19 June 2024

AR3 Extends High-Grade mineralisation 60km South of Koppamurra Resource

Highlights

- **New rare earth discovery south of Koppamurra:** Assay results from a regional hand auger program have identified shallow clay-hosted rare earth mineralisation up to 60 km south of AR3's Koppamurra Resource (which includes **186 million tonnes at 712 ppm Total Rare Earth Oxides** (TREO)[(ASX 19/09/2023)]).

- **Extensive mineralised zone:** Assays confirm the extensive nature of the mineralised clay, opening up the southern tenements to follow up exploration and providing strong evidence of the rare earth province potential.

- **Shallow, high-grade clays:** Shallow clays with rare earth grades and assemblages comparable to the Koppamurra Resource have been identified within previously unexplored southern tenements EL6942 and EL6943.

- **Significant dysprosium (Dy) content:** The samples contain Dy, a critical heavy rare earth element, at levels of up to 4.0% of the TREO content.

- **High-grade mineralisation intersected includes:**

    - **Hole/Sample 715464**, 1,889 ppm Total Rare Earth Oxide (TREO) sampled 0.7m below surface, with 27.6% combined Neodymium/Praseodymium (Nd/Pr) and 3.1% Dysprosium (Dy)
    - **Hole/Sample 715321**, 1,654 ppm TREO sampled 1.4m below surface, with 24.7% combined Nd/Pr and 2.2% Dy
    - **Hole/Sample 715497** 1,631 ppm TREO sampled 0.7m below surface, with 22.4% combined Nd/Pr and 3.2% Dy
    - **Hole/**Sample 715405 1,496 ppm TREO sampled 1.4m below surface, with 22.2% combined Nd/Pr and 3.2% Dy
    - **Hole/Sample 715299** 1,286 ppm TREO sampled 1.0m below surface, with 23.0% combined Nd/Pr and 3.0% Dy
    - **Hole/Sample 715108** 1,147 ppm TREO sampled 2.0m below surface with 20.5% combined Nd/Pr and 4.0% Dy

- Click here to watch a short video on this from our MD and CEO, Travis Beinke, or ask us any questions.

Australian Rare Earths Limited (ASX: AR3) is pleased to announce that assay results from its recent roadside hand auger sampling campaign have identified shallow, clay-hosted rare earth element (REE) mineralisation extending 60 kilometers south of its Koppamurra Resource in South Australia. The program was designed to advance exploration using a cost-effective, low-impact exploration technique targeting shallow, less than 2m deep, REE mineralisation on AR3's southern tenements EL6942 and EL6943 (Figure 1).

Assays confirm the extensive nature of the mineralised clay, opening up the southern tenements for follow-up exploration and providing strong evidence of the district's rare earth potential. Shallow clays with REE grades and assemblages comparable to the Koppamurra Resource have been identified, containing dysprosium, a critical rare earth element used in high-tech applications, at levels of up to 4.0% of the TREO content.

Figure 1- Roadside auger sampling (left) and high-grade mineralised clay sample 715464 (right) which contained 1,889 ppm TREO and 3.1% Dy sampled from 0.7m below surface.

The auger program, which began in February and concluded in May 2024, has covered a large portion of EL6942 and EL6943 utilising the extensive road verge network in the region (Figure 2). A total of 1047 auger holes/samples were collected from an average sampling depth of 1.1m of which, 371 samples which were submitted for analysis.

The hand auger program was limited to a maximum sampling depth of 2m, therefore only exceptional shallow lithologies were able to be sampled. Over 70% of the auger holes intersected clay and although significant shallow mineralised clays within the southern part of EL6943 were identified, other areas, like the northwestern portion of EL6942 which did not intersect significant mineralisation, remain prospective as mineralised clays may be deeper than the 2.0m hand auger could achieve.

A total of 129 of the 371 auger samples sent for assay (35%) contained mineralised clays >350ppm TREO and 26 of the 371 auger samples (7%) contained >750 ppm TREO (Figure 3). The results are highly encouraging due to the exceptionally shallow nature of the mineralised clays occurring over 60km from the Koppamurra Resource with comparable grades and magnet rare earth assemblage to the Koppamurra Resource.

The auger program will further inform the next stage of exploration in the southern region and builds confidence on the continuation of the widespread nature of the mineralised clays supporting a province wide REE potential in the region.

AR3 Managing Director Travis Beinke said:

"Our regional exploration program has unearthed extensive shallow clay-hosted REE mineralisation extending a full 60 kilometers south of our flagship Koppamurra Resource. This discovery not only expands the potential footprint of our province significantly, but the presence of high-grade clays and noteworthy dysprosium content within the newly identified zone paints a very exciting picture for the future.

Importantly, this auger program paves the way for follow-up exploration drilling in the southern tenements, solidifying our extensive province position."

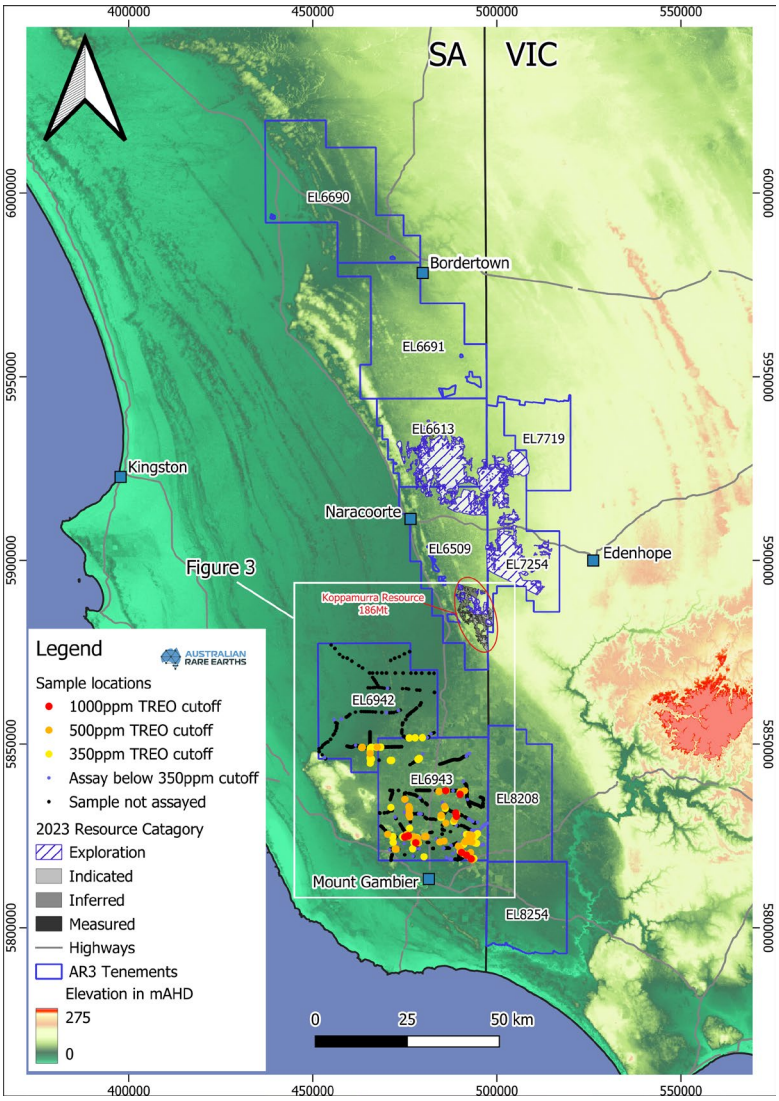

***Figure 2** – Auger hole locations and significant TREO assays relative to Koppamurra Resource.*

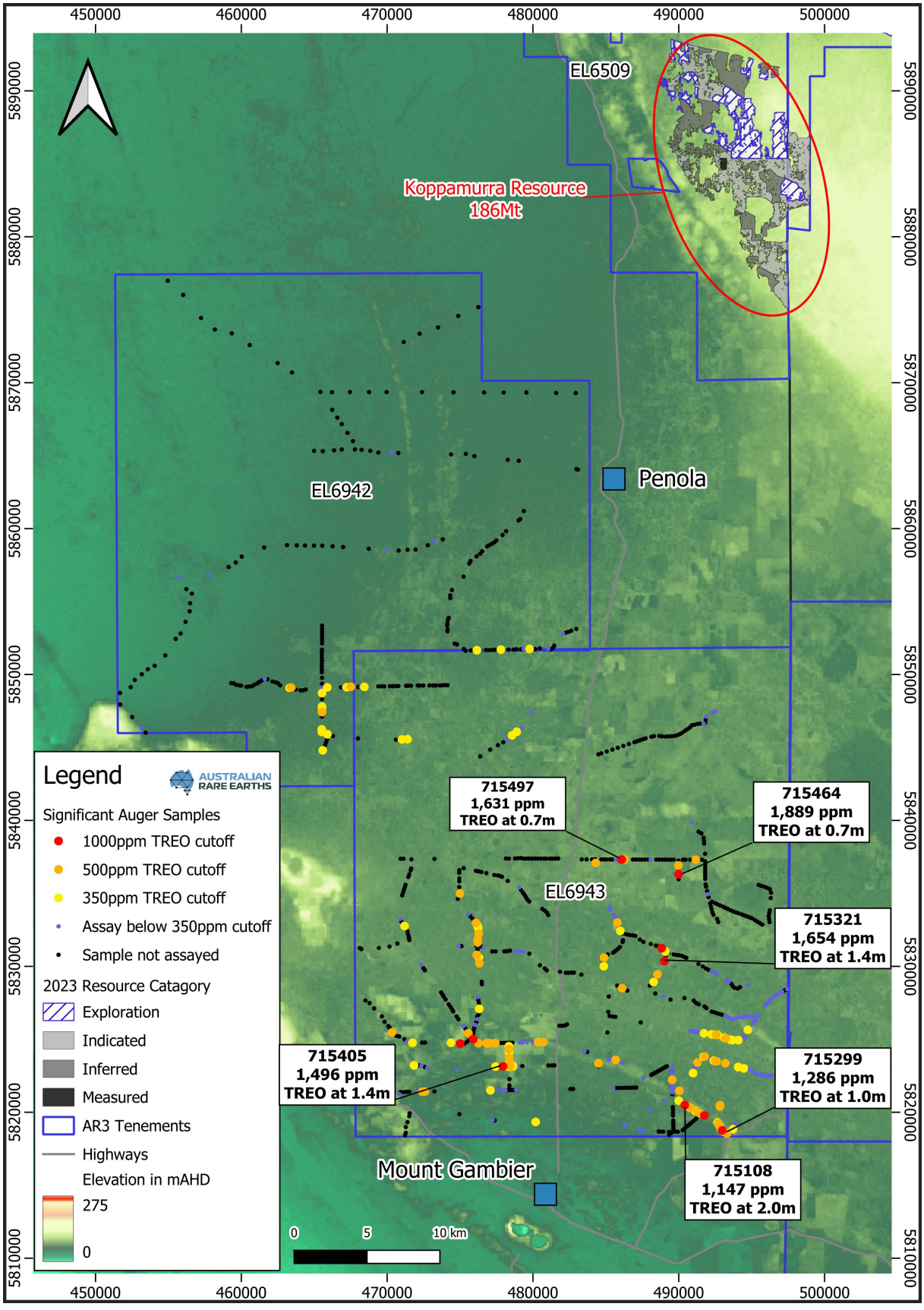

***Figure 3** – Significant auger samples.*

The announcement has been authorised for release by the Board of Australian Rare Earths Limited.

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Competent Person's Statement

The information in this report that relates to Exploration results is based on information compiled by Australian Rare Earths Limited and reviewed by Mr Rick Pobjoy who is the Chief Technical Officer of the Company and a member of the Australian Institute of Mining and Metallurgy (AusIMM). Mr Pobjoy has sufficient experience that is relevant to the style of mineralisation, the type of deposit under consideration and to the activities undertaken to qualify as a Competent person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Pobjoy consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

About Australian Rare Earths Limited

Australian Rare Earths is committed to the timely exploration and development of its 100% owned, flagship Koppamurra Project, located in the new Koppamurra rare earths Province in southeastern South Australia and western Victoria. Koppamurra is a prospective ionic clay hosted rare earth deposit, uniquely rich in all the elements required in the manufacture of rare earth permanent magnets which are essential components in electric vehicles, wind turbines and domestic appliances. In addition, AR3 is actively reviewing other potential prospective areas which may also host uranium and ionic clay hosted rare earth deposits throughout Australia.

The Company is focused on executing a growth strategy that will ensure AR3 is positioned to become an independent and sustainable source of energy transition metals, playing a pivotal role in the global transition to a green economy.

https://investorhub.ar3.com.au/link/lPd0LP

JORC Table 1

Section 1 Sampling Techniques and Data		
Criteria	**Explanation**	**Comment**
Sampling techniques	*Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g.,*	*Manual Hand Auger methods were used to obtain samples from the February- May 2024 sampling program.* *The following information covers the sampling process:* • *All samples were collected via the use of a manual hand auger and placed into a pre-numbered calico bag. The collected samples were geologically logged using the marked calico sample which averaged ~1.5 kg in mass.* • *A handheld Olympus Vanta XFR Analyser was used to assess the geochemistry of the hand auger samples in the field. The XRF analysis provided a full suite of mineral elements for characterising the lithological units.* • *XRF readings were downloaded from the XRF Analyser at the end of each day and uploaded to the Australian Rare Earths Azure Data Studio database.* • *At the laboratory, the samples were oven dried at 105 degrees for a minimum of 24 hours and secondary crushed to 3 mm fraction and then pulverised to 90% passing 75 µm. Excess residue was maintained for storage while the rest of the sample placed in 8x4 packets and sent to the central weighing laboratory. The samples were submitted for analysis using XRF-ICP-MS method.* • *A laboratory repeat was taken at ~ 1 in 21 samples.*

	submarine nodules) may warrant disclosure of detailed information.	
Drilling techniques	*Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit, or other type, whether core is oriented and if so, by what method, etc).*	• *Hand auger drilling was completed using a manual hand auger with a Clay sample bit.* • *Hand Auger drilling is a form of manual drilling where the sample is collected at the face and contained inside the bit. The drill cuttings are removed from the bit by removing the auger from the hole and manually collecting the sample.* • *A 83mm Clay hand auger bit was used with a 1 meter steel rod extension to allow for maximum 2 meter sample depth.* • *All hand auger holes were vertical with depths varying between 0 m and 2 m.* • *The auger bit is cleaned between holes to avoid contamination.*
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• *Sample recoveries were not recorded as the sample material was collected form the base of the auger holes to allow for a 1-1.5kg sample size.*
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or*	• *All hand auger samples were collected in calico bags were logged for lithology, colour, and any relevant comments such as moisture, sample condition, or vegetation.* • *Geological logging data for all hand auger holes was qualitatively logged onto ArcGIS Field maps using a Samsung tablet with validation rules built into the software including specific drop- down menus for each variable. The data was uploaded to the Australian Rare Earths Azure Data*

	costean, channel, etc) photography. *The total length and percentage of the relevant intersections logged.*	*Studio database.* • *Every auger hole was logged in full and logging was undertaken with reference to a auger sampling template with codes prescribed and guidance to ensure consistent and systematic data collection* • *Photos of each auger sample site were taken before and after hand augering including a photo of the sample material collected.*
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all cores taken.* *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* *For all sample types, the nature, quality, and appropriateness of the sample preparation technique.* *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• *The 1.5 kg sample was collected in a pre-numbered calico bag.* • *The 1.5 kg sample collected in the calico bag was logged by the geotechnician onsite. The logged samples were placed in polyweave bags and sent to Naracoorte base at the end of each day. The polyweave bags were then placed on pallets and dispatched to Bureau Veritas laboratory in Adelaide in Bulka Bags.* • *A geotechnician oversaw the sampling and logging process while a geologist selected samples for analysis based on the logging descriptions and Pxrf analysis. Clay rich sample and those adjacent to the limestone basement contact were selected for assay. REEs are known to be contained within the clay component of the sediment package based on analysis of XRF data and previous exploration work.*
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• *The 1.5 kg hand auger samples were assayed by Bureau Veritas laboratory in Wingfield, Adelaide, South Australia, which is considered the Primary laboratory.* • *The samples were initially oven dried at 105 degrees Celsius for 24 hours. Samples were*

	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. *Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.*	*secondary crushed to 3 mm fraction and the weight recorded. The sample was then pulverised to 90% passing 75 µm. Excess residue was maintained for storage while the rest of the sample placed in 8x4 packets and sent to the central weighing laboratory.* • *All weighed samples were then analysed using the Multiple Elements Fusion/Mixed Acid Digest analytical method;* • *ICP Scan (Mixed Acid Digest – Lithium Borate Fusion) Samples are digested using a mixed acid digest and also fused with Lithium Borate to ensure all elements are brought into solution. The digests are then analysed for the following elements (detection Limits shown): Al (100) As (1) Ba (1) Be (0.5) Ca(100) Ce (0.1) Co (1) Cr (10) Dy (0.05) Er (0.05) Eu(0.05) Fe(100) Gd (0.2) Ho (0.02) K (100) La (0.5) Lu (0.02) Mg (100) Mn (2) Na (100) Nd (0.05) Ni (2) Pr (0.2) S (50) Sc (1) Si (100) Sm(0.05) Sr (0.5) Th (0.1) Ti (50) Tm (0.2) U (0.1) V (5) Y (0.1) Yb (0.05) Zr (1)* • *Bureau Veritas completed its own internal QA/QC checks that included a Laboratory repeat every 21st sample and a standard reference sample every 9th sample prior to the results being released.* • *Analysis of QA/QC samples show the laboratory data to be of acceptable accuracy and precision.* • Australian Rare Earths requested BV insert blank washes at a frequency of 1:40 samples. These blank washes were inserted in the sample sequence behind samples which were thought to be mineralized to ensure that no contamination from higher grade samples was occurring. Frequency of blank samples totaled 1 in 31 samples. *The adopted QA/QC protocols are acceptable for this stage of test work. The sample preparation and assay techniques used are industry standard and provide a total analysis.*
Verification of sampling	*The verification of significant intersections by*	• *All results are checked by the company's Chief Technical Officer.*

and assaying	*either independent or alternative company personnel.* *The use of twinned holes.* *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* *Discuss any adjustment to assay data.*	• *Geological logging data for all hand auger holes was qualitatively logged onto ArcGIS Field maps using a Samsung tablet with validation rules built into the software including specific drop- down menus for each variable. This digital data was then uploaded to the Australian Rare Earths Azure Data Studio database.* • *Assay data was received in digital format from the laboratory and was uploaded Australian Rare Earths Azure Data Studio database.* • *Laboratory duplicate data pairs of each batch are plotted to identify potential quality control issues.* • *Standard Reference Material sample results are checked from each sample batch to ensure they are within tolerance (<3SD) and that there is no bias.* • *Assay data yielding elemental concentrations for rare earths (REE) within the sample are converted to their stoichiometric oxides (REO) in a calculation performed within the database using the conversion factors in the below table.* • *Rare earth oxide is the industry accepted form for reporting rare earths. The following calculations have been used for reporting throughout this report:* • *Note that Y2O3 is included in the TREO, HREO and CREO calculation.* ***TREO** = La2O3 + CeO2 + Pr6O11 + Nd2O3 + Sm2O3+ Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3+ Y2O3* ***CREO** = Nd2O3 + Eu2O3 + Tb4O7 + Dy2O3 + Y2O3* ***LREO** = La2O3 + CeO2 + Pr6O11 + Nd2O3* ***HREO** = Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3+ Lu2O3 + Y2O3 NdPr = Nd2O3 + Pr6O11* ***TREO-Ce** = TREO - CeO2* ***NdPr** = Nd + Pr*

		Element Oxide / Oxide Factor CeO2 1.2284 Dy2O3 1.1477 Er2O3 1.1435 Eu2O3 1.1579 Gd2O3 1.1526 Ho2O3 1.1455 La2O3 1.1728 Lu2O3 1.1371 Nd2O3 1.1664 Pr6O11 1.2082 Sc2O3 1.5338 Sm2O3 1.1596 Tb4O7 1.1762 ThO2 1.1379 Tm2O3 1.1421 U3O8 1.1793 Y2O3 1.2699 Yb2O3 1.1387
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* *Specification of the grid system used.* *Quality and adequacy of topographic control.*	• *Down hole surveys for shallow vertical hand auger holes are not required.* • *The drill hole collars were located using a GPS unit to identify the positions of the drill holes in the field. The handheld GPS has an accuracy of +/-5m in the horizontal.* • *The datum used is GDA2020/MGA Zone 54.* • *Topographic DTM surface over the Southern exploration area is derived from an Australian wide SRTM. The 1 second SRTM Level 2 Derived Smoothed Digital Elevation Model (DEM-S) is derived from the 2000 SRTM. The DEM-S has a ~30m grid which has been adaptively smoothed to improve the representation of the surface shape and is the preferred method for shape and vertical accuracy from STRM products. The smoothing process estimated typical improvements in the order of 2-3 m. This would make the DEM-S accuracy to be of approximately 5 m.* • *The accuracy of the locations is sufficient for this stage of exploration.*

Data spacing and distribution	*Data spacing for reporting of Exploration Results.* *Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	• *The holes were largely drilled at between 100 m and 400 m spacings along accessible road verges.* • *The drilling of hand auger holes was conducted to determine the regional prospectivity of the wider Koppamurra Project area.* • *No sample compositing has been applied.*
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• *The Koppamurra mineralisation is interpreted to be hosted in flat lying clays that are horizontal. Undulation of the clay unit is influenced by the weathered limestone basement below.* • *All auger holes are vertical which is appropriate for horizontal bedding and regolith profile.* • *The strike of the mineralisation is north south, and the high grades follow a northwest-southeast trend.* • *All hand auger holes were vertical, and the orientation of the mineralisation is relatively horizontal.*
Sample security	*The measures taken to ensure sample security.*	• *After logging, the samples in calico bags were tied and placed into polyweave bags, labelled with the sample numbers contained within the polyweave and transported to the base of operations, Naracoorte, at the end of each day.* • *The samples were then placed on pallets ready for transport and remained in a secure compound until transport had been arranged. Pallets were labelled and then 'shrink-wrapped' by the transport contractor prior to departure from the Naracoorte base to the analytical laboratory.* • *Samples for analysis were logged against pallet identifiers and a chain of custody*

		form created. • *Transport to the analytical laboratory was undertaken by an agent for the TOLL Logistics Group, and consignment numbers were logged against the chain of custody forms.* • *The laboratory inspected the packages and did not report tampering of the samples and provided a sample reconciliation report for each sample dispatch.*
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	• *Internal reviews were undertaken by AR3's Exploration Manager and Chief Technical officer during the auger, sampling, and geological logging process and throughout the sample collection and dispatch process to ensure AR3's protocols were followed.* • *A review of the database was also undertaken by Wallbridge Gilbert Aztec (WGA) – Consulting Engineers.*

Section 2 Reporting of Exploration Results		
Criteria	**Explanation**	**Comment**
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	*Koppamurra Project comprises of a granted South Australian Exploration Licences (EL), EL6509, EL6613, EL6690, EL6691, EL6942, and EL6943 along with Victorian EL007254, EL007719, EL008208 and EL008254 covering a combined area of ~7,400 km2 which is in good standing.* *EL6509 is within 100m of a Glen Roy Conservation Park and the Naracoorte Caves National Park, the latter of which is excised from the tenement. The License area contains several small Extractive Mineral Leases (EML) held by others, Native Vegetation Heritage Agreement areas, as well as the Deadman's Swamp Wetlands which are wetlands of national importance.* *A Native Title Claim by the First Nations of the South East #1 has been registered but is yet to be determined. The claim area includes the areas covered by EL's 6509,*

		6613, 6690 and 6691. *The exploration work was completed on the tenements (EL 6509 and EL6613) in South Australia and (EL007254 and EL007719) in Victoria which are 100% owned by the company Australian Rare Earths Ltd.* *The Exploration License EL6509 original date of grant was 15/09/2020 with an expiry date of 14/09/2028.* *The Exploration License EL6613 original date of grant was 06/07/2021 with an expiry date of 05/07/2027.* *The Exploration License EL6690 original date of grant was 02/11/2021 with an expiry date of 01/11/2027.* *The Exploration License EL6691 original date of grant was 02/11/2021 with an expiry date of 01/11/2027.* *The Exploration License EL6942 original date of grant was 17/10/2023 with an expiry date of 16/10/2029.* *The Exploration License EL6943 original date of grant was 17/10/2023 with an expiry date of 16/10/2029.* *The Exploration License EL007254 original date of grant was 29/04/2021 with an expiry date of 28/04/2024.* *The Exploration License EL007719 original date of grant was 29/08/2022 with an expiry date of 28/08/2027.* *The Exploration License EL008208 original date of grant was 11/06/2024 with an expiry date of 10/06/2029.* *The Exploration License EL008254 original date of grant was 11/06/2024 with an expiry date of 10/06/2029.* *Details regarding royalties are discussed in chapter 3.4 of Australian Rare Earths Prospectus dated 7 May 2021.*

Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	*Exploration activities by other exploration companies in the area have not previously targeted or identified REE mineralisation.* *Historical exploration activities in the vicinity of Koppamurra include investigations for coal, gold and base metals, uranium, and heavy mineral sands.* *Historical exploration by other parties is detailed in Chapter 7 of Australian Rare Earths Prospectus dated 7 May 2021.*
Geology	*Deposit type, geological setting and style of mineralisation.*	*The Koppamurra deposit is interpreted to contain analogies to ion adsorption ionic clay REE deposits. REE mineralisation at Koppamurra is hosted by clayey sediments interpreted to have been deposited onto a limestone base (Gambier Limestone) and accumulated in an interdunal, lagoonal or estuarine environment.* *A dedicated research program investigating the source of the REE at Koppamurra is ongoing, with no definitive source of the REE confirmed to date although preliminary results of this study have ruled out the alkali volcanics in south-eastern Australia which was originally considered.* *Mineralogical test work conducted on clay sample from the project area established that the dominant clay minerals are smectite and kaolin, and that the few REE-rich minerals detected during the SEM investigation are not considered inconsistent with the suggestion that a significant proportion of REE are distributed in the material as adsorbed elements on clay and iron oxide surfaces.* *There are several known types of regolith hosted REE deposits including, ion adsorption clay deposits, alluvial and placer deposits. Whilst Koppamurra shares similarities with both ion adsorption clay deposits and volcanic ash fall placer deposits, there are also several differences, highlighting the need for further work before a genetic model for REE*

		mineralisation at Koppamurra can be confirmed. *There is insufficient geological work undertaken to determine any geological disruptions, such as faults or dykes, that may cause variability in the mineralisation.*
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* *- easting and northing of the drill hole collar* *- elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* *- dip and azimuth of the hole* *- down hole length and interception depth* *- hole length.* *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	*The material information for auger hole relating to this report are contained within Appendices of this release.*
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* *Where aggregate intercepts incorporate*	*No metal equivalents have been used.* *A full list of drill holes with all MREO assay results can be found in the appendices of this release.*

	short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	*No assessment of the widths of mineralization was made and sampling was undertaken only to confirm or otherwise the presence of REE mineralization.* *The mineralisation is interpreted to be flat lying. Morphology of the mineralised unit is influenced by the morphology of the undulating limestone basement below. Drilling is vertical perpendicular to mineralisation. Any internal variations to REE distribution within the horizontal layering was not defined, therefore the true width is considered not known.*
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	*Diagrams are included in the body of this release.*
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to*	*This release contains all drilling results that are consistent with the JORC guidelines. Where data may have been excluded, it is considered not material.*

	avoid misleading reporting of Exploration Results.	
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	*All known relevant exploration data has been reported in this release.*
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	*AR3 intend to continue to define the Koppamurra resource during 2023 and 2024. This will include (but not limited to) drilling, assay, ground based geophysical surveys and further metallurgical testwork.*

Appendix 1- Drill hole collars

Hole ID	East (m)	North (m)	RL (m ASL)	Drill Method	Down Hole Width (mm)	Sample Depth (m)	Azimuth	Dip Direction
715059	489531.8	5823108.5	68.09	Hand Auger	83	1	0	-90
715060	489535	5822947.5	67.53	Hand Auger	83	1	0	-90
715061	489531.7	5823039.5	67.81	Hand Auger	83	1.4	0	-90
715062	489538.3	5822846	67.26	Hand Auger	83	1.5	0	-90
715063	489540	5822743.5	66.86	Hand Auger	83	1.5	0	-90
715064	489541.6	5822652.8	66.42	Hand Auger	83	1	0	-90
715065	489539.4	5822550.2	65.94	Hand Auger	83	2	0	-90
715066	489548.4	5822443.4	66.49	Hand Auger	83	0.4	0	-90
715067	489548.4	5822436.4	66.50	Hand Auger	83	0.4	0	-90
715068	489547.2	5822452.4	66.44	Hand Auger	83	2.1	0	-90
715069	489550.3	5822232.7	66.55	Hand Auger	83	0.3	0	-90
715070	489552	5822220.2	66.55	Hand Auger	83	0.4	0	-90
715071	489553.5	5822215.2	66.56	Hand Auger	83	1	0	-90
715072	489548	5822144.9	66.35	Hand Auger	83	2.1	0	-90
715073	489553.7	5822044.4	66.27	Hand Auger	83	1.3	0	-90
715074	493525.3	5818529.3	69.80	Hand Auger	83	0.7	0	-90
715075	493518	5818527.1	69.68	Hand Auger	83	0.7	0	-90
715076	493527.5	5818542.3	69.61	Hand Auger	83	0.8	0	-90
715077	493566	5818576.3	69.92	Hand Auger	83	0.6	0	-90
715078	493631.8	5818665	71.00	Hand Auger	83	1	0	-90
715079	493722.6	5818840.7	69.82	Hand Auger	83	1.3	0	-90
715080	493764.6	5818928.7	67.82	Hand Auger	83	1.5	0	-90
715081	493811.6	5819027	68.01	Hand Auger	83	1.5	0	-90
715082	493866.4	5819111	67.59	Hand Auger	83	2	0	-90
715083	493878.7	5819207	66.77	Hand Auger	83	1.8	0	-90
715084	487562.9	5818717.1	61.92	Hand Auger	83	1.5	0	-90
715085	487488.1	5818720.8	62.16	Hand Auger	83	1.5	0	-90
715086	487398.8	5818719.6	61.98	Hand Auger	83	1.8	0	-90
715087	487258.8	5818737.1	61.33	Hand Auger	83	0.8	0	-90
715088	486342.7	5819104	63.00	Hand Auger	83	0.8	0	-90
715089	486261	5819136.5	62.59	Hand Auger	83	2	0	-90
715090	487994.8	5820164	63.78	Hand Auger	83	1.5	0	-90
715091	489008.6	5820825.6	68.63	Hand Auger	83	1.5	0	-90
715092	471838.5	5823219.5	78.45	Hand Auger	83	0	0	-90
715093	492252.2	5829661.2	70.44	Hand Auger	83	0	0	-90
715094	492439.2	5829586.2	70.33	Hand Auger	83	1	0	-90
715095	492598.3	5829520.4	70.70	Hand Auger	83	1.4	0	-90
715096	489553.3	5821951.8	65.95	Hand Auger	83	2.1	0	-90
715097	489557.3	5821835.4	66.33	Hand Auger	83	1.2	0	-90
715098	489560.6	5821749.1	65.68	Hand Auger	83	1.4	0	-90
715099	489562.9	5821644.8	65.03	Hand Auger	83	2	0	-90
715100	489561.3	5821556.9	65.87	Hand Auger	83	2.3	0	-90
715101	489565.8	5821503.8	66.19	Hand Auger	83	2.3	0	-90
715102	489572.4	5821361.9	65.61	Hand Auger	83	1.5	0	-90
715103	489999.2	5820797	66.71	Hand Auger	83	1	0	-90
715104	490087.9	5820740.5	66.77	Hand Auger	83	1.1	0	-90
715105	490155.3	5820666.7	66.22	Hand Auger	83	2.3	0	-90
715106	490233	5820590.8	66.00	Hand Auger	83	2.3	0	-90
715107	490318	5820546.6	66.15	Hand Auger	83	2.2	0	-90
715108	490416.8	5820495.6	66.07	Hand Auger	83	2	0	-90
715109	490499.1	5820456.5	65.46	Hand Auger	83	2.2	0	-90
715110	490586.4	5820408.7	66.89	Hand Auger	83	1.8	0	-90
715111	490668.4	5820366.9	68.14	Hand Auger	83	2.1	0	-90
715112	490766.7	5820313.7	70.75	Hand Auger	83	0.2	0	-90

715113	490855.4	5820270.4	68.75	Hand Auger	83	0.2	0	-90
715114	490846.2	5820272.9	68.82	Hand Auger	83	0.2	0	-90
715115	491062	5820139.4	69.41	Hand Auger	83	1.5	0	-90
715116	491128.5	5820100.7	71.03	Hand Auger	83	1.2	0	-90
715117	491227.7	5820049.9	71.43	Hand Auger	83	1.1	0	-90
715118	491313.5	5820006.2	71.22	Hand Auger	83	1.1	0	-90
715119	491400.8	5819962.3	70.01	Hand Auger	83	0.8	0	-90
715120	491475.3	5819916.3	68.59	Hand Auger	83	1	0	-90
715121	493283	5829065.9	68.05	Hand Auger	83	0.2	0	-90
715122	493439.9	5828951.7	67.90	Hand Auger	83	0.3	0	-90
715123	494739	5828725.6	69.48	Hand Auger	83	1.3	0	-90
715124	494366.8	5823025.1	69.15	Hand Auger	83	0.7	0	-90
715125	494562.6	5822990.6	69.54	Hand Auger	83	0.7	0	-90
715126	494642	5822972.9	69.54	Hand Auger	83	0.9	0	-90
715127	485240.7	5834084.1	69.66	Hand Auger	83	1.5	0	-90
715128	485301.9	5833892.8	68.91	Hand Auger	83	1	0	-90
715129	485536.4	5833528.6	69.75	Hand Auger	83	1.5	0	-90
715130	485644.3	5833372	69.30	Hand Auger	83	1	0	-90
715131	485721.5	5833176	69.35	Hand Auger	83	1	0	-90
715132	485800.5	5833001	69.94	Hand Auger	83	1.6	0	-90
715133	485861.3	5832838.8	70.37	Hand Auger	83	1	0	-90
715134	486054.1	5832284.4	71.94	Hand Auger	83	1.6	0	-90
715135	487558.7	5822383.1	72.71	Hand Auger	83	0.2	0	-90
715136	486133.7	5823372.2	70.33	Hand Auger	83	2	0	-90
715137	485820.4	5823504.5	71.03	Hand Auger	83	0.5	0	-90
715138	485670.9	5823592.4	71.27	Hand Auger	83	1.6	0	-90
715139	491483.8	5819849	66.07	Hand Auger	83	0.6	0	-90
715140	491669.1	5819828.9	69.89	Hand Auger	83	0.3	0	-90
715141	491758.5	5819785	69.31	Hand Auger	83	1.2	0	-90
715142	492562.6	5819379.1	66.72	Hand Auger	83	0.2	0	-90
715143	492649.3	5819310.3	66.17	Hand Auger	83	1.3	0	-90
715144	492710.3	5819234.2	66.59	Hand Auger	83	1.1	0	-90
715145	492761.9	5819163.6	67.64	Hand Auger	83	0.7	0	-90
715146	492804.7	5819060.9	68.68	Hand Auger	83	1.1	0	-90
715147	492835.8	5818987.4	69.03	Hand Auger	83	0.7	0	-90
715148	492881.1	5818884.9	68.73	Hand Auger	83	1.4	0	-90
715149	492948.1	5818783.7	67.59	Hand Auger	83	1.4	0	-90
715150	493035.4	5818724.7	67.58	Hand Auger	83	2	0	-90
715151	493113.7	5818665.1	67.65	Hand Auger	83	1.2	0	-90
715152	493203.5	5818608.9	67.14	Hand Auger	83	1.4	0	-90
715153	493298.5	5818541	67.12	Hand Auger	83	1.1	0	-90
715154	493395	5818491.9	67.71	Hand Auger	83	1.1	0	-90
715155	496371.2	5822550.8	70.21	Hand Auger	83	1.1	0	-90
715156	496281.5	5822542	70.36	Hand Auger	83	1.3	0	-90
715157	496183.4	5822531.3	69.81	Hand Auger	83	1.2	0	-90
715158	496082.7	5822525.4	68.98	Hand Auger	83	1.1	0	-90
715159	495986.6	5822516.6	68.66	Hand Auger	83	1.2	0	-90
715160	495787.7	5822533.1	68.77	Hand Auger	83	1	0	-90
715161	495676.3	5822554.5	68.91	Hand Auger	83	1.1	0	-90
715162	495579.1	5822576.5	69.16	Hand Auger	83	1.1	0	-90
715163	493979.5	5823138.8	69.97	Hand Auger	83	1.1	0	-90
715164	494071.3	5823099.6	70.01	Hand Auger	83	0.9	0	-90
715165	494167.5	5823068.4	69.19	Hand Auger	83	1	0	-90
715166	494265.3	5823042.6	69.10	Hand Auger	83	1	0	-90
715167	494465.5	5823006.2	69.41	Hand Auger	83	0.9	0	-90
715168	494754.6	5822953.6	69.51	Hand Auger	83	1.1	0	-90
715169	494837.5	5822908.4	69.33	Hand Auger	83	1.2	0	-90
715170	495030.6	5822804.8	69.11	Hand Auger	83	1.2	0	-90
715171	495206.6	5822705	69.67	Hand Auger	83	1.1	0	-90

715172	495391.5	5822615	68.87	Hand Auger	83	1.1	0	-90
715173	490939.9	5822488.3	67.44	Hand Auger	83	2	0	-90
715174	490978.6	5822685.8	67.96	Hand Auger	83	1.2	0	-90
715175	491020.9	5822883.4	69.24	Hand Auger	83	1.8	0	-90
715176	491088.6	5823064.7	72.19	Hand Auger	83	2	0	-90
715177	491184.7	5823237.1	70.74	Hand Auger	83	1	0	-90
715178	491280.3	5823409.1	68.63	Hand Auger	83	0.9	0	-90
715179	491407.4	5823642.2	67.76	Hand Auger	83	1.9	0	-90
715180	491600.2	5823801.4	68.36	Hand Auger	83	1.2	0	-90
715181	491787.6	5823822	68.21	Hand Auger	83	1.1	0	-90
715182	491973.2	5823762.4	68.10	Hand Auger	83	1.2	0	-90
715183	492109	5823639	68.00	Hand Auger	83	1	0	-90
715184	492314	5823559.5	67.86	Hand Auger	83	1	0	-90
715185	492504.7	5823514.8	67.78	Hand Auger	83	1.1	0	-90
715186	492992.5	5823400.7	68.36	Hand Auger	83	1.2	0	-90
715187	493193	5823358.5	69.29	Hand Auger	83	1.1	0	-90
715188	495026.6	5822804.4	69.10	Hand Auger	83	1.2	0	-90
715189	485380.9	5823642.1	69.74	Hand Auger	83	0.2	0	-90
715190	485178.7	5823624.1	70.85	Hand Auger	83	0.5	0	-90
715191	490838.1	5825565.2	71.13	Hand Auger	83	1	0	-90
715192	491133.3	5825514.5	71.45	Hand Auger	83	1	0	-90
715193	491233.3	5825497.6	71.61	Hand Auger	83	0.8	0	-90
715194	491333.3	5825479	71.69	Hand Auger	83	1	0	-90
715195	491438.3	5825460	71.77	Hand Auger	83	1.2	0	-90
715196	491524.8	5825444	71.72	Hand Auger	83	0.8	0	-90
715197	491629.2	5825426.9	71.50	Hand Auger	83	1.2	0	-90
715198	491729.2	5825410.1	71.46	Hand Auger	83	1	0	-90
715199	491820.2	5825394.7	70.94	Hand Auger	83	1.1	0	-90
715200	491901.9	5825379.6	71.16	Hand Auger	83	1.1	0	-90
715201	492028.9	5825357	71.37	Hand Auger	83	1.4	0	-90
715202	492157.6	5825343.2	71.25	Hand Auger	83	1.4	0	-90
715203	492261.4	5825336.5	70.79	Hand Auger	83	1.2	0	-90
715204	492354.6	5825330.4	70.79	Hand Auger	83	1.1	0	-90
715205	492458.7	5825322.2	70.92	Hand Auger	83	2	0	-90
715206	490792.8	5825573.1	71.22	Hand Auger	83	1.2	0	-90
715207	490943.5	5825549.9	70.96	Hand Auger	83	0.9	0	-90
715208	491039.5	5825531.7	71.23	Hand Auger	83	1	0	-90
715209	492564.6	5825315.8	70.92	Hand Auger	83	1	0	-90
715210	492658.4	5825309	70.47	Hand Auger	83	1	0	-90
715211	492761.7	5825277.7	70.16	Hand Auger	83	1.1	0	-90
715212	492847.5	5825238.4	70.35	Hand Auger	83	1.2	0	-90
715213	492946	5825192.7	70.39	Hand Auger	83	1.3	0	-90
715214	493123.9	5825109.4	71.47	Hand Auger	83	1.3	0	-90
715215	493215.9	5825067.4	73.50	Hand Auger	83	1.9	0	-90
715216	493303.1	5825028.3	73.96	Hand Auger	83	1.1	0	-90
715217	493393.5	5824987	71.98	Hand Auger	83	1.2	0	-90
715218	493500.9	5824976.6	71.73	Hand Auger	83	1.3	0	-90
715219	493609.1	5824960	70.98	Hand Auger	83	1.3	0	-90
715220	493793.6	5824934.3	70.20	Hand Auger	83	1	0	-90
715221	493694	5824947.8	70.49	Hand Auger	83	1.3	0	-90
715222	494091.7	5824947.9	69.91	Hand Auger	83	1.4	0	-90
715223	494167	5824970.4	70.03	Hand Auger	83	1.3	0	-90
715224	494241.2	5824995.2	70.39	Hand Auger	83	1	0	-90
715225	494339.4	5825028.5	70.19	Hand Auger	83	1.3	0	-90
715226	494418.8	5825055.2	70.25	Hand Auger	83	1	0	-90
715227	494529.1	5825093.8	69.43	Hand Auger	83	1.4	0	-90
715228	494651.6	5825461.2	66.28	Hand Auger	83	2	0	-90
715229	494741.1	5825648.9	75.79	Hand Auger	83	1	0	-90
715230	494816.6	5825714	76.89	Hand Auger	83	2	0	-90

715231	494898.8	5825787.5	76.38	Hand Auger	83	0.8	0	-90
715232	495139.3	5826109.9	66.97	Hand Auger	83	2	0	-90
715233	495181.3	5826184.6	67.55	Hand Auger	83	2	0	-90
715234	495219.1	5826279.3	68.30	Hand Auger	83	2	0	-90
715235	495266.6	5826364	68.59	Hand Auger	83	0.8	0	-90
715236	495310.2	5826447.3	68.51	Hand Auger	83	1.1	0	-90
715237	495358.6	5826535.9	68.17	Hand Auger	83	1	0	-90
715238	495415.2	5826617.2	67.78	Hand Auger	83	1.3	0	-90
715239	495944.8	5827332.5	68.71	Hand Auger	83	1.3	0	-90
715240	496079.2	5827468.8	68.81	Hand Auger	83	1.2	0	-90
715241	496286.2	5827694.3	71.46	Hand Auger	83	1.3	0	-90
715242	496355.2	5827767.8	71.42	Hand Auger	83	1.9	0	-90
715243	496562.1	5827965.2	69.38	Hand Auger	83	1.1	0	-90
715244	496742.7	5828068.7	69.31	Hand Auger	83	1.1	0	-90
715245	496830.7	5828115.1	70.42	Hand Auger	83	1.2	0	-90
715246	496924.1	5828169.5	70.81	Hand Auger	83	1.2	0	-90
715247	497009.5	5828217.6	70.51	Hand Auger	83	0.9	0	-90
715248	497092	5828261.6	70.21	Hand Auger	83	1.1	0	-90
715249	495339.3	5826599.4	67.96	Hand Auger	83	2	0	-90
715250	495128.1	5826589.1	68.71	Hand Auger	83	1.1	0	-90
715251	494929	5826579.1	70.22	Hand Auger	83	0.7	0	-90
715252	494732.2	5826566.2	70.62	Hand Auger	83	0.8	0	-90
715253	494530.6	5826555.5	71.25	Hand Auger	83	1.6	0	-90
715254	494329.7	5826533.4	73.23	Hand Auger	83	2	0	-90
715255	494163.8	5826514.4	72.27	Hand Auger	83	2	0	-90
715256	493935.9	5826437.3	73.10	Hand Auger	83	0.5	0	-90
715257	493745.2	5826395.3	72.04	Hand Auger	83	0.9	0	-90
715258	493550.4	5826438.8	73.76	Hand Auger	83	1.4	0	-90
715259	493375.3	5826526.6	71.05	Hand Auger	83	1.9	0	-90
715260	493197.3	5826596.4	70.86	Hand Auger	83	1.4	0	-90
715261	484862.9	5830008.1	68.67	Hand Auger	83	0.9	0	-90
715262	484824.2	5830386.5	67.64	Hand Auger	83	1.3	0	-90
715263	484879.6	5830594	67.77	Hand Auger	83	1	0	-90
715264	484990.6	5830744.6	69.35	Hand Auger	83	1.3	0	-90
715265	485139.5	5830815.3	68.55	Hand Auger	83	1	0	-90
715266	485499.4	5830934.6	69.14	Hand Auger	83	1.5	0	-90
715267	485597.4	5831011	68.81	Hand Auger	83	1.6	0	-90
715268	485700.9	5831096.6	68.58	Hand Auger	83	1.1	0	-90
715269	485848.8	5831215.7	68.39	Hand Auger	83	1.3	0	-90
715270	485965.5	5831328.3	69.35	Hand Auger	83	2	0	-90
715271	486150.1	5831672.1	67.94	Hand Auger	83	2	0	-90
715272	486176.7	5831796.4	68.18	Hand Auger	83	1.5	0	-90
715273	486056.3	5832248.2	72.13	Hand Auger	83	1.6	0	-90
715274	485992.1	5832429.6	71.70	Hand Auger	83	1.4	0	-90
715275	485921.6	5832630.9	73.13	Hand Auger	83	0.8	0	-90
715276	485856.9	5832814.2	70.97	Hand Auger	83	0.2	0	-90
715277	485793.2	5832999	70.11	Hand Auger	83	0.9	0	-90
715278	492307.1	5825337.1	70.73	Hand Auger	83	1	0	-90
715279	492412.9	5825326.7	70.80	Hand Auger	83	1.2	0	-90
715280	492513.7	5825319.4	71.11	Hand Auger	83	1.3	0	-90
715281	492607.5	5825313.7	70.73	Hand Auger	83	0.9	0	-90
715282	492714.4	5825298.6	70.24	Hand Auger	83	1.1	0	-90
715283	493080.2	5825132.2	71.38	Hand Auger	83	1.1	0	-90
715284	493196.8	5825074.7	73.10	Hand Auger	83	1.2	0	-90
715285	493269.1	5825049.8	74.10	Hand Auger	83	1.1	0	-90
715286	493352	5825006.8	73.00	Hand Auger	83	1.1	0	-90
715287	493558.9	5824967.7	71.29	Hand Auger	83	1.2	0	-90
715288	493653	5824954.2	70.75	Hand Auger	83	1.2	0	-90
715289	493757.1	5824940.9	69.97	Hand Auger	83	0.9	0	-90

715290	491301.7	5823454.7	68.18	Hand Auger	83	0.9	0	-90
715291	491250.4	5823352	69.09	Hand Auger	83	0.9	0	-90
715292	491200.4	5823275	70.25	Hand Auger	83	0.9	0	-90
715293	491165.2	5823193.5	71.05	Hand Auger	83	1	0	-90
715294	493430.1	5818482.4	68.29	Hand Auger	83	1	0	-90
715295	493346.5	5818522.3	67.30	Hand Auger	83	1	0	-90
715296	493253.5	5818584.9	67.14	Hand Auger	83	1.6	0	-90
715297	493165.6	5818641.3	67.53	Hand Auger	83	1.4	0	-90
715298	493064	5818706.5	67.65	Hand Auger	83	2	0	-90
715299	492988	5818758.2	67.61	Hand Auger	83	1	0	-90
715300	492913.4	5818825.1	68.03	Hand Auger	83	1.7	0	-90
715301	492859.6	5818939.9	69.07	Hand Auger	83	0.9	0	-90
715302	492820.1	5819029.8	68.90	Hand Auger	83	1.4	0	-90
715303	492779.6	5819118.9	68.20	Hand Auger	83	0.5	0	-90
715304	492736	5819197	66.97	Hand Auger	83	0.4	0	-90
715305	492678.6	5819267.5	66.41	Hand Auger	83	1.8	0	-90
715306	492595.7	5823493.8	67.84	Hand Auger	83	1	0	-90
715307	492398.7	5823539.7	67.80	Hand Auger	83	0.9	0	-90
715308	492219.6	5823583	67.91	Hand Auger	83	1	0	-90
715309	492041.5	5823698.8	68.04	Hand Auger	83	1	0	-90
715310	491703.6	5823809.1	68.27	Hand Auger	83	1	0	-90
715311	491477.6	5823708.6	67.93	Hand Auger	83	1	0	-90
715312	485251.7	5826600.5	71.86	Hand Auger	83	1.1	0	-90
715313	485467.3	5826563.7	70.63	Hand Auger	83	1	0	-90
715314	485659.7	5826541.4	71.69	Hand Auger	83	1.2	0	-90
715315	488021.5	5828673	68.71	Hand Auger	83	0.8	0	-90
715316	488202	5828758.9	69.60	Hand Auger	83	1	0	-90
715317	488280.1	5828926.9	68.58	Hand Auger	83	1	0	-90
715318	488336	5829120.1	68.85	Hand Auger	83	1	0	-90
715319	488438.7	5829294.2	70.87	Hand Auger	83	0.9	0	-90
715320	488541.7	5829451.4	68.92	Hand Auger	83	1.4	0	-90
715321	489023.2	5830356.2	73.44	Hand Auger	83	1.4	0	-90
715322	489073	5830537.8	69.23	Hand Auger	83	1.6	0	-90
715323	489117.4	5830747.2	70.59	Hand Auger	83	1.9	0	-90
715324	489154.2	5830936.1	71.88	Hand Auger	83	1	0	-90
715325	489092	5831009.3	71.78	Hand Auger	83	1.5	0	-90
715326	488941.2	5831146	71.71	Hand Auger	83	1.7	0	-90
715327	488829.8	5831247.4	70.81	Hand Auger	83	1.2	0	-90
715328	488633.8	5831361.5	70.57	Hand Auger	83	1.4	0	-90
715329	488437.1	5831423.3	72.63	Hand Auger	83	1.1	0	-90
715330	488087.9	5831531.4	73.89	Hand Auger	83	2	0	-90
715331	487574	5831678.2	69.81	Hand Auger	83	2	0	-90
715332	487328.5	5831838.8	74.82	Hand Auger	83	2	0	-90
715333	489293.9	5830921.1	71.78	Hand Auger	83	1.2	0	-90
715334	489653.1	5830817.6	73.16	Hand Auger	83	1	0	-90
715335	489851.5	5830779.3	72.04	Hand Auger	83	2	0	-90
715336	490039.3	5830758.9	71.18	Hand Auger	83	2	0	-90
715337	490243.9	5830714.4	72.24	Hand Auger	83	1	0	-90
715338	490424	5830627.4	72.73	Hand Auger	83	2	0	-90
715339	490517.6	5830588.4	72.65	Hand Auger	83	2	0	-90
715340	491355.7	5830172.3	73.02	Hand Auger	83	1	0	-90
715341	491655.7	5829996.1	71.41	Hand Auger	83	1	0	-90
715342	491875.4	5829850.5	71.73	Hand Auger	83	2	0	-90
715343	492052.8	5829750.2	72.21	Hand Auger	83	0.9	0	-90
715344	477434.7	5823130.5	61.14	Hand Auger	83	2	0	-90
715345	478240.5	5823146.1	70.30	Hand Auger	83	2	0	-90
715346	479272.2	5823172.7	70.50	Hand Auger	83	2	0	-90
715347	481301.3	5823210.8	66.24	Hand Auger	83	2	0	-90
715348	481857.9	5829627.9	73.16	Hand Auger	83	1.4	0	-90

715349	482254.9	5829556.5	70.44	Hand Auger	83	0.8	0	-90
715350	482432.3	5829560.5	70.09	Hand Auger	83	2	0	-90
715351	482647.3	5829568.1	69.82	Hand Auger	83	1.2	0	-90
715352	482810.4	5829574.9	69.64	Hand Auger	83	1	0	-90
715353	483322.1	5829438.6	69.80	Hand Auger	83	1	0	-90
715354	485781.2	5828678.6	70.79	Hand Auger	83	0.9	0	-90
715355	486118.6	5828503.8	69.10	Hand Auger	83	1	0	-90
715356	486309.4	5828418.4	69.75	Hand Auger	83	1.3	0	-90
715357	486469.7	5828331.4	70.93	Hand Auger	83	1.1	0	-90
715358	492981.8	5826679.7	69.46	Hand Auger	83	2	0	-90
715359	492831.2	5826721	69.65	Hand Auger	83	1.3	0	-90
715360	492630.3	5826780.3	69.66	Hand Auger	83	0.6	0	-90
715361	492444.3	5826848.3	69.18	Hand Auger	83	0.9	0	-90
715362	492255.3	5826900.2	69.16	Hand Auger	83	1	0	-90
715363	491904.3	5827142	70.13	Hand Auger	83	1	0	-90
715364	491767.4	5827258.4	69.23	Hand Auger	83	2	0	-90
715365	491377.8	5827399	69.89	Hand Auger	83	1.1	0	-90
715366	491216.1	5827476.5	70.60	Hand Auger	83	1	0	-90
715367	491150.5	5827521.4	70.49	Hand Auger	83	1	0	-90
715368	491024.5	5827658.3	70.17	Hand Auger	83	1	0	-90
715369	490391.1	5827829.1	70.18	Hand Auger	83	0.8	0	-90
715370	489440	5827717.4	70.46	Hand Auger	83	0.8	0	-90
715371	488942.2	5827942.3	70.15	Hand Auger	83	0.8	0	-90
715372	484504.2	5823357.7	68.02	Hand Auger	83	2	0	-90
715373	484493.9	5823149.4	65.87	Hand Auger	83	2	0	-90
715374	488390.7	5828145.8	69.83	Hand Auger	83	1	0	-90
715375	485517.6	5821660.4	64.83	Hand Auger	83	1.4	0	-90
715376	485719.7	5821666.1	64.49	Hand Auger	83	1.1	0	-90
715377	485929.1	5821671.6	64.45	Hand Auger	83	0.8	0	-90
715378	486124.8	5821673	64.48	Hand Auger	83	1.4	0	-90
715379	486324.1	5821680.1	64.86	Hand Auger	83	2	0	-90
715380	486508.8	5821681.3	64.67	Hand Auger	83	2	0	-90
715381	486720.5	5821684.4	64.62	Hand Auger	83	2	0	-90
715382	486914.8	5821687.4	65.13	Hand Auger	83	2	0	-90
715383	487086.8	5821695.1	65.12	Hand Auger	83	2	0	-90
715384	489180.5	5823160.3	66.77	Hand Auger	83	1.4	0	-90
715385	489112.7	5823118.7	66.95	Hand Auger	83	1.2	0	-90
715386	488895.6	5822994.4	67.63	Hand Auger	83	2	0	-90
715387	488812.4	5822947.3	67.16	Hand Auger	83	1.4	0	-90
715388	488726.1	5822894.4	66.82	Hand Auger	83	2	0	-90
715389	489013	5823058.4	67.51	Hand Auger	83	1.1	0	-90
715390	488644.5	5822852.3	65.93	Hand Auger	83	1.2	0	-90
715391	488552.7	5822801.5	65.00	Hand Auger	83	2	0	-90
715392	488467.7	5822752.1	65.01	Hand Auger	83	2	0	-90
715393	488381.3	5822706.2	64.68	Hand Auger	83	1.7	0	-90
715394	488288.1	5822655.3	64.34	Hand Auger	83	2	0	-90
715395	488199.1	5822606.2	63.85	Hand Auger	83	2	0	-90
715396	488124.6	5822562.9	63.29	Hand Auger	83	1.4	0	-90
715397	482753.6	5821595.9	62.51	Hand Auger	83	1.9	0	-90
715398	482565.7	5821592.2	61.58	Hand Auger	83	1.7	0	-90
715399	483540	5824183.3	67.15	Hand Auger	83	1.9	0	-90
715400	483724.8	5824133.2	66.55	Hand Auger	83	2	0	-90
715401	477574.1	5823138.5	62.76	Hand Auger	83	2	0	-90
715402	477647.1	5823135.3	63.94	Hand Auger	83	2	0	-90
715403	477770.8	5823139.8	66.95	Hand Auger	83	0.7	0	-90
715404	477858.4	5823138.8	70.18	Hand Auger	83	0.6	0	-90
715405	477945.4	5823144.2	72.20	Hand Auger	83	1.4	0	-90
715406	478039.4	5823145.7	72.94	Hand Auger	83	2	0	-90
715407	478127	5823144.3	71.52	Hand Auger	83	2	0	-90

715408	478342.7	5823151.4	71.02	Hand Auger	83	0.7	0	-90
715409	478438.3	5823155.2	75.32	Hand Auger	83	2	0	-90
715410	478536.3	5823157.5	79.28	Hand Auger	83	2	0	-90
715411	478647	5823159.4	80.57	Hand Auger	83	1.5	0	-90
715412	478699.7	5823162.4	80.67	Hand Auger	83	2	0	-90
715413	478807	5823161.7	80.64	Hand Auger	83	0.7	0	-90
715414	478974.5	5823168.6	74.80	Hand Auger	83	1	0	-90
715415	481068.4	5823209.2	65.71	Hand Auger	83	2	0	-90
715416	481468.2	5823215.1	66.47	Hand Auger	83	0.2	0	-90
715417	484501.2	5823254.8	66.48	Hand Auger	83	1.8	0	-90
715418	490039.1	5821467.1	66.54	Hand Auger	83	1	0	-90
715419	489994.8	5821434.5	66.38	Hand Auger	83	0.4	0	-90
715420	492857.3	5820564.7	67.98	Hand Auger	83	1.2	0	-90
715421	492833.7	5820486.9	68.34	Hand Auger	83	1.2	0	-90
715422	492818.4	5820391.4	68.88	Hand Auger	83	1	0	-90
715423	492767.8	5820277.9	69.13	Hand Auger	83	1	0	-90
715424	497343.5	5828399.4	70.40	Hand Auger	83	0.8	0	-90
715425	497438.9	5828447.6	70.14	Hand Auger	83	0.8	0	-90
715426	497268.4	5828357.5	70.25	Hand Auger	83	0.8	0	-90
715427	497184.1	5828310.8	70.08	Hand Auger	83	1.2	0	-90
715428	494205.7	5828573.1	68.25	Hand Auger	83	2	0	-90
715429	494039.1	5828483.7	68.50	Hand Auger	83	0.7	0	-90
715430	493825.4	5828523.1	69.33	Hand Auger	83	1.7	0	-90
715431	493697.6	5828656.8	68.15	Hand Auger	83	0.6	0	-90
715432	493600.5	5828808.3	68.75	Hand Auger	83	0.6	0	-90
715433	487024.6	5832091.8	74.17	Hand Auger	83	1.5	0	-90
715434	486845.2	5832132.9	70.91	Hand Auger	83	1.7	0	-90
715435	486640	5832143.5	70.26	Hand Auger	83	1.7	0	-90
715436	486450.4	5832186.6	70.53	Hand Auger	83	1.4	0	-90
715437	486249.7	5832246.7	71.98	Hand Auger	83	1.2	0	-90
715438	485199.5	5827938.2	72.26	Hand Auger	83	1	0	-90
715439	485166.7	5826880.1	71.33	Hand Auger	83	0.6	0	-90
715440	485107.9	5825469.4	71.28	Hand Auger	83	0.2	0	-90
715441	487395.1	5826160.4	70.62	Hand Auger	83	0.8	0	-90
715442	495729.1	5832862.8	72.79	Hand Auger	83	0.5	0	-90
715443	495567	5832958.2	73.64	Hand Auger	83	0.6	0	-90
715444	495403	5833058.8	73.11	Hand Auger	83	0.9	0	-90
715445	495227.3	5833169.4	72.15	Hand Auger	83	0.7	0	-90
715446	495027.9	5833291.3	71.43	Hand Auger	83	0.8	0	-90
715447	494861.1	5833359.6	70.69	Hand Auger	83	0.9	0	-90
715448	494682.4	5833425.8	72.94	Hand Auger	83	0.9	0	-90
715449	494505.1	5833488.2	72.17	Hand Auger	83	0.7	0	-90
715450	494331.1	5833555.8	74.61	Hand Auger	83	1	0	-90
715451	494101.7	5833637.1	73.47	Hand Auger	83	0.7	0	-90
715452	493938.9	5833692.3	74.56	Hand Auger	83	0.8	0	-90
715453	493753.2	5833761	76.91	Hand Auger	83	0.6	0	-90
715454	493569.3	5833842.8	75.91	Hand Auger	83	0.7	0	-90
715455	493377.5	5833930.3	73.87	Hand Auger	83	0.7	0	-90
715456	493202.8	5834008.5	73.00	Hand Auger	83	0.8	0	-90
715457	493046.6	5834087.7	74.19	Hand Auger	83	0.7	0	-90
715458	492832.4	5834178.7	75.24	Hand Auger	83	0.9	0	-90
715459	492649.6	5834259.3	74.05	Hand Auger	83	0.9	0	-90
715460	492490.9	5834326.9	72.08	Hand Auger	83	0.8	0	-90
715461	492276.6	5834428	70.70	Hand Auger	83	0.9	0	-90
715462	489994	5835972.2	75.52	Hand Auger	83	0.7	0	-90
715463	489991.6	5836128.6	74.00	Hand Auger	83	0	0	-90
715464	489983.2	5836311.7	71.19	Hand Auger	83	0.7	0	-90
715465	489982.9	5836501.3	71.28	Hand Auger	83	0	0	-90
715466	489983.2	5836726.2	71.84	Hand Auger	83	1	0	-90

715467	489976.4	5836915.4	70.15	Hand Auger	83	0.6	0	-90
715468	489979.5	5837086.1	70.36	Hand Auger	83	1.6	0	-90
715469	489980.5	5837252.5	73.06	Hand Auger	83	0.8	0	-90
715470	471225.2	5818414.4	80.85	Hand Auger	83	2	0	-90
715471	471282.3	5818590.7	83.50	Hand Auger	83	1.9	0	-90
715472	471277.1	5818987.8	85.04	Hand Auger	83	1.7	0	-90
715473	471396.4	5819322.7	78.30	Hand Auger	83	2	0	-90
715474	471516	5819732.5	82.11	Hand Auger	83	0.8	0	-90
715475	471541.8	5819923.2	73.62	Hand Auger	83	2	0	-90
715476	474962.2	5819869.4	53.91	Hand Auger	83	0.05	0	-90
715477	480052.1	5819338.5	50.36	Hand Auger	83	0.7	0	-90
715478	480189.3	5819336.3	51.22	Hand Auger	83	0.05	0	-90
715479	488625.3	5818682.3	64.74	Hand Auger	83	1.4	0	-90
715480	488718.2	5818678	64.96	Hand Auger	83	2	0	-90
715481	488936.2	5818667.9	64.56	Hand Auger	83	2	0	-90
715482	489334.6	5818658.5	65.68	Hand Auger	83	1.4	0	-90
715483	489551.9	5818649.7	66.99	Hand Auger	83	2	0	-90
715484	489345.8	5818459.1	62.25	Hand Auger	83	1.8	0	-90
715485	489511.7	5818593.4	62.71	Hand Auger	83	1.6	0	-90
715486	483346.6	5837331	75.18	Hand Auger	83	1.7	0	-90
715487	483675.1	5837328.7	76.86	Hand Auger	83	1.7	0	-90
715488	484062.8	5837329.9	78.26	Hand Auger	83	2	0	-90
715489	484267.6	5837332.4	77.65	Hand Auger	83	1.8	0	-90
715490	484687.6	5837329.2	78.55	Hand Auger	83	1.8	0	-90
715491	484873.8	5837333.9	79.65	Hand Auger	83	1.7	0	-90
715492	485039.9	5837327	79.56	Hand Auger	83	1.7	0	-90
715493	485276.9	5837328.7	80.21	Hand Auger	83	2	0	-90
715494	485464.8	5837325.4	79.83	Hand Auger	83	2	0	-90
715495	485682.2	5837327.4	77.98	Hand Auger	83	0.6	0	-90
715496	485888.4	5837325.5	77.17	Hand Auger	83	0.7	0	-90
715497	486088.8	5837323	80.79	Hand Auger	83	0.7	0	-90
715498	486294.7	5837324.8	79.43	Hand Auger	83	0.8	0	-90
715499	486431	5837322.4	79.41	Hand Auger	83	2	0	-90
715500	486858.5	5837323.6	79.02	Hand Auger	83	1.8	0	-90
724742	487066.4	5837323	79.20	Hand Auger	83	1.3	0	-90
724743	487276.4	5837319.6	78.40	Hand Auger	83	1.2	0	-90
724744	487477.6	5837315.7	77.23	Hand Auger	83	2	0	-90
724745	487671.9	5837322.6	76.85	Hand Auger	83	0.8	0	-90
724746	487891.2	5837317.4	76.02	Hand Auger	83	1.5	0	-90
724747	488069.1	5837318.6	75.48	Hand Auger	83	0.9	0	-90
724748	488451.5	5837319.1	74.96	Hand Auger	83	1.4	0	-90
724749	488644.1	5837315.8	74.84	Hand Auger	83	1	0	-90
724750	488856.9	5837315.2	73.79	Hand Auger	83	1.3	0	-90
724751	489058.7	5837314.4	71.97	Hand Auger	83	1.7	0	-90
724752	489246.5	5837313.5	70.47	Hand Auger	83	2	0	-90
724753	489456.7	5837309.4	71.92	Hand Auger	83	2	0	-90
724754	489657.1	5837315.5	71.14	Hand Auger	83	2	0	-90
724755	490299.7	5837310.2	71.21	Hand Auger	83	0.7	0	-90
724756	490474.1	5837312.3	69.87	Hand Auger	83	2	0	-90
724757	490788.3	5837312	71.57	Hand Auger	83	1.4	0	-90
724758	489595.5	5820356	65.40	Hand Auger	83	2	0	-90
724759	489608.3	5820183.4	65.41	Hand Auger	83	2	0	-90
724760	489610.1	5819983.2	65.96	Hand Auger	83	2	0	-90
724761	489609	5819775.3	67.09	Hand Auger	83	1.2	0	-90
724762	489625.2	5819437.2	71.44	Hand Auger	83	2	0	-90
724763	489620.6	5819275.8	68.27	Hand Auger	83	1.7	0	-90
724764	489623.3	5819084.8	62.18	Hand Auger	83	2	0	-90
724765	489628	5818883.5	64.91	Hand Auger	83	1.8	0	-90
724766	489635.1	5818696.1	66.91	Hand Auger	83	2	0	-90

724767	489742	5818681.2	66.04	Hand Auger	83	2	0	-90
724768	489940.1	5818672.6	65.99	Hand Auger	83	2	0	-90
724769	490270.1	5818773.6	64.57	Hand Auger	83	2	0	-90
724770	490595.1	5819051.3	58.55	Hand Auger	83	1.8	0	-90
724771	490873.7	5819286.8	61.76	Hand Auger	83	1.4	0	-90
724772	491031.8	5819427.5	66.20	Hand Auger	83	2	0	-90
724773	491358.8	5819790.1	64.80	Hand Auger	83	1.3	0	-90
724774	491283.3	5819692.3	66.10	Hand Auger	83	1.4	0	-90
724775	491182.4	5819551.8	66.69	Hand Auger	83	2	0	-90
724776	490739.1	5819164.3	60.15	Hand Auger	83	1.1	0	-90
724777	490412.5	5818890	63.11	Hand Auger	83	2	0	-90
724778	491583	5837310.6	72.92	Hand Auger	83	0.7	0	-90
724779	491378.8	5837307	72.01	Hand Auger	83	0.8	0	-90
724780	491174	5837306.6	74.82	Hand Auger	83	1.2	0	-90
724781	490976.4	5837303.9	75.47	Hand Auger	83	1.2	0	-90
724782	484301	5837082.4	77.29	Hand Auger	83	1.2	0	-90
724783	484304.5	5836853.1	77.31	Hand Auger	83	1	0	-90
724784	491811	5837210	77.60	Hand Auger	83	1.1	0	-90
724785	491811.5	5836994.3	74.33	Hand Auger	83	1	0	-90
724786	491814.8	5836784	72.01	Hand Auger	83	1.3	0	-90
724787	491812.3	5836587.9	71.31	Hand Auger	83	1.5	0	-90
724788	491814.9	5836400.6	72.97	Hand Auger	83	1.4	0	-90
724789	491811.9	5836205.2	75.86	Hand Auger	83	1.6	0	-90
724790	491810.6	5835998.2	72.48	Hand Auger	83	2	0	-90
724791	491841.4	5835614.8	70.87	Hand Auger	83	1.2	0	-90
724792	491874.9	5835469	70.56	Hand Auger	83	2	0	-90
724793	491945.3	5835160.2	70.06	Hand Auger	83	1	0	-90
724794	492001.4	5834944.4	70.26	Hand Auger	83	1.2	0	-90
724795	492045.6	5834751.1	70.48	Hand Auger	83	1.3	0	-90
724796	478148.9	5837397.2	72.10	Hand Auger	83	1.2	0	-90
724797	478359.4	5837383.4	74.12	Hand Auger	83	1.2	0	-90
724798	478769.7	5837393.9	71.01	Hand Auger	83	1.4	0	-90
724799	478974.2	5837411.7	71.67	Hand Auger	83	1.3	0	-90
724800	479160	5837424.4	71.83	Hand Auger	83	1.7	0	-90
724801	479348.4	5837386	76.43	Hand Auger	83	1.3	0	-90
724802	479559.1	5837389.3	74.52	Hand Auger	83	0.9	0	-90
724803	479736.7	5837388.4	74.04	Hand Auger	83	1.4	0	-90
724804	479952.6	5837388.7	70.11	Hand Auger	83	1.2	0	-90
724805	480158	5837386.7	72.39	Hand Auger	83	0.8	0	-90
724806	480343.6	5837387.9	73.83	Hand Auger	83	1.4	0	-90
724807	480542.8	5837382.6	76.02	Hand Auger	83	1.2	0	-90
724808	480759.6	5837387.6	75.67	Hand Auger	83	1.4	0	-90
724809	480912.5	5837382.2	74.64	Hand Auger	83	1.7	0	-90
724810	481332.5	5837382.7	71.96	Hand Auger	83	0.8	0	-90
724811	481163.9	5837385.7	71.66	Hand Auger	83	1.1	0	-90
724812	481534.2	5837390	72.46	Hand Auger	83	1.2	0	-90
724813	481732.1	5837390.2	71.41	Hand Auger	83	1	0	-90
724814	478349.7	5824525	80.59	Hand Auger	83	1.1	0	-90
724815	478356.6	5824315.5	83.69	Hand Auger	83	0.7	0	-90
724816	478357.4	5824129.4	86.25	Hand Auger	83	1.4	0	-90
724817	478360.8	5823920.5	82.29	Hand Auger	83	0.8	0	-90
724818	478368.9	5823725.6	79.70	Hand Auger	83	1	0	-90
724819	478373	5823521.3	78.54	Hand Auger	83	0.8	0	-90
724820	478376.9	5823329.1	75.92	Hand Auger	83	1.1	0	-90
724821	478119	5821525.2	69.74	Hand Auger	83	0.4	0	-90
724822	477893.2	5821521.6	61.36	Hand Auger	83	0.1	0	-90
724823	477497.1	5821508.5	64.98	Hand Auger	83	2	0	-90
724824	477299	5821499.6	64.30	Hand Auger	83	1.4	0	-90
724825	477087.2	5821506.3	66.84	Hand Auger	83	0.8	0	-90

724826	476855.5	5821501.8	67.27	Hand Auger	83	2	0	-90
724827	478301	5821525.6	68.66	Hand Auger	83	1.2	0	-90
724828	478392.6	5821649	70.33	Hand Auger	83	1.3	0	-90
724829	478498.6	5821522.9	66.68	Hand Auger	83	1.1	0	-90
724830	478684.3	5821524.8	64.32	Hand Auger	83	2	0	-90
724831	478840.3	5821528.8	63.19	Hand Auger	83	1.5	0	-90
724832	478385.9	5821845.5	73.09	Hand Auger	83	2	0	-90
724833	478385.4	5822275.1	67.99	Hand Auger	83	0.9	0	-90
724834	478376.3	5823119.2	71.24	Hand Auger	83	1.4	0	-90
724835	478390.8	5824762.3	71.50	Hand Auger	83	2	0	-90
724836	478592.6	5824763	73.89	Hand Auger	83	2	0	-90
724837	479094.3	5824777.2	75.32	Hand Auger	83	0.6	0	-90
724838	479273.3	5824780.4	73.52	Hand Auger	83	0.2	0	-90
724839	479580.4	5824784.5	70.97	Hand Auger	83	1.1	0	-90
724840	479985	5824795.3	67.21	Hand Auger	83	0.4	0	-90
724841	480355.1	5824802.1	75.80	Hand Auger	83	1.1	0	-90
724842	480716.4	5824808.4	88.07	Hand Auger	83	1.2	0	-90
724843	468511.2	5827662.1	71.59	Hand Auger	83	2	0	-90
724844	468790.6	5827483	71.00	Hand Auger	83	2	0	-90
724845	469104.9	5827118.8	71.26	Hand Auger	83	2	0	-90
724846	469639.1	5826572.7	75.07	Hand Auger	83	2	0	-90
724847	469827.7	5826203.2	71.20	Hand Auger	83	1.6	0	-90
724848	470092.6	5825907	67.18	Hand Auger	83	1.2	0	-90
724849	470173.1	5825787.6	65.22	Hand Auger	83	0.7	0	-90
724850	470266.4	5825605.9	70.81	Hand Auger	83	1.2	0	-90
724851	470335.4	5825471.1	71.46	Hand Auger	83	1.6	0	-90
724852	470442.4	5825337.7	68.74	Hand Auger	83	0.6	0	-90
724853	470641.8	5825236.8	72.39	Hand Auger	83	2	0	-90
724854	470830.9	5825195.3	72.97	Hand Auger	83	1.7	0	-90
724855	471192.3	5825005.4	66.99	Hand Auger	83	1.7	0	-90
724856	471372.6	5824883.4	64.93	Hand Auger	83	0.6	0	-90
724857	471741.7	5824765.5	73.59	Hand Auger	83	0.2	0	-90
724858	472395.2	5824770.9	63.96	Hand Auger	83	1.4	0	-90
724859	478189.5	5824758.9	73.56	Hand Auger	83	1.4	0	-90
724860	477995.1	5824757.1	74.81	Hand Auger	83	1.6	0	-90
724861	477802	5824749.2	73.57	Hand Auger	83	1.4	0	-90
724862	477421.6	5824743.3	71.34	Hand Auger	83	0.9	0	-90
724863	477233.9	5824738.5	75.95	Hand Auger	83	1.4	0	-90
724864	471315.4	5832605.1	76.80	Hand Auger	83	1.2	0	-90
724864	477033.7	5824732.8	76.80	Hand Auger	83	1.3	0	-90
724865	476828.7	5824730.9	72.06	Hand Auger	83	2	0	-90
724866	476632.4	5824726.4	69.17	Hand Auger	83	1.4	0	-90
724867	476425.2	5824720.1	66.01	Hand Auger	83	1.6	0	-90
724868	476262.1	5824732.7	63.66	Hand Auger	83	1.2	0	-90
724869	475901.5	5825012	64.84	Hand Auger	83	1.2	0	-90
724870	475648	5824949.5	64.57	Hand Auger	83	1.4	0	-90
724871	475474.6	5824821.9	64.00	Hand Auger	83	1.2	0	-90
724872	475300.5	5824710.6	73.92	Hand Auger	83	1.6	0	-90
724873	475013.5	5824713.8	76.49	Hand Auger	83	0.9	0	-90
724874	474787.7	5824732.7	68.62	Hand Auger	83	0.6	0	-90
724875	474578.5	5824743.2	67.39	Hand Auger	83	2	0	-90
724876	474388.8	5824766.5	64.08	Hand Auger	83	1.6	0	-90
724877	472599.1	5824775	62.60	Hand Auger	83	0.6	0	-90
724878	475899.6	5825196.7	65.47	Hand Auger	83	1.3	0	-90
724879	475911	5825402.9	65.52	Hand Auger	83	1.4	0	-90
724880	475928.6	5825598.7	65.83	Hand Auger	83	0.9	0	-90
724881	475980.7	5825778.4	66.32	Hand Auger	83	1	0	-90
724882	476046.4	5825983.1	68.25	Hand Auger	83	0.8	0	-90
724883	476118.5	5826165.4	68.54	Hand Auger	83	1	0	-90

724884	476180.5	5826385.9	66.88	Hand Auger	83	1.1	0	-90
724885	476172.2	5826558.9	67.26	Hand Auger	83	1.3	0	-90
724886	476280.6	5826710.6	67.50	Hand Auger	83	0.9	0	-90
724887	476313.8	5826889	68.42	Hand Auger	83	2	0	-90
724888	476315.1	5827089	69.21	Hand Auger	83	1.1	0	-90
724889	476321.3	5827281.6	72.36	Hand Auger	83	1.2	0	-90
724890	476291.9	5827498	73.91	Hand Auger	83	1.1	0	-90
724891	476248.2	5827702.5	71.39	Hand Auger	83	1	0	-90
724892	476214.4	5827893	70.22	Hand Auger	83	0.7	0	-90
724893	476497.9	5828777.3	70.14	Hand Auger	83	1	0	-90
724894	475681.5	5825235.5	65.30	Hand Auger	83	2	0	-90
724895	475572.5	5825420.2	65.18	Hand Auger	83	0.8	0	-90
724896	475464	5825589	66.89	Hand Auger	83	1	0	-90
724897	475241.7	5825904.5	72.62	Hand Auger	83	0.5	0	-90
724898	471651.4	5836711	70.11	Hand Auger	83	1.1	0	-90
724899	471518.4	5836312.4	72.66	Hand Auger	83	1.2	0	-90
724900	471618.4	5836589.5	70.71	Hand Auger	83	1.3	0	-90
724901	471454.5	5836133	72.96	Hand Auger	83	1.2	0	-90
724902	471259.8	5835591.4	72.68	Hand Auger	83	1.6	0	-90
724903	471216.4	5835429.9	71.98	Hand Auger	83	1.3	0	-90
724904	476323.8	5830216	69.63	Hand Auger	83	0.5	0	-90
724905	471158.5	5835259.2	70.25	Hand Auger	83	1.3	0	-90
724906	470897.4	5833251.6	71.14	Hand Auger	83	1.1	0	-90
724907	470973	5833076.4	71.78	Hand Auger	83	1.3	0	-90
724908	471084.1	5832905.3	71.43	Hand Auger	83	1	0	-90
724909	471195	5832757.4	72.05	Hand Auger	83	1.3	0	-90
724910	476488.5	5828950.6	70.09	Hand Auger	83	0.8	0	-90
724911	476333.6	5830429.9	69.88	Hand Auger	83	1.2	0	-90
724912	476292.4	5830604.5	69.57	Hand Auger	83	0.5	0	-90
724913	476144.2	5830782.5	69.52	Hand Auger	83	0.5	0	-90
724914	476101.5	5830936.3	69.57	Hand Auger	83	0.7	0	-90
724915	476193.7	5831138.8	69.47	Hand Auger	83	0.7	0	-90
724916	476211	5831337.3	70.77	Hand Auger	83	0.8	0	-90
724917	476202.4	5831452.7	71.12	Hand Auger	83	1	0	-90
724918	476209.1	5831649.7	70.40	Hand Auger	83	0.9	0	-90
724919	476208.4	5831847.2	70.72	Hand Auger	83	0.9	0	-90
724920	476218	5832039.8	69.78	Hand Auger	83	1	0	-90
724921	476283.2	5832236.2	69.55	Hand Auger	83	1.1	0	-90
724922	476303	5832426.3	69.68	Hand Auger	83	0.9	0	-90
724923	476245.5	5832615.9	69.79	Hand Auger	83	0.5	0	-90
724924	476184.2	5832805.4	69.87	Hand Auger	83	0.8	0	-90
724925	476099.2	5832977.8	70.16	Hand Auger	83	0.7	0	-90
724926	475989	5833132.7	69.52	Hand Auger	83	0.7	0	-90
724927	475846.4	5833281.2	68.76	Hand Auger	83	0.9	0	-90
724928	475700.7	5833431.3	68.64	Hand Auger	83	0.9	0	-90
724929	475555.5	5833578.8	70.10	Hand Auger	83	0.9	0	-90
724930	474848.8	5834622.6	70.46	Hand Auger	83	0.9	0	-90
724931	474952.4	5836591.6	71.61	Hand Auger	83	1.2	0	-90
724932	474949.3	5836416.2	70.78	Hand Auger	83	1.3	0	-90
724933	474944.2	5836028.8	72.61	Hand Auger	83	1.3	0	-90
724934	474947.8	5835825.2	75.46	Hand Auger	83	1	0	-90
724935	474948.1	5835434.7	74.19	Hand Auger	83	1	0	-90
724936	474964.9	5835098.5	71.69	Hand Auger	83	1.2	0	-90
724937	474997.1	5834996.4	72.06	Hand Auger	83	1.2	0	-90
724938	475097.5	5831391.9	69.93	Hand Auger	83	1.4	0	-90
724939	474904.1	5831394.9	70.59	Hand Auger	83	1.2	0	-90
724940	476129.3	5831388	70.66	Hand Auger	83	1.4	0	-90
724941	476265.8	5831380.8	71.72	Hand Auger	83	1.2	0	-90
724942	476467.3	5831357.5	70.94	Hand Auger	83	1.7	0	-90

724943	476623	5831311	70.03	Hand Auger	83	0.9	0	-90
724944	477208.5	5831027.9	70.22	Hand Auger	83	1.5	0	-90
724945	477435.8	5831023	71.18	Hand Auger	83	2	0	-90
724946	478037.3	5831026.1	68.85	Hand Auger	83	1.8	0	-90
724947	478233.1	5831042.7	68.70	Hand Auger	83	2	0	-90
724948	478427.4	5831077.2	69.67	Hand Auger	83	1.3	0	-90
724949	478788.2	5831037.8	70.20	Hand Auger	83	1.4	0	-90
724950	479070.4	5831017.6	69.86	Hand Auger	83	0.7	0	-90
724951	479372	5830986.3	70.79	Hand Auger	83	0.8	0	-90
724952	479760.8	5830872.8	70.49	Hand Auger	83	1	0	-90
724953	480478.9	5830075.7	72.34	Hand Auger	83	2	0	-90
724954	480803	5829863.3	76.29	Hand Auger	83	1.6	0	-90
724955	480949.9	5829722.7	70.23	Hand Auger	83	1.6	0	-90
724956	474469.3	5827031.4	70.18	Hand Auger	83	2	0	-90
724957	474534.5	5826914.8	70.96	Hand Auger	83	2	0	-90
724958	473248	5837368.2	69.58	Hand Auger	83	1.4	0	-90
724959	471665.6	5837337.3	71.39	Hand Auger	83	1.1	0	-90
724960	471119.8	5837376.3	71.51	Hand Auger	83	1.4	0	-90
724961	470918.5	5837376.1	71.08	Hand Auger	83	1.3	0	-90
724962	471095.1	5835068.5	70.37	Hand Auger	83	1	0	-90
724963	471032.1	5834864.8	71.57	Hand Auger	83	0.9	0	-90
724965	471398.5	5832404.7	71.02	Hand Auger	83	1.2	0	-90
724966	471435.1	5832209.4	71.95	Hand Auger	83	1	0	-90
724967	471483	5832037.9	72.75	Hand Auger	83	1	0	-90
724968	471509.1	5831920.6	71.89	Hand Auger	83	1.1	0	-90
724969	471524	5831805	74.69	Hand Auger	83	0.9	0	-90
724970	478276.4	5835852.6	73.06	Hand Auger	83	0.8	0	-90
724971	477750.5	5836199.5	77.42	Hand Auger	83	0.8	0	-90
724972	477875.5	5836142.4	77.08	Hand Auger	83	1	0	-90
724973	477579.9	5836239	78.19	Hand Auger	83	0.8	0	-90
724974	477350.6	5836264.3	77.39	Hand Auger	83	1	0	-90
724975	476805.3	5836391.3	72.59	Hand Auger	83	0.8	0	-90
724976	476465.1	5836468.3	74.96	Hand Auger	83	0.7	0	-90
724977	476268.9	5836511.7	74.10	Hand Auger	83	1.2	0	-90
724978	476089.1	5836549.2	73.42	Hand Auger	83	1	0	-90
724979	475252.8	5836731	71.08	Hand Auger	83	1.2	0	-90
724980	479040.1	5835415.3	76.45	Hand Auger	83	0.8	0	-90
724981	479174.7	5835243.8	76.07	Hand Auger	83	1.2	0	-90
724982	479308.1	5835059	75.39	Hand Auger	83	0.8	0	-90
724983	479408.6	5834920.7	74.17	Hand Auger	83	1.4	0	-90
724984	479511.4	5834760.2	73.05	Hand Auger	83	1.3	0	-90
724985	479607.4	5834586.4	72.17	Hand Auger	83	0.8	0	-90
724986	479749.5	5834446.5	71.24	Hand Auger	83	1.1	0	-90
724987	480634.5	5833939.3	72.10	Hand Auger	83	0.8	0	-90
724988	480797.9	5833830.3	72.49	Hand Auger	83	0.6	0	-90
724989	480951.3	5833692.6	70.12	Hand Auger	83	0.5	0	-90
724990	481049.3	5833514	70.64	Hand Auger	83	0.8	0	-90
724991	482338.6	5826028.9	69.44	Hand Auger	83	0.9	0	-90
724992	482203.4	5825952.3	68.98	Hand Auger	83	0.6	0	-90
724993	481995.7	5825926.8	69.20	Hand Auger	83	0.5	0	-90
724994	481818.5	5825934.5	71.31	Hand Auger	83	0.8	0	-90
724995	475359.6	5825750.1	69.38	Hand Auger	83	1	0	-90
724996	474890.7	5826378.6	71.97	Hand Auger	83	2	0	-90
724997	474764.6	5826569.4	72.55	Hand Auger	83	1.7	0	-90
724998	468125.5	5831255.2	71.66	Hand Auger	83	2	0	-90
724999	468233.2	5831186.3	71.68	Hand Auger	83	2	0	-90
725000	469432.8	5831262	75.09	Hand Auger	83	1.1	0	-90
725001	470162.1	5831353.1	76.94	Hand Auger	83	2	0	-90
725002	470703.3	5831567.6	71.85	Hand Auger	83	1.4	0	-90

725003	472590	5829734	71.75	Hand Auger	83	1.4	0	-90
725004	472486.8	5829877.3	72.84	Hand Auger	83	1	0	-90
725005	472332.2	5830132.7	73.49	Hand Auger	83	1.1	0	-90
725006	473703.1	5828214.1	71.73	Hand Auger	83	1.7	0	-90
725007	473816.4	5828042.9	70.68	Hand Auger	83	2	0	-90
725008	473877.2	5827935.6	69.03	Hand Auger	83	1.4	0	-90
725009	474011.2	5827730.4	72.53	Hand Auger	83	1.8	0	-90
725010	474222.3	5827398	71.04	Hand Auger	83	1.8	0	-90
725011	474355.1	5827216.8	70.11	Hand Auger	83	2	0	-90
725012	470832.3	5821242	66.04	Hand Auger	83	0.5	0	-90
725013	470930.5	5821384.7	71.60	Hand Auger	83	1.2	0	-90
725014	471144.8	5821389.9	71.08	Hand Auger	83	1.2	0	-90
725015	471350.9	5821393.8	64.70	Hand Auger	83	1.4	0	-90
725016	471511.4	5821400	63.06	Hand Auger	83	1.2	0	-90
725017	471998.2	5821403	61.94	Hand Auger	83	0.7	0	-90
725018	472404	5821411	63.18	Hand Auger	83	1.4	0	-90
725019	472600.6	5821416.1	64.44	Hand Auger	83	0.6	0	-90
725020	473246	5821426.6	54.88	Hand Auger	83	0.2	0	-90
725021	474809.7	5822879	61.63	Hand Auger	83	0.5	0	-90
725022	472761.5	5823041.9	67.63	Hand Auger	83	1.6	0	-90
725023	472569.8	5823110.2	66.58	Hand Auger	83	2	0	-90
725024	472344	5823185.8	70.85	Hand Auger	83	0.9	0	-90
725025	472206	5823209.8	71.11	Hand Auger	83	1.6	0	-90
725026	471996.5	5823238	75.00	Hand Auger	83	1.1	0	-90
725027	477373.7	5819439.5	54.76	Hand Auger	83	0.2	0	-90
725028	477246.8	5819470.5	53.04	Hand Auger	83	0.2	0	-90
725029	491805.9	5837716.9	69.17	Hand Auger	83	1.4	0	-90
725030	491746.3	5838413.8	68.11	Hand Auger	83	0.2	0	-90
725031	491730.4	5838603.1	67.37	Hand Auger	83	1.2	0	-90
725032	491711	5838808.5	67.41	Hand Auger	83	1.1	0	-90
725033	491553.5	5839107.3	66.56	Hand Auger	83	2	0	-90
725034	491362.7	5839226.8	66.97	Hand Auger	83	2	0	-90
725035	490902.4	5839846.1	75.12	Hand Auger	83	2	0	-90
725036	492155.2	5834314.3	73.08	Hand Auger	83	1	0	-90
725037	492208.9	5834091.2	76.07	Hand Auger	83	0.9	0	-90
725038	492258.1	5833907.8	79.49	Hand Auger	83	1	0	-90
725039	492304.7	5833707.6	79.43	Hand Auger	83	0.7	0	-90
725040	492382.3	5833539.9	78.46	Hand Auger	83	1	0	-90
725041	492627.2	5833253.7	75.07	Hand Auger	83	0.7	0	-90
725042	492705.6	5833038.2	76.62	Hand Auger	83	2	0	-90
725043	496234.1	5833035.1	71.57	Hand Auger	83	1.1	0	-90
725044	496198.3	5833238.3	71.79	Hand Auger	83	2	0	-90
725045	496171.1	5833450.5	72.82	Hand Auger	83	1.3	0	-90
725046	496209.2	5833650.6	68.60	Hand Auger	83	1.1	0	-90
725047	496248.1	5833844.5	68.81	Hand Auger	83	2	0	-90
725048	496311.4	5834679.8	69.06	Hand Auger	83	2	0	-90
725049	496331.4	5835054	68.85	Hand Auger	83	1.2	0	-90
725050	496248.7	5835294.2	67.90	Hand Auger	83	0.8	0	-90
725051	496063.9	5835384.6	69.11	Hand Auger	83	1.4	0	-90
725052	495882.1	5835454.1	67.43	Hand Auger	83	0.9	0	-90
725053	495670.4	5835513.4	66.03	Hand Auger	83	0.7	0	-90
725054	495482.7	5835579.9	68.07	Hand Auger	83	0.7	0	-90
725055	484492.4	5844531.7	71.98	Hand Auger	83	2	0	-90
725056	484696.3	5844599.8	73.00	Hand Auger	83	2	0	-90
725057	485062.9	5844727.6	72.29	Hand Auger	83	2	0	-90
725058	485454.4	5844854.4	73.61	Hand Auger	83	2	0	-90
725059	485817	5844984.4	75.42	Hand Auger	83	2	0	-90
725060	486196.3	5845106.1	74.93	Hand Auger	83	2	0	-90
725061	486584.9	5845239.4	71.50	Hand Auger	83	2	0	-90

725062	486961.4	5845366.3	70.79	Hand Auger	83	2	0	-90
725063	487137.1	5845423.6	68.21	Hand Auger	83	1.1	0	-90
725064	487338	5845495.7	69.16	Hand Auger	83	2	0	-90
725065	487539.8	5845562.9	68.87	Hand Auger	83	2	0	-90
725066	487725.5	5845628.7	70.61	Hand Auger	83	2	0	-90
725067	488130.9	5845737.2	74.59	Hand Auger	83	1.1	0	-90
725068	488298.4	5845780.8	72.10	Hand Auger	83	1.1	0	-90
725069	488673.8	5845789.9	68.82	Hand Auger	83	1.2	0	-90
725070	488858.1	5845763.6	68.98	Hand Auger	83	0.8	0	-90
725071	489117.9	5845745.2	70.38	Hand Auger	83	0.9	0	-90
725072	489310.6	5845762.2	71.62	Hand Auger	83	0.9	0	-90
725073	489520.2	5845774.2	70.67	Hand Auger	83	1	0	-90
725074	489718.4	5845795.3	70.09	Hand Auger	83	0.9	0	-90
725075	489919	5845847.9	70.55	Hand Auger	83	0.8	0	-90
725076	490096.8	5845929.7	76.22	Hand Auger	83	0.8	0	-90
725077	490250.9	5846023.4	75.83	Hand Auger	83	0.7	0	-90
725078	490431.1	5846145.2	72.51	Hand Auger	83	0.8	0	-90
725079	490585.1	5846250.1	73.56	Hand Auger	83	0.9	0	-90
725080	490765	5846369	72.60	Hand Auger	83	0.7	0	-90
725081	490907.5	5846525.3	74.31	Hand Auger	83	0.8	0	-90
725082	491087.1	5846560.9	76.75	Hand Auger	83	1.3	0	-90
725083	491298.5	5846614.2	73.96	Hand Auger	83	1.1	0	-90
725084	491486.3	5846637.9	74.59	Hand Auger	83	1	0	-90
725085	491696.5	5846652.3	72.94	Hand Auger	83	0.9	0	-90
725086	491815.4	5846720.8	71.69	Hand Auger	83	0.9	0	-90
725087	491851.9	5846922	73.73	Hand Auger	83	0.9	0	-90
725088	491892.9	5847116.4	72.98	Hand Auger	83	1.4	0	-90
725089	492328.8	5847429.3	69.39	Hand Auger	83	1.2	0	-90
725090	492536.1	5847481.7	70.21	Hand Auger	83	0.9	0	-90
725091	479878.9	5847382.1	68.51	Hand Auger	83	0.9	0	-90
725092	479221.5	5846356.4	69.90	Hand Auger	83	0.7	0	-90
725093	478891.9	5846078.3	67.44	Hand Auger	83	0.7	0	-90
725094	478566.6	5845832.3	66.43	Hand Auger	83	0.9	0	-90
725095	478282	5845580.7	67.58	Hand Auger	83	1.4	0	-90
725096	477966.6	5845359.4	67.10	Hand Auger	83	1	0	-90
725097	477595.7	5845158.9	68.04	Hand Auger	83	0.7	0	-90
725098	477065.6	5844854.8	70.85	Hand Auger	83	1.2	0	-90
725099	476381.8	5844390.8	67.37	Hand Auger	83	0.8	0	-90
725100	474147.6	5849267.6	69.26	Hand Auger	83	0.8	0	-90
725101	473802	5849264.1	70.74	Hand Auger	83	0.9	0	-90
725102	473347.6	5849250.4	67.45	Hand Auger	83	0.9	0	-90
725103	471401.9	5845564	68.21	Hand Auger	83	0.8	0	-90
725104	471020.8	5845554.7	67.70	Hand Auger	83	0.9	0	-90
725105	470604.7	5845531.3	68.30	Hand Auger	83	0.9	0	-90
725106	468002	5845620	62.90	Hand Auger	83	0.9	0	-90
725107	466281.9	5845790.9	62.21	Hand Auger	83	0.6	0	-90
725108	473965.9	5849276.9	71.25	Hand Auger	83	0.9	0	-90
725109	473617.9	5849257.3	68.52	Hand Auger	83	0.9	0	-90
725110	473147.4	5849248	69.49	Hand Auger	83	0.8	0	-90
725111	472898.6	5849256.4	70.12	Hand Auger	83	0.9	0	-90
725112	472485.8	5849250.2	68.87	Hand Auger	83	0.8	0	-90
725113	472255.5	5849244.6	70.75	Hand Auger	83	1.4	0	-90
725114	472101.3	5849247.4	64.48	Hand Auger	83	0.6	0	-90
725115	471635.9	5849235	66.57	Hand Auger	83	0.8	0	-90
725116	471439.6	5849231.4	67.71	Hand Auger	83	0.7	0	-90
725117	471301.7	5849228.9	67.33	Hand Auger	83	1	0	-90
725118	470773.3	5849217.8	70.15	Hand Auger	83	1	0	-90
725119	470604	5849210.4	69.17	Hand Auger	83	2	0	-90
725120	470380.1	5849204.9	69.28	Hand Auger	83	0.7	0	-90

725121	470191.2	5849202.8	72.32	Hand Auger	83	1.2	0	-90
725122	469795.4	5849186.2	68.31	Hand Auger	83	0.6	0	-90
725123	469610.4	5849193.6	70.10	Hand Auger	83	1.4	0	-90
725124	465580.4	5844806	62.66	Hand Auger	83	0.8	0	-90
725125	465675	5844986.4	63.61	Hand Auger	83	1	0	-90
725126	465874.9	5845541.2	61.95	Hand Auger	83	0.4	0	-90
725127	465747.1	5845167.2	63.05	Hand Auger	83	0.8	0	-90
725128	465811.6	5845356.2	61.68	Hand Auger	83	0.7	0	-90
725129	465905.9	5845911.1	62.31	Hand Auger	83	0.8	0	-90
725130	465525.5	5846063.7	62.24	Hand Auger	83	0.4	0	-90
725131	465535.3	5848732.9	62.15	Hand Auger	83	0.7	0	-90
725132	465536.9	5848315.3	62.81	Hand Auger	83	0.3	0	-90
725133	465534.2	5847804.8	62.68	Hand Auger	83	0.6	0	-90
725134	465534.6	5847427.7	62.57	Hand Auger	83	0.6	0	-90
725135	469397.3	5849189.2	72.79	Hand Auger	83	1	0	-90
725136	468619.4	5849157.3	63.40	Hand Auger	83	0.9	0	-90
725137	468438.7	5849155.4	63.93	Hand Auger	83	0.7	0	-90
725138	468207	5849151.3	63.58	Hand Auger	83	0.6	0	-90
725139	468020	5849145.1	63.22	Hand Auger	83	0.6	0	-90
725140	467618.6	5849139.3	63.02	Hand Auger	83	0.5	0	-90
725141	467512.8	5849163	62.99	Hand Auger	83	0.7	0	-90
725142	467230	5849131.6	63.01	Hand Auger	83	0.6	0	-90
725143	467027.4	5849129.5	62.72	Hand Auger	83	0.8	0	-90
725144	466832.1	5849124.8	62.44	Hand Auger	83	0.6	0	-90
725145	465894	5849123.5	62.36	Hand Auger	83	0.6	0	-90
725146	465520.5	5849165.6	62.58	Hand Auger	83	0.6	0	-90
725147	465538.5	5853351.1	58.79	Hand Auger	83	1	0	-90
725148	465537.3	5852941.8	57.43	Hand Auger	83	2	0	-90
725149	465538.1	5852547	58.35	Hand Auger	83	1.3	0	-90
725150	465536.7	5852134.4	59.14	Hand Auger	83	0.6	0	-90
725151	465537.6	5851701	59.76	Hand Auger	83	0.7	0	-90
725152	465522.1	5851364.1	60.57	Hand Auger	83	0.9	0	-90
725153	465525.6	5850753	67.90	Hand Auger	83	0.8	0	-90
725154	465521.3	5850341.1	63.98	Hand Auger	83	0.8	0	-90
725155	459309	5849415.9	54.30	Hand Auger	83	1	0	-90
725156	459647.7	5849293.7	55.16	Hand Auger	83	0.6	0	-90
725157	459986.4	5849242.7	55.55	Hand Auger	83	0.5	0	-90
725158	460355.6	5849156.5	55.82	Hand Auger	83	0.5	0	-90
725159	460748.8	5849209.7	54.93	Hand Auger	83	0.6	0	-90
725160	461099.4	5849397.1	56.45	Hand Auger	83	0.4	0	-90
725161	461413.6	5849608.3	56.09	Hand Auger	83	0.5	0	-90
725162	461795.6	5849672.4	56.98	Hand Auger	83	0.5	0	-90
725163	462138.4	5849516.8	58.33	Hand Auger	83	0.5	0	-90
725164	462520.1	5849398.2	58.37	Hand Auger	83	0.5	0	-90
725165	463208.6	5849162.8	59.53	Hand Auger	83	0.7	0	-90
725166	463590.1	5849059.2	60.59	Hand Auger	83	0.4	0	-90
725167	464050.2	5848921.6	61.24	Hand Auger	83	0.6	0	-90
725168	464418.4	5848976.4	61.08	Hand Auger	83	0.5	0	-90
725169	463316.3	5848898.6	60.56	Hand Auger	83	0.6	0	-90
725170	463310.3	5849080.2	60.16	Hand Auger	83	0.5	0	-90
725171	475381.4	5851625.4	65.40	Hand Auger	83	0.6	0	-90
725172	475752.7	5851655.3	64.51	Hand Auger	83	0.5	0	-90
725173	476156.2	5851667.6	64.53	Hand Auger	83	0.5	0	-90
725174	476785.4	5851683.1	64.04	Hand Auger	83	0.1	0	-90
725175	477206.4	5851680.9	64.29	Hand Auger	83	0.6	0	-90
725176	477601.2	5851693	64.37	Hand Auger	83	0.1	0	-90
725177	477985	5851698.1	66.82	Hand Auger	83	0.5	0	-90
725178	478670.7	5851714.6	66.80	Hand Auger	83	0.8	0	-90
725179	479173.1	5851727.1	69.83	Hand Auger	83	0.5	0	-90

725180	479569.2	5851737.6	69.39	Hand Auger	83	0.7	0	-90
725181	479972.9	5851751.1	67.87	Hand Auger	83	0.4	0	-90
725182	480468	5851796.2	70.18	Hand Auger	83	0.7	0	-90
725183	481054.9	5851780.6	68.58	Hand Auger	83	0.7	0	-90
725184	481378.5	5851823.2	68.99	Hand Auger	83	0.6	0	-90
725185	474797.9	5852062.4	63.91	Hand Auger	83	0.5	0	-90
725186	474137.8	5852967.9	62.97	Hand Auger	83	0.5	0	-90
725187	474114.3	5853360.3	63.22	Hand Auger	83	0.6	0	-90
725188	474160.7	5853726	65.78	Hand Auger	83	0.6	0	-90
725189	474333.6	5855243.8	64.87	Hand Auger	83	0.5	0	-90
725190	479372.9	5861208.3	61.84	Hand Auger	83	0.5	0	-90
725191	479132.5	5860652.6	62.42	Hand Auger	83	0.3	0	-90
725192	478170.7	5859831.7	64.19	Hand Auger	83	0.5	0	-90
725193	477918.2	5859561.9	64.58	Hand Auger	83	0.4	0	-90
725194	477499.1	5859195.5	63.31	Hand Auger	83	0.6	0	-90
725195	477170.2	5858956.3	63.52	Hand Auger	83	0.5	0	-90
725196	476859.3	5858784.3	64.67	Hand Auger	83	0.5	0	-90
725197	476521.7	5858448.3	63.96	Hand Auger	83	0.5	0	-90
725198	476134.1	5858104.6	63.67	Hand Auger	83	0.1	0	-90
725199	475718.2	5857785.3	65.40	Hand Auger	83	0.6	0	-90
725200	475246.1	5856709.9	64.75	Hand Auger	83	0.7	0	-90
725201	474451.2	5855790.2	66.47	Hand Auger	83	0.6	0	-90
725202	482981.2	5853122.2	68.63	Hand Auger	83	0.7	0	-90
725203	482619.1	5852998.1	70.46	Hand Auger	83	0.5	0	-90
725204	482242.8	5852864.5	72.31	Hand Auger	83	0.8	0	-90
725205	465928.1	5845751.3	62.29	Hand Auger	83	0.6	0	-90
725206	466102	5845849.3	62.52	Hand Auger	83	0.6	0	-90
725207	465715.2	5845961.9	62.28	Hand Auger	83	0.6	0	-90
725208	465515.7	5846243.6	62.29	Hand Auger	83	0.5	0	-90
725209	465531.7	5847123.8	62.40	Hand Auger	83	1	0	-90
725210	465531.6	5847602.7	62.63	Hand Auger	83	0.5	0	-90
725211	465530.1	5848607.5	62.65	Hand Auger	83	0.3	0	-90
725212	465531.8	5848953.1	62.43	Hand Auger	83	0.6	0	-90
725213	465534.8	5849361.4	62.61	Hand Auger	83	0.2	0	-90
725214	465534.1	5849773.8	61.78	Hand Auger	83	0.5	0	-90
725215	465518.7	5850166.5	62.68	Hand Auger	83	0.4	0	-90
725216	465517.9	5850560.9	66.65	Hand Auger	83	1	0	-90
725217	465533.8	5850957.8	65.57	Hand Auger	83	0.4	0	-90
725218	465517.6	5851146.7	62.35	Hand Auger	83	0.5	0	-90
725219	465521.1	5851557.7	60.32	Hand Auger	83	0.5	0	-90
725220	465536.5	5852350.3	58.36	Hand Auger	83	0.8	0	-90
725221	465534	5852730.1	57.72	Hand Auger	83	1	0	-90
725222	465536.1	5853141.7	57.91	Hand Auger	83	1.2	0	-90
725223	459478.4	5849399.7	55.40	Hand Auger	83	0.6	0	-90
725224	459878.4	5849255.8	55.44	Hand Auger	83	0.7	0	-90
725225	460564.7	5849179.9	55.94	Hand Auger	83	0.7	0	-90
725226	460914	5849312.3	56.46	Hand Auger	83	0.8	0	-90
725227	461245.5	5849497	56.88	Hand Auger	83	0.6	0	-90
725228	461609.5	5849693.6	55.98	Hand Auger	83	0.5	0	-90
725229	462366.6	5849463.1	58.96	Hand Auger	83	0.4	0	-90
725230	462667.7	5849257.6	58.04	Hand Auger	83	0.7	0	-90
725231	463412.7	5849110.4	60.26	Hand Auger	83	0.4	0	-90
725232	463721.4	5848979.4	61.13	Hand Auger	83	0.6	0	-90
725233	464237.5	5848919.4	61.55	Hand Auger	83	0.5	0	-90
725234	465482.7	5849113.4	62.53	Hand Auger	83	0.5	0	-90
725235	479012.7	5860562	62.53	Hand Auger	83	0.3	0	-90
725236	477333.8	5859052.5	63.85	Hand Auger	83	0.7	0	-90
725237	476969.9	5858847.7	63.28	Hand Auger	83	0.5	0	-90
725238	476387.1	5858281.6	63.33	Hand Auger	83	0.6	0	-90

725239	475634.7	5857610.9	66.19	Hand Auger	83	0.3	0	-90
725240	474326.2	5855424.1	65.89	Hand Auger	83	0.6	0	-90
725241	474222.6	5853881.8	66.82	Hand Auger	83	0.6	0	-90
725242	474125.2	5853474.1	63.98	Hand Auger	83	0.4	0	-90
725243	474148.5	5853087.7	62.57	Hand Auger	83	0.3	0	-90
725244	474632.5	5852119.9	64.86	Hand Auger	83	0.3	0	-90
725245	475256.4	5851750.1	64.97	Hand Auger	83	0.3	0	-90
725246	476997	5851676.8	64.16	Hand Auger	83	0.3	0	-90
725247	477387.2	5851696.2	64.43	Hand Auger	83	0.2	0	-90
725248	477804.6	5851707.1	65.79	Hand Auger	83	0.8	0	-90
725249	478326.7	5851715.9	67.49	Hand Auger	83	0.4	0	-90
725250	478861	5851734	68.45	Hand Auger	83	0.9	0	-90
725251	479366.3	5851743.8	68.96	Hand Auger	83	0.5	0	-90
725252	479767.5	5851753.4	69.51	Hand Auger	83	0.4	0	-90
725253	480155.6	5851743.8	69.00	Hand Auger	83	0.7	0	-90
725254	481244.5	5851726.8	68.72	Hand Auger	83	0.7	0	-90
725255	481462.5	5851983.9	69.92	Hand Auger	83	0.5	0	-90
725256	482058.4	5852804.4	70.82	Hand Auger	83	0.7	0	-90
725257	482419.1	5852925.7	71.72	Hand Auger	83	0.6	0	-90
725258	453436.1	5846016.3	57.19	Hand Auger	83	1.4	0	-90
725259	453165	5846312.6	60.26	Hand Auger	83	0.5	0	-90
725260	452518.2	5847087.2	60.00	Hand Auger	83	0.2	0	-90
725261	451689.2	5847952.8	56.14	Hand Auger	83	2	0	-90
725262	451683.7	5848736.3	43.99	Hand Auger	83	0.2	0	-90
725263	452413.5	5849135.6	44.31	Hand Auger	83	0.3	0	-90
725264	452693.2	5849628.7	42.62	Hand Auger	83	0.5	0	-90
725265	453171	5850020.9	42.74	Hand Auger	83	0.4	0	-90
725266	453584.6	5850364.2	43.23	Hand Auger	83	0.4	0	-90
725267	454056.9	5850602.2	44.44	Hand Auger	83	0.5	0	-90
725268	454780.9	5851313.7	46.18	Hand Auger	83	0.6	0	-90
725269	455498.8	5852443.8	45.47	Hand Auger	83	0.2	0	-90
725270	455835.4	5852813.2	46.77	Hand Auger	83	0.1	0	-90
725271	456175.1	5853611.4	46.44	Hand Auger	83	0.3	0	-90
725272	456458.8	5854334.1	49.61	Hand Auger	83	0.4	0	-90
725273	456485.5	5854887.4	50.83	Hand Auger	83	0.3	0	-90
725274	456607.6	5855547.2	47.28	Hand Auger	83	0.4	0	-90
725275	456230.7	5855854.3	45.89	Hand Auger	83	0.4	0	-90
725276	455772.7	5856660	47.63	Hand Auger	83	0.4	0	-90
725277	457708.2	5856798.5	51.06	Hand Auger	83	0.5	0	-90
725278	459133.4	5857371	50.61	Hand Auger	83	0.6	0	-90
725279	459616.8	5857682	49.67	Hand Auger	83	0.4	0	-90
725280	460028.8	5858081.6	49.90	Hand Auger	83	1	0	-90
725281	461562.8	5858704.3	52.32	Hand Auger	83	1.1	0	-90
725282	463131.4	5858869.9	53.46	Hand Auger	83	0.9	0	-90
725283	463801.3	5858854.5	54.52	Hand Auger	83	0.5	0	-90
725284	464363	5858840.9	54.85	Hand Auger	83	0.9	0	-90
725285	464986.9	5858834.2	55.90	Hand Auger	83	0.6	0	-90
725286	465549.1	5858830.9	56.06	Hand Auger	83	0.6	0	-90
725287	466258.1	5858789.1	56.83	Hand Auger	83	0.5	0	-90
725288	466981.3	5858738.4	58.28	Hand Auger	83	0.5	0	-90
725289	468742.8	5858620.4	60.12	Hand Auger	83	0.5	0	-90
725290	469957.2	5858565.3	63.75	Hand Auger	83	0.5	0	-90
725291	470792.7	5858498.7	63.22	Hand Auger	83	0.8	0	-90
725292	471404.4	5858549.7	66.22	Hand Auger	83	0.5	0	-90
725293	471954.1	5858567.5	63.92	Hand Auger	83	1.2	0	-90
725294	472791.3	5858859.1	61.81	Hand Auger	83	0.5	0	-90
725295	473217.2	5859137.8	65.74	Hand Auger	83	0.9	0	-90
725296	473815.4	5859266	61.46	Hand Auger	83	1.7	0	-90
725297	483083.3	5864047.4	59.57	Hand Auger	83	0.5	0	-90

725298	482981.7	5864079.7	60.22	Hand Auger	83	0.5	0	-90
725299	479028.9	5864652.1	60.13	Hand Auger	83	0.2	0	-90
725300	478274.6	5864717.9	59.90	Hand Auger	83	0.1	0	-90
725301	475987.2	5864969.3	58.40	Hand Auger	83	0.6	0	-90
725302	475394.3	5865119.1	57.44	Hand Auger	83	0.5	0	-90
725303	474386.4	5865086	64.98	Hand Auger	83	0.6	0	-90
725304	470764.7	5865186.1	56.11	Hand Auger	83	0.9	0	-90
725305	470302.4	5865196	56.32	Hand Auger	83	0.4	0	-90
725306	469394.7	5865218.4	57.89	Hand Auger	83	0.7	0	-90
725307	468843.4	5865333.2	58.41	Hand Auger	83	2	0	-90
725308	468249.1	5865401.7	56.51	Hand Auger	83	0.9	0	-90
725309	467791.3	5865428.1	56.88	Hand Auger	83	2	0	-90
725310	466885.6	5865425	55.63	Hand Auger	83	0.9	0	-90
725311	466358.5	5865365.4	54.60	Hand Auger	83	1.3	0	-90
725312	465583	5865305.8	55.01	Hand Auger	83	0.6	0	-90
725313	464987.7	5865332.8	54.63	Hand Auger	83	0.4	0	-90
725314	466889.5	5867165	54.42	Hand Auger	83	0.6	0	-90
725315	466583.7	5867607.2	53.92	Hand Auger	83	1.3	0	-90
725316	466237.4	5868145.5	53.74	Hand Auger	83	1.2	0	-90
725317	467654.5	5865995	56.71	Hand Auger	83	0.6	0	-90
725318	467282.5	5866563.2	55.82	Hand Auger	83	0.6	0	-90
725319	465424.5	5869362.9	55.82	Hand Auger	83	1.4	0	-90
725320	460572.3	5872583.8	47.84	Hand Auger	83	0.9	0	-90
725321	459347.6	5873384.1	46.19	Hand Auger	83	0.4	0	-90
725322	458184.6	5873645.9	46.09	Hand Auger	83	1	0	-90
725323	457236.4	5874437.7	43.11	Hand Auger	83	0.7	0	-90
725324	456011.5	5876014.9	47.47	Hand Auger	83	1.4	0	-90
725325	454954.7	5876989.4	42.35	Hand Auger	83	0.7	0	-90
725326	462489.9	5871347.8	48.91	Hand Auger	83	0.7	0	-90
725327	467451.5	5869362.1	53.56	Hand Auger	83	1.4	0	-90
725328	463473.5	5870699.8	49.88	Hand Auger	83	1.2	0	-90
725329	466213.4	5869351.3	52.12	Hand Auger	83	0.5	0	-90
725330	468761.4	5869357	53.82	Hand Auger	83	1.5	0	-90
725331	469960.9	5869360.2	53.25	Hand Auger	83	0.4	0	-90
725332	472396.8	5869357.1	55.58	Hand Auger	83	0.7	0	-90
725333	482933.5	5869291.9	58.52	Hand Auger	83	0.2	0	-90
725334	481596	5869300.1	57.44	Hand Auger	83	0.1	0	-90
725335	474549.4	5869344.5	56.94	Hand Auger	83	0.7	0	-90
725336	476649.6	5869332.4	57.85	Hand Auger	83	0.8	0	-90
725337	477990.1	5869326.2	57.64	Hand Auger	83	0.1	0	-90
725338	479552.1	5869330.6	57.18	Hand Auger	83	0.4	0	-90
725339	476257.2	5875178.5	54.72	Hand Auger	83	0.2	0	-90
725340	474883.4	5874577.8	51.83	Hand Auger	83	0.7	0	-90
725341	473493.8	5873788.8	56.42	Hand Auger	83	1.3	0	-90
725342	471138.8	5872787.1	54.95	Hand Auger	83	1	0	-90
725343	472227.5	5873358.5	59.31	Hand Auger	83	2	0	-90
725344	489567.6	5821238.1	65.53	Hand Auger	83	0.2	0	-90
725345	489913.1	5820850.3	66.18	Hand Auger	83	0.1	0	-90
725346	492502.8	5819415.2	68.01	Hand Auger	83	0	0	-90

Appendix 2- Assay Data

Sample ID	TREO (ppm)	Pr_6O_{11} ppm	Pr_6O_{11} TREO %	Nd_2O_3 ppm	Nd_2O_3 TREO %	Tb_4O_7 ppm	Tb_4O_7 TREO %	Dy_2O_3 ppm	Dy_2O_3 TREO %
715464	1889	107	5.7	414	21.9	11	0.6	58	3.1
715321	1654	84	5.1	324	19.6	7	0.4	37	2.2
715497	1631	72	4.4	294	18	10	0.6	52	3.2
715405	1496	66	4.4	266	17.8	8	0.6	48	3.2
724873	1448	39	2.7	153	10.5	5	0.4	29	2
715141	1355	65	4.8	247	18.3	7	0.5	38	2.8
715299	1286	61	4.7	236	18.3	7	0.5	38	3
715327	1277	46	3.6	182	14.2	5	0.4	28	2.2
724869	1264	13	1	54	4.3	3	0.3	21	1.7
715108	1147	45	4	189	16.5	8	0.7	46	4
715114	962	53	5.6	202	21	5	0.5	28	2.9
724868	953	24	2.6	92	9.6	4	0.5	25	2.6
724913	949	45	4.8	206	21.8	3	0.4	17	1.8
715069	927	32	3.4	129	14	5	0.6	32	3.5
724818	907	42	4.6	170	18.8	5	0.6	29	3.2
724841	901	43	4.8	171	19	5	0.5	27	3
715119	896	40	4.4	155	17.3	5	0.6	28	3.2
715153	886	35	4	150	17	5	0.5	26	3
715111	842	30	3.5	113	13.4	5	0.5	26	3.1
715498	842	23	2.8	86	10.2	3	0.4	18	2.1
724780	830	21	2.6	83	10	4	0.5	22	2.7
715070	829	21	2.6	86	10.4	5	0.6	31	3.7
715181	829	35	4.2	135	16.3	3	0.4	18	2.2
724862	781	37	4.7	146	18.7	5	0.6	26	3.3
724819	761	37	4.9	154	20.2	4	0.6	24	3.2
715320	750	34	4.5	112	14.9	3	0.4	16	2.1
715372	727	36	5	132	18.1	4	0.6	24	3.3
715120	714	32	4.5	119	16.7	4	0.6	23	3.2
715144	706	23	3.3	90	12.8	4	0.5	21	3
725231	697	28	4	103	14.8	3	0.4	16	2.2
724865	692	25	3.6	92	13.3	4	0.5	21	3
715467	654	22	3.4	83	12.7	3	0.5	19	2.9
724864	646	22	3.5	82	12.7	3	0.5	17	2.6
725018	646	26	4.1	98	15.2	3	0.5	16	2.5
715178	627	21	3.4	85	13.5	3	0.5	18	2.8
724925	618	29	4.8	111	17.9	3	0.5	16	2.6
715355	615	18	3	76	12.4	3	0.5	17	2.8
724842	614	25	4.1	95	15.5	4	0.6	22	3.5
715301	603	27	4.4	92	15.3	3	0.5	17	2.8
724937	595	28	4.8	111	18.6	4	0.6	19	3.2
715418	594	23	3.8	88	14.8	3	0.6	20	3.3
715409	586	26	4.5	98	16.8	4	0.6	20	3.5
715421	584	19	3.2	82	14.1	3	0.6	20	3.4
715306	574	22	3.7	74	12.9	3	0.4	14	2.5
715148	569	14	2.4	56	9.9	3	0.4	15	2.6
715145	564	22	3.9	80	14.2	3	0.5	15	2.7
715422	560	26	4.6	99	17.8	3	0.6	19	3.4
725019	560	28	4.9	100	17.8	3	0.5	13	2.3
715209	558	29	5.3	105	18.7	3	0.5	15	2.7
724895	556	20	3.6	79	14.3	3	0.6	19	3.4
724904	553	22	4	80	14.5	3	0.5	15	2.8
725134	552	27	4.9	98	17.8	2	0.4	13	2.3
715277	550	22	3.9	76	13.9	3	0.5	16	2.9
724851	542	23	4.2	82	15.2	3	0.5	16	2.9
724918	534	24	4.4	91	17.1	3	0.5	15	2.8
715187	533	18	3.4	70	13.2	2	0.4	13	2.4
715185	532	22	4.1	83	15.7	2	0.5	14	2.5
715118	531	24	4.5	90	16.9	3	0.6	17	3.3
725141	531	20	3.7	73	13.8	2	0.4	12	2.3
715138	509	22	4.3	83	16.3	3	0.6	17	3.2
724815	509	12	2.4	47	9.3	2	0.4	11	2.1
724921	509	25	4.9	100	19.6	3	0.7	18	3.5
715215	508	20	3.9	77	15.1	3	0.6	16	3.1
724919	505	11	2.1	51	10.1	2	0.4	11	2.1
715263	503	23	4.6	74	14.7	2	0.4	12	2.3
724782	503	20	3.9	71	14.2	3	0.5	15	3
725208	497	24	4.8	85	17.2	2	0.4	10	2
715307	496	22	4.3	72	14.4	2	0.5	13	2.6

724857	496	22	4.5	82	16.6	3	0.6	16	3.2
715274	494	21	4.2	71	14.3	2	0.5	14	2.8
725248	476	27	5.6	103	21.7	2	0.5	13	2.7
724825	475	13	2.8	52	11	2	0.4	11	2.4
715222	474	18	3.7	67	14.1	2	0.4	11	2.3
725170	474	19	4.1	71	15	2	0.4	10	2.2
715229	464	22	4.6	78	16.9	2	0.5	11	2.5
715214	462	13	2.9	51	11.1	2	0.4	9	2
715287	452	14	3	52	11.5	2	0.4	11	2.5
715221	451	16	3.5	61	13.5	2	0.5	11	2.4
715116	447	19	4.4	66	14.8	2	0.5	13	2.9
715174	442	12	2.7	48	10.9	2	0.5	14	3.2
715092	438	17	3.9	63	14.4	2	0.5	12	2.7
715198	438	18	4	65	14.9	2	0.5	10	2.3
715146	437	18	4.2	70	16.1	2	0.5	12	2.8
725104	435	15	3.4	63	14.6	2	0.4	9	2.1
724909	431	11	2.5	43	9.9	2	0.4	11	2.5
725103	427	19	4.4	66	15.5	2	0.4	9	2.1
715325	426	16	3.7	59	14	2	0.5	11	2.5
724816	422	14	3.2	56	13.4	2	0.5	13	3
715110	419	14	3.3	54	12.9	2	0.6	14	3.4
715345	419	13	3.1	52	12.4	2	0.5	11	2.7
724876	413	13	3.1	48	11.7	2	0.4	10	2.3
715205	411	15	3.8	58	14.1	2	0.4	9	2.2
724912	410	13	3.2	63	15.4	2	0.5	12	2.9
725094	410	10	2.3	43	10.6	2	0.4	10	2.4
725142	409	14	3.5	56	13.7	2	0.5	10	2.6
715164	405	20	5	69	16.9	2	0.4	8	2
715203	404	15	3.6	55	13.6	2	0.4	9	2.2
725131	400	18	4.5	63	15.9	1	0.4	8	2
715167	399	14	3.5	50	12.6	1	0.4	8	2
715310	398	13	3.4	50	12.5	2	0.4	10	2.5
715103	395	13	3.3	50	12.6	2	0.5	13	3.2
715210	395	16	4	57	14.4	2	0.4	8	1.9
715117	394	14	3.7	51	13	2	0.5	11	2.8
724924	394	10	2.6	49	12.5	2	0.5	10	2.5
725137	393	15	3.7	58	14.7	2	0.5	10	2.6
715079	388	15	3.9	61	15.7	2	0.6	14	3.5
715344	386	14	3.6	54	13.9	2	0.4	10	2.6
715478	386	16	4.3	66	17.1	2	0.5	12	3.1
715261	384	19	5.1	61	16	2	0.4	9	2.2
715302	383	12	3.2	49	12.7	2	0.5	11	2.8
715411	383	13	3.4	55	14.4	2	0.6	14	3.6
715317	382	15	3.9	57	15	2	0.4	9	2.4
725093	382	10	2.7	50	13.2	2	0.5	10	2.6
725129	382	15	4.1	57	14.9	2	0.4	9	2.5
724814	379	16	4.1	61	16.1	2	0.5	11	2.9
725133	377	16	4.2	58	15.3	2	0.4	9	2.4
724834	374	14	3.8	56	15	2	0.5	10	2.7
725145	372	18	4.9	61	16.3	2	0.4	9	2.3
715303	371	15	4.1	60	16.1	2	0.5	12	3.1
715109	370	13	3.4	50	13.5	3	0.7	16	4.3
715151	367	9	2.4	37	10.1	2	0.5	11	3
724923	366	9	2.4	41	11.2	1	0.4	8	2.1
715143	363	13	3.5	51	13.9	2	0.5	11	3
725252	363	12	3.4	49	13.4	2	0.5	9	2.6
725210	360	15	4.1	55	15.4	1	0.4	8	2.3
725124	354	15	4.1	53	14.9	1	0.4	8	2.2
724888	353	12	3.3	48	13.5	3	0.7	15	4.3
725173	352	15	4.3	57	16.2	2	0.4	9	2.4
725130	351	14	4.1	53	15	1	0.4	8	2.3
715076	348	12	3.5	49	14	2	0.5	11	3.2
725183	345	12	3.4	47	13.6	2	0.5	10	2.9
725143	343	12	3.6	47	13.8	1	0.4	8	2.5
715074	340	13	3.8	51	14.9	2	0.6	11	3.2
715291	339	15	4.5	58	17	2	0.6	12	3.5
715304	339	13	3.8	50	14.7	2	0.5	10	2.8
724917	339	11	3.1	54	15.9	2	0.6	11	3.2
725088	339	6	1.8	28	8.2	1	0.3	6	1.6
725136	339	10	3.1	42	12.5	1	0.4	8	2.4
725234	338	14	4	50	14.7	1	0.4	8	2.3
725277	337	12	3.7	48	14.2	2	0.5	9	2.6

724914	332	12	3.5	57	17.1	2	0.5	9	2.8
715218	331	10	3	38	11.4	1	0.4	8	2.3
715087	330	14	4.2	51	15.5	2	0.5	8	2.4
724850	329	12	3.7	47	14.4	2	0.5	9	2.7
724939	328	9	2.8	45	13.8	2	0.5	9	2.8
715137	326	13	3.9	49	15.1	2	0.5	9	2.9
724892	326	12	3.6	45	13.9	1	0.4	8	2.3
725092	326	5	1.6	23	6.9	1	0.3	5	1.5
715149	317	11	3.3	43	13.6	2	0.5	9	2.9
724906	311	13	4.1	50	16	2	0.5	9	2.8
724908	311	9	2.9	35	11.2	1	0.4	8	2.5
724875	309	12	4	49	15.7	2	0.5	9	3
715163	306	12	4	46	15	1	0.5	8	2.6
715495	306	10	3.2	39	12.7	2	0.6	11	3.6
725259	306	15	4.8	56	18.4	1	0.5	8	2.5
724747	303	12	4	49	16.1	2	0.6	11	3.5
725138	302	12	4	48	15.8	1	0.5	8	2.6
724820	301	12	4.1	47	15.7	2	0.5	9	2.9
715308	300	11	3.8	42	14	1	0.5	8	2.6
715140	299	12	4	48	16.1	2	0.5	9	3.1
725035	298	6	1.9	28	9.5	1	0.4	7	2.3
725276	298	13	4.5	51	17.1	1	0.4	7	2.4
715077	295	12	4	46	15.6	2	0.5	9	3.1
715165	293	13	4.3	45	15.3	1	0.4	6	2.1
715177	286	10	3.4	39	13.7	2	0.6	10	3.4
724821	286	12	4.4	49	17	2	0.5	8	3
724866	284	10	3.7	43	15	2	0.6	10	3.4
725211	281	11	4	42	14.9	1	0.5	6	2.3
715121	277	11	3.8	41	14.6	1	0.5	8	2.9
715413	277	10	3.4	39	13.9	1	0.4	7	2.5
725091	271	7	2.7	34	12.6	1	0.5	7	2.8
715217	269	11	4.2	43	15.9	1	0.5	7	2.6
715182	266	9	3.5	37	13.8	1	0.5	7	2.8
725012	266	9	3.2	39	14.6	1	0.5	7	2.7
725205	265	10	3.9	39	14.9	1	0.4	7	2.5
724856	262	11	4.3	42	15.9	1	0.4	7	2.6
715408	261	11	4.4	45	17.2	1	0.5	7	2.8
724949	259	8	3	38	14.6	1	0.6	8	3
724897	258	8	3.3	34	13.1	2	0.7	10	3.9
724951	257	8	3.1	40	15.5	1	0.5	7	2.8
725228	257	11	4.2	40	15.5	1	0.4	6	2.4
725005	254	9	3.4	41	16.2	2	0.6	8	3.3
715127	253	8	3.3	30	12	1	0.4	6	2.4
715129	253	8	3.3	31	12.4	1	0.4	6	2.4
715425	253	9	3.6	36	14.3	1	0.5	7	2.7
715186	252	10	3.8	38	15	1	0.5	7	2.9
715241	250	9	3.5	34	13.7	1	0.5	7	2.7
715399	250	9	3.4	33	13.2	1	0.6	9	3.4
724943	248	9	3.7	44	17.8	2	0.6	8	3.3
724884	246	8	3.1	29	11.8	2	0.6	9	3.8
725024	245	6	2.4	27	11	1	0.4	5	2
724929	243	7	2.9	32	13.3	1	0.5	6	2.6
715223	242	9	3.8	35	14.4	1	0.5	6	2.6
715134	240	9	3.6	34	14.4	1	0.5	7	2.9
724874	239	10	4	38	15.8	1	0.5	7	2.9
724823	238	8	3.5	33	14	1	0.5	7	2.8
715071	236	8	3.3	30	12.5	2	0.7	10	4.2
725021	236	9	3.7	41	17.3	1	0.6	7	3.1
715285	233	10	4.2	35	15.1	1	0.5	7	2.9
715081	232	9	3.7	31	13.5	1	0.6	8	3.5
715166	232	8	3.6	32	13.8	1	0.4	6	2.5
715067	230	8	3.5	31	13.5	1	0.6	8	3.4
715184	229	9	3.9	33	14.6	1	0.4	6	2.5
715202	228	9	4	33	14.4	1	0.4	5	2.3
715213	227	10	4.4	34	15	1	0.4	5	2.2
715194	225	10	4.3	34	15.1	1	0.4	5	2.2
715290	223	7	3	25	11.1	1	0.5	6	2.8
715371	223	8	3.4	29	13.2	1	0.5	6	2.6
715170	222	9	4	33	14.6	1	0.4	5	2.1
724837	222	8	3.7	33	14.8	1	0.5	6	2.9
715237	220	9	4.2	33	14.9	1	0.4	4	2
725251	220	8	3.5	30	13.8	1	0.5	6	2.8

715414	219	9	3.9	35	15.9	1	0.5	6	2.8
715212	218	9	3.9	32	14.6	1	0.5	6	2.7
715300	218	8	3.8	32	14.7	1	0.6	7	3.2
725166	218	9	4	34	15.6	1	0.5	6	2.6
715139	212	8	3.9	32	15.1	1	0.5	6	3
724826	211	6	2.7	21	10	1	0.3	4	1.7
715075	210	8	3.9	31	14.9	1	0.5	7	3.2
715190	210	8	4	33	15.7	1	0.5	6	2.7
715211	209	8	3.7	28	13.5	1	0.4	5	2.4
724950	208	7	3.3	32	15.4	1	0.5	6	2.9
725095	207	8	3.9	35	17	1	0.6	6	3.1
724882	205	7	3.4	26	12.9	1	0.5	6	3.1
725017	205	7	3.6	34	16.7	1	0.6	6	3
715125	204	8	4.1	30	14.5	1	0.4	5	2.5
715154	202	6	2.9	24	11.9	1	0.5	6	3.1
724840	201	8	3.9	32	15.7	1	0.6	6	3.2
725290	201	7	3.6	28	14.2	1	0.5	6	3.1
715132	199	7	3.6	26	13.3	1	0.5	6	2.8
715193	199	7	3.4	24	12.1	1	0.4	4	1.9
715115	198	6	3	23	11.5	1	0.5	6	3.2
715231	197	8	4	31	16	1	0.6	6	3
725305	197	7	3.8	29	14.7	1	0.5	6	2.9
715375	196	8	3.9	30	15.4	1	0.5	6	3
724980	194	6	3.3	30	15.3	1	0.5	5	2.5
724839	193	7	3.9	31	15.8	1	0.5	6	3
715219	188	9	4.9	34	18	1	0.5	5	2.7
715255	186	4	2.4	18	9.7	1	0.4	5	2.7
715201	183	7	3.9	25	13.9	1	0.4	4	2.3
715282	183	7	3.9	26	14.1	1	0.5	5	2.8
715155	176	7	3.7	25	14.1	1	0.4	4	2.5
715113	175	7	3.9	27	15.6	1	0.5	5	3.1
715200	175	7	4.2	27	15.4	1	0.5	4	2.6
715188	174	7	4	25	14.2	1	0.4	4	2.2
725022	173	6	3.5	29	16.9	1	0.6	5	3.1
725085	173	5	2.9	23	13.4	1	0.5	5	2.7
725090	171	6	3.3	27	15.5	1	0.6	6	3.4
725028	170	6	3.8	30	17.3	1	0.5	4	2.6
715183	168	7	4	25	14.9	1	0.4	4	2.4
725256	168	6	3.7	24	14.5	1	0.5	5	2.8
715124	166	7	4	24	14.6	1	0.5	5	2.8
715133	163	6	3.7	24	14.5	1	0.5	5	2.9
715244	163	6	3.8	23	14.3	1	0.5	5	2.8
724831	163	6	3.9	25	15.1	1	0.5	4	2.7
715093	160	6	3.7	21	12.9	1	0.5	4	2.6
715130	160	5	3.3	20	12.5	1	0.5	5	3.1
715417	160	5	3	19	12.1	1	0.5	6	3.5
715147	159	6	3.8	24	15.4	1	0.5	4	2.7
715199	158	7	4.4	25	15.9	1	0.5	4	2.6
724822	158	7	4.2	25	15.7	1	0.4	4	2.4
725295	158	5	3.5	22	14.1	1	0.6	5	3.4
715150	156	5	2.9	18	11.4	1	0.5	5	2.9
715197	156	6	4.1	23	14.9	1	0.5	4	2.5
715152	154	6	3.7	22	14.2	1	0.5	5	3.1
715242	150	6	4	21	14.2	1	0.4	4	2.3
724794	149	6	4	24	15.8	1	0.7	6	4
715161	148	5	3.2	19	12.6	1	0.6	6	3.8
715168	148	6	4.1	22	15.1	1	0.5	4	2.6
724838	142	5	3.9	22	15.2	1	0.5	4	2.9
715204	141	5	3.8	19	13.7	1	0.5	3	2.4
715216	140	6	4.2	22	15.4	1	0.5	4	2.9
724783	137	5	3.8	20	14.9	1	0.7	5	3.8
715160	133	5	3.8	18	13.4	1	0.4	3	2.2
715250	133	5	3.9	19	14.3	1	0.5	3	2.5
715419	133	5	3.7	20	15.2	1	0.5	4	3
715156	132	5	3.8	19	14.2	1	0.4	3	2.5
715224	132	5	4.1	20	15.2	1	0.5	3	2.6
715208	131	6	4.6	22	16.8	1	0.5	4	2.7
715226	130	6	4.4	20	15.5	1	0.5	3	2.3
715246	130	5	3.8	19	14.5	1	0.5	4	3
715247	128	5	3.6	17	13.4	1	0.5	3	2.6
715220	126	6	4.6	21	16.3	1	0.5	3	2.5
725089	126	5	3.9	21	16.6	0	0.4	2	1.8

715243	125	5	4	18	14.5	1	0.5	4	2.8
715252	124	5	4	18	14.6	1	0.5	3	2.7
715135	123	5	3.8	18	14.7	1	0.5	3	2.7
715192	118	6	4.8	20	17.2	1	0.6	3	2.8
715175	117	4	3.7	16	13.4	0	0.4	3	2.2
715195	116	5	4.5	19	16.3	1	0.5	3	2.8
715236	116	5	3.9	16	14.1	1	0.4	3	2.5
715122	114	4	3.6	16	14.4	0	0.4	3	2.6
715225	114	5	4.3	17	15.2	1	0.5	3	2.4
715258	114	4	3.9	17	14.6	1	0.5	3	2.9
715064	112	4	3.5	14	12.3	1	0.5	3	3.1
715102	112	4	3.5	15	13.3	1	0.5	3	2.9
715191	112	4	3.8	16	14.1	0	0.4	3	2.5
715086	111	4	3.7	15	13.1	0	0.4	3	2.3
715179	111	4	3.8	16	14	1	0.5	3	2.6
715104	109	4	3.8	14	13.2	1	0.5	3	2.8
715257	109	4	4	17	15.6	1	0.6	4	3.3
715206	108	4	4	16	14.7	1	0.5	3	2.6
715066	107	4	3.7	14	13.1	0	0.4	3	2.4
715162	107	4	3.7	15	14.2	1	0.5	3	2.9
715227	107	5	4.3	16	15.4	0	0.5	3	2.4
715240	106	4	3.7	15	13.9	1	0.6	3	3
715084	105	4	3.8	14	12.9	0	0.4	2	2.1
715171	105	4	3.6	13	12.8	0	0.4	2	2.1
715085	104	4	3.8	13	12.6	0	0.4	2	2.3
715245	102	4	4	15	14.7	0	0.5	3	2.7
715088	101	4	4	13	13.1	0	0.4	2	2.3
715126	101	4	3.8	13	13.3	0	0.5	3	2.7
715248	101	4	4.1	15	15.2	0	0.5	3	2.8
715239	100	4	3.9	15	14.9	1	0.5	3	2.9
715253	100	4	3.8	14	13.7	0	0.4	2	2.3
715172	99	4	4.1	15	15	0	0.5	3	2.6
715107	98	3	3.3	12	11.9	0	0.5	3	2.8
715169	98	4	4.1	15	15.1	0	0.5	3	2.6
715180	98	4	3.7	13	13.6	0	0.4	2	2.3
715159	97	4	3.6	13	13	0	0.3	2	2
715189	96	4	4	15	15.9	1	0.5	3	3
715251	96	4	4	14	14.2	0	0.4	2	2.5
715196	95	4	4.6	15	16.2	0	0.5	2	2.6
715207	94	4	4.4	15	15.6	0	0.5	2	2.6
715235	94	4	3.8	13	13.6	0	0.5	3	2.7
715157	88	4	4	13	14.3	0	0.4	2	2.3
715158	88	3	3.9	13	14.5	0	0.5	2	2.7
715123	85	3	4	12	14	0	0.4	2	2.7
715068	83	3	3.9	11	12.7	0	0.3	2	2.2
715249	83	3	3.6	10	12.4	0	0.4	2	2.3
715131	82	3	3.6	10	12.2	0	0.4	2	2.4
715176	79	3	3.9	11	13.9	0	0.4	2	2
715059	78	3	3.7	10	12.2	0	0.4	2	2.4
715095	78	3	4	11	14.1	0	0.4	2	2.6
715097	78	3	3.7	9	11.8	0	0.4	2	2.1
715106	78	3	3.7	10	12.3	0	0.4	1	1.9
715112	78	3	4.1	12	15.9	0	0.5	2	3.1
715238	78	3	3.7	10	13.2	0	0.4	2	2.3
715080	74	3	3.5	9	12.1	0	0.4	2	2.9
715256	74	3	3.7	11	14.4	0	0.5	2	2.9
715061	73	3	3.8	9	12.5	0	0.4	2	2.4
715083	72	3	3.9	10	14	0	0.6	2	3.3
715094	71	3	4.1	10	13.8	0	0.5	2	2.8
715078	70	3	3.8	10	14	0	0.5	2	3
715099	70	3	3.7	8	11.6	0	0.4	2	2.3
715060	69	3	4	9	13.2	0	0.4	2	2.4
715260	69	3	3.9	10	13.9	0	0.4	2	2.7
715073	67	2	3.5	8	11.5	0	0.3	1	2
715128	67	3	3.9	9	13.6	0	0.5	2	2.7
715098	66	2	3.6	7	11.2	0	0.3	1	2.2
715096	63	2	3.7	7	11.4	0	0.4	1	2.3
715232	60	3	4.3	9	15.1	0	0.4	1	2.3
715173	59	2	3.4	7	11.8	0	0.4	1	2.2
715142	58	2	3.7	8	13	0	0.4	1	2.4
715233	50	2	4.1	7	14.1	0	0.4	1	2.2
715234	44	2	4.3	6	14.3	0	0.4	1	2.2

715136	43	2	4.2	6	14.6	0	0.4	1	2.5
715105	39	2	3.9	5	13.2	0	0.4	1	2.2
715259	37	1	3.9	5	13.6	0	0.4	1	2.6
715254	36	1	3.6	5	12.7	0	0.4	1	2.4
715065	35	1	3.8	5	13.1	0	0.4	1	2.5
715230	27	1	4.7	4	16.8	0	0.5	1	2.6
715082	25	1	3.9	3	14.1	0	0.4	1	2.5
715228	24	1	4.3	3	14.5	0	0.4	1	2.2
715100	23	1	3.6	3	13.5	0	0.4	1	2.2
715063	21	1	3.7	3	12.8	0	0.3	0	2.1
715072	20	1	3.5	3	12.5	0	0.3	0	2.2
715089	20	1	3.7	3	13.7	0	0.4	0	2.3
715090	19	1	3.4	3	13	0	0.4	0	2.4
715101	16	1	3.4	2	12.6	0	0.4	0	2.5
715091	13	0	3.8	2	12.7	0	0.4	0	2.2