17 July 2024

REVISED ANNOUNCEMENT 2 JULY 2024

At the request of ASX the company has made amendments to the above announcement to comply with the provisions of Clauses 17 and 50 of the JORC Code and the announcement is republished accordingly. The amendments are:-

1) The word "significant" has been deleted from the heading to the announcement to comply with JORC 17.

2) The metal equivalent calculation has been included in a more prominent position. It is now on page 1 (as well as being set out in detail in Appendix A Table 1 to the announcement) (JORC Clause 50).

Yours faithfully
Ark Mines Ltd

Ian Mitchell
Director/Secretary

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ARK MINES LTD.

ASX ANNOUNCEMENT

2 July 2024

EXPLORATION TARGET DEFINED AT SANDY MITCHELL RARE EARTHS PROJECT

- Following its Maiden Indicated mineral resource estimate Ark has undertaken an extensive reconnaissance drilling programme and, as a result, now is able to assess an exploration target range for the Sandy mitchell tenement.
- Exploration Target estimated for Sandy Mitchell: 1.3 billion tonnes to 1.5 billion tonnes @ 1250 to 1490 ppm monazite equivalent.

  The potential quantity and grade of the Exploration Target is conceptual in nature; there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in estimation of a Mineral Resource.

  Monazite equivalent calculation

  Mz EQ = monazite + xenotime + 0.3217 x zircon + 0.2957 x rutile + 0.0217 x ilmenite

  (Detailed in the Appendices Table 1)

- Exploration Target places Sandy Mitchell as potentially one of the world's largest surface-expressed terrestrial Placer Rare Earth projects.
- The Exploration Target considerably builds on the recently announced Maiden Indicated Mineral Resource Estimate (MRE) of 21.7Mt @ 1,419ppm Monazite Equivalent calculated using a 700ppm MzEq lower cut-off grade.

  (see Table 5, refer to ASX announcement 29 May 2024).

- The Exploration Target, like the resource, is based on mineralisation from surface down to an average depth of ~11 metres. Therefore, there is no overburden removal, simple mining and low environmental impact with very affordable development.
- The Exploration Target is summarised in Table 1 below and shown in Figure 2. Most of the Exploration Target lies immediately to the north of the project's recent drilling and maiden resource.

Exploration Target Range	Exploration Target	MzEq	Monazite	Xenotime	Zircon	Rutile	Ilmenite	TREO+Y+Sc	TREO	LREO	HREO	MagREO	CREO
From Grade ppm		1,250	590	80	620	550	10,000	440	380	370	13	90	110
From Dry Tonnes	1,316,705,000	1,644,000	781,000	103,000	810,000	721,000	13,169,000	573,000	504,000	487,000	17,000	122,000	139,000
To Grade ppm		1,490	710	90	730	650	11,930	520	460	440	13	110	130
To Dry Tonnes	1,580,046,000	2,354,000	1,119,000	148,000	1,160,000	1,032,000	18,855,000	820,000	722,000	698,000	24,000	175,000	199,000

- The Exploration Target includes a basket of high value Heavy Minerals (HM) totalling 15.6 to 22.3 million tonnes of contained HM, comprised of the following:
  - *Monazite from 781,000 tonnes to 1,119,000 tonnes, grading from 590 ppm to 710 ppm,*
  - *Xenotime from 103,000 tonnes to 148,000 tonnes, grading from 80 ppm to 90- ppm,*
  - *Zircon from 810,000 tonnes to 1,160,000 tonnes, grading from 620 ppm to 730 ppm,*
  - *Rutile from 721,000 tonnes to 1,032,000 tonnes, grading from 550 ppm to 650 ppm,*
  - *Ilmenite from 13,169,000 tonnes to 18,855,000 tonnes, grading from 10,000 ppm to 11,930 ppm.*

  Refer to table 1 in the Appendices for the detailed calculations
- Reported MzEq grades are expected to support strong project economics through simple low-cost downstream processing, with reference to current market prices for monazite concentrate.
- High magnetic REO (Nd, Pr, Dy, Tb) element proportion of 24% of the TREO basket, positioning Sandy Mitchell as one of Australia's most enriched MREO deposits. (*Refer to Table 1 in the Appendices*)

- MRE developed from only 1.2% of the available anomaly area at Sandy Mitchell, with the Exploration Target presenting as a real and substantial potential for Mineral Resource expansion.
  - The mineralisation is from surface to around 12m, amenable to low-cost open pit mining methods.
- First pass un-optimised beneficiation test work of the Sandy Mitchell Rare Earth sands has produced a high-grade rare earth concentrate.
- The beneficiation test work has shown the greatest upgrade is by screening followed by simple gravity separation, confirming the material is amenable to straightforward beneficiation by gravity processing:
  - The final concentrate assays returned 51.9% TREO, mostly La, Ce, Pr and Nd, plus Heavy Rare Earths Dy and Tb, which collectively represents a very high-value saleable product.
  - Direct cerium oxide (CeO_2) recovery from gravity feed to REM concentrate is estimated to be 71.7%, with indications that >83% may be achievable.
  - 49% of the feed mass is rejected by screening.

  (Refer to AHK ASX announcement 24/11/23)

- Pre-Feasibility Study for Sandy Mitchell now underway, along with an expanded phase 2 Mineral Resource adding to the Maiden Resource. The PFS is expected to be reported Q4 CY2024. Ark is targeting development of straightforward, low capex gravity separation plant that produces a monazite concentrate with HM credits.

Executive Director Ben Emery said:

"The sheer scale of the Sandy Mitchell Exploration Target, up to 1.5 billion tonnes, delivers a clear statement that this is one of the world's largest surface-expressed, sand-based placer Rare Earth deposits. With the consistent grades of rare earths and heavy minerals from surface to only ~11 metres deep, we are working with an exceptionally large and very simple deposit with an extremely low environmental impact. Sandy Mitchell has considerable advantages over projects where rare earths are housed in ionic clays or hard rock material. Most of the processing has already been done by mother nature, so to produce a monazite concentrate, simple, low-cost gravity separation is all that is required. Our pre-feasibility study, which has commenced, will illustrate this.While pre-feasibility work continues, we are also busy incorporating the second phase of drilling into an updated MRE and we are now advancing on mining and other relevant project development permits."

Ark Mines Limited (ASX: AHK) is pleased to report a Substantial Exploration Target at its 100 per cent-owned Sandy Mitchell rare earth and heavy mineral project in North Queensland Australia. The Exploration Target, prepared independently by Empirical Earth Science (full independent report available at on web site) is summarised in Table 1 and shown in Figure 2. Most of the Exploration Target lies immediately to the north of the project's **Indicated Mineral Resources which are estimated to be 21.7 million tonnes at 1420 ppm Monazite Equivalent** (MzEq) using a 700 ppm MzEq cut-off (see Table 5, refer to ASX announcement 29 May 2024). The potential quantity and grade of the Exploration Target is conceptual in nature, and there has been insufficient exploration to estimate Mineral Resources. Furthermore, it is uncertain if further exploration will result in defining additional Mineral Resources at Sandy Mitchell.

Table 1: *Sandy Mitchell Exploration Target. No cut-off grades, top-cuts, or interval exclusions are applied, apart from excluding intervals within underlying bedrock. The calculations and factors used are described in Appendix A, raw drill hole assay data is supplied in Appendix B (from EES 2024, see Ark web site).*

Exploration Target Range	Exploration Target	MzEq	Monazite	Xenotime	Zircon	Rutile	Ilmenite	TREO+Y+Sc	TREO	LREO	HREO	MagREO	CREO
From Grade ppm		1,250	590	80	620	550	10,000	440	380	370	13	90	110
From Dry Tonnes	1,316,705,000	1,644,000	781,000	103,000	810,000	721,000	13,169,000	573,000	504,000	487,000	17,000	122,000	139,000
To Grade ppm		1,490	710	90	730	650	11,930	520	460	440	13	110	130
To Dry Tonnes	1,580,046,000	2,354,000	1,119,000	148,000	1,160,000	1,032,000	18,855,000	820,000	722,000	698,000	24,000	175,000	199,000

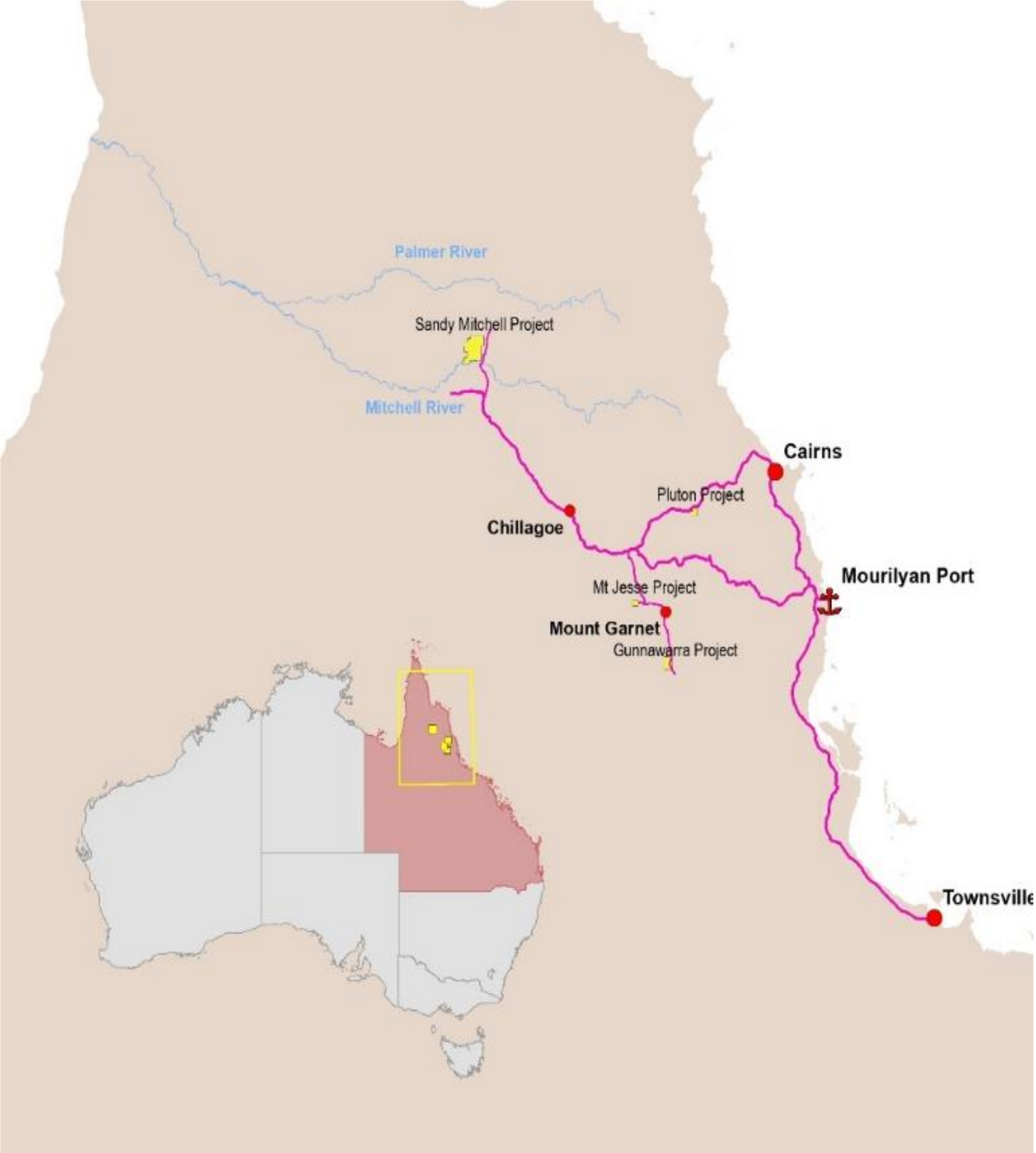

Figure 1: *Sandy Mitchell Rare Earth and Heavy Mineral Project location.*

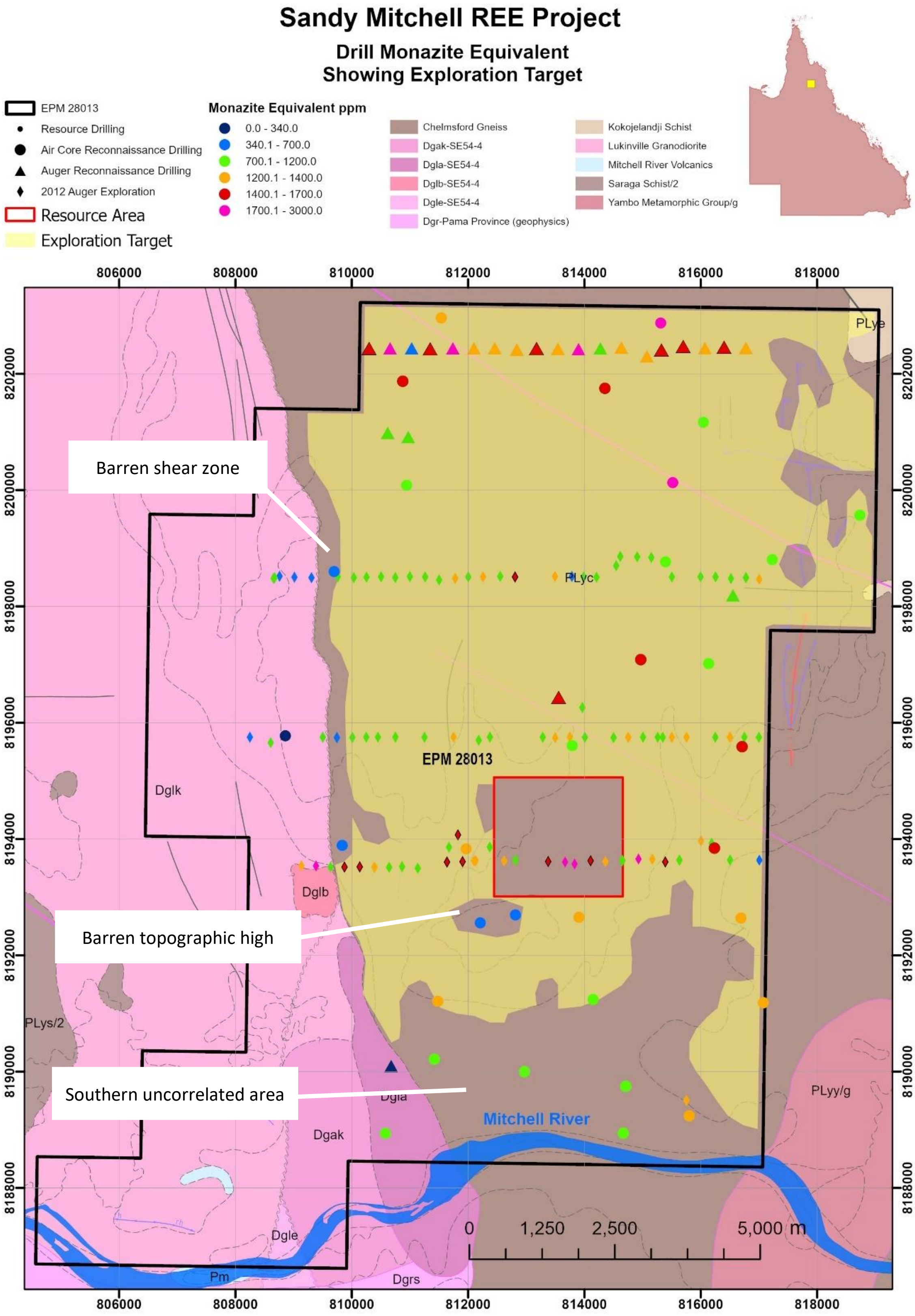

Figure 2: *The JORC Exploration Target (yellow) with all generations of exploration drilling shown coloured by monazite equivalent. The Target area is 86.6 km² excluding the 4.5 km² resource area. Figure 6 shows drilling coloured by TREO + Y + Sc.*

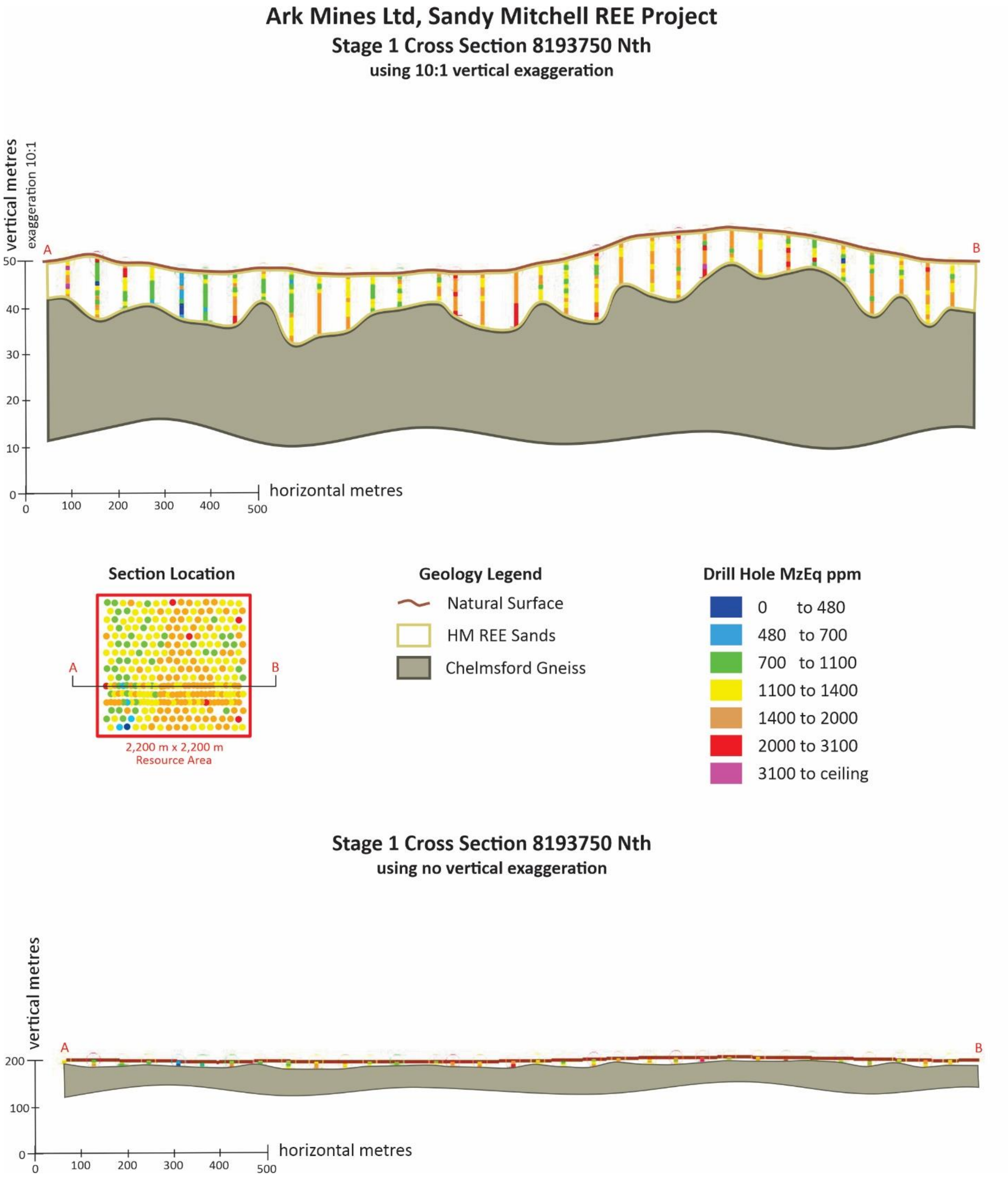

Figure 3: *Sandy Mitchell Project west to east cross section at 8193750 m north through the REE & HM sand, showing drill data from the Stage 1 resource AC drill grid coloured for monazite equivalent.*

The upper section has a vertical exaggeration of 10x to afford visibility of the drill data at the scale of the drill section. The lower section is the same section without vertical exaggeration, i.e. at true scale, illustrating why exaggeration is required to visualise the data. Note, the vertical exaggeration has the effect of magnifying topological variation as well as making the drill data visible. The lower section provides a realistic idea of the topography and basement variability of this relatively low relief terrain.

Geology of the Sandy Mitchell Project is dominated by two major rock units, the Proterozoic Chelmsford Gneiss covering the eastern two thirds of EPM 28013, intruded by the younger Devonian Lukinville Granodiorite covering the western third of the tenement. Other associated minor unnamed Kintore Supersuite granitoids related to the Lukinville Granodiorite are present on the southern third of the Chelmsford Lukinville contact, but to the north of these the two major units are separated by a regional scale shear zone (see Figure 2).

The Chelmsford Gneiss is covered by REE bearing HM sands approx. 11 m deep. These sands formed in situ by weathering driven disaggregation of the gneiss. This type of HM sand mineralisation is sometimes referred to as saprolite sands, though this is a misnomer in the case of the Sandy Mitchell Project, as there is very little secondary clay through the profile, and surficial clays in the top metre are considered transported by the wet season flood wash. The entire sand horizon, and the top of the underlying bedrock is fully oxidised. **Figure 3** shows a typical cross section through the REE and HM sands from within the heavily drilled Stage 1 resource area. HM and REE mineralisation is contained within the very fine sand fraction of the profile and is relatively evenly distributed throughout the profile with enrichment present only in the beds of minor ephemeral streams.

The underlying Chelmsford Gneiss shows HM and REE grades slightly lower than the overlying sands. The granitoids and the shear zone HM and REE grades are at or near the local background. The HM and REE bearing sands are correlated with a strong thorium band radiometric anomaly which allows simple localisation of the mineralisation (see Figure 5).

Drilling at Sandy Mitchell totals over 986 holes for over 4,900 m, across six drill programmes (see Table 2, Figure 6 and Figure 6). The first of these programmes was carried out by Walter Scott & Partners in 2012, the other 5 have been conducted by Ark.

Table 2: *Sandy Mitchell Project drilling summary.*

Type	Year	Collars *n*	Metres *m*	Assays *n*	Average Depth *m*	Min Depth *m*	Max Depth *m*	Average Sand Depth *m*
Historic auger exp	2012	101	~500	101	~5	?	6.0	~5
S1 AC res	2023	144	1,488.3	1,508	10.3	3.0	18.0	10.3
S2 AC/RC res	2023	185	2,427.1	2,463	13.0	4.1	26.0	12.2
S2 AC/RC exp	2023	32	393.0	394	12.3	4.0	30.0	11.3
S3 auger exp	2023	22	66.6	69	3.0	1.5	5.0	3.0
S3 OP water bore	2023	2	62.0	62	31.0	30.0	32.0	15.0

The average grade results of these drill programmes are given in Table 3.

Table 3: *The length weighted average grade of key HM sand commodities in each generation of drilling at Sandy Mitchell. NB: the values for the historic auger programme are simple averages, since depth data was not recorded and samples were single composites.*

Type	MzEq *ppm*	Monazite *ppm*	Xenotime *ppm*	Zircon *ppm*	Rutile *ppm*	Ilmenite *ppm*	TREO+Y+Sc *ppm*	TREO *ppm*	LREO *ppm*	HREO *ppm*	MagREO *ppm*	CREO *ppm*
Historic auger exp	1,098.9	386.5	48.1	867.9	556.5	10,164.5	304.4	284.9	276.1	8.7	74.7	69.5
S1 AC res	1,447.8	692.1	89.8	705.5	634.3	11,585.2	506.8	447.9	433.2	14.7	108.7	121.7
S2 AC/RC res	1,300.7	612.3	80.3	662.1	570.9	10,427.1	447.9	397.6	384.2	13.4	99.0	108.1
S2 AC/RC exp	1,155.2	474.7	80.7	599.3	588.1	10,742.1	358.6	305.0	291.1	13.9	74.8	91.8
S3 auger exp	1,393.1	600.6	82.1	844.3	634.0	11,581.1	441.4	388.8	373.7	15.1	98.0	110.3
S3 OP water bore	674.4	281.0	60.6	332.3	326.5	5,962.9	221.1	179.1	167.4	11.7	44.4	61.9

The mean grades are lower in the historic data due to its assay using four acid digest which leaves an undigested residue of incompatible elements including REE, Zr and Ti, compared to Ark's assay by fusion which can be considered a total digest. The Stage 2 AC/RC exploration data is notably lower than Ark's other data generations because a significant number of holes lie outside the mineralisation, so too for the Stage 3 water bore data. These two data sets have assisted in constraining the Exploration Target to areas overlying the Chelmsford Gneiss correlated with the Th anomaly, excluding topographic highs, the Lukinville contact shear zone, the areas of Th high overlying the Lukinville Granodiorite which are stream beds of limited extent, and a 14.9 km^2 area at the southern quarter of the tenement between the Mitchell River and the high range Th anomaly (see Figure 2).

When separated into correlated drilling within mineralisation and uncorrelated drilling outside mineralisation, the Stage 2 and 3 exploration reconnaissance data shows mineralisation grades comparable to the other data sets which lie wholly within the correlated area (see **Table 4** and Figure 2). Ark's assay suite, sampling, and quality control measures are detailed in Appendix A.

Table 4: *Length weighted average sand depths and assay grades, by correlation category. Note that sand depths exclude the bedrock portion of each hole. The full drill data set for these holes is available in Appendix B.*

Data Category	Drill Metres	Sand Depth	Monazite Equivalent	Monazite	Xenotime	Zircon	Rutile	Ilmenite	TREO+Y+Sc	TREO	LREO	HREO	MagREO	CREO
	m	*m*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*
All Recon Data	521.6	8.1	1,129.8	468.5	78.5	600.4	562.9	10,282.2	353.3	301.2	287.4	13.8	74.3	90.7
All Correlated Only	**342.6**	**7.1**	**1,308.2**	**535.9**	**88.4**	**715.9**	**655.3**	**11,969.6**	**404.0**	**346.5**	**331.5**	**15.0**	**85.4**	**101.4**
Correlated AC Only	244.0	**10.6**	1,309.6	532.2	90.8	695.3	669.0	12,219.2	403.2	344.0	329.0	15.1	84.0	100.9
Correlated Aug & OP Only	98.6	4.0	1,393.1	600.6	82.1	844.3	634.0	11,581.1	441.4	388.8	373.7	15.1	98.0	110.3
Uncorrelated Only	179.0	12.1	815.4	349.8	61.0	396.9	400.2	7,309.3	263.9	221.5	209.8	11.6	54.9	71.9

Exploration Target Ranges have been calculated from all Ark drill data. The grade range was calculated by adjusting the grade data from the statistically well constrained resource grades with their well validated internal ratios (see Table 5), to 3% below the lowest average correlated data set grade and 3% above the highest average correlated data set grade, based on MzEq. This gives a range of -12% to +5% from the Stage 1 resource as shown in Table 6.

Table 5: *Sandy Mitchell Stage 1 mineral resource estimate (refer to ASX announcement 29 May 2024) calculated at a cut-off grade of 700 ppm MzEq, provided for grade context and comparison.*

	Indicated Resource	Monazite Equivalent	Monazite	Xenotime	Zircon	Rutile	Ilmenite	TREO+Y+Sc	TREO	LREO	HREO	MagREO	CREO
Grade ppm		1,420	670	90	700	620	11,365	495	435	421	14.5	105	120
Tonnes	21,686,232	30,775	14,626	1,932	15,168	13,493	246,465	10,724	9,436	9,121	315	2,282	1,897

Table 6: *HM and REE grade range calculated from correlated exploration data.*

Correlated Area Range	MzEq	Monazite	Xenotime	Zircon	Rutile	Ilmenite	TREO+Y+Sc	TREO	LREO	HREO	MagREO	CREO
	ppm	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*
Minima	1,249	593	78	616	548	10,001	435	383	370	13	93	105
Maxima	1,490	708	94	734	653	11,933	519	457	442	15	110	126

The tonnage range is derived from the geology correlated thorium anomaly area of 91.2 km^2, minus the Stage 1 and 2 resource area of 4.5 km^2, giving an Exploration Target area of 86.6 km^2 (see Figure 2). The Stage 1 resource grid mean sand depth was 10.6 m, as was the correlated AC reconnaissance, while the Stage 2 resource grid has a mean sand depth of 12.2 m, providing the well supported (363 points across the Target area) depth range of 10 to 12 m. The spatial constraints yield a range of 866.3 million to 1,039.5 million bank cubic metres. With a density of 1.52 derived from the average of 1,451 laboratory measurements of Dry Loose Bulk Density, this gives a tonnage range of 1,316.7 million to 1,580.0 million dry metric tonnes.

Together, these relatively conservative ranges yield the Exploration Target as shown in Table 1 and Figure 2. The potential quantity and grade of the Exploration Target is conceptual in nature; there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in estimation of a Mineral Resource

Further Exploration is planned for 2024 to test the Exploration Target across its entire area with a grid of 189 auger holes. Drilling is planned to commence in July and run until the wet season (see Figure 7).

A further 34 auger holes have been designed to test the 14.9km^2 uncorrelated area between the high range Th anomaly and the Mitchell River. Though not included in the Exploration Target at this time, this area remains prospective. Although the sand thickness is believed to thin towards the Mitchell, assay data from uncorrelated Stage 2 AC/RC reconnaissance exploration shows grades above the 700 ppm MzEq cut-off and it is believed that the Th anomaly is obscured in this area by thin transported sediment cover deposited by the Mitchell in wet season flood. Only 20 to 30 mm of cover is required to prevent Th band gamma rays from reaching an above ground detector.

Though these holes outside the Exploration Target have the potential to expand the target area, they are considered of lower priority and may be pushed back to 2025 depending on wet season timing.

This exploration work is scheduled to take place concurrently with Ark's second phase of metallurgical testing, already commenced with a fresh bulk sample arrived at Mineral Technologies in June, and subsequent prefeasibility works, whilst data for the Stage 2 Mineral Resource is currently undergoing validation and checking in preparation for estimation.

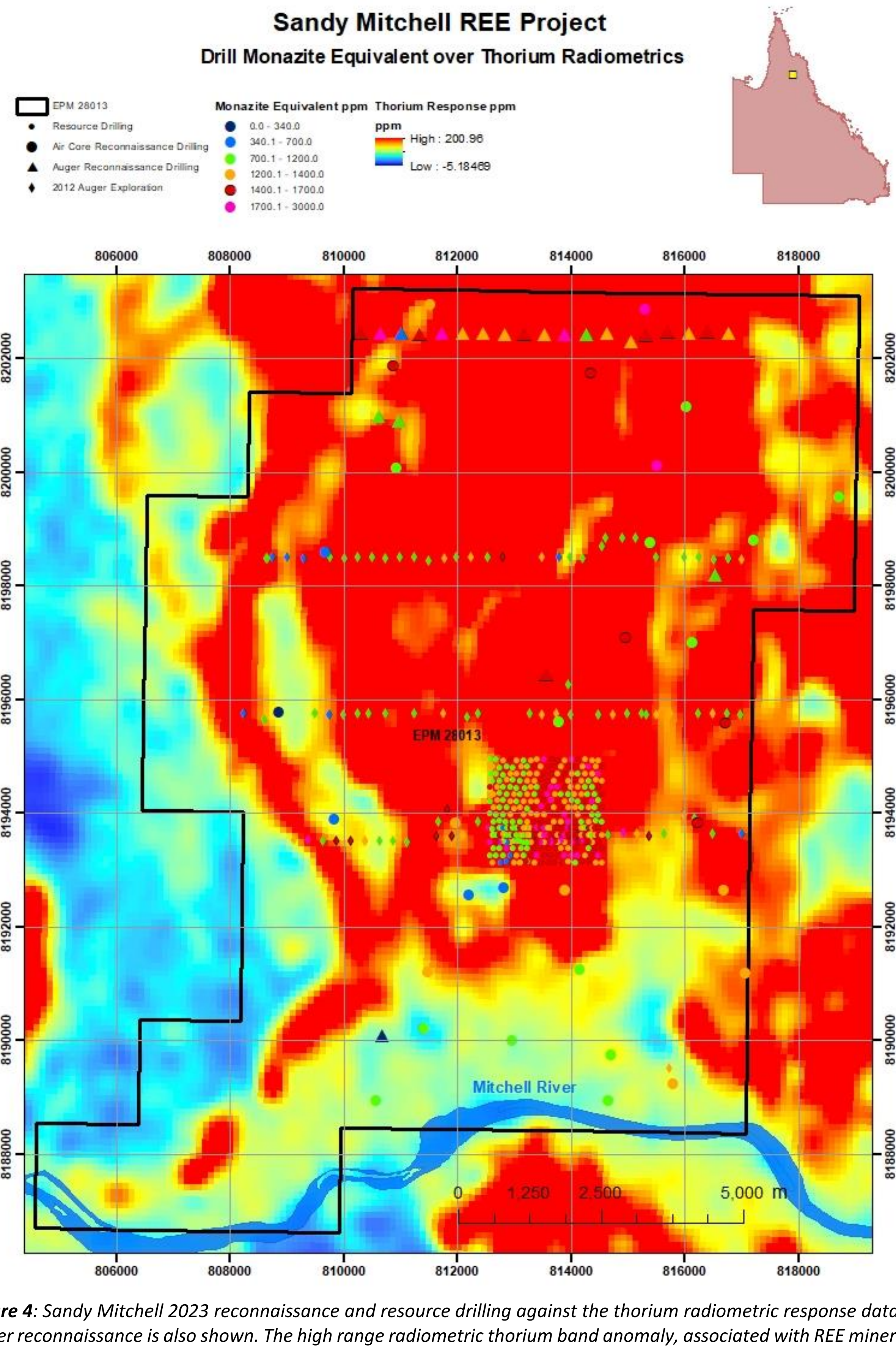

Figure 4*: Sandy Mitchell 2023 reconnaissance and resource drilling against the thorium radiometric response data. Historic auger reconnaissance is also shown. The high range radiometric thorium band anomaly, associated with REE mineralisation, covers an area of 100.7km^2 within the tenement. The stage 1 and 2 resource area is approximately 2.8% of the tenement area.*

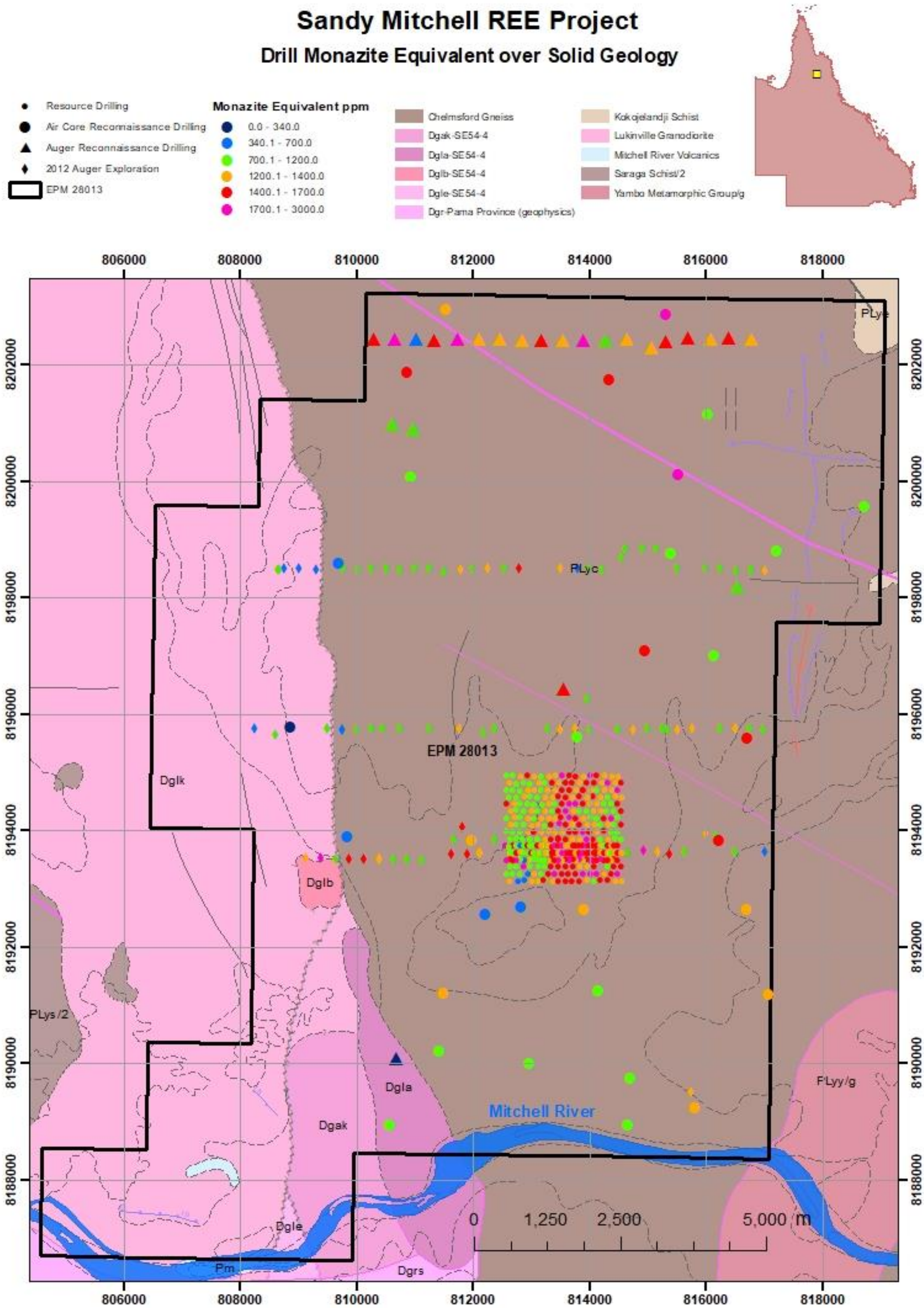

***Figure 5**: Sandy Mitchell drilling showing AHK's reconnaissance drilling, historic 2012 auger results, and the Stage 1 and Stage 2 resource grids, against the geological mapping. Drilling is colour coded by monazite equivalent HM grades.*

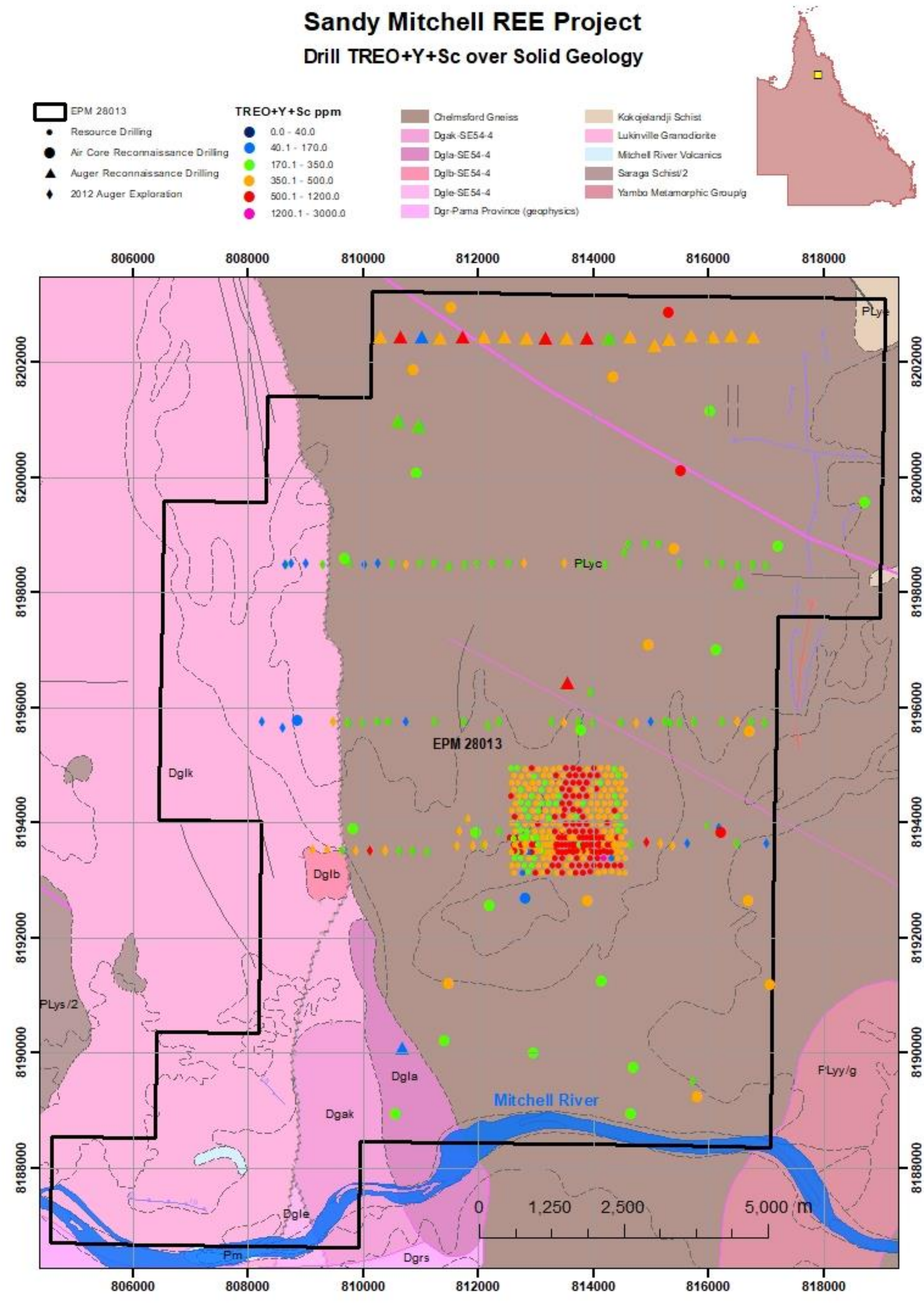

Figure 6: *Sandy Mitchell drilling showing AHK's reconnaissance drilling, historic 2012 auger results, and the Stage 1 and Stage 2 resource grids, against the geological mapping. Drilling is colour coded by TREO+Y+Sc grades.*

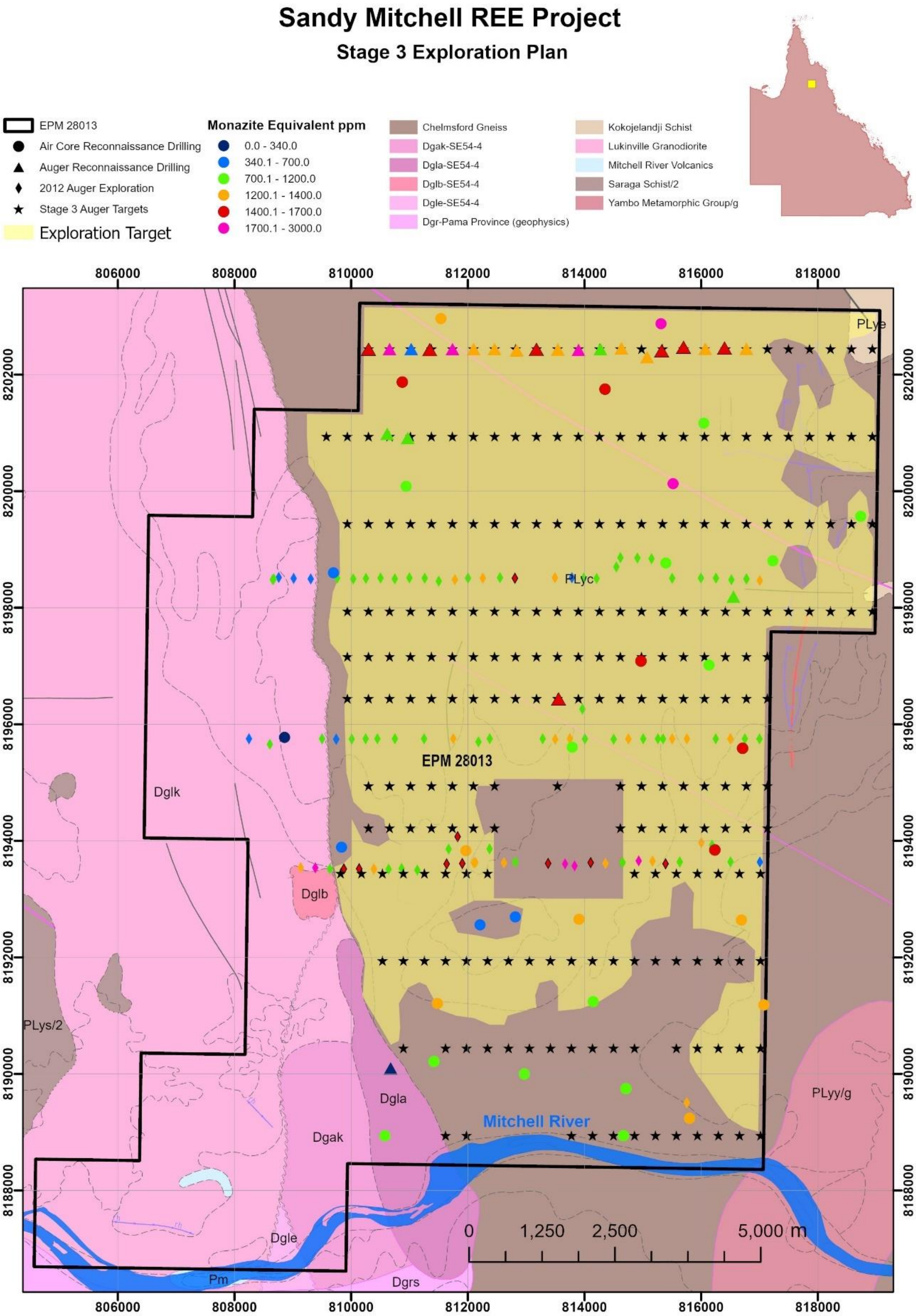

Figure 7: *Sandy Mitchell Stage 3 auger exploration design (black stars), planned for 2024 coverage of the Exploration Target. Coverage south of the Exploration Target is second priority and completion is wet season dependent.*

AUTHORITY FOR RELEASE

This announcement has been approved for release to the ASX by the Board of Ark Mines Ltd.

Roger Jackson
Executive Chairman
2 July 2024

FURTHER INFORMATION

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Or visit our website and social media:
www.arkmines.com | www.twitter.com/arkmineslimited

ABOUT ARK MINES LIMITED

Ark Mines is an ASX listed Australian mineral exploration company focused on developing its 100% owned projects located in the prolific Mt Garnet and Greenvale mineral fields of Northern Queensland. The Company's exploration portfolio consists of three four quality projects that are prospective for copper, iron ore, nickel-cobalt porphyry gold and rare earth elements.

Sandy Mitchell Rare Earth and heavy Mineral Project

- Ark has recently Acquired the 147km2 EPM 28013 'Sandy Mitchell' – an advanced Rare Earths Project in North Queensland with additional 138km2 of sub blocks under application
- Project contains all critical Light Rare Earths as well as Heavy Rare Earths including dysprosium (Dy), terbium (Tb), holmium (Ho), erbium (Er), thulium (Tm) ytterbium (Yb), yttrium (Y) and excluding only Lutetium
- Up to 25% of the TREO is Nd and Pr (magnet metals)
- Rare Earths at 'Sandy Mitchell' are amenable to panning a concentrate; Planned low-cost, fast start up, straightforward beneficiation by gravity processing

Mt Jesse Copper-Iron project

- Project covers a tenure area of 12.4km2 located ~25km west of Mt Garnet
- Centered on a copper rich magnetite skarn associated with porphyry style mineralization
- Three exposed historic iron formations
- Potential for near term production via toll treat and potential to direct ship

Gunnawarra Nickel-Cobalt Project

- Comprised of 11 sub-blocks covering 36km2
- Borders Australian Mines Limited Sconi project - the most advanced Cobalt-Nickel-Scandium project in Australia
- Potential synergies with local processing facilities with export DSO Nickel/Cobalt partnership options

Pluton Porphyry Gold Project

- Located ~90km SW of Cairns near Mareeba, QLD covering 18km2
- Prospective for gold and associated base metals (Ag, Cu, Mo)
- Porphyry outcrop discovered during initial field inspection coincides with regional scale geophysical interpretation.

EXPLORATION TARGET STATEMENT

The Exploration Target classified in accordance with the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC, 2012). The Exploration Target was completed by Daemon de Chaeney of Empirical Earth Science. Mr de Chaeney has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being 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 de Chaeney consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

COMPETENT PERSONS STATEMENT

The Information in this report that relates to exploration results, mineral resources or ore reserves is based on information compiled by Mr Roger Jackson, who is a Fellow of the Australian Institute of Mining and Metallurgy and a Fellow of the Australasian Institute of Geoscientists. Mr Jackson is a shareholder and director of the Company. Mr Jackson has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the `Australian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves '(the JORC Code). Mr Jackson consents to the inclusion of this information in the form and context in which it appears in this report. Mr Jackson confirms information in this market announcement is an accurate representation of the available data for the exploration areas being acquired.

FORWARD LOOKING STATEMENTS AND IMPORTANT NOTICE

This report contains forecasts, projections and forward-looking information. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions it can give no assurance that these will be achieved. Expectations and estimates and projections and information provided by the Company are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are out of Ark Mines 'control.

Actual results and developments will almost certainly differ materially from those expressed or implied. Ark Mines has not audited or investigated the accuracy or completeness of the information, statements and opinions contained in this announcement. To the maximum extent permitted by applicable laws, Ark Mines makes no representation and can give no assurance, guarantee or warranty, express or implied, as to, and takes no responsibility and assumes no liability for the authenticity, validity, accuracy, suitability or completeness of, or any errors in or omission from, any information, statement or opinion contained in this report and without prejudice, to the generality of the foregoing, the achievement or accuracy of any forecasts, projections or other forward looking information contained or referred to in this report.
Investors should make and rely upon their own enquiries before deciding to acquire or deal in the Company's securities.

EES DISCLAIMER

EES does not hold responsibility for the quality of the database or geological controls on the interpretation. The database was provided to EES in a professional manner with all relevant information including QAQC data and report. EES will accept responsibility for the validated interpretation, wireframing, block model and final interpolated results.

JORC COMPLIANCE STATEMENT

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Daemon de Chaeney, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (210569), and the Australian Institute of Geoscientists (5343). Mr de Chaeney is a Principal Geologist employed by Empirical Earth Science.

Mr De Chaeney has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being 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 De Chaeney consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Appendix A: JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	Ark Mines May to June 2023 Sandy Mitchell programme sampling techniques: • Samples are rock chips and accompanying bulk fines collected on 1m intervals by air core drill using 100mm bit. • Sample was passed through an 82.5: 12.5 riffle splitter to yield a representative aliquot of approx. 1.5 kg collected in prenumbered calico bag, and a remainder retained in a numbered plastic bag, with recoveries volumetrically estimated with periodic checks by mass using digital scale, compared against laboratory loose bulk density measurements. • Historic works by SGS (SGS Oretest Job No: S0580, 2010 for JOGMEC) shows mineralisation to have grainsize < = 125µm (very fine sand) and thus the sample mass is adequate for representivity. • Sample for total digest assay was sent to North Australian Laboratories for Assay. • Sample for pan concentration was sub-sampled by spade channel through the remainder sample to a mass of approx. 1kg per metre as determined by digital scales. These were then panned to a concentrate and the subsequent concentrates composited per hole. • Pan Con composite samples were sent to IHC Mining where samples were screened to -1mm, heavy minerals were further separated by heavy liquid separation with yields weighed at each stage. • The final heavy mineral concentrate was subject to Portable XRF analysis for a limited indicative assay. • Samples for preliminary metallurgical testing were sent to Downer Mineral Technologies and comprised the entire bulk metre remainder after riffle splitting the representative aliquot and removal of the 1kg pan concentrate aliquot. Ark Mines November to December 2023 Sandy Mitchell programme sampling techniques: • All sampling methodologies were as per the June programme, but the air core bit was exchanged for a reverse circulation face hammer to complete the end of hole, at the same diameter. • The bedrock horizon was determined by geological chip logging supported by driller's run sheet records of penetration. Ark Mines December 2023 Sandy Mitchell auger programme: • All sampling methodologies were as per the June programme, but the drilling was via 100mm auger using 105mm bit sampled on 1m intervals. • Bedrock was not intersected and depth was constrained by penetration. • No concentrate or metallurgical samples were produced
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer,*	Ark Mines May to June 2023 Sandy Mitchell programme: • Drill was by Comacchio track mounted air core rig using

Criteria	JORC Code explanation	Commentary
	rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).	100mm air core bit. • All holes were vertical and drilled to refusal or 17.5m, whichever came first. Ark Mines November to December 2023 Sandy Mitchell programme: • Drill was by AusRoc 4000 multi-purpose rig using 100mm and changing to slim line 100mm RC face hammer at depth. • All holes were vertical and drilled to complete the final metre in bedrock. Ark Mines November to December 2023 Sandy Mitchell auger programme sampling techniques: • Drilling was by Rockmaster utility mounted auger using 100mm flights and 105mm bit. • All holes were vertical and drilled to refusal whilst still in sands.
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.*	Ark Mines May to June 2023 and November to December 2023 Sandy Mitchell programme: • Recoveries were assessed by volumetric estimation by the metre based on total sample weights using a digital scale with comparison made via laboratory loose bulk density measurements. • Sample was passed through a cyclone with a gated chute to allow fines to fall out of the air stream. The chute was kept closed until the end of each metre had been drilled, then opened to collect sample, and closed prior to recommencement of drilling. • No relationship between recovery and grade has been identified. Ark Mines November to December 2023 Sandy Mitchell auger programme sampling techniques: • Recoveries were not estimated and the samples wit potential contamination by outside return, are treated as soils.
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 costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	Ark Mines May to June 2023 and November to December 2023 Sandy Mitchell programme: • Sample was logged by the metre for all drilling, by the site geology team for both qualitative and quantitative criteria. • Drill logs for 100% of drilling are available with overall length of 3914.2m. • Logging is sufficient to support resource estimation, mining and metallurgical studies. Ark Mines November to December 2023 Sandy Mitchell programme sampling techniques: • Sample was logged by the metre for basic qualitative criteria only.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core 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*	Ark Mines May to June 2023 Sandy Mitchell programme: • All sample passed through the drill cyclone dry. • Sub-sampling for laboratory assay was by 87.5:12.5 riffle splitter: the bulk sample was passed evenly through the riffles with the assay aliquot collected in a pre-numbered calico bag, and the reject collected in a numbered plastic bag. • Field duplicates were taken at 1:40 by 50:50 riffle splitter. • Historic works by SGS (SGS Oretest Job No: S0580, 2010 for JOGMEC) shows mineralisation to have grainsize < 125µm (very fine sand) and thus the sample mass is representative.

Criteria	JORC Code explanation	Commentary
	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.*	• Sample for pan concentration was sub-sampled by spade channel through the reject to a mass of approx. 1kg per metre as determined by digital scales. • Sample for preliminary metallurgical testing was selected from the 11m twinned hole SMDH 00014b and comprised the entire 87.5% bulk metre sample after riffle splitting to yield the representative sample and removal of the 1kg pan concentrate aliquot. Ark Mines November to December 2023 Sandy Mitchell programme: • All sampling was conducted as per the June 2023 programme, but duplicates at 1 in 40 were taken by passing the total reject sample through an 87.5:12.5 riffle splitter in the same manner as the primary sample. Ark Mines November to December 2023 Sandy Mitchell auger programme sampling techniques: • Sample was funnelled up by spiral flights through a closed steel collar tube, to a collector plate, then funnelled through a chute to a plastic collection tub. • Sub-sampling for laboratory assay was by 87.5:12.5 riffle splitter: the bulk sample was passed evenly through the riffles with the assay aliquot collected in a pre-numbered calico bag, and the reject was allowed to spill. • but duplicates at 1 in 40 were taken by passing the total reject sample through an 87.5:12.5 riffle splitter in the same manner as the primary sample.

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.*
	• *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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*
		Ark Mines May to June 2023 Sandy Mitchell programme:
		• Metre samples were sent to North Australian Laboratories (NAL) for total digest assay:
		• Samples were weighed then kiln dried and re-weighed.
		• 1 in 5 samples was tested for moisture content.
		• 1 in 3 samples was tested for dry loose bulk density.
		• Sample was then pulverization in an LM-5 to 94% passing 75 µm with assay aliquot selected by laboratory splitter.
		• Al, Ca, Cr, Fe, Mg, P, S, Si and Ti were assayed by sodium peroxide fusion in nickel crucibles with ICP-OES finish.
		• Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Th, U, Zr, Hf, Nb, Ta, Sr, Pb and As were assayed by sodium peroxide fusion in nickel crucibles with ICP-MS finish.
		• Na and K were assayed by 4 acid digest with ICP-OES finish.
		• Field duplicates were taken at 1:40 by 50:50 riffle split of the assay aliquot.
		• For total digest samples:
		  ◦ Laboratory repeats were assayed at than 1 in 8.
		  ◦ Standard insertion was carried out by the laboratory at 1 in 24.
		  ◦ Assay of blank quartz flushes was carried out at 1 in 40.
		  ◦ Grind size testing was carried out at 1 in 34.
		• For pan concentrate samples
		  ◦ Laboratory repeats were requested at no less than 1 in 40.
		  ◦ Standard insertion was requested of the laboratory at no less than 1 in 40.
		  ◦ Assay of blank quartz flushes was requested at 1 in 40.
		• Total radiometric count was measured on all assay samples using a SAIC Exploranium GR-110G hand held scintillometer, hired from Terra Search Townsville, pre-calibrated.

Criteria	JORC Code explanation	Commentary

		• Reading times were 10 second accumulations, which was the machine maximum, with 100x10 second background accumulations taken per day, per measuring station.
		• IHC Mining Laboratory procedures for pan concentrate composite samples was:
		    • Creation of duplicates by split at a rate of 1 in 24
		    • Screen to -1mm and weigh
		    • Heavy liquid separation and weigh
		    • Pulverization of the heavy mineral fines by extended grind
		    • Portable XRF analysis of the pulp
		• QAQC implemented is believed sufficient to establish accuracy and precision with any batches showing QAQC anomalies retested by batch.
		• Mineral Technologies preliminary met' samples were processed at bench scale by:
		    • 55.2kg of individual samples were combined by rotary homogenisation then split to yield a representative aliquot of 38.3 kg for process testing.
		    • The composite sample was screened to 2000 µm, 500 µm and wet screened at 20 µm with the 500 to 20 µm fraction then passed through 2 stages of gravity separation using Wilfley table (rougher stage).
		    • The Wilfley concentrate was passed through a bromoform heavy liquid separation flask (cleaner stage).
		    • The HLS sinks were attrition cleaned for 5 minutes at a 65% wet weight density and deslimed, then passed through a Geoteknica FM3 froth floatation cell using starch depressant and sodium silicate surfactant.
		    • Both sinks and floats were separately processed through a dry induced Reading magnetic separator.
		    • This yielded 4 final streams of mag and non-mag floats (containing the bulk of REE) and mag and non-mag sinks, containing the bulk of zircon, as well as various tails from each previous stage.
		    • Percentages of material passing or rejecting at each stage were determined by mass.
		    • The float magnetic fraction was further refined by semi-lift magnetic separator to determine feasibility of individual mineral species separation, but the yields of this process were not assayed due to volumetric limits from this round of processing.
		• Mineral Technologies sent samples of the tails and product concentrates, excluding SLM stage products, to Bureau Veritas Brisbane for assay:
		    • Samples were dried and pulverised using tungsten carbide bowls in a vibrating pulveriser to 90% passing 75 µm with a BQF before each sample.
		    • Sample was fused to a glass bead to determine Fe, Si, Al, Cr, Mg, Mn, P, U, Th, V, Nb, S, Ca, K, Ce, Sn, Ti, and Zr oxides by XRF.
		    • LOI was determined by mass after heating to 105°C (drying temp) and 1000°C (fusing temp).
		    • Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sc, Sm, Tb, Tm, Y and Yb were determined by laser ablation of fused bead with ICP-MS finish.
		    • Standards were assayed at 1 in 3 to cover all elements in the suite for both assay methods.
		    • Laboratory repeats were carried out at 1 in 4.

Criteria	JORC Code explanation	Commentary

		Ark Mines May to June 2023 and November to December 2023 Sandy Mitchell programme:
		• Metre samples were sent to North Australian Laboratories (NAL) for total digest assay:
		• Samples were weighed then kiln dried and re-weighed.
		• 1 in 10 samples was tested for moisture content.
		• 1 in 10 samples was tested for LOI.
		• 1 in 3 samples was tested for dry loose bulk density.
		• Sample was then pulverization in an LM-5 to 94% passing 75 µm with assay aliquot selected by laboratory splitter.
		• Al, Ca, Cr, Fe, Mg, P, S, Si and Ti were assayed by sodium peroxide fusion in nickel crucibles with ICP-OES finish.
		• Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Th, U, Zr, Hf, Nb, Ta, Sr, Pb and As were assayed by sodium peroxide fusion in nickel crucibles with ICP-MS finish.
		• Na and K were assayed by 4 acid digest with ICP-OES finish.
		• Field duplicates were taken at 1:40 by 87.5:12.5 riffle split of the bulk reject.
		• For total digest samples:
		  ◦ Laboratory repeats were requested at no less than 1 in 40 but carried out by the laboratory at 1 in 8.
		  ◦ Standard insertion was carried out by the laboratory at 1 in 24.
		  ◦ Assay of blank quartz flushes was requested at 1 in 40.
		  ◦ Grind size testing was carries out at 1 in 34.
		• Total radiometric count, K%, U ppm and Th ppm was measured on all assay samples using an RSI RS-230 103 cm^3 bismuth germanate oxide crystal high sensitivity hand held spectrometer, purchased for the Project and, pre-calibrated.
		• Reading times were 30 second accumulations, with 20x30 second background accumulations taken per day, per measuring station, one set before and one set after measurement.
		
		Ark Mines December 2023 Sandy Mitchell auger programme sampling techniques:
		• Laboratory, analytical procedures, analytes and QC were identical to that described for the AC programme above .

Verification of sampling and assaying	• *The verification of significant intersections by 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.*	Ark Mines May to June 2023 and November to December 2023 Sandy Mitchell programme (including auger): • Significant intersections have not been separately determined or reported. • 11 twin holes have been drilled for a total of 104.85 twin metres Two of these twins are using power auger to twin air core, to support both resource and reconnaissance works. • Data was entered into MS excel then verified against hard copy data, followed by import into Datamine Studio RM for validation. • Primary data is stored as hard copy, electronic tables in CSV format and Datamine format. • Assay data yielding elemental concentrations for rare earths (REE) within the sample are converted to their stoichiometric oxides (REO) in a calculation performed using the conversion factors in the table below. • Rare Earth oxide is the industry accepted form for reporting rare earths. The following calculations have been used for reporting: ◦ **TREO** = La2O3 + Ce02 + Pr6O11 + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3+ Y2O3

Criteria	JORC Code explanation	Commentary
		• **CREO** = Nd2O3 + Eu2O3 + Tb4O7 + Dy2O3 + Y2O3 • **LREO** = La2O3 + Ce02 + Pr6O11 • **HREO** = Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3+ Y2O3 • **MagREO =** Pr6O11 + Nd2O3 + Tb4O7 + Dy2O3 • **Where stated as +Y and or +Sc,** the calculated values above have the addition of Y2O3 and or Sc2O3 • ND/Pr = Nd2O3 + Pr6O11 • TREO – Ce = TREO – CeO2 • %NdPr + NdPr/TREO
		• Economic heavy minerals, monazite, xenotime, zircon, rutile and ilmenite are potentially marketable materials contained in the mineralisation as demonstrated by IHC pan concentrate work and Downer Mineral Technologies gravity concentration work to date.
		• Assay data yielding elemental concentrations for rare earths (REE), Zr, Hf and Ti within the sample are converted to their stoichiometric mineralogy in a calculation performed using the conversion factors in the table below. For elements that occur in more than one mineral, the proportions of occurrence in each were reported by SGS (SGS Oretest Job No: S0580, 2010 for JOGMEC) and the assayed element is assigned by a percentage determined by these proportion, into the appropriate mineral species.
		• The following calculated mineralogy has been used for reporting: • **Monazite** = La(PO4) + Ce(PO4) + Pr(PO4) + Nd(PO4) + Sm(PO4) + (91.12/100 x Y(PO4)) + Th(PO4) + CaU(PO4)2 • **Xenotime** = Eu(PO4) + Gd(PO4) + Tb(PO4) + Dy(PO4) + Ho(PO4) + Er(PO4) + Tm(PO4) + Yb(PO4) + Lu(PO4) + (8.88/100 x Y(PO4)_ppm) • **Zircon =** Zr(SiO4) + Hf(SiO4) • **Rutile** = 9.42/100 x Ti as TiO2 • **Ilmenite** = 90.58/100 x Ti as FeTiO3
		• Stoichiometric Oxide Table:

Element Name	Element Oxide	Oxide Factor
Ce	CeO2	1.2284
Dy	Dy2O3	1.1477
Er	Er2O3	1.1435
Eu	Eu2O3	1.1579
Gd	Gd2O3	1.1526
Ho	Ho2O3	1.1455
La	La2O3	1.1728
Lu	Lu2O3	1.1371
Nd	Nd2O3	1.1664
Pr	Pr6O11	1.2081
Sc	Sc2O3	1.5338
Sm	Sm2O3	1.1596
Tb	Tb4O7	1.1762
Th	ThO2	1.1379
Tm	Tm2O3	1.1421
U	U3O8	1.1793
Y	Y2O3	1.2699
Yb	Yb2O3	1.1387

• Stoichiometric Mineral Table:

Criteria	JORC Code explanation	Commentary
		<table><tr><td>Mineral Name</td><td>Assay Element</td><td>Chemical Formula</td><td>Stoichiometric Factor</td></tr><tr><td>Monazite</td><td>Y</td><td>Y(PO4)</td><td>2.0682</td></tr><tr><td>Monazite</td><td>La</td><td>La(PO4)</td><td>1.6837</td></tr><tr><td>Monazite</td><td>Ce</td><td>Ce(PO4)</td><td>1.6778</td></tr><tr><td>Monazite</td><td>Pr</td><td>Pr(PO4)</td><td>1.6740</td></tr><tr><td>Monazite</td><td>Nd</td><td>Nd(PO4)</td><td>1.6584</td></tr><tr><td>Monazite</td><td>Sm</td><td>Sm(PO4)</td><td>1.6316</td></tr><tr><td>Monazite</td><td>Th</td><td>Th(PO4)</td><td>1.4093</td></tr><tr><td>Monazite</td><td>U</td><td>CaU(PO4)2</td><td>1.9663</td></tr><tr><td>Xenotime</td><td>Y</td><td>Y(PO4)</td><td>2.0682</td></tr><tr><td>Xenotime</td><td>Sc</td><td>Sc(PO4)</td><td>3.1125</td></tr><tr><td>Xenotime</td><td>Eu</td><td>Eu(PO4)</td><td>1.6250</td></tr><tr><td>Xenotime</td><td>Gd</td><td>Gd(PO4)</td><td>1.6039</td></tr><tr><td>Xenotime</td><td>Tb</td><td>Tb(PO4)</td><td>1.5976</td></tr><tr><td>Xenotime</td><td>Dy</td><td>Dy(PO4)</td><td>1.5844</td></tr><tr><td>Xenotime</td><td>Ho</td><td>Ho(PO4)</td><td>1.5758</td></tr><tr><td>Xenotime</td><td>Er</td><td>Er(PO4)</td><td>1.5678</td></tr><tr><td>Xenotime</td><td>Tm</td><td>Tm(PO4)</td><td>1.5622</td></tr><tr><td>Xenotime</td><td>Yb</td><td>Yb(PO4)</td><td>1.5488</td></tr><tr><td>Xenotime</td><td>Lu</td><td>Lu(PO4)</td><td>1.5428</td></tr><tr><td>Zircon</td><td>Zr</td><td>Zr(SiO4)</td><td>2.0094</td></tr><tr><td>Zircon</td><td>Hf</td><td>Hf(SiO4)</td><td>1.5159</td></tr><tr><td>Rutile</td><td>Ti</td><td>TiO2</td><td>1.6685</td></tr><tr><td>Ilmenite</td><td>Ti</td><td>FeTiO3</td><td>3.1694</td></tr></table> • Because other elements can occur in both xenotime and monazite, the calculation for these minerals should be considered the minimum. • Because Ti and to a lesser extent Zr, can occur in other minerals no included in calculation, the calculated mineralogy for these elements should be considered a maximum.
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.*	Ark Mines May to June 2023 and November to December 2023 Sandy Mitchell programme: • An initial collar survey by hand held GPS was conducted as a failsafe, with expected accuracy of ±5000mm in x and y, and ±50000mm in z. • Full survey by Twine Surveys was subsequently carried out using RTKdGPS with accuracy of ±20mm in x and y, and ±200mm in z • Twine's professional RTK survey was implemented between drill collars and used to generate a digital terrain model for high quality topographic control. • All survey data is recorded in MGA 2020 zone 54 and AHD. Ark Mines December 2023 Sandy Mitchell auger programme: • Collar survey was by hand held GPS with expected accuracy of ±5000mm in x and y, and ±50000mm in z.
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*	Ark Mines May to June 2023 and November to December 2023 Sandy Mitchell programme: • Data spacing for 3 lines of drilling is 60m x 120m. • Data spacing for the remaining 13 lines is 120m x 120m • No compositing has been applied to 1m samples for total digest assay. • Pan concentrates were composited per drill hole. • Preliminary metallurgical sample was composited as discussed under *Laboratory Tests.*

Criteria	JORC Code explanation	Commentary
	been applied.	• Representative metre samples for total digest assay were not composited, residual sub-metre hole ends were similarly assayed separately to preserve geometric representation. Ark Mines December 2023 Sandy Mitchell auger programme: • Data spacing was approx. 360m. • Representative metre samples for total digest assay were not composited, residual sub-metre hole ends were similarly assayed separately to preserve geometric representation.
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.*	Ark Mines May to June 2023 and November to December 2023 Sandy Mitchell programme (including auger): • Deposit type is unconsolidated restite sand derived by in-situ weathering, sometimes called saprolite sand, with minor perturbation by small scale fluvial channels. • The applied vertical sampling is the optimal orientation for the deposit type. • No bias by orientation or spatial relationships has been identified.
Sample security	• *The measures taken to ensure sample security.*	Ark Mines May to June 2023 and November to December 2023 Sandy Mitchell programme (including auger): • Samples were collected after logging and transported at the end of each day to the company locked storage in Chillagoe. • Samples were boxed in closed pumpkin crates, wrapped in plastic for shipping by courier to the laboratory in Pine Creek, NT. • Samples for IHC Mining and Downer Mineral Technologies were similarly boxed, wrapped and couriered to the laboratories, but prior to shipping were stored on site at the Ark fenced bulk bag farm. • Bagged reject was stored on site in Ark's fenced secure bag farm and covered in UV resistant tarping for future use except for auger samples where rejects were not collected.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	Ark Mines May to June 2023 and November to December 2023 Sandy Mitchell programme: • Full audit of sampling techniques and data available to date was carried out by geological consultants, Empirical Earth Science. • EES notes that the composited concentrate samples results in assay representing diluted material with no internal separation possible. • EES noted that the hand panning process of such fine material is prone to heavy mineral loss, with the possibility that concentrates underrepresent the total heavy mineral fraction. • ESS noted that the pXRF technique used in initial concentrate assays is not suited to yield full REE data, but that the results can inform approximate proxy calculations for the full REE suite. • EES noted that none of these factors apply to the representative metre samples and total digest assays, which meet best practice. • EES noted that the preliminary metallurgy was of insufficient volume and source dispersion to represent the entire eventual resource, but was well suited to its stated purpose of proof of concept, testing recovery technique, and process to inform the next stage of bulk metallurgy.

Criteria	JORC Code explanation	Commentary
		• EES also noted that the preliminary metallurgy was selected by reviewing pan con composite results, representing a median grade material within that data set, and is thus a reasonable preliminary representation of grade and recovery performance. • EES noted that the extensive QAQC was of good quality without significant bias, and showed that the data was fit for use in resource estimation. • EES noted that the auger data correlated within acceptable limits with the AC data and showed no undue bias or significant contamination, given the short hole depths, metre sampling and full QC suite.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
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.*	• EPM 28013 Sandy Mitchell is 100% owned by Ark Mines Limited and was purchased on the 23rd of February 2023. • This tenement was formally EPM18308. • There are no third party agreements. • No known issues impeding on the security of the tenure of Ark Mines ability to operate in the area exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	A number of companies and individuals have explored the area for gold and base metals and for heavy minerals. The summaries presented below are from the IRTM source: • ATP 597M was granted to Laskan Minerals Pty Ltd in 1969 over the Reid Creek area, north of the Mitchell River. From assays of rock chip and stream sediment samples, it was concluded that there was little chance of economic mineralisation occurring in the Authority. Although good monazite grades were obtained, the samples were from creeks with little available wash. Good concentrations of monazite and ilmenite were present in large areas of sandy, alluvial sheet wash in the Reid's Creek area. It was believed that there was a potential for economic exploitation if the monazite concentrations occurred in a large enough volume of sandy material. No further work was reported. • In 1970, Altarama Search Pty Ltd was granted ATP 833M over the Mitchell River in the Reid Creek, Sandy Creek and Mount Mulgrave Homestead area. Four hundred stream sediment samples, at an average density of 1.25 samples/km^2, were collected for assay. Copper and lead contents were low. Half of the zinc results were considered to be possibly anomalous. A two population distribution was obtained for zinc, with a standard threshold of about 15 ppm. It was suggested that the two population distributions represented normal background ranges present in

Criteria	JORC Code explanation	Commentary
		different strata. No other work was carried out. • ATP 2580M was granted to Tacam Pty Ltd over Sandy Creek and its tributaries. Stream sediment samples averaged 0.18% monazite (0.01 to 0.45%), 0.07% rutile (0.15% in terraces), and 0.06% zircon (0.14% in terraces). The area had low economic potential and the Authority was abandoned in August 1981. • The principals involved in Tacam Pty Ltd combined with Metcalfe Holdings Pty Ltd in 1986 to take up 4 Authorities to Prospect - 4400,4401,4402 and 4403 centred on Mt Mulgrave, Arkara Creek, Sandy Creek and the Kennedy River respectively. The investigations were for the possibility of locating large-scale heavy minerals in association with major drainages and lower slope eluvial deposits associated with Cretaceous weathering as indicated in previous investigations. EPM 4400, 4401, 4402 and 4403 • Barron and O'Toole focused on Mt Mulgrave for Ilmenite, rutile, REE, Monzonite, Zircon, and Gold.Tenement EPM 4400 consisted of 96 sub-blocks centred on Mount Mulgrave (7665, 7765), EPM 4401 consisted of 97 sub-blocks centred on Arkara Creek (7665), EPM 4402 consisted of 100 sub- blocks centred on Sandy Creek (7665) and EPM 4403 consisted of 86 sub-blocks centred on Kennedy River (7666, 7766) were granted to P.T.C. Barron, A. O'Toole and Metcalfe Holdings Pty Ltd on 22 September 1986 to explore for heavy minerals and precious metals. After three years of exploration the EPMs were surrendered on 22 August 1989. • Tenement EPM 10185 consisted of 157 sub-blocks was granted to Palmer Gold Pty Ltd on 25 October 1994 for an initial 2 year period. The exploration permit was renewed for a further 3 years on 25 October 1996 and surrendered on 3 October 2001. The tenement was situated 200km west of Cooktown. Rationale Significant gold-silver, tin and base metal deposits are known from the Georgetown and southern Dargalong Inliers to the south of EPM 10185 (e.g. Etheridge, Croydon and Oaks goldfields), from the Hodgkinson Province to the east (e.g. Palmer, Hodgkinson, Russell River, Starcke, Jordon Ck, Mareeba and Mount Peter goldfields, and Herberton-Mt Garnet tinfield), and the Coen Inlier to the north (e.g. Alice River & Potallah goldfields). However, other than brief reference to sub-economic alluvial gold occurrences near the junction of the Palmer and Mitchell Rivers, and in the Staaten, Lynd and Walsh Rivers (Culpeper 1993), no precious or base metal deposits are known to occur within rocks of the Yambo Inlier. Application for the area was made after structural interpretation of the region showed prospectivity for gold occurrence. Base metal anomalies delineated from previous exploration were also targeted for follow-up work.

Criteria	JORC Code explanation	Commentary
		• In 2007 exploration activity was carried out by BHP Billiton Minerals Pty Ltd under an extremely large area (2,850 sub-blocks) of the Coen Yambo area from 2005 to 2007. EPM's 14438 and 14445 covered the majority of the Yambo Inlier. BHP targeted Ni sulphide and PGM and carried out AEM surveying, field mapping and sampling and drilling. The AEM targets were found to be related to sedimentary lithological units or obvious shear zones. • In 2007 - 2009 - MTY Resources Ltd undertook bulk sampling program along with a Panned Concentrate sampling program. • In 2012 Waverley Nominees undertook an Augur sampling program.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The tenement covers a portion of the southern extent of the Yambo Inlier, one of the several Proterozoic inliers to the west of the Palmerville Fault System. Rocks of the Yambo Inlier covered by the tenement comprise those of the middle Proterozoic Yambo Metamorphic Group of mainly amphibolites and gneisses ranging in age from ~1690 Ma to ~1585 Ma. • The dominant Yambo member on the tenement is the Chelmsford Gneiss, and this is the source of REE sands. • These rocks have been intruded by Silurian-Devonian granites of the Lukinville Suite which form an integral part of the Cape York Batholith. Within the tenement they form a belt roughly 10 km wide trending NNW. • Extensive intrusions of Carboniferous-Permian dolerites occur throughout the Inlier, with only a few occurrences within the tenement. • The tenement is largely gold deficient except for the gold reporting to sediments within the Palmer River to the north. Recent Governmental radiometric surveys have highlighted areas of anomalous radiometric emission within the Yambo Inlier. The project tenements cover the majority of the anomalous radiometric areas. • The project area in the tenement has a 3 to 25m, average 10.3m (stage 1 drilling) to 12.3m (stage 2 drilling), covering of disaggregated fine to very fine sand with sparse pebble or cobble horizons. These sands carry REE as monazite and lesser xenotime, zircon, rutile, illmenite and garnet. The sands are believed to derive from weathering of the Chelmsford Gneiss, with minimal fluvial transport largely constrained to the upper 2m. There is minor clay in the top 1 to 2m of sand which extends from daylight to the bedrock.
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*	• Ark Mines 2023 drill data, refer to table in Appendix B

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td><li style="list-style:none">
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.</td><td></td></tr>
<tr><td>Data aggregation methods</td><td>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 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.</td><td>No high or Low-grade top/bottom-cut has been applied to the data presented in Appendix B, which is the total data set.
REE Equivalent TREO (total REE oxides) is reported as this is the industry standard for presentation of REE data. Stoichiometric calculation of REE oxide equivalents were performed in units of ppm, with TREO, LREO (light REE oxides), HREO (heavy REE Oxides), CREO (critical REE oxides) and Mag REO (magnet production REE oxides), as per Table 1 page 5 to 7, yielding these factors as concentrations and percentages of TREO concentration.
Calculated mineralogy is used to derive a monazite equivalent, which represents the heavy minerals of value, present in gravity concentrates, as a single number based on five year commodity price median values.
The assayed elements, coupled with QEMSCAN element proportions in SGS Oretest Job No: S0580, 2010 for JOGMEC, allow calculation of monazite, xenotime, zircon, rutile and ilmenite concentrations stoichiometrically, as described in Table 1 page 5 to 7.
The ratio of 5 year median values of these minerals to monazite, yields a table of unitless factors:
<table>
<tr><th></th><th>Mean ratio</th></tr>
<tr><td>Monazite</td><td>1</td></tr>
<tr><td>Xenotime</td><td>1</td></tr>
<tr><td>Zircon</td><td>0.32173913</td></tr>
<tr><td>Rutile</td><td>0.295652174</td></tr>
<tr><td>Ilmenite</td><td>0.02173913</td></tr>
</table>
These factors are applied to the corresponding separate mineral concentrations in PPM for a given element assay, and the results are summed to give a monazite equivalent in PPM for that assay:
Mz EQ = monazite + xenotime + 0.3217 x zircon + 0.2957 x rutile + 0.0217 x ilmenite
This monazite equivalent thus represents the average value proposition for the main economic mineralogy, in terms of monazite concentration.
The cutoff grade is calculated on monazite equivalent (Mz Eq) which allows the value in the potentially saleable commodities to be tied together in a single calculation, and visible in the drill data in a single instance.
The cutoff grade applied is 700 ppm Mz Eq.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
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').*	• Ark Mines May to June 2023 drill data shows no regular variation in REE distribution beyond the top 1m where obvious and avoidable fluvial action may result in some supergene enrichment. • The mineralisation is essentially flat lying, and thus intercept width on the vertical holes drilled is at or approaching the geometric minimum width, which is optimal. • Consequently, only down hole length are reported and these are equivalent to true thickness.
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 as appropriate accompany the report/announcement.
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 avoid misleading reporting of Exploration Results.*	• Appendix B, contains the full data set.
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 data material to this report that has been collected to date has been reported textually, graphically or both.
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.*	• Ark plans further resource estimation based on the November to December 2023 drilling when assays are returned. • Ark plans further gravity beneficiation and metallurgical test work on a larger sample basis, investigating several different techniques to determine optimal processing. • Ark also plans pilot plant test work and other feasibility studies. • Ak plans further auger reconnaissance works across the tenement.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data*	• The database was created by HGS Australia for the purpose of conducting a resource evaluation.

Criteria	JORC Code explanation	Commentary
	has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • *Data validation procedures used.*	• The resource evaluation was conducted by HGS Australia
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• No site visits were conducted by HGS Australia

Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*
	• *Nature of the data used and of any assumptions made.*
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*
	• *The use of geology in guiding and controlling Mineral Resource estimation.*
	• *The factors affecting continuity both of grade and geology.*
		• The resource area has been sufficiently interpreted by geological consultants and the geology matches grade and geological interpretations as anticipated.
		• Criteria used in the interpretations were:
		  • Interpretations were based on the MzEq (monzonite equivalent) grade defined from element ratios and formulas.
		  • A nominal 700ppm MzEq lower cut-off grade with flexibility for geological continuity.
		  • Sections extended half the distance from the previous section.

Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the*	• Mineralised outlines were interpreted by HGS within the coordinates:
		  ○ 8193000N – 8193900N
		  ○ 812400E – 814700E
		  ○ 140mRL – 176mRL

Criteria	JORC Code explanation	Commentary
	Mineral Resource.	
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining*	• The models were created using Surpac software. • Reported Interpolation method used is Ordinary Kriging • Interpolation validation method of inverse distance squared was conducted as a check. • Grade cutting was variable within the 24 elements due to significant outliers. A list of the cut elements are as follows:

Element	High Grade Cut Used	Comments
Sc	46	
Y	87	
La	280	Uneven distribution. No values between 429ppm and 4902ppm
Ce	450	
Pr	50	
Nd	168	
Sm	30	
Eu	3.6	
Gd	19	
Tb	No cutting	
Dy	14	
Ho	No cutting	
Er	8	
Tm	No cutting	
Yb	9	
Lu	No cutting	
Th	105	
U	8	
Zr	1100	
Hf	46	
Nb	66	
As	32	
Ti	12700	
S	3800	

Criteria	JORC Code explanation	Commentary
	units. • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	see tables below

Type	Northing	Easting	Elevation
Minimum Coordinates	8193000	812400	140
Maximum Coordinates	8193900	814700	176
User Block Size	50	25	2
Min. Block Size	12.5	6.25	0.5
Rotation	0	0	0
Total Blocks	138511		
Storage Efficiency %	92.73		

- Model sizes and parameters are:

Attribute Name	Type	Decimals	Background	Description
creo	Float	-	0	calculated CREO
hreo	Float	-	0	calculated HREO
lode	Integer	-	0	Lode = 1
lreo	Float	-	0	calculated LREO
magreo	Float	-	0	calculated MagREO
monazite	Float	-	0	Calculated monazite
mzeq	Float	-	0	Calculated Monazite Equivilent MzEq
ok1	Float	2	0	Sc interpolation using Ordinary Kriging
ok10	Float	2	0	Tb interpolation using Ordinary Kriging
ok11	Float	2	0	Dy interpolation using Ordinary Kriging
ok12	Float	2	0	Ho interpolation using Ordinary Kriging
ok13	Float	2	0	Er interpolation using Ordinary Kriging
ok14	Float	2	0	Tm interpolation using Ordinary Kriging
ok15	Float	2	0	Yb interpolation using Ordinary Kriging
ok16	Float	2	0	Lu interpolation using Ordinary Kriging
ok17	Float	2	0	Th interpolation using Ordinary Kriging
ok18	Float	2	0	U interpolation using Ordinary Kriging
ok19	Float	2	0	Zr interpolation using Ordinary Kriging
ok2	Float	2	0	Y interpolation using Ordinary Kriging
ok20	Float	2	0	Hf interpolation using Ordinary Kriging
ok21	Float	2	0	Nb interpolation using Ordinary Kriging
ok22	Float	2	0	As interpolation using Ordinary Kriging
ok23	Float	2	0	Ti interpolation using Ordinary Kriging

Criteria	JORC Code explanation	Commentary
		(table continued below)

ok24	Float	2	0	S interpolation using Ordinary Kriging
ok3	Float	2	0	La interpolation using Ordinary Kriging
ok4	Float	2	0	Ce interpolation using Ordinary Kriging
ok5	Float	2	0	Pr interpolation using Ordinary Kriging
ok6	Float	2	0	Nd interpolation using Ordinary Kriging
ok7	Float	2	0	Sm interpolation using Ordinary Kriging
ok8	Float	2	0	Eu interpolation using Ordinary Kriging
ok9	Float	2	0	Gd interpolation using Ordinary Kriging
rutile_ilmenite	Float	-	0	calculated rutile & ilmenite
sg	Float	2	0	interpolated density data
treo	Float	-	0	calculated TREO
treo_y_sc	Float	-	0	calculated TREO + Y + Sc
xenotime	Float	-	0	calculated xenotime
zircon	Float	-	0	calculated zircon

- The interpolation pass parameters used are as follows for all elements:
  - Pass 1: 6-30 samples 100m max search
  - Pass 2: 3-30 samples 200m max search
  - Pass 3: 1-30 samples 500m max search

Criteria	JORC Code explanation	Commentary
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were estimated as dry basis
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Univariate statistics were conducted. Upper cut determinations were conducted from histograms and probability plots.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable*	• Resource economics identifies the probable lower cut-off to be 700ppm MzEq

Criteria	JORC Code explanation	Commentary
	prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Ark conducted metallurgical testwork following encouraging results from initial exploration and to assist with next stage development. • The work was conducted by Mineral Technologies Carrara Laboratory in Queensland and conducted on drill core samples sourced from the deposit. • The metallurgical characterisation was performed using approximately 40kg of feed material and using bench-scale equipment to assess response of the ore sample to conventional beneficiation techniques and show product purity after each stage of separation. The simulated industrial stages and their aims are listed below: • Size classification to remove slimes, trash oversize and prepare sand suitable for beneficiation, Gravity separation to recover the valuable heavy mineral components to concentrate, Mechanical attrition to clean mineral surfaces, followed by froth flotation to extract rare earth minerals, Magnetic separation to perform a final upgrade of the flotation rare-earth concentrate. • The final concentrate assays 51.9% TREO, and contained mostly heavy rare-earth elements La, Ce, Pr and Nd. • Direct CeO_2 recovery from gravity feed to REM concentrate is estimated to be 71.7%. • It is noted that approximately 16.9% of Ce-minerals were stranded in laboratory test work intermediate streams which would normally be recycled in a continuous operation, thereby suggesting overall recovery of 83.8% may be achieved.
Environmen-tal factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is*	• No assessments have been made yet

Criteria	JORC Code explanation	Commentary
	always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately*	• Bulk densities for 495 samples were conducted from the drill program and interpolated into the model. Densities ranged from 1.24t/m³ to 1.92 t/m³ with an average of 1.52 t/m³

Criteria	JORC Code explanation	Commentary
	account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The classification for this resource is conducted according to JORC 2012 guidelines. HGS considers the resource to be sufficiently drilled to be classified as indicated. The reasons are: • Quality control and quality assurance of the drilling is to industry standard that can identify issues in drilling methods and laboratory assaying. • Collar pickups were conducted by a qualified surveyor. • Drill density is sufficient to have good understanding mineralisation controls. • There is recognition of the geological controls on the mineralisation. • Variability in the grade distribution is sufficient to create quality variograms. • A degree of metallurgical understanding. • A measured resource is not given due to some lone element high grade anomalies that will, although, have minimal impact on the overall resource, may have a local impact on grade distribution. • The results reflect the competent person.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No available
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the*	• The competent person has confidence in the interpretation with regards to accuracy for the classification announced. • The interpolation process was run in inverse distance squared to compare a complex algorithm to a simple one. • The competent person in confident of the accuracy of the resource

Criteria	JORC Code explanation	Commentary
	application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

Appendix B: Sandy Mitchell Stage 2 AC/RC & Stage 3 auger/OP complete assay returns

See Appendix A for stoichiometric factors and REE calculations used.

BHID	East	North	AHD	FROM	TO	Mz EQ	monazite	xenotime	zircon	rutile	ilmenite	TREO	TREO+Y+Sc	LREO	HREO	HREO+Y+Sc	CREO	MagREO	Sc_2O_3	Y_2O_3	La_2O_3
units:	m	m	m	m	m	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SMDH 00546	814666.5	8188941.6	157.8	0	1	1244.6	528.8	79.5	747.5	572.0	10447.0	330.3	391.8	311.3	18.9	80.5	111.8	82.8	16.9	44.7	70.3
SMDH 00546	814666.5	8188941.6	157.8	1	2	1113.7	400.3	80.8	786.0	548.8	10025.0	239.7	303.5	220.2	19.5	83.3	94.6	59.9	18.4	45.5	49.7
SMDH 00546	814666.5	8188941.6	157.8	2	3	1050.5	381.6	80.0	643.4	551.8	10079.5	226.0	291.3	207.2	18.8	84.1	93.6	57.0	18.4	46.9	46.3
SMDH 00546	814666.5	8188941.6	157.8	3	4	967.6	323.3	60.2	663.5	535.5	9781.0	196.6	244.7	182.9	13.8	61.8	75.3	49.8	13.8	34.3	41.5
SMDH 00546	814666.5	8188941.6	157.8	4	5	1152.5	351.6	67.8	720.7	724.3	13228.8	215.3	268.8	199.1	16.2	69.7	82.3	53.5	15.3	38.2	44.2
SMDH 00546	814666.5	8188941.6	157.8	5	6	1048.4	361.6	70.2	674.9	577.3	10544.6	219.7	273.7	203.9	15.8	69.7	81.3	54.3	16.9	37.1	45.6
SMDH 00546	814666.5	8188941.6	157.8	6	7	1050.8	390.0	74.5	580.5	577.3	10544.6	237.9	296.9	220.4	17.5	76.6	91.9	60.1	16.9	42.2	50.0
SMDH 00546	814666.5	8188941.6	157.8	7	8	1154.8	456.8	95.9	590.9	595.4	10874.8	278.3	350.1	258.4	19.9	91.7	104.3	69.2	24.5	47.2	58.8
SMDH 00546	814666.5	8188941.6	157.8	8	9	1210.0	469.8	96.5	582.6	659.3	12043.2	285.3	358.4	265.3	20.1	93.1	106.8	70.7	24.5	48.5	60.2
SMDH 00546	814666.5	8188941.6	157.8	9	10	1142.7	455.6	95.9	498.4	622.7	11374.3	277.2	350.0	257.3	19.8	92.6	105.2	69.4	24.5	48.3	57.9
SMDH 00546	814666.5	8188941.6	157.8	10	11	1254.5	480.6	101.5	469.5	753.3	13759.9	291.2	367.7	270.2	21.0	97.5	110.4	72.5	26.1	50.4	63.1
SMDH 00546	814666.5	8188941.6	157.8	11	12	1149.8	425.6	84.8	534.8	675.4	12336.0	259.4	324.3	240.1	19.2	84.1	99.2	65.5	19.9	45.0	55.7
SMDH 00546	814666.5	8188941.6	157.8	12	13	1163.7	443.0	90.1	488.1	684.3	12499.6	270.8	337.6	252.2	18.6	85.4	100.4	68.4	23.0	43.8	58.5
SMDH 00546	814666.5	8188941.6	157.8	13	14	1153.9	435.1	88.2	530.8	664.4	12135.1	263.5	331.0	244.1	19.4	86.9	100.2	65.5	21.5	46.1	57.2
SMDH 00546	814666.5	8188941.6	157.8	14	15	1214.3	455.2	92.6	529.4	717.0	13096.8	277.5	347.4	257.8	19.7	89.6	104.9	70.1	23.0	46.9	60.4
SMDH 00546	814666.5	8188941.6	157.8	15	16	1155.9	439.0	89.5	411.4	715.3	13065.2	269.9	335.6	251.8	18.1	83.7	99.4	68.2	23.0	42.7	59.2
SMDH 00546	814666.5	8188941.6	157.8	16	17	1117.7	419.1	85.5	476.7	664.4	12135.1	256.7	320.5	238.8	17.9	81.6	96.1	65.0	21.5	42.3	54.8
SMDH 00546	814666.5	8188941.6	157.8	17	18	1052.1	393.7	67.6	574.9	586.4	10711.1	241.8	295.2	226.4	15.5	68.8	88.3	60.9	15.3	38.0	53.0
SMDH 00546	814666.5	8188941.6	157.8	18	19	1008.1	389.4	72.3	506.5	554.2	10122.6	243.6	295.2	228.9	14.7	66.3	84.3	62.4	18.4	33.3	50.5
SMDH 00546	814666.5	8188941.6	157.8	19	20	1102.6	393.7	74.1	683.0	599.8	10955.1	247.1	300.2	231.3	15.8	68.8	87.2	64.0	18.4	34.7	51.4
SMDH 00546	814666.5	8188941.6	157.8	20	21	909.9	348.1	68.1	569.5	448.6	8193.4	218.8	265.9	205.8	12.9	60.0	73.9	54.9	18.4	28.7	45.6
SMDH 00546	814666.5	8188941.6	157.8	21	22	1174.0	514.2	64.2	569.0	596.2	10889.1	336.3	373.0	327.0	9.3	46.0	85.5	83.8	18.4	18.3	73.7
SMDH 00546	814666.5	8188941.6	157.8	22	23	1074.3	462.4	67.9	439.9	581.5	10622.1	302.2	341.2	293.9	8.4	47.4	78.2	75.3	21.5	17.5	68.0
SMDH 00546	814666.5	8188941.6	157.8	23	24	872.9	373.8	57.3	176.8	556.1	10157.0	248.5	277.9	243.6	4.8	34.3	58.1	59.8	19.9	9.5	55.6
SMDH 00546	814666.5	8188941.6	157.8	24	25	1250.8	676.8	65.9	356.4	568.5	10383.8	453.0	484.5	446.8	6.2	37.7	101.9	112.2	19.9	11.6	101.3
SMDH 00546	814666.5	8188941.6	157.8	25	26	1012.7	466.7	66.6	415.5	499.5	9123.5	306.7	344.7	297.8	8.9	46.9	79.0	75.3	19.9	18.0	67.0
SMDH 00546	814666.5	8188941.6	157.8	26	27	712.6	314.1	54.2	316.9	350.2	6396.2	208.4	237.8	203.4	5.0	34.4	52.7	50.4	18.4	10.9	47.7
SMDH 00546	814666.5	8188941.6	157.8	27	28	560.8	246.5	43.6	232.9	282.9	5167.5	161.7	186.4	156.8	4.9	29.7	43.1	38.3	13.8	10.9	37.8
SMDH 00546	814666.5	8188941.6	157.8	28	29	885.6	346.9	65.4	406.0	495.1	9043.2	225.4	263.9	217.8	7.7	46.2	62.2	55.1	21.5	17.0	51.3
SMDH 00546	814666.5	8188941.6	157.8	29	30	674.8	272.0	56.5	326.9	348.3	6361.8	174.8	209.6	167.7	7.1	41.9	51.4	42.2	18.4	16.4	39.5
SMDH 00547	812207.4	8192556.8	170.6	0	1	654.6	336.2	44.0	254.4	278.4	5084.3	217.7	246.8	209.2	8.5	37.5	63.2	55.5	10.7	18.3	47.0
SMDH 00547	812207.4	8192556.8	170.6	1	2	638.1	381.0	43.3	240.8	197.1	3600.0	249.4	277.3	240.7	8.7	36.6	70.4	63.7	9.2	18.7	54.4
SMDH 00547	812207.4	8192556.8	170.6	2	3	698.4	432.2	51.1	224.8	206.4	3769.4	281.9	313.7	272.1	9.8	41.6	80.2	71.6	10.7	21.1	60.9
SMDH 00547	812207.4	8192556.8	170.6	3	4	647.7	381.6	38.7	235.6	218.9	3999.1	252.0	275.0	245.6	6.4	29.4	65.6	64.1	9.2	13.8	55.6
SMDH 00548	813906.2	8192654.3	166.3	0	1	1186.5	605.4	79.9	673.9	411.0	7507.3	390.5	443.6	376.7	13.8	66.9	108.5	96.4	21.5	31.6	85.3
SMDH 00548	813906.2	8192654.3	166.3	1	2	844.9	465.0	75.4	359.8	272.9	4983.8	290.4	347.9	274.6	15.9	73.4	97.7	72.3	18.4	39.1	64.2
SMDH 00548	813906.2	8192654.3	166.3	2	3	1249.7	572.4	106.8	656.2	519.3	9485.3	356.7	437.3	334.3	22.4	103.0	126.0	89.6	27.6	53.0	74.2
SMDH 00548	813906.2	8192654.3	166.3	3	4	1334.6	703.0	95.8	620.3	485.8	8873.8	451.4	518.0	432.9	18.5	85.0	132.4	112.1	24.5	42.0	96.4
SMDH 00548	813906.2	8192654.3	166.3	4	5	1470.8	754.3	122.7	652.7	554.5	10128.3	478.0	566.6	453.8	24.2	112.8	152.2	118.4	32.2	56.4	100.9
SMDH 00548	813906.2	8192654.3	166.3	5	6	1512.2	694.9	119.6	683.7	690.3	12608.7	448.5	524.5	428.8	19.7	95.7	135.0	114.7	33.7	42.3	96.5
SMDH 00548	813906.2	8192654.3	166.3	6	7	1592.4	713.6	134.2	753.2	726.0	13260.4	446.7	545.3	418.5	28.2	126.8	157.5	114.7	33.7	64.9	93.0
SMDH 00548	813906.2	8192654.3	166.3	7	8	1099.3	484.7	66.1	540.4	541.3	9887.2	315.0	356.4	305.1	10.0	51.4	86.9	79.1	18.4	23.0	70.5
SMDH 00548	813906.2	8192654.3	166.3	8	9	1163.3	606.2	80.2	548.5	434.1	7929.3	396.4	445.4	381.5	14.9	63.9	104.6	96.6	21.5	27.6	79.5
SMDH 00548	813906.2	8192654.3	166.3	9	10	1494.6	712.7	97.4	735.0	647.2	11822.1	466.0	523.9	450.9	15.0	73.0	123.7	117.1	27.6	30.4	101.3
SMDH 00548	813906.2	8192654.3	166.3	10	11	1295.4	662.5	81.2	568.0	533.1	9737.9	441.6	483.7	432.3	9.3	51.4	101.3	105.5	24.5	17.5	100.3
SMDH 00549	816691.0	8192640.6	163.0	0	1	1541.7	809.1	62.1	1452.7	293.6	5362.7	528.4	568.4	515.3	13.1	53.2	131.1	130.0	12.3	27.8	114.0
SMDH 00549	816691.0	8192640.6	163.0	1	2	1445.5	672.3	80.1	846.3	608.3	11110.2	442.3	492.2	429.2	13.1	63.0	114.3	106.7	21.5	28.4	95.5
SMDH 00549	816691.0	8192640.6	163.0	2	3	1327.9	553.3	85.8	659.1	688.9	12582.9	374.7	426.2	362.0	12.7	64.2	99.5	88.3	24.5	26.9	89.1
SMDH 00549	816691.0	8192640.6	163.0	3	4	1000.2	452.4	63.1	489.6	472.8	8635.5	295.6	334.2	286.1	9.5	48.1	76.3	69.8	18.4	20.2	65.6
SMDH 00549	816691.0	8192640.6	163.0	4	5	1388.2	641.1	75.9	755.3	618.6	11299.6	419.9	465.0	408.9	11.0	56.1	102.0	98.2	21.5	23.6	90.5
SMDH 00549	816691.0	8192640.6	163.0	5	6	1727.3	915.6	98.4	663.5	722.2	13191.5	593.0	658.4	573.8	19.2	84.6	161.8	147.3	23.0	42.4	125.3
SMDH 00549	816691.0	8192640.6	163.0	6	7	1438.5	705.6	92.0	668.4	615.5	11242.2	457.0	515.4	441.1	15.9	74.3	128.0	115.9	24.5	33.8	96.5
SMDH 00549	816691.0	8192640.6	163.0	7	8	1383.1	686.2	70.5	637.6	608.7	11118.8	449.7	490.3	438.9	10.8	51.4	113.9	112.7	18.4	22.2	95.9
SMDH 00549	816691.0	8192640.6	163.0	8	9	1572.5	786.6	87.8	728.7	670.0	12238.4	512.9	567.4	498.3	14.6	69.1	137.4	130.4	23.0	31.5	108.6
SMDH 00549	816691.0	8192640.6	163.0	9	10	1160.6	569.7	75.2	448.1	536.9	9806.8	372.3	417.1	360.9	11.5	56.2	95.8	90.4	21.5	23.2	81.2
SMDH 00549	816691.0	8192640.6	163.0	10	11	1093.0	436.0	59.7	493.9	633.4	11569.5	285.7	321.8	276.4	9.3	45.5	75.7	69.3	16.9	19.3	61.0
SMDH 00549	816691.0	8192640.6	163.0	11	12	1086.1	486.0	54.7	472.3	568.5	10383.8	319.1	352.6	309.4	9.7	43.2	81.3	77.3	13.8	19.7	71.3
SMDH 00549	816691.0	8192640.6	163.0	12	13	1030.0	457.3	58.5	511.4	505.3	9229.8	302.4	335.8	293.6	8.8	42.2	74.4	72.7	16.9	16.5	69.2
SMDH 00549	816691.0	8192640.6	163.0	13	14	1480.1	761.5	79.8	690.2	602.1	10998.2	503.5	551.2	491.2	12.3	60.0	121.0	118.6	21.5	26.3	110.1
SMDH 00550	812814.5	8192694.3	194.8	0	1	737.3	284.0	32.0	745.8	262.0	4785.7	176.6	204.3	171.2	5.4	33.1	50.8	40.8	9.2	18.5	40.7
SMDH 00550	812814.5	8192694.3	194.8	1	2	327.2	77.3	21.9	176.8	247.2	4515.8	44.1	57.3	41.1	2.9	16.2	14.1	10.1	7.7	5.6	13.1
SMDH 00550	812814.5	8192694.3	194.8	2	3	358.7	90.6	36.6	187.9	247.2	4515.8	52.1	74.3	48.2	3.9	26.1	18.3	12.3	13.8	8.4	14.0
SMDH 00550	812814.5	8192694.3	194.8	3	4	312.1	90.3	36.5	155.6	195.4	3568.5	52.0	73.4	48.4	3.7	25.1	17.5	12.3	13.8	7.6	14.2
SMDH 00550	812814.5	8192694.3	194.8	4	5	334.0	76.5	42.0	145.6	243.8	4452.7	41.0	65.1	37.2	3.8	27.9	14.8	9.3	16.9	7.2	12.3

BHID	East	North	AHD	FROM	TO	Mz EQ	monazite	xenotime	zircon	rutile	ilmenite	TREO	TREO+Y+Sc	LREO	HREO	HREO+Y+Sc	CREO	MagREO	Sc_2O_3	Y_2O_3	La_2O_3
units:	*m*	*m*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*
SMDH 00550	812814.5	8192694.3	194.8	5	6	277.9	57.1	36.4	141.6	200.6	3663.2	31.1	52.4	27.1	4.0	25.3	14.1	7.9	13.8	7.5	7.2
SMDH 00550	812814.5	8192694.3	194.8	6	7	239.6	47.3	21.6	111.8	194.6	3554.1	25.4	38.4	22.7	2.8	15.8	10.4	5.9	7.7	5.3	7.5
SMDH 00551	811966.9	8193830.8	156.4	0	1	1335.3	445.1	79.5	777.7	809.9	14793.5	282.4	339.6	265.1	17.3	74.6	91.7	67.4	19.9	37.3	62.6
SMDH 00551	811966.9	8193830.8	156.4	1	2	1362.2	465.5	102.3	722.1	812.3	14836.5	294.7	363.7	277.4	17.3	86.3	99.5	74.7	30.7	38.4	64.9
SMDH 00551	811966.9	8193830.8	156.4	2	3	1291.1	648.2	67.1	654.1	527.9	9643.2	420.0	460.0	407.9	12.2	52.1	112.8	107.7	16.9	23.1	97.5
SMDH 00551	811966.9	8193830.8	156.4	3	4	841.0	304.7	58.7	363.6	521.0	9516.8	192.8	233.5	182.3	10.5	51.2	64.5	49.0	16.9	23.7	41.9
SMDH 00551	811966.9	8193830.8	156.4	4	5	700.0	232.8	54.4	357.6	430.2	7857.5	147.5	183.0	138.8	8.6	44.2	48.9	36.7	16.9	18.7	31.9
SMDH 00551	811966.9	8193830.8	156.4	5	6	1334.8	463.2	105.6	550.1	851.1	15545.6	293.0	363.7	276.1	17.0	87.6	98.7	73.3	32.2	38.5	63.1
SMDH 00551	811966.9	8193830.8	156.4	6	7	1362.0	546.3	88.3	777.9	689.4	12591.5	345.2	408.7	327.7	17.5	81.0	111.3	87.3	23.0	40.5	74.4
SMDH 00551	811966.9	8193830.8	156.4	7	8	1524.6	599.2	101.0	895.7	774.9	14153.3	384.6	453.7	365.8	18.8	87.9	120.0	97.5	27.6	41.5	87.0
SMDH 00551	811966.9	8193830.8	156.4	8	9	2202.3	1188.6	117.0	1376.3	656.0	11982.9	770.4	849.8	747.2	23.2	102.6	208.0	193.6	26.1	53.3	169.5
SMDH 00551	811966.9	8193830.8	156.4	9	10	863.1	211.1	76.9	178.1	748.1	13665.2	132.1	182.5	122.3	9.7	60.2	54.5	35.4	26.1	24.4	27.2
SMDH 00551	811966.9	8193830.8	156.4	10	11	1733.1	380.5	133.3	234.6	1652.7	30186.9	246.3	330.4	231.4	14.9	99.0	89.9	64.3	47.5	36.6	59.2
SMDH 00551	811966.9	8193830.8	156.4	11	12	2160.4	243.6	184.4	318.0	2355.4	43022.4	143.2	260.1	122.6	20.6	137.5	88.3	44.0	67.5	49.4	22.8
SMDH 00551	811966.9	8193830.8	156.4	12	13	1271.9	301.4	101.4	293.2	1119.5	20449.0	192.2	256.3	178.8	13.4	77.5	72.5	50.4	33.7	30.4	39.6
SMDH 00551	811966.9	8193830.8	156.4	13	14	1712.6	266.0	144.5	271.3	1755.5	32064.4	160.5	255.9	141.1	19.4	114.8	85.2	44.5	49.1	46.4	27.9
SMDH 00551	811966.9	8193830.8	156.4	14	15	350.3	137.4	38.6	76.1	216.4	3953.2	87.4	116.4	78.0	9.4	38.4	42.5	23.9	7.7	21.3	16.7
SMDH 00551	811966.9	8193830.8	156.4	15	16	1585.6	218.3	139.3	292.3	1638.5	29928.5	134.1	219.5	118.3	15.8	101.2	65.8	35.1	50.6	34.8	24.0
SMDH 00551	811966.9	8193830.8	156.4	16	17	560.8	123.2	37.4	315.4	431.8	7886.2	80.9	102.3	76.5	4.4	25.8	25.5	18.6	12.3	9.1	17.6
SMDH 00551	811966.9	8193830.8	156.4	17	18	1677.1	261.0	128.9	282.4	1728.6	31573.5	163.3	244.4	145.6	17.8	98.8	77.5	45.0	42.9	38.1	30.4
SMDH 00553	814966.2	8197083.5	179.2	0	1	1972.4	1023.6	108.4	1461.7	534.9	9769.5	673.9	750.1	650.4	23.5	99.7	194.8	180.4	23.0	53.2	160.7
SMDH 00553	814966.2	8197083.5	179.2	1	2	1600.4	659.1	117.1	1071.4	693.0	12657.5	421.3	497.6	402.0	19.2	95.5	120.3	99.2	35.3	41.0	87.0
SMDH 00553	814966.2	8197083.5	179.2	2	3	1292.9	503.2	105.9	690.9	666.9	12181.0	316.6	388.5	299.1	17.5	89.4	98.3	72.5	32.2	39.6	66.3
SMDH 00553	814966.2	8197083.5	179.2	3	4	1300.6	614.4	99.3	699.8	522.8	9548.4	390.1	458.9	371.9	18.2	87.1	115.6	92.5	27.6	41.3	84.7
SMDH 00553	814966.2	8197083.5	179.2	4	5	1265.9	578.1	102.0	722.4	510.7	9327.4	366.7	437.2	348.6	18.1	88.6	109.9	85.5	29.1	41.4	78.8
SMDH 00553	814966.2	8197083.5	179.2	5	6	1247.4	519.4	103.3	670.1	591.3	10800.1	333.2	401.3	315.3	17.9	86.0	102.0	79.9	30.7	37.5	71.5
SMDH 00553	814966.2	8197083.5	179.2	6	7	1319.3	585.2	116.5	655.3	588.0	10739.8	372.8	454.1	347.6	25.2	106.5	123.9	89.0	30.7	50.7	79.8
SMDH 00553	814966.2	8197083.5	179.2	7	8	1666.3	713.9	97.6	1031.7	755.5	13800.1	466.9	527.3	452.4	14.6	74.9	120.4	111.8	29.1	31.2	102.2
SMDH 00553	814966.2	8197083.5	179.2	8	9	1625.4	760.8	100.2	888.4	691.6	12631.7	497.7	561.0	480.6	17.1	80.4	131.7	120.2	27.6	35.7	107.7
SMDH 00553	814966.2	8197083.5	179.2	9	10	1753.5	901.2	103.6	966.3	632.8	11558.0	592.6	656.5	575.2	17.4	81.3	150.6	143.0	27.6	36.3	129.5
SMDH 00553	814966.2	8197083.5	179.2	10	11	1025.8	399.4	98.5	595.8	485.8	8873.8	248.1	320.8	227.4	20.7	93.4	98.3	62.3	26.1	46.6	50.0
SMDH 00554	809694.5	8198598.7	177.5	0	1	549.8	346.7	34.6	351.4	80.2	1464.1	220.4	246.2	211.9	8.5	34.3	61.6	52.5	6.1	19.7	46.4
SMDH 00554	809694.5	8198598.7	177.5	1	2	324.7	186.6	28.8	100.3	111.3	2032.6	122.4	140.2	117.7	4.7	22.5	33.4	27.9	7.7	10.2	25.7
SMDH 00554	809694.5	8198598.7	177.5	2	3	754.9	545.7	56.1	161.8	145.9	2664.1	359.1	392.4	349.4	9.6	43.0	90.7	85.3	12.3	21.1	76.1
SMDH 00554	809694.5	8198598.7	177.5	3	4	550.4	366.7	51.0	153.4	120.4	2199.1	234.8	268.2	224.8	10.0	43.5	71.5	57.8	10.7	22.7	49.5
SMDH 00555	815394.7	8198766.3	181.7	0	1	1684.9	855.7	73.8	1073.0	592.7	10825.9	562.1	614.0	544.4	17.8	69.7	154.3	143.6	12.3	39.6	125.7
SMDH 00555	815394.7	8198766.3	181.7	1	2	1240.3	609.3	64.9	597.2	540.4	9870.0	403.3	443.6	391.4	11.9	52.2	106.3	100.9	15.3	24.9	90.7
SMDH 00555	815394.7	8198766.3	181.7	2	3	872.2	404.9	67.2	370.1	406.0	7415.4	260.0	307.7	246.7	13.3	61.0	83.8	64.9	16.9	30.9	57.5
SMDH 00555	815394.7	8198766.3	181.7	3	4	1018.7	503.9	75.3	377.5	459.7	8397.2	327.5	379.8	312.6	14.9	67.2	99.3	80.5	18.4	33.9	77.5
SMDH 00555	815394.7	8198766.3	181.7	4	5	985.9	517.4	71.4	388.4	393.2	7182.8	337.4	382.8	324.5	13.0	58.3	94.4	83.6	18.4	26.9	75.9
SMDH 00555	815394.7	8198766.3	181.7	5	6	939.6	357.3	68.6	425.2	544.6	9947.5	233.1	275.2	223.6	9.5	51.7	68.7	58.7	21.5	20.7	52.2
SMDH 00555	815394.7	8198766.3	181.7	6	7	840.1	357.3	62.0	386.1	428.6	7828.8	230.1	272.6	218.8	11.3	53.9	74.3	59.1	16.9	25.7	50.7
SMDH 00555	815394.7	8198766.3	181.7	7	8	772.5	282.1	54.6	326.1	478.1	8733.1	183.5	217.8	176.1	7.4	41.7	54.0	44.3	16.9	17.4	40.3
SMDH 00555	815394.7	8198766.3	181.7	8	9	869.9	362.8	60.6	408.0	455.6	8322.6	238.2	274.7	229.5	8.7	45.1	64.5	57.3	18.4	18.0	55.0
SMDH 00555	815394.7	8198766.3	181.7	9	10	993.0	543.0	70.3	355.2	383.5	7004.9	354.8	399.5	342.1	12.7	57.4	96.2	87.1	18.4	26.3	79.2
SMDH 00555	815394.7	8198766.3	181.7	10	11	941.2	383.3	136.9	236.3	498.4	9103.4	240.5	327.9	224.1	16.4	103.8	86.7	59.1	49.1	38.4	51.6
SMDH 00556	817229.6	8198805.0	190.7	0	1	1719.3	657.5	71.1	1717.0	633.4	11569.5	429.4	470.7	417.0	12.4	53.7	104.3	102.4	18.4	22.9	88.8
SMDH 00556	817229.6	8198805.0	190.7	1	2	825.1	326.8	56.9	466.1	421.1	7691.0	215.1	250.7	205.9	9.2	44.8	54.2	43.1	16.9	18.8	35.5
SMDH 00556	817229.6	8198805.0	190.7	2	3	722.1	311.9	69.7	278.9	362.3	6617.3	197.8	248.2	184.9	12.9	63.4	80.1	58.3	18.4	32.0	56.1
SMDH 00556	817229.6	8198805.0	190.7	3	4	780.1	353.9	60.0	335.0	373.4	6821.1	230.4	267.8	219.9	10.4	47.9	67.3	57.5	16.9	20.6	47.5
SMDH 00556	817229.6	8198805.0	190.7	4	5	1124.7	537.8	70.3	503.6	512.4	9358.9	345.0	395.4	330.6	14.4	64.8	102.0	83.9	16.9	33.5	74.1
SMDH 00557	815518.8	8200127.6	187.6	0	1	2343.2	1159.6	112.9	1648.2	780.8	14262.3	744.3	824.4	718.3	26.0	106.0	199.3	178.9	23.0	57.0	169.0
SMDH 00557	815518.8	8200127.6	187.6	1	2	1700.0	784.0	105.1	851.7	775.8	14170.5	500.0	575.6	477.1	22.9	98.5	148.4	121.2	24.5	51.0	109.4
SMDH 00557	815518.8	8200127.6	187.6	2	3	1633.4	558.3	113.0	1029.2	911.8	16653.8	345.7	430.2	323.1	22.6	107.1	125.3	87.2	30.7	53.8	75.4
SMDH 00557	815518.8	8200127.6	187.6	3	4	1492.3	751.2	120.1	690.6	576.2	10524.5	475.7	560.7	451.0	24.6	109.7	153.5	119.6	30.7	54.4	111.8
SMDH 00557	815518.8	8200127.6	187.6	4	5	1476.6	744.6	89.8	625.8	637.0	11635.5	482.5	540.7	466.4	16.1	74.3	132.3	116.7	23.0	35.2	109.9
SMDH 00558	814350.3	8201748.7	195.8	0	1	1122.2	373.5	72.1	179.9	894.2	16332.2	240.4	286.9	229.0	11.3	57.8	74.9	61.3	21.5	25.0	54.3
SMDH 00558	814350.3	8201748.7	195.8	1	2	1827.8	606.1	120.9	1134.5	1063.3	19421.2	386.9	469.7	364.7	22.2	105.0	124.7	96.3	35.3	47.5	85.6
SMDH 00558	814350.3	8201748.7	195.8	2	3	1668.0	426.5	119.3	698.4	1296.8	23687.3	271.6	349.7	253.3	18.3	96.4	95.5	68.2	38.3	39.7	55.9
SMDH 00558	814350.3	8201748.7	195.8	3	4	1027.7	308.5	71.6	783.4	571.5	10438.4	197.0	244.5	185.9	11.0	58.6	62.4	46.3	23.0	24.5	43.7
SMDH 00558	814350.3	8201748.7	195.8	4	5	1651.9	424.9	151.5	503.5	1319.9	24109.3	271.7	363.6	254.4	17.3	109.2	92.5	67.9	55.2	36.7	56.8
SMDH 00558	814350.3	8201748.7	195.8	5	6	1841.3	774.3	140.0	869.8	935.0	17078.6	497.9	589.5	474.7	23.2	114.8	148.1	123.6	42.9	48.6	107.7
SMDH 00558	814350.3	8201748.7	195.8	6	7	1546.6	589.1	116.2	675.0	901.9	16472.9	378.8	456.3	358.9	19.9	97.4	117.6	93.9	35.3	42.2	82.6
SMDH 00558	814350.3	8201748.7	195.8	7	8	1665.1	360.0	161.4	476.8	1431.1	26139.0	226.6	327.0	207.6	19.0	119.5	91.8	59.5	58.3	42.2	45.5
SMDH 00558	814350.3	8201748.7	195.8	8	9	1354.8	540.7	105.0	735.8	682.6	12468.1	345.5	416.1	326.7	18.8	89.5	109.6	85.7	30.7	40.0	75.3
SMDH 00559	816043.9	8201165.5	196.0	0	1	600.7	219.3	42.8	413.4	297.2	5428.8	141.9	170.3	134.9	7.0	35.4	44.0	33.3	12.3	16.1	32.8
SMDH 00559	816043.9	8201165.5	196.0	1	2	995.3	434.8	79.8	598.1	416.5	7607.7	275.9	333.9	259.9	16.0	74.0	90.7	66.3	21.5	36.4	62.4
SMDH 00559	816043.9	8201165.5	196.0	2	3	1363.7	596.7	95.3	768.9	613.0	11196.3	380.8	447.4	362.8	18.0	84.6	115.0	92.3	26.1	40.5	86.3
SMDH 00559	816043.9	8201165.5	196.0	3	4	1243.8	471.3	96.7	778.3	614.5	11225.0	297.6	366.3	279.2	18.3	87.1	98.8	70.4	27.6	41.1	67.1
SMDH 00559	816043.9	8201165.5	196.0	4	5	662.6	118.6	51.5	590.9	436.9	7980.9	73.1	108.1	65.6	7.5	42.5	33.1	16.6	16.9	18.2	16.3
SMDH 00559	816043.9	8201165.5	196.0	5	6	1081.4	303.0	86.3	667.0	690.0	12603.0	186.7	248.0	171.4	15.2	76.6	72.8	44.8	26.1	35.3	40.9

BHID	East	North	AHD	FROM	TO	Mz EQ	monazite	xenotime	zircon	rutile	ilmenite	TREO	TREO+Y+Sc	LREO	HREO	HREO+Y+Sc	CREO	MagREO	Sc_2O_3	Y_2O_3	La_2O_3
units:	m	m	m	m	m	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SMDH 00559	816043.9	8201165.5	196.0	6	7	1001.6	439.2	72.7	659.8	400.8	7320.6	281.1	332.3	267.7	13.4	64.6	86.6	67.4	19.9	31.2	63.6
SMDH 00559	816043.9	8201165.5	196.0	7	8	1192.0	557.6	102.5	460.0	554.8	10134.1	355.4	426.4	336.6	18.8	89.8	111.7	85.7	29.1	41.9	79.2
SMDH 00559	816043.9	8201165.5	196.0	8	9	1431.5	696.0	106.1	676.1	595.1	10869.0	447.6	519.2	428.4	19.2	90.8	130.5	110.0	29.1	42.4	97.9
SMDH 00559	816043.9	8201165.5	196.0	9	9.5	1312.5	586.1	91.5	631.1	624.0	11397.2	375.6	437.8	358.3	17.3	79.6	110.6	90.1	24.5	37.7	83.6
SMDH 00559	816043.9	8201165.5	196.0	9.5	10	1312.5	586.1	91.5	631.1	624.0	11397.2	375.6	437.8	358.3	17.3	79.6	110.6	90.1	24.5	37.7	83.6
SMDH 00560	810578.4	8188936.8	315.5	0	1	1077.3	339.8	63.6	882.5	563.6	10294.8	199.4	255.6	180.8	18.7	74.9	89.0	52.3	10.7	45.5	40.7
SMDH 00560	810578.4	8188936.8	315.5	1	2	1176.4	453.9	83.5	675.2	609.5	11133.1	275.0	340.0	254.2	20.7	85.7	108.7	72.0	16.9	48.1	57.9
SMDH 00560	810578.4	8188936.8	315.5	2	3	1133.7	449.9	78.5	556.1	616.1	11253.7	277.3	338.7	257.4	19.8	81.3	107.9	73.4	15.3	46.1	57.5
SMDH 00560	810578.4	8188936.8	315.5	3	4	713.4	298.8	47.9	439.8	325.5	5945.5	182.1	223.8	168.5	13.6	55.3	74.0	47.6	7.7	34.0	37.6
SMDH 00560	810578.4	8188936.8	315.5	4	5	220.2	121.5	27.1	76.9	67.7	1237.3	75.9	95.5	70.5	5.4	25.0	29.7	18.8	6.1	13.5	15.6
SMDH 00561	808856.5	8195774.3	166.6	0	1	196.1	120.3	35.3	67.3	27.2	496.7	74.2	100.4	66.3	7.9	34.1	32.1	17.9	9.2	17.0	16.5
SMDH 00561	808856.5	8195774.3	166.6	1	2	273.9	136.5	40.4	110.1	89.0	1624.9	80.4	112.3	72.2	8.2	40.1	38.1	19.9	10.7	21.2	16.1
SMDH 00561	808856.5	8195774.3	166.6	2	3	264.8	158.9	40.8	104.7	45.4	829.7	94.9	127.6	84.6	10.2	42.9	43.0	23.4	9.2	23.5	18.8
SMDH 00562	818734.8	8199568.0	347.5	0	1	1405.2	509.4	82.6	1011.2	705.1	12878.6	324.6	384.1	307.2	17.4	76.9	104.9	80.0	19.9	39.5	70.6
SMDH 00562	818734.8	8199568.0	347.5	1	2	1114.5	351.0	85.1	696.5	656.5	11991.5	222.9	284.1	205.6	17.3	78.5	80.6	50.9	23.0	38.2	49.4
SMDH 00562	818734.8	8199568.0	347.5	2	3	1206.0	379.0	148.7	620.5	691.6	12631.7	220.1	340.7	183.8	36.3	156.9	124.0	48.4	38.3	82.3	48.2
SMDH 00562	818734.8	8199568.0	347.5	3	4	894.7	340.3	96.5	481.7	437.7	7995.3	210.5	287.9	186.7	23.8	101.2	93.5	45.6	23.0	54.4	50.4
SMDH 00562	818734.8	8199568.0	347.5	4	5	1197.5	408.0	123.0	803.7	589.6	10768.5	264.1	348.6	238.7	25.4	109.8	94.3	54.4	35.3	49.1	63.4
SMDH 00562	818734.8	8199568.0	347.5	5	6	1011.4	356.6	120.9	661.4	464.0	8474.7	227.0	311.1	200.1	27.0	111.0	93.3	51.8	33.7	50.3	50.9
SMDH 00562	818734.8	8199568.0	347.5	6	7	922.4	293.0	69.8	480.4	585.3	10691.0	188.6	237.6	175.8	12.8	61.8	65.0	42.8	19.9	29.1	44.6
SMDH 00562	818734.8	8199568.0	347.5	7	8	750.3	152.8	63.6	314.4	625.2	11420.2	98.2	138.6	89.3	8.9	49.3	37.6	22.0	21.5	18.9	23.7
SMDH 00562	818734.8	8199568.0	347.5	8	9	1053.0	378.1	114.4	522.6	567.1	10358.0	235.4	317.9	213.9	21.5	104.0	96.2	57.6	33.7	48.8	51.1
SMDH 00562	818734.8	8199568.0	347.5	9	10	771.5	208.0	39.3	493.5	527.9	9643.2	138.6	165.3	131.7	6.9	33.6	44.1	32.9	10.7	16.0	35.7
SMDH 00562	818734.8	8199568.0	347.5	10	11	1324.7	454.6	93.6	734.3	780.8	14262.3	290.0	360.3	270.0	19.9	90.3	101.8	68.4	24.5	45.8	65.6
SMDH 00562	818734.8	8199568.0	347.5	11	12	1208.7	400.5	129.2	707.9	652.1	11911.1	251.2	342.7	227.2	24.0	115.5	103.9	64.6	38.3	53.1	53.2
SMDH 00562	818734.8	8199568.0	347.5	12	13	1473.5	436.8	209.3	492.5	966.6	17655.7	264.8	410.0	230.2	34.6	179.8	136.1	68.9	67.5	77.7	51.7
SMDH 00562	818734.8	8199568.0	347.5	13	14	1446.3	481.2	169.3	468.9	931.9	17021.2	297.3	418.1	267.5	29.8	150.6	135.6	77.3	50.6	70.2	60.4
SMDH 00562	818734.8	8199568.0	347.5	14	15	1273.7	442.3	113.4	544.6	784.3	14325.5	282.1	360.8	261.9	20.3	99.0	104.0	68.0	32.2	46.5	60.6
SMDH 00562	818734.8	8199568.0	347.5	15	16	888.6	274.3	54.4	473.2	589.1	10759.9	176.7	215.8	167.0	9.8	48.9	57.8	41.2	15.3	23.7	42.3
SMDH 00562	818734.8	8199568.0	347.5	16	17	1167.5	362.4	54.8	897.1	667.0	12183.9	239.7	274.2	231.8	7.9	42.4	62.4	55.9	16.9	17.7	56.5
SMDH 00563	810941.3	8200082.0	182.3	0	1	809.1	473.1	52.4	406.9	220.7	4030.7	311.7	344.6	302.9	8.8	41.7	78.0	74.0	13.8	19.0	66.6
SMDH 00563	810941.3	8200082.0	182.3	1	2	1468.6	690.0	92.3	858.6	592.5	10823.1	459.8	512.7	448.2	11.6	64.5	108.5	105.6	29.1	23.7	94.5
SMDH 00563	810941.3	8200082.0	182.3	2	3	895.5	247.0	134.0	281.4	612.7	11190.5	158.8	235.3	149.0	9.7	86.3	58.2	41.8	53.7	22.9	37.1
SMDH 00563	810941.3	8200082.0	182.3	3	4	814.3	333.6	48.5	499.9	392.0	7159.9	223.0	248.9	218.9	4.1	30.0	52.4	54.1	16.9	9.0	50.2
SMDH 00563	810941.3	8200082.0	182.3	4	5	732.3	276.2	54.0	437.7	377.5	6895.8	179.6	214.1	172.1	7.5	42.0	54.7	45.2	16.9	17.7	40.1
SMDH 00563	810941.3	8200082.0	182.3	5	6	744.5	271.9	64.0	575.3	323.1	5902.5	170.9	216.9	159.7	11.2	57.2	62.6	41.6	18.4	27.6	35.5
SMDH 00563	810941.3	8200082.0	182.3	6	7	701.3	136.6	180.3	121.1	499.2	9117.8	79.8	184.1	68.6	11.2	115.5	48.3	23.9	76.7	27.6	16.9
SMDH 00563	810941.3	8200082.0	182.3	7	8	710.4	172.5	162.1	101.8	495.6	9051.8	100.6	199.2	88.1	12.5	111.1	57.8	28.8	66.0	32.6	22.0
SMDH 00565	812966.7	8189998.4	154.2	0	1	1192.0	415.1	77.8	766.4	654.0	11945.6	254.1	314.3	237.0	17.1	77.3	94.2	64.0	18.4	41.8	55.4
SMDH 00565	812966.7	8189998.4	154.2	1	2	1204.0	457.1	88.3	758.5	599.0	10940.8	282.3	347.2	263.3	19.0	83.9	102.2	71.5	21.5	43.4	59.6
SMDH 00565	812966.7	8189998.4	154.2	2	3	1082.3	410.6	68.6	675.2	557.6	10185.7	252.0	307.4	233.4	18.6	74.1	96.4	64.2	12.3	43.2	57.8
SMDH 00565	812966.7	8189998.4	154.2	3	4	1093.7	406.0	68.1	809.9	518.7	9473.8	251.3	304.5	234.3	17.0	70.2	94.2	65.6	13.8	39.4	55.4
SMDH 00565	812966.7	8189998.4	154.2	4	5	1117.2	395.0	71.5	746.7	593.2	10834.6	243.0	297.5	225.4	17.6	72.0	90.6	62.2	15.3	39.1	52.2
SMDH 00565	812966.7	8189998.4	154.2	5	6	1032.7	377.1	68.1	592.4	573.7	10478.6	231.4	283.9	214.4	17.0	69.6	85.3	56.5	13.8	38.7	49.7
SMDH 00565	812966.7	8189998.4	154.2	6	7	1021.7	369.9	60.6	672.4	541.8	9895.8	227.8	275.4	212.5	15.4	62.9	82.0	56.0	12.3	35.3	47.1
SMDH 00565	812966.7	8189998.4	154.2	7	8	1020.1	405.9	69.8	515.7	547.0	9990.5	254.0	304.1	239.4	14.6	64.7	87.1	64.8	16.9	33.3	55.1
SMDH 00565	812966.7	8189998.4	154.2	8	9	1155.7	479.6	78.9	652.8	559.5	10220.2	305.9	360.0	292.1	13.9	68.0	94.1	75.9	21.5	32.6	67.1
SMDH 00565	812966.7	8189998.4	154.2	9	10	1079.8	415.9	73.7	565.9	589.7	10771.4	264.0	315.3	250.4	13.6	64.9	84.5	65.1	19.9	31.4	55.0
SMDH 00565	812966.7	8189998.4	154.2	10	11	809.8	461.3	59.0	318.8	270.0	4932.1	296.8	336.0	286.3	10.6	49.8	80.5	70.8	15.3	23.9	63.9
SMDH 00565	812966.7	8189998.4	154.2	11	12	989.7	618.5	63.8	271.1	318.0	5807.7	403.2	443.8	391.5	11.7	52.3	103.7	98.8	15.3	25.3	86.3
SMDH 00565	812966.7	8189998.4	154.2	12	13	755.8	466.9	52.3	237.1	231.7	4231.6	302.2	336.1	291.4	10.8	44.6	82.9	74.8	12.3	21.6	63.7
SMDH 00566	811420.1	8190212.7	157.0	0	1	556.0	177.9	29.1	571.5	238.7	4360.8	107.5	131.8	100.3	7.2	31.5	39.5	26.4	6.1	18.2	24.4
SMDH 00566	811420.1	8190212.7	157.0	1	2	575.0	183.1	31.8	525.9	275.8	5038.3	111.3	136.0	104.3	6.9	31.6	39.1	27.0	7.7	17.0	24.7
SMDH 00566	811420.1	8190212.7	157.0	2	3	692.3	230.4	37.3	486.7	387.3	7073.8	139.7	168.2	131.3	8.4	36.9	45.1	31.2	9.2	19.3	33.5
SMDH 00566	811420.1	8190212.7	157.0	3	4	470.9	169.5	31.5	291.2	254.6	4650.8	102.5	125.7	95.8	6.7	30.0	36.5	25.3	7.7	15.6	25.2
SMDH 00566	811420.1	8190212.7	157.0	4	5	568.6	275.9	42.9	284.3	228.8	4179.9	179.6	205.0	174.3	5.3	30.6	46.4	43.3	13.8	11.6	41.8
SMDH 00566	811420.1	8190212.7	157.0	5	6	484.8	246.2	38.2	218.1	188.3	3439.3	162.8	184.3	158.4	4.4	25.9	41.8	39.5	12.3	9.3	36.9
SMDH 00566	811420.1	8190212.7	157.0	6	7	292.8	174.8	22.0	112.0	86.6	1581.8	117.0	128.7	114.2	2.8	14.5	29.4	28.1	6.1	5.6	27.3
SMDH 00566	811420.1	8190212.7	157.0	7	8	756.9	351.0	42.3	365.7	355.4	6491.0	236.8	257.6	233.0	3.8	24.6	52.6	55.6	13.8	7.0	55.4
SMDH 00566	811420.1	8190212.7	157.0	8	9	845.8	434.5	50.8	378.7	344.8	6298.6	291.6	318.0	285.9	5.7	32.1	66.1	67.5	15.3	11.0	67.9
SMDH 00566	811420.1	8190212.7	157.0	9	10	1070.2	545.1	53.0	500.9	449.2	8204.9	366.7	394.1	360.7	6.0	33.4	81.8	86.7	15.3	12.1	87.8
SMDH 00566	811420.1	8190212.7	157.0	10	11	1152.3	463.0	58.4	665.1	602.4	11003.9	308.5	341.1	301.9	6.6	39.2	72.7	73.3	18.4	14.2	72.7
SMDH 00566	811420.1	8190212.7	157.0	11	12	566.9	269.4	34.0	277.7	251.6	4596.2	179.2	197.6	175.0	4.2	22.6	41.1	40.0	9.2	9.1	41.9
SMDH 00566	811420.1	8190212.7	157.0	12	13	641.8	364.8	40.3	213.6	242.7	4432.6	246.4	266.7	241.7	4.7	25.0	60.2	60.5	10.7	9.5	57.3
SMDH 00566	811420.1	8190212.7	157.0	13	14	1032.1	554.2	56.5	406.3	420.0	7670.9	378.4	407.6	372.3	6.1	35.3	86.7	92.0	16.9	12.3	97.8
SMDH 00566	811420.1	8190212.7	157.0	14	15	917.6	365.3	54.9	424.1	521.5	9525.5	244.4	275.7	237.5	6.9	38.1	62.1	57.3	16.9	14.3	59.2
SMDH 00566	811420.1	8190212.7	157.0	15	16	1159.4	317.1	61.7	469.1	909.9	16619.3	217.6	252.9	212.4	5.2	40.5	47.6	43.3	23.0	12.3	59.5
SMDH 00566	811420.1	8190212.7	157.0	16	17	1230.8	423.6	80.0	582.9	779.9	14245.1	286.3	328.3	281.1	5.3	47.3	61.3	62.0	30.7	11.3	71.5
SMDH 00567	814710.6	8189744.3	154.8	0	1	1452.0	468.9	91.5	701.2	962.4	17578.2	282.8	355.6	262.6	20.2	92.9	112.7	73.7	21.5	51.3	58.4
SMDH 00567	814710.6	8189744.3	154.8	1	2	1437.5	553.3	104.2	590.6	852.5	15571.4	342.0	419.5	320.3	21.8	99.3	119.3	81.9	26.1	51.4	70.4
SMDH 00567	814710.6	8189744.3	154.8	2	3	1271.9	455.6	95.5	789.5	674.4	12318.8	279.0	350.0	259.4	19.7	90.7	106.2	72.0	24.5	46.5	57.9

BHID	East	North	AHD	FROM	TO	Mz EQ	monazite	xenotime	zircon	rutile	ilmenite	TREO	TREO+Y+Sc	LREO	HREO	HREO+Y+Sc	CREO	MagREO	Sc_2O_3	Y_2O_3	La_2O_3
units:	m	m	m	m	m	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SMDH 00567	814710.6	8189744.3	154.8	3	4	1311.1	465.6	95.5	558.7	824.1	15051.8	284.6	356.8	264.6	20.0	92.2	110.0	73.6	23.0	49.1	58.5
SMDH 00567	814710.6	8189744.3	154.8	4	5	1108.4	419.3	79.8	621.5	591.4	10803.0	257.0	318.5	239.8	17.3	78.7	101.5	70.6	18.4	43.0	56.6
SMDH 00567	814710.6	8189744.3	154.8	5	6	1196.9	429.2	86.0	753.0	635.0	11598.2	264.1	329.4	244.4	19.7	84.9	99.7	65.5	19.9	45.3	51.4
SMDH 00567	814710.6	8189744.3	154.8	6	7	1001.9	328.5	66.3	708.4	547.9	10007.8	198.8	250.6	183.8	15.0	66.8	79.3	51.8	15.3	36.4	42.5
SMDH 00567	814710.6	8189744.3	154.8	7	8	1033.8	302.4	61.3	733.1	627.4	11460.4	182.8	229.9	169.9	12.9	60.0	71.0	47.4	15.3	31.7	38.9
SMDH 00567	814710.6	8189744.3	154.8	8	9	1053.1	349.9	66.7	619.0	632.0	11543.7	215.3	267.4	200.6	14.8	66.8	81.9	54.6	15.3	36.7	47.5
SMDH 00567	814710.6	8189744.3	154.8	9	10	1028.5	379.9	62.6	589.0	572.9	10464.2	232.2	284.7	216.6	15.6	68.2	90.5	60.5	12.3	40.3	50.8
SMDH 00567	814710.6	8189744.3	154.8	10	11	1040.5	469.1	58.1	517.0	501.4	9158.0	302.4	347.3	288.4	14.0	58.9	97.1	76.9	10.7	34.2	73.4
SMDH 00567	814710.6	8189744.3	154.8	11	12	1078.3	433.2	61.4	536.1	594.1	10851.8	279.4	323.8	265.8	13.6	58.0	88.3	70.4	13.8	30.6	66.1
SMDH 00567	814710.6	8189744.3	154.8	12	13	738.8	295.1	49.8	448.5	360.7	6588.6	185.3	222.3	173.2	12.1	49.2	64.0	46.0	10.7	26.3	40.6
SMDH 00567	814710.6	8189744.3	154.8	13	14	682.9	283.5	47.2	324.9	357.9	6536.9	178.0	211.9	167.9	10.1	43.9	61.2	46.1	10.7	23.1	38.0
SMDH 00567	814710.6	8189744.3	154.8	14	15	350.3	154.3	28.8	163.6	165.5	3023.0	95.6	116.0	90.2	5.4	25.8	32.0	23.4	7.7	12.7	20.3
SMDH 00567	814710.6	8189744.3	154.8	15	16	1377.5	650.0	61.4	609.9	679.0	12402.0	428.7	462.8	419.6	9.1	43.2	101.9	103.8	15.3	18.8	96.4
SMDH 00567	814710.6	8189744.3	154.8	16	17	940.0	523.0	104.2	564.4	189.6	3462.2	328.6	405.7	302.1	26.4	103.5	122.2	82.8	23.0	54.1	67.3
SMDH 00567	814710.6	8189744.3	154.8	17	18	975.7	404.9	92.2	252.2	574.3	10490.1	264.5	323.2	249.5	15.0	73.7	87.5	68.0	27.6	31.1	61.9
SMDH 00567	814710.6	8189744.3	154.8	18	19	725.8	146.6	100.8	177.1	609.0	11124.5	82.6	151.8	63.6	19.0	88.1	61.5	23.1	29.1	40.0	11.1
SMDH 00567	814710.6	8189744.3	154.8	19	20	916.4	388.1	39.0	832.5	319.8	5842.2	248.0	274.7	240.1	7.9	34.6	66.1	60.8	9.2	17.5	53.7
SMDH 00567	814710.6	8189744.3	154.8	20	21	1650.4	263.5	244.2	301.3	1511.1	27600.3	151.5	307.1	121.8	29.7	185.3	113.1	50.1	87.4	68.2	21.2
SMDH 00567	814710.6	8189744.3	154.8	21	22	1990.0	528.1	291.0	363.9	1522.7	27812.7	303.7	508.9	254.8	48.9	254.1	184.6	86.0	93.6	111.6	52.7
SMDH 00567	814710.6	8189744.3	154.8	22	23	942.1	294.0	153.6	196.5	623.2	11382.9	180.6	273.9	165.9	14.7	108.0	77.2	49.4	58.3	35.0	34.8
SMDH 00567	814710.6	8189744.3	154.8	23	24	1234.6	682.2	99.4	332.1	500.3	9137.9	436.5	505.0	416.8	19.7	88.2	132.7	108.9	24.5	43.9	95.8
SMDH 00567	814710.6	8189744.3	154.8	24	25	1511.9	721.9	82.3	367.7	851.7	15557.1	476.1	521.3	466.9	9.2	54.4	112.5	114.7	24.5	20.7	108.5
SMDH 00567	814710.6	8189744.3	154.8	25	26	1351.9	620.9	73.6	519.5	708.5	12941.8	409.2	449.9	400.1	9.1	49.8	98.5	99.1	21.5	19.3	93.5
SMDH 00568	815801.2	8189236.3	156.3	0	1	1071.3	423.7	75.2	616.0	540.8	9878.6	260.7	318.6	243.3	17.4	75.3	97.0	68.4	16.9	41.0	56.3
SMDH 00568	815801.2	8189236.3	156.3	1	2	1256.7	519.4	94.9	581.5	657.8	12014.5	319.2	391.4	298.5	20.7	92.9	114.0	78.9	23.0	49.1	66.3
SMDH 00568	815801.2	8189236.3	156.3	2	3	1021.7	402.8	69.7	633.9	498.9	9112.1	242.2	300.5	225.9	16.3	74.6	98.8	67.6	15.3	42.9	51.1
SMDH 00568	815801.2	8189236.3	156.3	3	4	1171.9	428.4	92.3	535.3	692.2	12643.2	266.8	331.3	249.7	17.1	81.6	94.6	66.1	24.5	39.9	56.3
SMDH 00568	815801.2	8189236.3	156.3	4	5	1144.4	432.4	88.0	712.8	570.4	10418.3	268.9	330.0	251.5	17.4	78.5	97.9	71.0	23.0	38.1	56.8
SMDH 00568	815801.2	8189236.3	156.3	5	6	1116.0	467.6	87.1	607.5	528.7	9657.5	291.1	355.1	273.7	17.4	81.4	100.6	70.2	21.5	42.5	62.3
SMDH 00568	815801.2	8189236.3	156.3	6	7	1124.0	449.5	84.5	671.0	540.7	9875.7	278.1	341.6	260.0	18.2	81.7	104.4	72.4	19.9	43.6	62.5
SMDH 00568	815801.2	8189236.3	156.3	7	8	1054.4	383.4	78.8	508.4	619.4	11314.0	235.3	293.6	219.9	15.5	73.8	88.5	60.3	19.9	38.4	52.3
SMDH 00568	815801.2	8189236.3	156.3	8	9	522.7	237.8	49.7	280.6	209.4	3824.0	144.3	181.8	134.0	10.3	47.7	54.8	36.0	12.3	25.1	31.2
SMDH 00568	815801.2	8189236.3	156.3	9	10	1192.7	531.1	55.2	575.0	609.0	11124.5	351.2	380.4	344.2	6.9	36.1	84.1	86.9	15.3	13.8	80.3
SMDH 00568	815801.2	8189236.3	156.3	10	11	1165.9	441.1	57.7	833.5	576.4	10527.4	292.5	322.3	286.4	6.0	35.9	67.6	68.9	18.4	11.4	68.4
SMDH 00568	815801.2	8189236.3	156.3	11	12	1225.8	570.9	70.6	559.1	584.4	10673.8	376.3	413.6	368.0	8.3	45.6	90.3	93.4	21.5	15.9	82.9
SMDH 00568	815801.2	8189236.3	156.3	12	13	1692.0	826.3	82.6	653.6	827.7	15117.9	542.4	586.8	531.6	10.8	55.3	124.6	129.4	23.0	21.5	115.4
SMDH 00568	815801.2	8189236.3	156.3	13	14	1262.4	460.5	78.3	656.9	740.1	13518.8	305.5	346.1	298.2	7.4	47.9	77.9	77.6	26.1	14.5	66.4
SMDH 00568	815801.2	8189236.3	156.3	14	15	1551.7	659.1	69.7	744.5	842.9	15396.3	436.3	472.3	427.9	8.4	44.3	103.4	108.8	19.9	16.0	98.0
SMDH 00568	815801.2	8189236.3	156.3	15	16	1234.6	596.4	52.9	577.5	577.3	10544.6	390.5	421.1	381.3	9.2	39.9	97.4	98.6	12.3	18.4	90.7
SMDH 00568	815801.2	8189236.3	156.3	16	17	1223.7	560.5	50.3	501.2	652.7	11922.6	365.0	395.4	355.7	9.3	39.7	91.7	89.2	10.7	19.7	83.0
SMDH 00568	815801.2	8189236.3	156.3	17	18	1227.7	546.3	42.2	567.7	659.7	12048.9	359.0	381.7	351.7	7.3	30.0	84.7	88.3	9.2	13.5	83.4
SMDH 00568	815801.2	8189236.3	156.3	18	19	1396.6	654.9	58.1	654.5	683.5	12485.3	433.4	463.2	425.2	8.2	38.0	101.5	108.6	15.3	14.5	98.4
SMDH 00568	815801.2	8189236.3	156.3	19	20	1951.6	1031.5	95.4	793.1	823.0	15031.7	685.0	741.4	668.3	16.8	73.2	152.7	146.8	21.5	34.9	175.2
SMDH 00570	811478.3	8191209.2	151.0	0	1	1662.7	706.6	135.0	1030.6	707.4	12921.7	444.2	538.4	414.8	29.3	123.5	147.6	106.8	32.2	62.0	96.6
SMDH 00570	811478.3	8191209.2	151.0	1	2	1258.8	495.3	111.8	486.2	715.8	13073.8	306.1	383.7	284.1	22.0	99.7	112.3	78.0	29.1	48.5	66.4
SMDH 00570	811478.3	8191209.2	151.0	2	3	1306.2	473.4	125.7	372.6	848.6	15499.7	295.2	378.9	273.7	21.5	105.2	106.1	72.2	36.8	46.9	63.7
SMDH 00570	811478.3	8191209.2	151.0	3	4	975.1	400.2	78.9	430.4	516.6	9436.5	253.7	306.4	239.8	13.9	66.6	82.6	62.8	21.5	31.2	55.1
SMDH 00570	811478.3	8191209.2	151.0	4	5	1050.2	566.4	79.1	543.9	331.9	6063.2	368.9	418.1	353.8	15.1	64.3	103.0	90.5	18.4	30.7	80.2
SMDH 00570	811478.3	8191209.2	151.0	5	6	781.3	344.3	60.8	379.6	367.2	6706.3	222.7	259.4	213.2	9.5	46.2	64.5	55.5	16.9	19.8	47.5
SMDH 00570	811478.3	8191209.2	151.0	6	7	594.0	250.8	39.8	304.7	296.7	5420.2	164.4	187.1	158.4	6.0	28.7	44.2	39.7	10.7	11.9	36.9
SMDH 00570	811478.3	8191209.2	151.0	7	8	1246.3	586.2	79.8	560.9	577.9	10556.1	384.6	435.8	369.6	15.0	66.2	104.5	90.3	18.4	32.8	80.5
SMDH 00570	811478.3	8191209.2	151.0	8	9	1610.7	493.0	118.3	552.8	1187.1	21683.5	326.4	396.8	310.4	16.1	86.4	97.1	78.9	36.8	33.5	64.2
SMDH 00570	811478.3	8191209.2	151.0	9	10	2207.9	279.3	247.3	412.0	2237.8	40875.1	168.0	314.9	145.3	22.7	169.6	90.3	46.9	96.6	50.3	30.6
SMDH 00570	811478.3	8191209.2	151.0	10	11	2257.6	362.2	235.3	380.1	2222.1	40588.0	222.3	367.8	195.7	26.6	172.0	109.4	59.4	85.9	59.6	37.5
SMDH 00570	811478.3	8191209.2	151.0	11	12	1227.1	804.3	76.4	253.0	383.0	6996.2	544.5	583.3	533.2	11.3	50.1	119.5	125.7	18.4	20.4	114.1
SMDH 00570	811478.3	8191209.2	151.0	12	13	1028.2	549.5	55.3	419.7	416.7	7610.6	371.7	400.1	362.6	9.2	37.6	85.4	86.5	12.3	16.1	80.1
SMDH 00570	811478.3	8191209.2	151.0	13	14	396.0	202.8	34.6	227.9	123.2	2250.7	133.9	154.4	128.1	5.7	26.2	39.0	32.7	9.2	11.3	29.3
SMDH 00571	814147.1	8191240.6	156.5	0	1	1625.1	623.6	101.8	929.0	868.2	15858.5	399.8	469.0	380.6	19.1	88.4	120.5	97.3	27.6	41.7	84.8
SMDH 00571	814147.1	8191240.6	156.5	1	2	1055.4	389.6	73.1	534.1	608.3	11110.2	250.7	298.8	238.6	12.1	60.2	75.2	60.1	21.5	26.5	53.4
SMDH 00571	814147.1	8191240.6	156.5	2	3	691.4	224.6	65.0	216.2	480.2	8770.4	141.2	183.3	132.2	9.0	51.0	50.1	35.6	21.5	20.6	29.7
SMDH 00571	814147.1	8191240.6	156.5	3	4	818.6	309.8	66.1	332.0	485.3	8865.2	197.8	241.3	187.1	10.7	54.2	64.6	49.9	19.9	23.6	43.0
SMDH 00571	814147.1	8191240.6	156.5	4	5	658.3	260.5	54.6	329.7	342.5	6255.6	166.6	200.5	159.8	6.8	40.7	48.4	41.0	18.4	15.5	37.1
SMDH 00571	814147.1	8191240.6	156.5	5	6	1371.8	666.1	78.4	783.9	542.1	9901.5	436.4	483.3	424.0	12.4	59.3	111.6	107.8	21.5	25.4	95.6
SMDH 00571	814147.1	8191240.6	156.5	6	7	1196.7	527.9	70.7	633.8	569.6	10403.9	346.3	386.8	337.1	9.2	49.7	87.6	85.0	21.5	19.0	78.0
SMDH 00571	814147.1	8191240.6	156.5	7	8	1170.9	544.7	63.2	515.8	573.7	10478.6	355.1	394.3	345.2	9.9	49.1	92.6	87.1	16.9	22.4	78.9
SMDH 00571	814147.1	8191240.6	156.5	8	9	1039.0	373.3	67.5	681.9	547.3	9996.3	245.0	283.0	237.9	7.1	45.0	62.4	58.4	23.0	15.0	55.1
SMDH 00571	814147.1	8191240.6	156.5	9	10	898.5	385.2	56.8	430.1	459.6	8394.3	254.7	286.1	248.3	6.4	37.9	63.5	62.5	18.4	13.1	57.0
SMDH 00571	814147.1	8191240.6	156.5	10	11	886.0	352.2	53.5	374.0	520.1	9499.6	232.4	263.2	226.0	6.5	37.2	59.5	56.6	16.9	13.8	52.8
SMDH 00571	814147.1	8191240.6	156.5	11	12	1191.2	618.5	69.4	489.8	499.7	9126.4	407.3	446.6	397.7	9.6	48.9	97.6	98.4	19.9	19.3	90.1
SMDH 00571	814147.1	8191240.6	156.5	12	13	885.2	335.9	81.2	354.7	511.6	9344.6	214.6	267.1	203.4	11.2	63.7	70.9	53.8	26.1	26.4	46.4
SMDH 00571	814147.1	8191240.6	156.5	13	14	1135.8	426.5	134.9	450.1	620.7	11337.0	270.1	354.8	254.7	15.4	100.1	92.8	67.3	47.5	37.2	57.6

BHID	East	North	AHD	FROM	TO	Mz EQ	monazite	xenotime	zircon	rutile	ilmenite	TREO	TREO+Y+Sc	LREO	HREO	HREO+Y+Sc	CREO	MagREO	Sc_2O_3	Y_2O_3	La_2O_3
units:	*m*	*m*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*
SMDH 00571	814147.1	8191240.6	156.5	14	15	1323.6	500.8	201.2	450.0	688.9	12582.9	302.1	439.6	274.8	27.3	164.9	133.2	77.6	69.0	68.6	60.5
SMDH 00571	814147.1	8191240.6	156.5	15	16	908.4	282.1	81.4	417.0	593.5	10840.3	181.2	231.9	171.5	9.7	60.5	61.3	46.1	27.6	23.1	38.4
SMDH 00572	817075.3	8191184.7	163.7	0	1	796.5	304.8	37.2	685.3	338.2	6178.1	200.0	222.3	194.3	5.7	28.0	49.4	47.2	10.7	11.6	44.0
SMDH 00572	817075.3	8191184.7	163.7	1	2	1455.8	616.1	62.7	873.3	716.9	13093.9	410.7	446.3	400.9	9.9	45.4	87.3	83.9	16.9	18.7	78.6
SMDH 00572	817075.3	8191184.7	163.7	2	3	1399.7	656.8	118.9	773.2	542.1	9901.5	432.3	505.8	413.2	19.1	92.6	116.0	99.8	35.3	38.2	86.9
SMDH 00572	817075.3	8191184.7	163.7	3	4	918.6	550.7	52.0	262.6	334.5	6109.2	362.6	393.8	353.4	9.2	40.4	92.9	92.1	12.3	18.9	81.3
SMDH 00572	817075.3	8191184.7	163.7	4	5	1328.9	604.5	86.7	764.1	566.3	10343.6	395.9	453.7	379.1	16.7	74.5	119.5	102.8	21.5	36.3	99.1
SMDH 00572	817075.3	8191184.7	163.7	5	6	1358.9	627.0	80.3	686.9	622.1	11362.8	409.7	460.1	397.0	12.7	63.2	108.3	99.6	21.5	29.0	92.4
SMDH 00572	817075.3	8191184.7	163.7	6	7	891.6	407.0	55.2	418.5	425.9	7780.0	269.9	301.0	263.5	6.4	37.5	68.3	67.0	16.9	14.2	63.1
SMDH 00572	817075.3	8191184.7	163.7	7	8	1111.2	522.6	57.8	467.6	549.6	10039.3	347.7	379.7	340.3	7.4	39.3	83.2	84.2	16.9	15.1	78.1
SMDH 00572	817075.3	8191184.7	163.7	8	9	1289.8	598.1	63.1	532.2	660.9	12071.9	396.5	432.4	387.1	9.4	45.3	100.6	100.4	16.9	19.0	86.9
SMDH 00572	817075.3	8191184.7	163.7	9	10	1172.1	526.8	61.3	549.8	588.3	10745.6	346.9	382.3	337.8	9.1	44.5	89.4	87.1	16.9	18.5	75.5
SMDH 00572	817075.3	8191184.7	163.7	10	11	1380.7	691.5	71.9	506.8	656.4	11988.6	458.1	500.0	446.3	11.8	53.7	115.2	112.9	18.4	23.5	102.3
SMDH 00572	817075.3	8191184.7	163.7	11	12	1443.5	706.5	77.0	703.4	626.8	11448.9	466.8	511.1	455.6	11.3	55.6	117.3	116.3	21.5	22.9	102.2
SMDH 00572	817075.3	8191184.7	163.7	12	13	1227.7	583.2	74.7	535.0	574.6	10495.8	384.9	428.7	375.3	9.5	53.4	95.5	93.0	23.0	20.8	89.3
SMDH 00572	817075.3	8191184.7	163.7	13	14	1322.9	614.8	83.2	660.6	595.8	10883.4	402.2	454.6	390.3	11.9	64.3	107.1	98.3	24.5	27.8	92.4
SMDH 00572	817075.3	8191184.7	163.7	14	15	1567.2	783.6	86.2	668.8	696.7	12726.4	525.6	574.0	515.0	10.6	59.0	126.5	129.2	26.1	22.4	127.7
SMDH 00573	816234.3	8193843.2	166.0	0	1	3365.9	1638.7	116.1	2662.5	1090.5	19917.9	1062.2	1141.5	1030.9	31.3	110.5	245.9	226.6	15.3	63.9	255.3
SMDH 00573	816234.3	8193843.2	166.0	1	2	1562.0	588.3	100.3	682.3	944.9	17259.5	384.8	445.9	370.3	14.4	75.6	105.8	92.3	30.7	30.5	82.0
SMDH 00573	816234.3	8193843.2	166.0	2	3	1373.3	727.4	64.2	782.1	476.9	8710.1	479.1	518.3	468.6	10.4	49.7	118.5	118.1	15.3	23.9	109.4
SMDH 00573	816234.3	8193843.2	166.0	3	4	1477.2	736.4	89.1	583.3	670.5	12247.0	477.4	537.1	460.3	17.1	76.8	132.3	116.9	21.5	38.2	105.8
SMDH 00573	816234.3	8193843.2	166.0	4	5	1529.2	810.6	88.1	654.0	607.2	11090.1	527.7	585.8	511.4	16.3	74.3	143.0	132.1	21.5	36.6	116.8
SMDH 00573	816234.3	8193843.2	166.0	5	6	1248.3	604.4	63.1	522.4	596.5	10894.8	400.9	433.4	394.4	6.5	39.0	86.9	93.5	19.9	12.6	88.4
SMDH 00573	816234.3	8193843.2	166.0	6	7	1252.8	656.9	60.8	376.1	598.4	10929.3	435.0	467.1	427.2	7.8	39.9	96.1	101.9	16.9	15.2	98.3
SMDH 00573	816234.3	8193843.2	166.0	7	8	1485.5	735.8	70.2	639.5	684.6	12505.4	486.3	526.1	475.7	10.7	50.4	119.1	121.5	18.4	21.3	108.1
SMDH 00573	816234.3	8193843.2	166.0	8	9	1327.4	645.9	74.2	681.8	560.6	10240.3	423.6	469.2	411.8	11.8	57.4	111.5	106.4	19.9	25.7	92.9
SMDH 00573	816234.3	8193843.2	166.0	9	10	1192.5	534.1	73.1	585.1	573.7	10478.6	349.8	395.8	338.6	11.2	57.2	91.6	83.1	21.5	24.5	78.6
SMDH 00573	816234.3	8193843.2	166.0	10	11	1254.9	579.4	76.9	474.4	644.4	11770.5	384.8	428.9	374.3	10.6	54.6	96.9	93.7	23.0	21.1	85.8
SMDH 00574	809836.5	8193888.1	156.3	0	1	672.2	247.1	43.3	409.8	361.2	6597.2	155.7	187.1	148.0	7.7	39.2	49.6	37.6	12.3	19.2	32.5
SMDH 00574	809836.5	8193888.1	156.3	1	2	961.3	361.9	75.1	581.9	487.2	8899.6	230.7	280.4	218.7	12.0	61.7	72.5	56.6	23.0	26.7	49.7
SMDH 00574	809836.5	8193888.1	156.3	2	3	1020.5	364.0	96.1	376.0	635.0	11598.2	230.9	295.3	216.5	14.3	78.8	80.2	55.9	30.7	33.8	49.4
SMDH 00574	809836.5	8193888.1	156.3	3	4	601.4	261.5	43.7	298.7	289.2	5282.4	168.2	196.2	162.1	6.1	34.1	47.9	41.9	13.8	14.2	37.1
SMDH 00574	809836.5	8193888.1	156.3	4	5	1581.2	699.9	83.8	1201.0	594.1	10851.8	453.2	509.1	437.4	15.8	71.7	123.8	111.8	21.5	34.4	99.2
SMDH 00574	809836.5	8193888.1	156.3	5	6	1336.3	642.1	81.0	838.0	496.7	9071.9	414.3	468.4	399.4	14.9	69.0	114.3	102.4	21.5	32.6	90.7
SMDH 00574	809836.5	8193888.1	156.3	6	7	2129.2	1069.1	98.4	1623.3	635.0	11598.2	695.6	760.8	674.7	20.9	86.0	177.7	169.1	21.5	43.7	151.3
SMDH 00574	809836.5	8193888.1	156.3	7	8	1551.7	1000.3	121.5	379.7	444.8	8124.5	620.2	729.8	582.8	37.5	147.0	211.9	150.8	18.4	91.2	133.0
SMDH 00574	809836.5	8193888.1	156.3	8	9	749.2	418.2	46.7	237.7	300.2	5483.3	271.6	301.9	263.2	8.4	38.7	71.9	67.4	12.3	18.0	61.8
SMDH 00574	809836.5	8193888.1	156.3	9	10	465.3	302.5	43.1	135.2	110.2	2012.5	190.2	223.5	182.7	7.5	40.8	61.4	45.9	10.7	22.6	42.0
SMDH 00574	809836.5	8193888.1	156.3	10	11	279.1	182.7	34.4	84.8	50.1	915.8	119.3	140.9	113.8	5.5	27.0	37.6	29.1	9.2	12.3	25.7
SMDH 00574	809836.5	8193888.1	156.3	11	12	273.9	186.5	35.3	66.6	44.3	809.6	121.2	144.2	115.3	6.0	28.9	39.3	29.5	9.2	13.7	26.2
SMDH 00574	809836.5	8193888.1	156.3	12	13	301.2	183.8	41.0	89.6	68.7	1254.6	116.0	145.2	108.5	7.5	36.8	43.3	28.4	10.7	18.5	24.4
SMDH 00574	809836.5	8193888.1	156.3	13	14	281.6	180.3	36.8	68.4	61.5	1122.5	117.9	139.9	112.9	5.0	27.0	35.1	28.0	10.7	11.2	25.7
SMDH 00574	809836.5	8193888.1	156.3	14	15	294.7	177.7	39.6	86.8	71.5	1306.2	112.9	140.0	106.2	6.6	33.8	39.6	26.9	10.7	16.4	24.0
SMDH 00574	809836.5	8193888.1	156.3	15	16	356.2	248.5	40.1	87.0	57.2	1045.0	160.2	188.3	152.2	8.0	36.1	51.1	38.2	9.2	18.9	34.9
SMDH 00574	809836.5	8193888.1	156.3	16	17	286.6	186.2	33.1	82.8	58.6	1070.8	119.1	142.8	112.7	6.4	30.1	40.4	28.3	7.7	16.0	25.6
SMDH 00574	809836.5	8193888.1	156.3	17	18	341.3	220.2	42.7	70.2	80.6	1472.7	138.5	170.8	128.9	9.6	41.9	52.4	34.1	9.2	23.1	29.4
SMDH 00574	809836.5	8193888.1	156.3	18	19	256.2	153.5	33.9	70.7	66.5	1214.4	99.0	121.4	93.3	5.7	28.1	33.4	23.8	9.2	13.2	21.6
SMDH 00574	809836.5	8193888.1	156.3	19	20	211.5	127.7	27.9	58.1	53.8	981.8	83.2	100.6	78.8	4.5	21.8	27.1	20.0	7.7	9.7	18.1
SMDH 00575	813787.1	8195606.2	165.9	0	1	907.1	309.2	66.4	588.3	494.5	9031.7	194.7	237.0	184.8	10.0	52.3	57.0	45.1	21.5	20.8	38.5
SMDH 00575	813787.1	8195606.2	165.9	1	2	1276.6	458.7	83.0	1054.2	571.8	10444.1	291.5	348.0	276.8	14.7	71.3	88.1	69.5	24.5	32.0	58.5
SMDH 00575	813787.1	8195606.2	165.9	2	3	1470.5	683.9	79.6	821.4	639.7	11684.3	440.8	496.7	424.8	16.0	71.9	121.1	107.4	19.9	35.9	95.9
SMDH 00575	813787.1	8195606.2	165.9	3	4	912.4	417.5	50.7	558.5	382.2	6981.9	272.3	306.2	262.2	10.1	43.9	75.2	66.8	12.3	21.6	58.1
SMDH 00575	813787.1	8195606.2	165.9	4	5	1230.9	508.1	73.3	612.4	654.0	11945.6	326.9	378.7	313.4	13.5	65.3	95.0	79.0	19.9	31.9	70.5
SMDH 00575	813787.1	8195606.2	165.9	5	6	948.2	396.1	59.7	666.1	401.9	7340.7	254.5	295.1	243.8	10.7	51.3	74.8	63.8	16.9	23.7	55.1
SMDH 00575	813787.1	8195606.2	165.9	6	7	1063.4	437.4	63.2	726.8	475.4	8684.3	282.0	326.9	270.0	11.9	56.9	85.8	71.4	16.9	28.1	59.9
SMDH 00576	816709.9	8195586.5	169.3	0	1	1512.9	610.2	71.0	1163.9	660.8	12069.0	398.7	448.4	384.5	14.2	64.0	113.4	99.5	16.9	32.9	91.9
SMDH 00576	816709.9	8195586.5	169.3	1	2	1555.6	629.0	77.4	1241.1	650.2	11876.7	412.5	465.7	397.3	15.2	68.4	117.0	103.0	18.4	34.8	93.9
SMDH 00576	816709.9	8195586.5	169.3	2	3	1759.4	763.8	101.2	1445.5	620.4	11331.2	491.3	559.2	471.7	19.6	87.5	137.1	119.0	26.1	41.8	107.2
SMDH 00576	816709.9	8195586.5	169.3	3	4	1034.2	221.5	94.2	225.5	933.3	17047.1	141.5	201.3	130.2	11.4	71.1	64.6	44.3	32.2	27.6	30.3
SMDH 00576	816709.9	8195586.5	169.3	4	5	1043.9	288.3	99.0	409.7	758.4	13851.8	185.2	246.0	173.5	11.7	72.5	66.6	50.8	35.3	25.5	37.2
SMDH 00576	816709.9	8195586.5	169.3	5	6	1540.4	573.7	126.4	820.0	833.0	15215.5	364.4	451.5	342.6	21.8	108.9	124.3	92.8	38.3	48.8	75.5
SMDH 00576	816709.9	8195586.5	169.3	6	7	1533.6	582.0	107.7	1037.8	736.8	13458.5	376.1	447.6	359.0	17.1	88.6	115.6	94.5	32.2	39.2	79.9
SMDH 00576	816709.9	8195586.5	169.3	7	8	1553.3	619.9	110.1	771.4	831.1	15181.0	398.6	473.3	379.8	18.8	93.5	125.6	102.7	32.2	42.5	85.3
SMDH 00576	816709.9	8195586.5	169.3	8	9	1335.3	525.1	79.2	713.0	724.9	13240.3	343.7	394.3	330.8	12.9	63.5	96.3	85.2	23.0	27.6	75.5
SMDH 00576	816709.9	8195586.5	169.3	9	10	1333.1	619.2	104.3	728.3	542.2	9904.4	399.5	470.9	379.3	20.2	91.6	126.2	101.1	27.6	43.8	84.7
SMDH 00576	816709.9	8195586.5	169.3	10	11	1727.9	732.2	136.7	810.5	864.4	15789.6	470.6	563.8	445.6	25.0	118.2	152.0	119.6	38.3	54.9	98.7
SMDH 00576	816709.9	8195586.5	169.3	11	12	1552.2	570.3	76.9	867.0	904.7	16524.6	378.4	426.1	366.8	11.7	59.3	97.7	91.8	23.0	24.6	89.1
SMDH 00576	816709.9	8195586.5	169.3	12	13	1836.8	508.5	182.0	754.5	1305.6	23848.1	312.3	436.2	285.2	27.1	151.0	128.0	80.0	61.4	62.5	63.9
SMDH 00576	816709.9	8195586.5	169.3	13	14	1222.5	221.8	160.1	259.3	1094.2	19986.8	134.1	232.5	118.5	15.6	114.0	70.5	38.9	61.4	37.1	24.7
SMDH 00576	816709.9	8195586.5	169.3	14	15	1950.5	576.2	143.8	783.3	1414.1	25829.0	375.0	458.4	359.5	15.5	98.9	106.7	94.0	52.1	31.2	80.3
SMDH 00576	816709.9	8195586.5	169.3	15	16	1524.2	291.6	135.1	440.2	1381.1	25226.1	187.0	265.7	174.4	12.6	91.3	66.8	48.3	52.1	26.5	36.9

BHID	East	North	AHD	FROM	TO	Mz EQ	monazite	xenotime	zircon	rutile	ilmenite	TREO	TREO+Y+Sc	LREO	HREO	HREO+Y+Sc	CREO	MagREO	Sc_2O_3	Y_2O_3	La_2O_3
units:	m	m	m	m	m	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SMDH 00577	816135.6	8197017.0	177.2	0	1	1204.9	491.1	55.8	1182.1	401.3	7329.3	321.6	356.5	312.1	9.5	44.4	76.1	71.5	15.3	19.6	65.0
SMDH 00577	816135.6	8197017.0	177.2	1	2	1348.0	539.3	100.4	580.3	753.6	13765.7	346.8	410.9	333.1	13.8	77.8	97.9	81.7	32.2	31.9	76.2
SMDH 00577	816135.6	8197017.0	177.2	2	3	1557.1	795.2	110.5	845.1	548.5	10019.2	518.7	595.8	493.8	24.9	102.0	159.3	131.5	24.5	52.6	116.7
SMDH 00577	816135.6	8197017.0	177.2	3	4	883.5	349.1	65.9	502.3	443.4	8098.6	222.9	265.6	212.6	10.3	53.0	65.7	53.3	19.9	22.7	47.5
SMDH 00577	816135.6	8197017.0	177.2	4	5	406.7	110.7	32.2	284.9	248.8	4544.5	68.7	88.8	64.4	4.4	24.4	23.5	16.8	10.7	9.3	16.1
SMDH 00577	816135.6	8197017.0	177.2	5	6	717.8	239.6	44.5	468.6	408.8	7467.1	155.3	184.6	148.8	6.5	35.8	45.9	37.6	13.8	15.5	34.0
SMDH 00577	816135.6	8197017.0	177.2	6	7	795.2	384.8	57.6	327.0	357.7	6534.0	246.1	285.8	235.6	10.4	50.2	73.4	60.8	15.3	24.4	52.9
SMDH 00577	816135.6	8197017.0	177.2	7	8	689.4	84.8	74.0	495.2	536.6	9801.1	53.4	95.0	48.5	4.8	46.4	23.2	13.6	30.7	10.9	10.9
SMDH 00580	815309.8	8202873.0	195.2	0	1	2398.0	919.9	99.7	1893.1	1111.8	20308.3	597.1	659.2	576.4	20.7	82.8	166.7	154.0	23.0	39.1	128.7
SMDH 00580	815309.8	8202873.0	195.2	1	2	2193.1	896.5	113.7	1732.5	903.9	16510.2	574.9	650.6	553.1	21.8	97.5	163.1	141.3	29.1	46.6	126.3
SMDH 00580	815309.8	8202873.0	195.2	2	3	1428.8	583.4	114.5	702.2	729.8	13329.3	370.0	448.9	348.2	21.8	100.7	122.0	93.5	32.2	46.7	77.8
SMDH 00580	815309.8	8202873.0	195.2	3	4	1562.6	690.8	202.2	671.5	655.6	11974.3	417.2	568.7	369.5	47.7	199.2	191.6	108.2	52.1	99.3	83.6
SMDH 00580	815309.8	8202873.0	195.2	4	5	3258.9	345.3	210.5	620.3	3617.5	66075.3	214.6	351.7	181.9	32.7	169.7	133.3	67.6	66.0	71.1	28.1
SMDH 00581	810876.3	8201871.0	178.4	0	1	1938.7	679.0	115.4	1379.5	1012.2	18488.2	433.4	516.8	408.9	24.5	107.9	138.2	103.1	29.1	54.2	90.8
SMDH 00581	810876.3	8201871.0	178.4	1	2	1544.9	527.1	96.4	1038.3	848.7	15502.5	332.0	399.6	313.2	18.8	86.4	106.5	80.3	26.1	41.5	71.4
SMDH 00581	810876.3	8201871.0	178.4	2	3	1906.9	760.9	107.0	1579.7	767.0	14009.7	488.4	562.8	467.1	21.3	95.8	142.5	118.4	27.6	46.9	106.3
SMDH 00581	810876.3	8201871.0	178.4	3	4	1925.9	706.6	116.3	1420.3	933.6	17052.8	457.0	536.0	435.3	21.7	100.7	136.0	109.2	32.2	46.9	104.8
SMDH 00581	810876.3	8201871.0	178.4	4	5	1527.0	676.3	84.4	830.0	721.4	13177.2	438.9	496.3	422.9	16.0	73.5	121.7	106.5	21.5	35.9	97.5
SMDH 00581	810876.3	8201871.0	178.4	5	6	1518.5	1018.9	69.7	633.1	326.9	5971.4	671.8	716.0	656.2	15.6	59.8	163.0	163.8	12.3	31.9	152.1
SMDH 00581	810876.3	8201871.0	178.4	6	7	1315.8	851.2	69.9	415.4	377.2	6890.0	558.7	604.1	544.8	13.9	59.3	137.5	134.3	15.3	30.1	127.7
SMDH 00581	810876.3	8201871.0	178.4	7	8	1615.2	886.9	82.8	914.4	507.7	9272.8	579.6	633.1	564.1	15.5	68.9	142.7	136.8	19.9	33.5	129.0
SMDH 00581	810876.3	8201871.0	178.4	8	9	2248.4	1051.7	116.5	1664.9	787.0	14374.3	684.9	761.3	660.2	24.6	101.1	178.0	161.5	27.6	48.9	147.9
SMDH 00581	810876.3	8201871.0	178.4	9	10	1974.1	1020.6	96.4	1359.4	606.7	11081.5	666.2	730.2	645.9	20.3	84.3	169.2	158.3	21.5	42.5	147.5
SMDH 00581	810876.3	8201871.0	178.4	10	11	2907.9	1419.4	139.6	2389.2	838.5	15315.9	924.2	1019.1	895.6	28.7	123.5	240.4	224.2	32.2	62.6	197.4
SMDH 00581	810876.3	8201871.0	178.4	11	12	1127.5	90.3	46.1	1055.6	941.5	17196.3	60.8	84.1	57.9	2.8	26.2	17.3	13.3	18.4	5.0	14.1
SMDH 00581	810876.3	8201871.0	178.4	12	13	1337.3	352.7	46.5	1101.7	843.4	15404.9	237.7	259.9	234.8	2.9	25.1	50.1	54.3	16.9	5.3	56.1
SMDH 00581	810876.3	8201871.0	178.4	13	14	1334.8	139.6	49.5	1092.7	1147.5	20960.0	96.0	120.2	93.5	2.5	26.7	23.8	22.3	19.9	4.2	23.1
SMDH 00581	810876.3	8201871.0	178.4	14	15	1319.1	65.0	44.7	1132.5	1221.1	22303.6	43.6	66.7	41.1	2.4	25.5	14.3	10.0	18.4	4.7	10.1
SMDH 00581	810876.3	8201871.0	178.4	15	16	1082.8	74.7	35.3	994.9	943.2	17227.9	50.7	68.4	48.4	2.3	20.0	14.6	11.4	13.8	3.9	11.3
SMDH 00581	810876.3	8201871.0	178.4	16	17	1029.5	90.7	39.1	904.9	879.4	16062.4	61.2	81.3	58.8	2.4	22.4	16.9	13.3	15.3	4.7	14.0
SMDH 00581	810876.3	8201871.0	178.4	17	18	785.2	69.8	32.6	768.3	629.5	11497.7	49.7	64.8	47.6	2.0	17.2	13.0	10.0	12.3	2.9	11.5
SMDH 00582	811537.2	8202962.1	182.7	0	1	1148.4	494.2	83.0	549.5	570.1	10412.5	315.8	371.8	301.0	14.8	70.8	94.9	76.5	23.0	33.0	68.8
SMDH 00582	811537.2	8202962.1	182.7	1	2	1197.7	362.5	98.1	565.4	802.2	14652.8	228.6	293.8	214.5	14.1	79.3	78.9	56.1	32.2	33.0	49.5
SMDH 00582	811537.2	8202962.1	182.7	2	3	1157.3	362.8	86.2	516.4	783.5	14311.1	229.2	288.3	214.8	14.4	73.5	80.0	57.0	26.1	33.0	48.7
SMDH 00582	811537.2	8202962.1	182.7	3	4	1429.5	539.3	93.2	785.3	786.6	14368.6	346.3	409.0	329.5	16.8	79.5	106.0	85.7	26.1	36.6	73.8
SMDH 00582	811537.2	8202962.1	182.7	4	5	1791.5	878.3	94.2	1089.0	677.1	12367.6	572.6	633.6	554.0	18.6	79.5	149.5	140.0	23.0	38.0	125.1
SMDH 00582	811537.2	8202962.1	182.7	5	6	696.2	326.0	53.2	252.1	340.9	6226.9	210.8	244.3	203.4	7.4	40.9	56.5	50.4	16.9	16.6	47.4
SMDH 00582	811537.2	8202962.1	182.7	6	7	556.0	245.8	53.1	216.9	270.5	4940.7	156.5	190.8	148.5	8.0	42.2	48.3	38.1	16.9	17.4	33.2
SMDH 00582	811537.2	8202962.1	182.7	7	8	1509.8	748.7	98.1	667.9	647.4	11825.0	486.1	549.8	468.6	17.5	81.2	132.5	118.5	26.1	37.6	105.3
SMDH 00582	811537.2	8202962.1	182.7	8	9	1537.1	753.5	98.5	669.7	678.7	12396.3	490.6	553.6	472.7	17.9	80.9	133.4	120.5	26.1	37.0	105.4
SMDH 00582	811537.2	8202962.1	182.7	9	10	1461.3	682.8	90.8	785.5	628.7	11483.4	443.0	502.5	427.0	16.0	75.4	119.3	105.6	24.5	34.9	97.9
SMDH 00582	811537.2	8202962.1	182.7	10	11	1276.7	546.1	83.2	487.5	708.8	12947.5	355.3	408.0	342.4	12.9	65.6	97.1	85.8	24.5	28.1	76.9
SMDH 00582	811537.2	8202962.1	182.7	11	12	1399.3	668.2	92.4	646.7	622.4	11368.5	434.5	494.3	419.3	15.2	75.0	118.1	105.2	26.1	33.7	93.7
SMDH 00582	811537.2	8202962.1	182.7	12	13	1339.5	620.4	96.7	582.2	628.7	11483.4	397.0	464.0	378.9	18.1	85.1	119.2	96.5	26.1	40.9	85.4
SMDH 00582	811537.2	8202962.1	182.7	13	14	1359.4	645.8	86.5	674.7	592.5	10823.1	420.5	474.9	407.0	13.5	67.9	111.9	101.7	24.5	29.8	92.2
SMDH 00582	811537.2	8202962.1	182.7	14	15	1420.7	664.8	92.4	581.2	688.6	12577.2	429.6	492.2	414.4	15.1	77.8	119.5	103.3	26.1	36.6	94.8
SMMB 001	816553.8	8198191.2	184.0	0	1	1009.0	459.9	50.2	625.5	430.2	7857.5	297.7	329.6	288.1	9.6	41.5	77.9	73.3	12.3	19.6	68.0
SMMB 001	816553.8	8198191.2	184.0	1	2	1257.2	536.7	114.7	567.6	611.6	11170.4	327.7	423.4	302.5	25.2	120.9	137.3	83.7	27.6	68.1	69.7
SMMB 001	816553.8	8198191.2	184.0	2	3	1391.3	602.5	127.9	443.0	749.1	13682.4	381.5	472.9	355.8	25.8	117.2	135.0	96.7	33.7	57.7	84.9
SMMB 001	816553.8	8198191.2	184.0	3	4	1261.0	444.6	127.1	558.4	736.5	13452.8	272.8	365.5	248.1	24.7	117.4	110.2	67.8	36.8	55.9	57.8
SMMB 001	816553.8	8198191.2	184.0	4	5	1207.4	456.8	104.4	473.9	713.4	13030.8	290.1	362.2	271.6	18.6	90.6	100.6	73.8	30.7	41.4	64.0
SMMB 001	816553.8	8198191.2	184.0	5	6	1257.9	498.5	91.2	677.6	650.5	11882.4	321.8	384.2	303.6	18.2	80.6	103.0	81.8	24.5	37.8	72.1
SMMB 001	816553.8	8198191.2	184.0	6	7	1044.7	406.3	75.3	629.5	521.0	9516.8	261.4	312.1	247.7	13.7	64.4	83.1	67.2	21.5	29.2	54.3
SMMB 001	816553.8	8198191.2	184.0	7	8	1026.9	421.3	93.7	571.7	473.9	8655.6	262.9	333.5	242.1	20.7	91.4	99.8	65.8	24.5	46.1	53.6
SMMB 001	816553.8	8198191.2	184.0	8	9	1251.8	504.9	87.7	478.0	730.2	13337.9	328.6	388.4	314.2	14.4	74.2	98.4	79.5	26.1	33.7	85.1
SMMB 001	816553.8	8198191.2	184.0	9	10	1306.7	546.5	101.5	635.4	656.4	11988.6	355.6	421.8	338.6	16.9	83.1	110.9	90.1	29.1	37.1	74.8
SMMB 001	816553.8	8198191.2	184.0	10	11	1442.7	684.0	104.2	604.1	664.8	12143.7	449.7	515.9	429.9	19.8	86.0	127.8	111.3	27.6	38.6	97.7
SMMB 001	816553.8	8198191.2	184.0	11	12	1280.8	549.8	98.8	562.9	652.0	11908.3	353.6	421.3	333.5	20.0	87.8	111.6	86.1	26.1	41.7	75.3
SMMB 001	816553.8	8198191.2	184.0	12	13	1079.3	339.9	76.7	740.8	613.1	11199.2	217.5	268.4	205.0	12.5	63.4	71.1	52.3	23.0	27.9	46.6
SMMB 001	816553.8	8198191.2	184.0	13	14	1651.3	853.7	98.3	767.3	653.8	11942.7	565.2	625.8	548.2	17.0	77.6	143.6	137.3	26.1	34.5	125.8
SMMB 001	816553.8	8198191.2	184.0	14	15	1337.3	644.2	72.9	525.3	652.0	11908.3	439.8	479.2	431.6	8.3	47.6	99.5	104.1	23.0	16.4	114.2
SMMB 001	816553.8	8198191.2	184.0	15	16	1088.2	454.9	79.8	456.9	587.4	10728.3	294.7	347.4	281.5	13.2	65.9	88.1	71.3	23.0	29.7	65.9
SMMB 001	816553.8	8198191.2	184.0	16	17	955.4	406.0	71.6	388.8	509.7	9310.1	264.7	310.3	253.7	11.0	56.6	77.0	64.9	21.5	24.1	57.3
SMMB 001	816553.8	8198191.2	184.0	17	18	593.8	244.2	43.2	380.3	265.9	4857.5	159.3	186.1	153.4	6.0	32.7	43.2	37.3	13.8	13.0	36.9
SMMB 001	816553.8	8198191.2	184.0	18	19	719.2	214.4	54.8	306.6	507.8	9275.7	139.6	173.3	132.5	7.1	40.7	41.5	31.9	18.4	15.2	30.1
SMMB 001	816553.8	8198191.2	184.0	19	20	1058.7	373.0	77.5	503.8	644.7	11776.2	243.6	291.1	231.1	12.5	60.0	71.1	61.0	24.5	23.0	52.8
SMMB 001	816553.8	8198191.2	184.0	20	21	823.8	294.1	77.1	389.3	473.1	8641.2	184.0	239.1	166.3	17.7	72.9	73.8	47.4	19.9	35.2	36.7
SMMB 001	816553.8	8198191.2	184.0	21	22	503.9	115.5	42.5	298.1	361.3	6600.1	74.7	100.8	68.4	6.3	32.4	27.7	18.1	13.8	12.3	16.0
SMMB 001	816553.8	8198191.2	184.0	22	23	944.5	322.6	77.6	442.2	580.9	10610.6	210.0	257.6	197.4	12.6	60.3	65.0	52.7	24.5	23.1	44.0
SMMB 001	816553.8	8198191.2	184.0	23	24	1102.7	401.8	87.3	631.9	592.9	10828.8	259.3	317.2	242.0	17.3	75.2	83.7	63.1	24.5	33.4	60.0
SMMB 001	816553.8	8198191.2	184.0	24	25	1118.5	362.0	85.1	683.0	652.7	11922.6	233.3	287.7	218.5	14.7	69.1	77.1	60.8	26.1	28.3	48.9

BHID	East	North	AHD	FROM	TO	Mz EQ	monazite	xenotime	zircon	rutile	ilmenite	TREO	TREO+Y+Sc	LREO	HREO	HREO+Y+Sc	CREO	MagREO	Sc_2O_3	Y_2O_3	La_2O_3
units:	m	m	m	m	m	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SMMB 001	816553.8	8198191.2	184.0	25	26	1069.9	383.2	78.4	503.8	644.7	11776.2	247.3	299.5	233.3	14.0	66.2	79.3	62.7	23.0	29.2	52.7
SMMB 001	816553.8	8198191.2	184.0	26	27	1191.3	295.6	75.4	913.8	760.6	13892.0	188.6	237.9	175.5	13.1	62.4	62.6	45.5	23.0	26.3	39.9
SMMB 001	816553.8	8198191.2	184.0	27	28	1491.8	324.6	60.6	1005.0	1131.8	20672.9	216.6	248.6	210.6	5.9	37.9	53.6	54.3	21.5	10.5	48.0
SMMB 001	816553.8	8198191.2	184.0	28	29	618.2	144.3	112.4	940.5	85.3	1558.9	89.6	155.0	81.3	8.3	73.6	38.4	22.3	46.0	19.3	19.4
SMMB 001	816553.8	8198191.2	184.0	29	30	1191.5	301.9	112.2	686.9	803.9	14684.4	190.4	262.8	175.4	14.9	87.3	70.5	46.4	39.9	32.5	44.3
SMMB 001	816553.8	8198191.2	184.0	30	31																
SMMB 001	816553.8	8198191.2	184.0	31	32																
SMMB 002	810675.6	8190095.2	157.0	0	1	453.9	264.3	46.2	230.7	100.0	1825.9	162.4	201.6	149.6	12.8	52.0	64.8	40.9	7.7	31.5	33.8
SMMB 002	810675.6	8190095.2	157.0	1	2	394.7	263.5	46.2	97.3	77.6	1418.2	172.6	203.6	164.4	8.3	39.2	56.8	43.8	10.7	20.2	40.1
SMMB 002	810675.6	8190095.2	157.0	2	3	232.7	132.7	38.6	69.0	56.6	1033.5	80.1	110.1	71.9	8.3	38.3	38.2	20.3	9.2	20.8	16.1
SMMB 002	810675.6	8190095.2	157.0	3	4	188.6	92.8	36.8	79.3	48.3	881.3	54.0	82.2	46.0	8.0	36.2	30.7	13.3	9.2	19.0	10.3
SMMB 002	810675.6	8190095.2	157.0	4	5	243.3	150.5	35.1	54.5	58.2	1062.2	99.4	119.5	94.7	4.7	24.8	30.1	24.3	10.7	9.4	21.1
SMMB 002	810675.6	8190095.2	157.0	5	6	209.2	123.7	35.4	60.8	44.2	806.7	76.4	102.4	68.1	8.3	34.4	34.2	18.0	7.7	18.4	15.1
SMMB 002	810675.6	8190095.2	157.0	6	7	298.7	177.0	47.4	84.2	68.2	1245.9	110.8	145.1	97.0	13.8	48.1	49.8	28.9	9.2	25.1	21.6
SMMB 002	810675.6	8190095.2	157.0	7	8	173.3	102.1	34.4	53.9	28.1	513.9	56.0	87.8	43.5	12.5	44.3	39.2	13.6	4.6	27.2	9.9
SMMB 002	810675.6	8190095.2	157.0	8	9																
SMMB 002	810675.6	8190095.2	157.0	9	10	193.9	114.8	27.3	62.2	46.1	841.2	75.0	91.6	70.0	4.9	21.6	24.7	19.4	7.7	9.0	16.0
SMMB 002	810675.6	8190095.2	157.0	10	11	127.6	70.1	31.1	38.5	20.1	367.5	41.9	63.9	34.7	7.3	29.3	23.7	10.1	7.7	14.3	8.0
SMMB 002	810675.6	8190095.2	157.0	11	12	203.1	135.0	35.6	49.1	24.0	439.2	80.0	109.9	69.7	10.3	40.2	41.5	20.1	6.1	23.7	14.9
SMMB 002	810675.6	8190095.2	157.0	12	13	211.8	116.8	42.9	71.3	42.1	769.4	66.9	101.5	55.7	11.2	45.8	41.2	17.5	9.2	25.4	12.2
SMMB 002	810675.6	8190095.2	157.0	13	14	208.6	123.7	36.0	53.1	46.1	841.2	75.4	102.6	66.5	8.9	36.2	35.7	18.6	7.7	19.6	15.0
SMMB 002	810675.6	8190095.2	157.0	14	15	308.7	201.0	29.4	137.4	49.2	898.6	130.3	150.6	124.5	5.8	26.1	41.4	32.8	6.1	14.1	27.4
SMMB 002	810675.6	8190095.2	157.0	15	16	335.9	185.2	38.2	146.9	94.3	1722.5	119.7	144.2	113.8	6.0	30.4	36.2	27.8	10.7	13.7	25.3
SMMB 002	810675.6	8190095.2	157.0	16	17	204.2	138.5	27.8	64.8	24.7	450.7	86.8	108.1	81.2	5.6	26.9	34.0	21.7	6.1	15.1	17.8
SMMB 002	810675.6	8190095.2	157.0	17	18	172.9	110.9	20.7	71.2	26.7	488.0	71.1	85.2	67.3	3.8	18.0	24.4	17.1	4.6	9.5	14.5
SMMB 002	810675.6	8190095.2	157.0	18	19	221.1	132.1	33.5	84.4	41.0	749.3	78.1	106.1	71.2	6.9	34.9	36.9	19.2	7.7	20.3	15.6
SMMB 002	810675.6	8190095.2	157.0	19	20	193.3	128.4	26.9	71.4	21.7	396.2	80.0	100.8	73.1	6.9	27.7	33.3	19.7	4.6	16.3	15.7
SMMB 002	810675.6	8190095.2	157.0	20	21	161.6	107.7	26.4	47.3	17.8	324.4	67.2	87.1	60.0	7.2	27.1	30.6	17.6	4.6	15.2	12.8
SMMB 002	810675.6	8190095.2	157.0	21	22	159.0	102.6	28.5	48.0	18.1	330.1	62.2	84.3	55.4	6.9	28.9	29.1	15.4	6.1	15.9	12.0
SMMB 002	810675.6	8190095.2	157.0	22	23	194.2	120.4	34.5	83.5	18.1	330.1	71.1	99.5	60.8	10.4	38.7	37.2	17.5	6.1	22.2	13.3
SMMB 002	810675.6	8190095.2	157.0	23	24	183.0	124.5	31.1	41.7	20.1	367.5	75.9	100.3	67.9	8.0	32.4	33.8	18.8	6.1	18.3	14.9
SMMB 002	810675.6	8190095.2	157.0	24	25	213.1	131.6	42.8	64.0	26.1	476.6	77.1	111.3	66.0	11.1	45.3	43.2	20.8	9.2	25.0	13.5
SMMB 002	810675.6	8190095.2	157.0	25	26	161.7	106.8	37.0	42.8	6.0	109.1	58.1	91.7	46.3	11.8	45.4	39.6	13.7	6.1	27.4	10.7
SMMB 002	810675.6	8190095.2	157.0	26	27	239.5	154.0	48.3	68.4	22.0	401.9	84.2	129.7	68.3	15.9	61.4	56.4	21.4	7.7	37.8	14.9
SMMB 002	810675.6	8190095.2	157.0	27	28	192.5	125.0	28.7	51.6	32.1	585.7	77.0	99.2	70.7	6.3	28.4	31.5	18.6	6.1	16.0	15.5
SMMB 002	810675.6	8190095.2	157.0	28	29	218.9	134.1	32.3	102.4	28.1	513.9	81.7	108.1	71.8	9.9	36.2	39.2	20.7	4.6	21.7	15.2
SMMB 002	810675.6	8190095.2	157.0	29	30	213.9	120.1	35.8	85.3	44.2	806.7	72.3	99.4	65.5	6.8	33.9	33.4	18.5	9.2	17.9	14.4
SMDH 00303	812837.0	8202419.0	190.0	0	1	1427.3	631.1	101.4	667.1	693.9	12674.8	404.7	475.6	382.4	22.3	93.2	127.9	100.0	24.5	46.4	89.8
SMDH 00303	812837.0	8202419.0	190.0	1	2	1105.7	441.5	70.7	489.1	630.3	11512.1	285.6	333.7	271.4	14.1	62.3	87.5	70.0	18.4	29.7	62.9
SMDH 00304	813175.0	8202436.0	182.0	0	1	1545.8	759.7	95.5	959.7	551.7	10076.7	489.6	554.0	467.7	21.9	86.3	142.6	123.2	21.5	42.9	104.7
SMDH 00304	813175.0	8202436.0	182.0	1	2	1293.7	644.0	73.6	672.3	519.9	9496.7	416.1	467.0	401.1	15.0	65.9	119.9	105.6	16.9	34.0	90.5
SMDH 00295	813542.0	8202434.0	191.0	0	1	1623.7	919.1	73.1	1031.7	432.9	7906.3	598.9	647.5	581.3	17.6	66.2	157.9	150.6	12.3	36.3	129.9
SMDH 00295	813542.0	8202434.0	191.0	1	2	1115.8	626.5	56.7	491.1	396.9	7248.9	414.0	445.7	405.0	9.1	40.8	99.0	101.0	13.8	17.9	92.2
SMDH 00295	813542.0	8202434.0	191.0	2	3	1113.5	453.3	64.2	529.0	615.3	11239.3	297.0	333.9	288.6	8.4	45.3	74.8	71.4	19.9	17.0	65.1
SMDH 00305	813898.0	8202426.0	194.0	0	1	2774.0	1488.0	120.1	1428.5	1020.7	18643.3	970.7	1044.3	945.9	24.8	98.5	244.9	242.6	23.0	50.7	209.0
SMDH 00305	813898.0	8202426.0	194.0	1	2	1174.2	470.9	60.7	570.2	663.4	12117.8	310.3	343.6	302.7	7.6	40.9	75.7	75.4	18.4	14.9	69.9
SMDH 00305	813898.0	8202426.0	194.0	2	3	1516.0	750.3	76.8	662.9	687.3	12554.2	491.5	537.5	478.0	13.5	59.5	123.6	120.2	18.4	27.6	109.7
SMDH 00305	813898.0	8202426.0	194.0	3	4	1541.6	797.3	73.9	628.8	676.5	12356.1	527.3	568.5	514.4	13.0	54.1	129.4	131.5	16.9	24.3	117.7
SMDH 00306	814272.0	8202437.0	196.0	0	1	1128.1	340.6	58.6	894.7	637.5	11644.1	218.3	256.3	208.9	9.4	47.4	65.6	54.5	16.9	21.1	48.2
SMDH 00306	814272.0	8202437.0	196.0	1	2	931.0	249.1	43.2	748.5	574.9	10501.5	166.7	190.9	161.3	5.4	29.6	44.6	41.4	13.8	10.4	39.5
SMDH 00306	814272.0	8202437.0	196.0	2	3	1361.5	687.3	88.8	587.7	572.7	10461.4	443.5	502.5	426.4	17.1	76.1	125.2	111.7	23.0	36.1	98.0
SMDH 00307	814633.0	8202453.0	200.0	0	1	1313.0	585.0	74.1	568.2	680.7	12433.6	378.0	426.3	365.1	13.0	61.2	104.5	94.6	19.9	28.3	84.9
SMDH 00307	814633.0	8202453.0	200.0	1	2	1220.7	540.3	61.1	576.5	626.8	11448.9	351.4	389.8	340.0	11.4	49.8	93.6	88.0	15.3	23.1	79.6
SMDH 00307	814633.0	8202453.0	200.0	2	3	1617.9	713.3	70.5	770.2	847.2	15473.8	473.2	518.1	459.4	13.8	58.7	118.6	115.0	16.9	28.1	117.5
SMDH 00307	814633.0	8202453.0	200.0	3	4	1178.9	380.3	55.9	783.5	709.0	12950.4	251.6	282.4	245.2	6.5	37.2	59.5	59.4	18.4	12.3	57.5
SMDH 00308	815072.0	8202301.0	194.0	0	1	1442.5	473.6	105.3	1212.9	684.0	12493.9	294.7	369.5	275.8	18.9	93.8	103.2	72.7	30.7	44.2	63.0
SMDH 00308	815072.0	8202301.0	194.0	1	2	1090.5	346.4	92.9	687.4	621.3	11348.4	217.7	278.6	204.8	12.8	73.7	75.5	55.1	30.7	30.2	46.2
SMDH 00308	815072.0	8202301.0	194.0	2	3	693.6	313.0	52.8	415.5	280.6	5124.5	201.6	235.2	192.8	8.8	42.5	59.2	50.5	15.3	18.3	43.6
SMDH 00308	815072.0	8202301.0	194.0	3	4	1940.0	792.6	111.0	1520.5	790.7	14443.2	512.7	582.3	493.6	19.1	88.7	143.4	128.9	30.7	38.9	111.7
SMDH 00291	813554.0	8196438.0	176.0	0	1	2374.4	1370.3	106.3	1399.9	646.5	11807.8	891.6	955.4	867.6	24.1	87.8	230.4	233.7	18.4	45.3	188.7
SMDH 00291	813554.0	8196438.0	176.0	1	2	1316.9	600.2	65.4	713.0	609.7	11136.0	391.7	429.5	380.8	10.9	48.7	107.1	106.6	16.9	21.0	84.8
SMDH 00291	813554.0	8196438.0	176.0	2	3	1104.8	616.8	62.9	332.2	459.7	8397.2	399.4	436.4	388.4	11.0	48.1	104.2	103.2	15.3	21.7	86.1
SMDH 00291	813554.0	8196438.0	176.0	3	4	1009.3	545.5	50.3	384.6	418.7	7647.9	359.4	384.8	352.9	6.5	31.8	85.5	92.8	13.8	11.6	78.3
SMDH 00309	815323.0	8202411.0	191.0	0	1	2072.7	873.9	93.7	1417.6	937.8	17130.3	566.3	625.1	546.8	19.5	78.3	154.8	146.4	21.5	37.3	124.3
SMDH 00309	815323.0	8202411.0	191.0	1	2	1196.8	482.3	67.1	545.7	681.8	12453.7	311.2	353.6	298.4	12.8	55.2	91.2	81.9	16.9	25.5	65.7
SMDH 00309	815323.0	8202411.0	191.0	2	3	1227.1	612.3	73.5	493.0	553.1	10102.5	395.2	443.3	379.4	15.8	63.9	113.7	103.4	16.9	31.2	84.4
SMDH 00311	816071.0	8202444.0	198.0	0	1	1864.0	847.8	83.0	1236.4	773.8	14133.2	551.9	604.9	535.1	16.9	69.8	152.5	145.9	18.4	34.5	123.0
SMDH 00311	816071.0	8202444.0	198.0	1	2	1393.6	704.4	81.3	578.3	609.7	11136.0	457.7	510.9	441.8	15.9	69.1	128.1	118.1	19.9	33.3	101.3
SMDH 00311	816071.0	8202444.0	198.0	2	3	918.3	339.7	58.5	651.3	448.7	8196.3	222.5	258.5	213.0	9.6	45.5	64.4	55.2	16.9	19.0	49.0
SMDH 00310	815697.0	8202471.0	197.0	0	1	1141.9	529.6	73.1	677.0	464.4	8483.3	343.0	390.2	328.5	14.4	61.7	99.6	88.0	18.4	28.8	75.2
SMDH 00310	815697.0	8202471.0	197.0	1	2	1433.3	667.2	98.5	964.8	516.3	9430.7	429.9	494.2	410.1	19.8	84.1	141.1	124.1	24.5	39.7	100.3

BHID	East	North	AHD	FROM	TO	Mz EQ	monazite	xenotime	zircon	rutile	ilmenite	TREO	TREO+Y+Sc	LREO	HREO	HREO+Y+Sc	CREO	MagREO	Sc_2O_3	Y_2O_3	La_2O_3
units:	*m*	*m*	*m*	*m*	*m*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*
SMDH 00310	815697.0	8202471.0	197.0	2	3	1771.1	817.6	112.2	1340.2	592.5	10823.1	523.9	603.9	495.7	28.2	108.2	167.7	136.6	23.0	57.0	109.1
SMDH 00312	816400.0	8202460.0	202.0	0	1	1946.6	848.4	104.7	1023.0	960.0	17535.1	545.1	618.9	521.1	24.0	97.8	162.1	134.4	21.5	52.3	117.3
SMDH 00312	816400.0	8202460.0	202.0	1	2	1574.3	645.5	102.2	705.8	866.3	15824.1	413.7	483.1	391.1	22.6	92.1	128.6	100.4	23.0	46.5	85.7
SMDH 00312	816400.0	8202460.0	202.0	2	3	2394.4	1275.7	112.6	1329.4	835.8	15267.1	828.8	896.8	806.2	22.6	90.6	209.1	202.8	21.5	46.5	174.4
SMDH 00312	816400.0	8202460.0	202.0	3	4	929.3	294.2	50.7	547.4	589.9	10774.3	184.9	221.2	175.1	9.9	46.1	60.9	44.9	12.3	24.0	38.7
SMDH 00312	816400.0	8202460.0	202.0	4	5	1162.0	177.5	65.4	974.2	875.1	15984.9	106.6	151.3	95.6	11.0	55.7	47.8	26.8	19.9	24.8	20.3
SMDH 00313	816774.0	8202445.0	199.0	0	1	1198.7	462.9	73.7	610.8	672.7	12287.2	297.0	348.1	281.0	15.9	67.1	93.5	71.7	16.9	34.3	63.2
SMDH 00313	816774.0	8202445.0	199.0	1	2	1463.9	619.7	99.6	549.2	820.6	14988.7	398.0	467.5	376.0	22.0	91.5	127.9	96.7	21.5	48.0	81.4
SMDH 00313	816774.0	8202445.0	199.0	2	3	1102.2	374.4	84.6	576.0	661.7	12086.2	236.4	295.1	220.3	16.1	74.8	84.5	58.0	23.0	35.7	50.1
SMDH 00325	810969.0	8200913.0	182.0	0	1	1611.7	789.7	97.7	822.9	664.1	12129.3	521.1	574.9	510.4	10.7	64.5	121.8	124.9	32.2	21.6	118.9
SMDH 00325	810969.0	8200913.0	182.0	1	2	1038.4	303.3	87.8	621.5	646.5	11807.8	197.3	248.6	188.3	9.1	60.3	55.4	44.1	32.2	19.0	37.1
SMDH 00325	810969.0	8200913.0	182.0	2	3	807.6	209.0	63.9	592.5	497.1	9080.5	139.6	173.7	134.4	5.2	39.2	37.8	33.9	24.5	9.5	30.4
SMDH 00325	810969.0	8200913.0	182.0	3	4	823.9	196.8	119.5	491.7	505.0	9224.0	126.0	195.0	116.1	9.9	78.9	49.2	32.6	47.5	21.5	26.9
SMDH 00324	810618.0	8200985.0	181.0	0	1	984.5	453.7	76.9	464.3	440.1	8038.4	301.5	346.8	289.9	11.6	56.9	83.2	75.2	23.0	22.4	64.6
SMDH 00324	810618.0	8200985.0	181.0	1	2	817.9	278.9	77.4	434.6	464.9	8492.0	182.2	228.6	172.0	10.2	56.6	57.5	44.6	26.1	20.3	38.8
SMDH 00324	810618.0	8200985.0	181.0	2	2.5	692.9	232.9	83.4	403.0	356.8	6516.8	146.1	201.0	133.8	12.3	67.2	57.8	36.6	27.6	27.3	28.7
SMDH 00299	811346.0	8202433.0	180.0	0	1	1517.3	508.4	94.0	1085.3	817.6	14934.1	326.7	387.8	310.9	15.8	76.9	99.9	81.4	27.6	33.5	71.0
SMDH 00299	811346.0	8202433.0	180.0	1	2	1359.3	433.6	91.9	837.8	815.4	14893.9	274.0	336.6	258.7	15.3	77.9	89.1	65.9	27.6	35.0	57.6
SMDH 00298	811028.0	8202440.0	188.0	0	1	787.0	234.8	118.6	352.5	462.7	8451.8	149.1	216.1	140.1	9.1	76.0	50.0	37.7	47.5	19.4	29.2
SMDH 00298	811028.0	8202440.0	188.0	1	2	387.1	58.2	77.7	107.4	313.2	5721.6	34.7	77.8	30.4	4.2	47.4	18.4	10.5	33.7	9.4	5.4
SMDH 00298	811028.0	8202440.0	188.0	2	2.5	429.7	70.1	83.1	154.3	327.9	5988.6	43.0	89.6	38.2	4.8	51.4	21.9	12.5	35.3	11.3	6.6
SMDH 00302	812457.0	8202439.0	186.0	0	1	1451.0	605.9	81.5	982.2	646.9	11816.4	390.1	445.5	371.0	19.1	74.5	120.1	102.1	18.4	37.0	85.8
SMDH 00302	812457.0	8202439.0	186.0	1	2	1172.8	646.4	60.4	501.9	440.1	8038.4	418.5	457.9	404.3	14.1	53.6	116.9	110.8	12.3	27.2	91.0
SMDH 00302	812457.0	8202439.0	186.0	2	3	1298.5	675.5	91.6	430.9	567.7	10369.5	430.4	491.0	411.2	19.3	79.8	128.4	112.7	23.0	37.6	91.9
SMDH 00302	812457.0	8202439.0	186.0	3	3.85	1422.2	737.2	92.8	521.4	613.3	11202.0	472.4	536.2	453.8	18.7	82.4	137.8	119.6	23.0	40.8	101.3
SMDH 00297	810658.0	8202439.0	182.0	0	1	2104.2	807.0	108.7	1757.4	900.4	16447.1	517.9	592.1	495.7	22.1	96.3	148.5	126.5	26.1	48.1	110.0
SMDH 00297	810658.0	8202439.0	182.0	1	2	2548.4	1020.9	112.7	2554.6	856.9	15651.8	658.7	735.8	633.4	25.3	102.4	180.1	160.4	24.5	52.6	141.7
SMDH 00297	810658.0	8202439.0	182.0	2	3	3089.8	1205.9	133.2	3187.9	1047.7	19137.0	777.3	866.9	749.9	27.4	117.0	209.3	188.4	30.7	58.9	169.4
SMDH 00296	810297.0	8202439.0	186.0	0	1	3079.9	1396.1	126.1	2931.6	888.0	16220.3	904.2	990.1	875.8	28.4	114.3	241.2	226.1	24.5	61.3	196.0
SMDH 00296	810297.0	8202439.0	186.0	1	2	361.0	63.5	19.4	315.2	255.2	4662.2	44.6	54.0	42.4	2.3	11.6	12.7	9.9	6.1	3.2	10.6
SMDH 00296	810297.0	8202439.0	186.0	2	2.3	286.1	47.2	15.6	197.1	231.0	4220.1	34.6	41.1	32.6	2.0	8.5	10.1	8.0	4.6	1.9	7.7
SMDH 00300	811738.0	8202439.0	187.0	0	1	1454.2	704.1	55.3	910.3	580.9	10610.6	461.6	495.8	448.3	13.3	47.5	119.4	117.9	9.2	25.0	101.1
SMDH 00300	811738.0	8202439.0	187.0	1	1.45	2273.8	1282.3	134.5	775.1	878.0	16036.5	814.9	921.3	772.2	42.7	149.1	265.2	218.2	18.4	88.0	178.6
SMDH 00301	812098.0	8202439.0	185.0	0	1	1239.7	438.3	71.6	971.6	602.9	11012.6	281.6	332.0	264.5	17.1	67.5	96.8	76.3	16.9	33.5	61.9
SMDH 00301	812098.0	8202439.0	185.0	1	2	1224.0	489.6	78.1	800.0	576.5	10530.3	314.4	369.4	296.0	18.4	73.4	101.3	79.9	18.4	36.6	70.3

BHID	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	ThO_2	U_3O_8	Nb_2O_5	TiO_2	$FeTiO_3$	HfO_2	ZrO_2	Moist	BD
units:	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*%*	
SMDH 00546	146.5	17.0	57.2	11.1	1.3	8.0	1.2	7.5	1.5	3.7	0.6	4.0	0.6	27.2	4.4	18.6	572.0	10447.0	11.1	492.9		
SMDH 00546	103.9	12.0	39.7	7.7	1.2	6.1	1.1	7.2	1.5	4.1	0.7	4.3	0.6	22.2	5.0	20.0	548.8	10025.0	11.7	518.3		
SMDH 00546	96.9	11.4	37.3	8.0	1.2	6.1	1.1	7.2	1.5	3.8	0.7	4.0	0.6	21.2	4.1	18.6	551.8	10079.5	10.1	423.7	0.79	1.44
SMDH 00546	85.1	9.9	33.8	6.5	1.0	5.0	0.8	5.3	1.1	2.9	0.3	3.1	0.3	15.9	3.5	17.2	535.5	9781.0	10.1	437.3		
SMDH 00546	94.8	10.5	36.2	7.0	1.2	5.3	0.8	6.0	1.3	3.3	0.6	3.6	0.6	16.2	3.7	25.7	724.3	13228.8	10.7	475.2		
SMDH 00546	97.0	11.2	36.2	7.4	1.2	5.3	0.9	6.0	1.3	3.2	0.6	3.5	0.3	19.2	4.4	48.6	577.3	10544.6	10.6	444.5		1.38
SMDH 00546	102.7	11.7	40.8	7.9	1.3	6.0	1.1	6.5	1.4	3.7	0.6	3.8	0.6	18.5	4.2	21.5	577.3	10544.6	9.1	382.4	1.06	
SMDH 00546	121.7	13.8	46.7	8.9	1.6	6.9	1.2	7.6	1.6	4.0	0.7	4.2	0.7	21.8	6.6	25.7	595.4	10874.8	9.7	388.9		
SMDH 00546	124.3	14.0	47.8	10.2	1.6	7.1	1.2	7.7	1.6	4.0	0.7	4.3	0.6	23.4	6.5	27.2	659.3	12043.2	9.3	383.6		1.22
SMDH 00546	121.5	14.0	46.7	8.7	1.5	7.0	1.2	7.6	1.6	4.1	0.7	4.1	0.6	21.5	6.1	25.7	622.7	11374.3	8.0	328.1	10.18	
SMDH 00546	124.8	14.3	49.0	10.1	1.7	7.3	1.2	8.0	1.6	4.3	0.7	4.4	0.7	24.8	6.3	28.6	753.3	13759.9	8.0	308.7		
SMDH 00546	110.1	12.8	44.3	9.0	1.5	6.7	1.1	7.3	1.5	4.0	0.7	4.1	0.6	22.0	4.7	21.5	675.4	12336.0	9.0	351.7		1.19
SMDH 00546	115.8	13.4	46.7	9.5	1.6	6.7	1.1	7.2	1.4	3.9	0.6	3.9	0.6	23.6	5.0	25.7	684.3	12499.6	8.1	321.1		
SMDH 00546	112.0	12.9	44.3	9.4	1.5	6.7	1.1	7.2	1.5	4.0	0.7	4.3	0.6	22.9	5.4	20.0	664.4	12135.1	8.7	349.3		
SMDH 00546	117.4	13.7	47.8	9.9	1.6	7.0	1.2	7.5	1.5	4.1	0.7	4.2	0.6	24.0	4.8	27.2	717.0	13096.8	8.8	348.2	2.08	1.21
SMDH 00546	114.6	13.3	46.7	9.5	1.7	6.8	1.1	7.2	1.5	3.7	0.6	3.8	0.3	23.2	4.4	24.3	715.3	13065.2	7.1	270.4		
SMDH 00546	110.1	12.7	44.3	8.9	1.5	6.6	1.1	6.9	1.4	3.7	0.6	3.8	0.6	22.4	3.9	20.0	664.4	12135.1	8.0	313.5		
SMDH 00546	103.8	11.8	42.0	8.7	1.3	5.8	0.9	6.1	1.3	3.3	0.3	3.3	0.3	20.4	3.5	18.6	586.4	10711.1	9.1	378.6	1.14	1.22
SMDH 00546	107.1	12.6	43.2	8.3	1.2	6.0	0.9	5.7	1.1	3.2	0.3	3.1	0.3	20.1	3.4	18.6	554.2	10122.6	8.4	333.2	1.14	
SMDH 00546	107.0	12.8	44.3	8.6	1.3	6.0	0.9	6.0	1.1	3.3	0.6	3.5	0.3	19.1	3.5	17.2	599.8	10955.1	11.4	449.3		
SMDH 00546	97.4	11.0	38.5	7.0	1.3	5.1	0.7	4.7	0.9	2.9	0.3	3.2	0.3	17.9	3.1	15.7	448.6	8193.4	9.6	374.6		0.98
SMDH 00546	155.8	17.9	60.7	10.9	1.3	6.9	0.9	4.4	0.7	1.5	0.3	1.3	0.3	29.0	3.8	15.7	596.2	10889.1	9.8	374.0		
SMDH 00546	138.1	15.9	54.8	9.6	1.4	6.0	0.7	3.8	0.6	1.5	0.3	1.3	0.3	24.9	3.4	22.9	581.5	10622.1	7.7	289.1	1.37	
SMDH 00546	116.5	13.0	44.3	7.9	1.7	4.6	0.3	2.2	0.3	0.8	0.3	0.7	0.3	21.4	1.3	18.6	556.1	10157.0	2.9	116.3		1.4
SMDH 00546	211.7	24.2	84.0	14.7	2.3	8.6	0.8	3.2	0.3	1.0	0.3	0.3	0.3	39.4	1.7	14.3	568.5	10383.8	5.9	234.5		
SMDH 00546	141.8	16.1	54.8	10.1	1.7	6.3	0.7	3.7	0.7	1.7	0.3	1.6	0.3	26.1	2.1	15.7	499.5	9123.5	7.3	273.0		
SMDH 00546	95.3	10.5	37.3	6.5	1.9	4.1	0.3	2.3	0.3	0.8	0.3	0.8	0.3	16.2	1.4	11.4	350.2	6396.2	4.8	208.8	0.59	1.52
SMDH 00546	73.1	8.0	28.0	4.8	1.9	3.3	0.3	2.1	0.3	0.9	0.3	0.8	0.3	13.2	1.4	15.7	282.9	5167.5	3.4	153.6		
SMDH 00546	102.0	11.5	39.7	7.1	1.6	4.7	0.6	3.3	0.6	1.4	0.3	1.3	0.3	18.1	2.5	17.2	495.1	9043.2	6.4	267.5		
SMDH 00546	78.6	8.7	30.3	5.5	1.5	3.6	0.3	2.9	0.3	1.4	0.3	1.7	0.3	13.4	2.5	20.0	348.3	6361.8	5.0	215.5		1.47
SMDH 00547	97.8	11.4	39.7	7.8	0.8	4.8	0.7	3.8	0.6	1.5	0.3	1.4	0.3	17.4	2.0	7.2	278.4	5084.3	3.9	167.6		
SMDH 00547	111.0	13.5	45.5	9.0	1.5	5.6	0.8	3.9	0.7	1.5	0.3	1.3	0.3	18.9	2.4	5.7	197.1	3600.0	3.8	158.6		1.78

BHID	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	ThO_2	U_3O_8	Nb_2O_5	TiO_2	$FeTiO_3$	HfO_2	ZrO_2	Moist	BD
units:	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*%*	
SMDH 00547	124.8	14.9	51.3	11.0	2.4	6.8	0.8	4.6	0.7	1.7	0.3	1.4	0.3	23.3	3.1	11.4	206.4	3769.4	3.9	147.8		
SMDH 00547	113.7	13.7	46.7	9.3	1.3	5.4	0.7	3.1	0.3	0.9	0.3	0.8	0.3	19.9	1.8	8.6	218.9	3999.1	3.7	155.2	0.38	
SMDH 00548	180.1	20.9	68.8	12.4	1.4	7.8	1.1	5.6	1.0	2.7	0.3	2.7	0.3	34.0	2.2	15.7	411.0	7507.3	10.7	443.7		1.52
SMDH 00548	128.5	15.1	50.2	9.0	1.4	6.2	0.9	6.1	1.1	3.2	0.6	3.6	0.3	25.4	1.8	18.6	272.9	4983.8	5.9	236.8		
SMDH 00548	158.8	18.0	63.0	11.4	1.4	7.5	1.1	7.6	1.6	5.3	0.8	5.4	0.8	29.6	1.9	22.9	519.3	9485.3	10.3	432.3	1.11	
SMDH 00548	208.3	23.2	80.5	14.0	1.5	9.0	1.2	7.2	1.4	3.8	0.6	3.8	0.6	38.5	2.2	20.0	485.8	8873.8	9.6	408.8		1.48
SMDH 00548	218.2	24.3	84.0	15.0	1.7	9.8	1.4	8.7	1.8	5.1	0.8	5.5	0.8	39.6	2.8	30.0	554.5	10128.3	10.5	429.7		
SMDH 00548	197.6	23.8	81.6	16.2	1.9	11.1	1.4	7.8	1.5	3.5	0.7	4.1	0.7	38.2	2.6	22.9	690.3	12608.7	11.2	450.0	1.24	1.49
SMDH 00548	195.1	23.8	79.3	14.6	1.6	11.1	1.5	10.1	2.1	5.7	1.0	6.6	1.1	37.2	2.9	27.2	726.0	13260.4	11.9	496.0		
SMDH 00548	141.9	17.0	57.2	10.1	1.9	6.6	0.8	4.1	0.8	1.8	0.3	1.8	0.3	28.1	1.1	20.0	541.3	9887.2	7.5	356.7		
SMDH 00548	189.9	21.3	68.8	13.2	1.6	7.1	1.1	5.5	1.0	4.0	0.3	2.7	0.3	34.4	2.0	18.6	434.1	7929.3	8.8	361.1	0.68	1.68
SMDH 00548	212.0	25.5	84.0	16.4	1.7	10.0	1.3	6.3	1.1	3.0	0.3	2.7	0.3	40.1	3.2	24.3	647.2	11822.1	11.6	484.1		
SMDH 00548	206.0	24.2	75.8	14.5	2.4	9.1	1.1	4.5	0.7	1.5	0.3	1.0	0.3	37.1	2.1	20.0	533.1	9737.9	8.7	374.3	0.99	1.58
SMDH 00549	250.1	27.4	95.6	17.2	0.7	10.3	1.2	5.7	0.9	2.3	0.3	2.4	0.3	47.6	3.3	8.6	293.6	5362.7	21.5	958.0		
SMDH 00549	209.0	22.0	78.1	14.3	1.2	9.2	1.1	5.5	0.9	2.4	0.3	2.6	0.3	33.5	2.7	17.2	608.3	11110.2	13.1	557.6	1.73	
SMDH 00549	168.7	19.1	63.0	11.6	3.4	7.1	0.9	5.3	0.9	2.4	0.3	2.6	0.3	16.7	1.2	25.7	688.9	12582.9	10.0	434.4		
SMDH 00549	139.4	15.1	50.2	8.8	1.5	5.5	0.7	3.8	0.7	1.8	0.3	1.9	0.3	24.9	1.4	15.7	472.8	8635.5	7.4	322.7		
SMDH 00549	202.8	21.5	71.2	13.0	1.7	8.2	0.9	4.6	0.8	2.1	0.3	2.0	0.3	37.9	1.8	20.0	618.6	11299.6	11.1	498.2	0.98	
SMDH 00549	277.1	29.6	108.5	19.5	1.7	12.1	1.4	7.8	1.5	3.5	0.7	4.0	0.3	53.9	2.9	24.3	722.2	13191.5	10.1	437.3		
SMDH 00549	210.8	23.0	85.1	14.6	1.3	9.8	1.3	6.5	1.1	3.2	0.3	3.2	0.3	41.5	2.5	22.9	615.5	11242.2	11.0	439.8	1.15	1.55
SMDH 00549	210.8	22.7	84.0	14.6	1.7	9.1	1.1	4.9	0.8	1.8	0.3	1.6	0.3	42.3	2.2	20.0	608.7	11118.8	10.1	419.8		
SMDH 00549	237.3	25.7	96.8	18.0	1.3	10.6	1.3	6.5	1.0	2.5	0.3	2.6	0.3	46.1	2.5	24.3	670.0	12238.4	11.3	480.1		
SMDH 00549	175.2	19.2	65.3	11.0	1.4	7.6	0.9	4.9	0.9	2.4	0.3	1.7	0.3	33.3	1.9	17.2	536.9	9806.8	6.7	295.4		
SMDH 00549	135.0	14.5	50.2	8.6	1.6	5.5	0.7	3.9	0.7	1.7	0.3	1.7	0.3	23.9	1.4	18.6	633.4	11569.5	7.3	325.7		
SMDH 00549	148.5	16.9	56.0	9.2	1.3	6.2	0.7	3.7	0.7	2.2	0.3	1.9	0.3	26.7	1.5	27.2	568.5	10383.8	7.0	311.5	1.33	1.58
SMDH 00549	139.2	16.2	52.5	9.5	1.4	5.6	0.7	3.3	0.6	2.1	0.3	1.6	0.3	24.8	1.3	18.6	505.3	9229.8	7.7	337.2		
SMDH 00549	242.9	25.7	86.3	15.0	1.9	9.3	1.1	5.5	0.9	2.2	0.3	2.0	0.3	39.8	2.4	21.5	602.1	10998.2	10.1	455.2		
SMDH 00550	80.0	8.8	30.3	9.0	0.3	2.1	0.3	1.4	0.3	1.3	0.3	1.6	0.3	13.3	2.6	14.3	262.0	4785.7	6.0	496.1	1.55	
SMDH 00550	16.6	1.9	7.0	1.4	0.3	0.8	0.3	0.9	0.3	0.3	0.3	0.6	0.3	8.9	1.2	11.4	247.2	4515.8	2.5	116.7		
SMDH 00550	20.4	2.7	8.2	1.6	0.3	1.2	0.3	1.1	0.3	0.7	0.3	0.9	0.3	8.5	1.3	10.0	247.2	4515.8	2.8	123.9		
SMDH 00550	20.4	2.7	8.2	1.3	0.3	1.4	0.3	1.1	0.3	0.6	0.3	0.8	0.3	9.3	1.3	10.0	195.4	3568.5	2.6	102.4		1.69
SMDH 00550	14.9	2.1	5.8	1.0	0.3	0.8	0.3	1.1	0.3	0.6	0.3	0.9	0.3	10.8	1.1	10.0	243.8	4452.7	2.5	95.8	1.17	
SMDH 00550	11.4	1.6	4.7	0.9	0.3	1.0	0.3	1.4	0.3	0.7	0.3	0.8	0.3	6.8	0.9	8.6	200.6	3663.2	2.1	93.3		
SMDH 00550	9.2	1.1	3.5	0.3	0.3	0.8	0.3	1.0	0.3	0.3	0.3	0.3	0.3	6.1	0.9	7.2	194.6	3554.1	1.8	73.6		1.67
SMDH 00551	126.0	14.4	46.7	8.2	1.4	5.8	0.8	5.5	1.3	4.3	0.6	4.1	0.7	21.4	2.0	30.0	809.9	14793.5	11.0	513.3		
SMDH 00551	128.5	15.0	52.5	8.8	1.4	6.3	0.9	6.3	1.4	3.5	0.6	4.0	0.6	23.4	1.9	22.9	812.3	14836.5	12.1	474.9		
SMDH 00551	185.4	19.1	82.8	13.9	1.2	8.1	0.8	4.9	0.9	2.6	0.3	2.3	0.3	43.0	2.2	17.2	527.9	9643.2	9.9	431.2		
SMDH 00551	85.4	9.3	35.0	6.0	1.0	3.7	0.6	4.1	0.8	2.2	0.3	2.3	0.3	15.7	1.3	14.3	521.0	9516.8	5.9	239.4	1.39	
SMDH 00551	65.4	7.4	25.7	4.5	0.9	3.1	0.3	3.3	0.7	1.8	0.3	1.9	0.3	11.9	1.3	17.2	430.2	7857.5	5.9	235.3		1.4
SMDH 00551	129.2	14.7	51.3	9.5	1.6	6.6	0.9	6.3	1.3	3.3	0.7	3.9	0.6	23.2	2.1	22.9	851.1	15545.6	9.8	361.3		
SMDH 00551	154.5	17.8	61.8	10.8	1.3	7.1	1.1	6.7	1.3	3.4	0.6	3.9	0.7	29.7	2.4	18.6	689.4	12591.5	12.7	512.0		
SMDH 00551	167.1	20.8	68.8	12.6	1.7	7.7	1.1	6.9	1.4	3.8	0.7	4.3	0.7	28.6	2.8	35.8	774.9	14153.3	14.5	589.6	2.57	
SMDH 00551	354.4	40.8	141.1	23.8	1.9	15.8	1.9	9.8	1.7	4.2	0.7	4.2	0.7	68.4	4.0	27.2	656.0	11982.9	20.0	907.9		
SMDH 00551	54.2	6.4	24.5	5.0	1.2	3.9	0.6	3.9	0.8	2.1	0.3	1.8	0.3	7.3	1.3	11.4	748.1	13665.2	2.7	117.4		
SMDH 00551	98.4	13.0	44.3	8.5	2.1	5.9	0.9	6.0	1.3	3.1	0.3	3.1	0.3	9.1	1.5	41.5	1652.7	30186.9	3.7	154.5		1.44
SMDH 00551	49.3	7.0	28.0	7.0	2.0	6.7	1.2	7.8	1.7	4.1	0.8	4.3	0.7	6.8	1.5	22.9	2355.4	43022.4	5.1	209.4	1.48	
SMDH 00551	80.7	10.1	33.8	7.2	1.9	5.4	0.9	5.5	1.0	2.6	0.3	2.7	0.3	11.9	1.3	22.9	1119.5	20449.0	4.7	193.0		
SMDH 00551	61.5	7.7	28.0	7.7	2.1	6.2	1.1	7.7	1.5	3.8	0.7	4.1	0.6	7.2	1.8	21.5	1755.5	32064.4	4.4	178.6		1.41
SMDH 00551	32.9	4.2	15.2	3.9	1.5	3.6	0.6	3.9	0.8	1.7	0.3	1.8	0.3	2.4	0.6	17.2	216.4	3953.2	1.2	50.1		
SMDH 00551	53.8	5.8	22.2	5.5	1.7	5.3	0.8	6.3	1.4	3.4	0.3	3.3	0.3	6.7	1.9	21.5	1638.5	29928.5	4.5	192.6	0.83	
SMDH 00551	35.6	3.9	12.8	2.9	1.6	2.1	0.3	1.6	0.3	0.8	0.3	0.8	0.3	4.8	1.3	11.4	431.8	7886.2	5.5	207.2		
SMDH 00551	63.3	7.7	29.2	6.5	2.2	6.3	1.1	7.0	1.4	3.7	0.6	3.5	0.6	7.7	2.1	20.0	1728.6	31573.5	4.6	185.9		
SMDH 00553	281.2	40.0	129.5	23.4	1.2	14.5	1.6	9.3	1.7	4.6	0.7	4.8	0.8	40.4	4.5	18.6	534.9	9769.5	22.5	963.1	1.04	
SMDH 00553	201.2	21.1	70.0	13.2	1.3	8.2	1.2	6.9	1.4	3.9	0.7	4.4	0.8	37.9	2.5	25.7	693.0	12657.5	16.3	706.2		1.28
SMDH 00553	150.0	15.3	50.2	9.6	1.5	6.2	0.9	6.1	1.3	3.8	0.6	4.2	0.7	28.6	1.8	25.7	666.9	12181.0	10.4	455.5		
SMDH 00553	181.8	19.7	65.3	11.5	1.5	7.4	0.9	6.5	1.4	3.7	0.7	4.3	0.7	33.5	3.3	24.3	522.8	9548.4	10.3	461.6		
SMDH 00553	172.3	18.4	59.5	10.9	1.4	7.3	1.1	6.5	1.4	3.7	0.6	4.2	0.7	30.4	3.1	22.9	510.7	9327.4	11.1	476.0	0.72	1.46
SMDH 00553	153.1	16.8	56.0	10.0	1.4	6.6	0.9	6.2	1.3	3.8	0.7	4.3	0.7	25.0	2.5	25.7	591.3	10800.1	10.6	441.3		
SMDH 00553	168.2	17.3	63.0	10.6	1.5	7.4	1.1	7.7	1.7	6.5	0.8	6.5	0.9	27.5	2.0	20.0	588.0	10739.8	12.0	430.1		
SMDH 00553	221.8	24.3	80.5	13.6	1.6	8.4	1.1	6.0	1.1	2.9	0.3	3.0	0.3	38.9	1.5	24.3	755.5	13800.1	16.2	679.6		1.48
SMDH 00553	234.6	25.9	86.3	15.0	1.6	9.6	1.2	6.9	1.3	3.1	0.6	3.5	0.6	40.6	1.8	20.0	691.6	12631.7	14.3	584.9	0.43	
SMDH 00553	280.3	30.7	103.8	17.6	2.0	11.3	1.4	7.1	1.3	3.2	0.3	3.5	0.6	48.8	1.9	20.0	632.8	11558.0	15.3	636.4		
SMDH 00553	107.9	11.8	42.0	8.2	1.2	6.3	1.1	7.5	1.7	4.2	0.8	4.7	0.8	17.1	1.4	18.6	485.8	8873.8	9.2	392.5		1.6
SMDH 00554	104.3	11.1	37.3	7.2	0.6	5.0	0.6	3.4	0.7	1.6	0.3	1.6	0.3	21.2	2.1	5.7	80.2	1464.1	5.4	231.5		1.75
SMDH 00554	58.6	5.8	19.8	3.9	1.2	2.7	0.3	2.0	0.3	0.8	0.3	0.8	0.3	9.1	0.9	5.7	111.3	2032.6	1.8	65.9		
SMDH 00554	170.1	17.9	61.8	12.8	2.2	8.5	1.1	4.6	0.7	1.5	0.3	1.3	0.3	29.9	3.1	11.4	145.9	2664.1	2.8	106.3	0.98	1.58
SMDH 00554	105.4	11.6	40.8	8.7	2.5	6.2	0.9	4.5	0.8	1.7	0.3	1.5	0.3	21.4	3.1	14.3	120.4	2199.1	2.6	100.9		
SMDH 00555	252.8	30.2	103.8	18.3	1.3	12.2	1.5	8.0	1.4	3.2	0.3	3.1	0.3	40.1	3.8	12.9	592.7	10825.9	15.9	707.5	0.43	
SMDH 00555	184.1	21.3	73.5	11.9	1.9	8.1	0.9	5.2	0.9	2.2	0.3	2.2	0.3	28.9	2.5	20.0	540.4	9870.0	9.1	393.6		1.56
SMDH 00555	114.4	13.5	45.5	8.5	1.6	5.8	0.8	5.0	1.0	2.7	0.3	3.1	0.3	17.9	1.8	11.4	406.0	7415.4	5.8	243.8		
SMDH 00555	142.2	17.0	56.0	10.8	2.0	7.0	1.1	6.4	1.1	2.7	0.3	3.0	0.3	20.3	2.7	35.8	459.7	8397.2	5.9	248.7		

BHID	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	ThO_2	U_3O_8	Nb_2O_5	TiO_2	$FeTiO_3$	HfO_2	ZrO_2	Moist	BD
units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	
SMDH 00555	151.2	17.6	59.5	11.4	1.5	7.4	1.1	5.4	1.0	2.4	0.3	2.5	0.3	26.1	2.8	17.2	393.2	7182.8	5.9	256.0	0.4	1.59
SMDH 00555	102.9	12.2	42.0	7.8	1.5	5.0	0.7	3.8	0.7	1.8	0.3	1.9	0.3	16.6	1.8	14.3	544.6	9947.5	6.1	280.6		
SMDH 00555	100.7	11.8	42.0	7.4	1.4	4.7	0.7	4.6	0.8	2.2	0.3	2.5	0.3	15.8	1.7	14.3	428.6	7828.8	6.5	254.0		
SMDH 00555	83.5	9.5	31.5	5.7	1.9	3.7	0.3	3.0	0.6	1.4	0.3	1.6	0.3	12.9	1.4	14.3	478.1	8733.1	5.0	214.9		1.58
SMDH 00555	107.2	12.6	40.8	7.7	1.7	4.5	0.6	3.3	0.7	1.6	0.3	1.9	0.3	17.0	2.0	17.2	455.6	8322.6	6.6	268.5	0.37	
SMDH 00555	161.8	18.4	63.0	11.4	1.2	7.3	0.9	4.8	0.9	2.5	0.3	3.0	0.3	28.0	2.2	12.9	383.5	7004.9	6.8	232.9		
SMDH 00555	105.5	12.0	40.8	7.5	1.2	5.5	0.8	5.5	1.3	3.5	0.7	3.9	0.7	17.0	1.2	7.2	498.4	9103.4	4.2	155.2		1.4
SMDH 00556	208.6	21.5	74.6	13.8	0.6	9.1	1.1	5.2	0.8	2.2	0.3	2.6	0.3	39.3	4.4	21.5	633.4	11569.5	26.5	1131.3		1.68
SMDH 00556	119.6	8.6	30.3	6.5	0.9	4.4	0.6	3.6	0.8	1.8	0.3	1.8	0.3	14.2	1.7	28.6	421.1	7691.0	7.0	307.3	2.48	
SMDH 00556	61.8	11.7	40.8	7.3	1.5	5.6	0.7	5.0	1.0	2.6	0.3	3.0	0.3	10.7	1.1	17.2	362.3	6617.3	4.4	183.7		
SMDH 00556	106.1	11.7	40.8	7.7	0.9	5.2	0.7	4.2	0.8	1.9	0.3	2.2	0.3	18.1	1.7	17.2	373.4	6821.1	4.7	221.1		1.57
SMDH 00556	160.1	16.7	60.7	10.9	1.3	6.9	0.9	5.6	1.1	3.0	0.3	3.2	0.3	28.4	1.9	31.5	512.4	9358.9	7.2	332.3		
SMDH 00557	342.1	38.1	129.5	23.7	1.4	14.6	1.8	9.6	1.8	5.3	0.9	5.8	0.8	71.3	4.0	22.9	780.8	14262.3	24.3	1087.0		
SMDH 00557	227.7	25.1	87.5	15.4	1.3	10.6	1.2	7.5	1.7	5.1	0.9	5.8	0.7	44.9	2.1	22.9	775.8	14170.5	12.6	561.7	1.77	
SMDH 00557	150.0	16.9	61.8	10.3	1.2	7.5	0.9	7.6	1.7	4.8	0.9	5.9	0.7	29.6	1.7	21.5	911.8	16653.8	15.3	678.6		1.48
SMDH 00557	203.3	22.4	87.5	14.5	1.9	9.8	1.3	8.5	2.2	5.4	0.9	5.6	0.8	43.2	1.9	27.2	576.2	10524.5	11.6	454.3		
SMDH 00557	221.7	21.9	87.5	14.0	2.3	9.1	1.2	6.2	1.1	3.3	0.6	3.4	0.3	44.3	1.5	15.7	637.0	11635.5	11.0	411.2		
SMDH 00558	103.9	13.3	43.2	7.7	1.9	4.8	0.7	4.1	0.9	2.4	0.3	2.6	0.3	19.3	1.2	37.2	894.2	16332.2	17.7	105.6		
SMDH 00558	170.7	20.7	67.7	11.4	1.6	7.0	0.9	7.0	1.6	4.9	0.9	5.9	0.9	29.5	1.3	24.3	1063.3	19421.2	17.8	747.3		1.3
SMDH 00558	120.4	14.1	46.7	8.6	1.7	5.9	0.9	6.4	1.4	3.9	0.7	4.4	0.6	19.2	0.6	20.0	1296.8	23687.3	10.7	460.2	0.86	
SMDH 00558	89.7	9.9	32.7	5.5	1.5	3.0	0.3	3.4	0.8	2.6	0.3	3.3	0.3	14.6	0.6	11.4	571.5	10438.4	12.1	516.1		1.56
SMDH 00558	120.9	13.8	46.7	8.8	1.6	5.9	0.9	6.5	1.4	3.4	0.6	3.9	0.6	20.3	0.6	17.2	1319.9	24109.3	7.8	331.8		
SMDH 00558	228.2	25.9	88.6	14.3	1.7	8.3	1.2	7.9	1.8	4.9	0.9	5.7	0.8	42.4	0.8	18.6	935.0	17078.6	13.7	572.9	1.17	
SMDH 00558	170.5	19.9	66.5	11.4	1.5	6.6	0.9	6.5	1.5	4.1	0.8	5.2	0.8	28.9	0.7	20.0	901.9	16472.9	10.4	444.8		1.55
SMDH 00558	95.0	11.6	39.7	8.0	1.7	6.1	1.1	7.2	1.5	3.9	0.7	4.1	0.6	14.1	0.7	24.3	1431.1	26139.0	7.3	314.2		
SMDH 00558	155.1	17.8	60.7	9.7	1.7	6.3	0.9	6.3	1.4	4.0	0.7	4.8	0.7	28.1	1.2	18.6	682.6	12468.1	11.1	485.1		
SMDH 00559	63.4	7.0	23.3	4.1	1.6	2.7	0.3	2.6	0.3	1.5	0.3	1.7	0.3	9.6	0.7	7.2	297.2	5428.8	6.6	272.2		1.56
SMDH 00559	123.3	13.3	46.7	7.8	1.3	5.2	0.8	5.5	1.1	3.3	0.6	4.1	0.6	20.3	1.2	20.0	416.5	7607.7	9.3	394.0		
SMDH 00559	171.9	19.1	65.3	11.7	1.3	7.3	0.9	7.0	1.4	3.5	0.6	4.0	0.6	32.3	1.3	21.5	613.0	11196.3	12.1	506.4		
SMDH 00559	133.5	14.1	49.0	8.6	1.4	5.5	0.8	6.4	1.4	3.8	0.7	4.6	0.7	22.9	1.2	17.2	614.5	11225.0	11.9	512.9	0.32	1.66
SMDH 00559	30.3	3.3	10.5	2.1	1.6	1.5	0.3	2.5	0.6	1.6	0.3	1.9	0.3	3.2	0.3	11.4	436.9	7980.9	8.7	389.7		
SMDH 00559	81.0	8.8	30.3	5.1	1.5	3.8	0.6	5.0	1.1	3.3	0.6	4.0	0.6	13.9	0.9	15.7	690.0	12603.0	10.3	439.6		
SMDH 00559	127.9	13.9	47.8	7.9	1.9	4.8	0.7	4.9	1.0	2.9	0.3	3.3	0.3	21.8	0.9	8.6	400.8	7320.6	10.3	434.7		1.73
SMDH 00559	160.2	17.5	60.7	10.8	1.6	6.7	0.9	6.5	1.4	4.0	0.7	4.6	0.7	28.3	1.3	12.9	554.8	10134.1	7.2	303.0	0.48	
SMDH 00559	204.5	23.8	78.1	13.6	1.9	8.5	1.1	7.0	1.4	3.9	0.7	4.6	0.7	36.9	2.6	17.2	595.1	10869.0	9.7	446.2		
SMDH 00559	170.4	19.0	64.2	12.2	1.7	7.3	0.9	6.1	1.3	3.5	0.7	4.2	0.6	32.0	1.9	14.3	624.0	11397.2	10.1	415.5		
SMDH 00559	170.4	19.0	64.2	12.2	1.7	7.3	0.9	6.1	1.3	3.5	0.7	4.2	0.6	32.0	1.9	14.3	624.0	11397.2	10.1	415.5		
SMDH 00560	81.1	9.8	35.0	7.3	1.0	5.9	1.1	6.4	1.5	4.1	0.7	4.2	0.7	16.7	5.3	22.9	563.6	10294.8	13.1	581.9		
SMDH 00560	114.2	13.0	50.2	8.9	1.6	8.3	1.3	7.5	1.6	4.3	0.7	4.7	0.7	22.8	7.9	25.7	609.5	11133.1	10.0	445.2		
SMDH 00560	115.5	13.2	51.3	10.3	1.6	8.1	1.3	7.6	1.6	4.0	0.7	4.1	0.6	21.7	5.2	24.3	616.1	11253.7	8.0	366.9	1.88	
SMDH 00560	76.3	8.7	32.7	7.0	1.0	5.2	0.9	5.3	1.1	2.7	0.3	3.0	0.3	13.4	3.1	24.3	325.5	5945.5	6.4	290.2		1.23
SMDH 00560	31.2	3.7	12.8	3.4	1.2	2.7	0.3	2.0	0.3	1.0	0.3	1.3	0.3	5.5	0.9	12.9	67.7	1237.3	1.1	50.8		
SMDH 00561	29.5	3.5	11.7	2.7	0.7	1.7	0.3	2.4	0.3	1.7	0.3	2.6	0.3	3.3	1.1	10.0	27.2	496.7	1.4	44.0		
SMDH 00561	33.4	3.7	12.8	3.0	0.8	2.3	0.3	3.0	0.6	1.7	0.3	2.0	0.3	4.8	1.7	11.4	89.0	1624.9	2.0	72.3		
SMDH 00561	38.8	4.6	15.2	3.9	0.7	2.7	0.3	3.3	0.7	2.2	0.3	3.2	0.3	6.4	1.7	7.2	45.4	829.7	2.0	68.6	0.19	1.64
SMDH 00562	146.1	15.9	56.0	9.6	1.4	7.6	1.1	7.0	1.3	3.0	0.6	4.0	0.6	24.4	2.7	17.2	705.1	12878.6	15.7	666.2	1.33	
SMDH 00562	99.5	10.0	33.8	6.3	1.5	5.1	0.8	6.2	1.4	3.5	0.7	4.1	0.6	11.7	1.3	20.0	656.5	11991.5	10.0	459.5		1.57
SMDH 00562	87.5	8.8	28.0	4.6	2.1	4.6	1.1	10.6	2.9	8.6	1.5	10.1	1.6	6.7	0.8	17.2	691.6	12631.7	10.0	408.5		
SMDH 00562	89.2	8.3	28.0	4.1	1.9	4.8	0.9	8.4	1.8	5.1	0.8	5.9	0.8	6.4	0.3	18.6	437.7	7995.3	7.7	317.2		
SMDH 00562	116.5	11.5	35.0	5.6	2.2	4.6	0.8	7.1	1.8	5.5	1.1	7.6	1.4	8.0	0.9	18.6	589.6	10768.5	13.1	529.0	0.89	
SMDH 00562	93.4	10.6	33.8	5.5	1.9	4.0	0.8	6.5	1.8	6.3	1.3	8.9	1.4	7.9	0.7	12.9	464.0	8474.7	10.8	435.2		1.45
SMDH 00562	83.5	8.6	29.2	4.5	1.7	3.7	0.7	4.4	1.0	2.7	0.3	3.4	0.3	9.3	0.3	15.7	585.3	10691.0	7.8	316.2		
SMDH 00562	40.9	4.5	14.0	2.6	1.2	2.5	0.3	3.2	0.7	1.8	0.3	2.3	0.3	3.8	0.3	14.3	625.2	11420.2	5.0	207.1	1.61	1.39
SMDH 00562	100.6	11.8	37.3	6.3	1.7	5.0	0.9	7.5	1.6	4.8	0.8	5.1	0.8	12.3	0.8	22.9	567.1	10358.0	8.4	344.0		
SMDH 00562	58.1	6.6	23.3	3.8	1.9	2.3	0.3	2.6	0.3	1.4	0.3	1.7	0.3	4.4	0.3	30.0	527.9	9643.2	7.2	325.5		
SMDH 00562	129.5	13.8	46.7	7.5	1.4	5.6	0.9	7.0	1.6	4.0	0.7	5.0	0.7	14.7	0.8	44.3	780.8	14262.3	11.0	484.1		
SMDH 00562	103.6	15.5	39.7	7.5	1.7	6.0	0.9	8.5	1.7	5.1	0.9	5.9	0.9	10.7	1.3	17.2	652.1	11911.1	10.6	466.7		
SMDH 00562	105.5	12.6	42.0	8.6	2.0	7.8	1.6	12.7	2.7	7.2	1.3	7.9	1.1	9.7	1.2	18.6	966.6	17655.7	7.7	324.5		1.45
SMDH 00562	122.0	13.8	50.2	10.0	1.9	9.3	1.5	11.8	2.4	5.8	1.0	6.4	0.8	13.8	1.3	31.5	931.9	17021.2	7.0	309.2		1.46
SMDH 00562	123.9	13.0	46.7	7.9	2.5	7.1	1.1	7.2	1.6	4.2	0.8	4.8	0.6	15.9	1.1	24.3	784.3	14325.5	7.5	359.6	1.22	
SMDH 00562	77.9	8.1	29.2	4.9	0.9	3.7	0.3	3.7	0.8	1.9	0.3	2.5	0.3	9.2	0.6	18.6	589.1	10759.9	6.4	312.6		
SMDH 00562	111.2	12.0	40.8	6.1	0.8	4.4	0.3	2.9	0.3	1.7	0.3	2.2	0.3	15.0	0.8	18.6	667.0	12183.9	13.1	591.8		1.57
SMDH 00563	150.7	15.7	53.7	9.4	0.7	6.1	0.8	3.8	0.7	1.5	0.3	1.5	0.3	22.9	2.2	15.7	220.7	4030.7	6.3	268.1		
SMDH 00563	231.1	22.2	77.0	13.5	1.4	8.5	1.1	5.3	0.9	1.9	0.3	1.8	0.3	32.1	2.7	20.0	592.5	10823.1	13.6	565.4		1.38
SMDH 00563	63.5	8.2	29.2	5.1	1.9	4.1	0.6	3.8	0.8	1.9	0.3	2.0	0.3	9.0	1.2	11.4	612.7	11190.5	4.5	185.3	1.3	
SMDH 00563	105.3	12.1	39.7	6.4	1.4	3.9	0.3	2.1	0.3	0.6	0.3	0.3	0.3	15.9	1.5	14.3	392.0	7159.9	7.2	329.9		
SMDH 00563	79.2	9.2	32.7	5.9	1.0	3.9	0.3	3.1	0.6	1.5	0.3	1.5	0.3	11.2	1.8	15.7	377.5	6895.8	6.1	288.9		1.54
SMDH 00563	76.4	8.0	29.2	5.5	1.4	3.8	0.6	3.9	0.8	2.5	0.3	2.8	0.3	9.9	1.9	15.7	323.1	5902.5	8.3	379.6		
SMDH 00563	25.2	4.0	15.2	3.6	0.8	3.0	0.6	4.1	0.9	2.4	0.3	2.6	0.3	2.8	0.8	12.9	499.2	9117.8	2.1	79.6	0.29	
SMDH 00563	33.8	4.8	18.7	4.2	1.2	3.5	0.6	4.7	1.0	2.7	0.3	2.8	0.3	3.8	1.5	11.4	495.6	9051.8	1.7	67.0		1.46
SMDH 00565	108.1	13.0	43.2	9.5	1.4	6.5	1.1	6.8	1.4	3.3	0.7	3.6	0.3	19.9	5.1	28.6	654.0	11945.6	12.0	504.8	1.36	

BHID	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	ThO_2	U_3O_8	Nb_2O_5	TiO_2	$FeTiO_3$	HfO_2	ZrO_2	Moist	BD
units:	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*%*	
SMDH 00565	121.9	14.4	49.0	9.6	1.6	7.3	1.2	7.0	1.5	3.7	0.7	4.3	0.7	22.1	6.1	28.6	599.0	10940.8	12.0	499.5		
SMDH 00565	103.3	12.4	43.2	8.1	1.4	7.1	0.9	7.7	1.4	3.9	0.6	3.9	0.3	19.5	5.0	28.6	557.6	10185.7	9.4	445.8		
SMDH 00565	105.2	12.2	45.5	8.1	1.4	6.6	0.9	7.0	1.3	3.3	0.6	3.6	0.3	19.6	4.4	25.7	518.7	9473.8	11.7	534.4	2.2	1.37
SMDH 00565	103.3	12.1	42.0	8.2	1.3	6.3	1.1	7.1	1.3	3.7	0.6	3.6	0.3	19.6	5.2	27.2	593.2	10834.6	11.1	492.4		
SMDH 00565	99.9	11.4	37.3	8.1	1.4	6.6	1.1	6.8	1.4	3.3	0.6	3.6	0.3	18.7	5.1	31.5	573.7	10478.6	8.5	390.9		
SMDH 00565	102.6	10.4	38.5	7.1	1.0	5.8	0.8	6.3	1.3	3.1	0.3	3.3	0.3	18.2	4.8	22.9	541.8	9895.8	10.0	443.3		1.4
SMDH 00565	109.7	12.4	45.5	8.9	1.4	6.3	0.8	6.1	1.1	2.9	0.3	3.1	0.3	20.8	4.4	24.3	547.0	9990.5	7.5	340.1		
SMDH 00565	137.5	15.8	53.7	9.7	1.4	6.9	0.9	5.5	1.1	2.7	0.3	3.0	0.3	23.8	3.4	21.5	559.5	10220.2	9.8	430.4		
SMDH 00565	120.9	13.4	45.5	8.5	1.4	5.8	0.9	5.3	1.0	2.7	0.3	3.1	0.3	19.9	3.3	27.2	589.7	10771.4	8.5	373.1		1.34
SMDH 00565	140.9	15.2	50.2	8.9	1.0	6.1	0.8	4.6	0.8	1.9	0.3	1.8	0.3	25.4	3.2	12.9	270.0	4932.1	5.0	210.0		
SMDH 00565	190.5	21.5	71.2	12.6	1.2	8.2	1.1	5.0	0.9	2.1	0.3	2.0	0.3	34.6	3.2	7.2	318.0	5807.7	4.1	178.7	1.4	
SMDH 00565	141.6	14.5	54.8	10.0	0.9	5.9	0.8	4.7	0.8	2.3	0.3	1.6	0.3	27.0	2.7	7.2	231.7	4231.6	3.3	156.6		1.72
SMDH 00566	46.8	5.4	17.5	3.2	0.3	2.7	0.3	3.2	0.3	1.3	0.3	1.6	0.3	9.6	1.9	14.3	238.7	4360.8	9.6	375.9		
SMDH 00566	48.4	5.2	18.7	4.3	0.3	2.8	0.3	2.9	0.6	1.4	0.3	1.3	0.3	10.6	2.0	12.9	275.8	5038.3	8.0	346.6	0.99	
SMDH 00566	62.9	5.7	22.2	3.9	0.3	2.8	0.3	3.1	0.7	1.7	0.3	2.0	0.3	14.1	3.2	28.6	387.3	7073.8	6.6	321.5		1.5
SMDH 00566	41.2	5.0	17.5	3.7	0.6	2.7	0.3	2.5	0.6	1.3	0.3	1.5	0.3	10.4	2.5	14.3	254.6	4650.8	4.6	191.8		
SMDH 00566	82.2	9.3	31.5	5.3	0.9	3.3	0.3	2.2	0.3	1.0	0.3	0.9	0.3	14.9	1.8	17.2	228.8	4179.9	4.5	187.2	1.2	1.48
SMDH 00566	75.1	8.2	29.2	4.8	1.3	3.0	0.3	1.8	0.3	0.7	0.3	0.7	0.3	12.4	1.2	10.0	188.3	3439.3	3.5	143.6		
SMDH 00566	52.9	5.8	21.0	3.6	1.5	2.1	0.3	1.0	0.3	0.3	0.3	0.3	0.3	8.9	0.6	7.2	86.6	1581.8	1.7	73.9		
SMDH 00566	111.3	11.5	42.0	7.1	1.5	4.3	0.3	1.8	0.3	0.6	0.3	0.3	0.3	17.8	0.9	15.7	355.4	6491.0	5.3	241.3	1.38	1.48
SMDH 00566	136.7	14.3	50.2	9.5	1.7	5.6	0.6	2.5	0.3	0.8	0.3	0.9	0.3	22.2	1.2	15.7	344.8	6298.6	6.0	249.4		
SMDH 00566	170.9	19.2	64.2	10.1	2.2	6.3	0.6	2.8	0.3	0.9	0.3	0.9	0.3	26.3	1.9	24.3	449.2	8204.9	7.2	330.5		
SMDH 00566	144.1	15.7	53.7	8.6	0.9	6.2	0.7	3.2	0.3	1.0	0.3	0.8	0.3	22.0	2.0	30.0	602.4	11003.9	9.7	438.7		1.45
SMDH 00566	83.7	9.9	28.0	5.7	1.9	4.0	0.3	1.8	0.3	0.7	0.3	0.6	0.3	14.8	0.9	18.6	251.6	4596.2	4.4	182.9	0.78	
SMDH 00566	111.7	12.1	45.5	7.5	2.3	5.3	0.6	2.3	0.3	0.7	0.3	0.3	0.3	18.0	0.9	12.9	242.7	4432.6	3.4	140.6		
SMDH 00566	166.7	20.5	67.7	10.9	2.9	5.8	0.7	3.1	0.3	0.9	0.3	0.6	0.3	20.7	1.3	54.4	420.0	7670.9	6.1	267.9		1.65
SMDH 00566	111.4	11.8	42.0	6.5	2.3	4.3	0.6	2.9	0.6	1.3	0.3	1.0	0.3	15.8	1.2	22.9	521.5	9525.5	6.8	279.2		
SMDH 00566	102.4	9.8	31.5	4.9	1.7	2.7	0.3	1.7	0.3	1.4	0.3	0.9	0.3	4.7	1.5	30.0	909.9	16619.3	7.4	308.9		
SMDH 00566	136.8	13.7	45.5	7.2	1.7	4.6	0.3	2.5	0.3	0.9	0.3	0.7	0.3	16.7	1.7	25.7	779.9	14245.1	9.7	383.5		1.5
SMDH 00567	120.9	13.8	50.2	10.2	1.5	7.7	1.2	8.6	1.5	3.8	0.7	3.9	0.6	23.9	5.7	35.8	962.4	17578.2	9.8	462.9		
SMDH 00567	157.8	15.7	56.0	10.3	1.6	8.4	1.3	9.0	1.6	4.3	0.7	4.3	0.6	26.4	7.1	45.8	852.5	15571.4	9.0	389.3		1.48
SMDH 00567	120.4	13.8	49.0	9.6	1.5	7.1	1.2	8.0	1.5	3.4	0.7	4.6	0.3	21.7	5.9	34.3	674.4	12318.8	11.1	521.1	3.02	
SMDH 00567	120.5	14.4	50.2	10.8	1.6	8.6	1.2	7.9	1.6	4.2	0.6	4.2	0.3	22.8	5.7	31.5	824.1	15051.8	8.8	368.0		
SMDH 00567	102.7	13.5	49.0	8.9	1.4	7.6	1.2	6.9	1.4	3.4	0.6	3.5	0.3	20.4	4.6	27.2	591.4	10803.0	9.7	409.4		1.52
SMDH 00567	119.5	12.4	44.3	8.1	1.3	7.4	1.2	7.6	1.6	3.9	0.7	4.4	0.3	20.8	4.5	27.2	635.0	11598.2	11.4	496.3		
SMDH 00567	82.9	10.1	35.0	6.6	1.2	5.5	0.8	5.9	1.1	3.1	0.3	3.5	0.3	17.4	3.3	24.3	547.9	10007.8	10.7	467.0	1.97	
SMDH 00567	77.9	9.1	32.7	5.7	0.9	4.7	0.7	4.9	1.0	2.7	0.3	3.0	0.3	16.6	3.3	27.2	627.4	11460.4	11.0	483.3		1.49
SMDH 00567	90.5	10.6	37.3	7.4	1.2	6.0	0.8	5.9	1.1	3.0	0.3	3.4	0.3	15.7	3.5	32.9	632.0	11543.7	9.3	408.1		
SMDH 00567	97.3	11.4	42.0	7.7	1.2	6.3	0.9	6.2	1.4	3.1	0.6	3.2	0.3	18.0	3.5	25.7	572.9	10464.2	8.6	388.5		
SMDH 00567	126.8	15.6	54.8	9.0	1.6	7.1	0.9	5.5	1.1	2.9	0.3	3.0	0.3	18.0	3.2	41.5	501.4	9158.0	7.8	340.8	1.68	1.42
SMDH 00567	119.4	14.1	50.2	8.6	1.4	6.0	0.8	5.3	1.0	2.6	0.3	3.3	0.3	17.5	3.1	34.3	594.1	10851.8	8.3	353.2		
SMDH 00567	80.7	9.1	31.5	5.9	0.8	4.6	0.7	4.7	0.9	2.4	0.3	2.8	0.3	14.2	2.6	20.0	360.7	6588.6	7.1	295.4		
SMDH 00567	77.0	8.8	32.7	5.6	0.8	5.1	0.6	4.0	0.8	2.1	0.3	2.0	0.3	15.2	2.5	14.3	357.9	6536.9	5.3	213.8		1.72
SMDH 00567	43.4	4.7	16.3	2.7	0.6	2.3	0.3	2.1	0.3	1.0	0.3	1.1	0.3	8.4	1.9	8.6	165.5	3023.0	2.7	107.7	0.84	
SMDH 00567	200.5	22.7	75.8	13.3	2.0	8.9	0.9	4.4	0.7	1.4	0.3	1.1	0.3	37.4	3.3	18.6	679.0	12402.0	10.4	401.1		
SMDH 00567	140.4	16.6	57.2	11.0	1.9	7.8	1.1	8.0	1.9	5.6	1.0	7.7	1.0	24.8	2.4	22.9	189.6	3462.2	8.7	371.9		1.47
SMDH 00567	109.3	13.8	47.8	8.7	2.1	5.9	0.8	5.6	1.0	3.1	0.3	3.9	0.3	13.4	2.7	37.2	574.3	10490.1	4.2	165.9		
SMDH 00567	25.2	3.3	12.8	4.2	1.6	5.4	0.8	6.2	1.3	3.5	0.7	5.8	0.7	3.3	2.5	28.6	609.0	11124.5	3.2	116.3	1.07	
SMDH 00567	117.1	12.6	44.3	7.4	0.3	4.7	0.6	3.3	0.6	1.3	0.3	1.6	0.3	24.0	2.7	18.6	319.8	5842.2	11.9	549.4		
SMDH 00567	45.6	6.8	29.2	7.4	1.6	10.0	1.9	12.3	2.4	5.7	0.9	5.8	0.7	3.5	2.4	32.9	1511.1	27600.3	4.6	198.6		1.66
SMDH 00567	111.7	14.6	51.3	11.6	1.6	11.3	2.5	17.6	3.7	9.8	1.7	12.0	1.7	15.9	3.1	32.9	1522.7	27812.7	5.3	240.0		
SMDH 00567	74.9	8.7	33.8	6.4	1.4	5.9	0.9	6.0	1.1	3.0	0.3	3.1	0.3	14.3	1.7	15.7	623.2	11382.9	3.3	129.3		
SMDH 00567	194.9	22.0	78.1	14.3	1.9	9.8	1.4	7.3	1.6	4.0	0.6	4.2	0.6	37.4	3.1	20.0	500.3	9137.9	5.4	218.6	1.22	1.48
SMDH 00567	222.7	25.3	84.0	14.4	2.4	9.7	1.1	4.4	0.8	1.5	0.3	0.9	0.3	42.6	2.4	24.3	851.7	15557.1	5.8	242.2		
SMDH 00567	189.3	21.7	72.3	12.6	1.9	8.8	0.9	4.1	0.7	1.6	0.3	1.1	0.3	36.2	2.4	24.3	708.5	12941.8	7.5	342.7		
SMDH 00568	110.9	13.5	46.7	7.9	1.2	6.8	1.1	7.1	1.4	3.5	0.3	3.8	0.3	20.6	5.3	35.8	540.8	9878.6	9.4	405.9		1.53
SMDH 00568	142.9	15.7	53.7	10.9	1.6	7.5	1.3	8.3	1.5	4.0	0.7	4.3	0.7	24.9	7.2	27.2	657.8	12014.5	9.2	383.0		
SMDH 00568	98.3	13.2	46.7	9.5	1.4	5.8	0.8	7.0	1.4	2.7	0.6	3.5	0.3	21.2	4.4	25.7	498.9	9112.1	8.4	418.9	1.59	
SMDH 00568	117.1	12.9	45.5	8.5	1.5	8.0	1.2	6.5	1.5	3.5	0.6	3.5	0.3	21.4	4.5	1.4	692.2	12643.2	9.1	352.0		
SMDH 00568	115.1	12.4	50.2	8.5	1.3	7.3	1.1	7.3	1.5	3.4	0.3	3.5	0.3	22.6	5.2	1.4	570.4	10418.3	10.5	470.1		1.6
SMDH 00568	130.9	13.4	49.0	8.3	1.3	8.4	1.1	6.8	1.5	3.9	0.3	3.6	0.3	22.1	5.3	1.4	528.7	9657.5	9.1	400.5		
SMDH 00568	114.1	12.9	51.3	9.9	1.4	7.8	1.1	7.1	1.5	3.8	0.6	3.9	0.3	21.2	5.0	1.4	540.7	9875.7	9.0	443.3	3.38	
SMDH 00568	97.8	11.2	42.0	8.2	1.2	7.1	1.1	6.0	1.3	3.2	0.3	3.4	0.3	19.1	4.4	1.4	619.4	11314.0	8.0	334.9		1.51
SMDH 00568	60.9	7.0	24.5	5.3	0.7	4.4	0.6	3.9	0.7	2.4	0.3	2.2	0.3	12.5	2.9		209.4	3824.0	4.0	185.2		
SMDH 00568	161.0	17.4	65.3	11.1	0.8	8.2	0.8	3.3	0.3	1.0	0.3	0.9	0.3	29.5	3.7		609.0	11124.5	9.3	378.5		
SMDH 00568	137.5	14.1	51.3	7.7	1.4	6.1	0.7	2.8	0.3	0.9	0.3	0.8	0.3	25.0	2.4	1.4	576.4	10527.4	11.6	550.3	1.95	1.35
SMDH 00568	174.4	20.7	67.7	12.8	1.7	7.8	0.9	4.1	0.6	1.1	0.3	0.9	0.3	35.0	2.4	7.2	584.4	10673.8	8.4	368.6		
SMDH 00568	263.0	27.8	94.5	18.0	1.5	11.4	1.4	5.7	0.8	1.4	0.3	0.9	0.3	51.7	4.5	27.2	827.7	15117.9	10.7	430.1		1.34
SMDH 00568	138.4	15.9	57.2	10.8	1.7	7.7	0.8	3.7	0.6	0.9	0.3	0.8	0.3	26.2	2.2	25.7	740.1	13518.8	11.0	432.1	1.64	
SMDH 00568	201.6	22.8	80.5	13.9	1.4	9.7	0.9	4.6	0.6	0.9	0.3	0.8	0.3	38.6	3.5	21.5	842.9	15396.3	11.9	490.2		
SMDH 00568	175.7	20.5	72.3	13.0	0.9	8.2	0.9	4.8	0.6	1.3	0.3	1.0	0.3	34.3	4.2	22.9	577.3	10544.6	9.1	380.4		1.45

BHID	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	ThO_2	U_3O_8	Nb_2O_5	TiO_2	$FeTiO_3$	HfO_2	ZrO_2	Moist	BD
units:	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*%*	
SMDH 00568	167.7	18.4	65.3	12.1	1.2	8.1	0.9	4.6	0.7	1.5	0.3	1.0	0.3	33.0	4.1	27.2	652.7	11922.6	8.1	329.9		
SMDH 00568	165.1	18.1	65.3	11.5	1.0	7.3	0.8	4.0	0.3	0.9	0.3	0.7	0.3	32.9	3.8	21.5	659.7	12048.9	9.0	373.9	2.33	
SMDH 00568	200.2	22.7	80.5	13.6	1.2	8.6	0.9	4.5	0.6	0.9	0.3	0.7	0.3	39.3	3.1	48.6	683.5	12485.3	10.4	431.0		1.37
SMDH 00568	320.1	31.2	105.0	19.7	2.2	14.9	1.9	8.7	1.3	2.5	0.3	1.8	0.3	50.8	4.7	15.7	823.0	15031.7	12.5	522.4		
SMDH 00570	193.0	23.1	71.2	16.4	2.0	12.7	1.9	10.7	2.5	6.3	1.1	5.9	0.9	34.3	8.3	32.9	707.4	12921.7	16.3	678.8		
SMDH 00570	127.3	16.1	52.5	10.8	1.9	9.2	1.4	8.0	1.9	4.9	0.8	4.3	0.6	23.2	8.0	32.9	715.8	13073.8	7.9	320.0		
SMDH 00570	126.3	14.7	47.8	10.7	1.7	8.8	1.4	8.3	1.7	4.7	0.8	3.9	0.8	22.2	5.4	35.8	848.6	15499.7	6.0	245.3		
SMDH 00570	111.0	12.9	43.2	9.2	1.5	6.9	1.1	5.6	1.1	3.0	0.3	2.5	0.3	19.2	4.2	21.5	516.6	9436.5	6.8	283.4	2.95	1.5
SMDH 00570	165.1	19.9	63.0	13.7	1.6	10.3	1.5	6.1	1.4	3.1	0.3	2.5	0.3	28.8	4.8	14.3	331.9	6063.2	8.7	358.1		
SMDH 00570	98.9	12.3	38.5	8.3	1.5	6.1	0.8	3.9	0.8	1.8	0.3	1.6	0.3	18.1	3.4	17.2	367.2	6706.3	6.3	249.8		
SMDH 00570	72.6	8.5	28.0	6.6	1.0	4.7	0.6	2.6	0.3	1.1	0.3	0.8	0.3	12.9	2.5	12.9	296.7	5420.2	4.6	200.9		
SMDH 00570	182.3	20.3	61.8	12.5	1.7	10.5	1.2	7.0	1.1	2.7	0.3	2.4	0.3	25.9	4.4	14.3	577.9	10556.1	10.3	368.2	2.48	1.4
SMDH 00570	153.4	17.5	52.5	10.8	2.2	9.8	1.3	7.6	1.1	2.9	0.3	2.6	0.3	17.6	3.4	18.6	1187.1	21683.5	10.0	363.0		
SMDH 00570	61.5	8.8	28.0	7.1	1.9	7.4	1.3	8.8	1.7	4.8	0.7	4.7	0.7	6.9	3.7	18.6	2237.8	40875.1	8.0	270.0		
SMDH 00570	91.1	11.4	36.2	8.1	1.9	9.6	1.5	10.3	2.2	5.4	0.8	5.5	0.9	9.3	3.2	24.3	2222.1	40588.0	7.8	248.8		
SMDH 00570	269.8	29.6	88.6	16.4	2.9	11.9	1.3	6.2	0.8	1.5	0.3	0.9	0.3	38.3	2.5	11.4	383.0	6996.2	4.8	165.9	1.49	1.54
SMDH 00570	179.2	19.0	61.8	11.4	1.7	9.3	0.9	4.8	0.6	1.4	0.3	0.9	0.3	24.4	3.3	21.5	416.7	7610.6	7.8	275.4		
SMDH 00570	59.6	6.8	23.3	4.5	1.7	2.9	0.3	2.3	0.3	1.0	0.3	1.3	0.3	9.0	1.5	5.7	123.2	2250.7	3.7	150.1		
SMDH 00571	185.0	20.1	68.8	12.3	1.6	8.1	1.2	7.2	1.4	3.8	0.7	4.2	0.7	31.0	3.7	125.9	868.2	15858.5	14.2	612.3		
SMDH 00571	116.3	12.7	42.0	7.8	1.3	5.2	0.7	4.7	0.9	2.4	0.3	2.8	0.3	19.0	1.8	14.3	608.3	11110.2	8.3	351.9		1.56
SMDH 00571	61.7	7.2	24.5	4.8	1.2	3.2	0.3	3.6	0.7	1.8	0.3	2.0	0.3	10.6	1.5	14.3	480.2	8770.4	3.4	142.4	2.61	
SMDH 00571	87.5	10.0	35.0	6.1	1.2	4.3	0.7	4.1	0.8	2.2	0.3	2.3	0.3	14.5	2.0	11.4	485.3	8865.2	5.1	218.8		
SMDH 00571	75.3	8.8	29.2	5.3	0.7	3.5	0.3	2.8	0.3	1.4	0.3	1.5	0.3	14.3	1.5	14.3	342.5	6255.6	5.4	216.9		1.55
SMDH 00571	203.3	22.7	78.1	14.1	1.2	9.0	1.1	5.9	0.9	2.1	0.3	1.9	0.3	36.3	3.7	20.0	542.1	9901.5	12.5	516.1		
SMDH 00571	160.1	17.9	61.8	10.9	1.4	7.0	0.9	4.4	0.7	1.4	0.3	1.3	0.3	29.4	2.8	21.5	569.6	10403.9	10.0	417.4	1.37	
SMDH 00571	164.7	18.1	63.0	11.7	1.3	7.5	1.1	4.9	0.7	1.5	0.3	1.1	0.3	29.2	3.5	20.0	573.7	10478.6	8.6	339.3		1.47
SMDH 00571	114.2	12.4	42.0	7.7	1.5	5.0	0.6	3.3	0.3	1.1	0.3	1.1	0.3	19.9	2.1	18.6	547.3	9996.3	11.2	448.7		
SMDH 00571	117.9	13.2	45.5	8.3	1.2	5.2	0.7	3.1	0.3	1.0	0.3	0.7	0.3	20.3	1.9	15.7	459.6	8394.3	7.0	283.1		
SMDH 00571	106.6	12.1	40.8	7.7	1.2	4.8	0.7	3.0	0.3	1.1	0.3	0.8	0.3	17.8	1.7	17.2	520.1	9499.6	6.1	246.1	0.94	1.63
SMDH 00571	193.1	21.3	71.2	12.9	1.2	8.1	1.1	4.9	0.7	1.4	0.3	1.0	0.3	35.2	2.7	17.2	499.7	9126.4	7.8	322.6		
SMDH 00571	95.7	10.9	37.3	6.6	1.5	5.0	0.8	4.8	0.9	2.2	0.3	1.9	0.3	15.9	1.3	17.2	511.6	9344.6	5.7	233.6		
SMDH 00571	120.4	13.5	45.5	9.2	1.9	6.7	1.2	7.1	1.3	3.0	0.3	2.3	0.3	20.5	1.5	25.7	620.7	11337.0	7.2	296.4		1.63
SMDH 00571	129.5	14.6	50.2	10.1	1.7	8.2	1.6	11.1	2.2	5.8	0.9	4.9	0.7	21.5	1.8	30.0	688.9	12582.9	7.4	296.1	0.49	
SMDH 00571	79.5	9.4	31.5	6.5	1.5	4.7	0.7	4.5	0.8	1.8	0.3	1.4	0.3	12.2	1.3	22.9	593.5	10840.3	6.6	274.6		
SMDH 00572	95.4	9.7	35.0	6.0	0.3	3.9	0.3	2.3	0.3	1.0	0.3	1.3	0.3	16.3	1.4	17.2	338.2	6178.1	9.9	452.1		
SMDH 00572	223.4	16.2	63.0	10.9	0.9	7.8	0.6	4.1	0.7	1.9	0.3	1.9	0.3	31.0	2.8	20.0	716.9	13093.9	14.9	574.2		
SMDH 00572	212.1	23.6	67.7	11.7	1.5	9.7	1.2	7.5	1.5	3.8	0.6	4.0	0.7	29.4	2.4	18.6	542.1	9901.5	13.9	507.8	4.36	1.42
SMDH 00572	166.2	19.6	67.7	10.3	1.5	6.9	0.7	4.1	0.7	1.6	0.3	1.5	0.3	31.3	1.4	11.4	334.5	6109.2	4.5	172.6		
SMDH 00572	161.7	21.7	73.5	12.4	2.1	8.6	1.2	6.4	1.3	3.1	0.6	3.6	0.6	26.1	1.9	18.6	566.3	10343.6	12.1	503.2		
SMDH 00572	187.7	21.6	71.2	13.2	1.4	9.5	1.2	5.6	0.9	2.3	0.3	2.2	0.3	33.2	2.5	20.0	622.1	11362.8	10.4	452.8	1.64	1.44
SMDH 00572	122.3	14.1	49.0	7.7	1.2	6.1	0.7	3.2	0.3	0.9	0.3	0.7	0.3	20.7	1.5	14.3	425.9	7780.0	6.4	275.8		
SMDH 00572	164.5	17.8	61.8	10.1	1.6	6.5	0.8	3.8	0.6	1.0	0.3	0.6	0.3	27.5	1.5	21.5	549.6	10039.3	7.7	307.7		
SMDH 00572	183.0	20.1	74.6	13.0	1.3	8.2	1.1	4.6	0.7	1.4	0.3	1.1	0.3	31.3	2.5	25.7	660.9	12071.9	8.5	350.4		
SMDH 00572	161.3	17.4	64.2	10.9	1.2	7.4	0.9	4.6	0.7	1.4	0.3	0.9	0.3	28.9	2.5	22.9	588.3	10745.6	9.4	361.5	1.32	1.48
SMDH 00572	213.6	23.1	82.8	13.8	1.9	8.9	1.1	6.0	0.9	1.9	0.3	1.4	0.3	36.3	2.4	32.9	656.4	11988.6	8.1	333.6		
SMDH 00572	218.7	23.6	86.3	14.4	1.6	8.9	1.3	5.2	0.9	1.8	0.3	1.5	0.3	38.2	2.6	21.5	626.8	11448.9	10.7	463.6		
SMDH 00572	178.6	19.9	67.7	11.4	1.6	6.9	0.8	4.6	0.7	1.6	0.3	1.3	0.3	30.3	1.8	15.7	574.6	10495.8	7.9	352.8	0.34	
SMDH 00572	185.2	20.5	71.2	11.6	1.6	7.7	1.1	5.5	0.9	2.2	0.3	1.7	0.3	31.0	2.1	18.6	595.8	10883.4	9.8	435.6		
SMDH 00572	238.4	27.2	95.6	14.8	2.2	9.0	1.1	5.3	0.8	1.7	0.3	1.1	0.3	35.2	2.0	35.8	696.7	12726.4	10.4	440.6		1.48
SMDH 00573	512.6	46.0	164.5	29.0	1.4	22.1	2.5	13.7	2.1	5.6	0.8	6.0	0.7	103.7	6.3	14.3	1090.5	19917.9	38.8	1756.3	1.42	
SMDH 00573	180.9	18.6	66.5	12.4	1.6	8.3	0.9	6.3	1.0	2.5	0.3	3.1	0.3	30.3	1.8	24.3	944.9	17259.5	9.4	450.5		
SMDH 00573	221.5	25.1	87.5	14.1	1.6	9.3	0.9	4.6	0.8	1.7	0.3	1.8	0.3	41.3	1.3	17.2	476.9	8710.1	12.3	515.2		1.54
SMDH 00573	219.5	24.6	84.0	14.5	1.9	10.0	1.2	7.1	1.4	3.3	0.3	3.5	0.3	41.0	2.0	24.3	670.5	12247.0	9.1	384.3	1.74	
SMDH 00573	243.2	27.1	96.8	15.4	1.4	10.7	1.4	6.8	1.4	3.0	0.3	3.2	0.3	45.1	2.2	20.0	607.2	11090.1	9.8	431.2		1.5
SMDH 00573	195.8	20.7	68.8	12.2	1.5	7.0	0.7	3.3	0.3	0.9	0.3	0.7	0.3	37.4	0.8	18.6	596.5	10894.8	7.8	344.5		
SMDH 00573	209.0	22.7	74.6	12.8	1.7	8.1	0.8	3.7	0.6	1.1	0.3	1.0	0.3	34.3	5.9	234.6	598.4	10929.3	5.4	248.1	0.99	
SMDH 00573	226.9	25.6	89.8	14.4	1.9	9.0	1.1	5.0	0.8	1.6	0.3	1.6	0.3	43.1	1.3	18.6	684.6	12505.4	10.3	421.0		
SMDH 00573	196.2	22.1	78.1	12.5	1.6	8.3	0.9	5.2	0.9	2.1	0.3	2.2	0.3	36.6	1.1	15.7	560.6	10240.3	10.5	449.3		
SMDH 00573	164.0	17.6	60.7	10.1	1.6	6.0	0.7	4.1	0.8	2.3	0.3	2.7	0.3	28.0	0.8	31.5	573.7	10478.6	8.3	386.2	0.87	1.62
SMDH 00573	179.1	19.6	68.8	11.8	1.7	7.4	0.8	4.5	0.9	1.9	0.3	1.8	0.3	29.8	1.1	25.7	644.4	11770.5	7.3	312.6		
SMDH 00574	72.6	7.7	26.8	4.8	0.6	3.0	0.3	2.8	0.6	1.7	0.3	1.8	0.3	12.4	1.2	11.4	361.2	6597.2	6.1	270.2		
SMDH 00574	104.4	11.7	39.7	7.4	1.0	4.7	0.7	4.5	0.9	2.6	0.3	2.7	0.3	18.0	1.8	14.3	487.2	8899.6	9.2	383.2		
SMDH 00574	103.7	11.2	38.5	7.1	1.7	5.0	0.7	5.5	1.1	3.2	0.3	3.2	0.3	14.7	1.8	18.6	635.0	11598.2	5.8	247.7		1.42
SMDH 00574	77.0	8.8	30.3	5.1	0.7	3.1	0.3	2.4	0.3	1.3	0.3	1.3	0.3	14.1	1.2	11.4	289.2	5282.4	4.5	196.9	4.24	
SMDH 00574	210.1	23.6	80.5	14.4	1.2	8.5	1.2	6.5	1.1	3.2	0.3	3.2	0.3	38.0	3.1	18.6	594.1	10851.8	18.8	791.2		
SMDH 00574	191.6	21.7	73.5	13.1	1.0	7.7	1.1	6.1	1.1	3.1	0.3	3.0	0.3	35.5	2.8	14.3	496.7	9071.9	12.4	552.6		1.39
SMDH 00574	328.8	36.4	122.5	21.5	1.3	13.0	1.6	8.6	1.5	4.1	0.6	3.9	0.6	61.0	4.6	15.7	635.0	11598.2	24.2	1070.4		
SMDH 00574	280.1	31.3	105.0	19.4	1.3	12.8	1.9	12.6	2.7	8.8	1.4	8.8	1.3	51.7	4.6	14.3	444.8	8124.5	5.5	250.4	1.55	
SMDH 00574	124.1	14.3	49.0	8.6	0.7	4.8	0.6	3.6	0.6	1.6	0.3	1.5	0.3	23.0	2.0	14.3	300.2	5483.3	3.4	156.8		1.53
SMDH 00574	86.5	8.8	33.8	6.0	1.7	3.8	0.3	3.0	0.7	1.5	0.3	1.5	0.3	15.5	1.5	11.4	110.2	2012.5	2.0	89.2		
SMDH 00574	52.6	5.7	21.0	4.3	1.9	2.8	0.3	2.2	0.3	1.1	0.3	1.0	0.3	8.4	0.9	5.7	50.1	915.8	1.4	55.8		

BHID	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	ThO_2	U_3O_8	Nb_2O_5	TiO_2	$FeTiO_3$	HfO_2	ZrO_2	Moist	BD
units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	
SMDH 00574	53.3	5.8	21.0	4.4	1.9	2.8	0.3	2.4	0.3	1.3	0.3	1.1	0.3	8.2	0.9	4.3	44.3	809.6	1.2	43.8	0.57	1.46
SMDH 00574	50.4	5.4	19.8	3.9	1.7	2.8	0.3	2.9	0.6	1.6	0.3	1.6	0.3	7.7	0.9	5.7	68.7	1254.6	1.4	59.0		
SMDH 00574	52.5	5.8	19.8	4.5	1.7	2.9	0.3	2.1	0.3	0.9	0.3	0.9	0.3	8.4	1.3	5.7	61.5	1122.5	1.2	45.0		
SMDH 00574	49.6	5.4	18.7	3.9	1.7	2.8	0.3	2.5	0.3	1.5	0.3	1.5	0.3	7.9	1.1	7.2	71.5	1306.2	1.4	57.1		1.28
SMDH 00574	71.6	7.9	26.8	5.5	1.9	3.7	0.3	3.2	0.6	1.7	0.3	1.6	0.3	11.2	1.2	5.7	57.2	1045.0	1.5	57.1	1.67	
SMDH 00574	52.6	5.8	19.8	4.3	1.9	2.8	0.3	2.4	0.3	1.4	0.3	1.5	0.3	8.2	0.9	5.7	58.6	1070.8	1.4	54.4		
SMDH 00574	59.3	6.8	23.3	4.6	2.0	3.5	0.3	3.7	0.8	2.2	0.3	2.0	0.3	9.3	1.2	7.2	80.6	1472.7	1.2	46.2		1.49
SMDH 00574	43.4	5.1	16.3	3.0	1.5	2.4	0.3	2.1	0.3	1.3	0.3	1.3	0.3	6.0	1.1	7.2	66.5	1214.4	1.1	46.6		
SMDH 00574	36.2	4.1	14.0	2.9	1.5	2.0	0.3	1.6	0.3	0.8	0.3	0.9	0.3	5.6	0.8	7.2	53.8	981.8	0.9	38.2		
SMDH 00575	95.1	9.5	31.5	5.8	0.7	3.7	0.6	3.4	0.7	2.3	0.3	2.4	0.3	20.6	0.9	14.3	494.5	9031.7	9.2	387.5		1.38
SMDH 00575	140.7	14.4	49.0	8.2	1.0	5.0	0.8	5.3	1.1	3.3	0.6	3.3	0.3	25.8	1.2	17.2	571.8	10444.1	16.0	694.9		
SMDH 00575	206.2	23.4	77.0	13.6	1.2	7.5	1.1	6.0	1.1	3.5	0.6	3.4	0.3	38.9	1.2	12.9	639.7	11684.3	12.6	541.3		
SMDH 00575	127.3	14.3	47.8	8.5	1.0	5.3	0.7	4.0	0.8	2.1	0.3	1.9	0.3	21.8	0.9	8.6	382.2	6981.9	8.5	368.1	0.91	1.56
SMDH 00575	153.3	17.2	56.0	9.5	1.3	5.6	0.8	5.0	1.0	3.1	0.3	3.0	0.3	25.7	0.9	21.5	654.0	11945.6	9.2	403.8		
SMDH 00575	116.5	13.9	45.5	7.5	1.2	4.1	0.6	3.8	0.8	2.3	0.3	2.6	0.3	21.7	0.7	8.6	401.9	7340.7	10.5	438.7		
SMDH 00575	129.2	15.0	51.3	8.5	1.4	4.7	0.7	4.4	0.9	2.5	0.3	2.8	0.3	21.2	0.8	12.9	475.4	8684.3	11.0	479.1		
SMDH 00576	178.6	20.3	72.3	12.3	1.3	7.7	0.9	6.0	1.0	2.7	0.3	3.0	0.3	26.1	2.9	60.1	660.8	12069.0	19.9	765.2		1.42
SMDH 00576	184.4	22.1	73.5	13.2	1.4	8.8	1.1	6.3	1.1	3.0	0.3	3.2	0.3	25.8	2.9	22.9	650.2	11876.7	20.0	817.0		
SMDH 00576	227.7	25.3	85.1	15.3	1.5	9.6	1.3	7.3	1.4	3.9	0.7	4.3	0.7	44.0	2.8	17.2	620.4	11331.2	22.8	952.0		
SMDH 00576	48.6	8.3	30.3	5.9	1.0	5.6	0.8	4.8	0.9	2.1	0.3	2.2	0.3	5.5	0.6	15.7	933.3	17047.1	3.7	148.5		
SMDH 00576	79.7	10.6	35.0	5.5	0.9	4.6	0.8	4.4	1.0	2.4	0.3	2.5	0.3	12.5	0.3	15.7	758.4	13851.8	5.4	270.7		1.42
SMDH 00576	163.4	18.5	65.3	11.5	1.3	7.1	1.2	7.8	1.8	4.7	0.8	4.8	0.7	27.1	0.9	20.0	833.0	15215.5	13.0	540.0	2.45	
SMDH 00576	171.1	19.2	67.7	11.7	1.2	8.3	1.1	6.5	1.5	3.4	0.6	3.8	0.3	27.8	1.1	21.5	736.8	13458.5	15.9	683.9		
SMDH 00576	178.7	20.8	74.6	11.1	1.2	8.1	1.1	6.2	1.5	4.0	0.6	4.9	0.6	30.3	1.3	21.5	831.1	15181.0	12.6	507.6		1.62
SMDH 00576	157.8	17.8	61.8	10.1	1.3	6.5	0.8	4.8	1.0	2.6	0.3	3.1	0.3	25.6	1.1	17.2	724.9	13240.3	11.8	469.1		
SMDH 00576	179.8	20.3	72.3	11.9	1.5	8.8	1.1	7.5	1.6	4.2	0.7	4.4	0.7	30.3	1.1	27.2	542.2	9904.4	11.3	479.8	1.11	
SMDH 00576	211.3	24.0	85.1	14.4	1.6	10.4	1.5	8.8	1.9	5.0	0.9	5.8	0.9	35.3	1.3	24.3	864.4	15789.6	12.3	534.2		1.63
SMDH 00576	174.1	20.3	66.5	9.2	1.5	6.1	0.7	4.4	0.8	2.5	0.3	2.7	0.3	24.8	1.1	32.9	904.7	16524.6	14.0	570.7		
SMDH 00576	133.3	15.7	54.8	9.4	1.3	6.8	1.2	8.3	2.2	5.9	1.1	7.4	1.0	21.7	1.3	22.9	1305.6	23848.1	11.2	497.5		
SMDH 00576	50.4	6.5	25.7	4.9	1.0	5.3	0.9	5.7	1.3	3.1	0.3	4.0	0.3	7.2	0.7	17.2	1094.2	19986.8	4.1	170.7	3.11	1.64
SMDH 00576	171.6	19.7	67.7	11.5	1.2	7.6	0.9	5.7	1.0	3.3	0.3	3.9	0.3	29.0	2.7	22.9	1414.1	25829.0	12.9	515.5		
SMDH 00576	82.2	9.2	33.8	6.4	1.2	4.7	0.7	4.6	0.9	2.7	0.3	3.1	0.3	12.7	0.8	22.9	1381.1	25226.1	6.8	290.0		
SMDH 00577	164.6	15.6	51.3	9.3	0.6	5.8	0.7	3.9	0.7	1.7	0.3	1.9	0.3	25.8	2.6	21.5	401.3	7329.3	18.9	778.3		1.73
SMDH 00577	162.3	17.0	58.3	10.9	1.4	6.9	0.9	5.4	1.1	2.7	0.3	3.0	0.3	28.2	2.5	18.6	753.6	13765.7	8.7	382.5		
SMDH 00577	226.8	27.1	93.3	16.4	2.2	11.4	1.6	9.5	1.9	4.8	0.8	5.2	0.9	33.1	3.4	65.8	548.5	10019.2	13.1	556.8		
SMDH 00577	103.8	11.4	37.3	6.8	1.0	4.7	0.7	3.9	0.8	2.1	0.3	2.3	0.3	19.9	1.4	12.9	443.4	8098.6	7.3	331.4		1.48
SMDH 00577	29.1	3.4	11.7	2.0	0.8	1.4	0.3	1.5	0.3	0.8	0.3	0.9	0.3	6.3	1.4	11.4	248.8	4544.5	4.4	187.8	2.24	
SMDH 00577	71.7	8.0	26.8	4.4	0.8	3.0	0.3	2.5	0.3	1.4	0.3	1.5	0.3	10.2	1.1	14.3	408.8	7467.1	7.1	308.9		
SMDH 00577	112.9	12.7	43.2	7.8	0.9	5.3	0.7	4.2	0.8	2.1	0.3	2.0	0.3	19.5	2.7	187.4	357.7	6534.0	4.7	215.7		1.48
SMDH 00577	21.5	2.4	9.3	1.9	1.0	1.5	0.3	1.6	0.3	0.9	0.3	1.1	0.3	2.7	0.6	10.0	536.6	9801.1	7.1	326.8		
SMDH 00580	269.5	27.5	116.6	20.4	1.2	12.4	1.4	8.4	1.5	3.9	0.7	4.6	0.3	57.0	3.4	35.8	1111.8	20308.3	34.1	1243.1		
SMDH 00580	262.9	26.0	106.1	18.9	1.2	11.8	1.4	7.8	1.7	4.3	0.8	5.0	0.7	55.2	3.1	28.6	903.9	16510.2	29.8	1138.9		
SMDH 00580	164.7	19.8	65.3	11.6	1.5	7.5	1.2	7.2	1.6	4.8	0.8	5.4	0.8	30.7	1.7	22.9	729.8	13329.3	11.2	462.4		
SMDH 00580	169.8	17.6	73.5	13.1	1.7	10.1	1.8	15.3	4.0	10.9	1.9	12.0	1.9	33.6	1.5	35.8	655.6	11974.3	12.1	440.9		1.55
SMDH 00580	74.1	8.3	43.2	12.8	2.9	12.6	2.1	14.0	2.7	6.3	1.0	5.7	0.8	4.8	0.8	44.3	3617.5	66075.3	11.0	407.5	1.04	
SMDH 00581	201.3	21.0	72.3	12.9	1.9	8.8	1.3	8.5	1.8	5.4	0.8	5.8	0.9	30.7	3.1	30.0	1012.2	18488.2	21.0	909.2		1.31
SMDH 00581	150.0	16.8	56.0	10.6	1.5	6.9	1.1	6.4	1.4	4.1	0.7	4.4	0.7	25.3	5.4	186.0	848.7	15502.5	16.2	684.0	1.38	
SMDH 00581	226.1	24.2	85.1	14.6	1.4	9.3	1.3	7.8	1.5	4.7	0.7	4.7	0.7	40.2	3.1	24.3	767.0	14009.7	22.9	1042.1		
SMDH 00581	206.5	22.1	78.1	13.3	2.0	8.4	1.2	7.8	1.6	4.8	0.7	4.8	0.8	31.9	2.7	35.8	933.6	17052.8	20.9	936.8		1.25
SMDH 00581	203.3	22.0	77.0	13.3	1.3	8.5	1.1	6.4	1.1	3.5	0.3	3.3	0.3	33.9	2.8	20.0	721.4	13177.2	11.8	547.7		
SMDH 00581	315.1	34.0	121.3	20.3	1.3	12.2	1.4	7.1	1.1	2.9	0.3	2.5	0.3	55.8	3.4	11.4	326.9	5971.4	9.3	417.5	0.89	
SMDH 00581	261.8	28.0	99.1	17.0	1.2	9.9	1.2	6.0	1.0	2.7	0.3	2.4	0.3	46.4	2.6	11.4	377.2	6890.0	6.1	273.9		1.51
SMDH 00581	276.9	28.9	100.3	17.4	1.3	10.4	1.2	6.4	1.1	3.2	0.3	3.0	0.3	49.7	3.1	12.9	507.7	9272.8	13.6	603.0		
SMDH 00581	327.4	34.0	116.6	20.3	1.5	12.6	1.5	9.4	1.7	5.7	0.7	4.8	0.8	58.1	3.8	34.3	787.0	14374.3	25.2	1097.4		
SMDH 00581	316.3	33.1	115.5	19.9	1.5	12.0	1.4	8.3	1.5	4.1	0.6	3.9	0.6	56.2	3.5	18.6	606.7	11081.5	20.5	896.1		1.1
SMDH 00581	440.9	48.3	162.1	28.3	2.0	16.6	2.1	11.6	2.1	5.8	0.9	5.4	0.8	76.7	5.2	21.5	838.5	15315.9	34.4	1576.4		
SMDH 00581	26.8	2.9	9.3	1.9	2.0	1.0	0.3	0.8	0.3	0.3	0.3	0.6	0.3	3.3	1.3	42.9	941.5	17196.3	14.7	696.9		
SMDH 00581	114.4	12.1	40.8	6.0	2.5	2.9	0.3	1.1	0.3	0.3	0.3	0.3	0.3	18.4	1.2	24.3	843.4	15404.9	15.6	727.1		1.36
SMDH 00581	43.2	4.8	16.3	2.4	2.2	1.4	0.3	0.8	0.3	0.3	0.3	0.3	0.3	5.0	0.9	60.1	1147.5	20960.0	15.4	721.2	0.91	
SMDH 00581	18.3	2.1	7.0	1.3	1.6	0.8	0.3	0.7	0.3	0.3	0.3	0.3	0.3	1.6	1.2	70.1	1221.1	22303.6	15.9	747.5		
SMDH 00581	22.6	2.4	8.2	1.4	1.6	0.9	0.3	0.6	0.3	0.3	0.3	0.3	0.3	2.4	1.2	64.4	943.2	17227.9	14.3	656.5		1.42
SMDH 00581	28.0	3.0	9.3	1.6	1.9	1.0	0.3	0.7	0.3	0.3	0.3	0.3	0.3	3.3	0.9	25.7	879.4	16062.4	12.9	597.2		
SMDH 00581	22.1	2.4	7.0	1.4	2.5	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.3	2.0	0.6	12.9	629.5	11497.7	11.8	506.3	0.27	
SMDH 00582	143.7	16.2	53.7	10.6	1.5	6.6	0.9	5.7	1.1	3.1	0.3	3.3	0.3	25.9	2.6	17.2	570.1	10412.5	8.4	362.1	0.25	1.49
SMDH 00582	101.3	11.6	38.5	7.3	1.4	4.8	0.8	5.2	1.0	3.1	0.3	3.4	0.3	16.6	1.4	22.9	802.2	14652.8	8.8	372.4		
SMDH 00582	101.7	11.4	39.7	7.2	1.4	4.8	0.7	5.3	1.1	3.2	0.3	3.5	0.3	16.5	1.4	17.2	783.5	14311.1	7.8	340.4		
SMDH 00582	158.2	17.8	60.7	10.6	1.5	7.0	0.9	6.3	1.3	3.4	0.6	3.8	0.6	27.4	2.0	18.6	786.6	14368.6	12.0	517.5		1.38
SMDH 00582	268.7	29.7	101.5	17.2	1.3	10.6	1.3	7.5	1.4	3.7	0.6	3.6	0.6	49.2	2.9	17.2	677.1	12367.6	16.5	717.8	2.48	
SMDH 00582	97.0	11.2	36.2	7.0	0.7	3.9	0.3	2.8	0.6	1.5	0.3	1.7	0.3	18.1	0.9	14.3	340.9	6226.9	3.7	166.3		
SMDH 00582	72.0	8.0	26.8	4.6	0.8	3.1	0.3	3.0	0.6	1.7	0.3	1.8	0.3	13.5	0.9	10.0	270.5	4940.7	3.1	143.2		1.58
SMDH 00582	225.9	25.4	85.1	15.5	1.9	9.5	1.2	6.8	1.3	3.5	0.6	3.6	0.6	40.9	2.7	22.9	647.4	11825.0	10.1	440.2		

BHID	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	ThO_2	U_3O_8	Nb_2O_5	TiO_2	$FeTiO_3$	HfO_2	ZrO_2	Moist	BD
units:	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*%*	
SMDH 00582	228.1	25.9	86.3	15.7	1.9	9.5	1.3	7.0	1.4	3.4	0.6	3.6	0.6	40.9	2.7	22.9	678.7	12396.3	10.1	441.4	1.87	
SMDH 00582	206.4	23.0	75.8	13.9	1.7	8.3	1.1	5.7	1.1	3.5	0.6	3.6	0.3	36.6	2.4	20.0	628.7	11483.4	11.9	517.8		1.37
SMDH 00582	165.8	18.5	61.8	11.0	1.7	6.6	0.8	4.7	0.9	2.9	0.3	3.1	0.3	28.7	1.8	18.6	708.8	12947.5	7.2	321.5		
SMDH 00582	203.9	22.4	75.8	13.7	1.6	8.2	1.1	6.0	1.1	3.3	0.3	3.2	0.3	34.9	2.4	18.6	622.4	11368.5	9.9	426.2		
SMDH 00582	183.3	19.9	68.8	12.2	1.7	7.6	1.1	6.7	1.4	3.9	0.6	4.0	0.6	32.5	2.4	18.6	628.7	11483.4	8.5	384.0	0.55	1.42
SMDH 00582	196.8	21.5	73.5	13.1	1.9	8.1	1.1	5.6	1.0	2.7	0.3	2.5	0.3	34.4	3.1	17.2	592.5	10823.1	10.3	444.7		
SMDH 00582	200.2	22.0	74.6	13.1	1.6	8.1	1.1	5.6	1.1	3.1	0.3	3.6	0.3	33.9	2.4	18.6	688.6	12577.2	8.4	383.5		
SMMB 001	136.0	15.2	53.7	8.6	0.3	6.3	0.9	3.4	0.7	2.1	0.3	1.9	0.3	26.6	3.1	11.4	430.2	7857.5	10.7	411.2		
SMMB 001	139.1	16.2	58.3	9.0	1.7	8.5	1.3	7.9	2.1	6.4	0.9	5.8	0.8	19.5	2.1	20.0	611.6	11170.4	10.3	372.7	1.56	
SMMB 001	161.2	20.7	66.5	11.2	1.3	10.0	1.5	8.0	1.9	6.3	0.9	6.3	0.8	26.5	1.9	22.9	749.1	13682.4	7.9	291.0		1.31
SMMB 001	114.2	14.3	45.5	8.8	0.8	6.7	1.2	6.9	1.7	6.2	1.0	6.8	0.9	18.4	1.8	22.9	736.5	13452.8	10.0	366.7		
SMMB 001	124.7	15.3	51.3	8.5	0.7	7.0	1.1	6.1	1.3	4.3	0.7	4.6	0.6	19.2	1.9	25.7	713.4	13030.8	8.4	311.4		
SMMB 001	140.2	17.4	57.2	8.9	0.7	7.1	1.2	6.1	1.1	4.3	0.6	4.2	0.7	21.7	1.5	21.5	650.5	11882.4	11.1	445.9	1.42	1.36
SMMB 001	117.1	13.7	47.8	8.6	0.3	6.0	0.8	4.9	1.0	3.1	0.3	3.0	0.6	19.0	1.5	18.6	521.0	9516.8	10.7	413.9	1.45	
SMMB 001	116.8	12.7	44.3	8.3	0.6	5.8	1.2	7.6	1.7	4.7	0.8	4.0	0.8	17.1	1.8	22.9	473.9	8655.6	9.1	376.5		
SMMB 001	141.3	15.8	56.0	8.7	1.0	6.2	0.7	7.0	1.1	2.6	0.3	2.4	0.3	18.4	1.9	20.0	730.2	13337.9	7.7	314.7		1.39
SMMB 001	159.9	17.6	64.2	12.2	1.4	8.5	1.3	7.0	1.3	3.4	0.3	3.0	0.7	23.3	2.4	25.7	656.4	11988.6	11.0	417.7		
SMMB 001	204.7	23.4	79.3	13.7	1.4	9.7	1.4	7.1	1.4	4.2	0.7	4.2	0.8	31.0	2.5	24.3	664.8	12143.7	10.5	397.0	0.54	
SMMB 001	159.6	17.5	60.7	11.6	1.4	7.5	1.2	6.8	1.5	4.1	0.8	4.9	0.8	25.1	2.4	22.9	652.0	11908.3	9.9	369.8		1.42
SMMB 001	98.8	11.0	36.2	6.1	1.9	4.5	0.7	4.5	0.9	2.7	0.3	3.1	0.3	15.2	1.5	24.3	613.1	11199.2	12.7	487.0		
SMMB 001	264.1	29.1	100.3	16.6	0.9	11.3	1.4	6.4	1.3	3.4	0.6	3.6	0.3	40.4	2.8	28.6	653.8	11942.7	12.6	504.9		
SMMB 001	197.3	23.1	77.0	11.0	2.1	6.9	0.7	3.3	0.6	1.5	0.3	1.6	0.3	21.7	1.5	58.7	652.0	11908.3	8.0	346.2	0.8	1.62
SMMB 001	132.9	14.5	51.3	9.2	1.5	6.2	0.7	4.8	1.0	2.9	0.3	3.2	0.3	20.5	2.0	21.5	587.4	10728.3	7.8	300.4		
SMMB 001	120.6	13.3	46.7	8.9	1.3	5.5	0.8	4.1	0.8	2.3	0.3	2.4	0.3	18.1	2.0	20.0	509.7	9310.1	6.3	256.0		
SMMB 001	73.0	8.1	26.8	4.9	1.0	2.7	0.3	2.1	0.3	1.3	0.3	1.5	0.3	11.7	0.9	12.9	265.9	4857.5	5.5	250.8		1.72
SMMB 001	65.5	7.0	22.2	3.8	1.4	2.5	0.3	2.4	0.3	1.9	0.3	1.6	0.3	9.1	0.7	14.3	507.8	9275.7	5.4	201.4	0.44	
SMMB 001	110.7	13.5	42.0	7.0	0.6	4.6	0.7	4.8	0.8	2.4	0.3	3.2	0.3	17.1	1.5	15.7	644.7	11776.2	8.0	331.8	0.41	
SMMB 001	77.5	9.7	31.5	5.7	0.9	4.3	0.7	5.5	1.0	3.5	0.7	5.5	0.8	11.5	1.8	11.4	473.1	8641.2	6.6	256.0		
SMMB 001	31.6	4.1	11.7	2.2	1.4	1.5	0.3	2.1	0.3	1.3	0.3	1.8	0.3	3.8	0.7	8.6	361.3	6600.1	5.4	195.7		1.51
SMMB 001	93.6	11.6	36.2	6.8	0.8	4.4	0.7	4.2	0.9	2.6	0.3	3.5	0.3	14.6	1.3	14.3	580.9	10610.6	7.4	290.8		
SMMB 001	110.6	13.5	43.2	8.2	0.7	5.8	0.8	5.6	1.3	3.5	0.7	4.6	0.8	16.6	1.7	20.0	592.9	10828.8	10.7	415.5	0.29	
SMMB 001	100.9	12.7	42.0	8.5	0.7	5.0	0.8	5.3	1.0	2.9	0.3	3.9	0.6	15.1	2.5	21.5	652.7	11922.6	10.6	450.0		1.42
SMMB 001	110.7	13.3	43.2	7.5	0.7	5.3	0.7	5.5	1.0	2.9	0.3	3.3	0.3	15.8	1.9	18.6	644.7	11776.2	8.0	331.8		
SMMB 001	83.9	10.1	30.3	6.3	0.9	4.0	0.6	4.5	0.8	2.7	0.3	3.6	0.6	12.7	1.8	28.6	760.6	13892.0	15.9	600.6		
SMMB 001	99.1	12.2	38.5	7.5	1.0	4.3	0.7	2.9	0.3	0.7	0.3	0.8	0.3	15.1	2.2	41.5	1131.8	20672.9	15.7	662.0	0.57	1.44
SMMB 001	36.1	4.3	15.2	2.9	1.2	2.3	0.3	2.5	0.6	2.3	0.3	2.0	0.3	3.3	1.7	27.2	85.3	1558.9	16.6	617.9		
SMMB 001	80.5	9.4	31.5	5.3	0.9	3.5	0.7	4.8	1.0	3.5	0.3	4.0	0.6	9.9	1.5	35.8	803.9	14684.4	11.8	451.6		1.52
SMMB 001																						
SMMB 001																						
SMMB 002	67.7	8.6	26.8	6.6	0.9	5.2	0.8	4.7	0.9	3.4	0.3	2.4	0.3	11.7	1.7	5.7	100.0	1825.9	3.9	151.7	0.34	
SMMB 002	70.8	9.4	30.3	6.5	2.2	5.1	0.8	3.2	0.6	1.7	0.3	1.4	0.3	10.4	0.7	10.0	77.6	1418.2	2.2	63.5		
SMMB 002	31.4	4.1	12.8	3.4	1.2	2.9	0.6	2.8	0.6	2.1	0.3	1.7	0.3	4.8	0.7	8.6	56.6	1033.5	1.3	45.3		1.59
SMMB 002	19.8	2.7	8.2	1.9	1.0	2.2	0.3	2.2	0.6	1.9	0.3	2.4	0.3	3.0	0.7	10.0	48.3	881.3	1.5	52.0		
SMMB 002	43.6	4.8	17.5	3.7	1.2	2.8	0.3	1.7	0.3	0.9	0.3	0.9	0.3	7.2	0.6	10.0	58.2	1062.2	0.8	35.9		
SMMB 002	30.8	3.4	11.7	2.9	1.2	3.0	0.3	2.6	0.6	2.4	0.3	1.8	0.3	5.0	0.6	7.2	44.2	806.7	1.1	40.0		1.55
SMMB 002	43.6	5.4	17.5	4.4	1.2	3.3	0.8	5.2	0.9	3.2	0.3	3.1	0.3	7.1	1.1	11.4	68.2	1245.9	1.5	55.2	0.32	
SMMB 002	19.8	2.3	7.0	1.7	0.8	2.1	0.6	3.7	0.8	3.3	0.3	3.5	0.3	3.0	0.8	4.3	28.1	513.9	0.9	35.4		
SMMB 002																						
SMMB 002	31.6	4.7	12.8	2.3	0.9	1.7	0.3	1.6	0.3	1.4	0.3	0.8	0.3	5.1	0.6	7.2	46.1	841.2	1.3	40.7		1.62
SMMB 002	15.0	1.8	5.8	1.5	1.0	1.5	0.3	2.2	0.6	1.9	0.3	1.7	0.3	2.3	0.7	5.7	20.1	367.5	0.7	25.3		
SMMB 002	31.0	3.4	12.8	3.6	1.0	3.0	0.6	3.3	0.8	2.6	0.3	2.4	0.3	5.1	1.1	7.2	24.0	439.2	1.2	32.0	0.2	
SMMB 002	24.1	2.8	10.5	2.4	1.0	2.7	0.7	3.6	1.0	2.9	0.3	2.5	0.3	3.9	1.1	7.2	42.1	769.4	1.1	47.0		1.5
SMMB 002	29.4	3.5	11.7	3.1	1.0	2.8	0.6	2.9	0.7	2.2	0.3	2.0	0.3	4.6	0.9	8.6	46.1	841.2	0.9	34.9		
SMMB 002	57.1	6.6	23.3	5.0	1.2	3.8	0.3	2.5	0.3	1.1	0.3	1.0	0.3	9.4	0.9	11.4	49.2	898.6	2.9	89.8		
SMMB 002	53.6	6.3	18.7	5.5	1.0	3.5	0.3	2.5	0.3	1.3	0.3	1.0	0.3	8.8	0.9	12.9	94.3	1722.5	2.4	96.7	0.23	1.59
SMMB 002	36.9	3.9	15.2	3.6	1.0	2.9	0.3	2.4	0.3	1.1	0.3	0.9	0.3	5.5	0.8	7.2	24.7	450.7	1.7	42.1		
SMMB 002	31.0	3.4	11.7	3.4	1.2	2.2	0.3	1.7	0.3	0.7	0.3	0.3	0.3	5.0	0.8	7.2	26.7	488.0	1.2	46.9		
SMMB 002	32.2	3.5	12.8	3.1	0.9	3.0	0.3	2.5	0.7	1.5	0.3	1.4	0.3	5.2	0.9	10.0	41.0	749.3	1.4	55.5		1.59
SMMB 002	33.3	3.9	12.8	3.2	1.2	3.0	0.3	2.8	0.3	1.5	0.3	1.5	0.3	5.2	0.9	4.3	21.7	396.2	1.3	46.9		
SMMB 002	26.3	3.1	11.7	2.6	0.9	2.7	0.3	2.5	0.3	1.5	0.3	2.0	0.3	4.0	0.8	5.7	17.8	324.4	0.8	31.1		1.5
SMMB 002	24.7	3.3	9.3	3.0	1.0	2.1	0.3	2.5	0.3	1.3	0.3	1.9	0.3	4.0	0.7	4.3	18.1	330.1	1.1	31.3		
SMMB 002	27.1	3.6	10.5	2.9	1.0	2.3	0.3	3.1	0.7	2.2	0.3	3.5	0.3	4.4	1.1	4.3	18.1	330.1	1.8	54.6	0.13	
SMMB 002	30.1	4.1	11.7	3.5	0.8	2.9	0.3	2.8	0.6	1.6	0.3	2.2	0.3	5.1	0.8	4.3	20.1	367.5	0.7	27.4		
SMMB 002	29.1	3.7	12.8	3.0	1.0	2.8	0.6	3.7	0.9	2.2	0.3	3.2	0.3	4.8	1.1	5.7	26.1	476.6	2.7	40.7		
SMMB 002	20.1	2.7	7.0	2.7	1.0	2.1	0.3	3.8	0.9	2.7	0.3	3.5	0.3	3.2	1.2	4.3	6.0	109.1	0.9	28.0		
SMMB 002	31.0	4.0	11.7	2.9	1.2	2.8	0.7	5.0	1.0	3.0	0.6	4.9	0.7	5.0	1.1	4.3	22.0	401.9	1.2	45.0	0.35	1.61
SMMB 002	32.2	4.2	11.7	3.4	1.2	2.7	0.3	2.4	0.3	1.3	0.3	1.5	0.3	5.1	0.9	5.7	32.1	585.7	1.1	33.8		
SMMB 002	31.3	4.3	12.8	3.6	1.2	3.3	0.3	3.2	0.7	2.2	0.3	3.0	0.3	5.1	0.9	7.2	28.1	513.9	1.7	67.4		
SMMB 002	29.1	3.9	11.7	2.7	0.9	2.9	0.3	2.6	0.3	1.4	0.3	1.6	0.3	5.0	0.7	14.3	44.2	806.7	1.3	56.2		1.41
SMDH 00303	179.3	20.2	71.2	11.6	1.7	8.5	1.2	7.5	1.8	4.3	0.8	5.9	0.8	31.6	2.2	20.0	693.9	12674.8	10.0	439.8		
SMDH 00303	129.2	14.0	50.2	8.2	1.7	5.2	0.8	5.0	1.0	3.2	0.3	3.2	0.6	20.8	1.5	24.3	630.3	11512.1	7.2	322.6		

BHID	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	ThO_2	U_3O_8	Nb_2O_5	TiO_2	$FeTiO_3$	HfO_2	ZrO_2	Moist	BD
units:	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*%*	
SMDH 00304	222.7	25.0	88.6	15.3	1.5	9.8	1.3	8.3	1.6	4.3	0.7	5.0	0.7	44.5	2.5	17.2	551.7	10076.7	14.4	632.7	2.3	1.23
SMDH 00304	190.4	21.3	77.0	11.9	1.5	8.4	1.2	6.2	1.4	3.0	0.3	2.7	0.3	35.4	2.4	20.0	519.9	9496.7	10.3	443.1		
SMDH 00295	278.6	30.1	112.0	17.2	1.0	12.4	1.5	7.0	1.4	3.3	0.3	3.4	0.7	54.7	3.2	10.0	432.9	7906.3	14.6	680.9		
SMDH 00295	195.7	21.4	74.6	11.2	1.5	8.3	0.8	4.1	0.7	1.6	0.3	1.3	0.3	37.4	1.4	8.6	396.9	7248.9	7.7	323.5		1.32
SMDH 00295	140.7	15.3	52.5	8.0	1.7	5.3	0.6	3.0	0.6	1.5	0.3	2.2	0.3	27.4	0.8	11.4	615.3	11239.3	8.4	348.4	1.16	
SMDH 00305	454.3	50.1	179.6	29.8	1.9	21.2	2.4	10.4	2.1	4.3	0.7	4.2	0.7	96.7	3.4	25.7	1020.7	18643.3	20.5	942.6		
SMDH 00305	144.1	16.3	54.8	9.9	1.7	6.0	0.7	3.6	0.3	1.4	0.3	1.1	0.3	28.7	1.1	18.6	663.4	12117.8	8.8	375.7		1.45
SMDH 00305	228.9	26.1	86.3	15.0	1.9	10.3	1.3	6.5	1.0	2.3	0.3	1.8	0.3	46.0	1.5	17.2	687.3	12554.2	9.7	437.3		
SMDH 00305	242.7	28.3	95.6	16.8	1.9	11.3	1.2	6.4	0.7	1.9	0.3	2.2	0.3	47.8	1.7	15.7	676.5	12356.1	9.6	414.4	0.59	
SMDH 00306	98.4	11.5	38.5	6.4	1.5	4.5	0.6	3.9	0.8	1.8	0.3	1.7	0.3	19.0	1.5	12.9	637.5	11644.1	12.7	590.4		1.28
SMDH 00306	73.6	8.8	30.3	4.5	1.6	2.9	0.3	2.0	0.3	0.9	0.3	1.4	0.3	11.5	0.3	11.4	574.9	10501.5	9.2	495.2		
SMDH 00306	202.2	23.7	80.5	12.3	1.2	8.5	1.2	6.3	1.3	3.4	0.7	3.6	0.6	40.6	1.2	20.0	572.7	10461.4	8.8	387.4		
SMDH 00307	172.0	19.5	68.8	11.5	1.0	7.4	0.8	5.5	0.9	2.4	0.3	2.7	0.3	33.2	2.5	15.7	680.7	12433.6	8.7	374.4	2.34	1.28
SMDH 00307	159.8	18.2	64.2	10.2	0.7	7.3	0.9	4.7	0.8	1.9	0.3	2.4	0.3	30.3	3.1	18.6	626.8	11448.9	8.6	380.1		
SMDH 00307	210.9	25.7	82.8	12.9	1.3	8.3	0.9	5.5	0.9	2.7	0.3	3.1	0.3	31.9	2.4	47.2	847.2	15473.8	11.9	507.5		
SMDH 00307	118.3	13.0	43.2	7.5	0.8	4.8	0.6	2.6	0.3	1.0	0.3	1.4	0.3	19.7	2.1	17.2	709.0	12950.4	12.0	516.3		1.35
SMDH 00308	129.6	15.0	50.2	10.3	1.3	6.5	1.1	6.5	1.5	4.0	0.7	4.4	0.7	24.1	2.5	20.0	684.0	12493.9	19.2	798.7		
SMDH 00308	96.2	11.0	38.5	6.7	1.2	5.1	0.8	4.8	1.0	2.6	0.3	3.0	0.3	17.5	1.7	17.2	621.3	11348.4	10.6	452.9		1.29
SMDH 00308	91.3	10.3	36.2	6.5	0.7	4.3	0.6	3.4	0.7	1.7	0.3	1.8	0.3	17.6	1.2	17.2	280.6	5124.5	6.3	273.9		
SMDH 00308	232.9	25.7	94.5	16.7	1.4	10.7	1.3	7.3	1.4	3.7	0.7	4.2	0.6	47.1	2.8	21.5	790.7	14443.2	23.1	1002.2		
SMDH 00291	406.2	50.3	171.5	29.8	1.6	19.5	2.1	9.9	1.6	5.3	0.6	4.0	0.7	93.1	4.0	21.5	646.5	11807.8	18.3	925.3	1.33	
SMDH 00291	172.7	21.6	79.3	12.9	1.2	8.3	0.9	4.7	0.8	2.2	0.3	1.7	0.3	38.8	1.5	25.7	609.7	11136.0	9.4	471.2		1.42
SMDH 00291	181.6	22.0	75.8	13.2	1.3	8.4	0.9	4.5	0.7	2.6	0.3	1.7	0.3	43.5	1.4	18.6	459.7	8397.2	4.6	219.4		
SMDH 00291	165.7	20.2	68.8	11.5	1.3	7.1	0.7	3.1	0.3	1.1	0.3	0.7	0.3	37.0	1.1	15.7	418.7	7647.9	5.3	254.0		
SMDH 00309	252.9	29.8	108.5	18.3	0.9	12.0	1.3	6.8	1.3	4.8	0.6	4.1	0.7	54.8	3.2	47.2	937.8	17130.3	19.7	936.0	2.07	
SMDH 00309	137.1	16.9	59.5	10.9	0.7	7.6	0.9	4.6	0.9	3.3	0.3	2.5	0.3	29.4	1.9	32.9	681.8	12453.7	7.4	360.4		
SMDH 00309	176.5	22.1	74.6	12.3	1.2	8.2	1.1	5.6	1.1	4.0	0.3	3.4	0.3	37.4	1.9	27.2	553.1	10102.5	7.0	325.4		
SMDH 00311	245.1	29.4	108.5	16.6	1.4	11.2	1.2	6.9	1.1	4.0	0.3	3.1	0.3	50.9	2.4	27.2	773.8	14133.2	15.7	817.6		1.52
SMDH 00311	206.1	24.8	86.3	13.1	1.5	8.6	1.1	6.0	1.1	3.8	0.3	3.4	0.3	40.5	1.4	21.5	609.7	11136.0	7.7	382.1	1.3	
SMDH 00311	99.7	11.7	39.7	6.8	1.9	4.1	0.3	3.6	0.6	2.3	0.3	2.3	0.3	17.3	0.7	21.5	448.7	8196.3	10.4	428.9		
SMDH 00310	152.6	18.2	63.0	11.1	1.0	7.4	0.9	5.9	1.0	3.1	0.3	3.0	0.3	29.0	2.5	15.7	464.4	8483.3	11.0	445.6		1.63
SMDH 00310	169.2	23.9	92.1	13.3	1.2	10.1	1.1	7.0	1.3	4.7	0.6	4.7	0.6	37.9	2.0	15.7	516.3	9430.7	16.0	634.7		
SMDH 00310	232.7	27.2	98.0	15.4	1.3	12.1	1.4	10.0	1.9	6.7	1.0	6.1	0.9	44.9	2.6	17.2	592.5	10823.1	20.8	883.0	1.93	
SMDH 00312	248.8	26.8	96.8	16.6	2.2	12.7	1.9	8.8	1.6	4.9	0.9	5.0	0.8	48.2	2.8	31.5	960.0	17535.1	13.9	675.7		1.4
SMDH 00312	189.2	20.1	71.2	12.2	1.7	11.1	1.6	7.6	1.6	4.7	0.9	5.4	0.8	36.5	2.2	22.9	866.3	15824.1	9.8	466.0		
SMDH 00312	392.6	41.7	149.3	25.7	1.5	21.0	2.7	9.1	1.5	4.0	0.7	4.0	0.7	85.6	4.7	24.3	835.8	15267.1	17.8	878.3	1.63	1.48
SMDH 00312	84.1	8.8	31.5	5.6	0.8	5.5	0.8	3.8	0.8	1.9	0.3	1.9	0.3	17.1	1.3	28.6	589.9	10774.3	7.5	361.5		
SMDH 00312	45.2	4.7	17.5	3.4	0.9	3.6	0.7	3.9	0.8	2.4	0.3	2.6	0.3	9.2	1.4	34.3	875.1	15984.9	13.9	642.8		
SMDH 00313	135.2	13.9	51.3	8.2	1.4	7.7	1.2	5.3	1.1	3.4	0.6	3.6	0.7	24.2	1.7	17.2	672.7	12287.2	8.3	403.5		1.46
SMDH 00313	180.8	18.7	68.8	12.6	2.0	11.6	1.6	7.5	1.6	4.7	1.0	4.8	0.8	31.7	2.2	22.9	820.6	14988.7	7.2	363.0	1.73	
SMDH 00313	104.0	11.1	40.8	6.6	1.9	5.8	0.8	5.3	1.1	3.5	0.7	4.1	0.6	18.3	1.2	17.2	661.7	12086.2	8.4	380.0		
SMDH 00325	246.5	26.2	93.3	15.0	1.5	9.0	0.9	4.5	0.8	1.9	0.3	1.9	0.3	45.4	2.4	15.7	664.1	12129.3	12.9	542.1		
SMDH 00325	100.4	8.8	31.5	5.3	1.0	4.1	0.6	3.2	0.6	1.9	0.3	2.2	0.3	14.0	1.8	15.7	646.5	11807.8	10.1	409.0	1.64	
SMDH 00325	64.1	6.9	24.5	4.5	1.3	2.8	0.3	2.2	0.3	0.8	0.3	1.0	0.3	9.2	0.9	12.9	497.1	9080.5	9.3	390.2		1.25
SMDH 00325	52.5	6.0	22.2	4.1	1.2	3.3	0.3	4.1	0.7	1.9	0.3	2.3	0.3	6.3	0.8	14.3	505.0	9224.0	8.1	323.5		
SMDH 00324	138.3	15.6	53.7	9.7	1.2	6.8	0.8	5.2	0.8	2.1	0.3	2.2	0.3	19.5	1.9	11.4	440.1	8038.4	7.0	306.1		
SMDH 00324	81.6	8.8	31.5	5.9	1.4	4.0	0.6	3.7	0.8	2.1	0.3	2.5	0.3	11.3	1.4	12.9	464.9	8492.0	6.8	286.2	1.66	1.41
SMDH 00324	64.1	7.1	24.5	4.6	1.0	3.7	0.7	4.2	0.9	2.5	0.3	3.3	0.3	7.7	1.7	11.4	356.8	6516.8	5.9	265.8		
SMDH 00299	146.4	16.3	58.3	10.7	1.3	6.9	1.1	5.7	1.3	3.3	0.3	3.9	0.3	26.4	2.1	21.5	817.6	14934.1	16.3	715.5		
SMDH 00299	125.2	13.3	46.7	8.9	1.4	5.6	0.8	5.2	1.1	3.5	0.3	3.8	0.6	21.7	2.2	22.9	815.4	14893.9	12.4	552.5		1.37
SMDH 00298	66.7	7.9	25.7	5.7	0.8	4.1	0.6	3.6	0.7	1.8	0.3	1.8	0.3	11.9	1.7	11.4	462.7	8451.8	5.7	232.1		
SMDH 00298	13.1	1.8	7.0	1.6	0.3	1.2	0.3	1.4	0.3	0.8	0.3	0.9	0.3	1.9	0.8	7.2	313.2	5721.6	1.8	70.6		1.25
SMDH 00298	16.7	2.2	8.2	2.2	0.3	2.1	0.3	1.8	0.3	0.9	0.3	0.9	0.3	1.6	0.8	10.0	327.9	5988.6	2.5	101.6		
SMDH 00302	170.6	20.2	73.5	11.8	1.3	7.7	1.2	7.2	1.3	4.2	0.7	3.9	0.7	34.0	2.1	14.3	646.9	11816.4	16.3	646.2		1.3
SMDH 00302	187.9	22.1	81.6	12.9	1.0	7.7	1.1	6.0	1.1	2.9	0.3	2.5	0.3	41.0	1.9	11.4	440.1	8038.4	7.8	330.7		
SMDH 00302	192.7	23.3	80.5	13.3	1.5	7.8	1.2	7.7	1.3	4.0	0.7	3.9	0.6	45.5	1.5	15.7	567.7	10369.5	7.0	283.7	22.27	
SMDH 00302	217.2	24.2	87.5	13.1	1.6	8.9	1.1	6.9	1.5	3.9	0.7	4.1	0.6	44.4	2.0	18.6	613.3	11202.0	8.1	343.5		1.41
SMDH 00297	237.9	27.7	89.8	17.0	1.6	11.6	1.4	7.6	1.7	4.6	0.8	5.2	0.8	45.5	3.8	21.5	900.4	16447.1	26.4	1158.6	1.35	
SMDH 00297	305.3	34.3	115.5	21.9	1.5	13.3	1.5	9.1	1.8	5.4	0.9	5.6	1.0	58.7	4.4	24.3	856.9	15651.8	37.3	1685.1		1.29
SMDH 00297	361.4	39.7	136.5	25.0	1.7	16.1	2.1	10.1	2.1	5.3	1.0	5.9	0.9	71.3	5.4	28.6	1047.7	19137.0	48.1	2101.4		
SMDH 00296	419.0	48.0	164.5	27.9	1.7	18.7	2.2	11.5	2.1	5.5	0.9	5.6	0.7	82.0	6.1	21.5	888.0	16220.3	44.8	1932.0		
SMDH 00296	19.0	2.1	7.0	1.3	1.6	0.8	0.3	0.6	0.3	0.3	0.3	0.3	0.3	2.0	0.3	7.2	255.2	4662.2	4.1	208.3	1.6	1.38
SMDH 00296	14.1	1.6	5.8	1.0	1.7	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.3	0.3	4.3	231.0	4220.1	2.8	130.1		
SMDH 00300	212.5	24.4	86.3	13.3	0.9	9.7	1.1	6.1	0.9	2.5	0.3	2.2	0.3	41.8	2.7	14.3	580.9	10610.6	15.8	598.3		
SMDH 00300	349.2	43.1	157.5	25.2	2.1	16.5	2.5	15.1	3.0	9.7	1.6	9.3	1.5	74.9	3.9	17.2	878.0	16036.5	13.7	509.3		1.41
SMDH 00301	119.6	14.0	54.8	7.7	0.9	5.5	0.9	6.5	1.3	4.0	0.6	3.5	0.3	20.5	1.7	14.3	602.9	11012.6	16.2	639.2	1.38	
SMDH 00301	137.8	16.3	56.0	8.3	1.2	6.1	1.1	6.5	1.3	4.5	0.7	3.9	0.6	23.7	1.8	12.9	576.5	10530.3	13.2	526.4		