ASTRON

ASX Announcement

ASX Code: **ATR**

27 February 2026

Donald Project - MIN5532 Mineral Resource and Ore Reserves Update

Highlights

- The Mineral Resource and the Ore Reserve Estimates for Mining Licence MIN5532, the site of Phase 1 of the Donald Project, have been updated to include detailed rare earth element grade data.
- The Donald Project is shovel ready and the revised Mineral Resource and Ore Reserve Estimates confirm its position as one of the world's most significant near-term sources of heavy rare earths.
- The heavy mineral (**HM**) grade of the updated MIN5532 Mineral Resource is 4.0% and includes 1.4% total rare earth oxides (**TREO**), comprising 18.2% neodymium/praseodymium (**NdPr**) oxide, 2.9% dysprosium (**Dy**) oxide, and 0.4% terbium (**Tb**) oxide.
- Average annual forecast production of the high value heavy rare earth oxides Dy oxide and Tb oxide (which are contained in the Project's rare earth element concentrate (**REEC**) product) increased by 57%, to 144tpa, and by 22%, to 22tpa, respectively when compared to the 2025 July updated economics study.
- The revised Mineral Resource and Ore Reserves have been prepared in accordance with the guidelines of the JORC 2012 Code (2012 edition), as well as NI 43-101 and SK-1300 North American standards. Astron's Joint Venture partner, Energy Fuels Inc., has released a technical report on EDGAR+ in accordance with its statutory obligations as an entity listed on the American Stock Exchange (**NYSE American**).
- Separately, grade control (GC) drilling and advanced sample analysis techniques, carried out over an area of MIN5532 representing approximately the first 2 ½ years of mining operations at the Donald Phase 1 Project, indicated a 5% increase in the HM grade accompanied by an 11% increase in the zircon grade and a 6% increase in the monazite grade in the HM fraction, within the area of GC drilling.

Astron Limited (ASX: ATR) (**Astron** or the **Company**) is pleased to announce revised Mineral Resource and Ore Reserve estimates for Mining Licence MIN5532 (**MIN5532**), the site of Phase 1 of the Donald Rare Earths and Mineral Sands Project (**Donald Project** or **Project**).

The Donald Project, located in the Wimmera Region of Victoria, is being developed by Astron in joint venture with Energy Fuels Inc., a U.S. based critical minerals producer. The Project contains the critical minerals zircon and titanium dioxide, as well as the light rare earth elements neodymium (**Nd**) and praseodymium (**Pr**), and the more valuable heavy rare earth elements dysprosium (**Dy**) and terbium (**Tb**).

The Donald Project tenements comprise MIN5532 and Retention Licence RL2002. MIN5532, the subject of this Mineral Resource and Ore Reserves update, with an area of approximately 28 square kilometres, comprises approximately 10% of the total Donald Project area.

The 2022 Mineral Resource Estimate (**MRE**) for MIN5532 has been updated to incorporate detailed rare earth element data . The 2025 MRE is based on inductively coupled plasma-mass spectrometry (**ICP-MS**) analysis of the 2022 drilling program samples which were used in the 2022 MRE. ICP-MS analysis is more accurate than the previously used X-ray fluorescence (**XRF**) analysis, specifically for low mineral concentrations. This is particularly relevant for the highly strategic heavy rare earth elements dysprosium and terbium. As a result, the 2025 MRE includes significantly more accurate determinations of the grades of these elements than previous Mineral Resource estimates. This has enabled the Company to report the detailed rare earth element assemblage data for the first time.

MIN5532, which contains approximately 29% of the Donald Project Mineral Resources, contains 8.5kt of Dy oxide, and 1.3kt of Tb oxide (see Table 6).

Table 1: Summary – Revised Mineral Resource at 31 Dec 2025 (2025 MRE)

Classification	Tonnes	Total HM	Slimes	Oversize	% of Total HM		
	Mt	%	%	%	ZrO_2+HfO_2	TiO_2	TREO
Measured	400	4.2	16	10	10.9	34	1.4
Indicated	110	3.5	24	11	9.9	29	1.3
Inferred	20	2.3	22	14	8.9	30	1.1
Total	**530**	**4.0**	**18**	**10**	**10.6**	**33**	**1.4**

Note:

- *The Donald deposit Mineral Resource has been classified and reported in accordance with the guidelines of the JORC code 2012. The table represents a summary of the more detailed Mineral Resource Statement as shown in Table 6.*
- *Mineral Resource reported above a cut-off grade of 1% total HM.*
- *All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus sum of columns may not equal.*

2025 Grade Control Drilling Analysis

Separately, in 2025 the Company undertook a grade control drilling program (**GC Drilling**) over the area of MIN5532 representing approximately the first 2.5 years of mining operations (eight mining blocks) at the Donald Phase 1 Project. The GC Drilling was conducted at an increased drillhole density when compared to drilling for the purposes of Mineral Resource estimation. Based on the results of the GC Drilling, a standalone MRE for this area was completed in December 2025 (**2025 GC MRE**), as shown in Table 2 below, including a comparison with the 2025 MRE for the same volume.

The 2025 GC MRE demonstrated the following key findings:

- An approximately 5% increase in the heavy mineral (**HM**) content within the first eight mining blocks of MIN5532 compared with the 2025 MRE, and
- The HM fraction is estimated to contain a 6% increase in zircon, an 11% increase in monazite and an 8% increase in xenotime compared with the 2025 MRE.

The 2025 GC MRE is a standalone MRE and does not form part of the 2025 MRE.

Table 2: Summary – Revised Mineral Resource at 31 Dec 2025 for grade control area (2025 GC MRE vs 2025 MRE)

Classification	Tonnes	Total HM	Slimes	Oversize	% of Total HM		
	Mt	%	%	%	ZrO_2+HfO_2	TiO_2	TREO
2025 GC MRE Measured	15	5.2	15	3.7	12	34	1.6
Total	**15**	**5.2**	**15**	**3.7**	**12**	**34**	**1.6**
2025 MRE	*15*	*4.9*	*16*	*7.3*	*11*	*33*	*1.5*

Note:

- *The GC Mineral Resource has been classified and reported in accordance with the guidelines of the JORC code 2012. The table represents a summary of the more detailed Mineral Resource Statement as shown in Table 7 below.*
- *All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus sum of columns may not equal.*
- *The 2025 Mineral Resource for the 2025 MRE is provided for reference*

Analysis of the GC Drilling results included improvements to the drill sample preparation and assaying method. The analysis indicates that there may be potential to increase the HM and mineral assemblage grades throughout the Donald Deposit. However, this may not be representative of the entire MIN5532 Mineral Resource, and further investigation is required to determine whether and the extent to which the total MIN5532 Mineral Resource may exhibit increased HM and mineral assemblage grades.

Donald Phase1 Project Ore Reserves Estimate

Together, the 2025 MRE and 2025 GC MRE, have been converted into a revised Ore Reserves estimate for MIN5532 at 31 December 2025. The Ore Reserves estimate is based on the more detailed 2025 GC MRE over that portion of MIN5532 representing the first 2 ½ years of mining operations, and the 2025 MRE over the balance of the area of MIN5532.

Table 3. Donald Project MIN5532 Ore Reserves at 31 Dec 2025

Classification	Tonnes	Total HM	Slimes	Oversize	% of Total HM		
	Mt	%	%	%	ZrO_2+HfO_2	TiO_2	TREO
Proved – GC Area	15	5.2	15	4	12	34	1.6
Proved - remaining	240	4.5	15	10	11	34	1.4
Probable	39	4.3	18	11	11	32	1.4
Total	**293**	**4.5**	**15**	**9**	**11**	**34**	**1.4**

Note:

- *The Donald deposit MIN5532 Ore Reserves have been classified and reported in accordance with the guidelines of the JORC code 2012. The table represents a summary of the more detailed Ore Reserves Estimate as shown in Table 10 below.*
- *All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus sum of columns may not equal.*

Rare Earths Interpretation

Rare earth elements (**REE**) are critical minerals essential to the manufacturing of clean energy and high-end technology solutions. Specifically, Dy, Tb, Nd and Pr are used in the manufacture of permanent magnets which retain strong magnetic properties at elevated temperatures. These have critical applications for electric vehicle motors, wind turbines and other power generation, robotics and a range of defence-related applications.

The 2025 Ore Reserve estimate for MIN5532 includes increased contents of the valuable heavy REE Dy and Tb against previous estimates (the 2025 Updated Economics Study and the 2023 Definitive Feasibility Study), which leads to potentially greater annual production rates of the heavy rare earth elements.

At a processing plant throughput of 7.5Mtpa of Ore, the Donald Phase 1 Project is forecast to produce 279kt of REEC over a 39.25-year mine life. This includes the production of 4.5kt of Dy oxide and 1.1kt of Tb oxide at average annual production rates of 115t and 18t per annum respectively. The average annual Dy and Tb production rates over the first five years of Project life are estimated to be 144t and 22t respectively.

Table 4: Relative distribution of saleable minerals in REE oxides in REEC

Relative Distribution	Annual Forecast REEC Production (t)	TREO (%)	As a % of TREO			
			Pr_6O_{11} (%)	Nd_2O_3 (%)	Tb_4O_7 (%)	Dy_2O_3 (%)
2025 REEC Product	7,100	60.6	3.9%	13.9%	0.4%	2.7%
2023 REEC Product	7,200	61.5	4.6%	16.4%	0.3%	1.8%
% change	(1.4%)	(1.5%)	(16%)	(16%)	37%	53%

Note:

- *The 2025 REEC product assemblage is provided based on the Ore Reserves Statement and the metallurgical recoveries provided on pg. 18 of this release.*
- *The 2023 REEC product assemblage used in the 2023 DFS and the 2025 Updated Economic Study was released to the ASX on 31 March 2023, Donald Rare Earth and Mineral Sands Project – Phase 1 Project Ore Reserves, https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02649718-2A1440828&v=undefined.*

Rare Earths Market

On 4 April 2025, China imposed export controls on seven heavy rare earth elements - including dysprosium, terbium, samarium and gadolinium, and their related oxides, alloys, and permanent magnets. These restrictions, which remain in place, require exporters to obtain licenses prior to export and have led to a bifurcation of the rare earth prices across the globe, especially in the heavy REEs Dy and Tb.

As an illustration of this phenomenon, at the end of January 2026, the moving quarterly average FOB China and CIF Europe prices of Nd and Pr oxides were ~US$110/kg and ~US$100/kg respectively. However, the moving quarterly average prices of Dy and Tb oxides were US$250/kg FOB China and ~US$900/kg CIF Europe, and ~US$1,000/kg FOB China and ~US$3,800/kg CIF Europe respectively. Western purchasers are now paying a significant premium to secure these critical materials. (Note: rare earth oxide prices sourced from Argus Media, an independent market researcher).

In the Donald Phase 1 Project context, the revised mineral assemblage contains significantly more heavy rare earths than were accounted for in previous resource estimates and, despite a 1.4% lower TREO content, the project's REEC product, when priced on a Western rare earths spot pricing basis, commands a significant price premium over product priced on a China rare earths spot pricing basis.

Table 5: Spot Prices for the REEC Product based on the revised assemblage using China and Western reference prices

	REEC Spot Price (Based on China FOB) US$ / t	REEC Spot Price (Based on E.U. CIF) US$ / t
2025 REEC Product	7.6	15.3

Note:

- *REEC spot price has been calculated based on three month moving averages for Nd, Pr, Dy, Tb oxide pricing as provided by Argus Media, an independent research services provider, and the relevant mineral assemblages as noted in Table 4.*

The revised MRE and Ore Reserve estimates position the Donald Project as one of the world's most significant sources of heavy rare earth elements in grade and scale outside of China.

The 2025 MRE has been prepared by Snowden Optiro, and the Ore Reserves Estimates for the 2025 Ore Reserve and the 2025 GC Ore Reserve have been prepared by AMC Consultants Pty Ltd in accordance with the guidelines of the JORC Code (2012 edition).

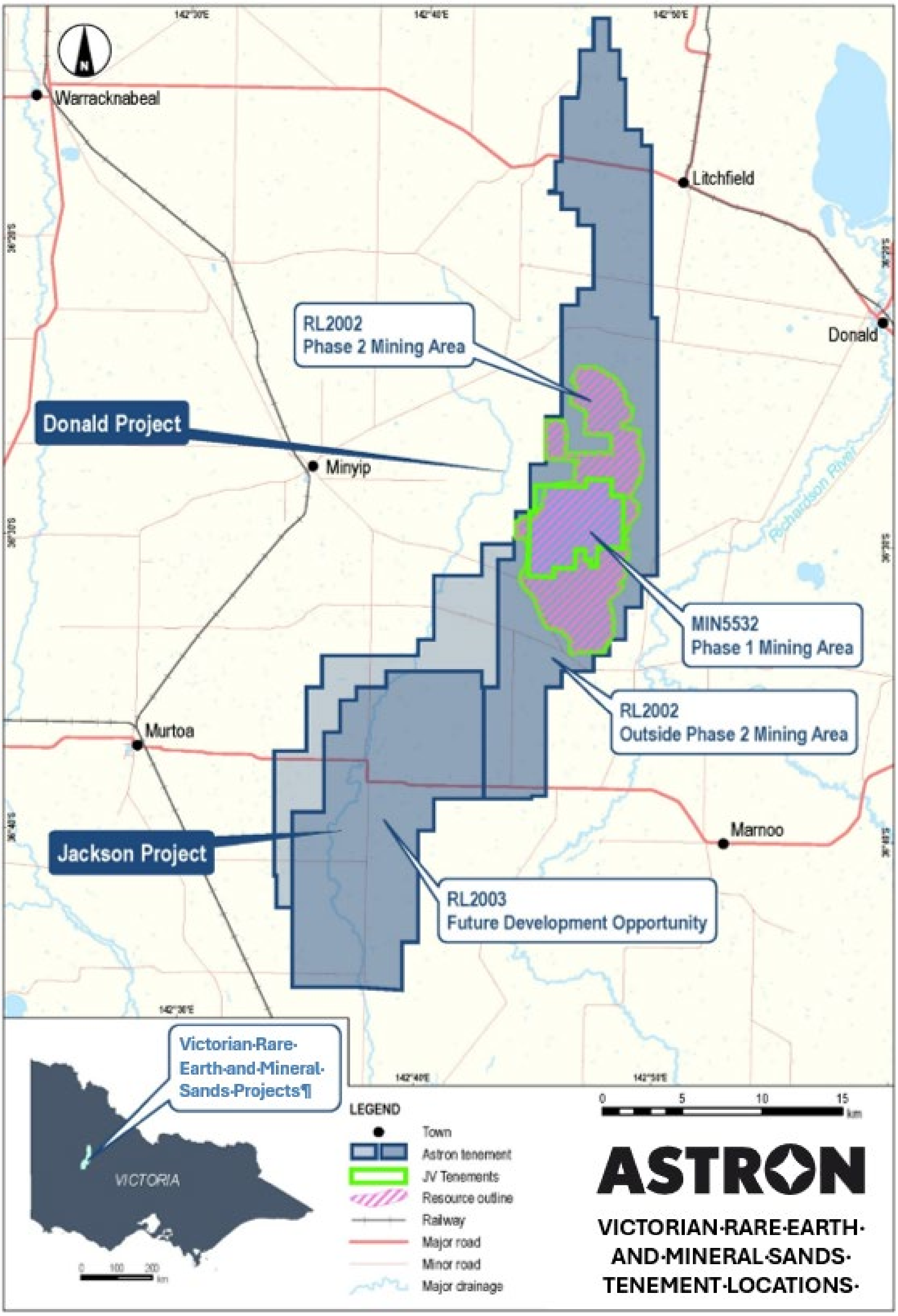

Figure 1: Location of Astron's rare earths and mineral sands projects in Victoria

Mineral Resource

Summary of Mineral Resource Statement and Reporting Criteria – Revised MIN5532 Mineral Resource Estimate

Table 6: Donald Project Mineral Resource for MIN5532 at 31 Dec 2025 (2025 MRE)

	Tonnes	Total HM	Slimes	Oversize	% of Total HM														
	Mt	%	%	%	Zircon	Rutile	Leucoxene	Ilmenite	Monazite	Xenotime	TiO_2	ZrO_2+HfO_2	CeO_2	Y_2O_3	Pr_6O_{11}	Nd_2O_3	Dy_2O_3	Tb_4O_7	TREO
Measured	400	4.2	16	10	16	7.4	24	21	1.6	0.66	34	11	0.46	0.28	0.055	0.20	0.041	0.0063	1.4
Indicated	110	3.5	24	11	15	5.9	18	19	1.6	0.60	29	9.9	0.44	0.26	0.053	0.19	0.037	0.0059	1.3
Inferred	20	2.3	22	14	13	6.9	19	19	1.2	0.51	30	8.9	0.34	0.23	0.041	0.15	0.032	0.0049	1.1
Total	**530**	**4.0**	**18**	**10**	**16**	**7.1**	**22**	**21**	**1.6**	**0.64**	**33**	**11**	**0.45**	**0.27**	**0.055**	**0.20**	**0.040**	**0.0062**	**1.4**

Note:

- *Mineral Resource reported above a cut-off grade of 1.0% total HM.*
- *The Donald deposit Mineral Resource has been classified and reported in accordance with the guidelines of the JORC code 2012.*
- *Total HM is from within the +20 micron to -250 micron size fraction and is reported as a percentage of the total material. Slimes is the -20 micron fraction and oversize is the +1 mm fraction.*
- *Estimates of the mineral assemblage (zircon, ilmenite, rutile and leucoxene) and are presented as percentages of the total HM component, as determined from grain counting, QEMSCAN, XRF, and laser ablation analysis. QEMSCAN data was aligned with the grain counting data and the following breakpoints are used for used definition of the titania minerals: rutile: >95% TiO_2, leucoxene: 50% - 95% TiO_2, ilmenite 30% - 50% TiO_2.*
- *TiO_2, ZrO_2+HfO_2 from XRF and REOs from laser ablation data are presented as percentages of the total HM component.*
- *Estimates of the oxide components (presented as percentages of the total HM component) are contained within the minerals and are not in addition to the minerals. The REOs (Pr_6O_{11}, Nd_2O_3, Dy_2O_3, Tb_4O_7) are a subset of the TREO.*
- *All tonnages and grades have been rounded to two significant figures, thus sum of columns may not equal.*

As per ASX report guidelines Section 5.8.1, information material to the reporting of the Donald deposit Mineral Resource Estimate update and the 2025 GC Mineral Resource Estimate is summarised below. More detail is included in the JORC 2012 Table 1 provided in Appendix A for the revised MIN5532 Mineral Resource Estimate of this announcement.

Summary of Mineral Resource Statement and Reporting Criteria – Grade Control Mineral Resource Estimate over GC Area

***Table 7*: Donald Project Mineral Resource for first eight mining blocks of MIN5532 at 31 Dec 2025 – Grade Control Mineral Resource Estimate (2025 GC MRE)**

Classification	Tonnes	Total HM	Slimes	Oversize	% of Total HM												
	Mt	%	%	%	Zircon	Rutile	Leucoxene	Ilmenite	Monazite	Xenotime	TiO_2	ZrO_2+HfO_2	Pr_6O_{11}	Nd_2O_3	Dy_2O_3	Tb_4O_7	TREO
Measured	15	5.2	15	3.7	17	N/A	N/A	N/A	1.9	0.73	34	12	0.06	0.22	0.043	0.0066	1.59
Total	**15**	**5.2**	**15**	**3.7**	**17**	**N/A**	**N/A**	**N/A**	**1.9**	**0.73**	**34**	**12**	**0.06**	**0.22**	**0.043**	**0.0066**	**1.59**

Note:

- *The Donald deposit Mineral Resource has been classified and reported in accordance with the guidelines of the JORC Code (2012). A cut-off grade has not been applied as all blocks are within the Ore Reserve as defined by AMC Consultants Pty Ltd in 2025.*
- *Total HM is from within the +20 micron to -250 micron size fraction and is reported as a percentage of the total material. Slimes is the -20 micron fraction and oversize is the +1 mm fraction.*
- *Estimates of the mineral assemblage (zircon, monazite and xenotime) and the oxides (TiO_2, ZrO_2+HfO_2, Pr_6O_{11}, Nd_2O_3, Dy_2O_3, Tb_4O_7 and TREO) are presented as percentages of the total HM component. Estimates of the oxide components (presented as percentages of the total HM component) are contained within the minerals and are not in addition to the minerals. The REOs (Pr_6O_{11}, Nd_2O_3, Dy_2O_3, Tb_4O_7) are a subset of the TREO.*
- *All tonnages and grades have been rounded to two significant figures, thus sum of columns may not equal.*

Table 8: Comparison between the Grade Control Mineral Resource Estimate (2025 GC MRE) and Updated 2025 Mineral Resource Estimate (2025 MRE) over first eight mining blocks

	Tonnes	Total HM	Slimes	Oversize	% of Total HM									
	Mt	%	%	%	Zircon	Monazite	Xenotime	TiO_2	ZrO_2+HfO_2	Pr_6O_{11}	Nd_2O_3	Dy_2O_3	Tb_4O_7	TREO
GC Area – GC Results	15	5.2	15	3.7	17	1.9	0.73	34	12	0.06	0.22	0.043	0.0066	1.59
GC Area – 2025 MRE	15	4.9	16	7.3	16	1.7	0.67	33	11	0.06	0.21	0.042	0.0066	1.48
Change (in-situ)	**0.2%**	**5%**	**-2%**	**-49%**	**6%**	**11%**	**8%**	**3%**	**6%**	**4%**	**5%**	**3%**	**1%**	**7%**

Note:

- *Mineralisation reported above a cut-off grade of 1.0% total HM.*
- *The Donald deposit Mineral Resource has been classified and reported in accordance with the guidelines of the JORC code 2012*

Geology and interpretation

The Donald deposit is within the Murray Basin, which comprises flat-lying Cenozoic sediments that unconformably overlie Proterozoic and Palaeozoic basement rocks. The mineralisation is contained within the Tertiary aged Loxton Sand, a sequence of marine sands representing a range of environments including deep-water (offshore), near shore, tidal, beach and back dunal sediments.

The mineralisation at Donald is contained within the marine sequence of the Loxton Sand. The marine sequence of the Loxton Sand unit can be subdivided into three sub-units:

- LP1 – fine to very coarse friable quartz sands and minor silty, clay and gravel beds representing dunal, foreshore and surf zone sediments.
- LP2 – near-shore, very fine silty micaceous quartz sands, minor clays and gravels, representing sediments deposited below the wave base that show friable laminated and truncated HM mineralised beds. LP2 is the principal fine-grained heavy mineral target throughout the Murray Basin and contains most of the mineralisation in the Donald deposit.
- LP3 – represents deep water sedimentation containing higher silt and clay material than LP2.

Within the Donald deposit area, the Loxton Sand is underlain by the Geera Clay. The Geera Clay typically consists of black, grey, green or yellow brown plastic clays, with minor silts and is interpreted to have formed in a shallow water, marginal marine, lagoonal or tidal flat environment. The Loxton Sand is overlain by the fluvio-deltaic Shepparton Formation which consists of clay and silt.

Geological logging

All Zirtanium (2000 to 2004), DMS (2010 to 2015) and Astron (2022) drillholes were logged in their entirety on 1m intervals.

Geological logging by Astron for the 2022 drilling recorded lithology, lithology proportion, grainsize, colour, induration (presence and strength), geological stratigraphical unit and heavy mineral type and content estimation. Zirtanium drill logs recorded lithology, colour, geological unit, induration (presence, type and strength), estimated total HM content and estimated HM grain size. For the 2025 GC AirCore (**AC**) program, geological logging recorded lithology, lithology proportion, grain size, colour, induration (presence and strength), hardness, geological stratigraphical unit and HM type and content estimation, and estimated clay content.

Logging was performed by either Astron/DMS geologists or by trained contract geologists. Detailed geological data is not available for the historic CRA Exploration drillholes, with only the depth to the top and base of the host unit (LP2) recorded.

Sampling and sub-sampling techniques

All sampling for total HM, slimes and oversize content has been carried out on 1m intervals down hole. Sampling from 2000 to 2015 was undertaken by collecting the entire 1m interval sample and later riffle splitting the dried sample down to size for analysis.

In 2022, subsamples were collected directly from a drill rig mounted rotary splitter netting samples weighing on average 1.6kg (dry) with the remainder of the sample interval also being collected for recovery analysis.

Composite samples prior to 2022 were created by grouping individual sample heavy liquid separation (**HLS**) sink fractions down-hole based on the presence of heavy minerals (generally >1.5% total HM). In 2022, mineralogy composites were created by grouping individual samples HLS sink fractions across multiple adjacent holes and also down-hole within the same geological domain (where total HM is >1.0%). These composites were analysed by XRF, optical grain counting and QEMSCAN methods prior to 2022 and additionally by laser ablation ICP-MS. The results from the ICP-MS analysis have been used to estimate individual rare earth oxide (**REO**) content in the 2025 MRE.

Samples from the 2025 GC AC program were split at the assay laboratory. AC holes were sampled from the top of the Loxton Sand until the intersection of the Geera Clay. The 2025 samples were not used for the 2025 MRE but were used to generate a separate GC Mineral Resource model for the first 2.5 years of mining.

Drilling

There have been multiple drilling campaigns conducted across the Donald deposit since the early 1980s (Table 9). Most of the drilling since 1987 used for Mineral Resource estimation has been conducted by licensed and trained drillers from Wallis Drilling using the AC method and NQ rods with a nominal drill bit diameter of 82mm. Assay information from drilling prior to 2004 has not been used for the Mineral Resource Estimate, only for geological interpretation. Astron and DMS completed four major phases of AC drilling primarily focused on resource delineation between 2010 and 2022 and pre-production GC drilling in 2025. The location of the drill holes from the different drilling campaigns in and around MIN5532 are shown in Figure 2.

Table 9: Summary of drilling information used for the MIN5532 Donald Mineral Resource model

Company	Year	Number of drillholes	Metres drilled	Type	Comment
CRA Exploration	1985-1991	55	1,377	AC	Used for geological interpretation only in MIN5532.
Zirtanium	2000	1	19	Calweld	Used for geological interpretation only in MIN5532.
	2002	10	231	AC	Used for geological interpretation only in MIN5532.
	2004	160	3,497	AC	Used for geological interpretation.
DMS	2010	157	3,708	AC	Used for geological interpretation. Assay data (total HM, slimes and oversize)
	2015	10	257	Sonic	Not used for Mineral Resource estimation. Used for metallurgical testwork.
	2015	4	100	AC	Used for geological interpretation only in MIN5532.
Astron	2022	245	6,355	AC	All geological, assay and mineral assemblage data used for Mineral Resource estimation.
	2022	25	649	Sonic	Not used for Mineral Resource estimation. Used for bulk density and metallurgical testwork.
	2024	37	793	Sonic	Not used for Mineral Resource estimation. Used for metallurgical testwork and geotechnical studies
	2025	133	3,387	AC	Not used for Mineral Resource estimation. Used for development of GC model.
	2025	10	251	Sonic	Not used for Mineral Resource estimation. Used for bulk density testwork.
Total		**847**	**20,624**		

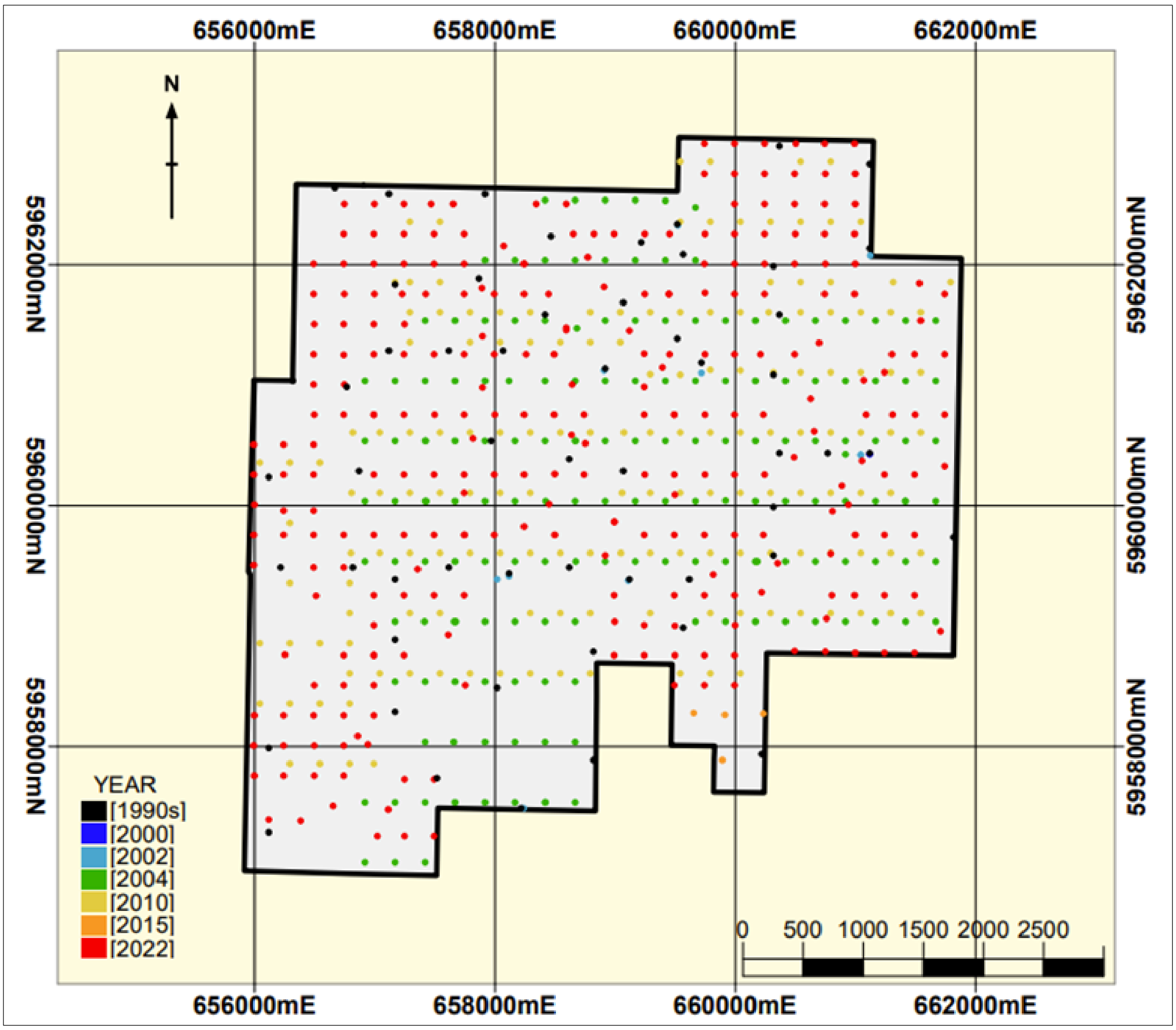

Figure 2: Drilling in MIN5532 (black outline) coloured by year, used for Mineral Resource estimation

Astron undertook GC drilling in early 2025. For the GC program, AC drillholes were spaced on a 100m by 100m grid covering the first eight mining blocks, which represents the first 2.5 years of mining production. Holes were drilled to intersect the entire Loxton Sand and to extend into the Geera Clay by 1m. In addition to the regular grid-pattern, other drillholes included were:

- 14 drillholes infilling nearby areas that either were unavailable during the 2022 drilling or may become unavailable after the commencement of earthworks, due to the placement of long-term soil stockpiles or the need to establish drainage infrastructure.
- 10 drillholes drilled as twins of existing AC holes from the 2025 program with the only difference being that samples were split with a rotary splitter at the drill site. This exercise was undertaken to confirm if samples split at the rig can be considered reliably representative of the overall drill-sample.
- Four extra AC holes drilled north of the grid area following up on a potential high-grade zone seen in logging during the program.

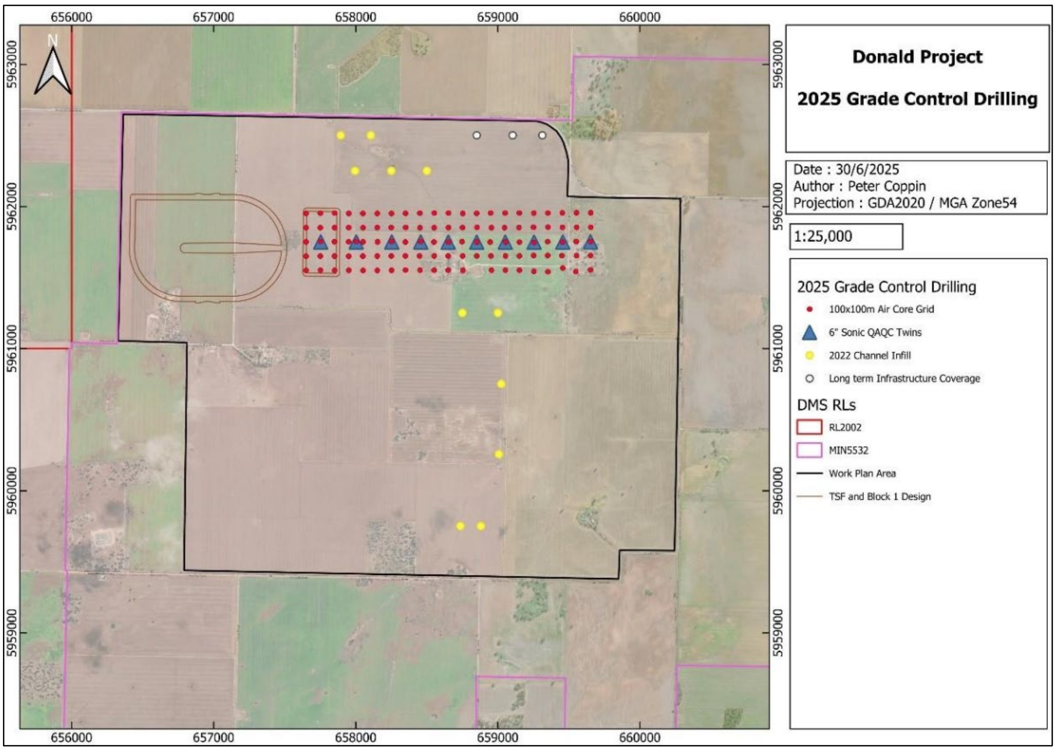

Figure 3: GC Drilling (red dots) in MIN5532 during 2025 used for 2025 GC MRE

Resource model domains and resource classification

Drilling and sampling conducted in 2022 sought to redefine the MRE within MIN5532 capturing the geological domains, xenotime and the 20µm to 38µm fraction of HM content based on a 1.0% total HM cut-off grade. Further sample analysis of the 2022 drilling program has informed estimates for individual REO contents within MIN5532 that forms part of the 2025 MRE update.

The 2022 drilling spacing covers the majority of MIN5532 except for an area which could not be accessed at the time. The area of the resource model covered by drilling and sampling performed in 2022 makes up approximately 97% of the MIN5532 resource. The remainder of the resource model area outside of the 2022 drilling area uses older historical drilling information. The resource model estimation has also been constrained vertically within geological domains, primarily the interpreted layers of the Loxton Sand (LP1, LP2 and LP3), but also by grade within these domains.

The 2025 MRE has been classified according to the guidelines of the JORC Code (2012) into Measured, Indicated and Inferred Mineral Resources, considering data quality, data density, geological continuity, grade continuity and confidence in the estimation of HM content, mineral assemblage and elemental composition.

The nominal drill spacing for the 2022 drilling is approximately 250mE by 350mN. In general, the historical drillhole spacing ranges from 125mE by 400mN to 250mE by 500mN.

A 2025 GC model was developed within the area of Ore Blocks 1 to 8 for short-term mine planning that used only the 2025 AC data. The 2025 GC model has been classified as Measured according to the guidelines of the JORC Code (2012), considering data quality, data density, geological continuity, grade continuity and confidence in the estimation of HM content and the mineral assemblage and oxides contained in the heavy mineral fraction.

Sample analysis method

All the samples from the 2022 drilling program were prepared and analysed by Bureau Veritas Minerals Pty Ltd at their Adelaide laboratory. The samples were screened at 20µm, 250µm and 1mm. Slimes is defined as the -20µm fraction, oversize is the +1mm fraction and total HM was measured in the +20µm/-250µm fraction and reported as a percentage of the whole sample.

Rare earths element (**REE**) data was obtained in 2022 from laser ablation ICP-MS analysis. Only the yttrium oxide (Y_2O_3) data was included in the previous 2022 MRE to estimate xenotime content. CeO_2 data from XRF analysis was used to estimate the monazite content in the 2022 MRE. Additional density measurements obtained since 2022 have been used to update the density values assigned to each of the geological horizons. The additional ICP data has allowed the individual REO contents to be estimated in the 2025 MRE.

All samples used for the 2025 MRE estimate were analysed for total HM content within the stated size ranges by the heavy liquid separation technique (TBE 2.96 g/cm^3 SG).

For assay analysis work done prior to 2022, different in-size fractions were used for defining analysis of the total HM content of the whole sample processed post-break-up and post-splitting:

- Zirtanium 2000 and 2002: +38µm to -1mm for total HM% and mineralogy determined in +38µm to -90µm and then adjusted to a percentage of whole sample.
- Zirtanium 2004: +38µm to -1mm for HM% and mineralogy determined in +38µm to -90µm and then adjusted to a percentage of the whole sample.
- DMS 2010 and 2015: +38µm to -90µm.

HLS analysis prior to 2022 was predominantly carried out by Western Geolabs Pty Ltd in Perth, WA and Titanatek Pty Ltd in Ballina, NSW.

The 2025 GC samples were analysed by ALS Global Metallurgy in Perth, Western Australia. The entire sample for each 1m interval was collected for 123 of the 133 holes. The following procedures were used for sample preparation and analysis:

- Clay dispersion in container of 1% TSPP solution – overnight soak time.
- Mild stirring for two minutes to disperse and homogenise.
- Dissociation by bottle-roll (steel).
- Wet screened to 1 mm, 250 µm and 20 µm using stacked screens.
- Sample fractions dried and weighted.
- Riffle split of +20 µm/-250 µm fraction for HM determination. Initially, 100 g was taken for the heavy liquid separation start weight, this was increased to 150 g mid-program to ensure enough sink material was produced for mineralogy work on low grade samples.
- Riffle spit fraction and processed via heavy liquid separation at 2.96 g/cm^3 SG using TBE.
- The percentage of total HM calculated for the entire sample.
- Chemical analysis of heavy liquid separation sinks by XRF for mineral sands element suite using a D4ZM lithium metaborate fusion, the ICP-MS uses a mixed acid digestion for REEs.

Estimation methodology

Snowden Optiro prepared the previous 2022 MRE for the Donald deposit. Snowden Optiro updated the 2022 MRE within MIN5532 to include REO% and total rare earth oxide (**TREO**)%, and updated density data.

The 2025 MRE used REE data from the composite samples used for the 2022 MRE. Block grades for REOs were estimated using inverse distance cubed techniques and grade estimation was performed into parent blocks. The estimation parameters used for mineral assemblage estimation in 2022 were applied for estimation of the REEs. Hard boundaries were applied between each of the geological horizons (LP1, LP2, and LP3) and the search ellipses were oriented within the plane of the mineralisation using a dynamic anisotropy methodology.

Block grade estimation was extended to cover the entire MIN5532. REE data is not available for the samples used to estimate the mineral assemblage components in areas where there was no drilling access, covering approximately 3% of MIN5532. Laser ablation ICP-MS data were therefore extrapolated into these areas. For the 2022 MRE, the CeO_2 contents were determined from XRF data and were used to estimate the monazite content. This data was compared to the extrapolated laser ablation ICP-MS data to validate the extrapolated data as an acceptable estimate.

The block estimates of the REEs were converted to REO percentages and the TREO was determined. The CeO_2 and Y_2O_3 data included in the 2025 MRE were estimated from the laser ablation ICP-MS data and were used to estimate monazite and xenotime.

Total HM, slimes and oversize block grades were estimated using ordinary kriging (**OK**). Mineral assemblage components were estimated using an inverse distance cubed technique. Variogram analysis was undertaken to determine the kriging estimation parameters used for OK estimation of total HM, slimes and oversize.

Block dimensions were selected from kriging neighbourhood analysis. Grade estimation was into parent blocks of 100mE by 200mN by 1mRL. Sub-cells to a minimum dimension of 25mE by 50mN by 0.25mRL were used to represent volume.

Geological interpretation and wireframe surface creation was performed using both Datamine Studio and Surpac software. The Mineral Resource estimation was completed using Datamine Studio software whilst geostatistical data analysis was performed using Snowden Supervisor software.

The block model for the 2025 GC MRE used a parent block size of 50mE by 50mN by 1mRL with sub-celling to 12.5mE by 12.5mN by 0.25mRL to more accurately represent the geometry and volumes of the geological units and the interpreted mineralised zones. Block grades for total HM, slimes and oversize were estimated using OK and grade estimation was into the parent blocks. XRF and ICP-MS of the 1m samples were used for analysis of the mineral assemblage and oxide contents of the total HM fraction. These were estimated into the parent blocks using OK. QEMSCAN analysis was not undertaken on the GC samples and so the individual titania minerals (rutile, leucoxene and ilmenite) were not estimated: only the total TiO_2 is reported.

Modelling cut-off grades

Geological modelling surfaces were interpreted to define the top and base of mineralisation within the Loxton Sand using a nominal 1.0% total HM cut-off grade from the total HM contained within the +20µm to -250µm fraction.

Examination of the cumulative probability plot of the total HM data (<5.0%) from the 2022 drilling indicates that there is a grade inflection at around 1.0% total HM and a nominal grade of 1.0% total HM was used for definition of the mineralisation within the sediments. In addition, the 2025 GC model included interpretation of a high-grade HM zone (using a nominal grade of ⩾7.5% total HM) and a high-zircon zone (using a nominal grade of ⩾12% ZrO_2) within the LP2 unit.

Bulk density

A total of 149 bulk density samples were collected from test pits in 2005 (nuclear density measurements) and 2018 (sand replacement), from nuclear density measurements in 2024, and from sonic drill core samples in 2022, 2024 and 2025. As part of the 2022 sonic drilling program, 15 holes that were drilled primarily for geotechnical test work were also used to collect samples for bulk density test work specific to the geological domains (LP1, LP2 and LP3) used for the 2022 Mineral Resource estimate. Samples were analysed by ATC Williams Laboratory using the Australian Standard test for Bulk Density. Further bulk density sampling was conducted as part of the 2024 and 2025 sonic drilling programs. These samples were analysed using the same technique.

Mining and metallurgical modifying factors

A conventional shallow dry mining approach will be used at the Donald Project. The previous Ore Reserve estimate was completed based on ore mining from the pit using excavators loading haul trucks that would transport the ore to a stockpile located adjacent to the pit crest, to feed a skid-mounted mining unit plant (**MUP**) that would be moved approximately every few weeks. The mining method has been updated to use tracked bulldozers pushing ore to a track-mounted, self-relocating MUP to allow ore-feeding in-pit. The improved associated changes to operating and capital expenditure improves project cashflows and have been included in the updated 2025 Ore Reserve Estimates.

Mining factors such as dilution and ore loss have not applied to the December 2025 MRE. It is considered that there are no mining factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.

Metallurgical test work has determined recoveries for the final products based upon TiO_2%, ZrO_2+HfO_2%, CeO_2%, Y_2O_3%. Metallurgical test work programs conducted by Astron/DMS through Mineral Technologies Pty Ltd have demonstrated commercial recovery of fine-grained HM sand products from the Donald deposit through conventional gravity separation processes. This test work includes recovery of mineral products down to a particle size of 20µm. Test work has also demonstrated the ability to recover rare earth minerals via a monazite and xenotime flotation process.

ASTRON

Ore Reserves – MIN5532

Summary of Ore Reserve Statement and Reporting Criteria

The Ore Reserve Statement is compiled as at 31 December 2025, and is based on the Mineral Resource as at 31 December (2025 MRE)

Table 10: Donald Project Ore Reserve for MIN5532 at 31 Dec 2025 (2025 Ore Reserve)

		Tonnes	Total HM	Slimes	Oversize	% of Total HM									
		Mt	%	%	%	Zircon	Monazite	Xenotime	TiO_2	ZrO_2+HfO_2	Pr_6O_{11}	Nd_2O_3	Dy_2O_3	Tb_4O_7	TREO
First 8 mining blocks (Area 1)	Proved	15	5.2	15	4	17	1.9	0.73	34	12	0.061	0.22	0.043	0.0066	1.6
Remaining Blocks	Proved	240	4.5	15	10	17	1.7	0.67	34	11	0.056	0.20	0.042	0.0065	1.4
	Probable	39	4.3	18	11	16	1.6	0.64	32	11	0.056	0.20	0.040	0.0062	1.4
Total		**293**	**4.5**	**15**	**9**	**17**	**1.7**	**0.67**	**34**	**11**	**0.056**	**0.20**	**0.041**	**0.0064**	**1.4**

Note:

- *The table tonnes have been rounded to million tonnes and the grades to two significant figures.*
- *The Ore Reserve is based on material classified as Indicated and Measured in the Mineral Resources, contained within designed ore blocks.*
- *Mining Dilution and ore loss are incurred by the application of the mining blocks to the resource model. No further dilution or ore loss was applied.*

In accordance with ASX Listing Rule Chapter 5.9.1, information material to the reporting of the Donald Ore Reserve estimate update is summarised below. More detail is included in the JORC 2012 Table 1 in Appendix B.

Material Assumptions and Outcomes of the Ore Reserve Declaration

Phase 1 of the Donald Project is planned for MIN5532 based on a mining rate of 7.5Mtpa of ore, and the onsite processing into two saleable products; a heavy mineral concentrate (**HMC**) containing the zircon and titanium feedstock products, and a REEC product consisting of the monazite and xenotime minerals. The production rates have been estimated to average 216ktpa of HMC, and 8.9ktpa of REEC over the first five years of operations, and 192ktpa and 7.1ktpa respectively over the life of the Phase 1 mine. The Updated 2025 Ore Reserve Statement represents a decrease from the previously announced Ore Reserves at 31 March 2023. The decline is attributable to declining final product price forecasts for both the rare earth and mineral sands markets against the 2023 Definitive Feasibility Study. Despite the decrease, the contained dysprosium oxide and terbium oxides have been released for the first time at 5.4kt, and 843t respectively.

At a forecast throughput of 7.5Mtpa, over the project's revised 39-year mine life, the Project forecasts to produce 279kt of REEC. This REEC is forecast to contain the production of ~4.5 kt of Dy and ~1.1 kt of Tb at an average of 115t and 18t per annum, including at an average of 144t and 22t over the first five years. The revised REEC production represents a material increase of 57% for Dy oxides contained within the REEC product and 22% for Tb oxide contained within the REEC when compared to the previous forecast production announced in the July 2025 Updated Economics Study. Notably, the first eight mining blocks contained a higher HM%, zircon%, monazite%, and xenotime%, and lower oversize% when modelled under the grade control model as opposed to the Ore Reserve within the first eight blocks modelled using the 2025 MRE.

While the forecast production rates of HMC have decreased in comparison to the 2025 Updated Economic Study, the contained ZrO_2 and TiO_2 production forecasts per annum have remained consistent. This is due to further metallurgical test-work confirming that higher product grades can be achieved while maintaining minimal recovery losses of heavy minerals.

The revised 2025 Ore Reserve was converted from the 2025 MRE and 2025 GC MRE based on studies completed as a part of a technical report compiled for Canadian National Instrument 43-101 – Standards of Disclosure for Mineral Projects and United States Securities and Exchange rule S-K 1300 that has been released to the American Stock Exchange (**NYSE American**) by Energy Fuels. A copy of this report is attached to this announcement as Appendix C and can also be found at www.sec.gov/edgar/search.

Product prices, grades, recoveries and costs, as a part of the study, were used to identify economically mineable blocks for inclusion in the 2025 Ore Reserves Estimate. The basis of the estimate and related assumptions have been established to a ±10% level accuracy as appropriate for a Feasibility Study:

Product pricing assumptions are based on consensus forecast prices provided by independent consultants, TZ Mineral International Pty Ltd (**TZMI**) for mineral sands price forecasts in a commissioned mineral sands marketing report (Nov 2025), and includes the following assumptions:

- Unit ZrO_2 price recovering from US$12.9 / unit in 2028 to US$18.1 / unit long-term from 2035.
- Unit TiO_2 price recovering from US$2.7 / unit in 2028 to US$3.6 / unit long term from 2035.

Product pricing assumptions are based on consensus forecast prices provided by independent consultants, Argus for rare earth products in a report commissioned in (Dec 2025), and includes the following assumptions:

- NdPr price ranging from US$98.5 / kg in 2028 to US$130 / kg long term from 2040 onwards (spot price FOB China: US$165 – US$195 /kg, CIF Rotterdam: US$235 - US$255 / kg) [1]
- Dy price ranging from US$495/kg in 2028 to US$1,032/kg long term from 2040 onwards (spot price FOB China: US$280 / kg - US$330 kg)[1]
- Tb price ranging from US$1,694/kg in 2028 to US$2,187/kg long term from 2040 onwards (spot price FOB China: US$818 - US$824)[1]

Product specifications and recovery assumptions are based on metallurgical test work results derived from the Company's laboratory-scale and pilot-scale test work involving test-pit material and on-mine path Sonic drill bulk samples.

Mining cost assumptions have been determined from tendered cost estimates.

Processing cost assumptions were determined from first principles using process flow sheets, with estimated operating costs for each stage of processing based on engineering design, metallurgical test work and expected equipment usage.

Transport and logistics costs assumptions were sourced from tendered cost estimates.

Other operating costs such as administration, labour, environmental management and general expenses have been developed from first principles based on expected organisational structure and manning levels, operating

[1] Retrieved from Shanghai Metals Market on 23 February 2026

schedules and rostering requirements, materials requirements, other equipment, communications, IT, consultants and recruitment costs.

In addition, sensitivity analysis of project economic outcomes has been undertaken to reflect changes in commodity prices, production volumes, operating and capital cost, as well as macroeconomic factors including inflation and foreign exchange rates.

Table 11: Material Assumptions in the development of the Ore Reserves at 31 Dec 2025

Criteria	Assumptions (Dec 2025 real)
Production physicals	Ore mining: 7.5 Mtpa Rougher feed rate: 1,060 t/h Forecast production: - HMC 192 ktpa - REEC: 7.1 ktpa Over the project's 39-year life
Project timing	Financing / FID: Q1 2026 Process Plant EPC award: Q1 2026 Earthworks commencement: Q1 2026 Commissioning & ramp-up completions: Q1 2028 First product shipment: Q1 2028 Full production achieved: Q1 2028 End mining and processing: Q2 2067
Capital costs	Capital Expenditure: $440m
Operating costs	Mining Costs: - Clearing and rehabilitation cost: $3,300/ha disturbed footprint - Topsoil and subsoil mining and placement cost inclusive of clearing and rehab, rehandle and ancillary costs: $1.66/bcm - Overburden mining costs and ancillary costs: $3.16/bcm - Ore mining cost inclusive of ore loss, rehandle, ore feed and ancillary costs: $6.25/bcm Processing costs: - Ore processing cost including reagents, tailings disposal and dewatering: $6.24/t of ore
Escalation	Financial modelling on a real Dec 2025 basis. Cap-Ex out-turn allowance in accordance with contractor estimates during construction period.
FX rate	US$0.66: A$1
Discount rate	8.0%

Criteria used for the Classification of Ore Reserves

The Ore Reserve is the part of the Mineral Resource that can be economically mined using the selected mining methods.

- Mineral Resources included within MIN5532 classified as Measured were categorised as Proved Ore Reserves after adjustment for all mining, metallurgical, social, environmental, statutory and economic aspects of the Donald Project.
- Mineral Resources included within MIN5532 classified as Indicated were categorised as Probable Ore Reserves after adjustment for all mining, metallurgical, social, environmental, statutory and economic aspects of the Donald Project.

The mineralised orebody is continuous higher-grade strata without pockets of lower grade and therefore no additional dilution of the Mineral Resource model was included.

Mining method selected and other mining assumptions

MIN5532 will be mined using a conventional strip-mining method, designed as about 500m wide strips separated by in-situ ore bunds between the strips. Each strip comprises a series of 500mN wide and 250mE long mining blocks separated by bunds constructed from overburden stripped from the active mining area. The mining blocks will be extracted in a progressive sequence within each strip, before shifting to a new strip. Wells will be used to dewater the active mining area and the active tailings cell.

Process tailings will be returned to tailings cells constructed in the void left behind the active mining block. A downstream embankment will be constructed between the active tailings block and active mining block. Waste overburden will be backfilled behind the active tailings cell and above consolidated tailings.

The mining contract will include topsoil and subsoil stripping, overburden stripping, ore mining to an in-pit MUP using bulldozer push, construction of the tailings cells, overburden backfilling and subsoil and topsoil replacement and contouring. The bulldozer push to a tracked MUP reduces reliance on truck haulage on potentially soft pit floors. Final rehabilitation will be carried out by other specialized contractors.

The 2025 MRE block model and 2025 GC model within the mine design completed in 2024, were used to generate the 2025 Ore Reserve estimate. The mine design is based on a pit optimisation completed in 2023 as part of the March 2023 Ore Reserves. A pit optimisation has been repeated with the updated Mineral Resource to confirm the designs. No additional dilution was applied; any lateral edge dilution is expected to be predominantly mineralised material. The mining costs used for the pit optimisation were developed from contractor costs, and processing costs from the process design consultant.

Processing method and other processing assumptions, including recovery factors applied and allowances for deleterious elements

From the in-pit MUP, ore is to be pumped to a Wet Concentration Plant (**WCP**), which consists of a feed preparation circuit that includes a scrubber unit, screens for oversize, and a spiral circuit. The WCP will produce a raw HMC containing both rare earth minerals and the titanium feedstock and zircon products. The raw HMC will be further processed in a concentrate upgrade plant (**CUP**), where the rare earth minerals will be separated off from the remaining HMC by flotation.

Processing recoveries were supplied by Metmac Services Pty Ltd based on metallurgical test work undertaken by Mineral Technologies. The processing recovery assumptions applied were:

- Total HM[2]: 51.20% (to HMC)
- Zircon: 92.98% (to HMC)
- TiO_2: 54.34% (to HMC)
- CeO_2 (as a tracer for light rare earths including Nd, and Pr): 92.0%
- Y_2O_3 (as a tracer for heavy rare earths including Dy and Tb): 88.0%

[2] Includes non-valuable HM materials that will not be recovered as final products.

Basis of the cut-off grade(s) or quality parameters applied

The pit optimisation considered the Measured and Indicated Mineral Resource model blocks only within the MIN5532 boundary, with all Inferred and unclassified blocks treated as waste. The 2024 pit optimisation generated a series of nested pit shells for a range of revenue factors (**RFs**) ranging from 10% (RF10) to 110% (RF110) of the base case prices. There was very little change in the optimisation results beyond the RF60 pit shell because the economic pit was constrained by the MIN5532 boundary. The RF50 shell, which targets the higher-grade areas within the Work Plan area (Phase 1A), was selected for the initial mining area and the RF70 shell, which covers the entire MIN5532 area, was selected for the remaining MIN5532 mine life.

The cut-off for defining ore, has been increased to improve cash flow. The cut-off within the Work Plan area was further increased to improve the initial cash flow and reduce payback. This has been achieved by raising the base of the mine and lowering the top of ore surface to exclude lower value material.

The excavation was designed to exclude cultural and environmentally significant areas, the external tailings storage facility (**TSF**), the process plant footprint, roads and other support facilities. An offset of 100m was used from the MIN5532 boundary to the crest of the closest pit excavation. The floor of the mine design was a surface created from the combined RF50 and RF70 shells.

Mineral Resources

The 2025 Ore Reserves has been prepared based on the 2025 MRE and 2025 GC MRE contained within this release and undertaken by Snowden Optiro. Two Mineral Resource Estimates were used as the basis for the conversion to an Ore Reserve. The first eight ore blocks (the initial 15Mt of ore and representing 2.5 years of mining) were based on the 2025 GC MRE. The remaining blocks were based on the 2025 MRE to include REE elemental data derived from ICP-MS.

Ore Reserve Estimation Methodology, including mining recovery factors and mining dilution factors

The deposit has been assessed through pit-optimisation, review of mine design, mine scheduling and economic modelling. Dilution and ore loss is appropriate and inherent in the process, and no additional dilution or ore loss has been applied when converting the mineral resource model for the mine planning beyond the application of designs. Individual discrete mining blocks have been digitised around ore and overburden, these boundaries incorporate some material at lower value (dilution) and exclude material with higher value (ore loss). Additional ore loss incurred as pillars of in-situ material left between adjacent mining strips to prevent tails from entering the working areas has been allowed for.

Material modifying factors, including the status of environmental approvals, tenements and approvals, other governmental factors and infrastructure requirements for selected mining methods and for transportation to market

Following the 2008 EES, approval has been received under the Federal Environment Protection and Biodiversity Conservation Act 1999 (**EPBC Act**) in 2009 and renewed in 2018. The Cultural Heritage Management Plan (**CHMP**) was approved for the Work Plan area in 2014 and the radiation licence obtained in 2015 and renewed in 2024. The HMC export license issued in 2016 has expired and a new permit is being sought to export the REEC (a permit is no longer required for the HMC owing to the changed composition).

The Donald Project's Work Plan was approved in June 2025. Other approvals in progress include infrastructure outside of MIN5532 relating to road upgrades, road decommissioning and the water pipeline, and other secondary licences and permits for water supply connection, groundwater extraction and surface water capture. A Rehabilitation Plan was prepared in 2023, and Donald Project Pty Ltd (**DPPL**) is in the process of determining the closure cost estimate and required bond. Once determined, this will be submitted for approval with Resources Victoria. A Construction Rehabilitation Bond of $27.0 million has already been approved by the regulator.

The Phase 1 operations within MIN5532 cover arable, mixed-use freehold farming land. The Phase 1A Work Plan area encompasses 1,143ha of land. DPPL currently owns freehold titles for a total of 705ha within the Work Plan area. The remaining freehold titles are contracted to the Project with settlement scheduled at Final Investment Decision (**FID**).

In June 2022, DPPL established the Community Reference Group. Membership comprises 25 representatives of local community, business, agency stakeholders and DPPL. The Community Reference Group aims to facilitate information exchange from DPPL to stakeholders and to provide an avenue for community members to raise project-related issues. The Community Reference Group operates in an advisory capacity and does not hold regulatory authority.

NI 43-101 and S-K 1300 Technical Report

Astron's Joint Venture partner, Energy Fuels Inc (NYSE American: **UUUU**) has released a technical report on EDGAR+ in accordance with its statutory obligations as an entity listed on the American Stock Exchange which is compliant with both Canadian National Instrument NI43-101– Standards of Disclosure for Mineral Projects and United States Securities and Exchange rule S-K 1300. The full technical report is reproduced in Appendix C of this announcement.

This announcement is authorised for release by the Managing Director of Astron Limited.

For further information, contact:

Tiger Brown
Managing Director
+61 3 5385 7088
contact@astronlimited.com

Joshua Theunissen
Australian Company Secretary
+61 3 5385 7088
contact@astronlimited.com

About Astron

Astron Limited (ASX: ATR) is an ASX listed company, with over 35 years of experience in mineral sands processing and downstream product development, as well as the marketing and sales of zircon and titanium dioxide products. Astron's prime focus, in association with joint venture partner, Energy Fuels Inc, is the development of its Donald Rare Earth and Mineral Sands Project in regional Victoria. The Donald Rare Earth and Mineral Sands Project has the potential to become a globally significant, long-life supplier of critical rare earth elements, including neodymium, praseodymium, dysprosium, terbium, as well as zircon and titanium minerals. In addition to its Australian assets, the Company also conducts a mineral sands trading operation.

Competent Persons Statement

The information in this document that relates to the estimation of the MIN5532 Mineral Resources (2025 MRE and 2025 GC MRE) is based on information and supporting documentation compiled by Mrs Christine Standing, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mrs Standing is a full-time employee of Snowden Optiro (Datamine Australia Pty Ltd) and is independent of Astron, the owner of the MIN5532 Mineral Resources. Mrs Standing 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'. Mrs Standing consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

The information in this document that relates to the estimation of the Ore Reserves is based on information compiled by Mr Pier Federici, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Federici is a full-time employee of AMC Consultants Pty Ltd and is independent of Astron, the owner of the Ore Reserves. Mr Federici 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 Federici consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

Cautionary Statement

Certain sections of this document contain forward looking statements that are subject to risk factors associated with, among others, the economic and business circumstances occurring from time to time in the countries and sectors in which the Astron Group operates. It is believed that the expectations reflected in these statements are reasonable, but they may be affected by a wide range of variables which could cause results to differ materially from those currently projected. The information contained in this document is not investment or financial product advice and is not intended to be used as the basis for making an investment decision. Please note that, in providing this document, Astron has not considered the objectives, financial position or needs of any particular recipient. Astron strongly suggests that investors consult a financial advisor prior to making an investment decision.

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Appendix A. JORC 2012 Table 1 (Revised 2025 MRE and 2025 GC MRE)

The table below summaries the assessment and reporting criteria used for the Updated 2025 Donald deposit Mineral Resource estimate and the 2025 GC Mineral Resource estimate and reflects the guidelines in Table 1 of *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code, 2012).

Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* *Aspects of the determination of mineralisation that are Material to the Public Report.* *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	Reverse circulation aircore (AC) drilling was used to take samples at 1 m intervals. Samples collected prior to 2022 were approximately 7 kg in weight and were riffle split down to 2 kg before analysis. From 2013 to 2016, samples were rotary split. For the 2022 drilling program, the AC samples were split to approximately 1.6 kg (after drying) from a rig mounted rotary splitter. For the 2025 grade control (GC) drilling the entire sample for each 1 m interval was collected for 123 of the 133 holes, and samples were split at the assay laboratory. Ten twin AC holes were drilled, and a 25% split was taken at the drill rig with a rotary splitter. Data from the twin holes were not used for the GC model. The heavy mineral (HM) content was determined by the centrifugal heavy liquid separation (HLS) method (TBE 2.96 SG) after removal of slimes and oversize. The in-size range for HM for the 2022 assay work was from 20 µm to 250 µm. Prior to 2022, the in-size range was 38 µm to 90 µm. Mineralogy content for the Updated 2025 Mineral Resource model was assessed using grain counting for earlier data and QEMSCAN techniques were used to determine the titania mineral definition and proportions. X-ray fluorescence (XRF) was used to determine the ZrO_2 and TiO_2 content for estimating zircon and titania minerals. Laser ablation ICP-MS was used to determine CeO_2 content for calculating monazite and Y_2O_3 content for calculating xenotime. QEMSCAN was used to check the mineralogy. The 2025 GC samples were analysed using X-ray fluorescence (XRF) to determine the TiO_2 content, and the ZrO_2 and HfO_2 contents for estimating zircon. Assay data for U and Th was also obtained. Laser ablation ICP-MS was used for analysis of the suite of rare earth elements and the CeO_2 and Y_2O_3 contents were used to determine monazite and xenotime respectively.
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	All drillhole drilled by Donald Mineral Sands Pty Ltd (DMS in 2022, now Donald Project Pty Ltd in 2025) were reverse circulation aircore (AC) with NQ rods and a nominal drill bit diameter of 82 mm. During 2022, Sonic drilling was used to drill a program of twin holes (6-inch core) for comparison with selected AC holes. Comparison of the Sonic twin holes to AC holes showed acceptable correlation on HM grade, slimes, oversize and sample weight/recovery. Ten Sonic holes were drilled in 2025 using 4-inch core.

Criteria	JORC Code explanation	Commentary
		Sonic holes, drilled for geotechnical test work used a 6-inch core, whereas additional sonic holes drilled holes for bulk samples used 8-inch core. Lexan Liner samples for bulk density analysis were taken from all hole sizes. Assay data from the sonic holes were not used for the 2025 Mineral Resource or the GC models. The AC drilling technique used attempted to maximise recovery and minimise water injection. Sample was cleared from the rods and cyclone/splitter between each 3 m drill rod.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	For holes drilled by DMS, sample recovery was visually checked. Sample intervals with problematic recovery in 2022 were noted and assay data check against adjacent samples. For the 2025 GC drill holes, the entire 1 m sample was weighted at laboratory. No issues with sample recovery were noted.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Zirtanium Ltd reported in 2004 that their drilling had a consistent sample weight recovery of 7.1 kg ±0.8 kg. During the 2022 drilling for a set of selected holes samples, the residual sample (the other part of the sample from the drill rig rotary splitter) was collected and weighed to check overall drilling recovery. The average recovered sample weight for samples tested was 6.5 kg (wet) or ~83% of a theoretical maximum recovery weight. For comparison, the Sonic twin holes were estimated to have 95% recovery versus the theoretical hole volume multiplied by density. For the 2025 GC AC program, the entire sample for each 1 m interval was collected for 123 of the 133 holes, and samples were split at the assay laboratory. Ten twin AC holes were drilled, and a 25% split was taken at the drill rig with a rotary splitter.
	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.	No relationship between recovery and grade has been observed.
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.*	All 2022 drillholes were logged for lithology, grain size, colour, stratigraphy, induration and estimated HM content. All 2025 GC holes were logged in their entirety on 1 m intervals. Geological logging recorded lithology, lithology proportion, grain size, colour, induration (presence and strength), hardness, geological stratigraphical unit and HM type and content estimation, and estimated clay content.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging is mostly qualitative with proportion of lithological types logged. Interpretations of stratigraphic units were also made. Every sample interval also had a small amount collected and stored in chip trays which were subsequently photographed.
	The total length and percentage of the relevant intersections logged.	All AC holes were completely logged.

Criteria	JORC Code explanation	Commentary
Subsampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Diamond core samples were not taken. The entire core from the Sonic holes was used for bulk density and geotechnical testwork.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Prior to 2022, samples were dried and had the +4 mm oversize removed before sending to the assay laboratory for sizing and HLS assay. Samples were split down to 70 g of sample in the laboratory for HLS. During the 2022 work, samples were split off by a rig mounted cyclone splitter resulting in an ~1.6 kg primary sample. These samples were dried and riffle split to 500 g for analysis. For the 2025 GC AC program, the entire sample for each 1 m interval was collected for 123 of the 133 holes, and samples were split at the assay laboratory. Samples were dried at the laboratory prior to splitting. Ten twin AC holes were drilled, and a 25% split was taken at the drill rig with a rotary splitter.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sampling technique was deemed appropriate for mineral sands testwork. AC is widely accepted for drilling deposits of this type. The 2022 assay work used 100 g of sample for centrifugal HLS analysis. For the 20025 GC samples a riffle split of the +20 µm/-250 µm fraction was taken at the assay laboratory for HM determination. Initially, 100 g was taken for the heavy liquid separation (HLS) start weight; this was increased to 150 g mid-program to ensure enough sink material was produced for mineralogy work on low grade samples.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	For the 2022 samples, field duplicates (1 in 40) and laboratory duplicates (1 in 28) were taken to assess the repeatability and consistency of samples being taken. For the 2025 GC samples, duplicate samples (1 in 35) and laboratory duplicates (1 in 20) were taken to assess the repeatability and consistency of samples being taken. In addition, assay data from the ten twin-holes were compared to data from the original drillholes.
	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.	For the 2022 samples, field duplicates at a rate of 1 in 40 samples were taken to assess the repeatability of the rig sample splitting. Field duplicates weight averaged 115% of their corresponding primary sample even after adjusting the splitter aperture. For the 2025 GC samples, the entire 1 m sample was collected, and sample splits were taken at the laboratory. Following completion of the analysis of the GC samples 66 splits of the samples were re-submitted to ALS for as duplicate samples for analysis. In addition, samples from the 10 twin AC holes were used to assess the repeatability of the samples and influence of sample splitting.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The samples size and split quantity were deemed appropriate for the hole size and sample geology.

Criteria	JORC Code explanation	Commentary
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 the 2022 samples, slimes and oversize were removed and the (in-size) HM percentage content of the samples was determined by the HLS technique with centrifugal aid in separation. The analysis method is considered total. Laboratory standards and duplicates were performed both at a rate of 1 in 28 samples. Blanks were not submitted. All assay determination and QEMSCAN analysis was performed by Bureau Veritas Minerals Pty Ltd (Bureau Veritas) at their Adelaide facility whilst XRF and laser ablation ICPMS work was performed at their Perth facility. For the 2025 GC program all assay determination analysis was performed by ALS Global Metallurgy in Perth, Western Australia. After the removal of slimes (-20 µm) and oversize (+1 mm) the (in-size) HM percentage content of the samples was determined by the HLS technique with centrifugal aid in separation. The analysis method is considered total. Two standard samples were inserted by ALS (at a rate of around 1 in 30 samples) for screening and HLS. Control (duplicate) samples were inserted by ALS at a rate of around 1 in 25 samples for HM and at around 1 in 16 samples for the XRF and ICP samples. Blank samples were not inserted by DMS and are generally not used in the mineral sands industry. Forty-six blank samples (rate of around 1 in 60 samples) were inserted by ALS with the samples for screening and HLS. The maximum total HM in these samples was 0.06%, indicating that sample contamination is not an issue. Sixty-four blank samples were inserted by ALS for the ICP analysis and all but two returned very low or less than detection limit results. The assay technique used by Bureau Veritas and ALS is considered appropriate and conforms to or exceed industry standards. Centrifugal HLS is considered preferable (as opposed to gravity sink alone) where fine-grained HM sand quantities are being assayed.
	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.	For the 2022 samples, Al_2O_3, As_2O_3, BaO, CaO, CeO_2, Cr_2O_3, Fe_2O_3, HfO_2, K_2O, La_2O_3, MgO, MnO, Nb_2O_5, Nd_2O_3, P_2O_5, PbO, SiO_2, SnO_2, SO_3, Th, TiO_2, U, V_2O_5, ZnO, ZrO_2+HfO_2 were determined by XRF spectrometry on oven dry (105°C) samples. Ag_LA, As_LA, Ba_LA, Be_LA, Bi_LA, Cd_LA, Ce_LA, Co_LA, Cr_LA, Cs_LA, Cu_LA, Dy_LA, Er_LA, Eu_LA, Ga_LA, Gd_LA, Ge_LA , Hf_LA, Ho_LA, In_LA, La_LA, Lu_LA, Mn_LA, Mo_LA, Nb_LA, Nd_LA, Ni_LA, Pb_LA, Pr_LA, Rb_LA, Re_LA, Sb_LA, Sc_LA, Se_LA, Sm_LA, Sn_LA, Sr_LA, Ta_LA, Tb_LA, Te_LA, Th_LA, Ti_LA, Tl_LA, Tm_LA, U_LA, V_LA, W_LA, Y_LA, Yb_LA, Zn_LA, Zr_LA were determined by laser ablation inductively coupled plasma mass spectrometry (LA-ICPMS).

Criteria	JORC Code explanation	Commentary
		For the 2025 GC samples, Al_2O_3, CaO, CeO_2, Cr_2O_3, Fe_2O_3, HfO_2, K_2O, MgO, MnO, Nb_2O_5, Nd_2O_3, P_2O_5, Pr_6O_{11}, SiO_2, SO_3, Th, TiO_2, U, V_2O_5, Yb_2O_3 and ZrO_2 were determined by XRF spectrometry. Ce, Dy, Er, Eu, Gd, Ge, Ho, La, Lu Nd, Pr, Sm, Tb, Tm, Y and Yb were determined by laser ablation inductively coupled plasma mass spectrometry (LA-ICPMS).
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Field and laboratory duplicates were both used to assess the assay process work for the 2022 samples. A company standard was inserted at a rate of 1 in 40 samples and laboratory standards were also inserted at a rate of 1 in 28 samples. Duplicate sample assay variability was deemed acceptable as was the precision of both field and laboratory standards. For the 2025 GC samples, duplicate samples and samples from twin AC holes submitted by DMS were used to assess the assay process work. Assay variability and precision was deemed acceptable for both the duplicate samples and twin AC hole samples. Two standard samples were inserted by ALS (at a rate of around 1 in 30 samples) for screening and HLS. Control (duplicate) samples were inserted by ALS at a rate of around 1 in 25 samples for HM and at around 1 in 16 samples for the XRF and ICP samples. Blank samples were not inserted by DMS and are generally not used in the mineral sands industry. Forty-six blank samples (rate of around 1 in 60 samples) were inserted by ALS with the samples for screening and HLS. The maximum total HM in these samples was 0.06%, indicating that sample contamination is not an issue. Sixty-four blank samples were inserted by ALS for the ICP analysis and all but two returned very low or less than detection limit results.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Drilling and analytical data for HM, slimes and oversize content has been reviewed by Snowden Optiro (Mineral Resource consultants).
	The use of twinned holes.	For the 2022 drilling program, a selection of twin holes, using Sonic drilling, were used to assess the recovery, geology and HM % of corresponding AC program holes. Twin sample intervals were compared for consistency and found to be acceptably comparable. For the 2025 GC drilling program, ten twin AC holes were used to assess recovery and splitting at the rig (for the twin holes) and comparison of assay data. Twin sample intervals were compared for consistency and found to be acceptably comparable.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All geological and analytical data for the 2022 drilling program was imported into a Microsoft Access database. The data for the 2022 drilling and analytical work was validated against the original logging records. Astron engaged EarthSQL Pty Ltd (EarthSQL) to maintain the drilling database in the QUEST database system in 2025. The 2025 GC data was provided as csv files exported by EarthSQL.

Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	Processing is expected to recover total HM from the +20 µm/-250 µm fraction. Data used for resource estimation within Area 1 and within the GC model area used this size fraction for analysis and no adjustments were made to the data. Historical data is from the +38 µm/-90 µm fraction and data calibration equations (which diluted the grade) were used to align this data to the expected recovery fraction. This data was used for Area 2 of the 2025 Mineral Resource model
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	All drillhole collars for the 2022 drilling were surveyed for their final locations by Fergusson Perry Surveyors using a Leica Captivate GS18 unit and CS20 controller. Earlier drillhole locations were marked out with handheld global positioning systems (GPS) units. All drillhole collars for the 2025 GC drilling were surveyed for their final locations by licenced surveyors using a Leica Captivate GS18 unit and CS20 controller. The surface topography was obtained from LiDAR data of the project area. The surface topography was obtained from LiDAR data of the project area.
	Specification of the grid system used.	The MGA94 Zone 54 coordinate system was used for the 2025 Mineral Resource model, and the MGA 2020 Zone 54 coordinate system was used for the 2025 GC model. These models were not combined and were used independently for future studies.
	Quality and adequacy of topographic control.	The quality and accuracy of the topographic model is considered good. Newly surveyed drillhole collar from 2022 and 2025 drillholes aligned with the LiDAR derived topography surface.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The drillhole spacing of historical data for the total model area prior to the 2022 drilling was 100 mE by 400 mN. The 2022 drillholes were spaced on a 250 mE by 350 mN spacing with drill lines designed to infill between the 400 mN, north-south spacing. For the model Area 1 only, the 2022 drilling has been used in this resource update. For the model Area 2, no extra drilling has been performed since the previous resource estimate. The 2025 GC drilling is on a nominal grid of 100 mE by 100 mN. The holes were designed to cover the area planned for the first two years of production and are within Ore Blocks 1 to 8.
	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.	The overall drilling spacing of 250 mE by 350 mN for Area 1 of the model (using the 2022 drilling) is considered sufficient for a Measured Resource category considering that the previous resource estimate of this area was also Measured. Geostatistical parameters support the 2025 Mineral Resource category classifications, using only the 2022 drilling information. For Area 2 of the model, the drillhole spacing remains the same (100 mE by 400 mN) but as adjustments have been made to account for sample sizing range data differences, an Indicated resource category has been applied.

Criteria	JORC Code explanation	Commentary
		The GC data spacing is sufficient to establish geological and grade continuity for Mineral Resource estimation within Ore Blocks 1 to 8 and the assigned classification of a Measured Resource.
	Whether sample compositing has been applied.	For the 2022 samples compositing was only performed for the purposes of mineralogy assay testwork (XRF, laser ablation ICP-MS and QEMSCAN). Composites for the 2022 drilling were made up from adjacent or nearby drillholes HLS sinks from within the same geological domain where samples showed >1% HM and were not immediately next to a geological domain contact. Mineralogy composites were made of up sequential samples downhole for all other drilling campaign sampling. The 2022 assays for HM, slimes and oversize were performed on individual 1 m AC drilling samples only. For the 2025 GC program, all samples were taken over 1 m intervals. Sample compositing was not used.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	The orientation of the mineralised horizon is generally flat and horizontal – an undeformed sedimentary deposit. All holes were drilled vertically and as such, have no orientation bias.
Sample security	*The measures taken to ensure sample security.*	Samples were securely stored on private property. Samples were transported to the laboratory by courier with no loss.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	Internal reviews were carried out by Astron. Sample assay quality assurance and quality control – the company standard and field duplicate results have been reviewed by Snowden Optiro. Laboratory standards and duplicate performance have also been reviewed by Snowden Optiro

Section 2: Reporting of Exploration Results

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 2025 MRE and the 2025 GC MRE are within the area of mining licence MIN5532 owned by Donald Mineral Sands (DMS). The Updated 2025 Mineral Resource is within MIN5532. The 2025 GC model covers the area planned for the first 2.5 years of production (Ore Blocks 1 to 8) which are within MIN5532. On 4 June 2024, Energy Fuels entered into a farm-in and joint venture agreement and ancillary agreements (Agreement) with Astron for a joint venture (JV) to develop the Donald deposit within MIN5532. There are no native title interests, wilderness or national park settings relating to this resource area. Heritage areas and other environmental settings are described in the Donald project Environmental Effects Statement which was positively assessed in 2008.

Criteria	JORC Code explanation	Commentary
		Land use is dominantly broad acre cropping and agriculture.
	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.	The tenement is in good standing, and no known impediments exist.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Exploration work done by CRA Exploration in the 1980s and 1990s. Zirtanium Ltd exploration work from 2000 to 2004. All work from 2015 was undertaken by Astron.
Geology	*Deposit type, geological setting and style of mineralisation.*	WIM (Wimmera Industrial Minerals) style, fine-grained heavy mineral sand deposit within the Loxton Sand.
Drillhole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* • *easting and northing of the drillhole collar* • *elevation or RL (elevation above sea level in metres) of the drillhole collar* • *dip and azimuth of the hole* • *downhole length and interception depth* • *hole length.*	Diagrams in this announcement show the location of and distribution of drillholes in relation to the Mineral Resource and MIN5532.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	Not relevant – exploration results are not being reported; a Mineral Resource has been defined.
Relationship between mineralisation widths and intercept lengths	*If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* *If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').*	Not relevant – exploration results are not being reported; a Mineral Resource has been defined.
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 drillhole collar locations and appropriate sectional views.*	Not relevant – exploration results are not being reported; a Mineral Resource has been defined. Plan views have been included in this 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.*	Not relevant – exploration results are not being reported; a Mineral Resource has been defined.
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.*	During 2025, Astron completed the Donald Project Financial Investment Decision (FID) 2025 report. This includes market analysis, project logistics, mine planning, results from metallurgical and geotechnical testwork, engineering development and tailings management.

Criteria	JORC Code explanation	Commentary
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Extensional drilling to be conducted around the boundaries of the resource model and to cover areas where drilling was restricted in 2022 due to time and access constraints. GC verification drilling will be continued where required with mining advance, outside of the GC model in Ore Blocks 1 to 8.

Section 3: Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	The 2022 drillhole data was extracted directly from Astron's drillhole Microsoft Access database, which includes internal data validation protocols. In 2025 Astron engaged EarthSQL Pty Ltd (EarthSQL) to maintain the drilling database in the QUEST database system. This includes internal data validation protocols. The 2025 GC data was provided as csv files exported by EarthSQL. Data was further validated by Snowden Optiro upon receipt, and prior to use in the estimation.
	Data validation procedures used.	Validation of the data was confirmed using mining software (Datamine) validation protocols, and visually in plan and section views.
Site visits	*Comment on any site visits undertaken by the Competent Persons and the outcome of those visits.*	Mrs Christine Standing (Snowden Optiro, acting as Competent Person) has not visited the site. She has visited similar WIM-style deposits in the Murray Basin. Mr Allan Earl (Snowden Optiro) completed a two-day site visit to the Property in August 2024. The site visit included an inspection of the proposed mining area, an inspection of the sample storage shed, the collection of samples for check analysis, confirmation of a previous drillhole collar location (DMS170) within rehabilitated agricultural land.
Geological interpretation	*Confidence in (or conversely, the uncertainty of the geological interpretation of the mineral deposit.*	There is good confidence in the geological interpretation of the overlying Shepparton Formation and the LP1 and LP2 units within the Loxton Sand. Confidence in the basal contact of the LP3 unit and the Geera Clay is relatively good, but additional verification of the historical data is required. GC verification drilling has been conducted in 2025 on approximately the first 2.5 years of mining area and will be continued where required with mining advance.
	Nature of the data used and of any assumptions made.	Both assay and geological data were used for the interpretation. The mineralised horizon is defined by a nominal cut-off grade of 1% total HM. In addition, the 2025 GC model included interpretation of a high-grade HM zone (using a nominal grade of ≥7.5% total HM) and a high-zircon zone (using a nominal grade of ≥12% ZrO_2) within the LP2 unit.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	No alternative interpretations were considered. Any alternative interpretations are unlikely to significantly affect the Mineral Resource estimates.

Criteria	JORC Code explanation	Commentary
	The use of geology in guiding and controlling Mineral Resource estimation.	The geological units were defined using geological logging, slimes and oversize contents, and sediment colour.
	The factors affecting continuity both of grade and geology.	The mineralisation is contained within the Loxton Sand. Offshore-hosted HM sand deposits are formed in a near-shore environment, are fine grained and can extend laterally over several kilometres. The confidence in the grade and geological continuity is reflected by the assigned resource classification.
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 Mineral Resource.*	The HMs are concentrated within the full extent of MIN5532 and extends over an area of area of 10 km north-south by 6 km east-west. The GC Mineral Resource model includes 2.7% of the MIN5532 Mineral Resource. Within MIN5532, the overlying Shepparton Formation ranges in thickness from 3 m to 15 m with an average thickness of 8.7 m. The mineralised horizon ranges in thickness from 3 m to 20 m and has an average thickness of 9.8 m.
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.*	Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software. For the 2025 Mineral Resource model, total HM, slimes and oversize block grades were estimated using ordinary kriging (OK). Mineral assemblage components and REEs were estimated using an inverse distance cubed (ID^3) technique. For the 2025 GC model, total HM, slimes, oversize, TiO_2, ZrO_2, HfO_2 and the REE block grades were estimated using OK. Snowden Optiro considers these methods to be an appropriate estimation technique for this type of mineralisation. For the 2025 Mineral Resource model a maximum extrapolation distance of 250 m was applied north-south and east-west. Within the 2025 GC model area, a maximum extrapolation distance of 100 m was applied north-south and east-west. Variogram analysis was undertaken to determine the kriging estimation parameters used for OK estimation of total HM, slimes and oversize. Variogram analysis was undertaken to determine the search parameters used for ID estimation of the mineral assemblage data and the REE data for the 2025 Mineral Resource Model. For the 2025 GC model, variogram analysis was undertaken to determine the parameters used for estimation of TiO_2, ZrO_2 and HfO_2. Variogram analysis was undertaken for Ce and Dy and the variogram parameters interpreted for Ce were applied to all the light REEs (La, Nd, Pr, Sm, Eu and Gd) and the variogram parameters determined for Dy were applied to all the heavy REEs (Er, Ho, Lu, Tb, Tm, T and Yb). Kriging neighbourhood analysis was performed to determine the block size, sample numbers and discretisation levels for both the 2025 Mineral Resource model and the 2025 GC model.

Criteria	JORC Code explanation	Commentary
	Description of how the geological interpretation was used to control the resource estimates.	All geological logging data (including historical drillholes), slimes content and oversize content were used to define the geological units. The mineralised horizon was defined using a nominal cut-off grade of 1% total HM (selected from statistical analysis). The mineralised domain is considered geologically robust in the context of the resource classification applied to the estimate. In addition, the 2025 GC model included interpretation of a high-grade HM zone (using a nominal grade of ≥7.5% total HM) and a high-zircon zone (using a nominal grade of ≥12% ZrO_2) within the LP2 unit. Hard boundary conditions were applied for all geological units, and a combination of soft and hard boundaries were applied for the mineralisation domains.
	Discussion of basis for using or not using grade cutting or capping.	For the 2022 data, the distributions of the total HM, slimes and oversize data within each geological unit and within the mineralised horizon are positively skewed; however, the total HM, slimes and oversize all have low coefficients of variation (less than 0.95). High-grade outliers are not present and so top cut grades (cap grades) were not applied. For the 2025 GC data, the distributions of the total HM within each estimation domain are positively skewed, except for the high zircon domain in LP2. The coefficient of variation (CV) for total HM is low (0.24 to 0.65) for all domains, except for domain 210 (the unmineralised horizon in LP1), which has a CV of 1.74. Domain 210 is above the mineralised horizon and contains isolated high grades at the top of LP1. A top-cut (cap) grade of 3.2% total HM was applied to the data used for geostatistical analysis and grade estimation in domain 210 which reduced the CV from 1.74 to 0.99. Top-cut grades were not applied to HM in the other domains. The other variables all have low coefficients of variation in each domain and high-grade outliers are not present. Top-cut grades were not applied
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Mineral Resources for MIN5532 were reported by Snowden Optiro in 2022. Comparison of the 2022 and the Updated 2025 Mineral Resources indicates: • A small increase (1.8%) in total tonnes (from 525 Mt to 534 Mt) as updated density values have been assigned for tonnage estimation. • Monazite and CeO_2 have decreased by 9.7%. In 2022, CeO_2, and thus monazite, were estimated from the XRF data which has now been replaced with the ICP data. CeO_2 within Area 2 has been estimated using extrapolated data from Area 1. • Xenotime and Y_2O_3 have decreased by 0.7% and 0.1% respectively. Y_2O_3, and thus xenotime, within Area 2 has been estimated using extrapolated Y_2O_3 data from Area 1.

Criteria	JORC Code explanation	Commentary
		During 2025, Astron undertook a GC drilling program within the area (4.3% of the area of MIN5532) that is expected to be mined during the first two to three years of production (Ore Blocks 1 to 8) as defined by AMC Consultants Pty Ltd and a GC resource model (in MGA2020 coordinates), for short-term mine planning was prepared for this area (2025 GC model). A comparison of the average grades of the Updated 2025 model and the 2025 GC model indicates a 5% increase in total HM, a 2% decrease in slimes and a 49% decrease in oversize (due to the modified sample preparation, which included bottle-rolling). The zircon, monazite and xenotime have increased by 6%, 11% and 8% respectively, and TiO_2 has increased by 3%. Each of the REOs have increased by 1% to 4%. It must be noted that the potential up-grade identified in Ore Blocks 1 to 8 may not be representative of the entire MIN5532 Mineral Resource and that additional data is required to assess this.
	The assumptions made regarding recovery of by-products.	Processing is expected to recover total HM from the +20 µm/-250 µm fraction. Data used for resource estimation within Area 1 and the 2025 GC model used this size fraction for analysis. Historical data is from the +38 µm/-90 µm fraction and data calibration equations (which diluted the grade) were used to align this data to the expected recovery fraction.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	Deleterious elements were not considered for the 2025 Mineral Resource estimate. The 2025 GC block model included estimates for U and Th. A surface was incorporated into the 2025 GC model to define the top of a PASS horizon. Interpretation of this surface used medium to high slimes contents and high (>2%) SO_3. The 2025 GC Mineral Resource is above this surface.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Grade estimation for the 2025 Mineral Resource model was into parent blocks of 100 mE by 200 mN by 1 mRL. Block dimensions were selected from kriging neighbourhood analysis and reflect the variability of the deposit as defined by the current drill spacing. Sub-cells to a minimum dimension of 25 mE by 50 mN by 0.25 mRL were used to represent volume. Grade estimation for the 2025 GC model was into parent blocks of 50 mE by 50 mN by 1 mRL. Block dimensions were selected from kriging neighbourhood analysis and reflect the variability of the deposit as defined by the current drill spacing. Sub-cells to a minimum dimension of 12.5 mE by 12.5 mN by 0.25 mRL were used to represent volume.
	Any assumptions behind modelling of selective mining units.	Selective mining units were not modelled.
	Any assumptions about correlation between variables.	The majority of the total HM and slimes, total HM and oversize, and slimes and oversize data is uncorrelated.

Criteria	JORC Code explanation	Commentary
		Correlation coefficients of the 2022 mineral assemblage data indicate a strong positive relationship between zircon and monazite, zircon and xenotime, and monazite and xenotime, a moderate positive relationship between rutile and the other mineral assemblage components, and between xenotime and the other mineral assemblage components, and a poor positive correlation between leucoxene and ilmenite, leucoxene and zircon, leucoxene and monazite, and ilmenite and monazite. Correlation coefficients between the REEs from the 2022 composite samples are high (0.816 to 0.9997). There is a high positive correlation between ZrO_2+HfO_2 and all the REEs (0.915 to 0.989). All variables were estimated independently. The 2025 GC data indicate a moderate positive relationship of total HM with ZrO_2 and HfO_2 and that total HM and TiO_2 are not correlated. Correlation coefficients between the REEs are high (0.959 to 0.999). Correlation coefficients for the heavy REEs (Dy, Tb, Y, Ho, Lu, Er, Tm and Yb) are very high (0.988 to 999) and are slightly lower (0.968 to 0.999) for the light REEs (Ce, Pr, Nd, La, Sm, Eu and Gd). Correlation coefficients between the heavy REEs and the light REEs range from 0.959 to 0.996. There is a high positive correlation between ZrO_2 and all the REEs (0.943 to 0.987). All variables used for the 2025 GC model were estimated independently. Estimation parameters determined for Ce were applied to all the light REEs (La, Nd, Pr, Sm, Eu and Gd) and the parameters determined for Dy were applied to all the heavy REEs (Er, Ho, Lu, Tb, Tm, T and Yb). TREO is the sum of the heavy and light REOs.
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	The total HM, slimes, oversize and mineral assemblage estimated block model grades in the 2025 Mineral Resource model were visually validated against the input drillhole data and comparisons were carried out against the declustered drillhole data and by northing, easting and elevation slices. The total HM, slimes, oversize and mineral assemblage and REEs (converted to REOs) estimated block model grades for the 2025 GC model were visually validated against the input drillhole data and comparisons were carried out against the declustered drillhole data and by northing, easting and elevation slices. No production has taken place and thus no reconciliation data is available.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages have been estimated on a dry basis. Average moisture contents of 15.2% to 29.5% were recorded from density testwork.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	The Mineral Resource is reported above a cut-off grade of 1.0% total HM. This cut-off grade is aligned with the current nominal economic cut-off grade 1.0% total HM used by AMC Consultants Pty Ltd in 2026 for reporting the Ore Reserves. It is expected that the entire Donald Mineral Resource has reasonable prospects for eventual economic extraction using open pit mining.

Criteria	JORC Code explanation	Commentary
		A mining study has been undertaken, and FID documentation has been finalised.
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 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.*	Open pit mining methods will be used, similar to those commonly and currently in use in HM mining operations both in Australia and globally. Mining factors such as dilution and ore loss have not been applied. It is considered that there are no mining factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.
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.*	Metallurgical testwork has determined recoveries for the final products based upon TiO_2%, ZrO_2+HfO_2%, CeO_2% and Y_2O_3%. Metallurgical testwork programs conducted by Astron/DMS through Mineral Technologies Pty Ltd have demonstrated commercial recovery of fine-grained HM sand products from the Donald deposit through conventional gravity separation processes. This testwork includes recovery of mineral products down to a particle size of 20 µm. Testwork has also demonstrated the ability to recover rare earth minerals via a monazite flotation process.
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is 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.*	There are no known significant environmental impediments to the project's viability from the currently available information.
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.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	A total of 149 bulk density samples were collected from test pits in 2005 (nuclear density measurements) and 2018 (sand replacement), from nuclear density measurements in 2024, and from sonic drill core samples in 2022, 2024 and 2025 The average dry bulk density values (updated with additional data in 2025) were assigned to the Shepparton Formation (1.45 t/m^3) and to the LP1, LP2 and LP3 units of the Loxton Sand (1.84 t/m^3, 1.75 t/m^3 and 1.67 t/m^3 respectively).
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.* *Whether appropriate account has been taken of all relevant factors (i.e. 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).*	The 2025 Mineral Resource has been classified as Measured, Indicated and Inferred taking into account data quality, data density, geological continuity, grade continuity and confidence in the estimation of heavy mineral content and mineral assemblage. Measured and Indicated Mineral Resources have been defined within the area covered by the 2022 drilling (on a nominal spacing of 250 m by 350 m) and where the mineral assemblage has been determined by QEMSCAN, XRF and laser ablation analysis. Measured Mineral Resources are within the LP1 (Domains 210 and 211) and LP2 units (Domains 220 and 221). The eastern area of Domain 210 and the LP3 unit (Domains 230 and 231), within the area of 2022 drilling are classified as Indicated.

Criteria	JORC Code explanation	Commentary
		Within Area 2, the drilling data used for the resource estimate is on a generally on a spacing of 250 m to 500 m east west and 250 m to 500 m north-south. The historical nature of the data, and changes in the grain size and data calibration have reduced confidence in the data used for resource estimation. Mineral Resources within Area 2 are classified as Indicated and Inferred. Data analysis concentrated on the LP2 unit and the LP2 unit is classified as Indicated where mineral assemblage data was obtained from the 2004 drilling. Mineral Resources are classified as Inferred within all the LP1 and LP3 units and where there is a lack of mineral assemblage data within LP2. The 2025 GC Mineral Resource within Ore Blocks 1 to 8 has been classified as Measured taking into account data quality, data density, geological continuity, grade continuity and confidence in the estimation of heavy mineral content and mineral assemblage.
	Whether the result appropriately reflects the Competent Person's view of the deposit	The assigned classification of Measured, Indicated and Inferred reflects the Competent Person's assessment of the accuracy and confidence levels in the Mineral Resource estimates.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	The Mineral Resource models have been reviewed internally as part of normal validation processes by Snowden Optiro. No formal external audit or review of the current Mineral Resources has been conducted.
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.*	The assigned classification of Measured, Indicated and Inferred reflects the Competent Person's assessment of the accuracy and confidence levels in the Mineral Resource estimates.
	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.	The confidence levels reflect potential production tonnages on an annual basis, assuming open pit mining.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No production has occurred from the deposit.

Appendix B. JORC 2012 Table 1 – Ore Reserves

The table below summaries the assessment and reporting criteria used for the updated Ore Reserve estimate and reflects the guidelines in Table 1 of The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012). Information shown in Appendix A representing Sections 1 -3 in relation to the updated Mineral Resource Estimate are applicable to the update Ore Reserve estimate and should be read in conjunction with the table below.

Section 4: Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	*Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	Two Mineral Resource Estimates (MRE) were used as the basis for the conversion to an Ore Reserve. The first 8 ore mining blocks (the initial 15Mt of ore and representing the first 2.5 years of mining) were based on the Grade Control MRE. The remaining blocks were based on the Update 202 MRE. The Grade Control MRE for the Donald Mineral Sands deposit was compiled by Snowden Optiro (Datamine Australia Pty Ltd) geologists utilising relevant data. The MRE incorporates grade control drilling and assays for these blocks. The Updated 2025 MRE for the Donald Mineral Sands deposit was compiled by Snowden Optiro geologists utilising relevant data. The MRE is an update from 2022 which now also incorporates estimated rare earth oxides (REOs) within MIN5532. Drilling and sampling conducted in 2022 sought to redefine the Mineral Resource within Mining Licence (MIN5532) capturing the geological domains, xenotime and the 20 to 38µm fraction of heavy mineral (HM) content based on a 1% total HM cut-off grade. The 2022 drilling spacing covers the majority of MIN5532 except for an area which was not able to be accessed at the time. The area of the resource model covered by drilling and sampling performed in 2022 is known as Area 1 and makes up approximately 97% of the MIN5532 resource. The remainder of the resource model area outside of Area 1 uses older historical drilling information and is known as Area 2. The resource model estimation has also been constrained vertically within geological domains, primarily the interpreted layers of the Loxton Sand (LP1, LP2 and LP3), but also by grade within these domains. The MRE has been classified according to the guidelines of the JORC Code (2012) into Measured, Indicated and Inferred Mineral Resources, considering data quality, data density, geological continuity, grade continuity and confidence in the estimation of heavy mineral content and mineral assemblage. The nominal drill spacing for the 2022 drilling is approximately 250 mE by 350 mN. In general, the historical drillhole spacing ranges from 125 mE by 400 mN to 250 mE by 500 mN. Only a new MRE within MIN5532 is reported as the 2022 drilling and sampling data does not extend outside of the mining licence. Rare earth element (REE) data (referred to as ICP data) was obtained in 2022 from laser ablation (LA-ICPMS) analysis by Bureau Veritas. Only the Y (Y2O3) data was included (and used to estimate xenotime) in the 2022 resource model. The CeO_2, estimated in 2022 and used to estimate monazite, was from XRF analysis. Additional density measurements were obtained after completion of the 2022 model, and this data has been used to update the density values assigned to each of the geological horizons. The 2022 Mineral Resource model used data in the MGA94 Zone 54 co-ordinate system and the Updated 2025 Mineral Resource model (*DO_OR_4NOV2025.dm*) is in the MGA94 Zone 54 co-ordinate system. The deposit is classified as a WIM style deposit. WIM deposits consist of fine-grained economic minerals of zircon, titanium, and various rare earths. The regional aquifer intersects the lower few metres of the orebody.

Criteria	JORC Code explanation	Commentary
		The deposit sits over Geera clay. Geera clay is carbonaceous silts and minor carbonates, massive pyritic clays with minor sand and silt layers, with sparse marine fossils. The Mineral Resources are reported inclusive of the Ore Reserve.
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.*	The Competent Person, Mr Pier Federici FAusIMM(CP), conducted a site visit in July 2013. The site visit provided: Familiarization with the site including current mining conditions, proposed pit limits, waste dump locations, site drainage and geotechnical considerations, identification of vegetation to be preserved. Observation of samples being prepared for analysis. General landforms. Access to the deposit. The competent person is of the opinion that no material changes have occurred in the region since the last site visit.
Study status	*The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	The Ore Reserves are supported by the recent completion of updated mine planning work undertaken by AMC Consultants Pty Ltd completed as part of the recent definitive feasibility study with a level of accuracy +/- 10%. The mine plan is considered technically and economically achievable involving the application of conventional mining technology. Modifying Factors (mining, processing, infrastructure, environmental, legal, social, and commercial) have been considered during the Ore Reserve estimation process. Economic modelling was completed as part of the definitive feasibility study and identified that the project is economically viable and robust under current assumptions.
Cut-off parameters	*The basis of the cut-off grade(s) or quality parameters applied.*	The ore block shapes (defining ore) were delineated using top and bottom of ore surfaces determined in AMC Consultants Pty Ltd 2023 study. In-situ bunds were removed from the ore block shapes. The Mineral Reserve is contained within these ore blocks. The ore blocks were tested against the 2025 Mineral Resource block model and 2025 GC model and are still appropriate for reporting the Mineral Reserve.
Mining factors or assumptions	*The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* *The major assumptions made and Mineral Resource model*	The deposit has been assessed through pit optimisation, review of mine design, mine scheduling and economic modelling. Dilution and ore loss is appropriate and are inherent in the process, and no additional dilution or ore loss has been applied when converting the mineral resource model for mine planning beyond the application of designs. Individual discrete mining blocks have been digitised around ore and overburden these boundaries incorporate some material at lower value (dilution) and exclude material ate higher value (ore loss). Additional ore loss is incurred as pillars of in situ material have been left between adjacent mining strips to prevent tails from entering the working areas. The mine extents and depth were decided by pit optimisation using the Lerchs-Grossman (LG) algorithm with Geovia Whittle software. Nested pit shells generated and tested with sensitivities on mining cost, processing cost, metal price, recoveries formed the basis of the optimal pit shell to maximize value and achieve operational design requirements. LG pit optimisations assessed Measured and Indicated classified material only. No Inferred material was included in the LG assessment. Geotechnical slope parameters were based on a geotechnical study completed in 2022 by ATC Williams focused on the external and in-pit

Criteria	JORC Code explanation	Commentary
	used for pit and stope optimisation (if appropriate). *The mining dilution factors used.* *The mining recovery factors used.* *Any minimum mining widths used.* *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* *The infrastructure requirements of the selected mining methods.*	embankment designs for tails storage facilities. The in-situ embankments and pit slopes also applied these parameters due to in-pit storage of tails. Infrastructure requirements included development of tails and slimes storage, topsoil, and subsoil stockpiles, over burden stockpiles, haul roads, external tails storage facility, office, fuel bay and storage, salvage yard, and workshop. Key infrastructure will be located in the north-western corner of MIN5532 adjacent to the wet concentrator plant. The pit will be mined in blocks of general dimension of 500 m wide and 250 m long. These will be mined in a strip sequence. The mining method will be a truck and excavator for the overburden, ore will be fed via dozers into an in-pit Mining Unit Plant (MUP), while scrapers will be used for soil stripping and rehandling. Ore will be fed into the MUP where it is screened and slurried and pumped to the wet concentrator plant (WCP) on site. Sand tails, from the WCP will be returned to the mine void placed in constructed cells after which overburden will be placed above prior to rehabilitation.
Metallurgical factors or assumptions	*The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* *Whether the metallurgical process is well-tested technology or novel in nature.* *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* *Any assumptions or allowances made for deleterious elements.* *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	Two concentrate products are produced; a heavy mineral concentrate (HMC) which is predominantly ZrO_2+HfO_2, and TiO_2 minerals and a rare earth mineral concentrate (REEC). A WCP employing spirals will separate a heavy mineral concentrate from tails through gravity separation The Flotation and Two concentrates are generated at site. Based on the extensive test work and pilot plant testing that has been completed, it has been demonstrated to meet the performance requirements for this plant in the rougher, middlings scavenger and cleaner spiral stages of the WCP. A concentrate upgrade plant (CUP) will separate the minerals containing rare earth elements from the heavy mineral concentrate from the WCP. This will be achieved by attritioning the feed to ensure that the surfaces of all minerals are sufficiently exposed prior to the flotation circuit used to collect the rare earth minerals into the rare earth mineral concentrate (REEC) product. The associated recoveries and costs to generate concentrates, were applied in the mine planning work. The metallurgical assumptions are based on metallurgical test work undertaken by Mineral Technologies in 2022 developing the recoveries, flowsheet and concentrate upgrade validation base on site bulk samples.
Environmental	*The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue*	An Environmental Effects Study (EES) was completed for the Donald Mineral Sands Project in 2008 and was suitable to proceed towards a Work Plan. The recent feasibility study has been based on the EES with the Work Plan approved in 2025. The plan is to return disturbed areas to similar topography preserving water surface flow directions. Sand tails will be buried below ground level and capped with overburden. A permit for inpit tailings disposal was received in 2025.

Criteria	JORC Code explanation	Commentary
	storage and waste dumps should be reported.	
Infrastructure	*The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	Power and water will be accessible from existing grid infrastructure in the local area. Additional infrastructure required for open pit mining has been designed and costed and includes: • Mining Unit Plant (MUP). • Wet concentrator plant (WCP). • HMC and REMC product handling facilities including weigh bridge. • Reagents receipt and distribution. • Maintenance workshops. • Internal Roads and External Road Upgrades. • Offices and crib rooms. • Fuel storage and refuelling area. • Site will be powered by a hybrid power station (solar and thermal power generation). A work plan variation has been approved. • GWM Water reticulation upgrades to transfer fresh water from storage in Taylors Lake to mine site. • Fresh water, process water and sediment control Dams. • Wash Bay. • Stores. • Tyre Repair Facility. • Vehicle Parking Facilities. • Salvage Yard. • Pit dewatering. • Land purchase. • Accommodation facility in nearby town.
Costs	*The derivation of, or assumptions made, regarding projected capital costs in the study.* *The methodology used to estimate operating costs.* *Allowances made for the content of deleterious elements.* *The source of exchange rates used in the study.* *Derivation of transportation charges.* *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* *The allowances made for royalties payable, both Government and private.*	Capital and operating costs have been collated and supplied by DMS. The costs were flexed in the economic model to test the effect on the project. The costs were reviewed by the Competent Person for reasonableness. The costs are reasonable and appropriate for the project. Operating and capital costs have been based on: • Sales and logistics costs. • Processing costs based on first principal cost estimates. • First principal mining cost estimates based on mine schedule physicals prepared by AMC Consultants Pty Ltd. • First principal estimates based on infrastructure design. • External TSF design updated by GEOAnalytica. Inpit tailings prepared by ATC Williams. • Marketing studies - TZMI for HMC and Adamas Intelligence for REMC. • Relevant government royalties for concentrate products. • Processing prepared by Mineral Technologies. • Power strategy scoped and priced by Agilitus. • GWM Water reticulation prepared by W3Plus. • Road upgrades prepared by Driscoll Engineering. • Accommodation facilities prepared by BM Projects. • Dewatering infrastructure updated by Agilitus.

Criteria	JORC Code explanation	Commentary
		All appropriate government royalties have been applied in the evaluation of the project. The processing is designed to meet specification so no penalties for this, will be incurred.
Revenue factors	*The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	The value of the concentrate and the cost of processing was applied to define economic material. Commodity prices and exchange rate forecast were advised by Donald Mineral Sands Limited (DMS) and are based on consensus forecast prices. Product specifications are based on metallurgical test work including processing of bulk sample material. Treatment charges are linked to forecast commodity prices and align with five-year historical rates. Off-site marketing and freight costs are based on DMS forecast linked to industry indices. Key value driver inputs into the financial model included: • Heavy mineral concentrate and Rare Earth mineral concentrate forecast pricing. • Exchange rate from AU$ to US$ used 0.66:1. • Discount rate of 8%.
Market assessment	*The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* *A customer and competitor analysis along with the identification of likely market windows for the product.* *Price and volume forecasts and the basis for these forecasts.* *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	The current short-term reduction in zircon demand is expected to return to the long-term demand in 2025. The macro trend in zircon demand is driven by urbanisation. Maturation of existing supply sources will lead to a reduction in zircon supply. The long life of this project (>40 years) provides opportunity to move through the rise and fall of global supply and demand. Titanium feedstock market is large, and it is expected that the Donald Mineral Sands Project will fill a small section of the existing supply shortage in the marketplace. The DMS Ti product has a major advantage in its grade (High in Ti% over 60% overall). It is anticipated that the benefits for the high Ti content will be significant for the downstream producers as the high Ti content enables high Ti grade in the final products, as well as a decrease in the by-product, pig-iron of the slag process. With 95% of the Rare Earth market situated in China, a macro-trend in the rare earth space is that western governments have started to heavily invest in the Rare Earth sector. Under the Australian Governments A$ 2B critical minerals facility, the Australian federal government is investing over A$ 1.25B in Eneabba rare earth refinery announced in April 2022 which is currently in design / construction by Iluka in Western Australia. Rare Earths, as a Total Rare Earth Oxide (TREO), was priced by Adamas Intelligence in February 2023. Following a 7.1% pandemic-induced drop in global TREO consumption in 2020, Adamas Intelligence data indicates that global consumption jumped 13.2% higher in 2021, bolstered by the materialisation of some pent-up consumer and industrial demand from the year prior. By volume, permanent magnets and catalysts were collectively responsible for over 65% of global TREO consumption in 2021. However, by value, permanent magnets alone were responsible for 95% of the total value of global TREO consumption in 2022. Demand for and prices of neodymium, praseodymium, dysprosium and terbium (all of which are contained in the DMS TREO) are expected to continue to rise strongly in the years ahead.

Criteria	JORC Code explanation	Commentary
Economic	*The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	Discounted cash flow modelling and sensitivity analysis has been completed to assess the economics of the Ore Reserve. The Ore Reserve returns a positive NPV (pre-tax) under the assumptions detailed herein. Sensitivity testing of the project identified changes to mining costs, recoveries, and product prices produced the largest difference in the project NPV. All reasonable sensitivity variations to inputs resulted in a positive NPV.
Social	*The status of agreements with key stakeholders and matters leading to social licence to operate.*	Cultural & Heritage Management Plan (CHMP) for a large portion of MIN5532 was approved in 2014. DMS is engaged with stakeholder groups through regular Community Reference Group meetings and has established a Transport Working Group that had its inaugural meeting in January 2023. A Memorandum of Understanding was executed with the Yarriambiack Shire Council in November 2022 with key areas for collaboration between the two parties being Optimising Economic and Social Outcomes – to work cooperatively and in good faith to facilitate as many positive outcomes from the Donald Mineral Sands Project as possible whilst also working jointly to minimise and mitigate any potential negative economic employment and social outcomes associated with the project and building relationships to support the Donald Mineral Sands Project by working cooperatively and in good faith to develop an advocacy and relationship management program which will aid the timely delivery of the project and wider community benefits. There are no social barriers to operate.
Other	*To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* *Any identified material naturally occurring risks.* *The status of material legal agreements and marketing arrangements.* *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	Mining Licence (MIN5532) expires August 2030. Retention Licence (RL2002) expires October 2029. Export Licence was renewed in October 2020. Radiation Licence has been granted. Work Plan approval received. Where practical native vegetation is avoided. There is a vegetation offset management plan for other areas. Sufficient water has been secured for the project. The area occasionally floods. Diversion bunds will be constructed around the mine workings to control surface flood water. The natural phreatic water level is above the base of the pit. Because of low permeability, ground water will be managed by a series of spear bore pumps installed either side of the mining blocks. In pit pumps and sumps will also be used as required. Some risk is considered related to the trafficability of haul trucks in the pit based on the material properties and moisture content.

Criteria	JORC Code explanation	Commentary
Classification	*The basis for the classification of the Ore Reserves into varying confidence categories.* *Whether the result appropriately reflects the Competent Person's view of the deposit.* *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	Material has been classified as Proven and Probable Ore Reserve, based on Measured and Indicated Mineral Resources respectively. The results of the Ore Reserve estimate reflect the Competent Person's view of the deposit.
Audits or reviews	*The results of any audits or reviews of Ore Reserve estimates.*	The supporting mine planning work has not been externally audited.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which 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.* *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	The Ore Reserve estimate is based on the recent undertaking of a definitive feasibility study for the project, with a level of accuracy ±10%. Costs are based on estimated first principle operating costs and capital costs. This has provided a high level of confidence in the economic basis of the Ore Reserve and assessment of the project value. In the opinion of the Competent Person, cost assumptions and modifying factors applied in the process of estimating Ore Reserves are reasonable. Mineral price and exchange rate assumptions were set out by DMS and are subject to market forces and therefore present an area of uncertainty. In the opinion of the Competent Person, there are reasonable prospects to anticipate that all relevant legal, environmental, and social approvals to operate are currently granted or will be granted within the project timeframe. Sensitivity testing of the project identified changes to product prices produced the largest difference in the project NPV. Regardless, the project produces a positive NPV over a range of product prices and operating costs.

Appendix C. Donald Project – Technical Report

The Company's joint venture partner in the Donald Rare Earth and Mineral Sands Project (**Donald Project**), Energy Fuels Inc (**NYSE American: UUUU**) has released a technical report for the Donald Project pursuant to Canadian National Instrument 43-101 – Standards of Disclosure for Mineral Projects and United States Securities and Exchange rule S-K 1300 on EDGAR (www.sec.gov/edgar/search) in accordance with its statutory obligations as an entity listed on the American Stock Exchange (**NYSE American**).

The report, titled "*Technical Report for the Donald Rare Earths and Mineral Sands Project, Victoria, Australia*" and dated 26 February 2026, with an effective date of 31 December 2025, is attached as this Appendix C.

Technical Report for the Donald Rare Earths and Mineral Sands Project, Victoria, Australia

Prepared for Energy Fuels Inc. by Datamine Australia Pty Ltd (Snowden Optiro)

Project Number DA213254

Qualified Persons

Mr. Allan Earl, *FAusIMM*

Mrs. Christine Standing, *MAIG*

Mr. Pier Federici, *FAusIMM (CP Min)*

Mr. Peter Allen, *MAusIMM (CP)*

Ms. Gené Main, *EAPASA, Pr.Sci.Nat. SACNASP*

Mr. Peter Theron, *PrEng, MSAIMM*

This report was prepared as a National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) Technical Report and a Subpart 229.1300 of Regulation S-K Disclosure by Registrants Engaged in Mining Operations (S-K 1300) and Item 601 (b)(96) Technical Report Summary (collectively Technical Report) for Energy Fuels Inc. (Energy Fuels) by Datamine Australia Pty Ltd (Snowden Optiro). The quality of information, conclusions, and estimates contained herein are consistent with the quality of effort involved in Snowden Optiro's services. This Technical Report is intended to satisfy the requirements of a Feasibility Study under both NI 43-101 and S-K 1300. The information, conclusions, and estimates contained herein are based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. The user of this document should ensure that this is the most recent Technical Report for the property as it is not valid if a new Technical Report has been issued.

Issued by:	Perth Office
Doc ref:	Signed_DA213254 Donald Technical Report.docx
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Forward-looking information

This Technical Report contains “forward-looking information” and “forward-looking statements” within the meaning of applicable Canadian and United States securities legislation (collectively, “forward-looking information”) which involves a number of risks and uncertainties. Forward-looking information includes, but is not limited to: information with respect to strategy, plans, expectations or future financial or operating performance, such as expectations and guidance regarding project development, production outlook, including estimates of production, grades, recoveries and costs; estimates of Mineral Resources and Mineral Reserves; construction plans; mining and recovery methods; mining and mineral processing and rates;

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Forward-looking information is based on the opinions, estimates and assumptions of contributors to this Technical Report. Certain key assumptions are discussed in more detail. Forward-looking information involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements to be materially different from any other future results, performance or achievements expressed or implied by the forward-looking information.

Such factors and assumptions underlying the forward-looking information in this Technical Report includes, but are not limited to: risks associated with community relationships; risks related to estimates of production, cash flows and costs; risks inherent to mining operations; shortages of critical supplies; the cost of non-compliance and compliance; volatility in commodity prices; risks related to compliance with environmental laws and liability for environmental contamination; the lack of availability of infrastructure; risks related to the ability to obtain, maintain or renew regulatory approvals, permits and licenses; imprecision of Mineral Reserve and Mineral Resource estimates; deficient or vulnerable title to concessions, easements and surface rights; inherent safety hazards and risk to the health and safety of employees and contractors; risks related to the workforce and its labour relations; key talent recruitment and retention of key personnel; the adequacy of insurance; uncertainty as to reclamation and decommissioning; the uncertainty regarding risks posed by climate change; the potential for litigation; and risks due to conflicts of interest.

There may be other factors than those identified that could cause actual actions, events or results to differ materially from those described in forward-looking information, there may be other factors that cause actions, events or results not to be anticipated, estimated or intended. There can be no assurance that forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers are cautioned not to place undue reliance on forward-looking information. Unless required by Canadian or United States securities legislation, the authors and Snowden Optiro undertake no obligation to update the forward-looking information if circumstances or opinions should change.

1 Summary

This Technical Report was prepared for Energy Fuels Inc. (Energy Fuels) to support the disclosure of Exploration Results, Mineral Resources and Mineral Reserves for Phase 1 of the Donald Rare Earths and Mineral Sands Project (Donald or the Property), a mineral exploration and development property located in western Victoria, Australia.

This Technical Report satisfies the requirements of Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) and the United States Securities and Exchange Commission's (SEC's) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 229.1300 of Regulation S-K Disclosure by Registrants Engaged in Mining Operations (S-K 1300), and Item 601(b)(96) Technical Report Summary.

This Technical Report was authored by the following Qualified Persons (as such term is defined under NI 43-101 and S-K 1300):

- Mr. Allan Earl and Mrs. Christine Standing of Snowden Optiro, a business unit of Datamine Australia Pty Ltd (Snowden Optiro) were responsible for the preparation of this Technical Report, including the review of the geology, Mineral Resource estimates, mine planning, mining capital and operating cost estimates, and the economic analysis.
- Mr. Peter Allen of GR Engineering Services (GRE) was responsible for the review of the metallurgy, processing, infrastructure and processing capital and operating cost estimates.
- Ms. Gené Main and Mr. Peter Theron of Prime Resources (Prime) were responsible for the review of the environmental studies, permitting and social.
- Mr. Pier Federici of AMC Consultants Pty Ltd (AMC) was responsible for the review of the Mineral Reserve estimates.

The effective date of this Technical Report is 31 December 2025.

Unless otherwise specified, all units of currency are in Australian dollars ($) and all measurements are metric.

1.1 Property description, ownership and background

Donald is a planned greenfields mineral sands mine development in the Wimmera region of western Victoria, Australia. The Property comprises two areas, Mining Licence 5532 (MIN5532) and Retention Licence 2002 (RL2002), covering a combined area of 27,155 ha (271.55 km^2), held by Astron Limited (formerly Astron Corporation Limited) (collectively Astron) through its subsidiary Donald Project Pty Ltd (DPPL).

Astron completed a "definitive feasibility study" in April 2023 for the Phase 1 operation within MIN5532 and a "pre-feasibility study" in June 2023 for the Phase 2 operation within RL2002, based on a plan to open pit mine the Donald heavy mineral (HM) deposit with on-site processing to produce a HM (zircon and titanium minerals) concentrate (HMC) and rare earth element concentrate (REEC) (Phase 1), and proposed future processing of the HMC into zircon and titania (titanium feedstock) final products (Phase 2).

On 4 June 2024, Energy Fuels entered into a farm-in and joint venture agreement and related ancillary agreements (Agreement) with Astron for a joint venture (JV) to develop the Donald deposit within MIN5532 and RL2002. Energy Fuels will contribute the first $183 million of equity capital to earn a 49% interest in DPPL. As at the effective date of this Technical Report, Energy Fuels held a 9.48% equity interest in DPPL and its remaining earn-in obligation is forecast to be $132 million (after taking into account funds already advanced and approximately $16 million of debt finance provided by EFRD which upon a final investment decision (FID) will be recognised as earn-in funding). Energy Fuels also entered into an offtake agreement for 100% of the Phase 1 and Phase 2 REEC monazite and xenotime production at commercial prices. Under the Agreement, and subject to its terms, Astron and its affiliates have the right to enter into an offtake agreement for 100% of the zircon and titanium HMC for processing at Astron's mineral separation plant in China and at third-party facilities.

DPPL completed an "Updated Economics Study" on 14 July 2025 to support a FID for the Phase 1 operation following the receipt of major regulatory approvals including the Work Plan covering the initial 19 years of operation (Phase 1A area of 1,143 ha in MIN5532). This study was updated in the "Draft - Donald Project Revised Economics Study Q4 2025" report dated 19 December 2025.

Once commissioned, the combined Phase 1A and 1B operation will mine and process 7.5 million tonnes per annum (Mt/a) of ore and is expected to produce an average of about 192 thousand tonnes per annum (kt/a) of HMC and about 7,100 tonnes per annum (t/a) of REEC for the 40-year project life.

1.2 Geological setting and mineralization

The Murray Basin is a low-lying, saucer-shaped intracratonic depression in southeastern Australia hosting thin, flat-lying Cainozoic sediments overlying deformed early Palaeozoic turbidites, volcanic and volcaniclastic rocks of the Lachlan Fold Belt. A succession of Tertiary freshwater, marine, coastal and continental sediments containing HM were deposited into the basin.

The Late Miocene to Late Pliocene Loxton Sand is the host sequence to all the known HM sand deposits in the Murray Basin. These deposits are of two principal types: the coarser-grained strandline occurrences and the finer-grained "WIM-style" accumulations. The strandline-style deposits occur along the seaward face of ancient shorelines and are the result of concentration and winnowing in a littoral environment. The WIM-style deposits, named after the Wimmera area of the Murray Basin, consist of a solitary or composite broad, lobate sheet-like body of highly sorted HM associated with fine grained, micaceous sand with considerable areal extent. These deposits are thought to represent accumulations formed below the active wave base in a near-shore environment, possibly representing the submarine equivalent of the strandline-style deposits. The WIM-style deposits are typically considerably larger in tonnage and lower in grade than the strandline deposits. The HM sand deposits are typically buried beneath Quaternary and Tertiary aged fluvial sediments.

The WIM-style HM sands in the Property are concentrated mainly within the lower units (LP2 and LP3) of the Loxton Sand, which ranges in thickness from 10 m to 15 m. HM concentrations decrease in grade towards the top of the fine-grained LP2 unit. A medium to coarse-grained sand unit (Loxton Sand LP1) overlies the fine-grained LP2 unit.

North-south trending, discrete higher-grade zones have formed within the greater Donald deposit, presenting a focus for the initial stages of the mining operation. To the west, the mineralization deepens and overburden increases. On the southern margins, the fine-grained, silty HM sand disperses in an east-west direction following silty clay units, which are interpreted as washout zones that tend to contain no HM.

The Loxton Sand is overlain by clays of the Pliocene to Holocene Shepparton Formation, which range in thickness from 5 m to 20 m. "Stringer" sands of the overlying Quaternary Woorinen Formation develop as discontinuous or meandering channels of up to 10 m in thickness within the Shepparton Formation clays. The drillhole geology shows that the top of the Loxton Sand at the Donald deposit is reached at a depth of around 9 m, depending on local topography such as sand dunes.

The HM sand deposit typically comprises the following minerals of economic interest:

- Zircon
- Rutile (and anatase)
- Leucoxene
- Ilmenite
- Monazite
- Xenotime.

Zircon is rich in the element zirconium. Rutile (and anatase), leucoxene and ilmenite contain titanium. Monazite and xenotime contain rare earth elements (REEs).

1.3 Exploration and drilling

The Property has been subject to several major evaluation campaigns by three companies: Conzinc Rio Tinto Australia (CRA) from 1985 to 1991; Zirtanium Ltd from 2002 to 2004 and Astron from 2010 to 2022 and in 2025. There has been no previous mine production within the Property.

To date, 847 holes for a total of 20,622.9 m have been drilled within MIN5532 and a further 805 holes for a total of 20,944 m within the surrounding RL2002. This includes 133 pre-production, grade control (GC) and 10 sonic holes drilled within MIN5532 during 2025 for a total of 3,637.5 m. All holes were vertical and orientated perpendicular to the sub-horizontal mineralized horizon. Most holes were drilled using reverse circulation aircore (AC) with 82 holes in MIN5532 drilled by the sonic method for verification of the AC drilling, geotechnical and metallurgical testwork. In addition, groundwater monitoring bores were drilled.

Some problems with recovery were experienced in the pre-2004 drilling with refinements subsequently made to the drilling equipment and technique to improve recovery. In the 2002 Zirtanium drilling program, poor HM% correlation with the CRA drilling was reported. These results were disregarded for the Mineral Resource estimate, with the holes used for geological interpretation only.

For the 2004, 2010 and 2015 drilling programs, the entire sample from each 1 m interval was collected at the drill rig with the samples dried before splitting to remove any uncertainty from the splitting of wet samples at the drill rig. In 2022, the 1 m samples were split at the drill rig using a rotary splitter with attention paid to cleaning and minimizing contamination under the supervision of an Astron representative. The sample splits were deemed acceptable and quality control data indicated that the data from the 2022 drill program is of a high quality and suitable for resource estimation. All GC samples collected in 2025 are from the entire 1 m interval and samples were split at the assay laboratory. Recovery factors were not applied to the data.

1.4 Sample preparation, analyses, and data verification

Definition of Area 1 and Area 2 was defined based on the various drilling programs for data analysis and grade estimation for the 2022 and subsequent 2025 Mineral Resource estimate. Only assay data from the 2022 drilling program were used for the MIN5532 (Phase 1) Mineral Resource estimate in Area 1. Assay data from the 2004, 2010 and 2015 drilling programs were used for resource estimation in Area 2. The area covered by the 2022 drilling is coded as Area 1 and encompasses 97% of the total area of MIN5532.

Data from the CRA drillholes were used for geological interpretation only, due to the historical nature of the data and inconsistencies in the size fractions and analytical methodologies with the data obtained in 2022. Analytical laboratories Western GeoLabs in Perth and Titanatek were used by Zirtanium; however, no details are available on their accreditation. The sample preparation and analytical process involved drying, crushing, screening, desliming and centrifugal heavy liquid separation of the +38 µm/-1 mm fraction for HM (%) calculation and mineralogy analysis (+38 µm/-90 µm fraction).

From 2010, Astron adopted similar sample preparation and analytical procedures to those used by Zirtanium at Western GeoLabs. Analytical work for the 2022 drill program was performed by independent laboratory Bureau Veritas at its Adelaide, South Australia facility (ISO/IEC 17025 (2017) accreditation). The sample preparation and analytical process was:

- Oven dry samples
- Break up clays in bag with mallet
- Rotary split 500 g for testwork with an additional 500 g split off every 28th sample for the laboratory duplicate
- Soak overnight in a 1% tetrasodium pyrophosphate (TSPP) solution

- Wet screen at 20 µm, 250 µm and 1 mm to create an in-size sample of between 20 µm and 250 µm
- Dry and weigh in-size and oversize samples
- Rotary split off approximately 100 g for heavy liquid separation
- Centrifugal and heavy liquid separation using tetrabromoethane (TBE), >2.96 g/cm^3 specific gravity (SG)
- Wash, dry and weigh sinks.

Total HM was measured in the +20 µm/-250 µm fraction and reported as a percentage of the whole sample. Mineralogy on 53 composite samples, generated from individual samples of >1% total HM from the 227 holes drilled in 2022 was also performed by Bureau Veritas using x-ray fluorescence spectrometry (XRF), laser ablation inductively coupled plasma mass spectrometry (ICP-MS) and QEMSCAN® analysis.

Quality control data for the 2004 drill program included interlaboratory analysis of duplicate samples. The results were good, with correlation coefficients of over 0.94 for total HM, slimes and oversize. AMC reviewed the quality control data for laboratory repeat analysis of drill samples from the 2010 drilling and field duplicate and laboratory repeat analysis of drill samples from the 2015 drilling. AMC reported that the 2015 field duplicates showed a bias for total HM and oversize. For the MIN5532 (Phase 1) Mineral Resource, this data was used for estimation within Area 2 only.

Quality assurance and quality control (QAQC) procedures for the 2022 drilling program included insertion of standards and field duplicates at the drill site (rate of 1 in 40). Blank samples were not inserted and are generally not used in the mineral sands industry. In addition, duplicate and standard samples were inserted by the laboratory. Performance of the standard samples throughout the program was considered moderately acceptable and no bias was noted for HM, slimes or oversize contents over time. The field duplicate samples showed no overall bias for total HM and a small bias to lower slimes and oversize contents in the duplicate samples. The duplicate analysis indicates good overall precision. The results from internal laboratory standards and duplicates were reviewed by Snowden Optiro and the overall performance of the analyses was deemed acceptable. The Qualified Person concluded that the data from the 2022 drill program is of a high quality and suitable for resource estimation. There is less confidence in the assay data from the 2004, 2010 and 2015 drill programs, which was limited to resource estimation in Area 2.

No issues were noted by the Qualified Person from verification work completed on data management, surveying, sample security and sample analysis. There were no drilling or sampling programs in progress during the time of the Qualified Person's site visit in August 2024.

1.5 Mineral processing and metallurgical testwork

The finer grained (generally <90 µm) WIM-style HM historically were not suited to simple gravity separation and to achieve effective selectivity and recovery, attritioning has been required to remove the iron staining and clay cementation to present clean particle surfaces for a flotation stage.

The development of a new spiral in the late 1990s (the FM1 and subsequently the MG12) was effective in separating HM down to around the 20 µm particle size and pilot plant testwork on a bulk sample from a test pit at the Donald deposit in the mid-2000s was successful in producing a pre-concentrate. From 2010, ongoing testwork developed a gravity spiral and flotation flowsheet to produce an HMC.

To reduce flowsheet risk, a confirmatory testwork program using samples from a sonic drilling program commenced in 2015 for both the gravity circuit to produce HMC and downstream processing to final products. Continued re-assessment of the project from mining operations through the process flowsheet and product transport logistics, identified further opportunities for reducing capital, operating and product handling costs. The 2008 Environment Effects Statement (EES) conditions also prevented a mineral separation plant (MSP) on the project site, requiring the HMC to be transported elsewhere for sale or treatment.

A substantial body of testwork at pilot scale as well as additional testwork confirming the final flowsheet design and the response of ore samples extracted from the first few years of mining has been carried out since 2018. In 2019, a 1,000 metric tonne (t) bulk sample from the re-opened test pit was shipped to the Corridor Sands operation in Queensland where a pilot wet concentration plant (WCP) was constructed. After attritioning, the reprocessed HMC was floated in a continuous pilot flotation facility at an independent laboratory in Western Australia, which produced a quantity of on-spec rare earth concentrate grade at a high recovery. Further bulk samples from a sonic drilling program specifically targeting the first few years of mining were recovered and processed in 2022.

Characteristics of the HMC produced (which were all in line with previous results) were:

- An average particle size of 50 µm
- 94.3% HM assaying 33.1% TiO_2 with 17.9% ZrO_2 and 0.87% CeO_2
- An estimated radioactivity of 12 becquerels per gram (Bq/g), as expected from the elevated HM grade
- The mass balance produced slightly lower overall recoveries than the continuous and integrated pilot plant as this testwork was carried out without the ability to recycle between stages
- Concentrate upgrade plant (CUP) processing of the raw HMC to separate minerals containing REEs returned results in accordance with previous testwork
- The opportunity to further streamline the CUP flowsheet by eliminating gravity (tabling) upgrading of the rare earth flotation concentrate was identified.

The final flowsheet comprises:

- Scrubbing for disaggregation
- Ex-pit trommel at 10 mm prior to pumping to the WCP
- At the WCP, screen the slurry at 1 mm to reject residual oversize that has not been further deagglomerated in pumping and transport
- Single stage hydro-cyclone desliming to reject -20 µm slimes
- Retention in a Lyons Feed Control Unit (LCFU) surge bin
- Mass flow and density-controlled feed to a rougher, middlings scavenger and cleaner gravity spiral circuit using MG12 spirals
- Interstage fine screening at 250 µm ahead of the final recleaner stage using HG10i spirals to produce a raw HMC
- Selective flotation of the rare earth minerals in the raw HMC into a concentrate with filter cake drummed and containerized for transport
- Filtering, stockpiling and loading of the final high-grade, rare earth free HMC into half-height containers for transport.

Table 1.1 summarizes the metallurgical performance including stagewise recoveries of HM and the valuable components from the in-size HM fraction as well as target HM grades at each process stage and final product grades.

Table 1.1 Metallurgical performance summary

Stage wise recovery and grade parameters	MUP recovery	WCP recovery	CUP recovery	CUP recovery	Overall recovery to HMC	Product grade
From	ROM	WCP feed	Raw HMC	Raw HMC	ROM	HMC
To	WCP feed	Raw HMC	HMC	REEC	HMC, REEC	REEC
Oversize (+250 µm)	6.4%	0.0%	0.0%	0.0%	0.0%	-
Slimes (-20 µm)	17.4%	0.0%	0.0%	0.0%	0.0%	-

Stage wise recovery and grade parameters	MUP recovery	WCP recovery	CUP recovery	CUP recovery	Overall recovery to HMC	Product grade
Sand (+20 µm/-250 µm = in-size)	78.6%	5.5%	95.7%	3.0%	4.3%	-
Mass yield	61.6%	5.2%	95.7%	3.0%	3.2%	-
Total HM (+2.85 g/cm^3 SG; in-size)	89.0%	77.9%	96.1%	3.2%	66.7%	-
TiO_2 (in total HM; in-size)	99.4%	70.7%	99.2%	0.6%	69.7%	33.5%
ZrO_2 (in total HM; in-size)	99.6%	94.3%	99.0%	1.0%	93.0%	14.6%
CeO_2 (in total HM; in-size)	99.5%	94.5%	1.9%	97.5%	91.7%	21.3%
Y_2O_3 (in total HM; in-size)	99.5%	94.5%	2.2%	97.2%	91.4%	11.6%
Total HM grade	6.3%	94.3%	94.8%	99.0%	-	-

Source: Astron, 2023a

Notes: Assumes no oversize in raw HMC, HMC and REEC. Assumes no slimes in HMC and REEC.

1.6 Mineral Resource estimate

The Mineral Resource estimate, which is within MIN5532 and includes part of RL2002 (to the south of MIN5532), contains data from a total of 844 vertical AC drillholes (for a total of 20,648 m) and one Calweld drillhole (for a total of 19 m) drilled by CRA, Zirtanium and Astron. Assay data from 82 sonic drillholes (for a total of 1,948.9 m), drilled for bulk density, geotechnical and metallurgical testwork and verification of the AC drilling. Data from the pre-production AC GC holes drilled during 2025 were not used for the 2025 Mineral Resource estimate. Density data from sonic holes were used for tonnage estimation.

The Mineral Resource was estimated in 2022, and this model was updated in 2025 to include updated density data and estimates of rare earth oxides (REOs). In addition, the monazite was re-estimated using data from ICP-MS analysis rather than XRF data, as was used for the 2022 Mineral Resource estimate.

Geological information from all historical drilling campaigns was used to inform the geological interpretation for resource modelling. Sample assay data (including mineral assemblage data) derived from the 2022 drilling program were used for grade estimation within Area 1. Assay data from the 2004 drilling program (assayed using the +38 µm/-90 µm fraction) and data from the 2010 and 2015 drilling programs were also used for HM, slimes and oversize estimation in Area 2. Data from the 2004 drilling was also used for estimation of the mineral assemblage components within Area 2.

Four lithological surfaces were interpreted for the resource model (top of Loxton Sand, base of LP1, base of LP2, and base of LP3) using all available geological logging data. Surfaces were interpreted to define the top and base of the mineralization using a nominal 1% total HM cut-off grade from the total HM contained within the +20 µm/-250 µm fraction (following calibration of the data from the -38 µm and the +38 µm/-90 µm fractions to the -20 µm and +20 µm/-250 µm fractions within Area 2).

Data compositing was not required, as all the sample intervals with assay data were 1 m. A hard boundary was used for variography and grade estimation of total HM within the mineralized horizon in LP1, LP2 and LP3. Examination of the slimes and oversize data indicated a gradational boundary from the mineralized domains to the surrounding material within LP1 and LP2 and soft boundary conditions were used for variography and grade estimation of slimes and oversize within these domains.

The distributions of the total HM, slimes and oversize data within each geological unit and within the mineralized horizon are positively skewed; however, the total HM, slimes and oversize all have low coefficients of variation (less than 0.95). High-grade outliers are not present and so top cut grades (cap grades) were not applied.

Variogram analysis was undertaken using a normal scores transformation to determine the total HM, slimes and oversize continuity. Kriging neighbourhood analysis was carried out to optimize the block size, number of samples used for grade estimation, search ellipse dimensions and the block discretization.

The mineral assemblage data was attributed to each drillhole interval that was incorporated into the composite sample, and the data was coded using the wireframe surfaces for the mineralized horizon and each geological sequence. Along-strike and across-strike variograms were examined for rutile, leucoxene, ilmenite, zircon, monazite and xenotime.

Block grades for total HM were estimated using both ordinary kriging (OK) and inverse distance squared (ID^2) techniques, and block grades for slimes and oversize were estimated using OK techniques. The OK HM estimate was used for Mineral Resource reporting and the ID^2 estimate was used for validation of the OK estimate. The block model has a parent block size of 100 mE by 200 mN by 1 mRL. The parent blocks were allowed to sub-cell down to 25 mE by 50 mN by 0.25 mRL to more accurately represent the geometry and volumes of the geological units and the mineralization horizon. Grade estimation was into the parent blocks and a three-pass search scheme was used.

Block grades for the mineral assemblage components (all titania mineral subdivisions, zircon, monazite, and xenotime) and TiO_2, ZrO_2+HfO_2 and REOs were estimated using inverse distance cubed (ID^3) techniques and grade estimation was into the parent blocks.

The estimated grades in the resource model were validated by:

- Visual comparison of the drillholes and blocks
- Comparing the mean input grades with the estimated block grades
- Examining trend plots of the input data and estimated block grades by easting, northing and elevation slices.

Data from a total of 149 density samples, collected from test pits in 2005 (nuclear density measurements) and 2018 (sand replacement), from nuclear density measurements in 2024, and from sonic drill core samples in 2022, 2024 and 2025 were used to determine average density values for the Shepparton Formation and LP1, LP2 and LP3. These average density values were applied for tonnage estimation of the 2025 Mineral Resource.

The 2025 Mineral Resource estimate was classified into the Measured, Indicated and Inferred categories, taking into account data quality, data density, geological continuity, grade continuity and confidence in the estimation of HM content and mineral assemblage. Measured and Indicated Mineral Resources were defined Area 1 (covered by the 2022 drilling on a nominal spacing of 250 mE by 350 mN) and where the mineral assemblage was determined by QEMSCAN®, XRF and ICP-MS analysis. The eastern area of LP1 (Domain 210 – outside of mineralized horizon) and the LP3 unit within the area of 2022 drilling were classified as Indicated. Domain 210 is thinner in the east and grade estimation was supported by sparser data compared to the western area. Inferred Resources were not defined in the area drilled in 2022. Mineral Resources were classified as Indicated and Inferred in Area 2 (outside of the 2022 drilling) as the historical nature of the data, and changes in the grain size and data calibration reduced confidence in the data used for estimation. The LP2 unit was classified as Indicated where mineral assemblage data was obtained from the 2004 drilling and was classified as Inferred where there was a lack of mineral assemblage data. Mineral Resources within LP1and LP3 were classified as Inferred in Area 2.

The 2025 Mineral Resource for the Donald deposit within MIN5532 exclusive of the Mineral Reserve reported above a cut-off grade of 1.0% total HM is summarized in Table 1.2.

The Donald 2025 Mineral Resources have been classified in accordance with the definitions for Mineral Resources in S-K 1300, which are consistent with the CIM Definition Standards for Mineral Resources & Mineral Reserves (the 2014 CIM Definition Standards) incorporated by reference in NI 43-101.

Table 1.2 Donald Mineral Resource exclusive of Mineral Reserves within MIN5532 as of 31 December 2025 (100% equity)

Classification	Tonnes (Mt)	Density (t/m^3)	Total HM (%)	Slimes (%)	Oversize (%)	% of total HM					
						Zircon	Rutile	Leuco-xene	Ilmenite	Monazite	Xenotime
Measured	71	1.8	4.1	14	9	16	7.3	24	20	1.7	0.66
Indicated	26	1.7	3.2	23	10	16	5.8	18	18	1.8	0.64
Measured + Indicated	**96**	**1.7**	**3.9**	**17**	**9**	**16**	**7.0**	**23**	**20**	**1.7**	**0.66**
Inferred	21	1.7	2.3	22	14	13	6.9	19	19	1.2	0.51

Classification	Tonnes (Mt)	Total HM (%)	% of total HM								
			ZrO_2+ HfO_2	TiO_2	CeO_2	Y_2O_3	Pr_6O_{11}	Nd_2O_3	Dy_2O_3	Tb_4O_7	TREO
Measured	71	4.1	11	33	0.48	0.28	0.058	0.21	0.041	0.0065	1.46
Indicated	26	3.2	10	28	0.50	0.28	0.061	0.22	0.041	0.0065	1.50
Measured + Indicated	**96**	**3.9**	**11**	**32**	**0.48**	**0.28**	**0.059**	**0.21**	**0.041**	**0.0065**	**1.47**
Inferred	21	2.3	9	30	0.34	0.23	0.041	0.15	0.032	0.0049	1.07

Notes:

- *Mineral Resources are reported on a 100% basis. As at the effective date of this Technical Report, Energy Fuels held a 9.48% interest in the Property.*
- *Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.*
- *Measured and Indicated Mineral Resources that are within the Mineral Reserve outline have been excluded from the reported Mineral Resource. Inferred Mineral Resources within the Mineral Reserve outline are included in the reported remaining Mineral Resource*
- *The reference point for the Mineral Resources is in-situ without assumed recovery modifying factors.*
- *The MIN5532 Mineral Resource has been classified and reported in accordance with the 2014 CIM Definition Standards incorporated in NI 43-101 and S-K 1300 Definitions.*
- *Total HM is from within the +20 µm to -250 µm size fraction and is reported as a percentage of the total material. Slimes is the -20 µm fraction and oversize is the +1 mm fraction.*
- *Estimates of the mineral assemblage (zircon, ilmenite, rutile (including anatase), leucoxene, monazite and xenotime) are presented as percentages of the total HM component. Estimates of the oxide components (presented as percentages of the total HM component) are contained within the minerals and are not in addition to the minerals. The REOs (CeO_2, Y_2O_3, Pr_6O_{11}, Nd_2O_3, Dy_2O_3, Tb_4O_7) are a subset of the TREO.*
- *All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sum of columns may not equal.*
- *The Mineral Resource is reported within MIN5532 above a 1% HM cut-off grade within a RF100 pit shell identified using the geotechnical parameters, operating costs, metal prices and recoveries disclosed in Item 15.2.1.*

1.7 Mining and Mineral Reserve estimates

MIN5532 will be mined using a conventional strip-mining method, designed as about 500 m wide strips separated by in-situ ore bunds between the strips. Each strip comprises a series of 500 m wide and 250 m long mining blocks separated by bunds constructed from overburden stripped from the active mining area. The mining blocks will be extracted in a progressive sequence within each strip, before shifting to a new strip. Wells will be used to dewater the active mining area and the active tailings cell.

Process tailings will be returned to tailings cells constructed in the void left behind the active mining block. A downstream embankment will be constructed between the active tailings block and active mining block. Waste overburden will be backfilled behind the active tailings cell and above consolidated tailings.

The mining contract will include topsoil and subsoil stripping, overburden stripping, ore mining to an in-pit mine upgrade plant (MUP) using bulldozer push, construction of the tailings cells, overburden backfilling and subsoil and topsoil replacement and contouring. The bulldozer push to a tracked MUP reduces reliance on truck haulage on potentially soft pit floors. Final rehabilitation will be carried out by other specialized contractors.

The 2025 Mineral Resource block model and 2025 GC model were used to generate the 2025 Mineral Reserve estimate. To accommodate the wall angles in the pit optimization process and to provide better resolution of the mining boundaries, the resource model was re-blocked to 25 mE by 25 mN by 1.0 mRL cell size. A slope angle of 20° and a 6% ore loss to account for in-situ bunds were applied. The mining costs used for the pit optimization were developed from contractor costs, and processing costs from the process design consultant. Processing recoveries were supplied by Metmac Services Pty Ltd. Product prices were supported by market analysis reports.

The pit optimization considered the Measured and Indicated Mineral Resource model blocks only within the MIN5532 boundary, with all Inferred and unclassified blocks treated as waste. The pit optimization generated a series of nested pit shells for a range of revenue factors (RFs) ranging from 10% (RF10) to 110% (RF110) of the base case prices. There was very little change in the optimization results beyond the RF60 pit shell because the economic pit was constrained by the MIN5532 boundary. The RF50 shell, which targets the higher-grade areas within the Work Plan area (Phase 1A), was selected for the initial mining area and the RF70 shell, which covers the entire MIN5532 area, was selected for the remaining MIN5532 mine life.

The cut-off for defining ore, has been increased to improve cash flow. The cut-off within the Work Plan Area was further increased to improve the initial cash flow and reduce payback. This has been achieved by raising the base of the mine and lowering the top of ore surface to exclude lower value material

The excavation was designed to exclude cultural and environmentally significant areas, the external tailings storage facility (TSF), the process plant footprint, roads and other support facilities. An offset of 100 m was used from the MIN5532 boundary to the crest of the closest pit excavation. The floor of the mine design was a surface created from the combined RF50 and RF70 shells.

The Measured Mineral Resource component was classified as a Proven Mineral Reserve and Indicated Mineral Resource was classified as a Probable Mineral Reserve. The Donald Mineral Reserve estimate within MIN5532 reported by AMC as of December 2025 is summarized in Table 1.3.

The information in this Technical Report that relates to the MIN5532 Mineral Reserve estimate is based on information compiled by Mr. Pier Federici and fairly represents this information. Mr. Federici is a Fellow of the Australasian Institute of Mining and Metallurgy and a full-time employee of AMC and is independent of DPPL, Astron and Energy Fuels. Mr. Federici has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Qualified Person as defined in NI 43-101 and S-K 1300.

The Mineral Reserve is in a granted Mining Licence in good standing with state and federal environmental approvals and an approved Cultural Heritage Management Plan (CHMP) in place over the Phase 1A Work Plan area within MIN5532. The Work Plan area covers 1,143.4 ha, of which Astron owns freehold titles over an area of 705 ha. The remaining freehold titles are contracted to DPPL with settlement scheduled at FID.

The Phase 1A Work Plan area will support mining for about 19 years. Mining over areas within MIN5532 outside the Work Plan area will require a CHMP and approval of a Work Plan amendment. There is an additional 1,646.6 ha of land within MIN5532 outside of the Work Plan area. DPPL will need to engage with those landowners to ensure appropriate access under MIN5532 is secured.

Table 1.3 Donald Mineral Reserve within MIN5532 as of 31 December 2025 (100% equity)

Class.	Tonnes (Mt)	Total HM (%)	Slimes (%)	Over-size (%)	Zircon (%)	Mona-zite (%)	Xeno-time (%)	TiO_2 (%)	ZrO_2+ HfO_2 (%)	Pr_6O_{11} (%)	Nd_2O_3 (%)	Dy_2O_3 (%)	Tb_4O_7 (%)	TREO (%)
Proven	255	4.5	15	9	17	1.7	0.68	34	11	0.057	0.20	0.042	0.0065	1.5
Probable	39	4.3	18	11	16	1.6	0.64	32	11	0.056	0.20	0.040	0.0062	1.4
Total	**293**	**4.5**	**16**	**10**	**17**	**1.7**	**0.67**	**34**	**11**	**0.056**	**0.20**	**0.041**	**0.0064**	**1.4**

Source: AMC, 2025a

Notes:

- *Mineral Reserves are reported on a 100% basis. As at the effective date of this Technical Report, Energy Fuels held a 9.48% interest in the Property.*
- *The Mineral Reserve is based on Measured and Indicated Mineral Resources contained within a practical mine design.*
- *Estimates of the mineral assemblage (zircon, monazite and xenotime) are presented as percentages of the total HM component. Estimates of the oxide components (presented as percentages of the total HM component) are contained within the minerals and are not in addition to the minerals. The REOs (CeO_2, Y_2O_3, Pr_6O_{11}, Nd_2O_3, Dy_2O_3, Tb_4O_7) are a subset of the TREO.*
- *The Mineral Reserve is reported by individual heavy mineral components for transparency of mineralogical composition and processing considerations.*
- *The reference point for the Mineral Reserve is in-situ with allowance for mining recovery.*
- *All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sum of columns may not equal.*
- *The nominal cut-off grade is 1.0% HM using the metal price, cost and recovery assumptions as disclosed in Item 15.2.1.*
- *The MIN5532 Mineral Reserve has been classified and reported in accordance with the 2014 CIM Definition Standards incorporated in NI 43-101 and S-K 1300 Definitions.*

1.8 Processing methods and infrastructure

The Phase 1 process flowsheet includes the following units:

- A tracked MUP located in the pit
- Screens, deslime hydro-cyclones, thickening plant
- A wet concentration plant (WCP)
- A concentrate upgrade plant (CUP), including a REEC packing plant
- A HMC storage and loading plant.

The process plant was designed at a nominal annual plant throughput of 7.5 Mt.

Run-of-mine (ROM) ore extracted from each mining block will be bulldozed and fed to the in-pit MUP situated close to the crest of the active mining face. The MUP has been designed to scrub and screen the ROM ore before pumping to the WCP, which can be relocated as it moves along the active mining strip. The main process plant and ancillary facilities will be situated in the northwestern corner of MIN5532.

ROM screens at the front end of the WCP have been designed to remove coarse (+1 mm) gangue particles from the scrubbed and screened (-10 mm) ROM material pumped from the MUP. Deslime hydro-cyclones will be positioned above the WCP surge bin to remove fine slimes from the ore slurry prior to entering the surge bin and subsequent spiral circuit. The WCP will include a series of spirals to separate the HM from the screened and deslimed ore.

The CUP will separate the minerals containing rare earth elements from the raw HMC produced in the WCP. This will be achieved by attritioning the HMC to ensure that the surfaces of all minerals are sufficiently exposed prior to the flotation circuit used to collect the rare earth minerals into the REEC. The flotation process uses various chemical reagents so the rare earth minerals float to the surface of the cell with the froth, while the remaining HM sink to the bottom of the cell. The CUP building will be sealed to prevent interference from the environment (rain and wind) and to limit personnel access and time spent in proximity of the product which contains radioactive mineral particles.

Dewatered REEC will be loaded directly from the product bin into 2-tonne bulka bags and loaded into half-height lined shipping containers that meet Class 7 radioactive material transport requirements. Containers will be sealed, weighed, labelled, and placarded in accordance with International Atomic Energy Agency (IAEA) regulations for Class 7 transport and all other applicable regulatory requirements. The filled containers will be stored on site until dispatched to Energy Fuels, who will be responsible for final disposal of the container liners.

The HMC storage facility will be in a separate structure where the product will be pumped from the CUP, dried and loaded into custom-built half height shipping containers with a front-end loader.

Ancillary process infrastructure includes a reagents storage and dosing facility and a flocculant storage and preparation plant for the safe delivery, storage and use of reagents.

Other site infrastructure will include an external TSF immediately south of the proposed process plant with 12 months capacity to store tailings until sufficient in-pit void space is available, a power substation and network, raw water supply, water treatment plant and access roads. Other ancillary facilities include administrative buildings, first aid building, ablution blocks, change rooms, crib rooms, laboratory, workshops, storage facilities and loading and delivery bays.

1.9 Permitting, environmental and social

Following the 2008 EES, approval has been received under the Federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in 2009 and renewed in 2018. The CHMP was approved for the Work Plan area in 2014 and the radiation licence obtained in 2015 and renewed in 2024. The HMC export license issued in 2016 has expired and a new permit is being sought to export the REEC (a permit is no longer required for the HMC owing to the changed composition).

DPPL's amended Phase 1A Work Plan, incorporating and addressing formal feedback and comments received from Earth Resources Regulator (ERR) Victoria and its referral agencies, was approved in June 2025. Other approvals in progress include infrastructure outside of MIN5532 relating to road upgrades, road decommissioning, and other secondary licences and permits for groundwater extraction and surface water capture. A Rehabilitation Plan was prepared in 2023, and DPPL is in the process of determining the closure cost estimate and required bond. Once determined, this will be submitted for approval with ERR. A Construction Rehabilitation Bond of $27 million has already been approved by the regulator.

The Phase 1 operations within MIN5532 cover arable, mixed-use freehold farming land. The Phase 1A Work Plan area encompasses 1,143.4 ha of land. DPPL currently owns freehold titles for a total of 705 ha within the Work Plan area. The remaining freehold titles are contracted to DPPL with settlement scheduled at FID.

In June 2022, DPPL established the Community Reference Group. Membership comprises 25 representatives of local community, business, agency stakeholders and DPPL. The Community Reference Group aims to facilitate information exchange from DPPL to stakeholders and to provide an avenue for community members to raise project-related issues. The Community Reference Group operates in an advisory capacity and does not hold regulatory authority.

1.10 Costs and economic analysis

The life of mine (LOM) capital cost and operating cost estimates for the 40-year mine life were developed to an AACE Class 2 level of accuracy (typically -15% to +15%) which meets the requirements for a feasibility study. The effective date of capital cost estimate is Q4 2025. The components of the pre-production capital cost estimate are summarized in Table 1.4.

Table 1.4 Pre-production capital cost estimate

Description	Unit	Cost
Project development	$ M	114.60
Process plant	$ M	188.44
On-site infrastructure	$ M	77.41
Off-site infrastructure	$ M	9.48
Product transport and logistics	$ M	1.85
Mining	$ M	48.24
Total	**$ M**	**440.02**

Source: DPPL

Sustaining capital costs (Table 1.5) were developed on a bottom-up basis consistent with the defined mining and processing strategy and the level of study supporting the FID. The estimate includes ongoing capital required to sustain operations over the LOM, such as mining equipment replacement and rebuilds, progressive in-pit tailings cell and embankment construction, mobile equipment additions, plant and infrastructure upgrades, and ongoing landform rehabilitation works. Cost allowances were derived from first principles estimates, vendor budget quotations, and benchmarking against comparable mineral sands operations, and were scheduled in the LOM model based on asset lives, production schedules, and maintenance strategies. Sustaining capital excludes initial development and pre-production capital and was prepared in real terms at the FID base date for inclusion in the cash flow model supporting the Mineral Reserve estimate.

Table 1.5 LOM sustaining capital costs

Description	Unit	Cost
Project development	$ M	62.79
Process plant	$ M	36.14
On-site infrastructure	$ M	21.00
Off-site infrastructure	$ M	17.36
Product transport and logistics	$ M	0.18
Mining	$ M	18.02
Total	**$ M**	**155.49**

Source: DPPL

The LOM operating cost estimate summarized in Table 1.6 was developed from a range of quotes and benchmarking performed against other similar projects in Australia.

Table 1.6 LOM operating cost estimate

Activity	Unit	Cost
Mining	$ M	2,957.54
Processing	$ M	1,319.98
Transport and logistics	$ M	958.59
G&A	$ M	557.16
Total	**$ M**	**5,793.27**

Source: DPPL

Mining operating costs were developed by DPPL based on the detailed strip mining method defined for MIN5532 using unit costs provided by potential mining contractors submitted via tender. Costs were derived from first principles using estimated mining activities, including topsoil and subsoil stripping, overburden removal, ore mining and haulage to the process plant, construction of in-pit tailings cells, progressive backfilling, and landform rehabilitation. Unit rates reflect contractor-supplied pricing, equipment productivity assumptions, haulage profiles, material rehandling requirements, and allowances for operational delays.

Processing operating costs were developed by Mineral Technologies, based on the selected flowsheet, design throughput, reagent and consumable requirements, power and water consumption, and staffing levels. Costs were estimated from similar mineral sands operations and vendor quotations and scaled to the project operating parameters.

Tailings and residue management costs are included within the mining and processing cost estimates and reflect the in-pit tailings deposition strategy, embankment construction, dewatering, and progressive backfilling.

General and administrative (G&A) costs were estimated by DPPL and include site administration, technical services, environmental management, safety, and corporate overheads attributable to the operation.

Logistics, marketing and royalty costs were estimated by DPPL and include concentrate handling, transport, port charges, marketing costs, and applicable royalties. These costs were included in the cut-off grade determination and the LOM operating cost model.

All operating costs were prepared in real terms, at the FID base date, and were incorporated into the LOM cash flow model supporting the Mineral Reserve estimate.

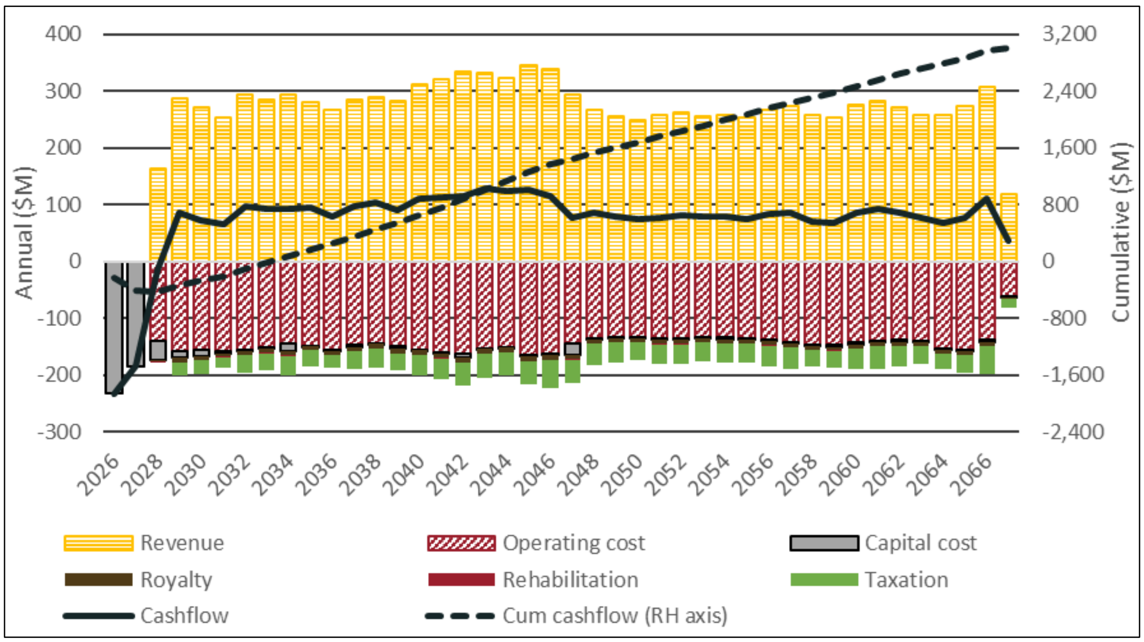
There is a 2.75% government royalty and $30 million closure cost for MIN5532.

The financial model developed for the Phase 1 project summarizes the annualized LOM plan with inputs derived from detailed mine planning, mining and processing schedules, and capital and operating costs. The model aligns to the key inputs as described in this Technical Report that underpin the overall project plan and is based on Proven and Probable Mineral Reserves only.

The LOM plan assumes ore mining at 7.5 Mt/a feeding the MUP. The resultant rougher head feed is processed in the WCP at a rate of about 1,060 t/h at 7,200 h/a, producing an average of approximately 192 kt/a of HMC and 7,100 t/a of REEC over the 40-year project life. HMC and REEC production is higher in the first six years because mining is initially focused within the RF50 shell and approved Work Plan area, which targets higher value mineral assemblages, resulting in a higher recoverable mineral output at a constant plant throughput.

Figure 1.1 presents a summary of annual (calendar year) post-tax cash flows to 2067. Initial capital expenditure commences in 2026. Following the initial investment period, which results in a maximum negative cash flow of about $473 million in mid-2027, payback is achieved in 2034. Over the LOM, the project generates a cumulative post-tax cash flow of about $3,000 million, a pre-tax and post-tax NPV of about $800 million and $496 million respectively, at an 8% discount rate applied to quarterly cash flows, with an IRR of 16%.

Figure 1.1 Donald Phase 1 LOM cash flow summary (100% equity)



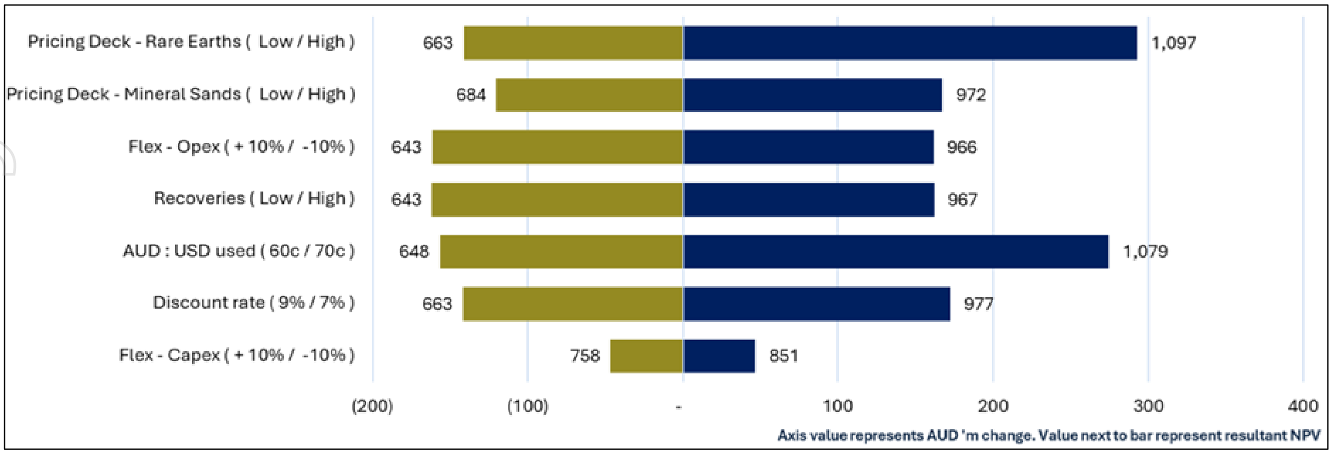
Source: Snowden Optiro

A sensitivity analysis of the pre-tax financial model NPV considered a variety of value drivers to arrive at discrete upside and downside value impacts for:

- Pricing for REEC using the high/low prices reported in Item 22.1.2
- Pricing for HMC using the high/low prices reported in Item 22.1.1
- Operating costs (±10%)
- TiO_2 recoveries (74.1% / 84.1%)
- ZrO_2 recoveries (89.5% / 95.5%)
- US$ exchange rate (0.6/0.7)
- Discount rate (9%/7%)
- Capital costs (±10%).

The most significant and material driver of project value is concentrate pricing (Figure 1.2).

Figure 1.2 LOM pre-tax NPV sensitivity analysis



Source: DPPL

1.11 Other relevant data and information

The June 2023 "pre-feasibility study" for the proposed Phase 2 development comprised:

- Duplication of the Phase 1 throughput with 7.5 Mt/a ROM material mined and processed within RL2002 to produce HMC and REEC
- Construction of a mineral separation plant (MSP) on MIN5532, sized to process the HMC equivalent of 15 Mt/a mined from both MIN5532 (Phase 1) and RL2002 (Phase 2), to separate the HMC into premium (ceramic) and secondary (chemical) grade zircon and final titania products.

The Phase 2 historical resource estimate for the extensions to the Donald deposit, outside of MIN5532 and contained within RL2002, was reported by AMC in 2016 based on data from 794 AC holes drilled by CRA, Zirtanium and Astron. All holes are vertical and the spacing varies from 125 mE by 450 mN to 500 mE by 500 mN and were analyzed for HM, slimes and oversize contents. Mineral assemblage data were obtained from composite samples from 348 drillholes on a spacing of approximately 200 mE by 450 mN. Adjustments were applied to the mineral assemblage data obtained prior to 2015 for ilmenite and rutile.

The RL2002 historical resource was classified and reported in accordance with the guidelines of the JORC Code (2012). The Qualified Person has not done sufficient work to classify the historical estimate as a current Mineral Resource in accordance with CIM Definition Standards for Mineral Resources & Mineral Reserves or S-K 1300 Definitions.

AMC also prepared the reserve estimate for Phase 2 using the 2016 historical resource estimate and studies completed on RL2002 by Astron, which included cost and price inputs, a strategic mine schedule and recovery rates. AMC updated the inputs and assumptions where appropriate, using external sources such as contractor prices, its in-house proprietary tool to estimate mining and operating costs from first principles, and experience with similar mining projects. The results were also compared with benchmarks. The basis of the 2023 reserve estimate and related assumptions were established to a ±25% level of accuracy. The methodology in determining the reserve estimate was similar to that adopted for the Phase 1 Mineral Reserve estimate.

The RL2002 reserve was initially classified in accordance with the guidelines of the JORC Code (2012). The Qualified Person has not done sufficient work to classify the historical estimate as a current Mineral Reserve and the estimate does not meet CIM Definition Standards for Mineral Resources & Mineral Reserves and S-K 1300 Definitions.

The following material issues have been identified by the Qualified Person responsible for the review of the reserve estimate regarding modifying factors that may materially affect the progress of Phase 2 and the future conversion of Mineral Resources to Mineral Reserves:

- The reserve is in a Retention Licence without the necessary and state and federal approvals and permits in place for mining, environmental, cultural and social issues.
- DPPL has limited freehold ownership over the surface of RL2002 outside of MIN5532. There is no guarantee that land can be purchased or accessed in a timely manner to allow production to proceed.
- The reserve is based on a study at ±25% accuracy completed in June 2023. The HM and REE concentrate prices, and capex and opex assumptions used in the study are subject to review to reflect current market conditions.
- The financing and timing for the commencement of the Phase 2 operation has yet to be determined.

1.12 Conclusions and recommendations

Key conclusions of this Technical Report include:

- The Phase 1 project (MIN5532) comprises 293 Mt of Proven and Probable Mineral Reserves at 4.5% total HM.
- The 40-year Phase 1 LOM plan involves a 7.5 Mt/a open pit mining operation using conventional strip mining. Ore will be processed through a MUP, WCP and CUP to produce HMC and REEC for sale under offtake agreements with Astron and Energy Fuels respectively.
- The first capital expenditure is in 2026. Following the initial investment period, which results in a maximum negative cash flow of about $473 million in mid-2027, payback is achieved in 2034. Over the LOM, the project generates a cumulative post-tax cash flow of about $3,000 million, a post-tax NPV of about $496 million at an 8% discount rate applied to annual cash flows, with an IRR of 16%. The financial model is highly sensitive to HMC and REEC pricing, making commodity price fluctuations a critical factor. The Phase 1A operation covering the first 19 years of the LOM plan has key approvals in place for the Work Plan area, including federal environmental permits, a CHMP and a radiation licence. Key outstanding critical path items include final land acquisitions and approval of the REEC export licence.

The future development of Phase 2 will be subject to the receipt of additional approvals, securing the required surface rights and completion of a feasibility study.

Key recommendations include:

- Improving Mineral Resource confidence through additional drilling and data calibration
- Optimizing tailings handling and pit sequencing to reduce costs and enhance mine efficiency
- Strengthening financial and cost management with refined estimates, bulk purchasing strategies and lease vs purchase evaluations
- Securing HMC offtake agreements and financing options to mitigate revenue uncertainty and attract investment
- Enhancing stakeholder engagement and permitting efforts for long-term project viability.

2 Introduction

2.1 Terms of reference

This Technical Report was prepared for Energy Fuels to support the disclosure of Exploration Results, Mineral Resources and Mineral Reserves for Phase 1 of the Donald Rare Earths and Mineral Sands Project, a mineral exploration and development property located in western Victoria, Australia.

This Technical Report satisfies the requirements of Canadian NI 43-101 and the SEC's Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 229.1300 of Regulation S-K Disclosure by Registrants Engaged in Mining Operations (S-K 1300), and Item 601 (b)(96) Technical Report Summary.

The Technical Report was authored by the following Qualified Persons (as such term is defined under NI 43-101 and S-K 1300):

- Mr. Allan Earl and Mrs. Christine Standing of Snowden Optiro, a business unit of Datamine Australia Pty Ltd (Snowden Optiro) were responsible for the preparation of this Technical Report, including the review of the geology, Mineral Resource estimates, mine planning, mining capital and operating cost estimates and the economic analysis.
- Mr. Peter Allen of GRE and an Associate of Snowden Optiro was responsible for the review of the metallurgy, processing, infrastructure and processing capital and operating cost estimates.
- Ms. Gené Main and Mr. Peter Theron of Prime Resources and Associates of Snowden Optiro were responsible for the review of the tailings dam, environmental studies, permitting and social.
- Mr. Pier Federici of AMC was responsible for the review of the Mineral Reserve estimates.

Mr. Earl completed a two-day site visit to the Property in August 2024. The site visit included an inspection of the proposed mining area, an inspection of the core shed, the collection of samples for check analysis, confirmation of a previous drillhole collar location (DM170) within rehabilitated agricultural land, a visit to nearby towns and an inspection of the likely service areas.

Mr. Pier Federici conducted a site visit to the Property in July 2013. The purpose of the visit was to familiarize himself with the site conditions, including existing mining activities, proposed pit limits, waste dump locations, site drainage and geotechnical considerations, access to the deposit, general landforms, and areas of vegetation proposed to be preserved. During the visit, Mr. Federici also observed sample preparation activities. In Mr. Federici's opinion, no material changes have occurred at the site since the time of the visit that would materially affect the Mineral Reserve estimate.

Site visits were not carried out by the other Qualified Persons, as there was no additional work or development completed at the Property that would contribute materially to the technical information and data provided. Mrs. Standing has previously conducted site visits to the WIM 150 and Avonbank WIM-style deposits in the Murray Basin.

All the Qualified Persons are eligible members in good standing of a recognized professional organization (RPO) within the mining industry and have at least five years of relevant experience in the type of mineralization and type of deposit under consideration and in the specific type of activity that the Qualified Person is undertaking as disclosed in Table 2.1 at the time this Technical Report was prepared.

Table 2.1 Responsibilities of each Qualified Person

Qualified Person	Employer	Qualifications and affiliation	Details of site inspection	Responsibility
Mr. Allan Earl	Snowden Optiro	*AWASM, FAusIMM*	27–28 August 2024	Snowden Optiro's Qualified Person responsible for this report. Review of property description, data verification, mining, mining costs and economic analysis. Items 1–6, 16, 19, 21.1.7, 21.3.1, 21.3.3–21.3.4, 21.4, and 22–29.
Mrs. Christine Standing	Snowden Optiro	*BSc (Geol), MSc (Min Econs), MAIG*	-	Review of history, geology, drilling, sample preparation and analysis, data verification, Mineral Resources. Items 7–12 and 14.
Mr. Peter Allen	Snowden Optiro	*BE(Metallurgy), MAusIMM (CP)*	-	Review of metallurgy, processing, infrastructure, and processing and infrastructure costs. Items 13, 17, 18.1 and 18.3–18.9, 21.1.1 -6, 21.2, 21.3.2 – 21.3.4
Ms. Gené Main	Snowden Optiro	*MSc (Botany), Member EAPASA; Pr.Sci.Nat. SACNASP*	-	Review of environmental studies, permitting and social. Items 20.1 and 20.3–20.6.
Mr. Pier Federici	AMC	*FAusIMM (CP Min)*	July 2013	Mineral Reserves. Items 15.
Mr. Peter Theron	Snowden Optiro	*B Eng (Civil), MSAIMM, Pr Eng ECSA*		Items 18.2 and 20.2.

Unless otherwise stated, the information and data contained in this Technical Report or used in its preparation was provided by the Property owner, Astron Limited (Astron). The Qualified Persons of this Technical Report reviewed information and documents provided by Astron via a virtual data room. The primary information sources were the "Donald Rare Earth & Mineral Sands Project Phase 1 - Definitive Feasibility Study" dated 27 April 2023, the "Donald Rare Earth & Mineral Sands Project Phase 2 – RL2002 Pre-feasibility Study Report" dated 26 June 2023, the "Donald Rare Earths & Mineral Sands Project Updated Economics Study" for Phase 1 dated 14 July 2025 and the "Draft - Donald Project Revised Economics Study Q4 2025" report for Phase 1 dated 19 December 2025. The virtual data room also included internal company technical reports, diagrams and maps, spreadsheets and reports prepared by Astron's external consultants.

Further information was received from the Astron representatives listed in Table 2.2 in response to queries submitted by Snowden Optiro.

Table 2.2 Astron information sources

Name	Position
Mr. Sean Chelius	Donald Project Director
Mr. Peter Coppin	Senior Geologist
Mr. Greg Bell	Chief Financial Officer

The Property comprises two areas:

- Mining Licence 5532 (MIN5532) area where the licence holder is entitled to mine the land covered by the licence; explore for minerals and construct mining facilities related to the mining operation
- Retention Licence 2002 (RL2002) where a resource has been identified but the resource is not yet commercially viable to mine or is required to support an existing mining operation in the future.

The Donald Mineral Resources and Mineral Reserves with MIN5532 were initially classified under the 2012 edition of the Australasian Joint Ore Reserves Committee Code (JORC Code, 2012). The confidence categories assigned under the JORC Code (2012) were reconciled to the confidence categories in the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (2014 CIM Definition Standards) and reported in compliance with NI 43-101 and S-K 1300. For MIN5532, the confidence category definitions are the same and no modifications to the confidence categories were required. The RL2002 historical resource and reserve estimates disclosed in Item 24 were classified under the JORC Code (2012) and have not been adjusted to conform with NI 43-101 or S-K 1300. Energy Fuels is not treating the historical estimates as a current Mineral Resources or Mineral Reserves and are disclosed for background purposes only and should not be relied upon.

The Qualified Persons listed in Table 2.1 were responsible for this Technical Report and declare that they have taken all reasonable care to ensure that the information contained in this report is, to the best of their knowledge, in accordance with the facts and contains no material omissions.

In preparing this report, the Qualified Persons have extensively utilized information collated by other parties. The Qualified Persons have critically examined this information, made their own enquiries, and applied their general mineral industry competence.

The Qualified Persons believe that their opinions must be considered as a whole, and that selection of portions of the analysis or factors considered by them, without considering all factors and analyses together, could create a misleading view of the process underlying the opinions presented in this Technical Report. The preparation of a Technical Report is a complex process and does not lend itself to partial analysis or summary.

A draft copy of this Technical Report was provided to Astron and Energy Fuels for review on omission and factual accuracy. The Qualified Persons who have authored this Technical Report do not disclaim responsibility for the contents of this report.

The effective date of this Technical Report is 31 December 2025. As at the effective date of this Technical Report, none of the Qualified Persons had an association with Astron or Energy Fuels or their respective employees, or any interest in the securities of Astron or Energy Fuels or any other interests that could reasonably be regarded as capable of affecting their ability to give an independent unbiased opinion in relation to the Property.

This Technical Report constitutes a Feasibility Study for purposes of both NI 43-101 and S-K 1300 with respect to Donald Phase 1 and contains the initial NI 43-101 and S-K 1300 estimates of Mineral Resources and Mineral Reserves. This report does not include any NI 43-101 and S-K 1300 estimates of Mineral Resources or Mineral Reserves relating to Donald Phase 2.

Snowden Optiro, Prime, GRE and AMC will be paid a fee for the preparation by its Qualified Persons of this Technical Report based on a standard schedule of rates for professional services, plus any expenses incurred. This fee is not contingent on the outcome of the Technical Report, and neither Snowden Optiro nor the Qualified Persons will receive any other benefit for the preparation of this report.

2.2 Abbreviations and units

Unless otherwise specified, all units of currency are in Australian dollars ($) and all measurements are metric.

Table 2.3 Abbreviations and units of measurement

Abbreviation/Unit	Description
$	Australian dollars
°	degree(s)
°C	degree(s) Celsius
%	percent
µm	micrometre or micron
3D	three-dimensional
a	annum
AACE	Association for the Advancement of Cost Engineering
AC	aircore
AER	Australian Energy Regulator
AMC	AMC Consultants Pty Ltd
ANC	acid neutralizing capacity
ANCOLD	Australian National Committee on Large Dams
Argus	Argus Media Ltd
As	arsenic
Astron	Astron Limited (formerly Astron Corporation Limited)
ATC Williams	ATC Williams Pty Ltd
Au	gold
B	boron
bcm	bank cubic metre(s)
BESS	battery energy storage system
BGLC	Barengi Gadjin Land Council
Bq, Bq/g	becquerel(s), becquerels per gram
CAGR	compound annual growth rate
capex	capital expenditure or capital cost
CAT	Caterpillar
CDM	co-disposal mixture
Ce	cerium
CeO_2	cerium oxide
CEP	Community Engagement Plan
cfm	cubic feet per minute
CHMP	Cultural Heritage Management Plan
CIF	cost, insurance and freight
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CNY	Chinese yuan renminbi
CRA	Conzinc Rio Tinto Australia
CUP	concentrate upgrade plant
DEECA	Department of Energy, Environment and Climate Action
DPPL	Donald Project Pty Ltd
DTP	Department of Transport and Planning
DWT	deadweight tonnage
Dy	dysprosium
Dy_2O_3	dysprosium oxide
ECI	early contractor involvement

Abbreviation/Unit	Description
EE Act	Environmental Effects Act 1978
EES	Environment Effects Statement
EHP	Ecology and Heritage Partners Pty Ltd
EL	exploration licence
Energy Fuels	Energy Fuels Inc.
EP Act	Environment Protection Act 2017
EPA	Environment Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPC	engineering, procurement and construction
Er	erbium
ERC	Environmental Review Committee
ERR	Earth Resources Regulator
ESG	environmental, social and governance
Eu	europium
EU	European Union
FFG Act	Flora and Fauna Guarantee Act 1988
F	fluorine
FID	final investment decision
FIRB	Foreign Investment Review Board
FOB	free on board
FX	foreign exchange
g	gram
g/t	gram(s) per tonne
G&A	general and administrative
GC	grade control
Gd	gadolinium
GHG	greenhouse gas
GL, GL/a	gigalitre(s), gigalitres per annum
GPS	global positioning system
GRE	GR Engineering Services
GWM	Grampians Wimmera Mallee
GWMWater	Grampians Wimmera Mallee Water
H_2SO_4	sulphuric acid
h, h/a	hour(s), hours per annum
ha	hectare(s)
HARD	half absolute relative difference
HfO_2	hafnium dioxide or hafnia
HM	heavy mineral(s)
HMC	heavy mineral concentrate
Ho	holmium
HREE	heavy rare earth elements
HSE	health, safety and environment
IAEA	International Atomic Energy Agency
ICP-MS	inductively coupled plasma mass spectrometry
ID^2	inverse distance squared
ID^3	inverse distance cubed

Abbreviation/Unit	Description
IFC	issued for construction
IGT	International Groundwater Technologies Ltd
Incoterms	international commercial terms
IRR	internal rate of return
ISO	International Organization for Standardization
JORC Code	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 edition)
JV	joint venture
kg, kg/bcm, kg/t	kilogram(s), kilograms per bank cubic metre, kilograms per tonne
km, km^2	kilometres, square kilometres
kt, kt/a	thousand tonnes, thousand tonnes per annum
kV	kilovolts
L, L/s	litre(s), litres per second
La	lanthanum
LCFU	Lyons Feed Control Unit
LIDAR	light detection and ranging
LIMS	low intensity magnetic separator
LG	Lerch Grossman
LOM	life of mine
LREE	light rare earth elements
Lu	lutetium
M	million(s) or mega
m, m^2, m^3	metre(s), square metres, cubic metres
Mbcm	million bank cubic metres
mg/L	milligrams per litre
MIN	mining licence
ML, ML/a	megalitre(s), megalitres per annum
mm	millimetre(s)
Mm^3	million cubic metres
MRSD Act	Mineral Resources (Sustainable Development) Act 1990
MRSD Regulations	Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2019
MSP	mineral separation plant
Mt, Mt/a	million tonnes, million tonnes per annum
MTO	material take offs
MUP	mining unit plant
NAF	non-acid forming
Nd	neodymium
Nd_2O_3	neodymium oxide
NEPM	National Environment Protection (Assessment of Site Contamination) Measure 2013
NI 43-101	(Canadian Securities Administrator's) National Instrument 43-101 Standards of Disclosure for Mineral Projects
NPV	net present value
OEM	original equipment manufacturer
OK	ordinary kriging
opex	operating expenditure or operating cost
P&ID	piping and instrumentation diagram(s)

Abbreviation/Unit	Description
Pa, kPa	pascal, kilopascal
PAM	polyacrylamide
Pm	promethium
PMF	possible maximum flood
Pr	praseodymium
Pr_6O_{11}	praseodymium oxide
Prime	Prime Resources
PSD	particle size distribution
psi	pounds per square inch
PV	photovoltaic
QAQC	quality assurance and quality control
REE	rare earth element
REEC	rare earth element concentrate
REO	rare earth oxide
RF	revenue factor
RL	retention licence
ROM	run-of-mine
rpm	revolutions per minute
s	second(s)
SEC	(United States) Securities and Exchange Commission
SG	specific gravity
S-K 1300	Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations
Sm	samarium
t, t/a, t/h, t/m^3	tonne(s), tonnes per annum, tonnes per hour, tonnes per cubic metre
Tb	terbium
Tb_4O_7	terbium oxide
TBE	tetrabromoethane
TDS	total dissolved solids
Te	tellurium
TiO_2	titanium dioxide or titania
Tm	thulium
TREO	total rare earth element oxide
TS	total sulphur
TSF	tailings storage facility
TSPP	tetrasodium pyrophosphate
TZMI	TZ Minerals International Pty Ltd
US$	United States dollar(s)
VHM	valuable heavy minerals
WCP	wet concentration plant
VHM	valuable heavy minerals
WHIMS	wet high intensity magnetic separation
WIFT	Wimmera Intermodal Freight Terminal
WIM	Wimmera area
wmt	wet metric tonne
wt	wet tonne(s)
XRD	x-ray diffraction

Abbreviation/Unit	Description
XRF	x-ray fluorescence spectrometry
Y	yttrium
Y_2O_3	yttrium oxide or yttria
Zn	zinc
ZrO_2	zirconium dioxide or zirconia

3 Reliance on information provided by the registrant

The Qualified Persons have relied on Energy Fuels for the legal aspects of land title and mineral tenure information, as summarized in Item 4 of this Technical Report, and the legality of any underlying agreement(s) that may exist concerning the permits or other agreement(s) between third parties, as summarized in Item 4 of this Technical Report. In particular, the Qualified Persons have relied on Energy Fuels' acceptance of information provided by representatives of Astron. The mineral tenure information was also confirmed on the GeoVic website of Resources Victoria[1].

The Qualified Persons have relied on Energy Fuels for guidance on applicable political and environmental matters outside the expertise of the Qualified Persons, as summarized in Item 20 of this Technical Report, and tax matters for the proposed Donald mining and processing operation, as summarized in Item 22 of this Technical Report.

Having made enquiries and taken appropriate steps to confirm this information in the public domain, the Qualified Persons consider it reasonable to rely on the information provided by Energy Fuels.

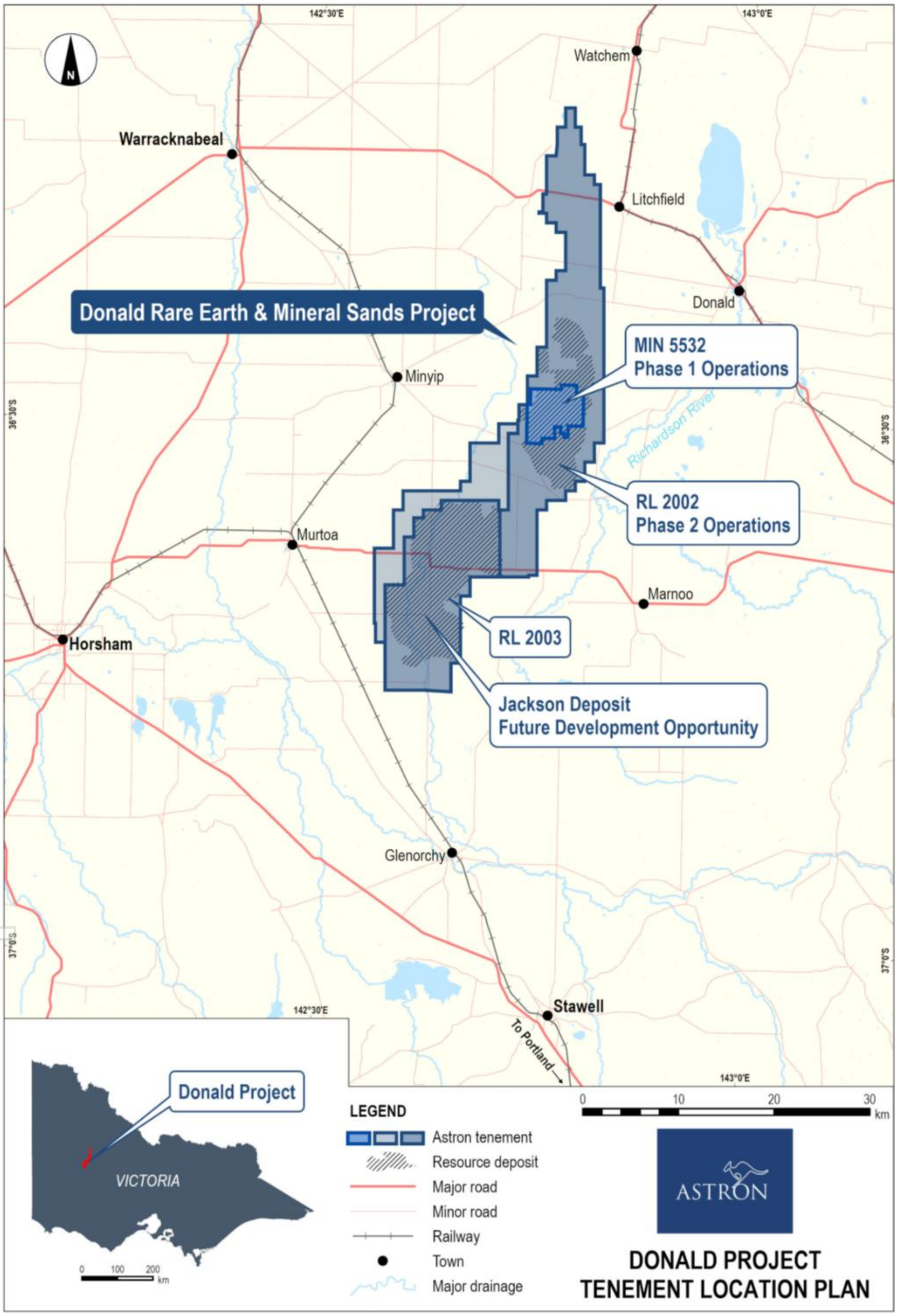
[1] https://resources.vic.gov.au/geology-exploration/maps-reports-data/geovic.

4 Property description and location

4.1 Location and area

Donald is in the Wimmera region of Victoria (latitude 36°29'25" S, longitude 142°46'21" E), approximately 300 km northwest of Victoria's capital city, Melbourne (Figure 4.1). The area of the Property is 271.55 km^2.

Figure 4.1 Location of Donald Property



Source: Astron

4.2 Type of mineral tenure

4.2.1 Legal framework

Resources Victoria sits within the Department of Energy, Environment and Climate Action (DEECA). It includes the Earth Resources Regulator (ERR) and Geological Survey of Victoria and plays a key role in:

- Regulating the resources industry to effectively manage risks to the environment and community
- Managing access to Victoria's resources for current and future use
- Policy development and regulatory reform
- Regulatory approval coordination
- Regional geoscientific investigations and data provision.

The *Mineral Resources (Sustainable Development) Act 1990* (MRSD Act) is the legal framework for mining and extractive industries that is compatible with the economic, social and environmental objectives of the State. The Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2019 (MRSD Regulations) set clear work plan and rehabilitation plan requirements to manage risks associated with mining and mineral exploration.

An Exploration Licence (EL) gives the holder exclusive rights to explore for specific minerals within the specified licence area for five years. No mining activities can be undertaken on an EL. ELs may be renewed once, for up to five years. A second renewal, for up to five years, is only allowed in exceptional circumstances and where it can be demonstrated that there is a likelihood of the licensee identifying minerals during the period of the renewal. No further renewals are permitted.

Minimum expenditure conditions and progressive relinquishments of the licence area from year 2 (leaving 10% of the original licence area at the end of year 10) apply to an EL.

A Retention Licence (RL) is suitable where a resource has been identified but the resource is not yet commercially viable to mine or is required to support an existing mining operation in the future. The maximum term for a RL is 10 years and may be renewed for two additional periods of 10 years. The work required under a RL reflects the work program that was submitted with the licence application.

A Mining Licence (MIN) holder is entitled to mine the land covered by the licence, explore for minerals and construct mining facilities related to a mining operation. Before work can start, the holder needs to have an approved work plan for mining, provide a rehabilitation bond and obtain the necessary consents and permits.

A MIN can be granted for up to 20 years, or longer with the Minister's agreement, and there is no limit to the number of renewals, subject to the holder's record of compliance and various other matters, including whether mining will be feasible in the foreseeable future.

4.2.2 Property mineral titles

Astron's Donald Project comprises three granted mineral tenements and one application (Table 4.1 and Figure 4.1). MIN5532 and RL2002 form part of the Donald JV with Energy Fuels (the Property).

Table 4.1 Donald project mineral titles

ID	Type	Status	Registered owner	Area (ha)	Grant date	Expiry date	Bond	Comments
MIN5532*	Mining licence	Granted	Donald Project Pty Ltd	2,784	20/08/2010	19/08/2030	$10,000	Primary area of Phase 1
RL2002*	Retention licence	Granted	Donald Project Pty Ltd	24,371	10/10/2019	9/10/2029	$70,000	Covers future expansions in Phase 2

ID	Type	Status	Registered owner	Area (ha)	Grant date	Expiry date	Bond	Comments
RL2003	Retention licence	Granted	Jackson Mineral Sands Pty Ltd	15,481	10/10/2021	9/10/2031	$10,000	Covers the Jackson deposit
EL8516	Exploration licence	Application	Jackson Mineral Sands Pty Ltd	6,653				

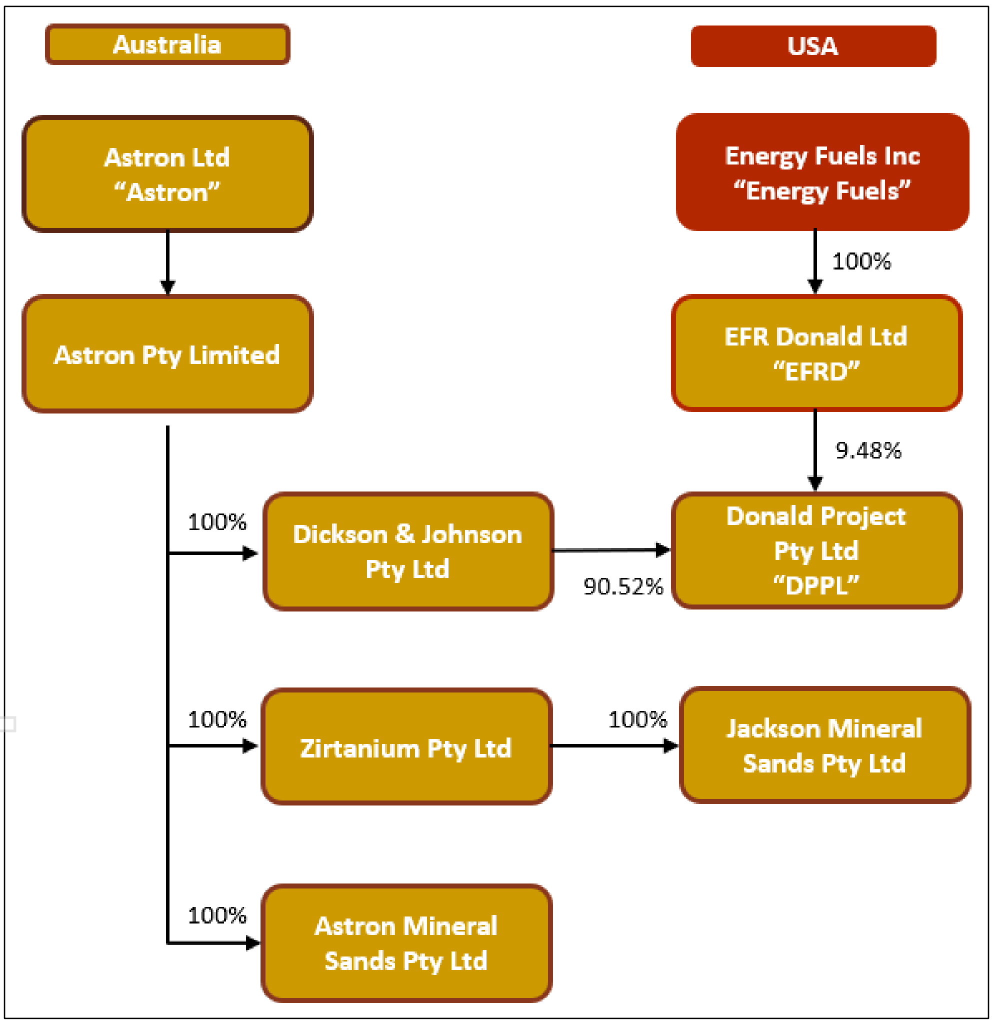
**MIN5532 and RL2002 form part of the joint venture with Energy Fuels. Energy Fuels retains a Right of First Refusal on RL2003, as disclosed in Item 4.5.*

Source: Astron

4.3 Issuer's interest

Astron holds its interest in the Donald JV mineral titles (MIN5532 and RL2002) through its subsidiary Donald Project Pty Ltd (DPPL, Figure 4.2).

Figure 4.2 Donald JV ownership structure



Source: Astron

On 4 June 2024, Energy Fuels entered into a farm-in and joint venture agreement and ancillary agreements (Agreement) with Astron for a JV to develop the Donald deposit within MIN5532 and RL2002. Energy Fuels will contribute the first $183 million of equity capital to earn a 49% interest in DPPL. As at the effective date of this Technical Report, Energy Fuels held a 9.48% equity interest in DPPL through its subsidiary company EFR Donald Ltd (EFRD). EFRD's remaining earn-in obligation is forecast to be $127.3 million (after taking into account funds already advanced and approximately $22.4 million of debt finance provided by EFRD, which upon FID will be recognised as earn-in funding).

Energy Fuels also entered into an offtake agreement for 100% of the Phase 1 and Phase 2 REEC monazite and xenotime production at commercial prices. Under the Agreement and subject to its terms, Astron and its affiliates retain a right to enter into an offtake agreement for 100% of the zircon and titanium HMC for processing at Astron's mineral separation plant in China and at third-party facilities.

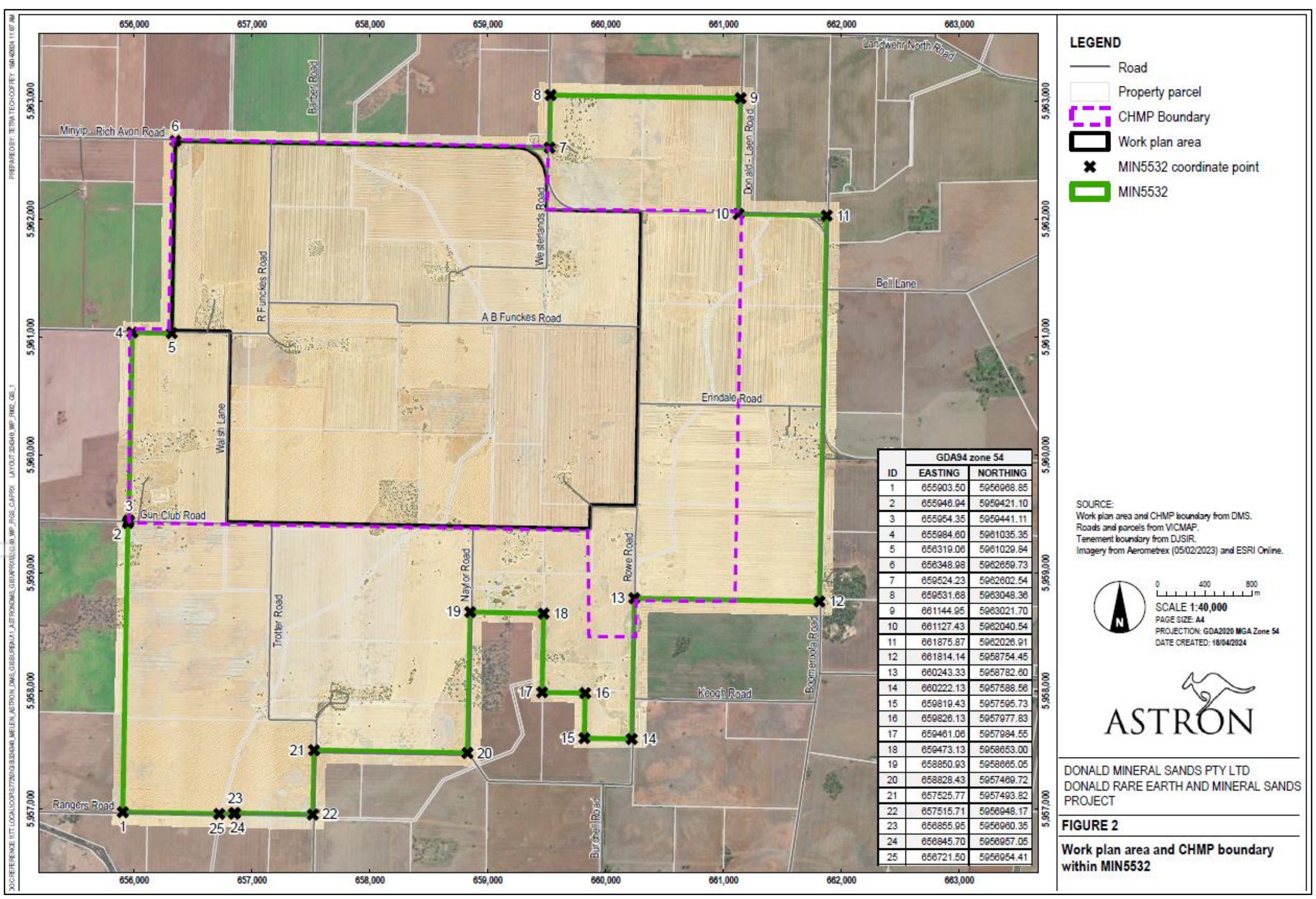
Astron Mineral Sands Pty Ltd is the manager of the JV.

4.4 Surface rights

The Phase 1 operations within MIN5532 cover arable, mixed-use freehold farming land. The Phase 1A Work Plan area encompasses 1,143.4 ha of land (Figure 4.3).

DPPL currently owns freehold titles covering 705 ha within the Work Plan area, which are currently leased to local farmers for agricultural purposes. The remaining freehold titles within the Work Plan area are either held by Astron and leased to DPPL for the term of the Donald project, owned by DPPL, or are the subject of an option in favour of DPPL with settlement scheduled at FID. There is an additional 1,646.6 ha of land within MIN5532 outside of the Work Plan area (Phase 1B).

Figure 4.3 Plan of MIN5532



ID	GDA94 zone 54 EASTING	GDA94 zone 54 NORTHING
1	655903.50	5956968.85
2	655946.94	5959421.10
3	655954.35	5959441.11
4	655984.60	5961035.35
5	656319.06	5961029.84
6	656348.98	5962659.73
7	659524.23	5962602.54
8	659531.68	5963048.36
9	661144.95	5963021.70
10	661127.43	5962040.54
11	661875.87	5962026.91
12	661814.14	5958754.45
13	660243.33	5958782.60
14	660222.13	5957588.56
15	659819.43	5957595.73
16	659826.13	5957977.83
17	659461.06	5957984.55
18	659473.13	5958653.00
19	658850.93	5958665.05
20	658828.43	5957469.72
21	657525.77	5957493.82
22	657515.71	5956948.17
23	656855.95	5956960.35
24	656845.70	5956957.05
25	656721.50	5956954.41

Source: Astron, 2025

Astron subsidiary, Jackson Mineral Sands Pty Ltd, owns an additional 1,138 ha of land outside of the Work Plan area, which is also leased out to local farmers providing alternative land for farming whilst the Work Plan area is mined, rehabilitated and returned to active farming.

Two parcels of Crown Land within the Work Plan area form part of the decommissioned open channel Wimmera Mallee Water Supply System and are no longer required for water supply purposes. Local roads within the Work Plan area are managed by Yarriambiack Shire Council and will revert to Crown Land if decommissioned.

A Public Conservation and Resource Zone runs along Dunmunkle Creek (to the west of the Work Plan area) and Richardson River (to the east of the Work Plan area) to protect and conserve the natural environment. Other areas of bushland to the northeast and southwest are conservation reserves designated Crown Land for reserve management.

Once the remaining freehold titles within the Work Plan area are purchased following exercise of the relevant purchase options by DPPL, the surface rights on MIN5532 will be sufficient for the proposed Phase 1A operation including all mining, processing and waste disposal. Overburden and process tailings will be backfilled into the void created by mining. A permanent ex-pit storage facility has been designed for tailings until sufficient mining void becomes available for backfilling.

4.5 Royalties, back-in rights, payments, agreements, encumbrances

The MRSD Act states that the royalty rate is 2.75% of the net market value (or mine gate value), which is the commercial value of the mineral at the time it is first sold, transferred or disposed of less any costs reasonably, necessarily, and directly incurred in connection with the sale, transfer or disposal, including insurance, freight and marketing.

The market value of the mineral means the value of the mineral if it were sold to an unrelated party in an arms-length commercial sale.

The Agreement with Astron provides for Energy Fuels to invest the first $183 million of capital required for the proposed Donald Project development and comprises:

- $1.5 million exclusivity fee, which has already been paid
- Funding for agreed project development activities until FID
- Secured interest free loans of up to $22.4 million for certain land and equipment acquisitions, whereupon following FID the loans will be recognised as earn-in funding and converted to equity in DPPL
- Sole funding of the balance of Donald project development costs up to a total of the earn-in amount of $183 million.

The conditions precedent under the Agreement included the transfer of assets, comprising the Donald deposit tenements (MIN5532 and RL2002) and water rights, to DPPL and Energy Fuels obtaining Foreign Investment Review Board (FIRB) approval from the Australian Government for its investment in Donald. FIRB approval was received on 19 September 2024, and completion of the JV agreement was achieved on 26 September 2024.

In addition, Energy Fuels agreed to issue common stock with a value of US$17.5 million to Astron in two tranches. The first tranche of US$3.5 million was issued upon the satisfaction (or waiver) of conditions precedent to the JV becoming effective. The second tranche of US$14.0 million will be issued upon approval of the FID for Phase 1 of the project.

Astron transferred MIN5532 and RL2002 and the water rights to DPPL during 2024. Land owned by Astron has been leased to the JV for the duration of operations with the JV responsible for all outgoings, rates and taxes. Astron will retain the right to develop the Jackson deposit on RL2003 independently. If the development of RL2003 is planned with a third party, Energy Fuels has a first right of refusal to participate.

Upon the expenditure of the full earn-in amount, Energy Fuels will have earned a 49% interest in the JV and Astron will retain a 51% interest. Any additional capital contributions will be funded by the parties pro-rata to their respective interests in the JV after taking into account the amount of certain pre-JV expenditure by Astron.

Energy Fuels' REEC offtake agreement will come into effect following the FID on the project. The price of REEC will be based on a formula derived from the market price of the constituent REOs (being neodymium and praseodymium combined, terbium and dysprosium), a payability factor and the actual assemblage of the REEC product (i.e. the percentage of the REOs). The JV will be responsible for organizing transport to Energy Fuels' White Mesa Mill in Utah, and the parties will work collectively in obtaining the necessary export permits.

The REEC offtake agreement will be subject to a floor price whereby, should the unit price of the REEC drop below the floor price, Energy Fuels may elect to suspend the REEC offtake until the realised prices of the downstream rare earth products recover. During this period, the JV may market the REEC product to third parties on the spot market.

Under the Agreement and subject to its terms, Astron and its affiliates have the right to enter into an offtake agreement for 100% of the project's HMC product on arms-length terms based on market pricing of the constituent products for processing at Astron's mineral separation plant (MSP) in Yingkou, China and at third-party facilities.

Astron Mineral Sands Pty Ltd as manager of the JV will charge a management fee of 5% of the allowable project costs pre-FID and 1.25% of allowable project costs post-FID plus reimbursement of all costs directly incurred by the manager in carrying out its duties as manager.

4.6 Environmental liabilities

Environmental bonds currently lodged against the Donald Project tenements are summarized in Table 4.1. A previously excavated test pit on land owned by Astron was fully rehabilitated in 2018. Prior to commencing Phase 1A site works, the bond requirements will be set by the responsible Victorian Government Minister.

A Rehabilitation Plan was prepared in accordance with the MRSD Act and associated MRSD Regulations in 2023 and approved as part of the Work Plan. A rehabilitation bond of $27 million to cover the liability up to process plant commissioning must be in place prior to commencing site works. Discussions with the ERR bonds team are ongoing regarding the bond calculation approach for the subsequent stages.

No other surface disturbances, land compensation, road maintenance or other liabilities or payments are required.

4.7 Permits

Following the 2008 Environment Effects Statement (EES), approval was received under the Federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in 2009 and varied in 2018. The Cultural Heritage Management Plan (CHMP) was approved for the Work Plan area in 2014, and the radiation licence obtained in 2015 and varied and renewed in 2024. The HMC export licence issued in 2016 has expired and a new export licence is being sought relating to the REEC product.

DPPL's amended Work Plan, incorporating and addressing formal feedback and comments received from ERR and its referral agencies, was approved in June 2025. Other approvals in progress include infrastructure outside of MIN5532 relating to road upgrades, road decommissioning and water pipeline, and other secondary licences and permits for water supply connection, groundwater extraction and surface water capture.

Further details on the status of permitting are provided in Item 20.3.

4.8 Other significant factors and risks

The Work Plan area covers 1,143.4 ha, of which DPPL either owns or has obtained options to acquire the entirety of the Work Plan land area. There is an additional 1,646.6 ha of land within MIN5532 outside of the Work Plan area, of which 1,138 ha has already been purchased or contracted (Phase 1B).

DPPL will need to engage with the landowners within the Phase 1B area (to the extent they are different from the landowners within the Work Plan area and own land other than already held by DPPL) to ensure that appropriate access to the resource under MIN5532 is secured by the commencement of construction and preliminary mining activities for the Phase 1B operation. The options available to securing land access within the Phase 1B area include:

- Purchasing the freehold title or entering a long-term option to purchase agreement
- Leasing the land
- Entering into a compensation agreement under the MRSD Act
- Obtaining a compensation determination from the Victorian Civil and Administrative Tribunal (VCAT) or Supreme Court of Victoria (i.e. compulsory pathway).

There are Crown Land parcels and historical water channel reserves located both within the Work Plan area and the broader MIN5532. DPPL's understanding is that areas of Crown Land covered by MIN5532 are restricted to roads and de-commissioned water channels. DPPL will need to obtain the consent of the relevant Crown Land minister and other authorities, which cannot be unreasonably withheld, and can be granted subject to conditions including the payment of compensation.

There are nine sensitive receptors within 2 km of the MIN5532 boundary. Dust and noise modelling is currently being undertaken and will inform decision-making with respect to potential mitigation effects for these properties.

5 Accessibility, climate, local resources, infrastructure and physiography

5.1 Topography, elevation and vegetation

The topography of the Property is flat to gently undulating at an elevation of 126 m to 132 m above sea level. The land is extensively cleared of native vegetation (Eucalyptus and Buloke woodland and grassland) and used for cropping and livestock grazing.

5.2 Access

The Property can be accessed via sealed road from the capital city of Melbourne approximately 300 km to the southeast. Good access through the Property is provided by a network of unsealed roads and tracks servicing the freehold blocks.

5.3 Proximity to population centre and transport

The Work Plan area within the Property is 13.4 km east of the township of Minyip and approximately 65 km northeast of the regional centre of Horsham, in Victoria (Figure 4.1). The population of Minyip is approximately 390 and Horsham is approximately 15,600. There are several other townships in proximity to the Property, the largest of which is Donald with a population of approximately 1,400.

A rail line runs through Minyip. There are several aerodromes servicing nearby towns which are suitable for use by light aircraft.

5.4 Climate and length of operating season

The Property has a semi-arid climate with hot dry summers and cool wet winters, with most of the rain falling in winter and early spring. Mean diurnal temperature range from 4°C to 13°C during the winter months of June to August and from 13°C to 30°C during the summer months of December to February. The average annual rainfall is approximately 400 mm falling on an average of 98 days per annum.

The Phase 1 mine and process plant is scheduled to operate year-round on two 12-hour shifts per day, seven days per week with provision made for shutdowns and weather interruptions.

5.5 Infrastructure

The sufficiency of the surface rights to support the proposed Phase 1A project is discussed in Item 4.4.

Existing infrastructure includes telecommunications cables, low voltage transmission lines and water supply pipelines.

Power for the Phase 1 project will be supplied via an onsite hybrid microgrid using a mixture of solar, battery and diesel power generation.

The project will use a combination of groundwater, surface water and raw water supply for the mining and processing operations. The raw water supply will be drawn from Astron's Grampians Wimmera Mallee Water Headworks water allowance of 6.975 GL/a stored in Taylors Lake, outside of Horsham. An upgrade of the existing water reticulation systems to transmit the water from the Minyip Pumping Station to the mine site has been completed.

Access to the Property via the existing road network will be upgraded in part to meet local Shire and State government requirements.

5.6 Workforce

The project benefits from its location close to Horsham and Melbourne without the need for a fly-in-fly-out workforce. The preferred option for the Phase 1 operation is for a residential workforce to support the local communities. As such, the project is not planning to build permanent housing stock but rather work with local parties to jointly develop solutions, including utilizing existing housing stock in the area.

The construction workforce is estimated to peak at approximately 120 during an estimated 9-month construction period. During the operations phase, the 100-person residential workforce will work on two rosters:

- 2 weeks on/1 week off for shift roles
- 5 days on/2 days off for non-shift roles.

6 History

The Property has been subject to several major evaluation campaigns by three companies. The Donald deposit was discovered by CRA Exploration Ltd (CRA) in the early 1980s. Zirtanium Ltd (Zirtanium) acquired the tenements in 2000 and sold them to Astron in 2004. Since then, Astron has invested approximately $100 million in the project's development, including exploration, mining, metallurgical studies, obtaining necessary regulatory approvals and acquiring farmland and water rights. There has been no previous mine production within the Property.

6.1 CRA

During the 1980s, CRA actively explored the Murray Basin for multiple commodities, including brown coal, uranium, gold, diamonds and HM sands.

Anomalous accumulations of fine-grained HM were first identified through downhole geophysical logging (gamma ray spectroscopy). Following the discovery of the WIM 150 HM sands deposit near Horsham, CRA embarked on extensive regional AC drilling programs aimed at identifying similar mineral sands deposits. In 1990, CRA reported the partial delineation of the WIM 50, WIM 100, WIM 200 (current Jackson deposit) and WIM 250 (current Donald deposit within the Property).

From approximately 1982 to 1991, CRA undertook exploration and resource definition drilling over the Jackson and Donald deposits. CRA completed approximately 423 AC drillholes at Donald (within MIN5532 and RL2002) for an estimated total of 11,220 m (Table 6.1).

Table 6.1 Drilling by mineral title

Company	Year	No. holes	Metres	Type	Comment
MIN5532					
CRA	1982–1989	91	2,250	AC	55 holes in MIN5523 used for geological interpretation only.
Zirtanium	2000	1	19	Calweld	940 mm Calweld hole used for bulk sampling. Used for geological interpretation only in MIN5523.
	2002	14	327	AC	10 holes in MIN5523 used for geological interpretation only in MIN5523.
	2004	225	4,967	AC	160 holes in MIN5523 used for geological interpretation. Assay and mineral assemblage data used for Area 2 where total HM data is from +38 µm to 90 µm fraction.
Astron	2010	167	3,969	AC	157 holes in MIN5523 - used for geological interpretation. Assay data (total HM, slimes and oversize) use for grade estimation in Area 2.
	2015	10	256.7	Sonic	Not used for Mineral Resource estimation. Used for metallurgical testwork.
	2015	102	2,777	AC	10 holes in MIN5523 used for geological interpretation. Assay data (total HM, slimes and oversize) used for grade estimation in Area 2.
	2022	245	6,355	AC	All geological, assay and mineral assemblage data used for Mineral Resource in Area 1.
	2022	25	648.5	Sonic	Not used for Mineral Resource estimation. Used for bulk density and metallurgical testwork, geotechnical studies and to expand network of groundwater monitoring bores.
	2024	37	793.2	Sonic	Not used for Mineral Resource estimation. Used for metallurgical testwork and geotechnical studies.
	2025	133	3,387	AC	Not used for Mineral Resource estimation. Used for development of GC model.

Company	Year	No. holes	Metres	Type	Comment
	2025	10	250.5	Sonic	Not used for Mineral Resource estimation. Used for bulk density testwork.
Total		**1,060**	**25,999.9**		
RL2002					All data used for historical resource estimation.
CRA	1982–1989	332	8,970	AC	300 holes with HM assays, 275 with VHM assays.
	2002	23	558	AC	23 holes with HM assays, 15 with VHM assays.
Zirtanium	2004	118	2,603	AC	108 holes with HM assays, 51 with VHM assays.
	2010	179	4,607	AC	176 holes with HM assays, 21 with VHM assays.
Astron	2015	153	4,206	AC	150 holes with HM assays, 21 with VHM assays.
Total		**805**	**20,944**		

Note: VHM – valuable heavy minerals.

6.2 Zirtanium

Between 2002 and 2004, Zirtanium Ltd completed 397 AC drillholes for a total of 6,097 m over the Donald deposit within MIN5532 and RL2002 (Table 6.1).

6.3 Astron

Astron completed four phases of AC drilling primarily focused on resource delineation between 2010 and 2022 and pre-production GC drilling in 2025 (Table 6.1):

- 2010 within MIN5532 and RL2002
- 2013 within RL2003 (Jackson deposit – not included in this report)
- 2015 within MIN5532, RL2002 and RL2003
- 2022 within MIN5532
- 2025 within MIN5532 (GC drilling for first two years of production).

Sonic drilling programs within MIN5532 were completed in 2015, 2022, 2024 and 2025 for geotechnical, bulk density and metallurgical testwork, to twin existing drillholes and add to the network of groundwater monitoring bores.

Further details of the drilling programs completed within MIN5532 and RL2002 are provided in Item 10.

A test pit was also excavated by Astron in 2005 about 1–2 km from the first mining blocks to a depth of 18 m. The test pit provided bulk samples for metallurgical testwork along with details on soil handling characteristics and observations of the rehabilitation requirements that will be encountered. A second bulk sample was taken, and the test pit was backfilled and rehabilitated during 2018.

6.4 Historical resource estimates

6.4.1 CRA

CRA completed resource modelling of the Donald deposit in 1990 (Smart and Allnut, 1990) and generated kriged block models for tonnage, grade and contained HM tonnes estimates. Separate tonnages for overlying clay and barren sand were also estimated.

The modelling was reportedly completed without a full assay database due to laboratory backlog and included assay results from two analytical methods. The older dataset used a minimum grain size of 38 µm and the newer dataset included grades for a concentrate nominally above 10 µm. Variogram analysis was used to determine grade estimation parameters, and the two datasets were subject to separate variogram analyses.

Drillholes with no mineralization were allocated mineralization thickness and grade values of zero and drillholes with suspect analytical data and abandoned holes were omitted from the analysis. The statistics indicated reasonable continuity structures for grade and thickness data in the north-south direction. A parent block size of 500 m by 500 m was used, selected from the drillhole spacing, total HM grades were estimated using OK, and a bulk density of 1.65 t/m^3 was assigned for tonnage estimation.

The Donald deposit was reported as a north-northeast trending deposit of about 135 km^2 in area. The highest but thinnest HM grades were reported in the south. The bulk of the HM was found in the north-central zone. The reported tonnage-grade curve showed a slight inflection at the 3% HM cut-off and the "global resource" was reported as 1,270 Mt at 5.3% HM. This included the north-central zone of the Donald deposit which was reported as containing 520 Mt at 5.4% HM with a combined cut-off criteria of 4 m minimum thickness and 4% HM minimum grade.

CRA reported that the Donald resource estimate was classified as "Indicated" in accordance with the Australian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC Code,1989 edition). The Qualified Person has not done sufficient work to classify the historical estimate as a current Mineral Resource and the estimate does not meet CIM Definition Standards for Mineral Resources & Mineral Reserves and S-K 1300 Definitions. Energy Fuels is not treating the historical estimate as a current Mineral Resource and is disclosed for background purposes only and should not be relied upon.

CRA undertook further drilling after the resource study was completed in 1990.

6.4.2 Zirtanium

In February 2004, JB Mining remodelled the Donald deposit using all CRA's drilling results and results from Zirtanium's drilling carried out in August 2002 to verify the resource. The resource reported for Donald was 1,392 Mt at 6.4% HM (Thiess, 2004a).

A subset of the Donald deposit was remodelled by JB Mining in September 2004 and reported by Thiess, and mineral assemblage data was included in the resource estimate (Thiess, 2004b). The 2004 resource for the central area of Donald was reported to contain 355 Mt at 6.3% HM, and the HM fraction was reported to include 19% zircon, 20% leucoxene, 8% rutile and 30% ilmenite.

The resource for the Donald deposit was re-estimated in 2005. The mineralized horizon was interpreted using a 1.5% HM cut-off grade and a polygonal method was used for grade and tonnage estimation. Shepherd (2005) reported a resource of 187 Mt at 6.3% HM above a 1.5% HM cut-off and the HM fraction was reported to contain 19% zircon, 8% rutile, 20% leucoxene and 32% ilmenite.

The Qualified Person has not done sufficient work to classify the historical estimates as a current Mineral Resource and the estimates do not meet CIM Definition Standards for Mineral Resources & Mineral Reserves and S-K 1300 Definitions. Energy Fuels is not treating the historical estimates as a current Mineral Resource and are disclosed for background purposes only and should not be relied upon.

6.4.3 Astron

Historical resource estimates for the Donald deposit have previously been reported by AMC in 2006 (EL4433, including current MIN5532), 2010 (proposed MIN5532), 2011 (EL4433 and proposed MIN5532) and 2012 (EL4433 and MIN5532). The Qualified Person has not done sufficient work to classify the historical estimates as current Mineral Resources and the estimates do not meet CIM Definition Standards for Mineral Resources & Mineral Reserves and S-K 1300 Definitions. Energy Fuels is not treating the historical estimates as a current Mineral Resource and are disclosed for background purposes only and should not be relied upon. The most recent Mineral Resource estimate for MIN5532 (Phase 1) was prepared by Snowden Optiro and reported in 2022 and subsequently updated in 2025 to include updated density data and estimates of REOs, as disclosed in Item 14. The most recent Mineral Resource estimate for RL2002 (previously EL4433) was prepared by AMC and reported in 2016, as disclosed in Item 24.2 for Phase 2.

AMC prepared a resource estimate for EL4433 in 2006 which included the area that was subsequently covered by MIN5532 and extended into the area now covered by RL2002. The resource estimate was classified and reported in accordance with the guidelines of the 2004 edition of the JORC Code. AMC reported a total resource above a 1% HM cut-off grade of 693 Mt with an average grade of 5.1% HM, an average slimes content of 15.3% and an average oversize content of 7.3% (AMC, 2006). Mineral assemblage data was not available for the total resource and AMC reported a subset of the resource, with mineral assemblage data (Table 6.2). The total HM content of the subset resource was not reported, and the valuable heavy minerals (VHM) were reported as a percentage of the total material.

Table 6.2 Subset of the 2006 resource reported by AMC in EL4433 (which included MIN5532 and extended into RL2002)

Classification	Tonnes (Mt)	Zircon %	Rutile %	Leucoxene %	Ilmenite %
Indicated	368	1.1	0.3	1.2	1.8
Inferred	109	1.0	0.2	0.9	1.7

Source: AMC, 2006

MIN5532 (Phase 1)

AMC prepared a resource estimate within the area of the proposed MIN5532 in 2010. This resource was classified and reported in accordance with the guidelines of the 2004 edition of the JORC Code. Mineral assemblage data was not available for the total resource and AMC reported a subset of the resource, with mineral assemblage data. The resource estimates for HM and the VHM assemblage, reported above a 1% total HM cut-off grade by AMC in 2010, are summarized in Table 6.3. Slimes and oversize contents were not reported for the subset resource. AMC reported an additional resource, without estimated VHM assemblage data, above a 1% HM cut-off grade of 235 Mt with an average grade of 2.8% HM, an average slimes content of 13.7% and an average oversize content of 14.3% (AMC, 2011).

Table 6.3 MIN5532 resource (subset with VHM) reported by AMC in 2010

Classification	Tonnes (Mt)	Total HM (%)	% of total HM			
			Zircon	Rutile	Leucoxene	Ilmenite
Measured	192	5.09	17.32	5.62	14.77	31.74
Indicated	70	5.17	18.75	5.22	10.32	31.13
Measured + Indicated	**262**	**5.11**	**17.71**	**5.51**	**13.57**	**13.71**
Inferred	23	4.96	18.51	3.50	6.27	33.26

Source: AMC, 2011

The resource estimate within the area of the proposed MIN5532 was updated by AMC in 2011 and was classified and reported in accordance with the guidelines of the 2004 edition of the JORC Code. Mineral assemblage data was not available for the total resource and AMC reported a subset of the resource, with mineral assemblage data. The resource estimates for HM and the VHM assemblage, reported above a 1% total HM cut-off grade by AMC in 2012, are summarized in Table 6.4. Slimes and oversize contents were not reported for the subset resource. AMC reported an additional resource, without estimated VHM assemblage data, above a 1% HM cut-off grade of 232 Mt with an average grade of 2.4% HM, an average slimes content of 14.0% and an average oversize content of 13.4% (AMC, 2012a).

Table 6.4 MIN5532 resource (subset with VHM) reported by AMC in June 2012

Classification	Tonnes (Mt)	Total HM (%)	% of total HM			
			Zircon	Rutile	Leucoxene	Ilmenite
Measured	239	5.1	19	6.8	21	32
Indicated	85	5.0	20	6.5	22	34
Measured + Indicated	**324**	**5.1**	**19**	**6.7**	**21**	**33**
Inferred	10	4.7	21	7.6	17	35

Source: AMC, 2012a

The resource estimate within MIN5532 was updated by AMC in September 2012. This resource was classified and reported in accordance with the guidelines of the current JORC Code (2012). AMC reported the resource above a 2.5% HM cut-off grade and between cut-off grades of 1% and 2.5% HM (AMC, 2012b). The resource estimates for HM and the VHM assemblage, reported above a 1% total HM cut-off grade are summarized in Table 6.5.

Table 6.5 MIN5532 resource (subset with VHM) reported by AMC in September 2012

Classification	Tonnes (Mt)	Total HM (%)	Slimes (%)	Over-size (%)	% of total HM			
					Zircon	Rutile	Leucoxene	Ilmenite
Measured	319	4.6	15	16.9	18.5	6.5	21.7	31.0
Indicated	116	4.3	13.9	15.8	17.7	6.8	18.0	31.9
Measured + Indicated	**435**	**4.5**	**14.7**	**16.6**	**18.3**	**6.6**	**20.8**	**31.2**
Inferred	17	3.6	14.2	14.1	17.0	5.8	13.9	30.1

Source: AMC, 2012b

AMC prepared a resource estimate within MIN5532 in April 2016. This was classified and reported in accordance with the guidelines of the JORC Code (2012). AMC reported a total resource above a 1% HM cut-off grade of 454 Mt with an average grade of 4.4% HM with an average slimes content of 14.2% and an average oversize content of 12.8% (AMC, 2016a). Mineral assemblage data was not available for the total resource and AMC reported a subset of the resource, with mineral assemblage data. The resource estimates for HM and the VHM assemblage, reported above a 1% total HM cut-off grade by AMC in 2016, are summarized in Table 6.6.

Table 6.6 MIN5532 resource (subset with VHM) reported by AMC in 2016

Classification	Tonnes (Mt)	Total HM (%)	Slimes (%)	Over-size (%)	% of total HM				
					Zircon	Rutile + anatase	Leuco-xene	Ilmenite	Monazite
Measured	264	5.4	14.2	12.2	18.7	7.0	22.4	31.3	1.8
Indicated	49	4.9	13.6	12.1	20.3	7.0	22.0	33.3	2.0
Measured + Indicated	**313**	**5.3**	**14.1**	**12.2**	**18.9**	**7.0**	**22.3**	**31.6**	**1.8**
Inferred	5	4.2	13.5	10.5	22.0	7.2	19.7	35.7	2.7

Source: AMC, 2016a

RL2002 (Phase 2)

AMC prepared a resource estimate within EL4433 (now RL2002) in 2011. This resource was classified and reported in accordance with the guidelines of the 2004 edition of the JORC Code. Mineral assemblage data was not available for the total resource and AMC reported a subset of the resource, with mineral assemblage data. The resource estimates for HM and the VHM assemblage, reported above a 1% total HM cut-off grade by AMC in 2012, are summarized in Table 6.7. Slimes and oversize contents were not reported for the subset resource. AMC reported an additional resource, without estimated VHM assemblage data, above a 1% HM cut-off grade of 1,521 Mt with an average grade of 3.8% HM, an average slimes content of 14.4% and an average oversize content of 8.2% (AMC, 2012a).

Table 6.7 RL4433 (now RL2002) resource (subset with VHM) reported by AMC in 2012

Classification	Tonnes (Mt)	Total HM (%)	% of total HM			
			Zircon	Rutile	Leucoxene	Ilmenite
Measured	7	5.4	16	8.6	21	33
Indicated	447	4.9	18	7.0	18	34
Measured + Indicated	**454**	**4.9**	**18**	**7.0**	**18**	**33**
Inferred	796	5.4	18	9.7	16	34

Source: AMC, 2012a

AMC prepared a resource estimate within EL4433 (now RL2002) which was classified and reported in 2012 in accordance with the guidelines of the JORC Code (2012). Mineral assemblage data was not available for the total resource and AMC reported a subset of the resource, with mineral assemblage data. The resource estimates for HM and the VHM assemblage, reported above a 1% total HM cut-off grade by AMC in 2012, are summarized in Table 6.8. Slimes and oversize contents were not reported for the subset resource. AMC reported an additional resource, without estimated VHM assemblage data, above a 1% HM cut-off grade of 1,203 Mt with an average grade of 4.0% HM, an average slimes content of 14.3% and an average oversize content of 7.0% (AMC, 2012c).

Table 6.8 RL4433 (now RL2002) resource (subset with VHM) reported by AMC in 2012

Classification	Tonnes (Mt)	Total HM %	% of total HM			
			Zircon	Rutile	Leucoxene	Ilmenite
Measured	8	5.3	16	10	21	32
Indicated	566	4.6	17	8	15	34
Measured + Indicated	**574**	**4.6**	**17**	**8**	**15**	**34**
Inferred	822	5.2	18	7	10	34

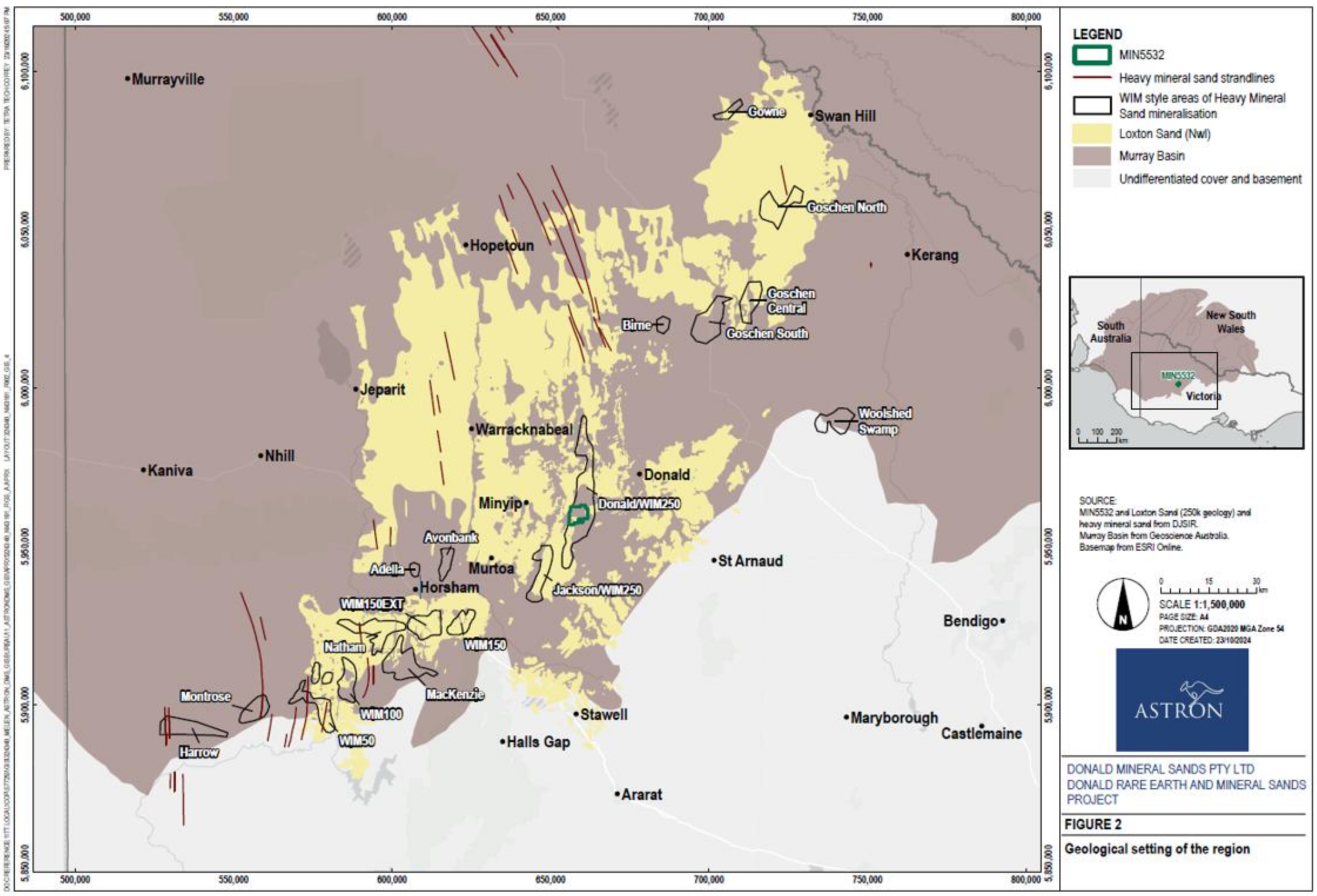
Source: AMC, 2012c

7 Geological setting and mineralization

7.1 Regional geology

The Murray Basin is a low-lying, saucer-shaped intracratonic depression in southeastern Australia hosting thin, flat-lying Cainozoic sediments. The basin overlies deformed early Palaeozoic turbidites, volcanic and volcaniclastic rocks of the Lachlan Fold Belt, is up to 600 m in thickness and extends approximately 850 km from east to west and 750 km from north to south, covering an area of approximately 320,000 km^2 over southwestern New South Wales, northwestern Victoria and southeastern South Australia (Figure 7.1).

Figure 7.1 Regional geological setting



Source: Astron

A succession of Tertiary freshwater, marine, coastal and continental sediments deposited HM into the basin. Much of the sedimentary sequence is the result of repeated marine incursions from the southwest, with the latest transgression-regression event resulting in deposition of the Late Miocene to Late Pliocene Loxton Sand (formerly called the Parilla Sand or Loxton-Parilla Sand). The Loxton Sand was deposited in shallow marine, littoral and fluvial conditions and comprises fine to coarse grained, commonly moderately well sorted sand with minor clay, silt, mica and gravel.

The Loxton Sand is the host sequence to all the known HM sand deposits in the Murray Basin. These deposits are of two principal types: the coarser-grained strandline occurrences and the finer-grained "WIM-style" accumulations.

The strandline-style deposits occur along the seaward face of ancient shorelines and are the result of concentration and winnowing in a littoral environment. These deposits are consistent with the present (and ancient) east and southwest Australian coastlines and are characterized by one or more relatively narrow composite lenses generally from 2 m to 12 m in thickness and are frequently persistent along any specific mineralized shoreline. These deposits are generally associated with relatively coarse, clean sand and gravel, consistent with any modern active beach environment.

The WIM-style deposits, named by CRA, consist of a solitary or composite broad, lobate sheet-like body of highly sorted HM associated with fine grained, micaceous sand with considerable aerial extent. These deposits are thought to represent accumulations formed below the active wave base in a near-shore environment, possibly representing the submarine equivalent of the strandline-style deposits. The WIM-style deposits are typically considerably larger in tonnage and lower in grade than the strandline deposits.

In the late Pliocene or early Pleistocene ages, the Murray Basin was closed by uplift in the southwest. Major lakes formed and deposited a thick sequence of sediments dominated by clay. The onset of arid climate conditions about 500,000 years ago added an extensive system of playa lakes and aeolian sands to the cover sequence of the central and northern Murray Basin. Quaternary to Recent river systems helped create the present-day surface geology and geomorphology. The HM sand deposits are typically buried beneath Quaternary and Tertiary aged fluvial and aeolian sediments.

7.2 Local geology and mineralization

The oldest rocks in the general area of the Property are a series of medium-grade (low to middle greenschist facies) metamorphic sediments of the Ordovician St Arnaud Group. These occur at depths ranging from 40 m to 75 m as determined by a few holes drilled into basement rocks (Figure 7.2).

Unconformably overlying the basement rocks are medium-grained sands (with occasional gravels) of the Eocene Renmark Group. These are essentially clean quartz sands with wood and seed fragments overlain by carbonaceous (occasionally lignitic) clays. The sands often contain crystalline masses or concretions of marcasite and are commonly water saturated. The Late Oligocene to Mid Miocene Geera Clay conformably overlies the Renmark Group as 10 m to 30 m thick sequence of dark green to black marly clay, with shell fragments and rare shark's teeth, and pyrite (which has the potential to form acid sulphate soil).

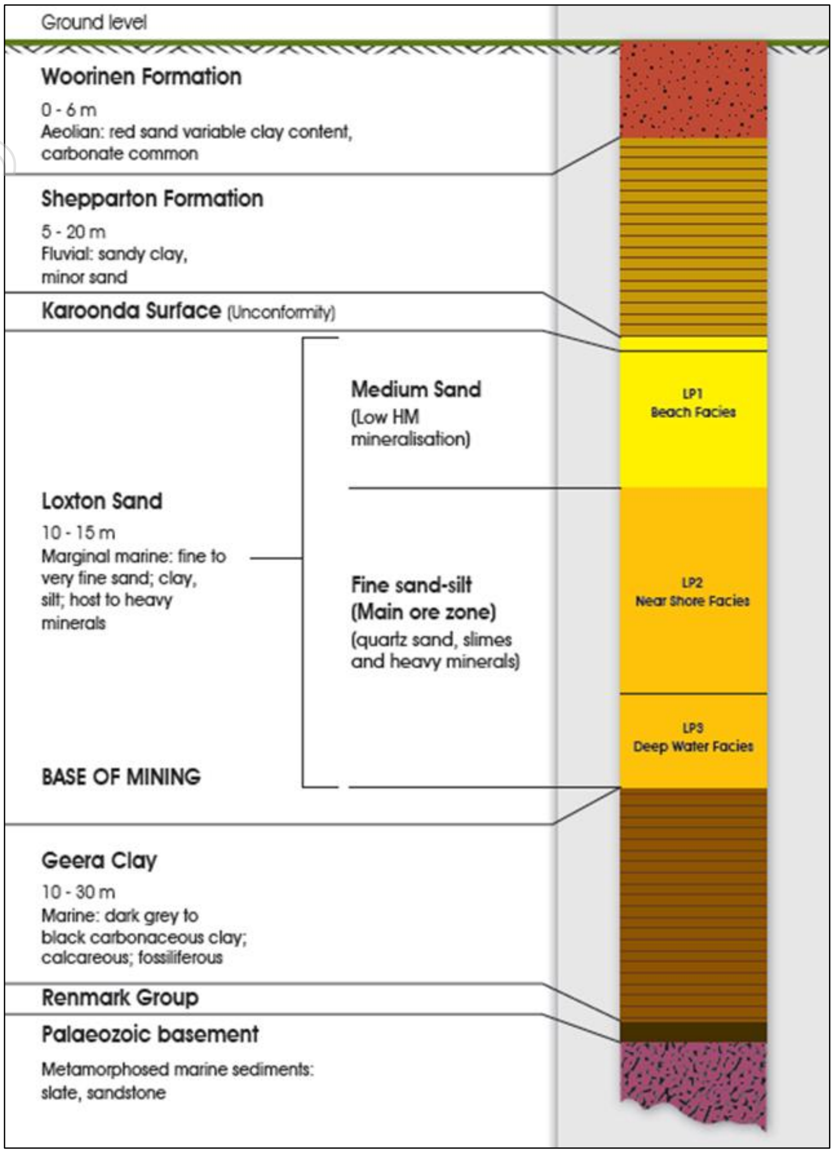
The HM sands in the Property are concentrated mainly within the lower units (LP2 and LP3) of the unconformably overlying Late Miocene to Late Pliocene Loxton Sand, which ranges in thickness from 10 m to 15 m. HM concentrations occur immediately above the Geera Clay and decrease in grade towards the top of the fine-grained LP2 unit. A medium to coarse-grained sand unit (Loxton Sand LP1) overlies the fine-grained LP2 unit: this unit also contains HM sands.

Minor amounts of iron oxides within the HM concentrations can form iron-cemented or indurated sandstone, developed as sub-horizontal layers within the deposit. The top of the HM deposit is often seen as a similarly developed cemented zone of less than 1 m in thickness. The HM occur as very fine laminae within clayey silt and have been shown to be gently dipping imbricated laminae within sub-horizontal bands of sediment, indicating deposition within an offshore deep-water, ripple bed environment.

North-south trending, discrete higher-grade zones have formed within the greater Donald deposit presenting a focus for the initial stages of the mining operation. To the west, the mineralization deepens and overburden increases. On the southern margins, the fine-grained, silty HM sand disperses in an east-west direction following silty clay units, which are interpreted as washout zones that tend to contain no HM.

The Loxton Sand is overlain by heavy (slaking) clays of the Pliocene to Holocene Shepparton Formation, which ranges in thickness from 5 m to 20 m. These widespread brown clays commonly show mottling due to hydrated iron oxides with local developments of haematitic pisolites or nodules. "Stringer" sands of the overlying Quaternary Woorinen Formation develop as discontinuous or meandering channels of up to 10 m in thickness within the Shepparton Formation clays.

Figure 7.2 Donald Project area generalized stratigraphic column



Source: Astron, 2023a

Note: Not to scale.

The drillhole geology shows that the top of the Loxton Sand at the Donald deposit is reached at a depth of around 9 m, depending on local topography such as sand dunes. The Loxton Sand is seen as a fine to medium grained sand at the base of the Shepparton Formation clays. A hard or silica cemented horizon (possibly the Karoonda Surface – a weathering profile created by a sea level hiatus) is seen a few metres into this sand, which can indicate the start of the very fine sand to silt zone of the Loxton Sand unit (LP2). The lower portion of the Loxton Sand is often below the water table.

Geological logging has differentiated the following interpreted depositional facies within the Loxton Sand (Figure 7.3). The depositional facies are used to geologically domain the deposit for resource modelling of the Donald deposit within MIN5532 (Phase 1). HM content is generally highest within the LP2 domain.

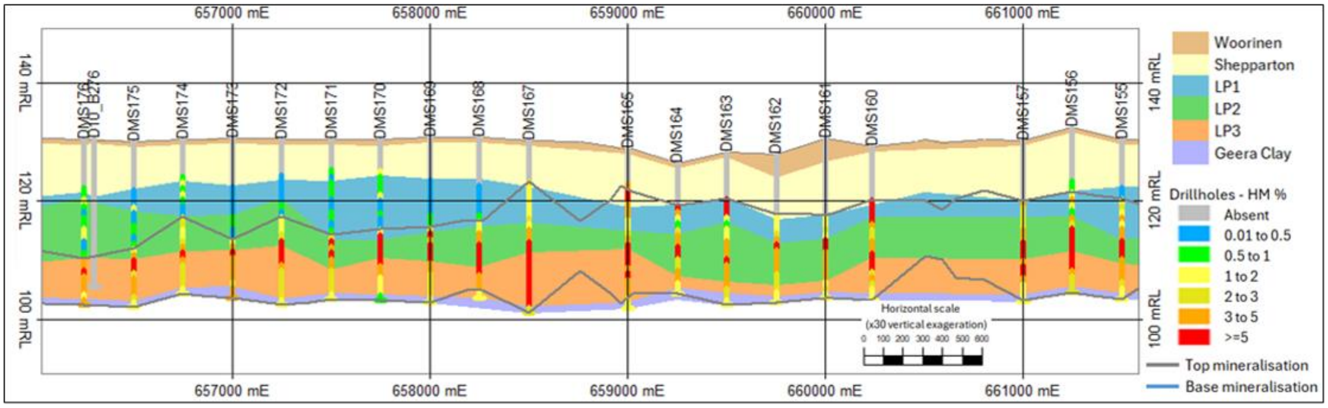
- LP1 – fine to very coarse friable quartz sands and minor silty, clay and gravel beds representing dunal, foreshore and surf zone sediments.
- LP2 – near-shore, very fine silty micaceous quartz sands, minor clays and gravels, representing sediments deposited below the wave base that show friable laminated and truncated HM mineralized

beds. LP2 is the principal fine-grained HM target throughout the Murray Basin and contains most of the mineralization in the Donald deposit.

- LP3 – deep water sedimentation containing higher silt and clay material than LP2.

The Geera Clay is usually encountered at depths ranging from 18 m to 30 m and, due to its potential to form acid sulphate soil, mining is to be restricted to above this horizon.

Figure 7.3 Representative geological cross-section looking north along 5,959,750 mN with drillholes coloured by total HM%*



**Section location included in Figure 14.1*

Note: As discussed in Item 14, for data and block model coding, the geological surfaces took precedence over the mineralization surfaces, with the mineralization constrained to within the Loxton Sand sequence (LP1, LP2 and LP3).

Source: Snowden Optiro

The mineralized horizon, within the Loxton Sand LP1, LP2 and LP3 layers, covers the entire area of MIN5532 (6 km east-west by 6 km north-south) and extends to the north, south, east and west of MIN5532 to within RL2002. Within RL2002 the mineralized horizon extends for 33 km north-south and from 3 km to 8 km east-west. The mineralized horizon ranges from 3 m to 20 m and has an average thickness of 9.8 m within MIN5532.

8 Deposit types

HM sand deposits contain concentrations of economically important minerals which are heavier than common sand minerals such as quartz. HM sand deposits typically comprise the following minerals of economic interest:

- Zircon
- Rutile (and anatase)
- Leucoxene
- Ilmenite
- Monazite
- Xenotime.

Zircon is rich in the element zirconium. Rutile (and anatase), leucoxene and ilmenite contain titanium. Monazite and xenotime contain REEs. Other minerals such as magnetite and garnet may also be present.

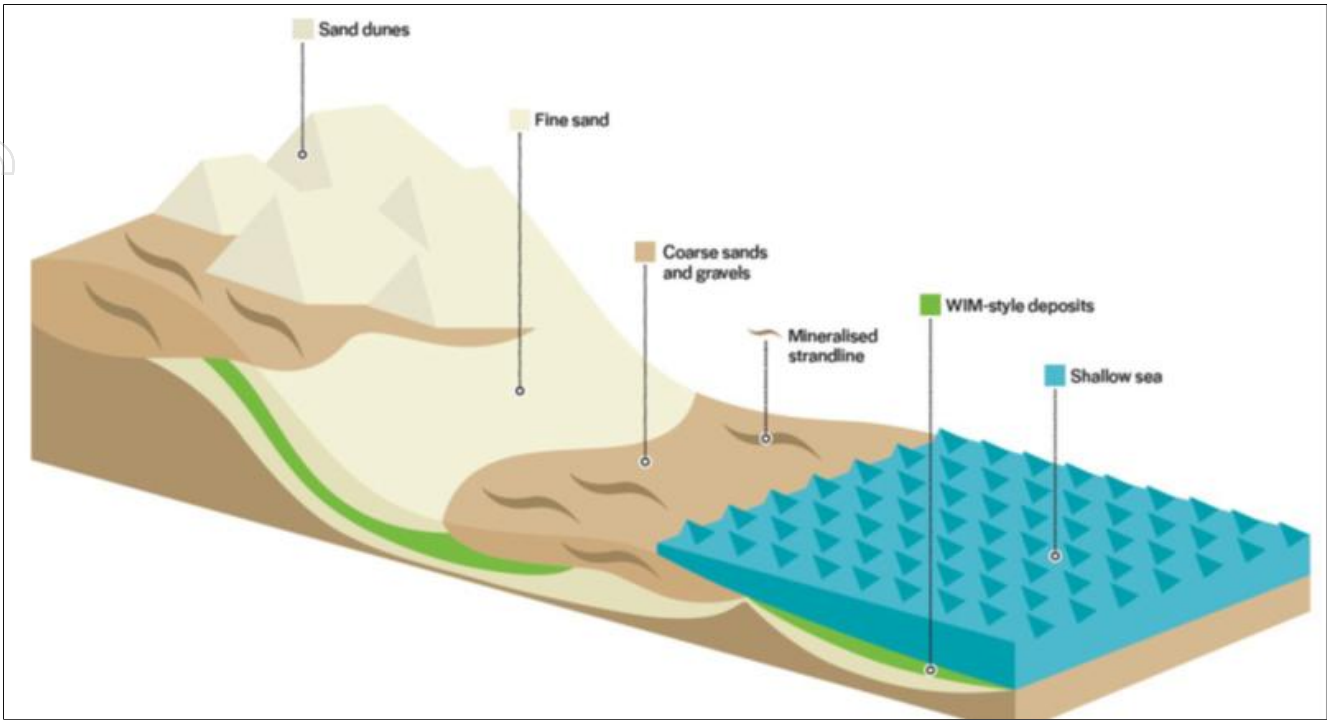
Victoria's HM sand deposits occur a long way from the modern coastline and reflect the presence of former inland seas and associated coastal processes. The two main types of HM sand deposits recognized in the Murray Basin are strandline deposits and Wimmera-style (WIM) deposits.

The strandline-style deposits occur along the seaward face of ancient shorelines and are the result of concentration and winnowing in a littoral environment. These deposits are consistent with the present (and ancient) east and southwest Australian coastlines and are characterized by one or more relatively narrow composite lenses, generally from 2 m to 12 m in thickness, and are frequently persistent along any specific mineralized shoreline for more than 2 km. These deposits typically have a 5–20% HM sand content with coarse-grained (>100 µm) HM assemblages associated with relatively coarse, clean sand and gravel, consistent with any modern active beach environment.

The WIM-style deposits, which are present and substantially pattern-drilled in the Property, are characterized by a sheet-like body of highly sorted HM associated with fine grained sand with considerable aerial extent. The deposits can be up to 25 m thick, 10 km long and 8 km wide and are relatively high tonnage and low grade (2–5% HM sand content) with a fine-grained (<250 µm) HM sand assemblage.

These deposits are thought to represent accumulations formed below the active wave base in a near-shore environment, possibly representing the submarine equivalent of the strandline-style deposits (Figure 8.1). The Donald deposit is geologically domained into LP1 beach facies, LP2 shallow sea and LP3 deeper water facies.

Figure 8.1 WIM-style HM sand deposit model



Source: Astron, 2023c

9 Exploration

As disclosed in Item 7, WIM-style HM sand deposits within the Property are typically buried beneath Quaternary and Tertiary aged fluvial and aeolian sediments, so surface exploration techniques such as mapping and geochemistry are not commonly performed or considered effective.

Excluding drilling, there has been no recent exploration conducted by DPPL relevant to the Property.

9.1 Geotechnical studies

ATC Williams Pty Ltd (ATC Williams) was engaged for the initial external tailings cells and subsequent in-pit tailings cell construction and deposition modelling. Numerous site geotechnical investigations have been undertaken since 2015 by Douglas Partners, GHD, and ATC Williams. ATC Williams provided geotechnical slopes of 1:2 (~27°) for in-situ slopes and 1:2.5 (~22°) for constructed slopes.

The most recent open pit geotechnical work completed by ATC Williams in 2022 was to obtain disturbed and undisturbed samples for laboratory testing to identify suitable material parameters for inclusion in the design of the co-disposal tailings facilities. The following testwork was completed by ATC Williams:

- Particle size distribution (PSD) of all material types
- Plasticity of fine-grained material encountered
- Emerson class testing to estimate dispersity of foundation material
- Particle density of the foundation materials
- Bulk density estimates from Lexan tube samples
- Compaction testing of remoulded samples for construction purposes
- Triaxial testing on selected undisturbed samples
- Remoulded permeabilities of foundation material for construction purposes.

Laboratory testing was undertaken to assess material strength of the Shepparton Clays, LP1, LP2 and Geera Clay materials. This work incorporated:

- Three consolidation tests on clay materials (Unit 2/Shepparton Formation, Unit 4/LP3 and Unit 5/Geera Clay) at Melbourne University
- Three triaxial tests.

In 2024 and 2025, ATC Williams completed an expanded program with:

- 17 geotechnical boreholes, 25 test pits, and 11 shallow boreholes in the pit, process plant, and external TSF areas
- 38 Lexan undisturbed samples and extensive in-situ testing (Pocket Penetrometer, Standard Penetration Test)
- Laboratory testing for PSD (sieve/hydrometer), Atterberg limits, SG, compaction, permeability, pinhole dispersion, Emerson, pH, California Bearing Ratio (standard and lime-stabilized), shrink-swell potential, sulphate content, and salinity/chemistry
- Integration of results into final pit slope design, TSF foundation design, and in-pit tailings consolidation modelling.

9.2 Hydrological studies

CDM Smith undertook a structured program of hydrogeological testwork to characterize surface and groundwater conditions at the Donald (MIN5532) Project. Data were acquired through a combination of drilling, bore construction, aquifer testing, and groundwater sampling using both slug and pump tests. Boreholes were completed to appropriate depths to intercept the key stratigraphic units, and monitoring wells were installed to enable long-term data collection. Groundwater levels were measured using dataloggers and manual dips to establish seasonal and short-term fluctuations. Sampling for water quality was conducted in accordance with industry-standard protocols to minimize contamination, and analyzed for major ions, trace elements, and nutrients at accredited laboratories, ensuring reliable baseline chemistry.

Hydraulic properties were characterized using constant rate aquifer pumping tests, step tests, and slug tests. These methods are widely accepted for determining transmissivity, storativity, and hydraulic conductivity. QAQC procedures included calibration of flow meters and water level loggers, appropriate test durations, and comparison of recovery data. Results demonstrated the presence of permeable zones within unconsolidated alluvial and sandy units, with hydraulic conductivities varying across the deposit. Pumping test responses confirmed aquifer yields sufficient for localized water supply, with storativity values indicative of confined to semi-confined behaviour in deeper units.

The conceptual model incorporates recharge from rainfall infiltration, limited lateral inflows, and discharge to surface features under natural conditions. A numerical groundwater model was developed and calibrated using observed heads, pumping test results, and long-term monitoring data. Material assumptions included homogeneity within mapped hydro-stratigraphic units, anisotropy aligned with depositional geometry, and steady-state recharge estimates derived from regional rainfall infiltration rates. Model outputs provided estimates of flow directions, aquifer connectivity, and sustainable abstraction rates, and were used to establish a water balance and predict potential drawdown impacts.

The Qualified Person concludes that the methods applied were appropriate and industry-standard, the data quality is sufficient for robust interpretation, and the models reliably characterize the aquifer systems underlying the project.

10 Drilling

10.1 Type and extent

Details of the drilling evaluating the Mineral Resource within MIN5532 are summarized in Table 10.1 and presented in Figure 10.1. Data from sonic holes, drilled for bulk density and geotechnical testwork and to expand network of groundwater monitoring bores, were not used for resource estimation. A representative cross-section is provided in Figure 7.3 with the location of the cross-section shown in Figure 14.1.

In addition, 133 AC holes and 10 sonic holes were drilled within MIN5532 during 2025 (Table 10.1 and Figure 10.2) that were not used for the current Mineral Resource estimate. A pre-production GC model was generated in 2025 using data from these drillholes.

Table 10.1 Drilling completed on MIN5532

Company	Year	No. of holes	Metres	Type
CRA	1985–1991	55	1,377	AC
Zirtanium	2000	1	19	Calweld
	2002	10	231	AC
	2004	160	3,497	AC
Astron	2010	157	3,708	AC
	2015	4	100	AC
	2015*	10	256.7	Sonic
	2022	245	6,355	AC
	2022*	25	648.5	Sonic
	2024*	37	793.2	Sonic
	2025*	133	3,387	AC
	2025*	10	250.5	Sonic
Total	**1985–2025**	**847**	**20,622.9**	

**Not used for Mineral Resource estimation.*

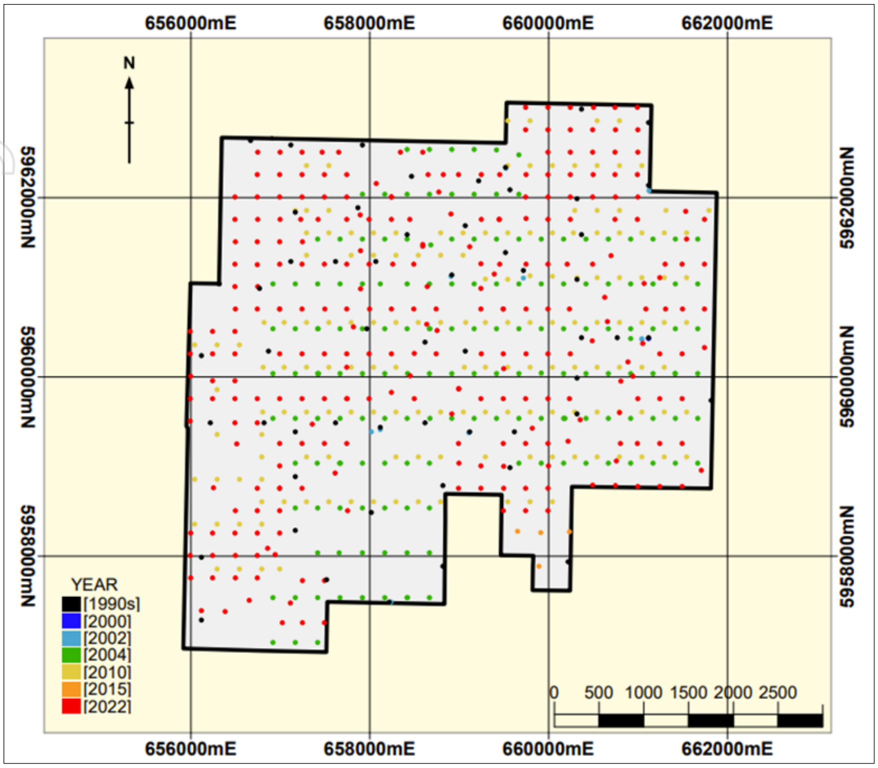
The drillholes completed over RL2002 (outside of MIN5532) are summarized in Table 10.2 with the drillhole collars shown in Figure 10.3.

All holes were vertical and orientated perpendicular to the sub-horizontal mineralized horizon.

Table 10.2 Drilling completed on RL2002 (outside of MIN5532)

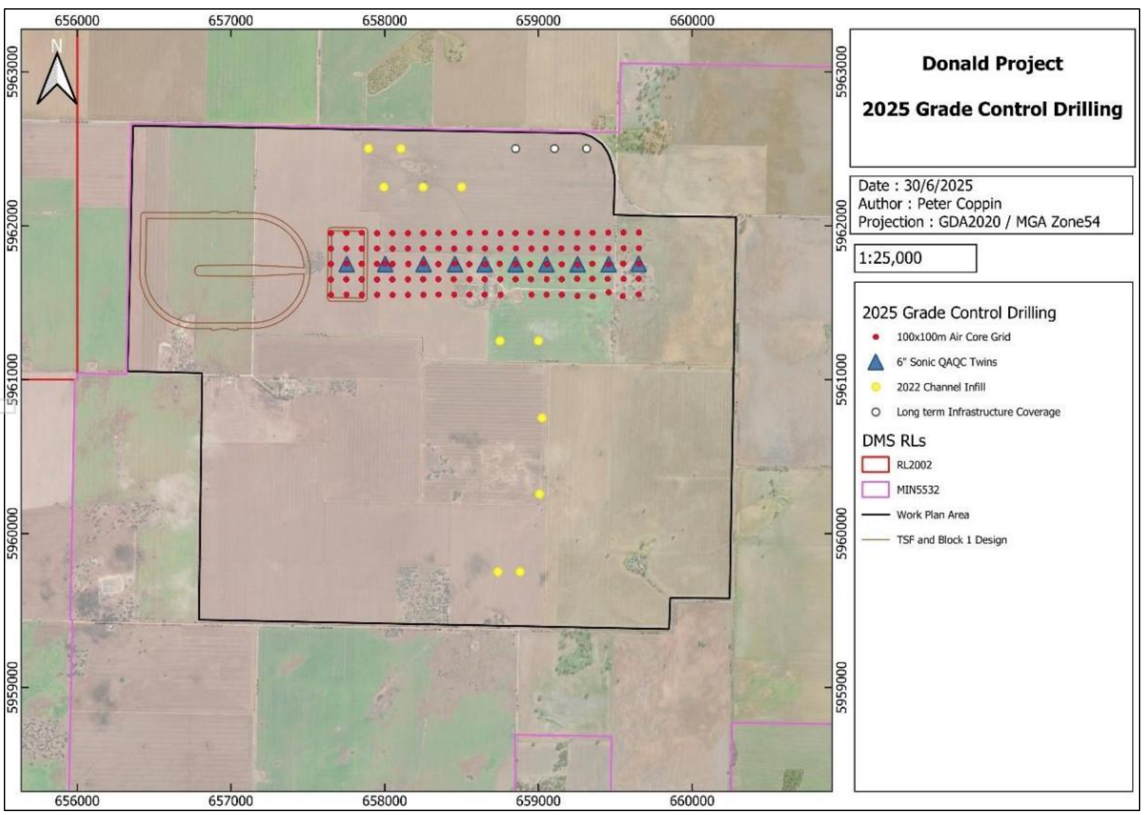
Company	Year	No. of holes	Metres	Type
CRA	1985–1991	332	8,970	AC
Zirtanium	2002	23	558	AC
	2004	118	2,603	AC
Astron	2010	179	4,607	AC
	2015	153	4,206	AC
Total	**1985–2024**	**805**	**20,944**	

Figure 10.1 Drilling in MIN5532 (black outline) coloured by year and used for Mineral Resource estimation



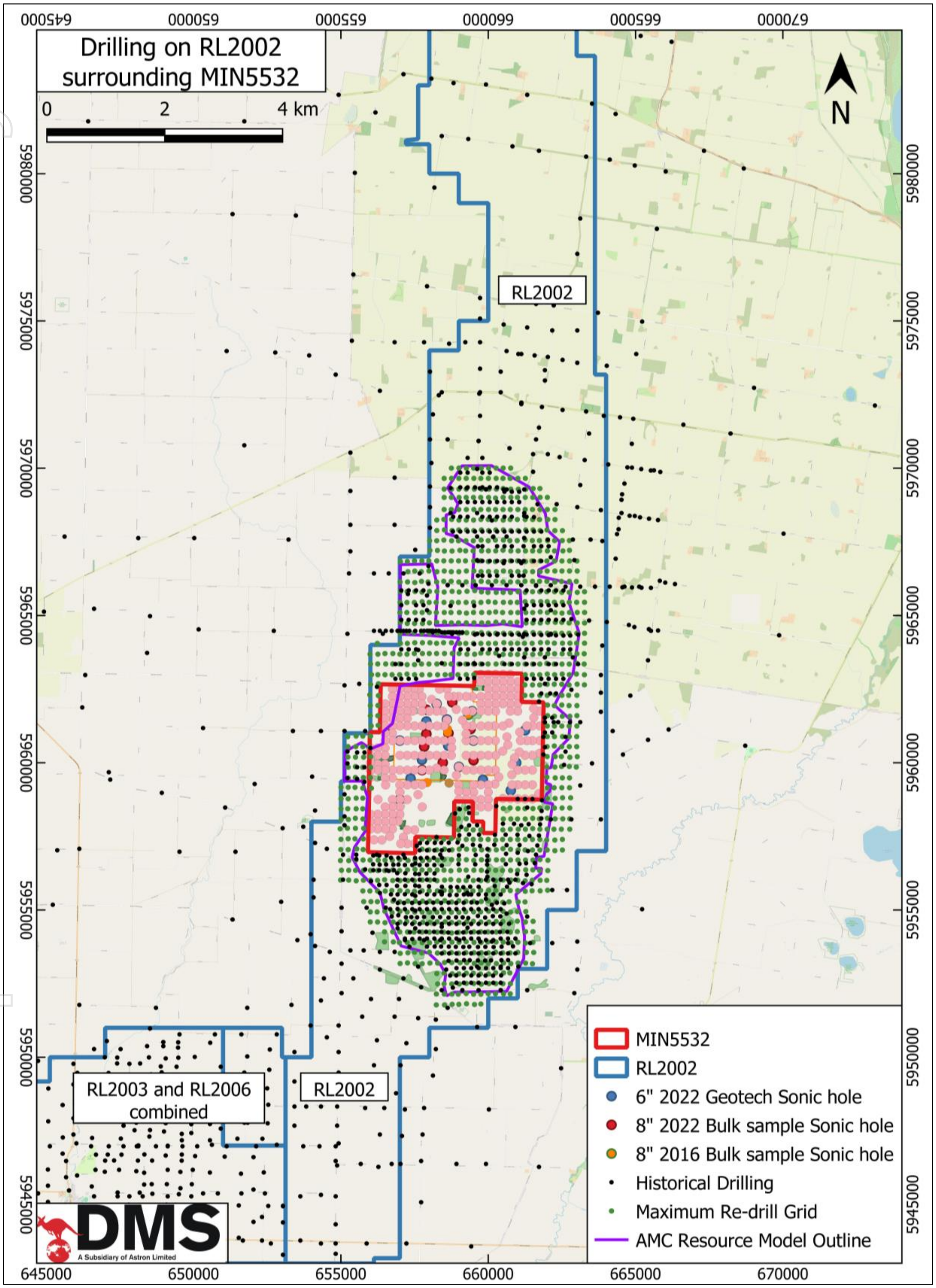
Source: Snowden Optiro

Figure 10.2 Drilling in MIN5532 (purple outline) during 2025 – not used for Mineral Resource estimation



Source: Astron

Figure 10.3 Extent of drilling in RL2002 (blue outline) coloured by program



Source: Astron

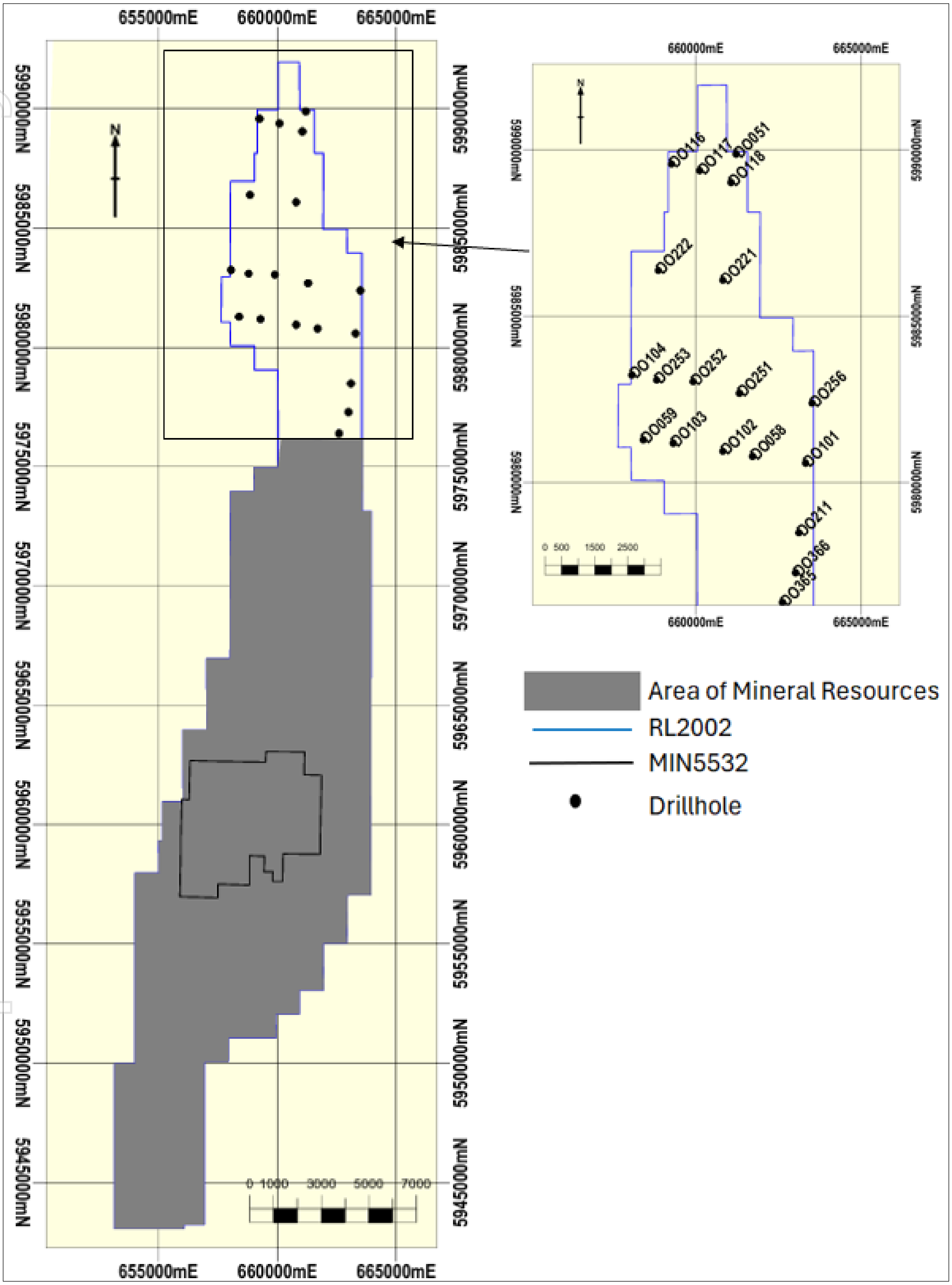
There are 19 holes drilled by CRA in the 1980s that intersected mineralization with >1% total HM within RL2002 to the north and outside of the extent of the MIN5532 Mineral Resource model (as discussed in item 14) and the RL2002 historical resource model defined by AMC (as discussed in Item 24.2). These drillhole intersections are listed in Table 10.3 and illustrated in Figure 10.4. All drillholes are vertical.

Table 10.3 Mineralised (>1% total HM) intersections within RL2002 not included in the extent of the resource models

Drillhole	Easting	Northing	From (m)	To (m)	Length (m)	Total HM%
DO051	661223	5989878	25	31	6	5.62
DO058	661722	5980778	20	26	6	6.84
DO059	658423	5981278	23	33	10	2.79
DO101	663322	5980578	20	28	8	3.62
DO102	660823	5980928	20	26	6	4.60
DO103	659323	5981178	21	23	2	4.20
			26	29	3	3.90
DO104	658072	5983228	23	26	3	4.57
			36	37	1	1.40
DO116	659273	5989578	19	20	1	4.20
			24	32	8	3.58
DO117	660123	5989378	23	25	2	3.50
			26	34	8	4.40
DO118	661072	5989028	25	29	4	8.15
			30	31	1	3.00
DO211	663123	5978478	20	23	3	6.90
DO221	660822	5986078	25	27	2	10.00
DO222	658872	5986378	28	29	1	8.62
DO251	661323	5982678	22	26	4	6.16
			27	29	2	4.58
DO252	659923	5983028	26	31	5	4.59
DO253	658823	5983078	21	23	2	4.32
			26	30	4	2.92
DO256	663523	5982378	27	28	1	5.63
DO365	662622	5976378	19	22	3	6.81
DO366	663023	5977278	20	22	2	6.25

Source: Snowden Optiro

Figure 10.4 Location of RL2002 and mineralized drillhole intersections outside of the MIN5532 and RL2002 resource models



Source: Snowden Optiro

10.1.1 Aircore drilling

The AC drilling completed by CRA over the Donald deposit was by a Mantis 200 drill rig. The drill spacing was generally at 500–800 m centres, with some closer spaced drilling (100–300 m) in selected areas. The average drillhole depth was 27 m below ground surface.

Zirtanium drilled the Donald deposit during 2002–2004 on a 250 m by 500 m grid pattern using a 10-tonne Mercedes truck-mounted (D28) Mantis 75 AC rig with a 300 cfm/175 psi compressor. NQ drill rods (70 mm diameter) with a three-blade drill bit were used for the 82 mm diameter holes. The holes were drilled to a depth of 24 m or until the Geera Clay was intersected.

The 2010 Astron program comprised infill AC drilling on MIN5532 and the area directly to the north. The purpose of this drilling was to:

- Provide sufficient coverage to enable the resource contained within MIN5532 to be upgraded to the Measured Resource category
- Obtain further information on the VHM composition within the HM resource and to enable the VHM resource to be increased
- Obtain further information on the resource to the immediate north where it appears that the high-grade zircon formation found within the resource area continues.

In 2015, a further AC drilling program was completed covering an area to the south of MIN5532 within RL2002. The program was primarily focused on delineating resources outside of MIN5532; however, a small number of holes provided information relevant to the southern part of MIN5532.

A Mantis 80 Toyota 6WD mounted drill rig with a NQ drill string and tungsten tip bladed NQ (82 mm) core bit was used for both programs.

Astron completed a further 245 vertical infill AC holes across MIN5532 in 2022 to:

- Provide new sample data for HM grade estimation covering the 20–250 µm size fraction to align with expected processing capabilities
- Address the difference in the domain sizes between the previously estimated and reported HM resource and VHM resource
- Sample more extensively above and below the deposit as previously interpreted
- Provide further logging information to enable a more detailed geological, domain-based resource estimation
- Determine rare earth mineral grades.

The drilling was completed on 250 mE by 250 mN and 250 mE by 500 mN patterns with holes spaced between existing drill traverses to improve the overall drillhole spacing. A Mantis AC75 drill rig with a 300 cfm/175 psi compressor and a NQ based drill string with three-blade AC drill bit was used for the program. All holes were drilled vertically, and the average hole depth was 26 m.

Astron undertook GC drilling in early 2025. For the GC program, AC drillholes were spaced on a 100 m by 100 m grid covering the first eight mining blocks, which represents approximately the first two years of mining production. Holes were drilled to intersect the entire Loxton Sand and to extent into the Geera Clay by 1 m. In addition to the regular grid-pattern, other drillholes included were:

- 14 drillholes infilling nearby areas that either were unavailable during the 2022 drilling or may become unavailable after the commencement of earthworks, due to the placement of long-term soil stockpiles or the need to establish drainage infrastructure.

- 10 drillholes drilled as twins of existing AC holes from the 2025 program with the only difference being that samples were split with a rotary splitter at the drill site. This exercise was undertaken to confirm if samples split at the rig can be considered reliably representative of the overall drill-sample.
- Four extra AC holes drilled north of the grid area following up on a potential high-grade zone seen in logging during the program.

10.1.2 Sonic drilling

In 2015, a 10-hole sonic drilling program was completed in the mining commencement zone of MIN5532. The core was sent to Mineral Technologies for metallurgical and engineering analysis. A selection of samples from were also analyzed by Ultra-Trace Laboratory for TiO_2, Fe_2O_3, Al_2O_3, ZrO_2, HfO_2 and loss-on-ignition by XRF analysis. No details are available on the accreditation or certification of Ultra-Trace Laboratory.

A second 25-hole program of sonic drilling was completed within MIN5532 during 2022 with the following objectives:

- To gather geotechnical information about the deposit including geology, material strength, compaction, moisture and bulk density
- To twin existing AC drillholes from the 2022 drilling program
- Collection of a bulk sample for further metallurgical testwork
- To add to the network of groundwater monitoring bores.

A 37-hole program of sonic drilling was completed during 2024, and a 10-hole program was completed in 2025 to collect additional geotechnical, bulk density and bulk samples for mineralogical analysis.

The 2015 and 2022 sonic drilling was carried out using a Boart Longyear LS600 drill rig. Sonic drilling after 2015 has been performed by Star Drilling Pty Ltd either using 6-inch core or 8-inch core. All geotechnical testwork was performed using a 6-inch core, whereas bulk samples were derived using the larger 8-inch core holes. Lexan Liner samples for bulk density analysis were taken from both hole sizes and from a range of locations across MIN5532. Assay data from the sonic holes were not used for Mineral Resource estimation.

10.1.3 Calweld drilling

In 2000, Zirtanium completed one large diameter (940 mm) Calweld drillhole to a total depth of 19 m to obtain a bulk sample.

10.2 Procedures

10.2.1 Surveying

The CRA reports do not include details of the survey methodology used for the holes drilled in the 1990s. As disclosed in Table 14.1, data from the CRA holes was used for geological interpretation only.

All Zirtanium’s drillholes were surveyed using a global positioning system (GPS) unit with an accuracy of ±2 m. The drill collar elevation was estimated by GeoReality software using a high-resolution digital elevation model with an accuracy of ±1.2 m. AMC reported that later drillhole collars were surveyed using a differential GPS (AMC, 2016a).

The 2010 Astron holes were surveyed by GPS prior to drilling, and all holes were drilled within 1 m of the surveyed peg. At completion, the hole locations were surveyed by licensed surveyors.

All 2022 drillhole locations were set out using GPS survey equipment with the final hole locations also surveyed by licensed surveyors using a Leica Captivate GS18 unit and CS20 controller.

The coordinate systems used for all location data prior to 2025 was GDA94/MGA94 Zone 54 and the Australian Height Datum.

All 2025 drillhole locations were set out by licensed surveyors using a Leica Captivate GS18 unit and CS20 controller. Where holes were moved, the final hole locations also surveyed by licensed surveyors. The coordinate systems used for all 2025 location data was GDA2020/MGA2020 Zone 54 and the Australian Height Datum.

10.2.2 Sampling and logging

CRA

CRA's drill samples were collected at 1 m intervals in plastic lined garbage bins. Each drill sample was visually logged for lithology, colour, grainsize, sorting, grain shape, accessory minerals and bottom of the clay horizon. A handheld scintillometer recorded the gamma count of each sample to assess a relative HM grade.

Prior to 1988, drill samples were collected at 1 m intervals, with an equal dry split by weight composited for a 2 m interval and submitted for heavy liquid separation. A composite of the >2.96 g/cm^3 SG concentrate for all drill samples from each hole was prepared for mineralogy studies.

The technique was modified in 1988 to reduce time spent on sample preparation. Previously, the work involved a conventional dry riffle splitting technique to generate a 1 kg dry sample representing the composite 1 m intervals in equal proportions by weight for a particular sample interval.

A concrete mixer was subsequently used to prepare a wet sample for a lithologically consistent bulked sample interval. This allowed ferruginous granules/pisolites in the drill samples to remain in suspension. CRA assumed that HM grains less than 100 µm would remain evenly disseminated in suspension. A wet sample was scooped from the mixer and dried to a 1 kg sample for analysis. A close correlation between the new technique and the conventional dry splitting technique was reported for recovered HM concentrates.

To allow for rapid analysis of samples collected during resource infill drilling, CRA used a hand coring technique to collect a sample from selected single metre intervals following compositing. Checks were made against the conventional dry splitting method and good correlations were reported.

On completion of the hole, a downhole natural gamma logging device was used to identify radiometric anomalies (thorium in monazite). Based on the gamma log values, individual samples were composited into larger intervals (usually two or three composites per hole) and sent for preparation and assay. The natural gamma logging results provided the depth to the top and base of mineralization and the interpreted thickness of the HM sand deposit in the drillhole. This information was later correlated with the assayed samples.

Zirtanium

For Zirtanium's drilling program, calico bags were used to collect the samples and water via a cyclone. At the completion of the drilling program, the geologist assessed the drill logs and selected the samples sent for HM analysis.

The drillholes were geologically logged at 1 m intervals recording the lithology, estimated HM, interpreted stratigraphic horizon and presence of indurated material. Samples for HM and size analysis were collected at 1 m intervals from identified mineralized horizon.

Prior to moving to the next location, each hole was plugged; backfilled and the site cleaned. The on-site geologist panned and extracted representative subsamples, and visually logged lithology, colour, estimated HM (%) and estimated HM grain size.

Astron

Astron's sampling method for the 2010 program replicated the process from Zirtanium's 2004 drilling campaign. Two types of samples were collected from each hole:

- Surface or topsoil sample using a pick and shovel
- HM samples collected at 1 m intervals from the identified mineralized horizon.

The HM samples were collected by cyclone at 1 m intervals. The recovered material was dropped into buckets from the cyclone and visually assessed for overall lithological description. Once potentially relevant HM-bearing sand and silt intervals were reached, a small sample of each interval was panned to determine the HM content, and the sample described in the logs. When the top of the HM-bearing interval was determined, calico sample bags were placed directly under the cyclone and the whole of the recovered material over 1 m was collected. The hole was terminated once the Geera Clay was intersected.

The drillholes were geologically logged at 1 m intervals recording the lithology, colour, mineralization, contamination and any other features.

For the 2022 program, representative samples were collected in calico bags at 1 m intervals using a rig mounted cyclone and rotary sample splitter (25% split). The holes were typically sampled from the top of the Loxton Sand until the intersection of the Geera Clay. The samples were sun dried before dispatch to the assay laboratory. Residue from the sample splitter was collected into larger calico bags for backup testing and recovery calculations. Field duplicate samples over a 1 m interval were also collected from the sample splitter every 40 samples. Standard samples sourced from Placer Consulting Pty Ltd were also inserted every 40 samples.

For the 2025 GC AC program, the entire sample for each 1 m interval was collected for 123 of the 133 holes, and samples were split at the assay laboratory. Ten twin AC holes were drilled, and a 25% split was taken at the drill rig with a rotary splitter. The 2025 sonic holes were sampled on 0.5 m intervals. All 2025 AC holes were sampled from the top of the Loxton Sand until the intersection of the Geera Clay. Geological logging recorded lithology, lithology proportion, grain size, colour, induration (presence and strength), hardness, geological stratigraphical unit and HM type and content estimation, and estimated clay content. The 2025 samples were not used for Mineral Resource estimation but were used to generate a separate GC model for the first two years of mining.

Sample representativity

While the AC drilling technique was extensively used for the evaluation of the Donald deposit, some problems with recovery were experienced in the pre-2004 drilling with refinements subsequently made to the drilling equipment and technique to improve recovery. In the 2002 Zirtanium drilling program, poor HM% correlation with the CRA drilling was reported. These results were not used for the current Mineral Resource estimate (as disclosed in Item 14), with the holes used for geological interpretation only.

For the 2004, 2010 and 2015 drilling programs, the entire sample from each 1 m interval was collected at the drill rig with the samples dried before splitting to remove any uncertainty from the splitting of wet samples at the drill rig. In 2022, the samples were split (25%) at the drill rig using a rotary splitter with attention paid to cleaning and minimizing contamination under the supervision of an Astron representative. The sample splits were deemed acceptable and quality control data (discussed in Item 11.3) indicated that the data from the 2022 drill program is of a high quality and suitable for resource estimation. Recovery factors were not applied to the data. For the 2025 GC AC program, the entire sample for each 1 m interval was collected for 123 of the 133 holes, and samples were split at the assay laboratory.

10.2.3 Data management and security

DPPL's samples are stored in a shed at Minyip.

Prior to February 2025, the DPPL master database was stored within a Microsoft Access format that contained all historical and recent drilling and assay information. The database was independently reviewed by AMC prior to its last Mineral Resource update in 2016 and by IHC Mining in 2021–2022.

Between 2022 and February 2025 all information added to the database and subsequent validation was the sole responsibility of Astron's senior geologist. Validation work included checking the imported data against the original assay reports. The database and backups were stored on Astron's Microsoft SharePoint document management platform, which has built-in access restrictions.

Since February 2025, DPPL's data has been managed in Quest by third party provider EarthSQL Pty Ltd in a fully relational SQL Server database hosted on Microsoft Azure. All data is gathered from either the field or the laboratory via pre-determined templates and vetted prior to being uploaded.

11 Sample preparation, analyses, and security

11.1 Sample preparation and analysis

11.1.1 CRA

CRA's samples were initially analyzed at independent laboratory AMDEL and at CRA's internal Belmont laboratory in Perth, Western Australia. No accreditation or certification details were disclosed for AMDEL or CRA's internal laboratory.

The analytical procedure used up to mid-1989 was heavy liquid and magnetic separation of a sieved fraction (>38 µm and <1 mm) followed by mineralogical detection by a combination of chemical and optical methods. Duplicate samples reportedly showed a good correlation between the two laboratories for total HM.

A new analytical technique was developed in 1989 (the 'WIM Method') to facilitate a more accurate assessment of the titanium mineral suite and to capture the fine material lost when sieving samples at 38 µm. The new procedure allowed better liberation of minerals cemented with clay or goethite, recovered the denser HM such as zircon and monazite in the <38 µm fraction and used chemical analysis rather than optical methods to determine the mineral assemblage of the HM fraction.

As disclosed in Table 14.1, data from the CRA holes were used for geological interpretation only. Assay data for HM, slimes, oversize and mineral assemblage data were not used for the MIN5532 Mineral Resource estimate due to the historical nature of the data and inconsistencies in the size fractions and analytical methodologies with the data obtained by Astron in 2022.

11.1.2 Zirtanium

Due to the large number of drill samples, multiple laboratories under the supervision of consultant's Titanatek were used by Zirtanium.

Titanatek gave each laboratory instructions for the sample preparation developed for WIM-style, fine-grained material. Independent commercial laboratory, Western GeoLabs laboratory in Perth, Western Australia performed the analytical work, using the following sample preparation procedure:

- Kiln dry samples (6–9 kg) at 110°C.
- Weigh samples for recovery estimate.
- Hammer each sample to break up clays.
- Screen sample using a 4 mm oversize screen, remove rocks and crush remainder of +4 mm fraction via a jaw crusher.
- Return crushed sample to 4 mm screen and hand crush +4 mm clays if required.
- Weigh and record all +4 mm product and discard.
- Riffle split all -4 mm material to obtain nominal 130 g subsample.
- Retain residue as reference/audit sample.
- Weigh subsample (25 g) and carry out soak/attrition desliming at 38 µm.
- Wet sieve to deslime and retain +38 µm product in aluminium tray and dry.
- Weigh dry sample and screen at +1 mm and record weight.
- Centrifugal heavy liquid separation of the +38 µm/-1 mm fraction.
- Screen sink material to +38 µm/-90 µm and weigh for in-size HM (%) calculation and mineralogy analysis.

- Composite mineral samples by weight for mineralogy analysis. Mineralogy testwork results were adjusted for potential use with +38 µm/-1 mm total HM assay data.

Comparative testwork using a centrifuge achieved an increase in the recovery of HM for the fine-grained fraction vs standard heavy liquid separation. Centrifuge was selected as the routine method for HM% determination using the following standardized procedures:

- Prepare a 25 g sample and place in a 110 ml centrifuge tube and add TBE (>2.96 g/cm^3 SG) and mix.
- Centrifuge for 5 minutes at 1,500 rpm, re-stir and repeat spin.
- Scoop off floats and wash the sides of the tube with TBE and leave to settle for 5 minutes.
- Gently pour the remainder of the floats off, drain into filter paper and wash with TBE so that all HM are collected on the filter paper.
- Transfer to a wash basin and clean with acetone. Wash into a drying dish and oven dry.
- Weigh the HM content and save in labelled plastic bag.

Further testing by Titanatek confirmed that there was no statistical difference using a 25 g sample instead of the 70 g sample normally used by Titanatek. The smaller size was adopted and Western GeoLabs duplicated 1 in every 10 samples as part of its internal quality control procedure. To identify potential laboratory analytical errors, 1 in 20 samples was sent to external laboratories and results were statistically analyzed for bias, repeatability and reproducibility.

Analysis of the VHM component indicated a size range from 10 µm to 90 µm, the majority of which lies above 38 µm, with an average of approximately 50 µm to 55 µm. Western GeoLabs reported its HM% results as +38 µm/-1 mm, even though the majority of the VHM reported in the 38 µm to 75 µm range.

From 2004, Western GeoLabs reported the HM% results adjusted to a +38 µm/-90 µm HM size range definition for consistency with mineralogy assemblage testwork.

Geochempet Services performed mineralogical analysis on a sample set. To provide maximum control over the mineralogical data for resource estimation, every second hole on every second drill line was selected by Zirtanium for mineralogical analysis (1,000 m by 500 m coverage). The mineralogical analysis included composite samples prepared by Titanatek based on a 1.5% HM cut-off grade using a weighted average of the individual 1 m HM intervals.

No details are available on the accreditation or certification of Western GeoLabs, Geochempet Services or Titanatek.

11.1.3 Astron

From 2010, Astron adopted the same sample preparation and analytical techniques used by Zirtanium at Western GeoLabs. The only exception was the removal of jaw crushing +4 mm oversize material and the splitting of samples down to 250 g, which was outsourced to independent laboratory Gekko Pty Ltd in Victoria (ISO/IEC 17025 (2017) accreditation) to reduce the volume of material shipped to Western GeoLabs in Perth and improve the assay turnaround time.

As the plant process flowsheet did not include a crushing module, it was considered inappropriate to include this in the sample preparation procedure, resulting in a substantial increase in oversize percentage. Further analysis of the oversize by Western GeoLabs verified that most of this material is mineralized clay that has solidified during the sample drying process. Water in the trommel and subsequent processes will break this material down during processing, releasing any contained HM.

Western GeoLabs' laboratory in Perth carried out the heavy media separation by TBE and centrifuge.

Samples for mineralogy were either composited or selected on a per metre basis. Robbins Metallurgical (who purchased Titanatek and is now part of the Royal IHC group) prepared the samples and Geochempet Services performed the mineralogical studies.

Astron's analytical work during 2022 was performed by independent laboratory Bureau Veritas at its Adelaide, South Australia facility (ISO 9001:2015 accreditation). As disclosed in Item 14, Area 1 and Area 2 were defined, based on the drilling programs, for data analysis and grade estimation for the current Mineral Resource. The area covered by the 2022 drilling is coded as Area 1 and encompasses 97% of the total area of MIN5532.

The sample preparation and analytical process for the 2022 samples was:

- Oven dry samples
- Break up clays in bag with mallet
- Rotary split 500 g for testwork with an additional 500 g split off every 28th sample for the laboratory duplicate
- Soak overnight in a 1% TSPP solution
- Wet screen at 20 µm, 250 µm and 1 mm to create an in-size sample of between 20 µm and 250 µm
- Dry and weigh in-size and oversize samples
- Rotary split off approximately 100 g for heavy liquid separation
- Centrifugal and heavy liquid separation using TBE (>2.96 g/cm^3 SG)
- Centrifugal and heavy liquid separation of laboratory duplicate
- Centrifugal and heavy liquid separation of standard (supplied by Bureau Veritas) every 28th primary sample
- Wash, dry and weigh sinks.

Total HM was measured in the +20 µm/-250 µm fraction and reported as a percentage of the whole sample.

The analytical testwork flowsheet is presented in Figure 11.1.

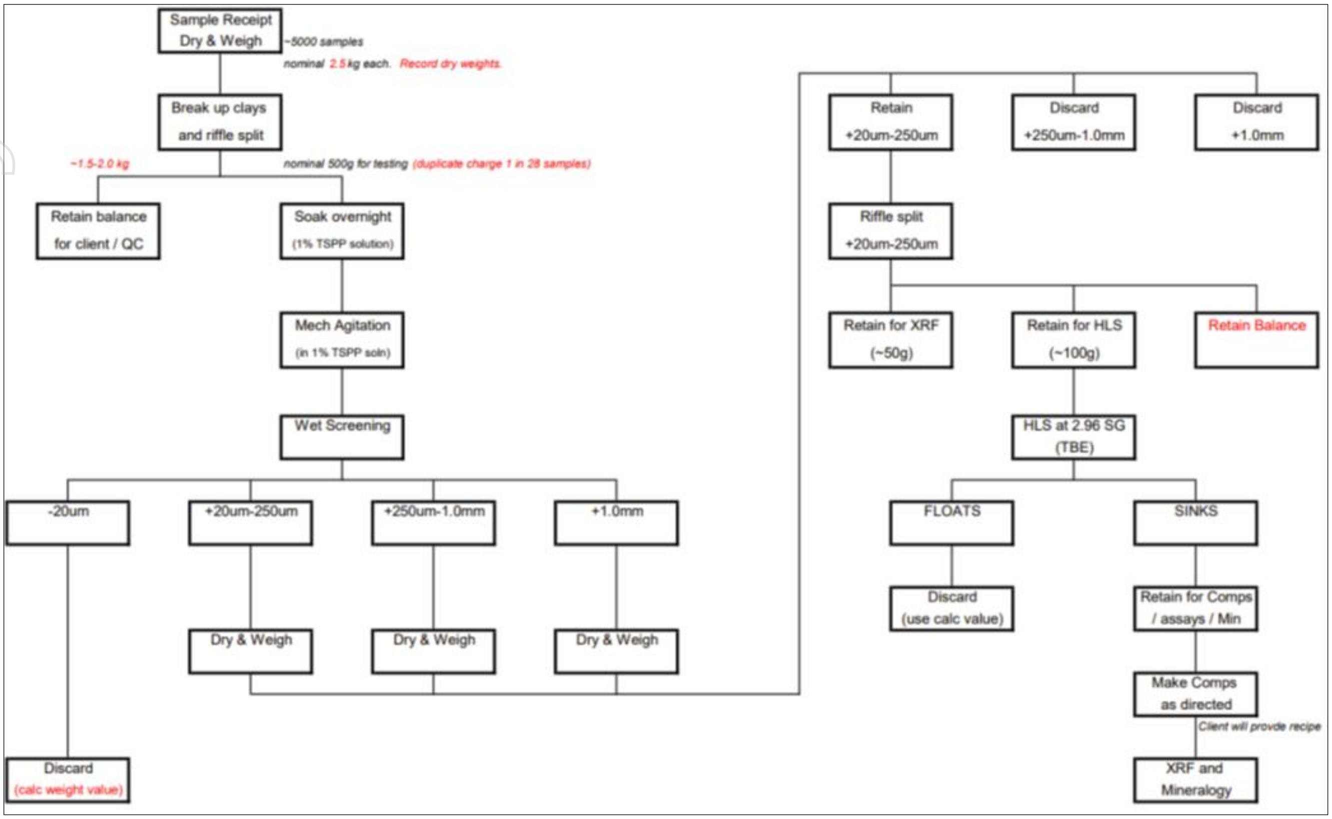
The need for additional breaking up of solidified clays and aggregate particles was monitored throughout the process with the possibility of adding a second pass of wet screening after further mechanical agitation in 1% TSPP solution, but this was deemed unnecessary at the time of the program.

Mineralogy on 53 composite samples, generated from individual samples of >1% total HM from 227 holes drilled in the 2022, was also performed by Bureau Veritas using XRF, laser ablation inductively coupled plasma mass spectrometry (ICP-MS) and QEMSCAN® analysis. Testwork was performed on the in-size (+20 µm/-250 µm fraction) HM sinks composited by representative geological domains (LP1, LP2 and LP3) and geographic domains (from nearby or adjacent holes). This was done primarily to obtain enough sample mass for the QEMSCAN® analysis.

The process for the mineralogy was:

- Compositing – homogenize and subsample as required
- QEMSCAN® analysis
- Pulverise samples for assay
- XRF and ICP-MS
- Quantitative x-ray diffraction (XRD) analysis for validation and comparison with XRF and QEMSCAN®.

Figure 11.1 2022 analytical testwork flowsheet



Source: Snowden Optiro, 2022

The "particle classification" data from the QEMSCAN® analysis was used to estimate the titania minerals, XRF data was used to estimate the zircon, TiO_2% and ZrO_2+HfO_2%, and the ICP-MS data was used to estimate monazite, xenotime and REOs (including CeO_2% and Y_2O_3%) within the HM fraction.

The breakpoints used for the titania minerals were as follows:

- Rutile (including anatase) (≥95% TiO_2)
- Leucoxene (50–95% TiO_2)
- Ilmenite (30–50% TiO_2).

Zircon and monazite and xenotime were estimated using the follow conversions:

- Zircon = ZrO_2+HfO_2 / 0.667
- Monazite = CeO_2 / 0.28
- Xenotime = Y_2O_3 / 0.42.

The REEs (in parts per million (ppm)) were converted to REOs in percent using the following conversions, and TREO was calculated as the sum of these REOs:

- CeO_2 = Ce x 1.2284/10,000
- Dy2O_3 = Dy x 1.1477/10,000
- Er_2O_3= Er x 1.1435/10,000
- Eu_2O_3 = Eu x 1.1579/10,000
- Gd_2O_3 = Gd x 1.1526/10,000

- Ho_2O_3 = Ho x 1.1455/10,000
- La_2O_3 = La x 1.1728/10,000
- Lu_2O_3 = Lu x 1.1371/10,000
- Nd_2O_3 = Nd x 1.1664/10,000
- Pr_6O_{11} = Pr x 1.2082/10,000
- Sm_2O_3 = Sm x 1.1596/10,000
- Tb_4O_7 = Tb x 1.1762/10,000
- Tm_2O_3 = Tm x 1.1421/10,000
- Y_2O_3 = Y x 1.2699/10,000
- Yb_2O_3 = Yb x 1.1387/10,000.

As discussed in Item 14, this data was used as input to an inverse distance estimate of the mineral assemblage components of the HM fraction.

The 2025 GC samples were analyzed by ALS Global Metallurgy in Perth, Western Australia (ISO 9001 accreditation). The following procedures were used for sample preparation and analysis:

- Clay dispersion in container of 1% TSPP solution – overnight soak time.
- Mild stirring for two minutes to disperse and homogenize.
- Dissociation by bottle-roll (steel).
- Wet screened to 1 mm, 250 µm and 20 µm using stacked screens.
- Sample fractions dried and weighted.
- Riffle split of +20 µm/-250 µm fraction for HM determination. Initially, 100 g was taken for the heavy liquid separation start weight, this was increased to 150 g mid-program to ensure enough sink material was produced for mineralogy work on low grade samples.
- Riffle spit fraction and processed via heavy liquid separation at 2.96 g/cm^3 SG using TBE.
- The percentage of total HM calculated for the entire sample.
- Chemical analysis of heavy liquid separation sinks by XRF for mineral sands element suite and by D4ZM lithium metaborate fusion ICP-MS for REEs.

QEMSCAN analysis was not undertaken and so the individual titania minerals (rutile, leucoxene and ilmenite) were not determined. The above conversions for zircon, monazite, xenotime and REEs to REOs were applied.

11.2 Bulk density

11.2.1 CRA

CRA initially assigned bulk density values derived from the nearby WIM 150 deposit for the Donald (WIM 250) resource estimates due to their similarity. Initial determinations by CRA, derived from weighing a known volume of competent drill core, returned an average bulk density of 2.0 t/m^3 within a range of 1.8 t/m^3 to 2.2 t/m^3. CRA used a more conservative bulk density of 1.75 t/m^3 for the initial WIM 150 resource estimate.

Trenches excavated for bulk sampling allowed for further bulk density testwork, resulting in an average dry bulk density of 1.65 t/m^3.

11.2.2 Zirtanium

Roadlab Pty Ltd, accredited by the National Association of Testing Authorities (NATA), conducted field density measurements from a test pit excavated during 2005 using a Troxler nuclear gauge. The results are summarized in Table 11.1 and confirmed the samples in Loxton Sand mineralization agreed with the bulk density value of 1.65 t/m^3 used by CRA.

Table 11.1 Troxler nuclear gauge bulk density readings

Formation	Lithology	No. of samples	Depth (m)	Moisture (%)	Wet density (t/m^3)	Dry density (t/m^3)
Shepparton Formation	Clay	6	2 to 6	26.4	1.89	1.50
Loxton Sand	Fine-grained sand	3	9 to 12	17.9	1.98	1.68

Source: Astron, 2023a

11.2.3 Astron

As part of the 2022 sonic drilling program, 15 holes that were drilled primarily for geotechnical testwork were also used to collect samples for bulk density testwork specific to the geological domains (LP1, LP2 and LP3) used for the 2022 Mineral Resource estimate. Samples were analyzed by the ATC Williams Laboratory (ISO 9001 accreditation) using the Australian Standard test for Bulk Density (AS1289.6.4.1).

Further bulk density sampling was conducted as part of the 2024 and 2025 sonic drilling programs. These samples were analyzed using the same technique. Data for bulk density of soil types and the Shepparton Formation clays (0–10 m below surface) were also gathered from surface test pitting work as part of soil profile investigations in 2024.

Data from a total of 149 density samples, collected from test pits in 2005 (nuclear density measurements) and 2018 (sand replacement), from nuclear density measurements in 2024, and from sonic drill core samples in 2022, 2024 and 2025 were used to determine average density values for the Shepparton Formation and LP1, LP2 and LP3 (Table 11.2). These average density values were applied for tonnage estimation (Item 14).

Table 11.2 Bulk density testwork results

Geological unit	No. of samples	Moisture (%)		Dry density (t/m^3)	
		Range	Average	Range	Average
Shepparton Formation	70	17.1–39.9	29.5	1.10–1.68	1.45
Loxton Sand – LP1	34	5.7–24.0	15.2	1.58–2.14	1.84
Loxton Sand – LP2	36	16.0–34.2	22.4	1.47–2.13	1.75
Loxton Sand – LP3	10	23.4–28.2	28.2	1.52–1.85	1.67

Source: Snowden Optiro, 2025b

11.3 Quality control quality assurance procedures

11.3.1 Pre-2022 analytical data

The CRA reports do not include details of QAQC data or procedures used for the samples collected in the 1990s. As disclosed in Table 14.1, data from the CRA holes was used for geological interpretation only in the MIN5532 Mineral Resource estimate.

A detailed review of the historical assay data by Astron (which included the collation of assay data from the original laboratory reports) revealed that different size fractions were used for the analysis of the total HM content of the whole sample post breakup and riffle splitting as follows:

- CRA: +38 µm/-1 mm fraction for HM%, mineralogy determined in +38 µm/-90 µm fraction (in-house laboratory) and +38 µm/-75 µm fraction (AMDEL) with all results adjusted to % of whole sample.

- Zirtanium, 2000 and 2002: +38 µm/-1 mm fraction for HM%, mineralogy determined in +38 µm/-90 µm fraction and adjusted to % of whole sample.
- Zirtanium, 2004: +38 µm/-1 mm fraction for HM%, mineralogy determined in +38 µm/-90 µm fraction and adjusted to % of whole sample.
- Astron, 2010 and 2015: +38 µm/-90 µm fraction.

Only assay data from the 2022 drilling program was used for the MIN5532 Mineral Resource estimate in Area 1. Assay data from the 2004, 2010 and 2015 drilling programs were used for resource estimation in Area 2 (Table 14.1).

Quality control data for the 2004 drilling program included interlaboratory analysis of duplicate samples. Western GeoLabs produced two 1 kg subsamples from 1 in 20 samples for analysis at Dune and Titanatek laboratories. The results were good with correlation coefficients of over 0.94 for total HM, slimes and oversize.

Six sets of twinned holes were drilled during 2004. Zirtanium (2005) reported that the mineralization intercept intervals were comparable, comparisons of the slimes and oversize data were acceptable, and the total HM content varied between the twin holes.

AMC reviewed the quality control data for laboratory repeat analysis of drill samples from the 2010 drilling and field duplicate and laboratory repeat analysis of drill samples from the 2015 drilling (AMC, 2016a). AMC reported that the 2015 field duplicates showed a bias for total HM and oversize. For the MIN5532 Mineral Resource estimate, this data was used for estimation within Area 2 only and was classified as Indicated at best (refer to Item 14.4).

11.3.2 2022 analytical data

QAQC procedures for the 2022 drilling program included insertion of standards and field duplicates at the drill site (rate of 1 in 40). Blank samples were not inserted and are generally not used in the mineral sands industry. In addition, duplicate and standard samples were inserted by the laboratory.

Standards

Prior to drilling, a batch of HM sand standard material was acquired from Placer Consulting Pty Ltd in Western Australia. The standard material was not officially certified. The standard samples used were primarily sourced for HM% content monitoring and the stated expected value for the supplied standard material was 3% HM.

Performance of the standard throughout the program was considered moderately acceptable averaging 2.87% HM over 121 standards assayed. The performance of the slimes content was more inconsistent with the content of the whole batch determined by large-scale mixing of slimes material into the batch. Similarly, the oversize (>1 mm) content was very low and consistent apart from two outlier results.

The standard could only be used to assess bias or drift in the batches of results over time. No bias was noted for HM, slimes or oversize contents over time.

For the 2022 drilling, the rates of insertion of standards are in line with industry standard rates. It is recommended that at least three different standards are included with the samples submitted for analysis.

Field duplicates

Duplicate samples were collected from the cyclone at the drill rig and inserted at a rate of 1 per 40 samples, with the results summarized in Table 11.3.

Assays for the original and repeat field duplicates show a high correlation (0.91 to 0.98). The 90th percentile HARD (half absolute relative difference) values were good for total HM and slimes (17% and 10% respectively) and were acceptable for oversize (33%). The field duplicate samples showed no overall bias for total HM and a small bias (less than 4% relative difference) to lower slimes and oversize contents in the duplicate samples. The duplicate samples performed well and indicate good precision of the total HM, slimes and oversize analysis.

Table 11.3 QAQC results from field duplicate samples

	Total HM			Slimes			Oversize		
	Original	Duplicate	% Diff.	Original	Duplicate	% Diff.	Original	Duplicate	% Diff.
Count	118	118	-	118	118	-	118	118	-
Minimum	0.04	0.04	0.0	5.48	7.02	28.1	0.82	0.48	-41.5
Maximum	10.11	9.23	-8.7	66.74	53.64	-19.6	54.23	50.66	-6.6
Mean	2.72	2.79	2.8	21.23	20.44	-3.7	12.51	12.06	-3.6
Median	0.23	0.22	-2.4	1.15	1.01	-12.0	1.03	1.02	-0.8
Standard deviation	1.86	2.00	7.3	15.92	16.41	3.1	10.31	8.90	-13.7
Correlation coefficient	0.9839			0.9180			0.9142		

Source: Snowden Optiro, 2022

Laboratory QAQC

Internal laboratory QAQC practices at Bureau Veritas for the 2022 drillhole samples consisted of standards and duplicates inserted at a rate of 1 in 28 throughout the program. The results of this work were reviewed by the Qualified Person for the Mineral Resource estimate, and the overall performance of the standard and duplicate analyses were deemed acceptable.

The average returned HM% value across 155 laboratory standards was 4.0% HM with an expected value of 4.0% HM. Scatter plots comparing laboratory duplicate results for HM %, slimes % and oversize % to the parent sample assays showed excellent correlation.

11.3.3 2025 analytical data

Field duplicates were not collected for the 2025 GC program, as the entire 1 m sample was submitted to the assay laboratory. Data from the twin-holes was used to assess the quality of the data. Only 17 field standards were submitted as part of the sample stream. The available data from the twin drillholes and standards have not indicated any issues. The 2025 samples were not used for Mineral Resource estimation but were used to generate a separate pre-production GC model for the first two years of mining.

11.4 Security

All samples from 2022 onwards were dispatched from site under the supervision of Astron's senior geologist. The samples were bagged into larger polyweave bags, numbered and zip tied prior to loading into numbered bulka bags on pallets for transport to Bureau Veritas using a commercial freight service.

Previously, assay data from the laboratory was emailed in spreadsheet files by batch number and imported into the Microsoft Access database by Astron's senior geologist. Since February 2025, data from the laboratory is emailed to EarthSQL Pty Ltd where it is vetted prior to being uploaded into the SQL Server database.

11.5 Qualified Person's opinion

Industry standard practice and a reputable laboratory have been used for sample preparation and sample analysis of the samples from the 2022 drilling program. Transfer of the 2022 assay data from the laboratory and inclusion in Astron's database was verified by the Qualified Person for the MIN5532 Mineral Resource estimate (refer to Item 12.4). No issues were noted by the Qualified Person on data management, sample security or sample analysis.

Following review of the data quality and assay techniques, the Qualified Person concluded that the dataset from the 2022 drill program is of a high quality and suitable for resource estimation and potential Measured classification. Within MIN5532 (Phase 1), only the 2022 assay data were used for estimation of 92% of the Mineral Resources: this includes all of the Measured Resources and 82% of the Indicated Resources in MIN5532 (refer to Item 14.4).

There is less confidence in the assay data from the 2004, 2010 and 2015 drilling programs, which were used for resource estimation in Area 2. Consequently, the Qualified Person assigned a lower classification, and Mineral Resources within Area 2 were classified as Indicated at best (refer to Item 14.4). Analysis of the CRA data and Zirtanium 2000 and 2002 samples used different size fractions, so assay data from these programs were not used for the current Mineral Resource estimate. Data from these drilling programs were only used to guide geological interpretation.

12 Data verification

12.1 Data management

The Qualified Person for the Mineral Resource estimate compared the assay data sheets for the 2022 drilling program from the laboratory against the assay data files provided by Astron. All the 2022 assay data extracted from the database matched the data in the assay data sheets supplied by Bureau Veritas. Only assay data from the 2022 drilling program were used for resource estimation in Area 1 (refer to Item 14). The area covered by the 2022 drilling is coded as Area 1 and encompasses 97% of the total area of MIN5532.

12.2 Survey

The Qualified Person checked the drillhole collar data for all 2000–2022 drillholes against the topographical surface provided by DPPL. A few minor discrepancies were noted between the topographical surface and the 2022 drillhole collars and, as the 2022 drillhole collars were surveyed by licensed surveyors (refer to Item 10.2.1), the topographical surface was adjusted to align with all 2022 drillhole collars.

During the site visit by the Qualified Person, confirmation of a drillhole collar location within rehabilitated agricultural land was completed.

12.3 Drilling and sampling

There were no drilling or sampling programs in progress during the time of the Qualified Person's site visit in August 2024.

12.4 Sample analysis

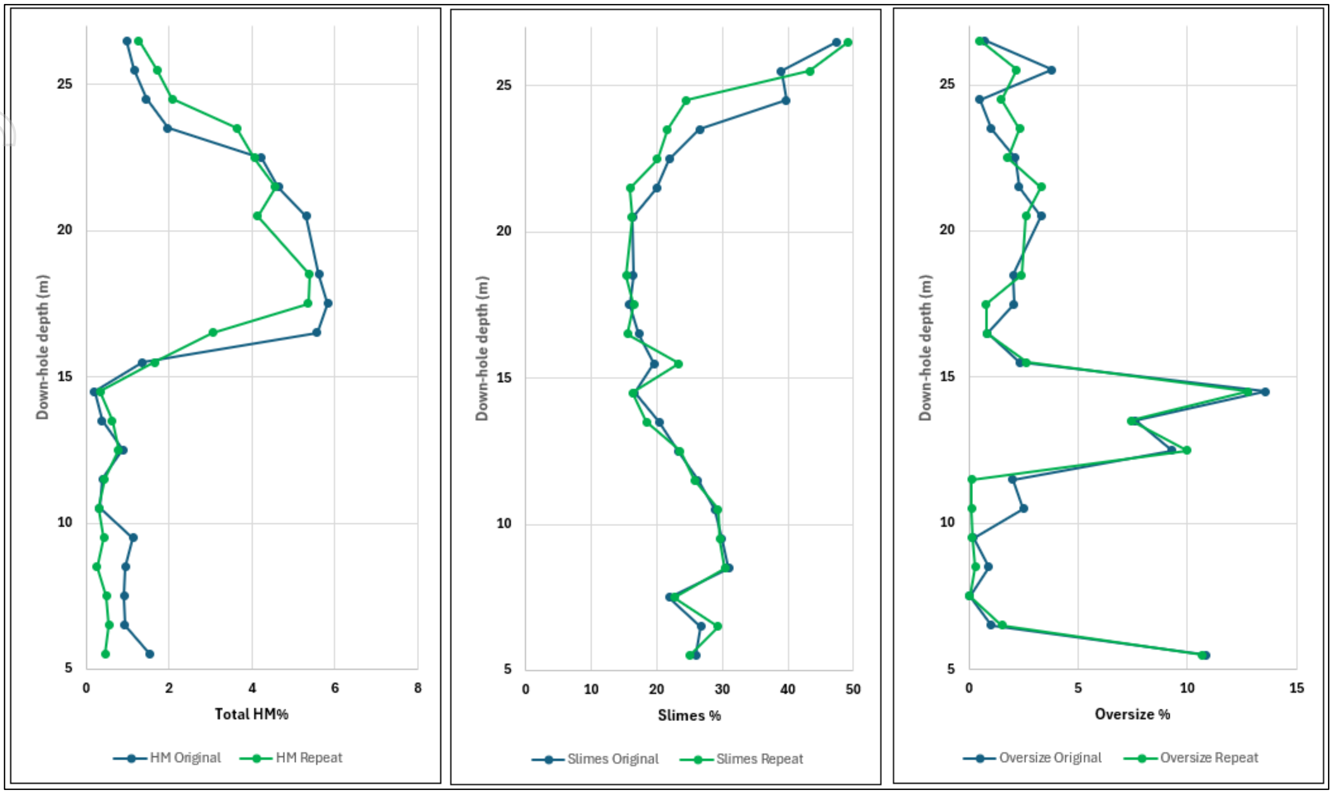
During the Qualified Person's site visit in August 2024, 21 samples from AC drillhole DMS170, completed during the 2022 drilling program, were selected and submitted to Bureau Veritas for analysis. The results are summarized as downhole plots of the total HM, slimes and oversize data in Figure 12.1. Correlation coefficients of the datasets are moderately high for total HM (r^2 = 0.84) and slimes (r^2 = 0.81) and high for oversize (r^2 = 0.94). The average total HM, slimes and oversize contents are slightly higher for the original assay data (Table 12.1). In the Qualified Person's opinion, the repeat analysis results indicate acceptable verification of the original 2022 assay data.

Table 12.1 Summary statistics from verification analysis of hole DMS170

	Total HM		Slimes		Oversize	
	Original	Repeat	Original	Repeat	Original	Repeat
Minimum	0.20	0.26	15.84	15.33	0.02	0.04
Maximum	5.82	5.39	47.50	43.31	13.58	12.77
Mean	2.17	1.97	25.27	24.37	3.28	3.04
Correlation coefficient	0.84		0.81		0.94	

Source: Snowden Optiro

Figure 12.1 DMS170 – downhole plots for verification results for total HM (left), slimes (centre) and oversize (right) results



Source: Snowden Optiro

12.5 Qualified Person's opinion on the adequacy of the data

The Qualified Person confirmed that the 2022 assay data supplied by the laboratory matched the database and concluded that the data from Astron's 2022 drill program are suitable for resource estimation and potential Measured classification. Within MIN5532 (Phase 1), only the 2022 assay data were used for estimation of 92% of the Mineral Resources: this includes all the Measured Resources and 82% of the Indicated Resources in MIN5532 (as discussed in Item 14.4).

As discussed in Item 11, there is less confidence in the assay data from the 2004, 2010 and 2015 drilling programs, which were used for resource estimation in Area 2 (8% of the Mineral Resource). Consequently, the Qualified Person assigned a lower classification, and Mineral Resources within Area 2 were classified as Indicated at best (refer to Item 14.4). Analysis of the CRA data and Zirtanium 2000 and 2002 samples used different size fractions, so assay data from these programs were not used for the current Mineral Resource estimate. Data from these drilling programs were only used to guide geological interpretation.

13 Mineral processing and metallurgical testing

13.1 Introduction

The finer grained (generally <250 µm) WIM-style HM sand deposits are geologically older than the strandline-style deposits and have undergone a number of geological processes which have altered some of the key minerals.

The WIM-style titania-bearing minerals have undergone substantial weathering, which has resulted in variable removal of iron from ilmenite, variable partial oxidation of the residual iron, as well as incorporation of impurity elements including clays and redeposited iron oxides into micro-pores created through those processes. In turn, this has led to a complex and continuous spectrum of titania-bearing particles rather than any specific mineral type. Variable iron content, oxidation and redeposition of elements or compounds makes classification of the titania-bearing particles into traditional mineral nomenclature difficult and potentially misleading.

Some of the zircon has been affected by the presence of radioactive elements (uranium and thorium and radioactive progeny). While these elements are inherent in all zircons, it has potentially been exacerbated by the deposition of radioactive elements onto the surface and within the pores and cracks of zircon grains in cemented clays. The WIM-style zircon has a higher than usual degree of internal micro-cracking (metamict zones) in which impurity elements can reside as well as some significant surface staining and clay (slime) cementation.

In the early 1990s, having identified that the fine-grained minerals were not suited to gravity separation, CRA built and operated a flotation pilot plant for treatment of the WIM150 deposit. The flowsheet was developed by CRA in collaboration with Lakefield Research, Canada. To achieve effective flotation selectivity and recovery, attritioning was required to remove the iron staining and clay cementation to present clean particle surfaces to the flotation stage.

At that time, flotation was inefficient and costly, requiring significant upfront investment. It also required a high usage of power and water as well as a costly range of reagents.

Some ensuing technological developments and external factors resulted in paradigm shifts that generated real opportunities for the processing of the WIM-style deposits:

- In the late 1990s, Mineral Technologies developed a new spiral called the FM1, which was effective for separating HM down to around the 20 µm particle size.
- Global markets for zircon stabilized as more widespread uses for zircon and zirconia emerged. This market preferred fine minerals over coarse mineral particles and offered an advantage for WIM-style zircon.
- The emerging rare earth mineral market offered an additional revenue stream over and above titania and zircon.

13.2 Historical testwork

In 2004, independent mineral processing company Mineral Technologies (ISO 9001 accreditation) was commissioned by Astron to undertake testwork at its facility in Queensland using the FM1 spirals for the concentration of the WIM-style, fine-grained HM. The testwork made use of the mineralization recovered from a test pit excavated at the Donald deposit.

Initial testwork at Mineral Technologies demonstrated that a HMC with grades of up to 90% HM could be produced using a gravity spiral and wet magnetic separation flowsheet.

In 2005, the successful pre-concentration of 200 tonnes of mineralization from the test pit was undertaken in a pilot plant using gravity concentration. The pilot plant gravity stage produced a pre-concentrate containing 19.9% HM, with an overall HM recovery of 84.8% and a zircon recovery of 91.2%.

The pre-concentrate was processed in a concentrate upgrade circuit, consisting of two stages of wet high intensity magnetic separation (WHIMS) to produce magnetic and non-magnetic concentrates. A five-stage spiral separator/wet shaking table circuit was used to upgrade the non-magnetic concentrate to an HMC containing greater than 90% HM. While the testwork confirmed that fine mineral recoveries at commercial scale could be achieved, there was scope for improvement.

Further laboratory-scale work was undertaken from 2007 to 2010 to simplify the initial flowsheet and reduce the number of spiral stages. In association with Mineral Technologies, Astron continued to work on the means to enhance the recovery of the fine VHM.

It was recognized that with better feed preparation, the intermediary WHIMS circuits could be eliminated allowing a spiral only flowsheet to produce HMC. Laboratory-scale testwork confirmed the production of a 90% HMC grade, containing rare earth, zircon and titanium minerals at recoveries of 92.6%, 94.6% and 60.4% respectively.

Utilizing the experience gained in developing and applying the FM1 spiral to fine-grained minerals, Mineral Technologies subsequently developed the MG12 (medium grade) spiral. The MG12 spiral yielded better results for the Donald fine mineral separation than the FM1. In 2010 to 2012, testwork demonstrated that MG12 spirals could enable a reduction in the number of spiral separation stages from five to four. Together with the smaller footprint of the MG12 spiral compared to the FM1 spiral, the smaller overall plant would give savings in capital expenditure and operational cost.

As a result of this technological development and the testwork results, a simplified, four-stage gravity spiral flowsheet was developed. This flowsheet was able to achieve commercial level HM recoveries comparable to coarse-grained mineral sands operations.

Up to 2010, it was assumed that the HMC could be efficiently separated by flotation as had been achieved in the original CRA work. Mineral Technologies and others had attempted mineral separation using combinations of the traditional unit operations of wet magnetics, wet gravity, dry electrostatics, dry magnetics and screening. However, it was difficult to achieve the combination of high recoveries with acceptable grades and unit throughputs with the primary issues being:

- The fineness of the particles
- The continuous spectrum of titania-bearing particles rather than the discrete minerals of ilmenite and rutile
- The paramagnetism (weak magnetic response) of the rare earths which tended to disperse across all products and recycle streams.

With the assistance of AMML at its independent laboratory in New South Wales, Australia and the development of new, benign reagents compared to the regimes employed in the CRA flowsheet, a metallurgically effective flowsheet was defined and tested. The flowsheet consisted of a series of selective flotation steps, of which rare earth flotation was a previously identified and successful step. The flowsheet steps consisted of:

1) Attrition and desliming of the HMC. This was a much-reduced volume of material to be attritioned compared to the original flotation flowsheet treating the whole of ore.
2) Zircon flotation.
3) Rare earth flotation.
4) Residual quartz and silica flotation from the titania; and optionally
5) Chromite flotation from the titania. This step still required quite aggressive reagents.

To this point, the WCP testwork had been carried out in discrete laboratory tests, albeit with full-scale spirals, and with material from the original test pit excavation. To reduce flowsheet risk, a confirmatory testwork program commenced in 2015 for both the gravity circuit to HMC flowsheet and downstream processing to final products. Samples for this testwork were provided from a sonic drilling program completed across the Donald deposit (refer to Item 10.1).

Key outcomes of the testwork campaign by Mineral Technologies at its Queensland facility were:

- Minimal loss of recoverable (>20 µm) VHM over the feed preparation unit operations
- Definition of the underlying spiral separation efficiencies for the gravity separation circuit
- Confirmation that significant improvement in rougher spiral performance was achieved by fine screening of the gravity circuit feed at 250 µm
- Processed about 6 tonnes to generate a HMC with around 90% HM at recoveries for ZrO_2, CeO_2 and TiO_2 of 94.6%, 92.6% and 60.4% respectively from the spiral circuit feed.

Key outcomes of the MSP testwork campaign by AMML at its New South Wales facility were:

- After effective attritioning, a zircon concentrate could be floated from the HMC with a single pass recovery of about 83% determined by the zircon reporting to the float tail.
- A zircon product could be produced at about 65.5% ZrO_2 (93% recovery) from the flotation concentrate. A primary zircon grade of 66% ZrO_2 could be achieved albeit at only 56% recovery from the flotation concentrate. The remainder would be a secondary zircon grade product.
- Very selective flotation of rare earths as indicated by CeO_2. The float test was not taken to completion and only 82% CeO_2 was recovered to concentrate in a single rougher stage.
- Simple and effective gravity rejection of trash minerals that were co-floated with the rare earths to produce a very high-grade rare earth concentrate at >90% rare earth minerals.
- The rare earth float tails were subsequently fractionated to a range of notional titania products including a rutile, leucoxene, and high and low chrome grades of ilmenite. However, all the titania products had significant quality issues associated either with silica or chromia content and/or were of very low yield from the HMC.

Subsequent testwork was carried out by Mineral Technologies in 2016 using a 3.8-tonne sample collected from six sonic drillholes and the same approach. The WCP testwork:

- Confirmed similar underlying spiral separation efficiencies for the gravity separation circuit to those achieved in 2015
- Processed about 3 tonnes to a HMC with around 82% HM at recoveries for ZrO_2, CeO_2 and TiO_2 of 94.6%, 92.6% and 73.4% respectively from the spiral circuit feed
- Demonstrated the flexibility and robustness of the proposed gravity circuit; however, to a slightly lower HM grade in the HMC.

Both the 2015 and 2016 WCP campaigns:

- Demonstrated minimal loss of recoverable VHM in the feed preparation stages for oversize removal by scrubber, trommel and screen as well as slime (-20 µm) clay removal by single-stage hydro-cyclone
- Confirmed the underlying spiral separation efficiencies for the gravity separation circuit
- Demonstrated full-scale, single-start spiral operation stepwise through the gravity separation flowsheet.

The 2016 MSP testwork was also carried out at the Mineral Technologies facility. Issues with the operation of the large-scale attritioning unit resulted in poor attritioning of the large sample in tests that were intended to be semi-continuous (locked cycle), where recycle streams such as the cleaner tail and scavenger concentrate are recycled to subsequent tests to demonstrate process stability.

Notwithstanding this, the flowsheet was simulated at small-scale with the following outcomes:

- After effective attritioning, locked cycle tests demonstrated stable zircon flotation with an overall recovery about 80–82% to zircon concentrate. The absence of a quick turnaround analytical unit prevented higher recoveries being achieved, as most rougher-scavenger float cycles were terminated prior to optimum zircon recovery.
- A 65.5% ZrO_2 zircon product could be produced at about 93% recovery from the flotation concentrate. This zircon was subsequently upgraded to around 66% ZrO_2 by dry magnetic processing.
- Very selective flotation of rare earths as indicated by CeO_2.
- Simple and effective gravity rejection of gangue minerals that were entrained with the rare earths produced a very high-grade rare earth concentrate at >90% rare earth minerals.

It was realised early in the development of the metallurgical flowsheets, that tracking mineral classifications was complex, expensive and impractical. The simplest, most cost effective and ultimately the most relevant means of tracking grades and recoveries through metallurgical testwork was by XRF analysis where the components TiO_2, ZrO_2, CeO_2 and Y_2O_3 were used as trackers of the entire titania-bearing spectrum, zircon, monazite and xenotime.

Up to 2016, correlations were required for converting mineralogical classification of resource data in mine schedules to an estimate of the component compositions from which the testwork derived recoveries and grades (Table 13.1).

Table 13.1 2016 mineral classification to chemical component conversion matrix

Mineral	ZrO_2	CeO_2	TiO_2	Comment
Ilmenite	0.0%	0.0%	55.0%	Notional average TiO_2 for “ilmenite” classification
Leucoxene	0.0%	0.0%	72.5%	Notional average TiO_2 for “leucoxene” classification
Rutile	0.0%	0.0%	90.0%	Notional average TiO_2 for “rutile” classification
Anastase	0.0%	0.0%	90.0%	Notional average TiO_2 for “anatase” classification
Zircon	64.0%	0.0%	0.0%	ZrO_2 assumes dirty zircon as in-situ
Monazite	0.0%	32.0%	0.0%	Assumes that “monazite” classification in mine plan refers only to “monazite” and does not include xenotime
Other HM	0.0%	0.0%	10.0%	Notional average TiO_2 for “Other HM” classification (includes titano-silicates)

Source: Astron, 2023a

Process performance was therefore assessed in terms of the recovery of TiO_2, ZrO_2 and CeO_2 as components specific to the respective titania, zircon and rare earth concentrates. The whole stream XRF assays and recoveries of these components had to be adjusted to align with the +38 µm/-90 µm data used for resource definition. The drilling campaigns from 2020 onwards have assigned the sizing ranges and incorporated both QEMSCAN® mineralogy and XRF analyses of in-size HM.

Reviews in 2017 identified several risks and potential issues related to the metallurgy of the project:

- An absence of definitive, continuous pilot scale operation of the HMC process from ore to HMC
- Concern regarding the processing of HMC to final products by flotation alone
- High capital and operating costs related to ore processing and HMC beneficiation despite the considerable simplification and streamlining of the flowsheet over the previous decade or more
- Confirmatory testwork on a representative sample from the first three to five years of mining operations.

Continued re-assessment of the project from mining operations through the process flowsheet and product transport logistics, identified some further opportunities for reducing capital, operating and product handling costs. This also included a refocussing on the implications of the flowsheet against the conditions of the established EES. Some significant optimization opportunities arose:

- The conditions of the 2008 EES would prevent an MSP on the project site and the HMC would have to be shipped either for sale to third parties, toll treated or a dedicated MSP built elsewhere.
- It had been identified that as the HM grade of the HMC increased beyond 85% HM, the rejection of non-HM quartz, silicates and low SG particles resulted in concentration of the radioactivity to the point that the HMC product would exceed 10 Bq/g. While not inherently dangerous, the HMC product would require placarding and require more expensive product handling. It was also understood that at 85% HM, the HM component of the HMC also contained a substantial fraction of highly altered titano-silicates representing an unnecessary transport cost and even additional waste disposal costs.
- As the bulk of the radioactivity was present in the rare earth minerals, investigative testwork at Mineral Technologies demonstrated that the rare earths could be readily floated from the raw HMC at very high grade and recovery using the same reagent scheme that was already proven in the earlier MSP work. This resulted in capturing the bulk of the radioactivity into a much smaller quantity of material which could be more readily transported in a safe manner.
- The WCP could now target a HMC with grades up to 95% HM with conventional wet magnetic, wet gravity and dry electrostatic equipment arranged in a less complex flowsheet without any discernible loss of the VHM components.

13.3 Recent testwork

A substantial body of testwork at pilot scale as well as additional testwork confirming the final flowsheet design and the response of ore samples extracted from the first few years of mining has been carried out since 2018.

In 2019, a 1,000-tonne bulk sample from the re-opened test pit was shipped to the Corridor Sands operation at Woongoolba in Queensland where a pilot WCP was designed and constructed in JV with Mineral Technologies and a third-party western Victoria project developer.

The flowsheet aligned with the design of the 2015–2016 testwork. The HMC produced was subsequently reprocessed over an HG10i spiral at Mineral Technologies facility in Queensland to bring it to the desired 95% HM to provide a design level feed for subsequent processing. After attritioning at Mineral Technologies, the reprocessed HMC was floated in a continuous pilot flotation facility at Nagrom’s independent laboratory in Western Australia, which produced a quantity of on-spec rare earth concentrate grade at a high recovery. The flotation tail was repatriated to Mineral Technologies where it was separated using conventional magnetic and electrostatic techniques into several grades of zircon product and a single titania concentrate, which would be readily marketable as a chloride slag feedstock.

A sonic drilling program specifically targeting the first few years of mining was completed in 2022 with approximately 6 tonnes recovered and processed through the Mineral Technologies facility in Queensland to a high-grade HMC. This HMC was floated for rare earths with the float tail separated into the constituent zircon and titania products confirming the response of this sample to the design flowsheet.

In 2024 and 2025, further metallurgical testwork was completed as part of the 2025 Updated Economics Study, including extended pilot plant trials for both the WCP and the rare earth minerals flotation and hydrometallurgical circuits. These programs processed representative bulk samples from multiple mining stages and ore zones to validate and optimise the process flowsheet under continuous operating conditions.

13.3.1 WCP pilot plant

The WCP pilot plant at the Corridor Sands facility consisted of the following equipment:

- A feed bin loaded by front-end loader.
- Conveying to a scrubber trommel screening at 3 mm.

- Single-stage cyclone desliming of the trommel undersize at a nominal 20 µm.
- Screening of the cyclone underflow on a vibrating screen. The screen was fitted with both 400 µm and 250 µm screen panels to allow spiral performance in response to screen size to be evaluated for optimal design purposes.
- Four-stage gravity spiral separation with MG12 spirals installed for rougher, middlings scavenger and cleaner stages. A HG10i spiral was provided for recleaner duty.
- HMC was discharged to a settler and bulka bag collection. Tails and slimes were discharged to an appropriate location within the Corridor Sands site.

In the absence of XRF analytical capability, metallurgical control was maintained with the use of a gravity table fitted to one of the distributor legs of the recleaner feed. Manual sample points were installed at several locations for regular survey and overall metallurgical accounting.

The bulk sample was characterized as follows:

- Density separation by size fraction indicated the -250 µm/+20 µm size fraction contained 5.1% HM, with 45.3% of the HM having a density greater than 4.05 g/cm^3.
- Sizing analysis indicated the average particle size of the sample was 98 µm, with 64.3% by weight reporting to the -250 µm/+20 µm size fraction.
- Almost 20% of the in-size HM had a density less than 4.05 g/cm^3. This light HM fraction included trash minerals such as tourmaline, garnet and variously altered ilmenites and titano-silicates. The gravity separation stage and the setting of the final HMC HM target grade control the extent to which this largely non-valuable HM fraction is rejected to tails in the WCP.
- The recoverable total HM content of the sample was back calculated as 3.3% (i.e. ignoring any HM in the oversize and the slimes).
- The recoverable feed assay was calculated as 2.22% TiO_2, 0.67% ZrO_2 and 0.03% CeO_2.

The pilot plant produced the following key results:

- 24 tonnes of HMC at an average HM grade of 90.6%, which was slightly less than the targeted 95% HM.
- Respective recoveries of key components, relative to the in-size fraction of the spiral circuit feed, were:
  - Total HM: 82%
  - VHM: 93%
  - TiO_2: 88% and 57% of total TiO_2 relative to the sample highlighting the TiO_2 fraction in the highly altered trash HM fraction
  - ZrO_2: 94%
  - CeO_2: 94%.

The raw pilot plant HMC was subsequently passed through a 250 µm screen at Mineral Technologies facility in Queensland to eliminate residual oversize and 15 tonnes of the screened HMC was re-passed over an HG10i spiral to correct the raw HMC to the target 95% HM. Virtually no VHM was lost in the post-processing steps with rejected material either being +250 µm oversize and light HM trash.

A 12-tonne subsample of the upgraded HMC was attritioned and deslimed at Mineral Technologies before despatch to a pilot plant flotation facility at Nagrom in Western Australia. Approximately 9 tonnes of HMC were processed with the following key results:

- 91% recovery of rare earth minerals to the REEC
- A total rare earth element oxide (TREO) grade of 56%.

13.3.2 Confirmatory flowsheet testwork

In 2022, 10 sonic drillholes were drilled across the northern and central area of MIN5532 to collect representative samples from the first few years of mining.

Approximately 4 tonnes was recovered from the mineralized sections of the core samples. While subsamples were taken for separate characterization, the samples were consolidated into three composites reflecting years 1, 2 and 3 (and beyond). Characterization was also carried out on subsamples taken from the year 1 composite above and below the water table.

The bulk samples from each year were processed through scrubbing for deagglomeration, screening at 1 mm and desliming at 20 µm. Each of the deslimed bulk samples underwent primary rougher gravity separation. To maintain, overall sample quantity for bulk treatment, each of the rougher concentrates was combined as were each of the rougher middlings. The now single rougher middlings sample was processed to a middlings concentrate and combined with the rougher concentrate as per the flowsheet. A single cleaner feed was then processed through the spiral cleaner stage.

In accordance with the flowsheet, the cleaner spiral concentrate was screened at 250 µm prior to recleaner gravity spiral processing to produce a raw HMC.

The raw HMC was processed through the concentrate upgrade circuit flowsheet consisting of attritioning with removal of generated slimes followed by rougher and scavenger flotation of the rare earth minerals.

The rare earth concentrate was passed over a gravity table for the effective rejection of alumina bearing trash minerals (typically tourmaline and garnet), which had floated with the rare earth minerals.

During this work, it was discovered that preferential flotation of the phosphates in the rougher stage could be enhanced by fine tuning of the reagent additions in attrition and float as well as average retention time. Further testwork on a retained sample of the upgraded pilot plant HMC demonstrated that this differential flotation behaviour between the phosphate and alumina-bearing minerals could be optimized. Concentrates with >60% TREO and at 92–94% total rare earth phosphate were floated. This allowed a further refinement of the concentrate upgrade circuit to eliminate most or all the gravity table circuit by simple diversion of the alumina-rich scavenger concentrate to the head of the circuit as a recycle or if necessary, retreatment by a single gravity table.

Key outcomes from this phase of testwork were:

- The mineralization within the first three to four years of mining is broadly homogenous in character with only minor variations in oversize, slimes and HM grade. This also applied to samples from above or below the water table apart from the iron content as the result of weathering below the water table.
- At a composite scale, the results of the characterization, feed preparation and HM concentration were consistent with the testwork results.

Characteristics of the HMC produced (which were all in line with previous results) were:

- An average particle size of 60 µm
- 94.3% HM assaying 33.1% TiO_2 with 17.9% ZrO_2 and 0.87% CeO_2
- An estimated radioactivity of 12 Bq/g, as expected from the elevated HM grade
- The mass balance produced slightly lower overall recoveries than the continuous and integrated pilot plant as this testwork was carried out without the ability to recycle between stages
- CUP processing of the raw HMC returned results in accordance with previous testwork
- The opportunity to further streamline the CUP flowsheet by eliminating gravity (tabling) upgrading of the rare earth flotation concentrate was identified.

Pilot-scale testing undertaken in 2024 and 2025 at Mineral Technologies' Carrara facility in Queensland successfully validated the WCP and downstream rare earth minerals flotation circuits proposed for the Donald Project. The pilot program confirmed design throughput and metallurgical performance, achieving or exceeding targeted recoveries for HM and REEC products. Product quality specifications for zircon, ilmenite, rutile and REEC were met, with reduced levels of deleterious minerals compared to earlier campaigns. Minor refinements to equipment sizing, classification stages and flotation reagent regimes resulted in improved concentrate grades, lower reagent consumption and enhanced process stability. Testing of material from multiple ore zones demonstrated consistent metallurgical performance across anticipated feed variability, and operational data from the continuous runs were incorporated into the 2025 Updated Economics Study for final capital and operating cost estimation.

The float tails (together with all other products and unused feed) were returned to Mineral Technologies, where the tails were separated to a primary and secondary zircon product at respective grades of 66.5% and 65.7% ZrO_2 with an estimated overall ZrO_2 recovery of 85% relative to the HMC assuming stranded stream recycles were closed. A single titania concentrate was also produced at 66% TiO_2 at a recovery of TiO_2 relative to HMC of 86%.

13.3.3 Metallurgical summary

The Donald mineralization comprises four components:

- HM: defined as the -250 µm/+20 µm portion that will sink in a heavy liquid at a SG of 2.85 g/cm^3.
- Sand (quartz): defined as the -250 µm/+20 µm portion that will float in a heavy liquid at a SG of 2.85 g/cm^3.
- Clay fines (slimes): defined as the portion that is -20 µm in size.
- Oversize: defined as the portion that is +250 µm in size and consists of coarse quartz, trash minerals and rock.

The final flowsheet comprises:

- Scrubbing for disaggregation.
- Ex-pit trommel at 10 mm prior to pumping to the WCP
- At the WCP, screen the slurry at 1 mm to reject residual oversize that has not been further deagglomerated in pumping and transport
- Single stage hydro-cyclone desliming to reject -20 µm slimes
- Retention in a LCFU surge bin
- Mass flow and density-controlled feed to a rougher, middlings scavenger and cleaner gravity spiral circuit using MG12 spirals
- Interstage fine screening at 250 µm ahead of the final recleaner stage using HG10i spirals to produce a raw HMC
- Selective flotation of the rare earth minerals in the raw HMC into a concentrate with filter cake bagged and containerized for transport
- Filtering, stockpiling and loading of the final high-grade, rare earth free HMC into half-height containers for transport.

Table 13.2 summarizes the metallurgical performance including stagewise recoveries of HM and the valuable components from the in-size HM fraction as well as target HM grades at each process stage and final product grades.

Table 13.2 Metallurgical performance summary

Stage wise recovery and grade parameters	MUP recovery	WCP recovery	CUP recovery	CUP recovery	Overall recovery to HMC	Product grade
From	ROM	WCP feed	Raw HMC	Raw HMC	ROM	HMC
To	WCP feed	Raw HMC	HMC	REEC	HMC, REEC	REEC
Oversize (+250 µm)	6.4%	0.0%	0.0%	0.0%	0.0%	
Slimes (-20 µm)	17.4%	0.0%	0.0%	0.0%	0.0%	
Sand (+20 µm/-250 µm = in-size)	78.6%	5.5%	95.7%	3.0%	4.3%	
Mass yield	61.6%	5.2%	95.7%	3.0%	3.2%	
Total HM (+2.85 g/cm^3 SG; in-size)	89.0%	77.9%	96.1%	3.2%	66.7%	
TiO_2 (in total HM; in-size)	99.4%	70.7%	99.2%	0.6%	69.7%	33.5%
ZrO_2 (in total HM; in-size)	99.6%	94.3%	99.0%	1.0%	93.0%	14.6%
CeO_2 (in total HM; in-size)	99.5%	94.5%	1.9%	97.5%	91.7%	21.3%
Y_2O_3 (in total HM; in-size)	99.5%	94.5%	2.2%	97.2%	91.4%	11.6%
Total HM grade	6.3%	94.3%	94.8%	99.0%		

Source: Astron, 2023a

Notes: Assumes no oversize in raw HMC, HMC and REEC. Assumes no slimes in HMC and REEC.

Discrepancies in HM% and oversize% as well as mineralogy grades were noted in the recent metallurgical testwork performed on the sonic drilling core samples. Further testwork was performed on samples from the 2022 AC drilling program, which informed the Mineral Resource estimate, to isolate the source of these discrepancies.

It was hypothesized that a difference in the sample preparation technique used for the metallurgical testwork, where additional attritioning was applied to the sample, was responsible for increased liberation of HM minerals from oversize material or sample agglomerates. Results indicated an increase in the in-size material proportion; however, a clear relationship and upgrade in the HM% grade was not apparent. The results were within the accuracy range of the resource model.

In 2024 and 2025, Mineral Technologies' Carrara facility conducted extended pilot runs, processing bulk samples from multiple mining zones. The WCP and rare earth minerals flotation circuits met or exceeded targets for throughput, recovery and product quality. Zircon, ilmenite, rutile and REEC products achieved specification grades with fewer deleterious minerals. Performance was consistent across ore variability, and the resulting operational data were incorporated into the 2025 Updated Economics Study cost models to improve economic confidence.

13.4 Sample representativity and metallurgical risks

The process design and projected metallurgical performance have been based on the results of testwork and large-scale pilot plant testing. Material from the deposit for the metallurgical programs was composited from drill core and included bulk samples over 1,000 tonnes obtained from test pits. Metallurgical characterization and scoping testwork was completed on samples from drill core and trenches within the mine work plan. Two bulk samples have been used.

In 2005, a test pit was mined adjacent to drillhole D04-045 that provided 1,760 tonnes of mineralized material comprising 1,000 tonnes of low-grade HM from 9 m to 12 m depth and 760 tonnes of high-grade HM from 12 m to 18 m depth. A total of 200 tonnes of material was despatched for testwork in Australia with the rest shipped to China by Zirtanium at that time. The test pit was located 7.8 km from the centre of the planned MIN5532 mine plan Work Area. The methodology for selection of the 200-tonne sample out of the total material mined is not known and therefore the representativity of the sample can only be deduced by comparing the assays and performance in testwork with other samples from within the mine plan.

The second bulk sample came from a 40 m extension of the same test pit to the southeast. This 1,000-tonne sample was mined in 2018 by Astron and treated by Mineral Technologies through the Corridor Sands WCP in Queensland over a continuous two-month period at 10 t/h.

Despite being sourced from outside the MIN5532 Work Plan area, the test pit is in the RL2002 Phase 2 area. The geology of the MIN5532 Work Plan area and the test pit are considered the same as the mineralogy (minerals and extent of alteration), PSD and liberation (zircon and REO) generally consistent across the region.

A summary of samples used for the metallurgical testwork since 2005 is provided in Table 13.3.

Table 13.3 Metallurgical sample summary

	FS	Channel sample	Drillhole D04-045	Bulk test pit sample		Sonic drill core			
Year	2023	2004?	2004	2005	2018	2016	2022	2022	2022
Description		9–17 m	9–18 m	200 t	9–14 m; 1,000 t	3.8 t	Year 0–1	Year 1–2	Years 2+
HM %	4.6	8.04	6.24	8.01	3.3	4.0	3.33	4.52	3.16
Slimes %	15.4	18.4	19.28	20.74	16	15.9	17.4	18.9	21.8
Oversize %	9.8	3.75	3.87	3.38	3.23	3.0	4.03	3.3	3.75

In 2015–2016, a 3.8-tonne sample was composited from six sonic drillholes (300 mm diameter) drilled to 18 m depth within the MIN5532 area representing mining areas in years 1, 3, 4 and 8. Ten sonic drillholes were completed in 2022 to provide 4 tonnes of samples representing the northern and central area of MIN5532 with subsamples representing year 1, year 2 and years 3+ of mining. The later samples were tested to verify the flowsheet performance for the different mining periods and to assess any differences in treating material from above and below the water table.

The data from the 2022 testing indicated the ore was homogeneous with small differences in the PSD of the ROM and relatively consistent chemical composition of in-size sand particles.

Performance of the processing facilities will rely on the feed ore characteristics (clay content, PSD, proportion of weathered titanium minerals) being blended to remain within the ranges of the design envelope and minimizing the inclusion of Geera Clay.

Recycle of dewatering hydro-cyclone overflow within the rare earth flotation circuit may lead to build-up of slimes or colloidal material and residual reagent that can interfere with performance of the flotation stage. The performance of the flotation circuit to remove the minerals associated with radioactivity is important for maintaining low levels in the HMC.

The salt content of the groundwater (17,000 mg/L total dissolved solids (TDS)) may fluctuate and increase over time and require treatment for some sections of the plant.

The 2024 and 2025 pilot plant test results confirmed that metallurgical performance remained consistent across the anticipated range of feed variability, with product quality and recoveries achieving or surpassing the design criteria. In the Qualified Person's opinion, the data is adequate for the purposes used in this Technical Report.

13.5 Qualified Person's opinion

Mr. Peter Allen, MAusIMM (CP), has reviewed and relied upon specialist input provided by Mr. Shier in relation to metallurgical testwork, process design and processing cost estimates. Mr. Shier is an experienced mineral processing specialist but is not a Qualified Person as defined under NI 43-101 and is not designated as a Qualified Person for the purposes of Regulation S-K 1300. Mr. Allen has reviewed the information provided, considers such reliance to be reasonable, and accepts responsibility for the mineral processing information and conclusions presented in this Technical Report.

14 Mineral Resource estimates

Snowden Optiro was contracted by Astron in 2022 to assist with updating the Donald deposit Mineral Resource estimate within the area of MIN5532 (Snowden Optiro, 2022). A Mineral Resource estimate was prepared in 2022 (Snowden Optiro, 2022) and this was updated in December 2025 to include REO data and updated density data (Snowed Optiro, 2025a). The 2025 Mineral Resource within MIN5532 is referred to as the Phase 1 Mineral Resource. MIN5532 is within the central area of RL2002 (Figure 4.1) and the resource area extends outside of MIN5532 and into the adjacent RL2002. The reported Phase 1 Mineral Resource is screened to within MIN5532. Extensions to the Donald deposit are within RL2002 and Mineral Resources within RL2002 were estimated by AMC in 2016. The additional resource that is within RL2002 and outside of MIN5532 is referred to as the Phase 2 historical resource and is discussed in Item 24.2.

The 2025 Mineral Resource estimate within MIN5532 updates the resource previously reported by AMC in 2016 and incorporates data from an additional 245 AC drillholes (for a total of 6,355 m) completed within MIN5532 during 2022. The Mineral Resource area extends to the south of MIN5532 within RL2002 but does not cover all the resource within RL2002. As discussed in Item 24.2, the 2016 AMC resource model has been retained for the Phase 2 historical resource estimate.

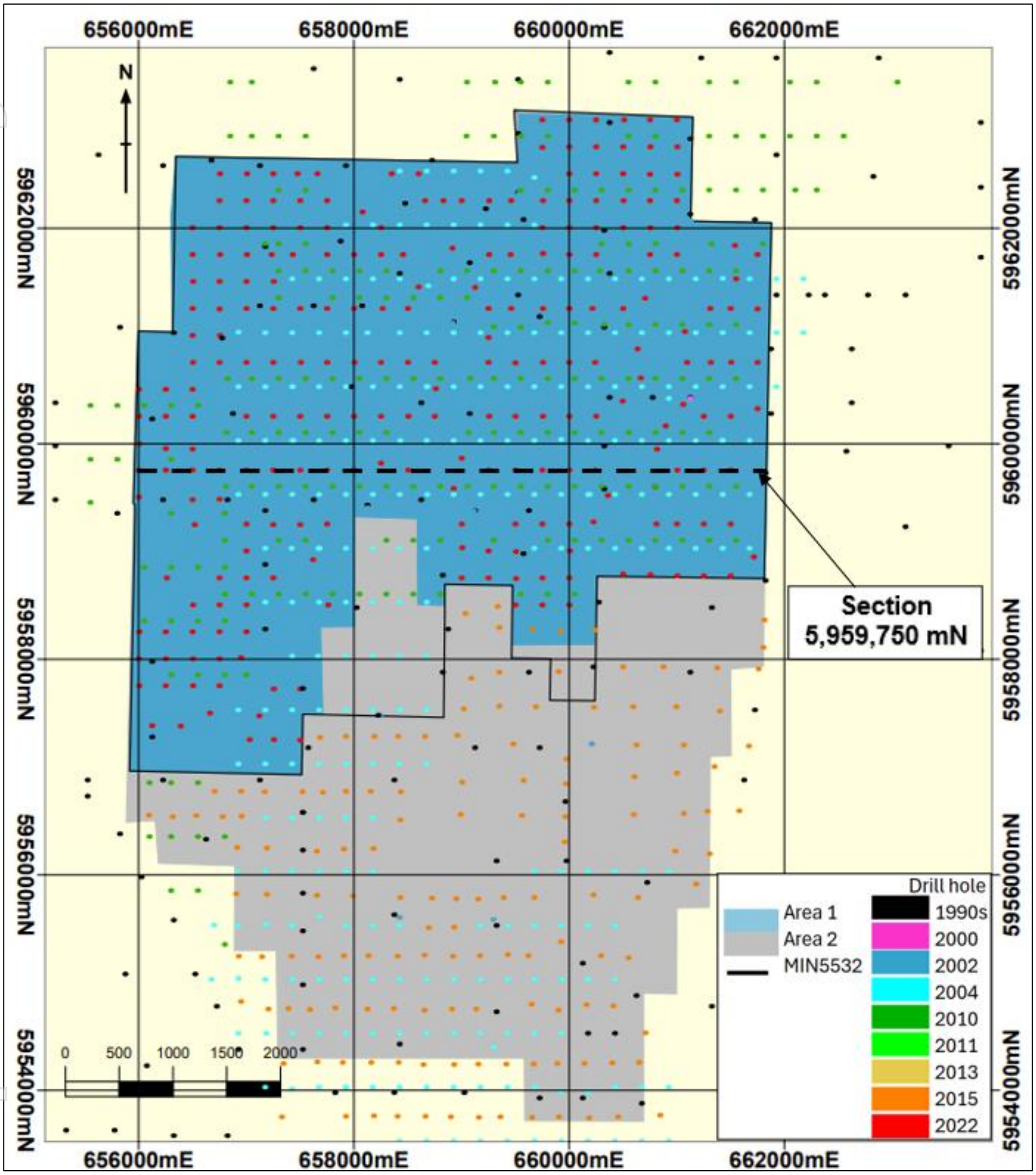
The resource area used for the 2022 and subsequent 2025 models contain data from a total of 844 vertical AC drillholes (for a total of 20,648 m) and one Calweld drillhole (for a total of 19 m) drilled by CRA in the 1990s, Zirtanium from 2000 to 2004 and Astron in 2010, 2015, 2022 and 2025. Assay data was obtained from 7 of the 25 sonic drillholes drilled in 2022. These holes were drilled for verification of the AC drilling, metallurgical testwork, geotechnical studies and to extend the network of groundwater monitoring bores. The assay data from these sonic holes were not used for the Mineral Resource estimate. Data from the pre-production AC GC holes drilled by Astron during 2025 were not used for the 2025 Mineral Resource estimate. Data from these holes were used for the development of a separate GC model. Density data from the sonic drillholes (drilled in 2015, 2022, 2024 and 2025) were used for tonnage estimation. The data used for the Mineral Resource estimate are summarized in Table 14.1 and illustrated in Figure 14.1.

Table 14.1 Drilling history (AC and one 2000 Calweld drillhole) at the Donald deposit – within resource area and used for 2025 Mineral Resource estimate (which extends into RL2002)

Company	Year	No. of drillholes	Metres drilled	Comment
CRA	1990s	91	2,250	Used for geological interpretation only.
Zirtanium	2000	1	19	Used for geological interpretation only.
	2002	14	327	
	2004	225	4,967	Used for geological interpretation. Assay and mineral assemblage data used for Area 2 where total HM data is from +38 µm/-90 µm fraction.
Astron	2010	167	3,969	Used for geological interpretation. Assay data (total HM, slimes and oversize) used for grade estimation in Area 2.
	2015	102	2,777	
Astron	2022	245	6,358	All geological, assay and mineral assemblage data used for Area 1.
Total		**845**	**20,667**	

Geological information from all historical drilling campaigns (pre-2022) was used to inform the geological interpretation for resource modelling in the MIN5532 area. The Mineral Resource estimate was divided into two areas (Area 1 and 2) based on the drillhole coverage. The nominal drill spacing for the 2022 drilling was approximately 250 mE by 350 mN. In general, the historical drillhole spacing ranges from 125 mE by 400 mN to 250 mE by 500 mN. The area covered by the 2022 drilling is coded as Area 1 and encompasses 97% of the total area of MIN5532 (Figure 14.1). The resource model was extended to cover MIN5532 and an area to the south of MIN5532 (to improve analysis of the Area 2 data). The area outside of the 2022 drilling was coded as Area 2.

Figure 14.1 Plan of drillholes coloured by drilling program and section line of representative cross-sections included in Figure 7.3 and Figure 14.4



Source: Snowden Optiro

Sample assay data (including mineral assemblage data) derived from the 2022 drilling program were primarily used for the Mineral Resource estimate which informed the Phase 1 study. Only the 2022 data were using for grade estimation within Area 1. Assay data from the 2004 drilling program (assayed using the +38 µm/-90 µm fraction) and data from the 2010 and 2015 drilling programs were also used for HM, slimes and oversize estimation in Area 2. Data from the 2004 drilling were also used for estimation of the mineral assemblage components within Area 2. Only data with a complete set of mineral assemblage analysis data were used for mineral assemblage estimation within Area 2. The 2010 and 2015 mineral assemblage data did not include analysis of xenotime.

14.1 Geological model and mineralization interpretation

Geological logs from the 2022 drilling program identified the Shepparton Formation, the LP1, LP2 and LP3 units of the Loxton Sand sequence and the underlying Geera Clay. The 2022 holes were drilled to intersect the entire Loxton Sand sequence and were terminated in the underlying Geera Clay.

Only limited geological data was available from the CRA drillholes (the majority of which terminated within the Loxton Sand sequence), and so precedence was given to the geological logging data from the later drillholes. The CRA data included the depth to the top and base of the "host horizon" (Loxton Sand sequence); however, these holes did not extend below the Loxton Sand sequence and did not record the depth to the base of the overlying Shepparton Formation or LP1.

Geological logging data, along with assay data for slimes and oversize contents were used to guide the interpretation, with preference given to the 2022 data. Data was examined in long and cross-sections and minor modifications were made to the logged lithologies to generate consistent 3D surfaces of the interpreted lithological horizons. In particular, inconsistencies were noted in the geological logging of the LP3 and Geera Clay units between the 2022 and historical drilling (2004 to 2015). The interpreted base of mineralization surface is irregular, due to the inconsistencies in interpretation of LP3 and samples selected for analysis.

Four lithological surfaces were interpreted for the resource model, using all available geological logging data (including the CRA top and base of host Loxton Sand sequence):

- Base of Shepparton Formation/top of Loxton Sand.
- Base of LP1 – contact was selected where there is a sudden decrease in oversize content or change in logged grain size and where intervals above were generally logged as LP or LP1.
- Base of LP2 – contact was selected where there is marked increase in slimes or where it is logged as clay (but not black clay) or gravel. Material above is generally logged as LP2 and intervals below are generally logged as LP3.
- Base of LP3/top of Geera Clay – contact was selected where Geera Clay was logged in the 2022 drilling data and where the clay is logged as being black or dark brown in the previous drilling programs.

The resource model is screened to above the top of Geera Clay surface and the classified Mineral Resource is screened to within the Loxton Sand.

Examination of the cumulative probability plot of the total HM data (<5%) from the 2022 drilling indicated that there is a grade inflection at around 1% total HM and a nominal grade of 1% total HM was used for definition of the mineralization within the sediments. Surfaces were interpreted to define the top and base of the mineralization using a nominal 1% total HM cut-off grade from the total HM contained within the +20 µm/-250 µm fraction (following calibration of the +38 µm/-90 µm fraction within Area 2 (as discussed in Item 14.2.2).

A cross-section through the Donald deposit showing the geological and mineralization interpretation is presented in Figure 7.3 with the location of the cross-section shown in Figure 14.1. The minimum, maximum and average thicknesses of the Shepparton Formation, the Loxton Sand and the mineralized horizon as intersected by the drillholes are summarized in Table 14.2.

Table 14.2 Thickness of geological units and mineralized horizon

Unit	Minimum (m)	Maximum (m)	Average (m)
Shepparton Formation	3	15	8.7
Loxton Sand – LP1	1	17	3.4
Loxton Sand – LP2	4	17	9.3
Loxton Sand – LP3	1	12	2.5
Mineralized horizon	3	20	9.8

Source: Snowden Optiro, 2022

As illustrated in Figure 7.3, the main HM (WIM-style) mineralized horizon is within the LP2 layer. Minor HM mineralization is present within the LP1 horizon within the eastern area of the deposit. This is associated with fine-grained sands and is not the more traditional mineralization associated with strandline mineralization often found in the upper layers of the Loxton Sand. It has been interpreted as an extension to the underlying WIM-style mineralization and is included in the resource model. For data and block model coding, the geological surfaces took precedence over the mineralization surfaces, with the mineralization constrained to within the Loxton Sand sequence.

The 2022 drilling also intersected isolated zones of possible strandline mineralization within LP1 in the western area of the deposit. With the wide spaced drilling, the across-strike extend of the potential strandline mineralization could not be defined and so the potential strandline mineralization was not included in the resource model.

The domains assigned to the geological units in the resource model are summarized in Table 14.3.

Table 14.3 Donald deposit resource model domains

Description	Outside of mineralized horizon	Within mineralized horizon
Shepparton Formation	100	-
Loxton Sand – LP1	210 -	- 211
Loxton Sand – LP2	220 -	- 221
Loxton Sand – LP3	230 -	- 231
Geera Clay (model screened to exclude this)	300	-

Source: Snowden Optiro, 2022

14.2 Data analysis

14.2.1 Area 1

Grade estimation for Area 1 only used the assay data from the 2022 drilling program. All the sample intervals were 1 m and so data compositing was not required.

Statistical analysis

Summary statistics of the coded 2022 data were generated for total HM, slimes and oversize within each geological unit (LP1, LP2 and LP3) and within the mineralized horizon (Table 14.4). The distributions of the total HM, slimes and oversize data within each geological unit and within the mineralized horizon (Domains 211, 221 and 231) are positively skewed; however, the total HM, slimes and oversize all have low coefficients of variation (less than 0.95). High-grade outliers are not present, so top cut grades (cap grades) were not applied. Top cut grades are generally not applied for resource estimation of HM, slimes or oversize contents in mineral sands deposits.

Within the mineralized domains, the overlying LP1 has a lower total HM (mean of 2.79%) and higher slimes (mean of 19.38%) and oversize (mean of 17.4%) contents compared to LP2 (mean of 4.42% total HM, 15.13% slimes and 9.27% oversize). The slimes content increases in the underlying LP3 (mean of 27.98%), the average total HM grade decreases to 3.31% and the oversize content increases to 10.81%.

Table 14.4 Summary statistics of 2022 HM, slimes and oversize data

Geological unit		LP1		LP2		LP3	
Domain		**210**	**211**	**220**	**221**	**230**	**231**
Number of samples		748	372	331	1,835	3	819
Total HM	Minimum	0.03	0.39	0.14	0.71	0.33	0.72
	Maximum	7.27	12.98	3.79	13.58	0.99	12.31
	Mean	0.56	2.79	0.72	4.42	0.67	3.31
	Standard deviation	0.50	1.88	0.37	2.26	0.27	1.63
	Coefficient of variation	0.90	0.67	0.52	0.51	0.40	0.49
Slimes	Minimum	3.33	5.92	5.76	4.73	5.79	2.12
	Maximum	79.34	54.34	37.54	40.93	53.94	53.60
	Mean	19.15	19.39	13.39	15.13	32.15	27.98
	Standard deviation	7.61	8.46	4.29	3.99	19.92	9.90
	Coefficient of variation	0.40	0.44	0.32	0.26	0.62	0.35
Oversize	Minimum	0.00	0.06	0.13	0.02	11.44	0.02
	Maximum	59.80	60.77	54.23	58.50	26.73	71.96
	Mean	15.02	17.40	7.61	9.27	18.76	10.81
	Standard deviation	12.08	12.73	6.90	8.69	6.26	9.37
	Coefficient of variation	0.80	0.73	0.91	0.94	0.33	0.87

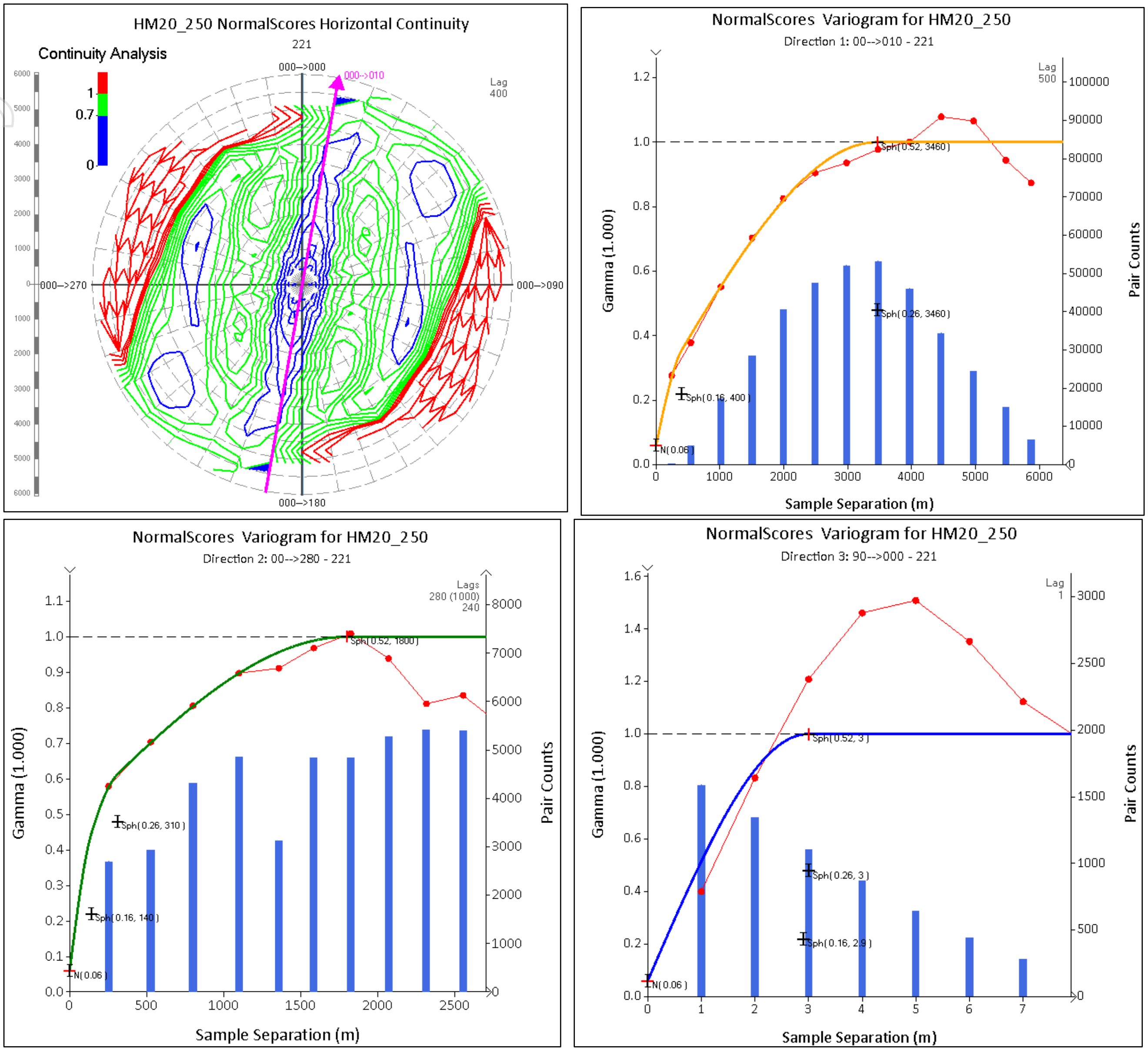
Source: Snowden Optiro, 2022

Boundary analysis indicates a sharp change in the total HM grade in LP1 and LP2, within and outside of the mineralized horizon. As there are only three data points within Domain 230, boundary analysis was not possible within LP3. A hard boundary was used for variography and grade estimation of total HM within the mineralized domains. Examination of the slimes and oversize data indicates a gradational boundary from the mineralized domains to the surrounding material within LP1 and LP2 and soft boundary conditions were used for variography and grade estimation of slimes and oversize. Hard boundary conditions were applied between the geological units (LP1, LP2 and LP3) in recognition of the different depositional environments. Hard boundary conditions mean that data analysis and grade estimation use data only from within that domain and soft boundary conditions allow data to be used from adjacent domains for data analysis and grade estimation.

Variography

Variogram analysis was undertaken using a normal scores transformation to determine the total HM, slimes and oversize continuity. Domain 230 was not included for variogram analysis as this domain only had three data points. Total HM continuity was analyzed for each of the geological and mineralization domains and examples are provided for Domain 221 in Figure 14.2. As contact analysis determined that a soft boundary should be applied for slimes within each of the LP units, the data was combined within LP1 (Domains 210 and 211), LP2 (Domains 220 and 221) and LP3 (Domains 230 and 231). Similarly, as contact analysis determined that a soft boundary should be applied for oversize within LP1, the data from Domains 210 and 211 were combined.

Figure 14.2 Total HM in Domain 221 – horizontal variogram fan and directional variograms with interpreted models



Source: Snowden Optiro

Strike directions were interpreted from horizontal variogram fans and directional variograms were generated for the along strike, across strike and perpendicular orientations and modelled using the spherical scheme. Continuity for total HM, slimes and oversize had a strike orientation of between 005° and 015° within a flat lying plane. The back-transformed variogram parameters used for total HM grade estimation are summarized in Table 14.5.

Table 14.5 Interpreted variogram parameters for HM

Domain	Direction (°)	Nugget variance	Sill 1	Range 1 (m)	Sill 2	Range 2 (m)	Sill 3	Range 3 (m)
210	0→005 0→275 -90→360	0.262	0.526	280 340 4	0.212	1,430 470 5	-	-
211	0→015 0→285 -90→360	0.106	0.399	560 400 2.5	0.163	1,170 1,450 3	0.332	2,335 1,460 3
220	0→015 0→285 -90→360	0.297	0.261	600 420 1.2	0.442	1,000 860 2.4	-	-
221	0→010 0→285 -90→360	0.063	0.168	400 140 2.9	0.264	3,460 310 3	0.505	3,460 1,800 3
231	0→015 0→285 -90→360	0.252	0.264	390 270 3	0.203	1,415 300 3	0.281	1,425 1,130 3

Source: Snowden Optiro, 2022

The maximum grade continuity ranges for total HM, slimes and oversize are oriented along 005° to 015°. The total HM data have low and moderate nugget variances (6% to 30%), the slimes data have low nugget variances (9% to 20%), and oversize data have low and moderate nugget variances (14% to 44%). Total HM has a maximum continuity range of 1,000 m to 3,460 m along strike, 470 m to 1,800 m across strike and 2.4 m to 5 m vertically. Maximum continuity ranges interpreted for the slimes are 2,150 m to 3,090 m along strike, 1,135 m to 1,600 m across strike and 3 m to 5 m vertically and for oversize are 1,410 m to 4,400 m along strike, 875 m to 2,270 m across strike and 2.8 m to 7.8 m vertically.

Kriging neighbourhood analysis

Kriging neighbourhood analysis was carried out to optimise the block size, number of samples used for grade estimation, search ellipse dimensions and the block discretization. This analysis used the variogram parameters determined for total HM within Domain 221, which contains most of the mineralization. Block configurations varying between 100 m and 400 m in the easting axis (X) and northing axis (Y) and 1 m and 2 m bench heights were tested. The results indicated that for the blocks tested, the kriging efficiency and regression slope results were not overly sensitive to the block size. A block size of 100 mE by 200 mN by 1 mRL was selected to provide local definition of the grade variability.

The influence of the number of informing samples on the block estimate was tested. For this analysis, the block size was set to 100 mE by 200 mN by 1 mRL, and the sample numbers were varied between two and 40. The minimum and maximum numbers of samples were selected to be eight and 22, respectively, for the first search and second search passes and the minimum number of samples was reduced to six for the third search pass.

The influence of the search ellipse dimensions was investigated. The results indicated that the kriging efficiency and regression slope results decreased with increasing search ellipse dimensions. Given the long variogram ranges, a search ellipse with half the maximum variogram ranges was selected for the first search. The search dimensions were increased to the maximum variogram ranges for the second pass and were increased further to complete the estimate for the third search pass.

The influence of the discretization parameters on the block estimate was also tested. The results indicated that the kriging efficiency and regression slope results were not overly sensitive to the discretization, and this was set to 6 X by 6 Y by 4 Z for grade estimation.

14.2.2 Area 2

Area 2 encompasses 3% of the total area of MIN5532. As discussed in Item 11.3.1, the CRA data and most of the 2004 Astron data analyzed the +38 µm/-1 mm fraction to determine the total HM content. Data obtained during 2010 and 2015, and some of the 2004 samples, were analyzed using the +38 µm/-90 µm fraction. For all samples, oversize data was the +1 mm fraction and for all data obtained prior to 2022, slimes data was the -38 µm fraction. Only data from samples where total HM was analyzed using the +38 µm/-90 µm fraction were used for data analysis and resource estimation within Area 2. Data compositing was not required as all the sample intervals were 1 m.

The 2022 data used total HM from the +20 µm/-250 µm fraction to align with the expected processing. Calibration equations were developed for total HM and slimes within each of the LP1, LP2 and LP3 units. These were used to estimate the total HM data within the +20 µm/-250 µm fraction from the total HM within the +38 µm/-90 µm fraction, and to estimate the slimes data within the -20 µm fraction from slimes within the -38 µm fraction.

Snowden Optiro used the global distributions of HM and slimes from the two different size fractions within Area 1 to determine equations to calibrate the distribution of total HM from the +38 µm/-90 µm fraction to the distribution of total HM from the +20 µm/-250 µm fraction, and the distribution of slimes from the -38 µm fraction to the distribution of slimes from the -20 µm fraction.

Astron analyzed 30 samples for verification of the calibration equations. Duplicate samples that had been screened at -20 µm were re-screened at -38 µm. Total HM was analyzed within the +38 µm/-250 µm fraction, which was then screened at 90 µm to obtain total HM from the +38 µm/-90 µm and +90 µm/-250 µm fractions. Two slimes data pairs were excluded as the -38 µm slimes was less than the -20 µm slimes and one of the total HM data pairs was excluded as the total HM from the +38 µm/-90 µm was less than from the +20 µm/- 250 µm fractions.

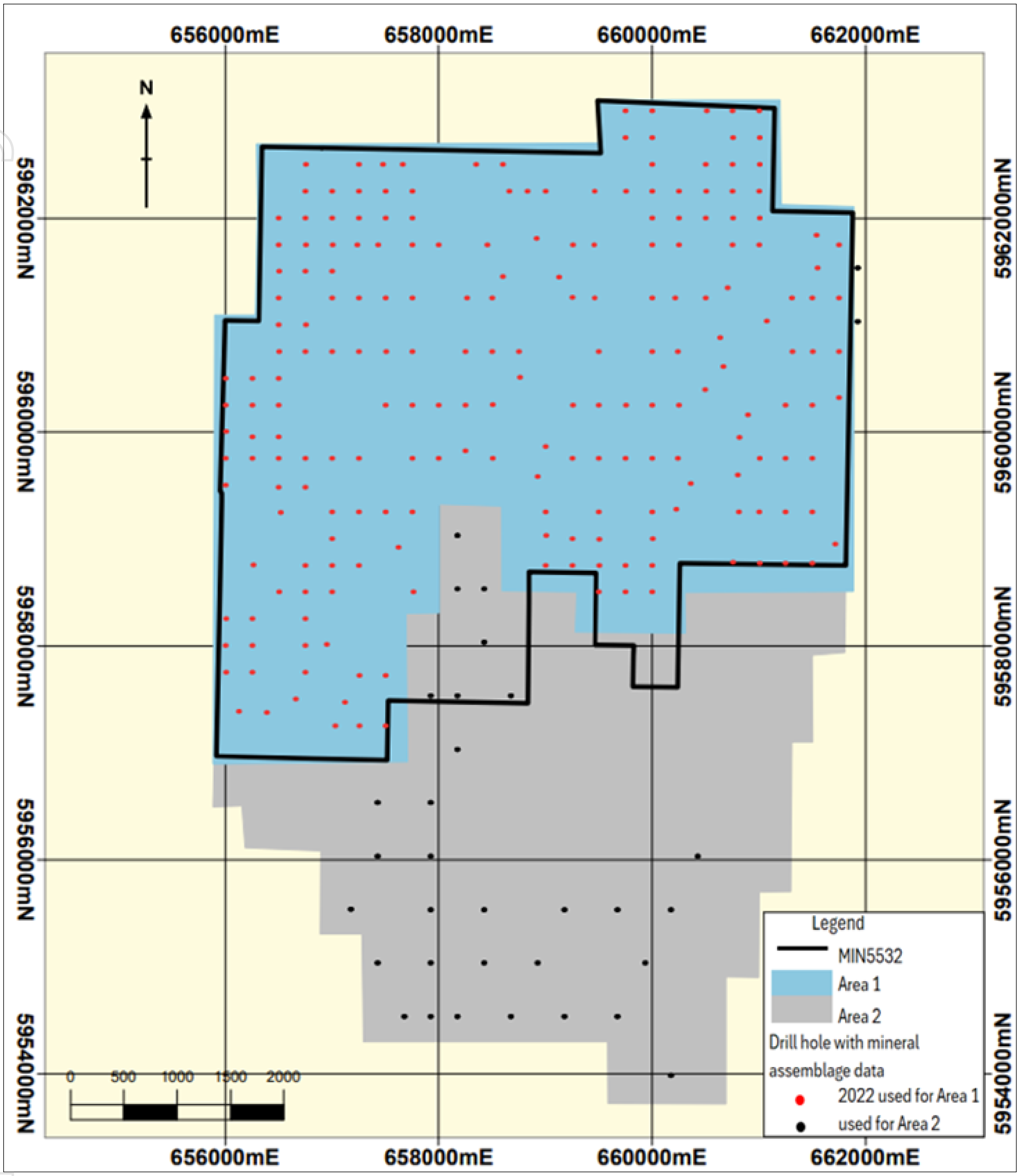
As discussed in Item 14.4, part of LP2 was assigned an Indicated classification and all of LP1 and LP3 within Area 2 were classified as Inferred. There were 22 sets of paired data within LP2, and these provided reasonable confidence in the calibration equations used for LP2 within Area 2. There was insufficient data for verification of the calibration equations within LP1 (two pairs of data) and LP3 (three pairs of data).

The variogram models interpreted from the 2022 total HM, slimes and oversize data were checked against the directional variograms generated using the combined dataset. These confirmed that the variogram parameters used for Area 1 could be used for grade estimation of the calibrated data within Area 2. For grade estimation within Area 2, the calibrated data within Areas 1 and 2 were combined with the 2022 data to prevent boundary effects between Area 1 and Area 2.

14.2.3 Mineral assemblage analysis

Astron selected representative intervals from each of the LP1, LP2 and LP3 units to generate 53 composite samples of HMC. These are from 227 drillholes and include intervals from over a total of 1,611 m (Figure 14.3). Where possible, Astron excluded samples from the top and base of the LP1, LP2 and LP3 units to ensure that the composite samples are representative of each geological unit and only individual samples reporting >1% total HM were used in these composites.

Figure 14.3 Plan of drillholes with mineral assemblage data used for Area 1 and Area 2



Source: Snowden Optiro

Area 1

As discussed in Item 11 QEMSCAN® analysis was used for determination of the titania minerals, XRF data (ZrO_2 and HfO_2) were used to determine zircon contents and ICP-MS data (CeO_2 and Y_2O_3) were used to determine monazite and xenotime contents.

Correlation coefficients of the 2022 mineral assemblage data from the Area 1 composite samples (Table 14.6) indicate a strong positive relationship between zircon and monazite, zircon and xenotime, and monazite and xenotime; a moderate positive relationship between rutile and the other mineral assemblage components, and between xenotime and the other mineral assemblage components; and a poor positive correlation between leucoxene and ilmenite, leucoxene and zircon, leucoxene and monazite, and ilmenite and monazite.

Table 14.6 Correlation coefficients of mineral assemblage data – composite samples

	Rutile	Leucoxene	Ilmenite	Zircon	Monazite	Xenotime
Rutile	1.00	0.75	0.76	0.78	0.63	0.78
Leucoxene		1.00	0.38	0.51	0.50	0.61
Ilmenite			1.00	0.80	0.58	0.73
Zircon				1.00	0.92	0.98
Monazite					1.00	0.96
Xenotime						1.00

Source: Snowden Optiro, 2022

The mineral assemblage data was attributed to each drillhole interval that was incorporated into the composite sample, and the data was coded using the wireframe surfaces for each geological sequence. Most of the mineral assemblage data is from LP2 (30 composite samples). Within LP1, there are a total of seven composite samples and within LP3 there are 16 composites samples.

LP2 contains the highest ilmenite, zircon, monazite and xenotime concentrations, LP1 contains the lowest ilmenite, zircon, monazite and xenotime concentrations and LP3 contains the lowest leucoxene and rutile concentrations.

Along strike and across strike variograms were examined for rutile, leucoxene, ilmenite, zircon, monazite and xenotime. Along-strike (015°) ranges of 580 m to 1,010 m and across-strike ranges (285°) of 480 m to 900 m were interpreted, with leucoxene having the shorter ranges and monazite having the longest ranges. The zircon variograms were selected as being the most robust and were in line with the ranges determined for ilmenite, rutile and monazite. The zircon ranges of 940 m along strike by 880 m across strike were used for the horizontal search ellipse dimensions and a vertical search of 3.5 m was selected, which is about half the average sampled interval used for the composite samples.

The mineral assemblage components (all titania mineral subdivisions, zircon, monazite and xenotime) and TiO_2, ZrO_2+HfO_2 and REOs were estimated using ID^3 estimation within the LP1, LP2 and LP3 sequences. Hard boundary conditions were applied between the geological units.

Area 2

For Area 2, mineral assemblage and XRF data obtained from the 2004 drilling was used for estimation of the titania minerals and zircon. Mineral assemblage data was determined using HM concentrate from within the +38 µm/-90 µm fraction. The 2004 data (following the adjustments discussed below) was combined with the 2022 data for mineral assemblage estimation within Area 2.

The 2022 REE data was used for estimation of the REOs, and monazite and xenotime were estimated from the 2022 cerium and yttrium ICP-MS data.

The particle distribution data from the +20 µm/-250 µm HM concentrate was used to determine the proportion of HM and the proportions of zircon and the titania minerals that were within the -40 µm (considered equivalent to 38 µm for this analysis), the +40 µm/-90 µm and the +90 µm fractions within the LP1, LP2 and LP3 sediments. The proportions of zircon and the titania minerals that were within the combined -40 µm and +90 µm HMC were less than within the +40 µm/-90 µm HMC and the inclusion of total HM from the +20 µm/-38 µm and +90 µm/-250 µm fractions in the 2022 data will have diluted the mineral assemblage components. The dilution factors determined from this analysis and applied to the 2004 zircon and titania data are summarized in Table 14.7.

Table 14.7 Factors applied to 2004 zircon and titania mineral assemblage data

Unit	Mineral	Within +40 µm/-90 µm fraction	-40 µm and +90 µm fractions	Dilution factor for additional 40 µm and +90 µm HM
LP1	Total HM	59.0	41.0	-
	Titania	59.9	40.1	0.86
	Zircon	74.0	26.0	0.73
LP2	Total HM	87.0	13.0	-
	Titania	67.4	32.6	0.93
	Zircon	76.5	23.5	0.91
LP3	Total HM	57.0	43.0	-
	Titania	63.6	36.4	0.82
	Zircon	76.0	24.0	0.71

Source: Snowden Optiro, 2022

Within Area 2, mineral assemblage data had only been analyzed within the LP2 sequence. Analysis of the data within Area 1 indicated that the mineral assemblage contents in LP2 were higher than in LP1 and LP3. The mineral assemblage within LP2 was discounted for estimation within the LP1 and LP3 units. The discount factors applied were the average proportion of each of variable within LP1 and within LP3 compared to LP2 (Table 14.8). As discussed in Item 14.4, the LP1 and LP3 units within Area 2 were assigned an Inferred classification to account for the uncertainties in the mineral assemblage estimates.

Table 14.8 Discount factors applied to LP2 mineral assemblage data

	LP1	LP3
Rutile	0.81	0.73
Leucoxene	0.98	0.73
Ilmenite	0.63	0.79
Zircon	0.61	0.86

Source: Snowden Optiro, 2022

14.3 Grade estimation and model validation

The 2022 and subsequent 2025 block models were constructed using the parameters determined from the kriging neighbourhood analysis and the expected mining methods. The block model had a parent block size of 100 mE by 200 mN by 1 mRL. The parent blocks were allowed to sub-cell down to 25 mE by 50 mN by 0.25 mRL to more accurately represent the geometry and volumes of the geological units and the mineralization horizon. The block model was screened above the interpreted top of Geera Clay surface.

14.3.1 Total HM, slimes and oversize

Block grades for total HM were estimated using both OK and ID^2 techniques, and block grades for slimes and oversize were estimated using OK techniques. Grade estimation was into the parent blocks.

Grade estimation for Area 1 only used the 2022 assay data. Grade estimation for Area 2 used the 2022 data, and the data that was analyzed using 38 µm and 90 µm screens (2010, 2015 and some of the 2004 data) and was calibrated with the +20 µm/-250 µm total HM and the -20 µm slimes data (as discussed in Item 14.2.2), Grade estimation of total HM was within the +20 µm/-250 µm fraction, slimes was the -20 µm fraction and oversize was the +1 mm fraction.

The search ellipses were oriented within the plane of the mineralization using Datamine's dynamic anisotropy methodology. Centre-line surfaces were generated through the interpreted mineralized domains, and the local dip and dip orientations of the surface were determined and estimated into the block model for each domain. These dips and dip orientations were used to control the orientation of the search ellipse and variogram model for grade estimation.

As discussed in Item 14.2, a combination of hard and soft boundary conditions was applied. Hard boundary conditions were applied for Domains 210, 211, 220, 221 and 231 for estimation of total HM so only data from within each domain was used for grade estimation within that domain. For slimes, soft boundary conditions were applied within each of the geological units and hard boundary conditions were applied between the geological units. Data from Domains 210 and 211 were used for slimes estimation within LP1, data from Domains 220 and 221 were used for slimes estimation within LP2 and data from Domains 230 and 231 were used for slimes estimation within LP3. For oversize, hard boundary conditions were applied between the geological units and within LP2. Data from Domains 210 and 211 were used for oversize estimation within LP1, data from Domains 230 and 231 were used for oversize estimation within LP3, data from within Domain 220 were used for oversize estimation within LP2 Domain 220 and data from within Domain 221 were used for oversize estimation within LP2 Domain 221.

A three-pass search scheme was used. As determined from the kriging neighbourhood analysis, the search ellipse dimensions for the first search corresponded to half of the mineralization continuity ranges interpreted from the variogram analysis for total HM, slimes and oversize. For the second search pass, the search ranges were double the initial search ranges (i.e. to the maximum variogram ranges). For the third search pass, the search ranges were increased to complete grade estimation within each of the mineralized domains and the minimum number of samples reduced to six.

Even with the increased third search ranges, not all total HM and oversize block grades were estimated within Domain 220 in Area 1. A total HM grade of 0.74% and an oversize grade of 7.84% were assigned to the remaining blocks. Domain 230 contained only three data points and a total HM grade of 0.76% was assigned to this domain. Soft boundary conditions were used for the estimation of slimes and oversize within the LP3 layer (Domains 230 and 231), so these variables were estimated within Domain 230.

Approximately 71% of the total HM block grades were estimated in the first search pass, 16% within the second search pass and 3% in the third search pass. For the remaining 10% of blocks (which are mainly within Domain 230 which has only three data points), the average total HM grade was assigned to Domain 230 and to 1% of the blocks within Domain 220. For slimes, approximately 96% of the block grades were estimated in the first search pass, 6% within the second search pass and the remaining 0.1% estimated in the third search pass. Approximately 93% of the oversize block grades were estimated in the first search pass, 6% within the second search pass and 0.6% estimated in the third search pass. For the remaining 0.1% of the blocks, the average oversize grade estimated for Domain 220 was assigned to these blocks.

The percentages of parent blocks with total HM, slimes and oversize grades estimated in each search pass and domain for Area 2 were also recorded. Approximately 61% of the total HM block grades were estimated in the first search pass, 26% within the second search pass and 13% in the third search pass. For slimes, approximately 89% of the block grades were estimated in the first search pass, 11% within the second search pass and the remaining 0.4% estimated in the third search pass. Approximately 87% of the oversize block grades were estimated in the first search pass, 11% within the second search pass and 1% in the third search pass.

14.3.2 Mineral assemblage

Block grades for the mineral assemblage components (all titania mineral subdivisions, zircon, monazite, and xenotime) and TiO_2, ZrO_2+HfO_2 and REEs were estimated using ID^3 techniques and grade estimation was into the parent blocks.

Estimation for Area 1 only used the 2022 QEMSCAN® mineral assemblage, XRF and ICP-MS data. Grade estimation of zircon and the titania minerals for Area 2 used the 2022 data, and the 2004 data that was analyzed using HMC from the +38 µm/-90 µm fraction. Estimation of the REEs used the 2022 data obtained in Area 1 and this was extrapolated into Area 2. The block estimates of the REEs (ppm) were converted to REOs (%) and the TREO determined using the conversion formulae listed in Item 11.1.3. As for the total HM, the search ellipses were oriented within the plane of the mineralization using Datamine's dynamic anisotropy methodology.

Within Area 1, 92% of the grades were estimated in the first search pass, 8% within the second search pass and the remaining 0.2% in the third search pass. Within Area 2, 57% of the zircon and titania mineral grades were estimated in the first search pass, 39% within the second search pass and the remaining 4% in the third search pass, and almost 40% of the REE, monazite and xenotime grades were estimated in the first search pass, almost 60% within the second search pass and the remaining 0.5% in the third search pass.

14.3.3 Density

The density values in Table 11.2 were applied to the Shepparton Formation and the LP1, LP2 and LP3 units. The model was screened to above the top of Geera Clay surface.

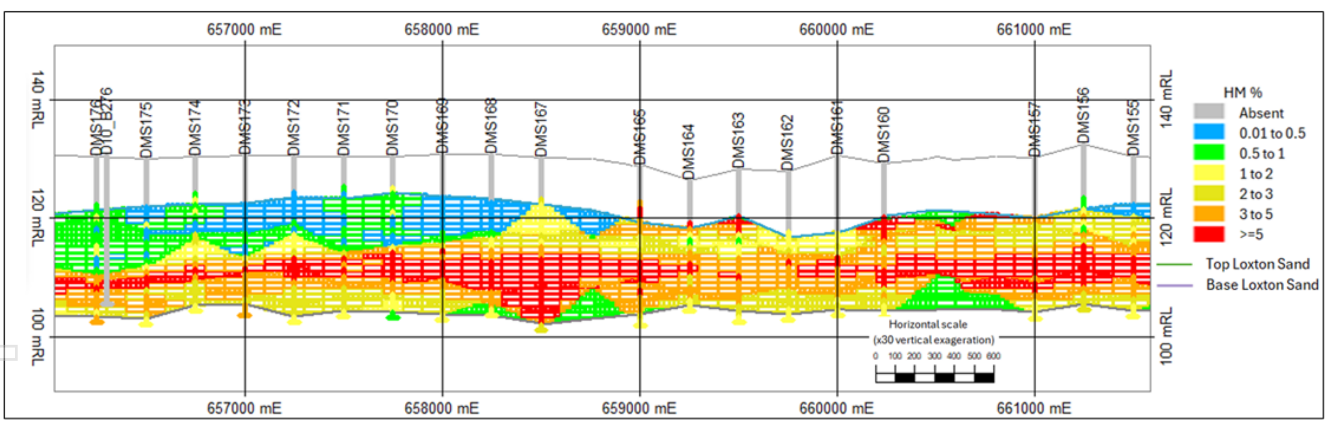
14.3.4 Model validation

The estimated grades in the resource model were validated by:

- Visual comparison of the drillholes and blocks
- Comparing the mean input grades with the estimated block grades
- Examining trend plots of the input data and estimated block grades by easting, northing and elevation slices.

Visual validation of the block models was carried out by examining cross-section, long section and plan views of the drillhole data and the estimated block grades. These indicated good correlation of the estimated block grades with the input drillhole data. A cross-section through the Donald deposit showing the drillhole HM data and estimated HM block grades is presented in Figure 14.4.

Figure 14.4 Representative geological cross-section looking north along 5,959,750 mN with drillholes coloured by total HM%*



**Section location included in Geological information from all historical drilling campaigns (pre-2022) was used to inform the geological interpretation for resource modelling in the MIN5532 area. The Mineral Resource estimate was divided into two areas (Area 1 and 2) based on the drillhole coverage. The nominal drill spacing for the 2022 drilling was approximately 250 mE by 350 mN. In general, the historical drillhole spacing ranges from 125 mE by 400 mN to 250 mE by 500 mN. The area covered by the 2022 drilling is coded as Area 1 and encompasses 97% of the total area of MIN5532 (Figure 14.1). The resource model was extended to cover MIN5532 and an area to the south of MIN5532 (to improve analysis of the Area 2 data). The area outside of the 2022 drilling was coded as Area 2*

Source: Snowden Optiro

The Mineral Resource was reported using the OK estimate for total HM and the ID^2 estimate was used as validation of this model. Trend plots were used to compare the total HM OK estimate with the ID^2 estimate for total HM in the easting, northing and elevation directions. The average block estimates were similar for each model slice, with minor differences noted in areas of sparse data. The relative percentage difference between the average total HM grades estimated using OK and estimated using ID^2 was less than 2%.

The HM slimes and oversize block estimates were statistically validated against the input data. The mean estimated total HM, slimes and oversize grades were compared to the input and the declustered input data means. Within Area 1, the relative differences between the input data means and the mean estimated grades were all less than 6% and the relative differences between the declustered input data means and the mean estimated grades were all less than 8%. Within Area 2, the relative differences between the input data means and the mean estimated grades were all less than 8% and the relative differences between the declustered input data means and the mean estimated grades were all less than 11%. As discussed in Item 14.4, Mineral Resources within Area 2 were assigned an Indicated or Inferred classification.

The mean estimated mineral assemblage component grades were compared to the input data means. The relative differences are all less than 4% within Area 1. Within Area 2, mineral assemblage data was only available within LP2, and the relative differences were all less than 7%. As discussed in Item 14.2.3, discount factors were applied to the LP2 zircon and titania mineral assemblage components for estimation within LP1 and LP3. The REO, monazite and xenotime grades in Area 2 were extrapolated for the 2022 data. As discussed in Item 14.4, LP2 in Area 2 was classified as Indicated at best and LP1 and LP3 were assigned an Inferred classification within Area 2.

The validation plots indicated a good correlation between the input total HM, oversize and slimes grades and the block grades. The block grades followed the trends present in the input data in the easting, northing and elevation trend plots although, as would be expected, the model grades were slightly smoother than the input data. The validation plots for the mineral assemblage components indicated good correlation between the input data and the block grades for the easting and northing trend plots. Elevation plots were not examined as the mineral assemblage data are from downhole composited samples.

14.4 Classification

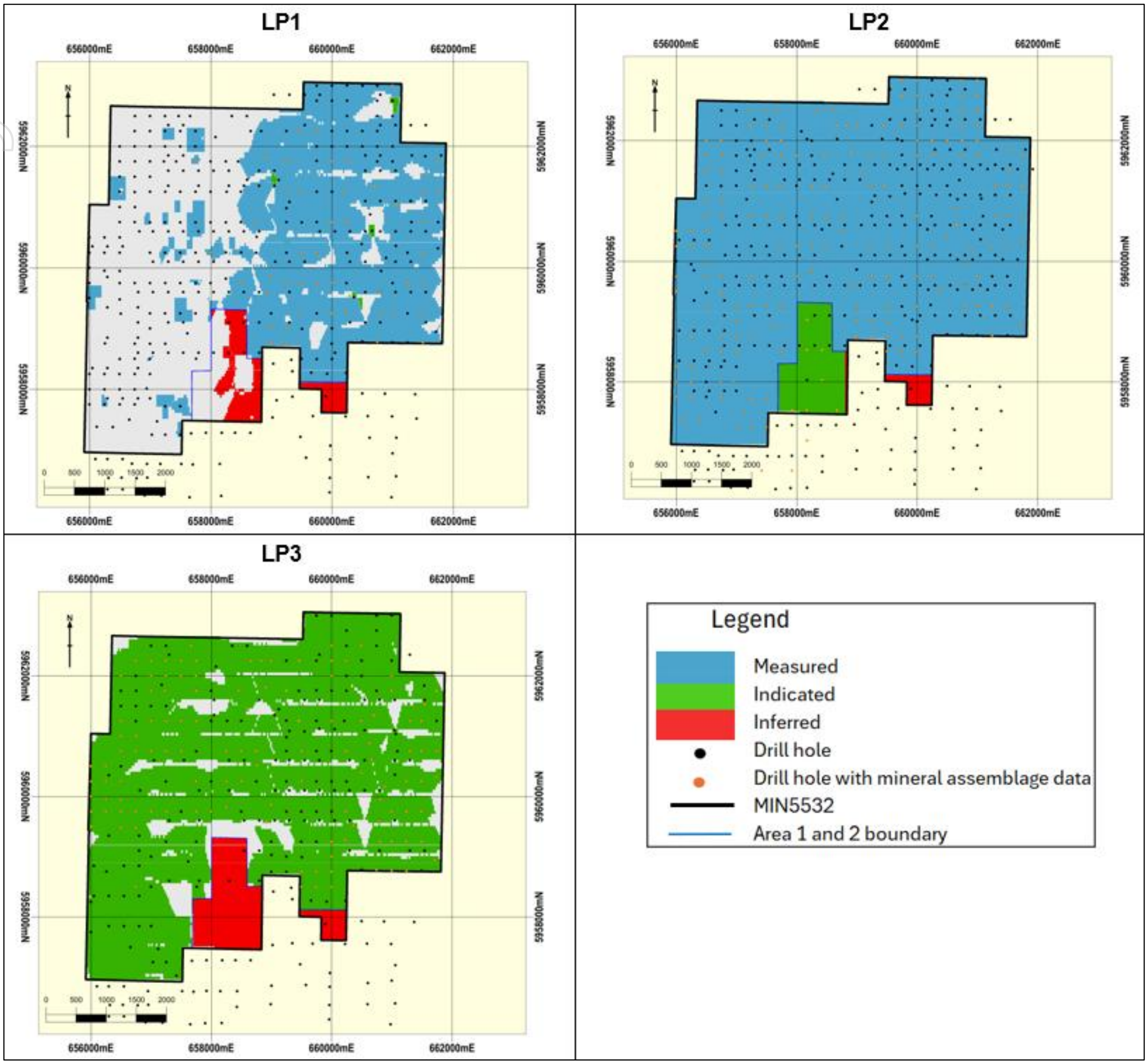
The 2025 Mineral Resource estimate was classified into the Measured, Indicated and Inferred categories, taking into account data quality, data density, geological continuity, grade continuity and confidence in the estimation of HM content and mineral assemblage.

Measured and Indicated Mineral Resources were defined within the Area 1, in areas covered by the 2022 drilling (on a nominal spacing of 250 mE by 350 mN) and where the mineral assemblage was determined by QEMSCAN®, XRF and ICP-MS analysis. Measured Mineral Resources were defined within the LP1 (Domains 210 and 211) and LP2 units (Domains 220 and 221). Domain 210 in the east and the LP3 unit (Domains 230 and 231) were classified as Indicated. Domain 210 is thinner in the east and grade estimation was supported by sparser data compared to the western area. Inferred Resources were not defined in Area 1.

Within Area 2, the drilling data used for the Mineral Resource estimate was generally on a spacing of 250 m to 500 m east-west and 250 m to 500 m north-south. The historical nature of the data, and changes in the grain size and data calibration reduced confidence in the data used for estimation. Mineral Resources within Area 2 were classified as Indicated and Inferred. The LP2 unit was classified as Indicated where there is 2004 mineral assemblage data and was classified as Inferred where there was a lack of mineral assemblage data. Mineral Resources within LP1and LP3 were classified as Inferred.

The classifications for the reported 2025 Mineral Resource (>1% total HM) are illustrated in Figure 14.5.

Figure 14.5 MIN5532 Mineral Resource classification



Source: Snowden Optiro

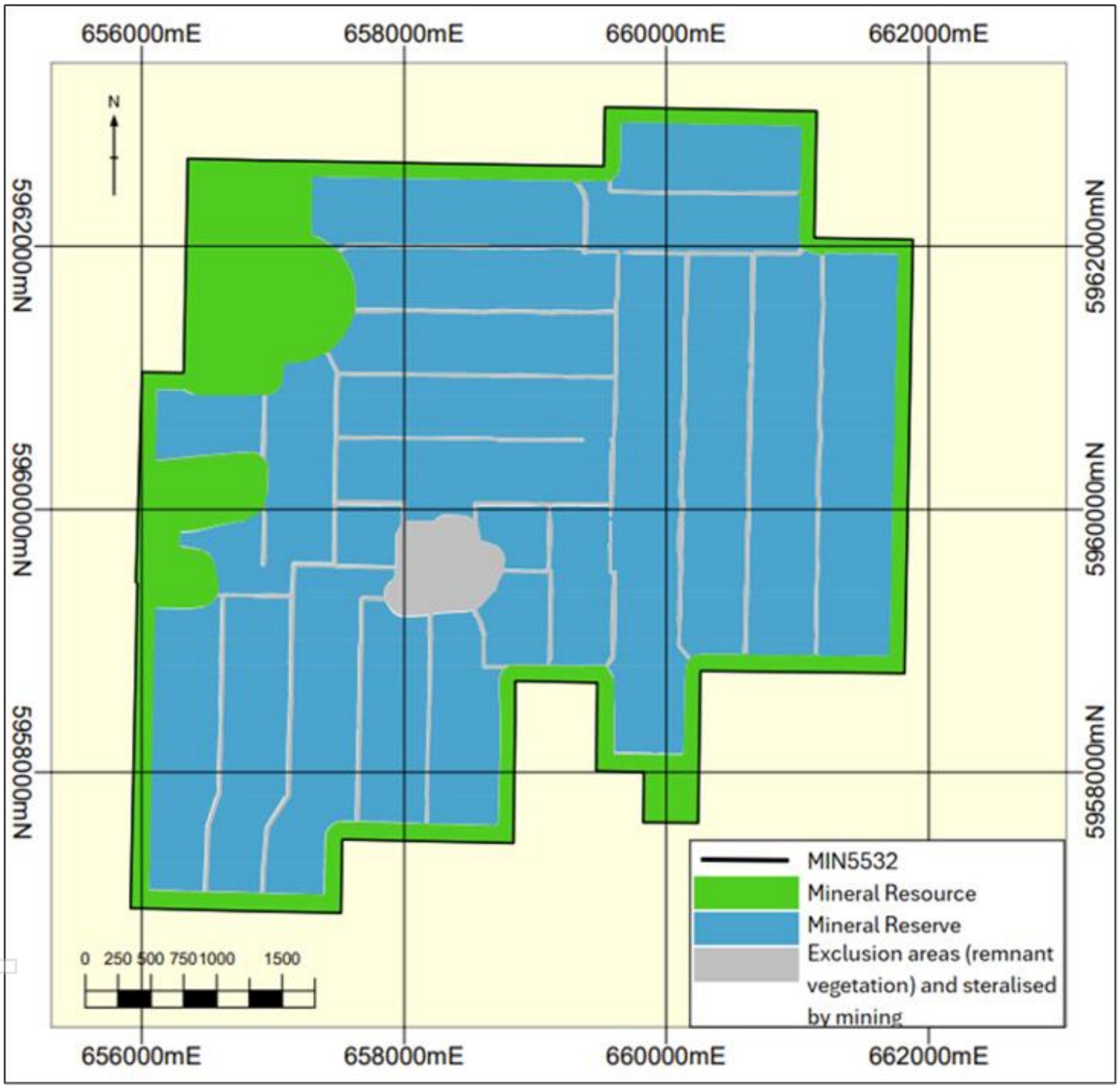
14.5 Mineral Resource estimate

The 2025 Mineral Resource estimate is reported above a cut-off grade of 1% total HM within a RF100 pit shell identified using the geotechnical parameters, operating costs, metal prices and recoveries disclosed in Item 15.2.1 as determined from the Mineral Reserve study. As disclosed in Item 15, the 2025 Mineral Reserve has been estimated within MIN5532, based on the Mineral Resource within the area outlined in Figure 14.6.

A buffer zone within and around the edges of MIN5523 has been excluded from the 2025 Mineral Reserve estimate and the remaining 2025 Mineral Resource has been reported within this buffer zone. The previously reported reserve within RL2002 (refer to Item 24.3) abuts MIN5523 and, should the project advance to Phase 2, which proposes mining within RL2002, it is expected that the Mineral Resource within the buffer zone has reasonable prospects for economic extraction.

The 2025 Mineral Resource for the Donald deposit within MIN5532 and outside of the Mineral Reserve area (and areas sterilized by mining) is illustrated in Figure 14.6 and reported in Table 14.9. The reported 2025 Mineral Resource includes Inferred Mineral Resources within the outline of the 2025 Mineral Reserve area. The total HM% is reported as a percentage of the total material. The mineral assemblage components (rutile, leucoxene, ilmenite, zircon, monazite and xenotime) and the oxides are reported as a percentage of the total HM that is within the +20 µm/-250 µm fraction. The oxide components are contained within the minerals and are not in addition to the minerals. The slimes content is the -20 µm fraction and oversize is the +1 mm fraction.

Figure 14.6 Plan of 2025 Mineral Reserve area and remaining 2025 Mineral Resource within MIN5532



Source: Snowden Optiro

Table 14.9 Donald Mineral Resource exclusive of Mineral Reserves within MIN5532 as of 31 December 2025 (100% equity)

Classification	Tonnes (Mt)	Density (t/m³)	Total HM (%)	Slimes (%)	Over-size (%)	% of total HM					
						Zircon	Rutile	Leuco-xene	Ilmenite	Monazite	Xeno-time
Measured	71	1.8	4.1	14	9	16	7.3	24	20	1.7	0.66
Indicated	26	1.7	3.2	23	10	16	5.8	18	18	1.8	0.64
Measured + Indicated	**96**	**1.7**	**3.9**	**17**	**9**	**16**	**7.0**	**23**	**20**	**1.7**	**0.66**
Inferred	21	1.7	2.3	22	14	13	6.9	19	19	1.2	0.51

Classification	Tonnes (Mt)	Total HM (%)	% of total HM								
			ZrO_2+ HfO_2	TiO_2	CeO_2	Y_2O_3	Pr_6O_{11}	Nd_2O_3	Dy_2O_3	Tb_4O_7	TREO
Measured	71	4.1	11	33	0.48	0.28	0.058	0.21	0.041	0.0065	1.46
Indicated	26	3.2	10	28	0.50	0.28	0.061	0.22	0.041	0.0065	1.50
Measured + Indicated	**96**	**3.9**	**11**	32	0.48	0.28	0.059	0.21	0.041	0.0065	1.47
Inferred	21	2.3	9	30	0.34	0.23	0.041	0.15	0.032	0.0049	1.07

Notes:

- *Mineral Resources are reported on a 100% basis. As at the effective date of this Technical Report, Energy Fuels held a 9.48% interest in the Property.*
- *Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.*
- *Measured and Indicated Mineral Resources that are within the Mineral Reserve outline have been excluded from the reported Mineral Resource. Inferred Mineral Resources within the Mineral Reserve outline are included in the reported remaining Mineral Resource.*
- *The reference point for the Mineral Resources is in-situ without assumed recovery modifying factors.*
- *The MIN5532 Mineral Resource has been classified and reported in accordance with the 2014 CIM Definition Standards incorporated in NI 43-101 and S-K 1300 Definitions.*
- *Total HM is from within the +20 µm to -250 µm size fraction and is reported as a percentage of the total material. Slimes is the -20 µm fraction and oversize is the +1 mm fraction.*
- *Estimates of the mineral assemblage (zircon, ilmenite, rutile (including anatase), leucoxene, monazite and xenotime) are presented as percentages of the total HM component. Estimates of the oxide components (presented as percentages of the total HM component) are contained within the minerals and are not in addition to the minerals. The REOs (CeO_2, Y_2O_3, Pr_6O_{11}, Nd_2O_3, Dy_2O_3, Tb_4O_7) are a subset of the TREO.*
- *All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sum of columns may not equal.*
- *The Mineral Resource is reported within MIN5532 above a 1% HM cut-off within a RF100 pit shell identified using the geotechnical parameters, operating costs, metal prices and recoveries disclosed in Item 15.2.1.*

The information in this Technical Report that relates to the MIN5532 Mineral Resource estimate is based on, and fairly reflects, information and supporting documentation compiled by Mrs. Christine Standing, who is a Member of the Australian Institute of Geoscientists. Mrs. Standing is an employee of Snowden Optiro and the Qualified Person responsible for Item 14.

Mrs. Standing has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Qualified Person as defined in the CIM guidelines and S-K 1300 Definitions. Mrs. Standing consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

The Donald 2025 Mineral Resources have been classified in accordance with the definitions for Mineral Resources in S-K 1300, which are consistent with CIM Definition Standards for Mineral Resources and Mineral Reserves dated 10 May 2014 (CIM, 2014) incorporated by reference in NI 43-101.

The Qualified Person is unaware of any issues that materially affects the Mineral Resource in a detrimental sense. These conclusions are based on the following:

- The Mineral Resource is in a granted Mining Licence in good standing with state and federal environmental approvals in place and an approved CHMP
- DPPL currently owns several freehold titles and is in the process of acquiring or negotiating land use terms over the remaining Work Plan area
- Astron has represented that there are no outstanding legal issues, no legal actions or injunctions pending against the Phase 1 project
- There are no material marketing, political, socio-economic or taxation issues
- There are no known infrastructure issues.

14.6 Grade control model

During 2025, Astron undertook a GC drilling program within the area that is expected to be mined during the first two years of production (Ore Blocks 1 to 8). This included 133 AC holes and 10 sonic holes within MIN5532 during 2025 (Table 10.1 and Figure 10.2). Data from these holes were not used for the current Mineral Resource estimate as modifications were made to the sample preparation method used by ALS for the 2025 GC samples.

For the 2022 samples, a traditional sample preparation procedure was used by Bureau Veritas, which included agitation of a soaked sample. Astron noted that processing of the testwork samples (using scrubbing/trommel) reduced the oversize component and increased the HM sinks, and the in-size sand fraction (+20 µm/-250 µm, from which the HM are recovered), with an increase to the in-situ HM grade. The sample preparation method used by ALS included bottle-rolling, to mimic the scrubbing process used for the testwork samples. Additional data is required that covers the full extent of MIN5532, before the impact of the increased in-situ HM can be assessed for the Mineral Resource.

A 2025 GC model was developed within the area of Ore Blocks 1 to 8 for short-term mine planning that used only the 2025 AC data (Snowden Optiro, 2025b). The block model used a parent block size of 50 mE by 50 mN by 1 mRL with sub-celling to 12.5 mE by 12.5 mN by 0.25 mRL to more accurately represent the geometry and volumes of the geological units and the interpreted mineralized zones. Block grades for total HM, slimes and oversize were estimated using OK and grade estimation was into the parent blocks

XRF and ICP-MS of the 1 m samples were used for analysis of the mineral assemblage and oxide contents of the total HM fraction. These were estimated into the parent blocks using OK. QEMSCAN analysis was not undertaken on the GC samples and so the individual titania minerals (rutile, leucoxene and ilmenite) were not estimated: only the total TiO_2 is reported. Zircon and monazite and xenotime were estimated using the follow conversions:

- Zircon = ZrO_2+HfO_2 / 0.667 (from XRF data)
- Monazite = CeO_2 / 0.28 (from ICP-MS data)
- Xenotime = Y_2O_3 / 0.42 (from ICP-MS data).

The 2025 GC model has been assigned a Measured classification, taking into account data quality, data density, geological continuity, grade continuity and confidence in the estimation of HM content and the mineral assemblage and oxides contained in the heavy mineral fraction. The classification of the 2025 GC model is in accordance with the definitions for Mineral Resources in S-K 1300, which are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated 10 May 2014 (CIM, 2014) incorporated by reference in NI 43-101. The entire 2025 GC model is contained within the 2025 Mineral Reserves, as discussed in Item 15.

14.7 Independent reviews

An independent review of the Mineral Resource estimate for MIN5523 and for Ore Block 1 to 8 has not been completed. The Mineral Resource was estimated by the Qualified Person for the Mineral Resource estimate. Internal reviews were completed by Snowden Optiro.

15 Mineral Reserve estimates

The mine designs and schedules from the 2023 "Mining Feasibility Study" (AMC, 2023a) and "Mining Work Plan" (AMC, 2023b) were based on Lerchs-Grossmann open pit optimizations within MIN5532. The mine schedules and Mineral Reserve were updated by AMC in 2025 (AMC, 2025a) using the 2025 Mineral Resource model and 2025 GC model. Pit optimizations were updated for 2025 costs and metal prices and constrained within the mine crest to avoid protected vegetation, tailings storage, and the wet concentrator footprint. The first two years of production (the first eight mining blocks) is informed by the recently developed 2025 GC model, together with detailed mine planning and scheduling.

Figure 4.3 provides an outline of the Work Plan area and the MIN5532 boundary. The Work Plan area will support operations at the target throughput rate of 7.5 Mt/a for about 19 years. The MIN5532 area will support mining and processing activities for a total of about 40 years (Phase 1).

15.1 Key parameters and assumptions

MIN5532 will be mined using a conventional strip-mining method, designed as 500 m wide strips separated by in-situ ore bunds between the strips. Each strip comprises a series of about 500 m wide and 250 m long mining blocks separated by bunds constructed from overburden stripped from the active mining area. The mining blocks will be extracted in a progressive sequence within each strip, before shifting to a new strip (refer to Item 16.1). Spear point wells will be used to dewater the active mining area and the active tailings cell.

Once the ore is exposed bulldozers will push ore to a track-mounted, self-relocating Mining Unit Plant (MUP), enabling in-pit ore feeding. The ore will be screened and pumped to the process plant. The MUP will be relocated to follow the mining front and minimize bulldozer distances.

Process tailings will be returned to tailings cells constructed in the void left behind the active mining block. A downstream embankment will be constructed between the active tailings block and active mining block. Waste overburden will be backfilled behind the active tailings cell and above consolidated tailings.

Tailings cells are contained within sets of constraining bunds. Two types of bunds will be used:

- In-situ bunds which are left between strips of mining blocks, resulting in ore loss which is accounted for in the 2025 Mineral Reserve estimate
- Constructed in-pit bunds placed between the tailing cells.

ATC Williams was engaged for the initial external tailings cells and subsequent in-pit tailings cell construction and deposition design. Numerous site geotechnical investigations have been undertaken since 2015 by Douglas Partners, GHD and ATC Williams. ATC Williams provided geotechnical slopes of 1:2 (~27°) for in-situ slopes and 1:2.5 (~22°) for constructed slopes. The most recent site open pit geotechnical work was completed by ATC Williams in 2024 and is discussed in Item 16.1.

Based on this work, the design progressed considering a modified co-disposed tailings slurry (mix of sand and slimes) that is initially hydraulically placed within an external TSF until sufficient in-pit void space has been generated through the mining operation to allow tailings to be deposited within in-pit tailings cells (refer to Item 18.2 for further details).

The mine blocks are sized to allow better control over the tailings rate of rise which is linked to the overall settled density of the tailings (i.e. lower rate of rise generally equates to an improved final settled density).

The geological units are relatively fine-grained and clayey and form a low permeability water table aquifer system. Bore yields are less than 0.5 L/s and there are no groundwater extraction bores within 20 km of the site, largely because the typical groundwater salinity is about 17,000 mg/L TDS. The depth to the (saline) water table is about 10–14 m, indicating very low potential for groundwater dependent vegetation.

15.2 Pit optimization

The 2025 Mineral Resource block model and 2025 GC model were used by AMC to generate the MIN5532 Mineral Reserve estimate.

A pit optimization was completed by AMC in 2025 to confirm the economically mineable portion of the Donald Mineral Resource and to support Mineral Reserve estimation.

The 2025 Mineral Resource block model was re-blocked to a uniform cell size of 25 mE by 25 mN by 1.0 mRL for optimization purposes. This block size was selected to improve resolution of pit boundaries and accurately represent pit wall geometries in the optimization process.

Economic inputs applied in the optimization included mining, processing, and transport and shipping cost assumptions, together with forecast product prices, royalties and recoveries. Block revenues were calculated from HM assemblage grades within the model. Geotechnical constraints were incorporated by applying a nominal overall pit slope angle of 20°, reflecting the shallow nature of the mineralization and the low pit wall heights expected during mining.

A mining loss of 6% was applied during optimization to account for in-situ bunds and practical mining constraints. No additional dilution was applied; any lateral edge dilution is expected to be predominantly mineralized material.

The optimization was carried out using industry-standard pit optimization algorithms to generate a series of nested pit shells. The selected shells formed the basis for detailed pit designs, production scheduling, and Mineral Reserve estimation.

15.2.1 Optimization parameters

The following mining costs used for the pit optimization were developed by AMC and DPPL based on contractor quotations:

- Clearing and rehabilitation cost: $3,300/ha disturbed footprint.
- Topsoil mining and placement cost inclusive of clearing and rehabilitation, rehandle and ancillary costs: $1.66/bcm.
- Subsoil mining and placement cost inclusive of clearing and rehabilitation, rehandle and ancillary costs: $1.66/bcm.
- Overburden mining cost inclusive of 20% rehandle and ancillary costs: $3.16/bcm.
- Ore mining cost inclusive of 6% ore loss, rehandle, ore feed and ancillary costs: $6.25/bcm.

The following processing costs used in the optimization were developed by Mineral Technologies:

- Ore processing cost including reagents, tailings disposal and dewatering: $6.24/t of ore.
- Royalty: 5% of mine gate value (a 2.5% mine gate value is applied in the economic model discussed Item 22 to reflect the state royalty in Victoria).

The oxide prices adopted for the optimization were based on independent market studies as disclosed in Item 19.1 and Item 22.1.

- HMC:
  - HM content – 94.1%
  - ZrO_2 price – US$18.52/% in product
  - TiO_2 content – US$3.51/% in product
  - Transport to port cost – $160.8/wet t

  - Shipping cost – US$46/wet t.
- REEC:
  - CeO_2 content – 20.3%
  - Pr_6O_{11} price -US$2,340/ % in product
  - Nd_2O_3 price – US$8,240/ % in product
  - Tb_4O_7 content – US$3,830/ % in product
  - DyO_3 content – US$8,100/ % in product
  - Transport to port – $104.47 / wet t
  - Shipping – US$/957.07/ wet t.
- Concentrate moisture content – 8%.
- Exchange rate – 0.7 US$:A$.

The processing recovery assumptions used in the pit optimization are summarized in Table 15.1 and Table 15.2.

Table 15.1 Processing recovery (%) assumptions used for pit optimization

Product	HM	Zircon	Rutile	Leucoxene	Ilmenite	Monazite	Xenotime	TiO_2
HMC	51.20	92.98	54.34	54.34	54.34	2.40	2.60	54.34
REEC	2.20	0.90	0.30	0.30	0.30	92	88	0.3

Source: AMC, 2025a

Table 15.2 Processing recovery (%) assumptions

Product	ZrO_2+HfO_2	CeO_2	Y_2O_3	Pr_6O_{11}	Nd_2O_3	Dy_2O_3	Tb_4O_7
HMC	92.98						
REEC	0.90	92	88	92	92	88	88

Source: AMC, 2025a

The pit optimization considered the Measured and Indicated Mineral Resource model blocks only within the MIN5532 boundary; all Inferred and unclassified blocks were treated as waste.

The pit optimization process allowed the generation of a series of nested pit shapes (pit shells) for a range of RFs ranging from 10% (RF10) to 110% (RF110) of the base case prices. At a RF100, the incremental cost = incremental revenue. No pit shells were generated at RFs lower than 34%.

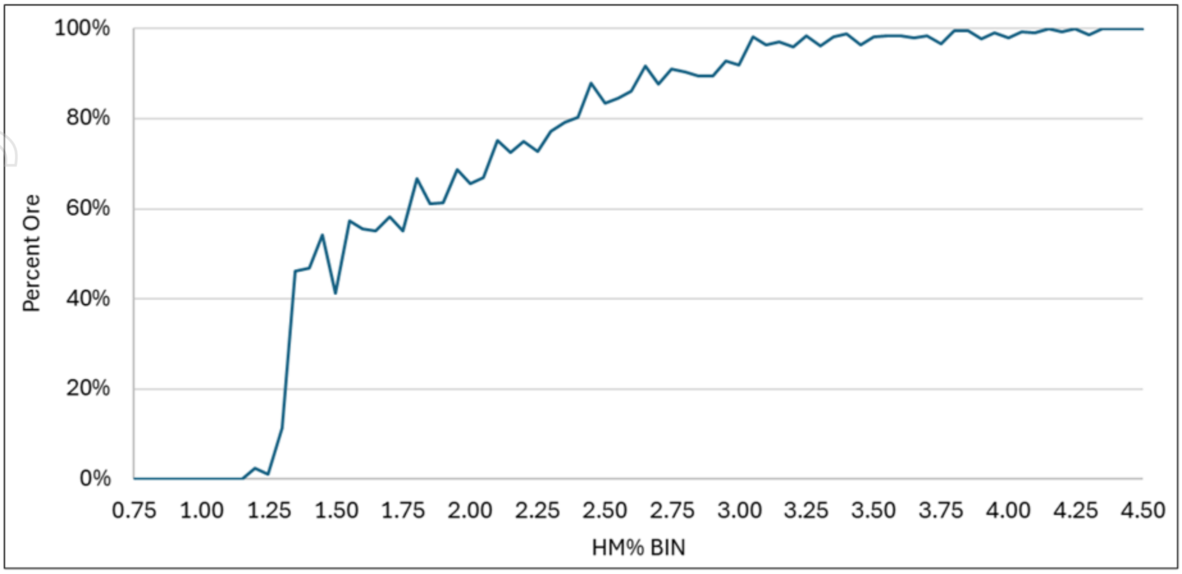
There was very little change in the optimization results beyond the RF60 pit shell because the economic pit was constrained by the MIN5532 boundary. The RF50 shell, which targets the higher-grade areas within the Work Plan area, was selected for the initial mining area and the RF70 shell, which covers the entire MIN5532 area, was selected for the remaining MIN5532 mine life. Based on current HMC and REE pricing (discussed in Item 22), the resulting MIN5532 pit design is consistent with the RF70 shell used by AMC in the 2023 "Mining Feasibility Study".

15.2.2 Cut-off grade

The ore block shapes (defining ore) were delineated using top and bottom of ore surfaces determined in AMC's 2023 study (AMC 2023a). In-situ bunds were removed from the ore block shapes. The Mineral Reserve is contained within these ore blocks. The ore blocks were tested against the 2025 Mineral Resource block model and 2025 GC model and are still appropriate for reporting the 2025 Mineral Reserve.

99.6% of ore within the ore blocks is above a 1.0%. The relationship between economic ore and HM cut-off is shown in Figure 15.1.

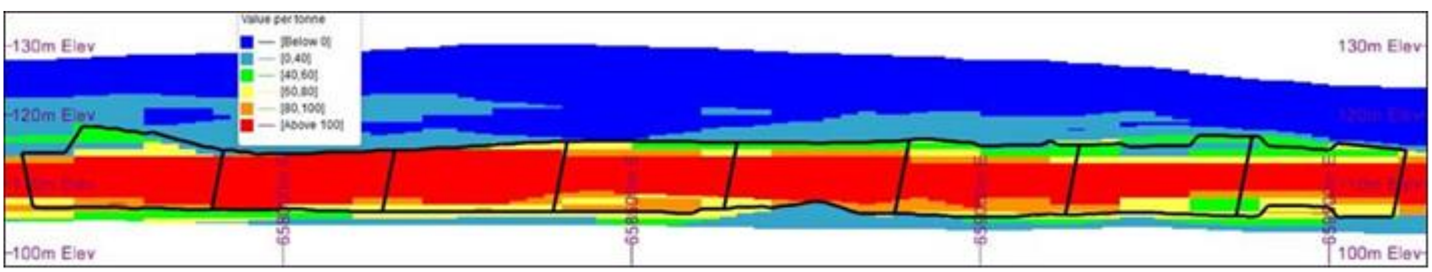
Figure 15.1 Cut-off grade curve – percent ore and equivalent total HM%



Source: AMC

Figure 15.2 is a long section through the 2025 Mineral Resource block model coloured on operating surplus per tonne (value per tonne) showing the first eight blocks to be mined. The ore block top and bottom limits are coloured black. The value per tonne (based on the 2025 parameters reported in Item 15.2.1) is inclusive of revenue less royalties and operating costs for processing, mining, and off-site. The ore blocks are entirely within the positive value sand. To improve project NPV and the payback period, the ore block boundaries were designed to exclude negative and lower value (yet positive value) mineral assemblage. There is potential to further redefine the ore block boundaries to further improve the project financial return.

Figure 15.2 Long section through first eight ore blocks (5961700 mN)

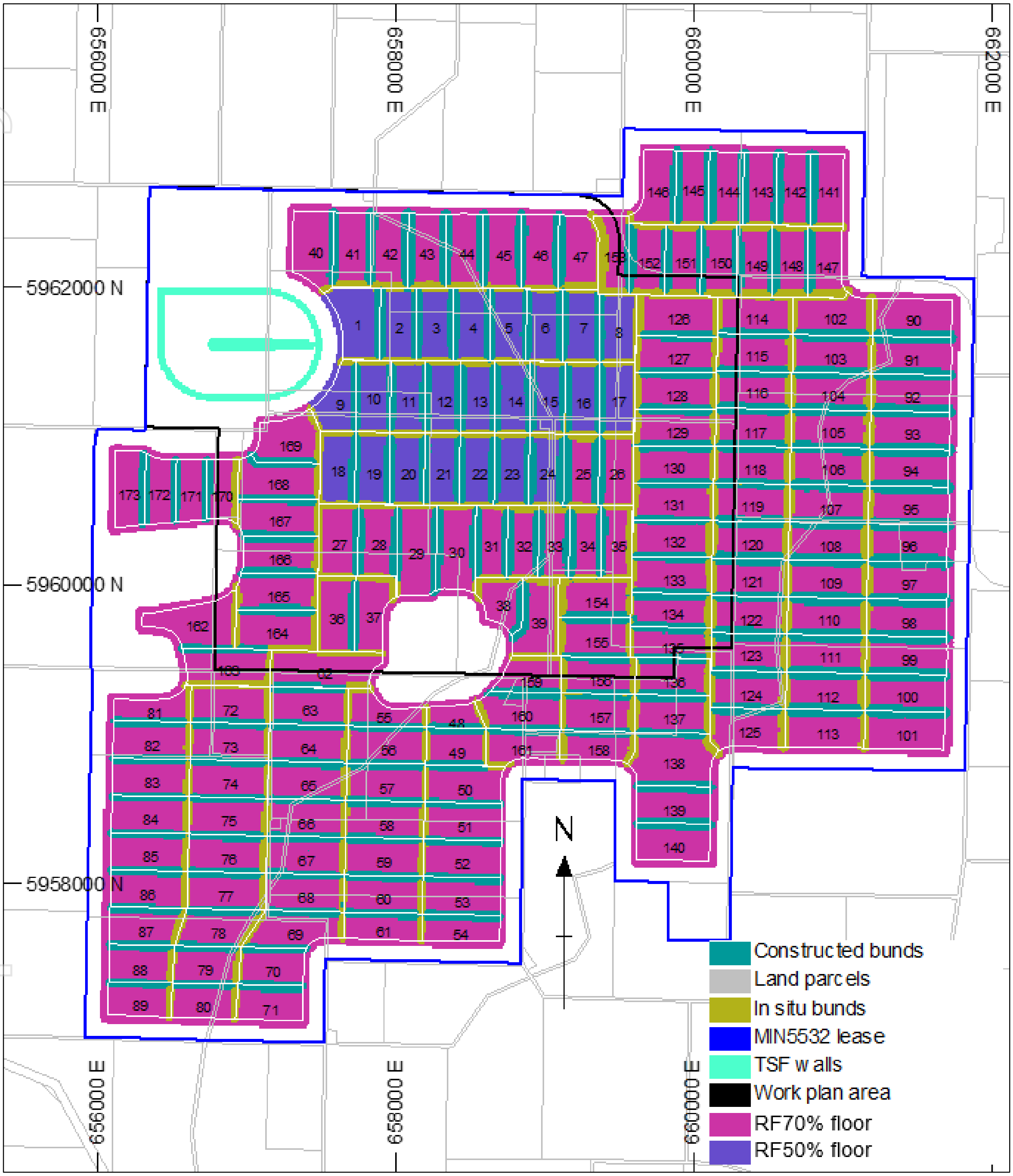


Source: AMC

15.3 Pit design

The RF70 pit shell was chosen for the basis of the MIN5532 mine design (Figure 15.3). The RF surfaces are based on the reduced level of the highest accumulated value from the surface at that RF. Detailed pit designs were prepared for the Work Plan area to inform the mine schedule and the Mineral Reserve estimate.

Figure 15.3 Plan view showing MIN5532 mining blocks and RF floor



Source: AMC, 2023b

The RF70 shell was modified to exclude cultural and environmentally significant areas, the external TSF, the process plant footprint, roads and other support facilities. An offset of 100 m was used from the MIN5532 boundary to the crest of the closest pit excavation. The floor of the mine was a surface created from the combined RF50 and RF70 shells.

RF70 (and the lower RF selections used for early mining) are considered conservative because they are materially below the project's base-case economic assumptions and deliberately limit the pit extent to areas that remain robust under downside conditions.

Detailed pit designs were finalized, incorporating bund geometry per ATC Williams' recommendations, refinements to accommodate the final process plant footprint, and optimized haulage and in-pit tailings deposition layouts. These designs were validated against the mine schedule and confirmed the planned production profile and tailings capacity.

15.4 Mineral Reserve estimate

The Donald Mineral Reserve estimate within MIN5532 as of December 2025 is reported in Table 15.3. The Measured Mineral Resource component was classified as a Proven Mineral Reserve and Indicated Mineral Resource was classified as a Probable Mineral Reserve. The Mineral Reserve estimate included appropriate allowances for mining, metallurgical, social, environmental, statutory and revenue aspects.

The physicals generated from the mine schedule provided input into the project cash flow model described in Item 22.2, which demonstrated at the time of reporting that the project was economically viable.

The information in this Technical Report that relates to the MIN5532 Mineral Reserve estimate is based on information compiled by Mr. Pier Federici and fairly represents this information. Mr. Federici is a Fellow of the Australasian Institute of Mining and Metallurgy and a full-time employee of AMC and is independent of DPPL, Astron and Energy Fuels. Mr. Federici has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Qualified Person as defined in NI 43-101 and S-K 1300.

Table 15.3 Donald Mineral Reserve within MIN5532 as of 31 December 2025 (100% equity)

Class.	Tonnes (Mt)	Total HM (%)	Slimes (%)	Over-size (%)	Zircon (%)	Mona-zite (%)	Xeno-time (%)	TiO_2 (%)	ZrO_2+ HfO_2 (%)	Pr_6O_{11} (%)	Nd_2O_3 (%)	Dy_2O_3 (%)	Tb_4O_7 (%)	TREO (%)
Proven	255	4.5	15	9	17	1.7	0.68	34	11	0.057	0.20	0.042	0.0065	1.5
Probable	39	4.3	18	11	16	1.6	0.64	32	11	0.056	0.20	0.040	0.0062	1.4
Total	**293**	**4.5**	**16**	**10**	**17**	**1.7**	**0.67**	**34**	**11**	**0.056**	**0.20**	**0.041**	**0.0064**	**1.4**

Source: AMC, 2025a

Notes:

- *Mineral Reserves are reported on a 100% basis. As at the effective date of this Technical Report, Energy Fuels held a 9.48% interest in the Property.*
- *The Mineral Reserve is based on Measured and Indicated Mineral Resources contained within a practical mine design.*
- *Estimates of the mineral assemblage (zircon, monazite and xenotime) are presented as percentages of the total HM component. Estimates of the oxide components (presented as percentages of the total HM component) are contained within the minerals and are not in addition to the minerals. The REOs (Pr_6O_{11}, Nd_2O_3, Dy_2O_3, Tb_4O_7) are a subset of the TREO.*
- *The Mineral Reserve is reported by individual heavy mineral components for transparency of mineralogical composition and processing considerations.*
- *The reference point for the Mineral Reserve is in-situ with allowance for mining recovery.*
- *All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sum of columns may not equal.*
- *The nominal cut-off grade is 1.0% HM using the metal price, cost and recovery assumptions for as disclosed in Item 15.2.1.*
- *The MIN5532 Mineral Reserve has been classified and reported in accordance with the 2014 CIM Definition Standards incorporated in NI 43-101 and S-K 1300 Definitions.*

15.5 Risks and opportunities

15.5.1 Land acquisition

The Phase 1A Work Plan area covers 1,143.4 ha of which Astron owns freehold titles encompassing an area of 705 ha, with the remaining freehold titles under contract to be settled upon an FID (refer to Item 4.4).

There is an additional 1,646.6 ha of land within MIN5532 outside of the Work Plan area. DPPL will need to engage with those landowners to ensure appropriate access is secured. These areas will only be mined +19 years from the start of production.

There are Crown Land parcels and historical water channel reserves located both within the Work Plan area and the broader MIN5532. DPPL will need to obtain the consent of the Crown Land minister and other relevant authorities, which cannot be unreasonably withheld.

There are nine residences within 2 km of the MIN5532 boundary. Dust and noise modelling is currently being undertaken and will inform decision-making with respect to potential land purchase of these properties.

The Mining Licence for MIN5532 expires in August 2030. It is reasonable to expect that this licence will be extended subject to DPPL meeting the appropriate conditions and requirements.

The Phase 1A Work Plan area will support mining for about 19 years. Mining outside the Work Plan area, but within MIN5532 (Phase 1B) will continue until about Year 40. Mining over areas outside the Work Plan area will require a CHMP and approval of a Work Plan amendment under current Victorian regulations (refer to Item 20.3).

15.5.2 Other

Other material issues identified by the Qualified Person that could materially impede the progress at Donald or the conversion of Mineral Resources to Mineral Reserves are:

- Equipment productivity risk due to pit moisture affecting trafficability and the ability to meet scheduled production rates
- Geotechnical risk from potential pit floor heave
- Noise impacts on local receptors, with potential constraints on mining rates
- Dust generation impacting local receptors
- In-pit TSF risk related to tailings consolidation time; delayed settlement could defer backfilling and rehabilitation and increase overburden rehandling
- External TSF risk associated with environmental and social approvals and stakeholder impact.

Opportunities identified by the Qualified Person include:

- Placement of overburden adjacent to pit cells to reduce rehandle distances
- Development of a test pit to confirm operational conditions and groundwater behaviour
- Updated noise modelling based on the revised mine plan and equipment selection
- Installation of perimeter bunds around the Work Plan Area to reduce noise impacts on local receptors
- Use of more direct haulage routes during operations to reduce travel time and fleet requirements
- Re-location of overburden stockpiles during operations to reduce haulage distances and associated costs.

The MIN5532 Mineral Reserve estimate is based on detailed mine planning and scheduling. The level of accuracy is at a feasibility study level.

15.6 Independent reviews

The Mineral Reserve estimate for MIN5532 has been reviewed internally by senior consultants at AMC. No independent reviews have been undertaken.

16 Mining methods

16.1 Geotechnical

ATC Williams was engaged for the initial external tailings cells and subsequent in-pit tailings cell construction and deposition modelling. Numerous site geotechnical investigations have been undertaken since 2015 by Douglas Partners, GHD and ATC Williams. ATC Williams provided geotechnical slopes of 1:2 (~27°) for in-situ slopes and 1:2.5 (~22°) for constructed slopes.

Geotechnical work completed by ATC Williams in 2022 obtained disturbed and undisturbed samples for laboratory testing to identify suitable material parameters for inclusion in the design of the co-disposal tailings facilities. The following testwork was completed:

- PSD of all material types
- Plasticity of fine-grained material encountered
- Emerson class testing to estimate dispersity of foundation material
- Particle density of the foundation materials
- Bulk density estimates from Lexan tube samples
- Compaction testing of remoulded samples for construction purposes
- Triaxial testing on selected undisturbed samples
- Remoulded permeabilities of foundation material for construction purposes.

Laboratory testing was undertaken to assess material strength of the Shepparton Clays, LP1, LP2 and Geera Clay materials. This work incorporated:

- Three consolidation tests on clay materials (Unit 2/Shepparton Formation, Unit 4/LP3 and Unit 5/Geera Clay) at Melbourne University
- Three triaxial tests.

In 2024 and 2025, ATC Williams completed an expanded program with:

- 17 geotechnical boreholes, 25 test pits, and 11 shallow boreholes in the pit, process plant and external TSF areas.
- 38 Lexan undisturbed samples and extensive in-situ testing (Pocket Penetrometer, Standard Penetration Test)
- Laboratory testing for PSD (sieve/hydrometer), Atterberg limits, SG, compaction, permeability, pinhole dispersion, Emerson, pH, CBR (standard and lime-stabilized), shrink-swell potential, sulphate content and salinity/chemistry
- Integration of results into final pit slope design, TSF foundation design and in-pit tailings consolidation modelling.

Based on geotechnical testwork, the design progressed considering a modified co-disposed tailings slurry (mix of sand and slimes) that is initially hydraulically placed within an external TSF until sufficient in-pit void space has been generated through the mining operation to allow tailings to be deposited within in-pit tailings cells (refer to Item 18.2.2 for further details).

The mine blocks are sized to allow better control over the tailings rate of rise which is linked to the overall settled density of the tailings (i.e. lower rate of rise generally equates to an improved final settled density).

The Loxton Sand geological units are relatively fine-grained and clayey compared to other regions of the Murray Basin and together with the shallow Shepparton Formation form a low permeability water table aquifer system. Bore yields are less than 0.5 L/s and there are no groundwater extraction bores within 20 km of the site, largely because the typical groundwater salinity is about 17,000 mg/L TDS. The depth to the (saline) water table is about 10–14 m, indicating very low potential for groundwater dependent vegetation.

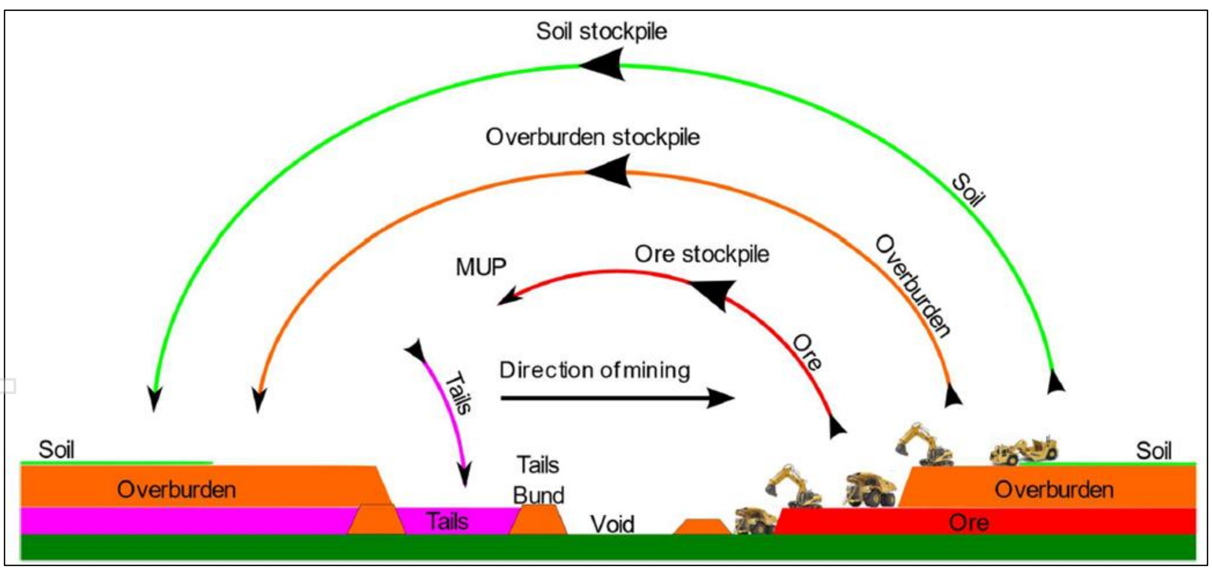
16.2 Mining method

The proposed mining extraction sequence is shown in the following schematic cross-section (Figure 16.1):

- Perimeter and in-path dewatering bores (spear point wells) will be used to lower the groundwater table.
- Topsoil and subsoil will be removed by scrapers and stockpiled separately adjacent to the mining area.
- The overburden will be mined using excavators and off-highway haul trucks to expose the top of ore contact. Overburden will be initially stockpiled. Once sufficient volume has been mined, overburden will be trucked directly for bund construction and to backfill above filled tailings cells.
- Exposed ore will be pushed by bulldozer to an in-pit tracked, self-relocating MUP, reducing haulage requirements and handling costs.
- Tailings cells will be established behind the active mining face, formed by leaving in-situ bunds along both sides of the mining strip and dividing bunds constructed across the mining void from overburden waste and spaced about 250 m apart.
- The tailings cells will be backfilled with tailings pumped from the processing facility.
- Once the tailings have consolidated (about three months after final placement), overburden will be placed over the tailings followed by the replacement of subsoil and topsoil, after which the final rehabilitation can be completed.

The general mining approach is described in Items 16.2.1 to 16.2.5.

Figure 16.1 Schematic cross-section of mining approach (conceptual)

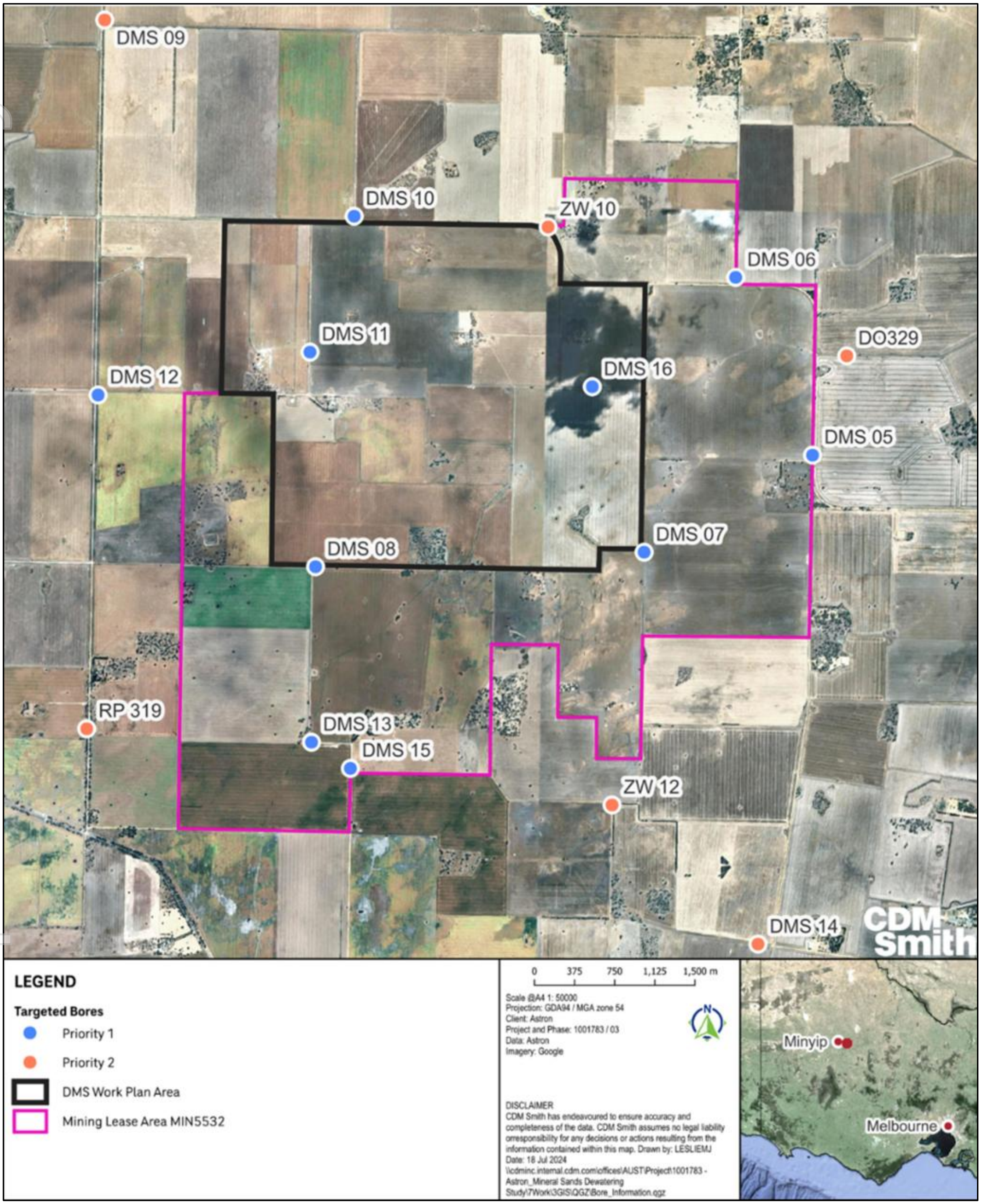


Source: AMC, 2023b

16.2.1 Hydrology and dewatering

CDM Smith conducted hydraulic testing of the aquifer in and around MIN5532 in the form of slug tests on 15 wells (DMS05 to DMS16, RP319, ZW10 and ZW12 as shown in Figure 16.2) in July 2024. Works were undertaken in accordance with the CDM Smith Slug Test Procedures. The data was analyzed using Aqtesolv Pro 4.0 software to estimate hydraulic conductivity in metres per day (m/day) for the screened aquifer at each bore.

Figure 16.2 Location of wells for 2024 slug testing



Source: CDM Smith Australia, 2025

In March 2025, CDM Smith conducted a seven-day aquifer pumping test within mining block 1. The test included the drilling and installation of one pumping and two observation bores to facilitate an aquifer pumping test. During the seven-day pump test from the pumping bore, aquifer testing (slug testing) was conducted on the two observation bores.

A groundwater model was developed to examine the effectiveness of a wellfield dewatering design to dewater the orebody in mine block 1. This work provided an update to previous modelling undertaken in 2007. The model, developed using MODFLOW in FloPy, relies on site-specific hydrogeological data collected by CDM Smith during concurrent field programs, and allows for iterative model runs to optimise mine-scale dewatering design. This includes performing Monte Carlo analyses of parameter combinations, allowing for an understanding of how the uncertainty of hydraulic parameters at the site impacts potential dewatering success.

The final results of the modelling indicated that a wellfield dewatering design within the constraints of modelled variables is not expected to achieve dewatering of block 1 due to the hydraulic constraints of the Loxton Parilla Sand. The depth of dewatering is expected to be variable across the dewatered block, with complete dewatering around each well, and a cone of recovery in an inverted parabolic shape extending between dewatering wells. The Monte Carlo analysis and scenario modelling indicates that the remnant uncertainty in site hydraulic parameters is unlikely to raise the potential of achieving better than 60–70% dewatering of LP2. Hydraulic conditions at block 1 are not thought to be representative of those across the entirety of the project site, particularly in the eastern mining blocks, where aquifer thickness is thought to be greater and the aquifer may be more permeable, therefore there may be a greater potential for LP2 dewatering via wellfield.

The work to date has significantly reduced uncertainty in the dewatering requirements of mining block 1.

Further filed tests will be carried out in mining blocks 2 to 8 (first two years of mining) to confirm the hydraulic conditions (considering the potential permeability increase moving into the eastern blocks) and inform dewatering requirements. Works will include the installation of new test dewatering and observation wells, water level monitoring, permeability (slug) testing and dewatering tests with drainage infrastructure. These tests will be carried out in advance of mining and provide data for ongoing aquifer modelling and final determination of dewatering requirements.

While groundwater conditions will vary across the mine site primarily due to oversize in the orebody, there is no material impact on geotechnical ground bearing capacity for the MUP in-pit operations. As a result, groundwater conditions can be monitored by installing single bores ahead of the mining front to test conditions and allow time for an appropriate response if required.

The deposited tailings will be actively dewatered at the decant area to promote tailings consolidation. The active tailings cell will remain dewatered until the deposited tailings elevation is above the pre-mining groundwater level.

ATC Williams (2024) completed a site wide surface water management study to assess surface water flows across the site and ways to manage stormwater flows, including extreme storm events and impacts on mining operations.

16.2.2 Topsoil and subsoil stripping

Topsoil (about the top 200 mm) and subsoil (about the next 800 mm) will be stripped from the first mining block (block 1) by either tractor-pulled scrapers or scrapers and bulldozers. The topsoil and subsoil will be stockpiled within MIN5532 and to a height of less than 2 m and 5 m, respectively. Topsoil and subsoil will also be removed from under the base of any overburden and ore stockpiles, the external TSF and adjacent roads as part of the initial mining activities.

16.2.3 Overburden mining

The overburden will be mined from the active mining area with hydraulic excavators and off-highway haul trucks. The overburden ranges in thickness from 8.5 m to 16.6 m and mining will occur on at least two benches simultaneously to optimise the production rate of the mining equipment. Temporary haul ramps will be cut with a bulldozer from the surface roads down to the base of overburden. Ramps are designed at a width of 22 m with a gradient of 10%.

The proposed overburden fleet will consist of two 250-tonne hydraulic excavators matched to 150-tonne capacity off-highway haul trucks. The trucks will haul the overburden to one of three destinations depending on the timing of the mining sequence:

- An overburden stockpile
- An existing mining void for the construction of bunds
- An existing void to cover the consolidated tailings.

The same fleet will be used for the rehandle of overburden from the overburden stockpile to the existing void to cover the tailings. The first overburden mined will be used for the construction of the external TSF, process plant pads, dam walls, roads and noise bunds around the WCP.

16.2.4 Ore mining

The top and bottom ore surfaces within the active mining area will be mined to an economic cut-off value contour.

After the overburden stripping has advanced sufficiently in front of the exposed ore block (a distance of about 250 m), ore will be mined using an in-pit MUP configuration, with ore pushed by tracked bulldozers directly to a track-mounted, self-relocating MUP for in-pit feed. The MUP will be positioned on a prepared working platform constructed from approximately 3 m of compacted overburden material to provide a competent and trafficable operating surface. Mining will be undertaken in sequential pit blocks, with each block divided into two halves to allow preparation of travel paths and operating pads between MUP relocations to minimise relocation time. Upon completion of ore mining within a block, the MUP will be relocated to the adjacent block, allowing backfilling of overburden and progressive rehabilitation to be completed. This ore mining method eliminates ore stockpiling and rehandling and is a proven approach for mineral sands operations.

The bulldozer push to a tracked MUP reduces reliance on truck haulage on potentially soft pit floors. Temporary access ramps will be cut at a gradient of about 10% by bulldozer from the surface down to the base of the ore.

The MUP will slurry the ore and pump it to the WCP for production of the HM and REE concentrates.

16.2.5 Dividing bund construction and filling

When sufficient void space is created, a tailings cell will be constructed by controlled compacted construction techniques using overburden material.

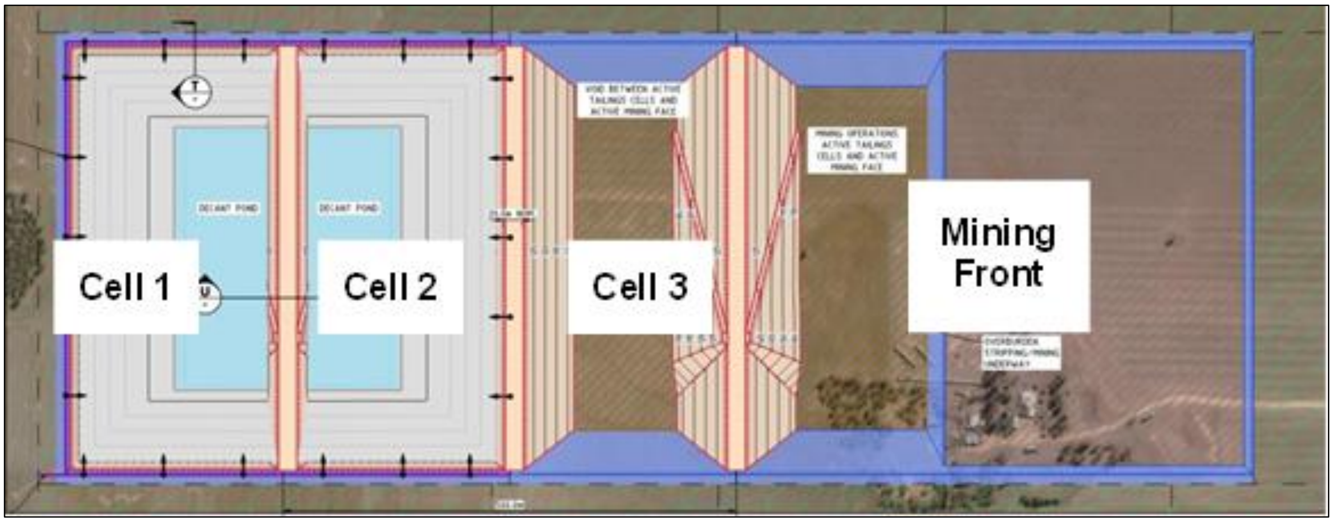
The dividing bund will be used for decant pond infrastructure and to provide protection of downstream mining personnel against the risk of a breach of the active upstream tailings cell.

An external TSF will be used until the first tailings cell is available for filling. When the cell is ready, tailings will be pumped from the WCP. The tailings cell will be filled and the tailings allowed to consolidate. A decant pump and dewatering bores (spear point wells) installed at the crest of the tailings cells will provide tailings dewatering until consolidation occurs.

Overburden will be backfilled above the consolidated tailings. Subsoil and topsoil will be reclaimed from stockpiles and placed over the overburden and contoured to achieve the desired final landform. The tailings cells will be constructed below the natural ground surface and the final tailings elevation will be no higher than 2 m below the final landform design to account for closure requirements.

Construction of the first tailings cells is shown schematically in Figure 16.3 and will be replicated for all remaining tailings cells. The active tailings cell and the mining front will be separated by an empty tailings cell.

Figure 16.3 Layout of mining/in-pit tailings cell configuration



Source: ATC Williams, 2024

Based on a tailings production rate of approximately 547,500 tonnes per month (365,000 m^3 per month) at a deposited dry density of 1.5 t/m^3, it will take approximately three to four months to fill each cell with a corresponding rate of rise of approximately 6 m per month. The estimated storage capacity for each cell is approximately 2 Mt or 1.33 Mm^3 based on a nominal pit depth of 22 m.

The active tailings cell will require dewatering from the perimeter spear points until the tailings elevation has exceeded the long-term natural groundwater level. The dormant half of the next cell and the active mining area below the water table will also require dewatering.

16.2.6 Exposed mining area

The exposed mining area, covering all mining activities from initial topsoil stripping to final backfilling of the mined void, averages about 80 ha but peaks at about 190 ha during the early years of the mine life.

16.3 Mining and ancillary fleet selection

16.3.1 Test pit study

A shallow pit was excavated at a location 1–2 km from the proposed early mining areas by International Groundwater Technologies Pty Ltd (IGT) in 2005 to test possible mining methods (Figure 16.4). The test pit demonstrated that ground conditions were generally favourable for the proposed mining method at a larger scale. IGT concluded that the soil general properties do not present significant stability issues during excavation. Suitable slope management, excavation and backfilling methods, and groundwater controls should suffice to maintain a safe working environment on a scaled-up version, provided that geological conditions do not change significantly.

Test pit excavations have shown that ore can be mined effectively in the presence of groundwater, with only minor seepage observed and no material handling issues encountered, as indicated in Figure 16.5.

Figure 16.4 Test pit excavation viewed from northern end

Source: IGT, 2005

Figure 16.5 Test pit ore excavation trial showing extraction of ore zone

Source: IGT, 2005

16.3.2 Mining and ancillary fleet selection

Mining will be undertaken by an experienced mining contractor and will include topsoil stripping, overburden stripping, ore mining and delivery to the process plant via an in-pit MUP, construction of tailings cells, overburden backfilling and topsoil replacement. Rehabilitation activities will be undertaken by specialist contractors.

A typical mining and ancillary fleet for the Work Plan area was estimated by AMC using the quantities and haulage profiles developed in the mining schedule and advise from experienced mining contractors. The mining equipment list is based on Caterpillar (CAT) equipment as summarized in Table 16.1 and is similar to the equipment numbers proposed by the preferred mining contractors, albeit from a different manufacturer.

Table 16.1 Typical mining equipment list

Descriptor	Nominal equipment model	Number
Overburden mining excavator 250 t	CAT 6020B	2
Overburden mining haul truck 150 t	CAT 785D	1 to 4
Bulldozer	CAT D10T	5
Bulldozer	CAT D9R	1
Grader	CAT 16M	1
Support excavator	CAT 345GC (45 t)	1
Water truck	CAT 777WT	1
Water truck	CAT 745WT	1
Support front-end loader	CAT 980M	1
Service truck	Light highway service truck	1
Soil compactor	CAT CP76	1
Lighting plants	Allight	6
Scraper	CAT 657G	1
Bus	Toyota	1
Grade control drill	FlexiROC D65	1
Light vehicles	Toyota 4WD	11

Source: AMC, 2023b

16.3.3 Mining production rates

Loading unit and haul truck operating hours were estimated and compared to the AMC benchmark database. AMC's database has relevant data on the mining fleet availability, utilization and typical operating hours. Bulldozer production rates were provided by experienced mining contractors.

The ore mining production rates were set based on a processing constraint of 7.5 Mt/a. Ore mined will be pushed to the in-pit MUP.

The overburden mining fleet selection for a production rate of 15 Mt/a was developed from first principles by AMC and used an average 3.2 km return haulage of overburden direct to void cell and to stockpile.

The operation is based on two 12-hours shifts, seven days a week. The mine operating hour assumptions are summarized in Table 16.2.

Table 16.2 Operating hours assumptions

Descriptor	Value	Descriptor	Value
Loading unit operating hours		**Haul truck operating hours**	
Availability	90%	Availability	90%
Use of availability	90%	Use of availability	80%
Operator efficiency	87%	Operator efficiency	90%
Operating hours/annum	6,173	Operating hours/annum	5,676
Effective utilization	70%	Effective utilization	65%

Source: AMC, 2023b

16.3.4 Personnel

Mining operations will run on two 12-hour shifts, 7 days a week, and will use a contractor to provide the full mining fleet and personnel. The specific mining personnel numbers are based on the contractor's proposed roster to support ore mining, overburden removal, tailings cell construction and rehabilitation works. These headcounts are integrated with support functions such as maintenance, grade control and mine services, and are aligned with the operational assumptions for equipment availability and utilization in Table 16.2.

The owner's mining team is planned to comprise five personnel covering:

- Mine manager (or mining superintendent)
- Mining engineer/planner
- Mine geologist (grade control supervision)
- Mine surveyor
- Health, safety and environment (HSE) advisor (mining focus).

The mining contract workforce will average 96 personnel over the initial five-year term, with a composition of about 5% local hires and the remaining 95% housed in paid accommodation, transitioning to about 90% local hires and 10% in paid accommodation by the end of the term.

16.4 Life of mine production schedule

MIN5532 has been divided into a series of about 500 m wide strips, with each strip subdivided into 7 to 10 mining blocks with dimensions of about 250 m long by 500 m wide as shown in the final mine plan schematic (Figure 16.6). Mining will progress linearly along each strip, commencing in block 1 and then move progressively eastwards to block 8, before returning to block 9 to commence the next strip, and so on.

The LOM sequence for MIN5532 targets the RF50 pit designs for about the first five years and RF70 pit designs for the remainder of the mine life. Focusing early production on the higher value Work Plan area (Figure 16.6) provides the highest project value. By targeting the RF50 shell during the initial years, the mine plan concentrates on higher-grade ore with stronger margins, which improves early cash flow, shortens payback, and reduces exposure to downside price or cost variability during the capital recovery phase. This approach also limits early mining to areas with the highest confidence in grade and continuity within the Work Plan area, reducing technical and execution risk.

Figure 16.6 LOM schematic showing final mine plan with mining block sequence and the position of fixed infrastructure within MIN5532 and the Work Plan area

Source: DPPL

The schedule was based on the detailed pit design, TSF voids, in-situ and constructed in-pit bunds and stockpiling. Mine scheduling for both the initial Work Plan period and the remaining LOM was prepared using Deswik mining and scheduling software.

Deswik incorporates sequencing of mining blocks and key dependencies linking soil stripping, overburden and ore mining, in-pit bund construction, tailings cell filling, and backfilling of overburden and soil. Stockpiling of soil and overburden with rehandle, loading unit productivities, haulage profiles and associated hours were also modelled.

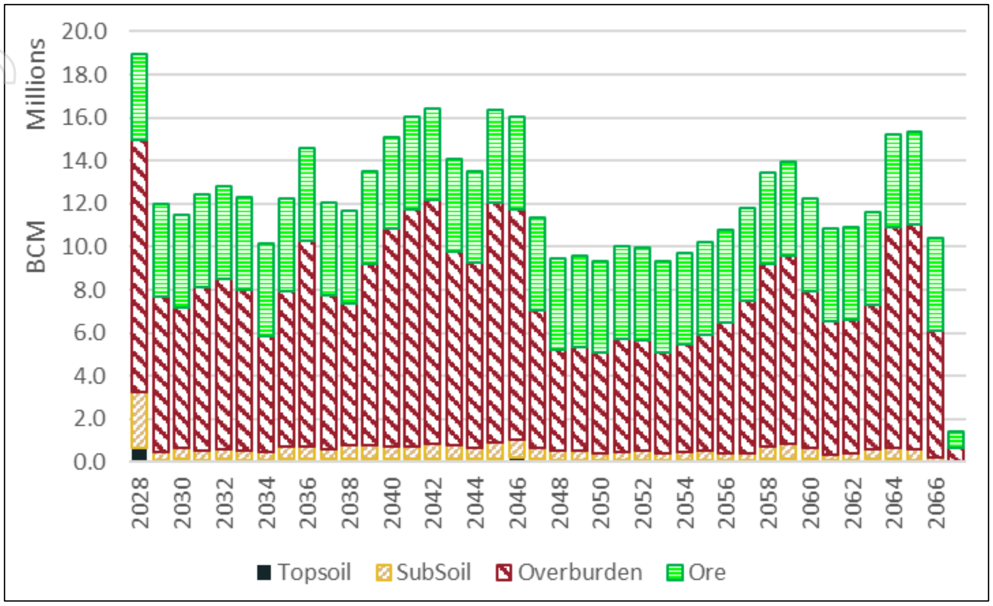
The sequence of mining follows the mine schedule, which is designed to capture higher value material earlier in the mine life. Each block is mined top-down (topsoil, subsoil, overburden and ore), then following construction of the in-pit bund is filled from the bottom-up (pumped tails, overburden, subsoil, topsoil).

The annual LOM annual ex-pit movements are shown in Figure 16.7 by calendar year. Annual process throughput is shown in Figure 16.8 and annual concentrate production is shown in Figure 16.9. Mining, processing and concentrate production is summarized in Table 16.4, annually from 2028 to 2034, in 10-year increments from 2035 to 2054, and then the remaining LOM to 2069.

The open area being mined and backfilled to achieve these production rates (defined as start of soil stripping to end of tails backfilling) is about 115 ha per annum.

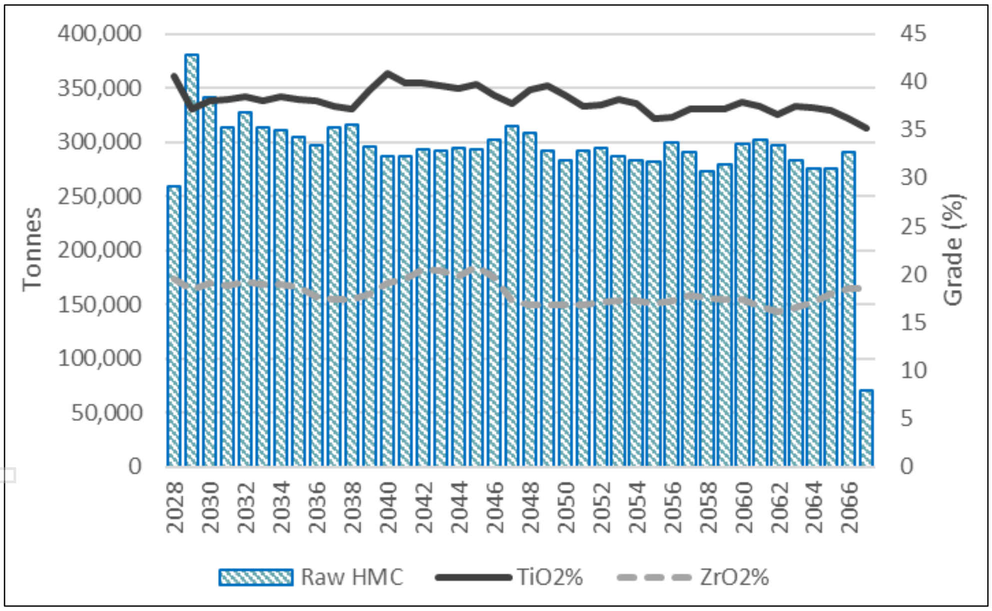
The start date for the mining schedule is Q1 2028, which assumes site earthworks for plant construction will commence in Q1 2026.

Figure 16.7 Annualized MIN5532 mining schedule – ex-pit movement



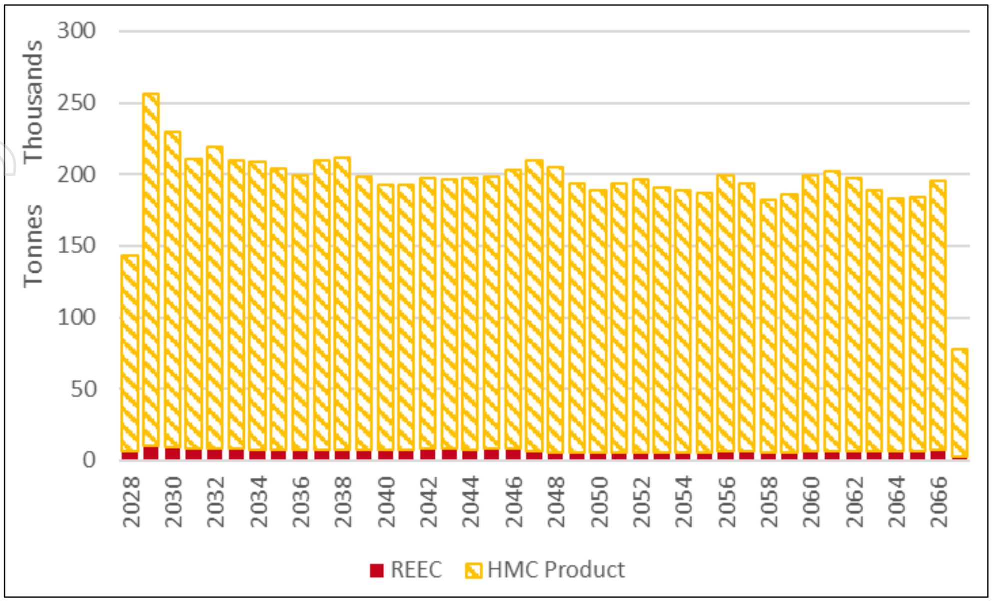
Source: DPPL

Figure 16.8 Annualized MIN5532 processing schedule – raw HM



Source: DPPL

Figure 16.9 Annualized MIN5532 concentrate product schedule



Source: DPPL

Table 16.3 MIN5532 ex-pit mining and minerals sands and concentrate product schedule

Material moved	Unit	Total	2028	2029	2030	2031	2032	2033	2034	2035-44	2045-54	2055-64	2065-67
Mined													
Topsoil	Mbcm	**5.2**	0.7	0.1	0.1	0.1	0.1	0.1	0.1	1.5	1.2	1.1	0.2
Subsoil	Mbcm	**21.0**	2.6	0.4	0.5	0.4	0.5	0.4	0.4	5.9	4.7	4.4	0.6
Overburden	Mbcm	**294.4**	11.7	7.3	6.5	7.5	7.9	7.5	5.3	88.8	62.5	72.4	17.0
Ore	Mt	**293.3**	6.8	7.5	7.5	7.5	7.5	7.5	7.5	75.1	75.0	75.1	16.3
Processed													
Raw HM	kt	**11,691.57**	259.33	380.71	341.82	313.97	326.93	313.01	310.84	2,979.48	2,950.83	2,878.27	636.38
TiO_2	%	**38.1**	40.6	37.2	38.1	38.1	38.4	38.1	38.4	38.9	38.4	37.1	36.5
ZrO_2	%	**18.1**	19.4	18.3	19.1	18.8	19.3	18.9	19.0	18.8	17.7	17.1	18.2
Concentrate produced													
HMC	kt	**7,540.0**	137.2	245.5	220.4	202.5	210.8	201.9	200.5	1,921.5	1,903.0	1,856.2	440.4
REEC	kt	**314.6**	6.2	10.5	9.2	8.0	8.7	8.2	8.0	78.1	67.1	93.4	17.2

Source: DPPL

17 Recovery methods

Mineral Technologies completed the process plant design and developed capital and operational cost estimates to inform the Phase 1 study. The flowsheet included the following process units:

- Mining unit plant (MUP)
- ROM screens, deslime hydro-cyclones, thickening plant
- Wet concentrator plant (WCP)
- Concentrate upgrade plant (CUP) including REEC packing plant
- HMC storage and loading plant.

The process plant was designed at a 1,000 t/h solids (dry basis) ROM feed rate with an estimated 7,500 operating hours per annum, equating to a nominal annual plant throughput of 7.5 Mt.

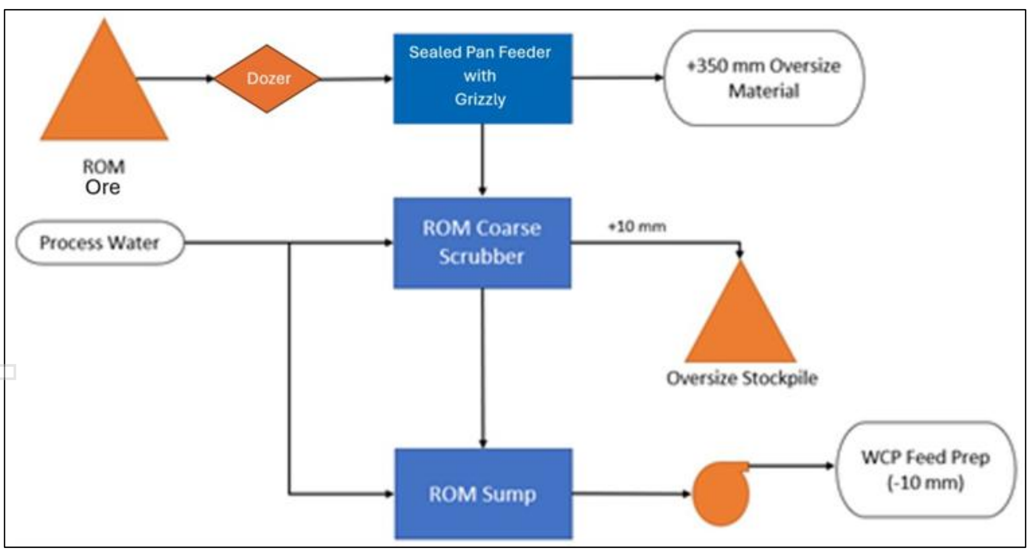
A ROM feed grade of 5.1% HM was used for the design, with an operating range of 4.0% to 6.5% HM. At the minimum feed grade, the feed rate to the plant is maintained at the nominal rate of 1,000 t/h, while at the maximum feed grade, the feed rate will be constrained to approximately 900 t/h due to higher concentrate production rates through the back end of the circuit.

The process plant and ancillary facilities will be situated in the northwestern corner of MIN5532 (Figure 16.6).

17.1 Mining unit plant

The in-pit tracked MUP has been designed to scrub and screen the ROM ore before pumping it to the WCP for further processing, as indicated in Figure 17.1.

Figure 17.1 MUP flowsheet



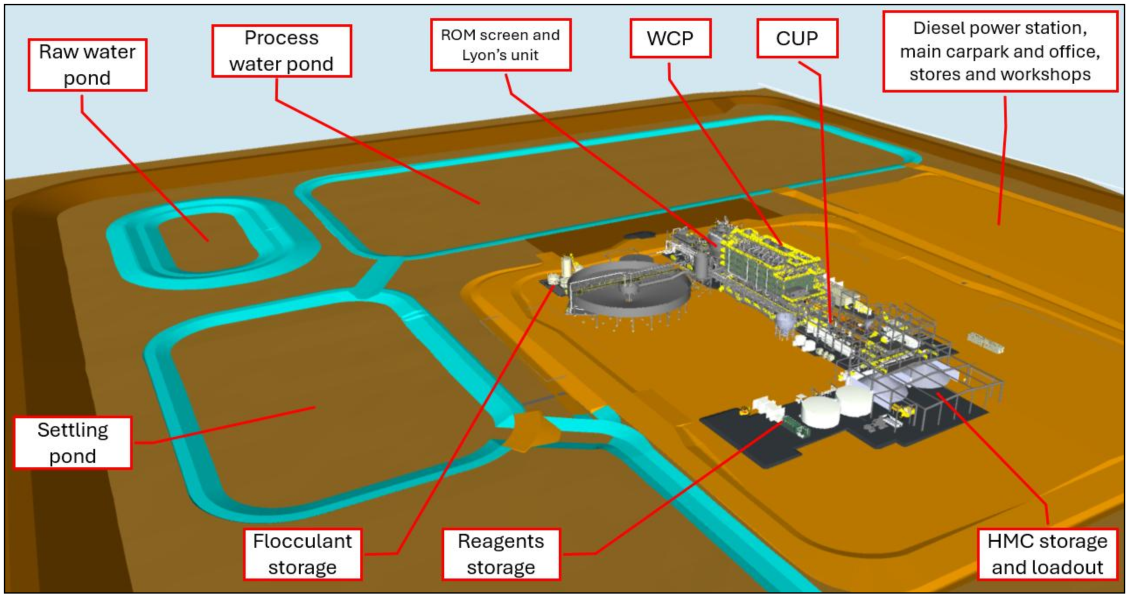
Source: DPPL

The MUP will be located within the mining cells, away from the process plant and is designed to scrub and screen the ROM ore before pumping to the WCP for further processing. The MUP is designed to be relocatable and moves along the designated mining path. The MUP is expected to be relocated approximately every two weeks. Each move should take around 12 hours from shutdown to restarting ore washing. Longer intervals may be required to extend the installed infrastructure, such as piping and power cables, and be coordinated with planned plant maintenance activities.

17.2 ROM screen, hydro-cyclones, thickening plant

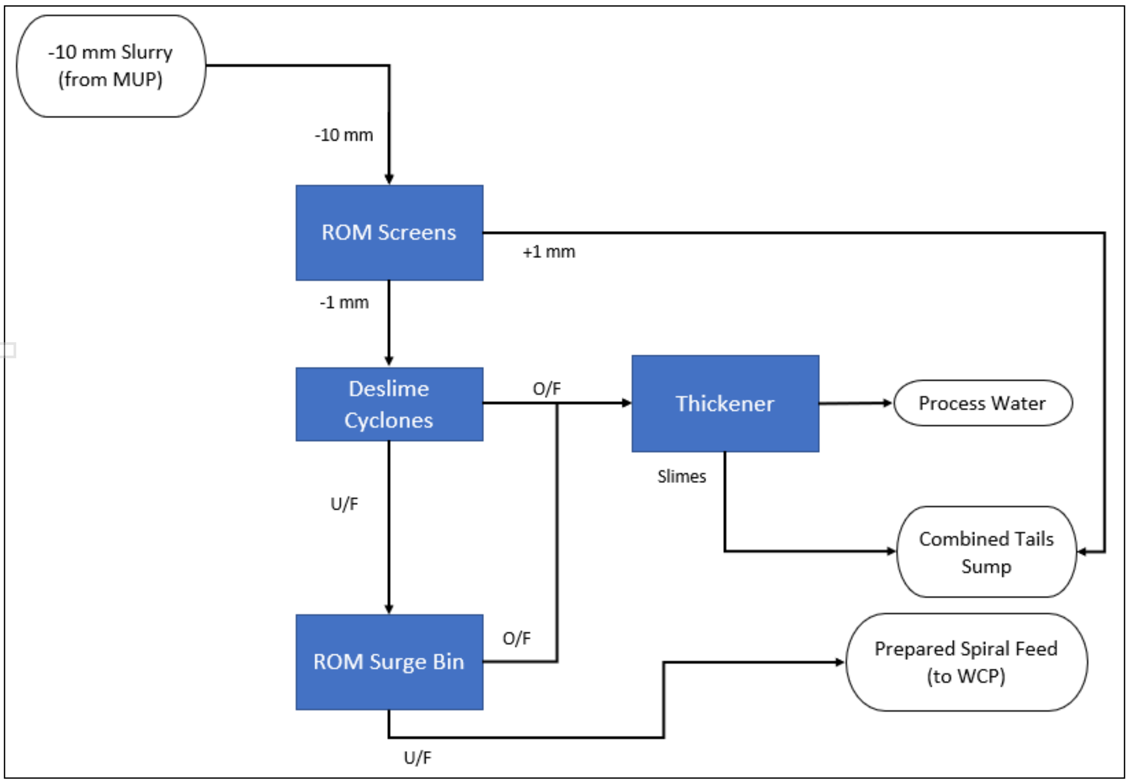
The ROM screens at the front end of the WCP (Figure 17.2 and Figure 17.3) have been designed to remove coarse (+1 mm) gangue particles from the scrubbed and screened (-10 mm) ROM material pumped from the MUP. This screen provides protection to the WCP by removing coarse (mainly silicate) particles which would otherwise increase wear on spirals and negatively impact on spiral performance.

Figure 17.2 Process plant layout



Source: DPPL, 2025

Figure 17.3 WCP feed preparation circuit flowsheet



Source: Astron, 2023a

The tails dewatering hydro-cyclones will be utilized to control the density of the tailings being pumped to the mine void and to recover a large proportion of the contained water for reuse in the WCP circuit.

The deslime hydro-cyclones will be positioned above the WCP surge bin (also referred to as the ROM surge bin or LFCU) and will remove fine slimes from the ore slurry prior to entering the surge bin and subsequent spiral circuit. Deslime hydro-cyclone overflow will gravitate to a thickener for removal and dewatering of the slimes and to recover process water.

The WCP surge bin will provide surge capacity at the head of the WCP, enabling up to two hours downtime of the MUP prior to the requirement to shut down the WCP. The design of the surge bin will allow for accurate control of feed rate and slurry density to the WCP rougher spirals.

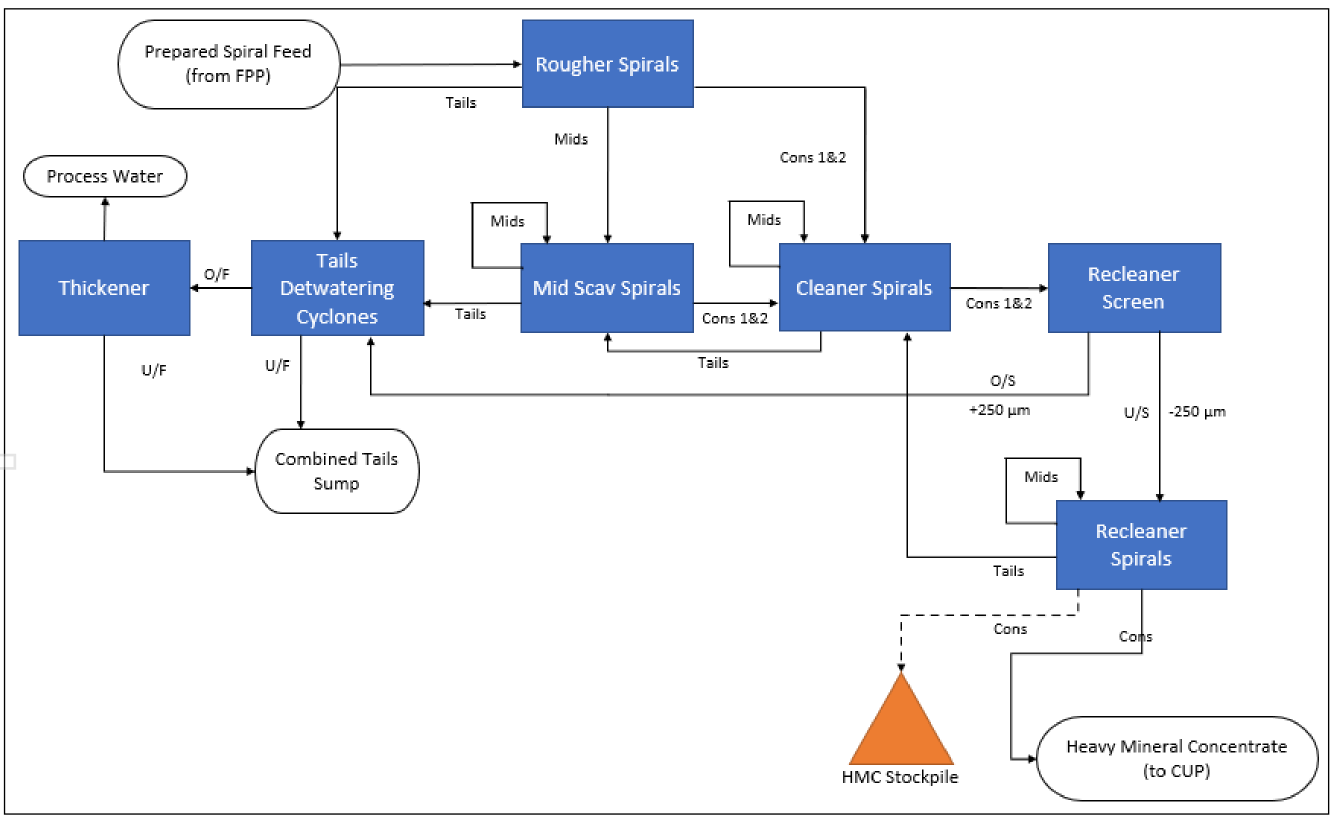
The LFCU has been designed as a mass flow bin, so discharge of slurry can be readily restarted, even if the bin is full of solids.

The slimes thickener processes overflow from the deslime hydro-cyclones and WCP surge bin, as well as internal dilution water, and has been located adjacent to the settling ponds to reduce pipework and allow for gravity flow from the thickener to the settling pond. The slimes thickener can process 6,000 m^3/h of slurry, consisting of deslime hydro-cyclone and WCP surge bin overflow as well as internal dilution water.

17.3 Wet concentration plant

The WCP will include the equipment required to separate the HM from the screened and deslimed ore (Figure 17.4). This equipment will comprise primarily of spiral (gravity separation) technology (MG12 and HG10i spirals).

Figure 17.4 WCP spiral circuit flowsheet



Source: Astron, 2023a

Based on the extensive testwork and pilot plant testing that has been completed (refer to Item 13), the MG12 has been demonstrated to meet the performance requirements for this plant in the rougher, middlings scavenger and cleaner spiral stages of the WCP. The HG10i spiral has also been tested and is used specifically in the recleaner spiral stage where the feed to the spirals is high-grade material.

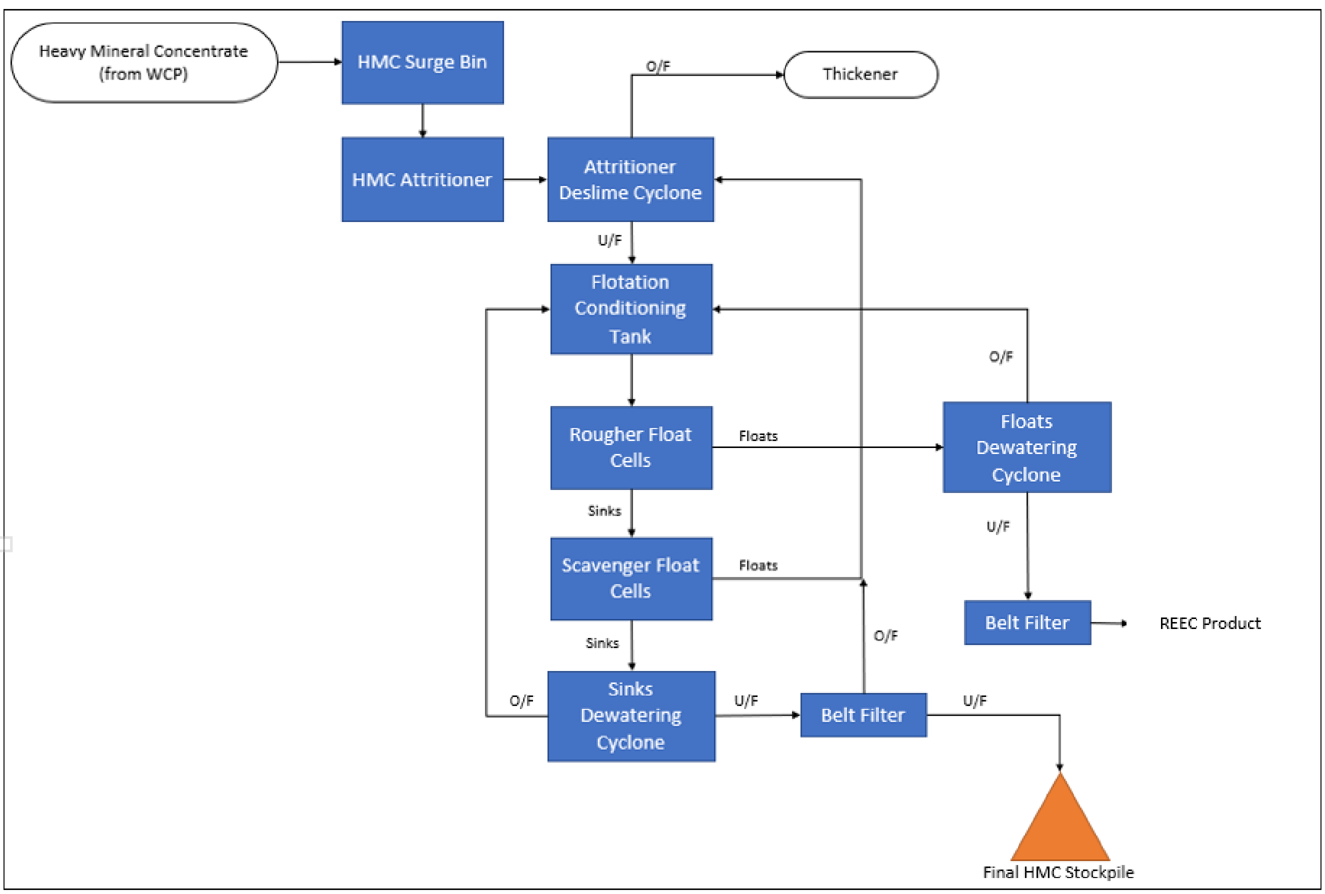
The overall WCP structure has been designed with cladding around the spiral level of the building to provide protection from the seasonal high winds that may affect the performance of the spirals.

Pilot-scale testing undertaken in 2024 and 2025 confirmed the WCP flowsheet and spiral configurations. Performance across rougher, middlings scavenger, cleaner and recleaner stages was consistent with, or exceeded, earlier results, with stable operation achieved across the full range of expected feed variability. Minor refinements to equipment sizing and operational settings were incorporated into the final design to improve concentrate grades and reduce operating costs. The WCP layout and process design were integrated with the slimes thickening and tailings water recovery systems to optimise water balance, operational efficiency, and environmental performance.

17.4 Concentrate upgrade plant

The CUP will separate the minerals containing REEs from the nominally 40 t/h (dry solids basis) of raw HMC produced in the WCP. This will be achieved by attritioning the HMC to ensure that the surfaces of all minerals are sufficiently exposed prior to the flotation circuit used to collect the rare earth minerals into the REEC (Figure 17.5).

Figure 17.5 CUP circuit flowsheet



Source: Astron, 2023a

The flotation process uses various chemical reagents so the rare earth minerals float to the surface of the cell with the froth, while the remaining HM sink to the bottom of the cell.

The CUP building will be sealed to prevent interference from the environment (rain and wind) and to limit personnel access and time spent in proximity of the product which contains radioactive mineral particles.

HMC will be pumped from the WCP to the CUP surge bin, similar in construction to the WCP surge bin (LFCU).

17.5 Heavy mineral concentrate storage and loading

17.5.1 Rare earth element concentrate

The REEC will be dewatered and stored in the REEC product bin, which will provide 30 tonnes of storage capacity. When the product bin is full, feed to the CUP will be stopped until space is made available in the bin. The CUP will have 12 hours of storage capacity in the surge bin before the WCP feed will need to stop.

Dewatered REEC will be loaded directly from the product bin into 2-tonne bulka bags and loaded into half-height lined shipping containers that meet Class 7 radioactive material transport requirements. Containers will be sealed, weighed, labelled, and placarded in accordance with IAEA regulations for Class 7 transport and all other applicable regulatory requirements. The filled containers will be stored on site until dispatched to Energy Fuels, who will be responsible for final disposal of the bulka bags.

The transport and logistics contractor will provide the required forklifts for handling the containers. All other plant and equipment have been included in the process plant capital cost.

17.5.2 Heavy mineral concentrate

The HMC storage facility will be located within a separate structure (Figure 17.2), where the product will be dried and loaded into custom-built half height shipping containers with a front-end loader.

The HMC product will be pumped from the CUP facility to the final HMC belt filter. The washed and dewatered final HMC filter cake will then be deposited onto a reversible discharge conveyor which will discharge into one of two concrete walled bunkers. One bunker will receive product while final HMC is being loaded by a front-end loader into half-height shipping containers. The entire structure is clad to protect the product from wind and rain.

The storage facility will be included in the process plant capital cost. The front-end loader and half-height shipping containers will be provided by the transport and logistics contractor.

17.6 Ancillary processing facilities

The process infrastructure will include a reagents storage and dosing facility and a flocculant storage and preparation plant for the safe delivery, storage and use of reagents.

Two existing independent structures (dimensions of 25 m by 15 m and 30 m by 15 m) located on land owned by DPPL will be removed.

The required water and power infrastructure is discussed in Item 18.

17.7 Process plant requirements

Design work completed in 2025 integrated the process services with site-wide water and power balance models. The process water supply will be maintained via a closed-loop system linking the WCP, CUP and tailings return water, with redundancy built into pumping and pipeline systems to maintain plant uptime. Potable water will be produced on-site using a dedicated treatment plant fed from licensed bore fields. Critical power circuits will be supported by uninterruptible power supply (UPS) systems to protect control and safety equipment. A site-wide fibre-optic communications backbone will support plant control systems, mining operations, and environmental monitoring. All services have been designed with capacity for potential future expansion of the processing facilities.

The raw water demand is 2,520 ML per year, sourced from the GWM Water Headworks allocation, supplemented by recovered groundwater and decant water. Potable water demand is 13 kL per day with two 50 kL on-site storage tanks, and provision for future treatment if required. Instrument air, firewater and washdown water systems, sewage disposal capacity of 15 kL per day to off-site treatment, and a light vehicle wash bay with oily water separation are included.

The power requirement from the power station for each year of operation has been determined by developing an annual load profile for the site (including planned minor and major shutdowns) based on the calculated maximum demand of each area/plant across the project. Total processing power requirements including the MUP is approximately 4.7 MW. This consists of approximately 1.7 MW for the MUP, 1.6 MW for the WCP, 0.5 MW for the CUP, 0.5 MW for process water and services, and other areas consisting of 0.3 MW.

Site power will be supplied by a modular micro-grid comprising solar PV, battery energy storage system (BESS) and high-efficiency diesel generators as spinning/backup capacity. The system is designed for islanded operation with black-start capability, N-1 redundancy on critical feeders and staged expansion to match throughput increases. The micro-grid integrates with plant control systems for automated load-following, and with the process water/REEC handling schedules to minimize fuel use and emissions. Protection and metering are configured to utility standards, with provision to inter-tie to the 66 kV network in future if required.

Flocculants comprise the largest portion of the processing consumables cost. Dosage rates provided by SciDev based on trial results are summarized in Table 17.1.

Table 17.1 Processing consumables assumptions

Consumable	Dosage rate
Flocculant (Maxifloc 530M) – Thickener Feed	250 g/t thickener feed
Flocculant (Maxifloc 530M) – Tailings Discharge	185 g/t tailings discharge
Sulphuric acid (98% w/w)	138 g/t flotation feed
Quebracho	45 g/t flotation feed
Dextrin	100 g/t flotation feed
Collector (Flotinor 18080)	475 g/t flotation feed
Sodium Silicate	200 g/t flotation feed
Sodium Hydroxide	180 g/t flotation feed
Frother (Flottec F150)	20 g/t flotation feed

Source Astron, 2025

The process plant workforce is about 57 personnel. This includes:

- Operations (management, supervision, plant operators, control room, field technicians) – 28
- Maintenance (mechanical, electrical, instrumentation) – 19
- Metallurgist, laboratory and QAQC staff – 10.

These positions are largely rostered across shifts to support 24/7 operation. Contractors are also expected to supplement the workforce during major shutdowns and maintenance campaigns.

18 Project infrastructure

18.1 Site layout

A key factor influencing the site layout is the ore zone extending across the entire Work Plan area. To minimize ore sterilization and maximize resource utilization, the pit design and disturbance area was based on the following constraints:

- Avoidance of culturally significant areas.
- Avoidance of environmentally significant areas, including native vegetation to be retained and protected, and vegetation "no-go zones"
- Allowance of a 100 m buffer zone between the pit crest and Work Plan area boundary for haul roads, utility infrastructure and surface water management structures
- Allowance for a geotechnical offset to exclude any potential impacts on public safety, the environment, land, property and infrastructure
- Offset area for the process plant infrastructure and external TSF
- Allowance for geotechnically designed pit slopes
- Allowance for siting the modular microgrid, including solar photovoltaic (PV) arrays, BESS, and diesel backup units.

Figure 18.1 shows the general site layout including process plant area, external TSF, pit crest, haul roads, project infrastructure, buffer zones, Work Plan boundary and vegetation "no-go zones".

18.2 Tailings storage facility

18.2.1 External TSF design

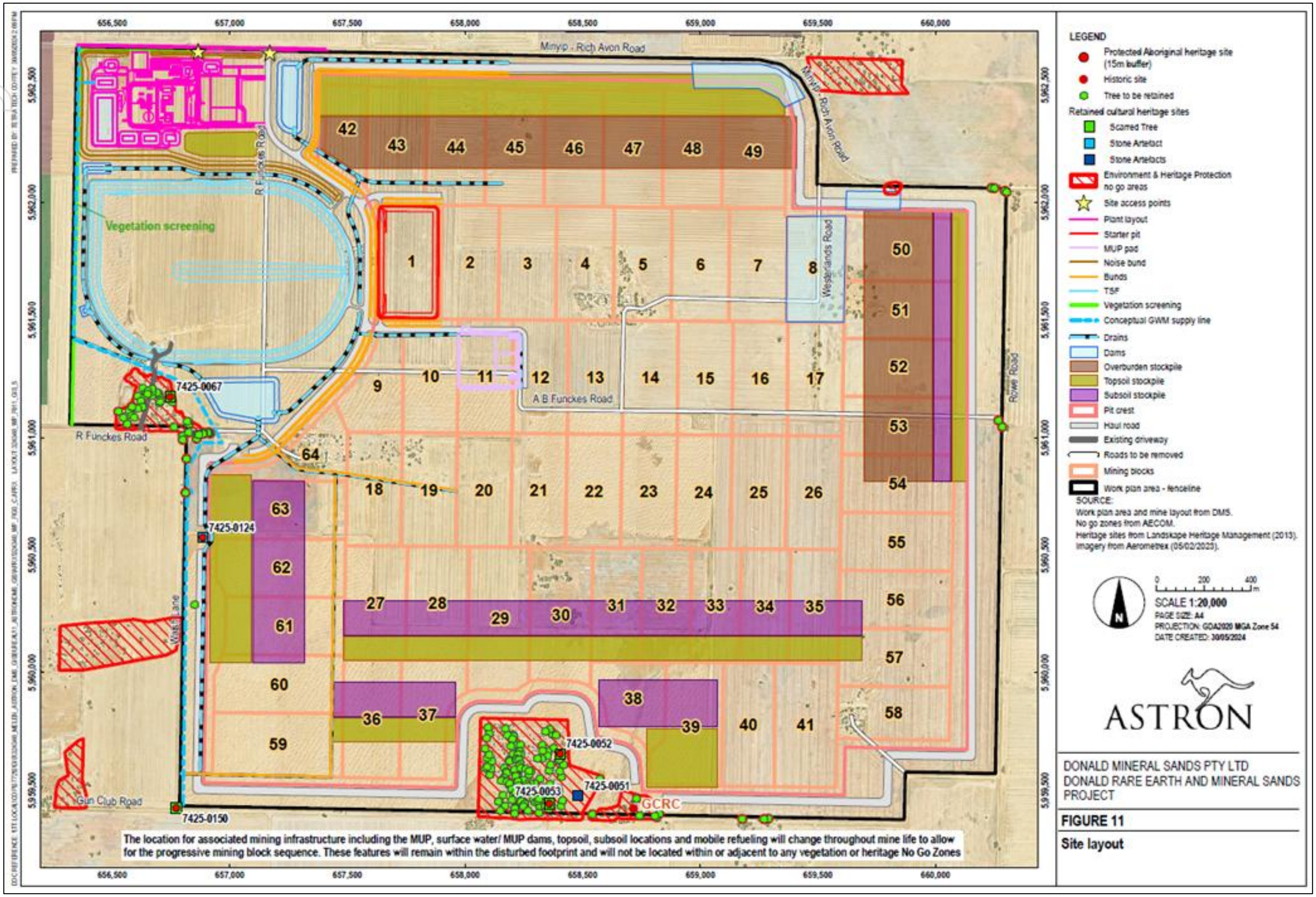
The external TSF site selection process consisted of selecting the lowest value area close to the site infrastructure to reduce pumping/capital costs. As such, the external TSF has been situated immediately south of the proposed process plant within MIN5532 where there is no impact on any ecological or cultural heritage zones (Figure 18.1).

The external TSF (Figure 18.2) was configured by GEOAnalytica as a modified central thickened discharge (CTD) arrangement. CTD-type TSFs are commonly used in the mineral sands industry, including in the Murray Basin at multiple mine sites.

The confining embankments will be constructed to approximately 8.8 m high while the central spine will be constructed to nominally 16.3 m high with the decant pond located in the northwestern corner of the facility. The TSF has been sized to accommodate approximately 12 months of initial tailings storage (nominally 6.4 Mt). The overall dimensions of the external TSF are approximately 1,100 m by 760 m.

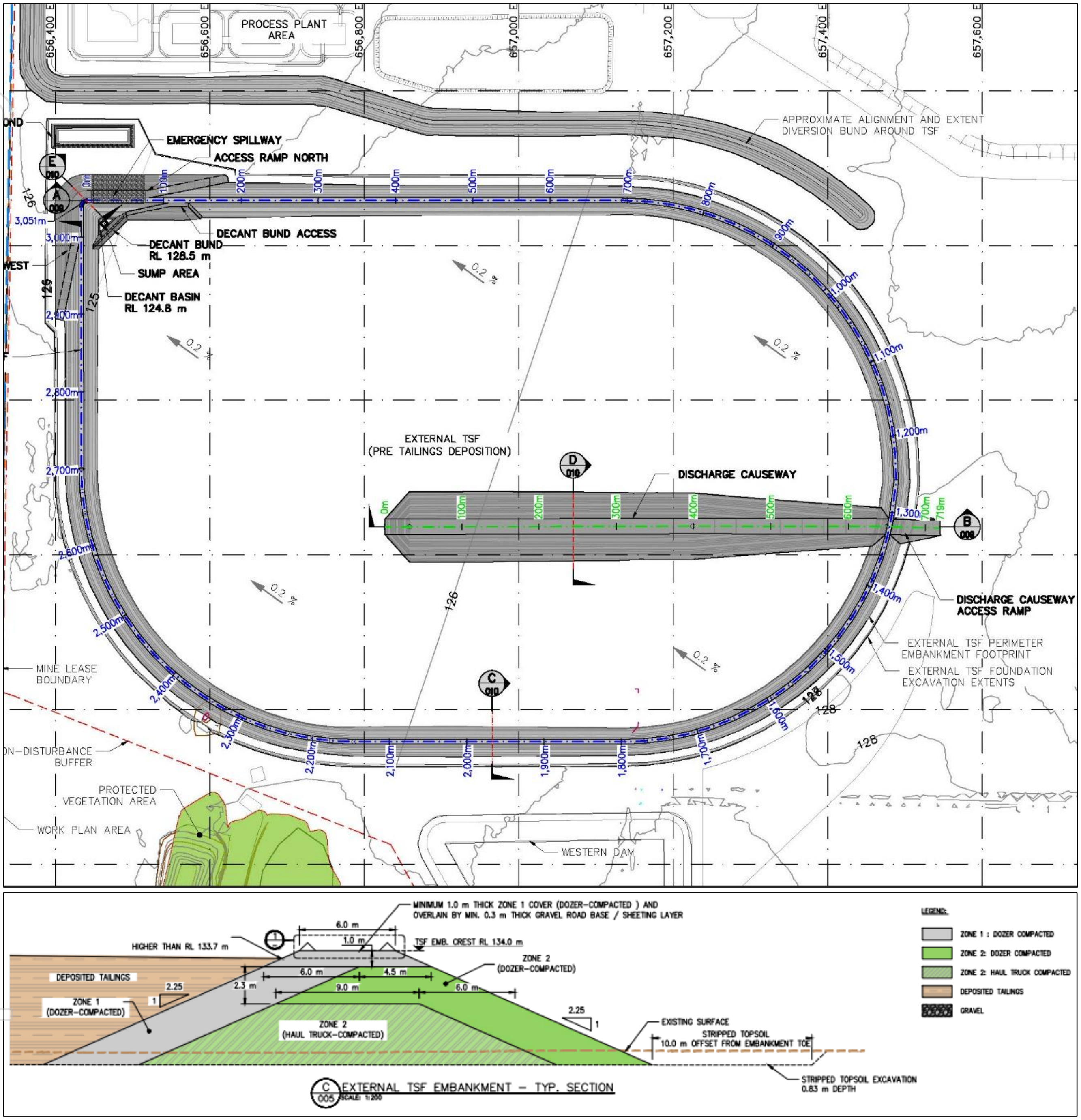
The embankments are expected to be constructed using a clay core comprising Unit 2 Shepparton Formation clay with Unit 3a/LP1 material placed over the core. In the area of the decant pond, the clay core will extend to the upstream face of the embankment, and the initial 1.5 m of clay facing will be lime-stabilized (nominally 3%) to reduce dispersivity. Designs indicate that embankment crest widths will be 20 m with upstream and downstream slopes of approximately 2H:1V and 2.5H:1V, respectively. The results of the stability analyses completed (static and post seismic) demonstrate compliance with or exceedance of the minimum required ANCOLD Factor of Safety.

Figure 18.1 Site layout in Work Plan area



Source: DPPL, 2024

Figure 18.2 External TSF design



Source: Astron, 2025

The external TSF will be founded on a compacted low permeability liner of Unit 2 Shepparton Formation clay and hence any seepage through the base of the facility will be slow. A seepage collection sump has been included in the design to allow accumulated seepage removal and minimize seepage through the embankment walls. A surface water management system, comprising swale drains located on the northern and western sides and outside the external TSF and two stormwater ponds also located on the northern and western sides outside the facility, to capture and manage locally generated stormwater.

The water balance results indicate an average operating decant pond of approximately 0.6 m in depth. Water return will be undertaken via a skid mounted pump located on an access ramp in the decant pond area. The water balance model indicates that a 700 m^3/h pump is required to maintain decant pond levels, and minor ongoing pumping will be required post-tailings deposition to maintain a low decant pond level. The return water system has been designed for additional capacity at a maximum rate of 1,000 m^3/h.

A diversion bund north of the TSF has been incorporated in the design to divert potential dam break flows from the process plant area. The diversion bund is expected to tie-in with the proposed noise bunds around the process plant and extends to the east for approximately 600 m by partially wrapping around the external TSF.

A consequence category assessment was undertaken considering post flood failure conditions to assess the worst-case scenario in terms of ANCOLD standards. While recent dam break modelling suggests a "LOW" consequence rating with an Incremental Potential Loss of Life (PLL) of 0.05 and Population at Risk (PAR) of approximately 2.9, the design of the external TSF has been designed in accordance with a higher consequence category. A spillway has been designed to accommodate the probable maximum flood, ensuring adequate conveyance of peak flows and controlling maximum flood depth. To minimize embankment height, the spillway depth was preliminary set at 0.5 m, resulting in a spillway width of approximately 30 m.

18.2.2 In-pit TSF design

Once sufficient in-pit void space is available, tailings deposition will take place within the pit. The tailings cells will be constructed below the natural ground surface (i.e. final tailings elevation will be no higher than 3.2 m below the natural surface to account for closure requirements). Indicative tailings cells of approximately 250 m by 500 m are planned, with individual cells expected to operate for several months, subject to detailed design and operational requirements. The active in-pit cell and the active mining face will be separated by an empty cell.

The adopted design parameters for the in-pit TSFs (Figure 16.3) are based on the consequence category assessment of "Significant" and ANCOLD design criteria.

Like the external TSF, the cross-pit embankments will be constructed using Unit 3a/LP1 material with about a 1.5 m thick (measured horizontally) low permeability facing in the areas where the normal operating pond will be located. The embankments are expected to be constructed with a 20 m wide final crest with 2.5:1 (H:V) side slopes. The marginally flatter slopes are required due to the increased height of the embankments for the in-pit TSF (in comparison with the external TSF). The remaining confining embankments for each cell will be accounted for by leaving an in-situ embankment (i.e. pit wall).

The design is based on the requirement that the pit will remain dewatered for at least the active tailings cell, dormant/empty cell and active mining front. Once the deposited tailings elevation has increased sufficiently beyond the groundwater elevation, dewatering can cease in the area around the active tailings cell, subject to operational and water management considerations.

The tailings transportation to the in-pit TSFs will be completed by tailings transportation pipeline mains. Return water will be dealt with in the same manner as the external TSF (i.e. access ramp and skid mounted pump). Tailings will typically be deposited from multiple sides of each cell and the decant pond will form on either side of the dividing embankment.

SciDev Ltd undertook testing to assess the sand:slimes mix ratio, define the most appropriate flocculant type and identify the dose rate. A density of 1.5 t/m^3 was adopted for the tailings deposition assessment, which equates to approximately 13,333 m^3 per day of consumed void space.

In-pit deposition of tailings within the in-pit TSFs will require permission from the EPA to deposit waste to an aquifer (A18 permit). All required regulatory approvals will be obtained prior to the commencement of in-pit tailings deposition.

18.3 Power

Power for the operation will be supplied by a site-based modular microgrid rather than a direct connection to the Victorian electricity distribution network. The microgrid will comprise a hybrid generation system of PV arrays, BESS, and high-efficiency diesel generators to provide spinning reserve and backup capacity.

The microgrid is designed for fully islanded operation, with redundancy on critical feeders and black-start capability. Generation and storage modules will be staged to align with project ramp-up, with provision for future expansion to support potential throughput increases. Automated load-following control will optimise the use of renewable energy and minimize diesel fuel consumption, integrating closely with plant operating schedules and the water management system.

The microgrid will be located to the southeast of the process plant to optimize electrical distribution efficiency to the WCP, CUP and mining areas, while minimizing interference with mine sequencing. Protection, metering, and operational control systems will be built to utility standards, with the option for future intertie to the 66 kV grid if commercially advantageous.

Two shortlisted tenderers propose alternative hybrid power configurations, providing a range of installed capacities. Diesel generation capacity is in the order of 10–11 MVA, based on alternative modular generator configurations, with solar capacity from 10 MW to 15 MW (peak). Battery energy storage capacity averages approximately 15 MWh, based on alternative system configurations. Both options achieve an estimated renewable energy penetration of 45%.

18.4 Raw water supply

The mining and processing operations will source water from:

- Groundwater recovered from dewatering activities
- Surface water recovered from the tailings decant ponds and rainfall
- A makeup raw water supply of approximately 3 GL/a.

Raw water will be drawn from the Grampians Wimmera Mallee (GWM) Water Headworks water allowance in accordance with a contract executed in 2011. The Headworks Water Allocation is stored in Taylors Lake east of Horsham (Figure 4.1) and the Headworks Water Allowance is 6.975 GL/a. In 2018, a deed of variation was executed that, inter-alia, extended the term from 2018 for 25 years.

In February 2023, W3Plus was engaged to develop a detailed basis of design and a preliminary Design Application. That work was progressed to detailed design in early 2024, and the final design was subsequently approved by Grampians Wimmera Mallee Water (GWMWater).

Work completed during 2024 and 2025 included:

- Gun Club Road pipeline fully installed and commissioned to draw from the Wimmera Mallee Pipeline upstream of Minyip Pumping Station (14 km route)
- Pipeline capacity of 100 L/s, consistent with the project's licensed maximum take
- GWMWater issued final acceptance of the completed pipeline in November 2025.

Raw water storage in the freshwater pond at the mine site (Figure 17.2) will cater for a three-day disruption to the GWM raw water supply.

18.5 Access and security

The 2008 EES included several conditions issued under the Victorian Environment Effects Act relating to public roads, traffic and transport. To satisfy these requirements and those of the local shire councils, a number of initiatives have been advanced:

- Developing a Transport Management Plan and its revision in November 2024
- Forming a Transport Working Group in 2023 with representatives from Yarriambiack Shire, Buloke Shire, Northern Grampians Shire, Horsham Rural City Council, the Department of Transport and Planning (DTP), and emergency services
- Road condition and traffic investigations to inform detailed design.

The public road upgrade scope includes:

- Upgrade to the Minyip–Rich Avon Road servicing the mine site
- Construction of a Minyip bypass road
- Henty Highway, Horsham–Minyip Road and Donald–Murtoa Road intersection upgrades (Figure 4.1).

Based on earlier utility location surveys, feature surveys, geotechnical results and cadastral surveys completed in 2022–2023, Driscoll Engineering (RMG Driscoll) was engaged in November 2024 to deliver detailed haul route and intersection designs. These are currently under review by Yarriambiack Shire Council (for local roads) and DTP (for state roads). The Minyip bypass alignment has been refined to avoid GWMWater infrastructure, and GWMWater has confirmed the design meets asset protection requirements. The Transport Management Plan revisions also incorporated additional DTP requirements, including widening sections of Horsham–Minyip Road and upgrades to the Donald–Murtoa Road intersection. The road upgrade works will be staged, with Stage 1 included in project capex prior to mining operations, and Stage 2 to be delivered post-commissioning under sustaining capital.

The only rail infrastructure upgrade requirements will be at the rail level crossing in Minyip. Upgrades will include new boom gates, active warning devices, and pavement improvements in accordance with VicTrack and DTP standards.

General vehicle site access, including the transport of mine products and all deliveries, will be via the Minyip–Rich Avon Road which forms the northern border of the site. Access will be controlled entry via dual activation boom gates. The boom gates will be fitted with closed-circuit television (CCTV) systems and lighting to allow for 24 hours of operational activities and to monitor vehicle and people movements.

A car park is provided external to the main security fence and gate with personnel access into the office compound via dedicated turnstiles through the fence line into the main plant area.

The entire process plant perimeter including raw water pond, process water pond and settling ponds will be fenced with a 1.8 m high topped chain wire fence with three strands of barbed wire.

The roads within the process plant area and the structural capping of earthworks will require a certain volume of imported gravel fill. Fill will be sourced locally from operating quarries.

Haul roads will be constructed of materials found within the Work Plan area and the coarse sands extracted during mining.

18.6 Ancillary facilities

Allowance has been made for administrative buildings including a main office building, first aid building, ablution blocks, change rooms, crib rooms and laboratory. Diesel fuel will be stored and contained in self-bunded tanks.

Offices and associated amenities (ablution blocks, medical facilities and change rooms) are contained within a fenced off area south of the main car park area accessible via a swipe-card activated turnstile.

The process plant will include an ablution block, laboratory and laboratory office. Workshop buildings and storage facilities will include:

- Process plant maintenance workshop and stores
- A transport logistics unloading bay located adjacent to the workshop and stores
- Light vehicle washdown bay with a hydrocarbon/water treatment unit
- Mining maintenance and stores structure/s constructed outside the process plant area and closer to the mining area.

18.7 Accommodation

The mine site is situated within a farming community with the surrounding small towns providing services primarily to agriculture. The preferred option for the Phase 1 operation is for a residential workforce to support the local communities. As such, the project is not planning to build permanent housing stock but rather work with local parties to jointly develop solutions, including utilizing existing housing stock in the area.

The construction workforce is estimated to peak at approximately 120 during an estimated nine-month process plant construction period. A 100-person residential workforce is estimated during the operations phase.

18.8 Communications

The project Wide Area Network (WAN) will be a multi-protocol label switching (MPLS) network which will fully support the minimum technical specifications to provide end-to-end support. A two-way radio communications system will also be installed.

18.9 Logistics

The logistics strategy for the operation has been developed to optimize efficiency, reduce transport risk and align delivery schedules with construction and operational requirements.

Inbound logistics:

- Bulk construction materials (aggregates, cement, structural steel) will be sourced from regional suppliers where feasible, reducing long-haul freight requirements.
- Major process plant components and modular assemblies will be fabricated off-site (including selected international suppliers) and transported via the Port of Adelaide to site by road freight under oversize/over-mass permits.

Outbound logistics:

- HMC will be trucked in containers from site to the Wimmera Intermodal Freight Terminal (WIFT) at Dooen (near Horsham).
- At WIFT, the containers will be loaded onto trains for transport to the Port of Portland, Victoria for export. Empty containers will be loaded onto trucks for return to the mine site.
- REEC will be containerized on site and transported by road and rail via WIFT to the Port of Adelaide, South Australia for export to the Port of Seattle, USA in compliance with Class 7 dangerous goods requirements per IAEA regulations.

Operational support logistics:

- Local contractors will be engaged for fuel supply, consumables delivery and routine maintenance logistics.
- Deliveries will be staged to match construction sequencing and reduce on-site laydown requirements.

19 Market studies and contracts

19.1 Market studies

Two products will be produced at the Phase 1 operation:

- A HMC consisting of zircon and titanium feedstock minerals
- A REEC consisting of the REE-bearing minerals monazite and xenotime.

The two products will have distinct markets and revenue streams which are subject to different market forces and cycles. The mineral sands market is more mature and, historically, influenced by urbanization and construction trends. The rare earths market has increased in prominence in recent years and is forecast to grow significantly commensurate with the shift toward decarbonization and increasing adoption of renewable sources of energy.

Independent market studies were commissioned by Astron to support the economic assumptions used in the Donald project evaluation:

- TZ Minerals International Pty Ltd (TZMI, November 2025) provided analysis and long-term forecasts for zircon and titanium feedstocks, including supply-demand fundamentals, market segmentation and inducement pricing assumptions
- Argus Media Ltd (Argus, December 2025) prepared an independent market assessment for the REEC product, incorporating global supply-demand projections, competitive positioning and price outlooks
- Adamas Intelligence contributed confidential supply, demand, and pricing forecasts for REOs.

Together, these studies underpin the revenue forecasts presented in Item 22.

19.1.1 Mineral sands market

Zircon

Zircon is primarily used in ceramics (tiles, sanitaryware, glazes), with additional applications in foundry casting, refractories and specialty chemicals. No direct substitutes exist that match zircon's physical and chemical properties, and zircon cannot be economically recycled.

According to TZMI's market study, current global zircon consumption is approximately 1.14 Mt/a. Global titanium dioxide consumption is estimated at 8.1 Mt/a TiO_2 equivalent. Zircon sales are conducted under a combination of term contracts and spot sales, either directly to end users or via intermediate processors. Purchasing decisions are driven by product specifications and customer requirements. There is no formal traded market for mineral sands products, which results in less price transparency compared to widely traded commodities such as base and precious metals.

Global zircon demand is forecast to increase to 1.46 Mt by 2033, representing a compound annual growth rate (CAGR) of 2.8% from 2023. The ceramics segment is expected to remain the largest market share in 2033 at ~47%, followed by foundry and refractory segments, which are forecast to grow at CAGRs of 2.2% and 2.9%, respectively. Growth is partly driven by renewable energy applications such as PV glass and by advanced manufacturing sectors, including electric vehicle production.

China is expected to remain the largest consumer, accounting for ~46% of global demand in 2033. India is forecast to be the fastest-growing major market, with its share rising from 9% in 2023 to ~10% by 2033, reflecting a CAGR of 4.6%.

On the supply side, zircon production is expected to peak in 2026 at ~1.29 Mt/a before gradually declining in the absence of new large-scale developments. TZMI identified a supply decline of nearly 300,000 tonnes by 2033, highlighting the strategic importance of new projects such as Donald.

Independent whiteness and impurity testing by Chinese end-users confirmed that the Donald zircon qualifies as a "premium" product, with high whiteness (L* value of ~94.8) and very low impurities, meeting strict ceramic industry requirements.

Titanium

Titanium feedstocks are classified by their titanium dioxide (TiO_2) content and include, amongst other minerals, rutile, leucoxene and ilmenite. Titanium dioxide feedstocks are used predominantly to produce titanium dioxide pigment, and for the manufacture of paint, plastics and other forms of coating. Other applications include the production of titanium metal sponge for the manufacture of titanium metal.

In 2023, titanium feedstock demand was 8.12 million TiO_2 units and forecast by TZMI to grow to 10.7 million TiO_2 units by 2033, a CAGR of 2.8%. Macroeconomic factors, such as urbanization and increased expenditure on consumer goods will influence this growth.

Over 2022 and 2023, there was a cumulative market surplus of approximately 422,000 TiO_2 units. In 2023, this surplus was concentrated in chloride pigment feedstock, reflecting reduced operating rates among Western chloride pigment producers. Despite the surplus, TZMI projects that underlying demand over the next decade will only be met if all potential new supply sources commence production on schedule. Given the low likelihood of full and timely project delivery, medium-term supply constraints remain a distinct possibility.

Independent smelter studies confirm that Donald ilmenite produces a high-yield, low-impurity slag when blended appropriately, making it a suitable feedstock for chloride pigment plants in both Western markets and China.

19.1.2 REE market

REEs are a set of 17 metallic elements, including 15 lanthanides, scandium and yttrium. REEs exhibit special magnetic and conductive properties and have become necessary components across a wide range of technological applications including consumer products and industrial, medical and defence applications. REEs are also central to a range of clean energy, environmental and alternative fuel source initiatives. Their categorization as "critical minerals" indicates the commercial and strategic importance.

REEs are classified as light rare earth elements (LREEs) or heavy rare earth elements (HREEs) based on the atomic weights. LREE include lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), promethium (Pm), samarium (Sm), europium (Eu) and sometimes gadolinium (Gd), while HREEs include terbium (Tb), dysprosium (Dy), erbium (Er), holmium (Ho), lutetium (Lu) and thulium (Tm). LREEs typically comprise over 90% of the TREO content of a rare earth mineral deposit and, as such, represent most of the global TREO production volumes.

Broadly, REE end-uses can be classified into eight categories:

- Battery alloys (La, Ce, Pr, Nd)
- Catalysts (La, Ce)
- Ceramics, pigments and glazes (La, Ce, Pr, Nd, Y)
- Glass polishing powders and additives (Ce, La, Er, Gd, Y)
- Metallurgy and alloys (La, Ce, Ho, Gd, Y)
- Permanent magnets (Nd, Pr, Dy, Tb, Sm)
- Phosphors (Ce, La, Y, Tb, Eu)
- Other (La, Ce, Nd, Dy, Tb, Gd, Lu, Tm).

The saleable products in Donald REEC are expected to comprise Nd as Nd_2O_3, Pr as Pr_6O_{11}, Dy as Dy_2O_3 and Tb as Tb_4O_7, as reported in the 2025 Mineral Reserve estimate.

Argus' market report noted that in 2023 the glass industry accounted for the largest share of REE demand by volume at ~31% but contributed only ~7% of market value. In contrast, permanent magnet applications represented ~25% of demand by volume and ~78% of value. By 2034, Argus projects magnets will account for ~40% of rare earth demand by volume and nearly 90% of value. This reflects the significantly higher value contribution of magnet materials, driven primarily by neodymium and praseodymium and supplemented by critical heavy rare earths such as dysprosium and terbium, both of which are forecast to remain in structural deficit without new supply.

TREO demand increased by 7% in 2022, with a further lift of 6% in 2023. In 2024, the demand was expected to grow 4% to about 210,000 tonnes. This increase in demand has primarily been driven by the permanent magnet sector (Argus Media, 2025). This is largely associated with the increased demand for electric vehicles, wind turbines, automotive electrification, and other permanent magnet applications.

Forecast TREO demand for all sectors is expected to increase by about 3.5% per annum to 2030. Argus then expects demand growth to moderate to 3% per annum to 2035 and further reduce to 2% per annum to 2040. Permanent magnet demand is forecast to grow by 8.5% per annum to 2030, moderating to 3% per annum to 2035 and then reducing to 1.5% per annum to 2040. Electric vehicle traction motors and generators use high-temperature, performance-grade permanent magnets that contain higher volumes of dysprosium and terbium, which are expected to account for more than 50% of total dysprosium and terbium demand. Other automotive applications such as micromotors, sensors and speakers are also forecast to increase, outpacing the underlying vehicle market, as manufacturers deploy TREO in new models to reduce weight, improve fuel efficiency and extend driving range. Demand from wind power generation is also expected to rise, with direct drive and hybrid drive turbines requiring high-performance magnets. New areas of innovation, such as robotics, will also contribute to growing demand.

Direct drive and hybrid drive wind power generation demand for permanent magnets is forecast to increase for both onshore and offshore applications as global energy generation shifts more toward renewable sources. For offshore wind power alone, Argus forecasts rare earth demand in permanent magnets to increase from 3,850 tonnes TREO in 2024 to 10,650 tonnes in 2030, 15,750 tonnes in 2035 and 18,250 tonnes in 2040, representing CAGRs of 18%, 8% and 3% respectively.

China has dominated both mine production of REE and processing of refined products. It also controls the downstream market, including the high-value magnet sector. In 2023, Argus estimated that China accounted for more than 90% of global downstream magnet market value. With rising demand for rare earths, prices have increased significantly over the past decade, incentivizing exploration, evaluation and development of new deposits.

Outside China, governments are actively supporting new production to create additional raw material supply chains and reduce reliance on Chinese output. New global projects could contribute ~25% of supply by 2035. The drive to expand and diversify supply chains and encourage new ex-Chinese downstream capacity is expected to support prices. However, with many projects yet to reach feasibility stage and construction, lead times remaining long, and demand for rare earths, particularly dysprosium and terbium required for permanent magnets, is expected to remain tight through the early 2030s.

Argus notes that forecast increases in supply will struggle to meet the growing demand for magnet materials, particularly neodymium, praseodymium, dysprosium and terbium, by the early 2030s. Demand for these magnet materials has been rising steadily and accounted for ~32% of total rare earth demand in 2024. According to Argus, prices for rare earth magnet materials dipped in 2023 but appeared to have bottomed in 2024. Prices are forecast to rebound strongly in 2025–2026, moving above breakeven levels for Chinese producers, and then grow steadily through the remainder of the decade. Additional upside may be supported by government policy and regulatory settings, particularly in the European Union (EU) and USA, which are aimed at strengthening ex-Chinese supply chains.

19.2 Contracts

Material contracts required for the Phase 1 development following FID will include mining, construction, rehabilitation, transportation, handling, sales and hedging, and forward sales contracts or offtake arrangements.

DPPL plans to award several large contracts through competitive tendering or justified sole sourcing to minimize risks and optimise management. Key contracts include earthworks, engineering, procurement and construction (EPC), project management, mining, and transport and logistics to cover the full supply chain from mine to port with initial terms of 5–10 years.

Sedgman Pty Ltd has been engaged for early contractor involvement to develop the design and execution strategy for the process plant with a target cost estimate contract. Agilitus has provided project management services including project planning, engineering management, procurement, quality, HSE, construction and commissioning management under a performance-based contract.

Invitations to tender for the sitewide earthworks contracts have been made. The process plant and ancillary facilities, excluding the in-pit MUP, will be delivered under a single EPC contract. The contract for the in-pit MUP will be structured as a design-and-construct delivery model. An independent power provider will be engaged under either a build-own-operate contract or equipment hire and services contract to provide the power station, including generators, solar units and energy storage system. Negotiations are in progress with the bidders for the transport and logistics contract.

The project has a binding offtake agreement with Energy Fuels covering 100% of the REEC production from Phase 1. The agreement uses a formula linked to the market prices of constituent REOs (neodymium, praseodymium, dysprosium, terbium) published by Asian Metal, adjusted for payability factors, product assemblage. There is a REEC floor price mechanism tied to the project EBITDA, allowing Energy Fuels to suspend offtake if prices fall too low; in that case, DPPL may sell into the spot market. In the Qualified Person's opinion, the terms of the offtake agreement are no more favourable to the terms that would be offered to a third party given that revenue is linked to generally accepted market pricing mechanisms.

The contract for the supply and construction of the water supply infrastructure from the GWMWater network was completed in November 2025. A contract for the supply of spirals was executed with Mineral Technologies in September 2025. The process plant earthworks contract was awarded to Unyte Southern Pty Ltd in December 2025.

No other material contracts have been executed at the effective date of this Technical Report.

20 Environmental studies, permitting, and social or community impact

20.1 Environmental studies

The Property is within the Wimmera Bioregion and would have once been covered in woodlands variously dominated or co-dominated by Yellow Gum, Buloke, Black Box and Grey Box with large areas of native grassland occurring between the woodlands. Most of the Work Plan area now comprises cleared land used for dry land agriculture and livestock which is typical of the Wimmera plains. Native vegetation mapped within the Work Plan area by Ecology and Heritage Partners Pty Ltd (EHP) in 2023 included Ecological Vegetation Classes 803 Plains Woodland and 823 Plains Savannah, both of which have Bioregional Conservation Statuses of "endangered" within the Wimmera Bioregion (DEECA, 2023).

The Work Plan area (black boundary in Figure 4.3) within MIN5532 (green boundary) was selected on the following criteria:

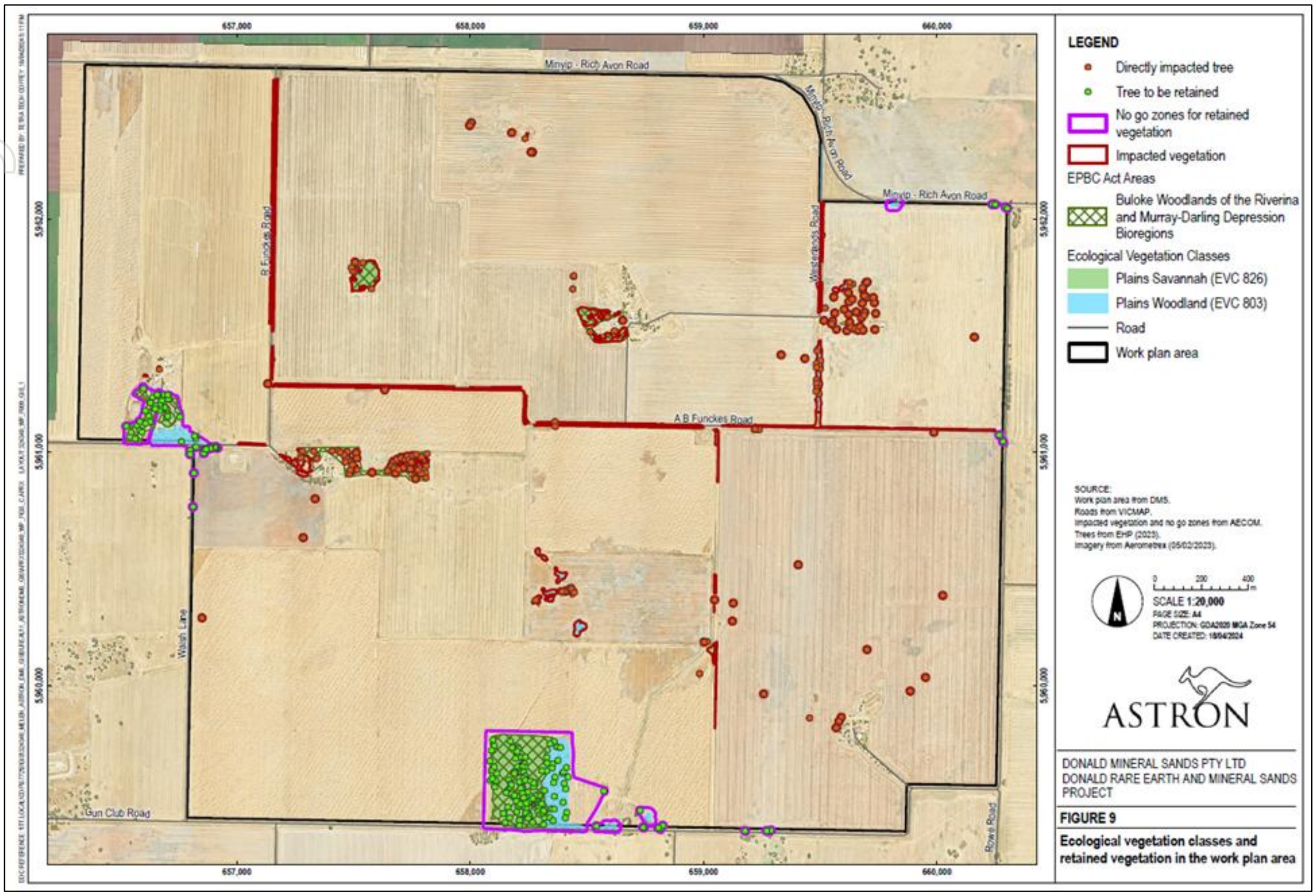
- To minimize impacts on Crown and Shire infrastructure
- To minimize impacts on biodiversity and heritage resources
- To provide higher value ore early in the mine life
- To include sufficient area to support mining for over a decade.

20.1.1 Flora

Native vegetation exists as scattered patches or along roadsides. An assessment by EHP (2023) was undertaken to review and update the previous ecological data that was obtained as part of the 2008 EES to minimize and offset the proposed removal of native vegetation and outline any implications associated with changes in the legislative and policy framework.

As part of the flora and fauna management, vegetation "no-go zones" were derived by identifying tree protection zones and applying a minimum buffer of 10 m around threatened ecological communities. The vegetation "no-go zones" are shown on Figure 20.1.

Figure 20.1 Ecological vegetation classes and retained vegetation in the Work Plan area



Source: DPPL, 2024

Flora species of State significance were observed during the EHP 2023 site assessment:

- Buloke (*Allocasuarina luehmannii*) – Endangered, protected under the EPBC Act[2]
- Buloke Mistletoe (*Amyema linophylla* subsp. *orientale*) – Critically Endangered, protected under the FFG Act[3]
- Golden Wattle (*Acacia pycnantha*) – Considered "protected flora" under the FFG Act, requiring legal authorization for its removal from public land
- Fuzzy New Holland Daisy (*Vittadinia cuneata*)[4] – Endangered (Victoria), protected under the FFG Regulations (2020)
- Umbrella Wattle (*Acacia oswaldii*) – Vulnerable (Victoria), protected under the FFG Act.

Prior to native vegetation removal DPPL will, among others, ensure that all required approvals and/or offsets have been secured in accordance with Federal and State legislation.

As part of meeting its conditions in the approval, DPPL identified two suitable offset sites approximately 3 km apart, identified as Habitat Zone 21 (13 ha of Buloke Woodlands at 163 R Funckes Road, Minyip – within the Work Plan area) and Barry's Block (16 ha of Buloke Woodlands at 472 Barru-Lawler Road, Rich Avon West – adjacent to and outside MIN5532). The offset sites, combined with active management were deemed suitable to compensate for the project impacts to Buloke Woodlands. The offsets will be secured via a Section

[2] *Environment Protection and Biodiversity Conservation Act, 1999; refer to Item 20.3.3.*
[3] *Flora and Fauna Guarantee Act, 1988; refer to Item 20.3.2.*
[4] *Unconfirmed but presumably including both subspecies morrisii and hirsuta.*

69 agreement (or similar)[5] to protect and improve the extent and quality of native vegetation on the sites. The two offset sites will be managed for the purposes of conservation.

20.1.2 Fauna

Ninety-eight fauna species were identified during the 2008 Coffey assessment, including the following protected species:

- Brown Treecreeper (*Climacteris picumnus victoriae*) – Vulnerable, protected under the EPBC Act
- Bush Stone-curlew (*Burhinus grallarius*) – Critically Endangered, protected under the FFG Act
- Diamond Firetail (*Stagonopleura guttata*) – Vulnerable, protected under the EPBC Act
- Eastern Bearded Dragon (*Pogona barbata*) – Vulnerable (Victoria), protected under the FFG Act
- Fat-tailed Dunnart (*Sminthopsis crassicaudata*) – Vulnerable, protected under the FFG Act
- Hooded Robin (*Melanodryas cucullate*) – Vulnerable, protected under the FFG Act
- Southern Whiteface (*Aphelocephala leucopsis*) – Vulnerable, protected under the EPBC Act.

Three species were identified as state significant fauna occurring within MIN5532:

- Brown Treecreeper (*Climacteris picumnus victoriae*)
- Bush Stone-curlew (*Burhinus grallarius*)
- Diamond Firetail (*Stagonopleura guttata*).

The assessment of the 2008 EES concluded that there were not any significant risks to protected threatened fauna species due to the project. There is no indication as to whether this study will be updated.

20.1.3 Hydrology and hydrogeology

The Work Plan area is split between the Wimmera and the Avon–Richardson catchments and does not contain any defined watercourses or water bodies. There are two redundant and decommissioned domestic and stock supply channels (Taylors Lake Extension Channel and the Laen East Channel). The closest defined waterways are the Richardson River (4 km to the east) and Dunmunkle Creek (2 km to the west). The closest major water body is Lake Buloke (25 km to the northeast). Sheet floodwater flows can occur following major rainfall events.

The regional hydrogeology is generally understood, but on a wider scale only. The main aquifer is the Loxton Sand, an unconfined aquifer with high salinity and low yield that hosts the HM sand deposits. The regional groundwater salinity varies between 14,000 mg/L and 35,000 mg/L TDS and the average local salinity is 16,930 mg/L TDS. In vicinity of the Work Plan area, depth to groundwater ranges from approximately 11 m to 15 m below surface and the regional groundwater flow is northwesterly towards the deeper section of the Murray Basin. Bore yields are less than 0.5 L/s.

The top of ore is approximately 3.0 m above the groundwater level, while the base of ore is about 6.8 m below groundwater levels. This suggests that the ore is partially saturated.

Dewatering of the operating cells will draw down local groundwater levels. Numerical modelling suggests the drawdown may extend 2.5 km from the mine site. The drawdown cone is not expected to impact groundwater users as the closest registered stock or domestic groundwater bores are approximately 20 km from the mine site and will not intersect adjacent water features (i.e. Richardson River and Dunmunkle Creek).

[5] *A Section 69 offset agreement, established under the Conservation, Forests and Lands Act 1987, is a legally binding on-title agreement in Victoria, Australia, between a landowner and the Secretary to the Department of Energy, Environment and Climate Action (DEECA). It secures land for the long-term protection and management of native vegetation, enabling the owner to generate credits that can be sold to third parties to meet native vegetation removal permit requirements.*

A Take and Use Licence is required from GWMWater for dewatering groundwater from the Loxton Sand aquifer. In-pit tailings deposition will require a permit from the Environment Protection Authority (EPA) as it is considered discharge of waste to aquifer. It is reasonable to assume that they will be issued prior to requirement.

20.1.4 Groundwater dependent ecosystems

Within 5 km of the Work Plan area, only two temporary wetlands and marsh/meadows were identified related to surface water drainage features and topographic depressions. The site to the southwest is classified as having a low potential for reliance on groundwater; the site to the south is unclassified.

There are several small and isolated potential terrestrial groundwater dependent ecosystems mapped within a 5 km radius of the mine site that were not ground-truthed. There is low potential for groundwater dependent vegetation, based on the saline water table in this area and the depth to the water table of around 10 m.

The closest terrestrial vegetation mapped as high potential groundwater dependent ecosystems included plain woodlands and drainage line woodlands along the Richardson River, approximately 4 km east of the project. In the groundwater impact assessment, CloudGMS (2023) considered that any changes in the water table from the mine operations would not impact on such vegetation.

20.2 Waste and tailings disposal, REEC management, site monitoring, and water management

20.2.1 Tailings management

Processing overview

The non-valuable solids rejected primarily by the WCP must be treated before placement back into the mine pits or initially into the external TSF. The tailings need dewatering to reduce the time needed for rehabilitation of the tailings cells and to maximize water recovery.

The dewatering of the tailings is done over two phases:

- Coarse or sand tails dewatering
- Slimes thickening.

The coarse tails are comprised of the ROM screen oversize and the tailings streams from the rougher and mid scavenger spirals which are directed to and combined in the tailings cyclone feed sump. From there, the tailings are pumped under pressure to the tailings dewatering cyclone cluster to remove most of the water. The dewatering cycloned tails discharge into the tailings sump at about 60% solids.

The desliming cyclone and surge bin overflow streams are combined in a high-rate thickener to separate and recover as much water as possible for reuse in the WCP. Slimes thickening refers to the process in which fine slimes solids are separated in a large tank (+35 m in diameter) from water in a dilute slurry, resulting in a thickened slurry containing a higher percentage of solids. This is done to facilitate recovery of much of the contained water to be reused in the process as possible, reducing overall water consumption, and to provide a cost-effective method to dispose of undesired sands which have no financial value. Flocculant is used in the thickening process to bind the small particles of solids (slimes/clay).

Dewatered coarse sand tailings will be combined with the high-rate thickener underflow and pumped back to the external TSF or when available, the mine pit. A flocculant will be added at the discharge (pipe head) of this tailings line to promote the settling of solids in the tailings cells to speed up rehabilitation of the mine pit as well as increasing water recovery.

Tailings testing

Laboratory testing was undertaken to identify suitable material parameters for inclusion in the design of the tailings facilities. Representative samples of the tailings were provided to SciDev and ATC Williams in 2022 and 2024 for laboratory testing.

Additional testing was undertaken by RGS who undertook geochemical screening tests of sonic drill core. The sonic drillholes were selected to cover the spatial extent of the mineral strand. The field pH screening tests were performed on every 1 m interval of core for five drillholes (i.e. overburden and ore).

The key outcomes from the testing were:

- Tailings classification – CH
- Initial settled density – 1.28 t/m^3
- Bleed rate – 0.82 t/m^3 (dry tons of tailings)
- Segregation threshold – 55%
- Shrinkage limit density – 1.51 t/m^3
- Adopted final settled density for tailings deposition – 1.4 t/m^3 for the external TSF and 1.5 t/m^3 for the in-pit TSF.

Key results from the geochemical testwork undertaken to identify potential for acid mine drainage, including soluble metal(loid) and salt release from tailings (sand and slimes) produced from processing of the HM deposit, were:

- The total sulphur (TS) content of the samples ranged from 0.01% TS to 0.06% TS, with a median value of 0.04% TS. Approximately 50% of the TS in the samples is present as sulphide sulphur.
- The acid neutralizing capacity (ANC) values for the samples were considered low with a median of 4.4 kg sulphuric acid (H_2SO_4) per tonne.
- The tailings processing waste samples had a negligible to low sulphide sulphur content, low ANC and were classified as non-acid forming (NAF) (barren) with low to negligible risk of generating saline drainage.
- There is a low risk of any significant acid generation from these materials.
- The NAF tailings classified by static leach tests were confirmed to be NAF via kinetic leach testing. The amount of potential acidity that could be generated from the samples is expected to be negligible, with all samples having low reactivity.
- The water leach results indicate the risk of generating metalliferous drainage is very low. Concentrations of soluble boron (B) and zinc (Zn) may be occasionally above Aquatic Freshwater Ecosystem guidelines.
- Arsenic (As), gold (Au) and tellurium (Te) that were shown to be enriched in the solid tailings samples, were not readily soluble under the testing conditions.
- Kinetic results from sand and slimes tailings indicate there is a minor risk of generating elevated boron (B) and fluorine (F) concentrations in leachate over time.
- Generally, tailings represented by these samples are likely to generate pH neutral surface runoff and seepage with low/moderate salinity and generally low concentrations of dissolved metals(loids) (excluding those mentioned above).

Deposition management

Tailings deposition will initially occur within the external TSF until sufficient space is available for the establishment of in-pit tailings cells. Tailings will be deposited via a secondary flocculated sand/slimes mix (i.e. Modified Co-Disposed or ModCod tailings). Laboratory testwork (2022–2024) confirmed an optimal sand-to-slimes ratio of 4.4:1, with flocculant type Maxiflox 530 applied at a dose of 185 g/t. The use of flocculant permits the formation of temporary tailings structures that allows water release with relative ease and increases evaporation effects.

Tailings will be pumped via a pipeline to the discharge location at the TSF. Two spigot manifolds are connected to the tailings pipe. Tailings will be distributed via spigot downpipes spaced approximately 40 m apart. These tailings spigot downpipes are connected to the spigot manifolds with knife gate valves. The spigot downpipes will discharge tailings to perforated PVC sleeve pipes installed on the embankment.

For both the external and in-pit TSFs, water return will be undertaken via a skid mounted pump located on an access ramp in the decant pond area. The pump can then be relocated up the ramp as the tailings and decant pond level increases.

High-level consolidation and evaporative drying modelling work has been undertaken to understand:

- Tailings density increases with time and depth
- Tailings strength gains over time (shear strength estimation)
- Rapid strength gain testing showed undrained shear strengths of 380–610 Pa within 30–60 minutes of deposition.

A model was developed to simulate the likely filling conditions for the in-pit tailings cells which is comparable to the external facility. The input parameters for initial settled density, SG, initial void ratio, material compressibility and permeability were obtained from the tailings testing results, which indicate:

- Approximately 0.36–1.07 m of tailings consolidation is expected under self-weight over a period of approximately two years following the end of deposition.
- After one year of surface drying, subsequent to the cessation of fulltime tailings deposition, results of the evaporative drying modelling indicates that a crust of greater than 25 kPa strength is predicted to develop to a depth of approximately 3.0 m. Following a further two years of evaporative drying, this depth is expected to increase to approximately 7.5 m and is considered sufficient crust development to support direct placement of capping layers.
- Beach slopes are predicted at 2.4–3.7%, with design values of 3.7% (upper beach) and 0.5% (lower beach).

Flocculant

A program of testwork was conducted on samples of thickened slimes and sand tailings by SciDev assessing the flocculant to be used in operations (Maxiflox 530(M) as anionic polyacrylamide (PAM)). The objectives of the work were to assess the rheological and dewatering behaviour of the slimes and a flocculated co-disposal mixture. The work program assessed the viscosity and yield stress behaviour of both the slimes alone and the co-disposal mixture before secondary flocculation, and the water release, yield stress and compression-permeability characteristics of the co-disposal mixture after flocculation.

Based on the test results, a flocculant dosage of 155–185 g/t should be targeted as this will provide good water release, dewatering and consolidation rates at a lower flocculant dosage, whilst avoiding excessively stiff structure development which could adversely impact spreading and storage utilization. Ongoing flocculant assessment and optimization is proposed in the detailed design phase of the project to ensure decant water recovery and flocculant use is optimized.

PAM has limited mobility in the environment and low toxicity; however, PAM may biodegrade to acrylamide and commercial flocculant formulations may also contain trace amounts of this compound, which is mobile in the environment and a known neurotoxin and potential carcinogen. Acrylamide completely degrades to ammonia and acrylic acid within days to months.

Given its rapid degradation, the very low concentrations in commercial PAM, and the low potential for acrylamide to be formed by PAM degradation, acrylamide was considered unlikely to be detected in groundwater in the vicinity of the TSFs where flocculent is used.

It was concluded that there is potential for PAM based flocculant, including Maxiflox 530(M), to cause impact on the environment. As such, management practices must be established to ensure regulatory compliance and to minimize risk as reasonably practicable.

20.2.2 Radioactive material management

All HM sands deposits contain traces of uranium and thorium, together with their decay products in association with some of the HM. However, the only component of mineral sands that is significantly radioactive is monazite. Monazite will be part of the HM assemblage extracted during the ore treatment process and most of it will leave the site as REEC (195 Bq/g) in containerized bulka bags.

Radiation management plans have been developed and approved for the operational phase and include a Radiation Management Plan, Radiation Transport Management Plan, and Radioactive Waste Management Plan.

Although the REEC product exhibits a relatively low level of radioactivity, an average radiation reading of 195 Bq/g subjects it to both Australian and international regulations. Australia's legislative framework relating to the safe and secure transport of radioactive material is based on international requirements published by the International Atomic Energy Agency (IAEA). The Australian Code for the Safe Transport of Radioactive Material (RPS C-2), published by the Australian Radiation Protection and Nuclear Agency (ARPANSA), adopts the IAEA's Specific Safety Requirements No. SSR-6 Regulations for the Safe Transport of Radioactive Material. The Code establishes requirements for adoption by the Commonwealth, the States and the Territories that will maintain a system for safe transport of radioactive material by road and rail, and by waterways other than those subject to the *Navigation Act 2012*. The Victorian *Radiation Act of 2005* and Radiation Regulations 2007 regulate radioactive material that emits ionizing radiation exceeding a prescribed activity or activity concentration.

Following the classification procedure in IAEA SSR-6, the REEC product will be classified for international transport as UN 2912 — Radioactive Material, Low Specific Activity (LSA-I), non-fissile or fissile-excepted which is assigned to Class 7 (Radioactive Material). As a result, each bulka bag and sealed container will be fully marked, labelled, placarded, and otherwise shipped in accordance with IAEA regulations for Class 7 transport.

The HMC product total activity is approximately 3 Bq/g, which is under the SSR-6 Class 7 Radioactive Material classification of >10 Bq/g.

The risk of radioactive dust inhalation will be minimized by:

- The moving pit concept, which allows mined out cells to be progressively backfilled and re-vegetated minimizing ore and tailings exposure to the environment
- Ore pumped as a wet slurry to the WCP avoiding potential for dust creation
- Tailings pumped as a slurry, minimizing the potential for inhalation of radioactive dust and/or transport of dust into the environment during the disposal of tailings to the external TSF and in-pit mine voids
- The CUP being contained within a completely enclosed shed
- Transport off site in bulka-bags in sealed containers.

Dedicated forwarders, carriers, and agents who are involved in radioactive transportation have the required experience to execute the shipments. In addition, these entities are required to complete specific Class 7 training and maintain emergency response plans. The radiation licence has recently been renewed and is valid until October 2025. Radiation management plans were submitted with the Radiation Management Licence renewal.

Radioactive waste management

Once operations commence, estimates of waste materials will be confirmed via specific radionuclide and/or chemical analysis to accurately characterize waste streams. Overburden from the mine pit will have only marginally greater uranium-238 and thorium-232 content (0.084 Bq/g) to topsoil from the area.

Oversize mineralized material from the MUP is likely to have low radionuclide concentrations but may have some residual HM content. The exposure risk from this material is negligible.

The fines and slime tailings from the WCP are expected to be very low in HM content, especially monazite. Therefore, the dose rate for both materials is likely to be extremely low.

There is virtually no waste generated from the CUP.

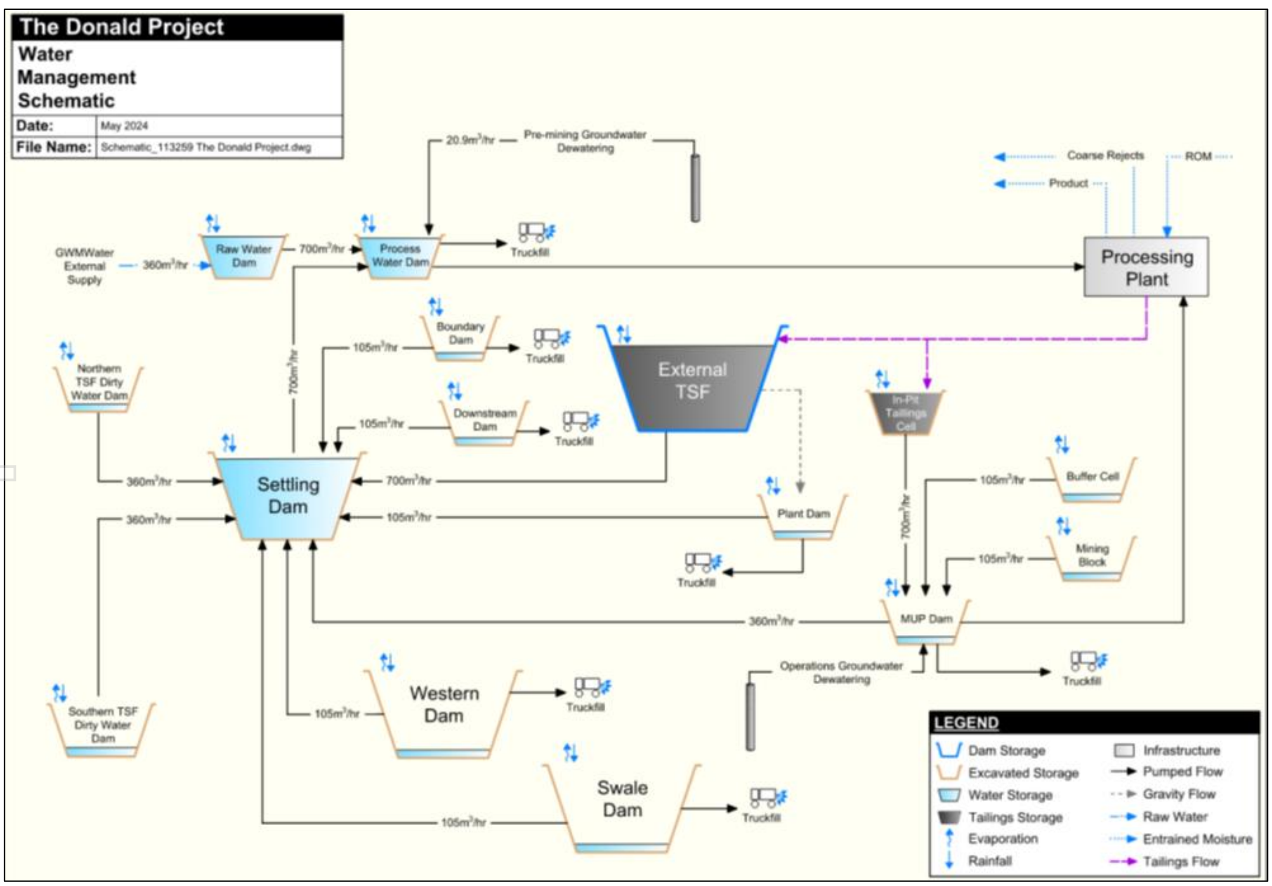
20.2.3 Hazardous materials storage

The project will have a reagent storage and dosing facility and a flocculant storage and preparation plant that allows for the safe delivery, storage and use of the essential reagents. Hazardous reagents will be stored in intermediate bulk containers and on-site storage tanks within a bunded area inside a reagent shed.

20.2.4 Water management

The surface water management system of the project involves several interlinked storages, catchments, the WCP, external TSF, in-pit TSFs and water pumping systems. A schematic of the modelled water management system is presented in Figure 20.2.

Figure 20.2 Water management system schematic



Source: DPPL, 2024

A global water balance was developed from the flowsheet and by estimating losses to tailings, evaporation and other site usage (for potable water, dust suppression, etc.). Water gain was estimated from average local area rainfall, inherent ROM moisture and water recovered from mine dewatering. Water recovery from tailings will not be available at the beginning of operations, so water storage on-site will need to be at a maximum level prior to starting operations.

The operation has been identified as a no-spill mine and the water balance model has been used to size storages and pumping infrastructure accordingly. A rainfall event design criteria of 1% annual exceedance probability (AEP) has been adopted for the design of bunds used to divert surface water flow away from the active mine cells and to ensure runoff in the mine area is contained during high rainfall events.

The management of water across the site was considered at different stages of the operation. Multiple mine schedule stage plans were proposed at various points in time to ensure the surface water management options accounted for the changes in site conditions.

The separation of the circuits for process water and clean water ensures:

- The diversion of clean surface water away from disturbed areas via diversion channels and bunds.
- The capture of contact water (from disturbed surfaces) into on-site dams to meet the no-spill commitment and use of the contact water as a priority for demands. This water is reticulated through the closed processing water circuit by being constantly recaptured and recycled.

20.2.5 Land management

Prior to mining each land parcel, a preliminary site investigation will be undertaken in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 2013 (NEPM). The investigation will be undertaken at the earliest opportunity once the relevant consent to access land parcels have been granted by the landholder.

Given the current and historical agricultural land use, the probability of contamination is relatively low.

The NEPM outlines a staged approach to the investigation and assessment of existing contamination that proceeds in stages, in proportion to the risks of environmental harm. Further work may be required pending the outcome of the site investigations.

20.2.6 Sewage treatment and waste disposal

Sewage from the process plant and mining contractor facilities is captured via local collection sumps and pumped through a reticulation system to a central 50 kL sewage storage tank and removed every two days by a licensed local waste contractor.

On-site waste disposal will be minimized where practicable, and recyclable material will be separated from landfill waste. Non-hazardous waste generated from mining operations will be stored in dedicated areas, with landfill and recyclable materials sorted and separated in dedicated areas. All waste, including recyclables will be removed by an appropriately licenced waste management contractor for off-site disposal or recycling.

All petrochemical and chemical waste, including from the on-site laboratory and process area, will be stored to the appropriate regulatory requirements and be removed by an appropriately licensed waste management contractor.

20.2.7 Noise and air quality

The mine design incorporates a reduced footprint that increases the buffer distance to receptors, reduced haul distances and truck movements, noise attenuation on equipment, full and partial enclosure of the process plant, slurry, and the active selection of the mobile MUP location to maximize separation from receptors, as well as a progressive rehabilitation strategy.

Key noise contributions will be from the mobile plant operating within the mine pit. All activities will be managed through noise control measures and the noise management strategy presented in the Noise Management Plan. The plan details receptor management requirements for specified activities during construction, operations and rehabilitation, and the time period (day, evening or night) when certain activities must be restricted to meet noise requirements. The noise management strategy includes building treatments or land acquisition and is subject to agreement with the landholder.

The main sources of emissions will be from earthworks and mining activities. Assuming all mitigation measures proposed in the Air Quality Management Plan are implemented, including reaching an agreement with two sensitive receptors (to not inhabit their properties) prior to the construction of the project, air emissions associated with the project are expected to comply with relevant criteria at all surrounding residences.

20.2.8 Carbon emissions

The Donald project is currently estimated to produce 93,815 t-CO_2e[6] per annum across Scope 1, 2 and 3 emissions for each year of Phase 1. Significant sources of emissions are expected to be diesel fuel, use of heavy mine machinery and diesel generated electricity use in the mine plant. A greenhouse gas (GHG) Management Plan has been prepared in line with the EPA Guideline for minimizing GHG emissions – 2048 (2022). The Management Plan provides plans and actions to eliminate, minimize or reduce as far as reasonably practicable the emissions of Scope 1, 2 and 3 GHG emissions to the atmosphere.

Emissions will be reduced where practicable by utilizing energy and fuel efficiency measures and through the development of an energy efficiency plan. The plan will identify energy efficiency targets and measures to achieve these targets with consideration to Victoria's Climate Change Framework, which sets out the State's long-term plan to achieve net zero emissions by 2050.

20.3 Approvals and permitting

The following local, state and federal government legislation is applicable to the development of the Phase 1 project within the Work Plan area.

20.3.1 Local

The Work Plan area within MIN5532 occupies land managed by Yarriambiack Shire Council, which is classified as "Farming Zone" under the council's planning scheme. The project is exempt from a planning permit to use or develop land for mining under the local planning scheme on account that an EES and assessment has been prepared.

20.3.2 State

Environmental Effects Act 1978

The *Environmental Effects Act 1978* (EE Act) applies to works that the Victorian Minister for Planning determines are capable of having a significant effect on the environment.

In 2005, the project was referred to the Minister for Planning requesting a decision on whether an EES was required. The Minister determined that an EES was required to assess the environmental effects of the project. An EES was prepared and publicly exhibited in January 2008. In November 2008, the Minster responded to the overall recommendation of the inquiry recommending that the project be approved under the relevant legislation, subject to the conditions.

Since the approval of the EES in 2008, there have been amendments to regulations governing mining and environmental protection, and these, in addition to updates to the project design have resulted in certain

[6] Tonnes carbon dioxide equivalent.

impact assessments needing to be updated. A new EES was determined to not be required as the changes were not considered significant.

Mineral Resources (Sustainable Development) Act 1990

Under the MRSD Act, authorization of mining work is granted by a Work Plan approved by the Head of ERR within DEECA. The Work Plan was submitted to ERR, including a rehabilitation plan, risk management plan and community engagement plan. The updated Work Plan (V3) was submitted to ERR on 18 October 2024 and was approved in June 2025. The following must also be in place prior to commencing on-site plant construction works:

- A rehabilitation bond of $27 million covering site activities up until process plant commissioning
- Public liability insurance (reviewing existing cover; will likely require increased coverage for additional activities in 2025)
- Relevant landholder consent/compensation agreements (obtained for all existing work plans; underway for low impact exploration activities)
- All other necessary consents or approvals under the MRSD Act or any other relevant Act.

The MRSD Act exempts the licensee from obtaining certain other permits (such as planning approvals or mining works within land covered by the mining licence) if an EES for the work has been prepared and assessed in accordance with the EE Act.

Environment Protection Act 2017

The *Environment Protection Act 2017* (EP Act) and subsequent amendment in 2018 comprise the principal Victorian statutes dealing with the protection of the environment from pollution and the management of waste and is administered by the EPA Victoria.

The general environmental duty referred to in Section 25 of the EP Act is a continuing duty. It requires that a "*person who is engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste must minimise those risks, so far as reasonably practicable*."

Water Act 1989

The *Water Act 1989* defines water entitlements and establishes the mechanisms for managing Victoria's water resources.

All groundwater pumped out of the aquifer (dewatering) will be stored and used on site. A Groundwater Extraction Licence is required to remove this groundwater, which needs to be applied for under Section 51 of the Water Act.

The project also requires a water supply of up to 3 GL/a for processing that will be drawn from the GWMWater Headworks Water allowance of 6.975 GL/a currently stored in Taylors Lake, outside of Horsham.

Flora and Fauna Guarantee Act 1988

The FFG Act is the primary legislation dealing with biodiversity conservation and sustainable use of native flora and fauna in Victoria.

As the project has an assessed EES and approval of the Work Plan in accordance with the MRSD Act, no further permit is required to "take" (kill, injure, disturb or collect) listed and/or protected flora species or listed vegetation communities within the Work Plan area.

Radiation Act 2005

The principal framework for the regulation of radiation protection of people and the environment is stipulated in the Victorian *Radiation Act 2005* and the Radiation Regulations 2017 outline the requirements. The legislation defines the levels of prescribed radioactive substances for their application and contain provisions relating to the limits on occupational and public exposures arising from the mining and processing operations. The Radiation Act is administered by a radiation section within the Department of Health.

Under Regulation 6, the prescribed activity concentration for natural Uranium (U-nat) + natural Thorium (Th-nat) combined, is 1 Bq/g. Based on the estimated activity concentrations, the final products including HMC and REEC, are classified as prescribed radioactive material under Regulation 6, and therefore the Radiation Act is applicable. The project is deemed a radiation practice and has been issued a Radiation Act Management Licence (Licence No. 300066740) to cover the radiation safety related aspects of project operations in accordance with the provisions of the regulations. As is standard, the licence was issued with conditions imposed by the Department of Health.

Aboriginal Heritage Act 2006

The *Aboriginal Heritage Act 2006* works primarily to provide for the protection of Aboriginal cultural heritage in Victoria. The Act allows different organizations, groups and bodies to connect and better enforce and preserve policies regarding Aboriginal heritage. Under Section 49 of the Act, an Aboriginal CHMP must be prepared for any project for which an EES has been required.

DPPL has established and maintains a good working relationship with the Barengi Gadjin Land Council (BGLC) representing Traditional Owner custodians of the lands encompassing MIN5532. The CHMP for the project, approved in 2014, applies to activities conducted in the Work Plan area and was developed with the involvement of the BGLC. DPPL will seek a further CHMP for the area south of the existing Work Plan area.

Heritage Act 2017

The purpose of the *Heritage Act 2017* is to provide for the protection and conservation of the cultural heritage of Victoria. The Act creates a framework to identify the most important non-Aboriginal heritage in Victoria and regulates changes to those places. The Act also creates offences and other enforcement measures to protect and conserve heritage.

20.3.3 Federal

Native Title Act 1993

The Native Title Act 1993 establishes a framework for the protection and recognition of Native Title. The Act gives Indigenous Australians who hold Native Title rights and interests or who have made a Native Title claim the right to be consulted and, in some cases, to participate in decisions about activities proposed to be undertaken on the land.

Based on the 2005 federal consent determination (Federal Court File No. VID6002/1998), there are no Native Title rights or interests overlapping the project area.

Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act provides a legal framework to protect and manage nationally and internationally significant flora, fauna, ecological communities and heritage places defined in the Act (typically referred to as “Matters of National Environmental Significance” or MNES).

Project approval under the EPBC Act was received in 2009 with the period of effect of the approval extended to 2042. A key matter in the approval conditions is the offsets required in relation to the endangered Buloke woodlands that will be impacted by the project (refer to Item 20.1.1). DPPL is working with the Department of Climate Change, Energy, the Environment and Water to address the conditions.

20.3.4 Status of approvals and permitting

Following the Ministerial assessment of the 2008 EES, the following permits and licences for the project to proceed have been obtained (Table 20.1).

Table 20.1 Donald Project approvals and licences obtained

Year	Approval/Licence	Expiry
2009	EPBC Act approval (including variations)	2042
2010	MIN 5532	2030
2011	Water supply rights (6.975 GL/a bulk water entitlement from GWMWater) with option to extend	2039
2014	CHMP - Management plan No. 11572 approved for Work Plan area	NA
2015	Radiation license No. 300066740	2026
2016	HMC export licence – requires renewal	Expired (see Table 20.2)
2024	De-listing (2) and protection (1) of heritage sites from Heritage Inventory	
2025	Developer works agreement with GWMWater for water pipeline and supply	NA
2025	Instrument of authority to possess and sell uranium and thorium	2030
2025	EPA (A18) permit/s to remove, use and return tailings to in-pit tailings storage	2030
2025	Phase 1A Work Plan approval (including variation for onsite power generation) from ERR	2030

Source: DPPL, 2024

Approvals required to be issued prior to the commencement of construction and operations are summarized in Table 20.2.

Table 20.2 Donald Project approvals and licences pending

Approval/Licence	Status
Planning and approvals for off-MIN infrastructure	Vegetation clearing permits and other permits for road discontinuance, and road upgrades from Shire Council.
Water licensing	Consent to connect to take water through the GWMWater, groundwater extraction and surface water capture.
Approval of Transport Management Plan	Submitted to transport working group and ERR on 18 October 2024; awaiting approval.
EPA development licence or permitting for sewage treatment	Wastewater treatment plant has been deferred and is not urgently required.
Renewal of export licence	Based on the current understanding of uranium and thorium concentrations in HMC, an export licence is not required. Export licence for REEC is in progress.

Source: Adapted from Astron, 2025

20.4 Social and community related requirements

20.4.1 Historic heritage

Three non-indigenous historic heritage sites are present in the Work Plan area (Figure 20.3). Two of the sites that will be disturbed by mining activities are of low historical significance and have recently been de-listed. One site present in the Work Plan area is of moderate historical significance and will be preserved by DPPL.

20.4.2 Cultural heritage

The CHMP for the project was developed with the integral involvement of the BGLC. DPPL continues to engage with the BGLC to ensure that cultural heritage is appropriately protected.

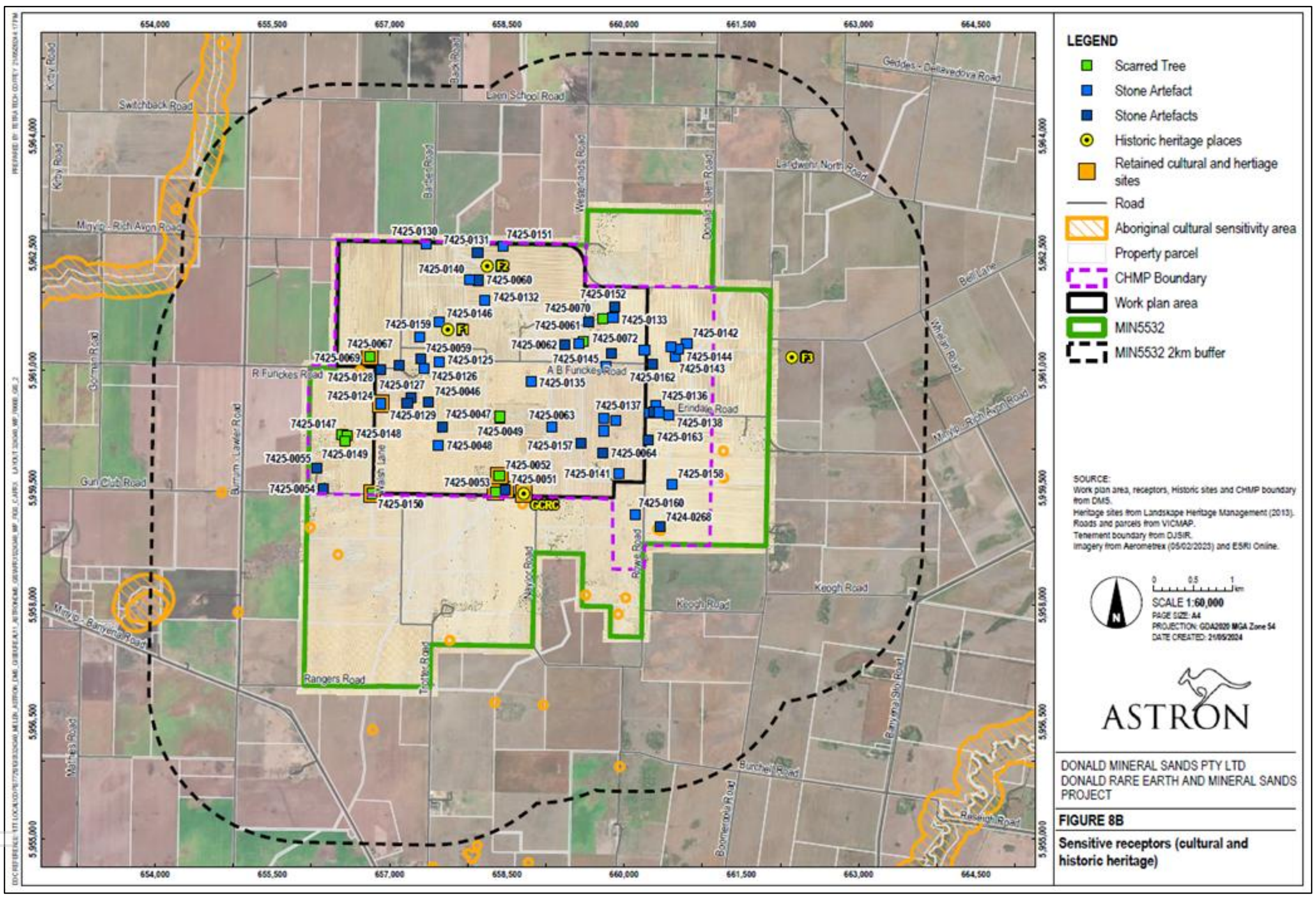
Sixty-six Aboriginal cultural heritage places were recorded in the activity area. DPPL has designed the mine to avoid disturbance to nine sites. Permanent protective fences will be erected around each of these sites prior to the commencement of works to ensure that activities do not inadvertently impinge on them.

Three trees will be recovered and stored prior to the commencement of works. This work will be supervised by a Cultural Heritage Advisor with participation of the BGLC.

Several Aboriginal cultural heritage places, in the form of mainly angular fragments found either solitarily or in scatters, will be supervised by a Cultural Heritage Advisor with participation of the BGLC prior to disturbance to avoid their destruction.

The cultural sensitivity areas in the vicinity of the Work Plan and cultural and heritage sites to be retained and protected within the Work Plan area are shown in Figure 20.3.

Figure 20.3 Historic and cultural heritage sites



Source: DPPL, 2024

20.4.3 Community

The region is a leading agricultural region in Victoria, with a strong rural community identity. Despite experiencing long-term population decline since the 1960s, the last decade has seen modest population growth, years of robust agricultural production, and the emergence of new and diverse sectors in tourism, mining, and renewable energies. At the same time, there are some key barriers to growth, the most prominent of which appears to be the availability of housing in the community. A 2024 regional skills and housing study confirmed that labour attraction will remain constrained without significant new housing stock.

Within approximately 50 km of the project are the city of Horsham, the towns of St Arnaud, Warracknabeal, Donald, Rupanyup, Murtoa and Minyip, and numerous smaller areas in between. The local government areas within this area are the Northern Grampians, Yarriambiack, and Buloke.

Community engagement for the project commenced in 2005 during the EES process and has continued since that time. During the finalization of the feasibility study (April 2023) and development of the Work Plan, key stakeholder issues raised were related to the housing market, unemployment, rehabilitation and land access. The approved Community Engagement Plan (CEP) covers community engagement matters for all activities under the Work Plan including rehabilitation. A 2017 Memorandum of Understanding (updated in 2022) with the Yarriambiack Shire Council provides for the parties to work collaboratively to maximise economic and social outcomes from the development and operation of the project, and to build relationships to support the project. A shortage of housing stock has been highlighted as a particular challenge, which DPPL has indicated it will support pending more detailed discussions. This includes participation in Yarriambiack Shire's Housing Working Group and assessment of worker accommodation models.

In June 2022, DPPL established the Community Reference Group. Membership comprises 28 representatives of local community, business, agency stakeholders and DPPL. The Community Reference Group aims to facilitate information exchange from DPPL to stakeholders and to provide an avenue for community members to raise project-related issues. The Community Reference Group operates in an advisory capacity and does not hold regulatory authority.

An Environmental Review Committee (ERC) will be established upon Work Plan approval by the ERR and prior to the commencement of construction to review the project's environmental performance. The ERC will meet on a biannual basis to discuss the environmental and social performance of the mine.

The community members primarily affected by noise and air quality emissions are landholders and residents near MIN5532. To maximize the buffer between mining activities and nearby residents, DPPL has gradually increased its landholdings in proximity to and within the Work Plan area. DPPL has engaged with every receptor identified in the Air Quality and Noise and Vibration Management Plans. Agreements have been executed for all except two, which are expected to be finalized prior to construction. The agreements are unique to each receptor.

Engagement with the community indicates that returning land to agricultural uses, with additional native revegetation, is the preferred option at closure. The main concern raised by community members is whether the rehabilitated land would retain its pre-mining productivity, with several farmers indicating that they would be interested in returning to farming on rehabilitated land. DPPL has shared results of rehabilitation of the test pit excavated in 2005 and rehabilitated with crop cover in 2017. A 2022 inspection showed positive results with no significant difference in yield between the rehabilitated pit and the rest of the paddock.

Public meetings in the past (2022) saw community members inquire about the project's water use. Most of the agricultural community had previously struggled through the Millennium Drought (1997–2010) and more recent "flash drought" periods a decade ago. During drier years, the project's water use will likely become a greater concern within the community. DPPL's engagement to date on water use issues has been through the Community Reference Group and directly with individual landowners. These pre-existing relationships will inform ongoing engagement on water use.

Since the EES, a potential impact that has become more prominent is that of competing with existing employers in the job market. DPPL is cognisant of not "poaching" workers from other employers or to be seen as doing so. DPPL is engaging on preferred approaches for recruitment and procurement with local government, recruitment service providers, training providers, employers, statutory authorities and the general community. In January 2024, DPPL commissioned a regional workforce skills study to assess labour availability by job type, skill level and location. The company is also participating in multilateral forums with Regional Development Victoria and Wimmera Southern Mallee Development to coordinate projected workforce demand across industries. Partnerships with local training providers have been expanded to support skill development pathways, including initiatives under the Memorandum of Understanding with Yarriambiack Shire Council. Community forums and contractor portals are being used to provide transparent access to employment and procurement opportunities.

While no formal agreements are in place for local procurement or hiring, DPPL will engage with local businesses where practicable. Recent examples include the appointment of Unyte Southern Pty Ltd for the process plant earthworks.

20.5 Closure requirements and costs

The 2024 Rehabilitation Plan was prepared in accordance with the MRSD Act and associated MRSD Regulations. The overall mine rehabilitation concept is, as far as reasonably practicable, to restore the land disturbed by mining and mineral processing to an achievable and sustainable land use capability, suitable for both agricultural land and native vegetation. DPPL has commenced an ongoing program of soil sampling to understand the physical and chemical properties of the soil on the mine site and baseline topography to achieve the required results in returning the land to productive agriculture.

Rehabilitation of the operations will be undertaken progressively through the LOM, with the external TSF and most of the in-pit TSF cells being rehabilitated during operations. At closure, the mine site including the process plant and supporting infrastructure will be decommissioned except for the raw water pipeline and raw water storage dam, which will be retained. Site entry access points will also remain.

Rehabilitation of the mine will be subject to ongoing monitoring until the following objectives are achieved:

- Landforms that are safe to people and animals
- Landforms that are structurally, geotechnically and hydro-geologically stable
- Landforms and an environment that are non-polluting to air, land, water and biological receptors
- Alignment with the principles of sustainable development.

The Rehabilitation Plan will be updated within two years of project commissioning based on the rehabilitation milestones and will be reviewed annually thereafter during operations. The rehabilitation bond calculation will be reviewed and updated at appropriate stages of the project. Internal reviews of the Rehabilitation Plan will be supported by a review of estimated closure and rehabilitation costs.

A rehabilitation bond of $27 million to cover the liability up to process plant commissioning must be in place prior to commencing site works. Discussions with the ERR bonds team are ongoing regarding the bond calculation approach for the subsequent stages.

DPPL is in the process of determining the closure cost estimate and required bond. Once determined, this will be submitted for approval with ERR. The financial model includes a closure cost of $30 million.

20.6 Qualified Person's opinion on the adequacy of current plans

The Qualified Person is of the opinion that the current plans for environmental compliance, permitting, and community engagement are adequate to address identified issues, with strategies in place to meet regulatory requirements and respond to the concerns of local individuals and groups.

21 Capital and operating costs

The LOM capital cost (capex) and operating cost (opex) estimates were developed to an AACE Class 2 level of accuracy (typically -15% to +15%). This level is consistent with a feasibility study level cost estimate. The capital cost estimate has been developed on a real Q4-2025 basis with no forward escalation included and is supported by a high level of engineering definition and tendered pricing.

The estimate has been built-up from the following engineered, designed and tendered inputs:

- Process plant – Sedgman Total Cost Estimate developed through Early Contractor Involvement (ECI), incorporating detailed engineering, vendor quotations and market pricing.
- External TSF – competitively tendered as part of the site-wide earthworks package based on detailed design developed by ATC Williams and GEOAnalytica.
- Mining – mobilization and site establishment costs based on competitively tendered pricing; ongoing mining operations are treated as operating costs.
- Earthworks – engineered and detail designed by Agilitus to IFC level and competitively tendered for both process plant area and site-wide bulk earthworks.
- Road upgrades for transport and logistics route – based on functional and detailed designs for road and intersection upgrades priced by regional contractors.
- Dewatering, tailings deposition and decant return systems – based on detailed engineering and vendor pricing, with operating labour costs included in operating costs.
- Ultra-high frequency (UHF) radio communications design and system by Agilitus.
- Telecommunications and IT infrastructure design by Agilitus.
- Owner's costs – including project management, engineering, approvals, environmental, health and safety, environmental, social and governance (ESG), operations readiness and commissioning support developed by the Donald Operations Readiness team based on typical labour rates.
- Land acquisitions based on agreed contract values and current market prices.

Exclusion from the capital cost estimate include:

- Goods and services tax (GST)
- Import duties
- Forex risk contingency
- Escalation beyond the estimate base date
- Contingency in excess of the P50 contingency
- Residual value of temporary equipment and facilities
- Cost of pre-FID study, engineering, legal, land purchases, preproduction drilling/assaying and approvals, including any further environmental studies and any other costs incurred prior to a positive FID
- JV company overheads
- Any cost associated with transportation and logistics
- Operating costs beyond the start of ore commissioning
- Work Plan approval costs for the area within MIN5532 but outside the Work Plan area
- Pre-FID committed funds for enabling works such as the water supply infrastructure installation completed December 2025

- Procurement of Mineral Technologies equipment paid as part of pre-FID costs (i.e. part payment for MG12 Spirals).

21.1 Capital costs

Pre-production capital costs (2026 to 2028) are itemized in Table 21.1 and summarized by activity in Table 21.2 to Table 21.7.

Sustaining capital costs are listed in Table 21.8.

The estimate is in Australian dollars, with the following foreign exchange rates applied where applicable:

- Euro: $1.77
- South African Rand (ZAR): $0.90
- US$: $1.54
- China CNY: $0.21.

The estimate is predominantly based on preliminary design or higher levels of definition, with IFC and detailed design applied to major infrastructure and process plant scopes. Most costs are supported by market or tendered pricing, consistent with an AACE Class 2 estimate. The total preproduction capital cost is $440.02 million, inclusive of a contingency allowance of $33.86 million.

Table 21.1 Pre-production capital cost estimate

Description	Unit	Cost
Project development	$ M	114.60
Process plant	$ M	188.44
On-site infrastructure	$ M	77.41
Off-site infrastructure	$ M	9.48
Product transport and logistics	$ M	1.85
Mining	$ M	48.24
Total	**$ M**	**440.02**

Source: DPPL

21.1.1 Process and infrastructure

Pre-production capital costs are listed in Table 21.2 to Table 21.6.

Table 21.2 Pre-production project development capital cost estimate

Description	Unit	Cost
On-mine permits and approvals	$ M	14.16
Off-mine permits and approvals	$ M	0.05
Financing	$ M	0.74
Overheads	$ M	17.37
Project execution	$ M	28.06
Operational readiness	$ M	20.36
Contingency	$ M	33.86
Total	**$ M**	**114.60**

Source: DPPL

Table 21.3 Pre-production process plant capital cost estimate

Description	Unit	Cost
Wet concentration	$ M	55.43
CUP	$ M	18.32
Product handling, storage	$ M	17.15
Processing services, utilities and infrastructure	$ M	10.76
Reagents building and infrastructure	$ M	6.66
Non-process infrastructure	$ M	0.32
Process plant contractors indirects	$ M	44.45
Allowances and fees	$ M	21.08
Free issue equipment	$ M	14.27
Total	**$ M**	**188.44**

Source: DPPL

Table 21.4 Pre-production on-site infrastructure capital cost estimate

Description	Unit	Cost
Process plant earthworks	$ M	12.65
Site-wide earthworks	$ M	29.34
External TSF	$ M	5.89
Power distribution	$ M	8.23
Communications	$ M	2.96
Non-process infrastructure	$ M	9.14
Buildings	$ M	7.32
Off-site facility design	$ M	1.86
Total	**$ M**	**77.41**

Source: DPPL

Table 21.5 Pre-production off-site infrastructure capital cost estimate

Description	Unit	Cost
Access road upgrade	$ M	8.81
Water supply infrastructure	$ M	0.27
Mobile services upgrade	$ M	0.40
Total	**$ M**	**9.48**

Source: DPPL

Table 21.6 Pre-production transport and logistics capital cost estimate

Description	Unit	Cost
Product transport and logistics	$ M	1.85
Total	**$ M**	**1.85**

Source: DPPL

21.1.2 Process plant

The process plant capital cost estimate has been developed by Sedgman to an AACE Class 2 level of accuracy, with an expected accuracy range of –15% to +15%. The estimate is presented in Australian dollars on a real cost basis with a base date of 28 November 2025 and is not adjusted for escalation beyond the base date. Contingency has been applied on a line-by-line basis to reflect residual technical and execution risk and does not include delay-related escalation.

The process plant will be delivered under an Engineer, Procure and Construct (EPC) target cost estimate contracting model following an ECI phase. The target cost estimate structure is an incentivized, reimbursable actual-cost arrangement with contractor overheads and margin established as a defined fee and incorporating pain/gain share mechanisms and performance guarantees.

The capital estimate has been developed using a high level of engineering definition. More than 98% of the process plant scope is at preliminary design stage or higher, supported by detailed material take-offs, vendor quotations and market pricing. Process plant earthworks have been developed to Issued-for-Construction (IFC) level and contract executed for the construction of the earthworks, while site-wide bulk earthworks have been tendered separately.

Process scope refinements incorporated into the estimate include upgrades to the concentrate handling and screening configuration and the inclusion of a wet concentrator plant fire deluge system identified through the hazard and value optimization process.

21.1.3 Quantity development

Mechanical equipment quantities were developed from project-specific process flow diagrams (PFDs), piping and instrumentation diagrams (P&IDs), design criteria and the consolidated equipment list prepared for the project. Quantities for minor equipment items were derived from Sedgman project-specific estimating data and validated against similar facilities.

Quantities and cost estimates were developed using the EPC contractor's deterministic estimating system (ESy) and compiled against the project work breakdown structure at Levels 2 to 4, consistent with AACE Class 2 estimating practices.

Concrete quantities were derived from material take-offs based on project-specific general arrangement drawings, equipment foundation plans and the 3D plant model. These quantities were supported by detailed layouts for major foundations, including thickeners and large process equipment.

Structural steel quantities were developed from the project 3D model and detailed layouts progressed through value optimization. For the WCP and tailings thickener structures, material take-offs were supported by vendor-supplied information. Structural steel quantities for the CUP, HMC, reagent handling and REEC facilities were developed from the project 3D model and detailed engineering layouts categorized by material type (including primary steel, secondary steel, grating and handrails).

Mechanical bulk materials, including platework and conveyor transfer chutes, were quantified using project-specific general arrangement drawings, detailed layouts and the 3D model.

Piping quantities were developed from project-specific P&IDs and the 3D model for major process and service piping systems.

Electrical and instrumentation quantities were developed using detailed equipment lists, P&IDs, single-line diagrams, cable schedules, general arrangement drawings and the 3D model, reflecting a preliminary to detailed level of design maturity appropriate for a Class 2 estimate.

Earthworks quantities for the process plant area were developed from detailed digital terrain models and survey data and progressed to IFC level. Site-wide bulk earthworks quantities were estimated separately and tendered outside the EPC process plant scope.

Estimated quantities across all disciplines were subject to benchmarking against comparable projects and Sedgman reference data. A discipline-based quantity growth allowance was applied in accordance with the EPC contractor's estimating methodology and the level of engineering definition, consistent with the AACE Class 2 estimate classification.

21.1.4 Equipment and bulk commodity pricing

Pricing for major equipment items was developed using vendor quotations obtained through the ECI process and supported by market pricing where firm quotations were not available. Competitive vendor pricing was obtained where practicable, with specialized or proprietary equipment priced on a sole-source basis where required by the process design.

Pricing for minor equipment items and bulk commodities was derived from Sedgman's project-specific estimating databases and validated against current market rates and recent comparable projects.

Request for quotation (RFQ) packages were issued to equipment suppliers and vendors and included datasheets, scopes of work, specifications and commercial terms. Quotations were subject to technical and commercial evaluation prior to incorporation into the capital estimate. Sole-specified mineral separation equipment, including spirals, launders, distributors and gravity separation equipment, was priced in collaboration with Mineral Technologies based on vendor budget pricing and prior supply history.

Bulk material pricing for structural steel, platework, piping and associated fabrication was based on vendor quotations, subcontractor pricing and market rates appropriate to the assumed fabrication locations and execution strategy. Structural steel pricing includes supply, fabrication, surface treatment and associated ancillary items such as packers, shims, splice plates and fasteners.

Electrical equipment pricing, including switch rooms and switchboards, was based on packaged supply from reputable vendors using budget quotations or market pricing consistent with the level of design maturity.

Where vendor quotations included delivery to site, the quoted logistics costs were included directly in the capital estimate. Where delivery was excluded, freight and logistics costs were estimated separately based on the applicable Incoterms, equipment dimensions and weights, transport mode and haul distances, using market-based logistics pricing.

The capital estimate includes allowances for vendor commissioning support through wet and sequence testing (C4), vendor attendance during commissioning and initial consumables and first fills (including oils and lubricants), consistent with the EPC scope definition.

21.1.5 Installation

Installation costs and construction man-hours were developed using a first principles estimating approach consistent with the EPC contractor's deterministic estimating methodology and AACE Class 2 requirements. Direct installation man-hours were derived using Sedgman project-specific installation norms applied to the quantities developed for each discipline and equipment type.

Site labour productivity factors were applied based on Sedgman historical performance data from comparable projects and adjusted to reflect the anticipated site conditions, execution strategy and construction schedule for the project.

Electrical and instrumentation installation man-hours were estimated using material take-offs derived from equipment lists, cable schedules, instrument lists, single-line diagrams and the 3D model, consistent with the level of engineering definition.

Structural steel and platework installation costs were developed from first principles based on material take-off quantities and standard installation rates, considering the installation sequence and access constraints identified in the construction methodology.

Construction plant, equipment and temporary facilities including cranes, vehicles, tools and elevated work platforms were included within indirect construction costs in accordance with the EPC contractor's estimating structure.

Indirect costs were estimated based on the services, consumables, temporary facilities and site support infrastructure required to execute the works within the planned construction schedule.

Supervision requirements were estimated using standard supervision-to-labour ratios appropriate to the scope and schedule, while project management costs were developed on a level-of-effort basis aligned with the project execution plan and construction duration, covering both site-based and off-site roles.

21.1.6 Infrastructure capex

Infrastructure capex has been estimated based on engineered scope definitions, completed enabling works, competitively tendered pricing and market-based estimates.

Capital costs for off-site infrastructure, including public road upgrades, access road works and intersection upgrades along the transport and logistics route, were developed from functional and detailed design scopes and priced using market-based estimates and regional contractor pricing.

Mine dewatering system capital costs were developed from detailed engineering scope and vendor pricing for bore field development, pumping infrastructure and associated controls, with operating labour and power costs treated as operating expenditure.

Site infrastructure capital costs include non-process buildings and facilities such as offices, workshops, warehouses, laboratories, site utilities, communications and power distribution infrastructure, developed from detailed layouts and market pricing consistent with the level of engineering definition.

Indirect capital costs include owner's costs and allowances necessary to deliver the project and bring the facilities to an operational state, including:

- Owner's project management team and external project management support
- Engineering, permitting and approvals
- Operational readiness, start-up and commissioning support
- Land acquisition costs based on executed contracts and market values
- Landowner compensation associated with infrastructure corridors
- Project insurance during construction
- Temporary construction facilities and services
- Freight associated with equipment supply where not included in vendor pricing
- Spare parts and commissioning spares
- Initial consumables, first fills, oils and lubricants.

Uncertainty associated with infrastructure scope and execution risk is addressed through line-by-line contingency applied in accordance with AACE Class 2 estimating practices.

21.1.7 Mining pre-production costs

Mining pre-production capital costs include contractor mobilization, site establishment and demobilization, together with capital costs associated with the MUP. These costs are capitalized in accordance with the mining execution strategy adopted for the project, with all ongoing mining and ore extraction activities treated as operating expenditure. Mining and MUP capital costs are based on competitively tendered pricing and vendor quotations, supported by schedules and quantities developed for the initial operating period within the approved Work Plan area. Earthworks associated with permanent infrastructure, including the process plant, TSFs and site-wide bulk earthworks, are included within infrastructure capital costs rather than mining pre-production costs.

Mining pre-production costs are listed in Table 21.7.

Table 21.7 Pre-production mining capital cost estimate

Description	Unit	Cost
Mining	$ M	2.05
MUP	$ M	44.73
Dewatering system	$ M	1.26
Test pits	$ M	0.20
Total	**$ M**	**48.24**

Source: DPPL

21.2 Sustaining capital costs

Sustaining capital costs (Table 21.8) have been estimated based on equipment life expectancies defined by original equipment manufacturers and design engineers and are applied at scheduled replacement or refurbishment intervals over the LOM. Sustaining capital costs are additional to routine maintenance costs included in operating expenditure.

Table 21.8 LOM sustaining capital costs

Description	Unit	Cost
Project development	$M	62.79
Process plant	$M	36.14
On-site infrastructure	$M	21.00
Off-site infrastructure	$M	17.36
Product transport and logistics	$M	0.18
Mining	$M	18.02
Total	**$M**	**155.49**

Source: DPPL

Sustaining capital includes allowances averaging about $5.0 million per annum ($0.68/ore t) comprising:

- MUP:
  - Relocation and re-establishment associated with pit progression
  - Replacement or refurbishment of MUP equipment based on service life.
- Process plant sustaining capital:
  - Scheduled replacement or refurbishment of major mechanical equipment
  - Electrical and instrumentation renewals at end-of-life
  - Structural, piping and ancillary equipment refurbishment where required.
- Tailings and water management infrastructure:
  - Sustaining works to maintain tailings deposition and water return systems
  - Routine tailings bund construction is treated as an operating cost.
- Mobile and site infrastructure:
  - Replacement of mobile equipment and site infrastructure not covered by routine maintenance
  - Refurbishment of non-process infrastructure required to support ongoing operations.
- Land access and property:
  - Future land acquisitions required to support LOM mining progression.
- Other LOM sustaining allowances:
  - Capitalized replacements driven by asset life rather than annual maintenance

- Sustaining works required to maintain operability, safety and regulatory compliance.

21.3 Operating costs

The operating cost estimate has been developed using a first principles cost build-up in Australian dollars and is supported by tendered pricing, vendor quotations and market-based rates. Key inputs to the estimate include outsourced mining operations based on a competitive mining contractor tender, processing plant operating and maintenance requirements developed by the Donald Project team for the MUP, WCP and CUP, and competitively tendered transport and logistics contracts for product haulage, port handling and shipping.

Operating cost assumptions are supported by consumption rates, unit costs and labour rates, with benchmarking undertaken against comparable Australian mineral sands operations where appropriate. The operating cost estimate is presented in real Q4 2025 terms and excludes contingency. The diesel fuel pricing used is $1.08/L.

The base case for power provision has been estimated using a Power Purchase Agreement (PPA) with an independent power provider (IPP) for a Microgrid Hybrid Power Station. The Microgrid Power Station contains both solar and BESS facilities, which supplements diesel power generation with renewable power generation. The annual electricity demand for the project has been determined by developing a site-wide load profile, including planned minor and major shutdowns, based on the calculated maximum demand of each plant and operating area across the project. The average annual power operating cost for the process plant is about $8.9 million with a unit processing power cost of about $1.19/t ore processed. The sitewide cost of power is $15.6 million or $2.09/t ore processed.

21.3.1 Mining

Mining operations will be undertaken under an outsourced mining contract, with an initial contract term of five years. The mining operating cost estimate is based on a competitive tender process undertaken to obtain binding offers for the initial five-year mining period.

Mining costs are derived from the preferred contractor's tendered schedule of fixed and variable rates applied to the LOM material movement schedule. Fixed rates cover contractor management, site establishment, mobilization and supporting infrastructure, while variable rates apply to surface mining activities including topsoil and overburden removal, ore mining and haulage, ore blending and loading to the MUP, oversize management, in-pit tailings wall construction, rehabilitation and associated support activities.

Allowances for dayworks and ripping have been included based on the tendered rates and quantities assessed during post-tender review.

LOM mining costs have been developed using tendered rates for the initial five-year contract period, with average rates applied beyond the initial term. Contractor mobilization, demobilization and site establishment costs are capitalized and incurred at the commencement and completion of mining operations, with all other mining costs treated as operating expenditure.

Mining operating costs are in real terms and are calculated on a $/t basis consistent with the production schedule.

Mining costs incurred outside the contractor relate to a range of activities required to support the ongoing operation of the mine, including specialist consulting services for mine planning, Mineral Resource and Mineral Reserve updates, groundwater modelling and geotechnical support, together with mining-related software licensing. The costs also include pre-mine bore field dewatering and mine water management activities, technical services functions such as grade control, survey and specialist engineering support, and the progressive repositioning and extension of the tailings discharge and decant water return systems in line with the mining sequence, and MUP relocations.

The LOM mining operating cost estimate is summarized in Table 21.9.

Table 21.9 Mining LOM operating cost estimate

Activity	Unit	Cost
Site preparation	$ M	8.80
Mining – overburden	$ M	1,023.82
Mining – ore	$ M	498.39
Dayworks	$ M	128.02
Water	$ M	30.93
Diesel	$ M	125.96
Management	$M	556.86
Oversize	$ M	32.98
Site labour	$ M	105.79
Electricity	$ M	248.42
Maintenance	$ M	48.82
Services	$ M	148.76
Total	**$ M**	**2,957.54**

Source: DPPL

21.3.2 Processing

Direct processing operating costs have been estimated using a first principles cost build-up based on the proposed processing facilities and operating strategy. Processing labour requirements were developed from the approved operations organization structure and regional labour rates, including statutory on-costs, and reflect the staffing required to operate the MUP, WCP and CUP on a continuous operating basis.

Maintenance costs were developed from equipment lists and maintenance task schedules and include routine and shutdown maintenance labour, materials and contractor support. Processing operating costs also include site health and safety, ESG functions, and G&A costs necessary to sustain ongoing operations.

Processing consumables were estimated using design consumption rates and budget pricing for reagents, flocculants, utilities and raw water supply. Mobile equipment operating costs were estimated based on anticipated utilization, with lease, maintenance and fuel costs derived from vendor information and OEM data where applicable.

LOM processing operating cost estimate is summarized in Table 21.10.

Table 21.10 LOM processing operating cost estimate

Activity	Unit	Cost
Site labour	$ M	222.39
Electricity	$ M	351.76
Maintenance	$ M	210.34
Consumables	$ M	488.23
Mobile equipment	$ M	47.26
Total	**$ M**	**1,319.98**

Source: DPPL

21.3.3 Transport and logistics

HMC transport and logistics cost include:

- Half-height containers
- Operations at the mine
- Road transport of full and empty containers to and from the WIFT at Dooen
- Operations at the WIFT
- Rail haulage to the Port of Portland
- Operations at the Port of Portland
- Off-shore port charges
- Vessel chartering and shipping charges to Zhanjiang, China by 38,000 DWT bulk vessel
- Marine insurance
- HMC transport costs on an FOB China basis
- Consignment documentation.

REEC transport and logistics costs include:

- Operations at the mine
- Road transport of containers to WIFT at Dooen for intermodal transfer
- Operations at the Port of Adelaide
- Off-shore port charges
- Container booking shipping charges to the Port of Seattle, USA by container vessel
- Marine insurance
- Import inspections, customs and clearance duties at USA
- Consignment documentation.

The LOM transport and logistics operating cost estimate is summarized in Table 21.11.

Table 21.11 Concentrate transport and logistics cost estimate

Activity	Unit	Cost
Road transport	$ M	456.73
REEC freight	$ M	501.87
Total	**$ M**	**958.59**

Source: DPPL

21.3.4 General and administration

Site LOM G&A costs are summarized in Table 21.12.

Table 21.12 Site LOM G&A cost estimate

Activity	Unit	Cost
Management fee	$ M	42.08
Site labour	$ M	191.66
Electricity	$ M	17.82
Maintenance	$ M	25.39
HSE	$ M	20.76
ESG	$ M	48.90
Other G&A	$ M	209.02
Post-load commissioning support	$ M	1.51
Total	**$ M**	**557.16**

Source: DPPL

21.4 Closure

The LOM cash flow model includes allowance for a closure cost of $30 million at the end of mining in MIN5532.

22 Economic analysis

The financial model developed for Phase 1 of the project summarizes the annualized LOM plan with inputs derived from detailed mine planning, mining and processing schedules, and capital and operating costs. The model aligns to the key inputs as described in this Technical Report that underpin the overall project plan and is based on Proven and Probable Mineral Reserves only.

The LOM plan assumes ore mining at 7.5 Mt/a feeding the MUP. The resultant rougher head feed is processed in the WCP at a rate of about 1,060 t/h at 7,200 h/a producing an average of approximately 192 kt/a of HMC and 7,100 t/a of REEC over the 40-year project life. HMC and REEC production is higher in the first six years because mining is initially focused within the RF50 shell and approved Work Plan area, which targets higher-grade Proven Mineral Reserve and more favourable mineral assemblages, resulting in higher recoverable mineral output at a constant plant throughput. Concentrate production for the first six years is summarized in Table 22.1.

Table 22.1 Donald six-year concentrate sales forecast

	Unit	2028	2029	2030	2031	2032	2033
HMC	Kt	137.2	245.5	220.4	202.5	210.8	201.9
REEC	kt	6.2	10.5	9.2	8.0	8.7	8.2

Source: DPPL

Market and price forecast assumptions for the HMC and REEC products were provided by TZMI and Argus and Adamas Intelligence. The price forecasts as disclosed in Item 22.1 were reviewed by the Qualified Person and are considered reasonable.

DPPL proposes to sell the Phase 1 HMC product to Astron for supply to third party downstream processors in China. Based on the indicative uranium and thorium levels for the HMC product, radioactivity is expected to be below the threshold for international transport under the Class 7 classification.

All REEC product will be sold to Energy Fuels under a binding offtake agreement.

22.1 Price assumptions

The revenue assumptions for the economic analysis are based on titanium minerals (such as ilmenite, leucoxene and rutile) valued on a TiO_2 basis, zircon valued on a ZrO_2 basis, and rare earth minerals (monazite and xenotime) valued as individual rare earth oxides, which collectively are reported as TREOs.

22.1.1 HMC

HMC pricing is based on free-on-board (FOB) China in real Q4 2025 terms. Base case pricing was provided by TZMI (2025). The following saleable mineral products are recovered from HMC:

- Zircon – reported and sold on a ZrO_2 basis
- Titanium minerals, comprising ilmenite, leucoxene and rutile, each reported in the Mineral Reserve as discrete mineral products and sold on a TiO_2 basis, with the associated TiO_2 content reported separately in the Mineral Reserve.

ZrO_2 unit price

Donald deposit zircon contains about 66% ZrO_2. For the revenue forecasts in the project financial model, a ZrO_2 unit price is derived from TZMI's zircon price forecasts. TZMI's price forecasts are expressed on a real Q4-2025 basis. Base-case, high-case and low-case bulk zircon price scenarios are applied over the period 2028 to 2035 and thereafter, the TZMI long term incentive price for the remainder of the mine life.

TZMI's zircon and price forecast was converted to a ZrO_2 unit price (US$/%.t) and modified for:

- Sea freight cost
- A quality discount of 5% for the targeted product
- Toll processing costs
- Port charges
- A recovery factor
- A processor margin
- A final product quality assumption of 66.0% ZrO_2.

Transport, processing and treatment charges applied in the financial model are commercial-in-confidence. These assumptions have been reviewed by the Qualified Person, are considered reasonable for the basis of the economic analysis and have been incorporated into the project financial evaluation.

The assumed ZrO_2 unit price base-case, high-case and low-case unit price forecasts are summarized in Table 22.2. Prices are flat from 2035 to the end of mine production.

Table 22.2 ZrO_2[7] unit price forecast

Case	Unit	2028	2029	2030	2031	2032	2033	2034	2035+
Low	US$/%.t	11.13	11.44	12.39	13.20	14.05	14.52	14.26	18.06
Base	US$/%.t	12.90	13.65	15.07	16.27	17.58	18.64	19.06	18.06
High	US$/%.t	14.92	16.38	18.32	19.97	21.98	23.28	23.85	18.06

Source: DPPL

TiO_2 unit price

The TZMI titanium feedstock price forecasts are applied on a TiO_2 unit basis (US$/t TiO_2) and adjusted to account for:

- Sea freight costs
- Product quality adjustments relative to benchmark specifications
- Processing and handling costs
- Port charges
- Recovery factors
- A processor or offtake margin
- Final product TiO_2 content assumptions consistent with the saleable mineral specifications.

Transport, processing and treatment charges applied are commercial-in-confidence. These assumptions have been reviewed by the Qualified Person, are considered reasonable for the basis of the study, and have been incorporated into the project financial evaluation

Q4 2025 (real) TiO_2 unit base-case, high-case and low-case price forecasts used in the financial model are summarized in Table 22.3. Prices are flat from 2035 to the end of mine production.

[7] The project financial model applies unit prices on a ZrO_2 basis. In the LOM schedule, zircon grades for mining Blocks 9 and greater are reported as combined ZrO_2 + HfO_2, reflecting the natural association of hafnium with zirconium in zircon minerals. Hafnium oxide typically represents approximately 5% of the combined oxide content. As hafnium is not separately priced or credited in the financial model, the inclusion of HfO_2 within the reported ZrO_2 basis has a negligible impact on the calculated zircon revenue and is not considered material to the project economic outcomes.

Table 22.3 TiO_2 unit price forecast

Case	Unit	2028	2029	2030	2031	2032	2033	2034	2035+
Low	US$/%.t	2.26	2.42	2.63	2.84	2.97	3.03	3.02	3.57
Base	US$/%.t	2.68,	2.97	3.38	3.70	3.81	3.92	4.01	3.57
High	US$/%.t	3.18	3.59	4.12	4.56	4.78	4.93	5.01	3.57

Source: DPPL, 2025

HMC revenue calculation

Project revenue has been calculated using the following methodology:

- HMC revenue = HMC (t) * HMC price (US$/t) /US$/A$ exchange rate (US$:A$).
- Where: HMC price = HMC TiO_2 grade (%) * TiO_2 unit price (US$/% TiO_2.t) + HMC ZrO_2 grade (%) * ZrO_2 unit price (US$/% ZrO_2.t).

The TiO_2 grade in HMC ranges from 35.2% to 41.4%, averaging about 38.1%; the ZrO_2 grade in HMC ranges from 16.1% to 21.4%, averaging about 18.1%.

A US$/A$ exchange rate of 0.66 was used.

22.1.2 REEC price assumptions

Cerium (Ce) and yttrium (Y) are used as tracer elements to estimate the abundance of monazite- and xenotime-hosted rare earths within the ore and resulting REEC product. Metallurgical testwork on the final REEC demonstrates that Ce and Y oxides comprise about 20.3% and 11.9% of the concentrate, respectively, and show very strong correlations between Ce and Nd-Pr (99.96%) and between Y and Dy-Tb (99.7%). On this basis, the recovered Ce and Y oxide contents have been used to back-calculate total REEC production and derive the concentrations of the payable REOs (Nd, Pr, Dy and Tb). These derived proportions are then applied to estimate REEC pricing using the established pricing formula.

The saleable REE oxides in REEC are Nd_2O_3 and Pr_6O_{11} (being LREEs) and Dy_2O_3 and Tb_4O_7 (being HREEs). The REE oxide pricing in the financial model is based on CIF China using an average of the pricing (US$/kg) sourced from Argus for forecasts from Q3 2025 (Table 22.4). The Argus price forecasts are reported on a nominal 2025 basis and are adjusted within the financial model by applying an appropriate conversion factor to establish real 2025 prices consistent with the model's real-term assumptions.

Table 22.4 Forecast REE oxide prices (US$/kg) to 2040 (base case)

Oxide	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040+
Nd	100.48	102.25	103.05	103.85	104.67	105.49	107.35	109.24	112.23	116.40	120.73	125.22	132.32
Pr	103.49	105.32	106.14	105.93	106.76	107.60	110.57	112.51	116.72	122.22	127.97	135.24	145.56
Dy	495.43	504.15	513.03	522.07	638.54	643.54	724.13	793.57	838.61	845.17	851.79	916.80	1,032
Tb	1,694	1,708	1,721	1,701	1,714	1,761	1,775	1,823	1,873	1,925	1,977	2,032	2,187
NdPr	98.47	100.20	100.99	101.78	102.57	103.38	105.20	107.05	109.98	114.07	118.31	122.71	129.68

Source: DPPL

The relative distribution of the saleable oxide minerals in REEC is summarized in Table 22.5.

Table 22.5 Relative distribution of saleable minerals in REE oxides in REEC

REE oxide	Relative distribution of TREO minerals in REEC (% TREO)
Pr_6O_{11}	3.85
Nd_2O_3	13.85
Tb_4O_7	0.41
Dy_2O_3	2.67

Source: DPPL analysis

The value of the individual Nd, Pr Dy and Tb oxides per tonne of REEC is calculated as the blended price for each saleable mineral * % of mineral in concentrate, adjusted for:

- The % total TREO in concentrate (60.6%)
- The percentage of all payable minerals in concentrate
- The payability of minerals in concentrate.

The individual contributions are summed to derive a REEC basket price (Table 22.6). The 2040 basket price is fixed for the remaining LOM. The REEC transport and treatment charges are commercial-in-confidence. These charges have been reviewed by the Qualified Person, are considered reasonable, and have been allowed for in the financial evaluation.

Table 22.6 REEC basket price on blended price forecast (US$/t REEC)

2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040+
10,095	10,255	10,371	10,451	11,340	11,466	12,146	12,786	13,304	13,601	13,908	14,644	15,969

Source: DPPL analysis

Table 22.7 lists the low and high REEC basket price used for the sensitivity analysis.

Table 22.7 REEC low and high basket price on blended price forecast (US$/t REEC) used in sensitivity analysis

Case	2028	2029	2030	2031	2032	2033	2034	2035+
Low	8,815	9,283	9,731	10,707	11,780	13,182	13,259	13,664
High	11,398	11,830	12,200	12,731	13,542	14,228	14,738	15,403

Source: DPPL analysis

22.1.3 Other price assumptions

The financial model and Mineral Reserve estimates are based solely on prices for the minerals discussed in Item 22.1.1 and Item 22.1.2. No other minerals or by-products contribute to revenue in the project financial model.

Although CeO_2 does not contribute directly to revenue, its recovery is a key indicator of overall rare earth recovery and process performance and has a direct influence on the recovery and cost of payable REOs.

22.1.4 Economic assumptions

The project execution schedule was developed from DPPL's indicative timeframes for the completion of primary approvals and delivery of long-lead time items following discussions with regulators, potential EPC contractors and suppliers of other equipment and infrastructure required for the commencement of mining activities. The key milestones for project execution are outlined in Table 22.8. These milestones are based on early works being carried out from January to March 2026.

Table 22.8 Phase 1 key project milestones

Activity	Estimated date
Financing and FID	March 2026
Process plant EPC award	March 2026
Earthworks commenced	March 2026
Commissioning and ramp-up completion	Q1 2028
First product shipment	Q1 2028
Full production achieved	Q1 2028
End mining and processing	Q2 2067

Source: DPPL

Other key economic assumptions used in the financial model are summarized in Table 22.9. The economic analysis supporting the Mineral Reserve applies a corporate income tax rate of 30%, calculated on taxable income after depreciation. No tax losses, tax credits, incentives, or accelerated depreciation have been assumed.

Table 22.9 Financial model economic assumptions

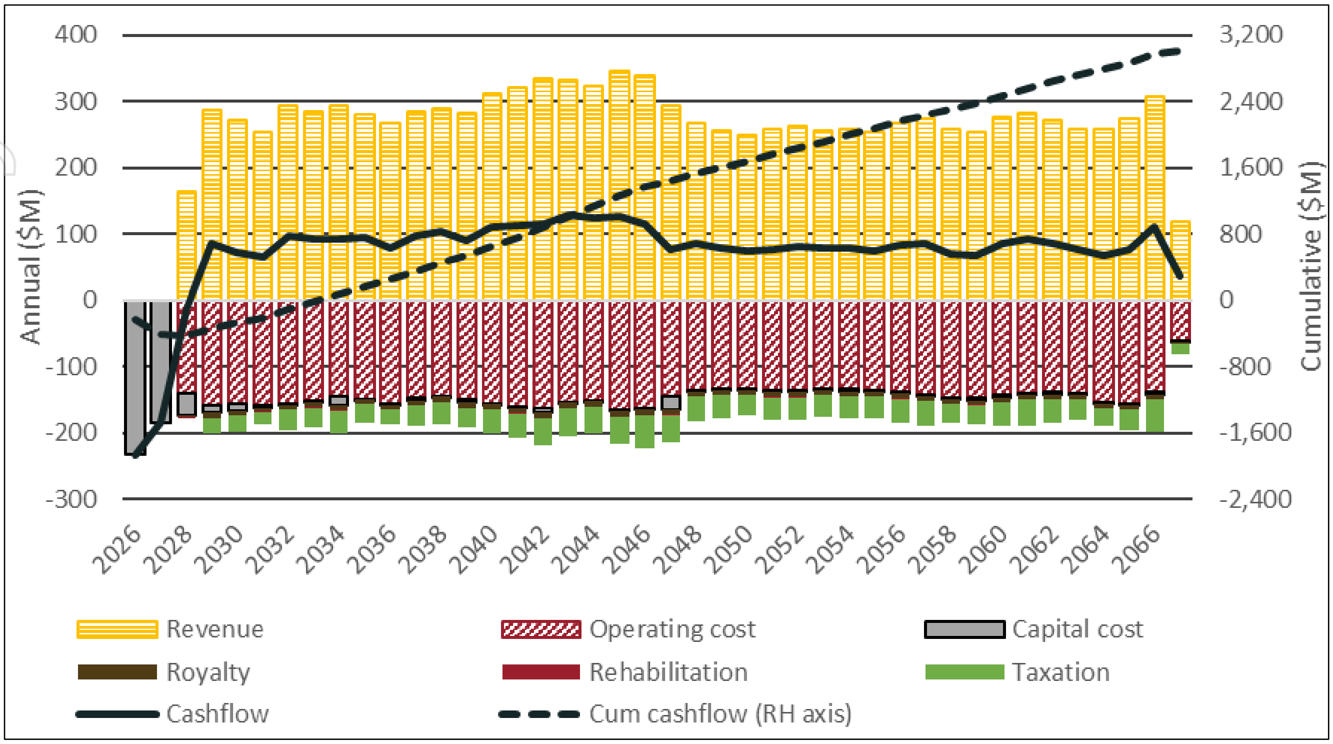
Assumption	Value
Base date	31 December 2025
Financial modelling	Real
Discount rate	8% post-tax
Forex rate	US$0.66:A$1.00
Corporate tax rate	30%
Debt	Unlevered
Point of product sale - HMC	FOB Portland/Geelong
Point of product sate - REEC	DAP Seattle
Royalty	2.75% of mine gate value
Depreciation rate	Straight line LOM
Closure cost	$30 million

Source: DPPL

22.2 Cash flow analysis

Figure 22.1 and Table 22.10 to Table 22.14 present a summary of annual (calendar year) post-tax cash flows to 2067. Initial capital expenditure commences in 2026. Following the initial investment period, which results in a maximum negative cash flow of about $473 million in mid-2027, payback is achieved in 2034. Over the LOM, the project generates a cumulative post-tax cash flow of about $3,000 million, a pre-tax and post-tax NPV of about $800 million and $496 million respectively, at an 8% discount rate applied to quarterly cash flows, with an IRR of 16%.

Figure 22.1 Donald Phase 1 LOM cash flow summary (100% equity)



Source: DPPL

Table 22.10 Donald Phase 1 LOM financial model (100% equity) 2026–2035

Item	Unit	Total	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Ore processed	Mt	**293.3**	-	-	6.8	7.5	7.5	7.5	7.5	7.5	7.5	7.5
HMC	kt	**7,540.0**	-	-	137.2	245.5	220.4	202.5	210.8	201.9	200.5	196.7
REEC	kt	**279.9**	-	-	6.2	10.5	9.2	8.0	8.7	8.2	8.0	7.7
Revenue	$ M	**10,992**	-	-	162	286	270	254	293	285	293	280
Operating cost	$ M	**(5,793)**	-	-	(140)	(159)	(155)	(159)	(157)	(153)	(145)	(148)
Capital cost	$ M	**(596)**	(233)	(185)	(33)	(11)	(11)	(4)	(1)	(2)	(14)	(1)
Royalty	$ M	**(276)**	-	-	(4)	(7)	(7)	(6)	(7)	(7)	(7)	(7)
Rehabilitation	$ M	**(30)**	-	-	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Taxation	$ M	**(1,293)**	-	-		(22)	(25)	(19)	(31)	(29)	(34)	(29)
Cash flow	**$ M**	**3,005**	**(233)**	**(185)**	**(16)**	**85**	**72**	**66**	**97**	**93**	**92**	**94**

Source: DPPL (excludes working capital adjustment)

Table 22.11 Donald Phase 1 LOM financial model (100% equity) 2036–2045

Item	Unit	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Ore processed	Mt	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
HMC	kt	191.7	202.1	203.7	191.1	184.8	184.6	188.9	188.2	189.8	189.3
REEC	kt	7.2	7.7	7.7	7.2	7.6	7.9	8.2	8.1	7.9	8.6
Revenue	$ M	268	285	290	282	311	320	334	332	323	344
Operating cost	$ M	(155)	(148)	(144)	(149)	(157)	(160)	(163)	(154)	(152)	(164)
Capital cost	$ M	(3)	(4)	(2)	(6)	(1)	(2)	(7)	(0)	(0)	(3)
Royalty	$ M	(7)	(7)	(7)	(7)	(8)	(8)	(8)	(8)	(8)	(9)
Rehabilitation	$ M	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Taxation	$ M	(23)	(30)	(33)	(29)	(35)	(36)	(39)	(41)	(39)	(41)
Cash flow	**$ M**	**79**	**96**	**103**	**91**	**110**	**113**	**116**	**127**	**123**	**127**

Source: DPPL (excludes working capital adjustment)

Table 22.12 Donald Phase 1 LOM financial model (100% equity) 2046–2055

Item	Unit	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055
Ore processed	Mt	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
HMC	kt	194.8	203.2	198.6	188.4	182.8	187.9	190.1	185.1	182.8	181.3
REEC	kt	8.3	6.8	6.0	5.7	5.6	5.9	6.0	5.8	5.9	5.9
Revenue	$ M	337	293	267	256	248	258	261	256	258	253
Operating cost	$ M	(163)	(144)	(135)	(134)	(133)	(136)	(136)	(133)	(135)	(136)
Capital cost	$ M	(1)	(21)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Royalty	$ M	(9)	(7)	(7)	(6)	(6)	(6)	(7)	(6)	(6)	(6)
Rehabilitation	$ M	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Taxation	$ M	(50)	(42)	(37)	(34)	(32)	(34)	(35)	(34)	(34)	(32)
Cash flow	**$ M**	**114**	**77**	**85**	**78**	**73**	**78**	**80**	**79**	**79**	**75**

Source: DPPL (excludes working capital adjustment)

Table 22.13 Donald Phase 1 LOM financial model (100% equity) 2056–2065

Item	Unit	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065
Ore processed	Mt	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
HMC	kt	192.7	187.5	175.9	180.1	192.5	195.1	191.3	182.5	177.4	177.7
REEC	kt	6.2	6.4	6.0	5.9	6.4	6.7	6.5	6.2	6.1	6.6
Revenue	$ M	267	273	257	254	276	281	270	258	257	273
Operating cost	$ M	(139)	(142)	(146)	(148)	(143)	(140)	(139)	(139)	(153)	(156)
Capital cost	$ M	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Royalty	$ M	(7)	(7)	(6)	(6)	(7)	(7)	(7)	(6)	(6)	(7)
Rehabilitation	$ M	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Taxation	$ M	(36)	(36)	(30)	(29)	(36)	(39)	(36)	(32)	(27)	(30)
Cash flow	**$ M**	**82**	**85**	**70**	**67**	**86**	**92**	**85**	**77**	**67**	**77**

Source: DPPL (excludes working capital adjustment)

Table 22.14 Donald Phase 1 LOM financial model (100% equity) 2066–2067

Item	Unit	2066	2067
Ore processed	Mt	7.5	1.3
HMC	kt	187.4	75.3
REEC	kt	7.7	2.9
Revenue	$ M	307	119
Operating cost	$ M	(139)	(62)
Capital cost	$ M	(3)	(1)
Royalty	$ M	(8)	(3)
Rehabilitation	$ M	(1)	(0)
Taxation	$ M	(48)	(15)
Cash flow	**$ M**	**109**	**37**

Source: DPPL (excludes working capital adjustment)

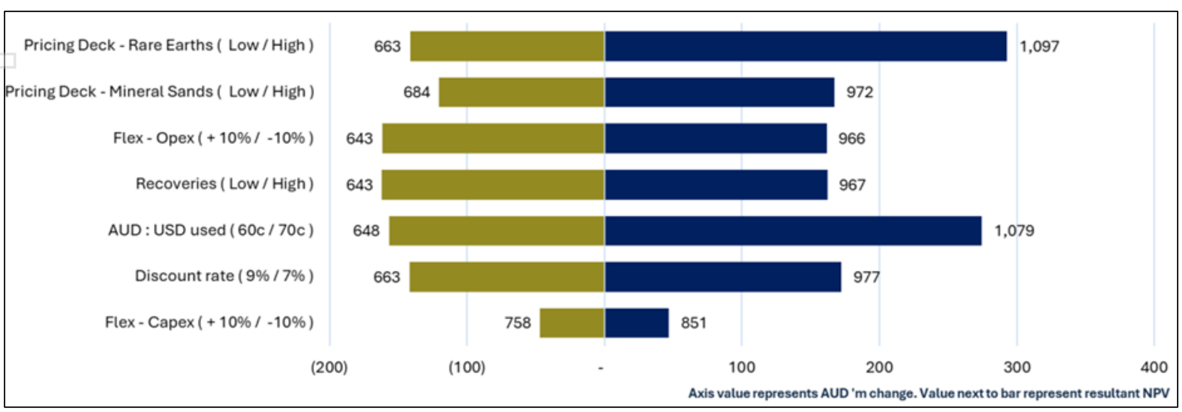
22.3 Sensitivity analysis

A sensitivity analysis of the pre-tax financial model NPV considered a variety of value drivers to arrive at discrete upside and downside value impacts for:

- Pricing for REEC using the base and high/low prices reported in Item 22.1.2
- Pricing on HMC using the high/low prices reported in Item 22.1.1
- Operating costs (± 10%)
- TiO_2 recoveries (74.1% / 84.1%)
- ZrO_2 recoveries (89.5% / 95.5%)
- Exchange rate (0.60 / 0.70)
- Post-tax discount rate range (9% / 7%)
- Capital costs (± 10%).

The sensitivity of project pre-tax NPV (about $800 million) to discrete changes in these key value drivers is presented in Figure 22.2.

Figure 22.2 LOM NPV sensitivity analysis



Source: DPPL

The most significant and material drivers for project value are concentrate pricing (including exchange rate), recovery and operating cost.

23 Adjacent properties

The general region surrounding the Property is held by a wide range of private and public companies under exploration and retention licences for which limited information is publicly available. Properties known to host HM deposits within 50 km of MIN5532 include Astron's Jackson deposit to the immediate southwest of Donald and Watchem (owned by ACDC Metals Ltd).

23.1 Jackson

Astron's adjoining Jackson deposit is a similar "WIM-style" HM deposit within RL2003 (Figure 4.1).

A resource for Jackson was last estimated by AMC and reported in accordance with the JORC Code (2012) by Astron on 7 April 2016[8] using the same methodology described for AMC's Donald Mineral Resource estimate within RL2002 (refer to Item 24.2). A subset of the total estimate with mineral assemblage data above a 1% total HM cut-off grade is presented in Table 23.1 for comparative purposes only.

Table 23.1 Jackson resource subset reported by AMC in 2016 within RL2003

Classification	Tonnes (Mt)	Total HM (%)	Slimes (%)	Oversize (%)	% of total HM				
					Zircon	Rutile + anatase	Leuco-xene	Ilmenite	Monazite
Measured	-	-	-	-	-	-	-	-	-
Indicated	670	4.9	18	5.4	18	9	17	32	2
Measured + Indicated	**670**	**4.9**	**18**	**5.4**	**18**	**9**	**17**	**32**	**2**
Inferred	160	4.0	15	3.1	21	9	15	32	2

Note: Tonnes rounded to the nearest 10 Mt and grades rounded to one or two significant figures by Snowden Optiro.

The Qualified Person has been unable to verify the above information and has not done sufficient work to classify the historical estimate as a current Mineral Resource. The estimate may not meet CIM Definition Standards for Mineral Resources & Mineral Reserves and S-K 1300 Definitions and is disclosed for background purposes only and should not be relied upon.

As disclosed in Item 4.5, Astron retains the right to develop the Jackson deposit on RL2003 independently. If the development of RL2003 is planned with a third party, Energy Fuels has a first right of refusal to participate.

23.2 Watchem

ACDC Metals' Watchem property comprises four exploration licences that immediately adjoin RL2002 to the northwest and continue approximately 100 km to the north of MIN5532. AC drilling completed by ACDC Metals along wide-spaced traverses in 2023 and 2024 confirmed the presence of significant HM mineralization associated with several strandlines that collectively extend to the north of RL2002 over a considerable distance. The exploration work completed to date is an early stage of assessment with the drilling results released to date summarized in ACDC Metals' 2024 Annual Report[9]. No details have been disclosed on the future exploration plans.

The Qualified Person has been unable to verify the information disclosed by ACDC Metals and cautions that this information is not necessarily indicative of the mineralization on the Property that is the subject of this Technical Report.

[8] https://stocknessmonster.com/announcements/atr.asx-2A916480/
[9] wcsecure.weblink.com.au/pdf/ADC/02857817.pdf

24 Other relevant data and information

24.1 Phase 2

In June 2023, Astron completed a "pre-feasibility study" for the proposed Phase 2 development of the Donald Project. The accuracy range of the study was at an AACE Class 3 level of accuracy (-20%/+30%). The study did not comply with NI 43-101 or S-K 1300 standards and is being disclosed herein solely for informational purposes and should not be relied upon.

The Phase 2 project comprises:

- Duplication of the Phase 1 throughput with 7.5 Mt/a ROM material mined and processed within RL2002 to produce HMC and REEC.
- Construction of a mineral separation plant (MSP) on MIN5532, sized to process the HMC equivalent of 15 Mt/a mined from both MIN5532 (Phase 1) and RL2002 (Phase 2). When the MSP is commissioned, HMC produced from Phase 1 and Phase 2 will be separated into premium (ceramic) and secondary (chemical) grade zircon and final titania products.

The Phase 2 operations will be carried out on RL2002 to the north and south of MIN5532 and has been separated into two sub-phases:

The Phase 2A operation will be a duplication of the Phase 1 operation and will comprise:

- Conventional truck and shovel open pit mining, by an independent contractor, to produce 7.5 Mt/a of feed to a MUP located adjacent to the pit
- Concentration in a WCP to produce an HMC
- Processing of the HMC through a CUP where the rare earth concentrate will be separated from the titanium and zircon concentrate by flotation to produce REEC and HMC product streams
- REEC product bagged and made ready for sale to offtake partners
- HMC loaded into half-height containers ready for sale to offtake partners or pumped to the MSP for processing to final products (Phase 2b)
- Sand tailings mixed with slimes deposited in an external TSF during startup and commissioning and, subsequently, returned to the mined areas as part of the progressive mine rehabilitation.

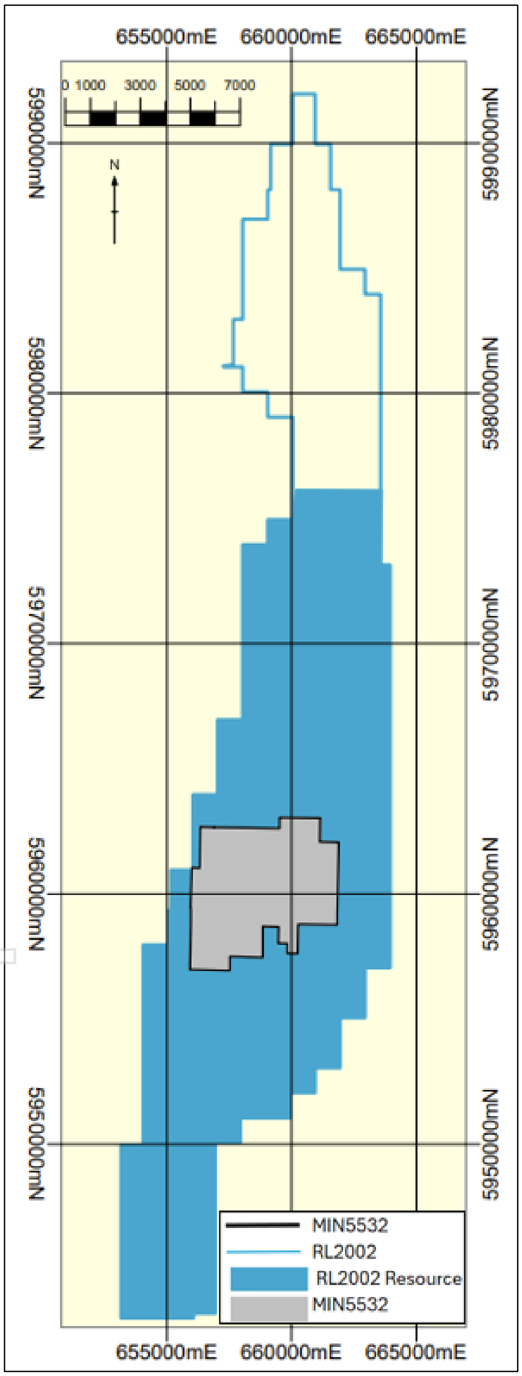
The Phase 2B operation will comprise:

- Construction of an MSP on MIN5532 sized to process the HMC equivalent from a 15 Mt/a feed rate
- Pumping HMC from Phase 1 and Phase 2A CUPs to the MSP feed tank on MIN5532
- Processing the HMC feed through a low intensity magnetic separator (LIMS) and two stages of wet high intensity magnetic separators (WHIMS) to produce magnetic and non-magnetic concentrate streams
- Beneficiation of the non-magnetic concentrates using a multistage gravity circuit to produce a zircon concentrate and a non-magnetic titanium mineral concentrate, comprising rutile and leucoxene, and rejecting the low specific gravity titano-silicates
- Processing zircon concentrates (non-magnetics) through a drying circuit using multi-stage electrostatic and magnetic circuits to produce premium grade and secondary (chemical grade) zircon products
- Processing the combined WHIMS magnetic and non-magnetic titania concentrate through a drying circuit using multi-stage electrostatic and magnetic circuits to produce a final titania product
- Transporting the final zircon and titania products by truck to Dooen intermodal rail terminal before railing to a Victorian port for export.

24.2 Phase 2 historical resource estimate

A historical resource estimate for the extensions to the Donald deposit, outside of MIN5532 and contained within RL2002, was prepared by AMC in 2015 and reported in 2016 (AMC, 2016b). Datamine software was used for geological and domain interpretation, data analysis and grade estimation and the final model (*bmfin2015f.dm*) was used for definition of reserves (as discussed in Item 24.3). This is referred to as the Phase 2 historical resource estimate, the extent of which is included in Figure 24.1. An independent review of the historical resource estimate for RL2002 has not been completed by the Qualified Person for the Mineral Resource. The following section contains a summary and extracts from AMC's 2016 report (AMC, 2016b).

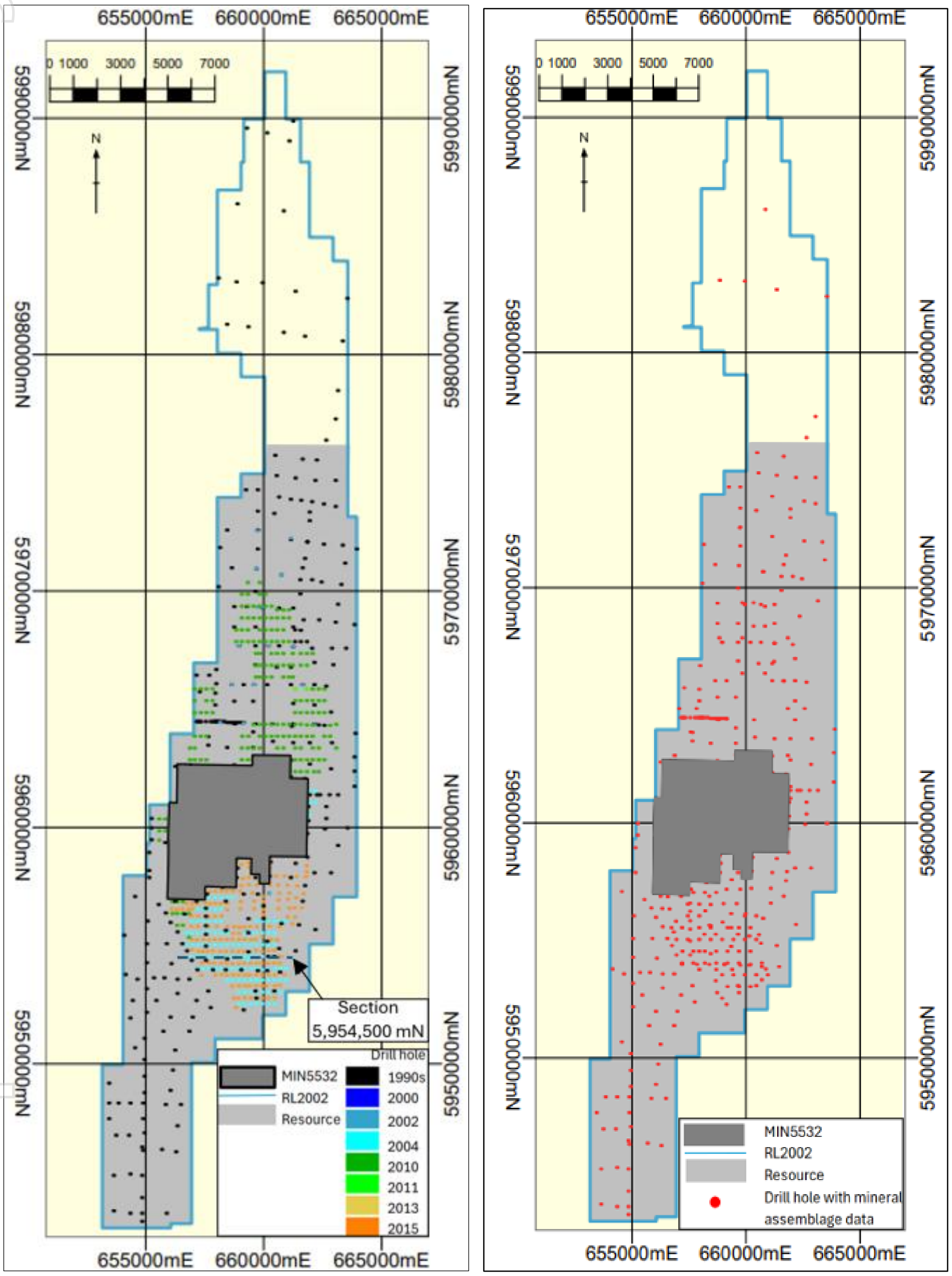
Figure 24.1 Extent of resource within RL2002



Source: Snowden Optiro

The Phase 2 historical resource estimate is based on data from 794 AC drillholes that were analyzed for HM, slimes and oversize contents. Data from holes drilled by CRA, Zirtanium and Astron were used for data analysis and resource estimation (Figure 24.2).

Figure 24.2 RL2002 – plans of drillholes analyzed for HM and section line of representative cross-section included in Figure 24.3 and Figure 24.4 (left) and mineral assemblage (right)

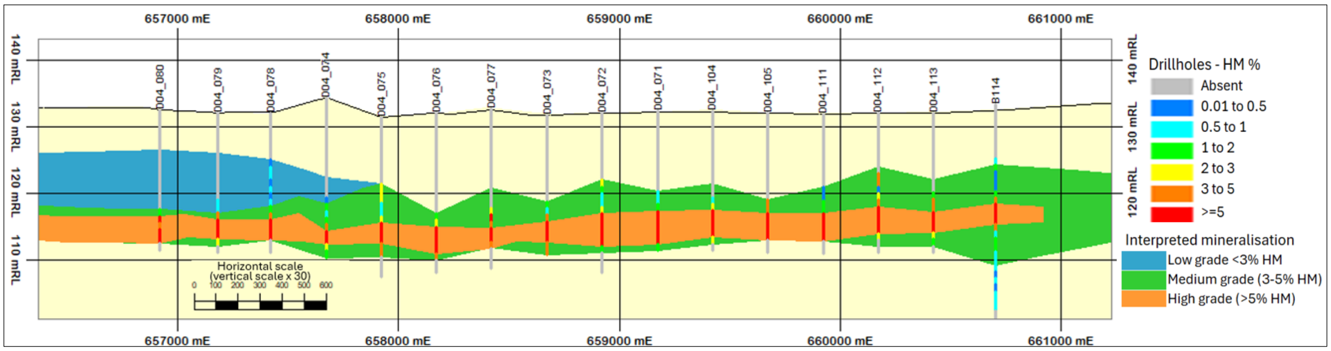


Source: Snowden Optiro

AMC reported that Zirtanium reviewed the quality control data in 2005 and noted that internal laboratory checks and inter-laboratory checks (1 in 20 samples) gave acceptable results. Twining of CRA holes by Zirtanium from bulk samples collected using a Caldwell drill rig showed a 35% lower grade. AMC reviewed the quality control data for the field duplicate samples and laboratory repeats for HM, slimes and oversize from the drilling carried out by Astron in 2010 and 2015. Field duplicates were only available for the 2015 drilling. AMC's review of the field duplicates indicated a bias for HM and oversize results.

All holes are vertical and spacing varies from 125 mE by 450 mN to 500 mE by 500 mN. The resource is constrained to within the interpreted Loxton Sand. AMC interpreted high (>5% HM), medium (3–5% HM) and low (<3%) grade HM horizons (Figure 24.3) and a horizon that included mineral assemblage data (within the horizon with higher total HM contents). Only total HM, slimes and oversize contents were estimated and reported within the material surrounding the mineral assemblage horizon. A top-cut value of 70% was applied to the oversize data.

Figure 24.3 Representative cross-section looking north along 5,954,500 mN with interpreted mineralized horizons and drillholes coloured by total HM%*

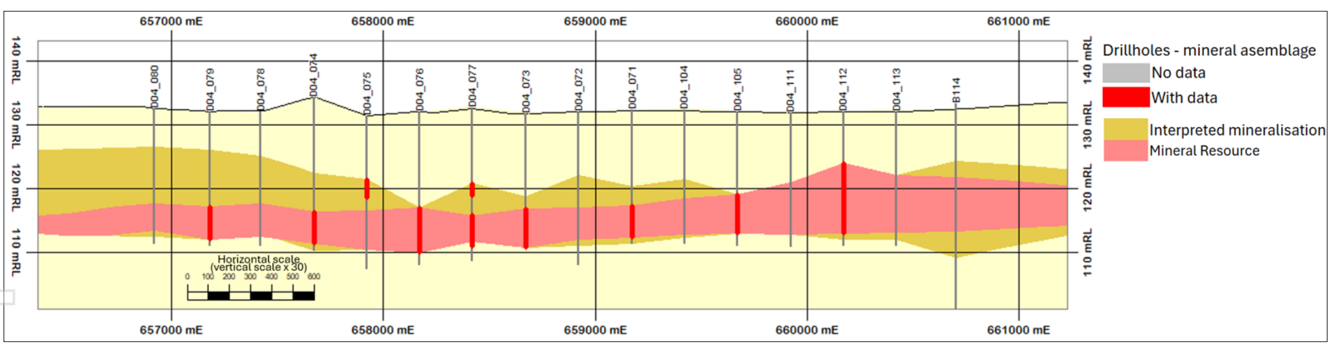


Section location included in Figure 24.2

Source: Snowden Optiro

Mineral assemblage data was obtained from composite samples from 348 drillholes on a spacing of approximately 200 mE by 450 mN. The composite samples were selected from the horizon with higher total HM contents and (as noted above) AMC treated this as a separate horizon and mineral assemblage components were estimated and reported only within this horizon (Figure 24.4). Zircon estimates are from a combination of grain count data and calculation of the zircon from ZrO_2 data obtained from XRF analysis.

Figure 24.4 Representative cross-section looking north along 5,954,500 mN with drillholes with mineral assemblage data and mineral assemblage horizon used to constrain the reported historical resource*



Section location included in Figure 24.2

Source: Snowden Optiro

AMC reported that the following adjustments were applied to the mineral assemblage data obtained prior to the 2015 data:

- Ilmenite analyzed from the Astron composite samples contained magnetite and, based on a comparison with the CRA data, the Astron ilmenite grades were decreased by 1.6% to remove magnetite.
- Of the 719 samples assayed for rutile, 178 were reported as rutile + anatase, 497 samples included data for rutile and anatase (and this data was combined) and for 44 samples, only rutile assays were reported. AMC calculated rutile + anatase for these samples using the following formula:
  - Rutile + anatase = 1.015 x rutile + 1.89

The maximum rutile + anatase assay, following adjustment by AMC was 26.3% and a top-cut value of 15% was applied to the rutile + anatase data.

Variogram analysis was undertaken by AMC to determine the continuity of HM, slimes, oversize and each of the mineral assemblage components. The variogram parameters used for total HM grade estimation are summarized in Table 24.1. The maximum grade continuity ranges for total HM, slimes and oversize were oriented along strike. The total HM data within each of the three HM domains have low nugget variances (11–17%). AMC interpreted maximum continuity range of 625–930 m along strike, 314–588 m across strike and 8–29 m vertically for total HM.

The slimes data have a low nugget variance (5%), and oversize data has a moderate nugget variance (27%). Maximum continuity ranges interpreted by AMC for the slimes are 449 m along strike, 317 m across strike and 22 m vertically and for oversize are 921 m along strike, 703 m across strike and 10 m vertically.

The mineral assemblage components were all interpreted by AMC to have low nugget variances (1–6%). Maximum continuity ranges interpreted are 1,336–4,981 m along strike, 1,030–4,062 m across strike and 19–80 m vertically with ilmenite displaying the shorter maximum continuity ranges and rutile + anatase displaying the longest continuity ranges.

Table 24.1 RL2002 – interpreted variogram parameters for HM

Variable	Rotation around Z axis	Nugget variance	Sill 1	Range 1 (m)	Sill 2	Range 2 (m)
HM – high (>5%) horizon	-45°	0.14	0.54	102 102 7.5	0.32	625 477 8
HM – medium (3–5%) horizon	0°	0.17	0.45	362 115 3	0.38	930 314 14
HM – low (<3%) horizon	0°	0.11	0.39	112 179 3	0.50	696 588 29

Source: AMC, 2016b

A block model was constructed by AMC using a parent block size of 100 mE by 200 mN by 1 mRL. The parent blocks were allowed to sub-cell down to 20 mE by 40 mN by 0.25 mRL to more accurately represent the geometry and volumes of the geological units and the mineralization horizon. Total HM, slimes, oversize and mineral assemblage grades were estimated using OK and the parameters determined from the variogram analysis. Hard boundaries (where only data from each domain is used for grade estimation) were applied between the three mineralized domains (high, medium and low). Search ellipses were orientated to align with the direction of maximum continuity defined from the variograms and an octant search with a minimum of 3 samples was applied. The search ranges were based on the variogram ranges, but with the smallest range large enough to include samples from the next line of drilling in the estimation. Up to three estimation passes were applied with increasing search ellipse dimensions for each search pass. A minimum of 6 samples and a maximum of 18 samples were applied for search passes one and two and the minimum number of samples was reduced to 3 for the third search pass. A maximum of 2 samples per drillhole was applied.

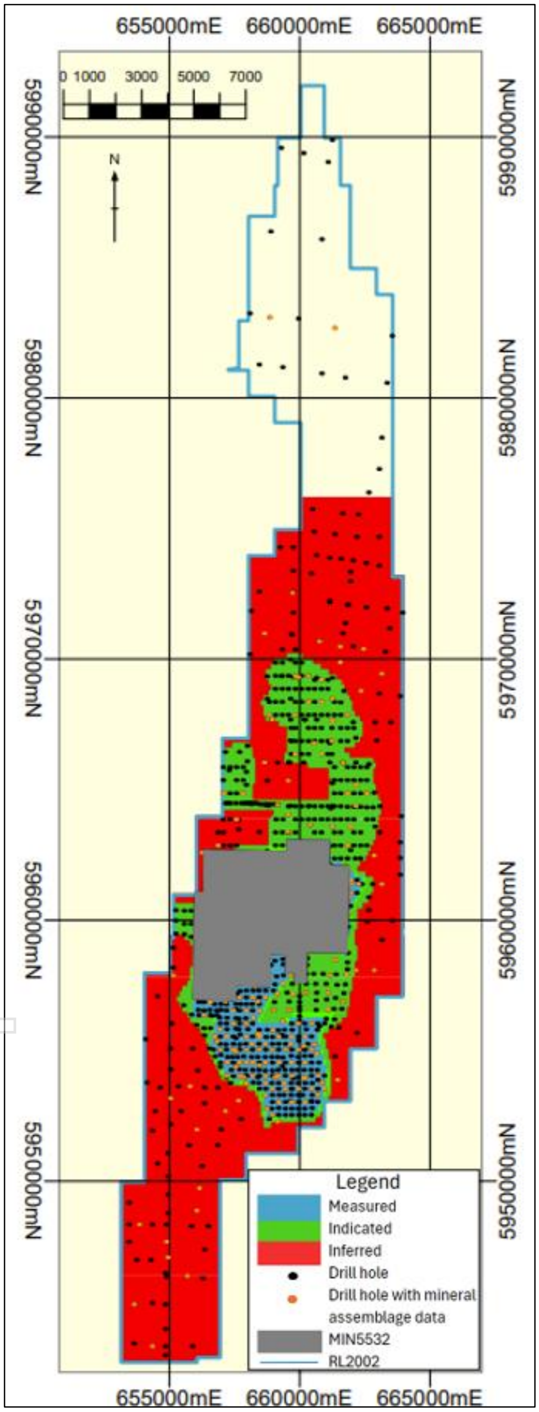
AMC checked the block model by visually comparing the input data for each of the variables against the block estimates. Trend plots and histograms were also used to compare the input data against the block estimates.

AMC used the following formula for estimation of the bulk density and tonnage:

- Bulk density = 0.01 x total HM% + 1.65

AMC classified the resource in accordance with the guidelines of the JORC Code (2012 edition) and based on drill spacing and consideration of the geological and HM grade continuity. Measured Resources were defined where drilling is generally on a spacing of 100 mE by 400 mN, Indicated Resources were defined where drilling is wider than the Measured Resource areas and is generally 250 mE by 400 mN. Inferred Resources were defined where the drill spacing is wider than 250 mE by 400 mN. The classification is illustrated in Figure 24.5. Mineral assemblage data was not available for the total resource and AMC reported a subset of the resource with mineral assemblage data.

Figure 24.5 RL2002 resource classification



Source: Snowden Optiro

The Qualified Person's review indicates that there is reasonable confidence in the HM and mineral assemblage grades within the Measured and Indicated Resource areas and the Qualified Person concurs with the classification applied by AMC (in accordance with the guidelines of the JORC Code, 2012) within the horizon with mineral assemblage data and used for estimation of reserves (refer to Item 24.3). AMC also reported additional Measured (158 Mt), Indicated (379 Mt) and Inferred (948 Mt) Resources above and below the horizon with mineral assemblage data. These resources do not have mineral assemblage data. In the Qualified Person's opinion, the resources without mineral assemblage data do not meet the standards for Measured and Indicated Resources and these have been reclassified as Inferred Resources in accordance with the guidelines of the JORC Code.

The RL2002 historical resources have been classified and reported in accordance with the guidelines of the JORC Code (2012) and have not been adjusted to conform with the 2014 CIM Definition Standards or S-K 1300 Definitions.

The AMC block model contains estimates outside of RL2002 and within MIN5532 and also within RL2003 to the south (Jackson deposit). The Qualified Person screened AMC's block model to within RL2002 and outside of MIN5532. There are minor differences between the resource reported by AMC and the resource reported by the Qualified Person, which are not regarded as material.

The historical resource for the Donald deposit within RL2002 exclusive of reserves and outside of MIN5532 above a cut-off grade of 1% total HM is reported in Table 24.2. The reported historical resource exclusive of reserves includes Inferred resources within the outline of the reserve area (Figure 24.6).

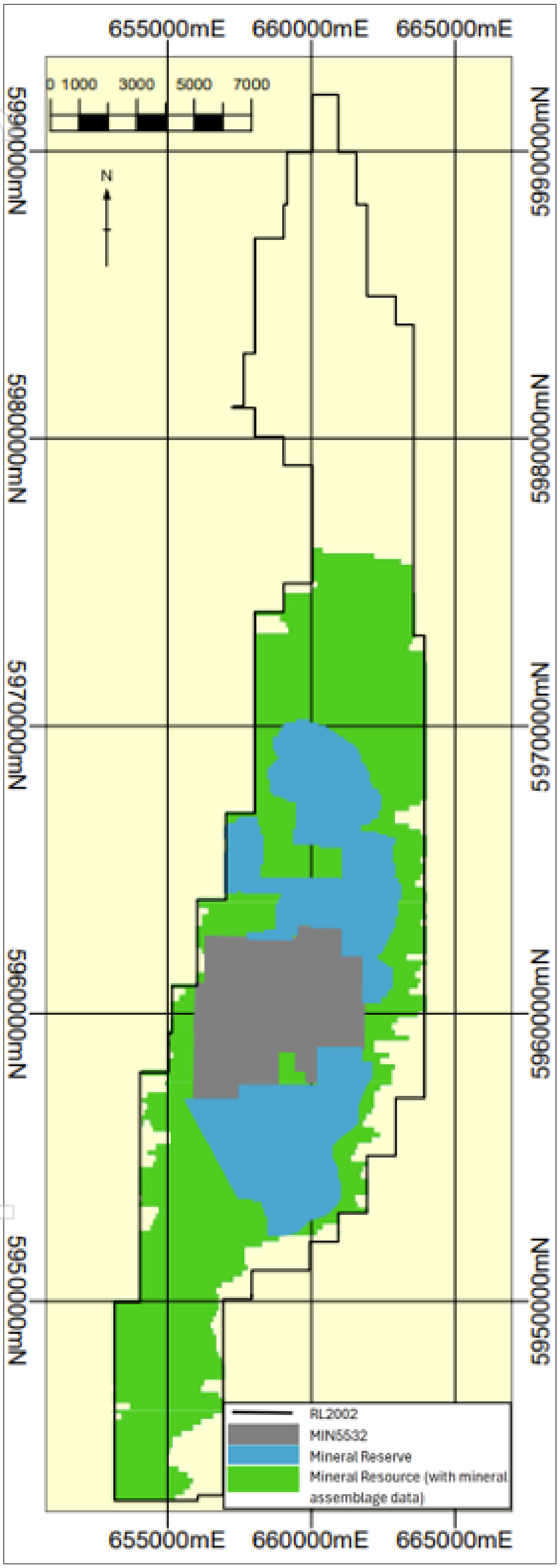
Table 24.2 Historical resources exclusive of reserves reported by Snowden Optiro from AMC model within RL2002 and outside of MIN5532 as of March 2016 (100% equity)

Classification	Tonnes (Mt)	Total HM %	Slimes %	Oversize %	% of total HM				
					Zircon	Rutile + anatase	Leuco-xene	Ilmenite	Monazite
Measured	18	4.1	21	8.7	18	9.8	20	30	1.6
Indicated	37	4.1	18	7.9	20	8.9	20	32	1.9
Measured + Indicated	**55**	**4.1**	**19**	**8.2**	**19**	**9.2**	**20**	**31**	**1.8**
Inferred	650	4.9	16	5.8	19	8.6	17	33	1.8
	1,490	2.3	16	8.4	Not available				
Total Inferred	**2,130**	**3.1**	**16**	**7.6**	**-**	**-**	**-**	**-**	**-**

Notes:

- *Historical resources are reported on a 100% basis. As at the effective date of this Technical Report, Energy Fuels held a 9.48% interest in the Property.*
- *Resources that are not reserves do not have demonstrated economic viability.*
- *Resources are reported above a cut-off grade of 1.0% total HM within RL2002.*
- *Measured and Indicated Resources that are within the reserve outline have been excluded from the reported historical resource. Inferred Resources within the reserve outline are included in the reported remaining resource. Inferred Resources without mineral assemblage data are in addition to Inferred Resources with mineral assemblage data.*
- *The reference point for the historical resources is in-situ.*
- *The RL2002 historical resources have been classified and reported in accordance with the guidelines of the JORC Code (2012) and have not been adjusted to conform with the 2014 CIM Definition Standards or S-K 1300 Definitions.*
- *Total HM is reported as a percentage of the total material. Estimates of the mineral assemblage (zircon, ilmenite, rutile, leucoxene and monazite) are presented as percentages of the total HM component.*
- *All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sum of columns may not equal.*

Figure 24.6 Plan of reserve area and remaining historical resource (with mineral assemblage data) within RL2002



Source: Snowden Optiro

The information in this Technical Report that relates to the RL2002 historical resource estimate is based on information compiled by Mr. Rod Webster. Mr. Webster is a Member of the Australasian Institute of Mining and Metallurgy and Australian Institute of Geoscientists. Mr. Webster is independent of DPPL, Astron and Energy Fuels. Mr. Webster has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code (2012).

The RL2002 resource was initially classified in accordance with the guidelines of the JORC Code (2012). **The Qualified Person has not done sufficient work to classify the historical estimate as a current Mineral Resource and the estimate does not meet CIM Definition Standards for Mineral Resources & Mineral Reserves and S-K 1300 Definitions. Energy Fuels is not treating the historical estimate as a current Mineral Resource and is disclosed for background purposes only and should not be relied upon.**

24.3 Phase 2 historical reserve estimate

Astron completed the Phase 2 – RL2002 "pre-feasibility study" for the Donald project in June 2023. AMC prepared the reserve estimate using the historical resource estimate (*bmfin2015f.dm*) reported by AMC in 2016 (AMC, 2016b) and studies completed on RL2002 by Astron, which included cost and price inputs, a strategic mine schedule and recovery rates. AMC updated the inputs and assumptions where appropriate, using external sources such as contractor prices, its in-house proprietary tool to estimate mining and operating costs from first principles, and experience with similar mining projects. The results were also compared with benchmarks.

The basis of the reserve estimate and related assumptions were established to a ±25% level of accuracy as follows:

- Product pricing assumptions for HM sands products based on consensus real Q1 2023 forecast prices provided by TZMI in a commissioned mineral sands market report and adjusted for the quality characteristics of the Donald products. Downstream processing costs were considered in the pricing assumptions applied to the production of HMC.
- Product pricing assumptions for rare earth products based on real Q1 2023 forecast prices provided by Adamas Intelligence, which considered the costs of processing REEC products into final products.
- Product specifications and recovery assumptions based on metallurgical testwork results derived from the laboratory-scale and pilot-scale testwork involving test pit material and sonic drill bulk samples as disclosed in Item 13.
- The exclusion of xenotime due to the historical samples used in the resource estimate not being analyzed for xenotime. Metallurgical testwork confirmed the REE composition (monazite-to-xenotime ratio) to be relatively consistent across the Donald deposit. As such, the economic model used for the reserve estimate included assumptions used in the MIN5532 Mineral Reserve estimate to account for the xenotime content of REEC.
- Mining cost assumptions developed by AMC including clearing, rehabilitation, and topsoil, subsoil and ore mining costs.
- Vehicle and haulage costs determined from first principles based of the required vehicle fleet, haulage travel times, operating hours and productivities.
- Processing cost assumptions determined from first principles, with estimated operating costs for each stage of processing. Costs relate to ore processing, reagents, concentrate transport and zircon cleaning.
- Transport and logistics costs assumptions based on recent container freight and haulage costs to port and from Australia to international markets.
- Other operating costs such as administration, labour, environmental management and general expenses developed from first principles based on expected organizational structure and manning levels,

operating schedules and rostering requirements, materials requirements, other equipment, communications, IT, consultants and recruitment costs.

The material assumptions used in the reserve estimate are summarized in Table 24.3.

Table 24.3 Summary of material assumptions for RL2002 reserve estimate

Criteria	Assumption (real 2022 terms)
Physical production parameters	• Average strip ratio – 2.2:1 • Mining equipment – truck and shovel • Ore mining rate – 7.5 Mt/a up to 15 Mt/a
Opex	• LOM average costs: – Direct mining – $6.15/bcm of combined ore, overburden and topsoil – Processing – $2.90/t of ore mined – Other operating costs - $3.86/t of ore processed – Rehabilitation costs - $0.07/t of ore mined – Selling costs - $2.26/t of ore mined
Escalation	• All modelling has been performed on a real basis based on assumed product pricing and quoted operating costs
FX rate	• US$0.70:A$1.00

Source: AMC

The methodology in determining the reserve estimate was:

- The deposit was assessed through pit optimization, detailed mine design, mine scheduling and economic modelling.
- Individual discrete mining blocks were digitized around ore and overburden. Pillars of in-situ material were left between adjacent mining strips to prevent tails from entering the working areas. Mining dilution and ore loss were inherent in the process, and no additional dilution or ore loss was applied when converting the resource model for mine planning.
- The extent and depth of the area to be mined was decided by pit optimization using the Lerchs-Grossmann algorithm. Nested pit shells were generated and tested with sensitivities on mining cost, processing cost, metal price and recoveries, and formed the basis of the optimal pit shell to maximize value and achieve operational design requirements.
- The Lerchs-Grossmann pit optimizations assessed Measured and Indicated classified material only. No Inferred material was included in the Lerchs-Grossmann assessment.
- Vertical walls were used for the geotechnical slopes for the purpose of the Lerchs-Grossmann optimization.
- Required capital expenditure mostly related to mining vehicles, with a portion related to infrastructure such as fuel storage and a workshop.
- The pit to be mined in 500 mN by 500 mE wide blocks in a strip sequence. The mining method will be by truck and excavator, similar to the method proposed for MIN5532.
- Ore will be fed into a MUP where it is screened and slurried and pumped to the WCP.
- Sand tails from the WCP will be returned to the mine void and placed in constructed cells to be covered by previously stockpiled overburden prior to rehabilitation.
- Ore was defined as material that meets the mill limited, variable cut-off criteria. This was where the revenue from mining the ore will be greater than costs related to processing, overhead, marketing and royalties. Costs did not include mining or initial capital costs. Revenue was calculated after mining and processing recoveries. Material below the cut-off grade and above the ore was mined as overburden or waste.

The reserve reported within RL2002 and outside of MIN5532 as of May 2023 in accordance with the guidelines of the JORC Code (2012) is summarized in Table 24.4.

Table 24.4 Donald reserve within RL2002 and outside of MIN5532 as of May 2023 (100% equity)

Class.	Tonnes (Mt)	Total HM (%)	Slimes (%)	Oversize (%)	% of total HM					
					Zircon	Rutile	Leucoxene	Ilmenite	Monazite	Xenotime
Proved	152	5.6	7.1	18.8	21.1	9.4	18.2	31.3	1.8	-
Probable	364	4.1	13.7	15.7	17.1	7.5	19.3	32.8	1.6	-
Total	**516**	**4.6**	**11.7**	**16.6**	**18.6**	**8.2**	**18.9**	**32.3**	**1.7**	**-**

Source: AMC, 2023a

Notes:

- *Historical reserves are reported on a 100% basis. As at the effective date of this Technical Report, Energy Fuels held a 9.48% interest in the Property.*
- *The reserve is based on Measured and Indicated Resources contained within a mine design above a variable where the recovered block value > mining + processing cost.*
- *The reference point for the reserve is in-situ with allowance for mining recovery.*
- *All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus the sum of columns may not equal.*
- *The reserve has been classified and reported in accordance with the guidelines of the JORC Code (2012) and has not been adjusted to conform with the 2014 CIM Definition Standards or S-K 1300 Definitions.*

The information in this Technical Report that relates to the RL2002 reserve estimate is based on information compiled by Mr. Pier Federici and fairly represents this information. Mr. Federici is a Fellow of the Australasian Institute of Mining and Metallurgy and a full-time employee of AMC and is independent of DPPL, Astron and Energy Fuels. Mr. Federici has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code (2012).

The RL2002 historical reserve was initially classified in accordance with the guidelines of the JORC Code (2012). **The Qualified Person has not done sufficient work to classify the reserve estimate as a current Mineral Reserve and the estimate does not meet CIM Definition Standards for Mineral Resources & Mineral Reserves and S-K 1300 Definitions. Energy Fuels is not treating the historical estimate as a current Mineral Reserve and is disclosed for background purposes only and should not be relied upon.**

The following material issues have been identified by the Qualified Person responsible for the review of the Mineral Reserve estimate regarding modifying factors that may materially affect the progress of Phase 2 and the conversion of the RL2002 resources to Mineral Reserves:

- The reserve is in a Retention Licence without the necessary and state and federal approvals and permits in place for mining, environmental, cultural and social issues.
- DPPL has limited freehold ownership over the surface of RL2002 outside of MIN5532. There is no guarantee that land can be purchased or accessed in a timely manner to allow production to proceed.
- The reserve is based on a study at ±25% accuracy completed in June 2023. The HM and REE concentrate prices, and capex and opex assumptions used in the study are subject to review to reflect current market conditions.
- The financing and timing for the commencement of the Phase 2 operation has yet to be determined.

25 Interpretation and conclusions

The Donald Rare Earths and Mineral Sands Project is a planned greenfield development of the Donald HM sands deposit in the Wimmera region of western Victoria, Australia. The deposit is covered by Mining Licence MIN5532 and Retention Licence RL2002 (the Property) owned by Astron through its subsidiary DPPL. In June 2024, Energy Fuels Inc. entered a JV agreement with Astron, committing the first $183 million in capital investment to earn a 49% interest in the Property. Energy Fuels also secured offtake rights for 100% of the REEC product. As at the effective date of this Technical Report, Energy Fuels held a 9.48% equity interest in DPPL and its remaining earn-in obligation is forecast to be $127.3 million.

The Loxton Sand is the host sequence to the sheet-like HM sand deposit that contains zircon, rutile (and anatase), leucoxene, ilmenite, monazite, and xenotime. Monazite and xenotime contain rare earth elements, including neodymium, praseodymium, dysprosium, and terbium.

The project has undergone multiple drilling programs, and a total of 704 holes (16,985.4 m) have been drilled in MIN5532 and 805 holes (20,944 m) in RL2002.

The Phase 1 development will mine ore at a rate of 7.5 Mt/a and produce an average of approximately 192 kt/a of HMC and 7,100 t/a of REEC over a 40-year project life within MIN5532.

Mining will follow a strip mining method. Process tailings will be returned to tailings cells constructed in the void left behind the active mining block. Waste overburden will be backfilled behind the active tailings cell and above consolidated tailings.

Conventional truck and shovel open pit mining, by an independent contractor will produce 7.5 Mt/a of feed to a relocatable in-pit MUP. The mining contract will include topsoil and subsoil stripping, overburden stripping, ore mining by bulldozer push to the MUP, construction of the tailings cells, overburden backfilling and subsoil and topsoil replacement and contouring. Final site rehabilitation will be carried out by other contractors.

Specialized processing is required due to the fine-grained nature of the deposit. Testwork since 2018 confirmed a gravity and flotation process flowsheet to produce HMC and REEC. The process includes spiral separation, flotation and filtration to achieve high recovery rates. The processing infrastructure includes:

- Screens, deslime hydro-cyclones, thickening plant
- The WCP
- The CUP
- HMC storage and transport facilities.

The Mineral Reserve within MIN5532 (as of 31 December 2025) is Proven: 254 Mt at 4.5% HM and Probable: 40 Mt at 4.2% HM. Environmental approvals were renewed in 2018 for the Work Plan area within ML5532, which will provide the initial 19-year mine life. Approval of the final Phase 1A Work Plan variation is anticipated ahead of the scheduled FID in March 2026.

DPPL currently owns freehold titles covering a total of 705 ha within the Work Plan area. The remaining freehold titles are the subject of an option in favour of DPPL with settlement scheduled at FID.

Initial capital expenditure commences in 2026. Following the initial investment period, which results in a maximum negative cash flow of about $473 million in mid-2027, payback is achieved in 2034. Over the LOM, the project generates a cumulative post-tax cash flow of about $3,000 million, a post-tax NPV of about $470 million at an 8% discount rate applied to annual cash flows, with an IRR of 16%.

The key milestone dates for the Phase 1 project development are:

- Process plant earthworks contract awarded – January 2026
- FID – March 2026

- Process plant EPC contract award – March 2026
- Earthworks commence – March 2026
- Process plant EPC works commence – September 2026
- Process plant commissioning commences – August 2027
- First products produced – Q1 2028.

Critical path activities required to develop the project include:

- Receipt of outstanding regulatory approvals including secondary permits
- Finalise acquisition of remaining surface rights within the Work Plan area
- Debt funding secured
- TSF development
- Mine development and pre-strip
- Process plant construction.

The identified material project risks for Phase 1 are:

- Commodity pricing – the project is very sensitive to the low side concentrate prices. A sustained low-price environment would materially impact project economics.
- The estimated processing operating cost of approximately $4.46/t is on the low side relative to comparable mineral sands operations. While several cost assumptions appear reasonable, there is potential upside risk, particularly in labour and reagent costs. Labour rates are based on published benchmarks that have shown limited escalation in recent years and may understate current market conditions, and some internal inconsistencies are noted between comparable supervisory roles. Reagent and consumables pricing is lower than recent experience on similar projects, and actual costs may be higher once final supplier quotations are obtained. Power and consumables assumptions, while broadly reasonable, could further contribute to cost variability if offsets are lower than assumed. Product transport costs of approximately $60/t are considered reasonable. Overall, the operating cost estimate is viewed as optimistic but within an acceptable range for the level of study, with identified risks addressed through sensitivity analysis.
- The process plant capital cost estimate is based largely on mid-2024 pricing with limited escalation applied to the December 2025 FID date and given recent industry cost escalation rates and construction labour risks, actual capital costs may be higher and trend toward the upper end of the stated estimate accuracy range.
- Inability to secure timely land access to the remaining portions of MIN5532 not owned by DPPL due to unrealistic land value expectations or landowners unwilling to negotiate. Failure to secure timely access could delay execution.
- Raw water shortages as only 3.1 GL/a can be sourced through the GWMWater network upgrade. This may be insufficient under stress conditions or ramp up.
- Ore loss/dilution during mining process due to misalignment between the Mineral Reserve and actual mining performance. This could negatively affect recoveries and project economics.
- Reduced mining productivity due to insufficient dewatering of the orebody with water remaining in, or re-entering, mining blocks due to incorrect feasibility study dewatering assumptions or dewatering methods. This could materially reduce mining productivity.

26 Recommendations

The following recommendations are made by the Qualified Persons. The activities are considered part of normal operational and compliance improvements and are not expected to materially affect the economic viability of the project. The costs associated with implementing these recommendations are adequately covered within the proposed capital and operating cost estimates disclosed in Item 21. DPPL currently has no work program or budget in place to undertake these recommendations.

26.1 Mineral Resource estimates

The Qualified Person for the Mineral Resource estimate recommends the following to improve Mineral Resource confidence in MIN5532 (Phase 1):

- Data calibration within Area 2 of the MIN5532 Mineral Resource was used to align the historical data with the 2022 data for preliminary mining studies; however, this has reduced confidence in the Mineral Resource within Area 2 (3% of the total area of MIN5532). Additional data is required within Area 2 to improve Mineral Resource confidence and to obtain a consistent dataset.
- When access is obtained, the 250 mE by 350 mN spaced drilling should be extended to cover all of MIN5532. Data analysis should use the same grain size fractions that were used for the 2022 drilling in Area 1 and mineral assemblage, XRF and laser ablation data should be obtained that is consistent with that obtained during 2022 for Area 1. The Mineral Resource should be updated to incorporate this data.
- Inconsistencies were noted in the geological logging of the LP3 and Geera Clay units between the 2022 and historical drilling (2004–2015). The interpreted base of mineralization surface is irregular, due to the inconsistencies in interpretation of LP3 and samples selected for analysis. DPPL intends to refine the base of ore modelling, following staged grade control drilling of MIN5532 ahead of the mining advance.

26.2 Other

26.2.1 Overburden and tailings handling optimization

Explore accelerated consolidation methods (e.g. polymer additives or mechanical dewatering) to shorten tailings settlement times and reduce rehabilitation expenses.

26.2.2 Mine sequence refinement

Continue to assess early-stage pit designs to maximize high-value material extraction while minimizing initial capital expenditure.

26.2.3 Dewatering system optimization

Assess real-time groundwater monitoring and predictive modelling to improve efficiency and reduce excess pumping costs.

Investigate potential for water recycling from dewatering operations to reduce overall water demand.

26.2.4 Technology integration for cost reduction

Consider the use of high-precision GPS-controlled excavation and haulage systems to improve accuracy and reduce material movement costs.

26.2.5 Detailed engineering and process optimization

Conduct additional engineering design refinements to further optimize material handling, energy efficiency, and water recycling.

Assess opportunities to further automate key processing steps to reduce operational costs and improve plant reliability.

26.2.6 Environmental, social, and regulatory compliance

Strengthen EES, ensuring full alignment with local and international regulations for mining waste management, water usage, and emissions control.

Expand community and stakeholder engagement efforts, particularly around relocation plans, job creation, and environmental sustainability initiatives.

26.2.7 Logistics and infrastructure readiness

Finalize agreements with transport and logistics contractors for shipping container handling and export procedures.

26.2.8 Financing strategy

Secure final offtake agreements for HMC to provide revenue certainty and attract investors.

Explore opportunities for government incentives, subsidies, or strategic partnerships to enhance project financing.

By implementing these recommendations in the next study stage, the project can significantly improve its investment attractiveness, reduce risks, and secure the necessary funding for full-scale development.

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28 Certificates

Certificate of Qualified Person – Allan Earl

I, Allan Earl, Executive Consultant of Snowden Optiro, Level 9/216 St Georges Terrace, Perth Western Australia, do hereby certify that:

a) I am the co-author of the technical report titled Technical Report for the Donald Rare Earths and Mineral Sands Project, Australia and dated effective 31 December 2025 (the 'Technical Report') prepared for Energy Fuels Inc.

b) I graduated with an Associateship in Mining Engineering from the Western Australian School of Mines in 1977.

c) I am a Fellow of the Australasian Institute of Mining and Metallurgy, with membership no. 110247.

d) I have worked as a mining engineer continuously for 45 years since graduation. I have been involved as a mining and resource evaluation consultant for over 30 years, and work has included: scoping studies, prefeasibility studies, feasibility studies, and reserve estimation for open pit and underground mines for at least 5 years of these years.

e) I have read the definition of 'qualified person' set out in National Instrument 43-101 ('the Instrument') and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements of a 'qualified person' for the purposes of the Instrument.

f) I made a current visit to the Donald project on 27–28 August 2024.

g) I am responsible for the preparation of Items 1–6, 16, 21.1.7, 21.3.1, 21.3.3–21.3.4 and 22–29 of the Technical Report.

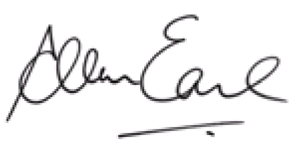
h) I am independent of the issuers as defined in section 1.5 of the Instrument.

i) I have had no prior involvement with the property that is the subject of the Technical Report.

j) I have read the Instrument and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

k) As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Perth WA this 17th February 2026



Allan Earl AWASM, FAusIMM

Executive Consultant

Certificate of Qualified Person – Pier Federici

I, Pier Federici, Principal Consultant of AMC Consultants, Level 12, 477 Collins Street, Melbourne, Victoria, Australia, do hereby certify that:

a) I am the co-author of the technical report titled Technical Report for the Donald Rare Earths and Mineral Sands Project, Victoria, Australia and dated effective 31 December 2025 (the 'Technical Report') prepared for Energy Fuels Inc.

b) I graduated with a Batchelor of Engineering in Mining Engineering from Curtin University in 1991.

c) I am a Fellow of the AusIMM, and Chartered Professional with membership number 102640.

d) I have worked as a mining engineer continuously for 35 years.

e) I have read the definition of 'qualified person' set out in National Instrument 43-101 ('the Instrument') and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements of a 'qualified person' for the purposes of the Instrument.

f) I made a site visit to the Donald Project in July 2013.

g) I am responsible for the preparation of Item 15 of the Technical Report.

h) I am independent of the issuers as defined in section 1.5 of the Instrument.

i) I have had prior involvement with the property. I have been involved in mine planning projects and Ore Reserve estimations.

j) I have read the Instrument and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

k) As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Melbourne Victoria this 26 February 2026.

P. Federici

Pier Federici, Qualifications and other affiliations FAusIMM (CP Mining)

Principal Consultant

Certificate of Qualified Person – Christine Standing

I, Christine Standing, Executive Consultant of Snowden Optiro, Level 9, 216 St Georges Terrace, Perth, Western Australia, do hereby certify that:

a) I am the co-author of the technical report titled Technical Report for the Donald Rare Earths and Mineral Sands Project, Victoria, Australia and dated effective 31 December 2025 (the 'Technical Report') prepared for Energy Fuels Inc.

b) I graduated with a B.Sc. (Hons) in Geology from the University of Western Australia (Australia) in 1981, and with an M.Sc. in Mineral Economics from Curtin University (Australia) in 2016.

c) I am a Member in good standing of the Australian Institute of Geoscientists – Membership No. 2470.

d) I have worked as a geologist continuously for 44 years since graduation from the University of Western Australia. I have worked as an exploration geologist for 6 years and have worked as a consultant for the past 38 years, working on resource estimation, due diligence studies and reconciliation for a range of commodities, including heavy mineral sands.

e) I have read the definition of 'qualified person' set out in National Instrument 43-101 ('the Instrument') and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements of a 'qualified person' for the purposes of the Instrument.

f) I have not made a current visit to the Donald Rare Earths and Minerals Sands Project.

g) I am responsible for the preparation of Items 6, 7, 8, 10, 11, 12, 14 and 24.2 of the Technical Report of the Technical Report.

h) I am independent of the issuer as defined in section 1.5 of the Instrument.

i) I have had no prior involvement with the property that is the subject of the Technical Report.

j) I have read the Instrument and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

k) As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Perth, Western Australia this 17th February 2026

C Standing

Christine Standing MAIG, BSc (Hons), MSc

Executive Consultant

Certificate of Qualified Person – Peter Allen

I, Peter Allen, Manager – Technical Services of GR Engineering Services, 71 Daly Street, Ascot, Western Australia, and an Associate of Snowden Optiro do hereby certify that:

a) I am the co-author of the technical report titled Donald Rare Earths and Mineral Sand Project, Victoria, Australia and dated 31 December 2025 (the 'Technical Report') prepared for Anglo American plc.

b) I graduated with a B. Eng. (Metallurgy) from the University of Queensland in 1981.

c) I am a Registered Professional Engineer of Queensland (RPEQ) and a Member and Chartered Professional in good standing of the Australasian Institute of Mining and Metallurgy (MAusIMM) (CP) – membership no. 103637.

d) I have more than 35 years' experience including process design, process equipment selection and evaluation, metallurgical testwork initiation and development, plant commissioning, and ongoing operational support. Throughout this career, I have been responsible for, and provided key technical input into, the process engineering and design of numerous minerals projects in Australia and internationally.

e) I have read the definition of 'qualified person' set out in National Instrument 43-101 ('the Instrument') and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements of a 'qualified person' for the purposes of the Instrument.

f) I have not made a current site visit to the Donald Rare Earths and Mineral Sands Project.

g) I am responsible for the preparation of Items 13, 17, 18.1 and 18.3–18.9, 21.1.1–21.1.6, 21.2 and 21.3.2–21.3.4 of the Technical Report.

h) I am independent of the issuer as defined in section 1.5 of the Instrument.

i) I have not had prior involvement with the property.

j) I have read the Instrument and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

k) As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Ascot, Western Australia this 17th February 2026

Peter Allen B. Eng. (Metallurgy), RPEQ, MAusIMM (CP)

Manager – Technical Services

Certificate of Qualified Person – Peter Theron

I, Peter Jonathan Theron, Director and Principal Consultant of Prime Resources (Pty) Ltd, The Workshop, 70-7th Avenue, Parktown North, Johannesburg, South Africa, and an Associate of Snowden Optiro do hereby certify that:

a) I am the co-author of the technical report titled Technical Report for the Donald Rare Earths and Mineral Sands Project, Victoria, Australia and dated effective 31 December 2025 (the 'Technical Report') prepared for Energy Fuels Inc.

b) I graduated from the University of Pretoria with a B. Eng. (Civil) in 1985 and from the Witwatersrand University with a Graduate Diploma in Engineering (GDE) in 1995.

c) I am a member in good standing of the Engineering Council of South Africa and am registered as a Professional Engineer – registration no. 950329. I am a Member in good standing of the South African Institute of Mining and Metallurgy (SAIMM) – membership no. 703496.

d) I have worked as a civil and environmental engineer continuously since graduation. I have more than 35 years of consulting experience in the field of tailings design, waste management and environmental studies.

e) I have read the definition of 'qualified person' set out in National Instrument 43-101 ('the Instrument') and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements of a 'qualified person' for the purposes of the Instrument.

f) I have not made a current visit to the Donald Rare Earths and Minerals Sands Project.

g) I am responsible for the preparation of Items 18.2 and 20.2 of the Technical Report.

h) I am independent of the issuer as defined in section 1.5 of the Instrument.

i) I have had no prior involvement with the property that is the subject of the Technical Report.

j) I have read the Instrument and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

k) As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Hermanus, South Africa this 17th February 2026

Peter J Theron B. Eng. (Civil), GDE, Pr. Eng. (ECSA), MSAIMM

Associate Principal Consultant

Certificate of Qualified Person – Gené Main

I, Gené Main, Principal Environmental Consultant of Prime Resources (Pty) Ltd, The Workshop, 70-7th Avenue, Parktown North, Johannesburg, South Africa, and an Associate of Snowden Optiro do hereby certify that:

a) I am the co-author of the technical report titled Technical Report for the Donald Rare Earths and Minerals Sands Project, Victoria, Australia and dated effective 31 December 2025 (the ‘Technical Report’) prepared for Energy Fuels Inc.

b) I graduated with a B.Sc. (Hons.) in Environmental Science from Rhodes University (South Africa) in 2003, and with a M.Sc. in Botany from the University of the Western Cape (South Africa) in 2006.

c) I am registered as a Certified Environmental Practitioner (registration no. 2019/1257) with the Environmental Assessment Practitioners Association of South Africa (EAPASA), and as a Professional Natural Scientist (Environmental Science) (registration no. 400370/13) with the South African Council for Natural Scientific Professions (SACNASP). I am a member in good standing of the International Association for Impact Assessment South Africa (IAIASA) (membership no. 5932).

d) I have worked as an environmental and social consultant for 18 years since graduation. I have worked as a Principal Environmental Consultant for 10 years, primarily in the mining and waste management sectors.

e) I have read the definition of ‘qualified person’ set out in National Instrument 43-101 (‘the Instrument’) and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements of a ‘qualified person’ for the purposes of the Instrument.

f) I have not made a current visit to the Donald Rare Earths and Minerals Sands Project.

g) I am responsible for the preparation of Items 20.1 and 20.3–20.3.6 of the Technical Report.

h) I am independent of the issuer as defined in section 1.5 of the Instrument.

i) I have had no prior involvement with the property that is the subject of the Technical Report.

j) I have read the Instrument and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

k) As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Rotorua, New Zealand this 17th February 2026

Gené Main, M.Sc. (Botany), Registered EAP (EAPASA), Pr.Sci.Nat. (Environmental Science)

Associate Principal Consultant

29 Date and signature

This report titled “Technical Report for the Donald Rare Earths and Mineral Sands Project, Victoria, Australia” with an effective date of 31 December 2025 was prepared and signed by:

Dated at Perth Australia 17 February 2026	Allan Earl (Feb 26, 2026 08:39:08 GMT+8) Mr. Allan Earl, FAusIMM
Dated at Perth Australia 17 February 2026	Christine Standing Christine Standing (Feb 26, 2026 14:40:39 GMT+8) Mrs. Christine Standing, MAIG
Dated at Melbourne Australia 17 February 2026	Pier Federici Pier Federici (Feb 26, 2026 13:15:55 GMT+11) Mr. Pier Federici, FAusIMM (CP Min)
Dated at Perth Australia 17 February 2026	Peter Allen Peter Allen (Feb 26, 2026 14:31:07 GMT+8) Mr. Peter Allen, MAusIMM (CP)
Dated at Hermanus South Africa 17 February 2026	Mr. Peter Theron, MSAIMM, Pr Eng ECSA
Dated at Rotorua New Zealand 17 February 2026	Gene Main (Feb 26, 2026 13:41:35 GMT+13) Ms. Gené Main, Member EAPASA; Pr.Sci.Nat. SACNASP