Stepping Out for a Larger Resource
St George Mining Limited

We update our coverage on **St George Mining (ASX:SGQ)** with a reaffirmed **Speculative BUY** rating and **maintain our 12-month target of 31c**.

This is underpinned by the strong step-out & infill drilling results that confirm the extensive continuity of high-grade mineralisation over very broad intervals from surface. This builds on already being established as the **largest & highest-grade carbonatite-hosted REE resource in South America & the second highest grade REE resource in the Western world.**

Investment Thesis

Tier 1 Mining Location: Adjacent to CBMM's world-leading niobium operation, with established infrastructure, renewable power, and a skilled workforce in Brazil's most mining-friendly state.

Globally Significant Resource Base: 41.2Mt at 0.68% Nb_2O_5 (280kt contained niobium) and 40.6Mt at 4.13% TREO (1.7Mt contained rare earth oxides), including a high-value magnet REE component (19% of TREO) from Maiden MRE (Apr 25).

Strong Recent Drilling: With only 10% of the tenement drilled, mineralisation remains open in all directions, and recent step-out and infill results—including the project's thickest intercepts to date—support substantial resource growth and conversion to indicated ahead of reserve and feasibility work.

Register Bolstered by Mining Giant: Hancock Prospecting enters the register — major shareholder in MP Materials (Mcap. US$11Bn) and Arafura Rare Earths (Mcap. cap A$895M) — which anchored the October A$72.5M placement with A$22.5M, signalling strong tier-one investor confidence as SGQ advances drilling, permitting and metallurgical testwork at Araxá.

Araxá Acquisition Now Complete: Payments to Itafos were fast-tracked, with US$11M paid to gain 100% unencumbered ownership of the Araxá Project – all security held by Itafos over the project and related group assets now released.

Strong Key Stakeholder Support: Local, state and institutional backing received for Araxá, with public endorsement from the Minais Gerais Governor & key agencies, reinforcing expedited permitting momentum & broad community support.

Comps & Re-Rating Potential: We find a massive potential for re-rating for SGQ, from its current A$180/t TREO to be placed in between Lynas (A$2,648/t TREO) and Northern Minerals (A$2,420/t TREO) given its Grade and TREO tonnage. Feasibility decisions around TREO should trigger a rerating for SGQ.

Fast-track to first production by 2028, supported by permitting MoUs with Minas Gerais, proven CBMM-derived processing expertise, and a REAlloys strategic alliance that positions SGQ to reach US Defence markets ahead of peers (WA1, NioCorp, Globe).

Robust Economics: Two development scenarios deliver **NPVs of A$2.87–2.97B** and IRRs of 68–84%, with payback periods under two years and strong unit margins.

Evolution Capital's Internal Araxa Model Overview Below

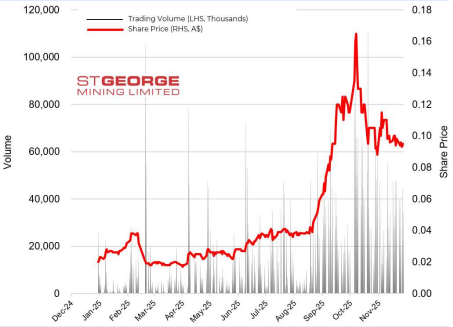
Parameter	Standalone Development	Opportunistic Acquisition
Initial Capex	US$200M	US$150M
Production Start	2030	2028
Niobium & REE Production	15ktpa (2032) -> 22ktpa (2037)	15ktpa (2030) -> 22ktpa (2035)
Mine Life	40+ Yrs	
Steady State EBITDA	US$479M/yr (2037)	US$479M/yr (2035)
NPV	A$2.87B	A$2.97B
IRR	68%	84%
Implied Share Price (A$/sh)	$0.31 (3.3x upside)	$0.33 (3.5x upside)

Recommendation	**Spec. Buy**
Share Price	**A$0.094/sh**
Fair Value	**A$0.80/sh**
Target (12-month)	**A$0.31/sh**
TSR (12-month)	**230%**

Company Profile

Market Cap	A$361M
Shares on Issue	~3.8B
Cash (Est.)	A$2.7M
ADV (3-month)	~20.29M share
52-Week Range	A$0.015-A$0.18

Price Performance



Company Overview

St George Mining Limited (ASX:SGQ) is an Australian exploration company leading with Araxá, a globally significant Niobium deposit in Minas Gerais, Brazil. The company also holds a portfolio of exploration tenements in copper, gold and lithium in Western Australia.

Head of Research (Resources)

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Majority Shareholders

Hongkong Xinhai	3.66%
ITAFOS	2.93%
BNP Paribas Nominees	2.47%
Noble Investments	1.47%
Tornado Nominees	1.19%

Upcoming Catalysts

Met Testing Results	Q4 2025
Exploration Results	Q4 2025
Permitting Progress	Q4 2025 - 2026
Scoping & PFS Studies	CY2026
Strategic Partnerships	Ongoing

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1. VALUATION SUMMARY

1.1 Valuation Target Summary

Our **A$0.31/sh target** is derived from a DCF (standalone case) on the Araxá Project using a **conservative long-term Niobium REE basket price of US$45,000/t**.

The valuation assumes **one equity raise totalling ¼ of pre-development capex (US$150-200M)**, taking **post-raise common shares outstanding to ~4,106M**. For the Araxá Deposit, we model a **41.20Mt** inventory (100% M&I and Inferred conversion) as the base for valuation.

We apply **no value to other SGQ projects apart from Araxá** at this stage; it is treated as upside pending resource definition and metallurgy.

Our **Total NAV (post-funding)** is **A$1,279m**, which equates to **A$0.31/sh** target.

Asset	Method	Risking	Value (A$M)	NAV/Share (A$)
Araxá NPV_8	DCF (Pre-tax)	0.55x	1,289	0.34
+ Other SGQ Projects (Destiny, Lithium Star etc)	No Value	—	—	—
+ Net Cash (PF)	—	—	59.5	0.02
- PV Exploration	—	—	(40)	(0.01)
- PV Corporate G&A	—	—	(30)	(0.01)
NAV (Equity Value)			1,279M	0.34 A$/sh (~3.8bn shares)
Total NAV (Post-Funding)			1,279M	≈ 0.31 A$/sh (4.1bn shares)

Table 1.1 - Sum of Parts Valuation

1.2 Key Updates Since October 2025

1.2.1 Strong Step-Out & Infill Drilling Results

Recent step-out and infill drilling at Araxá has returned some of the thickest and highest-grade niobium and rare earth intercepts reported to date, substantially outperforming those used in the current MRE. Step-out holes up to 1km east and 230m west of the resource boundary delivered broad zones such as:

- 98.4m @ 3.07% TREO and 0.43% Nb_2O_5 and 87.7m @ 2.95% TREO and 0.41% Nb_2O_5 from surface, confirming mineralisation extends well beyond the existing model.

Infill drilling has similarly produced standout results—including the project's thickest intercept to date of:

- 115.65m @ 3.34% TREO and 0.34% Nb_2O_5—demonstrating exceptional grade continuity and validating high-grade zones across the vertical profile.

Collectively, these results materially strengthen the geological model, de-risk resource classification upgrades, and provide clear support for a significant expansion of tonnage and contained metal in the forthcoming MRE.

1.2.2 October A$72.5M Placement

In October, A$72.5M raised to advance the Araxá Project towards FID. This included a strategic investor placement to Hancock Prospecting Pty Ltd for A$22.5M, strengthening the registry with the addition of a highly credentialed Australian resource company.

Detailed use of funds includes:

- Upgrading the mineral resource estimate,
- Project permitting,
- Metallurgical testwork including pilot plant development, and

The company continues to consider ways to increase access to US capital markets through a potential listing on a US stock exchange and downstream partnerships in the US for both rare earths and niobium products.

1.2.3 Acquisition of Araxá Now Complete

SGQ has accelerated payment of the final US$11m deferred consideration to Itafos for the 100% acquisition of the Araxá Rare Earths and Niobium Project in Brazil. The early settlement—originally scheduled across November 2025 and August 2026—was funded from the Company's A$50m institutional placement (part of a larger A$72.5m equity raising) and results in full release of all security held by Itafos.

With unencumbered ownership now secured, St George strengthens its balance sheet flexibility and reinforces its commitment to fast-tracking Araxá toward a Final Investment Decision on what it views as a globally significant rare earths and niobium development.

1.2.4 Government & Community Support for The Araxá Project

St George's Araxá Open Day showcased strong and coordinated support from state and local government as well as the surrounding community for its rare earths and niobium project. Minas Gerais Governor Romeu Zema publicly endorsed the project, highlighting its importance for regional economic diversification, Brazil's critical minerals supply chain and its commitment to "responsible, technology-driven mining." Local government leaders, including the Mayor of Araxá, praised St George's collaborative approach and the benefits the project is expected to deliver through jobs, investment and community programs.

The Company's partnerships with government-funded institutions such as EMBRAPII, SENAI, CEFET MG and participation in national initiatives like MagBras further demonstrate substantial institutional backing. This broad support is reinforced by a 2024 cooperation agreement with the State to expedite permitting and by positive community engagement around education, sustainability and social investment initiatives.

1.3 Araxá Project Scenarios and Assumptions

We see the need for an independent processing plant and tailings dam as the biggest bottlenecks for a quick development of the prospect. Brazil's multi-layered regulations, federal laws, ANM resolutions, and state policies, impose comprehensive restrictions on tailings disposal methods, facility design, monitoring, and decommissioning, ensuring that tailings are managed sustainably and safely the same time as making permits for new tailings dam a time-consuming process.

For the development scenarios, we consider two possibilities,

- **Standalone Development**: SGQ will be able to progress through to the FID stage and obtain the requisite mining and tailings dam permits from the relevant authorities. This will delay the time to market for SGQ to a conservative 2030 for first production. We estimated a staged development, with initial capex of US$200M, inclusive of US$50M for Mine Development, US$100M for processing plant, and US$50M for a tailings dam for an initial ROM rate of 3Mtpa, and an incremental capex of US$60M to increase the ROM processing rate to 4.5Mtpa, 5 years after start of operations.

- **Opportunistic Acquisition:** SGQ acquires Mosaic's Araxá mine beneficiation facilities in order to fast track its permitting process in line with SGQ's strategy to race to market. We see this as a possibility because Mosaic has launched a dual track process to either sell its Araxá Phosphate mine and beneficiation facilities or attract capital to develop niobium processing at the Araxá beneficiation plant. (Mosaic's Q1 FY25 Report)

If SGQ were to acquire the beneficiation plant or assist in terms of capital, there would be corresponding decrease in initial capex required. We estimate the initial capex for this development pathway to be ~US$150M, inclusive of US$50M for mine development and additional haulage trucks, and US$100M for the processing plant, lower given ready infrastructure at Mosaic site. We believe SGQ would opt for this early route to market (by 2028 by our estimates). Same as our standalone development, we expect SGQ to increase ROM production rate to 4.5Mtpa through an incremental capex of US$60M, 5 years into operational life.

Even though SGQ tenements are located on private land, we do not account for capex for land acquisition as Brazil separates mineral rights from surface rights, with mining companies conventionally negotiating land access agreements (50% of the royalty) rather than purchasing land outright.

We rule out the possibility of a toll treatment arrangement between SGQ and CBMM, given CBMM has its own strategic plans to expand niobium oxide from 3kt/annum to 20kt/annum by 2030.

In this update we reduce the risk of the project by 20% to 60% in total, in light of the accelerated drilling campaign and initial results demonstrating the potential for resource expansion and bulk tonnage mining, access to European capital markets, strategic relationships being developed with US firms, and strong support from the mining jurisdiction in Brazil. We also upgrade the base case Niobium and TREO mix base case price to US$45,000/t. Our other assumptions about the project development pathways, timelines and capex requirements remain unchanged.

Common to both the development scenarios our list of assumptions and associated rationale is as follows:

- **Commodity Price:** We take the FeNb-66 price at US$45K/t given the massive support it has had over the past few years. Given that FeNb, targeted towards steel industry, comprises of 88% of the demand the price outlook is expected to be more resilient to any downsides compared to Niobium Oxide, geared more towards battery performance improvements and speciality alloy manufacturing.

- Our **Beneficiation and Pyrometallurgical Recoveries** assumptions are based on a considerable conservative lower end of the beneficiation (60-65%) and pyro (90-95%) benchmark ranges for niobium processing to FeNb 66 product.

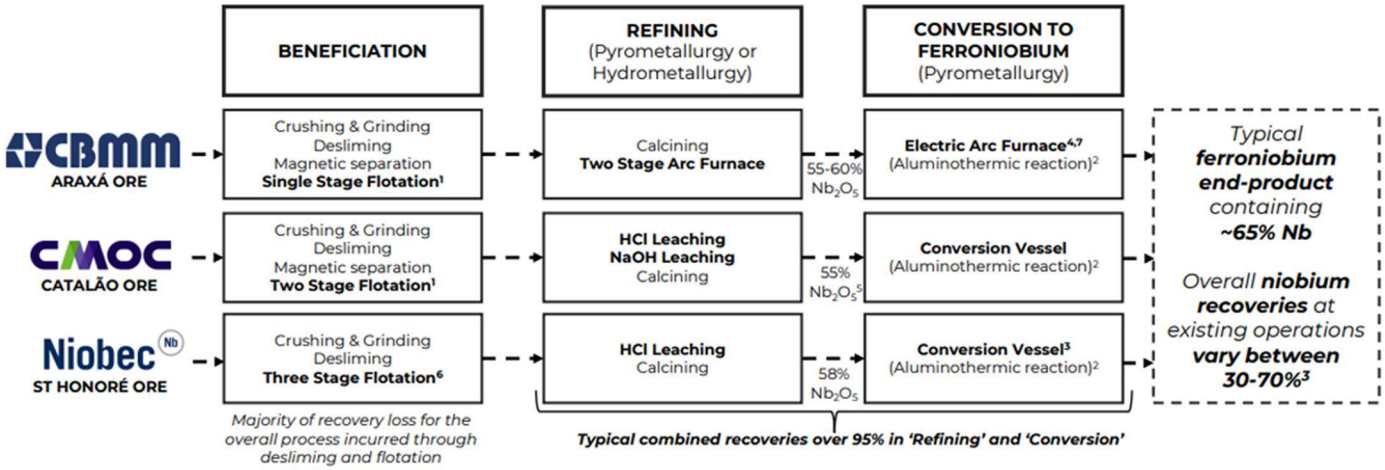


Figure 1.2 - Ferroniobium Recovery FlowSheet

- **Mining and Processing Cost** assumption of US$28.1/t ROM represent the conservative end of a operation that involves free digging, concentration and pyrometallurgical processing in Brazil, relevant to the both the Development pathways. The mining and processing costs have been increased by 1.5x to have a conservative figure for inclusion of TREO products in the processing output given the remarkable exploration outcomes.

- **Resource Growth:** We assume that SGQ will be able to increase its resource base from 41.2Mt at 0.68% Nb_2O_3 to 124Mt while maintain little to no grade loss overall at 0.68%. We find this reasonable given the frequency (500+) of high grade >1% intercepts that SGQ has reported for its maiden MRE, the deposit being open along strike and depths, and only being drilled to 100m depths at the time of reporting. This resource size is sufficient to sustain the operation at our planned rate of 23 yrs.

- We assume **Prioritization of High Grade** at 1% Nb_2O_5 in the first 8 years, producing at an average rate of 0.65% Nb_2O_5 thereafter. The initial project ramp up will be 3 years.

- **Royalties and Land Access** we estimate the state royalties at 6% of the revenues. Conventionally mining companies in Brazil negotiate land access agreements (50% of the royalty) rather than purchasing land outright

- **Sustaining Capital Expenditure** of 5% of the Initial Capex per year has been assumed.

- **Project Finance Assumptions:** We assume SGQ will be able to secure project finance for 75% of the initial capex at 10% interest rate. We also assume that the 25% of the initial capex will have to be raised through equity, which SGQ will be able to through one capital raise at A$0.20/sh (A$75M under standalone development & A$57M under an opportunistic acquisition).

Assumptions Used in SGQ DCF Valuation		
Particular	**Assumptions**	
Niobium and REE Basket Price	US$45,000/t	
Discount Rate	8%	
Royalties	6%	
Land Access Fee	3%	
Resource at FID	124Mt at 0.68% Nb_2O_3	
Niobium Beneficiation Recovery	60%	
Niobium Pyrometallurgical Recovery	85%	
Sustaining Capital Expenditure	5% of the Initial Capex per year	
SG&A	US$10M/yr	
Particular	**Standalone Development**	**Opportunistic Acquisition**
Initial Capex	US$200M	US$150M
Production Start Year	2030	2028
Mining and Processing Cost (ROM)	US$28.1/t	US$28.1/t
Incremental Capex for 5Mtpa ROM	US$60M	US$60M
Incremental Capex Year	2035	2033

Table 1.2 - DCF Assumptions Summary

1.4 Valuation Analysis

The development pathways generate NPVs of A$2.87-2.97B at IRRs of 68%-84% given the timing and quantum of cashflows. In both the cases we see exceptional unit economics, and the ability to payback within 2 yrs of production.

Standalone Development Pathway

If SGQ takes this pathway for the project, it will be able to start production from 2030 to the tune of 10ktpa Nb-TREO mix, generating an EBITDA of US$319M/yr. In 2035, 5yr into production it will invest another US$60M to increase production to 15ktpa REE mix, generating US$479M/yr in EBITDA. Over the longer horizon the focus will shift to lower grades in order to optimise the mine life, reducing output to 20ktpa for the then EBITDA of US$267M/yr. This development pathway has an NPV of A$2.87B and an IRR of 68% at our base case Niobium basket price of US$45,000/t, 55% risked valuation of A$0.31/share, a 3.1x upside from current A$0.094/sh.

Selected Case: Standalone Development	Units	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E	2038E	2039E	2040E
Ore Mined	MTPA			-	-	1.0	2.5	3.0	3.0	3.0	3.0	4.0	4.5	4.5	4.5	4.5
Niobioum and TREO	Kt			-	-	5	12	15	15	15	15	20	22	22	22	22
Payable Niobium and TREO	Kt			-	-	3	8	10	10	10	10	13	15	15	15	15
Revenue	US$M			-	-	148	370	444	444	444	444	591	665	665	665	665
COGS	US$M			-	-	(28)	(70)	(84)	(84)	(84)	(84)	(112)	(127)	(127)	(127)	(127)
Royalties and Land Access	US$M			-	-	(13)	(33)	(40)	(40)	(40)	(40)	(53)	(60)	(60)	(60)	(60)
EBITDA	US$M			-	-	106	266	319	319	319	319	426	479	479	479	479
Operating Cashflow	US$M			-	-	74	186	232	239	241	240	320	362	363	364	365
Growth Capex	US$M			(50)	(100)	(50)	-	-	-	-	(60)	-	-	-	-	-
Sustaining Capex	US$M			-	-	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
Free Cash Flow	**$M**	**-**		**(50)**	**(106)**	**4**	**181**	**226**	**229**	**231**	**170**	**310**	**352**	**353**	**354**	**355**

Discount rate	8%
Net Present Value, US$M	1,910
Project IRR	68%
NPV, A$M	2,865
NPV, (55% risked)	1,289
Implied Share Price, A$	0.31
Implied Upside	3.3x

Share Sensitivity

Disc \ FeNb 66 US$/T	28,800	36,000	45,000	54,000	64,800
6%	0.11	0.23	0.39	0.55	0.74
7%	0.09	0.21	0.35	0.49	0.66
8%	0.08	0.18	0.31	0.44	0.59
9%	0.07	0.16	0.28	0.39	0.53
10%	0.06	0.15	0.25	0.35	0.48

NPV Sensitivity

Disc \ FeNb 66 US$/T	28,800	36,000	45,000	54,000	64,800
6%	972	2135	3589	5043	6788
7%	863	1903	3203	4503	6064
8%	765	1698	2865	4032	5433
9%	677	1518	2569	3620	4882
10%	598	1359	2309	3259	4400

Figure 1.3 - Standalone Development Summary

Opportunistic Acquisition Case

We see similar set of metrics for the Opportunistic Acquisition Case but for a lower initial capex by US$50M and the cashflows starting 2 years earlier than the Standalone case. This development pathway has an NPV of A$2.97B and an IRR of 84% at our base case niobium price desk of US$45,000/t, 55% risked valuation of A$0.33/share, a 3.5x upside from current A$0.094/sh.

Selected Case: Opportunistic Acquisition	Units	0E	0E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E	2038E
Ore Mined	MTPA			-	-	1.0	2.5	3.0	3.0	3.0	3.0	4.0	4.5	4.5	4.5	4.5
Niobioum and TREO	Kt			-	-	5	12	15	15	15	15	20	22	22	22	22
Payable Niobium and TREO	Kt			-	-	3	8	10	10	10	10	13	15	15	15	15
Revenue	US$M			-	-	118	296	355	355	355	355	473	532	532	532	532
COGS	US$M			-	-	(28)	(70)	(84)	(84)	(84)	(84)	(112)	(127)	(127)	(127)	(127)
Royalties and Land Access	US$M			-	-	(11)	(27)	(32)	(32)	(32)	(32)	(43)	(48)	(48)	(48)	(48)
EBITDA	US$M			-	-	80	199	239	239	239	239	318	358	358	358	358
Operating Cashflow	US$M			-	-	74	191	236	240	240	239	320	361	362	364	364
Growth Capex	US$M			(38)	(75)	(38)	-	-	-	-	(60)	-	-	-	-	-
Sustaining Capex	US$M			-	-	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)
Free Cash Flow	**$M**	**-**		**(38)**	**(80)**	**(6)**	**117**	**149**	**151**	**152**	**91**	**205**	**233**	**234**	**235**	**235**

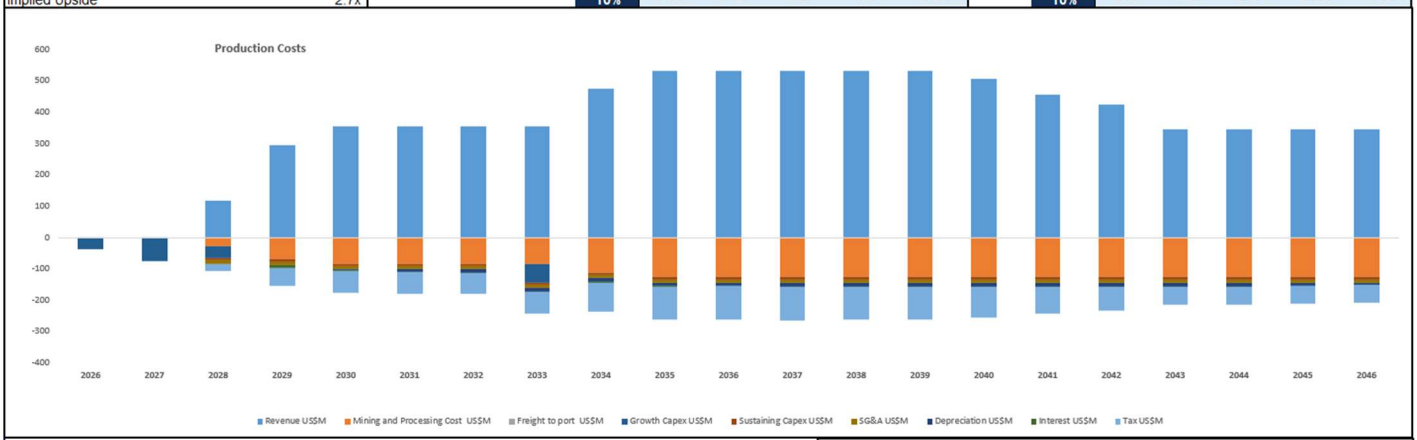
Discount rate	6%
Net Present Value, US$M	1,503
Project IRR	61%
NPV, A$M	2,254
NPV, (55% risked)	1,014
Implied Share Price, A$	0.25
Implied Upside	2.7x

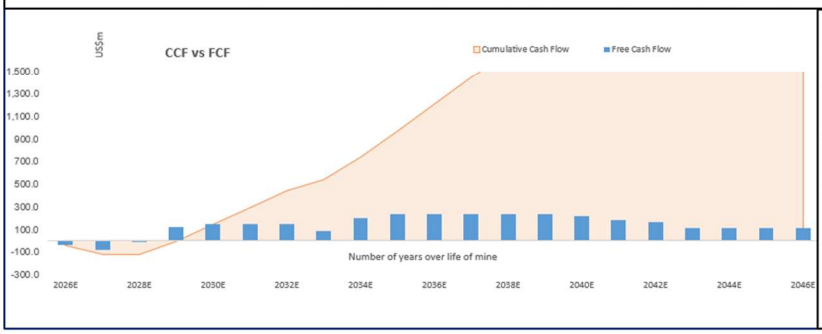
Share Sensitivity

Disc	FeNb 66 US$/T 28,800	36,000	45,000	54,000	64,800
6%	0.12	0.25	0.41	0.57	0.77
7%	0.11	0.22	0.37	0.51	0.68
8%	0.10	0.20	0.33	0.46	0.61
9%	0.09	0.18	0.30	0.41	0.55
10%	0.08	0.16	0.27	0.37	0.50

NPV Sensitivity

Disc	FeNb 66 US$/T 28,800	36,000	45,000	54,000	64,800
6%	1091	2254	3708	5162	6907
7%	974	2014	3315	4615	6175
8%	870	1803	2970	4137	5538
9%	777	1618	2669	3720	4982
10%	693	1454	2404	3355	4495





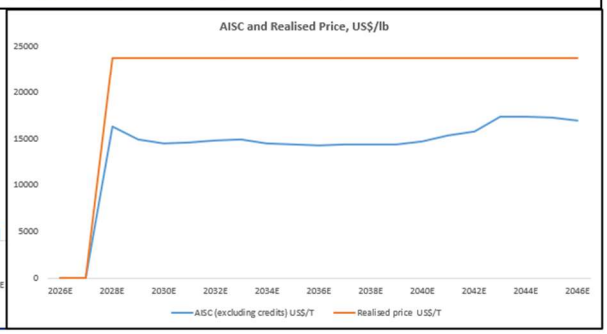


Figure 1.4 - Opportunistic Acquisition Summary

DCF Outcomes		
Parameter	**Standalone Development**	**Opportunistic Acquisition**
Initial Capex	US$200M	US$150M
Production Start	2030	2028
Niobium & REE Production	15ktpa (2032) -> 22ktpa (2037)	15ktpa (2030) -> 22ktpa (2035)
Mining and Processing Cost	US$28.1/Mt ROM	US$28.1/Mt ROM
First 5 Years Production	101kt FeNb and TREO	
Mine Life	40+ Yrs	
Steady State EBITDA	US$319M/yr (2032) -> US$479M/yr (2037)	US$319M/yr (2030) -> US$479M/yr (2035)
NPV	A$2.87B	A$2.97B
IRR	68%	84%
Implied Share Price (A$)	$0.31 (3.3x upside)	$0.33 (3.5x upside)

Table 1.3 - DCF Outcomes Summary

1.5 EV/Resource Valuation

We assess SGQ's comparable valuation from two lenses, (i) Niobium, which is the primary commodity of focus for SGQ, and the other (ii) TREO perspective, given the encouraging results from ongoing exploration.

SGQ's current resource trades at A$1,078/t Nb compared to its closest peer WA1 at A$509/t Nb. In our expansion case, SGQ trades more favourably at $359/t Nb – with recent strong drilling results and ~10% of the project being drilled underpinning confidence of a resource upgrade to ~124Mt while maintaining current grades of 0.68% Nb for 0.84Mt of total niobium. We reason SGQ compares favourably to Globe Metals, Niobay and NioCorp due to clear path to development.

We exclude CMOC (multi-commodity exposure) and CBMM (private company) from our comps analysis.

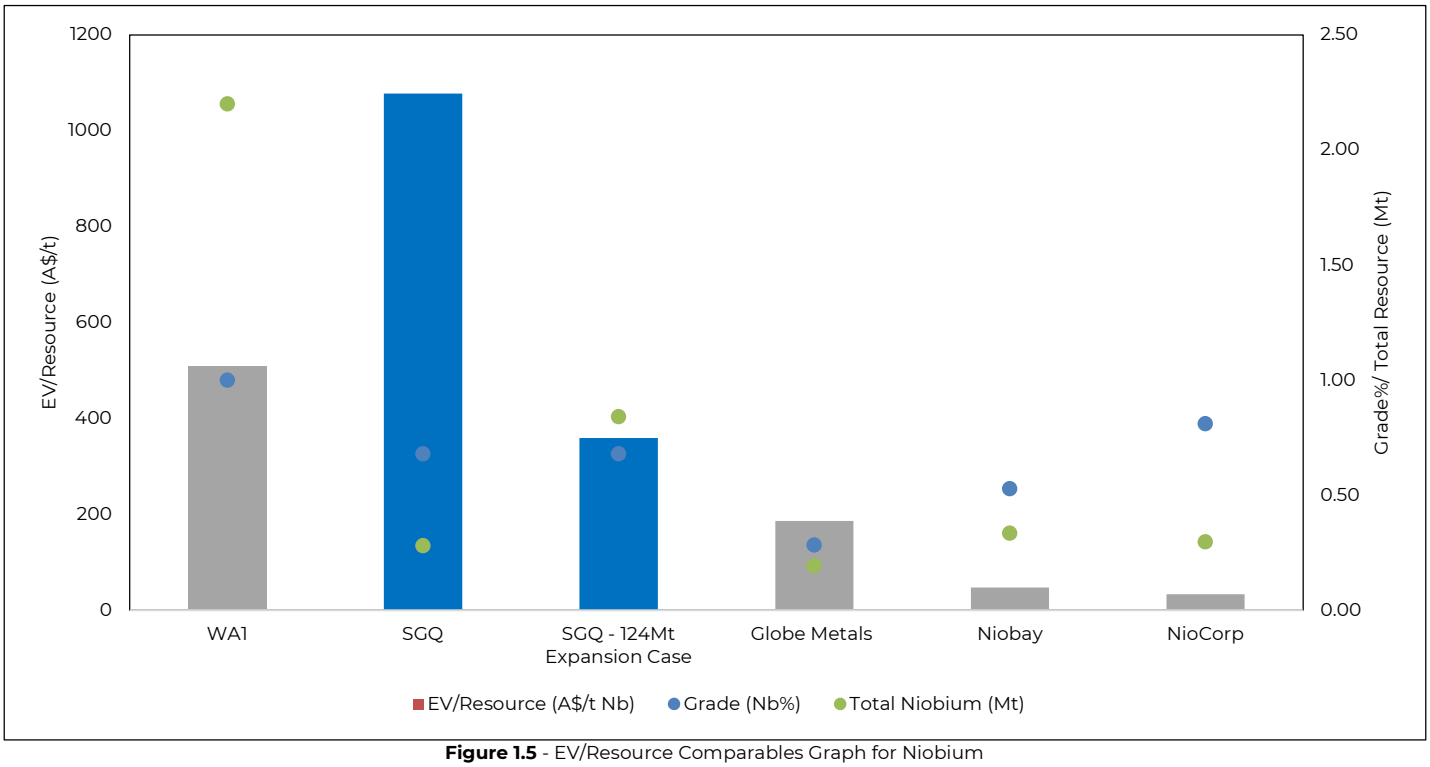


Figure 1.5 - EV/Resource Comparables Graph for Niobium

EV/Resource Comparables for SGQ (Niobium Only) *					
Company	**Total Resource (Mt)**	**Nb Grade %**	**Total Nb Tonnage (Mt)**	**EV (A$M)**	**EV/Resource (A$/Mt)**
WA1	220	1.00	2.20	1,119	509
SGQ	***41***	***0.68***	***0.28***	***302***	***1,078***
SGQ – 120Mt Expansion Case	***124***	***0.68***	***0.84***	***302***	***359***
Globe Metals	68	0.28	0.19	36	186
Niobay	64	0.53	0.34	16	48
NioCorp	37	0.81	0.30	1,230	34

Table 1.4 - EV/Resource Comparables for Niobium (*as of 8/12/25 – Resource Values as per 2024 Annual Reports)

On a broader TREO scope, we find a massive potential for re-rating for SGQ, from its current A$180/t TREO to be placed in between Lynas (A$2,648/t TREO) and Northern Minerals (A$2,420/t TREO) given its Grade and TREO tonnage. Feasibility decisions around TREO should trigger a massive rerating for SGQ, but for now we refrain from evaluations on that aspect.

EV/Resource Comparables for SGQ (TREO Considerations)*					
Company	**Total Resource (Mt)**	**TREO %**	**Total TREO Tonnage (Mt)**	**EV (A$M)**	**EV/Resource (A$/Mt)**
MP Materials	30	6.36	1.94	16,291	8,412
Lynas	110	4.28	4.69	12,422	2,648
Northern Minerals Limited	12	0.77	0.09	218	2,420
Hastings Technology Metals	21	0.90	0.19	131	697
Arafura	56	2.60	1.46	589	405
Ionic Rare Earths	617	0.07	0.41	62	152
Australian Strategic Minerals	75	0.74	0.56	81	146
Pensana	313	1.74	5.46	873	160
SGQ	***41***	***4.13***	***1.68***	***302***	***180***
Mkango Resources	524	1.02	5.34	309	58
Lindan Resources	261	2.14	5.59	515	92
American Rare Earths	2470	0.30	7.40	221	30
RareX Limited	524	0.31	1.63	26	16

Table 1.5 - EV/Resource Comparables for TREO (*EV Values as of 8/12/25 - Resource Values as per 2024 Annual Reports)

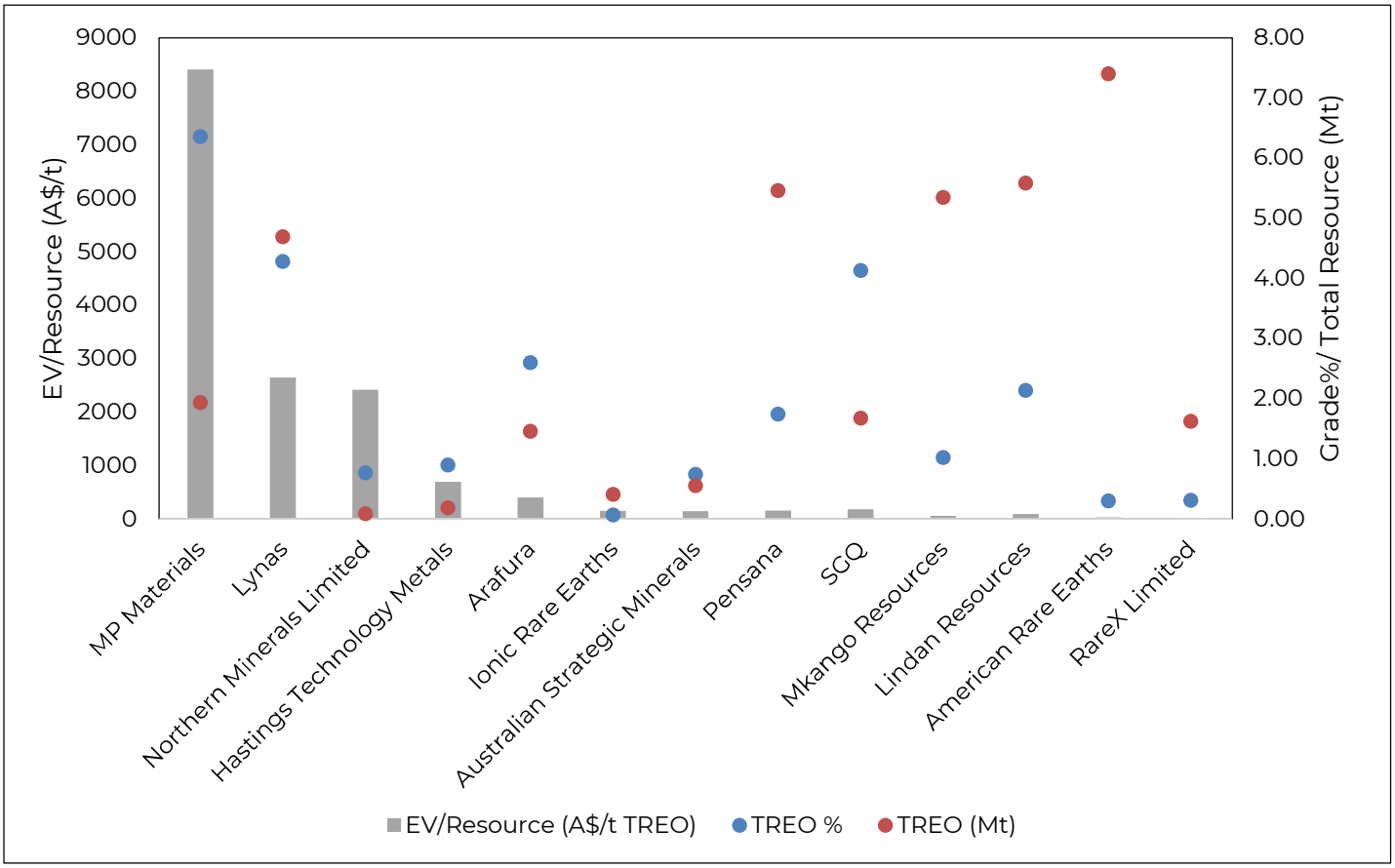


Figure 1.6 - EV/Resource Comparables for TREO (*as of 8/12/25 – Resource Values as per 2024 Annual Reports)

2. ST GEORGE MINING

2.1 Company Overview

St George Mining Limited (ASX:SGQ) is an emerging leader in critical minerals development, strategically focused on advancing its flagship Araxá niobium and rare earths project in Minas Gerais, Brazil. Shifting away from legacy commodities, SGQ has positioned itself at the forefront of the global supply chain for high-value materials essential to clean energy, advanced manufacturing, and technology sectors. The company's wholly owned Araxá project boasts a JORC-compliant resource of 41.2 million tonnes at 0.68% Nb_2O_5 and 4.13% TREO, placing it among the world's most significant undeveloped niobium and rare earth deposits.

2.2 Araxá

The Araxá project is located ~6km from the town of Araxá in Minas Gerais, Brazil's premier mining state and a globally recognized Tier 1 jurisdiction. Situated within the prolific Barreiro Carbonatite complex, the epicenter of global niobium production, Araxá stands at the heart of the world's most important niobium and rare earths district.

This region is responsible for over 80% of global niobium output, anchored by the neighboring CBMM Araxá mine, which has set the industry benchmark for more than half a century, and the Mosaic Araxá phosphate operation.

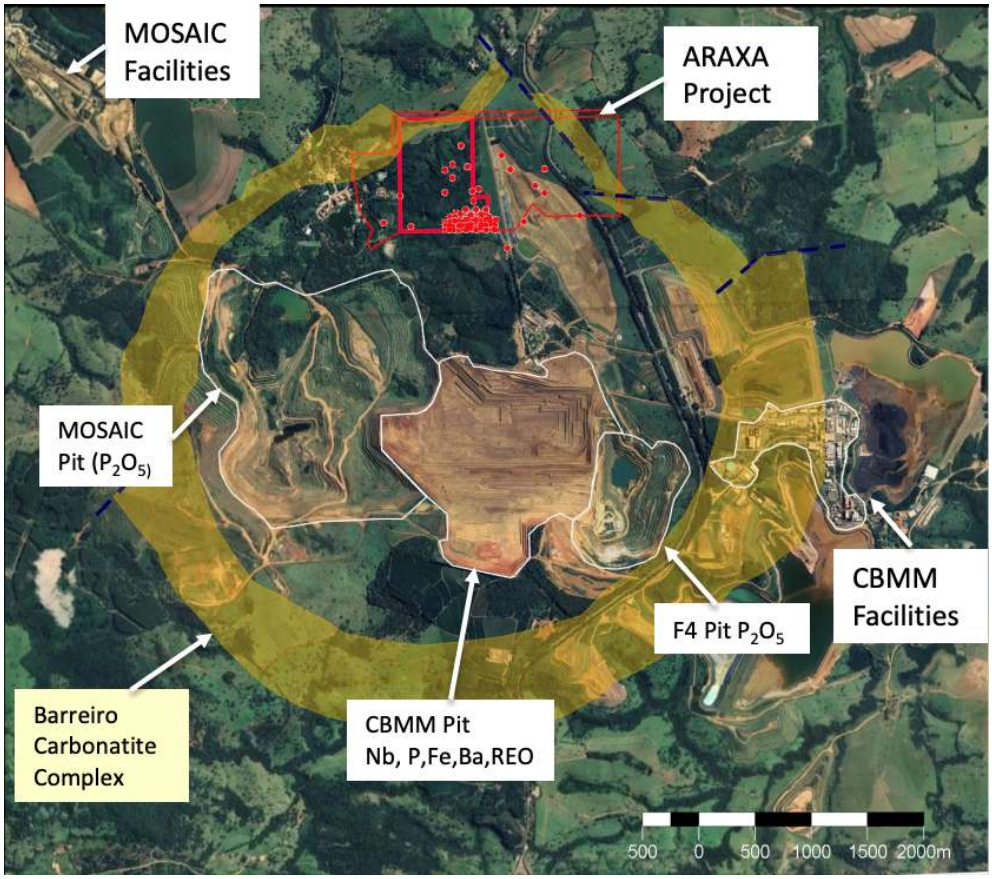


Figure 2.1 - Location of Araxá Project

Geologically, the deposits at CBMM are like SGQ's Araxá Project, both situated close to each other within the Barreiro Carbonatite, a carbonatite plug that has intruded country rock with ultra high-grade niobium in a near surface blanket of weathered ore. Further high-grade niobium is evident in deeper, primary (fresh) rock.

The similarity in the geology offers SGQ's deposit the advantage of leveraging a proven flotation and processing flowsheet that is already present at CBMM, alongside incorporating operational tweaks gathered by CBMM's team for productivity from the get-go. CBMM employs conventional, low-cost processing comprising wet grinding, magnetic-process separation and flotation to produce a concentrate of 60% Nb_2O_5 producing final products such as ferroniobium, niobium oxide and pure metal niobium.

Araxá's location also confers significant logistical and operational advantages. The project is seamlessly integrated into Brazil's most extensive mining infrastructure, with direct access to a vast road network, rail connections, and nearby deepwater ports, facilitating efficient export routes. The area benefits from reliable, low-cost renewable energy, and proximity to the regional hub of Belo Horizonte ensures a steady pipeline of skilled labor, technical services, and mining expertise.

Two of the project tenements are in the process of renewal and extension applications have been filed to the relevant approving authorities.

SGQ are now positioning Araxá for a substantial resource upgrade & conversion of inferred resources to indicated through step-out & infill drilling, with early results demonstrating the large resource that is yet to be discovered.

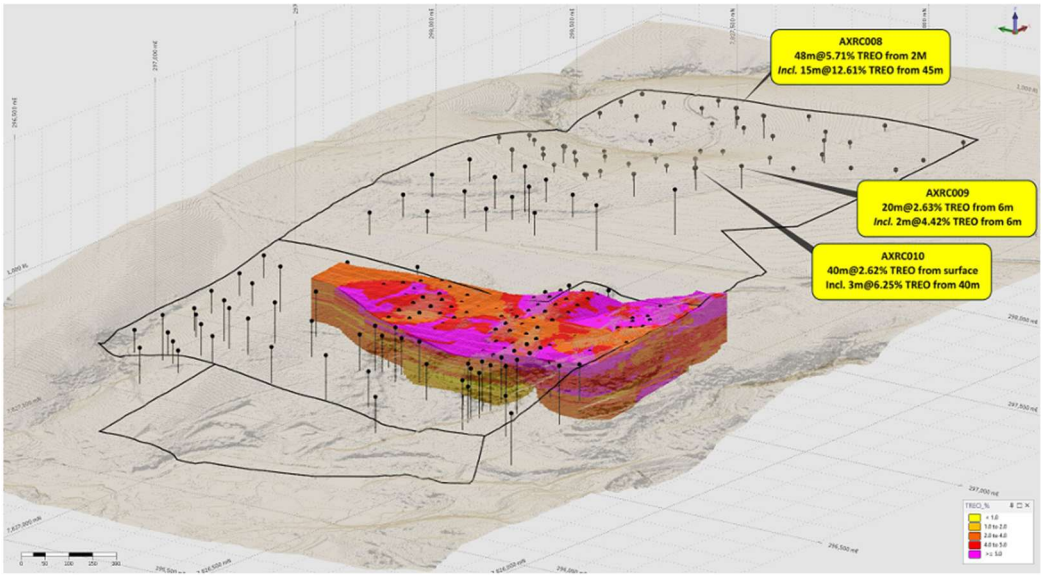


Figure 2.2 - Oblique Section of Planned Step-Out Drill Holes

3. GEOLOGY & RESOURCES

3.1 December 2025 Exploration Update

SGQ has been recently focused on step-out & infill drilling to increase the current MRE as well as upgrading a large portion of the inferred resource to indicated – which will improve the confidence of the resource for upcoming ore reserve definitions and feasibility studies.

In October, SGQ announced results from a drilling campaign that targeted extensions outside the current MRE. The step outs have been ~150-230m west & ~1km to the east of the MRE. This confirms the open nature of the carbonatite body, underpinning confidence of an increase in total MRE as further drilling proves up the resource. The following results occurred outside the current MRE at depths at or near surface:

- 98.4m @ 3.07% TREO and 0.43% Nb_2O_5 from surface inc. 10.4m @ 5.48% TREO and 0.48% Nb_2O_5 from 4.6m (230m west of current MRE)
- 87.7m @ 2.95% TREO and 0.41% Nb_2O_5 from 2m, inc. 70m @ 3.02% TREO and 0.43% Nb_2O_5 from 2m (150m west of current MRE), and
- 25m @ 4.42% TREO and 0.95% Nb_2O_5 from 25m inc. 11m @ 5.55% TREO and 1.29% Nb_2O_5 from 35m (~1km east of current MRE).

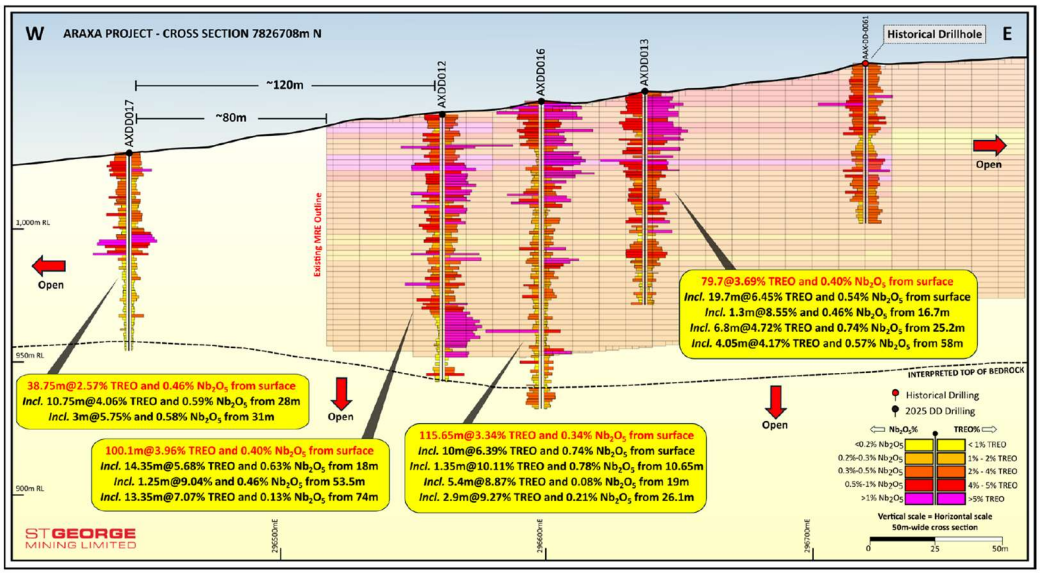


Figure 3.1 - Cross Section Detailing Extent of Step Out Holes

Recent infill drilling campaigns are also positioning Araxá for a resource conversion from inferred to indicated, with the following impressive results:

- 115.65m from surface at 3.34% TREO and 0.34% Nb_2O_5, inc. 10m @ 6.39% TREO and 0.74% Nb_2O_5 from surface (the thickest intercept at Araxá to date),
- 100m @ 3.96% TREO and 0.40% Nb_2O_5 from surface,
- 80.55m @ 5.44% TREO and 0.60% Nb_2O_5 from surface inc. 32.3m @ 9.13% TREO and 0.75% Nb_2O_5 from surface,
- 80.45m @ 5.19% TREO and 0.58% Nb_2O_5 from surface inc. 20.4m @ 7.13% TREO and 0.77% Nb_2O_5 from 56.6m, and
- 81.4m @ 3.23% TREO and 0.49% Nb_2O_5 from surface inc. 17.15m @ 3.68% TREO and 0.50% Nb_2O_5 from 30m.

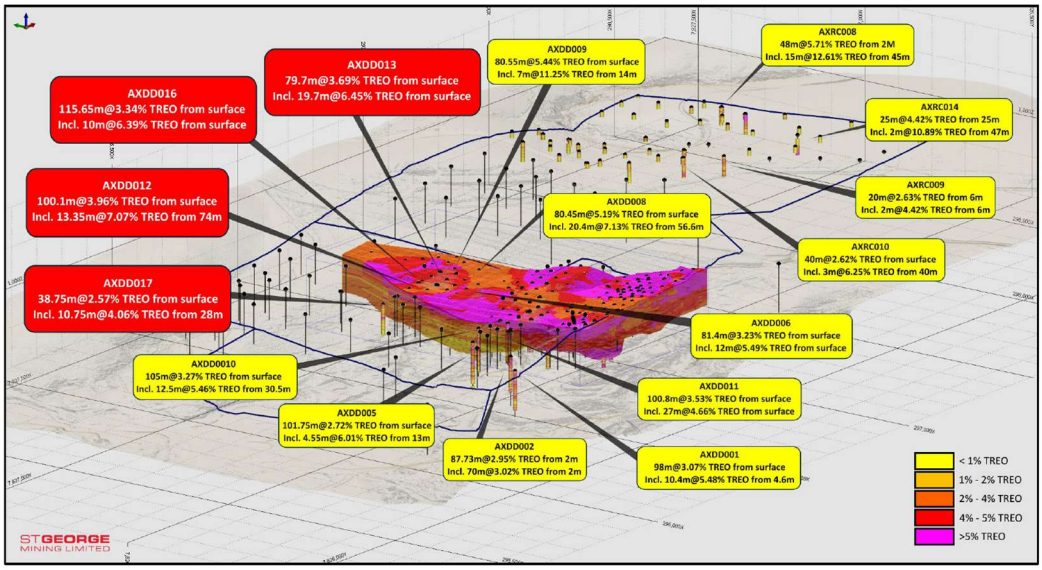


Figure 3.2 - Oblique Section Highlighting Recent Infill & Step Out Drill Holes

Recent drilling at Araxá has delivered broad, continuous high-grade rare earth and niobium intercepts that materially strengthen the geological model and confirm the project's exceptional grade continuity from surface. Closer-spaced drilling is also validating high-grade mineralisation across the full vertical profile, pointing to a meaningful increase in contained metal within the upcoming MRE. Importantly, the mineralisation remains magnet-REE rich, with a stable NdPr:TREO ratio of ~20%, reinforcing the project's strategic value.

Prior to October 2025, St George's shallow RC and auger drilling at Araxá confirmed thick, high-grade rare earth and niobium mineralisation from surface, including the newly discovered East Araxá zone. Intercepts included up to 48m at 5.71% TREO and 32m at 1.04% Nb_2O_5, with NdPr ratios up to 42%, and elevated heavy rare earths (Dy, Tb, Lu, Gd) and Samarium supporting strategic magnet applications. Niobium grades exceeded 2% over multiple intervals, while TREO intercepts consistently returned double-digit percentages from near surface.

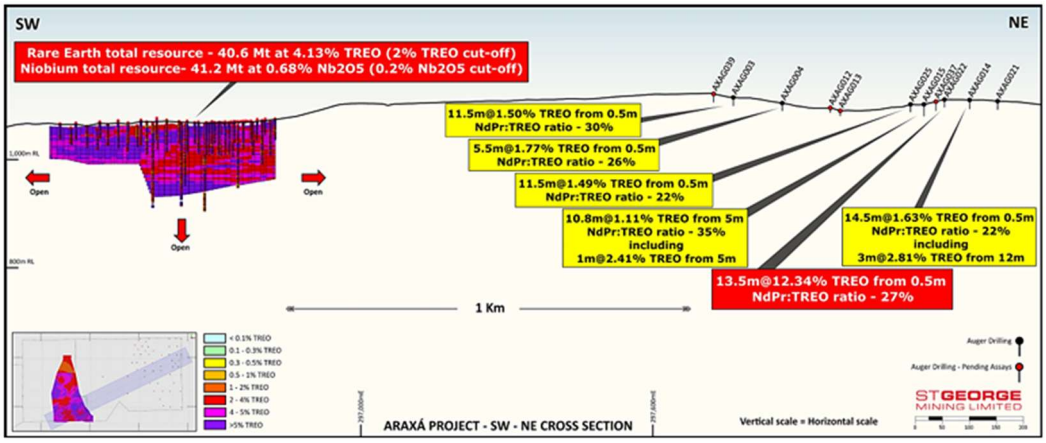


Figure 3.3 - Cross Section Highlighting Distance Between MRE & Recent Drill Results

Only ~10% of the project has been drilled, with mineralisation open in all directions and largely confined within 100m of surface, highlighting both the potential for substantial resource expansion and the prospect of a low-cost, free-digging shallow open-pit operation.

3.2 Resources and Reserves

The JORC compliant Resources and Reserves statement remains unchanged since our initiation in July, but we do expect to see massive increments given the discovery of South Araxá deposit, the ongoing aggressive exploration and interest in critical minerals. In summary, SGQ currently boasts of 280kt Niobium and 1.7Mt of TREO, one of the largest undeveloped rare earth resources in the world.

Niobium Resource- 41.2Mt at 0.68% Nb_2O_3 (6,800ppm of Nb_2O_5) comprising of at cut-off 0.2% Nb_2O_5		
Category	**Million Tonnes (Mt)**	**Nb_2O_5 (%)**
Measured	1.90	1.19
Indicated	7.37	0.93
Inferred	31.93	0.59
Total	**41.20**	**0.68**

Table 3.1 - SGQ Niobium MRE

TREO Resource - Cut-off 2% TREO			
Category	**Million Tonnes (Mt)**	**TREO (%)**	**MREO (%)**
Measured	1.90	5.44	1.04
Indicated	7.37	4.76	0.90
Inferred	31.37	3.90	0.74
Total	**40.64**	**4.13**	**0.78**

Table 3.2 - SGQ TREO MRE

4. PUSH FOR AN EXPEDITED DEVELOPMENT

The global mining industry is experiencing unprecedented momentum in 2025, driven by an urgent race to secure critical minerals and rare earth elements that power the clean energy transition, digital infrastructure, and modern defense systems. This movement represents more than a traditional commodity cycle—it reflects a fundamental reshaping of international trade, geopolitical alliances, and industrial strategy. The supply-demand imbalance is particularly acute leading to niobium's designation as a critical mineral by major economies.

SGQ has made a decisive and swift approach to the Araxá project to bring it to rapid production. In recent months, a binding acquisition agreement was made and the acquisition completed (3 quarters, 6 Aug 2024 – 27 Feb 2025) SGQ has

- Strategic Alliance with REAlloys USA
- Signed MoUs with Minas Gerais to expedite permitting
- Signed MoUs with SKI and Fangda for development and offtakes
- Signed EPC +F MoU with Xinhai, and
- Partnered with research institutes for a greener development.
- Poached talent from CBMM – CBMM ex senior executives Thiago Amaral and Adriano Rios, head of Mineral Processing, Chief plant engineer are now a part of SGQ

Strategic Alliance with REAlloys USA: In September, SGQ and REAlloys Inc entered into an agreement to advance commercialisation pathways for Araxá's high-grade rare earths into the US magnet and critical materials supply chain. REAlloys—an integrated producer of NdFeB and SmCo magnet materials serving US defence and protected markets—is in the process of listing on NASDAQ, positioning it as a significant downstream partner for SGQ. The alliance provides a framework for metallurgical collaboration, flowsheet optimisation and potential offtake agreements, leveraging Araxá's strategic location in Minas Gerais and its favourable development conditions.

Key Points of the Alliance:

- REAlloys Inc is a US producer of advanced magnet materials for defence, nuclear, robotics, aviation and critical infrastructure sectors.
- REAlloys brings proprietary metallisation and alloy technologies for NdFeB and SmCo magnets, including heavy rare earth metallisation capabilities.
- The alliance includes metallurgical test work on Araxá ore to maximise recoveries of high-value magnet REEs.
- Joint review of processing technologies and flowsheet optimisation to align with REAlloys' patented production methods.
- Collaboration on marketing strategies for rare earth products suited to magnet manufacturing.
- Framework established for definitive agreements, with the MOU lapsing if no offtake deal is reached within 120 days.
- Minas Gerais location offers SGQ fast-track development advantages including strong infrastructure, renewable power, skilled labour and shallow free-digging open-pit potential.

MoUs with Minas Gerais to expedite permitting: SGQ has strengthened its permitting pathway in Minas Gerais through a non-binding MoU with the State Government, designed to accelerate approvals for the Araxá Project. Combined with early commencement of environmental, heritage and technical studies, the company is positioning itself to achieve a materially faster permitting timeline than typical for the region, supported by advisors with a proven track record on major Brazilian mining projects.

Key points:

- **MoU with Invest Minas (Oct 2024)** to expedite regulatory approvals, with the State committing to fast-track permitting in recognition of SGQ's investment.
- Precedent from peers (e.g., **Latin Resources**) shows this pathway can cut approval times from 3–4 years to as little as **9 months**.
- **Environmental and cultural heritage studies already underway**, with submissions lodged targeting completion of permitting in **2026**.
- Appointment of **Alger Consultoriae**, a leading permitting advisor involved in projects for Sigma Lithium, Latin Resources and Meteoric Resources.
- **Downstream metallurgical testwork** initiated (March 2025) and resource expansion drilling underway (from May 2025) to support a major MRE upgrade during 2025.
- **Flowsheet development and pilot plant restart studies** in progress, with initial met testwork results expected **Q2 2025**.
- **Environmental, geotechnical and development studies** active, with an **economic study planned for Q4 2025**.

St George has broadened its strategic and technical backing through multiple MoUs covering engineering, financing, offtake optionality, and downstream processing, positioning the Araxá Project with strong development partners across the value chain. These alliances de-risk project execution, strengthen future funding pathways, and support the creation of a sustainable, Brazil-based rare earth and niobium supply chain.

Key points:

- **EPC+F MoU with Xinhai Group**, a major global mining services provider (2,000+ mines, 100+ countries), covering engineering, procurement, construction and financing at a fixed price; Xinhai also invested **A$8M** in SGQ's A$20M equity raise for the acquisition.
- **MoUs with Liaoning Fangda and SKI Hong Kong** to collaborate on project development and potential offtake arrangements, with ongoing discussions underway with multiple strategic investors.
- **Partnerships with EMBRAPII and SENAI/FIEMG**, Brazil's leading government-funded research institutions, to develop sustainable processing routes for ferroniobium and rare earth products.
- **Cost-sharing R&D structure:** EMBRAPII (50%), SENAI (10%) and SGQ (40%), with SGQ receiving **exclusive commercialisation rights to all co-developed IP for 10 years** at zero royalty.
- **Collaboration with SENAI on rare earth magnet production**, including operation of the Araxá pilot plant and plans to produce **100 tpa of permanent magnets**, with capacity targeted to double within three years.

4.1 Other Competing Development Stage Projects

WA1's Luni deposit represents the most significant niobium discovery in over 70 years, with 220 Mt at 1.0% Nb_2O_5 containing 2.2Mt of niobium. However, despite the scale of the resource, the project remains at an early stage with several technical, logistical and permitting hurdles to be addressed before development can advance.

Key Challenges:

- **Resource Confidence is Still Low:**
  - Entire resource remains in the *Inferred* category.
  - Requires substantial infill drilling and resource definition before moving to scoping or feasibility studies.
- **Remote Location Challenges:**
  - Situated ~490 km from Halls Creek and >600 km from the nearest operating mine.
  - Necessitates greenfield infrastructure including roads, power generation, communications, and water supply.
  - Infrastructure buildout alone could add 2–3 years to the development timeline.
- **Permitting and Approvals Risk:**
  - Development in previously undeveloped terrain likely to trigger extended environmental approvals.
  - Native title processes may add additional time and complexity.
  - Remote location sets a slower baseline for regulatory and logistical progression.
- **Timeline Expectations:**
  - No definitive production targets released by the company to date.
  - Based on current maturity and required workstreams, first production appears unlikely before the early 2030s.

Globe Metals' Kanyika project (Malawi) benefits from a completed definitive feasibility study but faces development and execution risks. Infrastructure, jurisdictional, and funding constraints are key factors that could delay project progress.

Key considerations:

- **Jurisdictional Challenges:**
  - Malawi is a nascent mining jurisdiction with limited precedent for large-scale critical minerals production.
  - Regulatory and operational uncertainty adds execution risk.
- **Infrastructure Requirements:**
  - Significant development needed, including construction of a refinery pilot plant to produce marketing samples for offtake agreements.
- **Funding Constraints:**
  - Project financing has been difficult to secure, creating potential delays in development.
- **Timeline Risk:**
  - One-year extension granted to September 2025 to commence substantial development, reflecting ongoing execution challenges.

For **NioCorp's Elk Creek** project in Nebraska, while benefits from U.S. jurisdiction and critical mineral policy support, it faces extended timelines due to its focus on producing multiple products (ferroniobium, scandium oxide, titanium, rare earth oxides), adding to technical complexity and extended development timelines beyond 15 years.

In essence, St George Mining's (SGQ) Araxá project emerges as the clear frontrunner in the race to market, and we estimate that with all aforementioned factors in its favour, it can target production as early as 2028 through an innovative two-pathway development strategy.

4.2 Project Risks

Execution and Development Risks

- **Granting of Authorisations:** Two mining concession applications and one exploration permit remain pending. Delays or onerous conditions in grant of an Environmental Licence (LP), Installation Licence (LI) or Operations Licence (LO) could defer exploration and development.
- **Land Access and Community:** All tenements lie on private land owned by CODEMIG and CBMM; new access agreements are required for drilling and mining. Failure to secure timely land-use approvals or comply with municipal preservation-zone restrictions may interrupt operations.

Regulatory and Political Risks

- **Environmental Approvals:** Portions of Araxá are designated as water-resource and vegetation preservation zones, requiring additional clearances. There is no guarantee approvals will be granted on acceptable terms, potentially limiting orebody conversion.
- **Policy Volatility:** Although Brazil and Minas Gerais are pro-mining, shifting state or federal environmental regulations, ANM resolutions or heritage mandates could impose unexpected conditions or delays.

Financial and Capital Risks

- **Capital Raising and Dilution:** With ~A$5 million cash at April 2025 and ongoing drilling, SGQ must secure further equity or debt to fund exploration, metallurgical work, pilot plant and permitting. Any equity raise will dilute current shareholders; debt may carry restrictive covenants.
- **Cash Burn:** A cash runway under 12 months exposes SGQ to liquidity risk unless funding is arranged or spending curtailed.

Operational and Technical Risks

- **Exploration Uncertainty**: Only ~10% of the Araxá tenement has been drilled. Further drilling may not extend high-grade zones or convert Inferred resources to Indicated/Measured categories, jeopardizing mine planning and economics.
- **Metallurgical and Process Risk:** While geology parallels CBMM's adjacent operation, SGQ's metallurgical recoveries for both niobium and TREO remain untested at scale. Pilot-plant outcomes may differ from expectations, affecting capital and operating costs.

Market and Commodity Risks

- **Niobium Price Volatility:** Global niobium pricing is tightly controlled, 80% by CBMM. Price fluctuations or substitution by vanadium or tantalum could erode project margins and offtake appetite.

- **REE Market Dynamics:** TREO markets are subject to Chinese export quotas, downstream processing bottlenecks and rapidly evolving magnet-grade supply chains. Demand forecasts may shift, impacting TREO valuation.

Jurisdictional and Geopolitical Risks

- **Foreign Ownership Constraints:** Brazilian law caps foreign mining ownership at 70%. While SGQ holds 100% of Araxá, future joint ventures or financing structures could be constrained by local-ownership requirements.
- **Infrastructure and Supply Chain:** Although Araxá benefits from existing roads, rail links and renewable power, regional equipment imports, port congestion and competition for skilled labour may delay construction or ramp-up.

5. CONCLUSION

St George Mining offers one of the most leveraged exposures to the surging demand for niobium and rare earths. Its Araxá Project combines Tier-1 geology, near-surface mining conditions, and a strategic location beside CBMM's world-leading operation in Brazil. With robust economics (NPV A$2.87–2.97B, IRR 68–84%) and first production targeted by 2028, SGQ stands positioned to emerge as a key Western supplier of critical minerals. We reaffirm our Speculative Buy rating with a 12-month target price of A$0.31/sh and view the stock as one of the most asymmetric critical-minerals opportunities on the ASX.

6. MANAGEMENT

St George Mining's Araxá project is led by a cohort of former CBMM experts and seasoned executives, and a mix of technical, operational and strategic funding skillset.

Thiago Amaral, Director – ESG & Technical Development
A 17-year CBMM veteran, he spearheaded sustainability, ISO certification, environmental licensing, and product-specification systems. Holds a Master's in Mechanical Engineering and an MBA; PhD in Materials Engineering in progress.

Adriano Rios, Director – Mining Operations
With 23 years at CBMM's Araxá mine, he managed block-caving transition and achieved >94% niobium recoveries. His expertise ensures optimized mine planning and execution.

Caue (Paul) de Araujo, Director – Corporate Development
Former Global GM (Mine Finance) at Palaris and Regional Director at Hatch, he structures project financing and offtake deals, leveraging global capital markets networks.

Wanderly Basso, Senior Exploration Geologist
Brazilian-trained, with end-to-end experience in geological modelling, resource estimation, and metallurgical testwork, he drives rapid resource expansion.

Carlos Alberto de Araujo, Consultant – Plant Engineering
Led design and commissioning of CBMM's advanced flotation and magnetic separation plant, accelerating Araxá's processing flowsheet development.

Ricardo Maximo Nardi, Consultant – Mineral Processing
Over 30 years at CBMM, he pioneered pilot-scale flotation and reagent optimization to consistently deliver 60%+ Nb_2O_5 concentrate grades.

Adolfo Sachsida, Board Advisor
Ex-Brazilian Minister of Mines & Energy, his deep regulatory insight and federal connections expedite approvals and government engagement.

Alger Consultoria, Permitting Advisor
Specialists in Brazilian environmental and heritage licensing, guiding compliance with ANM regulations and municipal preservation-zone requirements.

7. NIOBIUM MARKET OUTLOOK

Supply

Niobium supply is highly monopolistic, with only three producers of Niobium in the world. The biggest producer is CBMM at 80% of the global supply, based out of Minas Gerais and a neighbour to SGQ. CMOC supplies 11% of global output out of Goias, Brazil and Niobec the remaining 9% from Quebec, Canada.

In the short term (2025–2027), incremental increases will stem from capacity expansions at existing Brazilian operations (including a planned 3ktpa niobium oxide line to serve battery markets) and the commissioning of the first U.S. primary processing facility at Elk Creek, Nebraska, projected to add about 5.8ktpa of ferroniobium once financed and built. Meanwhile, Africa's maiden niobium project at Kanyika in Malawi is slated for 2026 start-up, targeting 3.25ktpa of Nb_2O_5, and Dubbo in Australia aims to contribute nearly 2ktpa of FeNb by around 2028. Early-stage Canadian projects such as James Bay and Crevier offer prospective supply but remain years from production.

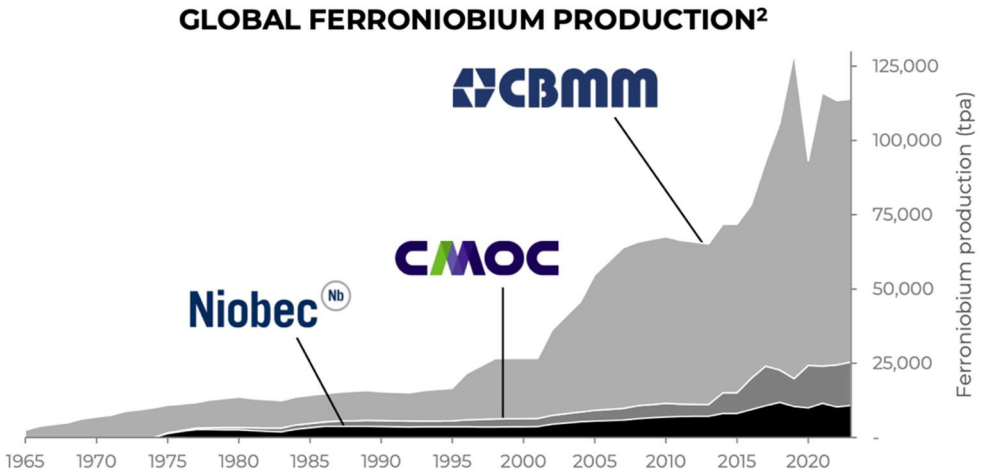


Figure 7.1 - Historical Global Ferroniobium Production

By the mid-term (2028–2030), these new mines and processing facilities could raise global output to meet demand. However, lengthy permitting, financing and construction timelines mean that concentrated Brazilian supply will still dominate, and nascent recycling efforts (< 20% recovery) are unlikely to materially offset primary production constraints. This near-duopoly within Brazil (CBMM + CMOC) creates single-country and single-company concentration that exacerbates supply risk from operational disruptions or policy changes. Current recycling rates for niobium (<20%) are minimal, offering little near-term relief from primary supply constraints.

However, world niobium mine production has plateaued at around 110 kt per annum (2023–2024), almost entirely sourced from Brazil (~92%) and Canada (~7%). With demand set to exceed supply by approximately 7kt in 2025, and by over 78kt by 2030 if production remains unchanged—a substantial supply gap is forecast in both the short and midterm.

7.1 Niobium Demand: The Building Block of Today's and Tomorrow's World

Niobium is produced into Ferroniobium and Niobium oxide. Ferroniobium comprises 88% of the demand for this rare earth element.

Current Steel Use

Ferroniobium is used in the steel industry to deliver performance improvement through creation of stronger, lighter, corrosion and heat-resistant steel ideal for tougher applications such as pipelines, automobiles, structural steel in construction and military equipment. Adding as little as 0.02% niobium to steel can increase its strength by up to 30%, enabling lighter, more fuel-efficient military vehicles, aircraft, and naval vessels, as well as corrosion-resistant pipelines and bridges. In aerospace and hypersonic applications, vacuum-grade niobium's exceptional thermal stability (withstanding temperatures above 2,400 °C) and low density are critical for heat-resistant superalloys in turbine blades, missile airframes, and spacecraft components, capabilities that no substitute metal can match.

EV Use

Niobium oxide is produced through further refinement of ferroniobium, and is used in Batteries, MRI equipment, optical lenses, superconductive magnets, aerospace and defence applications.

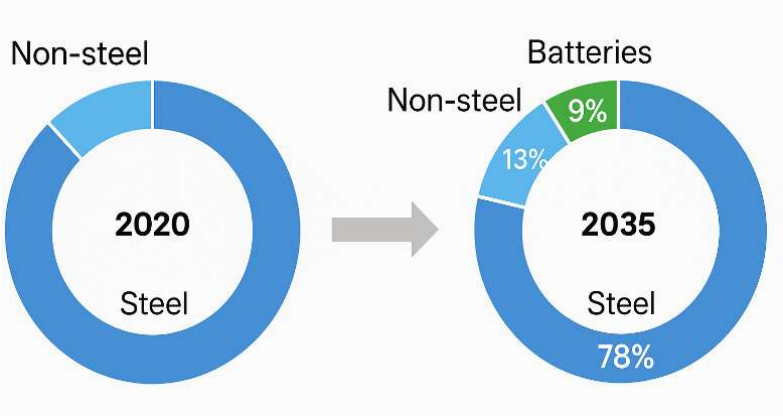


Figure 7.2 - Ferroniobium Industry Use Projections (Source: SFA Oxford)

Niobium's incorporation into lithium-ion battery electrodes is poised to unlock ultra-fast charging and extreme durability. Niobium-doped cathode and anode materials improve ionic conductivity, thermal stability, and structural integrity, enabling:

- 6-minute full charging in EV concept cars (Nyobolt) and heavy-duty vehicles (VW Trucks)
- Over 20,000 fast-charge/discharge cycles with minimal capacity fade (TNO-SCIB)
- 10× longer battery life and smaller cell form factors for enhanced power density

By 2030, forecasts suggest niobium oxide demand from battery applications could rise from under 5% of total niobium demand today to over 15%, reflecting its strategic importance in both decarbonizing transportation and fortifying global supply chains.

7.2 Demand Trend

The total global niobium consumption reached approximately 105.8kt of niobium content in 2024 and is projected to climb to about 117.45kt in 2025, growing at a near-10% CAGR through 2030 to reach 188.47kt.

In the short term (2025–2027), demand will be driven predominantly by high-strength low-alloy (HSLA) steels—accounting for roughly 57–77% of total consumption for use in automotive lightweighting, construction, pipelines, and infrastructure projects owing to niobium's capacity to increase steel strength by over 30%. Superalloys for aerospace and defense comprise about 21–43% of demand, enabling high-temperature turbine blades, rocket components, and nuclear reactor internals thanks to niobium's heat resistance and corrosion resistance. Emerging applications in next-generation batteries (niobium oxides in fast-charging, high-life EV cathodes) currently contribute under 5% of volume but are expected to accelerate as manufacturers commercialize battery-grade Nb_2O_5 for energy storage. Superconducting materials (niobium-titanium and niobium-tin alloys) for MRI scanners, research magnets, and future quantum devices represent under 3% of volume but remain strategically important.

Mid-term demand (2028–2030) will see diversification: widespread adoption of niobium in solid-state and advanced lithium-ion batteries, expansion of niobium-enhanced pipelines in energy transition infrastructure, and growth in superconducting grid applications. By 2030, steel and superalloys will still constitute over 85% of volume, but battery and superconducting segments combined may approach 15% of total consumption.

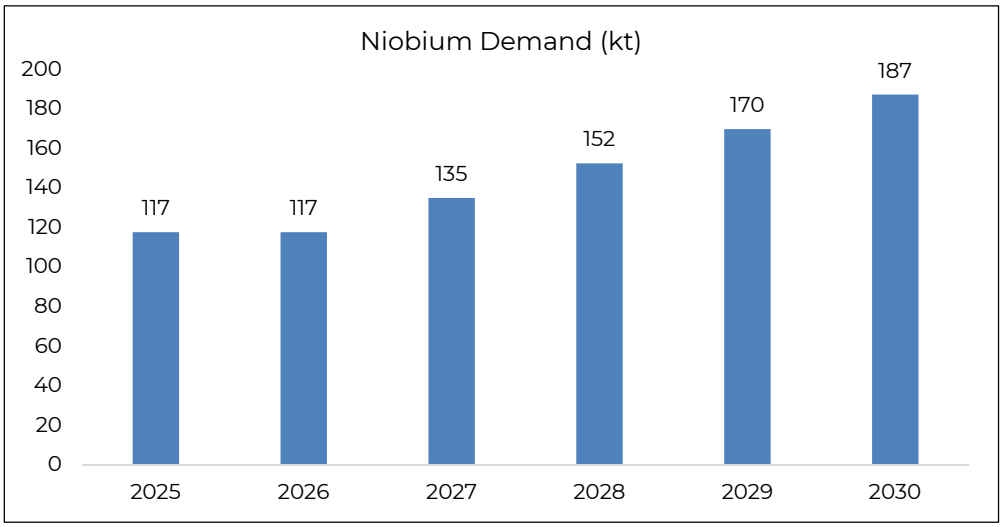


Figure 7.3 - Niobium Demand Projections (Source: Mordor Intelligence)

7.3 Niobium: A Universe of Strategies

Chinese Steelmakers

China has aggressively secured niobium supply to underpin its steel industry's shift to high-performance micro alloyed steels such as in April 2016 when CMOC paid Anglo American US$1.5B for 100% of its niobium and phosphate business in Brazil, and earlier in 2011 when Chinese steel consortiums paid US$1.95B for 15% equity in CBMM.

Beyond equity investment, CITIC Metal has served as CBMM's exclusive 30-year distributor in China, driving adoption of niobium microalloying technology across major steel mills (e.g., Baowu, Ansteel, TISCO), thereby growing China's niobium-bearing steel output to over 90 million tpa and accounting for more than one-third of global consumption.

Ex-China Steelmakers

Outside China, major steelmakers have similarly pursued minority interests in CBMM to de-risk supply. In March 2011, a Japanese–Korean consortium comprising JFE, Nippon Steel, Sojitz, POSCO and Japan Oil, Gas & Metals National Corporation paid US $1.8 billion for a 15% CBMM stake. These strategic partnerships grant downstream producers preferential pricing and technical support for integrating niobium into high-strength, low-alloy (HSLA) steels.

EV Manufacturers

The rapid uptake of electric vehicles has catalysed alliances to tailor niobium chemistry for next-generation batteries. CBMM has entered joint development agreements with leading OEMs and battery innovators:

- Volkswagen Caminhões e Ônibus partnered with CBMM to integrate niobium-oxide-enhanced anodes for ultra-fast charging electric trucks, targeting sub-10-minute recharge times and improved cycle life.

- Nyobolt and Williams Advanced Engineering have collaborated on niobium-based lithium-ion batteries capable of six-minute full-charging and over 2,000 fast cycles without degradation, addressing high-power demands in motorsport and commercial EVs.

- Toshiba's Titania-Niobium oxide (TNO-SCIB) battery, developed with CBMM's support, demonstrated 350 Wh/L energy density and retained 80% capacity after 25,000 cycles, exemplifying niobium's role in prolonging battery lifespan and safety.

Critical Mineral for Defence

Niobium is designated a critical and strategic mineral by the U.S. government due to its indispensable role in enhancing the performance of high-strength, low-alloy (HSLA) steels and superalloys used across defense and infrastructure sectors.

The U.S. Department of Defense's recent multibillion-dollar public-private partnership with MP Materials, operator of the Mountain Pass rare earths mine, exemplifies the Pentagon's strategic shift toward securing domestic supply chains for critical minerals, including but not limited to niobium analogues in rare earth magnets. Under the agreement,

- DoD will purchase $400 million of convertible preferred stock (acquiring an effective 15% equity stake), provide a 10-year price floor of $110/kg for neodymium-praseodymium oxides, and

- Commit to offtake 100% of magnet output from the "10X Facility" (10,000 t/year capacity) once it begins commissioning in 2028.

This partnership not only de-risks front-end capital for U.S. magnet manufacturing, vital for fighter jets, drones, and precision guidance systems, but also serves as a template for future DoD engagements to underwrite domestic production of other strategic materials such as niobium oxide, as seen in parallel funding for Global Advanced Metals' niobium oxide facility in Pennsylvania ($26.4 million) to re-establish U.S. output after a 30-year hiatus.

On a side note, REEs are also increasingly attracting attention for magnet applications, with REEs such as neodymium, praseodymium, terbium and dysprosium essential for high-capacity computer hard drives, EV motors, robotics and military equipment. The REE supply chains are dominated by the Chinese, producing up to 60% of the global REEs and handling 90% of the processing capacity.

Equipment	Rare Earths Used (kg)	Application Examples
F35 Fighter Jet	418	Guided missiles, lasers
Arleigh Burke DDG 51 Destroyer	2600	Advanced radar systems, missile guidance systems, propulsion
Virgina Class Submarine	4600	Tomahawk missiles, Radar systems, Drive Motors

Table 7.1 - Uses for Rare Earths in Defence

Evolution Capital Ratings System

Recommendation Structure	• **Buy:** The stock is expected to generate a total return of >10% over a 12-month horizon. For stocks classified as 'Speculative', a total return of >30% is expected. • **Hold:** The stock is expected to generate a total return between -10% and +10% over a 12-month horizon. • **Sell:** The stock is expected to generate a total return of <-10% over a 12-month horizon.
Risk Qualifier	• **Speculative:** This qualifier is applied to stocks that bear significantly above-average risk. These can be pre-cash flow companies with nil or prospective operations, companies with only forecast cash flows, and/or those with a stressed balance sheet. Investments in these stocks may carry a high level of capital risk and the potential for material loss.
Other Ratings:	• **Under Review (UR):** The rating and price target have been temporarily suppressed due to market events or other short-term reasons to allow the analyst to more fully consider their view. • **Suspended (S):** Coverage of the stock has been suspended due to market events or other reasons that make coverage impracticable. The previous rating and price target should no longer be relied upon. • **Not Covered (NC):** Evolution Capital does not cover this company and provides no investment view.

Expected total return represents the upside or downside differential between the current share price and the price target, plus the expected next 12-month dividend yield for the company. Price targets are based on a 12-month time frame.

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