# Cowboy State Mine Prefeasibility Study Delivers NPV Uplift and Maiden Ore Reserve

written by Raj Shah | November 19, 2026

**HIGHLIGHTS**

- **Prefeasibility Study outcome: after tax NPV of approximately US$1.3B at an 8% real discount rate and after-tax IRR of 24% for Cowboy State Mine, with pre-production capital of US$840M including contingency**
- **Value upside under way: recovery optimisation with Novex has commenced, and each one percentage point increase in NdPr recovery adds approximately US$50 million to NPV[8]**
- **Greater definition and confidence: capital and operating costs estimated to ±25% accuracy, with contingency of 15% of direct capital compared with the 2026 Scoping Study accuracy of ±30-50% with contingency of 30%**
- **Long life domestic supply: mining and processing of 4.5 million tonnes per annum over 26 years, with average annual NdPr oxide production of approximately 2,500 tonnes, scheduled entirely from Probable Ore Reserves**
- **Maiden Ore Reserve: Probable Ore Reserve of 116.4 million tonnes at 1,257 ppm payable rare earth oxide (PREO) declared at Cowboy State Mine**
- **Feasibility Study advancing: drilling to convert Mineral Resources to Ore Reserves for the Feasibility Study is complete, with yttrium being assessed as a future product opportunity**

November 19, 2026 (Source) – American Rare Earths Limited (**ASX: ARR | OTCQX: ARRNF | ADR: AMRRY**) **("ARR" or "the Company")** is pleased to announce the results of the Prefeasibility Study ("**PFS**") for Cowboy State Mine ("**CSM**"), the first development phase of the Halleck Creek Project in Wyoming, together with the declaration of a maiden Probable Ore Reserve.

The PFS evaluates a 4.5 million tonne per annum open pit operation over 26 years, with estimated after tax NPV of approximately US$1.3B at an 8% real discount rate and pre-production capital of approximately US$840M, including contingency. It builds on the updated Scoping Study released on 30 September 2026,[1] which brought forward PFS level mine planning and engineering to support the U.S. SEC Regulation S-K, Subpart 1300 Initial Assessment prepared as part of the Company's Nasdaq listing process. The Cowboy State Mine PFS contains less than 5% of the total Halleck Creek resource.

**IMPORTANT DISCLOSURES**

The PFS is a prefeasibility level technical and economic assessment, with capital and operating cost estimates prepared to a target accuracy of ±25%. The production target described in this announcement is based entirely on Probable Ore Reserves, which have been derived only from Indicated Mineral Resources. No Inferred Mineral Resources or Exploration Target material are scheduled as mill feed; Inferred material within the designed pits is treated as waste.

Recoveries downstream of the leach circuit are based on the Competent Person's rare earth processing experience rather than completed test work and remain subject to confirmation through the pilot and demonstration program. There is no certainty that the production target or forecast financial outcomes will be realized. Further work, including a Feasibility Study,

permitting and financing, is required before a development decision can be made.

Forecast outcomes depend on product prices, recoveries, capital and operating costs, technical performance, approvals and funding. This announcement contains forward-looking statements concerning development, test work, studies, partnerships and capital markets initiatives. Actual outcomes may differ materially because of technical, market, permitting, financing and operational risks.

*“Declaring a maiden Ore Reserve is a defining step for Halleck Creek. It moves Cowboy State Mine from a resource with development potential to a defined mining project, supported by a prefeasibility level mine plan and cost estimate.*

*The PFS confirms the scale we outlined in the Scoping Study: 4.5 million tonnes a year over 26 years, producing around 2,500 tonnes of NdPr oxide annually. The cost estimates now carry a tighter accuracy range and a lower contingency, which gives investors and funding partners a firmer basis for assessing the project.*

*We also see clear room to improve on this base case. Our work with Novex is focused on lifting NdPr recovery and producing NdPr metal from Halleck Creek ore, and every percentage point of NdPr recovery is worth about US$50 million in project value. At the same time, we are working to reduce mining costs and improve how we manage waste streams.*

*We are advancing the underlying upstream Halleck Creek project while also working hard on our domestic mine to magnet supply chain. The work that is underway with Novex aims to see Halleck Creek ore taken through to oxide and NdPr metal using non-Chinese metal production methodology. The work continues for the largest US domestic rare earths deposit on a total contained*

*rare earth basis.”*

**— Mark Wall, Chief Executive Officer, American Rare Earths**

**FROM RESOURCE TO RESERVE AT HALLECK CREEK**

CSM is the first development phase of the broader Halleck Creek Project, which hosts a reported JORC Mineral Resource of approximately 2.63 billion tonnes at 3,292 ppm total rare earth oxides (“TREO”). Within this, the Indicated Mineral Resource for the CSM area is 391.4 million tonnes at 3,295 ppm TREO, estimated by Odessa Resources with an effective date of November 2025.

The PFS has converted part of that Indicated Mineral Resource into a maiden Probable Ore Reserve. The Ore Reserve represents approximately 30% of the CSM Indicated tonnage and is the first Ore Reserve declared for Halleck Creek. It establishes the reserve basis for the first phase of development while leaving substantial resource for later phases and for the Whole of Property Assessment.

**Cowboy State Mine Ore Reserve, effective November 18, 2026**

| **Category** | **Tonnes (Mt)** | **PREO (ppm)** | **NdPr oxide (ppm)** | **SEG oxide (ppm)** | **$Tb_4O_7$ (ppm)** | **$Dy_2O_3$ (ppm)** | **Contained PREO (t)** |
|---|---|---|---|---|---|---|---|
| Proven | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| Probable | 116.4 | 1,257 | 958 | 230 | 12 | 57 | 146,300 |
| **Total** | **116.4** | **1,257** | **958** | **230** | **12** | **57** | **146,300** |

Notes: The Ore Reserve is reported above a payable rare earth oxide (PREO) cut-off grade of approximately 875 ppm, calculated as the sum of mining cost, process cost and general and administrative cost, divided by the product of the PREO price less royalty and the recovery. The pit optimization inputs were

a mining cost of US$5.38 per tonne, a process cost of US$28.28 per tonne, general and administrative costs of US$1.10 per tonne and a Wyoming State royalty of 2.50%. Material above the cut-off is sent to the process plant and material below it reports to the waste rock storage facility or is used as construction material. The Mineral Resource is separately reported above a 1,000 ppm TREO cut-off derived from Stantec net smelter return calculations.

The Cowboy State Mine deposit will be mined by open-pit methods using conventional truck-and-shovel extraction; the mine plan does not include underground mining. Pit optimization was carried out in Whittle and the life-of-mine schedule was developed in Deswik. The mine plan moves 135.0 Mt of total material, comprising 116.4 Mt of ore and 18.7 Mt of waste at a strip ratio of 0.16:1, feeding the plant at 4.5 Mtpa over 26 years of production following a three-year construction period. Mining recovery is taken as 100% and mining dilution as nil, because the geological interpretation treats nearly all material within the pit as mineralized and the waste adjacent to the reserve is itself above cut-off grade Inferred material. Minimum mining widths are 32.5 m per bench and 28 m at the pit bottom, set by shovel swing radius, truck turning circle and safety berm requirements. Overall slope angles range from 54 degrees at a 300 m slope height to 45 degrees at 700 m, with a 50 degree inter-ramp angle applied in optimization; groundwater data was not available and was not incorporated in the geotechnical analysis. All ore in the schedule is drawn from the Indicated Mineral Resource; no Inferred material is scheduled as ore.

Run-of-mine ore is crushed to 100% passing 300 micron through a jaw crusher, cone crusher and vertical roller mill at the mine site, then concentrated approximately ten times using gravity separation in a reflux classifier concentrator together with dry induced roll magnetic separation and wet high intensity magnetic

separation on the minus 50 micron fines stream. Concentrate is trucked to a refinery proposed at Wheatland, Wyoming, for dilute sulfuric acid tank leaching, impurity removal through two neutralization stages and uranium ion exchange, bulk solvent extraction, and solvent extraction separation and finishing into separate oxide products. Recoveries by unit operation are 78% through gravity and magnetic separation, 85% through leaching, 98% through partial neutralization and 96% through separation and finishing for NdPr oxide and 98% for the other products. The recoveries applied in the economic model are 58.2% for NdPr oxide, 25.8% for SEG oxide, 28.7% for terbium oxide and 12.4% for dysprosium oxide, giving an overall recovery of 49.9% of contained payable rare earth oxide. The process uses conventional unit operations, but yield losses downstream of the leach are based on the Competent Person’s rare earth processing experience rather than on completed test work, and the recoveries remain subject to confirmation by the pilot and demonstration plant program.

No statistical or geostatistical quantification of the relative accuracy of the Ore Reserve has been carried out. The estimate is global rather than local and carries the plus or minus 25% target accuracy of the underlying pre-feasibility level cost estimates. Confidence is supported by the conversion of Indicated Mineral Resources only, 100% mining recovery with nil dilution, and a mine plan returning a positive after-tax net present value in every single-variable downside case tested. Factors that may affect the estimate are unexpected variations in the quantity of mineralized material, grade or recovery, geotechnical conditions differing from those assumed, failure of plant, equipment or processes to operate as anticipated, and variations in project costs or metal prices. Groundwater data was not incorporated in the geotechnical analysis, no sustaining capital has been estimated for the processing and refinery

facilities or site infrastructure over the 26-year mine life (mining fleet sustaining capital is included in the mining operating cost), and the metallurgical recoveries remain subject to pilot-scale confirmation. There are no production records against which to compare the estimate. A quantitative risk assessment is recommended at the feasibility stage.

**PFS COMPARED WITH THE 2026 SCOPING STUDY**

The 2026 Scoping Study already incorporated PFS level mine planning, which means the mine plan, throughput and modelled recoveries are largely unchanged. The PFS adds the Ore Reserve, a more definitive capital and operating cost estimate, and firmer infrastructure arrangements, including a signed water lease.

| Key measure | 2026 Scoping Study base case | 2026 PFS base case |
|---|---|---|
| Study accuracy | ±30% to ±50% | ±25% |
| Ore Reserve | None declared | 116.4 Mt Probable at 1,257 ppm PREO |
| Planned ROM throughput | 4.5 Mtpa | 4.5 Mtpa |
| Modelled mine life | 26 years | 26 years |
| Construction / production | Commissioning 2030 / commercial production 2031 | Construction 2028 to 2030 / production 2031 to 2056 |
| Material mined in the mine plan | 135.0 Mt | 135.0 Mt |
| Ore / waste mined | 116.4 Mt / 18.7 Mt | 116.4 Mt / 18.7 Mt |
| Average annual NdPr oxide production | Approximately 2,500 tonnes | Approximately 2,500 tonnes |
| NdPr oxide recovery | 58.2% | 58.2% |

| | | |
|---|---|---|
| After tax NPV at 8% real | Approximately US$1.07 billion | US$1.3 billion |
| After tax NPV at 10% real | US$764 million | US$966 million |
| After tax IRR | 21% | 24% |
| After tax payback from first capital | 6.9 years | 6.4 years |
| Pre-production capital, including contingency | US$900 million | US$840 million |
| Contingency | US$208 million; 30% of direct capital | US$114M; 15% of direct capital |
| Closure | US$56 million | US$56 million |
| NdPr oxide price assumption | US $151/kg | US $163/kg |
| Average operating cost | US$39.68/t ROM processed | US$40.62/t ROM processed |

**Basis of comparison:** Both studies use an 8% real discount rate and constant Q1 2026 U.S. dollars, and both schedules only Indicated material as mill feed. Changes in modelled value between the two studies reflect the revised capital estimate and contingency, updated operating costs and Adamas Intelligence forward looking pricing. They should not be read as a change in the underlying resource or mine plan. Assumed product prices are study inputs, not contracted sales prices.

The project remains most sensitive to NdPr price and NdPr recovery. Single variable sensitivities were evaluated over a range of minus 30% to plus 30%, and after tax NPV remains positive at the minus 30% case for both variables, with an IRR of 14%. Discount rate, processing operating cost and processing

capital cost are the next most significant variables.

**MINING AND THE ORE RESERVE**

CSM will be mined by conventional open pit truck and shovel methods. Stantec carried out pit optimization in Whittle and developed the life of mine schedule in Deswik. The mine plan moves 135.0 million tonnes of total material, comprising 116.4 million tonnes of ore and 18.7 million tonnes of waste, a strip ratio of 0.16:1, and feeds the plant at 4.5 million tonnes per annum over 26 years following a three-year construction period.

Mining recovery is taken as 100% and dilution as nil, because the geological interpretation treats nearly all material within the pit as mineralized and the material adjacent to the reserve is itself above cut off grade. Minimum mining widths of 32.5 m per bench and 28 m at the pit bottom were adopted, with overall slope angles ranging from 54 degrees at a 300 m slope height to 45 degrees at 700 m. Groundwater data was not available for the geotechnical analysis and will be incorporated in the Feasibility Study.

The final pit designs contain approximately 14% more waste than the selected optimization shell, reflecting design and operating constraints. The Ore Reserve is classified entirely as Probable because no Measured Mineral Resource has been reported.

The Probable classification follows from conversion of Indicated Mineral Resources after applying the PFS Modifying Factors, including pit optimization, a 10 m by 10 m by 10 m selective mining unit, the assumed 100% mining recovery and nil dilution, metallurgical recoveries, and infrastructure, cost and market assumptions. Ore Reserve confidence has been assessed qualitatively on a global basis rather than quantified statistically. Cost estimates target ±25% accuracy, while groundwater has not been incorporated in the pit slope analysis,

downstream recoveries require pilot confirmation, processing and refinery sustaining capital beyond the planned waste disposal expansion has not been estimated, and permitting remains outstanding.

The Ore Reserve cut-off of approximately 875 ppm payable rare earth oxide (PREO) was calculated by comparing the recoverable value of the payable oxide products, net of royalty, with pit optimization inputs of US$5.38 per tonne for mining, US$28.28 per tonne for processing and US$1.10 per tonne for general and administrative costs. Material above this cut-off is processed; material below it is treated as waste or used for construction. This is distinct from the 1,000 ppm TREO cut-off used for reporting Mineral Resources.

**PROCESSING FLOWSHEET AND RECOVERIES**

Run of mine ore is crushed and ground to 100% passing 300 micron at the mine site using a jaw crusher, cone crusher and vertical roller mill. It is then concentrated approximately ten times through gravity separation in a reflux classifier, dry induced roll magnetic separation and wet high intensity magnetic separation of the fines. Concentrate is trucked to a refinery for dilute sulphuric acid tank leaching, two stage impurity removal, including disposal of deleterious elements (uranium and thorium), uranium ion exchange, bulk solvent extraction and separation into individual oxide products.

The recoveries applied in the PFS economic model are unchanged from the 2026 Scoping Study and give an overall recovery of 49.9% of contained payable rare earth oxide.

Iron and aluminium occur at levels requiring removal from the leach liquor, while uranium and thorium are present at low levels but require control for product quality and residue management. Zirconium, uranium, thorium and iron were estimated

alongside rare earth grades in the Resource model. The PFS allows for staged neutralization and filtration to remove iron, thorium and aluminium, followed by uranium ion exchange; associated reagents, processing and waste disposal costs, including refinery waste facility expansion and closure, are included in the economic assumptions. No separate value is assigned to these impurities and no third-party treatment or product specification penalties are modelled for the oxide products sold FOB. Impurity deportment and residue characteristics remain subject to further testing and permitting.

| Product | 2026 Scoping Study recovery | 2026 PFS recovery |
|---|---|---|
| NdPr oxide | 58.2% | 58.2% |
| Terbium oxide | 28.7% | 28.7% |
| Dysprosium oxide | 12.4% | 12.4% |
| Samarium, europium and gadolinium (SEG) oxide | 25.8% | 25.8% |

In August 2025 a test pit was excavated at CSM under a License to Explore by Dozer permit. Approximately 3,080 tonnes of fresh ore was excavated and crushed, and approximately 14.9 tonnes was shipped to FLSmidth, Loesche, DISA and COREM for comminution testing and downstream flowsheet work. No demonstration scale plant has yet been operated, and completion of the demonstration program, with rare earth oxide targeted for late Q2 2027, is a high priority metallurgical workstream.

**RECOVERY OPTIMIZATION AND COST REDUCTION**

Optimization work is continuing, with particular focus on improving recoveries and reducing operating costs.

**Novex recovery program:** Small scale continuous pilot plant work

with Novex has commenced on NdPr and includes additional work on producing NdPr metal from Halleck Creek ore. The second phase of the planned Novex program will focus on heavy rare earth recovery options. The PFS sensitivity analysis indicates that each one percentage point increase in NdPr recovery adds approximately US$50 million to after tax NPV at an 8% discount rate. This work is developmental and does not yet establish improved recoveries or commercial metal production.

**Nagrom and Saskatchewan Research Council:**

**Operating cost reduction:** Work on operating costs is focused on reducing mining costs and improving the management of waste streams. Operating costs accounts are as follows;

*Run of Mine-Driven Operating Costs*

| Cost Category | Unit | Unit Cost | Life-of-Project Total (USD M) | % of OpEx |
|---|---|---|---|---|
| Grinding | USD/t ROM | 1.54 | 178.9 | 3.8 % |
| Concentration | USD/t ROM | 2.62 | 304.8 | 6.4 % |
| Extraction | USD/t ROM | 7.51 | 874.0 | 18.5 % |
| Impurity Removal | USD/t ROM | 6.37 | 741.7 | 15.7 % |
| Separation and Finishing | USD/t ROM | 6.90 | 802.8 | 17.0 % |
| Infrastructure | USD/t ROM | 3.90 | 454.2 | 9.6 % |
| Product Packaging | USD/t ROM | 0.04 | 4.4 | 0.1 % |

| | | | | |
|---|---|---|---|---|
| Other | USD/t ROM | 2.15 | 250.3 | 5.3 % |
| **Total ROM-Driven Operating Costs** | **USD/t ROM** | **31.03** | **3,611.1** | **76.4 %** |

Notes: Unit operating costs are expressed on a ROM tonne basis over 116.4 Mt processed. Costs exclude royalties and production levies, which are reported in the Economic Analysis section. Processing costs encompass both on-site (grinding, concentration, and leaching) and off-site refinery (solvent extraction, separation, and finishing) components. All costs in this table were estimated by Tetra Tech. Tetra Tech's estimate includes disposal of process residues within the Impurity Removal (US$1.16/t ROM) and Infrastructure (US$0.64/t ROM) areas.

*Operating Costs Not Driven by Run of Mine Tonnes*

| Cost Category | Cost Driver | Unit | Unit Cost | Total (USD M) |
|---|---|---|---|---|
| Mining | Ore + waste tonnes mined | USD/t mined | 5.47 | 738.6 |
| Material Movement – Sand By-Product | Processed by-product tonnes (94% of ROM) | USD/t by-product | 2.00 | 218.8 |
| Refinery Waste Disposal – Disposal | Refinery waste tonnes (890 t/day) | USD/t waste | 3.60 | 30.4 |

| | | | | |
|---|---|---|---|---|
| Refinery Waste Disposal – Thorium Dilution | Mine tailings tonnes (123.13 t/day) | USD/t tailings | 21.60 | 25.3 |
| Water – Mine Site | Fixed annual, adjusted for utilization | USD/year | 1,340,000 | 34.6 |
| Water – Hydrometallurgical Facility | Fixed annual, adjusted for utilization | USD/year | 500,000 | 11.7 |
| Closure – Mine | Lump sum, final year of mine plan | USD | 30,891,191 | 30.9 |
| Closure – Refinery Waste Disposal | Lump sum, final year of mine plan | USD | 25,000,000 | 25.0 |
| **Total Non-ROM-Driven Operating Costs** | | | | **1,115.3** |

Notes: Mining cost is applied to total material mined of 135.0 Mt (116.4 Mt of ore and 18.7 Mt of waste at a strip ratio of 0.16:1) and was estimated by Stantec as an all-in owner-operated rate built up from first-principles labor and equipment costs, including mobile equipment rebuild and replacement costs. Sand by-product tonnage is modelled at 94% of ROM tonnes processed. Refinery waste tonnage is modelled at a fixed rate of 890 tonnes per day, comprising leach residue (707.07 t/day), iron precipitate (59.8 t/day) and mine tailings (sand) (123.13

t/day). The mine tailings are used for dilution of thorium in the refinery waste and carry an additional cost of US$21.60 per tonne. Fixed annual costs are shown at their full annual rate and scaled by annual utilization. The life-of-Project average utilization is 89.9% for the hydrometallurgical facility and 99.5% for the mine site. This gives average annual costs of US$0.45 million for Hydromet water and US$1.33 million for mine site water. Closure costs are incurred as a lump sum in 2056 and carry no contingency. USD/t ROM figures are expressed on a common basis of 116.4 Mt for comparison only.

Potential recovery improvements, cost reductions, additional product streams and downstream opportunities remain subject to test results and further assessment; they are not included in the PFS base case. The Company has entered into a signed agreement under which up to 1,620 acre-feet of water can be supplied per year to the Project for Project water needs, including site based non-chemical ore beneficiation and general site uses. A conceptual monthly water balance has been developed for the project. To manage the seasonal availability of the contracted water supply, a water-supply pond with an indicative capacity of approximately 550 acre-feet is currently included in the capital costs.

**CAPITAL AND OPERATING COSTS**

Pre-production capital is estimated at US$840M, comprising direct capital of US$730M and a 15% contingency of US$110M. Of this, US$840M is spent over the three-year construction period, and a further US$33M of expansion capital is provided for staged development of the refinery waste disposal facility in 2034 and 2044, giving total life of Project capital of US$873M.

Closure costs of US$55.9 million, comprising US$30.9 million for mine closure and US$25.0 million for refinery waste disposal

closure, are included in operating costs in the final year of the mine plan. Life of Project operating cost is estimated at US$4,726M undiscounted, equivalent to US$40.62 per tonne of ROM ore processed.

Sustaining capital for the replacement of the mining fleet is included in the mining unit rate. Sustaining capital was also included for the staged refinery waste disposal expansion and has been estimated. The Project is subject to a sliding scale Wyoming State royalty of 5% to 10%, a 2% Wyoming severance tax, a 7% Albany County ad valorem tax and a 0.875% industrial property tax. Total royalties, levies and federal income tax are estimated at US$1,785M over the life of the Project.

| Capital Cost Category | USD (M) | % of Initial | Notes |
|---|---|---|---|
| Mining Capital | 55.0 | 6.3% | Owner mobile fleet and ancillary equipment |
| On-Site and Refinery Processing | 590.1 | 67.6% | Comminution, WHIMS, leach, SX, purification, finishing |
| Refinery Waste Disposal | 47.9 | 5.5% | Phased 40% Year −2, 30% Year 3, 30% Year 13; includes individual cells for Fe precipitate. |
| Sand By-Product Stockpile | 21.2 | 2.4% | |
| Electric Infrastructure | 25.0 | 2.9% | |
| Water Infrastructure | 20.0 | 2.3% | |
| **Sub-Total Direct Capital** | **759.2** | **87.0%** | **Contingency-bearing items** |
| Contingency (15%) | 113.9 | 13.0% | Applied to direct capital only |
| **Total Initial Capital** | **873.1** | **100.0%** | **Includes US$33.0 M expansion capital** |

Notes: Capital is drawn down at US$122.7 million in 2028 (14.6% of construction capital), US$308.3 million in 2029 (36.7%) and US$409.0 million in 2030 (48.7%), with first ore in 2031. Direct capital is phased 15% / 35% / 50% over the three construction years. The exception is the refinery waste disposal facility, which is phased 40% in 2029 (US$19.1 million before contingency), 30% in 2034 and 30% in 2044. Expansion capital of US$16.5 million, inclusive of contingency, is expended in each of 2034 and 2044. Closure costs of US$55.9 million, incurred in 2056, are included in operating costs. Percentages may not sum precisely due to rounding.

## PRICING AND MARKETS

Pricing in the PFS continues to use the long-term price forecasts produced by Adamas Intelligence, a leading independent

rare earth market research firm, consistent with previous studies. Prices are held constant in real terms across the life of the Project.

| Product (US$/kg) | 2026 Scoping Study | 2026 PFS |
|---|---|---|
| NdPr oxide | 151.00 | 163.00 |
| Terbium oxide | 1,975.20 | 2,010.00 |
| Dysprosium oxide | 533.80 | 552.50 |
| SEG oxide | 27.37 | 34.58 |

NdPr oxide accounts for approximately 87% of life of Project revenue. Lanthanum carbonate is excluded from base case revenue given current market conditions. Adamas Intelligence forecasts global rare earth oxide demand for permanent magnets to grow at 8.4% a year from 2025 to 2040, compared with 7.8% a year growth in magnet rare earth production, implying a widening supply deficit. No offtake agreements are currently in place.

**FUTURE OPPORTUNITY: YTTRIUM**

Yttrium is present throughout the Halleck Creek Mineral Resource and is the largest single component of the heavy rare earth group, making up on average approximately 5.4% of TREO. It is not included in the PFS base case, Ore Reserve, production target or financial evaluation.

A mixed rare earth oxide produced from Halleck Creek ore in December 2025 confirmed yttrium is present in the product, although the flowsheet has not been optimized for yttrium. Early mineralogy indicates that a significant share of the yttrium may be hosted in minerals other than allanite, so the current test work is examining recovery routes both within and beyond the base case flowsheet. ARR is investigating yttrium recovery with U.S. Government research partners.

The program will confirm the minerals that host yttrium, test leach and separation conditions, develop a route to a commercial grade yttrium oxide product and define product specifications and market requirements. If this work demonstrates a viable recovery route and a supportable market, yttrium will be assessed for inclusion as a product in the Feasibility Study.

**ADVANCING TO THE FEASIBILITY STUDY**

Drilling to support the conversion of Mineral Resources to Ore Reserves for the Feasibility Study has been completed. Results from this program were not incorporated in the PFS and will be included in an updated Mineral Resource estimate to support the Feasibility Study. The PFS sets out a work program toward the Feasibility Study with an order of magnitude budget of approximately US$10 million.

*“The PFS gives us a reserve-based development case to build on. The Feasibility Study will now focus on the areas with the greatest influence on project value: NdPr recovery, mining and processing costs, water and waste management, and confirming the flowsheet at pilot scale.*

*With the Feasibility Study drilling complete, we can move straight into resource updating and engineering, while the Novex and pilot programs work to improve the base case before major capital is committed.”*
**– Andrew Conover, Chief Development Officer, American Rare Earths**

| Workstream | Next milestone or objective |
|---|---|
| Pilot and demonstration program | Confirm and optimize NdPr and heavy rare earth recovery; separated rare earth oxide targeted for late Q2 2027. |

| | |
|---|---|
| Novex recovery program | Complete NdPr recovery optimization and production of NdPr metal from Halleck Creek ore, followed by a second phase on heavy rare earth recovery options. |
| Resource update | Incorporate the completed Feasibility Study drilling into an updated Mineral Resource estimate and Ore Reserve. |
| Cost reduction | Advance mining cost reduction and waste stream management, including the manufactured sand byproduct and refinery waste disposal. |
| Engineering and study progression | Advance the Feasibility Study, equipment replacement, groundwater and geotechnical inputs. |
| Permitting and water | Progress the WDEQ Land Quality Division permit to mine application and hydrology and hydrogeology work with WWC Engineering. |
| Yttrium opportunity | Confirm yttrium deportment and recovery routes and assess product and market requirements for the Feasibility Study. |
| U.S. capital markets readiness | Progress PCAOB audits and SEC S-K 1300 technical disclosure in support of the Nasdaq listing pathway. |

These are planned workstreams and targets, not guarantees of timing or outcome. Completion of the Feasibility Study, permitting and financing will be required to support a future development decision.

**FUNDING AND U.S. CAPITAL MARKETS READINESS**

Development would require approximately US$840M of initial capital, including contingency. This materially exceeds the Company’s current cash resources and would require funding from

a combination of sources.

ARR believes there is a reasonable basis to assume that funding will be available to develop the Project as envisaged in the PFS to develop a long life strategic rare earth project within the United States. Options may include strategic investors, project debt, equity funding, government supported programs and joint venture arrangements.

The Company has previously announced a non-binding Letter of Interest from the Export Import Bank of the United States (EXIM). The Letter of Interest is not committed financing and remains subject to further evaluation, due diligence and approvals. There can be no assurance that funding will be available when required or on acceptable terms. Equity financing may dilute existing shareholders, while joint ventures or other funding arrangements may reduce ARR's ownership interest or economic exposure to the Project.

The PFS shares its underlying technical basis with the SEC Regulation S-K, Subpart 1300 technical report prepared to support a potential Nasdaq listing. The reports use different reporting standards and are not interchangeable. Listing readiness does not constitute approval of a listing or assurance of project funding.

**ORE RESERVE SUMMARY INFORMATION**

The following summary is provided in accordance with ASX Listing Rule 5.9.1. Further detail is provided in the JORC Table 1 in Appendix A.

| Item | Summary |
|---|---|

| | |
|---|---|
| Economic assumptions | Constant Q1 2026 U.S. dollars, 8% real after tax discount rate, Adamas Intelligence long term prices, 21% federal income tax, 14% depletion allowance and MACRS depreciation. |
| Classification | Probable only, derived from Indicated Mineral Resources. No Measured Mineral Resource is reported, so no Proved Ore Reserve is declared. |
| Mining method | Conventional open pit truck and shovel; 100% mining recovery and nil dilution; 10 m by 10 m by 10 m selective mining unit. |
| Processing method | Mine site grinding and gravity and magnetic concentration; offsite refinery with dilute sulphuric acid leach, impurity removal and solvent extraction separation. |
| Cut-off grade | Approximately 875 ppm PREO, based on mining, processing and general and administrative costs, PREO price less royalty, and recovery. |
| Estimation methodology | Pit optimization in Whittle on a regularised resource model, pit design and Deswik life of mine scheduling by Stantec. |
| Material modifying factors | State mineral leases and federal claims in good standing; permit to mine application not yet filed; signed water agreement; water rights not adjudicated; no offtake agreements; recoveries subject to pilot confirmation. |

**COMPETENT PERSON STATEMENT AND SUPPORTING DISCLOSURE**

This work was reviewed and approved for release by Mr. Kelton Smith (Society of Mining, Metallurgy & Exploration #4227309RM)

who is employed by Tetra Tech Inc. and has sufficient experience which is relevant to the processing, separation, metallurgical testing and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 JORC Code. Mr. Smith is an experienced technical manager with a degree in Chemical engineering, operations management, and engineering management. He has held several senior engineering management roles at rare earth companies (Molycorp and NioCorp) as well as ample rare earth experience as an industry consultant. Mr. Smith consents to the inclusion in this announcement of the matters based upon the information in the form and context in which it appears.

The information in this announcement that relates to Ore Reserves and the mine plan was reviewed and approved for release by Mr. Patrick A Sobecke (Society of Mining, Metallurgy and Exploration #04133849RM) who is employed by Stantec and has sufficient experience which is relevant to the mining plan, the estimation of Ore Reserves and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 JORC Code. Mr. Sobecke is a Professional Engineer (IL 062.064122) with over 21 years of experience in multiple commodities, mining methods and countries. Mr. Sobecke consents to the inclusion in this announcement of the matters based upon the information in the form and context in which it appears.

This work was reviewed and approved for release by Mr. Alfred J Gillman, a Fellow and Chartered Profession of the Australasian Institute of Mining and Metallurgy (AusIMM 107303). Mr. Gillman is an independent geological consultant to American Rare Earths Limited and has sufficient experience 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 2012 Edition of the Australasian Code for

Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr. Gillman consents to the inclusion in this announcement of the matters based on his information in the form and context in which they appear.

This work was reviewed and approved for release by Mark W. Travis, CPG, a Certified Professional Geologist and member of the American Institute of Professional Geologists (AIPG CPG-12090). Mr. Travis is an independent geological consultant to American Rare Earths Limited and has sufficient experience 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 (JORC Code). Mr. Travis consents to the inclusion in this announcement of the matters based on his information in the form and context in which they appear.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the previously announced Mineral Resource estimate and that all material assumptions and technical parameters underpinning that estimate continue to apply and have not materially changed.

This announcement has been authorized for release by the Board of American Rare Earths Limited.

**INVESTOR CONTACT**

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**ABOUT AMERICAN RARE EARTHS LIMITED**

American Rare Earths (ASX: ARR | OTCQX: ARRNF | ADR: AMRRY) is a critical minerals company at the forefront of reshaping the U.S. rare earths industry. Through its wholly owned subsidiary, Wyoming Rare (USA) Inc. ("WRI"), the company is advancing the Halleck Creek Project in Wyoming, a world class rare earth deposit with the potential to secure America's critical mineral independence for generations. Located on Wyoming State land, the Cowboy State Mine within Halleck Creek offers cost efficient open pit mining methods and benefits from streamlined permitting processes in this mining friendly state.

With plans for onsite mineral processing and separation facilities, Halleck Creek is strategically positioned to reduce U.S. reliance on imports, predominantly from China, while meeting the growing demand for rare earth elements essential to defense, advanced technologies, and economic security. As exploration progresses, the project's untapped potential on both State and Federal lands further reinforces its significance as a cornerstone of U.S. supply chain security. In addition to its resource potential, American Rare Earths is committed to environmentally responsible mining practices and continues to collaborate

with U.S. Government supported R&D programs to develop innovative extraction and processing technologies for rare earth

elements. Further information is available at www.americanree.com.

**FORWARD LOOKING STATEMENTS**

This announcement contains forward-looking statements that involve subjective judgement and analysis and accordingly, are subject to significant uncertainties and risks, many of which are outside the control of, and are unknown to, American Rare Earths ("ARR"). In such circumstances, the forward-looking statements can be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "seek", "estimate", "believe", "continue" or other similar words. No representation, warranty or assurance is given or made in relation to any forward-looking statement by ARR or its representatives, In addition, no representation, warranty or assurance is given in relation to any underlying assumption or that any forward-looking statements will be achieved. Actual future events may vary materially from the forward-looking statements and the assumptions on which the forward-looking statements are based. Accordingly, announcement readers are cautioned not to place undue reliance on such forward-looking statements as a result of the uncertainties. ARR wishes to caution readers that these forward-looking statements are based on economic predictions and assumptions on reserves, mining method, production rates, metal prices and costs (both capital and operating) developed by ARR management in conjunction with consultants. This presentation and the forward-looking statements made in this announcement, speak only as of the date of the announcement. Accordingly, subject to any continuing obligations under the Corporations Act and the Australian Securities Exchange Listing Rules, ARR disclaims any obligation or undertaking to publicly update or revise any of the forward-looking statements in this announcement, whether as a result of new information, or any change in events, conditions or circumstances on which any such

statements is based.

The full JORC report can be found here on the ASX version of the release.

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[1]American Rare Earths, ASX announcement, 30 September 2026, “Cowboy State Mine Study Strengthens Foundation for Domestic U.S. Rare Earth Supply”.

A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/aa91a401-ef3a-45a5-a15f-566a79421e4c