.261	0.077	0.3655	0.0031	0.27823	100.2496256	2008	15	2003	21
CC02_16 - 41	5.45	0.1	0.3418	0.0051	0.60443	100.1056524	1895	25	1893	32
CC02_16 - 112	4.724	0.061	0.3163	0.0031	0.67719	100.0564972	1771	15	1770	18
CC02_16 - 55	4.788	0.064	0.3177	0.0026	0.26363	100.0562746	1778	13	1777	23

CC02_16 - 19	4.928	0.081	0.3235	0.0027	0.46657	99.88944168	1807	13	1809	25
CC02_16 - 37	5.461	0.06	0.3411	0.0029	0.33267	99.63138494	1892	14	1899	20
CC02_16 - 88	4.594	0.065	0.3107	0.0028	0.65333	99.543379	1744	14	1752	20
CC02_16 - 50	5.325	0.079	0.3358	0.0044	0.49493	99.46695096	1866	21	1876	26
CC02_16 - 9	5.414	0.062	0.3388	0.002	0.41346	99.45002644	1880.6	9.8	1891	19
CC02_16 - 59	4.925	0.07	0.3215	0.0036	0.57682	99.44659657	1797	18	1807	23
CC02_16 - 26	11.2	0.14	0.481	0.0042	0.49028	99.41084053	2531	18	2546	19
CC02_16 - 102	5.917	0.095	0.3535	0.0041	0.33573	99.18657855	1951	20	1967	28
CC02_16 - 6	4.717	0.054	0.3136	0.0028	0.66893	98.59786876	1758	14	1783	20
CC02_16 - 18	5.14	0.12	0.3258	0.0053	0.3577	98.59002169	1818	26	1844	38
CC02_16 - 27	4.935	0.098	0.3211	0.003	0.5117	98.57221307	1795	15	1821	31
CC02_16 - 30	4.64	0.078	0.3106	0.003	0.18718	98.3643542	1744	15	1773	33
CC02_16 - 107	4.863	0.064	0.3172	0.0031	0.47376	97.95918367	1776	15	1813	22
CC02_16 - 36	4.961	0.079	0.3211	0.0033	0.3043	97.71366358	1795	16	1837	31
CC02_16 - 54	4.994	0.062	0.3183	0.0029	0.14713	97.42888403	1781	14	1828	28
CC02_16 - 39	5.997	0.079	0.3508	0.0032	0.45196	96.36996519	1938	15	2011	23
CC02_16 - 53	4.898	0.08	0.3153	0.0043	0.51345	95.97826087	1766	21	1840	24
CC02_16 - 133	5.452	0.049	0.3329	0.003	0.57288	95.76008273	1852	15	1934	17
CC02_16 - 76	4.901	0.062	0.3151	0.0044	0.65532	95.71583514	1765	22	1844	19
CC02_16 - 28	4.85	0.1	0.3114	0.0039	0.3957	95.41234298	1747	19	1831	35
CC02_16 - 103	5.422	0.079	0.3292	0.0036	0.504	94.97669601	1834	18	1931	22
CC02_16 - 71	5.285	0.064	0.3273	0.0029	0.33788	94.95317378	1825	14	1922	22
CC02_16 - 32	4.998	0.074	0.3161	0.0037	0.59419	94.60181721	1770	18	1871	22
CC02_16 - 8	7.18	0.12	0.3768	0.0029	0.17227	94.45462878	2061	14	2182	30
CC02_16 - 92	4.67	0.1	0.3037	0.005	0.84536	94.15977961	1709	25	1815	20
CC02_16 - 7	4.787	0.092	0.3078	0.005	0.62684	94.12084921	1729	24	1837	28
CC02_16 - 95	5.029	0.065	0.3162	0.0033	0.50859	94.10201913	1771	16	1882	23
CC02_16 - 83	5.571	0.074	0.3318	0.0029	0.56407	93.75634518	1847	14	1970	19
CC02_16 - 66	5.677	0.069	0.334	0.0043	0.32819	93.69323915	1857	21	1982	28
CC02_16 - 12	5.729	0.079	0.3378	0.0058	0.7456	93.46959123	1875	28	2006	21
CC02_16 - 65	4.719	0.074	0.3029	0.0031	0.57465	92.46203905	1705	15	1844	22
CC02_16 - 89	5.47	0.061	0.3271	0.0026	0.49621	92.26100152	1824	13	1977	21
CC02_16 - 90	4.204	0.055	0.2838	0.003	0.48615	91.9474586	1610	15	1751	21
CC02_16 - 15	4.732	0.064	0.3013	0.0032	0.59609	91.3394298	1698	16	1859	20
CC02_16 - 119	5.526	0.071	0.3198	0.002	0.26875	89.25648703	1788.7	9.9	2004	21
CC02_16 - 93	10.58	0.11	0.4351	0.0035	0.52452	89.05891354	2328	16	2614	15
CC02_16 - 33	5.026	0.088	0.3061	0.0033	0.32581	88.8946281	1721	16	1936	34

CC02_16 - 129	5.055	0.047	0.3065	0.0026	0.5403	88.86023724	1723	13	1939	15
CC02_16 - 16	5.45	0.065	0.3191	0.0039	0.21216	88.23529412	1785	19	2023	32
CC02_16 - 3	4.592	0.086	0.2912	0.0054	0.75964	87.886873	1647	27	1874	19
CC02_16 - 118	4.799	0.092	0.2952	0.0052	0.77842	87.50656168	1667	26	1905	24
CC02_16 - 134	4.946	0.05	0.2992	0.0027	0.57082	86.77983539	1687	13	1944	16
CC02_16 - 125	5.158	0.095	0.307	0.0047	0.23066	86.60311089	1726	23	1993	37
CC02_16 - 81	4.776	0.077	0.2936	0.0031	-0.054732	86.31633715	1659	15	1922	35
CC02_16 - 105	4.112	0.048	0.2702	0.0028	0.44581	84.95038589	1541	14	1814	22
CC02_16 - 127	5.54	0.28	0.314	0.014	0.93984	84.74903475	1756	68	2072	31
CC02_16 - 121	4.548	0.064	0.2812	0.0027	0.4896	83.48144276	1597	14	1913	23
CC02_16 - 44	4.5	0.14	0.2762	0.0071	0.86036	82.03655352	1571	36	1915	25
CC02_16 - 98	7.44	0.4	0.3497	0.0076	0.61546	81.47218737	1948	31	2391	95
CC02_16 - 126	4.104	0.058	0.2619	0.003	0.3936	80.68854223	1500	15	1859	27
CC02_16 - 52	4.508	0.064	0.2742	0.0023	0.39033	80.51546392	1562	12	1940	23
CC02_16 - 22	3.854	0.075	0.2526	0.0033	0.5516	80.03309432	1451	17	1813	28
CC02_16 - 120	5.209	0.08	0.2915	0.0056	0.7816	79.07869482	1648	28	2084	22
CC02_16 - 42	6.458	0.074	0.3218	0.0032	0.65359	78.68708972	1798	16	2285	19
CC02_16 - 43	4.399	0.06	0.2647	0.0033	0.67563	77.3237998	1514	17	1958	19
CC02_16 - 24	4.135	0.084	0.2532	0.0069	0.88025	75.48051948	1453	36	1925	26
CC02_16 - 110	6.052	0.082	0.3032	0.0044	0.72616	75.06596306	1707	22	2274	18
CC02_16 - 4	5.07	0.092	0.2781	0.0031	0.058437	75.04743833	1582	16	2108	34
CC02_16 - 124	3.91	0.15	0.2417	0.0063	0.46941	73.71760973	1394	33	1891	58
CC02_16 - 91	7.03	0.21	0.3157	0.0093	0.94689	72.24039248	1767	45	2446	17
CC02_16 - 113	3.668	0.095	0.2313	0.0041	0.66603	71.98067633	1341	22	1863	33
CC02_16 - 116	4.207	0.045	0.2458	0.002	0.72482	69.89141165	1416	10	2026	12
CC02_16 - 117	5.79	0.087	0.2824	0.0044	0.85215	69.24406048	1603	22	2315	13
CC02_16 - 46	3.503	0.047	0.2196	0.0021	0.43847	67.90450928	1280	11	1885	22
CC02_16 - 75	3.88	0.11	0.2296	0.0054	0.86932	67.37481032	1332	28	1977	21
CC02_16 - 62	3.512	0.089	0.2183	0.0054	0.85976	66.63174437	1272	28	1909	22
CC02_16 - 11	3.709	0.052	0.2186	0.0034	0.64318	64.85525648	1277	19	1969	23
CC02_16 - 21	5.335	0.074	0.2543	0.0027	0.82614	61.54170177	1461	14	2374	14
CC02_16 - 84	3.78	0.22	0.215	0.0087	0.88093	61.18164063	1253	46	2048	37
CC02_16 - 109	4.31	0.1	0.2275	0.0042	0.88197	60.54078827	1321	22	2182	17
CC02_16 - 5	4.144	0.06	0.2201	0.0022	0.56253	59.57249071	1282	11	2152	20
CC02_16 - 69	3.709	0.09	0.2066	0.0041	0.87197	57.75656325	1210	22	2095	20
CC02_16 - 47	3.6	0.1	0.2031	0.0057	0.94106	57.43243243	1190	31	2072	18
CC02_16 - 73	4.467	0.089	0.2245	0.0036	0.42243	57.28709394	1305	19	2278	35

CC02_16 - 99	3.367	0.094	0.1947	0.0061	0.91111	56.87344913	1146	33	2015	22
CC02_16 - 108	3.87	0.24	0.208	0.012	0.98052	56.70247548	1214	64	2141	25
CC02_16 - 63	3.095	0.058	0.1855	0.0034	0.93843	55.88385125	1097	18	1963	11
CC02_16 - 77	3.43	0.13	0.1946	0.005	0.96446	55.74488802	1145	27	2054	23
CC02_16 - 115	3.985	0.059	0.2086	0.0033	0.75788	55.72797809	1221	18	2191	17
CC02_16 - 78	3.986	0.068	0.2096	0.0053	0.25781	55.29995489	1226	28	2217	44
CC02_16 - 2	3.784	0.069	0.2016	0.0026	0.77675	55.14671635	1184	14	2147	21
CC02_16 - 13	3.57	0.047	0.1967	0.0035	0.83661	54.421444873	1157	19	2126	20
CC02_16 - 20	3.86	0.11	0.2023	0.0054	0.89621	54.07744875	1187	29	2195	19
CC02_16 - 14	3.318	0.055	0.1892	0.0025	0.68491	53.98743354	1117	13	2069	23
CC02_16 - 49	4.66	0.1	0.2166	0.0039	0.81421	53.20134794	1263	21	2374	19
CC02_16 - 114	5.81	0.3	0.2369	0.0052	0.83432	52.73287144	1370	27	2598	55
CC02_16 - 17	5.1	0.19	0.2234	0.0059	0.96229	52.37903226	1299	31	2480	26
CC02_16 - 51	2.82	0.093	0.1685	0.0042	0.94035	50.65656566	1003	23	1980	19
CC02_16 - 131	6.52	0.33	0.2428	0.0036	0.86181	50.57761733	1401	18	2770	58
CC02_16 - 106	4.15	0.12	0.1999	0.0019	0.6692	50.32119914	1175	10	2335	39
CC02_16 - 123	5.26	0.075	0.2231	0.0021	0.2589	50.31007752	1298	11	2580	27
CC02_16 - 132	4.68	0.16	0.2117	0.0055	0.8063	50.24370431	1237	29	2462	33
CC02_16 - 94	3.304	0.098	0.18	0.0064	0.91809	49.90627929	1065	35	2134	24
CC02_16 - 67	3.425	0.087	0.1823	0.0042	0.94632	49.86136784	1079	23	2164	15
CC02_16 - 80	3.88	0.16	0.1921	0.0027	0.62704	49.62735642	1132	15	2281	58
CC02_16 - 104	3.532	0.074	0.1853	0.0027	0.88795	49.36880072	1095	15	2218	14
CC02_16 - 56	2.841	0.069	0.1646	0.0042	0.91239	49.07730673	984	23	2005	17
CC02_16 - 34	4.065	0.066	0.1928	0.0032	0.77725	48.03382664	1136	17	2365	18
CC02_16 - 64	2.96	0.11	0.1636	0.0077	0.96413	46.50831354	979	42	2105	23
CC02_16 - 40	2.67	0.12	0.1553	0.0064	0.96713	46.08134921	929	36	2016	18
CC02_16 - 86	3.221	0.053	0.1693	0.003	0.81534	45.98540146	1008	16	2192	16
CC02_16 - 87	2.27	0.14	0.1417	0.0084	0.98691	45.03171247	852	47	1892	17
CC02_16 - 128	2.795	0.05	0.1486	0.0028	0.79548	41.40009272	893	15	2157	18
CC02_16 - 74	3.16	0.096	0.1543	0.003	0.82611	40.13015184	925	17	2305	29
CC02_16 - 10	2.39	0.16	0.1344	0.0081	0.98396	39.35860058	810	46	2058	18
CC02_16 - 38	2.303	0.087	0.1319	0.0042	0.92949	39.27165354	798	24	2032	24
CC02_16 - 45	2.84	0.13	0.1448	0.005	0.94361	38.78005343	871	28	2246	32
CC02_16 - 100	4.745	0.058	0.1781	0.0019	0.41895	38.31640058	1056	10	2756	20
CC02_16 - 130	2.489	0.074	0.1143	0.0041	0.93412	28.95720814	697	23	2407	23
CC02_16 - 111	2.075	0.043	0.1026	0.0011	0.10667	27.37505432	629.9	6.6	2301	37
CC02_16 - 70	1.478	0.063	0.0857	0.0034	0.92398	26.0591133	529	20	2030	28

CC02_16 - 1	1.035	0.035	0.062	0.0024	0.94563	19.67545639	388	15	1972	24
CC02_16 - 23	0.717	0.025	0.03815	0.00053	0.45384	11.27570093	241.3	3.3	2140	54
CC02_16 - 79	0.544	0.047	0.0313	0.0034	0.99594	9.379441023	198	21	2111	30

All U–Pb data for Wuraliwuntya Member

Analysis	207Pb/235U	Error	206Pb/238U	Error	rho	Concordance	206Pb/238U	Error	207Pb/206Pb	Error
CC04_01 - 58	5.22	0.11	0.3397	0.0038	0.18035	104.1436464	1885	18	1810	42
CC04_01 - 102	6.277	0.083	0.374	0.0035	0.42765	103.8539554	2048	16	1972	22
CC04_01 - 117	5.438	0.086	0.3427	0.0035	0.33702	102.2066738	1899	17	1858	28
CC04_01 - 44	4.75	0.11	0.3183	0.0039	0.2816	102.0630372	1781	19	1745	38
CC04_01 - 28	4.95	0.11	0.3272	0.0038	0.26471	101.7857143	1824	18	1792	40
CC04_01 - 42	5.231	0.078	0.3349	0.0029	0.26313	101.3609145	1862	14	1837	26
CC04_01 - 114	5.257	0.084	0.3358	0.0034	0.40241	101.3029316	1866	16	1842	26
CC04_01 - 96	5.59	0.13	0.3467	0.0037	0.28181	101.2671595	1918	18	1894	40
CC04_01 - 99	6.02	0.11	0.3601	0.0046	0.56811	101.2257406	1982	22	1958	28
CC04_01 - 63	7.8	0.12	0.4094	0.0037	0.20856	100.9124088	2212	17	2192	27
CC04_01 - 12	4.887	0.089	0.3223	0.0052	0.77213	100.7274762	1800	25	1787	26
CC04_01 - 98	10.02	0.26	0.4568	0.0074	0.69323	100.3309888	2425	33	2417	31
CC04_01 - 37	5.239	0.086	0.3336	0.0022	0.17145	100.3243243	1856	11	1850	32
CC04_01 - 83	4.733	0.079	0.3142	0.003	0.32935	100.2276608	1761	15	1757	29
CC04_01 - 30	6.54	0.1	0.3743	0.0035	0.55654	100.195599	2049	17	2045	22
CC04_01 - 52	4.606	0.073	0.3123	0.0024	0.24606	100.1715266	1752	12	1749	30
CC04_01 - 43	4.75	0.097	0.3176	0.0056	0.52741	100.0563063	1777	28	1776	36
CC04_01 - 46	5.42	0.12	0.3393	0.0036	0.16928	99.8938992	1883	17	1885	40
CC04_01 - 55	4.668	0.09	0.3133	0.0032	0.30079	99.71623156	1757	16	1762	36
CC04_01 - 109	5.441	0.096	0.3393	0.003	0.16565	99.62962963	1883	15	1890	35
CC04_01 - 7	9.7	0.18	0.4509	0.0051	0.45404	99.33747412	2399	23	2415	28
CC04_01 - 103	9.45	0.12	0.4446	0.004	0.30162	99.1635299	2371	18	2391	23
CC04_01 - 57	5.502	0.09	0.3405	0.0034	0.27246	98.53938445	1889	16	1917	34
CC04_01 - 115	10.58	0.3	0.469	0.014	0.61176	98.41017488	2476	60	2516	44
CC04_01 - 100	6.76	0.3	0.3751	0.0092	0.13321	97.94651385	2051	43	2094	86

CC04_01 - 64	5.04	0.11	0.3233	0.0037	0.27984	97.88503254	1805	18	1844	40
CC04_01 - 113	4.959	0.063	0.3201	0.0034	0.44351	97.86768726	1790	16	1829	21
CC04_01 - 9	4.746	0.057	0.3108	0.0027	0.097005	97.26715003	1744	13	1793	25
CC04_01 - 33	11.346	0.086	0.4758	0.0035	0.50531	97.17273431	2509	15	2582	14
CC04_01 - 5	10.56	0.11	0.4532	0.0033	0.36358	95.0295858	2409	15	2535	18
CC04_01 - 18	5.247	0.062	0.3238	0.0032	0.71075	94.70927187	1808	15	1909	17
CC04_01 - 69	5.06	0.13	0.3188	0.0044	0.45674	94.04949974	1786	22	1899	41
CC04_01 - 111	4.7	0.11	0.3047	0.0058	0.50635	93.10157523	1714	29	1841	35
CC04_01 - 110	11.71	0.14	0.4653	0.0039	0.65781	92.66089575	2462	17	2657	17
CC04_01 - 34	5.07	0.1	0.3121	0.0054	0.80275	91.62303665	1750	26	1910	19
CC04_01 - 94	4.78	0.11	0.2997	0.0049	0.72902	89.89361702	1690	24	1880	27
CC04_01 - 93	4.165	0.069	0.2759	0.0038	0.6192	88.0044843	1570	19	1784	27
CC04_01 - 45	3.998	0.084	0.2667	0.005	0.75048	86.64013644	1524	25	1759	26
CC04_01 - 56	4.271	0.066	0.2775	0.0031	0.22938	86.37110016	1578	16	1827	32
CC04_01 - 91	4.19	0.1	0.2717	0.005	0.64018	85.34435262	1549	26	1815	35
CC04_01 - 97	4.14	0.15	0.2562	0.0089	0.93767	77.43806009	1469	46	1897	21
CC04_01 - 17	3.476	0.062	0.2277	0.0039	0.9204	73.93736018	1322	20	1788	12
CC04_01 - 35	7.69	0.15	0.326	0.0061	0.70382	71.29411765	1818	30	2550	27
CC04_01 - 23	4.74	0.16	0.2615	0.0077	0.74449	70.93409199	1496	40	2109	40
CC04_01 - 74	3.067	0.058	0.2052	0.003	0.65517	68.63972681	1206	15	1757	30
CC04_01 - 85	3.57	0.11	0.2235	0.0061	0.86904	68.54881266	1299	32	1895	26
CC04_01 - 101	18.77	0.64	0.447	0.014	0.94981	68.39229221	2378	62	3477	16
CC04_01 - 41	6.48	0.18	0.2957	0.0074	0.92308	67.88766789	1668	37	2457	18
CC04_01 - 39	7.14	0.14	0.3028	0.0058	0.89152	66.58851114	1704	29	2559	17
CC04_01 - 1	3.342	0.099	0.2115	0.0058	0.80471	65.50079491	1236	31	1887	33
CC04_01 - 3	6.584	0.089	0.286	0.0038	0.87079	64.27438541	1621	19	2522	12
CC04_01 - 20	3.21	0.14	0.2035	0.0087	0.95759	63.67521368	1192	47	1872	21
CC04_01 - 104	3.339	0.066	0.2065	0.004	0.50583	62.88981289	1210	21	1924	34
CC04_01 - 15	2.802	0.056	0.1852	0.0025	0.19985	61.65540541	1095	13	1776	36
CC04_01 - 25	2.893	0.075	0.1859	0.0051	0.92763	60.06564551	1098	28	1828	18
CC04_01 - 48	3.459	0.079	0.2036	0.0045	0.67981	59.7	1194	24	2000	36
CC04_01 - 26	6.06	0.11	0.263	0.0035	0.6913	59.67486122	1505	18	2522	19
CC04_01 - 106	2.749	0.039	0.1808	0.0018	0.57491	59.53307393	1071	9.7	1799	22
CC04_01 - 59	2.946	0.096	0.1863	0.0043	0.91138	58.97161221	1101	23	1867	31
CC04_01 - 81	2.896	0.092	0.1852	0.0055	0.83094	58.75402793	1094	30	1862	28
CC04_01 - 24	3.794	0.095	0.2086	0.0046	0.87744	57.86729858	1221	25	2110	21
CC04_01 - 86	3.875	0.075	0.2018	0.003	0.87688	53.64418289	1185	16	2209	17

CC04_01 - 88	2.633	0.067	0.1613	0.0037	0.82701	50.84388186	964	20	1896	28
CC04_01 - 60	2.589	0.071	0.159	0.0039	0.84917	49.9737257	951	22	1903	31
CC04_01 - 82	2.668	0.037	0.1583	0.0022	0.60745	47.97365755	947	12	1974	25
CC04_01 - 73	2.955	0.059	0.1653	0.0034	0.90159	47.9338843	986	19	2057	14
CC04_01 - 50	2.364	0.062	0.1463	0.0045	0.88603	46.09334033	879	25	1907	25
CC04_01 - 118	2.34	0.074	0.1412	0.0041	0.88845	43.93391843	851	23	1937	28
CC04_01 - 6	3.141	0.09	0.1582	0.0044	0.93713	41.82139699	946	24	2262	19
CC04_01 - 10	1.998	0.037	0.1277	0.002	0.80138	41.79265659	774	11	1852	17
CC04_01 - 40	2.099	0.057	0.1308	0.0035	0.90991	41.72813488	792	20	1898	21
CC04_01 - 49	3.488	0.061	0.1641	0.0027	0.63081	41.42011834	980	15	2366	25
CC04_01 - 120	2.261	0.083	0.1326	0.0033	0.87678	39.84181908	806	20	2023	30
CC04_01 - 76	2.439	0.052	0.1367	0.0026	0.7982	39.74975938	826	15	2078	24
CC04_01 - 79	1.763	0.056	0.1158	0.0032	0.96133	39.68521641	706	18	1779	17
CC04_01 - 22	1.84	0.11	0.116	0.007	0.98639	38.47411444	706	40	1835	18
CC04_01 - 8	1.682	0.051	0.1108	0.0035	0.91948	38.01235261	677	20	1781	22
CC04_01 - 54	1.601	0.029	0.1071	0.0018	0.80485	37.25156161	656	10	1761	21
CC04_01 - 95	2.031	0.03	0.1196	0.0015	0.57909	36.67673716	728.4	8.9	1986	22
CC04_01 - 27	3.293	0.098	0.1493	0.0031	0.87058	36.55256724	897	17	2454	25
CC04_01 - 107	1.657	0.031	0.1065	0.0016	0.90291	35.22678186	652.4	9.5	1852	12
CC04_01 - 89	1.722	0.031	0.1063	0.0015	0.65004	34.48622881	651.1	9	1888	24
CC04_01 - 4	1.511	0.06	0.0997	0.0037	0.95471	34.35582822	616	21	1793	19
CC04_01 - 72	1.457	0.072	0.095	0.0043	0.96737	32.2830293	584	25	1809	20
CC04_01 - 29	1.429	0.045	0.0941	0.0028	0.87419	31.92074849	580	16	1817	26
CC04_01 - 66	1.798	0.043	0.1035	0.0018	0.63556	31.37351779	635	10	2024	29
CC04_01 - 92	1.329	0.049	0.0872	0.0032	0.94271	30.62146893	542	19	1770	23
CC04_01 - 108	2.285	0.068	0.1131	0.0031	0.8636	30.13100437	690	18	2290	25
CC04_01 - 21	1.04	0.03	0.077	0.0015	0.8893	30.02512563	478	9	1592	28
CC04_01 - 80	1.607	0.067	0.0965	0.0043	0.9121	29.93437658	593	25	1981	31
CC04_01 - 13	1.442	0.029	0.0907	0.0014	0.77845	29.66613672	559.8	8.5	1887	23
CC04_01 - 51	1.396	0.051	0.0875	0.003	0.95015	28.93048128	541	18	1870	21
CC04_01 - 121	1.508	0.089	0.0908	0.0052	0.97077	28.75514403	559	31	1944	23
CC04_01 - 90	1.457	0.042	0.0878	0.0023	0.75684	27.98141456	542	13	1937	33
CC04_01 - 71	1.165	0.025	0.0787	0.0017	0.84387	27.91881075	488.3	9.9	1749	21
CC04_01 - 16	1.184	0.04	0.0795	0.0028	0.90186	27.58813654	493	17	1787	24
CC04_01 - 87	3.186	0.06	0.1211	0.0022	0.82972	26.90763052	737	13	2739	17
CC04_01 - 32	1.269	0.021	0.0789	0.001	0.62003	25.92690678	489.5	6.2	1888	26
CC04_01 - 119	1.439	0.064	0.0833	0.0031	0.9386	25.76288144	515	19	1999	27

CC04_01 - 78	1.32	0.034	0.0786	0.0018	0.9118	24.89795918	488	11	1960	18
CC04_01 - 47	0.979	0.042	0.0648	0.0027	0.95127	22.77339346	404	16	1774	22
CC04_01 - 31	0.939	0.039	0.0635	0.0021	0.92375	22.69868496	397	13	1749	32
CC04_01 - 38	2.17	0.18	0.0933	0.0069	0.98294	22.41311988	574	40	2561	30
CC04_01 - 75	1.023	0.029	0.0656	0.0017	0.89387	22.22826087	409	10	1840	22
CC04_01 - 77	1.007	0.043	0.0654	0.0025	0.92024	22.13781877	408	15	1843	25
CC04_01 - 2	0.961	0.046	0.0622	0.0031	0.98131	21.28008753	389	19	1828	26
CC04_01 - 11	1.146	0.016	0.06694	0.00092	0.56481	20.70401587	417.6	5.6	2017	22
CC04_01 - 84	1.048	0.049	0.0627	0.0025	0.95152	20	392	15	1960	24
CC04_01 - 61	0.881	0.037	0.0567	0.0025	0.92754	19.5808053	355	15	1813	26
CC04_01 - 36	1.581	0.027	0.0733	0.0011	0.77619	19.05557877	456	6.6	2393	20
CC04_01 - 112	0.768	0.015	0.05239	0.00069	0.67786	19.03990746	329.2	4.2	1729	25
CC04_01 - 14	0.961	0.032	0.0582	0.0015	0.9003	18.58307849	364.6	8.9	1962	28
CC04_01 - 62	0.875	0.02	0.0535	0.0012	0.81784	17.36950904	336.1	7.4	1935	25
CC04_01 - 67	1.158	0.034	0.05974	0.00097	0.24211	17.03096539	374	5.9	2196	57
CC04_01 - 70	1.035	0.066	0.0561	0.0037	0.9678	16.37126866	351	22	2144	25
CC04_01 - 53	1.73	0.26	0.069	0.01	0.98847	16.18366579	430	62	2657	41
CC04_01 - 68	0.68	0.023	0.0419	0.0011	0.83691	13.943068	264.5	6.6	1897	25
CC04_01 - 116	0.961	0.023	0.0491	0.001	0.8773	13.82997763	309.1	6.4	2235	20
CC04_01 - 19	0.662	0.056	0.0406	0.0031	0.97932	13.54497354	256	19	1890	31
CC04_01 - 105	1.16	0.058	0.0525	0.0027	0.96343	13.47488771	330	16	2449	19
CC04_01 - 65	0.223	0.023	0.0146	0.0018	0.98055	5.005382131	93	12	1858	47

All U–Pb data for Wununmantyala Sandstone

Analysis	207Pb/235U	Error	206Pb/238U	Error	rho	Concordance	206Pb/238U	Error	207Pb/206Pb	Error
CC04_06 - 14	6.63	0.13	0.3814	0.0037	0.44419	103.016815	2083	17	2022	31
CC04_06 - 8	7.06	0.077	0.3913	0.0027	0.42418	101.7686424	2129	13	2092	19
CC04_06 - 6	5.465	0.068	0.3433	0.0023	0.27327	101.7112299	1902	11	1870	22
CC04_06 - 15	6.615	0.075	0.378	0.0034	0.77176	100.9770396	2067	16	2047	12
CC04_06 - 9	5.13	0.056	0.3296	0.003	0.18235	100.0544959	1836	15	1835	24
CC04_06 - 43	4.624	0.07	0.3122	0.0028	0.34425	100	1753	14	1753	27
CC04_06 - 22	4.514	0.091	0.3078	0.005	0.81396	99.94219653	1729	25	1730	21
CC04_06 - 2	13.43	0.18	0.5201	0.0045	0.33155	99.48396609	2699	19	2713	20
CC04_06 - 18	5.35	0.093	0.3346	0.004	0.11023	99.14712154	1860	19	1876	34

CC04_06 - 26	9.51	0.19	0.4364	0.0061	0.52885	95.89153657	2334	27	2434	30
CC04_06 - 38	11.38	0.21	0.4699	0.0095	0.74133	95.71924412	2482	42	2593	27
CC04_06 - 39	4.54	0.11	0.3017	0.0038	0.57628	95.66441441	1699	19	1776	34
CC04_06 - 30	4.85	0.1	0.3095	0.0056	0.78597	94.8172395	1738	27	1833	20
CC04_06 - 55	4.73	0.11	0.3087	0.0065	0.6778	94.59606987	1733	32	1832	42
CC04_06 - 16	4.45	0.11	0.2942	0.0054	0.60483	93.96843292	1667	28	1774	32
CC04_06 - 34	4.593	0.065	0.296	0.0033	0.53476	91.42545057	1674	17	1831	26
CC04_06 - 35	4.76	0.1	0.2995	0.0048	0.78855	89.69181722	1688	24	1882	27
CC04_06 - 5	4.712	0.073	0.2962	0.0033	0.41262	89.55543653	1672	16	1867	28
CC04_06 - 1	9.45	0.14	0.4002	0.0045	0.64808	85.25943396	2169	21	2544	18
CC04_06 - 45	3.728	0.062	0.2428	0.0042	0.88893	77.70382696	1401	22	1803	15
CC04_06 - 24	3.532	0.048	0.2324	0.0034	0.72828	75.71669477	1347	18	1779	18
CC04_06 - 19	7.08	0.19	0.325	0.0083	0.85334	74.65135357	1820	39	2438	24
CC04_06 - 33	3.53	0.091	0.2247	0.0055	0.89475	70.82429501	1306	29	1844	21
CC04_06 - 37	7.75	0.14	0.3184	0.0059	0.62039	68.44734819	1781	29	2602	30
CC04_06 - 51	3.545	0.099	0.2194	0.0039	0.49446	67.9787234	1278	21	1880	48
CC04_06 - 29	4.113	0.078	0.23	0.0022	0.48979	64.57225713	1336	11	2069	28
CC04_06 - 36	3.36	0.12	0.2057	0.0053	0.92528	63.5213495	1205	28	1897	22
CC04_06 - 27	2.874	0.073	0.1876	0.0031	0.58194	61.4872364	1108	17	1802	38
CC04_06 - 53	3.34	0.13	0.2037	0.0052	0.61036	61.2506407	1195	28	1951	59
CC04_06 - 44	2.89	0.17	0.1856	0.0097	0.9574	60.09879254	1095	53	1822	29
CC04_06 - 10	3.06	0.13	0.1912	0.0083	0.91347	59.67143614	1126	45	1887	28
CC04_06 - 52	3.145	0.093	0.1915	0.0052	0.68785	59.15049816	1128	28	1907	36
CC04_06 - 58	3.07	0.21	0.194	0.012	0.87209	58.88429752	1140	63	1936	61
CC04_06 - 28	2.512	0.099	0.1706	0.0058	0.95666	58.29982769	1015	32	1741	21
CC04_06 - 4	3.69	0.13	0.2042	0.0051	0.89647	57.52042287	1197	27	2081	29
CC04_06 - 41	4.96	0.1	0.233	0.0047	0.84889	56.62751678	1350	25	2384	20
CC04_06 - 17	5.84	0.19	0.2426	0.0077	0.96042	54.14407436	1398	40	2582	14
CC04_06 - 49	2.492	0.049	0.1637	0.0033	0.74147	53.88858246	977	18	1813	28
CC04_06 - 25	2.607	0.078	0.165	0.0044	0.83754	52.8747985	984	24	1861	32
CC04_06 - 48	2.5	0.12	0.1604	0.0062	0.52931	52.66630016	958	34	1819	82
CC04_06 - 54	3.28	0.22	0.1794	0.0085	0.69184	50.71633238	1062	46	2094	82
CC04_06 - 42	2.34	0.046	0.1525	0.0028	0.68115	50.4415011	914	16	1812	29
CC04_06 - 56	2.081	0.059	0.1407	0.0038	0.79529	48.23663254	848	22	1758	30
CC04_06 - 40	2.661	0.08	0.1577	0.0052	0.90715	47.91666667	943	29	1968	25
CC04_06 - 50	2.52	0.1	0.156	0.0045	0.564	47.77493606	934	25	1955	61
CC04_06 - 21	1.87	0.13	0.1225	0.0084	0.9834	41.69472503	743	48	1782	23

CC04_06 - 32	2.463	0.061	0.14	0.0046	0.85192	41.59684574	844	26	2029	30
CC04_06 - 23	3.008	0.051	0.1521	0.0022	0.66914	40.58744993	912	12	2247	23
CC04_06 - 13	2.154	0.037	0.125	0.0018	0.77292	37.68619662	759	11	2014	19
CC04_06 - 11	1.75	0.07	0.1105	0.0044	0.96535	36.25134264	675	26	1862	23
CC04_06 - 57	2.85	0.11	0.1364	0.0045	0.42096	34.94486853	824	26	2358	45
CC04_06 - 7	3.098	0.086	0.1396	0.0027	0.70712	34.45171849	842	15	2444	34
CC04_06 - 12	1.856	0.051	0.1116	0.0032	0.85471	34.32459677	681	18	1984	28
CC04_06 - 47	2.737	0.077	0.1295	0.0031	0.87557	32.91351805	784	18	2382	25
CC04_06 - 3	1.227	0.041	0.0793	0.0023	0.91449	27.12707182	491	14	1810	22
CC04_06 - 46	0.951	0.042	0.0647	0.0029	0.96677	23.37962963	404	18	1728	19
CC04_06 - 31	1.514	0.088	0.0767	0.0029	0.9047	21.14615726	476	18	2251	44
CC04_06 - 20	0.646	0.07	0.042	0.0041	0.97121	15.98311218	265	25	1658	46
CC05_12 - 61	4.551	0.099	0.3112	0.003	0.32779	101.9859813	1746	15	1712	39
CC05_12 - 57	4.702	0.084	0.3167	0.0031	0.28515	101.662844	1773	15	1744	33
CC05_12 - 111	4.721	0.068	0.3174	0.0025	0.59661	101.6590389	1777	12	1748	22
CC05_12 - 49	4.606	0.073	0.3131	0.0029	0.53951	101.2103746	1756	14	1735	26
CC05_12 - 16	4.626	0.072	0.313	0.0031	0.26989	101.2096774	1757	15	1736	29
CC05_12 - 87	4.715	0.08	0.3167	0.0029	0.39488	101.0832383	1773	14	1754	28
CC05_12 - 92	4.806	0.074	0.3199	0.0028	0.1444	100.8455468	1789	14	1774	30
CC05_12 - 5	4.759	0.06	0.3174	0.0026	0.15758	100.7369615	1777	13	1764	27
CC05_12 - 73	5.34	0.11	0.3384	0.0035	0.11362	100.6966774	1879	17	1866	35
CC05_12 - 75	4.66	0.073	0.3151	0.0035	0.41039	100.6845408	1765	17	1753	30
CC05_12 - 79	5.61	0.095	0.3438	0.003	0.2518	100.5277045	1905	15	1895	33
CC05_12 - 77	4.856	0.072	0.3208	0.0031	0.37131	100.4479283	1794	15	1786	25
CC05_12 - 100	4.914	0.071	0.322	0.0024	0.13261	100.4466778	1799	11	1791	26
CC05_12 - 3	10.68	0.11	0.4738	0.0038	0.40783	100.4419446	2500	17	2489	17
CC05_12 - 83	5.35	0.13	0.3388	0.0047	0.094252	100.3201708	1880	23	1874	46
CC05_12 - 112	7.1	0.11	0.3898	0.0039	0.24	100.1889466	2121	18	2117	28
CC05_12 - 113	4.587	0.067	0.3105	0.0025	0.28832	100.1147447	1745	12	1743	25
CC05_12 - 88	4.708	0.072	0.315	0.0033	0.42483	100.113443	1765	16	1763	28
CC05_12 - 48	4.832	0.085	0.3216	0.005	0.513	100.0556793	1797	24	1796	29
CC05_12 - 26	10.57	0.14	0.4702	0.005	0.50221	99.71898836	2484	22	2491	26
CC05_12 - 80	5.33	0.1	0.335	0.0051	0.69968	99.67880086	1862	25	1868	22
CC05_12 - 18	4.617	0.073	0.3113	0.0035	0.50053	99.6009122	1747	17	1754	27
CC05_12 - 90	4.731	0.077	0.3157	0.0031	0.37429	99.54954955	1768	15	1776	28
CC05_12 - 72	11.58	0.18	0.4849	0.0052	0.34323	99.41474834	2548	23	2563	25
CC05_12 - 22	6.141	0.098	0.3609	0.0039	0.46423	99.25037481	1986	18	2001	27

CC05_12 - 46	4.612	0.094	0.3102	0.003	0.24274	98.9766913	1741	15	1759	39
CC05_12 - 78	6.707	0.093	0.3737	0.0033	0.36321	98.93668439	2047	16	2069	25
CC05_12 - 15	5.026	0.099	0.3233	0.0038	0.43941	98.36601307	1806	19	1836	29
CC05_12 - 63	4.531	0.078	0.3022	0.0042	0.28994	97.20159909	1702	21	1751	34
CC05_12 - 65	4.596	0.061	0.3053	0.0027	0.51417	97.11538462	1717	13	1768	23
CC05_12 - 74	10.9	0.14	0.466	0.0052	0.52743	96.97208022	2466	23	2543	18
CC05_12 - 23	4.669	0.066	0.3086	0.0024	0.33339	96.76339286	1734	12	1792	24
CC05_12 - 104	4.629	0.069	0.304	0.0029	0.31555	95.80067189	1711	14	1786	28
CC05_12 - 39	4.938	0.068	0.3162	0.003	0.34781	95.67801189	1771	15	1851	27
CC05_12 - 69	11.08	0.12	0.4593	0.0035	0.53759	93.69230769	2436	16	2600	15
CC05_12 - 98	4.572	0.072	0.2973	0.0041	0.47698	92.65599117	1678	20	1811	26
CC05_12 - 95	4.25	0.1	0.2819	0.0061	0.74481	90.24252679	1600	31	1773	31
CC05_12 - 34	9.47	0.16	0.4147	0.0069	0.69772	89.57915832	2235	32	2495	25
CC05_12 - 7	4.151	0.088	0.2778	0.0028	0.21404	89.31599774	1580	14	1769	38
CC05_12 - 25	5.61	0.15	0.3215	0.0066	0.70957	89.02619871	1801	31	2023	32
CC05_12 - 71	3.938	0.092	0.2699	0.0041	0.50527	88.65860679	1540	21	1737	38
CC05_12 - 12	4.022	0.08	0.2701	0.0048	0.51709	88.10748999	1541	25	1749	33
CC05_12 - 60	4.188	0.089	0.2748	0.0039	0.50318	87.28388176	1565	20	1793	33
CC05_12 - 119	14.07	0.23	0.4847	0.0079	0.78328	87.1961657	2547	34	2921	17
CC05_12 - 115	4.02	0.1	0.2673	0.0045	0.47156	86.51558074	1527	23	1765	44
CC05_12 - 70	3.825	0.075	0.2613	0.0039	0.65342	86.12550374	1496	20	1737	29
CC05_12 - 10	9.44	0.24	0.4046	0.0086	0.76415	86.07943374	2189	40	2543	25
CC05_12 - 101	8.92	0.1	0.3928	0.0036	0.49482	85.81189711	2135	17	2488	18
CC05_12 - 105	3.95	0.19	0.2638	0.0086	0.89053	85.584563	1508	44	1762	40
CC05_12 - 59	4.17	0.082	0.2706	0.0047	0.79066	84.36303991	1543	24	1829	22
CC05_12 - 118	4.23	0.11	0.2735	0.006	0.30444	84.02590394	1557	30	1853	51
CC05_12 - 27	3.797	0.059	0.2543	0.0024	0.49354	83.04891923	1460	12	1758	25
CC05_12 - 86	4.031	0.075	0.2619	0.0051	0.78545	82.40791644	1499	26	1819	23
CC05_12 - 28	4.429	0.084	0.2735	0.0035	0.56605	81.57068063	1558	18	1910	29
CC05_12 - 97	4.15	0.19	0.264	0.0095	0.91892	81.12903226	1509	50	1860	34
CC05_12 - 53	3.643	0.084	0.2449	0.0051	0.7745	80.91690544	1412	26	1745	28
CC05_12 - 41	3.936	0.061	0.2539	0.0035	0.69741	79.80295567	1458	18	1827	24
CC05_12 - 14	4.212	0.077	0.2618	0.0047	0.5936	79.13365029	1498	24	1893	32
CC05_12 - 110	3.685	0.098	0.2408	0.0063	0.87417	77.74049217	1390	33	1788	24
CC05_12 - 9	4.65	0.13	0.2716	0.0071	0.95162	77.32267732	1548	36	2002	14
CC05_12 - 114	3.32	0.09	0.2277	0.0054	0.85811	76.68213457	1322	28	1724	21
CC05_12 - 17	3.54	0.056	0.2291	0.0024	0.50931	73.3995585	1330	13	1812	27

CC05_12 - 36	3.108	0.087	0.2104	0.0054	0.86823	71.63657542	1230	29	1717	25
CC05_12 - 47	3.629	0.096	0.2291	0.004	0.57389	71.29877071	1334	19	1871	39
CC05_12 - 66	5.67	0.1	0.2852	0.0041	0.67418	71.17077465	1617	21	2272	20
CC05_12 - 21	6.963	0.099	0.3099	0.0044	0.70644	70.78925956	1740	22	2458	20
CC05_12 - 32	3.862	0.07	0.2343	0.0046	0.75586	70.4569055	1357	24	1926	26
CC05_12 - 19	3.619	0.076	0.2267	0.0033	0.74904	69.9044586	1317	17	1884	24
CC05_12 - 6	3.8	0.062	0.2294	0.003	0.53033	68.08184143	1331	16	1955	23
CC05_12 - 43	6.55	0.71	0.295	0.03	0.98999	67.67842494	1650	150	2438	26
CC05_12 - 85	2.982	0.049	0.1974	0.0032	0.66723	65.11497476	1161	17	1783	25
CC05_12 - 40	2.879	0.087	0.1912	0.0051	0.78595	63.1019037	1127	28	1786	31
CC05_12 - 81	2.931	0.06	0.1912	0.0024	0.50178	62.47924737	1129	13	1807	34
CC05_12 - 29	3.646	0.095	0.2137	0.0047	0.8472	62.08955224	1248	25	2010	23
CC05_12 - 52	4.16	0.12	0.2271	0.0071	0.92457	62.06409048	1317	37	2122	19
CC05_12 - 20	3.292	0.099	0.2009	0.0054	0.88416	61.76008381	1179	29	1909	23
CC05_12 - 31	2.606	0.053	0.1789	0.0037	0.80933	61.29404968	1061	21	1731	24
CC05_12 - 50	3.046	0.043	0.1929	0.0028	0.92234	61.26077586	1137	15	1856	11
CC05_12 - 4	4.663	0.088	0.2357	0.0051	0.90928	60.19417476	1364	27	2266	14
CC05_12 - 33	3.24	0.12	0.197	0.01	0.86959	59.80392157	1159	56	1938	44
CC05_12 - 38	2.887	0.046	0.1824	0.0023	0.58488	57.14285714	1080	13	1890	26
CC05_12 - 106	2.66	0.062	0.1722	0.0034	0.82163	56.10958904	1024	19	1825	23
CC05_12 - 54	5.281	0.093	0.2364	0.0042	0.86014	55.34412955	1367	22	2470	14
CC05_12 - 67	2.559	0.065	0.1658	0.0041	0.94019	54.34543454	988	23	1818	16
CC05_12 - 82	2.924	0.048	0.1767	0.0039	0.78387	53.90946502	1048	21	1944	23
CC05_12 - 121	2.667	0.052	0.1678	0.0028	0.77	53.64806867	1000	15	1864	22
CC05_12 - 51	2.7	0.054	0.1697	0.0025	0.75915	53.55249205	1010	14	1886	25
CC05_12 - 30	2.649	0.061	0.1678	0.0032	0.8346	53.36179296	1000	18	1874	24
CC05_12 - 1	2.511	0.053	0.1611	0.0032	0.76783	52.08446129	962	18	1847	25
CC05_12 - 109	4.603	0.091	0.2102	0.0029	0.83407	50.93167702	1230	16	2415	19
CC05_12 - 89	2.616	0.039	0.1631	0.0022	0.48702	50.91479352	974	12	1913	27
CC05_12 - 42	2.693	0.085	0.163	0.0053	0.90942	50.31023785	973	29	1934	24
CC05_12 - 116	2.405	0.042	0.1536	0.0021	0.69363	49.97287032	921	12	1843	24
CC05_12 - 44	2.707	0.055	0.1625	0.0033	0.78693	49.64176049	970	18	1954	21
CC05_12 - 62	2.223	0.076	0.1456	0.0042	0.80413	48.61265261	876	24	1802	31
CC05_12 - 120	2.614	0.088	0.1555	0.0043	0.88886	47.18702484	931	24	1973	25
CC05_12 - 84	4.337	0.098	0.1959	0.0051	0.89552	47.05882353	1152	27	2448	18
CC05_12 - 2	2.885	0.062	0.162	0.0021	0.85879	46.85382381	968	12	2066	25
CC05_12 - 91	2.196	0.068	0.1368	0.0038	0.94203	43.68059228	826	22	1891	18

CC05_12 - 117	2.122	0.053	0.1307	0.002	0.84427	41.31455399	792	11	1917	28
CC05_12 - 37	2.068	0.098	0.1259	0.0051	0.94009	39.64711988	764	29	1927	28
CC05_12 - 94	1.748	0.039	0.1149	0.0019	0.68186	39.20581655	701	11	1788	28
CC05_12 - 96	3.53	0.054	0.1601	0.002	0.7125	38.99755501	957	11	2454	18
CC05_12 - 45	2.52	0.15	0.1379	0.0094	0.95972	38.76693134	830	53	2141	31
CC05_12 - 64	1.719	0.025	0.1137	0.0011	0.67449	38.39048673	694.1	6.1	1808	17
CC05_12 - 24	3.45	0.11	0.1569	0.0053	0.95463	38.34218048	939	29	2449	23
CC05_12 - 58	2.271	0.043	0.1285	0.0024	0.6508	37.5060183	779	14	2077	33
CC05_12 - 103	1.837	0.032	0.1148	0.0023	0.47466	36.95308382	701	14	1897	38
CC05_12 - 13	1.544	0.038	0.1033	0.0024	0.91358	35.96590909	633	14	1760	19
CC05_12 - 99	1.551	0.049	0.0998	0.0036	0.87111	33.57064622	613	21	1826	29
CC05_12 - 8	3.631	0.097	0.1367	0.0028	0.88418	29.98185118	826	16	2755	20
CC05_12 - 76	1.289	0.039	0.0849	0.0024	0.88839	29.59413754	525	14	1774	27
CC05_12 - 35	1.134	0.023	0.077	0.0015	0.89092	27.40825688	478	8.8	1744	20
CC05_12 - 11	1.353	0.049	0.0832	0.0019	0.9084	26.7950052	515	11	1922	25
CC05_12 - 55	1.2	0.024	0.0775	0.0012	0.82194	26.22343324	481.2	7	1835	21
CC05_12 - 107	1.401	0.058	0.0817	0.0034	0.9498	25.17412935	506	20	2010	24
CC05_12 - 93	1.086	0.02	0.07214	0.00091	0.79142	25.12590935	449	5.5	1787	20
CC05_12 - 108	1.932	0.032	0.0921	0.0012	0.73676	23.88725284	567.8	7.2	2377	18
CC05_12 - 102	1.128	0.025	0.0643	0.0015	0.84693	19.54744526	401.7	8.9	2055	19
CC05_12 - 56	0.752	0.033	0.0454	0.0017	0.96166	14.72708548	286	11	1942	23
CC05_12 - 68	0.359	0.034	0.0241	0.0023	0.99304	8.854166667	153	14	1728	22

REE data

Concordant samples REE data for Mallapunyah Formation normalised, to chondrite values from Taylor and McLennan (1985).

Anal ysis	A ge	Er ro r	Conco rdance	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Lu/La	Lu/Gd	Gd/La	Eu*	Ce*
CCO 1_0 4-9	19 55	34	104.29 66752	#VALU E!	1.9289 44619	0.3467 15328	1.5752 46132	15.281 38528	2.1264 36782	57.418 30065	83.103 44828	122.04 72441	166	207.63 05221	260	327.82 25806	400.26 31579	#VALU E!	6.9710 03205	#VALU E!	0.0584 99201	25.276 80022
CCO 1_0 4-4	19 61	34	101.78 48037	1.4277 92916	7.4608 15047	9.3722 62774	14.767 93249	76.406 92641	42.413 7931	125.81 69935	160.34 48276	161.94 22572	136	122.48 99598	120.27 77778	126.61 29032	123.15 78947	86.257 53315	0.9788 65345	88.119 91718	0.4194 73553	1.2543 45162
CCO 1_0 4-16	19 18	50	101.77 26799	1.8528 61035	9.7178 68339	4.4306 56934	6.0478 19972	22.640 69264	10.229 88506	53.725 4902	84.827 58621	160.36 74541	266.82 35294	411.24 49799	600.27 77778	807.25 80645	1045.7 89474	564.41 87307	19.465 42451	28.995 96309	0.2679 16627	2.9938 74683
CCO 1_0 4-5	19 21	40	101.04 11244	0.8855 58583	8.9237 19958	6.7883 21168	12.447 25738	64.502 1645	35.517 24138	108.16 99346	152.41 37931	237.27 03412	353.05 88235	509.63 85542	693.88 88889	913.30 64516	1137.1 05263	1284.0 54251	10.512 2118	122.14 88185	0.4113 83675	2.4104 31755
CCO 1_0 4-3	22 00	36	96.545 45455	7.8201 63488	55.590 38662	48.905 10949	71.026 72293	286.58 00866	179.31 03448	316.99 34641	329.31 03448	385.82 67717	458.82 35294	588.35 34137	772.22 22222	954.83 87097	1157.8 94737	148.06 52852	3.6527 40098	40.535 40115	0.5941 62367	1.6508 70476
CCO 1_0 4-18	25 57	33	95.815 40868	1.9809 26431	59.174 50366	20	42.475 38678	154.97 8355	82.183 90805	268.95 42484	321.20 68966	412.86 08924	545.29 41176	699.19 67871	876.38 88889	1075.8 06452	1279.7 36842	646.02 9465	4.7581 95306	135.77 19521	0.3877 21574	6.2836 49826
CCO 1_0 4-17	19 24	47	93.607 06861	0.6294 27793	7.7324 97388	3.7226 27737	7.1729 95781	40.692 64069	25.747 12644	61.764 70588	79.827 58621	121.25 98425	177.52 94118	238.95 58233	310.83 33333	420.96 77419	532.10 52632	845.37 93575	8.6150 37594	98.128 34225	0.5025 92099	4.0024 05986
CCO 1_0 4-8	17 94	43	92.474 91639	2.9972 75204	74.503 65726	21.824 81752	38.959 21238	183.54 97835	121.83 90805	251.30 71895	291.37 93103	412.86 08924	589.41 17647	817.67 06827	1155.5 55556	1495.9 67742	1960.5 26316	654.10 28708	7.8013 14078	83.845 21687	0.5603 63927	6.0937 7645
CCO 2_0 5-34	17 88	18	104.75 3915	#VALU E!	5.6112 85266	#VALU E!	1.6	12	#VALU E!	40.947 71242	91.206 89655	175.06 56168	314.23 52941	506.42 57028	733.88 88889	995.56 45161	1245.7 89474	#VALU E!	30.423 90893	#VALU E!	#VALU E!	#VALU E!
CCO 2_0 5-32	19 41	17	104.17 31066	#VALU E!	3.0522 46604	#VALU E!	1.8846 6948	13.030 30303	#VALU E!	68.235 29412	151.89 65517	355.11 81102	740.58 82353	1283.5 34137	1864.4 44444	2445.5 64516	2907.8 94737	#VALU E!	42.615 69873	#VALU E!	#VALU E!	#VALU E!
CCO 2_0	25 67	17	103.54 49942	0.1798 36512	28.798 32811	1.4525 54745	3.5161 74402	20.692 64069	5.4367 81609	77.745 09804	125.86 2069	209.71 12861	330.70 58824	487.55 02008	660.55 55556	854.03 22581	1061.5 78947	5903.0 22329	13.654 60941	432.30 98633	0.1104 61327	47.992 42169

5-35																						
CCO 2_0 5-79	28 86	23	103.11 85031	#VALU E!	23.719 9582	#VALU E!	#VALU E!	#VALU E!	11.264 36782	60.588 23529	106.37 93103	193.17 5853	320.11 76471	480.32 12851	679.44 44444	902.82 25806	1139.4 73684	#VALU E!	18.806 84722	#VALU E!	#VALU E!	#VALU E!
CCO 2_0 5-42	18 30	25	103.06 01093	#VALU E!	10.229 88506	0.5985 40146	1.8143 45992	12.813 85281	#VALU E!	46.797 38562	81.724 13793	148.03 14961	248.70 58824	373.49 39759	539.16 66667	705.64 51613	894.73 68421	#VALU E!	19.119 37665	#VALU E!	#VALU E!	51.808 89065
CCO 2_0 5-16	18 26	29	102.90 25192	0.0277 92916	7.1891 32706	0.4131 38686	1.1392 40506	8.0952 38095	1.0114 94253	34.967 32026	62.068 96552	103.93 70079	173.29 41176	265.06 0241	375.27 77778	493.14 51613	651.31 57895	23434. 59752	18.626 41417	1258.1 37896	0.0469 77899	47.984 41346
CCO 2_0 5-6	18 53	49	102.48 24609	0.0247 9564	4.6812 95716	0.4598 54015	1.4064 69761	7.6623 37662	1.0689 65517	28.529 41176	46.206 89655	80.971 12861	134.11 76471	208.03 21285	298.88 88889	528.22 58065	485.78 94737	19591. 72932	17.027 67227	1150.5 81771	0.0590 72332	31.135 54778
CCO 2_0 5-24	17 57	26	101.87 82015	#VALU E!	18.035 52769	#VALU E!	1.3924 05063	9.7835 49784	3.9310 34483	43.267 97386	76.896 55172	134.90 81365	234.35 29412	365.86 34538	529.16 66667	702.41 93548	955.26 31579	#VALU E!	22.077 83431	#VALU E!	0.1481 96855	#VALU E!
CCO 2_0 5-18	17 69	43	101.86 54607	#VALU E!	5.9665 62173	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	50.689 65517	96.850 3937	168	257.42 97189	386.66 66667	512.5	671.31 57895	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CCO 2_0 5-37	18 59	30	101.55 99785	#VALU E!	9.3730 40752	0.4182 48175	1.9690 57665	13.203 4632	3.7931 03448	55.915 03268	98.103 44828	168.50 3937	280.70 58824	412.85 14056	557.77 77778	711.69 35484	861.31 57895	#VALU E!	15.404 0112	#VALU E!	0.1097 56539	105.50 44628
CCO 2_0 5-23	28 14	34	101.45 70007	0.1634 87738	18.683 38558	1.6058 39416	3.1504 92264	16.450 21645	10.229 88506	64.705 88235	104.13 7931	194.22 57218	335.29 41176	508.43 37349	750	966.53 22581	1268.4 21053	7758.5 08772	19.602 87081	395.78 43137	0.2521 03914	22.825 99758
CCO 2_0 5-19	20 23	18	101.43 35146	3.1062 6703	15.569 48798	10.437 9562	14.908 57947	41.125 54113	11.954 02299	135.94 77124	215.86 2069	381.88 97638	624.70 58824	875.50 2008	1163.8 88889	1427.4 19355	1773.6 84211	571.00 18467	13.046 81174	43.765 62321	0.1350 17827	2.1304 90758
CCO 2_0 5-45	18 73	22	101.28 13668	0.0242 50681	15.747 12644	0.2912 40876	0.6610 40788	3.1168 83117	2.9655 17241	10.261 43791	17.051 72414	29.475 06562	53.411 76471	90	151.11 11111	229.83 87097	318.68 42105	13141. 24778	31.056 48676	423.14 01924	0.4433 31751	122.72 27037
CCO 2_0 5-14	17 60	34	101.19 31818	#VALU E!	5.7053 29154	1.0583 94161	3.4458 50914	17.402 5974	7.7586 2069	75.163 39869	127.41 37931	211.81 10236	352.94 11765	516.46 58635	694.44 44444	874.59 67742	1131.5 78947	#VALU E!	15.054 91991	#VALU E!	0.1676 34359	17.550 21004
CCO 2_0	18 66	24	101.01 82208	#VALU E!	15.987 46082	#VALU E!	1.4486 63854	9.1774 89177	5.7586 2069	30.620 91503	47.241 37931	80.419 94751	126.23 52941	189.15 66265	291.66 66667	379.03 22581	517.10 52632	#VALU E!	16.887 32236	#VALU E!	0.2893 89527	#VALU E!

5-12																						
CC0 2_0 5-97	25 61	19	100.85 90394	#VALU E!	8.3385 57994	0.3941 60584	1.5189 87342	8.7012 98701	2.1149 42529	31.209 15033	57.241 37931	96.850 3937	170.11 76471	245.78 31325	348.88 88889	464.11 29032	598.15 78947	#VALU E!	19.166 10637	#VALU E!	0.1059 84402	81.526 4859
CC0 2_0 5-40	18 10	38	100.49 72376	34.877 3842	35.423 19749	29.197 08029	25.879 0436	39.393 93939	2.4942 52874	85.294 11765	123.44 82759	194.22 57218	308.47 05882	431.32 53012	559.44 44444	725.40 32258	851.84 21053	24.423 91036	9.9871 14338	2.4455 42279	0.0400 07887	1.0753 68063
CC0 2_0 5-99	18 75	27	100.48	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	48.366 01307	86.379 31034	144.35 69554	245.76 47059	358.63 45382	485.27 77778	618.95 16129	803.42 10526	#VALU E!	16.611 27312	#VALU E!	#VALU E!	#VALU E!
CC0 2_0 5-44	19 67	22	100.30 5033	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	71.601 30719	158.10 34483	298.42 51969	510.11 76471	770.28 11245	1067.2 22222	1395.1 6129	1736.8 42105	#VALU E!	24.257 12844	#VALU E!	#VALU E!	#VALU E!
CC0 2_0 5-21	24 22	39	100.16 51528	47.138 96458	79.414 83804	44.525 54745	54.852 32068	64.502 1645	65.862 06897	145.09 80392	186.89 65517	274.80 31496	410.58 82353	575.50 2008	783.33 33333	1038.7 09677	1355.2 63158	28.750 38029	9.3403 27169	3.0780 91352	0.6284 54246	2.1972 4318
CC0 2_0 5-36	19 29	26	99.896 31934	#VALU E!	11.452 45559	#VALU E!	2.0112 51758	12.251 08225	7.3218 3908	50.032 67974	85.172 41379	158.53 01837	272.70 58824	424.49 7992	626.11 11111	885.08 06452	1170.7 89474	#VALU E!	23.400 49503	#VALU E!	0.2351 12294	#VALU E!
CC0 2_0 5-70	17 40	30	99.540 22989	2.5613 07902	12.288 40125	#VALU E!	#VALU E!	#VALU E!	#VALU E!	37.516 33987	67.068 96552	127.55 90551	228	359.83 93574	513.88 88889	704.43 54839	920.52 63158	359.39 69765	24.536 67706	14.647 33695	#VALU E!	#VALU E!
CC0 2_0 5-104	19 15	26	99.373 36815	111.71 66213	133.75 13062	94.890 51095	75.949 36709	#VALU E!	#VALU E!	114.70 58824	151.20 68966	208.66 14173	300	419.67 87149	576.94 44444	735.48 3871	968.42 10526	8.6685 49422	8.4426 45074	1.0267 57532	#VALU E!	1.1281 75387
CC0 2_0 5-15	18 80	35	99.308 51064	0.1689 3733	5.8725 18286	0.8102 18978	2.4613 22082	14.199 1342	2.8390 8046	57.516 33987	91.724 13793	156.43 04462	244.70 58824	352.20 88353	505.55 55556	623.38 70968	802.63 15789	4751.0 61121	13.954 8445	340.45 96247	0.0791 76231	22.018 51384
CC0 2_0 5-10	18 83	45	98.831 65162	#VALU E!	28.599 79101	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	75.590 55118	113.05 88235	157.42 97189	218.61 11111	292.74 19355	376.57 89474	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC0 2_0 5-61	18 04	28	98.392 4612	0.5367 84741	9.7178 68339	4.8248 17518	9.2686 35724	39.870 12987	25.402 29885	106.53 59477	165.17 24138	274.80 31496	436.47 05882	617.26 90763	880.55 55556	1125	1460.5 26316	2720.8 78974	13.709 23474	198.47 05219	0.3470 11535	3.8692 34397
CC0 2_0	17 74	24	98.027 0575	0.2942 77929	12.612 3302	#VALU E!	3.9943 74121	19.307 35931	#VALU E!	78.888 88889	137.24 13793	246.71 91601	418.11 76471	624.89 95984	914.44 44444	1189.5 16129	1492.1 05263	5070.3 94737	18.914 01038	268.07 61317	#VALU E!	#VALU E!

5-69																							
CCO 2_0 5-11	18 98	39	97.523 70917	0.3923 70572	50.877 74295	2.8905 10949	8.3825 59775	38.354 97835	26.206 89655	114.05 22876	171.72 41379	281.10 23622	444.11 76471	664.65 86345	926.38 88889	1210.4 83871	1584.2 10526	4037.5 3655	13.890 21264	290.67 49274	0.3439 06131	51.045 24096	
CCO 2_0 5-62	18 40	37	97.391 30435	0.7901 90736	16.123 30199	6.7153 28467	10.196 90577	41.861 47186	28.160 91954	71.241 83007	92.241 37931	145.93 17585	225.17 64706	334.93 9759	477.77 77778	627.01 6129	803.68 42105	1017.0 76225	11.281 07195	90.157 76426	0.4979 68124	3.6457 58305	
CCO 2_0 5-53	19 29	18	97.304 30275	2.7792 91553	17.763 84535	19.343 06569	27.848 10127	130.30 30303	73.563 21839	211.76 47059	273.96 55172	417.32 28346	598.82 35294	839.35 74297	1219.4 44444	1532.6 6129	1889.4 73684	679.84 00413	8.9225 1462	76.193 77163	0.4301 09073	1.3221 53745	
CCO 2_0 5-20	18 07	23	97.116 76812	0.3188 0109	7.1786 83386	5.2481 75182	12.883 26301	50.692 64069	9.1954 02299	131.04 57516	191.72 41379	296.06 29921	444.35 29412	612.44 97992	849.72 22222	1020.9 67742	1260.2 63158	3953.1 33153	9.6169 70731	411.05 80415	0.1011 93833	3.3577 93822	
CCO 2_0 5-100	19 13	22	97.072 66074	0.1798 36512	3.5841 17032	1.4379 56204	2.5316 4557	15.497 8355	4.9655 17241	55.457 51634	99.655 17241	174.01 5748	298.47 05882	449.39 75904	634.16 66667	804.83 87097	1034.7 36842	5753.7 63955	18.658 18937	308.37 74015	0.1399 6174	4.3882 74322	
CCO 2_0 5-111	17 53	23	96.976 61152	10.326 97548	41.692 78997	33.795 62044	49.367 08861	190.47 61905	127.58 62069	262.74 5098	327.58 62069	455.11 81102	669.41 17647	904.01 60643	1302.7 77778	1685.8 87097	2078.9 47368	201.31 23177	7.9124 11626	25.442 5992	0.5630 19479	1.8020 94769	
CCO 2_0 5-85	25 55	15	96.751 46771	3.3514 98638	35.318 70428	24.379 56204	35.161 74402	139.39 39394	95.402 29885	193.46 40523	231.03 44828	303.14 96063	401.17 64706	522.08 83534	673.33 33333	862.90 32258	1010.5 26316	301.51 47625	5.2233 28592	57.724 63999	0.5732 31235	2.0894 08567	
CCO 2_0 5-8	17 57	25	96.585 08822	1.5803 81471	73.092 99896	12.846 71533	19.817 15893	80.519 48052	53.908 04598	143.46 40523	187.75 86207	267.45 40682	384.70 58824	536.94 77912	721.38 88889	933.87 09677	1172.8 94737	742.15 92559	8.1755 30512	90.778 11584	0.4813 57226	8.7767 34725	
CCO 2_0 5-109	18 59	26	96.234 5347	1.0871 9346	18.902 82132	11.897 81022	23.066 10408	108.22 51082	62.643 67816	210.78 43137	277.41 37931	400.26 24672	580	779.91 96787	1025.8 33333	1264.5 16129	1555.2 63158	1430.5 30273	7.3784 57772	193.87 93061	0.3927 38733	3.0801 14079	
CCO 2_0 5-66	18 43	26	96.147 58546	1.9019 07357	21.149 42529	13.430 65693	19.971 8706	78.787 87879	54.482 75862	107.51 63399	116.55 17241	148.03 14961	180.23 52941	224.09 63855	308.88 88889	380.64 51613	466.84 21053	245.45 99608	4.3420 57271	56.530 79761	0.5848 79495	2.3416 54419	
CCO 2_0 5-52	17 89	28	95.695 91951	1.2670 29973	15.841 17032	10.729 92701	15.752 46132	71.861 47186	49.080 45977	114.70 58824	155.51 72414	227.55 90551	331.76 47059	478.31 3253	695.27 77778	879.83 87097	1103.6 84211	871.07 97963	9.6218 62348	90.531 3093	0.5261 41993	2.1674 15377	
CCO 2_0	18 14	34	95.644 98346	2.1798 36512	14.524 5559	15.109 48905	19.690 57665	68.831 16883	45.632 18391	123.20 26144	167.24 13793	267.97 90026	421.17 64706	598.79 51807	848.61 11111	1083.0 64516	1323.6 84211	607.24 01316	10.743 96203	56.519 19935	0.4752 51627	1.2527 42297	

5-28																						
CCO 2_0 5-81	17 40	28	95.229 88506	13.678 47411	42.842 21526	34.598 54015	43.881 85654	137.22 94372	91.839 08046	222.54 90196	270.86 2069	385.82 67717	560	744.57 83133	997.5	1301.2 09677	1581.5 78947	115.62 53932	7.1066 54301	16.270 01797	0.5105 31293	1.5705 12376
CCO 2_0 5-94	19 02	16	94.794 95268	1.7792 91553	14.587 25183	12.992 70073	18.691 98312	80.952 38095	50.344 82759	164.37 9085	245.68 96552	430.70 86614	723.52 94118	1095.9 83936	1591.6 66667	2081.4 51613	2702.6 31579	1518.9 3689	16.441 45652	92.384 56996	0.4104 22914	1.6152 13703
CCO 2_0 5-30	23 37	19	94.736 84211	57.765 66757	74.190 17764	61.313 86861	67.369 90155	122.94 37229	36.551 72414	263.39 86928	367.24 13793	593.70 07874	924.70 58824	1258.2 32932	1577.7 77778	1899.1 93548	2184.2 10526	37.811 56902	8.2924 12172	4.5597 79258	0.1892 19318	1.3295 20034
CCO 2_0 5-22	18 76	26	94.402 98507	1.2779 29155	13.134 79624	12.262 77372	20.956 39944	99.134 19913	50.344 82759	201.63 39869	283.79 31034	432.54 59318	662.35 29412	912.04 81928	1245	1533.4 67742	1950	1525.9 06183	9.6709 88655	157.78 18192	0.3347 74952	1.8304 69844
CCO 2_0 5-53	19 44	33	93.775 72016	2.0163 48774	14.211 07628	17.226 27737	20.815 75246	109.09 09091	55.172 41379	183.66 01307	253.44 82759	393.70 07874	602.35 29412	850.60 24096	1200	1536.2 90323	1931.5 78947	957.95 87482	10.517 13804	91.085 49726	0.3769 23777	0.9968 64691
CCO 2_0 5-41	18 76	28	93.656 71642	2.2070 84469	35.632 18391	13.722 62774	19.549 92968	77.056 27706	55.172 41379	121.89 54248	158.62 06897	229.39 63255	356.47 05882	526.90 76305	752.77 77778	1020.5 64516	1307.8 94737	592.58 93437	10.729 64583	55.229 16162	0.5546 31232	3.6992 44839
CCO 2_0 5-53	19 55	22	93.606 13811	3.1880 10899	20.167 18913	21.532 84672	32.770 74543	143.29 00433	83.448 27586	223.52 94118	293.10 34483	432.02 09974	604.70 58824	838.95 58233	1222.2 22222	1534.6 77419	1894.7 36842	594.33 19838	8.4764 54294	70.115 636	0.4549 82824	1.4253 73873
CCO 2_0 5-96	20 32	26	92.864 17323	13.623 9782	21.912 22571	6.3576 64234	7.5527 42616	#VALU E!	#VALU E!	63.398 69281	103.96 55172	196.58 79265	348.11 76471	507.63 05221	696.11 11111	900.40 32258	1157.3 68421	84.950 84211	18.255 39881	4.6534 64052	#VALU E!	4.0944 54053
CCO 2_0 5-73	18 93	24	92.604 33175	2.6348 77384	18.380 35528	19.562 0438	31.350 21097	121.64 50216	76.091 95402	193.46 40523	249.65 51724	337.53 28084	478.82 35294	651.00 40161	834.72 22222	1055.6 45161	1270.7 89474	482.29 54879	6.5686 07752	73.424 3094	0.4829 56286	1.5057 95225
CCO 2_0 5-80	18 70	19	91.818 18182	2.6702 99728	40.438 87147	27.445 25547	50.351 61744	242.42 42424	172.41 37931	307.18 95425	381.03 44828	509.18 63517	688.23 52941	915.66 26506	1211.1 11111	1620.9 67742	1997.3 68421	747.99 40924	6.5020 71669	115.03 93491	0.6273 99814	2.7031 9825
CCO 2_0 5-39	19 05	33	91.811 02362	0.5095 36785	13.239 28945	4.0145 9854	6.7510 54852	32.467 53247	18.505 74713	75.816 99346	120.17 24138	206.56 16798	342.35 29412	531.72 69076	765.27 77778	1045.5 64516	1352.6 31579	2654.6 2989	17.840 7441	148.79 59177	0.3417 98553	5.5456 45051
CCO 2_0	18 57	29	91.760 90468	1.1198 91008	10.794 14838	9.9270 07299	13.220 81575	63.636 36364	38.620 68966	126.14 37908	192.58 62069	320.99 73753	547.05 88235	826.50 60241	1216.6 66667	1618.9 51613	2113.1 57895	1886.9 31745	16.751 97709	112.63 93461	0.4070 04513	1.4481 38015

5-13																						
CC02_05-92	1904	29	91.59663866	#VALU E!	30.82549634	21.82481752	34.73980309	130.3030303	94.25287356	219.6078431	267.2413793	356.6929134	470.5882353	633.7349398	839.1666667	1044.354839	1318.421053	#VALU E!	6.003524436	#VALU E!	0.538725034	2.248206445
CC02_05-60	1967	24	91.56075241	1.534059946	13.52142111	12.83941606	19.83122363	86.58008658	45.86206897	177.777778	255.862069	406.5616798	604.7058824	862.6506024	1238.888889	1566.532258	1936.842105	1262.559596	10.89473684	115.8871127	0.346969583	1.626602015
CC02_05-2	2133	34	91.42053446	5.122615804	38.03552769	38.68613139	53.72714487	217.3160173	145.9770115	245.751634	274.137931	320.2099738	380	469.8795181	622.222222	862.9032258	868.4210526	169.5268757	3.533734602	47.97385621	0.630478122	1.365439943
CC02_05-74	1925	40	91.32467532	0.332425068	71.93312435	3.824817518	8.509142053	39.26406926	28.62068966	100.9803922	135.862069	209.4488189	315.2941176	441.7670683	585.277778	779.8387097	966.8421053	2908.451251	9.574552887	303.7688846	0.408154295	41.84015244
CC02_05-54	1988	25	91.24748491	1.068119891	26.75026123	8.248175182	13.5302391	64.06926407	44.13793103	102.6143791	121.0344828	155.9055118	208.4705882	266.6666667	375.8333333	470.1612903	598.9473684	560.7491944	5.836875629	96.0700947	0.529601228	5.320074894
CC02_05-67	1861	24	90.43524987	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	265.3543307	#VALU E!	567.0682731	#VALU E!	1060.887097	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_05-93	2487	16	90.06835545	2.983651226	27.89968652	22.33576642	31.08298172	109.5238095	87.35632184	169.6078431	207.0689655	277.9527559	392.9411765	545.7831325	761.9444444	1060.080645	1471.052632	493.0377313	8.67325829	56.84573373	0.62591484	1.738282179

Concordant samples REE data for Masterton Sandstone, normalised to chondrite values from Taylor and McLennan (1985).

Analysis	Age	Error	Concordance	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Lu/La	Lu/Gd	Gd/La	Eu*	Ce*
CC06_01N-49	1725	44	103.4782609	0.054495913	7.356321839	0.474452555	1.631504923	12.33766234	4.379310345	59.80392157	109.6551724	197.1128609	344.7058824	528.9156627	705.555556	941.1290323	1215.789474	22309.73684	20.32959448	1097.401961	0.121408766	53.31673311
CC06_01N-68	1809	44	103.2614704	#VALU E!	4.231974922	0.27810219	0.801687764	5.800865801	0.793103448	15.03267974	23.62068966	37.27034121	56.82352941	82.20883534	113.055556	155.2419355	182.8947368	#VALU E!	12.16647597	#VALU E!	0.076137156	43.86716047
CC06_01N-48	1715	50	102.9737609	0.034604905	5.339602926	0.941605839	3.417721519	18.83116883	8.988505747	69.83660131	115.3448276	189.5013123	312.4705882	448.5943775	614.722222	815.7258065	1003.947368	29011.70742	14.3756619	2018.112809	0.202745727	20.5829372

Cris Joshua Cruz
Geochronological constraints of the McArthur and Tawallah Groups

CC01_06-6	18 38	40	90.914 037	1.2724 79564	23.343 78265	24.160 58394	42.194 09283	106.06 06061	87.241 37931	158.82 35294	196.89 65517	267.19 1601	374.82 35294	512.85 14056	715.55 55556	925	1144.4 73684	899.40 43728	7.2059 45419	124.81 42083	0.6587 1351	1.6873 61096
CC01_06-38	18 43	38	90.341 83397	0.9455 04087	42.110 7628	20.437 9562	42.194 09283	125.54 11255	113.79 31034	190.52 28758	221.03 44828	301.83 72703	429.41 17647	626.90 76305	913.61 11111	1283.8 70968	1596.0 52632	1688.0 44138	8.3772 23075	201.50 40214	0.7200 63677	4.2537 29156
CC03_08-25	18 12	41	104.52 53863	#VALU E!	5.9247 6489	0.2262 77372	1.1814 34599	8.5281 38528	1.6321 83908	40.261 43791	81.206 89655	155.11 81102	271.64 70588	437.75 1004	641.38 88889	880.24 19355	1136.3 15789	#VALU E!	28.223 42789	#VALU E!	0.0669 07074	136.70 94554
CC03_08-133	17 28	35	104.34 02778	#VALU E!	9.0909 09091	0.3357 66423	1.0970 46414	6.3636 36364	2.1839 08046	37.385 62092	64.827 58621	125.98 4252	231.88 23529	363.45 38153	532.5	720.96 77419	914.21 05263	#VALU E!	24.453 53331	#VALU E!	0.0998 37491	88.462 21058
CC03_08-136	17 61	45	103.80 46564	#VALU E!	11.703 23929	0.8613 13869	2.7144 86639	16.926 40693	7.3908 04598	59.313 72549	92.758 62069	157.21 78478	258.58 82353	385.14 05622	522.5	686.69 35484	870.78 94737	#VALU E!	14.681 07873	#VALU E!	0.1938 8226	42.822 39103
CC03_08-129	17 55	35	102.90 59829	0.0209 80926	18.819 22675	0.5255 47445	1.5893 1083	14.805 19481	7.6781 6092	72.549 01961	145.34 48276	272.44 09449	494.70 58824	778.71 48594	1135.8 33333	1565.3 22581	2002.6 31579	95450. 10253	27.603 84068	3457.8 5587	0.1757 93715	108.28 96024
CC03_08-42	17 53	22	102.79 52082	0.0367 84741	41.065 83072	0.5401 45985	1.8565 40084	13.852 81385	11	43.267 97386	69.655 17241	120.47 24409	214.58 82353	337.75 1004	527.77 77778	751.20 96774	1035.7 89474	28158. 12865	23.938 94101	1176.2 47882	0.3851 4875	261.31 3976
CC03_08-89	18 37	37	102.72 18291	0.0422 34332	3.5945 66353	1.5766 42336	7.0604 782	35.930 73593	8.7586 2069	133.98 69281	207.75 86207	339.63 25459	521.64 70588	712.04 81928	943.61 11111	1186.6 93548	1481.3 15789	35073. 73514	11.055 67394	3172.4 64685	0.1030 92527	10.209 72991
CC03_08-60	18 53	23	102.59 0394	#VALU E!	6.3427 37722	0.3306 56934	1.2517 58087	7.5757 57576	0.5172 41379	32.352 94118	53.620 68966	100.52 49344	172.47 05882	260.24 09639	384.16 66667	513.30 64516	642.63 15789	#VALU E!	19.863 15789	#VALU E!	0.0259 08251	72.617 59967
CC03_08-96	18 80	23	102.23 40426	#VALU E!	10.574 71264	0.5401 45985	1.9831 22363	11.991 34199	2.6091 95402	46.699 34641	77.758 62069	125.19 68504	196.70 58824	283.13 25301	406.66 66667	579.43 54839	725.26 31579	#VALU E!	15.530 4777	#VALU E!	0.0889 13437	71.877 96642
CC03_08-17	17 14	45	102.15 86931	0.1253 40599	20.815 04702	2.8394 16058	7.2011 25176	26.709 95671	21.149 42529	62.385 62092	97.586 2069	150.39 37008	220.47 05882	310.04 01606	421.94 44444	537.09 67742	688.94 73684	5496.6 01831	11.043 36798	497.72 87582	0.4747 58138	18.591 72506
CC03_08-13	17 89	33	102.06 81945	#VALU E!	3.1671 89133	0.3941 60584	1.7018 28411	11.428 57143	4.4712 64368	54.869 28105	102.93 10345	187.13 91076	344.47 05882	497.99 19679	738.88 88889	981.04 83871	1302.3 68421	#VALU E!	23.735 839	#VALU E!	0.1348 84139	34.693 12196
CC03_08-128	19 01	23	101.78 85324	0.1934 6049	18.171 36886	5.3284 67153	8.8607 59494	31.168 83117	15.632 18391	86.601 30719	145	233.07 08661	362.47 05882	547.38 95582	786.94 44444	1063.7 09677	1365.5 26316	7058.4 24759	15.767 96425	447.64 33766	0.2654 69399	5.6709 2635
CC03_08-79	18 62	25	101.39 6348	#VALU E!	11.619 64472	0.6204 37956	2.1518 98734	14.545 45455	5.8045 97701	55.947 71242	84.482 75862	127.82 15223	196.58 82353	275.10 04016	382.22 22222	497.58 06452	649.21 05263	#VALU E!	11.603 87973	#VALU E!	0.1646 854	64.955 80396
CC03_08-31	17 62	40	101.36 20885	#VALU E!	4.7335 4232	0.1919 70803	0.6582 27848	6.7532 46753	2.7126 43678	29.379 08497	52.931 03448	98.162 72966	175.05 88235	265.06 0241	387.5	512.5	671.31 57895	#VALU E!	22.850 12587	#VALU E!	0.1501 50491	84.545 82258
CC03_08-53	17 50	30	101.2	#VALU E!	18.599 79101	0.3145 9854	1.2939 5218	9.0909 09091	10.551 72414	36.405 22876	62.931 03448	105.77 42782	183.64 70588	263.05 22088	385.27 77778	514.51 6129	658.68 42105	#VALU E!	18.093 12104	#VALU E!	0.4638 51423	243.17 16184

CC03_08-141	17 37	21	100.17 27116	1.6076 29428	34.796 23824	45.255 47445	74.542 89733	120.77 92208	97.701 14943	145.42 48366	189.65 51724	254.59 31759	371.76 47059	512.85 14056	747.5	983.46 77419	1245.2 63158	774.59 58965	8.5629 33176	90.459 17802	0.7340 32008	1.2664 74121
CC03_08-12	24 70	15	100.12 14575	0.2561 3079	26.123 30199	8.2481 75182	19.549 92968	55.411 25541	38.965 51724	105.22 87582	140.34 48276	197.90 02625	283.52 94118	373.49 39759	496.11 11111	599.19 35484	733.68 42105	2864.4 90482	6.9722 78522	410.83 99388	0.4851 28411	7.5068 46193
CC03_08-7	17 45	28	100.11 46132	4.8228 88283	44.409 61338	15.328 46715	25.035 16174	67.748 91775	53.333 33333	161.43 79085	241.55 17241	379.52 75591	610.58 82353	892.36 94779	1216.6 66667	1572.5 80645	2071.0 52632	429.42 16473	12.828 78756	33.473 28385	0.4654 13603	4.7318 38774
CC03_08-80	18 72	22	100.10 68376	0.1062 6703	16.405 43365	4.2335 76642	11.673 69902	58.441 55844	28.160 91954	136.92 81046	189.65 51724	265.09 18635	380	524.09 63855	703.61 11111	882.25 80645	1086.8 42105	10227. 46289	7.9373 19432	1288.5 28574	0.2882 83443	10.685 16797
CC03_08-139	20 09	25	100.09 9552	#VALU E! 72205	12.737 43365	0.2021 89781	0.5625 87904	3.0735 93074	3.0804 5977	7.5490 19608	11.741 37931	15.853 01837	27.411 76471	42.409 63855	63.888 88889	95.201 6129	133.94 73684	#VALU E! 67738	17.743 67738	#VALU E! 28574	0.5799 81566	175.29 26694
CC03_08-30	17 44	35	100.05 73394	0.0204 35967	5.9247 6489	0.5547 44526	2.1237 69339	13.593 07359	5.5747 12644	61.241 83007	108.10 34483	187.13 91076	320.11 76471	467.87 14859	665.27 77778	847.17 74194	1086.8 42105	53182. 80702	17.746 72808	2996.7 66885	0.1489 86967	40.887 67514
CC03_08-8	17 54	28	100.05 70125	0.3133 51499	30.303 0303	10.510 94891	17.158 93108	42.424 24242	32.988 50575	77.777 77778	118.10 34483	182.15 2231	276.23 52941	418.07 22892	611.11 11111	814.51 6129	1061.3 15789	3386.9 81693	13.645 48872	248.21 25604	0.5488 84381	4.7064 39065
CC03_08-68	18 52	28	100.05 39957	0.4141 68937	27.690 7001	17.883 21168	35.864 9789	113.41 99134	97.701 14943	200.32 67974	256.89 65517	370.07 87402	508.23 52941	657.02 81124	894.44 44444	1104.8 3871	1400	3380.2 63158	6.9885 8075	483.68 37805	0.6228 02701	3.1053 70918
CC03_08-29	18 40	28	99.891 30435	0.3378 74659	14.252 87356	8.5401 45985	15.752 46132	40.606 06061	29.655 17241	72.222 22222	96.206 89655	131.75 85302	199.29 41176	283.13 25301	402.77 77778	533.87 09677	647.89 47368	1917.5 59423	8.9708 50202	213.75 44803	0.5256 69126	3.0783 66082
CC03_08-76	17 50	27	99.771 42857	317.43 86921	330.19 85371	298.54 0146	281.29 39522	227.70 56277	71.379 31034	224.50 98039	222.41 37931	292.38 84514	415.29 41176	565.86 34538	742.5	978.22 58065	1236.8 42105	3.8963 18048	5.5090 78373	0.7072 5406	0.3156 87194	1.0421 49581
CC03_08-116	24 93	12	99.759 32611	0.1880 10899	11.400 20899	3.2992 70073	6.3713 08017	14.372 29437	12.643 67816	29.738 56209	38.620 68966	66.404 19948	109.29 41176	183.13 25301	290.55 55556	432.25 80645	613.42 10526	3262.6 88787	20.627 12551	158.17 46708	0.5732 68314	6.6727 62673
CC03_08-153	17 97	21	99.666 11018	0.1743 86921	7.8787 87879	7.0802 91971	13.642 75668	39.826 83983	31.264 36782	55.228 75817	79.655 17241	131.23 35958	207.05 88235	304.01 60643	450.55 55556	645.16 12903	859.47 36842	4928.5 44408	15.562 06789	316.70 24101	0.6578 12238	2.1441 69961
CC03_08-148	17 20	29	99.651 16279	0.1498 6376	22.998 95507	5.0875 91241	10.886 07595	37.012 98701	28.045 97701	77.450 98039	108.96 55172	172.70 34121	260.35 29412	383.93 5743	513.33 33333	670.16 12903	847.10 52632	5652.5 02392	10.937 30846	516.80 92692	0.4900 40275	9.6728 63136
CC03_08-118	19 09	22	99.476 16553	1.4713 89646	17.763 84535	45.255 47445	71.729 95781	123.80 95238	83.908 04598	202.61 43791	279.31 03448	396.32 54593	578.82 35294	833.73 49398	1161.1 11111	1502.4 19355	1828.9 47368	1243.0 06823	9.0267 40238	137.70 27354	0.5141 0479	0.6221 50299
CC03_08-109	18 42	22	99.185 66775	0.4059 9455	13.145 24556	9.2700 72993	18.959 21238	51.818 18182	46.091 95402	83.071 89542	106.55 17241	153.01 83727	219.29 41176	324.49 7992	493.33 33333	701.20 96774	961.84 21053	2369.1 01024	11.578 42975	204.61 33263	0.6834 00217	2.9001 64867
CC03_08-149	18 61	26	99.140 24718	0.1280 65395	8.6415 88297	3.3649 63504	7.1308 01688	21.818 18182	12.643 67816	48.431 37255	77.413 7931	124.40 94488	195.52 94118	295.18 07229	408.33 33333	558.06 45161	702.36 84211	5484.4 51288	14.502 34392	378.17 68878	0.3599 64651	5.4421 58847

CC03_08-146	1853	23	99.13653535	0.509536785	11.52560084	16.35036496	35.58368495	117.7489177	77.01149425	194.444444	241.3793103	323.0971129	429.4117647	529.7188755	677.222222	800	977.6315789	1918.667323	5.027819549	381.6102198	0.493357666	1.534120922
CC03_08-98	1753	27	99.08727895	0.359673025	24.38871473	9.781021898	19.26863572	48.05194805	35.86206897	94.77124183	128.2758621	192.9133858	295.7647059	428.1124498	625.2777778	826.2096774	1063.157895	2955.901116	11.21814882	263.4927708	0.502188321	4.912147713
CC03_08-43	1737	23	98.90616005	1.166212534	24.4200627	33.06569343	59.91561181	117.2727273	89.31034483	158.496732	206.2068966	279.7900262	399.5294118	546.184739	741.1111111	956.0483871	1200	1028.971963	7.571134021	135.9072445	0.647717445	1.338232286
CC03_08-150	1863	24	98.65807837	0.604904632	17.43991641	16.13138686	29.67651195	67.96536797	50.57471264	101.6339869	136.0344828	191.0761155	278.5882353	393.9759036	530	691.1290323	857.1052632	1416.926268	8.433254358	168.016546	0.596402182	1.988904088
CC03_08-137	1825	28	98.63013699	0.166212534	11.15987461	6.715328467	14.76793249	48.48484848	27.93103448	97.05882353	152.4137931	233.5958005	364.7058824	500.4016064	700	891.1290323	1068.421053	6428.041415	11.00797448	583.9440694	0.383816542	3.654639071
CC03_08-36	1770	36	98.36158192	0.185286104	8.54754441	1.408759124	3.600562588	17.96536797	7.816091954	62.74509804	106.5517241	193.175853	322.3529412	486.746988	694.444444	912.0967742	1147.368421	6192.414861	18.28618421	338.638985	0.193682241	15.50737349
CC03_08-154	2444	26	97.66775777	0.376021798	15.45454545	9.781021898	18.42475387	39.39393939	32.75862069	62.09150327	75	112.5984252	174.5882353	269.4779116	433.3333333	651.6129032	961.5789474	2557.242563	15.48648199	165.1274036	0.645582654	2.976387478
CC03_08-50	1774	21	97.40698985	2.234332425	36.46812957	52.55474453	102.6722925	181.8181818	158.6206897	287.5816993	367.2413793	496.0629921	701.1764706	957.0281124	1294.444444	1673.387097	2089.473684	935.1668806	7.265669856	128.7103459	0.675844609	1.355635365
CC03_08-86	1773	23	96.78510998	0.588555858	23.60501567	15.18248175	33.33333333	91.34199134	79.31034483	180.7189542	268.9655172	411.023622	605.8823529	887.1485944	1258.333333	1641.129032	2086.842105	3545.699318	11.54744456	307.0548899	0.583033663	3.413481102
CC03_08-138	2510	16	96.57370518	0.247956403	17.28317659	7.664233577	14.90857947	40.86580087	30.22988506	71.89542484	97.4137931	151.9685039	219.7647059	317.6706827	449.1666667	610.8870968	782.6315789	3156.327357	10.88569378	289.9518782	0.536175177	4.386542769
CC03_08-132	2425	22	96	1.662125341	29.57157785	46.71532847	81.57524613	156.7099567	124.137931	209.1503268	255.1724138	330.7086614	436.4705882	576.3052209	836.1111111	1093.145161	1394.736842	839.1285591	6.668585526	125.8330655	0.678608401	1.105386298
CC03_08-64	2457	25	95.97069597	6.485013624	77.11598746	170.8029197	281.2939522	444.5887446	357.4712644	456.8627451	455.1724138	434.9081365	407.0588235	412.0481928	455.5555556	522.1774194	549.2105263	84.6891862	1.202134628	70.44900313	0.7931015	0.743556952
CC03_08-57	1757	22	95.95902106	4.495912807	64.99477534	137.2262774	226.4416315	359.3073593	280.4597701	392.1568627	413.7931034	482.9396325	554.1176471	681.5261044	886.1111111	1110.887097	1355.263158	301.4433812	3.455921053	87.22519311	0.746435457	0.781556102
CC03_08-130	1766	25	95.18686297	0.542234332	39.32079415	24.37956204	58.50914205	197.4025974	170	285.620915	341.0344828	395.5380577	487.5294118	613.6546185	821.9444444	1089.516129	1302.631579	2402.340651	4.560700951	526.7481197	0.703899482	3.870741878
CC03_08-72	1785	19	95.07002801	20.16348774	40.33437827	34.67153285	50.91420534	125.1082251	100	187.9084967	232.7586207	293.4383202	390.5882353	519.2771084	680.5555556	872.5806452	1097.368421	54.42354196	5.839908467	9.319245716	0.638943501	1.70831617
CC03_08-121	1906	19	94.12381952	0.719346049	21.63009404	27.59124088	63.15049226	212.1212121	174.7126437	382.3529412	475.862069	585.3018373	721.1764706	887.5502008	1172.22222	1411.290323	1668.421053	2319.358054	4.363562753	531.5285205	0.587788864	1.79429019

CC03_08-83	18 24	30	93.530 70175	1.3514 98638	18.119 12226	41.824 81752	77.777 77778	187.01 2987	147.70 11494	285.29 41176	383.79 31034	514.17 32283	690.58 82353	940.96 38554	1269.4 44444	1617.3 3871	2000	1479.8 3871	7.0103 09278	211.09 46395	0.6254 45385	0.8056 09495
CC03_08-127	19 38	33	93.034 05573	0.4577 65668	10.658 30721	10.437 9562	21.659 63432	87.012 98701	95.402 29885	136.60 13072	151.72 41379	162.72 96588	185.88 23529	228.91 56627	300	396.37 09677	489.47 36842	1069.2 66917	3.5832 28406	298.40 8808	0.8532 75496	2.1188 9001
CC03_08-117	17 91	25	92.964 82412	1.0190 73569	36.280 0418	31.605 83942	67.088 60759	165.36 79654	131.72 41379	252.28 75817	312.41 37931	418.37 27034	572.94 11765	745.38 15261	971.94 44444	1165.7 25806	1502.6 31579	1474.5 07458	5.9560 26725	247.56 56216	0.6307 78827	2.4365 86865
CC03_08-124	18 33	23	92.853 24604	5.8310 6267	39.080 45977	92.700 72993	152.46 13221	285.71 42857	218.39 08046	413.07 18954	513.79 31034	701.04 98688	956.47 05882	1258.6 34538	1630.5 55556	2010.8 87097	2384.2 10526	408.88 09641	5.7719 02065	70.839 89982	0.6250 57594	0.6933 50828
CC03_08-27	18 12	31	92.660 04415	1.9618 52861	15.673 98119	11.824 81752	20.815 75246	61.904 7619	67.816 09195	160.13 0719	193.10 34483	254.59 31759	358.82 35294	467.46 98795	661.11 11111	830.64 51613	1047.3 68421	533.86 69591	6.5407 08915	81.622 18591	0.6108 58154	2.3333 64258
CC03_08-97	18 73	22	92.151 6284	1.1062 6703	21.577 84744	31.678 83212	64.416 31505	159.74 02597	112.29 88506	241.50 3268	303.96 55172	386.35 1706	501.17 64706	646.18 4739	847.5	1071.7 74194	1339.4 73684	1210.8 0503	5.5463 99829	218.30 46782	0.5597 54079	1.3850 50699
CC03_08-100	17 88	25	91.722 59508	5.1771 11717	42.946 70846	57.372 26277	99.296 76512	215.15 15152	174.71 26437	260.78 43137	303.44 82759	365.87 92651	449.41 17647	549.39 75904	733.33 33333	954.03 22581	1115.7 89474	215.52 35457	4.2785 91215	50.372 54902	0.7341 85716	1.2955 70429
CC03_08-88	18 09	23	90.934 2178	0.7220 70845	59.770 11494	30.364 9635	71.308 01688	242.42 42424	209.19 54023	346.40 52288	420.68 96552	493.43 83202	645.88 23529	799.19 67871	1058.3 33333	1346.7 74194	1642.1 05263	2274.1 60874	4.7404 1708	479.73 85621	0.7105 46644	4.6225 0003
CC03_08-65	18 05	26	90.470 91413	1.7084 46866	21.630 09404	48.102 18978	88.607 59494	193.50 64935	180.45 97701	298.69 28105	398.27 58621	485.56 43045	634.11 76471	819.27 71084	1088.8 88889	1310.4 83871	1578.9 47368	924.20 04533	5.2861 91408	174.83 29529	0.7332 79258	0.8283 22887
CC03_08-111	17 95	27	90.027 85515	2.5095 36785	71.473 35423	71.167 88321	125.73 83966	251.51 51515	193.10 34483	298.69 28105	320.51 72414	398.16 27297	502.35 29412	636.14 45783	865.27 77778	1083.0 64516	1326.3 15789	528.51 02006	4.4404 00783	119.02 30852	0.7019 28949	1.7743 69178
CC03_09-180	17 09	28	105.55 88063	0.1171 66213	14.169 279	3.1386 86131	8.1575 24613	54.545 45455	17.586 2069	80.065 35948	213.79 31034	272.70 34121	391.64 70588	634.53 81526	996.66 66667	1666.5 32258	1863.1 57895	15901. 83599	23.270 46187	683.34 85332	0.2612 8966	11.733 03504
CC03_09-168	18 46	21	105.03 79198	2.7520 43597	18.557 99373	5.7737 22628	12.292 54571	45.541 12554	26.551 72414	149.01 96078	211.03 44828	338.84 51444	514.11 76471	715.66 26506	938.88 88889	1150	1421.0 52632	516.36 26889	9.5360 1108	54.148 70899	0.2729 40214	6.8432 28205
CC03_09-170	18 39	17	104.13 26808	#VALU E!	6.6353 18704	0.7007 29927	2.1237 69339	12.857 14286	4.2758 62069	53.725 4902	88.448 27586	160.62 99213	272.11 76471	405.22 08835	583.05 55556	738.30 64516	961.57 89474	#VALU E!	17.898 00231	#VALU E!	0.1284 37758	28.699 0686
CC03_09-43	17 70	28	103.55 9322	#VALU E!	20.637 40857	0.5547 44526	1.9971 8706	11.645 02165	6.5977 01149	47.026 14379	78.275 86207	137.53 28084	240.82 35294	367.87 14859	549.44 44444	726.61 29032	939.73 68421	#VALU E!	19.983 28518	#VALU E!	0.2249 04384	133.93 30798
CC03_09-181	17 35	18	103.22 76657	4.6594 00545	31.243 46917	6.2043 79562	9.2827 00422	47.186 14719	8.5057 47126	47.745 09804	175.51 72414	220.47 24409	323.29 41176	563.45 38153	972.22 22222	2015.7 25806	2094.7 36842	449.57 21761	43.873 33838	10.247 04736	0.1791 98052	7.5341 95205
CC03_09-202	18 52	21	102.26 78186	0.3351 49864	12.131 66144	4.9781 0219	11.209 56399	39.307 35931	42.528 73563	86.928 10458	123.96 55172	188.45 14436	295.41 17647	442.97 18876	627.22 22222	910.88 70968	1226.3 15789	3659.0 07274	14.107 24179	259.37 08486	0.6738 00124	5.4875 86609

CC03_09-164	1779	20	100.1124227	0.561307902	12.22570533	16.93430657	33.89592124	60.17316017	29.65517241	102.6143791	171.5517241	326.2467192	580	900	1327.77778	1841.129032	2339.473684	4167.897292	22.79869259	182.8129957	0.364342044	1.445062165
CC03_09-58	1738	28	99.8849252	0.735694823	22.57053292	29.9270073	52.03938115	65.8008658	40.22988506	87.58169935	117.2413793	193.175853	306.8235294	490.3614458	706.1111111	935.483871	1168.421053	1588.187135	13.34092694	119.0462358	0.524569204	1.311436774
CC03_09-99	1838	24	99.78237214	0.03133515	7.607105538	0.166423358	0.571026723	5.497835498	1.436781609	26.47058824	52.93103448	110.2362205	199.2941176	330.5220884	500.277778	691.1290323	876.3157895	2796.590389	33.10526316	844.7570332	0.089887548	156.8365624
CC03_09-66	1763	38	99.77311401	0.250681199	37.25182863	11.02189781	24.61322082	56.70995671	40.57471264	81.04575163	101.2068966	146.7191601	226.4705882	342.9718876	493.6111111	693.5483871	920	3670	11.3516129	323.3020745	0.589082124	7.547502822
CC03_09-84	2547	31	99.72516686	0.122615804	22.25705329	2.664233577	7.35583685	36.36363636	19.1954023	105.5555556	165.5172414	249.343832	387.0588235	550.208032	763.8888889	987.9032258	1297.368421	10580.76023	12.29085873	860.8641975	0.270511719	23.0650903
CC03_09-228	1749	21	99.71412236	0.100817439	21.43155695	5.218978102	13.83966245	44.97835498	23.10344828	71.56862745	112.2413793	193.9632546	341.1764706	536.9477912	785.277778	1082.258065	1402.894737	1391.519915	19.60209084	709.8834128	0.396465834	10.88950832
CC03_09-144	2322	17	99.65546942	0.158038147	14.89028213	8.321167883	19.26863572	47.61904762	21.72413793	91.50326797	141.2068966	233.0708661	363.1764706	550.6024096	754.1666667	947.1774194	1139.473684	7210.117967	12.45281955	578.9948163	0.312302708	4.14367156
CC03_09-123	1812	23	99.61368653	0.117166213	5.506792059	4.445255474	12.23628692	35.10822511	20.22988506	107.5163399	171.7241379	290.5511811	491.7647059	687.9518072	981.3888889	1239.516129	1591.842105	13586.18727	14.80558311	917.6394589	0.283680235	3.410003921
CC03_09-121	1862	41	99.57035446	0.133514986	21.49425287	1.562043796	2.953586498	14.11255411	11.22988506	28.66013072	34.65517241	43.22834646	56.82352941	68.19277108	83.61111111	100.1209677	127.8947368	957.905478	4.462461742	214.6585301	0.525096103	26.01870251
CC03_09-46	1804	21	99.55654102	0.245231608	11.18077325	12.84671533	23.48804501	36.7965368	21.72413793	50	73.96551724	131.496063	233.5294118	363.4538153	528.8888889	739.516129	921.3157895	3756.921053	18.42631579	203.8888889	0.500576146	1.591235682
CC03_09-60	1794	33	99.55406912	0.029155313	13.17659352	1.350364964	3.952180028	14.32900433	15.49425287	36.20915033	56.72413793	86.87664042	138.5882353	226.1044177	361.3888889	559.2741935	815.2631579	2796.276439	22.51539046	1241.940016	0.613170504	28.55864155
CC03_09-151	1823	35	99.50630828	0.009809264	6.081504702	0.343065693	1.125175809	6.017316017	2.425287356	29.50980392	57.4137931	108.6614173	200.1176471	320.0803213	472.5	650.8064516	836.8421053	8531.140351	28.35810456	3008.360566	0.136531605	58.1402442
CC03_09-267	1966	26	99.4404883	0.138964578	7.523510972	6.452554745	17.73558368	46.58008658	18.04597701	92.74509804	139.6551724	222.3097113	351.1764706	518.875502	763.6111111	1013.306452	1298.684211	9345.433437	14.00272616	667.4009996	0.259048313	3.204812669
CC03_09-55	1921	37	99.37532535	0.063760218	2.530825496	1.554744526	6.005625879	31.16883117	2.827586207	117.9738562	180.3448276	307.0866142	473.0588235	693.5742972	917.5	1206.854839	1497.631579	23488.49528	12.69460563	1850.273728	0.037917866	6.287853329
CC03_09-68	1886	20	99.36373277	0.239782016	4.764890282	12.62773723	28.69198312	69.6969697	42.87356322	109.8039216	174.6551724	301.0498688	461.1764706	659.8393574	894.4444444	1143.951613	1381.578947	5761.812201	12.58223684	457.9322638	0.477697497	0.857358385
CC03_09-230	1747	22	99.31310819	0.395095368	10.90909091	17.73722628	31.50492264	55.84415584	31.6091954	83.33333333	137.5862069	239.8950131	414.5882353	645.3815261	930.8333333	1244.354839	1555.263158	3936.424682	18.66315789	210.9195402	0.454228562	1.092434899

CC03_09-30	18 43	23	99.294 62832	0.1307 90191	7.9937 30408	5.3284 67153	10.829 81716	29.870 12987	16.551 72414	65.686 27451	119.82 75862	213.12 33596	378.11 76471	583.93 5743	850.27 77778	1141.9 35484	1450.5 26316	11090. 48246	22.082 63943	502.22 63072	0.3464 28358	3.0490 60459
CC03_09-209	17 93	23	99.274 95817	0.0681 19891	18.004 17973	2.4817 51825	5.7665 2602	24.675 32468	10.689 65517	64.052 28758	112.06 89655	224.14 69816	397.64 70588	648.19 27711	961.11 11111	1334.6 77419	1747.3 68421	25651. 36842	27.280 34372	940.28 75817	0.2409 5442	16.856 6355
CC03_09-154	18 22	23	99.176 72887	0.1498 6376	5.1201 67189	7.3722 62774	15.611 81435	53.246 75325	24.137 93103	106.20 91503	182.75 86207	304.46 19423	540	817.26 90763	1194.4 44444	1616.9 35484	2086.8 42105	13924. 92823	19.648 42105	708.70 4694	0.3027 53683	1.4707 4001
CC03_09-81	18 36	35	99.128 54031	0.4550 40872	19.540 22989	16.861 31387	33.755 27426	55.844 15584	32.183 90805	85.620 91503	129.65 51724	212.07 34908	343.88 23529	524.49 7992	756.94 44444	966.53 22581	1287.8 94737	2830.2 83643	15.041 82403	188.16 0933	0.4550 08545	2.3200 02668
CC03_09-113	18 74	39	98.932 76414	1.4986 37602	3.8975 96656	1.5109 48905	2.6019 69058	13.419 91342	6.3333 33333	63.071 89542	109.65 51724	214.43 56955	361.17 64706	510.04 01606	716.66 66667	879.03 22581	1107.8 94737	739.26 79426	17.565 58495	42.086 15567	0.1655 95073	4.4422 13883
CC03_09-92	17 74	29	98.872 60428	0.1580 38147	40.752 3511	6.3503 64964	17.158 93108	77.922 07792	65.517 24138	94.771 24183	106.89 65517	199.47 50656	375.29 41176	651.40 56225	1150	1778.2 25806	2539.4 73684	16068. 73866	26.795 82577	599.67 32026	0.7587 69841	17.339 85767
CC03_09-171	17 37	34	98.848 58952	0.3787 46594	13.573 66771	14.890 51095	30.379 74684	60.606 06061	30.689 65517	95.098 03922	137.93 10345	235.95 80052	374.11 76471	555.82 32932	755.55 55556	979.83 87097	1231.5 78947	3251.7 22832	12.950 62398	251.08 61899	0.3942 04844	1.8597 82527
CC03_09-221	17 69	31	98.812 88864	1.1362 39782	49.947 7534	34.306 56934	63.291 13924	73.593 07359	51.609 1954	86.601 30719	113.79 31034	187.13 91076	317.64 70588	496.78 71486	738.88 88889	1067.3 3871	1418.4 21053	1248.3 46586	16.378 74876	76.217 45741	0.6443 32156	2.6859 89375
CC03_09-82	17 74	29	98.759 86471	0.2697 54768	10.877 74295	8.0656 93431	22.925 4571	65.844 15584	14.597 70115	164.05 22876	233.10 34483	366.92 91339	555.76 47059	771.08 43373	969.44 44444	1189.5 16129	1447.6 31579	5366.4 72621	8.8242 08429	608.15 34297	0.1269 9371	3.8333 04983
CC03_09-232	18 33	25	98.745 2264	0.8256 13079	10.783 69906	8.1751 82482	18.002 81294	58.008 65801	25.632 18391	139.21 56863	223.79 31034	390.55 11811	640	948.99 59839	1291.6 66667	1614.5 16129	1989.4 73684	2409.6 92548	14.290 58562	168.62 09797	0.2599 29209	2.9047 79811
CC03_09-77	18 39	35	98.531 81077	0.3950 95368	15.715 77847	0.9124 08759	1.9831 22363	11.125 54113	2.9425 28736	42.254 90196	67.068 96552	117.06 03675	195.76 47059	292.77 10843	408.61 11111	543.14 51613	697.89 47368	1766.3 95644	16.516 30236	106.94 86139	0.1102 47445	37.437 47233
CC03_09-203	17 63	34	98.525 24107	0.0659 40054	11.494 25287	4.3795 62044	11.251 75809	38.095 2381	25.862 06897	87.581 69935	136.37 93103	240.94 48819	380	570.68 27309	797.22 22222	1060.4 83871	1384.2 10526	20991. 95302	15.804 79183	1328.2 01804	0.4115 64277	6.7427 92067
CC03_09-72	17 78	30	98.368 95388	57.220 70845	65.830 721	66.423 35766	80.168 77637	112.12 12121	47.586 2069	124.50 98039	163.10 34483	252.23 09711	394.11 76471	575.90 36145	802.77 77778	1006.8 54839	1302.6 31579	22.765 03759	10.462 0804	2.1759 57049	0.4021 97545	1.1961 681
CC03_09-48	17 50	36	98.342 85714	0.1852 86104	30.104 49321	7.8102 18978	17.299 57806	40.519 48052	25.747 12644	68.627 45098	100	168.24 14698	262.11 76471	394.77 91165	567.22 22222	770.56 45161	984.73 68421	5314.6 82663	14.349 02256	370.38 63899	0.4717 8837	8.5376 90559
CC03_09-118	18 15	27	98.236 9146	1.8256 13079	28.317 65935	70.072 9927	113.92 40506	148.05 19481	87.356 32184	135.29 41176	160.51 72414	263.77 95276	432.94 11765	648.19 27711	965	1252.4 19355	1636.8 42105	896.59 8586	12.098 39817	74.108 86743	0.6166 05151	0.6570 09183
CC03_09-262	18 17	27	98.073 74794	0.2070 84469	7.9101 35841	9.8832 11679	20.478 19972	41.471 86147	21.839 08046	82.516 33987	133.44 82759	234.64 56693	405.76 47059	614.05 62249	899.44 44444	1239.1 12903	1521.0 52632	7345.0 83102	18.433 3507	398.46 70623	0.3522 76753	1.6583 62702

CC03_09-157	1859	25	91.76976869	6.130790191	88.81922675	240.8759124	406.4697609	441.5584416	262.0689655	297.3856209	300	393.7007874	563.5294118	819.2771084	1133.333333	1483.870968	1836.842105	299.6093567	6.176633892	48.50689906	0.709306641	0.622226473
CC03_09-110	1808	27	91.31637168	0.994550409	48.38035528	51.82481752	105.4852321	227.7056277	151.7241379	227.777778	279.3103448	356.4304462	528.2352941	735.3413655	1022.22222	1326.612903	1726.315789	1735.775054	7.578947368	229.0258752	0.666211485	1.900138041
CC03_09-44	1799	20	91.21734297	0.891008174	19.12225705	41.02189781	87.6230661	203.4632035	128.7356322	205.2287582	237.9310345	335.6955381	529.4117647	778.7148594	1100	1467.741935	1805.263158	2026.090455	8.79634596	230.3331934	0.62998857	0.995694484
CC03_09-88	2037	19	91.2125675	2.04359673	35.94566353	74.52554745	155.9774965	298.7012987	197.7011494	287.254902	316.2068966	431.496063	617.6470588	892.7710843	1202.77778	1568.548387	1902.631579	931.0210526	6.623495599	140.5633987	0.674798387	1.009480886
CC03_09-256	1801	29	91.17157135	0.604904632	40.94043887	27.08029197	59.77496484	130.7359307	84.71264368	157.8431373	204.4827586	296.5879265	460	655.4216867	950	1250	1560.526316	2579.789	9.886564237	260.9388801	0.58710179	3.337068629
CC03_09-64	2068	15	90.66731141	0.288828338	7.178683386	13.35766423	31.7862166	83.98268398	46.66666667	151.6339869	222.4137931	366.6666667	586.9411765	895.9839357	1346.944444	1842.33871	2352.631579	8145.431976	15.51519964	524.996917	0.39612364	1.278858789
CC03_09-192	1750	21	90.65142857	1.291553134	31.11807732	54.45255474	114.7679325	193.9393939	114.9425287	245.751634	300.862069	448.5564304	655.0588235	908.4337349	1222.5	1518.548387	1877.105263	1453.370531	7.638220885	190.2760542	0.522833178	1.204472234
CC03_09-91	1833	20	90.61647572	2.697547684	41.79728318	98.54014599	198.3122363	306.0606061	182.7586207	292.1568627	319.8275862	454.855643	669.4117647	918.875502	1244.444444	1584.274194	1886.842105	699.4657097	6.458318615	108.3046148	0.611010645	0.853632935
CC03_09-193	2386	20	90.36043588	2.207084469	88.40125392	95.10948905	185.0914205	337.2294372	230.8045977	321.2418301	330.1724138	457.7427822	670.5882353	981.5261044	1455.555556	2016.129032	2678.947368	1213.794672	8.339347861	145.5503107	0.701031645	1.808826936
CC03_09-41	1804	22	90.29933481	1.553133515	45.97701149	64.23357664	130.8016878	245.8874459	168.9655172	195.0980392	179.4827586	222.3097113	312.9411765	439.7590361	650.555556	899.5967742	1100	708.245614	5.638190955	125.6157551	0.766308747	1.457571529
CC03_09-117	1813	24	90.29233315	0.659400545	20.58516196	27.95620438	61.32208158	120.3463203	82.87356322	146.7320261	175.3448276	259.5800525	403.4117647	559.8393574	792.777778	1006.048387	1261.842105	1913.620052	8.599636619	222.523362	0.620593652	1.615157072
CC02_10-224	1857	30	104.7388261	#VALU E!	12.24660397	0.708029197	2.812939522	15.97402597	2.655172414	63.39869281	112.9310345	192.6509186	322.8235294	465.4618474	652.5	836.2903226	1038.684211	#VALU E!	16.38336951	#VALU E!	0.066903905	68.71851006
CC02_10-155	1772	23	104.4582393	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	502.0080321	#VALU E!	1004.032258	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-245	1849	17	103.4613304	0.14986376	11.52560084	6.204379562	11.71589311	21.6017316	9.83908046	53.23529412	86.03448276	158.5301837	267.4117647	396.7871486	577.5	772.5806452	1003.157895	6693.799043	18.84384996	355.2245989	0.26294686	3.507860049
CC02_10-246	1847	30	103.3567948	#VALU E!	6.948798328	#VALU E!	1.29395218	9.393939394	3.816091954	45.29411765	82.4137931	155.9055118	255.6470588	404.4176707	590	818.1451613	1076.842105	#VALU E!	23.77443609	#VALU E!	0.139558513	#VALU E!
CC02_10-255	1764	38	103.3446712	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	125.7217848	208.5882353	315.6626506	443.8888889	604.8387097	791.0526316	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!

CC02_10-70	17 37	33	103.16 63788	0.0269 75477	12.654 12748	0.3248 17518	1.0829 81716	8.7012 98701	2.0804 5977	36.241 83007	71.896 55172	140.94 48819	242	378.31 3253	576.66 66667	775	988.15 78947	36631. 71186	27.265 6732	1343.5 10266	0.0925 81884	129.88 96188				
CC02_10-42	18 62	21	102.68 52846	0.1961 85286	3.5005 22466	7.8832 11679	13.783 40366	31.168 83117	16.666 66667	94.444 44444	181.20 68966	359.84 25197	636.47 05882	1002.0 08032	1394.4 44444	1903.6 29032	2473.6 84211	12608. 91813	26.191 95046	481.40 4321	0.2653 64733	0.7763 95425				
CC02_10-2	21 52	21	102.50 92937	14.713 89646	22.048 06688	#VALU E!	#VALU E!	#VALU E!	#VALU E!	89.869 28105	137.93 10345	232.02 09974	362	516.06 4257	737.77 77778	987.5	1198.4 21053	81.448 24561	13.335 15789	6.1077 82619	#VALU E!	#VALU E!				
CC02_10-46	25 09	29	102.35 15345	#VALU E!	21.253 9185	#VALU E!	#VALU E!	#VALU E!	#VALU E!	87.581 69935	137.58 62069	219.16 0105	330.70 58824	493.57 42972	672.77 77778	911.69 35484	1252.8 94737	#VALU E!	14.305 43991	#VALU E!	#VALU E!	#VALU E!				
CC02_10-220	17 82	46	102.18 85522	156.94 82289	143.15 56949	131.38 68613	122.36 28692	98.701 2987	28.275 86207	145.75 1634	184.48 27586	280.57 74278	440.47 05882	593.17 26908	795.83 33333	1004.8 3871	1268.4 21053	8.0817 79971	8.7026 19778	0.9286 60585	0.2313 39929	1.0147 39124				
CC02_10-69	17 57	29	102.16 27775	0.2752 0436	23.406 47858	10.145 9854	24.753 86779	52.380 95238	25.287 35632	73.202 61438	105.34 48276	187.92 65092	310.58 82353	467.46 98795	691.66 66667	971.77 41935	1221.0 52632	4436.8 94216	16.680 45113	265.99 36582	0.4027 176	5.6284 74223				
CC02_10-50	17 67	32	102.15 05376	#VALU E!	25.015 67398	#VALU E!	#VALU E!	#VALU E!	#VALU E!	56.666 66667	90.517 24138	150.91 86352	260.11 76471	403.61 44578	600.55 55556	839.91 93548	1125	#VALU E!	19.852 94118	#VALU E!	#VALU E!	#VALU E!				
CC02_10-228	17 33	22	102.01 96192	1.9891 00817	40.647 85789	89.781 0219	189.87 34177	270.99 5671	157.47 12644	185.94 77124	198.96 55172	247.24 40945	368.94 11765	518.07 22892	718.05 55556	960.08 06452	1176.3 15789	591.38 06777	6.3260 56794	93.483 302	0.6892 3753	0.9574 86684				
CC02_10-184	25 00	17	101.88	0.4332 42507	38.035 52769	18.175 18248	36.427 56681	56.709 95671	37.931 03448	86.601 30719	119.48 27586	191.07 61155	300.70 58824	441.36 54618	646.38 88889	877.82 25806	1161.5 78947	2681.1 28765	13.412 94935	199.89 10675	0.5293 51754	4.1943 24713				
CC02_10-13	17 87	51	101.84 66704	0.3297 00272	12.633 22884	14.452 55474	34.036 56821	65.800 8658	29.310 34483	104.57 51634	141.55 17241	231.75 85302	376.47 05882	544.57 83133	741.66 66667	967.74 19355	1228.9 47368	3727.4 68465	11.751 80921	317.18 25204	0.3440 66533	2.0585 94851				
CC02_10-154	17 66	23	101.81 20045	#VALU E!	23.866 24869	#VALU E!	#VALU E!	#VALU E!	#VALU E!	50.130 71895	98.103 44828	181.36 48294	321.52 94118	489.95 98394	731.11 11111	992.33 87097	1272.6 31579	#VALU E!	25.386 26227	#VALU E!	#VALU E!	#VALU E!				
CC02_10-37	18 39	21	101.79 44535	#VALU E!	8.7251 82863	0.4087 59124	1.2376 9339	10.173 16017	1.4597 70115	49.281 04575	90.517 24138	170.60 36745	283.88 23529	434.53 81526	600.55 55556	791.53 22581	994.47 36842	#VALU E!	20.179 63842	#VALU E!	0.0491 05697	64.632 75814				
CC02_10-241	18 60	33	101.72 04301	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	137.17 64706	208.03 21285	304.16 66667	436.69 35484	565.78 94737	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!			
CC02_10-73	19 05	33	101.62 72966	#VALU E!	14.796 23824	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	107.61 15486	206.35 29412	339.75 90361	535	786.29 03226	1055.2 63158	#VALU E!	#VALU E!	#VALU E!	#VALU E!			
CC02_10-218	17 92	32	101.61 83036	#VALU E!	8.6938 34901	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	38.071 89542	78.620 68966	148.81 88976	274.82 35294	428.11 24498	616.66 66667	830.24 19355	1064.4 73684	#VALU E!	27.959 5663	#VALU E!	#VALU E!	#VALU E!
CC02_10-106	17 38	22	101.61 10472	#VALU E!	14.932 07941	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	151.44 35696	260.11 76471	377.10 84337	523.61 11111	700.40 32258	887.10 52632	#VALU E!	#VALU E!	#VALU E!	#VALU E!			

CC02_10-147	1755	30	101.5954416	2.779291553	8.850574713	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	43.27586207	87.27034121	156.5882353	248.9959839	368.0555556	504.0322581	663.9473684	238.8908669	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-233	2388	17	101.4656616	0.092643052	16.38453501	4.817518248	9.563994374	16.1038961	4.137931034	55.45751634	95.34482759	172.1784777	288.3529412	438.5542169	608.0555556	784.6774194	964.7368421	10413.48297	17.39596191	598.6149558	0.115646992	6.751910794
CC02_10-125	2533	25	101.4607185	0.14986376	7.115987461	0.591240876	1.603375527	10.43290043	5.781609195	37.15686275	62.93103448	117.0603675	184.5882353	283.935743	406.1111111	563.7096774	733.4210526	4893.91866	19.73850854	247.9376114	0.242977011	32.6393515
CC02_10-55	1836	22	101.3616558	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	522.983871	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-257	2500	31	101.36	122.6158038	185.9979101	204.379562	212.3769339	164.5021645	25.17241379	192.8104575	218.9655172	320.2099738	481.1764706	686.3453815	916.6666667	1197.580645	1568.421053	12.79134503	8.134522748	1.572476398	0.140898542	0.945671896
CC02_10-223	1873	33	101.3347571	#VALU E!	5.26645768	#VALU E!	#VALU E!	38.26839827	#VALU E!	126.7973856	201.7241379	322.3097113	501.1764706	695.9839357	900.2777778	1177.822581	1428.947368	#VALU E!	11.26953337	#VALU E!	#VALU E!	#VALU E!
CC02_10-98	1755	19	101.3105413	#VALU E!	14.4723093	#VALU E!	#VALU E!	#VALU E!	#VALU E!	45.81699346	89.82758621	170.3412073	302.9411765	480.3212851	704.1666667	957.6612903	1229.210526	#VALU E!	26.82870336	#VALU E!	#VALU E!	#VALU E!
CC02_10-129	1857	21	101.1308562	0.070844687	7.993730408	4.671532847	11.95499297	34.1991342	14.59770115	55.88235294	77.06896552	115.7480315	177.0588235	267.0682731	379.1666667	520.5645161	662.6315789	9353.299595	11.85761773	788.800905	0.324099915	4.379051056
CC02_10-36	2515	31	101.1133201	#VALU E!	22.83176594	#VALU E!	#VALU E!	#VALU E!	#VALU E!	38.95424837	60.17241379	107.3490814	172.7058824	257.4297189	374.1666667	521.3709677	702.8947368	#VALU E!	18.04410986	#VALU E!	#VALU E!	#VALU E!
CC02_10-230	1904	28	101.1029412	#VALU E!	14.73354232	0.518248175	1.856540084	10.86580087	1.931034483	41.4379085	69.13793103	120.9973753	203.1764706	315.2610442	456.1111111	584.6774194	750.2631579	#VALU E!	18.10571974	#VALU E!	0.073839294	101.8441158
CC02_10-3	1816	23	101.1013216	0.019073569	7.62800418	0.569343066	1.786216596	10.64935065	2.609195402	61.60130719	116.0344828	228.0839895	397.4117647	598.3935743	868.0555556	1137.903226	1430	74972.85714	23.2137931	3229.668534	0.072226205	42.03363721
CC02_10-151	1786	23	101.0638298	3.188010899	5.538140021	#VALU E!	#VALU E!	#VALU E!	#VALU E!	77.7777778	223.1034483	507.6115486	1045.882353	1840.160643	3147.22222	4762.096774	6352.631579	1992.663068	81.67669173	24.39696106	#VALU E!	#VALU E!
CC02_10-171	1878	21	101.0117146	0.288828338	9.435736677	12.26277372	25.3164557	#VALU E!	#VALU E!	46.07843137	65	107.6115486	181.2941176	312.8514056	485.8333333	665.3225806	841.3157895	2912.857498	18.25834267	159.5357011	#VALU E!	1.588551459
CC02_10-26	1779	26	100.955593	#VALU E!	4.848484848	#VALU E!	#VALU E!	#VALU E!	#VALU E!	46.66666667	128.6206897	309.7112861	634.1176471	1147.389558	1961.11111	2895.16129	3992.105263	#VALU E!	85.54511278	#VALU E!	#VALU E!	#VALU E!
CC02_10-64	1785	35	100.952381	0.449591281	14.73354232	16.86131387	29.95780591	34.63203463	19.08045977	47.05882353	69.31034483	117.847769	195.6470588	291.9678715	433.6111111	580.6451613	727.6315789	1618.429027	15.46217105	104.6702317	0.467138189	1.552509807
CC02_10-196	1893	26	100.9508716	1.141689373	13.09299896	37.51824818	76.37130802	96.53679654	59.54022989	60.45751634	57.4137931	64.56692913	76.23529412	101.6064257	151.1111111	191.9354839	249.4736842	218.5127497	4.126429587	52.95443555	0.758501742	0.710369421

CC02_10-226	20 43	44	100.93 00049	#VALU E!	13.615 46499	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	27.931 03448	56.430 44619	108.35 29412	184.33 73494	288.88 88889	424.19 35484	617.89 47368	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	
CC02_10-213	18 77	33	100.69 25946	#VALU E!	11.556 9488	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	58.530 18373	96.941 17647	155.02 00803	234.72 22222	313.70 96774	437.89 47368	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	
CC02_10-231	17 41	23	100.68 9259	0.3269 75477	41.065 83072	12.262 77372	26.722 92546	99.134 19913	42.758 62069	240.19 60784	367.41 37931	627.03 41207	1015.2 94118	1433.7 3494	1927.7 77778	2399.1 93548	2934.2 10526	8973.7 9386	12.215 89689	734.59 96732	0.2520 17716	7.2977 19788	
CC02_10-11	20 62	20	100.63 04559	0.3923 70572	146.60 39707	20.364 9635	48.241 9128	95.670 99567	50	165.03 26797	281.89 65517	527.55 90551	964.70 58824	1613.2 53012	2458.3 33333	3254.0 32258	4113.1 57895	10482. 83991	24.923 29338	420.60 41213	0.3835 77254	17.053 08592	
CC02_10-221	19 39	25	100.61 88757	1.7602 17984	21.212 12121	70.364 9635	132.20 81575	163.20 34632	78.850 57471	197.38 56209	308.44 82759	512.86 08924	821.17 64706	1242.5 70281	1661.1 11111	2122.1 77419	2586.8 42105	1469.6 14633	13.105 52457	112.13 70323	0.4373 43104	0.5664 08053	
CC02_10-229	19 00	26	100.57 89474	#VALU E!	12.518 28631	#VALU E!	#VALU E!	9.4372 29437	#VALU E!	37.516 33987	61.034 48276	106.82 4147	184.35 29412	283.93 5743	408.33 33333	548.38 70968	693.42 10526	#VALU E!	18.483 1744	#VALU E!	#VALU E!	#VALU E!	
CC02_10-68	18 32	29	100.54 58515	0.1471 38965	7.5026 1233	7.1751 82482	19.057 66526	47.186 14719	22.758 62069	111.43 79085	180.34 48276	297.90 02625	492	724.49 7992	1025.8 33333	1363.7 09677	1727.1 05263	11737. 9191	15.498 36395	757.36 50448	0.2869 50432	2.7772 58468	
CC02_10-48	30 68	11	100.52 15124	1.2615 80381	37.199 58203	50.948 90511	99.718 70605	122.07 79221	73.908 04598	92.156 86275	101.72 41379	137.53 28084	206.47 05882	338.55 42169	526.66 66667	822.58 06452	1247.3 68421	988.73 4796	13.535 27436	73.048 74434	0.6899 72415	1.4290 41969	
CC02_10-10	18 53	21	100.48 56989	0.1226 15804	17.993 73041	5.1824 81752	12.517 58087	30.735 93074	22.413 7931	38.562 0915	47.586 2069	78.740 15748	124.35 29412	203.21 28514	318.33 33333	467.33 87097	613.68 42105	5004.9 35673	15.914 18376	314.49 52796	0.6468 81177	8.3862 16154	
CC02_10-128	19 46	35	100.41 10997	0.3079 01907	13.469 1745	12.408 75912	26.160 33755	42.857 14286	25.977 01149	54.575 1634	84.827 58621	144.35 69554	233.52 94118	365.46 18474	551.38 88889	725.80 64516	930.78 94737	3023.0 06521	17.055 18437	177.24 85395	0.5332 31994	2.2883 77213	
CC02_10-138	17 58	17	100.39 81797	0.9536 78474	44.545 45455	44.598 54015	101.68 77637	185.28 13853	113.44 82759	140.52 28758	143.62 06897	185.82 67717	272.23 52941	419.27 71084	665	951.20 96774	1260.5 26316	1321.7 5188	8.9702 57038	147.34 82726	0.6964 19841	2.2773 55369	
CC02_10-210	17 56	27	100.34 16856	#VALU E!	15.297 80564	10.138 68613	26.779 18425	55.324 67532	21.839 08046	107.84 31373	159.31 03448	264.82 93963	414.47 05882	587.95 18072	831.94 44444	1056.0 48387	1284.2 10526	#VALU E!	11.908 13397	#VALU E!	0.2676 88585	3.9853 19325	
CC02_10-137	17 66	31	100.33 97508	#VALU E!	28.380 35528	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	95.013 12336	180.23 52941	288.75 50201	446.11 11111	649.19 35484	868.42 10526	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-56	25 23	16	100.31 70828	2.3705 72207	57.784 74399	45.036 49635	88.326 30098	133.76 62338	72.068 96552	129.73 85621	173.62 06897	250.39 37008	383.64 70588	597.18 8755	853.88 88889	1140.7 25806	1415.7 89474	597.23 53297	10.912 63423	54.728 79573	0.5470 03065	2.5163 67357	
CC02_10-43	24 32	27	100.28 78289	0.5095 36785	57.366 77116	23.430 65693	56.680 73136	100.43 29004	57.816 09195	109.80 39216	123.79 31034	183.46 45669	282	459.43 7751	711.94 44444	990.32 25806	1378.9 47368	2706.2 76386	12.558 27068	215.49 75359	0.5500 09189	5.9227 98007	
CC02_10-189	18 52	23	100.26 99784	#VALU E!	9.3416 9279	#VALU E!	#VALU E!	48.225 10823	28.850 57471	126.47 05882	169.31 03448	223.88 45144	325.17 64706	422.48 99598	551.38 88889	687.09 67742	833.68 42105	#VALU E!	6.5919 21665	#VALU E!	0.3302 95197	#VALU E!	

CC02_10-253	19 15	26	100.20 88773	#VALU E!	9.0177 63845	#VALU E!	#VALU E!	#VALU E!	#VALU E!	52.287 5817	91.034 48276	143.83 2021	241.17 64706	348.99 59839	494.44 44444	633.87 09677	807.89 47368	#VALU E!	15.450 98684	#VALU E!	#VALU E!	#VALU E!
CC02_10-216	17 16	48	100.17 48252	0.2697 54768	22.591 43156	10.291 9708	24.331 92686	56.406 92641	34.827 58621	97.385 62092	128.10 34483	193.17 5853	282.47 05882	392.77 10843	540.83 33333	700.40 32258	905.26 31579	3355.8 74535	9.2956 55245	361.01 53826	0.4529 16436	5.1894 71883
CC02_10-74	17 91	28	100.16 75042	0.1961 85286	7.0219 43574	10.145 9854	22.503 51617	53.593 07359	27.471 26437	81.045 75163	122.24 13793	220.20 99738	376.94 11765	558.63 45382	853.33 33333	1122.1 77419	1399.2 10526	7132.0 86988	17.264 45246	413.10 82062	0.4080 73441	1.5350 38424
CC02_10-167	24 97	17	100.16 01922	#VALU E!	10.992 68548	#VALU E!	#VALU E!	#VALU E!	#VALU E!	34.673 20261	58.793 10345	107.34 90814	178.58 82353	275.10 04016	415.83 33333	545.16 12903	711.31 57895	#VALU E!	20.514 85689	#VALU E!	#VALU E!	#VALU E!
CC02_10-110	17 78	30	100.05 6243	0.7275 20436	16.541 27482	40.437 9562	89.732 77075	127.27 27273	60.114 94253	107.18 95425	126.72 41379	188.71 39108	296.35 29412	422.48 99598	609.44 44444	799.19 35484	1039.2 10526	1428.4 27952	9.6950 73813	147.33 54385	0.5127 89905	0.9076 98588
CC02_10-191	17 61	21	100	2.0435 9673	46.384 53501	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	269.55 38058	421.17 64706	626.10 44177	908.61 11111	1196.3 70968	1547.3 68421	757.17 89474	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-126	27 54	21	99.963 68918	0.0335 14986	22.716 82341	0.4306 56934	1.9268 63572	11.948 05195	8.7126 43678	41.078 43137	69.137 93103	124.14 69816	213.17 64706	351.80 72289	531.38 88889	778.22 58065	1129.2 10526	33692. 70432	27.489 13453	1225.6 73521	0.3286 14803	236.01 28664
CC02_10-61	20 68	34	99.951 6441	#VALU E!	#VALU E!	#VALU E!	#VALU E!	19.480 51948	#VALU E!	81.111 11111	135.86 2069	239.10 76115	406.47 05882	583.13 25301	821.66 66667	1063.7 09677	1341.5 78947	#VALU E!	16.540 01442	#VALU E!	#VALU E!	#VALU E!
CC02_10-145	17 44	19	99.942 66055	0.5231 60763	19.435 73668	26.277 37226	62.025 31646	125.97 4026	70.114 94253	127.45 09804	159.65 51724	243.56 95538	370.58 82353	545.38 15261	756.66 66667	989.11 29032	1227.6 31579	2346.5 66612	9.6321 86235	243.61 72386	0.5533 38785	1.7458 46787
CC02_10-18	17 40	27	99.942 52874	0.2670 29973	24.618 59979	17.445 25547	39.662 44726	73.593 07359	40.344 82759	98.039 21569	127.58 62069	213.38 58268	320.58 82353	501.20 48193	726.66 66667	1002.8 22581	1270.5 26316	4757.9 91407	12.959 36842	367.14 68587	0.4701 30973	3.2083 97641
CC02_10-195	24 25	22	99.876 28866	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	461.84 73896	#VALU E!	897.17 74194	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-109	18 01	21	99.777 90117	#VALU E!	17.533 96029	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	140.41 99475	280	479.51 80723	806.11 11111	1208.4 67742	1771.0 52632	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-41	17 27	28	99.768 38448	1.0762 94278	25.287 35632	49.343 06569	104.21 94093	155.84 41558	81.034 48276	142.81 04575	190.86 2069	291.60 10499	444.70 58824	659.03 61446	886.11 11111	1142.3 3871	1452.6 31579	1349.6 60227	10.171 74515	132.68 71846	0.5426 63526	1.0824 29894
CC02_10-127	18 29	31	99.726 62657	0.8501 3624	13.082 54963	9.0364 9635	20.717 29958	40.909 09091	21.034 48276	74.183 00654	118.62 06897	205.51 1811	339.29 41176	518.07 22892	728.61 11111	954.03 22581	1209.7 36842	1422.9 91734	16.307 4658	87.260 1391	0.3655 24362	3.3191 38555
CC02_10-142	21 61	27	99.722 35076	0.1198 91008	6.2173 45873	5.4160 58394	12.208 15752	23.290 04329	13.563 21839	33.856 20915	47.758 62069	81.627 29659	140.35 29412	230.12 04819	341.94 44444	515.72 58065	760.52 63158	6343.4 80861	22.463 42207	282.39 15627	0.4746 84439	2.5875 48365
CC02_10-252	17 52	24	99.657 53425	0.5476 83924	29.362 59143	23.357 66423	50.632 91139	77.922 07792	36.551 72414	102.28 75817	137.41 37931	241.20 73491	380	582.32 93173	836.11 11111	1129.0 32258	1455.2 63158	2657.1 22283	14.227 17336	186.76 3893	0.4056 57768	2.7250 12256

CC02_10-130	25 52	14	99.529 78056	0.8855 58583	28.213 16614	35.109 48905	69.338 95921	86.147 18615	44.482 75862	83.660 13072	106.37 93103	160.36 74541	262.58 82353	386.74 6988	580.83 33333	756.45 16129	994.21 05263	1122.6 93117	11.883 9227	94.471 59377	0.5239 20399	1.5870 11693
CC02_10-239	17 75	29	99.492 95775	1.1961 85286	29.278 99687	60	126.30 09845	155.84 41558	86.206 89655	138.23 52941	157.41 37931	226.24 67192	332.11 76471	476.30 52209	663.61 11111	880.24 19355	1115.7 89474	932.78 98334	8.0716 68533	115.56 34463	0.5862 83037	1.0272 12814
CC02_10-95	17 50	18	99.485 71429	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	219.68 50394	#VALU E!	566.66 66667	#VALU E!	1120.9 67742	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-8	25 23	17	99.286 56361	0.2152 58856	27.753 39603	13.722 62774	33.614 62729	67.965 36797	43.563 21839	61.437 9085	72.586 2069	95.275 59055	137.05 88235	207.22 89157	315.27 77778	452.41 93548	564.73 68421	2623.5 24317	9.1919 93281	285.41 40812	0.6732 93901	4.9541 5818
CC02_10-115	20 18	19	99.256 68979	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-124	17 44	18	99.025 22936	0.2588 55586	21.985 37095	13.868 61314	35.864 9789	96.969 69697	60.574 71264	110.78 43137	147.06 89655	231.49 6063	372.47 05882	594.77 91165	854.44 44444	1175.4 03226	1506.0 52632	5818.1 19114	13.594 45738	427.97 72962	0.5831 38804	4.0995 70033
CC02_10-256	18 77	22	98.827 91689	1.1280 65395	30.512 01672	70.072 9927	172.99 57806	484.84 84848	310.34 48276	375.81 69935	303.44 82759	328.08 39895	374.11 76471	484.33 73494	666.66 66667	846.77 41935	1021.0 52632	905.13 60285	2.7168 87872	333.15 17792	0.7211 74104	1.0749 91654
CC02_10-99	18 79	20	98.722 72485	0.5722 07084	26.102 40334	26.861 31387	59.634 31786	106.23 37662	60.574 71264	101.63 39869	117.58 62069	148.55 64304	210.23 52941	301.60 64257	426.11 11111	581.04 83871	736.84 21053	1287.7 19298	7.2499 57692	177.61 74914	0.5828 19718	2.1573 58147
CC02_10-90	17 74	35	98.534 38557	#VALU E!	13.051 20167	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	75.344 82759	125.45 93176	209.29 41176	321.68 6747	456.66 66667	629.83 87097	813.42 10526	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-161	17 66	29	98.527 74632	#VALU E!	10.146 29049	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	100.86 2069	182.15 2231	308.23 52941	461.84 73896	656.38 88889	864.11 29032	1126.3 15789	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-58	25 18	15	98.451 15171	0.7329 70027	41.901 77638	39.416 05839	77.355 83685	#VALU E!	#VALU E!	#VALU E!	#VALU E!	200	316.47 05882	487.95 18072	744.44 44444	1017.7 41935	1342.1 05263	1831.0 50675	#VALU E!	#VALU E!	#VALU E!	2.0863 11434
CC02_10-243	17 83	39	98.429 61301	0.2779 29155	35.496 34274	18.905 10949	45.428 97328	90.043 29004	56.896 55172	102.28 75817	118.62 06897	171.12 86089	249.41 17647	353.41 36546	533.05 55556	743.95 16129	1078.9 47368	3882.0 94943	10.548 17555	368.03 47302	0.5916 52824	4.5118 86196
CC02_10-134	18 44	20	98.427 33189	0.2152 58856	7.6071 05538	10.802 91971	25.879 0436	58.874 45887	25.632 18391	92.483 66013	158.62 06897	276.11 54856	465.88 23529	725.30 12048	1062.2 22222	1413.7 09677	1800	8362.0 25316	19.462 89753	429.63 92819	0.3386 95857	1.6868 84576
CC02_10-140	17 42	33	98.277 84156	0.3051 77112	11.473 35423	15.109 48905	34.599 15612	77.922 07792	41.954 02299	145.09 80392	208.44 82759	330.70 86614	515.29 41176	710.44 17671	944.44 44444	1202.4 19355	1463.1 57895	4794.4 54887	10.083 92603	475.45 51821	0.3762 35324	1.7388 26908
CC02_10-63	17 96	31	98.218 26281	0.3569 48229	12.079 41484	20.145 9854	48.101 26582	86.147 18615	52.758 62069	100.65 35948	133.27 58621	198.16 27297	319.88 23529	479.11 64659	672.77 77778	935.08 06452	1159.7 36842	3249.0 33748	11.522 06083	281.98 3735	0.5648 65098	1.4316 12138
CC02_10-157	17 63	47	98.184 91208	0.1144 41417	6.1024 03344	5.4890 51095	14.275 66807	30.692 64069	14.827 58621	46.633 98693	71.896 55172	122.04 72441	200	310.04 01606	450.27 77778	589.91 93548	772.10 52632	6746.7 29323	16.556 70711	407.49 22191	0.3835 05312	2.8913 6423

Cris Joshua Cruz
Geochronological constraints of the McArthur and Tawallah Groups

CC02_10-200	1758	24	94.76678043	1.204359673	17.57575758	16.86131387	39.94374121	73.16017316	44.94252874	86.2745098	127.0689655	207.3490814	333.6470588	495.9839357	719.1666667	940.3225806	1230	1021.289593	14.25681818	71.63516991	0.563773552	2.469334747
CC02_10-66	1829	32	94.42318207	#VALU E!	11.69278997	16.56934307	39.66244726	83.11688312	44.13793103	75.81699346	93.62068966	138.5826772	216.8235294	324.0963855	479.4444444	643.1451613	797.6315789	#VALU E!	10.52048548	#VALU E!	0.555425086	1.689223351
CC02_10-21	1761	24	94.37819421	0.820163488	15.25600836	36.27737226	78.90295359	125.974026	75.05747126	185.9477124	259.3103448	396.8503937	605.8823529	821.2851406	1116.666667	1386.290323	1721.052632	2098.426298	9.255573027	226.7203005	0.481258354	0.914665999
CC02_10-78	2077	19	94.31872894	0.509536785	27.21003135	29.6350365	68.63572433	191.3419913	108.045977	261.4379085	336.3793103	517.0603675	823.5294118	1210.843373	1633.333333	2052.419355	2486.842105	4880.593864	9.512171053	513.0893712	0.477256067	2.126514413
CC02_10-39	2000	18	94.25	3.869209809	77.32497388	176.6423358	320.6751055	363.6363636	214.9425287	248.3660131	246.5517241	301.8372703	411.7647059	599.1967871	858.3333333	1145.967742	1450	374.7535211	5.838157895	64.19037098	0.702423837	0.794685759
CC02_10-54	1907	18	94.12690089	5.449591281	28.73563218	56.20437956	116.7369902	#VALU E!	#VALU E!	141.503268	160.5172414	218.6351706	310.5882353	464.2570281	610.8333333	794.3548387	996.8421053	182.9205263	7.044657834	25.96584967	#VALU E!	1.061912986
CC02_10-44	1893	20	93.76650819	0.629427793	13.7199582	34.08759124	81.1533052	166.6666667	99.31034483	178.7581699	262.0689655	444.8818898	755.2941176	1216.465863	1775	2411.290323	3065.789474	4870.756437	17.1504859	284.0010752	0.575004078	0.95822521
CC02_10-159	2585	11	93.73307544	1.100817439	29.04911181	47.44525547	94.23347398	148.9177489	88.50574713	135.620915	161.2068966	224.1469816	347.1764706	506.8273092	741.1111111	982.6612903	1210.526316	1099.661282	8.925808497	123.2001877	0.62209997	1.216052937
CC02_10-103	1882	27	93.41126461	0.877384196	23.19749216	40.87591241	97.0464135	216.4502165	118.3908046	274.5098039	296.5517241	375.328084	488.2352941	608.4337349	750	903.2258065	1055.263158	1202.737823	3.844172932	312.8729753	0.482282873	1.347366071
CC02_10-111	2532	18	93.00947867	1.297002725	59.77011494	68.61313869	163.1504923	323.3766234	210.3448276	266.3398693	253.4482759	262.992126	372.9411765	571.8875502	961.1111111	1500.806452	2284.210526	1761.145511	8.576299645	205.3502774	0.713376106	2.071371071
CC02_10-35	1817	26	92.95542102	#VALU E!	#VALU E!	#VALU E!	212.3769339	402.5974026	#VALU E!	277.777778	#VALU E!	246.7191601	#VALU E!	378.7148594	#VALU E!	839.9193548	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-80	1821	26	92.6963207	0.885558583	11.92267503	#VALU E!	#VALU E!	#VALU E!	#VALU E!	85.29411765	133.4482759	238.8451444	401.5294118	648.1927711	936.6666667	1275.403226	1652.631579	1866.202429	19.37568058	96.31674208	#VALU E!	#VALU E!
CC02_10-215	2465	23	92.12981744	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	342.9718876	#VALU E!	754.0322581	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!	#VALU E!
CC02_10-20	1855	31	91.96765499	#VALU E!	9.456635319	#VALU E!	#VALU E!	#VALU E!	#VALU E!	117.3202614	142.0689655	209.4488189	328.1176471	482.3293173	684.4444444	910.0806452	1195	#VALU E!	10.18579387	#VALU E!	#VALU E!	#VALU E!
CC02_10-107	2477	25	91.80460234	0.449591281	37.87878788	20.87591241	51.61744023	97.4025974	56.09195402	85.94771242	93.27586207	104.7244094	132.7058824	175.1004016	247.5	331.8548387	408.1578947	907.8421053	4.748909346	191.1685482	0.611855568	4.486437321
CC02_10-14	1865	24	91.63538874	0.662125341	19.55067921	33.35766423	81.29395218	161.038961	94.25287356	153.9215686	180.5172414	250.1312336	379.7647059	530.9236948	754.4444444	1022.983871	1260.526316	1903.757851	8.189406638	232.4659082	0.598505938	1.428330867

CC04 _15 - 79	27 57	20	92.383 02503	0.8092 64305	11.985 37095	9.9270 07299	14.261 60338	40.173 16017	33.448 27586	90.849 6732	133.62 06897	201.57 48031	327.29 41176	499.59 83936	746.38 88889	984.67 74194	1356.3 15789	1675.9 86178	14.929 23135	112.26 20541	0.5105 71707	1.7345 35337
CC04 _15 - 48	17 86	26	91.825 30795	75.803 81471	109.29 98955	101.75 18248	111.11 11111	174.45 88745	129.31 03448	271.24 18301	334.82 75862	456.16 7979	668.23 52941	934.13 65462	1350.8 33333	1824.5 96774	2328.9 47368	30.723 35313	8.5862 39696	3.5782 08182	0.5802 56408	1.1729 85988
CC04 _15 - 54	18 26	20	91.621 02957	9.4550 40872	32.915 3605	86.861 31387	253.16 4557	2779.2 20779	3057.4 71264	13562. 0915	20224. 13793	22572. 17848	20964. 70588	17590. 36145	14888. 88889	12217. 74194	9552.6 31579	1010.3 21553	0.7043 62714	1434.3 76825	0.3742 01436	1.1044 56796
CC04 _15 - 86	19 11	21	91.522 76295	5.0681 19891	44.514 10658	54.452 55474	82.278 48101	231.60 17316	180.45 97701	341.83 00654	410.34 48276	519.68 50394	675.29 41176	844.57 83133	1177.7 77778	1459.6 77419	1765.7 89474	348.41 11488	5.1656 93871	67.447 11505	0.6294 02733	1.2352 28792
CC04 _15 - 32	19 85	22	90.881 61209	2.3106 26703	29.728 31766	26.058 39416	39.240 50633	123.80 95238	93.908 04598	228.10 45752	295.51 72414	402.88 71391	572.94 11765	743.37 3494	1020.2 77778	1339.9 19355	1655.2 63158	716.36 97865	7.2565 97798	98.719 78666	0.5336 98685	1.7179 4651
CC04 _15 - 46	18 33	22	90.398 25423	5.4223 43324	34.587 25183	44.525 54745	68.495 07736	194.37 22944	144.48 27586	306.53 59477	380.51 72414	520.99 73753	696.47 05882	965.86 34538	1300	1649.5 96774	1963.1 57895	362.04 97223	6.4043 31725	56.532 00644	0.5768 83135	1.1949 69665
CC04 _15 - 77	18 68	32	90.364 0257	3.6784 74114	44.200 62696	29.343 06569	41.912 79887	117.74 89177	93.103 44828	197.38 56209	236.20 68966	310.23 62205	385.88 23529	536.94 77912	703.88 88889	922.17 74194	1105.2 63158	300.46 78363	5.5995 12025	53.659 64657	0.5908 80636	2.1516 12809

Concordant samples REE data for Wollogorang Formation, normalised to chondrite values from Taylor and McLennan (1985).

Anal ysis	A ge	Er ro r	Conco rdance	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Lu/La	Lu/Gd	Gd/La	Eu*	Ce*
CCO 6_0 1- 119	22 09	51	102.08 23902	0.0776 56676	16.405 43365	0.7226 27737	1.5893 1083	7.4458 87446	4.0574 71264	22.712 4183	35.344 82759	61.417 32283	117.76 47059	196.78 71486	324.44 44444	488.30 64516	724.73 68421	9332.5 76177	31.909 27679	292.47 21936	0.2690 78197	49.930 65951
CCO 6_0 1- 92	18 64	42	101.07 29614	#VALU E! 56676	6.3845 35005	0.2788 32117	0.6891 70183	4.8917 74892	0.5862 06897	18.039 21569	36.206 89655	69.475 06562	121.29 41176	188.35 34137	290.55 55556	377.82 25806	493.15 78947	#VALU E! 76177	27.338 10069	#VALU E! 21936	0.0511 27917	56.593 97
CCO 6_0 1- 7	18 03	48	100.77 64836	0.0237 05722	8.8296 76071	0.7007 29927	1.5893 1083	11.298 7013	5.9425 28736	51.372 54902	97.586 2069	173.22 83465	317.64 70588	469.07 63052	651.11 11111	854.83 87097	1107.8 94737	46735. 3297	21.565 88992	2167.0 94884	0.1896 41301	28.579 34573
CCO 6_0 1- 84	17 63	43	100.56 7215	#VALU E! 56676	8.8923 71996	0.4306 56934	1.3642 75668	10.259 74026	3.1839 08046	40.816 99346	74.310 34483	140.94 48819	236.94 11765	363.45 38153	521.66 66667	691.12 90323	938.42 10526	#VALU E! 76177	22.990 94012	#VALU E! 21936	0.1246 7156	65.411 91547
CCO 6_0 1- 114	19 02	40	100.47 31861	0.0779 29155	25.600 83595	1.9708 0292	5.9915 61181	27.619 04762	19.885 05747	75.457 51634	106.72 41379	168.76 64042	279.41 17647	432.93 17269	630.83 33333	892.74 19355	1240.7 89474	15922. 01877	16.443 55041	968.28 35139	0.3858 30818	39.491 87475
CCO 6_0 1- 101	25 68	34	100.23 36449	0.0237 05722	9.2476 48903	0.3817 51825	1.2376 9339	7.4458 87446	1.6091 95402	31.928 10458	53.448 27586	94.304 46194	158.70 58824	234.93 9759	338.05 55556	450.40 32258	566.05 26316	23878. 31216	17.728 977	1346.8 52227	0.0817 39002	78.538 42015
CCO 6_0 1- 20	19 03	46	100.15 76458	0.0653 95095	8.1295 71578	1.0875 91241	3.0520 39381	16.623 37662	4.2988 50575	69.281 04575	119.65 51724	208.39 89501	326.58 82353	485.94 37751	641.38 88889	818.14 51613	1012.3 68421	15480. 80044	14.612 48759	1059.4 22658	0.1000 845	20.976 17945
CCO 6_0 1- 104	18 01	43	100.11 10494	0.0253 40599	4.6185 99791	0.5474 45255	1.1392 40506	7.3160 17316	4.0229 88506	32.352 94118	59.137 93103	109.97 37533	195.29 41176	295.98 39357	427.77 77778	577.82 25806	750	29596. 77419	23.181 81818	1276.7 23593	0.2028 28038	17.556 75939
CCO 6_0 1- 86	17 61	42	100.05 67859	6.2670 29973	17.241 37931	6.0583 94161	5.7665 2602	12.554 11255	2.4252 87356	39.248 36601	70.862 06897	136.48 29396	238.23 52941	374.69 87952	549.44 44444	733.46 77419	978.68 42105	156.16 39588	24.935 66765	6.2626 74055	0.0936 35958	2.7087 64268
CCO 6_0 1- 47	25 52	64	100	0.0247 9564	9.1745 03657	0.5109 48905	2.1940 92827	13.073 59307	10.655 17241	41.176 47059	66.896 55172	107.87 40157	177.52 94118	262.24 8996	398.61 11111	536.69 35484	734.73 68421	29631. 69462	17.843 60902	1660.6 33484	0.3928 16955	77.105 01572
CCO 6_0 97	24 97	36	99.959 95194	0.1089 91826	11.327 06374	2.9927 0073	9.0014 0647	43.116 88312	6.3678 16092	124.73 85621	183.10 34483	283.72 70341	447.05 88235	639.35 74297	844.16 66667	1115.7 25806	1393.1 57895	12782. 22368	11.168 62237	1144.4 76307	0.0758 72619	11.384 16387

1-71																							
CCO 6_0 1-18	25	34	99.768 07112	0.0305 17711	11.786 83386	0.7810 21898	2.5035 16174	14.675 32468	4.4252 87356	64.379 08497	108.96 55172	191.60 10499	330.23 52941	488.75 50201	689.72 22222	891.93 54839	1093.9 47368	35846. 31109	16.992 27892	2109.5 64659	0.1119 55484	48.375 01831	
CCO 6_0 1-29	24	63	99.438 20225	#VALU E! 74504	3.4691 52555	0.4744 28692	1.2236 55411	5.4112 25287	4.1494 96732	24.084 44828	43.103 55906	79.527 52941	142.23 83534	222.08 44444	331.94 3871	447.98 94737	615.78 E! 37842	#VALU E! 25.567 37842	#VALU E! 21.212 59511	#VALU E! 0.2813 52994	18.857 76498		
CCO 6_0 1-1	17	45	99.051 86838	#VALU E! 95095	9.9164 05434	0.3284 67153	1.4205 34459	10.735 93074	3.3218 3908	49.052 28758	85.517 24138	160.36 74541	286.23 52941	422.89 15663	615.27 77778	822.98 3871	1040.5 26316	#VALU E! 21.212 59511	#VALU E! 21.180 09868	#VALU E! 0.1111 2019	130.56 36115		
CCO 6_0 1-23	17	44	98.931 98426	0.0653 95095	32.978 05643	1.2700 72993	3.1786 2166	16.406 92641	12.413 7931	62.745 09804	110	193.70 07874	332.58 82353	513.65 46185	733.61 11111	985.08 06452	1328.9 47368	20321. 82018	21.180 09868	959.47 71242	0.3136 6963	64.984 01387	
CCO 6_0 1-113	28	41	98.715 27778	0.0277 92916	12.685 47544	0.3481 75182	1.0267 22925	5.4978 35498	4.3103 44828	21.535 94771	34.655 17241	65.616 7979	109.29 41176	171.88 75502	264.16 66667	372.98 3871	503.94 73684	18132. 22394	23.400 28752	774.87 18442	0.3188 85803	107.43 96004	
CCO 6_0 1-38	18	52	98.612 65261	#VALU E! 95095	7.1682 34065	0.4963 50365	1.8424 75387	9.2207 79221	3.3448 27586	41.045 75163	70.862 06897	143.83 2021	246.94 11765	381.92 77108	550.55 55556	748.38 70968	981.57 89474	#VALU E! 23.914 26416	#VALU E! 21.180 09868	#VALU E! 0.1330 83685	53.608 93527		
CCO 6_0 1-83	17	51	96.983 24022	0.1716 62125	5.3082 54963	3.4525 54745	8.6216 59634	35.670 99567	23.448 27586	121.24 18301	178.62 06897	300.52 49344	468.23 52941	655.42 16867	881.11 11111	1102.0 16129	1416.5 78947	8252.1 34503	11.683 91261	706.28 1772	0.2988 70099	3.8393 83562	
CCO 6_0 1-60	18	51	96.782 988	0.0400 54496	13.887 14734	1.1824 81752	3.3333 33333	16.666 66667	7.7011 49425	60.457 51634	121.20 68966	241.20 73491	428.23 52941	675.90 36145	1038.8 88889	1435.8 87097	1894.7 36842	47303. 97422	31.339 97155	1509.3 8153	0.1997 07773	33.105 70903	
CCO 6_0 1-105	17	40	96.058 55856	0.1335 14986	9.6238 24451	1.5182 48175	4.1631 50492	23.463 20346	8.5632 18391	85.915 03268	145.34 48276	252.23 09711	428.58 82353	639.35 74297	887.22 22222	1130.6 45161	1431.0 52632	10718. 29216	16.656 60347	643.48 60611	0.1565 79932	17.381 38051	
CCO 6_0 1-55	24	43	93.059 01912	0.2806 53951	18.119 12226	5.5985 40146	14.486 63854	52.683 98268	26.896 55172	122.22 22222	151.20 68966	223.62 20472	330.23 52941	465.06 0241	658.05 55556	860.48 3871	1130	4026.3 1068	9.2454 54545	435.49 08306	0.3075 54003	8.3744 28631	
CCO 6_0 1-48	18	41	92.497 26177	0.2397 82016	7.6907 00104	5.7153 28467	9.0014 0647	30.865 80087	20.804 5977	71.895 42484	114.13 7931	193.17 5853	326.94 11765	495.18 07229	729.16 66667	966.53 22581	1257.1 05263	5242.7 00359	17.485 19139	299.83 66013	0.4049 11435	2.1193 06939	
CCO 6_0	18	45	91.480 06554	0.2234 33243	6.0397 07419	4.2335 76642	7.5949 36709	22.943 72294	22.528 73563	57.189 54248	83.965 51724	153.54 33071	272	426.90 76305	617.77 77778	837.5	1099.7 36842	4921.9 9294	19.229 68421	255.95 80743	0.5622 81732	2.5593 23633	

1-64																						
CCO 5_0 2-37	17 78	24	101.06 86164	0.3542 23433	4.8380 35528	1.6715 32847	1.8284 10689	7.8787 87879	1.8045 97701	39.575 1634	88.275 86207	178.21 52231	319.17 64706	504.81 92771	800.55 55556	1035.4 83871	1421.8 42105	4013.9 69636	35.927 63701	111.72 37305	0.0760 56794	3.1660 15046
CCO 5_0 2-15	17 53	28	100.96 97661	#VALU E! 23433	9.3521 42111	0.2751 82482	0.8579 46554	7.5757 57576	1.6091 95402	36.862 7451	74.137 93103	133.85 82677	247.41 17647	390.76 30522	561.38 88889	787.5	961.31 57895	#VALU E! 24748	26.078 24748	#VALU E! 23475	0.0724 23475	105.95 70274
CCO 5_0 2-65	18 12	32	100.82 78146	#VALU E! 99183	3.1630 09404	0.2043 79562	0.8016 87764	9.2207 79221	2.4022 98851	44.803 92157	98.275 86207	189.23 88451	340.23 52941	536.54 61847	800.27 77778	1097.9 83871	1456.3 15789	#VALU E! 20362	32.504 20362	#VALU E! 33351	0.0889 33351	60.705 88708
CCO 5_0 2-90	17 83	32	100.61 69377	0.0108 99183	13.761 75549	0.5036 49635	1.6315 04923	12.164 50216	9.1609 1954	51.601 30719	93.275 86207	166.14 17323	304.70 58824	493.17 26908	695.83 33333	1014.9 19355	1368.4 21053	12555 2.6316	26.519 11603	4734.4 19935	0.2873 30142	88.512 6164
CCO 5_0 2-66	18 77	42	100.37 29355	0.0574 93188	34.043 88715	1.4160 58394	4.2897 32771	15.844 15584	15.862 06897	39.542 48366	53.448 27586	74.803 14961	96	122.89 15663	159.44 44444	206.45 16129	253.94 73684	4416.9 99252	6.4221 40061	687.77 68485	0.5727 76002	72.829 4542
CCO 5_0 2-62	17 55	32	100.28 49003	1.9891 00817	10.428 42215	2.7518 24818	3.1223 62869	10.043 29004	3.3448 27586	46.732 02614	85.517 24138	154.59 31759	269.29 41176	416.46 58635	593.88 88889	788.30 64516	1036.8 42105	521.26 17159	22.186 97092	23.494 04602	0.1178 26824	4.2999 20352
CCO 5_0 2-64	25 26	27	100.11 87648	2.9427 79292	40.543 36468	15.693 43066	19.971 8706	19.177 48918	11.264 36782	40.816 99346	72.931 03448	106.29 92126	175.76 47059	256.22 48996	371.94 44444	497.58 06452	647.36 84211	219.98 53801	15.860 26716	13.870 21908	0.3755 13458	3.2877 79975
CCO 5_0 2-26	18 77	28	100.10 6553	9.5095 36785	45.141 06583	43.795 62044	46.835 44304	30.735 93074	12.298 85057	44.117 64706	61.206 89655	107.08 66142	182.70 58824	281.52 61044	423.88 88889	528.62 90323	742.10 52632	78.038 00332	16.821 05263	4.6393 05579	0.3286 10894	1.1022 62609
CCO 5_0 2-27	18 34	26	99.945 47437	0.4032 69755	6.8652 03762	3.5036 49635	4.8241 9128	12.770 56277	4.4827 58621	54.346 40523	103.10 34483	192.38 84514	329.76 47059	501.60 64257	748.61 11111	953.22 58065	1330.5 26316	3299.3 45661	24.482 32427	134.76 43967	0.1335 80487	2.6979 66859
CCO 5_0 2-16	18 13	34	99.944 8428	0.6866 48501	5.3814 00209	4.1094 89051	5.4289 73277	16.320 34632	3.9195 4023	60.751 63399	109.65 51724	179.26 50919	281.05 88235	408.03 21285	562.22 22222	767.74 19355	930	1354.4 04762	15.308 23023	88.475 59394	0.1017 11159	1.7299 65092
CCO 5_0 2-43	17 61	24	99.886 42817	4.8773 84196	27.001 04493	27.518 24818	29.957 80591	26.666 66667	11.103 44828	80.098 03922	138.79 31034	264.04 19948	475.17 64706	739.75 90361	1057.5	1462.0 96774	1885.5 26316	386.58 55631	23.540 23063	16.422 33541	0.2079 9848	1.0681 9123
CCO 5_0	18 70	36	99.679 14439	3.6512 26158	20.480 66876	20	21.378 34037	22.727 27273	11.609 1954	58.823 52941	115	219.16 0105	422.35 29412	679.11 64659	991.66 66667	1358.0 64516	1778.9 47368	487.21 91673	30.242 10526	16.110 62335	0.2847 10759	1.0946 06769

2 - 100																								
CCO 5_0 2 - 79	20 08	28	99.501 99203	1.1798 36512	12.497 38767	7.8832 11679	10.998 59353	26.666 66667	9.4482 75862	78.758 16993	107.24 13793	159.05 51181	219.05 88235	291.56 62651	408.88 88889	519.35 48387	705.52 63158	597.98 65078	8.9581 34964	66.753 46043	0.1792 41935	2.2118 21206		
CCO 5_0 2 - 89	17 88	26	99.272 93065	2.3433 24251	33.751 30617	12.189 78102	15.049 22644	20.735 93074	13.218 3908	71.143 79085	120.51 72414	218.37 27034	410.94 11765	655.42 16867	906.94 44444	1253.2 25806	1605.2 63158	685.03 67197	22.563 64384	30.360 19912	0.2877 32496	3.4183 2187		
CCO 5_0 2 - 93	17 54	36	99.201 8244	3.4059 9455	29.049 11181	19.489 05109	22.925 4571	19.913 41991	14.252 87356	28.039 21569	37.586 2069	55.380 57743	92.705 88235	151.80 72289	233.05 55556	360.48 3871	507.10 52632	148.88 61053	18.085 57232	8.2323 13725	0.5944 56317	1.7533 53455		
CCO 5_0 2 - 84	17 74	30	99.154 45321	0.0275 20436	11.442 00627	0.7153 28467	2.1940 92827	16.450 21645	6.4137 93103	82.352 94118	161.20 68966	286.08 92388	518.70 58824	789.15 66265	1064.1 66667	1446.3 70968	1784.2 10526	64832. 20427	21.665 41353	2992.4 28655	0.1298 29719	49.062 10323		
CCO 5_0 2 - 61	17 93	55	98.828 77858	95.504 08719	100	91.313 86861	89.451 47679	69.480 51948	14.827 58621	89.542 48366	120.51 72414	186.35 1706	280.11 76471	413.25 3012	573.05 55556	745.16 12903	939.47 36842	9.8369 99775	10.491 93239	0.9375 77504	0.1864 83539	1.0727 88304		
CCO 5_0 2 - 55	20 51	25	98.781 0824	0.1743 86921	10.700 10449	0.9635 0365	1.7018 28411	8.4848 48485	2.7471 26437	27.156 86275	40.172 41379	62.965 87927	96.941 17647	141.00 40161	206.11 11111	282.66 12903	372.89 47368	2138.3 18257	13.731 14193	155.72 76348	0.1541 52331	19.615 3951		
CCO 5_0 2 - 8	18 71	23	98.450 02672	10.435 9673	44.096 13375	38.978 10219	36.568 21378	28.787 87879	15.126 43678	54.183 00654	75	110.23 62205	179.88 23529	264.25 70281	361.11 11111	516.93 54839	622.89 47368	59.687 30246	11.496 12723	5.1919 48668	0.3646 20354	1.0613 60402		
CCO 5_0 2 - 53	17 64	34	98.299 31973	14.931 88011	72.831 76594	65.109 48905	66.807 31364	72.294 37229	41.954 02299	142.15 68627	206.55 17241	341.46 98163	568.35 29412	801.60 64257	1101.3 88889	1445.1 6129	1865.7 89474	124.95 34191	13.124 86388	9.5203 59239	0.3912 68654	1.1477 73715		
CCO 5_0 2 - 56	21 14	39	98.155 1561	1.3623 9782	17.450 36573	4.6715 32847	6.1884 66948	10.692 64069	8.6206 89655	30.882 35294	47.586 2069	80.839 89501	148.23 52941	245.38 15261	376.94 44444	595.16 12903	932.63 15789	684.55 15789	30.199 49875	22.667 64706	0.4147 05519	4.9484 45545		
CCO 5_0 2 - 38	17 86	48	98.040 31355	7.3841 96185	25.809 82236	19.854 0146	26.019 69058	44.199 1342	24.252 87356	117.32 02614	178.27 58621	309.97 37533	473.64 70588	661.04 41767	947.22 22222	1102.8 22581	1450	196.36 53137	12.359 33148	15.888 02064	0.3003 09117	1.7036 89589		
CCO 5_0 2 - 25	18 27	42	97.865 35304	0.1362 39782	8.1191 22257	3.1459 85401	9.5358 64979	48.571 42857	3.7356 32184	162.41 83007	251.55 17241	421.52 23097	660	899.59 83936	1201.9 44444	1443.1 45161	1805.2 63158	13250. 63158	11.114 89993	1192.1 50327	0.0354 1056	7.8226 83658		
CCO 5_0	17 78	38	97.412 8234	8.5558 58311	38.244 51411	44.817 51825	52.039 38115	35.930 73593	15.287 35632	67.647 05882	107.93 10345	222.30 97113	420.82 35294	677.10 84337	1013.8 88889	1399.1 93548	1834.2 10526	214.38 06571	27.114 41648	7.9065 19296	0.2951 85978	0.9908 44865		

2-58																						
CCO 5_0 2-83	18 03	27	96.616 74986	13.024 52316	59.874 60815	47.007 29927	41.350 21097	23.593 07359	9.4252 87356	61.699 34641	98.103 44828	185.82 67717	334.35 29412	494.77 91165	697.22 22222	940.32 25806	1176.8 42105	90.355 86875	19.073 81802	4.7371 67391	0.2210 11137	1.1204 43118
CCO 5_0 2-48	21 62	44	96.577 24329	1.1716 62125	10.971 78683	9.7810 21898	12.095 63994	16.450 21645	15.632 18391	46.633 98693	68.793 10345	98.687 66404	133.17 64706	160.24 09639	181.11 11111	246.77 41935	294.21 05263	251.10 52632	6.3089 29296	39.801 56559	0.4955 9741	1.3871 95749
CCO 5_0 2-67	24 39	20	96.473 96474	2.2615 80381	27.795 19331	13.284 67153	15.611 81435	15.930 73593	8.6206 89655	31.405 22876	47.758 62069	77.244 09449	126.11 76471	177.99 19679	262.77 77778	355.64 51613	456.84 21053	202.00 12682	14.546 6893	13.886 40838	0.3642 34244	2.4587 89984
CCO 5_0 2-34	18 82	29	94.739 63868	15.585 83106	71.891 32706	81.094 89051	84.810 12658	69.783 54978	35.862 06897	117.97 38562	142.41 37931	232.80 8399	327.05 88235	461.04 41767	650.83 33333	792.74 19355	1089.4 73684	69.901 54582	9.2348 73888	7.5693 01613	0.3820 04308	0.9271 22729
CCO 5_0 2-101	17 75	52	94.591 5493	2.1798 36512	19.331 24347	16.277 37226	19.127 98875	20.086 58009	7.8160 91954	50	81.379 31034	143.30 70866	258	393.57 42972	564.16 66667	744.35 48387	963.68 42105	442.09 01316	19.273 68421	22.937 5	0.2230 41043	1.3955 9854
CCO 5_0 2-92	18 42	43	93.811 07492	3.8419 61853	18.077 32497	19.562 0438	23.769 33896	19.870 12987	11.494 25287	33.529 41176	56.551 72414	95.800 52493	167.29 41176	251.40 56225	342.5	496.77 41935	652.36 84211	169.80 08585	19.456 60203	8.7271 58949	0.4305 00058	1.1228 52772
CCO 5_0 2-91	18 51	31	92.652 62021	136.23 9782	239.28 94462	262.04 37956	263.15 04923	160.17 31602	53.333 33333	144.11 76471	151.55 17241	220.20 99738	360.23 52941	519.67 87149	691.94 44444	959.67 74194	1177.1 05263	8.6399 52632	8.1676 69173	1.0578 23529	0.3505 41864	0.9170 22451
CCO 5_0 2-40	18 90	38	92.116 40212	49.318 80109	212.12 12121	235.76 64234	230.66 10408	129.43 72294	61.149 42529	114.05 22876	117.75 86207	171.12 86089	251.76 47059	368.67 46988	507.22 22222	668.95 16129	855.26 31579	17.341 5237	7.4988 68949	2.3125 51908	0.5022 7563	0.8802 26496
CCO 5_0 2-44	18 95	27	91.292 87599	17.465 94005	81.713 68861	96.350 36496	101.54 71167	67.965 36797	35.402 29885	85.947 71242	108.27 58621	172.96 58793	276.70 58824	418.87 5502	572.5	781.04 83871	1000.7 89474	57.299 49093	11.644 1665	4.9208 75266	0.4600 29762	0.8938 31558
CCO 5_0 2-70	18 32	35	91.157 20524	36.512 26158	158.82 96761	170.07 29927	163.15 04923	93.506 49351	41.724 13793	92.483 66013	117.24 13793	183.72 70341	296.70 58824	434.13 65462	630.83 33333	817.74 19355	1070.2 63158	29.312 43126	11.572 45676	2.5329 48005	0.4486 70396	0.8958 78947
CCO 5_0 2-5	18 78	31	90.841 32055	43.596 73025	185.99 79101	220.43 79562	240.50 63291	134.63 20346	59.885 05747	158.82 35294	240	428.08 39895	818.82 35294	1345.3 81526	1963.8 88889	2842.7 41935	3586.8 42105	82.273 19079	22.583 82066	3.6430 14706	0.4081 37141	0.9205 80609
CCO 2_1	17 75	23	105.29 57746	0.3106 26703	16.645 76803	2.6423 35766	8.4388 18565	29.004 329	21.839 08046	55.882 35294	96.896 55172	155.38 05774	264.70 58824	415.26 10442	599.44 44444	809.67 74194	1084.2 10526	3490.3 97045	19.401 66205	179.90 19608	0.5145 46686	20.119 14316

6-72																							
CCO 2_1 6-82	17 62	19	104.65 38025	#VALU E!	39.132 70637	0.3138 68613	1.3220 81575	10.952 38095	4.8045 97701	44.836 60131	75.344 82759	134.38 32021	236.11 76471	385.94 37751	577.77 77778	810.08 06452	1074.7 36842	#VALU E!	23.970 07826	#VALU E!	0.1722 41812	525.17 29638	
CCO 2_1 6-48	19 31	17	103.36 61315	#VALU E!	0.8192 2675	0.3299 27007	1.3361 46273	17.359 30736	0.4597 70115	73.725 4902	89.827 58621	99.212 59843	91.882 35294	85.421 68675	91.388 88889	117.29 83871	120.78 94737	#VALU E!	1.6383 67861	#VALU E!	0.0100 9543	10.055 93353	
CCO 2_1 6-31	17 83	43	102.29 94952	#VALU E!	7.8160 91954	0.1897 81022	1.0829 81716	10.303 0303	3.5747 12644	39.019 60784	72.068 96552	137.00 7874	220.82 35294	366.66 66667	516.38 88889	678.22 58065	884.47 36842	#VALU E!	22.667 41603	#VALU E!	0.1449 52208	235.02 0217	
CCO 2_1 6-58	19 24	27	101.97 5052	0.1226 15804	65.099 26855	2.0802 91971	5.5414 90858	29.567 09957	16.321 83908	73.202 61438	101.89 65517	155.90 55118	232.23 52941	303.21 28514	408.88 88889	527.41 93548	627.63 15789	5118.6 84211	8.5738 95677	597.00 79884	0.3176 39088	83.359 31636	
CCO 2_1 6-122	18 46	23	101.67 93066	0.0299 72752	27.617 55486	0.7080 29197	1.8846 6948	9.9567 09957	3.8505 74713	39.705 88235	62.586 2069	109.97 37533	180.35 29412	262.24 8996	376.38 88889	512.09 67742	642.89 47368	21449. 30622	16.191 423	1324.7 3262	0.1550 69421	103.82 88607	
CCO 2_1 6-57	20 88	24	101.48 46743	0.0397 82016	7.4921 63009	0.4525 54745	1.3502 1097	9.0043 29004	2.8965 51724	29.836 60131	53.620 68966	93.280 8399	160.11 76471	239.35 74297	343.61 11111	483.87 09677	623.42 10526	15670. 92646	20.894 50625	750.00 22383	0.1491 49451	49.393 13655	
CCO 2_1 6-29	18 56	23	101.34 69828	1.0354 22343	15.433 64681	6.2189 78102	13.122 36287	49.393 93939	39.310 34483	90.849 6732	134.65 51724	215.48 55643	315.41 17647	455.42 16867	591.11 11111	774.59 67742	948.42 10526	915.97 50693	10.439 45475	87.741 65807	0.5606 00859	5.2365 17332	
CCO 2_1 6-101	18 20	17	101.15 38462	0.0735 69482	6.1964 47231	3.2262 77372	12.362 8692	75.151 51515	21.379 31034	230.39 21569	266.03 44828	246.19 42257	184	124.09 63855	95.833 33333	76.209 67742	65.789 47368	894.24 95127	0.2855 54311	3131.6 26725	0.1399 42747	7.3596 74814	
CCO 2_1 6-35	17 61	43	101.13 57183	#VALU E!	32.810 86729	0.8175 18248	3.3473 98031	18.874 45887	13.333 33333	64.444 44444	102.93 10345	177.16 53543	294.47 05882	442.57 02811	622.77 77778	833.87 09677	1153.4 21053	#VALU E!	17.897 91289	#VALU E!	0.3200 55421	164.33 50327	
CCO 2_1 6-25	19 11	24	101.04 65725	0.0471 38965	1.0741 90178	0.2043 79562	0.8157 52461	5.8874 45887	1.4252 87356	54.052 28758	135.34 48276	307.34 90814	615.29 41176	1048.5 94378	1644.4 44444	2225.8 06452	2873.6 84211	60961. 9714	53.164 89531	1146.6 58355	0.0475 57347	20.978 02706	
CCO 2_1 6-96	17 46	29	100.91 63803	0.0975 47684	12.027 16823	0.8905 10949	2.1940 92827	9.8701 2987	6.9080 45977	40.130 71895	74.655 17241	135.95 80052	239.88 23529	362.65 06024	560.83 33333	750	960.78 94737	9849.4 3399	23.941 49666	411.39 59178	0.2763 17148	33.276 66974	
CCO 2_1	17 81	23	100.61 76305	0.0272 47956	13.751 30617	1.4014 59854	5.6118 14346	33.116 88312	10.459 77011	112.41 83007	175.86 2069	279.26 50919	434.35 29412	600.40 16064	796.94 44444	993.54 83871	1264.2 10526	46396. 52632	11.245 59364	4125.7 51634	0.1437 4215	39.290 35234	

6-61																						
CCO 2_1 6-60	18 63	25	100.59 04455	0.0572 20708	8.4848 48485	1.6788 32117	6.3150 49226	31.168 83117	4.9425 28736	101.30 71895	147.41 37931	247.24 40945	396.11 76471	545.38 15261	745.55 55556	945.96 77419	1145	20010. 2381	11.302 25806	1770.4 63741	0.0746 17711	19.011 05832
CCO 2_1 6-68	18 97	21	100.31 62889	0.8964 57766	9.4984 32602	8.4963 50365	21.547 11674	79.350 64935	60	160.13 0719	221.03 44828	335.95 80052	515.29 41176	708.83 53414	952.5	1188.3 06452	1500	1673.2 5228	9.3673 46939	178.62 60604	0.5010 82823	2.8351 51583
CCO 2_1 6-97	18 97	32	100.31 62889	0.2861 03542	8.0355 27691	4.0948 90511	11.786 2166	46.623 37662	20.804 5977	134.96 73203	198.10 34483	299.21 25984	463.88 23529	633.33 33333	842.5	1054.0 32258	1295	4526.3 33333	9.5949 15254	471.74 29194	0.2291 37264	5.6481 24117
CCO 2_1 6-85	20 03	21	100.24 96256	4.8773 84196	16.300 94044	9.2700 72993	16.736 99015	51.255 41126	27.931 03448	120.91 50327	188.10 34483	297.11 28609	475.76 47059	673.49 39759	950.83 33333	1222.9 83871	1564.4 73684	320.76 08056	12.938 6202	24.790 95921	0.3244 57948	3.1748 53672
CCO 2_1 6-41	18 93	32	100.10 56524	0.1117 16621	11.828 63114	0.7299 27007	2.2362 8692	11.688 31169	4.2528 73563	49.673 20261	85.689 65517	162.20 47244	275.64 70588	423.69 47791	615.83 33333	814.51 6129	1026.3 15789	9186.7 7792	20.661 35734	444.63 57405	0.1386 16969	49.648 15876
CCO 2_1 6-112	17 70	18	100.05 64972	0.2534 05995	7.0323 92894	2.3284 67153	5.9634 31786	27.359 30736	15.747 12644	80.065 35948	144.48 27586	282.41 46982	485.29 41176	791.96 78715	1131.9 44444	1535.0 80645	1921.0 52632	7580.9 28127	23.993 55532	315.95 68487	0.2931 75244	7.7349 79206
CCO 2_1 6-55	17 77	23	100.05 62746	0.0166 21253	10.553 814	0.3503 64964	0.7594 93671	6.8398 2684	1.8505 74713	32.320 26144	60.344 82759	127.55 90551	225.76 47059	354.21 68675	538.33 33333	747.98 3871	987.10 52632	59388. 13632	30.541 37619	1944.5 1409	0.0945 13306	65.296 85358
CCO 2_1 6-19	18 09	25	99.889 44168	0.0356 94823	18.463 94984	0.9854 0146	2.9957 80591	14.372 29437	13.103 44828	56.372 54902	96.551 72414	177.42 78215	321.88 23529	484.73 89558	698.61 11111	960.88 70968	1263.1 57895	35387. 70591	22.407 32265	1579.2 92022	0.3704 42499	56.965 01443
CCO 2_1 6-37	18 99	20	99.631 38494	0.0643 05177	10.135 84117	2.5328 46715	8.5935 30239	41.341 99134	11.367 81609	135.62 0915	212.06 89655	340.15 74803	517.88 23529	766.66 66667	1024.7 22222	1289.1 12903	1589.4 73684	24717. 6628	11.719 97464	2109.0 20162	0.1284 76824	13.577 30552
CCO 2_1 6-88	17 52	20	99.543 379	0.3297 00272	15.433 64681	3.4160 58394	7.6652 60197	33.506 49351	24.367 81609	71.568 62745	125.68 96552	201.57 48031	332	492.36 94779	717.22 22222	952.41 93548	1203.9 47368	3651.6 42018	16.822 2783	217.07 17874	0.4638 17046	10.137 82727
CCO 2_1 6-50	18 76	26	99.466 95096	0.9155 31335	10.031 34796	6.0364 9635	14.627 28551	49.783 54978	44.597 70115	81.045 75163	119.48 27586	176.90 28871	256.47 05882	359.83 93574	511.11 11111	682.25 80645	882.89 47368	964.35 2287	10.893 78183	88.523 18705	0.6817 69308	4.0267 35922

CCO 2_1 6-9	18 91	19	99.450 02644	0.0681 19891	13.949 84326	0.7664 23358	3.3333 33333	14.718 61472	5.9080 45977	66.732 02614	111.37 93103	192.91 33858	347.05 88235	519.67 87149	746.66 66667	996.37 09677	1303.1 57895	19130. 35789	19.528 2231	979.62 61438	0.1450 70583	79.160 87926
CCO 2_1 6-59	18 07	23	99.446 59657	0.4141 68937	42.800 41797	3.8686 13139	8.6216 59634	34.978 35498	29.080 45977	64.379 08497	96.724 13793	166.66 66667	256.58 82353	392.36 94779	598.33 33333	861.29 03226	1158.9 47368	2798.2 47922	18.001 92359	155.44 16065	0.5853 70553	24.656 32121
CCO 2_1 6-26	25 46	19	99.410 84053	0.1008 17439	76.583 0721	1.4890 51095	4.3319 26864	26.017 31602	11.264 36782	72.222 22222	120	207.34 90814	348.58 82353	532.12 85141	774.16 66667	1065.3 22581	1376.0 52632	13648. 95448	19.053 03644	716.36 63664	0.2293 24527	149.62 17394
CCO 2_1 6-102	19 67	28	99.186 57855	1.1798 36512	9.8746 0815	9.4160 58394	22.784 81013	86.580 08658	49.425 28736	204.90 19608	310.34 48276	497.11 28609	761.17 64706	1055.8 23293	1372.2 22222	1713.3 06452	2005.2 63158	1699.6 11037	9.7864 51775	173.66 97912	0.3391 30919	2.5376 22394
CCO 2_1 6-6	17 83	20	98.597 86876	6.3760 21798	18.913 27064	6.2773 72263	7.1729 95781	15.021 64502	6.8735 63218	55.228 75817	96.896 55172	169.55 38058	302.82 35294	481.92 77108	716.38 88889	953.62 90323	1253.1 57895	196.54 22852	22.690 31454	8.6619 4626	0.1956 87509	3.4427 97225
CCO 2_1 6-18	18 44	38	98.590 02169	0.3950 95368	5.6739 81191	2.4744 52555	5.9071 72996	25.974 02597	18.965 51724	59.477 12418	97.758 62069	154.06 82415	215.29 41176	288.35 34137	401.94 44444	497.58 06452	621.05 26316	1571.9 05626	10.441 87392	150.53 86522	0.4438 91445	5.4740 57052
CCO 2_1 6-27	18 21	31	98.572 21307	0.3351 49864	11.138 97597	3.3284 67153	8.6075 94937	40.129 87013	21.609 1954	111.11 11111	194.82 75862	334.12 07349	540	785.94 37751	1079.7 22222	1362.9 03226	1723.6 84211	5143.0 25246	15.513 15789	331.52 66486	0.2857 58466	8.6544 3135
CCO 2_1 6-30	17 73	33	98.364 3542	0.1362 39782	9.5506 79206	1.5255 47445	4.9226 44163	23.852 81385	11.724 13793	78.758 16993	124.82 75862	222.30 97113	370.58 82353	557.02 81124	783.05 55556	984.67 74194	1252.6 31579	9194.3 15789	15.904 7827	578.08 49673	0.2285 16237	20.201 39049
CCO 2_1 6-107	18 13	22	97.959 18367	0.3514 98638	6.6248 69383	3.9708 0292	10.182 84107	43.160 17316	32.413 7931	96.078 43137	163.10 34483	288.18 89764	497.64 70588	797.59 03614	1138.8 88889	1580.6 45161	2081.5 78947	5922.0 11424	21.665 41353	273.33 94133	0.4655 86296	4.2784 81126
CCO 2_1 6-36	18 37	31	97.713 66358	0.1798 36512	3.5109 71787	1.7153 28467	3.2067 51055	16.406 92641	11.264 36782	54.575 1634	110.34 48276	227.82 15223	400	664.65 86345	1019.4 44444	1379.0 32258	1786.8 42105	9935.9 2504	32.740 93917	303.47 09844	0.3173 86198	3.8264 67206
CCO 2_1 6-54	18 28	28	97.428 88403	0.6321 52589	12.215 25601	8.8540 14599	29.732 77075	146.32 03463	21.034 48276	478.43 13725	636.20 68966	1002.8 87139	1470.5 88235	1887.1 48594	2341.6 66667	2802.4 19355	3292.1 05263	5207.7 69964	6.8810 39689	756.82 89385	0.0673 37094	4.6329 48666
CCO 2_1 6-39	20 11	23	96.369 96519	0.2615 80381	2.8328 10867	2.9270 07299	6.7791 84248	37.575 75758	20.459 77011	118.88 88889	213.44 82759	392.12 59843	651.41 17647	972.69 07631	1382.7 77778	1769.3 54839	2147.3 68421	8209.2 10526	18.061 97737	454.50 23148	0.2615 2579	2.2415 44713
CCO 2_1	18 40	24	95.978 26087	0.6594 00545	10.167 18913	6.2043 79562	15.541 49086	72.727 27273	46.206 89655	165.03 26797	253.27 58621	422.57 21785	676.47 05882	936.14 45783	1280.5 55556	1602.4 19355	1976.3 15789	2997.1 40061	11.975 29964	250.27 68325	0.3886 85278	4.1048 45945

6-53																						
CCO 2_1 6-133	19 34	17	95.760 08273	0.1144 41417	2.5705 32915	1.5547 44526	4.2616 03376	24.458 87446	7.9310 34483	91.176 47059	175	318.37 27034	548.23 52941	774.69 87952	1130.5 55556	1491.9 35484	1831.5 78947	16004. 51128	20.088 28523	796.70 86835	0.1371 73188	4.5318 77109
CCO 2_1 6-76	18 44	19	95.715 83514	1.5967 30245	10.522 46604	14.598 54015	34.177 21519	119.91 34199	107.58 62069	173.20 26144	242.93 10345	339.63 25459	442.35 29412	560.64 25703	734.16 66667	889.11 29032	1071.0 52632	670.77 86959	6.1838 13307	108.47 33097	0.7340 86125	1.6874 67233
CCO 2_1 6-28	18 31	35	95.412 34298	0.1062 6703	9.1013 58412	0.6642 33577	2.1518 98734	15.930 73593	4.1149 42529	66.666 66667	111.55 17241	205.77 42782	340	535.34 13655	750	963.70 96774	1218.4 21053	11465. 65452	18.276 31579	627.35 04274	0.0996 38546	44.390 12797
CCO 2_1 6-103	19 31	22	94.976 69601	0.4713 89646	13.688 61024	4.1532 84672	9.8030 94233	42.857 14286	30.114 94253	87.908 49673	138.10 34483	216.01 04987	351.17 64706	504.01 60643	682.22 22222	909.27 41935	1129.2 10526	2395.4 92851	12.845 29446	186.48 79671	0.4605 94123	7.7792 75225
CCO 2_1 6-71	19 22	22	94.953 17378	1.0817 43869	6.3322 88401	8.0510 94891	18.143 45992	69.264 06926	59.425 28736	113.39 86928	185.17 24138	275.06 56168	390.58 82353	510.84 33735	618.61 11111	748.79 03226	831.57 89474	768.73 92284	7.3332 32216	104.82 95221	0.6506 5574	1.7724 374
CCO 2_1 6-32	18 71	22	94.601 81721	0.6212 53406	14.043 88715	6.4963 50365	11.392 40506	37.229 43723	23.908 04598	99.346 40523	171.72 41379	322.57 21785	540	871.08 43373	1246.6 66667	1636.6 93548	2050	3299.7 80702	20.634 86842	159.91 2854	0.3501 06513	3.7910 8804
CCO 2_1 6-8	21 82	30	94.454 62878	0.1961 85286	16.185 99791	3.7226 27737	12.728 55134	59.437 22944	5.4137 93103	182.35 29412	275.51 72414	422.83 46457	647.41 17647	861.44 57831	1137.5	1385.8 87097	1610.5 26316	8209.2 10526	8.8319 18506	929.49 34641	0.0447 8092	14.866 85962
CCO 2_1 6-92	18 15	20	94.159 77961	0.8937 3297	35.882 96761	7.8832 11679	18.565 40084	62.770 56277	55.287 35632	84.640 52288	109.65 51724	160.62 99213	244.35 29412	374.69 87952	633.05 55556	935.48 3871	1334.2 10526	1492.8 51412	15.763 2595	94.704 48749	0.7501 11243	10.719 79072
CCO 2_1 6-7	18 37	28	94.120 84921	0.2288 82834	15.715 77847	3.5766 42336	9.1420 53446	36.363 63636	33.793 10345	85.620 91503	132.41 37931	207.61 15486	341.17 64706	493.97 59036	719.16 66667	895.56 45161	1176.3 15789	5139.3 79699	13.738 65006	374.08 1855	0.5540 55461	11.231 26381
CCO 2_1 6-95	18 82	23	94.102 01913	3.8419 61853	13.688 61024	10.291 9708	23.347 39803	80.086 58009	63.103 44828	129.41 17647	178.44 82759	266.66 66667	385.88 23529	508.43 37349	700	854.43 54839	1042.1 05263	271.24 30011	8.0526 31579	33.683 77138	0.6024 24314	3.0171 76762
CCO 2_1 6-83	19 70	19	93.756 34518	1.8446 86649	9.5715 77847	14.160 58394	32.348 8045	119.48 05195	100	197.71 24183	285.17 24138	443.04 46194	627.05 88235	872.69 07631	1169.4 44444	1530.6 45161	1826.3 15789	990.04 12035	9.2372 3358	107.17 94055	0.6305 31062	1.5441 14302
CCO 2_1 6-66	19 82	28	93.693 23915	0.6893 73297	16.551 72414	5.1678 83212	14.627 28551	57.142 85714	39.885 05747	104.24 8366	154.65 51724	244.35 69554	377.64 70588	533.73 49398	740.27 77778	931.04 83871	1162.3 68421	1686.1 23362	11.149 99175	151.22 19381	0.4942 65508	9.0652 87812

CC0 2_1 6- 12	20 06	21	93.469 59123	1.0354 22343	8.3594 56635	10.583 94161	21.800 28129	78.787 87879	67.816 09195	153.26 79739	241.37 93103	377.95 27559	558.82 35294	783.13 25301	1077.7 77778	1383.0 64516	1692.1 05263	1634.2 17452	11.040 17506	148.02 45958	0.5844 80772	1.6268 41627
CC0 2_1 6- 65	18 44	22	92.462 03905	1.0681 19891	24.900 73145	9.9270 07299	23.628 69198	78.354 97835	70.229 88506	120.91 50327	165.68 96552	245.14 4357	354.11 76471	522.48 99598	775.27 77778	1034.6 77419	1421.0 52632	1330.4 24275	11.752 48933	113.20 36148	0.7048 71593	5.9705 60496
CC0 2_1 6- 89	19 77	21	92.261 00152	1.1716 62125	8.6624 86938	11.729 92701	28.410 68917	101.73 16017	89.540 22989	167.64 70588	243.44 82759	347.24 40945	442.35 29412	554.21 68675	711.11 11111	911.29 03226	1076.3 15789	918.62 3011	6.4201 29271	143.08 48153	0.6647 90817	1.7886 84495
CC0 2_1 6- 90	17 51	21	91.947 4586	1.3351 49864	20.721 00313	13.613 13869	32.208 15752	128.57 14286	92.988 50575	240.19 60784	333.10 34483	496.32 54593	741.17 64706	973.09 23695	1301.9 44444	1570.5 64516	1860.5 26316	1393.4 96241	7.7458 64662	179.90 19608	0.5043 20495	3.6013 06792
CC0 2_1 6- 15	18 59	20	91.339 4298	11.444 14169	51.097 17868	34.379 56204	57.946 55415	160.60 60606	142.52 87356	249.01 96078	339.65 51724	487.92 65092	662.35 29412	894.37 751	1211.1 11111	1524.1 93548	1847.3 68421	161.42 4812	7.4185 661	21.759 57049	0.6958 97482	2.5050 93019

Concordant samples REE data for Wuraliwuntya Member, normalised to chondrite values from Taylor and McLennan (1985).

Anal ysis	A ge	Er ro r	Conco rdance	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Lu/La	Lu/Gd	Gd/La	Eu*	Ce*
CC0 4_0 1- 58	18 10	42	104.14 36464	#VALU E!	11.118 07732	0.3649 63504	0.9423 3474	7.2294 37229	0.9195 4023	28.137 2549	46.379 31034	83.989 50131	137.29 41176	201.60 64257	309.16 66667	405.24 19355	541.84 21053	#VALU E!	19.257 10618	#VALU E!	0.0520 00353	78.656 7536
CC0 4_0 1- 102	19 72	22	103.85 39554	#VALU E!	0.6823 40648	0.3722 62774	1.6033 75527	15.670 99567	0.8850 57471	70.588 23529	91.206 89655	93.438 32021	86.705 88235	82.329 31727	100.55 55556	123.79 03226	141.84 21053	#VALU E!	2.0094 29825	#VALU E!	0.0205 20876	7.8947 299
CC0 4_0 1- 117	18 58	28	102.20 66738	0.1335 14986	3.7513 06165	2.3211 67883	4.1490 85795	19.653 67965	4.2068 96552	65.359 47712	110.17 24138	181.10 23622	306.58 82353	436.14 45783	592.22 22222	790.32 25806	978.68 42105	7330.1 45005	14.973 86842	489.52 9145	0.0989 70482	2.8888 28902
CC0 4_0 1- 44	17 45	38	102.06 30372	#VALU E!	4.4409 61338	0.1883 21168	0.6751 05485	5.4112 55411	1.4137 93103	23.986 9281	42.586 2069	83.989 50131	142.23 52941	224.49 7992	336.94 44444	456.85 48387	594.47 36842	#VALU E!	24.783 23534	#VALU E!	0.0961 82344	84.537 68509

CCO 4_0 1- 28	17 92	40	101.78 57143	0.5531 33515	7.8160 91954	1.4744 52555	3.2067 51055	16.926 40693	9.3103 44828	63.398 69281	110.17 24138	187.40 15748	318.23 52941	476.30 52209	673.61 11111	895.16 12903	1134.2 10526	2050.5 18538	17.890 1248	114.61 73412	0.2318 16577	11.529 04414
CCO 4_0 1- 42	18 37	26	101.36 09145	0.1253 40599	8.8610 24033	3.0656 93431	6.0759 49367	15.238 09524	7.2298 85057	56.176 47059	104.48 27586	194.48 8189	347.17 64706	531.72 69076	790	1070.9 67742	1418.4 21053	11316. 53318	25.249 37999	448.19 05371	0.2024 76483	5.7284 95999
CCO 4_0 1- 114	18 42	26	101.30 29316	0.2861 03542	12.340 64786	5.1094 89051	7.8762 30661	16.103 8961	7.7011 49425	40.686 27451	70	121.25 98425	194.35 29412	309.63 85542	458.33 33333	673.79 03226	880	3075.8 09524	21.628 91566	142.20 82166	0.2712 14168	3.7230 72046
CCO 4_0 1- 96	18 94	40	101.26 71595	0.0280 65395	7.6907 00104	0.6934 30657	2.2784 81013	12.164 50216	5.9655 17241	42.483 66013	62.241 37931	100.26 24672	157.29 41176	232.12 85141	330.27 77778	424.19 35484	555.26 31579	19784. 61932	13.070 04049	1513.7 38181	0.2183 24532	36.442 2526
CCO 4_0 1- 99	19 58	28	101.22 57406	0.2397 82016	6.4576 80251	4.0145 9854	5.5555 55556	16.450 21645	7.5862 06897	52.941 17647	96.551 72414	185.82 67717	322.58 82353	501.20 48193	747.22 22222	986.69 35484	1335.2 63158	5568.6 54306	25.221 63743	220.78 87701	0.2186 49794	2.2259 72463
CCO 4_0 1- 63	21 92	27	100.91 24088	0.7356 94823	15.841 17032	14.160 58394	21.659 63432	38.528 13853	22.643 67816	77.450 98039	102.58 62069	168.24 14698	260.23 52941	371.08 43373	520	670.96 77419	831.05 26316	1129.6 15984	10.730 04664	105.27 59622	0.3904 78534	1.7111 02627
CCO 4_0 1- 12	17 87	26	100.72 74762	0.3405 99455	8.9864 15883	7.0802 91971	8.1575 24613	30.303 0303	17.011 49425	60.130 71895	109.31 03448	183.20 20997	307.05 88235	469.87 95181	691.94 44444	892.74 19355	1132.6 31579	3325.4 06316	18.836 15561	176.54 37908	0.3762 20037	1.4623 20513
CCO 4_0 1- 98	24 17	31	100.33 09888	1.3923 70572	30.303 0303	23.941 60584	33.192 68636	53.246 75325	39.770 11494	88.235 29412	117.06 89655	175.06 56168	280.94 11765	421.28 51406	607.5	799.19 35484	1068.4 21053	767.33 95818	12.108 77193	63.370 5537	0.5621 93094	1.7547 76902
CCO 4_0 1- 37	18 50	32	100.32 43243	0.5177 11172	13.019 85371	11.021 89781	16.455 6962	28.051 94805	18.390 8046	59.477 12418	76.724 13793	123.35 95801	185.76 47059	263.45 38153	355.83 33333	472.17 74194	580	1120.3 15789	9.7516 48352	114.88 47609	0.4202 21628	1.7636 3864
CCO 4_0 1- 83	17 57	29	100.22 76608	0.5885 55858	11.128 52665	11.708 0292	20.281 29395	58.874 45887	31.954 02299	166.33 98693	246.55 17241	403.41 20735	644.35 29412	870.68 27309	1144.7 22222	1365.7 25806	1736.8 42105	2951.0 23392	10.441 52621	282.62 37594	0.2837 65454	1.6465 15169
CCO 4_0 1- 30	20 45	22	100.19 5599	0.0626 703	7.1473 35423	1.6934 30657	2.8691 98312	10.346 32035	3.4827 58621	31.764 70588	58.620 68966	107.61 15486	189.64 70588	299.19 67871	422.22 22222	580.64 51613	746.05 26316	11904. 40503	23.486 84211	506.85 42199	0.1654 08395	7.1510 51326
CCO 4_0 1- 52	17 49	30	100.17 15266	0.3787 46594	30.950 88819	7.2481 75182	11.012 65823	22.900 4329	16.091 95402	61.503 26797	95	161.94 22572	269.29 41176	404.01 60643	597.22 22222	792.74 19355	1072.8 94737	2832.7 50852	17.444 51591	162.38 63262	0.3813 09205	6.4879 56286

CCO 4_0 1- 43	17 76	36	100.05 63063	1.2670 29973	33.333 33333	29.854 0146	43.037 97468	70.562 77056	50.574 71264	156.86 27451	241.20 68966	408.13 64829	648.23 52941	924.89 95984	1297.2 22222	1652.4 19355	2047.3 68421	1615.8 80023	13.051 97368	123.80 34999	0.4447 58474	1.6096 26411
CCO 4_0 1- 46	18 85	40	99.893 8992	#VALU E! 17.074 19018	0.6715 32847	1.8846 6948	14.285 71429	6.1379 31034	61.666 66667	116.37 93103	222.57 21785	384.11 76471	586.34 53815	879.16 66667	1189.9 19355	1557.8 94737	#VALU E! 25.263 15789	#VALU E! 108.27 95501	0.1616 2577	71.357 6915		
CCO 4_0 1- 55	17 62	36	99.716 23156	10.599 45504	49.111 80773	47.591 24088	60.478 19972	83.896 1039	57.356 32184	126.47 05882	167.41 37931	230.70 86614	358.47 05882	505.62 249	695.27 77778	911.29 03226	1131.3 15789	106.73 3392	8.9452 87638	11.931 801	0.5452 9851	1.3113 86528
CCO 4_0 1- 109	18 90	35	99.629 62963	0.8692 09809	14.984 32602	12.554 74453	21.800 28129	43.506 49351	25.747 12644	94.117 64706	130.68 96552	216.27 29659	333.17 64706	465.86 34538	611.66 66667	831.45 16129	1025	1179.2 31975	10.890 625	108.27 95501	0.3741 65845	2.0724 47566
CCO 4_0 1- 7	24 15	28	99.337 47412	0.4359 67302	25.266 45768	2.4817 51825	4.5007 03235	13.290 04329	6.2068 96552	38.562 0915	58.620 68966	103.41 20735	169.29 41176	255.02 00803	404.16 66667	563.70 96774	749.73 68421	1719.7 08882	19.442 32828	88.451 79739	0.2394 07561	18.463 24517
CCO 4_0 1- 103	23 91	23	99.163 5299	0.0239 78202	14.388 71473	0.9927 0073	2.8551 33615	17.402 5974	2.7816 09195	60.784 31373	108.10 34483	190.02 62467	310.58 82353	451.40 56225	639.16 66667	845.56 45161	1042.1 05263	43460. 52632	17.144 31239	2534.9 82175	0.0711 52809	41.688 06691
CCO 4_0 1- 57	19 17	34	98.539 38445	#VALU E! 5.9247 6489	0.0978 10219	0.6469 7609	3.2034 63203	1.6896 55172	21.307 18954	38.620 68966	75.590 55118	131.29 41176	205.62 249	306.66 66667	395.96 77419	543.94 73684	#VALU E! 25.528 81821	#VALU E! 0.1378 71087	0.1378 71087	400.67 3749		
CCO 4_0 1- 115	25 16	44	98.410 17488	0.1089 91826	11.494 25287	3.1386 86131	7.1729 95781	21.212 12121	14.827 58621	49.019 60784	71.896 55172	109.97 37533	156.70 58824	230.92 36948	318.05 55556	451.20 96774	592.10 52632	5432.5 65789	12.078 94737	449.75 4902	0.4222 47506	8.3692 30824
CCO 4_0 1- 100	20 94	86	97.946 51385	#VALU E! 9.9582 02717	0.2328 46715	0.7313 64276	6.1038 96104	2.6896 55172	22.973 85621	37.758 62069	63.832 021	112.47 05882	177.10 84337	266.94 44444	362.90 32258	513.94 73684	#VALU E! 22.370 96653	#VALU E! 0.1849 97461	0.1849 97461	134.33 04513		
CCO 4_0 1- 64	18 44	40	97.885 03254	1.9346 04905	42.006 26959	47.299 27007	60.759 49367	61.038 96104	46.666 66667	94.117 64706	122.41 37931	188.18 89764	313.05 88235	458.63 45382	692.77 77778	955.24 19355	1244.7 36842	643.40 62268	13.225 32895	48.649 54432	0.6015 42754	1.1408 25931
CCO 4_0 1- 113	18 29	21	97.867 68726	0.6566 75749	13.166 1442	13.211 67883	20.675 10549	42.424 24242	26.781 6092	87.908 49673	135.68 96552	228.60 89239	380.11 76471	562.24 8996	798.05 55556	1097.5 80645	1385.7 89474	2110.3 10111	15.763 99922	133.86 89556	0.4109 72859	1.5595 17764
CCO 4_0 1- 9	17 93	25	97.267 15003	0.5776 56676	10.804 5977	10.948 90511	15.654 00844	36.796 5368	25.057 47126	84.869 28105	135	216.27 29659	341.76 47059	497.18 8755	683.61 11111	876.20 96774	1135	1964.8 34906	13.373 50789	146.91 99346	0.4119 06511	1.4108 88783
CCO 4_0	25 82	14	97.172 73431	1.1307 90191	31.055 3814	20.291 9708	28.987 34177	54.805 19481	37.241 37931	101.63 39869	145	222.30 97113	338	497.59 03614	676.94 44444	899.19 35484	1163.9 47368	1029.3 22131	11.452 34388	89.878 73061	0.4761 13195	2.1862 34789

1-33																						
CC04_01-5	2535	18	95.0295858	0.940054496	21.72413793	17.29927007	26.31504923	44.32900433	32.75862069	78.10457516	101.7241379	135.6955381	196.2352941	268.2730924	365.555556	479.0322581	588.4210526	625.9435545	7.533759084	83.08515677	0.535124773	1.910254277
CC04_01-18	1909	17	94.70927187	9.591280654	97.17868339	196.350365	248.9451477	244.1558442	196.5517241	252.2875817	191.3793103	186.0892388	187.0588235	165.4618474	201.1111111	231.0483871	273.9473684	28.5621262	1.085853559	26.3038473	0.791839367	0.627496418
CC04_01-69	1899	41	94.04949974	0.286103542	8.045977011	7.153284672	9.971870605	23.03030303	21.72413793	44.05228758	60	85.30183727	129.7647059	177.5100402	258.055556	341.5322581	446.5789474	1560.899749	10.13747462	153.9732337	0.647683333	1.56799403
CC04_01-111	1841	35	93.10157523	0.61852861	11.38975967	13.13868613	18.56540084	35.93073593	23.2183908	91.83006536	148.7931034	248.8188976	400	567.8714859	810.555556	1131.854839	1405.263158	2271.945282	15.30286571	148.465348	0.363466581	1.224940559
CC04_01-110	2657	17	92.66089575	0.975476839	16.40543365	19.6350365	26.86357243	47.18614719	43.33333333	82.67973856	112.9310345	164.8293963	235.4117647	324.497992	448.888889	616.5322581	817.3684211	837.9167892	9.885957978	84.75827948	0.667355142	1.143110083
CC04_01-34	1910	19	91.62303665	155.3133515	193.3124347	216.0583942	227.8481013	188.7445887	69.08045977	203.2679739	212.2413793	269.816273	370.5882353	494.37751	650	835.483871	1031.578947	6.641920591	5.074970384	1.308760463	0.352440031	0.94354565

Concordant samples REE data for Wununmantyala Sandstone, normalised to chondrite values from Taylor and McLennan (1985).

Anal- ysis	A- ge	Er- ro- r	Conco- rdance	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Lu/La	Lu/Gd	Gd/La	Eu*	Ce*
CCO 4_0 6- 14	20 22	31	103.01 6815	#VALU E!	5.3605 01567	0.1569 34307	0.8298 17159	4.8051 94805	1.2528 73563	31.797 38562	64.482 75862	129.65 87927	232.82 35294	376.30 52209	535.83 33333	708.87 09677	939.73 68421	#VALU E!	29.553 90274	#VALU E!	0.0684 5821	180.61 42669
CCO 4_0 6-8	20 92	19	101.76 86424	0.1771 11717	9.2685 47544	2.4233 57664	6.2587 90436	31.601 7316	7.5862 06897	99.019 60784	168.96 55172	278.74 01575	447.05 88235	658.23 29317	897.22 22222	1076.6 12903	1326.3 15789	7488.5 82996	13.394 47629	559.07 99397	0.1161 55705	9.8779 55361
CCO 4_0 6-6	18 70	22	101.71 12299	0.2016 34877	9.9686 52038	4.9416 05839	11.561 18143	58.571 42857	9.0459 77011	183.66 01307	301.55 17241	495.53 80577	815.64 70588	1191.1 64659	1592.2 22222	1853.6 29032	2334.2 10526	11576. 42248	12.709 40251	910.85 49726	0.0746 88674	4.7195 70204
CCO 4_0 6- 15	20 47	12	100.97 70396	2.0980 92643	24.451 41066	17.518 24818	24.050 63291	60.606 06061	48.965 51724	131.04 57516	184.31 03448	285.30 18373	440	662.24 8996	942.22 22222	1215.3 22581	1536.8 42105	732.49 48735	11.727 5233	62.459 46864	0.5109 8413	1.9162 36376
CCO 4_0 6-9	18 35	24	100.05 44959	0.1662 12534	4.3573 66771	2.6277 37226	3.1082 98172	16.926 40693	6.3218 3908	73.202 61438	157.58 62069	314.69 81627	572.94 11765	926.90 76305	1394.4 44444	1835.4 83871	2378.9 47368	14312. 68335	32.498 1203	440.41 57291	0.1402 84206	1.9614 75658
CCO 4_0 6- 43	17 53	27	100	0.0463 21526	7.1159 87461	0.9562 0438	2.8973 27707	20.735 93074	11.632 18391	79.117 64706	132.24 13793	226.24 67192	373.76 47059	563.05 22088	785.27 77778	1059.6 77419	1341.8 42105	28968. 0031	16.960 08609	1708.0 10381	0.2329 8482	22.549 21029
CCO 4_0 6- 22	17 30	21	99.942 19653	5.5040 87193	64.472 3093	33.649 63504	45.569 62025	126.83 98268	111.03 44828	211.43 79085	238.44 82759	328.34 64567	447.05 88235	667.46 98795	1025	1580.6 45161	2347.3 68421	426.47 73319	11.101 92793	38.414 70912	0.6564 69351	2.5947 04585
CCO 4_0 6-2	27 13	20	99.483 96609	0.1743 86921	11.024 03344	3.1897 81022	6.3572 43319	28.398 2684	24.827 58621	100.32 67974	158.44 82759	291.07 61155	484.23 52941	751.80 72289	1067.2 22222	1370.9 67742	1816.8 42105	10418. 45395	18.109 24053	575.31 14788	0.3857 45947	6.8879 12418
CCO 4_0 6- 18	18 76	34	99.147 12154	0.2942 77929	8.2549 63427	3.3065 69343	4.8241 9128	21.948 05195	13.448 27586	75.490 19608	137.41 37931	247.76 90289	423.05 88235	643.37 3494	941.38 88889	1198.3 87097	1586.8 42105	5392.3 24561	21.020 50581	256.52 687	0.2760 36898	3.6423 72875
CCO 4_0 6- 26	24 34	30	95.891 53657	0.6294 27793	32.601 88088	8.1605 83942	13.994 37412	51.818 18182	39.770 11494	125.16 33987	158.62 06897	232.54 59318	335.76 47059	463.45 38153	617.5	847.17 74194	1068.4 21053	1697.4 48166	8.5362 09977	198.85 26724	0.4494 26599	6.8509 95204
CCO 4_0 6- 38	25 93	27	95.719 24412	0.4059 9455	36.572 62278	4.0145 9854	6.4978 90295	30.952 38095	29.310 34483	82.679 73856	93.965 51724	165.35 43307	210.58 82353	267.87 14859	427.22 22222	625	947.36 84211	2333.4 51077	11.458 28999	203.64 74097	0.5158 81336	14.744 98166
CCO 4_0	17 76	34	95.664 41441	0.1634 87738	12.528 73563	3.0656 93431	3.3614 62729	16.493 50649	10.114 94253	55.555 55556	84.827 58621	155.11 81102	260.23 52941	404.41 76707	563.88 88889	764.51 6129	1010.7 89474	6182.6 62281	18.194 21053	339.81 48148	0.2807 79298	4.4810 32555

6-39																						
CCO 4_0 6-30	18 33	20	94.817 2395	2.2070 84469	30.198 5371	25.474 45255	33.192 68636	93.073 59307	77.011 49425	193.13 72549	215.51 72414	302.36 22047	404.70 58824	532.53 01205	731.38 88889	951.61 29032	1191.5 78947	539.88 82391	6.1695 9658	87.507 86734	0.5381 45181	1.5446 09095
CCO 4_0 6-55	18 32	42	94.596 06987	0.3079 01907	23.228 84013	3.6496 35036	4.4163 15049	18.614 71861	15.977 01149	53.267 97386	80.689 65517	143.30 70866	249.05 88235	373.49 39759	547.5	754.83 87097	1005.7 89474	3266.5 90592	18.881 69196	173.00 30655	0.4445 30135	7.7017 37243
CCO 4_0 6-16	17 74	32	93.968 43292	4.7411 44414	30.929 98955	40.948 90511	57.524 61322	146.75 32468	118.39 08046	317.64 70588	420.68 96552	575.06 56168	808.23 52941	1041.7 67068	1380.5 55556	1600.8 06452	1978.9 47368	417.39 86691	6.2300 19493	66.997 9716	0.5098 65317	1.0610 81866
CCO 4_0 6-34	18 31	26	91.425 45057	1.9019 07357	22.257 05329	26.423 35766	36.568 21378	124.67 53247	120	241.50 3268	256.37 93103	342.25 72178	384.70 58824	449.79 91968	639.16 66667	862.09 67742	1112.6 31579	585.00 82944	4.6071 07756	126.97 9512	0.6554 17888	1.1657 2311
CCO 5_1 2-61	17 12	39	101.98 59813	#VALU E! 16092	4.3678 67883	0.3211 67883	0.9845 28833	6.7532 46753	4.1839 08046	34.183 00654	60.862 06897	115.22 30971	203.76 47059	306.02 40964	445.27 77778	590.72 58065	808.94 73684	#VALU E! 1907	23.665 1907	#VALU E! 1907	0.2044 10893	41.689 68029
CCO 5_1 2-57	17 44	33	101.66 2844	0.0272 47956	7.9310 34483	0.7664 23358	1.7862 16596	10.519 48052	5.7241 37931	44.346 40523	86.206 89655	154.59 31759	281.88 23529	439.75 90361	614.72 22222	855.64 51613	1081.5 78947	39693. 94737	24.389 3263	1627.5 13072	0.2086 59274	24.117 17832
CCO 5_1 2-111	17 48	22	101.65 90389	0.0283 37875	26.091 95402	0.9489 05109	2.7566 80731	15.194 80519	7.4022 98851	46.993 46405	82.068 96552	144.09 44882	237.52 94118	374.69 87952	566.94 44444	765.72 58065	1038.4 21053	36644. 28138	22.097 13784	1658.3 27049	0.2380 60938	79.881 73792
CCO 5_1 2-49	17 35	26	101.21 03746	0.1934 6049	33.845 35005	6.3503 64964	13.080 16878	42.424 24242	36.666 66667	81.045 75163	111.55 17241	170.34 12073	277.76 47059	460.24 09639	670	986.29 03226	1361.3 15789	7036.6 60489	16.796 88031	418.92 66317	0.5939 36477	10.977 79173
CCO 5_1 2-16	17 36	29	101.20 96774	0.1038 14714	27.304 07524	0.9416 05839	2.5035 16174	14.285 71429	8.3448 27586	44.803 92157	80.344 82759	131.49 6063	219.29 41176	336.54 61847	500.83 33333	679.83 87097	876.84 21053	8446.2 21854	19.570 6553	431.57 58324	0.2824 46404	77.097 37424
CCO 5_1 2-87	17 54	28	101.08 32383	#VALU E! 87043	13.531 87043	0.4379 56204	1.3642 75668	11.861 47186	9.1494 25287	50.424 8366	87.758 62069	158.79 26509	276.58 82353	434.93 9759	650	881.04 83871	1231.5 78947	#VALU E! 0543	24.424 0543	#VALU E! 0543	0.2937 86083	96.249 52562
CCO 5_1 2-92	17 74	30	100.84 55468	#VALU E! 63009	14.921 63009	0.4817 51825	2.0253 16456	12.424 24242	4.7356 32184	52.189 54248	90	162.72 96588	272.11 76471	423.29 31727	600	795.96 77419	1090.5 26316	#VALU E! 49484	20.895 49484	#VALU E! 8272	0.1465 8272	130.21 54225

Cris Joshua Cruz
 Geochronological constraints of the McArthur and Tawallah Groups

CCO 5_1 2-5	17 64	27	100.73 69615	0.1226 15804	12.570 53292	3.3430 65693	7.0042 19409	22.813 85281	17.816 09195	61.601 30719	96.379 31034	159.58 00525	241.64 70588	354.21 68675	533.88 88889	707.66 12903	921.05 26316	7511.6 95906	14.951 83582	502.39 28831	0.4221 06455	7.8781 3847
CCO 5_1 2-73	18 66	35	100.69 66774	#VALU E!	3.2142 11076	0.4306 56934	1.7158 93108	10.822 51082	4.1494 25287	42.973 85621	72.413 7931	124.40 94488	206.82 35294	300	441.94 44444	573.38 70968	771.84 21053	#VALU E!	17.960 73644	#VALU E!	0.1542 64145	29.737 3137
CCO 5_1 2-75	17 53	30	100.68 45408	1.0762 94278	32.821 31661	1.9197 08029	3.5302 391	15.238 09524	8	46.732 02614	75.862 06897	135.17 06037	226.35 29412	333.33 33333	493.05 55556	664.11 29032	884.47 36842	821.77 68155	18.926 49982	43.419 37619	0.2581 88941	31.440 52264
CCO 5_1 2-79	18 95	33	100.52 77045	#VALU E!	42.601 88088	0.5474 45255	1.5330 52039	9.2207 79221	5.2413 7931	30.522 87582	50.344 82759	88.451 44357	154.35 29412	241.76 70683	377.22 22222	556.45 16129	739.73 68421	#VALU E!	24.235 48969	#VALU E!	0.2637 593	217.92 36069
CCO 5_1 2-77	17 86	25	100.44 79283	#VALU E!	7.3667 7116	0.2007 29927	0.8438 81857	6.9264 06926	1.9195 4023	37.026 14379	68.275 86207	130.97 11286	238.35 29412	356.22 48996	526.11 11111	706.45 16129	899.73 68421	#VALU E!	24.300 04181	#VALU E!	0.0873 46022	154.28 88619
CCO 5_1 2-100	17 91	26	100.44 66778	0.2779 29155	16.927 89969	7.3722 62774	15.330 52039	42.424 24242	22.873 56322	81.699 34641	119.48 27586	187.66 4042	281.76 47059	420.48 19277	574.44 44444	715.32 25806	869.47 36842	3128.4 00413	10.642 35789	293.95 74523	0.3685 611	4.7748 34913
CCO 5_1 2-3	24 89	17	100.44 19446	2.5885 55858	20.073 14525	5.4744 52555	10.126 58228	28.744 58874	13.448 27586	70.588 23529	99.827 58621	165.35 43307	264.35 29412	398.79 51807	610.27 77778	848.38 70968	1150	444.26 31579	16.291 66667	27.269 34985	0.2707 72043	6.7826 11319
CCO 5_1 2-83	18 74	46	100.32 01708	0.1743 86921	36.990 59561	3.8832 11679	11.800 28129	41.298 7013	33.448 27586	96.699 34641	123.96 55172	178.21 52231	245.88 23529	320.88 35341	428.88 88889	524.59 67742	664.21 05263	3808.8 32237	6.8688 21259	554.51 03145	0.4847 64479	28.946 86622
CCO 5_1 2-112	21 17	28	100.18 89466	#VALU E!	1.4838 03553	0.5036 49635	2.0112 51758	14.155 84416	2.1839 08046	66.830 06536	127.75 86207	255.38 05774	430.47 05882	656.22 48996	975.55 55556	1248.3 87097	1583.1 57895	#VALU E!	23.689 3064	#VALU E!	0.0539 33037	11.764 8338
CCO 5_1 2-113	17 43	25	100.11 47447	0.0343 32425	7.1995 82027	1.1240 87591	2.6722 92546	11.168 83117	6.7356 32184	36.078 43137	65.689 65517	132.54 59318	223.76 47059	342.97 18876	520.83 33333	695.96 77419	907.36 84211	26428. 9056	25.149 88558	1050.8 55898	0.2851 22643	15.226 18061
CCO 5_1 2-88	17 63	28	100.11 3443	0.1880 10899	12.288 40125	7.0072 9927	12.292 54571	36.926 40693	25.632 18391	65.686 27451	88.620 68966	138.32 021	220.94 11765	336.54 61847	488.88 88889	654.83 87097	890	4733.7 68116	13.549 25373	349.37 48224	0.4995 90958	3.0763 50991
CCO 5_1 2-48	17 96	29	100.05 56793	35.422 34332	79.414 83804	40.145 9854	45.991 56118	72.727 27273	46.091 95402	108.82 35294	140	197.37 53281	281.17 64706	409.23 69478	575	759.27 41935	989.47 36842	27.933 60324	9.0924 60882	3.0721 71946	0.5077 58197	2.2661 8605
CCO 5_1	24 91	26	99.718 98836	0.1771 11717	29.467 08464	4.9781 0219	13.980 30942	51.082 25108	51.379 31034	129.41 17647	166.20 68966	253.28 08399	387.05 88235	561.84 73896	833.33 33333	1125	1534.2 10526	8662.3 88664	11.855 26316	730.67 8733	0.5693 18713	16.623 64819

2-26																							
CCO 5_1 2-80	18 68	22	99.678 80086	1.1716 62125	60.188 08777	31.386 86131	59.071 72996	153.67 96537	122.98 85057	202.61 43791	215.51 72414	251.96 85039	329.41 17647	441.36 54618	669.44 44444	935.88 70968	1210.5 26316	1033.1 70135	5.9745 33107	172.92 90166	0.6903 76456	3.6090 62961	
CCO 5_1 2-18	17 54	27	99.600 9122	0.5040 87193	21.295 71578	12.627 73723	25.175 80872	73.593 07359	60.344 82759	156.86 27451	207.41 37931	329.92 12598	535.29 41176	793.57 42972	1159.4 44444	1592.7 41935	2086.8 42105	4139.8 43528	13.303 61842	311.18 177	0.5236 99752	3.3622 08178	
CCO 5_1 2-90	17 76	28	99.549 54955	0.1771 11717	7.7533 96029	3.8832 11679	9.1420 53446	33.506 49351	19.195 4023	103.92 15686	165.68 96552	270.07 87402	422.82 35294	617.26 90763	832.5	1018.1 45161	1326.0 52632	7487.0 97166	12.760 1291	586.75 71644	0.2793 52004	4.7006 03213	
CCO 5_1 2-72	25 63	25	99.414 74834	0.0234 33243	30.073 14525	1.0729 92701	3.6146 27286	18.571 42857	12.517 24138	62.483 66013	97.241 37931	157.48 0315	249.52 94118	344.97 99197	494.72 22222	655.64 51613	832.10 52632	35509. 60832	13.317 16582	2666.4 53868	0.3088 57632	94.416 7048	
CCO 5_1 2-22	20 01	27	99.250 37481	0.0460 49046	5.8725 18286	1.3284 67153	2.4331 92686	8.9177 48918	4.6551 72414	33.071 89542	64.827 58621	129.92 12598	240.47 05882	389.15 66265	577.22 22222	822.17 74194	1084.4 73684	23550. 40486	32.791 39796	718.18 84983	0.2217 29547	8.0965 35763	
CCO 5_1 2-46	17 59	39	98.976 6913	0.1416 89373	10.177 63845	4.0364 9635	10.126 58228	48.398 2684	22.413 7931	153.26 79739	255.51 72414	412.07 34908	660	941.76 70683	1261.1 11111	1585.8 87097	1963.1 57895	13855. 36437	12.808 66345	1081.7 182	0.2222 86019	6.3255 86319	
CCO 5_1 2-78	20 69	25	98.936 68439	0.0253 40599	6.7293 62591	1.1167 88321	2.2362 8692	8.3549 78355	8.6206 89655	23.888 88889	40.862 06897	75.853 01837	144.70 58824	242.57 02811	421.94 44444	691.12 90323	1118.4 21053	44135. 54046	46.817 62546	942.71 20669	0.5347 18096	12.065 90012	
CCO 5_1 2-15	18 36	29	98.366 01307	0.2479 56403	13.761 75549	7.1167 88321	15.218 00281	51.298 7013	28.045 97701	122.22 22222	172.75 86207	257.48 0315	363.52 94118	474.69 87952	628.88 88889	790.32 25806	942.10 52632	3799.4 79468	7.7081 33971	492.91 81929	0.3232 57581	4.1348 84664	
CCO 5_1 2-63	17 51	34	97.201 59909	0.1553 13351	7.6280 0418	4.5255 47445	8.2981 71589	61.038 96104	83.908 04598	166.66 66667	196.55 17241	267.71 65354	369.41 17647	506.02 40964	680.55 55556	810.48 3871	1047.3 68421	6743.5 82641	6.2842 10526	1073.0 99415	0.7369 8702	3.0906 58983	
CCO 5_1 2-65	17 68	23	97.115 38462	0.1471 38965	14.764 89028	4.8905 10949	9.5639 94374	27.922 07792	20.344 82759	74.509 80392	113.96 55172	193.17 5853	314	464.65 86345	689.16 66667	884.27 41935	1157.8 94737	7869.3 95712	15.540 1662	506.39 07044	0.3972 36236	5.9042 00061	
CCO 5_1 2-74	25 43	18	96.972 08022	0.5967 30245	28.975 96656	11.605 83942	22.925 4571	73.766 23377	55.632 18391	121.56 86275	137.24 13793	199.47 50656	273.41 17647	390.76 30522	591.11 11111	779.43 54839	1036.8 42105	1737.5 39053	8.5288 62479	203.72 45949	0.5696 08349	4.9317 70076	
CCO 5_1	17 92	24	96.763 39286	0.1907 35695	8.4117 03239	5.2043 79562	10.717 29958	34.502 1645	27.816 09195	86.274 5098	131.37 93103	212.07 34908	344.47 05882	493.97 59036	704.72 22222	887.5	1134.4 73684	5947.8 83459	13.149 58134	452.32 493	0.4606 20267	3.3283 68382	

2-23																						
CC0 5_1 2-104	17 86	28	95.800 67189	0.9264 30518	41.379 31034	28.321 16788	56.118 14346	138.09 52381	99.080 45977	217.32 02614	262.06 89655	392.91 33858	578.82 35294	817.67 06827	1144.1 66667	1466.1 29032	1802.6 31579	1945.7 81734	8.2948 15987	234.57 80469	0.5575 47208	2.8951 04379
CC0 5_1 2-39	18 51	27	95.678 01189	0.6267 02997	8.4743 99164	15.182 48175	32.770 74543	104.76 19048	76.321 83908	192.81 04575	240.68 96552	341.73 22835	497.64 70588	685.14 05622	905.83 33333	1143.9 51613	1402.6 31579	2238.1 12128	7.2746 65477	307.65 84257	0.5129 63223	1.2047 85414
CC0 5_1 2-69	26 00	15	93.692 30769	1.1498 6376	34.440 96134	30.145 9854	55.555 55556	146.75 32468	114.82 75862	203.26 79739	224.48 27586	272.96 58793	346.35 29412	433.73 49398	608.61 11111	756.04 83871	955.78 94737	831.21 97556	4.7021 15417	176.77 57024	0.6561 17855	2.1054 44468
CC0 5_1 2-98	18 11	26	92.655 99117	1.2452 31608	31.556 9488	49.781 0219	107.87 62307	348.48 48485	267.81 6092	424.83 66013	422.41 37931	419.94 75066	435.29 41176	479.51 80723	586.11 11111	721.77 41935	955.26 31579	767.13 69342	2.2485 4251	341.17 07498	0.6926 38468	1.3737 0397
CC0 5_1 2-95	17 73	31	90.242 52679	166.21 25341	179.72 83177	175.18 24818	175.80 87201	242.42 42424	136.78 16092	330.06 53595	400	511.81 10236	752.94 11765	983.93 5743	1266.6 66667	1528.2 25806	1907.8 94737	11.478 64538	5.7803 54351	1.9858 03064	0.4778 48362	1.0296 16686