11th of August, 2025

ASX RELEASE
IRON BEAR PROJECT SCOPING STUDY

Cyclone Metals Limited (ASX: CLE) (Cyclone or the Company) is pleased to report that the Scoping Study compliant with Association of Advancement of Cost Engineering (**AACE**) Class 5 has been completed for its flagship project Iron Bear, located in the Labrador Trough, Canada. The Scoping Study demonstrates an economically robust project based on IODEX62 iron ore prices **of USD90/t in 2035**, adjusted for grade and product quality, with staged production targets of 12.5 Mt p.a., **25 Mt p.a. (Base Case)** and 50 Mt p.a.

CAUTIONARY STATEMENT

This Scoping Study has been undertaken for the purpose of an initial evaluation of 3 potential processing operations (12.5Mt p.a., 25Mt p.a., and 50 Mt p.a. Concentrator Output Capacity or Production Target) of the Iron Bear magnetite deposit which forms part of the Iron Bear Magnetite Project located northwest of Schefferville, Canada, 100% owned by Cyclone Metals Limited ("Cyclone" or "CLE").

This Scoping Study is a preliminary technical and economic assessment of the potential viability of the Project and builds on several studies conducted and statements released since 2011.

The Scoping Study outcomes, Production Target and forecast financial information are based on low accuracy level technical and economic assessments that are insufficient to support estimation of Ore Reserves.

While each of the modifying factors was considered and applied, there is no certainty of eventual conversion to Ore Reserves or that the Production Target itself will be realised. Further exploration and evaluation work and appropriate studies are required before Cyclone will be able to estimate any Ore Reserves or to provide any assurance of an economic development case.

The published Iron Bear Mineral Resource of 16.66 billion tonnes, 12.9% of which is categorised as an Indicated Resource and 87.1% as Inferred Resources underpins the Production Target in this Scoping Study. That resource has been prepared by a competent person in accordance with the requirements of the JORC Code (2012). For full details of the Mineral Resource Estimate, refer to Cyclone's ASX release dated 11th of April 2024, "Significant Mineral Resource Upgrade for Project Iron Bear". Cyclone confirms that it is not aware of any new information or data that materially affects the information included in that release. All material assumptions and technical parameters underpinning the estimates in that ASX release continue to apply and have not materially changed.

- *The 25Mt p.a. Production Target (**Base Case**) utilised for this study is a subset of 1,452 million tonnes from the published mineral resource of 16.66 billion tonnes. The subset is made up of 71% Indicated and 29% Inferred mineralisation and relates to a Life of Mine (**LOM**) of 18 years*
- *The 12.5Mt p.a. (**Low Case**) Production Target utilised for this study is a subset of 1,433 million tonnes from the published mineral resource of 16.66 billion tonnes. The subset made up of 71 % Indicated and 29% Inferred mineralisation and relates to a LOM of 31 years*
- *The 50Mt p.a. (**High Case**) Production Target utilised for this study is a subset of 1,383 million tonnes from the published mineral resource of 16.66 billion tonnes. This is made up of 74% Indicated and 26% Inferred mineralisation and relates to a LOM of 13 years*

Cyclone has concluded it has reasonable grounds for disclosing the Production Targets for each of the Scoping Study scenarios evaluated. For the first 10 years of operations which covers the approximate payback period for all three cases, Indicated Resources makes up 78%, 88% and 77% for the base case, low case and high case respectively. Significantly, the inclusion of the Inferred Resources is not a determining factor in the financial viability of the three development cases modelled.

There is a low level of geological confidence associated with an Inferred Mineral Resource and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the Production Target will be realised. Cyclone does not anticipate that a failure to convert this mineralisation to Indicated status would materially impact the conclusions of the study.

Key components of the Scoping Study and the material assumptions used are detailed throughout this study. Information includes preliminary mine design studies, metallurgical recoveries from existing test work and indicative costs based on budgetary estimates and quotations from several sources. The cash flow and economic analysis has been prepared on a 100% of the project basis and are in US Dollars. Cost estimations are considered to be at a scoping study level of accuracy of -25%/+50%.

This Scoping Study contains a series of forward-looking statements. Generally, the words "expect," "potential," "intend," "estimate," "will" and similar expressions identify forward-looking statements. By their very nature forward-looking statements are subject to known and unknown risks and uncertainties that may cause the actual results, performance, or achievements, to differ materially from those expressed or implied in any of the forward-looking statements, which are not guarantees of future performance. Cyclone has concluded it has a reasonable basis for providing the forward-looking statements and expects that it will be able to proceed further with the project.

To achieve the outcomes as indicated in this Scoping Study, it is estimated that the Project will require additional engineering studies and working capital requirements of approximately $120M USD and pre-production capital investment of approximately $4,426M USD.

The Company considers that there is a reasonable expectation that the quality of the concentrate forecast to be produced will assist in the securing of funding and has undertaken a number of preliminary discussions with various parties.

Those preliminary discussions and the positive outcomes indicated by the Scoping Study provides confidence to the Board of the Company that there is a reasonable basis to assume the necessary funding for the Project will be obtained as and when required, through conventional mining project financing methods that may include a combination of debt and equity, joint venture or partial sale of the Company's interest in the project, subject to the delivery of key development milestones.

However, the normal risks for the raising of capital will apply and at this time there is no certainty that the Company will be able to source the necessary development funding when required. It is possible that such funding may only be available on terms that are dilutive to or otherwise affect the value of the company's existing shares.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the scoping study.

Paul Berend, Cyclone's CEO and Managing Director, commented, "*The Iron Bear Scoping Study highlights an extraordinary opportunity to develop a sustainable and low-cost iron ore mining and processing operation, in a first world mining jurisdiction. With the support of our partner Vale, Iron Bear is poised to become strategic large-scale producer of high-quality magnetite products, which are critical to unlock low carbon steel production.*

The Scoping Study supports our ambition to generate outstanding financial returns for our shareholders and create long term economic and social benefits for the indigenous and local communities adjacent to the project area. We are actively de-risking the project and developing sustainable mining scenarios, including systematic rehabilitation of mined areas, dry tailings and using 100% renewable energy for the concentrator complex.

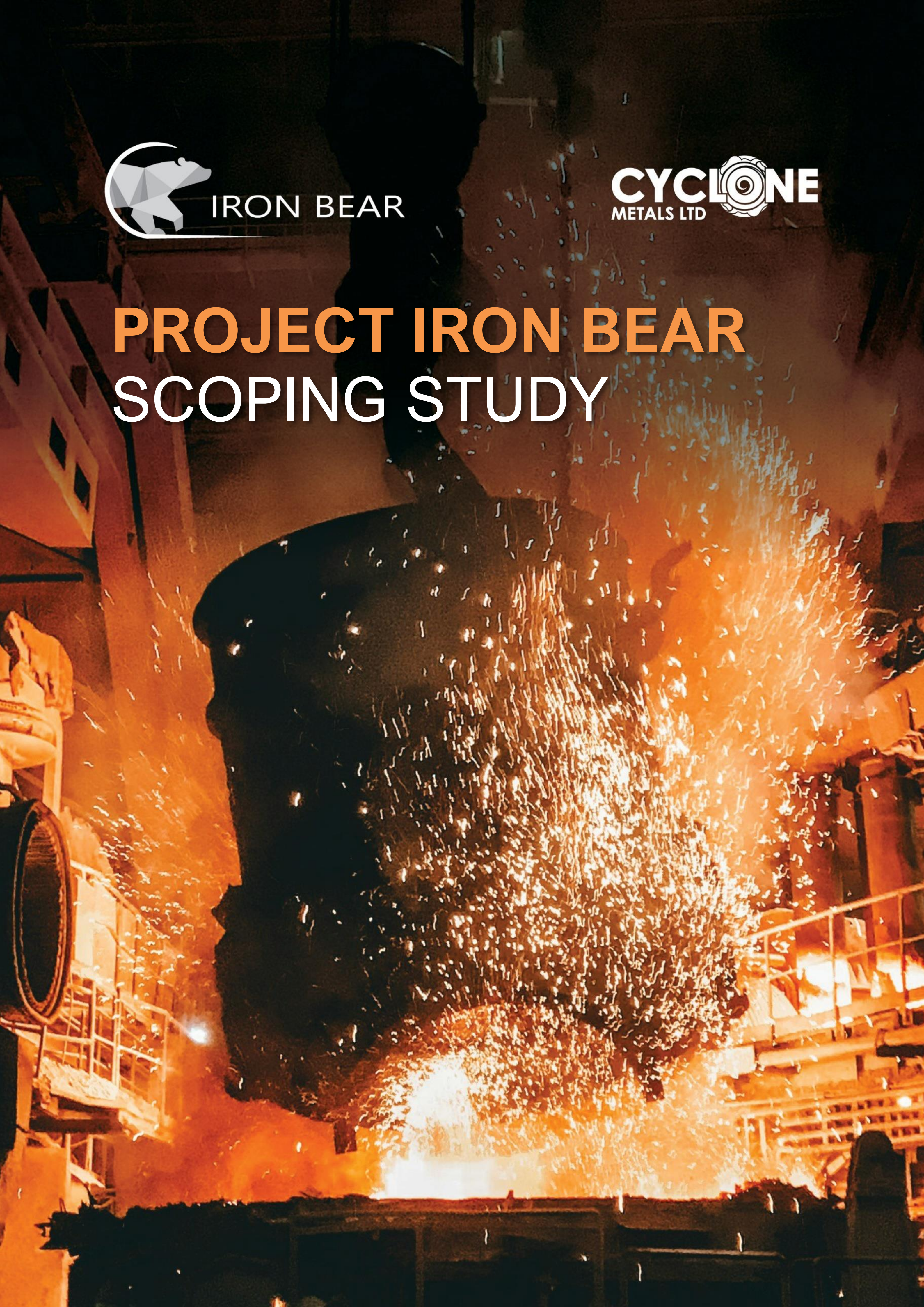
I would like to thank our project team which has developed such an exceptional study. The team continues to deliver outstanding results, and we are looking forward to advancing to the next engineering milestone, the Pre-Feasibility Study, which will be awarded in the coming weeks and completed by Q2 next year."

Announcement authorised for release by the board of Cyclone.

IRON BEAR

CYCLONE METALS LTD

PROJECT IRON BEAR
SCOPING STUDY



Executive Summary (Base Case)

1.1 Highlights

- Mineral Resource Estimate of **16.66 Bt at 29.3% Fe** (including 2.15 Bt at the Indicated category)
- Production target of **25 Mt p.a.** including 16 Mt p.a. of Blast Furnace (BF) magnetite concentrate and 9 Mt p.a. of Direct Reduction (DR) Pellets. Life Of Mine is 18 years
- Extensive metallurgical test work supports very high-grade iron ore products:
  - Blast Furnace (BF) concentrates grading **69.8% Fe** and 3.4% SiO_2
  - Direct Reduction (DR) magnetite concentrates grading **71.0% Fe** and 1.1% SiO_2
  - Direct Reduction (DR) pellets with CCS[3] of 346 kg and excellent metallisation properties
- Access to open access rail and iron ore export ports (Sept Isles and Pointe Noire)
- Socially responsible mining:
  - **100% low-cost renewable power** (hydropower and wind) for mining/concentrator complex
  - Dry tailings solution with mining pit backfilling and rehabilitation as mining progresses
  - Focus on developing local Indigenous Groups work force and ownership
- Iron Bear enables **low cost and low carbon or 'green steel'** production in Canada, the USA, Europe and MENA by supplying of critical iron ore products at a low cost
- **Pre-Feasibility Study** to commence imminently and is on target for completion by **Q2, 2026**
- Pathway to Decision to Mine enabled by Development Agreement[5] with **Vale S.A** which provides up **to USD 138m** of development funding

$NPV_{8\%}$ USD 9.79B
Post tax

IRR 18.6%

CAPEX USD 4.64B
Pre-production

Production 25 Mtpa[2]
BF Concentrate 16 Mtpa
DR Pellets 9 Mtpa

LIFE OF MINE 18 years
(9% of total mineral resource)

Mineral Resource[1]
16.66 BT @ 29.3% Fe
Stripping ratio 0.34

OPEX FOB[4]
BF Concentrate USD 46.1/t
DR Pellet USD 67.8/t

Iron Ore Price USD 90/t
Long term price IODEX62%

1: Compliant with JORC Code 2012. Cutoff grade 12.5% magnetic Fe.
2: Production year 6.
3: CCS: Cold Compression Strength – expressed in kg
4: Free On Board at Pointe Noire Port. This refers to product loaded on a vessel in Pointe Noire.
5: Refer to ASX announcement dated 17/02/2025 "Cyclone Metals and Vale execute Development Agreement for the Iron Bear Project"

1.2 The Project

The Iron Bear Project consists of ten licenses totalling 7,275 ha on 291 graticular Mineral Claims under the applicable Labrador and Newfoundland mining regulation. The Iron Bear project is in the Labrador Trough and located near the provincial border of Newfoundland and Labrador (NL) and Quebec (QC), approximately 25 km northwest of the town of Schefferville and 1,200 km by air northeast of Montréal, QC.

The Labrador Trough has supported iron ore mining operations since 1954. Rio Tinto (IOC), Arcelor Mittal (Mount Wright) Champion Iron (Bloom Lake and Kami), Tecora and Tata Steel are currently producing iron ore in the Labrador trough, in aggregate approximately 50 Mt p.a.

ArcelorMittal has a dedicated railway and port, but all the other producers (including IOC) use the Eastern open access railway to transport iron ore to either Sept Isles or Pointe Noire which are both open access iron ore export ports which can accommodate cape size iron ore vessels.

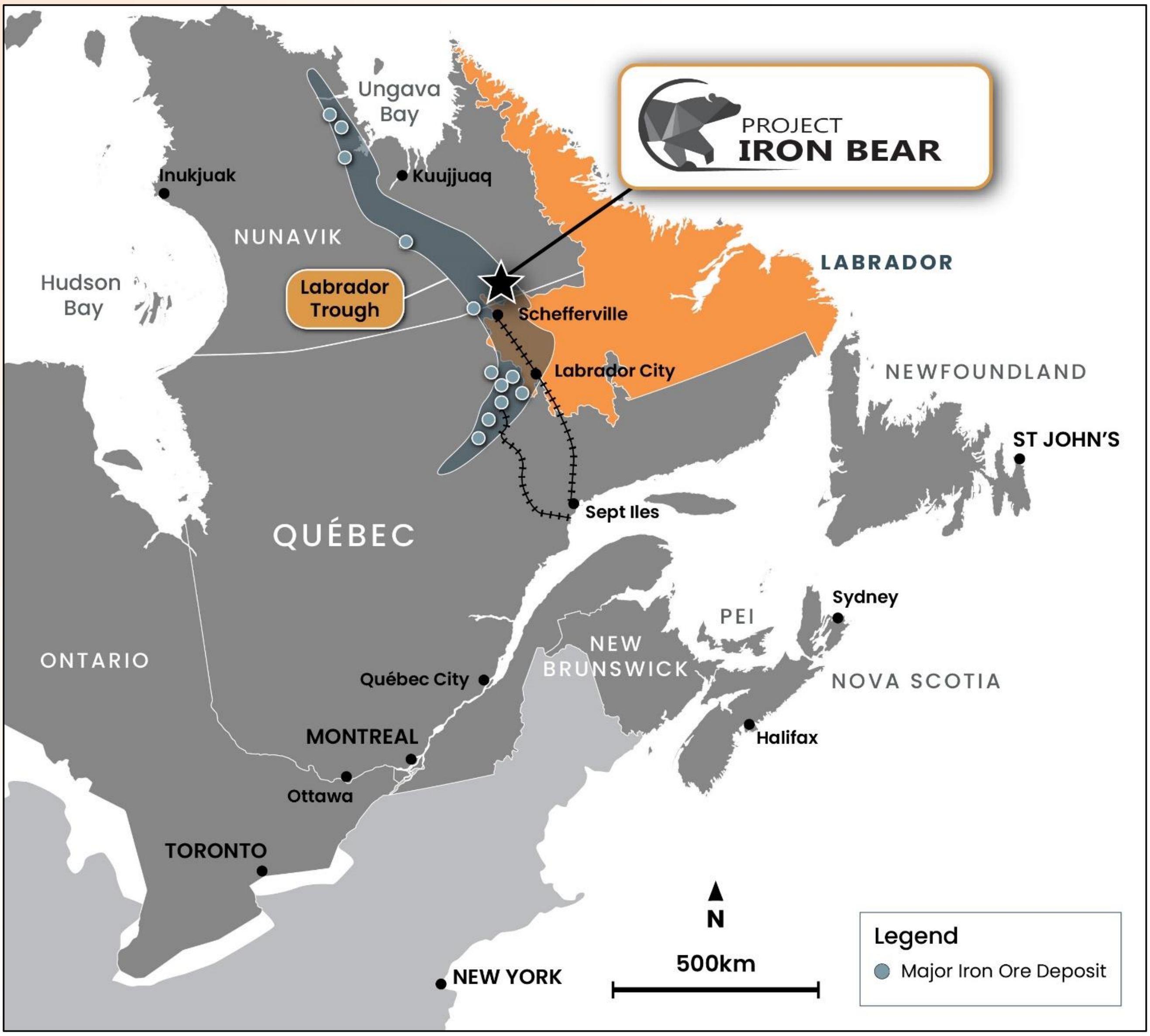


Figure 1: Iron Bear Regional Location

Figure 2: Schefferville Township

The Iron Bear project area is connected by a road to the town of Schefferville which is connected to a heavy haul iron ore open access railway connected to Sept Isles and Pointe Noire which are both open access iron ore export ports. Schefferville has a small airport with daily flights to Sept Isles and then to Quebec City and Montreal.

1.3 Project Physicals

The Life of Mine (**LOM**) is	18 years
Total material mined:	1,942 million tonnes
Total material movement (LOM avg)	114 million tonnes per annum
Average stripping ratio:	0.34
Payback Period:	6 years 9 months
% of Indicated Mineral Resource (payback period):	90%
% of Inferred Mineral Resource (payback period):	10%
% of Indicated Mineral Resource mined LOM:	71%
% of Inferred Mineral Resource mined LOM:	29%

Table 1: Iron Bear Mineral Resource Estimate at 12.5% magnetic Fe cut-off grade

Category	Volume (Bm^3)	Density (t/m^3)	Tonnes (Bt)	*% by mass*									
				Mag Fe	Total Fe	Mn	SiO_2	K_2O	MgO	MnO	Na_2O	P	LOI
Indicated	0.64	3.37	2.15	18.97	28.68	0.53	46.12	0.06	2.49	0.69	0.03	0.03	6.94
Inferred	4.28	3.39	14.51	18.13	29.44	0.52	45.75	0.08	2.22	0.67	0.03	0.03	4.83
Total	**4.92**	**3.39**	**16.66**	**18.24**	**29.34**	**0.52**	**45.8**	**0.08**	**2.26**	**0.67**	**0.03**	**0.03**	**5.1**

Total material movement over the mine life reaches 1,942 million tonnes, comprising 1,454 million tonnes of mineralised material and 488 million tonnes of waste rock at an average strip ratio of 0.34:1.

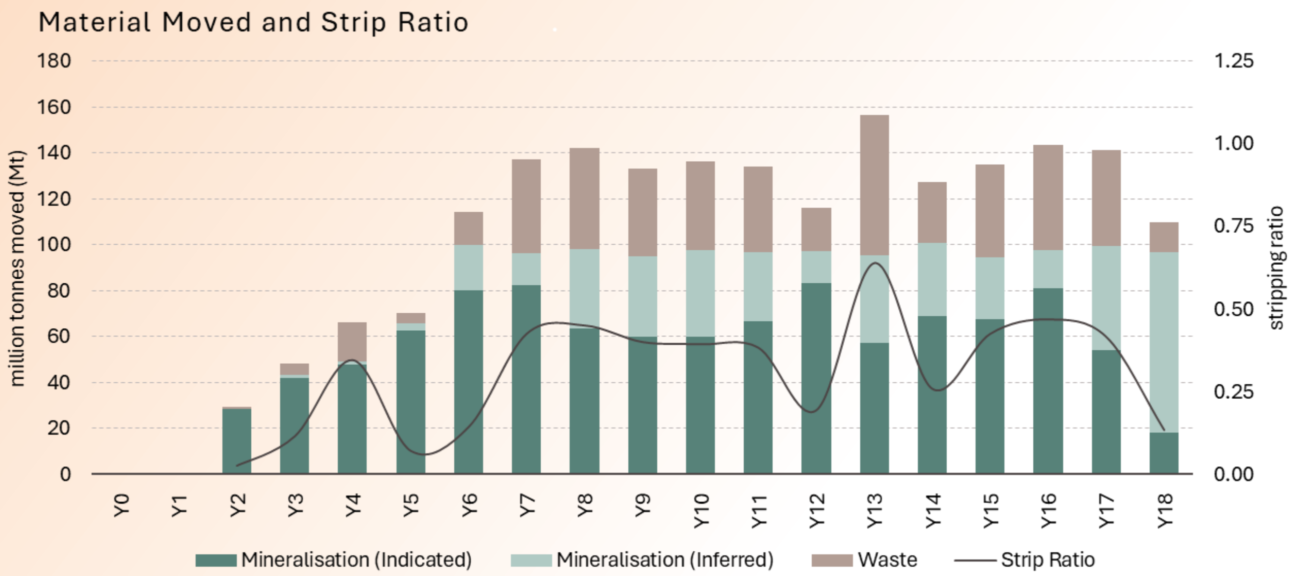


Figure 3: Material Moved and Strip Ratio - Base Case - Scenario A1

The ROM feed maintains consistent grades throughout the 18-year mine life, averaging 29.1% total iron and 20.8% magnetic iron content, with minimal variation that supports stable processing plant performance.

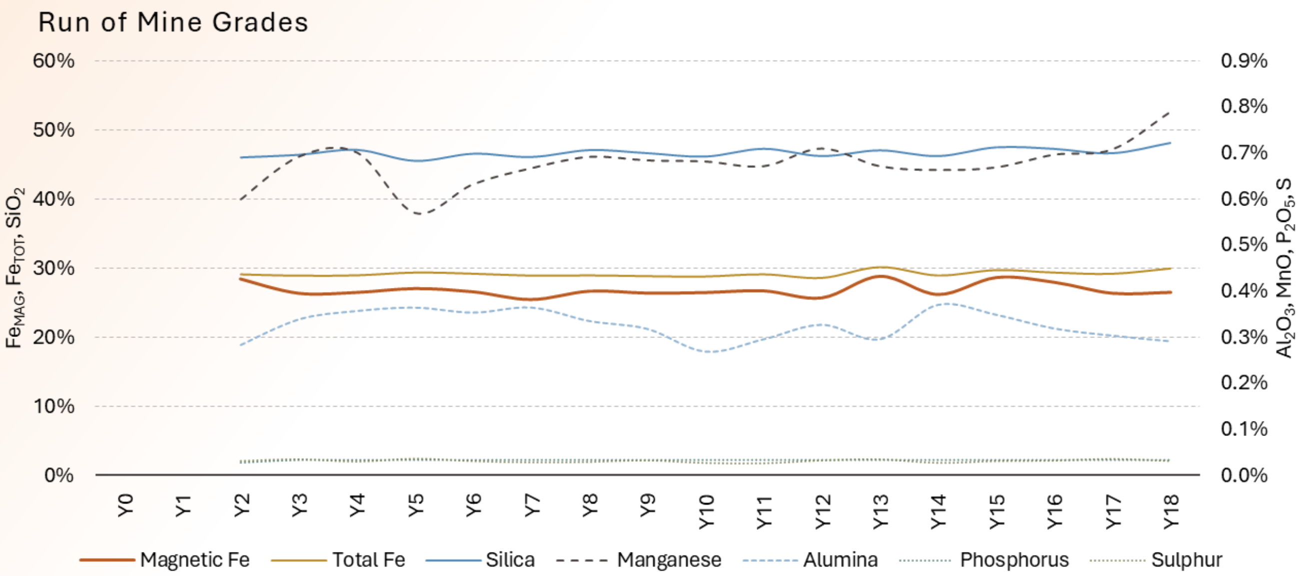


Figure 4: Run of Mine (ROM) Grades - Base Case - Scenario A1

The Base Case production target profile shown in Figure 5 represents a phased ramp-up approach beginning with 12.5 Mt p.a. concentrate capacity in Year-2, expanding to 17.5 Mt p.a. in Year-5 with the addition of pellet production, and reaching full capacity of 25 Mt p.a. by Year 6. Product mix shifts from blast furnace concentrate only in early years to a balanced portfolio of 16 Mt p.a. blast furnace concentrate and 9 Mt p.a. direct reduction pellets at full production.

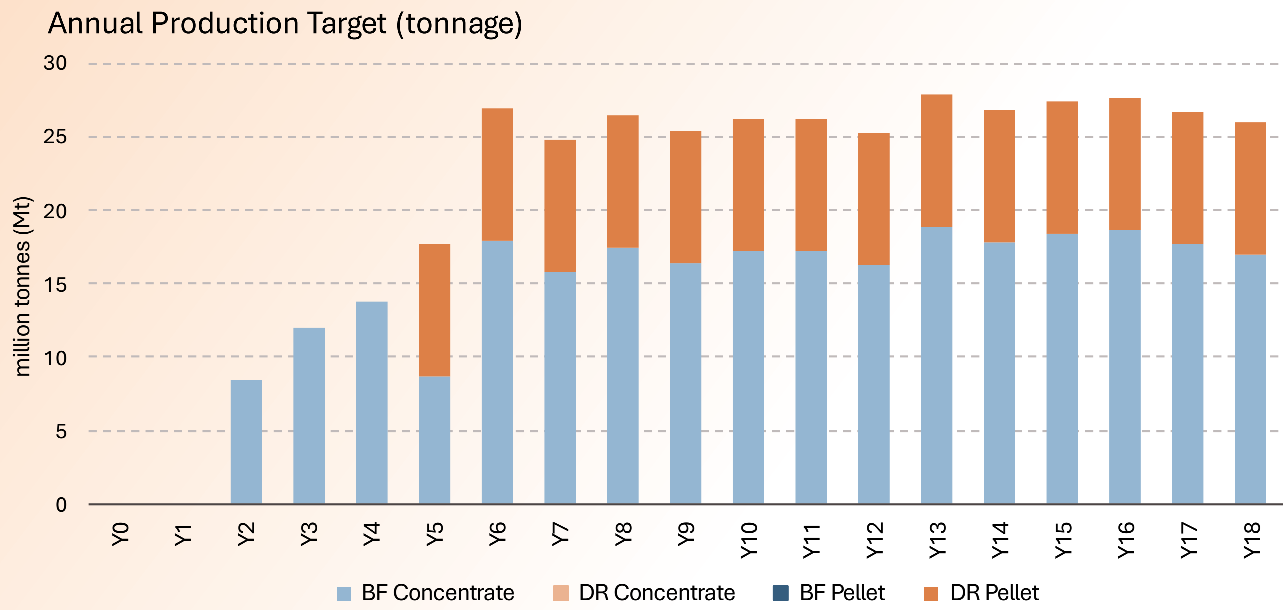


Figure 5: Annual Production Target Tonnage - Base Case - Scenario A1

Iron ore prices are derived from Wood Mackenzie's long-term forecasts, with the 62% Fe benchmark set at USD 90 per tonne in Year 0. This figure is conservative, considering that over the past five years, the IODEX 62 has averaged about USD 120 per tonne, with historical prices fluctuating between USD 90 and USD 200 per tonne. The baseline is then adjusted upward to account for Cyclone's concentrates, which have a higher grade (~70% Fe) and lower impurity levels. These modifications reflect the market premium for higher-grade, low-impurity products as specified in the base case scenario.

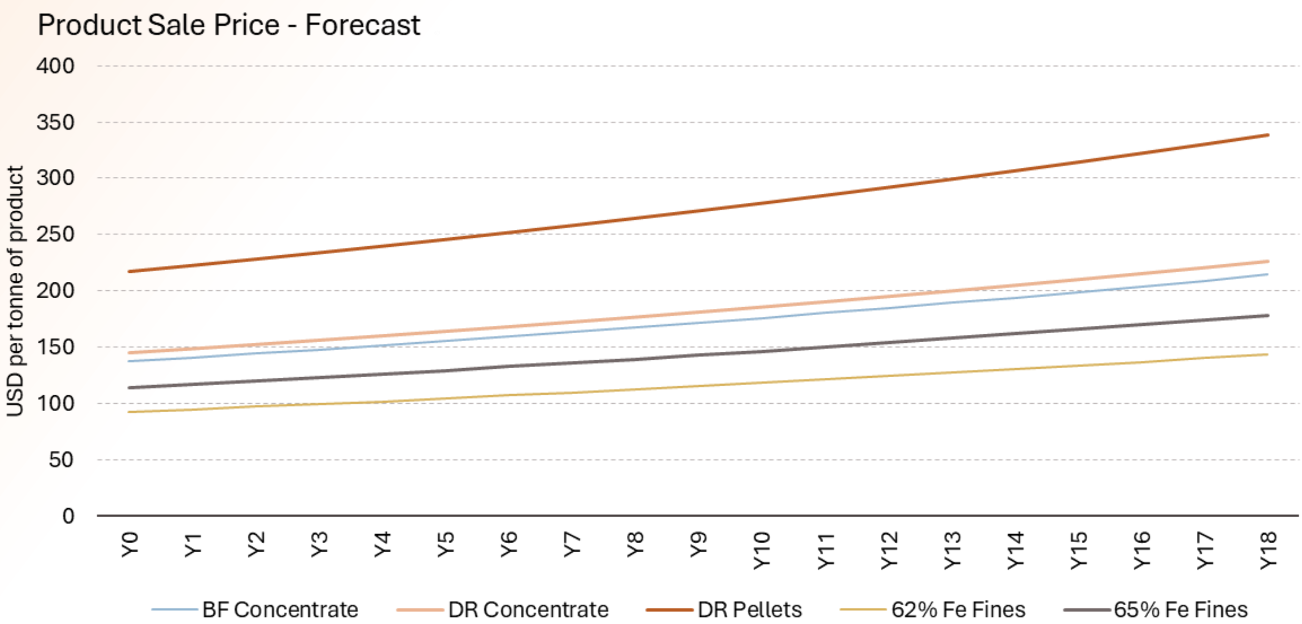
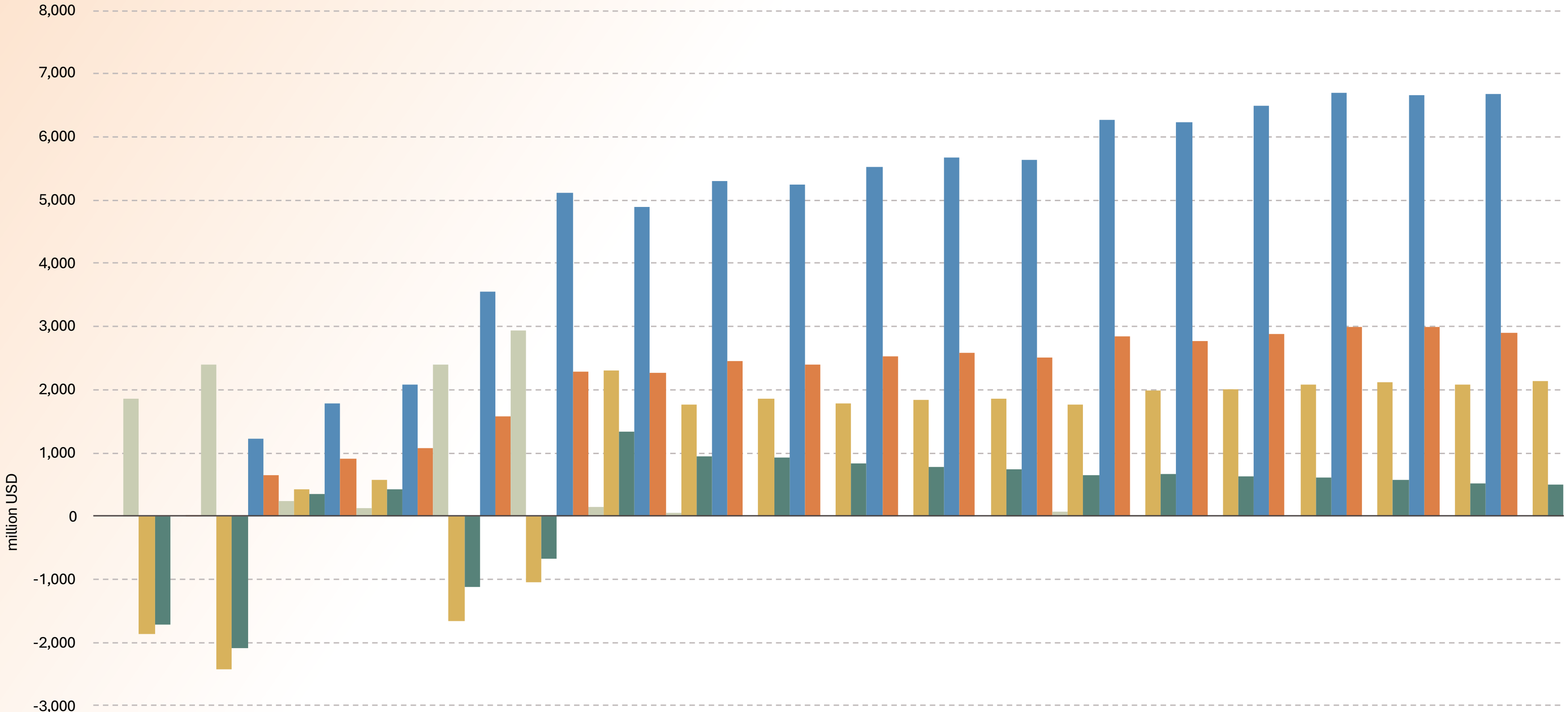


Figure 6: Product Sales Price Forecast (90 USD/t for the 62% Fe benchmark product, year 0)

1.4 Project Key Numbers

Nominal Life of Mine Cash Flows of Scenario A1



	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18
Revenue	-	-	1,227.4	1,783.1	2,084.6	3,556.7	5,115.5	4,901.5	5,307.0	5,244.1	5,522.3	5,674.8	5,637.5	6,271.8	6,226.8	6,494.0	6,701.3	6,663.9	6,678.8
Operating Costs	-	21.4	640.7	914.8	1,067.6	1,571.4	2,293.3	2,276.1	2,453.7	2,400.3	2,521.5	2,577.4	2,503.5	2,852.2	2,769.8	2,889.8	3,003.0	3,001.9	2,892.9
Capital Expenditure	1,857.1	2,407.1	244.3	126.8	2,400.0	2,945.3	141.8	47.8	-	-	-	-	79.8	16.9	-	-	-	-	-
Net Cash Flow	-1,857.1	-2,428.5	432.6	582.9	-1,653.0	-1,054.6	2,306.0	1,756.1	1,859.2	1,790.2	1,835.1	1,855.3	1,768.2	1,981.8	2,002.3	2,073.6	2,115.9	2,082.7	2,146.1
Discounted Cash Flow	(1,720)	(2,082)	343	428	(1,125)	(665)	1,346	949	930	829	787	737	650	675	631	605	572	521	497

1.4.1 Design Basis (Base Case, Scenario A1)

Iron Bear's metallurgical test work demonstrates the ability to produce high-grade iron ore products with Blast Furnace (**BF**) concentrate grading 69.8% Fe and Direct Reduction (**DR**) concentrate grading 71.0% Fe with low silica content. These specifications position Iron Bear products in the highest tier of globally traded iron ore, commanding premiums in markets increasingly focused on high-grade ores for carbon emission reduction. They may also be used for blending with lower grade iron ore to optimise furnace efficiency.

The Base Case design targets production of 25 Mt p.a. of products comprising 16 Mt p.a. of BF concentrate and 9 Mt p.a. of DR pellets over an 18-year mine life. The processing flow sheet employs conventional three-stage crushing followed by primary grinding and wet low-intensity magnetic separation (**LIMS**). Secondary grinding to 32 microns enables final magnetic separation to produce blast furnace grade concentrate, with a portion upgraded through reverse flotation to direct reduction specification for subsequent pelletising.

Operations are designed for 8,000 hours annually utilising 100% renewable power; for phase-1 from a proposed 60MW Menihek hydroelectric facility and 280MW wind farm, complemented with a 315kV power-line to Churchill Falls for phase-2, with product transport via existing rail infrastructure to Sept-Îles/Pointe-Noire port facilities. The design incorporates dry tailings management with progressive pit backfilling to minimise environmental footprint.

1.4.2 Capital Estimate

The capital cost estimate has been estimated to the AACE Class 5 estimate guidelines with an anticipated accuracy level range between -25% to +50%. All capital costs are expressed in USD with a base date of April 2025 and include provisions for direct costs, indirect costs, contingency, and future escalation to support project planning and investment decisions.

Table 2: CAPEX Estimates - WBS Level 1 - Scenario A1 (Base Case)

Scenario A1 - $M USD		
WBS Level 1	**Pre-Production**	**Total**
Mining	$ 252	$ 718
Concentrator	$ 830	$ 1,521
Flotation	$ -	$ 72
Pelletising	$ -	$ 1,050
Tailings	$ 77	$ 199
Rail	$ 588	$ 943
Slurry	$ -	$ -
Power	$ 1,137	$ 2,149
Water	$ 10	$ 26
Port	$ 127	$ 317
Direct Costs	$ 3,022	$ 6,997
Indirect		
Owners Costs	$ 67	$ 131
EPCM	$ 185	$ 361
Indirects	$ 176	$ 393
Indirect Costs	$ 428	$ 885
Contingency	$ 975	$ 2,230
CAPEX	$ 4,426	$ 10,113
Range (-25%)	*$ 3,319*	*$ 7,584*
Range (+50%)	*$ 6,639*	*$ 15,169*

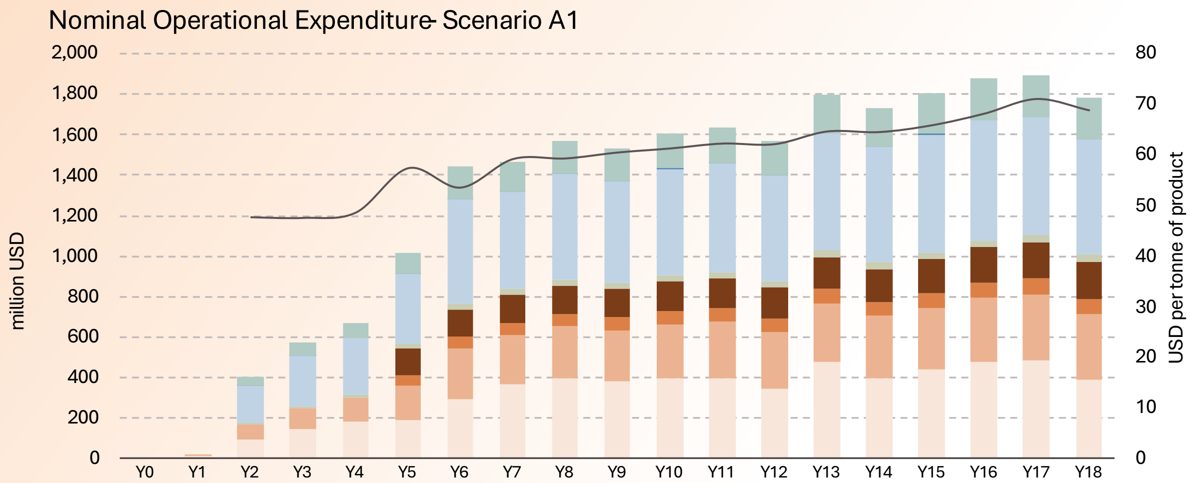
1.4.3 Operating Cost Estimate

The operating cost estimate has also been to estimate to AACE Class 5 estimate guidelines with an anticipated accuracy level range between -25% to +50%.

Table 3: Operating Cost Estimate - WBS Level 1 - Scenario A1 (Base Case)

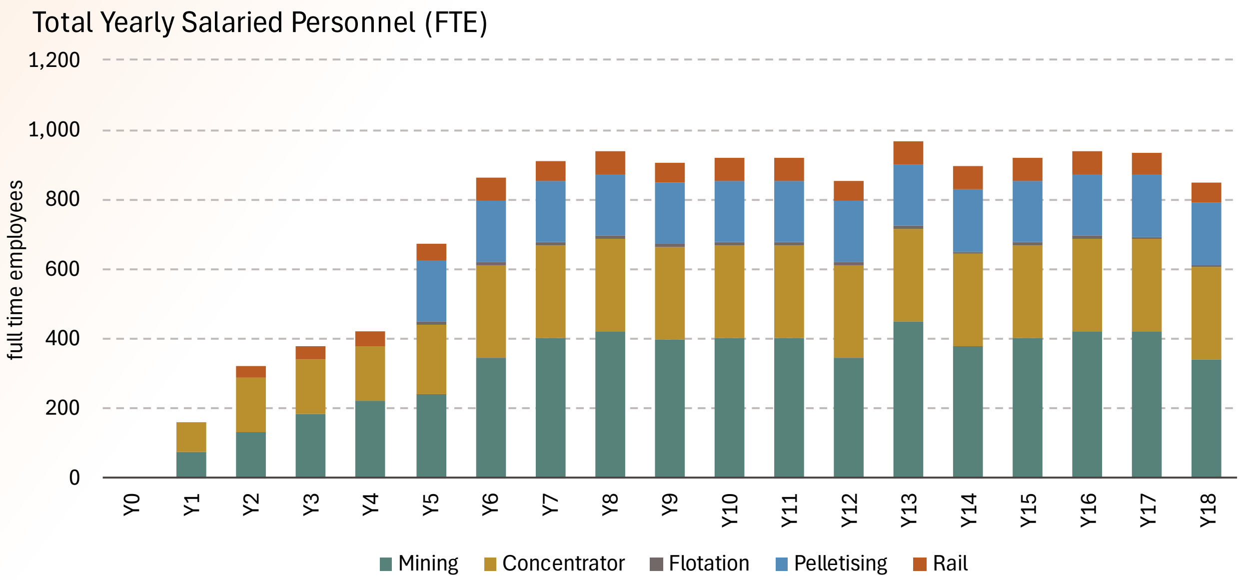
WBS Level 1	Base Case (A1)	Unit (Nominal Year 6)
Mining	$ 10.69	USD / t of sales
Concentrator	$ 9.42	USD / t of sales
Flotation	$ 6.61	USD / t of DR Concentrate
Pelletising	$ 14.97	USD / t of pellets
Tailings	$ 1.06	USD / t of sales
Rail	$ 19.06	USD / t of sales
Slurry	-	USD / t of sales
Water	$ 0.09	USD / t of sales
Port	$ 5.86	USD / t of sales
FOB at Pointe Noire		
Blast Furnace Concentrate	$ 46.19	USD / t of BF Concentrate
Direct Reduction Pellets	$ 67.77	USD / t DR Pellet
Ocean Freight	$ 24.11	USD / t of sales
CFR to GCC		
Blast Furnace Concentrate	$ 70.30	USD / t of BF Concentrate
Range (-25%)	$ 52.72	USD / t of BF Concentrate
Range (+50%)	$ 105.45	USD / t of BF Concentrate
Direct Reduction Pellets	$ 91.88	USD / t DR Pellet
Range (-25%)	$ 68.91	USD / t DR Pellet
Range (+50%)	$ 137.82	USD / t DR Pellet

Figure 7: Nominal Operational Expenditure - Scenario A1



	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18
Port	-	-	45.1	65.5	76.6	100.9	157.5	148.9	163.0	159.9	169.3	174.0	171.8	194.2	191.7	200.6	207.2	204.9	204.4
Water	-	-	0.7	0.9	1.3	2.1	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.7	2.7	2.7
Slurry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rail	-	-	185.3	249.7	279.5	348.8	516.0	480.5	520.8	500.8	527.6	535.1	517.8	577.2	565.4	582.7	594.1	583.2	570.1
Tailings	-	-	6.9	11.1	12.8	18.0	27.9	27.9	28.8	28.7	30.2	30.7	31.8	31.0	34.6	32.4	34.4	36.7	36.5
Pelletising	-	-	-	-	-	131.3	134.6	137.9	141.4	144.9	148.5	152.2	156.0	159.9	163.9	168.0	172.2	176.5	181.0
Flotation	-	-	-	-	-	56.6	58.1	59.5	61.0	62.6	64.1	65.8	67.4	69.1	70.9	72.7	74.5	76.4	78.3
Concentrator	-	11.7	77.0	106.2	120.8	164.8	248.8	244.0	257.8	256.4	269.4	275.5	279.2	293.0	305.1	304.5	317.8	325.5	325.7
Mining	-	9.6	90.9	140.3	177.8	191.1	295.2	366.1	395.3	376.8	392.3	398.2	344.2	474.7	397.6	441.1	479.0	486.1	385.6
OPEX USD/t			47.7	47.6	48.7	57.4	53.6	59.2	59.3	60.5	61.2	62.2	62.1	64.6	64.5	65.8	68.1	71.0	68.7

Figure 8: Total Salaried Personnel, FTE - Base Case - Scenario A1



1.4.4 Operational Scenarios

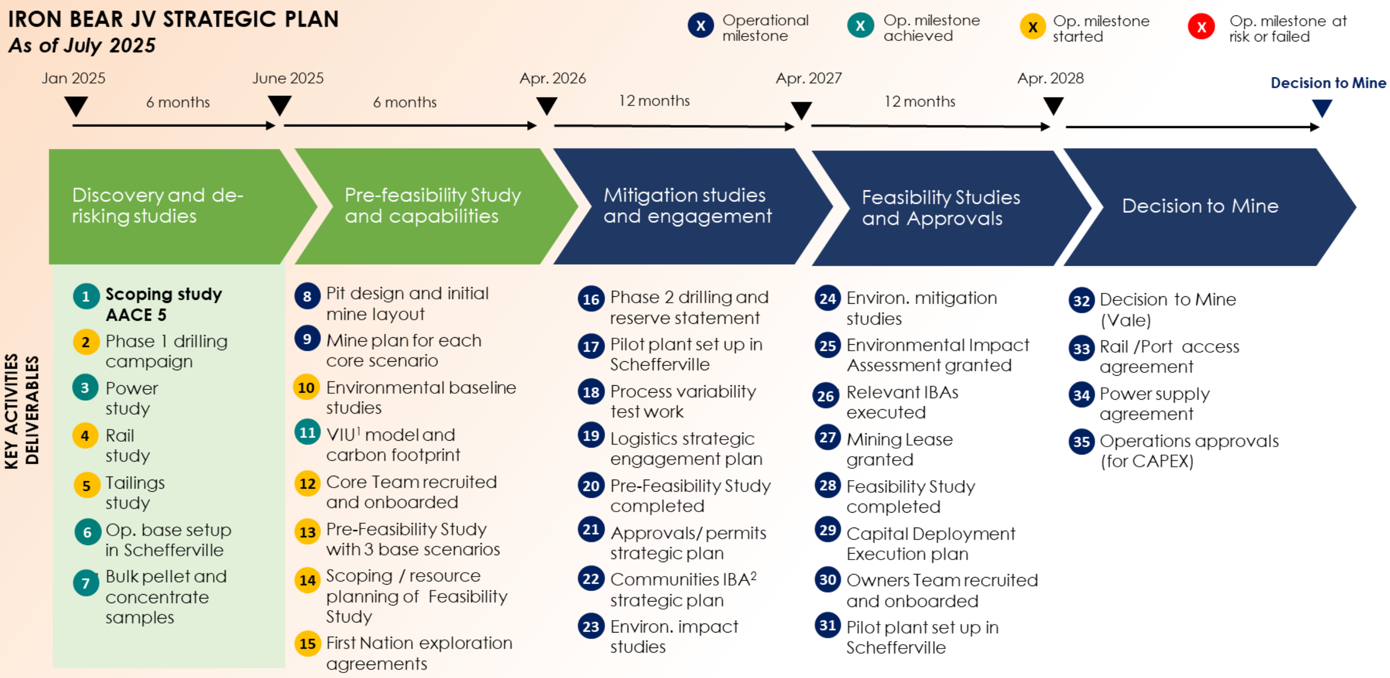
A total of 192 unique combinations (permutations) of different operating scenarios were evaluated to determine the best strategies in terms of financial metrics of NPV, IRR, environmental impact and operating cost. The table below shows the five selected operating scenarios for the scoping study, with production target, power supply source and transport method to Pointe-Noire the main variables.

- **Scenario A1** Base Case 25 Mt p.a.
- **Scenario B5** Base Case 25 Mt p.a., with the power supply via Churchill Falls from year-1
- **Scenario C9** Base Case 25 Mt p.a., with concentrate transport to port via Slurry Pipeline
- **Scenario D17** Low Case 12.5 Mt p.a.
- **Scenario E129** High Case 50 Mt p.a.

Table 4: Summary of the Operating Scenarios A1, B5, C9, D17, and E129

	Scenario A1	Scenario B5	Scenario C9	Scenario D17	Scenario E129
Concentrator Capacity	25Mt p.a.	25Mt p.a.	25Mt p.a.	12.5Mt p.a.	50Mt p.a.
Production Target	Base Case	Base Case	Base Case	Low Case	High Case
Life of Mine (LOM)	18 years	18 years	18 years	31 years	13 years
Power Supply	Menihek + Wind + Churchill Falls	Churchill Falls	Menihek + Wind + Churchill Falls	Menihek + Wind	Menihek + Wind + Churchill Falls
Logistics Solution	Rail	Rail	Slurry Pipeline	Rail	Rail
Water Return	NA	NA	Yes	NA	NA
Concentrate Drying	Magnetic Drum De-watering & Non-thermal Drying				
Tailings Dewatering	Thickener & Non-thermal Drying				
Tailings Storage	Dry Stacking				
Backfilling	Yes				
Power Amortisation	Off				
Flotation Location	Localised	Localised	Pointe Noire	NA	Localised
Pellet Plant Location	Pointe Noire	Pointe Noire	Pointe Noire	NA	Pointe Norie
Pellet Plant Fuel	Bunker C	Bunker C	Bunker C	NA	Bunker C
Discharge Port	Gulf Cooperation Council - GCC				

1.5 Development Plan and Key Risks



The Pre-Feasibility Study is targeted for completion by Q2 2026, representing the next critical milestone in project advancement.

Section 8.6 of this Study sets out the key risks that have a direct influence on the Company and the Iron Bear Project, including environmental risks, operational risks and financial risks.

Key environmental risks relate to groundwater water and surface water, waste management/ tailings facilities, dust and noise, biodiversity and greenhouse gas emissions.

Key operational risks relate to processing challenges, infrastructure development, geotechnical risks, mine development, resource and reserves, labour and skills and supply chains.

Key financial risks relate to operating costs and market volatility. With respect to the US$120 million Phase 2 commitment under the Binding Development Agreement with Vale, if Vale elects not to proceed to Phase 2, the Company will need to secure alternative funding through debt, equity or strategic partnerships. There is no certainty such funding would be available on acceptable terms, or at all, and the Project may not proceed.

Other key risks include cultural, heritage and community relations and regulatory approvals.

In the event Vale elects not to proceed with Phase 2, the Company will not be able to leverage from Vale's financial capacity and expertise to source the required pre-production capital investment of approximately $4,426M USD.

Investors should note that this Scoping Study contains forward-looking statements subject to known and unknown risks, and actual results may differ materially from those projected. The study's production targets are based on low-accuracy technical assessments insufficient to support Ore Reserve estimation, and there is no certainty of conversion to Ore Reserves or realisation of the Production Target.

1.6 Project Funding

The Company estimates that the Iron Bear project will require $138M USD to achieve Decision To Mine (DTM) and complete all the activities outlined in the Development Plan. In addition, once DTM has been achieved, the Iron Bear project will need to secure a pre-production capital investment of approximately $4,426M USD.

The Company has already secured the $138M USD to achieve DTM through a Development Agreement signed with Vale, which is one of the largest producers of iron ore in the world (see below).

The Development Agreement stipulates that, upon achieving DTM, Vale will become the majority shareholder of the Iron Bear project. This fact, combined with the compelling economics outlined in this study, gives the Company confidence that the required pre-production Capex will be secured, through an optimal mix of equity, debt financing, and offtake agreements.

As disclosed in the Company's Annual Report 2024, one of the key Iron Bear Project milestones was to establish a Joint Venture and/or Offtake Agreements with a Tier 1 miner or steel mill to fund and develop the Iron Bear Project to Decision To Mine, and subsequently to provide the resources to provide the CAPEX for a large scale mining operation.

On 17 February 2025 the Company announced that it had executed a binding commercial agreement with Vale S.A. (Vale), one of the world's largest iron producers, regarding the joint development of the Iron Bear Project (Development Agreement).

The Development Agreement defines a two-phased investment pathway for Vale to earn 75% of the Iron Bear Joint Venture and for the Joint Venture to develop the Iron Bear Project until Decision to Mine, as summarised below:

Phase 1 – Pre-Feasibility Study and Environmental Studies

Vale will contribute USD$18 million to fund the phase 1 work program, including a preliminary feasibility study, mineral resource drilling and environmental baseline studies. Phase 1 will be deemed complete when the full Phase 1 contribution has been received by Cyclone, or when the Phase 1 work program has been substantially completed

Once Phase 1 is complete, Vale can elect to trigger Phase 2. If Vale does not elect to trigger Phase 2, then Vale does not earn an interest in the Iron Bear Project which will therefore remain 100% owned by the Company.

Phase 2 – Bankable Feasibility Study and Impact Benefit Agreements

Once Phase 2 commences, Vale and CLE will form a joint venture to further develop the Iron Bear Project (Iron Bear JV). Vale will be granted a 30% equity interest in the Iron Bear JV and will fund the joint ventures development activities up to a further US$120 million, including a bankable feasibility study, environmental impact studies, establishing IBAs (Impact Benefit Agreements) with First Nations and generally de-risking the Iron Bear Project. Vale's interest in the Iron Bear JV will increase to 75% when Vale's total Phase 2 contribution of USD$120 million has been expended, or when Vale elects to progress the Iron Bear Project to Decision to Mine

Iron Bear Project Funding Strategy

The draft scoping study refers to pre-production capital investment of approximately US$4,426 million.
In respect to how this amount is to be funded, once a Decision to Mine is made, the following should be noted:

a. As outlined in the Development Agreement, Phase 1 expenditure of US$18 million and Phase 2 expenditure of up to a further US$120 million will be fully funded by Vale with no financial commitment being required by CLE. As of today, Vale has contributed A$17.6 million (US$11.3 million) as part of Phase 1 of the Development Agreement.

b. The explicit purpose of the Development Agreement funding to be provided by Vale is to de-risk the Iron Bear Project and complete all the technical and sustainability studies to a bankable feasibility study level, which are pre-requisites for Vale to progress to a Decision to Mine.

c. Upon the conclusion of Phase 2, Vale will have earned a 75% equity stake in the Iron Bear Project. The Development Agreement provides that Vale will take the Decision to Mine which will not occur until the pre-production Capex has been committed.

d. Therefore, the scoping study has been prepared on the reasonable assumption that financing of the Iron Bear Project will leverage Vale's financial capacity and expertise to source the required pre-production capital investment of approximately US$4,426 million based on the projected profitability of the Iron Bear project. It should be noted that in 2024, Vale reported Capex expenditures of US$6000 million.

e. Comparable magnetite projects to Iron Bear are typically very capital intensive but benefit from the strong demand and high prices for the high-grade magnetite concentrates produced (typically 66%–70% Fe), and additional products like pellets. As a result, comparable magnetite projects (including Bloom Lake – Champion Iron) have been successfully funded, at the decision to mine stage, via traditional project financing, leveraging debt and equity funding, as well as joint ventures and off take agreements.

Funding is anticipated to be obtained through the existing agreement with Vale, contingent upon Vale's decision to proceed to Phase 2. This partnership structure provides an established framework for project financing and development, leveraging Vale's expertise and financial capacity in iron ore operations.

In the event that Vale elects not to proceed to Phase 2, alternative funding mechanisms will be pursued through established project financing frameworks, incorporating debt facilities, equity investment, strategic partnerships, or partial divestment of project interests. Any such alternative financing arrangements would be contingent upon achieving critical project development objectives and regulatory approvals.

While the Company maintains a positive outlook regarding funding prospects through the Vale agreement, standard risks associated with joint venture agreements remain applicable. There can be no guarantee that Vale will proceed to Phase 2, or that required development capital will be available on acceptable terms within the necessary timeframes.

Given these inherent uncertainties in project financing, investors are cautioned against making investment decisions based exclusively on this study's findings. The availability and terms of future funding remain subject to Vale's Phase 2 decision, project advancement, and broader economic factors beyond the Company's control.

ASIC Information Sheet 214

Cyclone notes that the Information Sheet sets out clearly that secured funding is not necessarily required to show reasonable grounds for production targets and sets out a number of examples of factors to consider in assessing reasonable grounds when funding is not yet secured. The Company has dealt with each of these briefly as follows:

a) The Company size and capitalization relative, in particular, to the upfront capital expenditure requirement

The Company accepts that its size and capitalisation relative to the upfront capital expenditure requirement means that a key part of the strategy set out above was to enter into a joint venture agreement with a tier one major, which is what the Vale Development Agreement has delivered. As also set out above, Vale's size and capitalisation, as well as Vale's 2024 CAPEX expenditure make it clear that there are reasonable grounds for publishing the scoping study based on the CAPEX estimate set out in the scoping study.

b) The Company's financial position, including its gearing and revenues (if any)

The Company itself is in a sound financial position. In summary:

- It is debt free;
- the Iron Bear Project is fully funded by Vale through both Phase one and Phase two, such that the Company's own expenditure requirements are modest; and

- as at 30 June 2025 as set out in the recently released quarterly The Company's cash and cash equivalents were $1,331,000, an increase from the previous quarter, and the Company also holds shares in listed ASX entities valued at approximately $6,700,000.

c) The Company's debt/equity financing track record and support

The Company successfully raised in excess of $7.4m in equity funding over the financial year to 30 June 2025.

d) The Company's support from substantial holders or other large offtake or joint venture partners, including by heads of agreement

The Company has consistently received support from its substantial holders, including its largest shareholder, European Lithium Limited which itself has a market capitalisation in excess of $110,000,000 and estimated cash available for future operating activities at 30 June 2025 of in excess of $20,000,000.

e) The project's financial, economic and marketing metrics.

The draft scoping study sets out in detail the very significant NPV and IRR for the project at the scoping study level.

f) The overall state of relevant economies, demand/supply curves for your proposed mineral production, and current debt/equity capital funding markets.

As set out above, the Iron Bear Project is one of a number of comparable large scale magnetite projects that have successfully been funded in recent years on the basis of strong demand and high prices for high grade magnetite concentrates and additional products like pellets.

1.7 Study Team

Study Management	Cyclone Metals Ltd
Geology	Haren Consulting Pty Ltd
Geophysical Modelling	Resource Potentials Pty Ltd
Resource Modelling	Haren Consulting Pty Ltd
Resource Estimate 2024	Burnt Shirt Pty Ltd
Geotechnical	Bastion Geotechnical Pty Ltd
Mining Engineering	TME Mine Consulting
Electrical Engineering	Current Consulting
Mine Planning	Snowden
Metallurgical Test Work	Corem
Pelletising Engineering	Aglom S.A.
Process Engineering	Vulcan Technologies Pty Ltd
Tailings Study	Vulcan Technologies Pty Ltd
Value in Use Modelling	Vulcan Technologies Pty Ltd
Power Study	Hatch
Water Balance Review	BBA Consultants
Environment, Rehabilitation & Closure, Regulatory	Sikumiut Environmental Management Ltd
Social, Communities and Indigenous Groups	Transfert Environnement et Société (TES) Inc
Risk, Health, and Safety	Cyclone Metals Ltd
Estimating	Turner and Townsend / Capisce Qs
Commodity Price Forecasting	Vulcan Technologies Pty Ltd
Reviews	Cyclone Metals Ltd

1.7.1 Mineral Resource Competent Person

The information in this report that relates to Mineral Resources is based on information compiled by Elizabeth Haren, a Competent Person who is a Fellow of The Australasian Institute of Mining and Metallurgy and a member of the Australian Institute of Geoscientists. Ms Haren is a full-time employee of Haren Consulting Pty Ltd and a consultant to Iron Block. Ms Haren has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Ms Haren consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

1.7.2 Metallurgy Competent Person

Metallurgy has been reviewed and compiled by Paul Vermeulen MAusIMM, Member Association of Iron and Steel Technology **(**MAIST), a Director of Vulcan Technologies Pty Ltd, who has sufficient experience which is relevant to the method of processing under consideration to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Vermeulen consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Vulcan Technologies has assisted CLE in its development of the Iron Bear Project, Vulcan Technologies indirectly holds an interest in CLE, including Performance Rights. Mr Vermeulen has assumed Competent Person responsibility due to his familiarity with the Project.

1.7.3 Mining Competent Person

The information in this report which relates to the mining components underpinning the production target scenarios including pit optimisation, mining methods, mine designs, mine scheduling and mining costs is based on and fairly represents information and supporting documentation evaluated and prepared by Joel van Anen, Principal Mining Consultant of TME Mine Consulting. Mr van Anen is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM) and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has 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 (the "JORC Code"). Mr van Anen consents to the inclusion of the information in the report in the form and context in which it appears.

1.7.4 Processing Competent Person

Processing information has been reviewed and compiled by Paul Vermeulen MAusIMM, Member Association of Iron and Steel Technology (MAIST), a Director of Vulcan Technologies Pty Ltd, who has sufficient experience which is relevant to the method of processing under consideration to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Vermeulen consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Vulcan Technologies has assisted CLE in its development of the Iron Bear Project, Vulcan Technologies indirectly holds an interest in CLE, including Performance Rights. Mr Vermeulen has assumed Competent Person responsibility due to his familiarity with the Project.

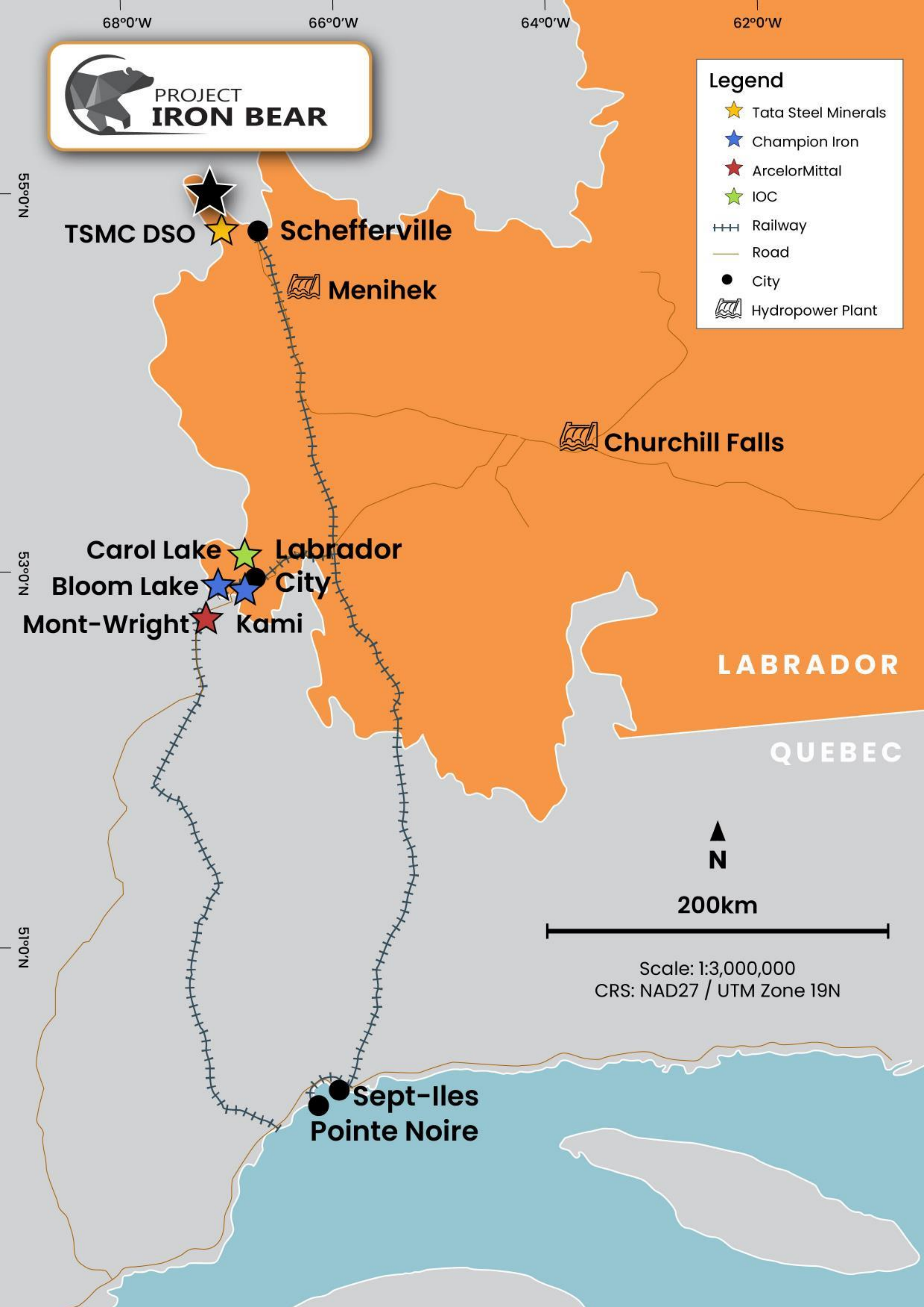
Table of Contents

PROJECT IRON BEAR

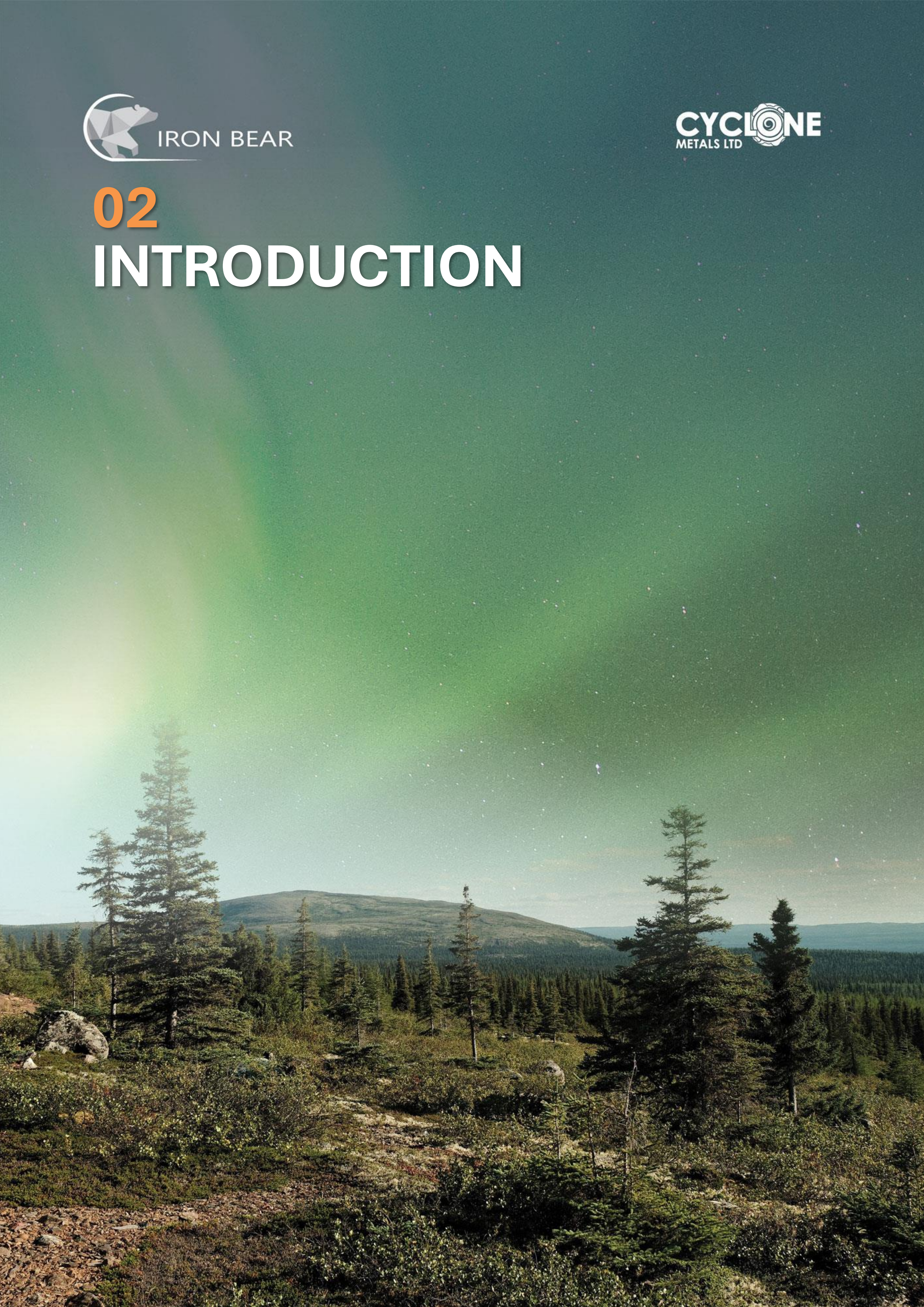
CYCLONE METALS LTD

Tables of Tables

Table of Figures


68°0'W
66°0'W
64°0'W
62°0'W
55°0'N
53°0'N
51°0'N
PROJECT
IRON BEAR
Legend
Tata Steel Minerals
Champion Iron
ArcelorMittal
IOC
Railway
Road
City
Hydropower Plant
TSMC DSO
Schefferville
Menihek
Churchill Falls
Carol Lake
Labrador
City
Bloom Lake
Mont-Wright
Kami
LABRADOR
QUEBEC
N
200km
Scale: 1:3,000,000
CRS: NAD27 / UTM Zone 19N
Sept-Iles
Pointe Noire

02
INTRODUCTION



2. Introduction

Cyclone Metals Limited (**ASX: CLE**) presents the results of a Scoping Study for the Iron Bear Project, a magnetite iron ore deposit located in the Labrador Trough, Canada. The study evaluates the potential technical and economic viability of developing an open-pit mining and processing operation based on the current Mineral Resource estimate of 16.66 billion tonnes at 29.3% Fe.

2.1 Project Location & Climate

The Labrador Trough forms part of the broader Quebec-Labrador iron ore district, a well-established mining region that has supported large-scale iron ore production for over 70 years. The Project is situated approximately 30 kilometres northwest of the town of Schefferville, 250 kilometres north of Labrador City, 550 kilometres north of the Port of Sept-Iles, and 1,100 kilometres northeast of Montreal. Road access to the project site utilises existing forestry and mining roads from Schefferville, with the final 45 kilometres requiring upgrading for year-round mining operations.

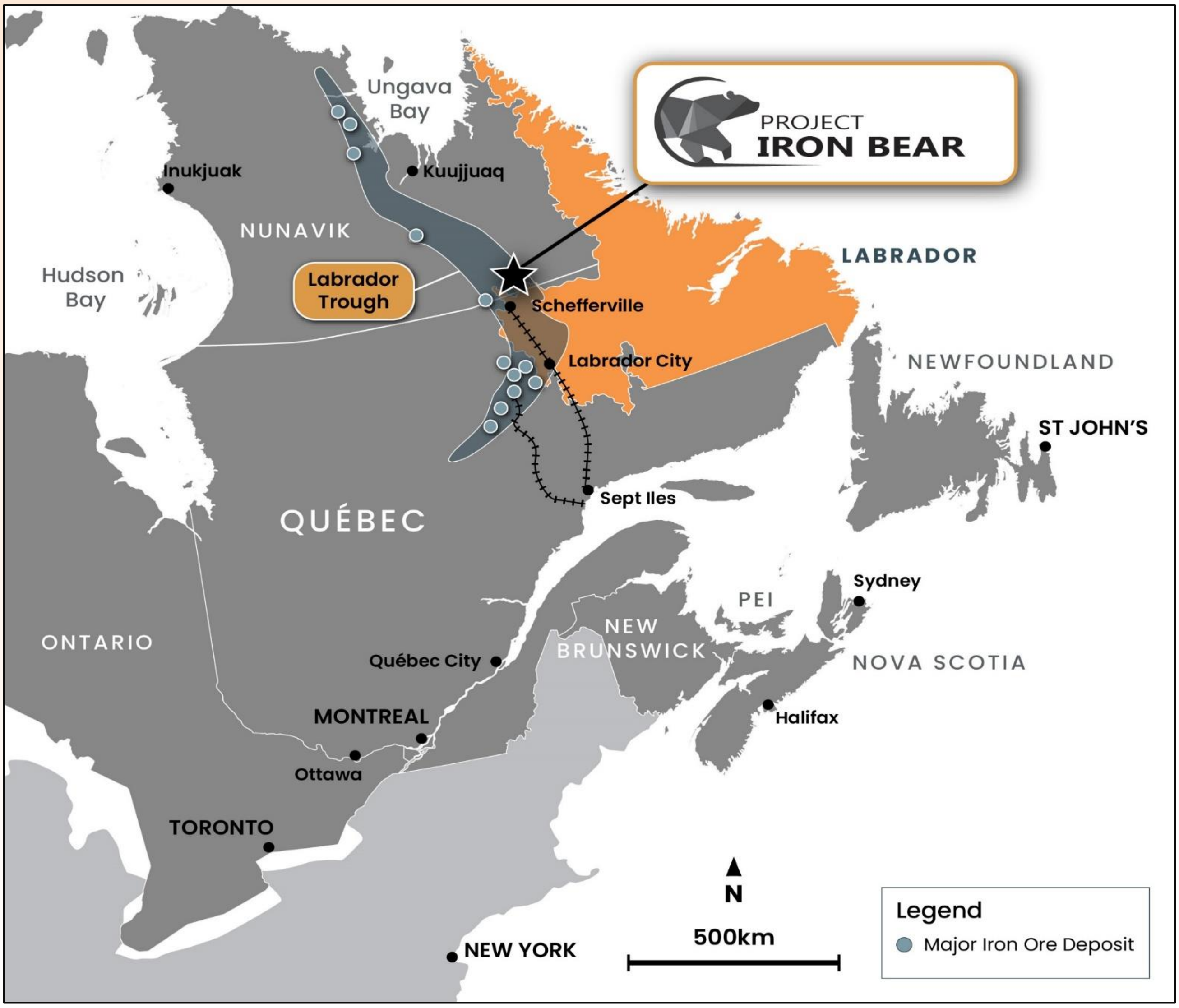


Figure 9: Iron Bear Location

The Port of Sept-Iles is operated by the Sept-Iles Port Authority and has an annual cargo handling capacity of 100 MT, making it the largest mineral port in North America. The port facilitates export of iron ore, aluminium, and other bulk commodities through multiple specialised terminals with deep-water access capable of accommodating large bulk carriers[1]. Rail access to the port is provided by the Quebec North Shore and Labrador Railway, which connects the region's mining operations to ocean transportation infrastructure.

The local climate is sub-Arctic continental, characterized by long winters and short, mild summers. The region receives approximately 900-1,000mm of annual precipitation, with significant snowfall accumulation reaching 3-4 metres during winter months. Average winter temperatures range from -15°C to -35°C, with extreme temperatures potentially reaching -40°C or lower. Summer temperatures typically range from 10°C to 25°C[2].

Winter conditions represent the most significant operational challenge, with continuous snow cover typically lasting from November through April. Ice formation on water bodies and frost penetration depths of 3-4 metres require specialized engineering solutions for all infrastructure components. The region experiences polar night conditions with limited daylight hours during winter months, necessitating comprehensive lighting systems for continuous operations.

Long-term climatic data is available from Environment and Climate Change Canada meteorological stations, including the Schefferville Airport station (operational since 1947) and regional monitoring networks maintained by provincial authorities. Historical weather data demonstrates consistent patterns of winter conditions requiring specialised cold-weather engineering and operational protocols for successful mining operations.

2.2 Licences and Claims

The ownership of the Iron Bear project is held by Iron Block 103 Corporation, registered in Newfoundland Labrador, but wholly owned and operated by Cyclone.

Licences 014603M, 014855M, 014856M, 018603M, 018610M, and 021841M cover the current mine plan and project area discussed in this Scoping Study. Table 5 lists licences currently held in Newfoundland and Labrador by Iron Block 103 Corporation:

Table 5: Iron Bear Claims, Newfoundland Labrador

Licence	Status	# of Claims	Expriy/Renewal Date
014603M	Issued	94	21/02/2028
014855M	Issued	55	24/04/2028
014856M	Issued	27	24/04/2028
017130M	Issued	5	29/01/2030
018603M	Issued	1	9/03/2026
018610M	Issued	8	9/03/2026
021841M	Issued	101	9/03/2026
038811M	Issued	37	19/02/2030
038828M	Issued	15	20/02/2030
038829M	Issued	62	20/02/2030
038830M	Issued	36	20/02/2030
		441	

[1] *Source: Port Sept Iles, https://www.portsi.com/knowledge-base/info-source/?lang=en*
[2] *Source: Government of Canada, https://climate.weather.gc.ca/historical_data/search_historic_data_e.html*

The legislative framework for mineral licences in the Province of NL is primarily governed by the following key statutes and regulations:

1. **Mineral Act (RSNL 1990, Chapter M-12)**

- This is the primary legislation governing mineral rights in the province.
- It defines what constitutes a mineral and outlines the rights and responsibilities of mineral licence holders.
- It also covers the conversion of mineral licences to mining leases, transfer of rights, and penalties for non-compliance.

2. **Mineral Regulations (CNR 1143/96)**

- These regulations set out the procedural and administrative details for acquiring and maintaining mineral licences. They cover:
  - Map staking process (via Mineral Rights Administration System (MIRIAD),
  - Fees and security deposits,
  - Assessment work requirements (Sections 47 & 48),
  - Extensions and waivers under certain conditions (e.g., Condition 2).
  - Of note, MIRIAD is the provincial online platform used for map staking, claim management, and application submissions.

In addition, while not directly governing mineral licences the Quarry Materials Act and Petroleum and Natural Gas Act exclude quarry materials (e.g., sand, gravel, stone) and petroleum and natural gas, respectively, from the definition of "mineral" under the Mineral Act, clarifying jurisdictional boundaries.

2.3 Previous Work

The Preliminary Economic Assessment (**PEA**), 2011 & 2012 drill campaigns, and re-scoping activities make up integral components of Iron Bear's history, and aimed at delineating the economic viability, operational methodologies, and strategy of this magnetite iron ore asset.

Iron Bear has undergone extensive historical exploration and definition through drilling, with 115 drill holes totalling over 28,021 meters. These efforts have identified two significant zones of mineralisation: the Northwest Zone and the Greenbush Zone, focusing on the latter for the mineral resource estimate. The 2013 historical NI 43-101 mineral resource, released on the Toronto Stock Venture Exchange (**TSX-V**)[3] was reported to be 7.2 billion tonnes grading 29.2% Fe, underscoring the project's scale and development potential.

The PEA for Iron Bear, conducted in 2013 by the consulting firms Watts, Griffis and McOuat and BBA and released on the TSX-V[4], provided a foundational economic analysis of the project. It estimated a Net Present Value (**NPV**) of $7.4 billion Canadian Dollars at an 8% Weighted Average Cost of Capital (**WACC**), based on a production rate of 16.6 million tonnes per annum of acid blast furnace pellets derived from a benchmark of 62% Fe iron ore priced at US$110 per tonne. The assessment highlighted the project's economics, driven by low estimated cash costs of US$46.5 per tonne FOB Sept Isles, attributable to favourable ore properties and the strategic utilisation of hydropower.

Subsequently, in 2020 M3 Metals Corp. (**M3 Metals**) engaged Hatch, a global multidisciplinary management, engineering, and development consultancy, to complete a re-scope and economic analysis of the Iron Bear project. This initiative aimed to significantly reduce the overall cost estimates from the historic 2013 PEA, implement phased production capacity increases to enhance economic viability, and achieve full-scale operation through organic growth. The re-scoping exercise was intended to recalibrate the project development plans, estimating capital requirements and operating costs to meet AACE International classification standards at a Class 5 estimate level.

3 Source: M3 Metals, https://www.m3metalscorp.com/images/iron/block103/2013-43-101-Technical-Report.pdf
4 Source: Cap-Ex, https://www.cap-ex.ca/news/2013-news-releases/184-cev-pea/

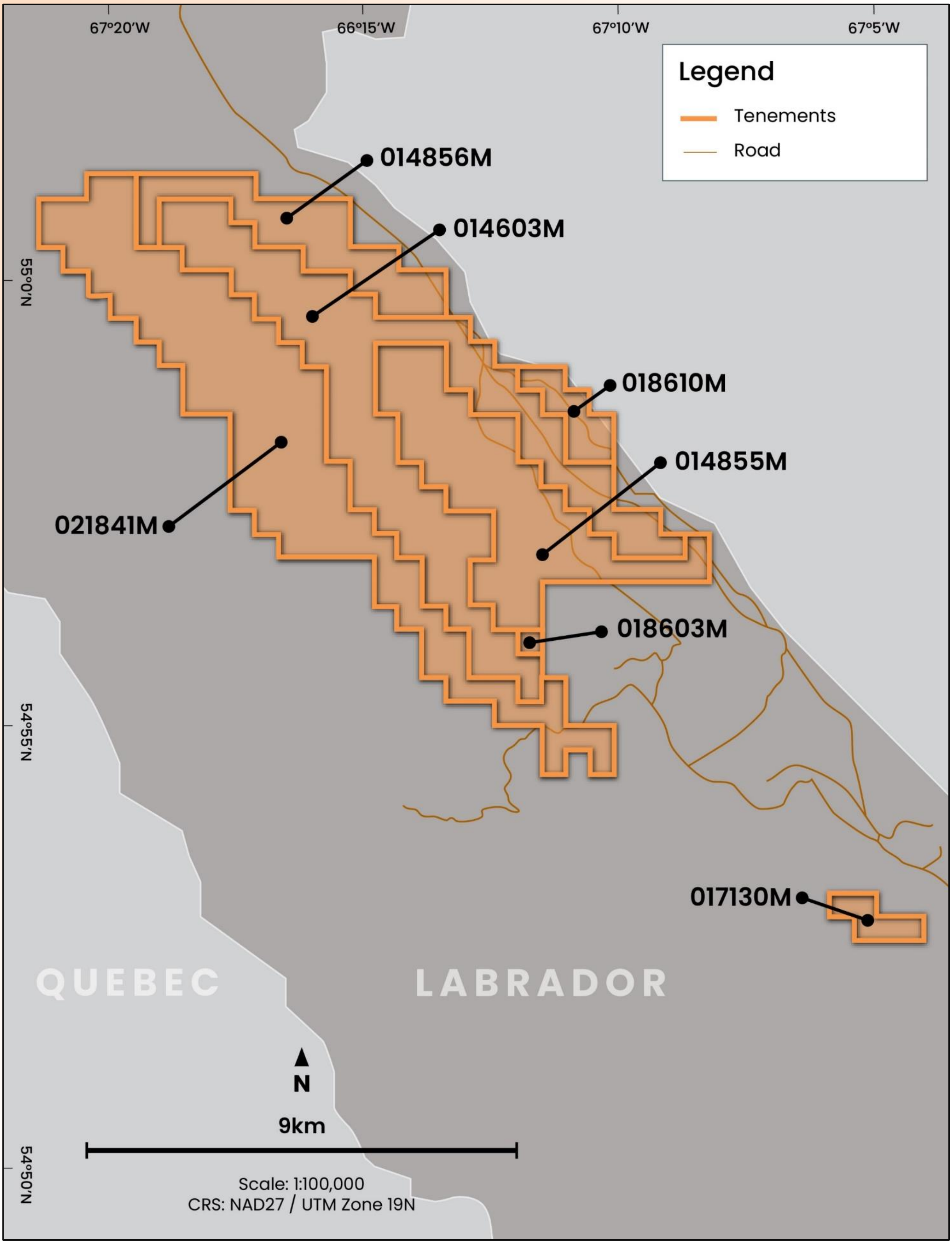


Figure 10: Iron Bear Claim Map

2.4 Objectives of this Scoping Study

The Scoping study is centred around a value chain economic and technical model that encompasses all activities from mining through to product shipping to ports of discharge. The objective is to explore the economics and risks of different production targets, different operating strategies, revenue as determined by long term price forecasts and product premiums, and other scenarios.

2.5 Strategic Operational Scenarios

2.5.1 Production Targets

Three main production target rates have been evaluated based on the Iron Bear mineral resource[5], of circa 25 Mt p.a. of products (**Base Case** – see Figure 11), 12.5 Mt p.a. of products (**Low Case** – see Figure 12) and 50 Mt p.a. of products (**High Case** – see Figure 13). A pellet plant of circa 9 Mt p.a. capacity or multiples thereof was costed, based on pelletising test work performed.

2.5.2 Inferred Resource Constraint and Life of Mine Optimisation

To ensure regulatory compliance and enable meaningful economic comparisons across production scenarios, a nominal 30% Inferred Resource constraint has been applied to the mine planning process. This constraint limits the proportion of Inferred Mineral Resources that can be included in production schedules, with the remainder comprised of Indicated Resources which carry higher geological confidence.

The application of this constraint results in varying Life of Mine (LOM) periods across the three production scenarios:

- **Base Case (25 Mt p.a.)**: 18-year LOM utilising 1,452 million tonnes (71% Indicated, 29% Inferred)
- **Low Case (12.5 Mt p.a.)**: 31-year LOM utilising 1,433 million tonnes (71% Indicated, 29% Inferred)
- **High Case (50 Mt p.a.)**: 13-year LOM utilising 1,383 million tonnes (74% Indicated, 26% Inferred)

This approach ensures that each scenario maintains a similar risk profile regarding resource confidence while optimising the utilisation of higher-confidence Indicated Resources. The constraint also facilitates levelised LOM comparisons by standardising the geological risk across production alternatives.

2.5.3 Terminal Value Considerations

Given that the total Iron Bear mineral resource of 16.66 billion tonnes significantly exceeds the quantities proposed in each production scenario, never exceeding 1,452Mt, substantial remaining resources are available beyond the constrained LOM periods. The economic evaluation incorporates terminal value estimates that recognise the potential for future production from the extensive remaining resource base, including both unused Indicated Resources and the large Inferred Resource inventory that may be upgraded through additional exploration and drilling programs.

This terminal value approach acknowledges that the 30% Inferred constraint is applied for near-term planning forethought rather than representing an absolute limit on the project's long-term production potential. The significant remaining resource inventory provides optionality for life-of-mine extensions and production rate modifications as market conditions and resource confidence evolve.

---

[5] *Refer to ASX announcement dated 11th April 2024: Significant Mineral Resource Upgrade for Project Iron Bear*

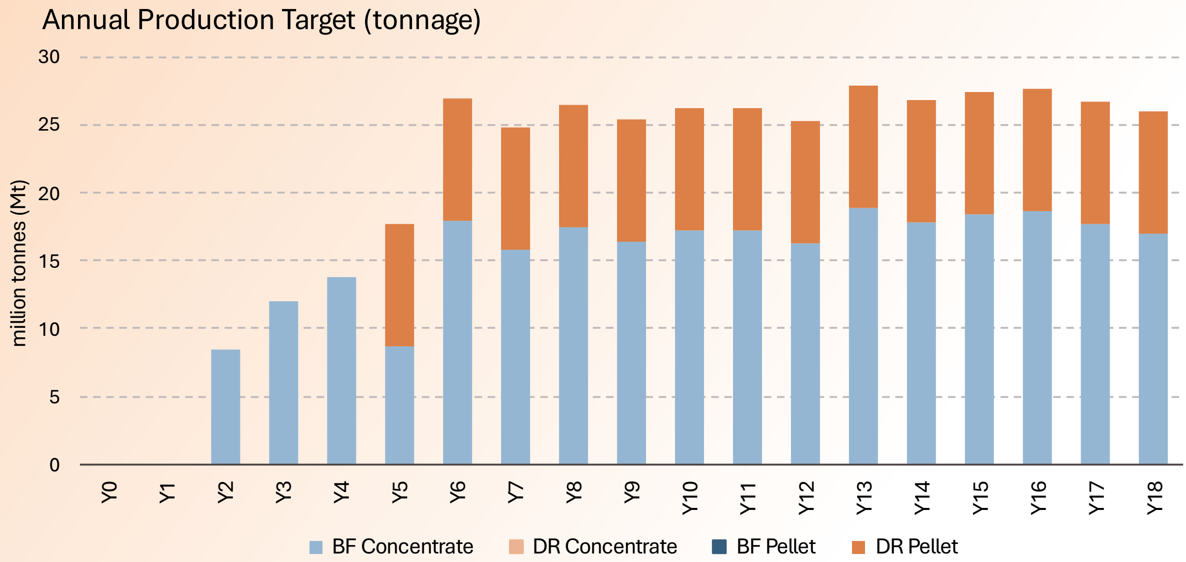


Figure 11: Annual Production Target (tonnage) - Base Case - Scenario A1, B5, C9

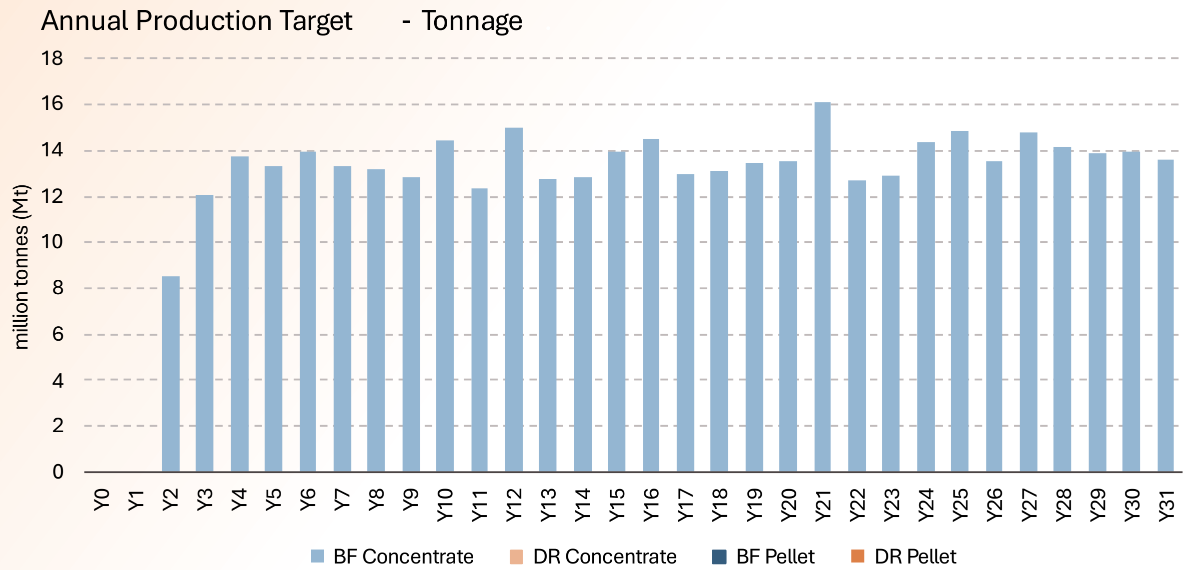


Figure 12: Annual Production Target (tonnage) - Low Case - Scenario D17

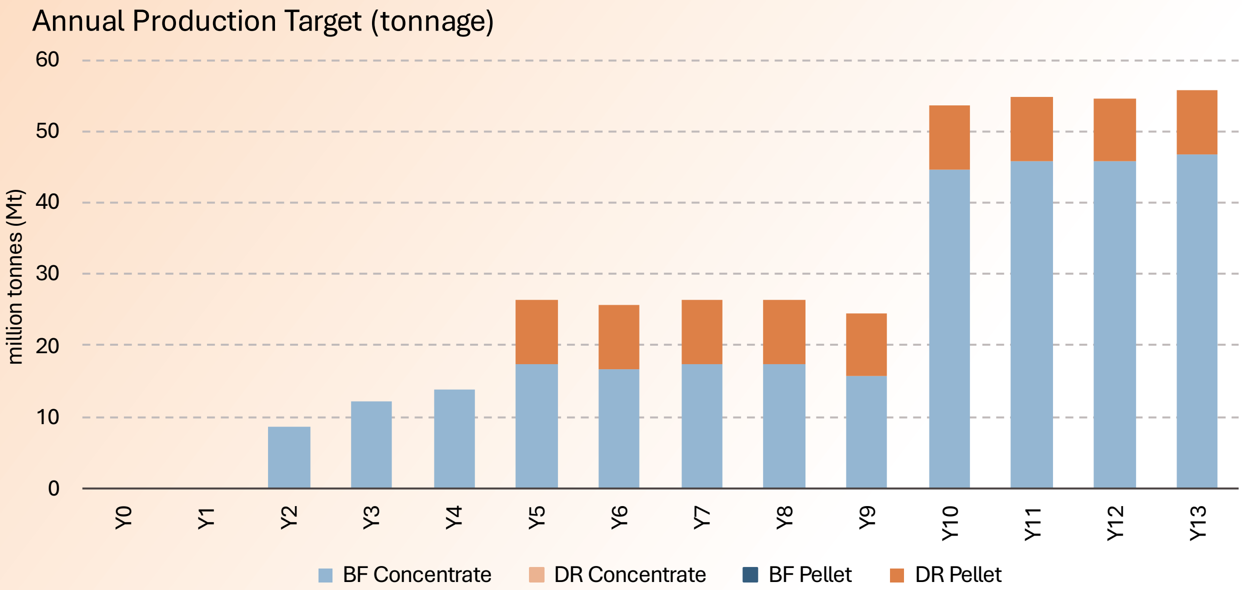


Figure 13: Annual Production Target (tonnage) - High Case - Scenario E129

2.5.4 Operating Scenario Variations

A total of 192 unique combinations (permutations) of different operating strategies were evaluated to determine the best strategies with respect to the key financial metrics including Net Present Value (**NPV**), Internal Rate of Return (**IRR**), environmental impact, Capital Expenditure (**CAPEX**), and Operating Cost(s) (**OPEX**). Table 6 shows the five selected strategies, with production target, power supply source and transport method to Pointe-Noire the main variables.

- **Scenario A1** – Base Case
- **Scenario B5** – Base Case, with the power supply via Churchill Falls from year-1
- **Scenario C9** – Base Case, with concentrate transport to port via Slurry Pipeline
- **Scenario D17** – Low Case
- **Scenario E129** – High Case

Table 6: Operating Scenario Summary

	Scenario A1	Scenario B5	Scenario C9	Scenario D17	Scenario E129
Concentrator Capacity	25Mt p.a.	25Mt p.a.	25Mt p.a.	12.5Mt p.a.	50Mt p.a.
Production Target	Base Case	Base Case	Base Case	Low Case	High Case
Life of Mine (LOM)	18 years	18 years	18 years	31 years	13 years
Power Supply	Menihek + Wind + Churchill Falls	Churchill Falls	Menihek + Wind + Churchill Falls	Menihek + Wind	Menihek + Wind + Churchill Falls
Logistics Solution	Rail	Rail	Slurry Pipeline	Rail	Rail
Water Return	NA	NA	Yes	NA	NA
Concentrate Drying	Magnetic Drum De-watering & Non-thermal Drying				
Tailings Dewatering	Thickener & Non-thermal Drying				
Tailings Storage	Dry Stacking				
Backfilling	Yes				
Power Amortisation	Off				
Flotation Location	Localised	Localised	Pointe Noire	NA	Localised
Pellet Plant Location	Pointe Noire	Pointe Noire	Pointe Noire	NA	Pointe Norie
Pellet Plant Fuel	Bunker C	Bunker C	Bunker C	NA	Bunker C
Discharge Port	Gulf Cooperation Council - GCC				

Below is a non-exhaustive list of alternative operating scenario variations and parameters that were evaluated in this scoping study:

a. Rail transport vs. slurry pipeline phase 1; a significant driver of carbon emissions is the diesel-powered rail transport, and options deploying rail electrification and slurry pipelines have been evaluated.
b. The return of slurry water from Pointe-Noire or discharge into bay after water treatment.
c. Concentrate drying methods – high-rate thickening, plate press dewatering and thermal drying vs. magnetic drum dewatering and Bergaz BALF (Boundary Air Laminar Flow) non-thermal drying to produce a <3% moisture concentrate suitable for cold-weather transport and lower rail / ocean freight costs.
d. Tailings dewatering methods – thickener and plate press dewatering vs. thickener and BALF non-thermal drying to produce a moisture level suitable for dry stacking (estimated to be 12% moisture).
e. Wet tailings storage facility vs. the base case of dry tailings storage.
f. A dedicated tailings storage facility vs. staged in-pit backfilling.
g. Power supply infrastructure to mine-site – transmission lines and associated equipment from Churchill Falls vs. Menihek expansion and wind turbine-generated power as well as various power supply staging scenarios e.g. Menihek and wind for a small operation followed by one, two or three transmission lines when required.
h. Power supply amortisation – on or off – impacts whether Iron Bear supplies the capital for power infrastructure or it is amortised by an electricity vendor.
i. Location of reverse flotation – mine site vs. Pointe-Noire – to evaluate possible impact on water quality at mine site.
j. Pellet plant location at mine site, Emeril Junction or Pointe-Noire.
k. Pellet plant fuel source of bunker C vs. natural gas.
l. Discharge port of Rotterdam, Jeddah (base case) or Tianjin, with freight netbacks included/excluded to China.

IRON BEAR

CYCLONE METALS LTD

03 GEOLOGY & MINING

Modifying Factors 1

PARAMETER	VALUE	UNIT
Year 1 Production Capacity (ramp-up)	60	% of nameplate
Year 2 Production Capacity (ramp-up)	90	% of nameplate
Mineralisation Bulk Density	3.0	tonnes / BCM
Waste Bulk Density	2.7	tonnes / BCM
Dump Truck Model	Cat 793	
Dump Truck Capacity	225.0	tonnes
BASE CASE		
Total Mineralisation Moved (LOM)	1452	million tonnes
% Indicated Material (Payback Period)	90	%
% Indicated Material (LOM)	71	%
Total Material Moved (LOM)	1942	million tonnes
Strip Ratio (LOM)	0.34	waste: ore
LOW CASE		
Total Mineralisation Moved (LOM)	1432	million tonnes
% Indicated Material (LOM)	70	%
Total Material Moved	1955	million tonnes
Strip Ratio (LOM)	0.37	waste: ore
HIGH CASE		
Total Mineralisation Moved (LOM) - **High Case**	1383	million tonnes
% Indicated Material (LOM) - **High Case**	74	%
Total Material Moved - **High Case**	1866	million tonnes
Strip Ratio (LOM)	0.35	waste: ore

3. Geology & Mining

3.1 Geology

3.1.1 Regional Geology

The Labrador Trough is a significant geological feature in the Canadian Churchill Province and extends over 1,100 kilometres along the eastern margin (the Grenville Front) of the Superior Craton, from Ungava Bay to Lake Pletipi, in Québec.

This region comprises a sequence of Proterozoic sedimentary rocks, including iron formation, volcanic rocks and mafic intrusions. The southern part of the Trough is crossed by the Grenville Front, representing a metamorphic fold-thrust belt in which the Archean basement and Early Proterozoic platformal cover were thrust north-westwards across the southern portion of the southern margin of the North American Craton during the 1,000 Ma Grenvillian Orogeny (Brown, Rivers, and Calon, 1992). Trough rocks in the Grenville Province are highly metamorphosed and complexly folded. Iron deposits in the Gagnon Terrane, Grenville part of the Trough, include Lac Jeannine, Fire Lake, Mont-Wright, Mont-Reed, and Bloom Lake in the Manicouagan-Fermont area, and the Luce, Humphrey and Scully deposits in the Wabush-Labrador City area.

The Trough hosts four main types of iron deposits: soft supergene ores that are the product of leaching and enrichment of the weakly metamorphosed cherty iron formation; magnetite-bearing, unmetamorphosed sediments (taconites); metataconites which are metamorphosed and coarser-grained; and occurrences of hard, high-grade hematite ore. Each of these deposit types is mined in the Labrador Trough and contribute to its significance as a major global source of iron ore. More metamorphosed material is referred to as itabirite.

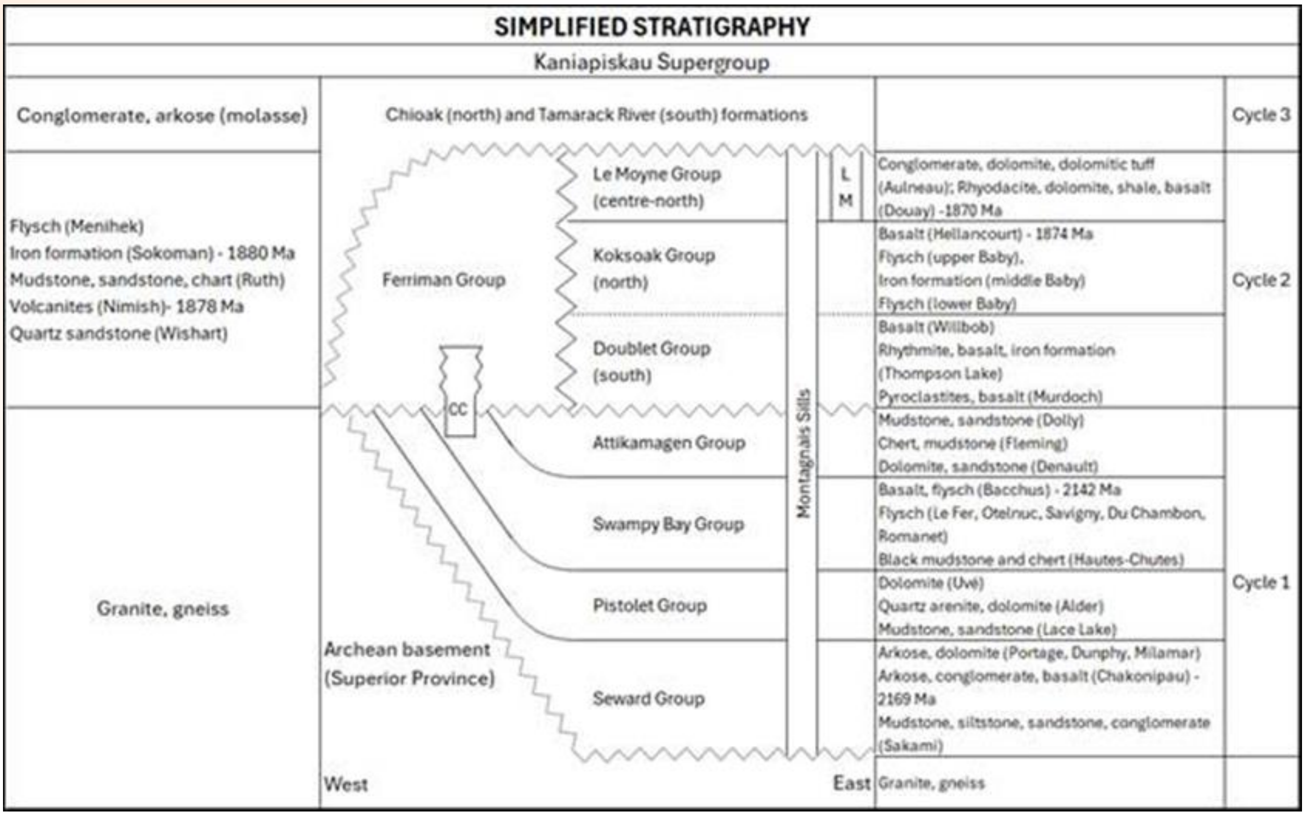


Figure 14: The regional stratigraphic column after Clark and Wares (2006)

3.1.2 Project Geology

At Iron Bear, the Greenbush Zone hosts Lake Superior-type taconite banded iron formation (**BIF**). BIF comprises banded sedimentary rocks composed of magnetite and haematite bands within a cherty silica matrix with variable amounts of silicate, carbonate and sulphides.

Mineralisation is predominantly magnetite (Fe_3O_4) and haematite (Fe_2O_3), with some carbonaceous siderite and ferro-ankerite, as well as in silicates. The iron oxide bands alternate with grey chert or jasper, producing the banding typical of BIF.

The general stratigraphy of the area comprises two sedimentary cycles, Cycle 1 comprising earlier rock types such as the Denault dolomite and chert breccia of the Fleming Formation; and Cycle 2 including black shales of the Wishart Formation overlain by the Sokoman Formation. In structurally complex areas, weathering has resulted in formation of limited secondary haematite, goethite and limonite.

The BIF exhibits a northwest strike and a corrugated topography resulting from elevated parallel ridges of quartzite and BIF alternating with subdued shales and slates. Unaltered BIF is gently dipping but Proterozoic Hudsonian Orogeny compressed the sediments into a series of synclines and anticlines intersected by steep angle reverse faults that dip to the east. The synclines are overturned at the southwest of Iron Bear, with its eastern extent truncated by strike faults.

Secondary iron deposits occur in canoe-shaped synclines, with some tabular bodies extending to depth. There is local supergene enrichment to high-grade ores, especially in synclinal depressions or down-faulted blocks.

Two zones of mineralisation have been defined: the Greenbush Zone, located near Greenbush Lake and the Northwest Zone, near the northwest boundary.

Numerous thrust faults have stacked mineralised geological units to greater than 500 vertical metres. The mineralogy and grade are uniform throughout the fault slices, and the same overall group of sub-members is repeated in whole or in part. The limits of the Greenbush Zone are open, and it is defined by a combination of mapping, geophysics, and drilling.

3.2 Mineral Resource Estimate

In April 2024, Burnt Shirt Pty Ltd (**Burnt Shirt**) was requested by Cyclone Metals to update its 2023 Mineral Resource Estimate on Cyclone Metals' Iron Bear project. Iron mineralisation mainly consists of magnetite (Fe_3O_4) and haematite (Fe_2O_3). The Mineral Resource estimate is based on data collected by CapEx Mining Ltd and modified by detailed compilation and interpretation of high-resolution geophysics and geology.

3.2.1 Drilling and Sampling

Iron Bear was the focus of a 2011 and 2012 drilling programme that identified mineralisation in what was named the Greenbush Zone. It is approximately 10 km long, striking northwest-southeast and 5 km wide and encompasses the Mineral Resource estimate. Numerous thrust faults have stacked mineralised geological units to greater than 500 vertical metres.

- The 2011 diamond core drilling programme comprised 42 BTW (42.0 mm Ø) drill holes for 5,662.3 m
- The 2012 programme consisted of 72 drillholes for 22,359 m at mostly BTW and then NQ (47.6 mm Ø)

Core from both the helicopter-supported 2011 and 2012 diamond drilling campaigns was transported to and professionally logged in a purpose-built core yard in Schefferville, Quebec. Descriptive core logs were recorded reporting drillhole azimuth and dip, rock code, rock description, foliation/banding angle with respect to core axis, estimate of magnetite by unit and listing all core samples.

3.2.2 Specific Gravity and Bulk Density

Selected representative samples of the deposit were sent to two laboratories for bulk density determination, both laboratories returning consistent data. Data for 315 samples was plotted against assayed total iron content and the resulting regression used to inform bulk density estimates for Mineral Resource estimation.

3.2.3 Block Model and Grade Estimation

Blocks of 20mX by 100mY by 20mZ were constructed using a rotation of -40° around the Z Axis to align with the dominant strike of mineralisation. The block model parameters are shown in Table 2. Dynamically rotating anisotropy angles were estimated into each block to honour the thrust faults identified in drilling and the Resource Potentials (ResPot) compilation data.

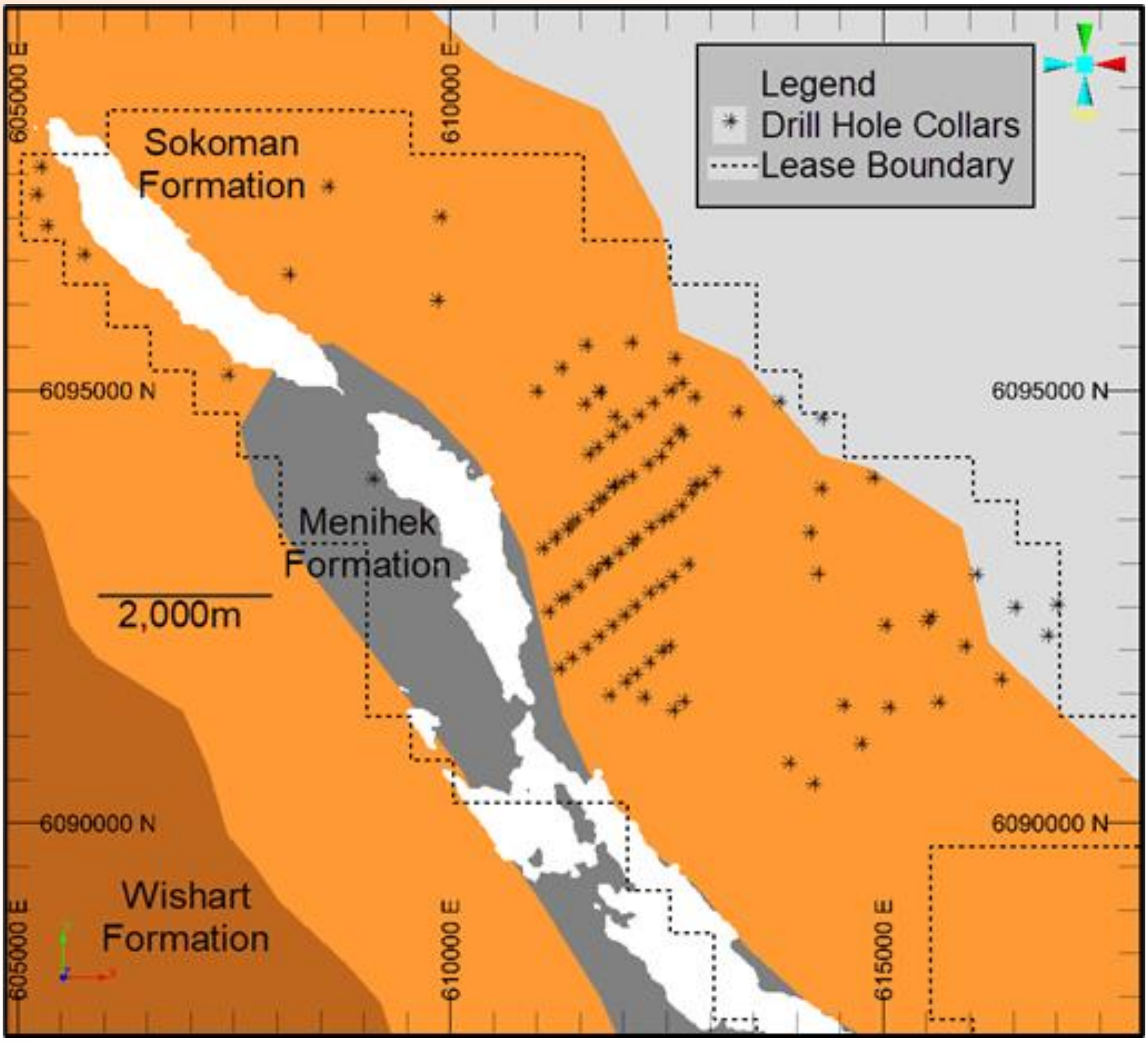


Figure 15: Section Location

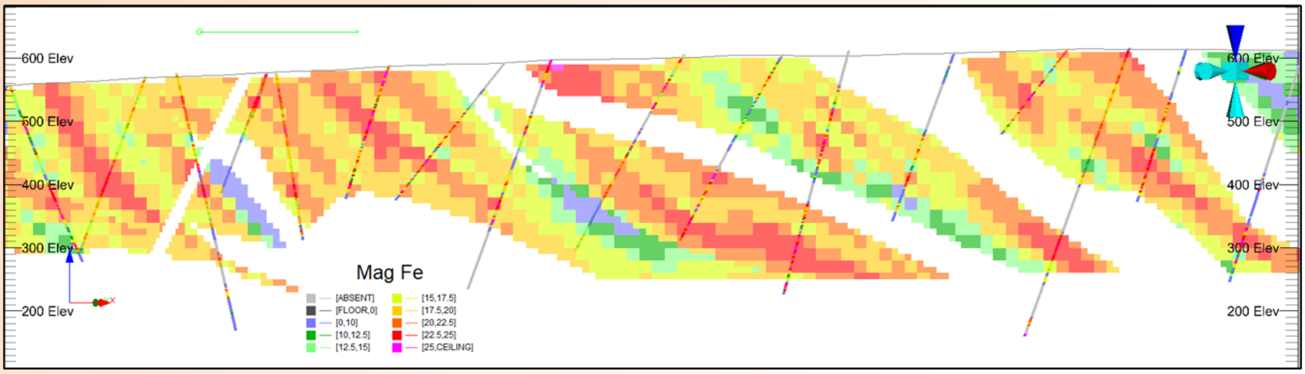


Figure 16: Mineral Resource Model Versus Drilling, Section Magnetic Fe%

Table 7: Block Model Dimensions (Source: Haren, 2024)

Dimension	Origin	Block Size	Number
X	615700	20	600
Y	6083000	100	200
Z	40	20	35

Ordinary kriging was used to estimate grade with parameters modified from those used in the 2013 Mineral Resource estimate. Samples were composited to 3m intervals with statistical analysis showing that no top-cutting of any composite grades was necessary. A search ellipse of 1,750mX by 300mY by 50mZ was used to select composites for the 1st pass estimation, based on the results of geostatistical analysis of the mineralisation continuity. A minimum of five and maximum of twenty composites were used for estimation.

The mineralisation has been stacked by folding and low angle thrust faulting into a series of inclined imbricate slices, which were used as hard boundaries for the interpolation. A suite of variables was estimated with Fe_2O_3, Fe_3O_4, haematite and magnetic iron oxide subsequently populated by regression equations.

Bulk density in mineralisation was set using the regression derived from samples:

Bulk density = (Total Fe x 0.0279) + 2.5695

Bulk density was set as 1.9 t/m^3 for overburden and 2.9 t/m3 for unmineralised material. Overburden was flagged using the topography wireframe translated down five metres down at null grade and examination of sub-celled cross sections indicates that this has a negligible effect.

3.2.4 Mineral Resource Classification

The mineralisation has been reported in accordance with the Australian Joint Ore Reserves Committee Code (the “JORC Code”). The mineralisation has been classified as Indicated and Inferred based on the geological continuity of the deposit, as demonstrated by drilling results and supported by detailed geophysical interpretation and mapping; and grade continuity of the deposit, as demonstrated by geostatistical analysis of drilling results. In accordance with the JORC Code, Table 1 is provided as Table 48, Table 49, and Table 50 in the Appendices which is a checklist of criteria considered by the Competent Person.

Two pit shells were used for classification of the Mineral Resource, CapEx's "30-year" pit shell, which was used to support its PEA's; and CapEx's "ultimate" pit shell:

- The Indicated Mineral Resource is that part of the mineralisation that occurs above the 250mRL floor (about 350m below surface) of a pit design undertaken by previous operators using similar design parameters to those prevalent today. This pit design contemplated provision of process plant feed for 30 years. There is a high degree of confidence in geological and grade continuity at the local and deposit scale within this boundary. Drill spacing for Indicated mineralisation is informed by the MagFe directional variography, being approximately 2/3 of the sill, which implies an along strike spacing of around 1,000m.
- The Inferred Mineral Resource is that part of the mineralisation above 250mRL that occurs external to the 30-year pit shell and within an ultimate pit shell identified by previous optimisations. There is good confidence in the geological and grade continuity, with evidence to imply but not verify continuity. Drill spacing for Inferred mineralisation is informed by the MagFe directional variography, being less than the sill, which implies an along strike spacing of less than 1,500m.

Table 8: Iron Bear Mineral Resource Estimate at 12.5% magnetic Fe cut-off grade

Category	Volume (Bm^3)	Density (t/m^3)	Tonnes (Bt)	*% by mass*									
				Mag Fe	Total Fe	Mn	SiO_2	K_2O	MgO	MnO	Na_2O	P	LOI
Indicated	0.64	3.37	2.15	18.97	28.68	0.53	46.12	0.06	2.49	0.69	0.03	0.03	6.94
Inferred	4.28	3.39	14.51	18.13	29.44	0.52	45.75	0.08	2.22	0.67	0.03	0.03	4.83
Total	**4.92**	**3.39**	**16.66**	**18.24**	**29.34**	**0.52**	**45.8**	**0.08**	**2.26**	**0.67**	**0.03**	**0.03**	**5.1**

3.3 Metallurgy

Metallurgical test work has been conducted to evaluate the processing characteristics of Iron Bear magnetite material and determine preliminary flowsheet design parameters. Testing has progressed through four phases using representative samples from the mineral resource.

3.3.1 Test Work Programme

Using the 2012 historical metallurgical test work as a starting point, a multi-stage programme was developed to confirm previous results and expand to include direct-reduction products.

Sighter test work was performed in 2023 that confirmed the previously-achieved blast furnace concentrate grades and processing yields, and further improved product grades via reverse flotation and pelletising work. This was followed by processing of a lower-grade sample in 2024, and a larger resource-average sample again in 2024. The below table shows the properties of the processed samples and the achieved product grades.

Table 9: Metallurgical modifying factors from test work

	Sample 1	Sample 2	Sample 3
Sampling date	Jul-23	Nov-23	Jul-24
Processed sample size (t)	1.6	7	17.7
Total Fe (%)	29.1	20.6	28.6
Contained magnetite (%)	23	14	24.7
BF Concentrate Fe (%)	68.9	68.4	69.1
BF concentrate SiO_2 (%)	3.4	3.6	3.5
Mass yield to BF concentrate (%)	23.8	15	25.7
Magnetite recovery (%)	97.6	96.5	97.45
DR concentrate Fe (%)	71.6	70.6	71
DR concentrate SiO_2 (%)	1.1	1.2	1.2
Flotation mass yield (%)	80	73.8	89
DR pellet Fe		67.5	68.4
DR pellet SiO_2		1.6	1.5
DR pellet Linder -3.15mm (%)		1	2.3

The results of Sample 3 are considered the most representative of average resource metallurgical performance, though encouragingly the results on the lower head grade Sample 2 still achieved the same product specifications.

3.3.2 Phase 1 Test Work

Phase 1 in 2023 included sighter test work on an initial 1.6 tonnes of core sample selected from the Schefferville-based core farm and processed at Corem, Quebec City. This phase concluded that dry cobbing was ineffective in discarding silica at a coarse size, and grinding & magnetic separation produced an acceptable Blast Furnace (**BF**) grade concentrate of <3.5% SiO_2 at a P80=32 micron grind size, validating the earlier work performed by previous owners. Similarly, this grind size produced a 1.1% SiO_2 Direct Reduction (**DR**) grade concentrate. The feed contained 23% magnetite as measured by Satmagan.

The Davis tube sighter work was followed by LIMS (**Low Intensity Magnetic Separation**) work to more accurately represent an operating plant performance. The results showed that approximately half the mass can be rejected at a p80=500micron, and thus conceptually a primary grind to ~500 micron with LIMS could reject 50% of the mass to tailings before a further grind to 32 micron.

Reverse flotation was also performed producing a Direct Reduction (**DR**) concentrate grade of 1.1% silica at p80=32 micron, at an 81% mass yield, as per below. It was noted that the 1.2% silica at 25 micron grind size can be reduced to 1.0% silica, however at a 50% mass yield. While a 45 micron grind size can produce an acceptable DR concentrate specification, the blast furnace concentrate at 5% SiO_2 at the 45 micron grind size was deemed not acceptable after a marketing assessment.

Table 10: Corem Phase 1 Reverse Flotation production results.

Streams	Weight %	FeT* %	FeO %	Mag** %	SiO2 %	Al_2O_3 %	Fe_2O_3 %	MgO %	CaO %	MnO %	Sub.total %	Sum %
Rougher tails 1	8.2	56.9	23.2	70.2	18.7	0.1	81.3	~~0.6~~	0.4	0.2	0.014	101.3
Rougher tails 2	5.8	65.2	26.9	82.7	7.5	0.1	93.2	0.4	0.3	0.1	0.012	101.7
Rougher tails 3	4.7	68.3	28.5	87.7	4.0	0.1	97.7	0.3	0.2	0.1	0.009	102.4
Rougher concentrate 3	81.3	71.2	29.7	93.4	1.1	0.1	101.9	0.1	0.1	0.0	0.005	103.3
Calculated feed	**100.0**	**69.6**	**28.9**	**90.6**	**3.1**	**0.1**	**99.5**	**0.1**	**0.1**	**0.0**	**0.006**	**103.0**
Total concentrate	**81.3**	**71.2**	**29.7**	**93.4**	**1.1**	**0.1**	**101.9**	**0.1**	**0.1**	**0.0**	**0.005**	**103.3**
Total tails	18.7	62.3	25.7	78.4	11.5	0.1	89.1	0.5	0.3	0.1	0.012	101.7

** Fet: Fe_2O_3 X 0.688*
*** Satmagan measurement*

A three-day production run was performed with the remaining 500kg of crushed core to test the initial flowsheet. The results were as expected in terms of product grade and mass recovery, with81% flotation mass yield.

A second product was envisaged to improve reverse flotation mass recovery, called "RF Concentrate", in essence the Rougher Tails 3 waste stream, perfectly suitable as a 4% silica blast furnace concentrate.

3.3.3 Phase 2 Test Work

This phase aimed to validate the Phase 1 laboratory results using a 7-ton sample to produce BF grade concentrate at 3-4% SiO_2 and DR grade concentrate at 1.2% SiO_2. The collected sample contained 13% magnetite and was treated as a low-grade datapoint for variability. The testing programme encompassed three sequential stages: primary grinding with magnetic separation, regrinding with magnetic separation, and reverse flotation to upgrade the concentrate quality.

The pilot-scale testing successfully demonstrated the technical feasibility of the proposed flowsheet, though with lower recoveries than Phase 1 results. The primary and regrind magnetic separation circuits achieved over 98% magnetic recovery while producing a BF concentrate grading 3.6% SiO_2. The flotation circuit successfully produced a DR concentrate meeting the target specification of 1.2% SiO_2. However, overall weight recovery was 15% compared to the expected 24% from Phase 1, primarily attributed to the lower-grade feed sample received (20.4% FeT versus 29.1% FeT in Phase 1).

Table 11: Corem Stage 2 sighter test and production results

Test ID	Stage	Weight (%)	FeT		FeO		Mag		Main impurities						Separation efficiency (%)
			Gr. (%)	Rec. (%)	Gr. (%)	Rec. (%)	Gr. (%)	Rec. (%)	SiO2 (%)	Al2O3 (%)	MgO (%)	CaO (%)	MnO (%)	Stotal (%)	
SF-1	Rougher	83.9	71.2	86.7	30.1	86.2	97	88.3	1.3	0.09	0.13	0.13	0.04	0.006	57.6
	Scavenger	4.7	69.4	4.8	29.7	4.8	87	4.5	1.9	0.10	0.36	0.52	0.11	0.015	2.3
	Rougher + Scavenger	88.6	71.1	91.4	30.1	90.9	96	92.8	1.3	0.09	0.14	0.15	0.04	0.006	59.9
SF-2	Rougher	88.7	70.8	91.4	30.6	91.1	96	92.7	1.4	0.09	0.11	0.14	0.03	0.006	58.0
	Scavenger	5.3	62.0	4.8	27.8	5.0	73	4.2	8.4	0.16	0.92	1.07	0.22	0.022	-7.1
	Rougher + Scavenger	94.0	70.4	96.2	30.4	96.1	95	96.9	1.8	0.09	0.16	0.19	0.04	0.007	50.8
Production	Rougher	65.8	71.3	68.2	30.3	67.4	92	69.3	1.2	0.10	0.06	0.11	0.03	0.003	46.9
	Scavenger	8.0	70.1	8.1	30.0	8.1	88	8.0	1.7	0.09	0.25	0.28	0.07	0.008	4.2
	Rougher + Scavenger	73.8	71.2	76.3	30.3	75.5	92	77.3	1.2	0.09	0.08	0.13	0.04	0.004	51.2

Iron recovery in the flotation stage was lower than expected at 76% compared to 91-96% in laboratory tests, likely due to equipment limitations with the available material quantity. Investigation into the low flotation mass yield result was postponed until Phase 4 results were available to verify whether the low mass yield was an anomaly or indicative of a beneficiation problem.

The RF Concentrate concept was developed further in light of the low mass yield, increasing total flotation mass yield from 74% to 89% but with a 4.7% SiO_2 RF Concentrate product – still acceptable for blast furnace-based ironmaking, but with a potentially lower price point.

3.3.4 Phase 3 Test Work

Phase 3 involved pelletising test work to validate the potential for producing high-quality DR and BF pellets from the Iron Bear magnetite concentrates generated during Phase 2 pilot-scale operations. This phase represents a critical step in demonstrating the technical viability of the complete value chain from raw ore through to finished pellet products suitable for steel production.

The testing programme utilised three distinct magnetite concentrate streams from the Phase 2 flotation circuit: Flotation Rougher Fe Concentrate (1.2% SiO_2, 70.6% Fe), Flotation Scavenger Fe Concentrate (2.26% SiO_2, 69.3% Fe), and a blend of Flotation Rougher Fe Concentrate with Flotation Scavenger SiO_2 Tail. These concentrates demonstrated excellent pelletising characteristics with fine particle size distributions (98.0-98.6% passing 45 µm), high Blaine surface areas (1,915-2,710 cm^2/g), and high magnetite content (92.5-97.9% by Satmagan analysis). The low impurity levels, particularly aluminium, phosphorus, and sulphur, positioned these concentrates favourably for premium pellet production.

Laboratory balling tests established optimal pelletising parameters using 0.9% bentonite addition and moisture content between 10.0-10.4%. Green pellet quality consistently met industry standards with appropriate wet strength (1.4-1.5 kg/pellet), dry strength (6.0-7.2 kg/pellet), and drop numbers (4-5), indicating excellent handleability and processing characteristics. The systematic basket firing tests evaluated multiple basicity levels for both DR and BF applications, testing natural basicity through enhanced flux additions to optimise metallurgical performance.

The pelletising results demonstrated exceptional product quality across all tested specifications. For DR applications, the optimal basicity (CaO/SiO_2) of 0.4 achieved outstanding performance metrics including cold crushing strength of 462 kg/pellet, mini-tumble abrasion of only 1.5% (-0.5 mm), and superior reducibility characteristics with DR90 of 89.6%, Corem R180 reducibility of 99.1%, and Linder performance of 1.0% (-3.15 mm) with 96.6% metallisation. These results indicate excellent suitability for modern direct reduction processes such as Midrex or HYL technologies.

BF pellet testing encompassed both acid and fluxed pellet configurations. The optimal acid pellet basicity of 0.27 delivered cold crushing strength of 481 kg/pellet, mini-tumble abrasion of 1.0% (-0.5 mm), R40 reducibility of 0.66% O_2/min, swelling of 14.6% by volume, and dynamic low-temperature disintegration (LTD) of 96.4% (+6.3 mm). Fluxed pellets at basicity 1.0, with and without dolomite addition, showed comparable performance with CCS of 385-381 kg/pellet and significantly improved swelling behaviour (7.3-8.0% volume) compared to acid pellets, while maintaining excellent LTD performance above 97.6%.

The test work confirmed that Iron Bear magnetite concentrates can produce pellets meeting or exceeding international quality standards for both DR and BF applications. The flexibility to produce multiple pellet grades from the same concentrate base provides significant commercial advantages, enabling market responsiveness and premium product positioning. However, the study notes that basket test conditions typically yield superior results compared to full-scale pot-grate operations due to ideal thermal conditions and controlled firing environment.

3.3.5 Phase 4 Test Work

Phase 4 test work consisted of processing an 18t core sample to concentrate, thermal profile design and bulk pellet sample production. In Stages 1 and 2 of the testwork program performed at Corem a conventional crushing and screen circuit consisting of three crushing stages was envisaged to produce a -3mm product from a 1000mm topsize ROM.

A simplified flowsheet schematic of the whole production process, comprising of crushing and screening, followed by a SAG mill to grind to p80=500micron and wet LIMS to reject half the mass, before further grinding to 32 micron to enable a second LIMS stage to produce the BF grade concentrate was developed.

The BF concentrate is subjected to reverse flotation to produce the DR grade concentrate of ~1.2% silica, and potentially a third marketable product of ~4.0% silica, called an RF concentrate.

While simplified in the above schematic, the flowsheet is based on the metallurgical test results, which in an operating plant will contain all the required support equipment like pumps, sumps and more complex recirculation loops, as well as sensible design choices like using rod mills to grind to 200 micron, before switching to ball mills to grind to 45 micron..

During the BF concentrate production in December 2024 for Phase 4, the desired silica level of <3.5% SiO_2 was not achieved after an equipment failure at Corem of one LIMS drum. Replacing the LIMS drum with a another did not yield the same results. After a joint investigation with Corem it was found that some clumping of concentrate occurred which may mechanically entrap liberated quartz particles, and larger (>45 micron) mixed particles were observed. The Corem test unit has three LIMS drums in series on the same frame, but in operation LIMS drums will be spaced further apart, providing opportunity to use demagnetising coils to prevent clumping if required.

The flowsheet was refined to include a polishing ISAMill to just treat the 45-75 micron particles. The original and revised flowsheets are shown below. The modification was successful with BF grade achieved.

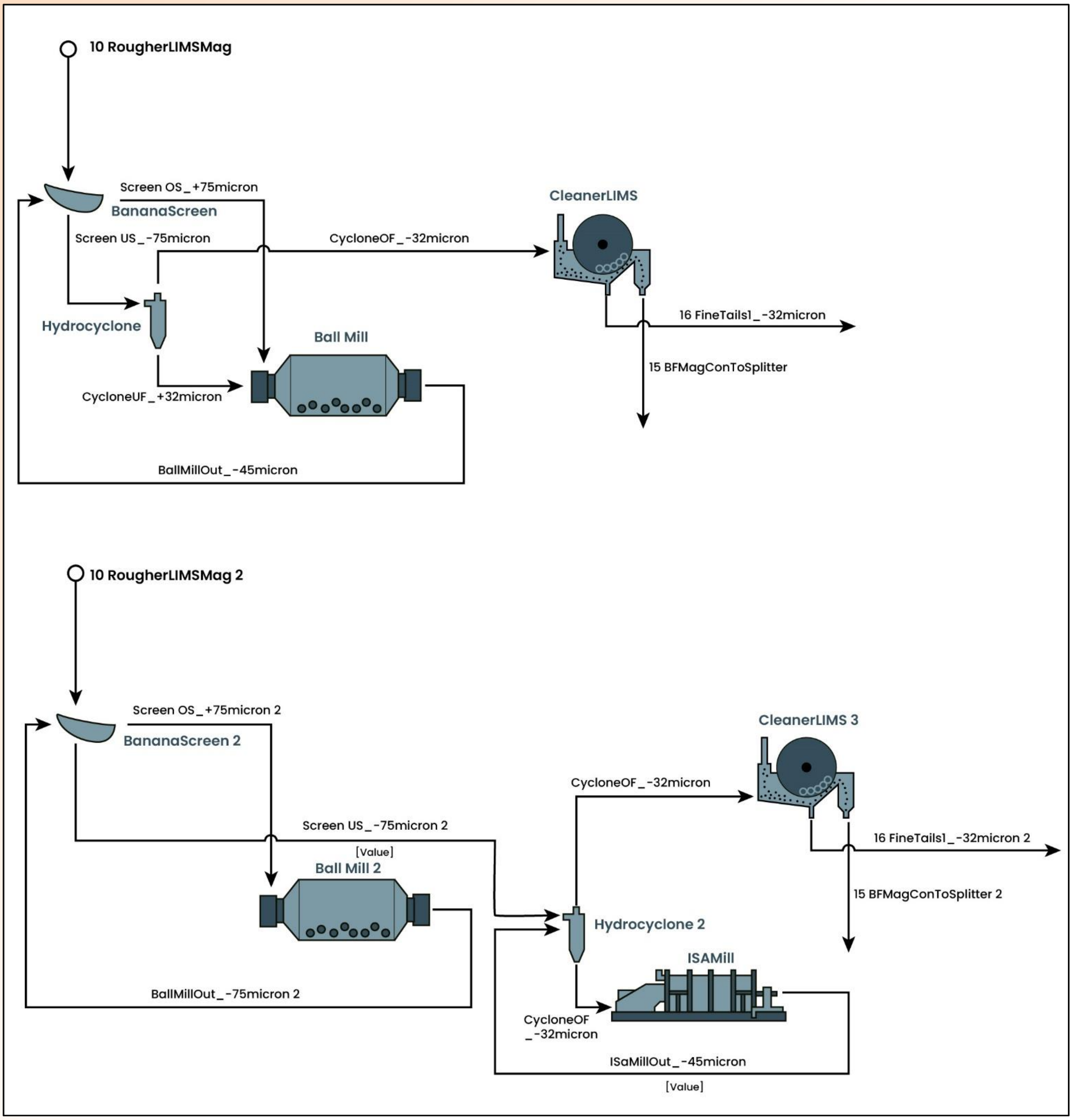


Figure 17: Phase 2 ballmill flowsheet (top) and ISAMill incusion (bottom).

The Phase 4 work did evaluate different reagents, including Chemical X which did not require an elevated pH. Different flotation technologies were also evaluated, and the combination of:

- ISAMill addition to remove higher than 45 micron mixed particles
- Change to column flotation
- Change in collector from Lilaflot to Armoflote

increased flotation mass yield to ~89% from ~80%.

While the produced DR concentrate was at <1.0% silica, some flotation tails were added again (19% of the floated froth) to achieve a 1.2% silica level. In operation the silica level can be managed with control of flotation additive additions or similar methods.

Figure 18 Picture of Iron Bear pilot plant located at COREM

An overview of the flowsheet results on Sample 3 (Corem phase 4) is shown below (Figure 19).

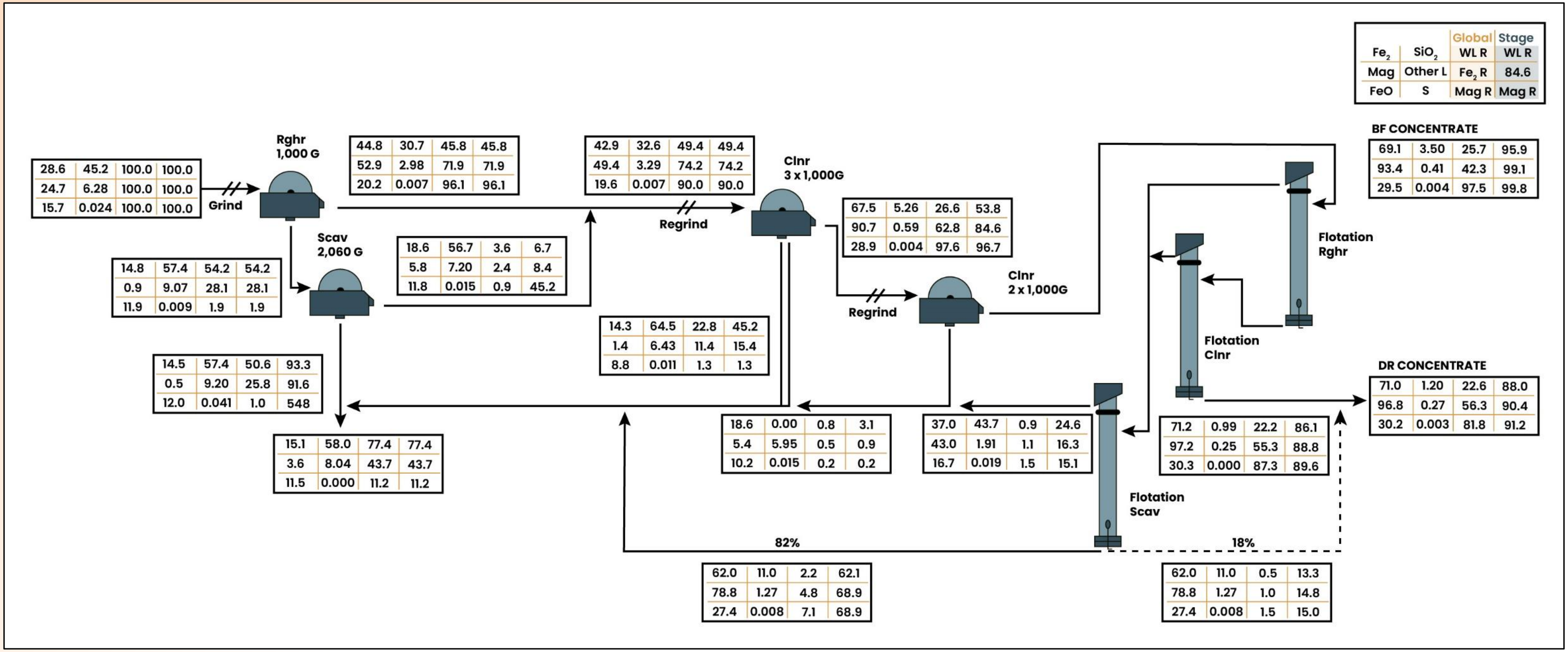


Figure 19: Corem Phase 4 Pilot-Scale Results - to BF and DR Concentrates

3.3.6 Comminution and Engineering Parameters

Comminution engineering parameters were measured on Samples 2 and 3, as shown in Table 12. While laboratory test work on samples 2 and 3 were performed with ball mills, the final operation may have rod mills for initial grinding duties due to lower power consumption, followed in the flow sheet by ball mills to achieve a finer grind size.

Table 12: Measured comminution parameters on Samples 2 and 3

Index	Abbr.	Reference size	Sample 2 Value	Sample 3 Value	Units
Bond Abrasion Index	Ai	-	0.5722	0.4067	g
Bond Crusher Work Index	CWi	-	13.8		kWh/t
Bond Ball Mill Work Index	BWi	600 µm	24.9	24.0	kWh/t
Bond Rod Mill Work Index	RWi	-	16.7	17.2	kWh/t
Levin Ball Mill Work Index	L-BWi	38 µm	20.8		kWh/t
		32 µm	21.0	20.4	kWh/t
JK Drop Weight Test	DWT	A	60.5	53.6	-
		b	0.63	0.79	-
		ta	0.17	0.21	-
		A×b	38.1	42.3	-
		SCSE	10.9	10.6	kWh/t
Stephen Morrell Test	SMC	A	68.3	59.6	-
		b	0.54	0.62	-
		ta	0.31	0.30	-
		A×b	36.9	37.0	-
		DWi	8.4	8.75	kWh/m^3
		Mia	20.3	20.1	kWh/t
		Mib*	21.5	21.0	kWh/t
		Mic	15.7	8.10	kWh/t
		Mih	8.1	15.7	kWh/t
		SCSE	11.2	11.4	kWh/t
Piston Die Test	PDT	1.5 N/mm^2	1.69	3.71	kWh/t
Total S.E. at 4 mm (95% eff. drive eff.)		2.5 N/mm^2	2.10	4.43	kWh/t
		3.5 N/mm^2	2.47	5.08	kWh/t
		4.5 N/mm^2	2.82	5.68	kWh/t

3.3.7 Forward Work Programme

In preparation for the Pre-Feasibility Study (**PFS**) the following work is planned:

- Concentrate dewatering and drying – concentrate thickening and plate press dewatering followed by thermal drying, versus Steinert magnetic dewatering drums and Bergaz BALF dewatering+drying
- Tailings thickening, followed by dewatering using plate presses or similar, versus dewatering via Bergaz BALF slurry pumping and conventional BALF dewatering/drying. Various tailings size distributions must be tested.
- Testing of produced DR pellets by Midrex and Danieli/Tenova, both for Raw Material Evaluation and basket/bag tests in operating reactors.
- Verification of the Steinert claim of a 16% exit moisture after the magnetic dewatering drums requires 1.0 to 1.5t of concentrate, and which has been deferred until enough concentrate can be produced again. Bergaz testing for concentrate drying can still proceed with a 16% input moisture assumption, with a sensitivity of 20% input moisture content.

3.4 Mining

3.4.1 Background

The Iron Bear Project is located 25km northwest of Schefferville and is a large taconite mining operation designed to extract and process mineralised material over a 18 year mine life. The project intends to combine conventional open pit mining, with the opportunity to implement in-pit crushing and conveying (IPCC) which will be considered in more detail in later study phases.

The deposit's characteristics make it well-suited to conventional open pit mining methods, with a relatively consistent tabular geometry and favourable geotechnical conditions. The mine will be developed in a series of phases (or pit stages) incorporating pit wall cut-backs and satellite pits to optimise the net present value of the resource while maintaining consistent resource quality being presented to the processing plant. This phased approach allows for capital deferral, optimises stripping requirements, and provides operational flexibility to respond to changes in market conditions.

3.4.2 Geotechnical Design Specifications

Bastion Geotechnical Pty Ltd (**BG**) was engaged by Cyclone to deliver a desktop review and recommendations to support conceptual level geotechnical design specifications for the Iron Bear Project.

The pit shells from the 2013 PEA were used to guide the geotechnical assessment.

The 30-year pit shell sits entirely within the Final pit shell and extends ~3.4km North-South and <~1.1km East-West, with a floor elevation of 250mRL. The Final pit shell extends ~5.7km North-South and ~2.9km East-West, with a floor elevation of 250mRL.

Figure 20 presents the location plan of the two (2) pit shells, with some spot height elevations adjacent to the crest of the pits. The depth of the 30-year pit shell is indicated to be between 340 and 415m deep and the Final pit shell between 260 and 415m deep.

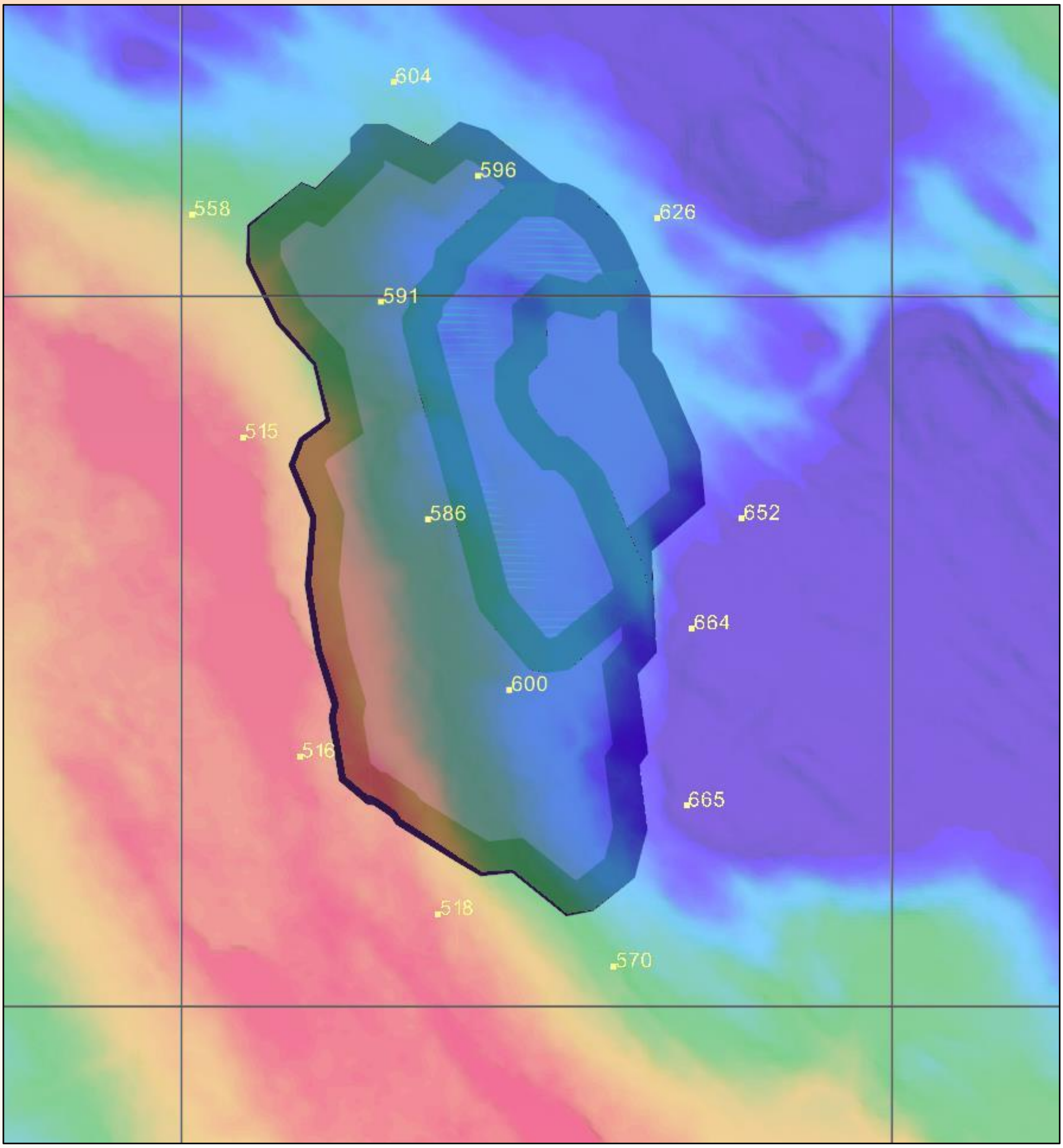


Figure 20: Location plan of the Iron Bear Project, showing spot height elevations adjacent to the pit shell crests.

The geotechnical design specifications exclude any recommendations for other engineered structures including roads, road cuttings, waste dumps, stockpiles, water storage facilities and tailings storage facilities.

The Geotechnical model can be summarised as:

- The deposit is located in the Sokoman Iron Formation, with the majority of walls anticipated to be excavated in this (a good rock mass quality apparent in core photographs), along with overlying Menihek Formation (understood to be a graphitic shale, with somewhat fair rock mass quality and subject to damage from thrust faulting apparent in core photographs) and underlying Wishart Formation (a good rock mass quality apparent in core photographs).
- A number of thrust faults are identified and modelled to produce an apparent repetition in the sequence within the deposit. These thrust faults exhibit, where available to be observed, shear fabric, high strain zones, and matrix or fines.

- The thrust faults dip shallow to moderately towards the North-east. The slope stability of the Western slopes will likely be sensitive to the dip of these thrust faults.
- One last stage intrusive is identified as the Post-Iron Dyke/Sill (PIDS), dips steeply towards the east and is located in the Western wall of the 30-year pit shell. The PIDS appears to be of fair to good rock mass quality.
- No geotechnical logging, structural fabric observations or geomechanical laboratory testing results were available for the deposit.
- No hydrogeological observations or characterisation were available for the deposit.

On the basis of this, the lack of geotechnical data and observations precludes traditional assessments of slope stability using Limit Equilibrium analyses. As an alternative method of derivation of conceptual geotechnical design parameters, with reference to an empirical chart of slope angle against slope height for large open pit projects globally was adopted (Figure 21).

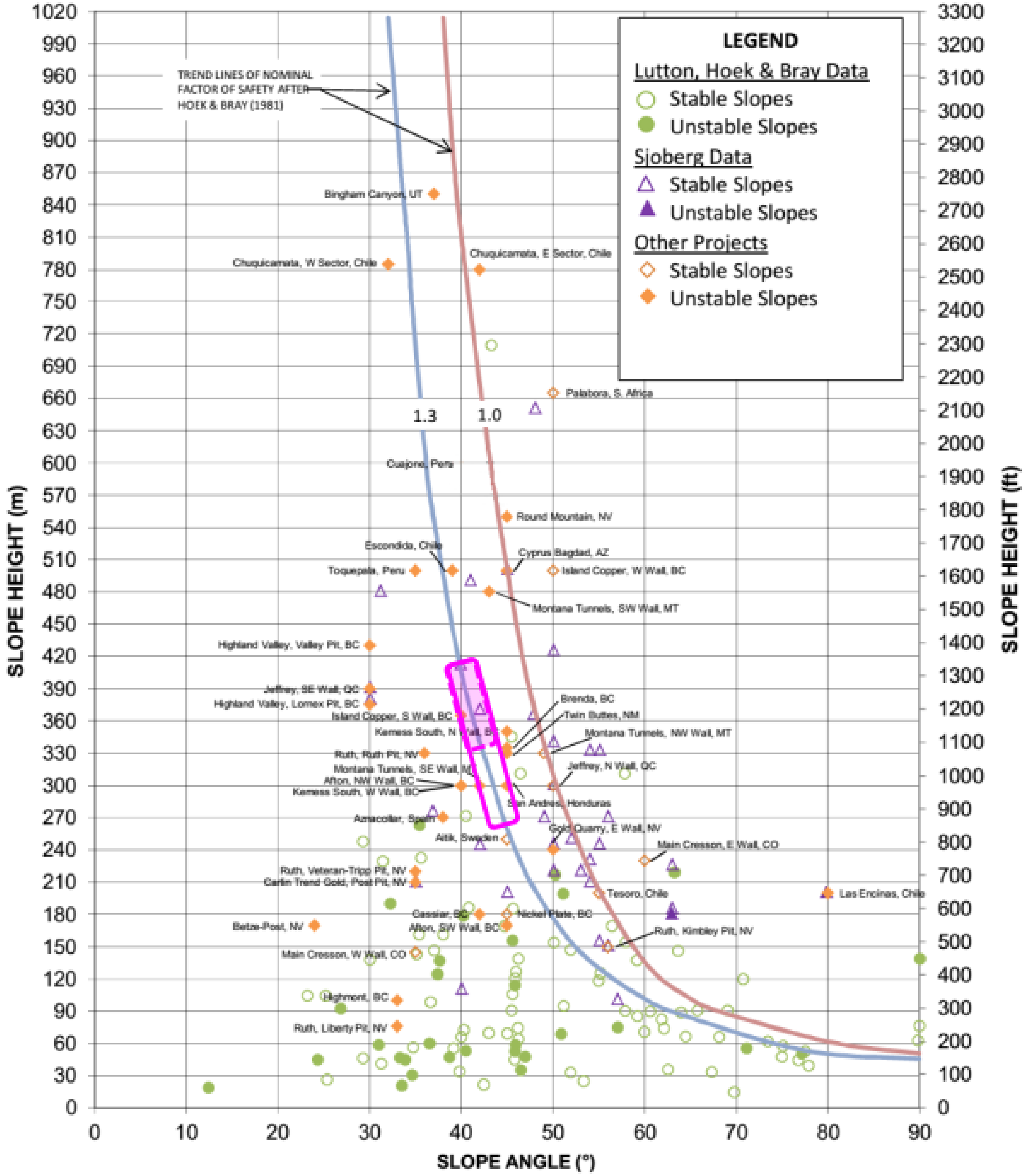
Although Stacey and Read (eds.) (2009) recommend for hard rock slopes to design from the batter scale up to the inter-ramp scale, this is not an option for Iron Bear Project considering the immature level of understanding of geotechnical conditions. With two (2) possibilities for bench height including 16m (mined on four (4) flitches) or 22m (mined on three (3) flitches), the geotechnical specifications approach therefore focused on designing for an Inter-Ramp Slope Angle (IRSA), with reference to Figure 20, and some consideration of possible geotechnical impacts from large structures.

The 30-year pit shell, the recommended design sectors are delineated in Figure 22 and the recommended parameters listed in Table 13

. Design sectors provided for the Final pit shell are consistent with the 30-year pit shell.

Design sector 1, on the western wall, has had the IRSA reduced from what is indicated in the empirical chart to accommodate possible impacts of thrust faults. Design sector 2, on the eastern wall, is recommended for the placement of pit ramps.

A generic 80° Batter Face Angle has been adopted and will require refinement following further investigations during the next study phase.



NOTES:
1. ORIGINAL DATA POINTS AFTER LUTTON 1970, HOEK AND BRAY 1981, AND SJOBERG 1996.
2. ADDITIONAL DATA FROM KNIGHT PIESOLD PROJECTS AND OTHERS ALSO INCLUDED.

Figure 21: Empirical Slope Angle (°) against Slope Height (m) chart. Solid magenta line represents anticipated slope heights for the Final pit shell, and the shaded magenta polygon represents anticipated slope heights for the 30-year pit shell

Table 13: Recommended geotechnical slope design parameters for 30-year Pit shell (Source: Bastion Geotechnical)

DESIGN SECTOR	BATTER HEIGHT (m)	BATTER FACE ANGLE (°)	BERM WIDTH (m)	INTER_RAMP SLOPE ANGLE (°)	COMMENTS
30YEAR_DS1	16	80	20.0	35	Whilst a steeper IRSA may be indicated in Figure 3, BG has discounted for possible impacts of thrust faults.
	22		27.5		
30YEAR_DS2	16		16.2	40	This design sector would be preferred for placement of haulage ramps.
	22		22.3		

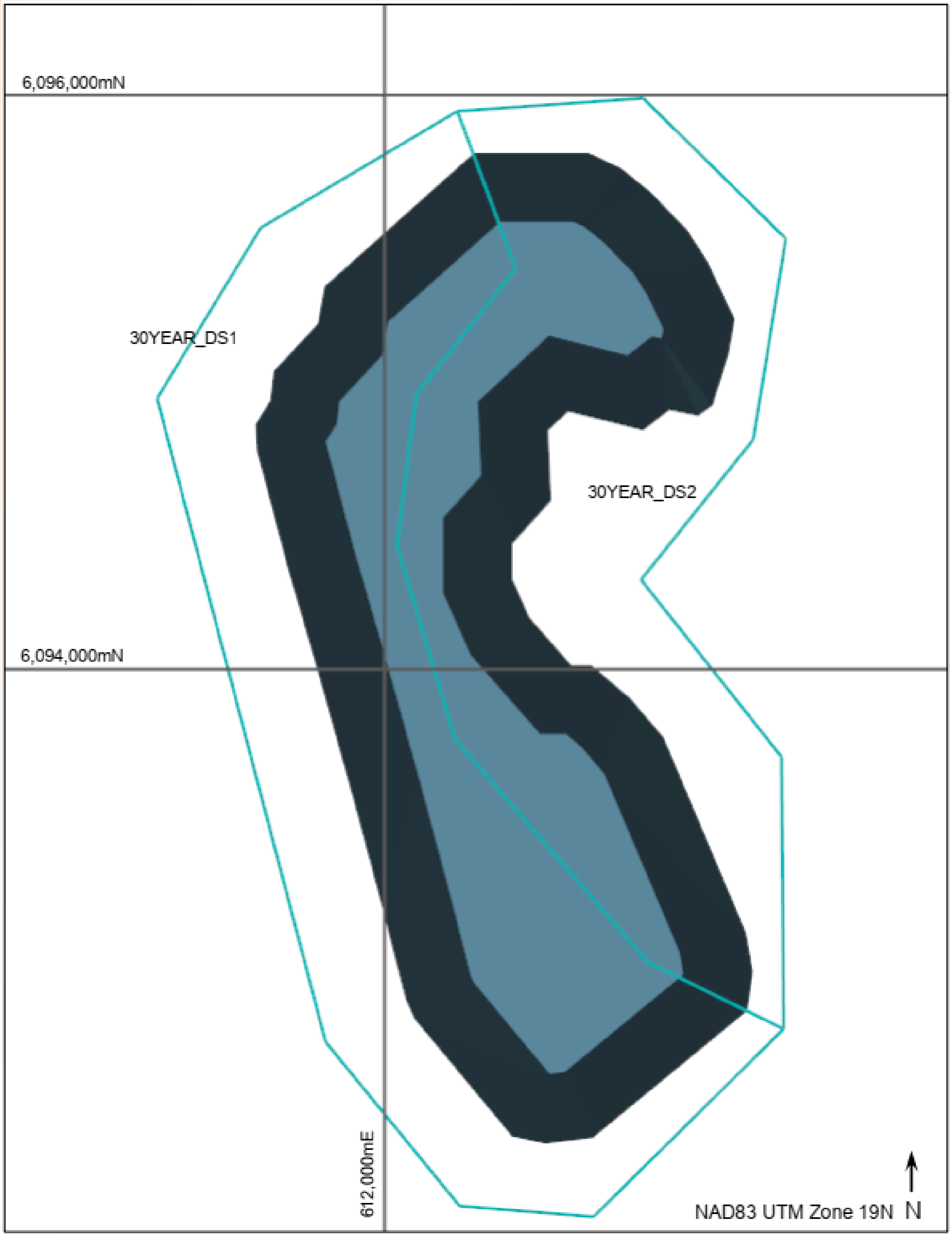


Figure 22: Recommended geotechnical design sectors for the 30-year pit shell (Source: Bastion Geotechnical)

The focus for future geotechnical investigative efforts will aim to reduce uncertainties and produce as a minimum, a Pre-Feasibility Study (PFS) level geotechnical study. This is inclusive of acquisition of teleview imagery of historic drill holes to improve the structural model, a diamond drilling program focused on the 30-year pit shell, laboratory testing of diamond core samples, geotechnical logging, and a hydrogeological study for geotechnical purposes.

3.4.3 Pit Optimisation and Mine Planning

Utilising the 2024 resource model, updated geotechnical parameters provided by BG, and cost and revenue parameters provided by Cyclone, Snowden Optiro Mining Consultants (**Snowden**) undertook pit optimisation and strategic production scheduling to develop an updated mine plan of 23 phases as shown in Figure 23 to provide 50Mt p.a. of nominal concentrator output capacity over a 30-year mine life.

Approximately 6 billion tonnes of mineral resources would be required to feed the process plant over the 30-years at these production rates.

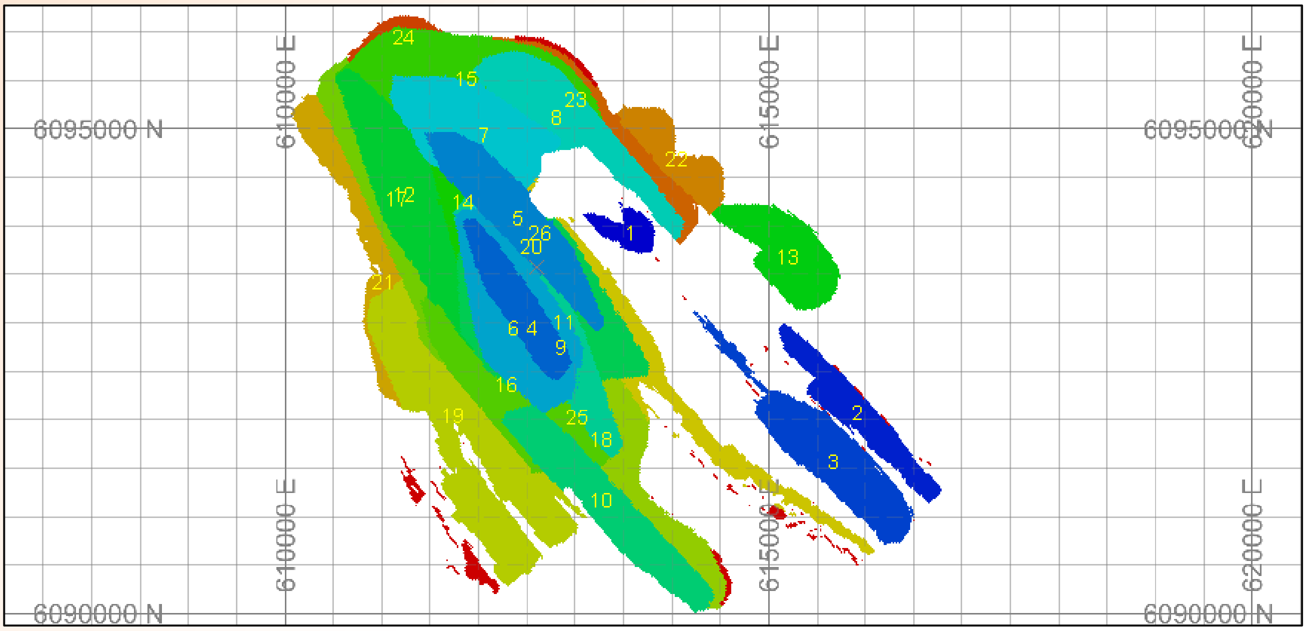


Figure 23: Pit Stages derived from the Pit Optimisation Results (Source: Snowden)

Pit optimisations were constrained to be within the lease boundaries, and to avoid the proposed plant location and both Greenbush and Kivivic Lakes (Figure 24). Pit shell selection focussed on maximising both value and the quantity of Indicated resources whilst achieving the required mine schedule inventory, with 93% of the total Indicated mineral resource included within the pit shell selected for pit staging and mine production scheduling. Figure 25 shows the pit shell results, the higher value shells (red colours) are preferentially located in the Indicated area of the block model (white outline). The selected pit shell is illustrated by the yellow area.

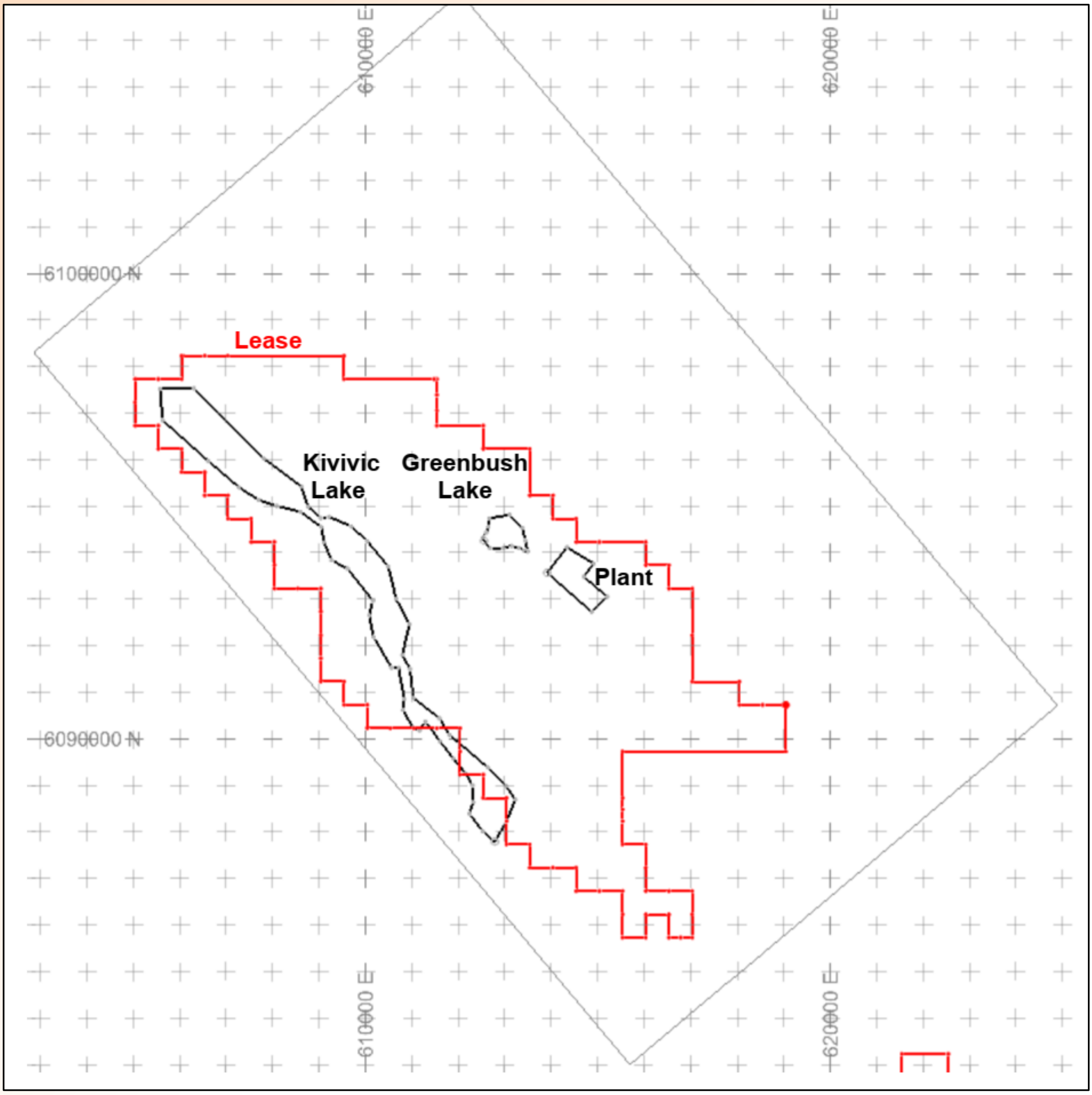


Figure 24: Spatial constraints applied to the pit optimisation (Source: Snowden)

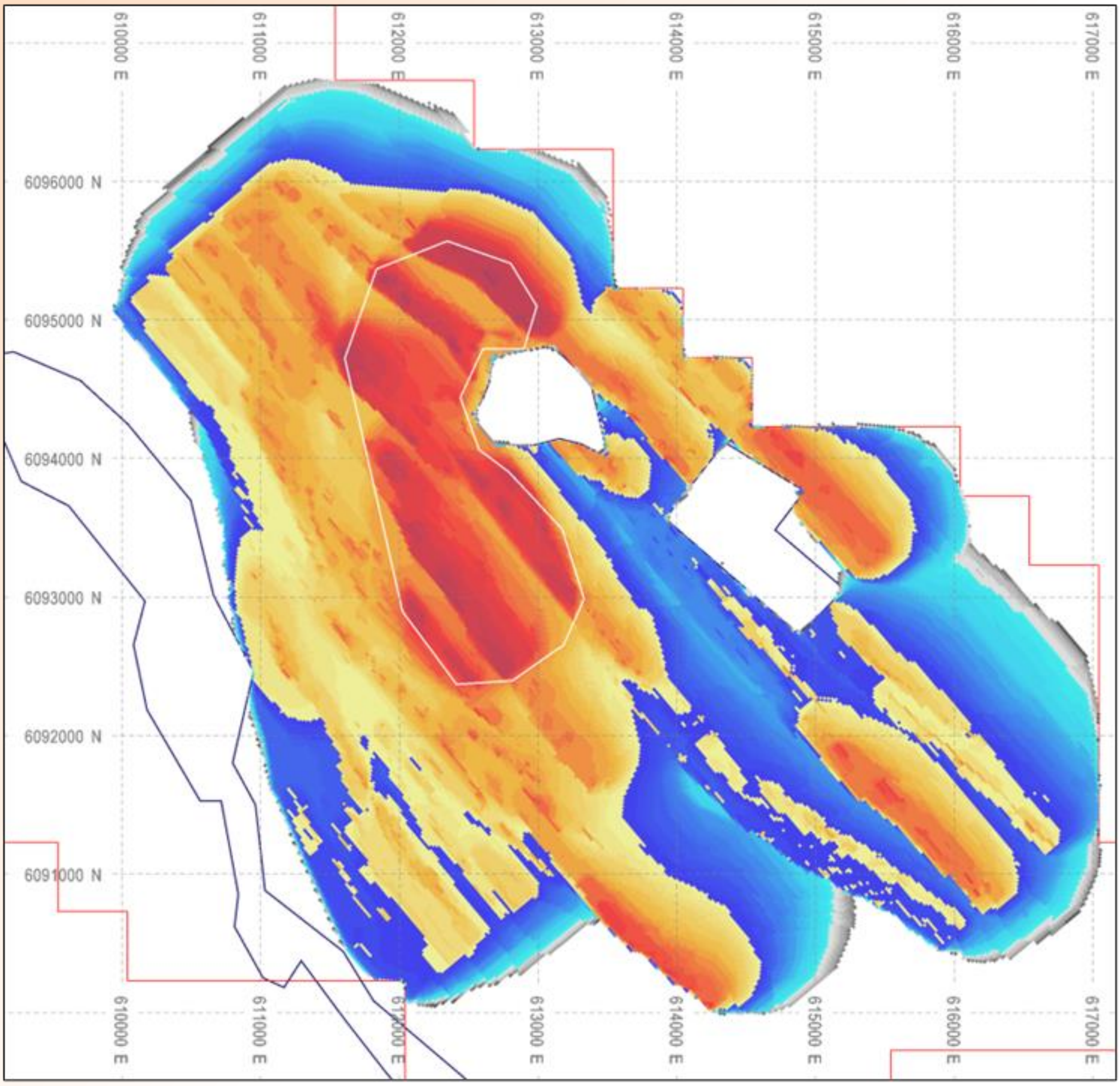


Figure 25: Pit Optimisation Results (Source: Snowden - highest value shells in red, lowest value shells blue and grey)

The selected pit shell has approximate dimensions of 7km along strike, and 3km in width. Most individual stages have widths of approximately 250m with considerable strike length of generally 2.5km or more. There are several stages that are smaller and narrower, down to 80 -100m in width which will need further review with detailed design work during the next study phase, along with considerations for multi-stage mining operational aspects and minimum mining widths. Generally, the widths described are more than adequate for the mining equipment assumed for the project.

The selected pit shell has a maximum depth of 420m from surface.

The full list of pit stages and the material inventories included within the Snowden mine plan are shown in Table 14.

Table 14: Pit Stage Inventories (Source: Snowden)

Stage	Pit size (Mt)	Waste (Mt)	Strip ratio (w:o)	Resource (Mt)	MagFe (%)	Total Fe (%)	MgO (%)	P_2O_5 (%)	SiO_2 (%)	MnO (%)	% Ind
1	29	3	0.10	26	17.6	28.5	2.1	0.021	47.0	0.7	-
2	97	11	0.13	86	16.7	30.2	2.3	0.040	45.3	0.6	-
3	288	37	0.15	251	19.4	32.7	1.6	0.045	45.3	0.4	-
4	117	10	0.09	107	19.9	28.9	2.7	0.026	46.3	0.6	99.7
5	253	45	0.21	208	18.9	29.4	2.3	0.034	45.7	0.6	93.8
6	435	101	0.30	334	18.5	28.4	2.8	0.035	46.6	0.7	79.8
7	405	128	0.46	277	19.5	29.3	1.9	0.023	47.1	0.7	57.1
8	312	119	0.61	193	21.8	30.2	1.8	0.024	47.6	0.7	68.5
9	335	80	0.32	255	18.8	28.6	2.7	0.029	46.1	0.7	68.7
10	281	18	0.07	263	19.9	29.7	2.0	0.023	47.1	0.7	-
11	625	142	0.29	483	18.2	28.3	2.8	0.037	45.3	0.8	62.9
12	326	47	0.17	279	20.7	28.8	2.4	0.025	47.0	0.7	-
13	205	65	0.47	140	22.2	31.0	1.8	0.021	46.5	0.9	-
14	602	113	0.23	489	18.9	28.3	2.7	0.026	46.4	0.7	68.9
15	686	197	0.40	489	20.6	29.6	2.1	0.025	46.6	0.6	30.5
16	435	27	0.07	408	18.9	29.2	2.6	0.041	45.5	0.6	1.0
17	437	23	0.06	414	18.9	28.6	2.7	0.028	45.9	0.6	-
18	561	104	0.23	457	19.0	28.8	2.2	0.029	47.2	0.6	-
19	673	66	0.11	607	17.8	29.3	1.9	0.025	46.3	0.6	-
20	543	91	0.20	452	18.7	28.8	2.7	0.033	45.6	0.7	28.3
21	274	24	0.09	251	18.8	28.8	2.5	0.022	46.5	0.7	-
22	97	9	0.11	88	18.5	30.4	2.0	0.023	46.0	0.9	-
23	202	97	0.93	104	20.7	30.6	1.9	0.025	45.8	0.7	28.4
Total	**8,217**	**1,556**	**0.23**	**6,661**	**19.2**	**29.2**	**2.3**	**0.029**	**46.3**	**0.7**	**29.8**

Pit phase sequencing prioritised Indicated resources and lower strip ratio stages and was completed within optimisation software to maximise Net Present Value (NPV) on an annual basis. Mine production scheduling constraints applied included:

- Two-year ramp-up period on production capacity for mining and concentrate production
  - 60% in Year 2
  - 90% in Year 3
- Vertical advance limits of 60m per annum
- Maximum of 280 Mt p a for total material mined
- Maximum of 225 Mt p a of mineralised feed into the crusher

The Snowden mine plan has then been scaled to produce the required mine production schedule outputs for the Scoping Study “Base Case”, “High Case”, and “Low Case” production target scenarios, including adjustments for the phased increases to concentrator output capacity, whilst limiting total Inferred mineral resources within the production schedules to approx. 30% for each scenario. The Inferred constraint achieves reporting compliance for the lower level of geological confidence mineralisation as well as levelised benchmarking of each production scenario before any further economic analysis is completed.

The Snowden mine plan pit stage sequencing has been honoured in any scaling and/or adjustments made to complete the Scoping Study production scenarios.

There is no formal pre-production (pre-strip) mining in Year 1 due to the shallow presence of mineralisation in the first pit phases. This will need to be reviewed in more detail during the next study phase to evaluate whether waste mining activities are needed to support site construction requirements.

Ore loss and dilution factors have not been included in the mine plan. This is a reasonable omission at this study stage and further supported by the large and relatively homogeneous mineral resource, with good continuity of mineralisation in well understood taconite geology and its distribution throughout the project. Given the geology, bulk tonnages planned to be mined and processed, and assuming routine grade control processes implemented for operations, it would be expected that ore loss and dilution impacts will be insignificant, with hanging wall and footwall contacts likely the main contributors, similar to other iron ore projects in the region. Potential ore loss and dilution will be assessed during the next study phase.

3.4.4 Base Case Production Schedule

The base case mine plan for the 25Mt p.a. Production Target Scenario encompasses three concentrate production target phases to maximise project NPV while maintaining consistent mill feed requirements once at full capacity. These three phases include an initial concentrate capacity of 12.5Mt p a, followed by a 5.0Mt p a. increase to accommodate DR concentrate production for pelletising in Year 5, then a final 7.5Mt p a. increase to concentrate production capacity in Year 6.

The 25Mt p.a. scenario moves 488Mt of waste for 1,452Mt of mineralised material at a strip ratio of 0.34 across life of mine from 10 of the 23 pit stages (see Table 15). The mineralised material utilised for the 25Mt p.a. Production Target scenario is a subset of 1,452 million tonnes from the published JORC compliant Iron Bear mineral resource. This is made up of 71% Indicated and 29% Inferred mineralisation (see Figure 26). During the phased increases to production capacity across the first 6 years feed to the process plant is 91% Indicated resource.

Mill feed during the first decade of operations comprises 78% Indicated resource, well after the payback period of the proposed expansion phases.

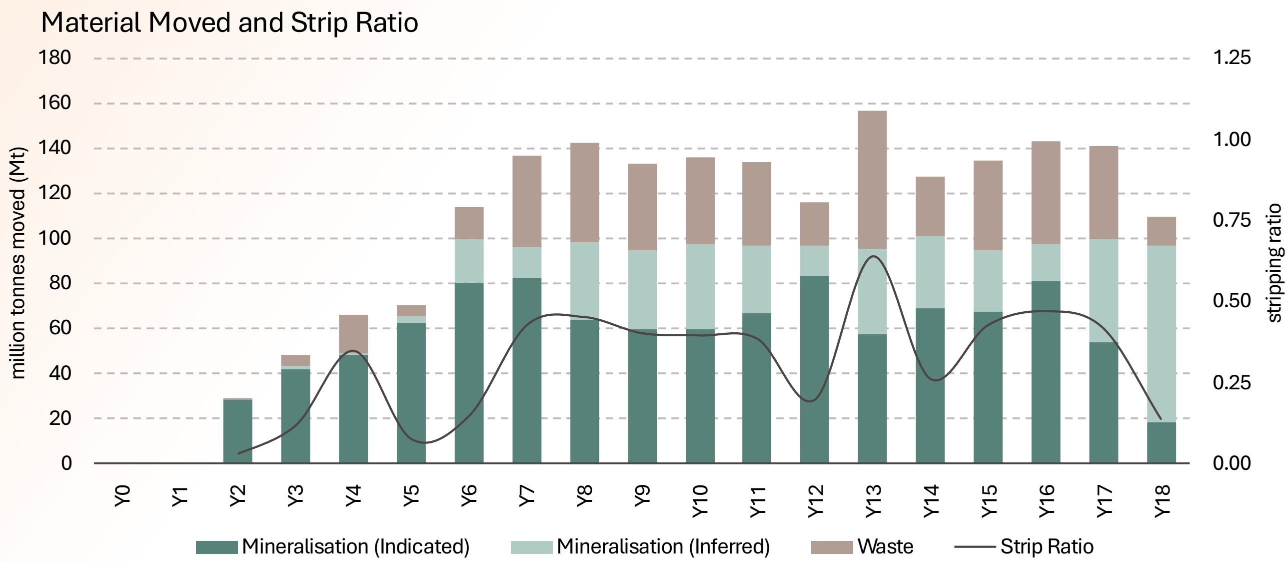


Figure 26: Material Moved and Strip Ratio - 25Mt p.a. / Base Case - Scenario A1, B5, C9

The Inferred resource constraint of 30% has resulted in a mine life of only 18 years for the base case from a target of 30 years. There remains significant indicated resource within defined pit stages not mined in this scenario that along with targeted infill resource drilling to increase the total Indicated resource proportion, it would be reasonable to assume that a 30-year mine life can be achievable even with conservative resource conversion rates.

The Snowden mine plan will be used to focus infill resource drilling programs to increase the quantity of Indicated resources in the areas required to achieve the practical and logical pit stage progression developed for the Scoping Study. This will aid in increasing the base case mine life to the target 30-years during the next study phase as well as improve the opportunity to declare an ore reserve estimate for the project, subject to the material modifying factors required as per the JORC Code (2012).

3.4.5 High Case Mine Production Schedule

The high case mine plan for the 50Mt p.a. Production Target Scenario encompasses three concentrate production target phases. These three phases include an initial concentrate capacity of 12.5Mt p a, followed by a 12.5Mt p a. increase to accommodate both BF concentrate production and DR concentrate production for pelletising in Year 5, then an additional 25.0Mt p a. increase to concentrate production capacity in Year 10.

The 50Mt p.a. scenario moves 483Mt of waste for 1,383Mt of mineralised material for a strip ratio of 0.35 across life of mine from 8 of the 23 pit stages (see Table 16). The mineralised material utilised for the 50Mt p.a. Production Target scenario is a subset of 1,383 million tonnes from the published JORC compliant Iron Bear mineral resource. This is made up of 74% Indicated and 26% Inferred mineralisation (see Figure 27).

The first 10 years of operations covering the proposed expansion phases for this scenario is supported by mill feed comprised of 77% Indicated resource.

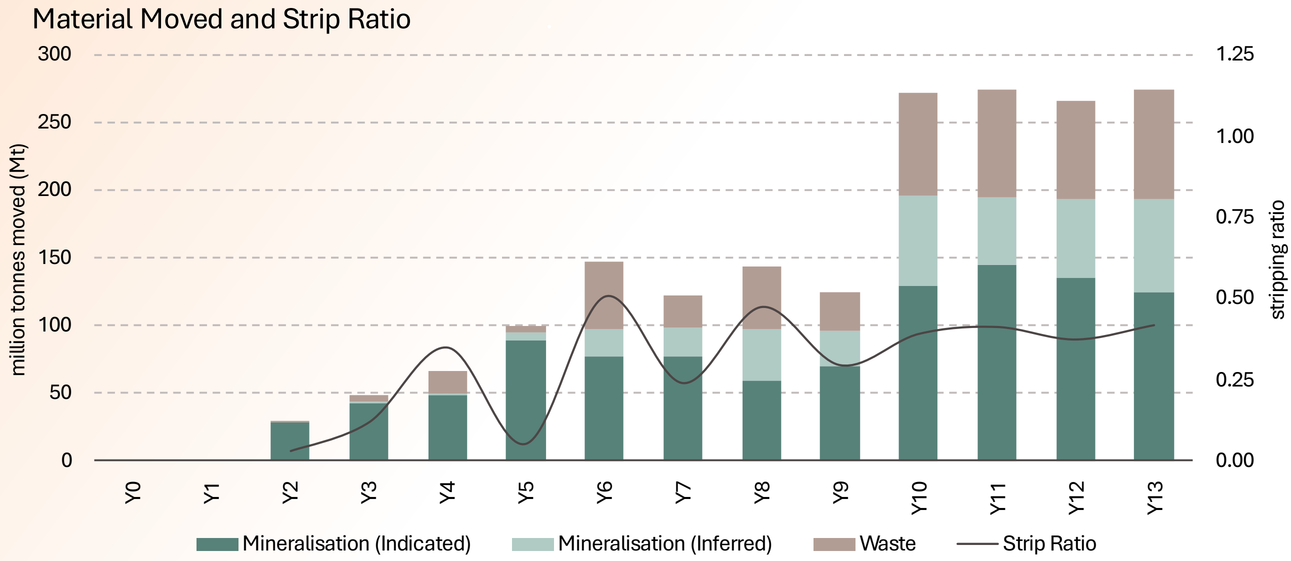


Figure 27: Material Moved and Strip Ratio - 50Mt p.a. / High Case - Scenario E129

As with the base case mine plan, the high case mine plan has not achieved the target 30-year mine plan due to the Inferred resource constraint, achieving only a 13-year mine life. Although a much larger portion of Inferred requires conversion to achieve the target 30-years than the base case, it is still only approx. 11% (1.65 Bt) of the total Inferred mineral resource classified. Based on the Snowden mine plan pit stages this could also be considered reasonable to achieve with targeted infill drilling and a very conservative resource conversion rate.

The high case Production Target scenario therefore remains a reasonable option to be given further consideration in the next study phase.

3.4.6 Low Case Mine Production Schedule

The low case mine plan for the 12.5Mt p.a. Production Target Scenario is based on life of mine production from the initial concentrate capacity installed to produce only BF concentrate, with no further increases in capacity or product types assumed.

The 12.5Mt p.a. scenario moves 486Mt of waste for 1,433Mt of mineralised material for a strip ratio of 0.34 across life of mine from 9 of the 23 pit stages (see Table 17). The mineralised material utilised for the 12.5Mt p.a. Production Target scenario is a subset of 1,433 million tonnes from the published JORC compliant Iron Bear mineral resource. This is made up of 71% Indicated and 29% Inferred mineralisation (see Figure 28).

Indicated resources makes up 88% of the total mill feed through the first 10 years of operations, which is well after the payback period for this scenario.

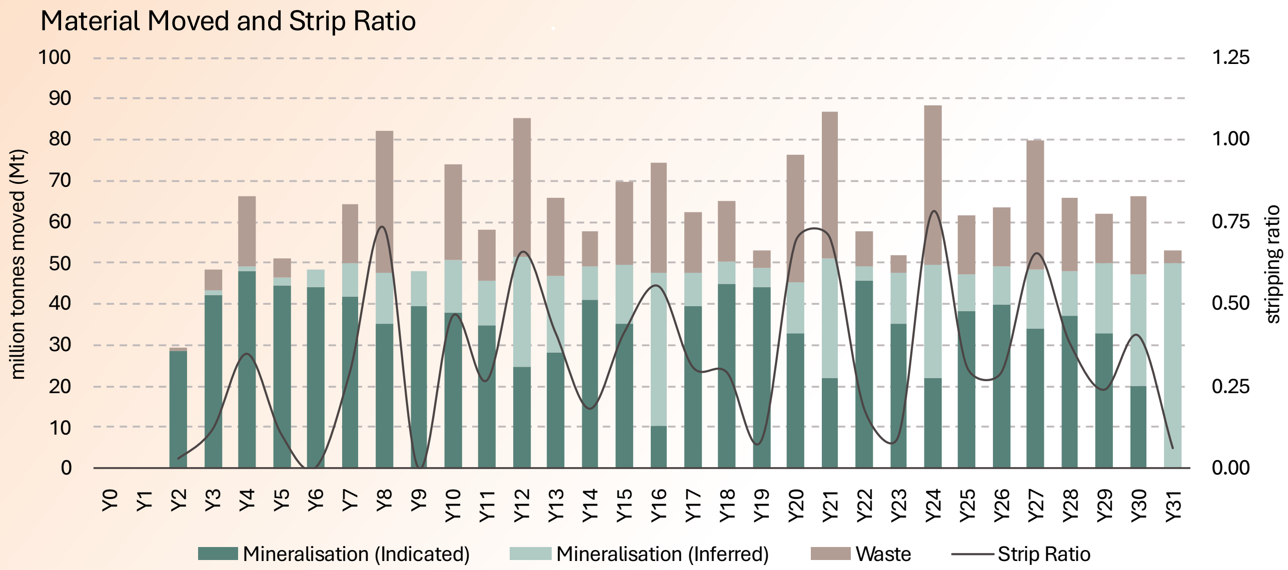


Figure 28: Material Moved and Strip Ratio - 12.5Mt p.a. / Low Case - Scenario D17

The low case mine plan is the only Production Target scenario to achieve the target 30-years with the 30% Inferred resource constraint applied. This on its own demonstrates the projects' ability to become a long-life operation with significant upside to revenue and overall project value with further conversion of Inferred resources to the Indicated category, allowing for increases in both production capacity and the product types produced.

Table 15: Mine Plan for Base Case - 25Mt p.a. Production Target (Scenario A1, B5, and C9)

	YEAR:		-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
STAGE TONNAGE (Mt)																					
STAGE:	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	117	-	-	19	30	33	4	16	12	3	0	-	-	-	-	-	-	-	-	-
	5	253	-	-	13	32	16	36	82	16	0	33	-	-	-	-	10	-	14	-	-
	6	435	-	-	-	-	-	67	15	16	109	24	49	76	5	72	-	3	-	-	-
	7	389	-	-	-	-	-	-	-	35	16	46	54	4	5	-	93	5	46	86	-
	8	273	-	-	-	-	-	-	-	-	-	-	-	59	59	38	37	-	73	6	-
	9	335	-	-	-	-	-	-	-	54	0	42	19	-	73	16	-	89	-	42	-
	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
	11	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	6	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	73
	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	63
	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TONNES (Mt)		1,942	-	-	29	48	66	70	114	137	142	133	136	134	116	157	127	135	143	141	111
VOLUME (Mbcm)		608	-	-	9	15	23	21	34	44	44	43	42	42	35	51	39	42	45	44	34
BENCH TONNAGE (Mt)																					
RL:	700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	660	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0	24
	640	50	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	6	1	-	40
	620	58	-	-	-	-	-	1	-	15	-	-	-	2	-	-	-	9	4	1	27
	600	188	-	-	26	22	-	14	-	50	0	-	-	39	2	-	-	-	-	0	35
	580	297	-	-	6	40	16	84	1	22	15	33	2	16	42	-	-	-	-	-	19
	560	278	-	-	-	-	30	4	65	19	24	33	50	1	15	33	2	-	-	-	-
	540	251	-	-	-	-	3	4	47	13	58	21	3	4	5	5	82	-	5	-	-
	520	220	-	-	-	-	-	-	-	12	30	57	25	-	5	-	47	5	40	-	-
	500	193	-	-	-	-	-	-	-	-	-	-	43	19	26	-	10	-	80	15	-
	480	139	-	-	-	-	-	-	-	-	-	-	-	53	29	-	-	-	9	48	-
	460	102	-	-	-	-	-	-	-	-	-	-	-	4	18	52	-	-	-	29	-
	440	65	-	-	-	-	-	-	-	-	-	-	-	-	-	35	-	29	-	-	-
	420	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	-	-	-
	400	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	15	-
	380	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	-
	360	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
	340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	280	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WASTE																					
VOLUME (Mbcm)		178	-	-	0	2	8	2	5	16	15	15	13	13	7	23	9	14	16	15	5
TONNES (Mt)		488	-	-	1	5	17	5	14	41	44	38	38	37	19	61	26	40	46	42	13
MINERALISED MATERIAL																					
VOLUME (Mbcm)		429	-	-	8	13	15	19	29	28	29	28	29	29	29	28	30	28	29	29	29
TONNES (Mt)		1,452	-	-	28	43	49	66	100	96	98	95	98	97	97	96	101	95	97	100	97
MAG FE %					20.5%	19.1%	19.1%	19.5%	19.2%	18.4%	19.3%	19.0%	19.1%	19.3%	18.6%	20.8%	18.9%	20.6%	20.2%	19.1%	19.0%
STRIPPING RATIO		0.34			0.03	0.12	0.35	0.07	0.15	0.43	0.45	0.40	0.39	0.38	0.20	0.64	0.26	0.43	0.47	0.42	0.14
INDICATED																					
VOLUME (Mbcm)		303	-	-	8	12	14	18	24	24	19	18	18	20	25	17	20	20	24	16	5
TONNES (Mt)		1,023	-	-	28	42	48	63	80	82	64	60	60	67	83	57	69	68	81	54	18
MAG FE (%)					20.5%	19.0%	19.1%	19.6%	19.0%	18.2%	18.6%	18.4%	18.2%	18.6%	18.4%	20.6%	18.2%	20.3%	20.1%	18.7%	20.8%
INFERRED																					
VOLUME (Mbcm)		126	-	-	-	0	0	1	6	4	10	10	11	9	4	11	9	8	5	13	23
TONNES (Mt)		428	-	-	-	1	1	3	20	14	34	35	38	30	14	38	32	27	17	46	79
MAG FE %					0.0%	20.7%	19.4%	19.2%	20.2%	20.1%	20.5%	20.2%	20.6%	20.9%	20.0%	21.0%	20.6%	21.4%	20.3%	19.5%	18.6%

Table 16: Mine Plan for High Case - 50Mt p.a. Production Target (Scenario E129)

		YEAR:	-	1	2	3	4	5	6	7	8	9	10	11	12	13
STAGE TONNAGE (Mt)																
STAGE:	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	117	-	-	19	30	33	4	27	-	3	0	-	-	-	-
	5	253	-	-	13	32	16	64	70	-	16	16	-	-	16	8
	6	435	-	-	-	-	-	78	4	50	86	17	120	77	3	-
	7	389	-	-	-	-	-	-	-	40	10	77	27	22	83	130
	8	273	-	-	-	-	-	-	-	-	-	-	117	51	45	59
	9	335	-	-	-	-	-	-	6	48	-	60	6	83	89	42
	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11	21	-	-	-	-	-	-	-	-	-	-	-	-	21	-
	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	14	-	-	-	-	-	-	-	-	-	-	-	-	-	14
	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22	17	-	-	-	-	-	-	-	-	-	-	-	-	-	17
	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TONNES (Mt)		1,866	-	-	29	48	66	100	147	122	144	124	272	274	266	274
VOLUME (Mbcm)		585	-	-	9	15	23	30	47	37	46	39	85	87	82	86
BENCH TONNAGE (Mt)																
RL:	700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	660	5	-	-	-	-	-	-	-	-	-	-	-	-	2	4
	640	18	-	-	-	-	-	-	-	3	-	-	-	-	7	8
	620	41	-	-	-	-	-	1	-	15	-	-	2	-	13	11
	600	161	-	-	26	22	-	14	6	44	-	-	41	-	-	8
	580	278	-	-	6	40	16	84	1	27	10	35	58	-	-	0
	560	278	-	-	-	-	30	44	29	41	-	62	37	35	-	-
	540	251	-	-	-	-	3	4	60	9	49	22	6	37	60	0
	520	220	-	-	-	-	-	-	12	-	57	52	7	0	68	23
	500	193	-	-	-	-	-	-	-	-	-	-	62	26	16	88
	480	139	-	-	-	-	-	-	-	-	-	-	53	29	-	57
	460	102	-	-	-	-	-	-	-	-	-	-	4	69	-	29
	440	65	-	-	-	-	-	-	-	-	-	-	-	35	29	-
	420	43	-	-	-	-	-	-	-	-	-	-	-	-	43	-
	400	35	-	-	-	-	-	-	-	-	-	-	-	-	20	15
	380	27	-	-	-	-	-	-	-	-	-	-	-	-	-	27
	360	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	280	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WASTE																
VOLUME (Mbcm)		176	-	-	0	2	8	2	18	8	17	11	27	30	25	28
TONNES (Mt)		483	-	-	1	5	17	5	49	23	46	28	76	80	72	80
MINERALISED MATERIAL																
VOLUME (Mbcm)		409	-	-	8	13	15	28	29	29	29	29	58	57	57	57
TONNES (Mt)		1,383	-	-	28	43	49	95	98	99	97	96	196	194	194	194
MAG FE %		0.0%	0.0%	0.0%	20.5%	19.1%	19.1%	19.7%	18.7%	19.0%	19.3%	18.4%	19.2%	19.7%	19.7%	20.2%
STRIPPING RATIO		0.35			0.03	0.12	0.35	0.05	0.50	0.24	0.47	0.29	0.39	0.41	0.37	0.42

Table 17: Mine Plan for Low Case - 12.5Mt p.a. Production Target (Scenario D17)

		YEAR:	-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
STAGE TONNAGE (Mt)																																		
STAGE:	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	117	-	-	19	30	33	4	-	15	12	-	-	2	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	253	-	-	13	32	16	25	39	32	39	-	-	-	16	16	-	-	-	-	-	-	-	-	-	5	5	-	6	7	1	-	-	-
	6	435	-	-	-	-	-	58	20	4	-	0	50	56	30	13	5	24	53	44	-	-	27	49	-	-	1	2	-	-	-	-	-	-
	7	389	-	-	-	-	-	-	-	-	-	14	27	10	0	15	62	23	4	-	0	5	-	-	16	45	37	-	1	20	68	42	-	-
	8	273	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	102	-	-	6	45	25	-	-	20	38	22	0	-	-
	9	335	-	-	-	-	-	-	-	-	6	48	0	-	-	26	34	1	0	-	5	54	20	9	-	-	24	55	11	-	-	19	23	-
	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	56
	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	35
	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TONNES (Mt)		1,955	-	-	34	43	68	53	61	57	76	59	56	72	68	77	57	69	67	75	58	70	65	80	59	87	58	56	61	63	73	79	95	60
VOLUME (Mbcm)		616	-	-	10	13	23	16	19	18	25	18	17	22	22	25	17	21	21	24	18	22	21	26	18	28	17	17	19	19	23	25	32	19
BENCH TONNAGE (Mt)																																		
RL:	700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	660	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	4	21
	640	50	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	8	32
	620	53	-	-	-	-	-	1	-	-	-	13	2	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	13	-	-	-	11	12
	600	180	-	-	26	22	-	14	-	-	6	26	18	-	-	-	-	-	-	12	29	-	-	-	-	-	-	-	-	-	-	-	8	19
	580	286	-	-	6	40	16	68	15	1	0	20	7	10	0	15	20	-	-	2	56	-	-	-	-	-	-	-	-	-	-	-	0	8
	560	278	-	-	-	-	30	-	44	26	3	0	41	-	-	21	41	21	-	-	16	-	-	6	29	-	-	-	-	-	-	-	-	-
	540	251	-	-	-	-	3	4	-	24	36	-	9	49	-	6	16	2	4	-	0	5	-	-	32	49	7	-	5	0	-	-	-	-
	520	220	-	-	-	-	-	-	-	-	12	-	-	9	48	29	23	2	0	-	5	0	-	-	-	21	30	-	16	23	0	-	-	-
	500	193	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	40	-	-	26	-	-	-	5	5	-	6	41	46	1	-	-
	480	139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	40	-	27	1	-	-	-	-	-	-	0	44	13	-	-
	460	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	46	23	-	-	-	-	-	-	0	28	-	-
	440	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35	-	-	25	4	-	-	-	-	-	-
	420	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	-	-	-	-	-	-
	400	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	11	-	-	15	-	-
	380	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	23	-
	360	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
	340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	280	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WASTE																																		
VOLUME (Mbcm)		192	-	-	2	0	8	1	5	4	9	4	3	7	9	10	3	7	6	10	3	7	8	11	4	13	3	3	5	6	8	10	18	5
TONNES (Mt)		523	-	-	5	1	17	4	13	11	25	10	9	21	22	26	9	21	17	28	9	21	20	27	11	39	8	9	12	16	22	30	48	11
MINERALISED MATERIAL																																		
VOLUME (Mbcm)		423	-	-	8	13	15	14	14	13	15	15	14	15	14	15	15	14	15	14	14	15	13	15	14	14	15	14	15	14	15	15	14	15
TONNES (Mt)		1,432	-	-	28	42	50	49	48	45	51	49	47	51	46	51	49	47	50	47	49	50	44	53	48	48	49	48	49	47	51	49	47	49
MAG FE %		19.3%	0.0%	0.0%	19.2%	20.1%	19.1%	18.7%	19.4%	19.9%	18.8%	19.0%	18.4%	19.6%	19.5%	18.9%	18.4%	19.2%	19.8%	19.2%	18.5%	19.1%	19.5%	22.0%	20.8%	19.8%	19.7%	17.8%	20.1%	19.5%	20.1%	18.5%	21.0%	18.8%
STRIPPING RATIO		0.37			0.18	0.02	0.34	0.09	0.27	0.25	0.50	0.21	0.20	0.40	0.48	0.51	0.18	0.45	0.34	0.59	0.19	0.42	0.46	0.52	0.23	0.80	0.17	0.18	0.24	0.35	0.44	0.62	1.01	0.22

3.4.7 Mine Design

A bulk mining approach is currently contemplated to occur on either 16-metre or 22 metre benches depending on outcomes of ongoing mining studies. Final bench heights will be based on multiple factors including detailed pit design, pit stage sequencing, equipment selection and operating specifications, and proposed bench mining methods along with consideration for the resource block models granularity.

Haul roads will accommodate 225t payload dump trucks with widths of 35m required for pit ramps at a maximum gradient of 10% assumed. These parameters are consistent with other iron ore projects in the region.

It is anticipated that separate drill patterns for ore and waste to optimise fragmentation whilst controlling dilution in areas of varying grades, and along the footwall and hangingwall contacts. The drilling and blasting specifications will be tailored to the taconite orebody characteristics with appropriate powder factors for mineralisation and waste rock, typically between 0.40 – 0.50kg/t. Drill rigs capable of drilling up to 311mm diameter blast holes are assumed. There is a portion of overburden material that will be amenable to free dig, with these quantities to be adequately quantified during ongoing study phases.

The project will employ industry standard grade control practices including blast hole sampling, high precision GPS systems on mining equipment and real-time ore tracking systems to manage the variable magnetite distribution within the orebody. The mine design currently contemplates stockpile capacity for approximately three months of plant feed.

3.4.8 Waste Rock and Tailings Management

The projects waste management strategy centres on dry stack tailings technology, representing industry best practice for sustainable tailings management. The filtered tailings approach reduces water consumption by approximately 85% compared to conventional methods while enhancing physical stability and facilitating progressive rehabilitation.

The mine operation therefore contemplates utilising the majority of the open pit void to be progressively backfilled with comingled waste rock and filtered tailings, significantly reducing the project's final environmental footprint.

Whilst open pit voids are unavailable, ex-pit waste rock dump footprints can be established to the west and east of the open pit area, consistent with designs completed during previous study work. Current waste rock dump parameters include 20m lifts and an overall as-built slope of 27 degrees.

Focus moving into the next study phase remains on comingled waste and dry stack tailings disposal in-pit, however, the option to utilise conventional waste rock and tailings disposal methods remains part of the project’s strategy until in-pit disposal can be achieved.

3.4.9 Mine Equipment

Equipment fleet requirements have been estimated from industry standard practices, first principles productivity estimates and benchmarked against known production capabilities of equivalent equipment sizes at similar scaled mining operations. Figure 29 illustrates the estimated fleet requirements for the base case mine production schedule. An average of 156 total mining fleet units are required during years of peak mining activities.

The high case and low case production schedule equipment requirements are proportional to the differences in peak mining activities, with the high case averaging 311 mining fleet units and the low case averaging 81 mining fleet units.

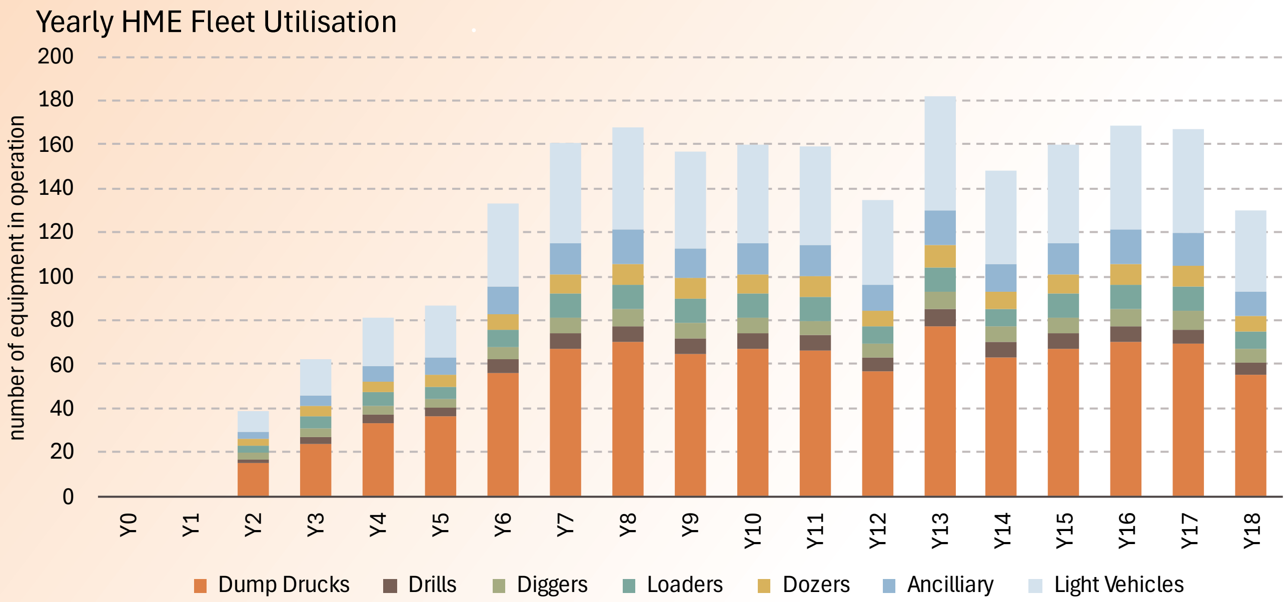


Figure 29: Mining Fleet Estimate - Base Case - Scenario A1, B5, C9

The primary loading units are envisaged as large hydraulic excavators in the 750-850 tonne operating weight class with indicative bucket capacities ranging from 40-50m^3. These units would serve as the primary loading equipment for both ore and waste material to achieve the bulk mining and material movement targets required to achieve the production target scenarios.

The dump truck fleet will comprise of large off-highway trucks with target payload capacities of 225 tonnes. These units would provide primary haulage for mineralised material to the ROM stockpiles and process plant, and waste haulage to designated disposal areas. Dump Trucks be installed with the relevant cold weather packages essential for reliable Labrador operations.

Support operations will be served by large wheel loaders with estimated bucket capacities of 15-25m^3. These units would handle multiple operational requirements including stockpile management and material rehandling, road maintenance and construction support, cleanup operations and auxiliary loading, plus ROM stockpile and crusher feed management.

The primary mining fleet will be supported by a suitably scaled and sized fleet of ancillary equipment commensurate to the operating conditions and mine production requirements.

The mining fleet configuration represents a conceptual approach suitable for the anticipated mining conditions and production requirements, with detailed equipment specifications and sizing to be refined during the next study phase.

3.4.10 Forward Work Programme

The mine plans produced to support the three processing options presented in this study will be progressed into a formal Pre-Feasibility Study (**PFS**) for detailed mine design, scheduling, cost estimation and economic analysis.

The PFS will also need to address the following geotechnical and mining study components in further detail:

- Mine geotechnical study to a PFS level inclusive of a diamond drilling, sampling and lab analysis program focusing on the base case mine plan
- Hydrogeological study to develop a groundwater model to assess the potential influences on pit wall stability, and water management requirements
- Ore loss and dilution assumptions, and address any potential selective mining requirements
- Review site layouts to optimise locations that potentially encroach on high value mineral resources identified in this study including clarifying exclusions zones required (if any) around natural features such as the adjacent lakes

- Equipment vendor engagement and obtain technical proposals, comprehensive equipment sizing and productivity analysis, detailed maintenance facility design and layout optimisation, equipment lifecycle cost modelling and sensitivity analysis to support optimisation of the equipment selection decisions for the mining operation, and to support updated mining cost estimates
- Undertake a local supply content and employment opportunity assessment, and detailed equipment procurement schedule and logistics planning.

Infill resource drilling should also be a priority consideration to improve confidence and increase the proportion of Indicated mineral resource available for the mine plan, with a focus on the defined pit stages developed from this study.

Opportunities to assess long term value propositions such as mine electrification options (e.g. trolley assist for dump trucks) and In-Pit Crushing and Conveying (**IPCC**) options should also be assessed during the PFS.

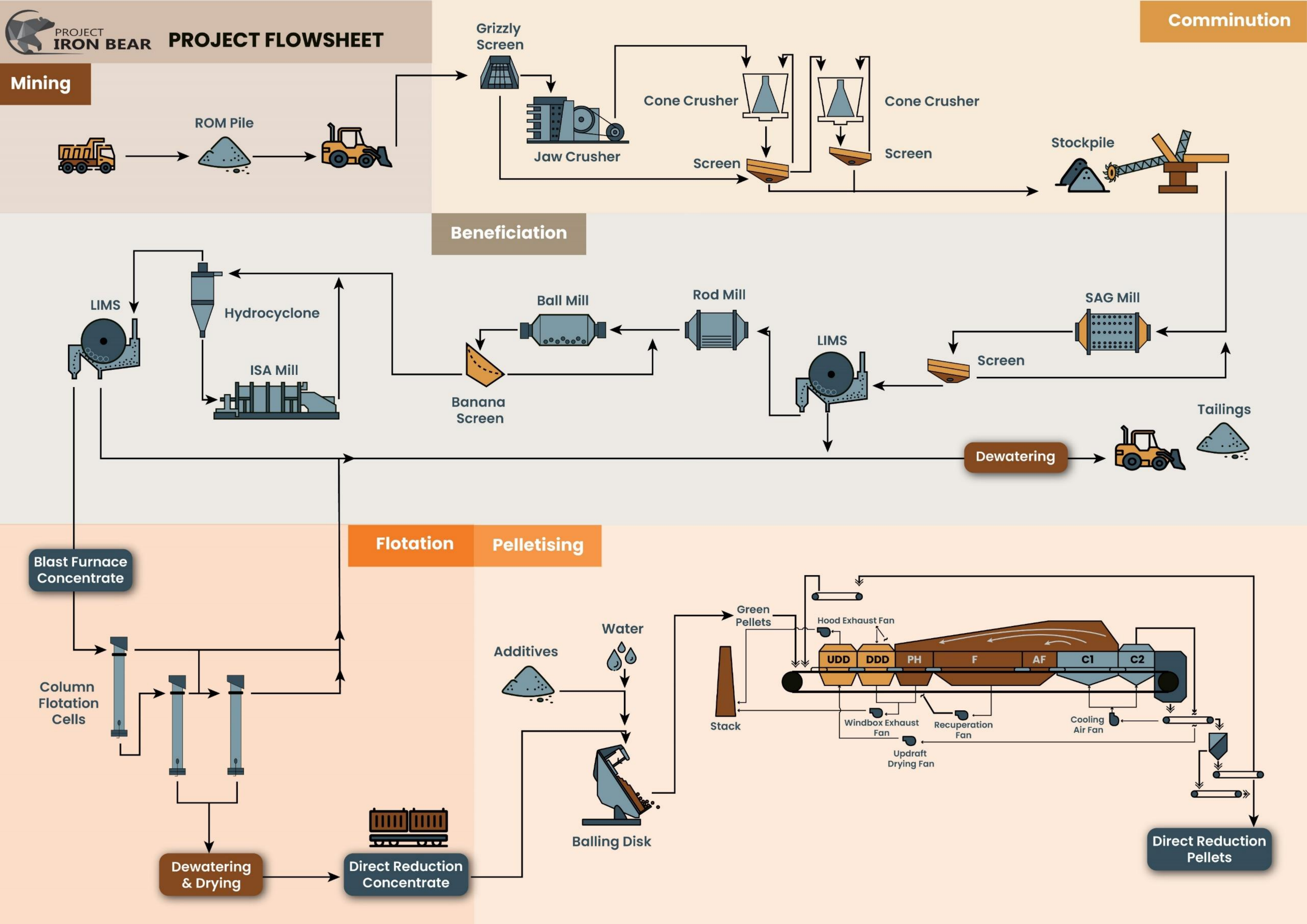
IRON BEAR

CYCLONE METALS LTD

04 PROCESSING

Modifying Factors 4

PARAMETER	UNIT	VALUE
Magnetite Feed Grade (ROM Pile)	24.7	%
Overall Mass Recovery to BF Concentrate	25.7	%
Flotation Mass Recovery	88.0	%
Overall Mass Recovery to DR Concentrate	22.6	%
Power Consumption (Processing)	24.2	kWh / tonne
Heavy Fuel Oil Consumption (Pelletising)	7	kg / tonne



PROJECT
IRON BEAR
PROJECT FLOWSHEET
Mining
ROM Pile
Comminution
Grizzly
Screen
Jaw Crusher
Cone Crusher
Screen
Cone Crusher
Screen
Stockpile
Beneficiation
SAG Mill
Screen
LIMS
Rod Mill
Ball Mill
Banana
Screen
Hydrocyclone
ISA Mill
LIMS
Tailings
Dewatering
Blast Furnace
Concentrate
Flotation
Pelletising
Column
Flotation
Cells
Dewatering
& Drying
Direct Reduction
Concentrate
Additives
Water
Balling Disk
Green
Pellets
Stack
Hood Exhaust Fan
UDD
DDD
PH
F
AF
C1
C2
Windbox Exhaust
Fan
Recuperation
Fan
Updraft
Drying Fan
Cooling
Air Fan
Direct Reduction
Pellets

4.2 Process Plant / Concentrator

The metallurgical flowsheet employs proven magnetic separation technology enhanced by reverse flotation to achieve premium product specifications. This conventional approach minimises technical risk while delivering superior concentrate grades that command significant market premiums.

4.2.1 Design Basis

A conventional crushing and screening circuit is proposed comprising of primary jaw crusher, secondary and tertiary cone crushers and associated screen to produce a P80=3mm product for grinding.

Some alternatives were considered and tested, e.g. dry cobbing at -12mm and -3mm, both found to have insufficient separation efficiencies. A wet grinding and beneficiation circuit is thus proposed.

Primary grinding will consist of a SAG mill to grind the -3mm material and achieve a P80=500 micron output, after which rougher+scavenger wet Low Intensity Magnetic Separation (LIMS) discards ~50.6% of the mass at a 99% magnetite recovery.

The magnetic fraction is then ground down to 32 micron using rod mills, ball mills and Isamills, with the rod mills grinding to 200 micron, the ball mills to 45 micron, and the Isamills performing polishing duties to break apart any larger mixed particles between 45 micron and 75 micron.

While this complex grinding flowsheet is not required for blast furnace concentrate production, the three different grinding mill types are expected to increase flotation mass yield while protecting the low silica product quality.

4.2.2 Mass, Energy, and Water Balance

Balances for this project has been incorporated into the economic model and detail each production step for tonnages moved, grades processed, waste and product streams, as well as reagent consumptions.

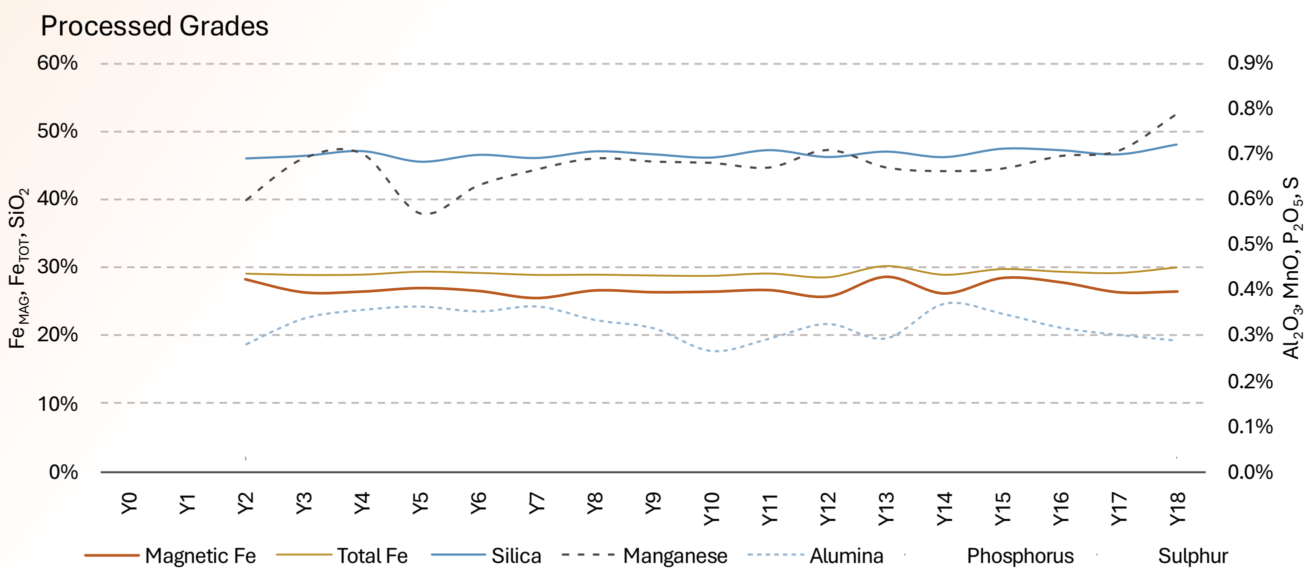


Figure 30: Iron and impurity grades processed through concentrator over LOM – Base Case - Scenario A1, B5, C9

Power requirements have been calculated using Bond index formulas and HSC Chemistry metallurgical process models on the measured engineering work indices shown in Table 18. Levin work indices were also measured to negate the need for energy calculations, with calculated values closely matching the measured Levin values.

Table 18: Measured Comminution Parameters

Index	Abbr.	Reference size	Sample 2 Value	Sample 3 Value	Units
Bond Abrasion Index	Ai	-	0.5722	0.4067	g
Bond Crusher Work Index	CWi	-	13.8		kWh/t
Bond Ball Mill Work Index	BWi	600 µm	24.9	24.0	kWh/t
Bond Rod Mill Work Index	RWi	-	16.7	17.2	kWh/t
Levin Ball Mill Work Index	L-BWi	38 µm	20.8		kWh/t
		32 µm	21.0	20.4	kWh/t
JK Drop Weight Test	DWT	A	60.5	53.6	-
		b	0.63	0.79	-
		ta	0.17	0.21	-
		A×b	38.1	42.3	-
		SCSE	10.9	10.6	kWh/t
Stephen Morrell Test	SMC	A	68.3	59.6	-
		b	0.54	0.62	-
		ta	0.31	0.30	-
		A×b	36.9	37.0	-
		DWi	8.4	8.75	kWh/m^3
		Mia	20.3	20.1	kWh/t
		Mib*	21.5	21.0	kWh/t
		Mic	15.7	8.10	kWh/t
		Mih	8.1	15.7	kWh/t
		SCSE	11.2	11.4	kWh/t
Piston Die Test	PDT	$1.5 N/mm^2$	1.69	3.71	kWh/t
Total S.E. at 4 mm (95% eff. drive eff.)		$2.5 N/mm^2$	2.10	4.43	kWh/t
		$3.5 N/mm^2$	2.47	5.08	kWh/t
		$4.5 N/mm^2$	2.82	5.68	kWh/t

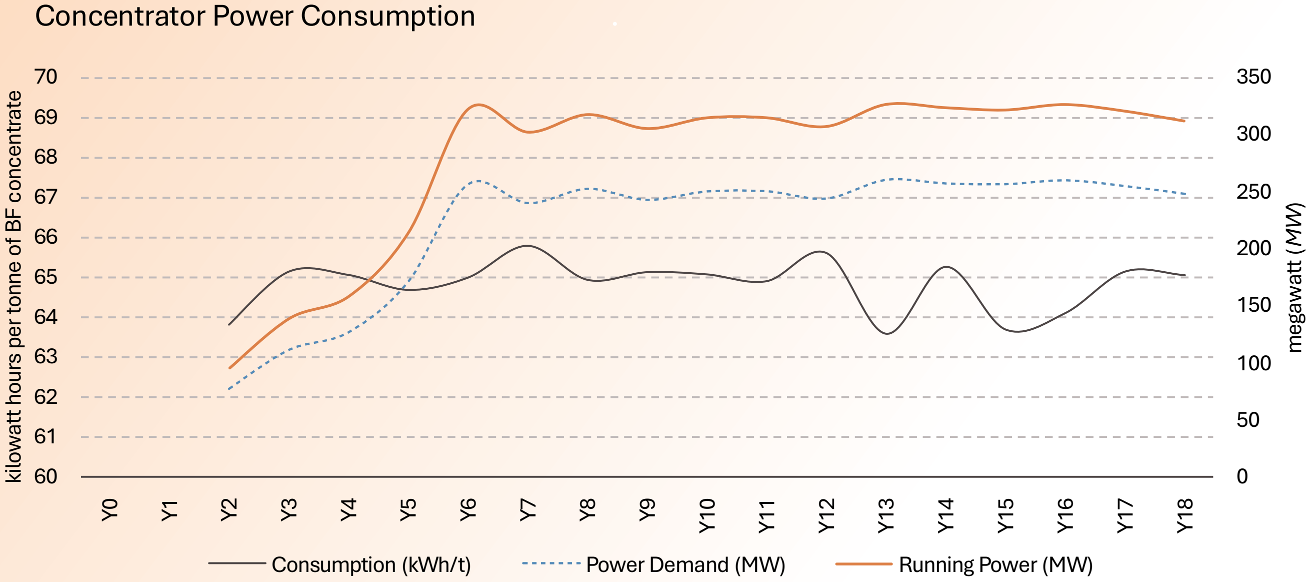


Figure 31: Concentrator Power Consumption - Base Case - Scenario A1, B5, C9

A water balance was also developed for the process and includes losses per stage of typically 5% and a reasonable water consumption amount, with each stage monitoring a targeted water including make-up and process water. Checks and balances were also developed to ensure that per stage, water requirements and water supply balance as well as for the overall water balance.

4.2.3 Crushing and Screening

Crushing is envisaged to be undertaken in a three (3) stage circuit reducing the expected ROM feed size F100 of 1,000mm to a product size P80 of 3mm. The crushing circuit must be capable of achieving ~12,300tph throughput to allow a final product rate of 25 Mt p.a. at a 25.7% mass yield and 8,000 operating hours (*90% utilisation*). The overall utilisation will be determined in the next study phase.

Mineralised material will be trucked in dump trucks to the ROM pad and tipped onto 3 stockpiles located at the ROM or into the crusher ROM bin (to be determined).

Blasting will be adjusted to ensure material suits the size of truck selected and deliver the top size of 1,000mm. Where necessary secondary breakage will be utilised to reduce ore that is greater than 1,000mm.

Each of the stockpiles will have a capacity of a minimum of 15 days of throughput. Stockpile One will be active from a production ore tip perspective with all mineralisation mined from the open pit over the period dumped only onto that stockpile. Stockpile Two will be closed to mining and be utilised for ROM crusher feed until depleted. On depletion of Stockpile Two the functions of each stockpile will be reversed, where Stockpile One will become the source for ROM crusher feed and Stockpile Two become active for dumping of mineralisation from the pit.

Stockpiled material will be withdrawn from the ROM feed stockpile by a dedicated Front End Loader(s) (**FEL**), that will work taking longitudinal strips along the side of that stockpile and will discharge to the ROM bin at the head of the crushing circuit. This should ensure a consistent feed grade and quality for the duration of that stockpile, nominally one month.

The nominal residence time of the ROM bin will be thirty minutes. Mineralisation will be withdrawn from the ROM bin at a measured rate by an apron feeder which will discharge to a vibrating grizzly feeder immediately ahead of a primary jaw crusher. The grizzly feeder will scalp the jaw crusher feed at nominally 130mm with only grizzly oversize feeding the jaw crusher. Grizzly undersize will bypass the first crushing stage and will be combined with the jaw crusher product. The jaw crusher will operate in an open circuit with a nominal closed side setting of 130mm.

Both jaw crusher product and grizzly feeder undersize will be conveyed to a double deck sizing screen.

The nominal deck apertures for the screen will be 35mm for the top deck and 12mm for the bottom deck. Top deck oversize will be conveyed to the secondary crusher feed while the bottom deck oversize will be conveyed to the tertiary crusher feed.

The configuration of the secondary and tertiary crushers will be similar in that they will consist of a single cone crusher being preceded by a feed surge bin and a vibrating feeder. Respective screen oversize will be conveyed from the respective screen deck to the feed surge bin. Material will be withdrawn from the feed surge bin by a vibrating feeder such that the receiving crusher will operate in choke feed conditions. Nominally, both crushers will be 1,250 mm head diameter or similar units with the secondary crusher running a 30mm gap and the tertiary crusher running a 14mm gap. Both secondary and tertiary crushers will operate in closed circuit with the sizing screen, discharging their crushed product to the screen feed conveyor for re-sizing.

Screen bottom deck undersize will be conveyed to the Fine Ore Bin with a capacity of 7,500 tonnes.

Tramp metal will be managed within the crushing circuit by the inclusion of magnets on the screen feed and secondary and tertiary crusher feed conveyors. Flag drop metal detectors immediately prior to the secondary and tertiary crusher feed bins will provide non-ferrous metal protection for the cone crushers.

4.2.4 Primary Grinding and LIMS

Primary grinding consists of a SAG mill in closed circuit with a double deck sizing screen. The primary duty being to reduce the crushed product with a F100 of 12mm (P80 of 3mm) to a F80 of 1mm (P80 of approx. 500um).

Crushed material from the FOB will be reclaimed at a measured rate via a belt feeder and transferred to the mill feed conveyor. A weightometer on the mill feed conveyor will monitor the feed rate to the mill.

The primary SAG mill product will be discharged through a trommel screen or similar to remove entrained grinding ball scats, with trommel underflow directed to the primary ball mill discharge pump hopper. Trommel oversize, inclusive of the entrained grinding ball scats, will report to a scats bunker for later disposal/processing.

Pulp from the primary mill discharge hopper will be pumped to a double deck sizing screen. The nominal deck apertures for the screen will be 3mm for the top deck and 1mm for the bottom deck. Both the top deck oversize and the bottom deck oversize will be returned to the primary SAG mill feed while the bottom deck undersize, at -1mm, will discharge to the coarse wet LIMS feed pump hopper. Pulp from the LIMS feed pump hopper will be pumped to a splitter box ahead of secondary grinding and LIMS units.

4.2.5 Secondary Grinding and LIMS

The p80=500micron magnetic material will report to a multi-stage grinding circuit and magnetic separation circuit to produce a blast furnace-grade concentrate.

Based on the testwork results so far a rod mill will perform grinding to ~p80=200 micron in open circuit, followed by ball mill grinding to p80=45 micron in closed circuit with banana screens, and Isa mill grinding of the coarser mixed particles (+45 micron mixed particles) to produce a nearly fully-liberated product for magnetic separation.

LIMS of the ground material will produce a <3.5% SiO_2 blast furnace magnetite concentrate. While this flowsheet may not be required for blast furnace concentrate production, the three different grinding mill types are expected to increase flotation mass yield while protecting the low silica product quality. Conversely, the Isa mills be produce a cleaner blast furnace concentrate product at higher magnetite yield by ensuring all larger particles are liberated.

4.2.6 Concentrate Thickening, Filtration and Storage

The base case for the project will be a high-rate thickener, followed by plate presses and a thermal drier to obtain low moisture suitable for transport, as per common practice in the area.

An innovative technology called BALF (Boundary Air Laminar Flow - developed by Bergaz) will be tested and used in combination with Steinert magnetic dewatering drums. A test with the Steinert equipment can be performed at Perth based laboratories but requires >1 tonne of concentrate. This has thus been deferred to the Bankable Feasibility Study (**BFS**).

The BALF system will be tested for concentrate drying in July 2025 and results will be incorporated into the PFS. It promises a lower capex and opex than filter presses, and will negate the need for a thermal drier since the BALF technology should achieve 1% moisture on magnetite concentrate if not controlled to give a higher moisture content of the 2.5% moisture target.

Dust Extinction Moisture (DEMt) has been measured by Jenike&Johanson as 2.25% moisture, thus a moisture target of 2.5% has been adopted for PFS design purposes.

4.3 Flotation Circuit

The orebody lends itself to further beneficiation by reverse flotation and produces a very low silica product at roughly 1% silica, suitable for direct reduction. The reverse flotation shall be performed in column flotation cells.

Test work has shown that a five-day average mass yield of 89% can be achieved with a column flotation circuit comprising rougher and scavenger columns.

Various collector reagents have been tested so far, being Tomamine, Flotigam, Lilaflot, Armoflote and others, under various pH, depressant and frother additions. The best results were obtained with Armoflote collector and causticised starch as a depressant, with standard MIBC as a frothing agent.

Various reactors were also tested, with column flotation achieving the best results in terms of mass yield and product grade. The flotation circuit design is thus based on rougher and scavenger column reverse flotation with causticised starch, Armoflote collector and MIBC frother.

4.4 Pelletising

4.4.1 Technology Review – Straight Grate vs Grate Kiln

Two main pelletising technologies currently exists, a grate kiln process and a straight grate process. While a third vertical shaft furnace technology exists for iron ore pellet production, it is not very common and is not discussed further.

A grate-kiln consists of a short straight-grate section with a low bed depth of green balls (e.g. 140mm), where moisture is evaporated and the green balls preheated before they enter a rotary kiln. The rotary kiln is fired on any solid, liquid or gaseous fuel and due to the rotation produces pellets of very even quality. The green balls do start to rotate when they are not fully indurated, and as such the only suitable binder that provides sufficient strength in the initial kiln stage is bentonite.

After induration the pellets are cooled on an external rotary cooler, and cooling air is recirculated through the different process zones to ensure good energy efficiency.

The benefits of a rotary kiln are pellets of consistent quality (narrower range of quality variations), but the requirement to use 100% bentonite as a binder as well as the different units does limit flexibility. A Rotary kiln can be used for magnetite or hematite pelletising, though there are limited examples of rotary kilns in direct reduction.

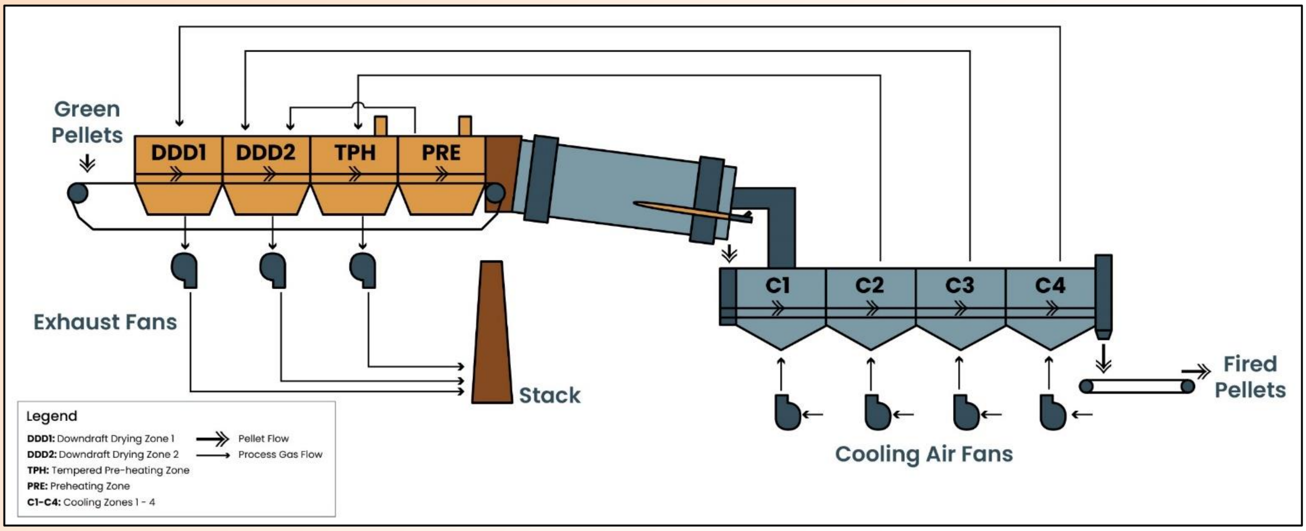


Figure 32: Grate kiln pellet plant schematic.

A travelling grate plant (also referred to as a straight grate plant) utilises a single travelling metal conveyor belt, a thicker bed depth (as high as 525mm), and various drying, preheating, induration and cooling zones separated by different wind boxes connected to different airflow streams. Cooling air preheated by the cooling action is also recirculated to maximise energy efficiency.

Since the green balls do not experience the same stresses associated with a rotary kiln, the bentonite consumption is lower, but this technology also offers the ability to partially or completely (limited examples) replace the bentonite with an organic binder, leading to lower silica product quality.

While the capex, footprint and opex of straight grate machines are typically lower than that of a grate-kiln, the product quality has a larger standard deviation since pellets at the bottom of the bed are indurated for a shorter period of time that pellets at the top of the bed. There are however multiple operating strategies to overcome this and produce pellets with a lower standard deviation of product quality.

The largest straight grate machines of Outotec produces ~9 Mt p.a. of pellets, far exceeding the proven production capability of grate-kilns.

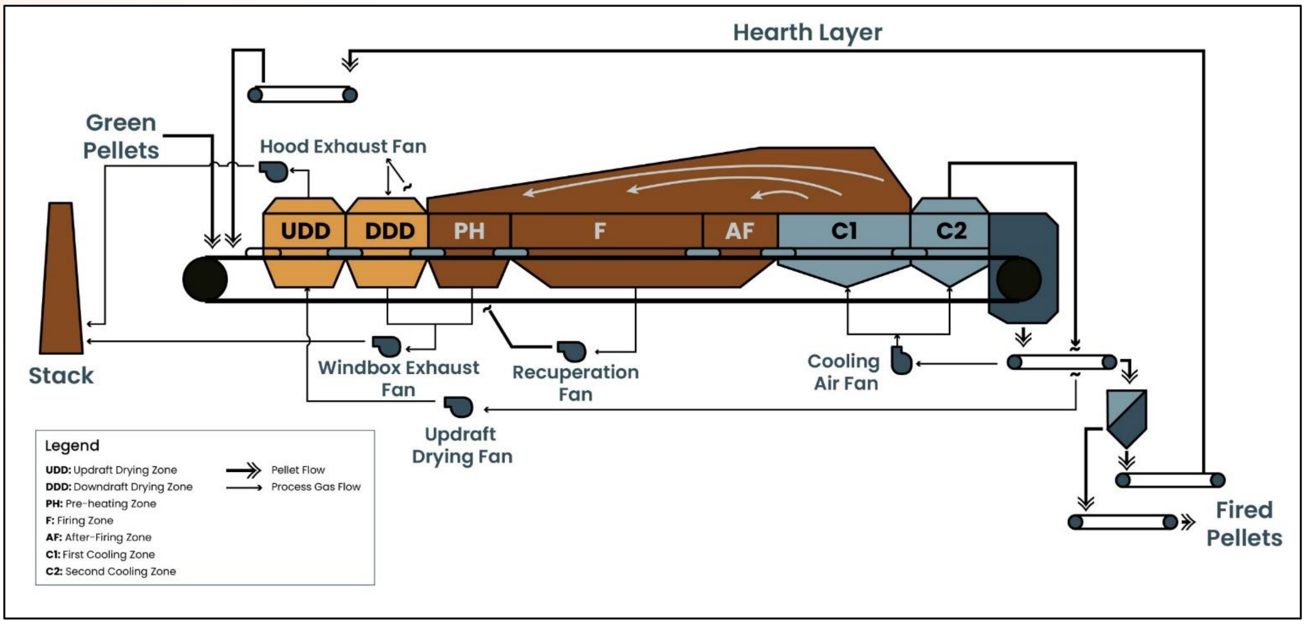


Figure 33: Straight Grate / Travelling Grate Pellet Plant Schematic

The ability to partially replace bentonite with organic binder in a straight grate machine offers a lower silica pellet product is seen as key to reducing the downstream electric arc furnace steelmaking cost as well as downstream carbon dioxide emissions. The use of organic binder in a grate-kiln does not typically produce pellets of sufficient strength entering the kiln.

4.4.2 Design Basis

Based on the initially chosen grind size of 32 micron to obtain an acceptable product specification of 1.2% SiO_2, a pellet chemistry of 1.6% silica was calculated, later verified during pot-grate basket testing.

A straight grate pellet plant design was chosen as advised by Aglom SA as well as from experience in other projects. Future work may include the testing of organic binders and coarsening the grind size to produce a slightly higher silica concentrate, but still be able to produce a 1.5% silica pellet.

Test work as well as experience will result in a modern grate kiln design, with design features not regularly offered by vendors as standard, but all design choices having an existing application.

Some of these choices include:

- Dry lintels to reduce water consumption to balling and bearing cooling only.
- Dual-fuel burner design to standardise the burner design regardless of pellet plant location
- Preheated green balls to 40 degC
- Segregated bed
- Single mixer
- Deep bed depth of >500mm
- Hearth layer of 75mm to 100mm
- Organic binder
- Bentonite activation with NaOH
- Segregated bin hearth layer drawdown with screenhouse thereafter

These as well as other design choices will allow the pellet plant(s) to operate at high productivity and thus improve capital efficiency.

4.4.3 Additive Preparation and Balling

Lump limestone and lump bentonite will be received, stored and dry-ground to 45 micron in batch mode in a vertical roller mill (VRM). The VRM shall be able to grind both materials in a 24h period, allowing enough time for changeover and maintenance requirements.

Because of the relatively fine concentrate sizing, test work to date has required a 0.9% bentonite addition and ~9.5% moisture for good balling performance. While later test work with organic binders to partially replace bentonite will be performed in later phases, it is planned to in any case have elevated green-ball temperature of 40 degC to avoid spalling in the middle of the bed.

The method of heating is not defined, however a 2.5% moisture concentrate at 15 degC mixed with 7.5% moisture at 80 degC achieves 35 degC due to the high heat capacity of water. Though 80 degC water is not desirable from a safety point of view, heat from grinding of the ore and other methods may achieve the 40 degC desired green-ball temperature.

4.4.4 Induration

Induration shall incorporate dual-fuel burners to accommodate either Bunker C or natural gas. A third cooling fan is to provide an annealing zone in the first cooling wind-box to avoid thermal shock of the pellets during low ambient temperature conditions anticipated in Quebec or Labrador locations.

4.4.5 Screening

It is preferred that hearth layer larger pellets be generated using a segregation bunker rather than screening, with the remaining pellets being screened.

Undersize from this screenhouse is to be recycled through a dry ball mill circuit and fed back into the pellet plant feed system through a separate bunker. It is estimated that screen out will not exceed 2%, though a 3% number is to be used for ball mill sizing purposes.

4.4.6 Stockpile Management

Two pellet stockpiles are planned of 200 kt capacity each, with a bridge reclaimer in the middle of the two stockpiles. A risk review in the PFS may result in the requirement for additional stockpile capacity to ensure plant performance is uninterrupted by any shipping delays.

4.5 Tailings Management

Whereas the 2012 study considered a conventional wet tailings storage facility with water collection/recirculation, a dry-stacked facility is envisaged. This may incur increased operational costs; however, it is contemplated that it may be required for approvals. It is recommended that the PFS considers both types of solutions, as well as potential staged backfilling of mining pits.

In this scoping study a cost allowance will be used for extra mobile fleet capex and opex for dry stacking.

05

INFRATRUCTURE & LOGISTICS

Modifying Factors 6

PARAMETER	UNIT	VALUE
Wagon Capacity	100	tonnes of product
Wagon Count	240	per train
Port Loading Capacity	3000	tonnes per hour
Rail - Cost	20.34	USD / tonne of product
Port - Cost	5.57	USD / tonne of product
Slurry - Cost (in scenario C9)	3.99	USD / tonne of product

5. Infrastructure & Logistics

5.1 Water Supply

The makeup water requirement for the Iron Bear Project will be determined through detailed engineering studies based on the final processing plant configuration and throughput targets. Preliminary investigations will be required to identify and evaluate potential water sources to meet operational requirements. The sub-Arctic location presents unique challenges for water supply systems, requiring specialised design considerations for winter operations, possible corrosion mitigation, and freeze protection.

Investigations into local water sources will consider the water demands, opportunities, and constraints specific to the Iron Bear Project site near Schefferville. The assessment will evaluate both groundwater and surface water options, taking into account seasonal availability, water quality characteristics, and regulatory requirements.

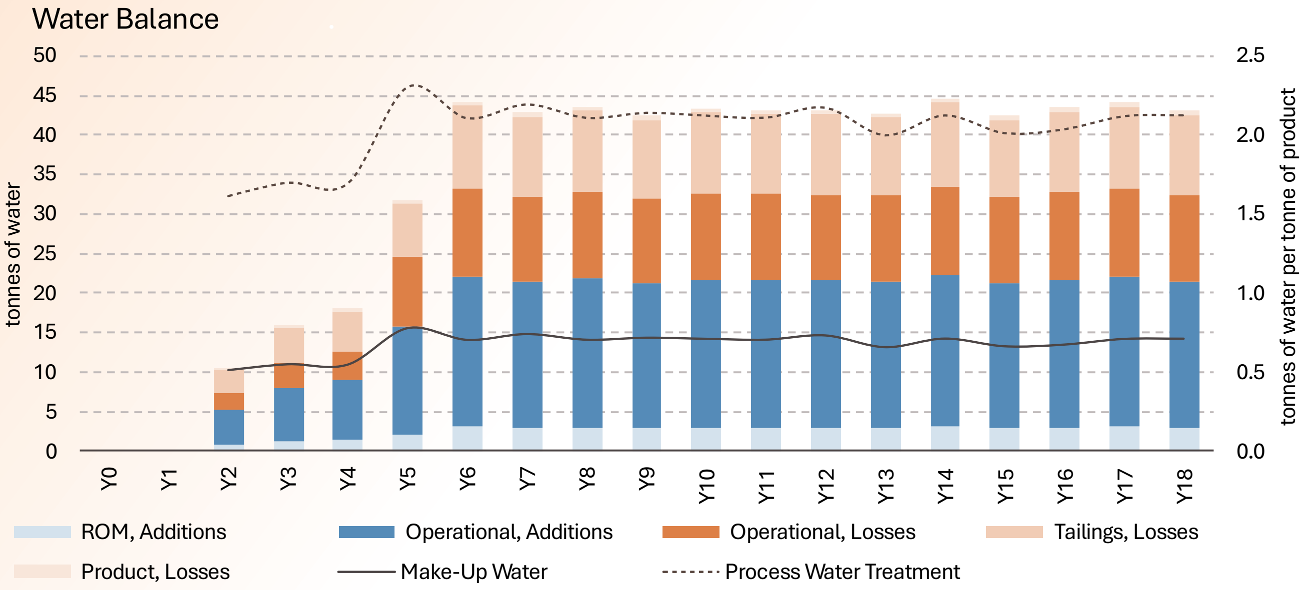


Figure 34: Water Balance - Base Case - Scenario A1, B5, C9

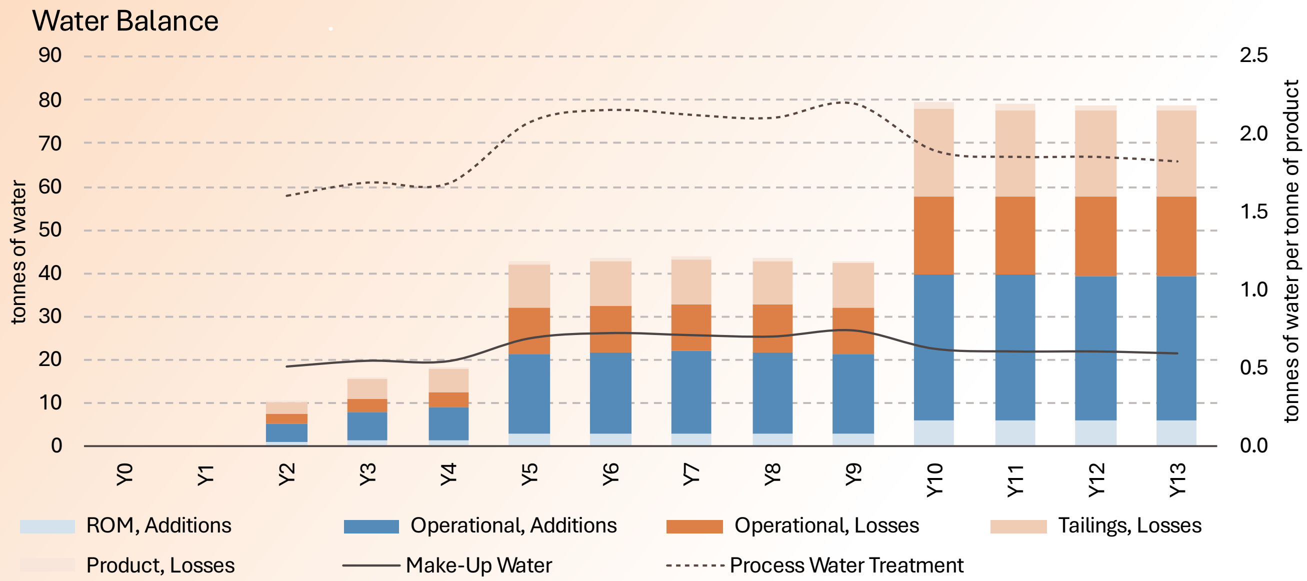


Figure 35: Water Balance - High Case - Scenario E129

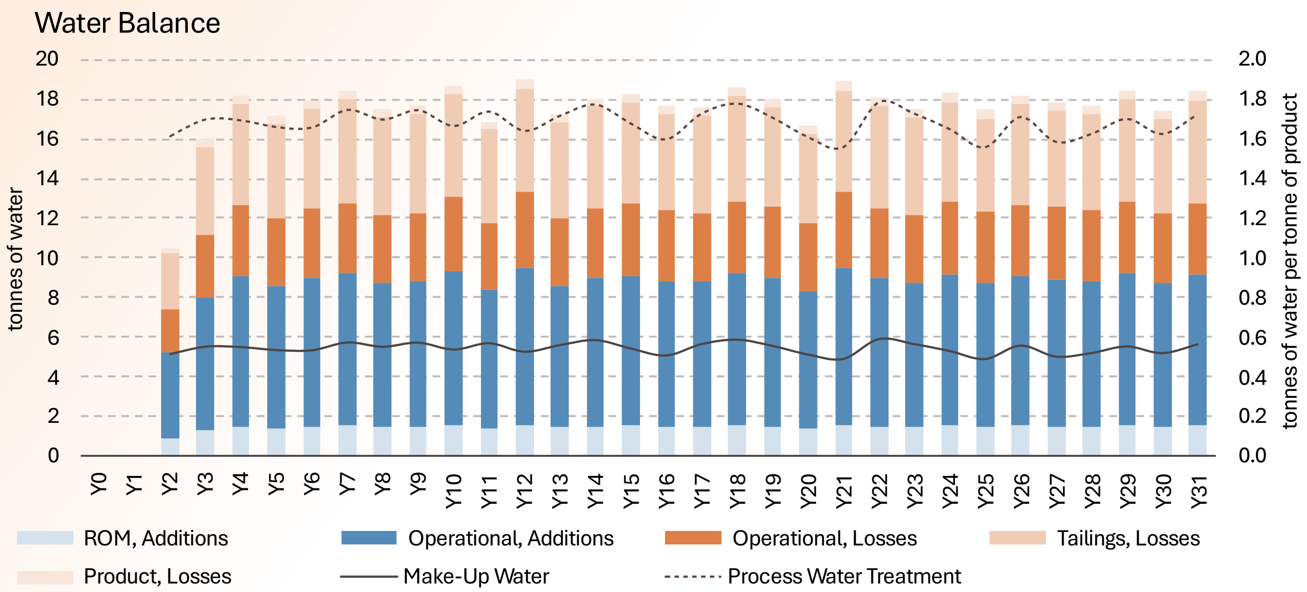


Figure 36: Water Balance - Low Case - Scenario D17

5.1.1 Raw Water

Make-up water requirements will be determined based on the final process plant mass balance and water recovery efficiency targets. Raw water requirements are anticipated to be met through a combination of groundwater extraction and potential surface water sources, subject to detailed hydrogeological investigations and environmental permitting.

Raw water infrastructure will include pumping systems designed for continuous operation under sub-Arctic conditions, with appropriate freeze protection measures. Raw water pumps (duty/standby configuration) will deliver water from storage facilities to the processing plant and firefighting services. Emergency firefighting capacity will be provided through diesel-driven backup systems capable of operating during power outages.

5.1.2 Water Recovery Circuit

The project will target maximum water recovery and reuse efficiency to minimize freshwater consumption and reduce environmental impact. Water recovery targets will be established based on industry best practices for iron ore processing operations and site-specific conditions.

This approach supports environmentally responsible mining practices in the sensitive sub-Arctic environment. Contingency water storage capacity will be incorporated into the design to accommodate variations in water recovery performance and seasonal supply constraints.

5.1.3 Process Water

Process water storage systems will be designed with appropriate capacity to support continuous mineral processing operations and provide emergency reserves. Storage facilities will include process water tanks and freshwater tanks sized according to operational requirements and regulatory standards.

Tailings decant water (as applicable) will be recovered and returned to the process water system to maximize water reuse. Thickener overflow will also report to process water storage. Supplementary makeup water will be added as required to maintain optimal process water quality and quantity.

All process water infrastructure will incorporate freeze protection systems including heated buildings, insulated pipelines, and temperature monitoring systems to ensure reliable year-round operation under extreme winter conditions.

5.1.4 Pit Dewatering

Groundwater has been encountered in exploration drill holes throughout the mineral resource area. Development of the Iron Bear open pit may thus require dewatering systems to manage groundwater inflows and enable safe mining operations. Dewatering requirements are typically highest during initial pit development, with extraction rates generally declining as mining progresses to deeper levels. The sustainability and long-term characteristics of pit dewatering will be determined through detailed hydrogeological investigations and numerical modelling studies.

Water management systems will include dewatering infrastructure designed to handle groundwater inflows and precipitation, along with surface water controls to maintain separation between clean and contact water. The dewatering system will incorporate permanent sumps, strategically positioned wells, and insulated pipeline networks designed for reliable operation throughout the sub-Arctic winter season.

Dewatered groundwater quality will be assessed to determine potential for integration with process water systems or other beneficial uses, subject to water quality standards and environmental compliance requirements. Excess dewatering volumes will be managed through appropriate discharge systems designed to meet regulatory requirements and environmental protection standards.

The water supply strategy will be refined during the Pre-Feasibility Study phase through comprehensive hydrogeological investigations, process engineering studies, and detailed water balance modelling to optimise system design and operational efficiency.

5.2 Power

Hatch delivered a conceptual study (as per AACE class 5 standard) to identify the required high-level power infrastructure necessary to support the various future power supply scenarios in alignment with the Iron Bear Project development plan. The mine's annual capacity for blast furnace (**BF**) grade or direct reduction (**DR**) grade magnetite concentrate, and load profile could evolve in three potential development stages with different commercial operation dates (**COD**s), as outlined below:

- Phase 1: 10Mt p.a. capacity of concentrator, requiring 100 MW - COD 2031-2032
- Phase 2: 25Mt p.a. capacity of concentrator, requiring 250 MW - COD 2035-2036
- Phase: 50Mt p.a. capacity of concentrate, requiring 500 MW - COD 2038-2039

To this end, a conceptual study was carried out by Hatch to evaluate potential energy sources options capable of supplying IB including:

- The construction of a new hydroelectric power facility at Menihek with a capacity of 60 MW;
- The construction of a 280 MW Wind Farm to complement the Menihek hydro-plant to supply the 100 MW concentrator demand load;
- The construction of a high voltage transmission line system connecting the Churchill Falls hydro generation station to the mine project site to supply the potential 250 MW to 500 MW demand load. *It should be noted that other scenarios and options were also considered.*

A conceptual design and a cost estimate of the different energy sources was provided. Three scenarios or phases are designed to meet the mine potential load demand varying from 100 MW to 500 MW were retained, as outlined below:

Table 19: Conceptual Power Development Phases

	Description	Demand Load	COD
Combine Menihek Hydro-Plant with a Wind Farm and transmission lines from Churchill Falls Hydro-plant to supply 100 MW to 500 MW to Iron Bear and 20 MW to the town Schefferville			
Phase 1 – (Wind 280MW + Hydro 60MW)	Build a new HGS at Menihek to produce 60 MW, combined with a 280 MW Wind Farm, to supply 100 MW to IB.	120 MW	2031-2032
Phase 2 - (Wind 280 MW + Hydro 60 MW + 2X 315kV)	Advance Phase 1, Option 2, achieving a combined Wind and Hydro capacity of 340 MW and constructing two 315 kV lines from Churchill Falls to the mine, to supply up to 250 MW to IB	270 MW	2035-2036
Phase 3 – (Wind 280 MW + Hydro 60 MW + 3X315 kV)	Advance Phase 2 and constructing a third 315 kV line from Churchill Falls to the mine to supply up to 500 MW to IB.	520 MW	2038-2039

Phases 2 and 3 are contingent upon the future upgrade of the Churchill Falls and the Gull Island hydro-power facilities, as outlined in the Memorandum of Understanding[6] (MoU) signed between the Government of Newfoundland and Quebec in December 2024. However, Phase 1 is entirely independent from the planned expansion of the Churchill Falls hydro-plant complex.

[6]Source: NL Hydro, https://www.ourchapter.ca/files/NewfoundlandLabrador-Quebec-MOU-English-Dec12-2024.pdf

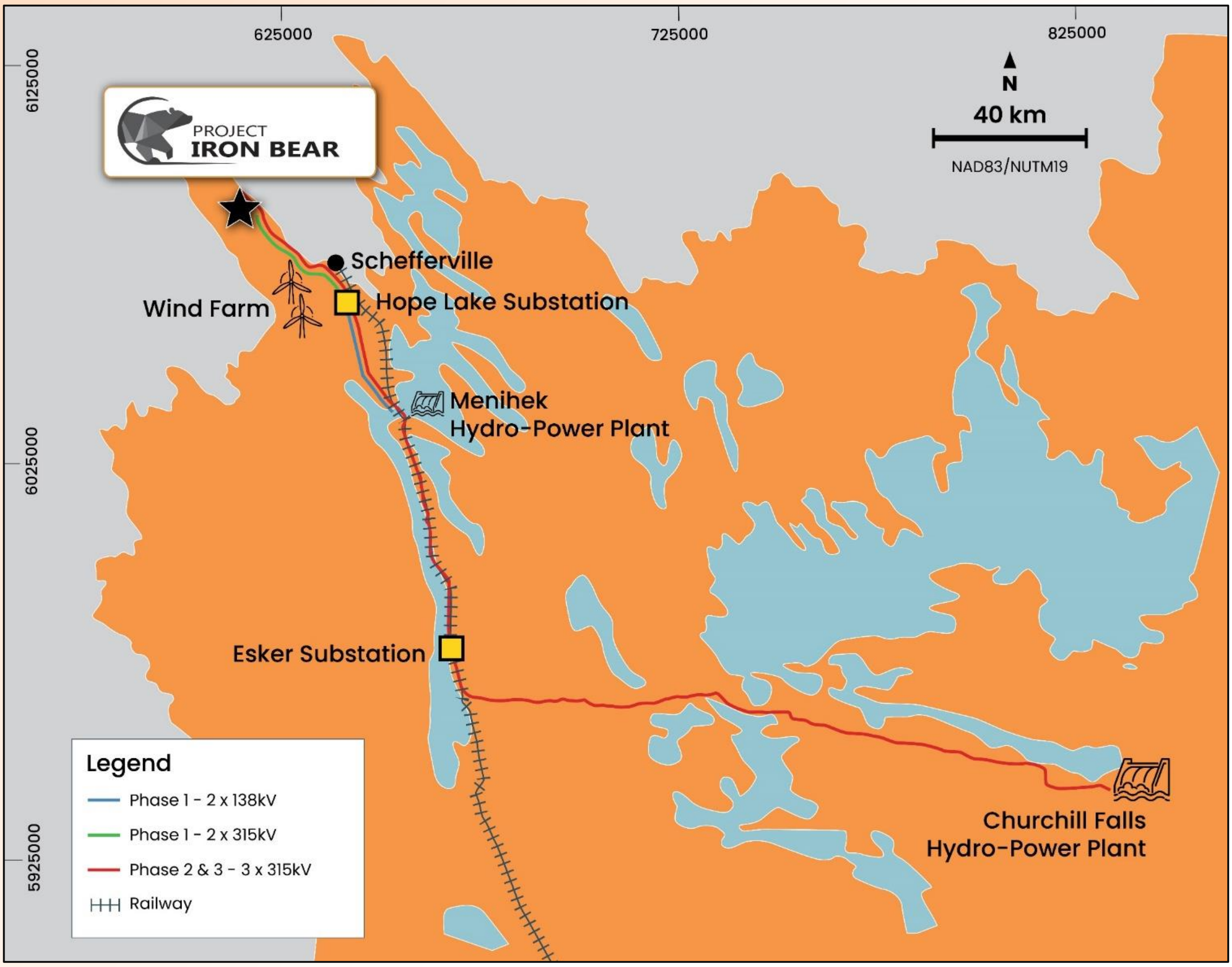


Figure 37: Iron Bear Renewable Assets Location

5.2.1 Wind Farm

The proposed wind farm is located approximately ten kilometres west of Schefferville, placing it nearly equidistant, around 40 kilometres, from Menihek HGS and the Iron Bear mine/concentrator.

The planned wind farm consists of forty (40) – 7 MW recognized utility-scale wind turbines resulting in a total capacity of 280 MW. This capacity was chosen to ensure the 100 MW mine load could be reliably supplied during Phase 1 of the project development. The 7MW wind turbine was selected based on its compatibility with the site's average wind speed at hub height and local weather conditions, including cold temperature and potential icing. Further analysis will be required for final wind turbine selection, in consultation with top-tier manufacturers and considering other potential models. Analysis of wind data was used to determine the total minimum wind farm capacity to ensure the 100 MW mine load could be reliably supplied in Phase 1.

Table 20: Wind Farm Characteristics

Wind Turbine Model	Generic recognized utility scale wind turbine
Rated Power (kW)	7,000
Number of Wind Turbines	40
Capacity of the Wind Farm (MW)	280
P50 – Gross Annual Energy (GWh)	1,308
Gross Capacity Factor	53.3%
P50 – Net Annual Energy (Gwh)	1,069
Net Capacity Factor	43.6%

Vortex long term hourly distribution wind data (8,760 hrs) at 100 m height, from 2014 to 2024, has been used. A typical wind shear coefficient of 0.2, representative of the site area, was used to extrapolate the wind data from 100 m to the considered hub height of 125 m.

To estimate the annual 8,760 hours energy distribution, the average wind distribution and the generic wind turbine power curve model, corrected for the site's air density were used.

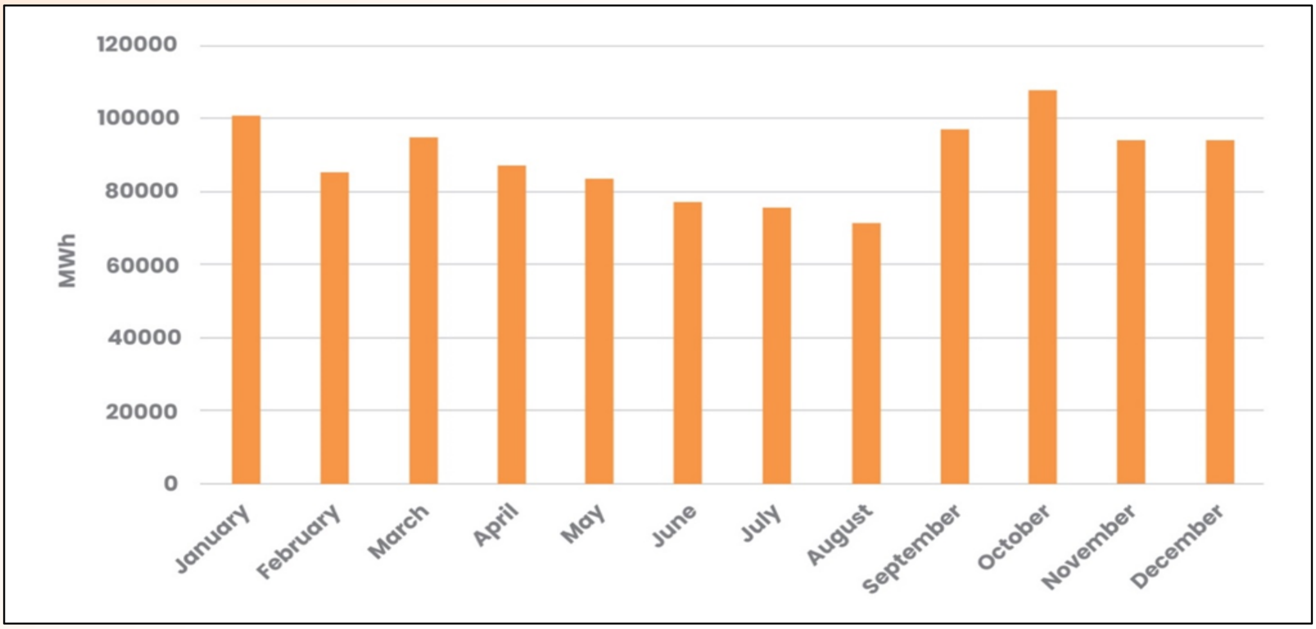


Figure 38: Average monthly energy produced from wind (MWh) from 2014 to 2024 including icing and general losses

The wind farm generates an average hourly power of 131 MW from September to April. However, the power output occasionally falls below 55 MW, requiring Menihek HGS to compensate for low wind conditions. From May to August, the average hourly power produced is 104 MW, with minimums that can drop below 30 MW. During the spring and summer periods, when hydro capacity reaches its peak, it can readily compensate for the lower wind generation, demonstrating the seasonal complementarity between the two energy sources.

Given the isolated nature of the interconnection in Phase 1, before the interconnection to Churchill Falls, the addition of a 10 MWh Battery Energy Storage System (BESS) to the wind farm has been considered. The BESS system provides grid forming capabilities-maintaining voltage and frequency-and supplies auxiliary power to the wind turbines when wind is insufficient. It will be located near the wind farm substation to minimize electrical losses and to facilitate construction and operational practicality.

5.2.2 Menihek Hydro-Power Plant Facility

Upgrading the existing Menihek facility with newer, larger turbines was investigated. An alternative to expanding the existing Menihek hydropower station, is to decommission the existing hydro-power plant and construct a new one. There are significant benefits to a new facility, such as overcoming risks related to aging facilities related to the existing Menihek station.

The new station is planned to have identical units for ease of maintenance and simplification of project execution. It is recommended that the new facility to be equipped with 3 Kaplan turbines with a rating output of 20 MW. In a later study, other configurations can be reviewed such as 1 Kaplan turbine and 2 fixed blade propeller turbines.

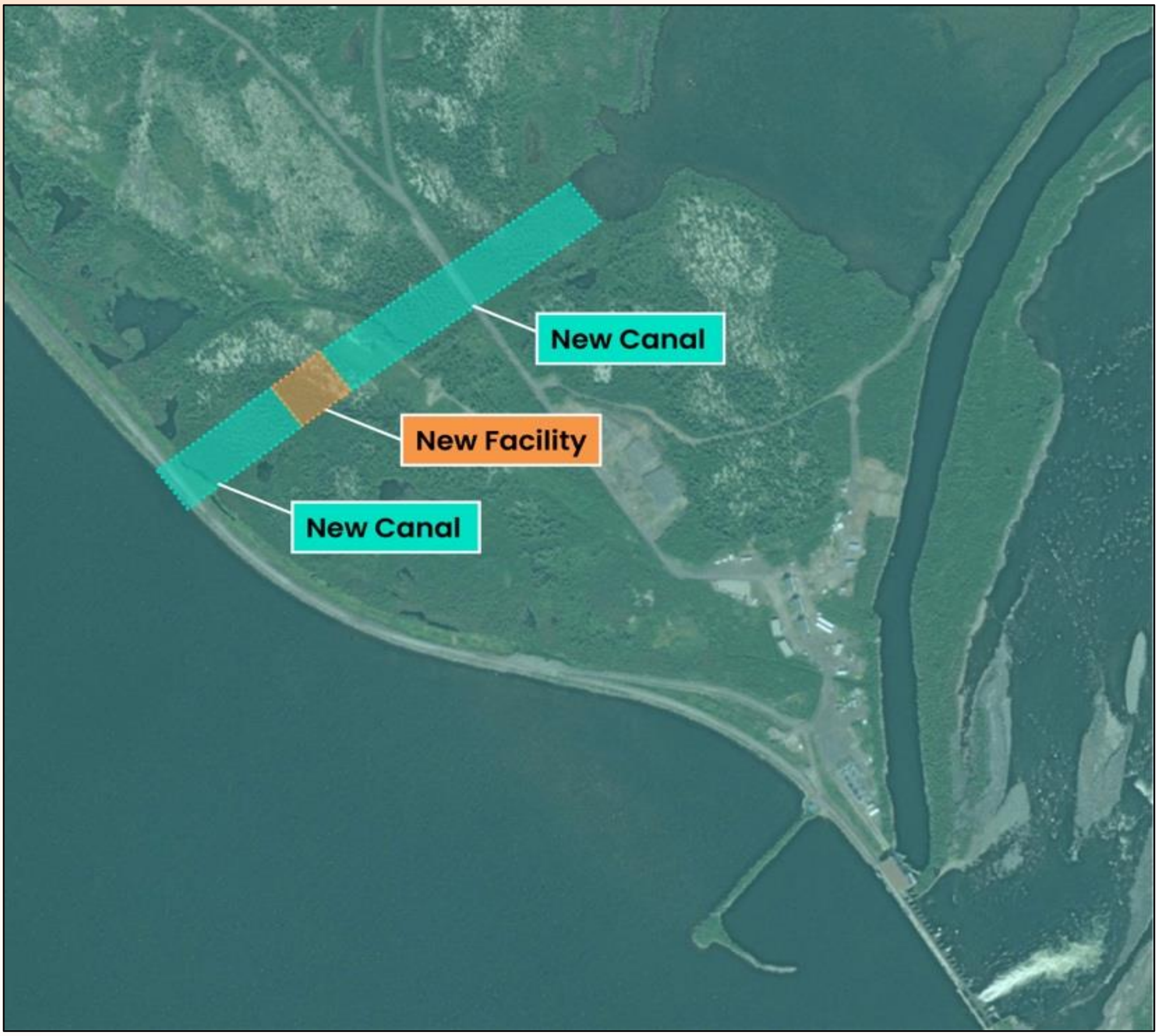


Figure 39: Potential New Site for Menihek hydro-plant

5.2.3 High Voltage Transmission Lines

5.2.3.1 Phase 1

The existing two 69 kV transmission lines between Menihek and Pearce Lake Substation are thermally limited. To transfer the proposed Menihek 40 to 60 MW capacity, it is proposed to build two new 138 kV transmission lines from Menihek to the Hope Lake area. Each 138 kV transmission line is assumed to consist of:

- H-Frame wood construction.
- 4.3 m phase spacing.
- OPGW and OHSW along its total length; and
- One 266.8 kcmil, 26/7, ACSR, “PARTRIDGE” conductor per phase with a 90°C maximum conductor temperature.

At Hope Lake a 138/69 kV station will be constructed to connect the new 138 kV transmission lines to the existing 69 kV L1 and L2 lines prior to the border crossing 29. The new station will contain:

- Two 138/69 kV, 30/40/50 MVA power transformers.
- H.V. on load tap changer to regulate L.V. bus voltage: ±10% in 33 steps.

Analysis to date indicates that two 140 MW wind farms (280 MW in total) will supply an average capacity of 104 MW to the Iron Bear Mine. It is proposed to connect both wind farm locations to a single 315/34.5 kV station. This station will contain:

- A minimum of two 315/34.5 kV, 100/133/167 MVA power transformers;
- H.V. on load tap changer to regulate L.V. bus voltage: ±10% in 33 steps.
- An optional third 315/34.5 kV transformer would ensure full wind farm output to the transmission system for loss of a wind farm main power transformer.

Two 315 kV transmission lines will connect the wind farm station to the Iron Bear Mine station, a distance of approximately 43 km. Two 9-km long 315 kV lines will connect the Wind Farm station to the Hope Lake Terminal Station. To permit the excess Menihek capacity to supply the mine site, two 315/138 kV, 30/40/50 MVA transformers, complete with on load tap changers will be added at Hope Lake.

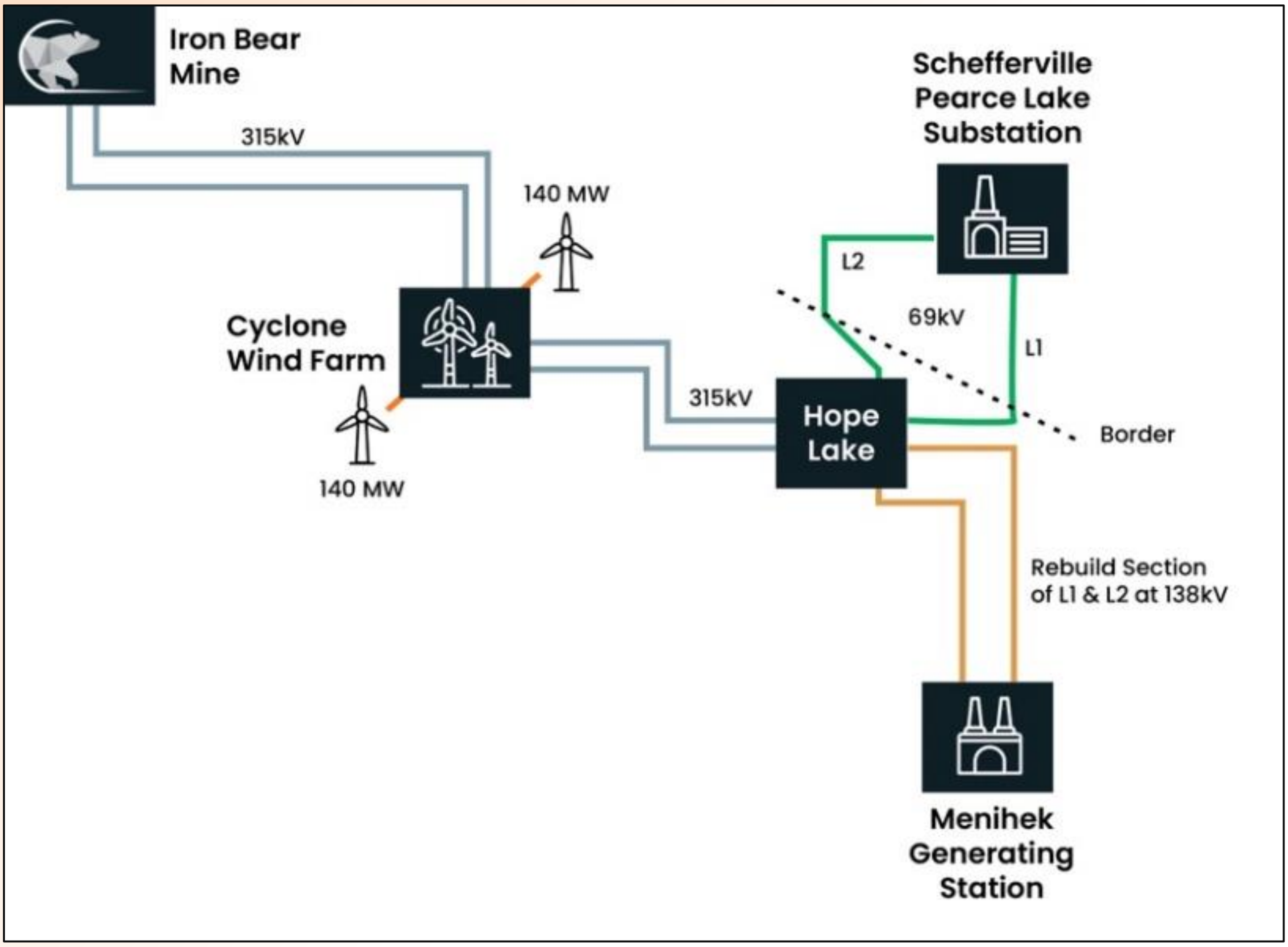


Figure 40: Phase 1 Menihek Hydro-Plant plus Wind interconnection

5.2.3.2 Phase 2 and 3

Supplying the IB mining & concentrator complex with a potential load of 250 MW (Phase 2) and 500 MW (Phase 3), requires the addition of two (Phase 2) or three (Phase 3) 315 kV transmission circuit from Churchill Falls to Esker Siding and on to Iron Bear. This third line is not required to enter either the Hope Lake or Wind Farm stations.

The figure below provides the interconnection diagram.

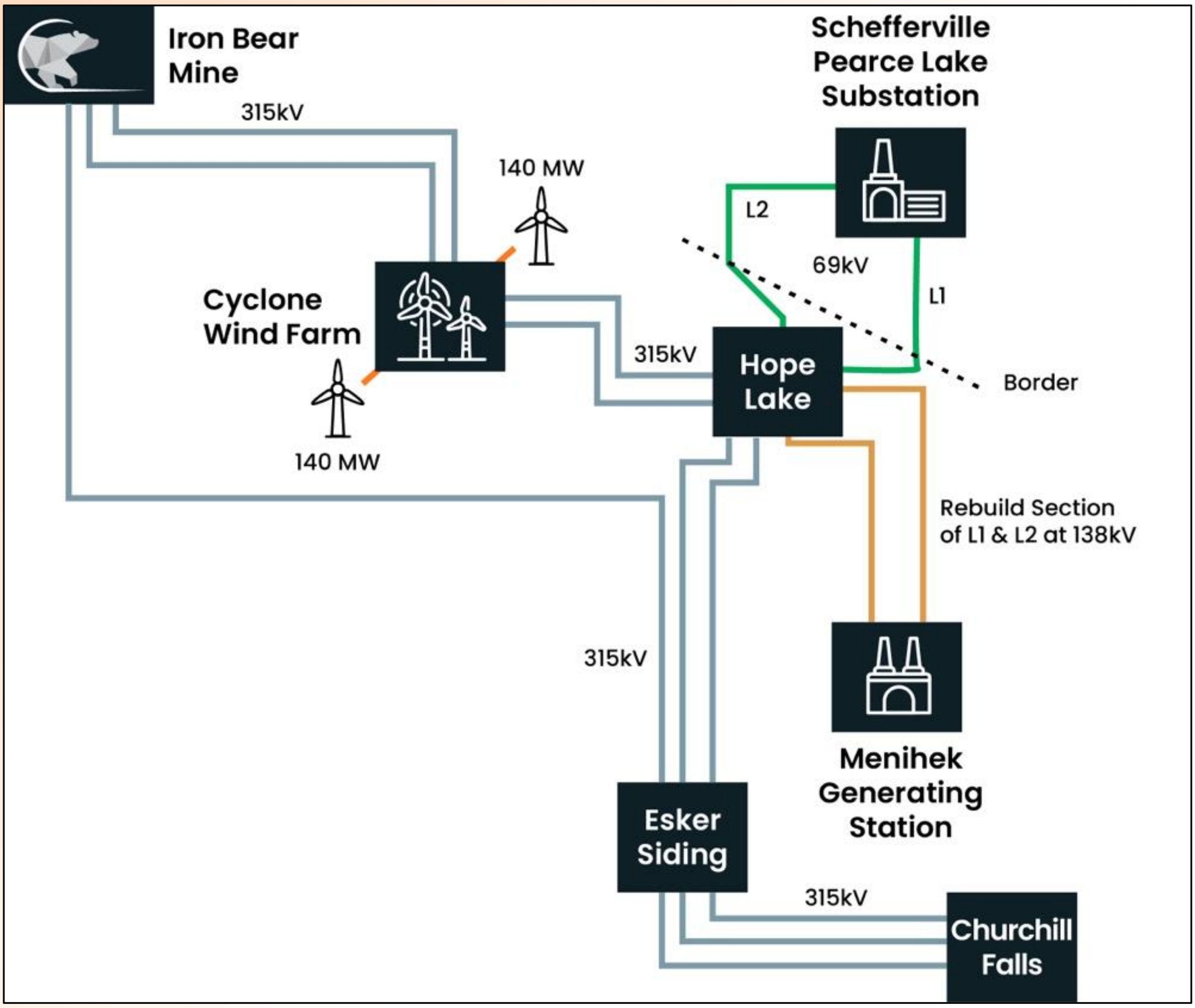


Figure 41: Phase 2 and 3 Interconnection Diagram

Power Balance Simulations

This section presents the results of the simulations of the different scenarios (Wind, Menihek HGS and Churchill Falls HGS), to assess the contribution of each energy source to meet the mine load demand for each development stage.

A Hatch proprietary simulation tool has been used. This model includes the Labrador generation and transmission system, as well as the isolated Menihek hydro-plant and Schefferville load. This model was deployed for this study to evaluate the robustness of the supply scenarios to meet the required demand load. To capture the hydrologic variability, simulations were carried out using the available historic inflows of the Menihek catchment area from 1957 to 2023. Simulations were performed using daily time step, with on and off-peak representation for wind, hydro generation and load.

IB maximum energy demand is estimated by multiplying the mine/concentrator operational hours (8,000 hours) by the total electrical load for each scenario. Schefferville will operate less than 8,000 hours per year. Real Schefferville historical load profile was used for the Hatch proprietary simulation tool.

Table 21: Energy Balance Summary (P-50)

	IB + Schefferville Load (MW)	Wind Energy (MW)	Menihek Hydro (GWh)	Churchill Falls Hydro (GWh)	IB + Schefferville Maximum Energy Demand (GWh)
Phase 1 Wind 280 MW + Hydro 60 MW	120	743.3	151.2	0	893
Phase 2 Wind 280MW + Hydro 60MW + 2X 315 kV	270	981.1	218.6	977.2	2,095
Phase 3 Wind 280MW + Hydro 60MW + 3X 315 kV	520	979.4	216.4	2,898.1	4,095

The results obtained indicate that the combined calculated energy outputs from each source, for each scenario, are on average sufficient to meet the energy demand of the Iron Bear mining and concentrator complex and Schefferville

The charts below show the daily simulated power generation in Phase 1 for the Menihek hydro-plant and the Wind farm:

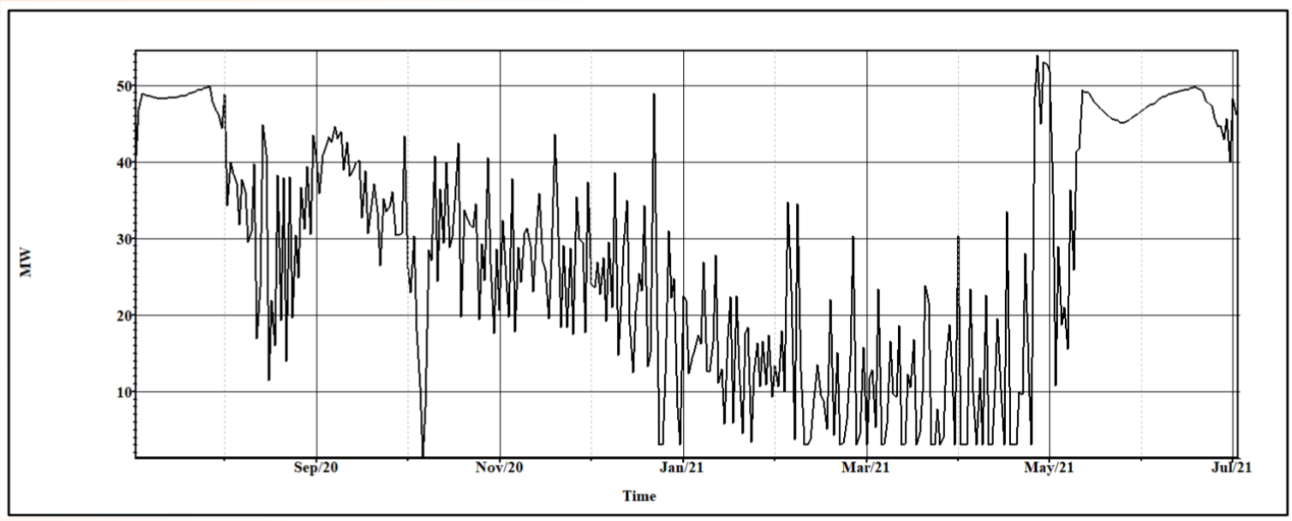


Figure 42: Menihek hydro-power generation - Phase 1

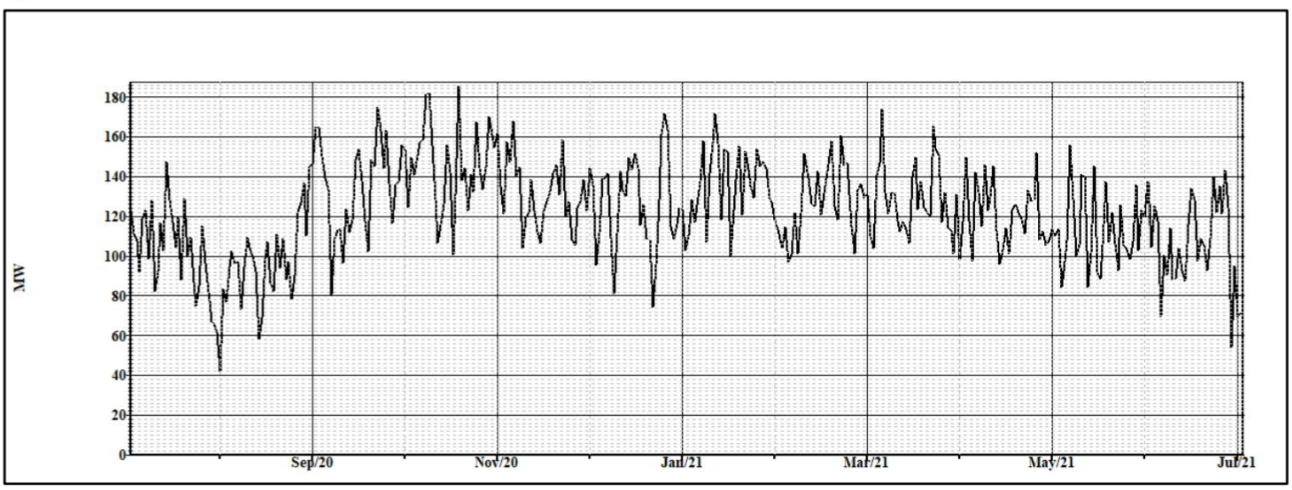


Figure 43: Wind Farm Generation - Phase 1

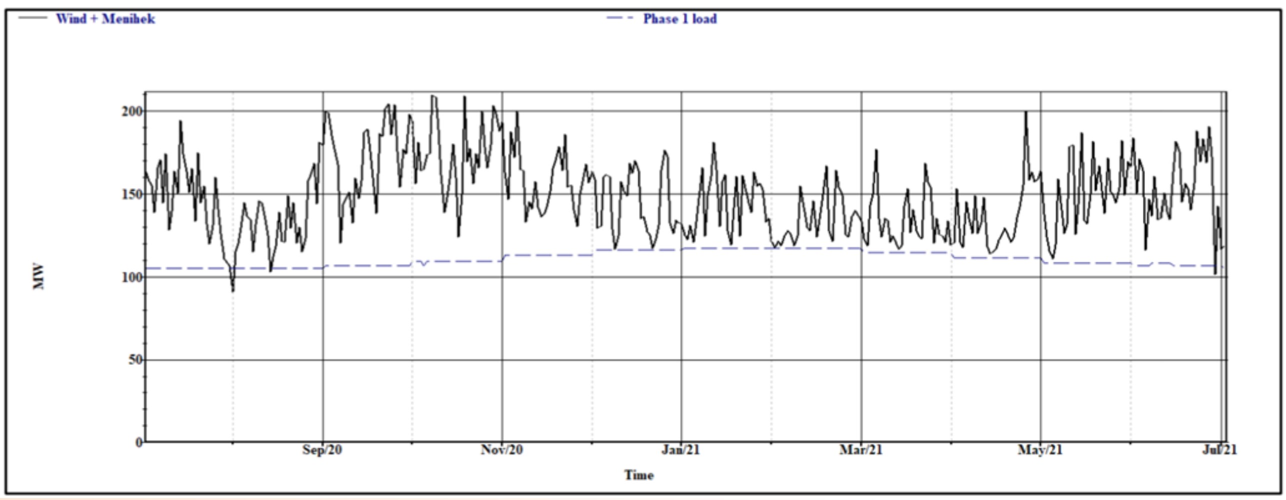


Figure 44: Total Power Generation - Phase 1

It is evident that for most of the year there is excess wind and hydro generation available to serve the demand of IB and Schefferville in Phase 1. However, with only 60 MW of hydro capacity and variability in wind generation, there a few periods where the generation is below the load. Therefore, wind forecasting, mine load management and potential emergency power sources will be required in Phase 1 to manage rare, but possible, power shortages.

5.2.4 Qualifications

CAPEX and OPEX estimates are based on the following assumptions and parameters:

- Quotes from previous projects and internal benchmarks were used to estimate the cost of the project. No quotes were requested from vendors or contractors.
- Hatch experience with similar projects and industry standards
- Adjust for project-specific factors, like locations factors (e.g., labour costs, land condition and accessibility, climate, etc.)
- Use of recent quote from wind turbine manufacturers for wind turbine pricing factored to site conditions, like remoteness and impact on transportation cost.
- Use of benchmarks and quotes for major electrical components like transformers, HV circuits breakers, etc., factored to site conditions and using Hatch experience with similar projects.
- Contingency applied on major equipment and indirect costs for Hydro and Transmission (10 to 25%). Higher contingency has been applied to transmission line cost due to increased uncertainty in design and construction expenses at this level of the study.
- 5% contingency applied on Wind Turbine as more recent quote from OEMs used. 15% to 20% applied on all other costs for the wind farm.

5.2.5 CAPEX and OPEX

A base cost of the energy imported from Churchill Falls in Phase 2 and 3 of 5.149 cents per kWh and a rate for firm power of 41 cents per kW per month were established. This cost is based on the Labrador industrial rates published in the Newfoundland's "Schedule of Rates, Rules and Regulations" document. These energy rates have not been approved nor confirmed by NL Hydro and have been used solely for reference purposes.

This section describes the methodology and basis for the preparation of the capital cost (**CAPEX**) and operating cost (**OPEX**) for the different source of energy and scenarios, including forty (40) – 7MW wind turbines, the refurbishment or new hydro units' installation at Menihek and transmission lines from Churchill Falls were considered.

The CAPEX estimate covers the direct and indirect costs including the engineering cost, material and equipment procurement, construction and commissioning costs, and contingency. Construction of the wind farm includes access roads, collector system, power substations, and a high-voltage transmission line.

The operating expenditure (**OPEX**) estimate consists of fixed and variable operating costs. OPEX estimates were based on recent benchmarks and experience with similar projects.

5.2.5.1 Phase 1

Table 22: Power CAPEX and OPEX, Phase 1

CAPEX	Wind 280 MW	Hydro 60 MW
	CAD million	CAD million
Wind Farm - Hydro Plant Retrofit	612	345
Substation	103	81
Transmission	285	170
BESS	10	/
Environmental Study	5	2
Total	**1,015**	**598**
OPEX		
Total	**16**	**5**

5.2.5.2 Phase 2

Table 23: Power CAPEX and OPEX, Phase 2

CAPEX	Wind 280 MW	Hydro 60 MW	2X 315 kV Transmission line (incremental cost)
	CAD million	CAD million	CAD million
Wind Farm - Hydro Plant Retrofit	612	345	/
Substation	103	81	174
Transmission	285	170	1,570
BESS	10	/	/
Environmental Study	5	2	8
Total	**1,015**	**598**	**1,752**
OPEX			
Total	**16**	**5**	**64**

5.2.5.3 Phase 3

Table 24: Power CAPEX and OPEX, Phase 3

CAPEX	Wind 280 MW	Hydro 60 MW	2X 315 kV Transmission line (incremental cost)	3X 315 kV Transmission line (incremental cost)
	CAD million	CAD million	CAD million	CAD million
Wind Farm - Hydro Plant Retrofit	612	345	/	/
Substation	103	81	174	43
Transmission	285	170	1,570	1,030
BESS	10	/	/	/
Environmental Study	5	2	8	/
Total	**1,015**	**598**	**1,752**	**1,073**
OPEX				
Total	**16**	**5**	**64**	**108**

5.2.6 Power Study Summary

IRON BEAR (IB) POWER SCOPING STUDY SUMMARY
AACE Class 5 standards

	PHASE 1	PHASE 2	PHASE 3
Demand load (MW) Concentrator capacity (Mta) Commercial Operational Date	120 MW 10 Mta 2031 – 2032	270 MW 25 Mta 2035 – 2036	520 MW 50 Mta 2038 – 2039
Iron Bear power infrastructure description	Expand Menihek hydro-power plant to 60MW and build a 280 MW Wind Farm to supply IB[2] with 100 MW	Phase 1 power production plus two 315kV power lines from Churchill Falls hydro-power plant to supply IB with 250 MW	Phase 2 power production plus one additional 315kV power line from Churchill Falls to supply IB with 500 MW
Total CAPEX estimate (CAD million)	CAD 1613 million	CAD 3365 million	CAD 4438 million
Power Balance Yearly Simulation[3] Wind Farm Hydro plant Menihek Hydro plant Churchill Falls Max. demand (IB + Schefferville)	 743 GWh / year 151 GWh / year 0 GWh / year 893 GWh / year	 981 GWh / year 219 GWh / year 977 GWh / year 2095 GWh / year	 979 GWh / year 216 GWh / year 2898 GWh / year 4095 GWh / year
OPEX estimate (CAD million / year)	CAD 21 million / year	CAD 85[4] million / year	CAD 194[4] million / year
Average Power Costs CAD cents / KWh	CAD 2,34 cents / kWh	CAD 4,06 cents / kWh	CAD 4,74 cents / kWh

Figure 45: Iron Bear Power Study Summary

1: 'Power Capacity and Expansion Assessment' dated 22/05/2025 by Hatch. Conceptual engineering study to AACE Class 5 standards
2: The IB concentrator and mine requires 100MW but the electricity production will also provide 20MW to Schefferville and Kawachikamak (local towns)
3: Power production simulations are based on Hatch proprietary simulation tool leveraging historical hydrological and wind data
4: Includes annual energy costs imported from Churchill Falls. These costs are derived from the MOU signed between Newfoundland and Quebec in December 2024 which outlines the commercial conditions for power associated with the planned expansions of the Churchill Falls and Gull Island hydro-plants

5.2.7 Power Study Assumptions

Potential sources of power and energy to supply the proposed Iron Bear Mine in Labrador include:

- Expansion of Menihek hydro plant or development of a new facility;
- Capacity increases at Churchill Falls generating station as per the recent MoU between Newfoundland and Labrador Hydro and Hydro-Québec (See Figure 46); and
- The development of a wind farm to be combined with the Menihek hydroelectric power.

Transmission via Menihek:

- New transmission will follow the existing 69 kV right of way and rail line between Menihek and Schefferville where practical;
- New transmission will be built within Labrador;
- The transmission line deviates from the existing corridor around the Tacora mine site then follows the proposed 25 km long rail line extension from Tacora to the Iron Bear Mine;
- Transmission line length of approximately 85 km to be confirmed during review; and
- The 100 MW capacity range and over 85 km lends itself to analysis of 69 kV and 138 kV transmission voltages.

Transmission via Churchill Falls:

- The Iron Bear Mine Load will be set at 250 MW with a potential to increase to 500 MW; • The presence of 315 kV at Churchill Falls provides the most reasonable voltage level for power transfers on the order of 500 MW; and

- For ease of construction the new 315 kV transmission system will follow the Esker Road that was used for initial construction of the Churchill Falls site then run northward along the rail line approximately 71 km from the Esker siding to Menihek; From Menihek to Iron Bear Mine the transmission system will take the same route as described above.

Transmission via the Wind Farm:

- New 315 kV transmission line will run the Wind Farm substation to IBM and will be located in Labrador; and
- Hope Lake tap station will connect to the Wind Farm substation via a 315 kV line running along the Quebec border and located in Labrador.

Wind Farm:

- The wind farm location will be established based on the best wind resource in the area and close enough to Iron Bear Mine to minimize the cost of the transmission line and the electrical losses;
- Vortex wind data will be used to determine the best wind resources of the area combined with GIS tools like google earth map to assess general accessibility and topography of the site; and
- Given the isolated nature of the interconnection in Scenario B – Phase 1, before the interconnection to Churchill Falls, the addition of a 10 MWh Battery Energy Storage System (BESS) to the Wind Farm has been considered. The BESS system provides grid forming capabilities-maintaining voltage and frequency-and supplies auxiliary power to the wind turbines when wind is insufficient.

Iron Bear Mine Load:

- The mine will be operating for approximately 8,000 hours per year;
- The load will evolve with the mine development Stages, as follows: Stage 1: 100 MW; Stage 2: 250 MW; Stage 3: 500 MW.
- The load will be supplied by multiple power transformers equipped with on load tap changers to assist with voltage regulation of the supply bus(es);
- The load will have a power factor of 0.95; and
- The supply bus voltage will be 34.5 kV.

Load Flow Study Assumptions:

Iron Bear Mine loads based on annual power requirements are as follows:

- Stage 1 development 100 MW at 0.95 pf;
- Stage 2 development 250 MW at 0.95 pf;
- Stage 3 development up to 500 MW at 0.95 pf.

The Schefferville loads are expected to at least double from the existing peak of approximately 10 MW to 20 MW due to the economic impact of the mine development. Schefferville load was assumed to have precedence over the mine site; however, no specific control mechanisms were applied during the dynamic flow analysis.

Cost Estimating:

- Contingency applied on major equipment and indirect costs for Hydro and Transmission (10 to 20%). Higher contingency has been applied to transmission line cost due to increased uncertainty in design and construction expenses at this level of the study.
- 5% contingency applied on Wind Turbine as more recent quote from OEMs used. 15% applied on all other costs for the wind farm.

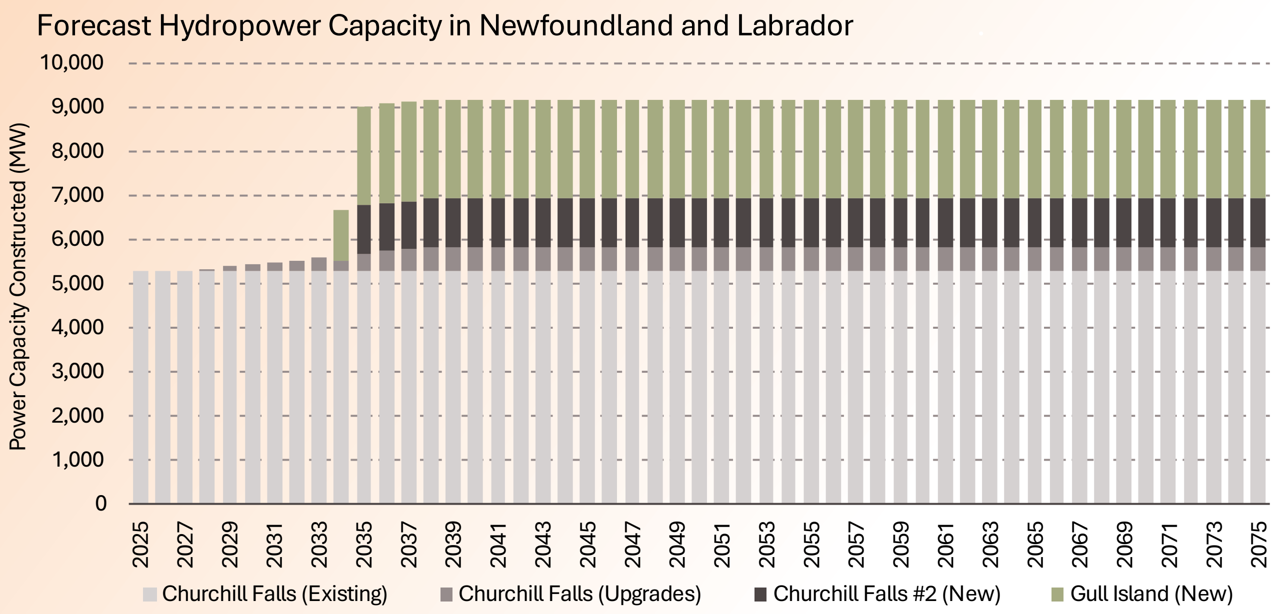


Figure 46: Forecast Hydro Capacity in Newfoundland and Labrador (Source: HL Hydro MOU, 12th December 2024)

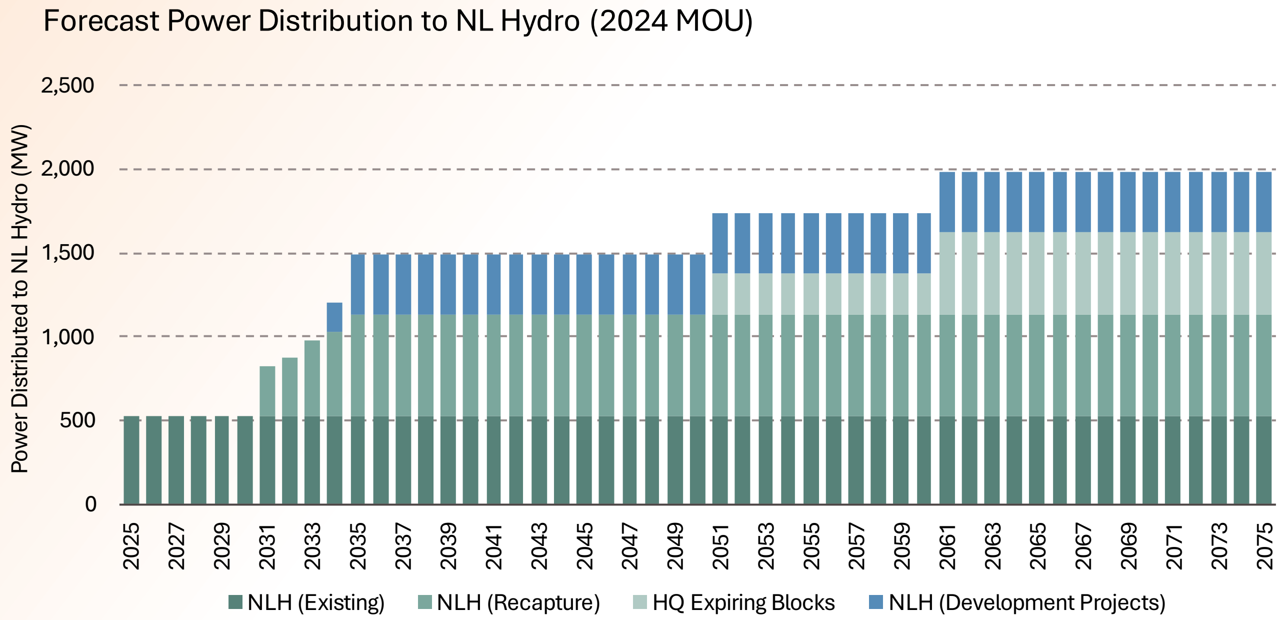


Figure 47: Forecast Power Distribution to NL Hydro (Source: NL Hydro MOU, 12th December 2024)

5.3 Rail Transport and Infrastructure

This scoping study for the Iron Bear project has evaluated transporting 25 million tonnes per annum of blast furnace iron ore concentrate via rail from the mine site near Schefferville to port facilities at Sept Iles/Pointe-Noire, Quebec. The proposed rail transportation system would employ, and upgrade, existing infrastructure operated by three regional carriers: Tshiuetin Rail Transportation (**TSH**), Quebec North Shore and Labrador Railway (**QNS&L**), and Société ferroviaire et portuaire de Pointe-Noire (**SFPPN**). This approach represents a technically proven and economically viable transportation solution that leverages established rail corridors while requiring strategic infrastructure investments.

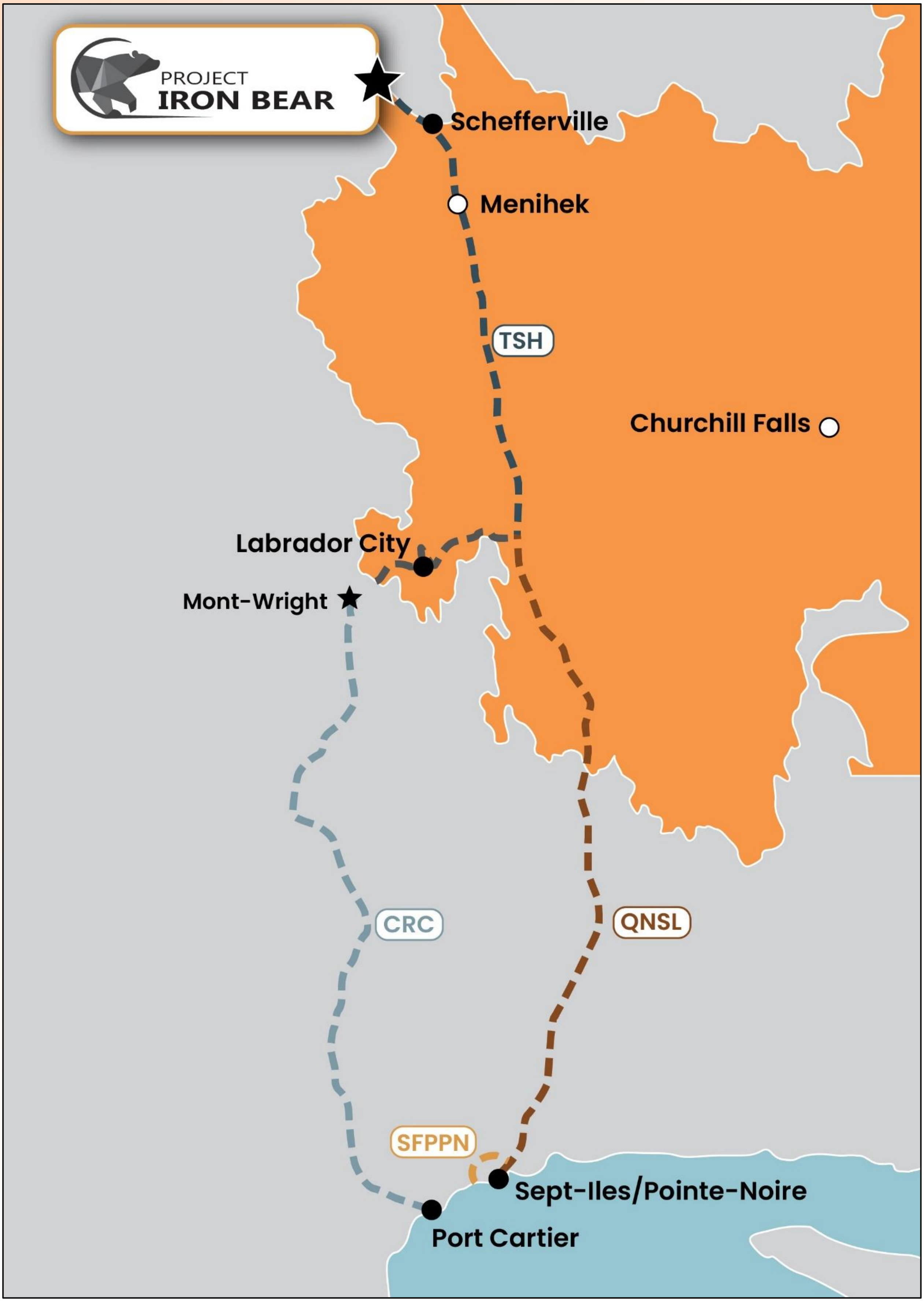


Figure 48: Rail Transport Corridor

5.3.1 Overview

Rail transportation for iron ore concentrate in the region has demonstrated sustained operational success over decades, with established operations including Iron Ore Company of Canada's (**IOC**) 418-kilometre railway from Labrador City to Sept Iles (operational since 1954, currently transporting approximately 23 million tonnes annually) and Champion Iron's utilisation of existing infrastructure for Bloom Lake operations (15 million tonnes annually). Recent technological advances in rail operations include automated train control systems, high-capacity ore cars exceeding 125 tonnes payload, and sophisticated inventory management systems enabling efficient fleet utilisation.

Benchmarking against comparable regional operations demonstrates the potential viability of achieving 25 million tonnes annual throughput via existing rail infrastructure. IOC's operations provide direct precedent for this scale of iron ore transportation over similar distances and operating conditions. Champion Iron's proposed Kami project evaluated similar transportation volumes over comparable infrastructure, while their Bloom Lake operations demonstrate successful integration with existing rail carriers. Upgrades/expansions to the existing system is estimated to require capital investment at USD 450 to 650 million for infrastructure and rolling stock acquisition, with operating costs projected at USD 150 to 250 million annually based on current regional benchmarks.

A rail derisking study is scheduled for completion in late August 2025, and will provide a more granular understanding of the existing railway network and expansion requirements to increase capacity for both Iron Bear products and anticipated increases in product volumes by others.

5.3.2 Infrastructure and Operating Parameters

Based on analysis of regional rail operations and scaling from established benchmarks, the Iron Bear rail transportation system would incorporate the following preliminary design parameters:

Table 25: Rail Infrastructure Specifications (Estimate)

Parameter	Specification
Track Gauge	Standard gauge (1,435 mm)
Rail Weight	136 lb/yd (67.5 kg/m) minimum
Operating Speed	40 km/h loaded, 50km/h empty
Minimum Curve Radius	290 metres
Maximum Gradient	1.2% loaded, 2.0% empty
Train Length	2,400 metres maximum
Loading Loop Capacity	240 railcars

The transportation system would employ 100 metric-tonne capacity bottom-dump gondola cars specifically designed for iron ore concentrate transport. These cars feature rotary couplers for efficient unloading, and specialised coatings to prevent concentrate freezing during winter operations. Locomotive requirements include high-horsepower units capable of handling 35,000-tonne trains over the challenging terrain profile between Schefferville and Sept Iles. Specific car designs will occur in a later study phase.

The proposed rail operation would integrate with existing infrastructure operated by the three regional carriers, requiring strategic upgrades rather than new construction. Critical infrastructure investments include expanding the existing TSH connection at Schefferville to accommodate the Iron Bear mine site through construction of new sidings and a high-capacity loading facility(ies). The route would utilise TSH infrastructure from Schefferville to Emeril Junction, transfer to QNS&L for the majority of the journey to Sept Iles and potentially utilise SFPPN infrastructure for port access.

5.3.3 Route Selection

The rail route operates under severe winter conditions identical to those affecting pipeline alternatives, with temperatures reaching -40°C and extended periods of snow and ice accumulation. Based on operational experience from IOC and regional carriers, the rail system requires comprehensive winter operations protocols including:

- High-capacity snow removal equipment and dedicated maintenance crews during winter months
- Specialised cold-weather locomotive systems with engine block heaters and anti-freeze systems
- Heated railcar dumping facilities and ore handling equipment with freeze protection
- Low concentrate moisture content to minimise ice block formation
- Emergency response capabilities for weather-related service disruptions

The route profile presents both advantages and challenges for rail operations. The approximately 500-metre elevation descent from mine to port provides operational benefits through reduced energy consumption for loaded trains, though this requires careful management of braking systems and speed control on descending grades. The established infrastructure has demonstrated capability to handle similar tonnages and operating conditions through decades of continuous operation. Conversely, the uphill journey for general goods trains may result in shorter consists (to be modelled).

Integration with existing regional mining operations presents significant operational and economic advantages. The shared utilisation of rail infrastructure with IOC, Tacora, Tata and Champion Iron operations may enable optimised scheduling, shared maintenance costs, and potential economies of scale in rolling stock procurement and maintenance. The established maintenance facilities, crew bases, and operational systems provide immediate support infrastructure that would otherwise require substantial independent investment, though this may still be required.

5.3.4 Conclusions and Recommendations

The proximity to other mining operations in the Schefferville region creates opportunities for coordinated transportation planning and shared infrastructure. Future expansions could potentially accommodate concentrate from adjacent projects through the same upgraded infrastructure, improving overall regional transportation efficiency and reducing per-tonne transportation costs through increased system usage.

Operational flexibility represents a key advantage of the rail transportation option. Unlike pipeline systems that require continuous operation, rail transportation can accommodate varying production schedules, maintenance shutdowns, and market-driven shipping adjustments. The ability to stockpile concentrate at multiple locations along the route provides buffer capacity during equipment maintenance or weather-related disruptions.

The established regulatory framework for rail operations in Quebec and Labrador provides a more straightforward permitting environment compared to new infrastructure development. Existing environmental assessments, Indigenous consultation frameworks, and operational agreements create a foundation for efficient project development and implementation.

This scoping study assessment indicates that rail transportation via existing infrastructure represents the most technically mature and economically viable option for Iron Bear project development. The combination of proven technology, established infrastructure, and regional operational experience provides high confidence in achievable performance and cost parameters.

The recommendation is to proceed with detailed engineering and commencement of commercial negotiations with the three regional rail carriers while conducting comprehensive infrastructure condition assessments to finalise upgrade requirements and implementation schedules. Parallel development of port handling facilities and mine-site loading infrastructure should commence to ensure integrated system readiness for production startup.

5.4 Slurry Pipeline

This scoping study for the Iron Bear project has evaluated transporting 25 million tonnes per annum of blast furnace / direct reduction grade iron ore concentrate via slurry pipeline from the mine site near Schefferville to port facilities at Sept Iles/Pointe-Noire, Quebec. The proposed 620-kilometre pipeline system represents a technically feasible and potentially economically advantageous alternative to conventional rail transportation for this remote mining operation.

Slurry pipeline technology for iron ore concentrate transportation is well-established, with successful long-distance operations including e.g. the 85-kilometre Savage River pipeline in Tasmania (operational since 1967) and the 529-kilometre Minas-Rio system in Brazil[7]. Recent technological advances include high-pressure pump systems capable of operating at pressures up to 25 MPa and sophisticated SCADA control systems for remote monitoring.

Benchmarking against comparable projects such as the Minas-Rio iron ore pipeline (529 km, 26.5 Mt/y) and recent developments in slurry pipeline technology demonstrates the viability of long-distance iron ore concentrate transportation. The system would require significant capital investment estimated at USD 1.8 to 2.2 billion based on current industry benchmarks, but with operating costs projected at only USD 45 to 55 million annually.

The pipeline route experiences severe winter conditions with temperatures reaching -40°C and frost penetration depths of 3-4 metres. Based on a technical review of the New Millenium LabMag project reports, the pipeline would require specialised freeze protection measures including:

- Polyurethane foam insulation (25-50 mm thickness) around the pipeline
- Emergency power systems to maintain flow during grid outages
- Heated buildings for all above-ground facilities
- Emergency response protocols for extended shutdowns

Based on analysis of comparable systems and scaling from industry benchmarks, the Iron Bear slurry pipeline would incorporate the following preliminary design parameters.

Table 26: Slurry Pipeline Specifications (estimated)

Parameter	Specification
Length	620 kilometres
Capacity	25Mt per annum (Dry Basis)
Pipeline Diameter	30 inch
Material	Steel pipe with optional internal HDPE lining
Slurry Concentrate	58-62% solids by weight
Flow Rate	2,200 cubic metres per hour

[7] *Ausenco: https://ausenco.com/insights/minas-rio-worlds-longest-largest-slurry-pipeline-designed-by-ausenco/*

Table 27: Slurry Pipeline Operating Parameters (estimated)

Parameter	Specification
Design Life	30 years
Availability	95% (accounting for maintenance)
Operating Pressure	Up to 20MPa at pump stations
Minimum Velocity	1.8-2.0 m/s (particle settling prevention)
Maximum Velocity	3.5 m/s (pipe wear minimisation)

The pipeline would be constructed using welded steel pipe with potentially specialised coatings and cathodic protection systems. Modern slurry pipelines often utilise high-density polyethylene (HDPE) internal linings to provide high resistance to slurry abrasion and extended wear life. The inclusion of internal linings will be investigated in later study phases.

Erosion and corrosion management is likely to consist of lime additions, oxygen-scavenging reagent additions and intelligent pigging once a year or as required.

The proposed route would generally follow existing transportation corridors between Schefferville and Sept Iles, potentially paralleling the Quebec North Shore and Labrador Railway (QNS&L) right-of-way where feasible. This approach offers several advantages including simplified permitting, reduced environmental impact, and potential cost sharing for infrastructure maintenance.

The route descends approximately 500 metres in elevation from the mine site to port, providing hydraulic advantages for pipeline operation. However, the profile includes several significant elevation changes that must be carefully managed to prevent operational issues such as excessive pressures or blockages after shutdowns.

The proximity of the Iron Bear project to other mining operations in the Schefferville region presents opportunities for shared pipeline infrastructure. Future expansions or modifications could potentially accommodate concentrate from adjacent projects, improving overall project economics through economy of scale benefits and shared operating costs.

This scoping study assessment indicates that slurry pipeline transportation warrants detailed engineering study in the next project phase, subject to successful completion of environmental permitting, Indigenous consultation, and detailed route surveys.

The recommendation is to proceed with further feasibility studies while maintaining parallel development of conventional rail transportation options to preserve project flexibility during the development phase.

5.5 Port Access and Infrastructure

This scoping study for the Iron Bear project has evaluated potential utilisation of regional port infrastructure for exporting 25 million tonnes per annum of products. The assessment examines available port facilities in the Sept-Iles region, including evaluation of Pointe Noire terminal capabilities operated by Société ferroviaire et Portuaire de Pointe-Noire (**SFPPN**) and the established Port of Sept-Iles Port Authority infrastructure. The analysis considers existing port infrastructure capabilities, potential modifications required for iron ore concentrate handling, storage capacity requirements, and ship loading systems necessary to support the projected annual throughput. This evaluation represents preliminary assessment of available options without established commercial arrangements.

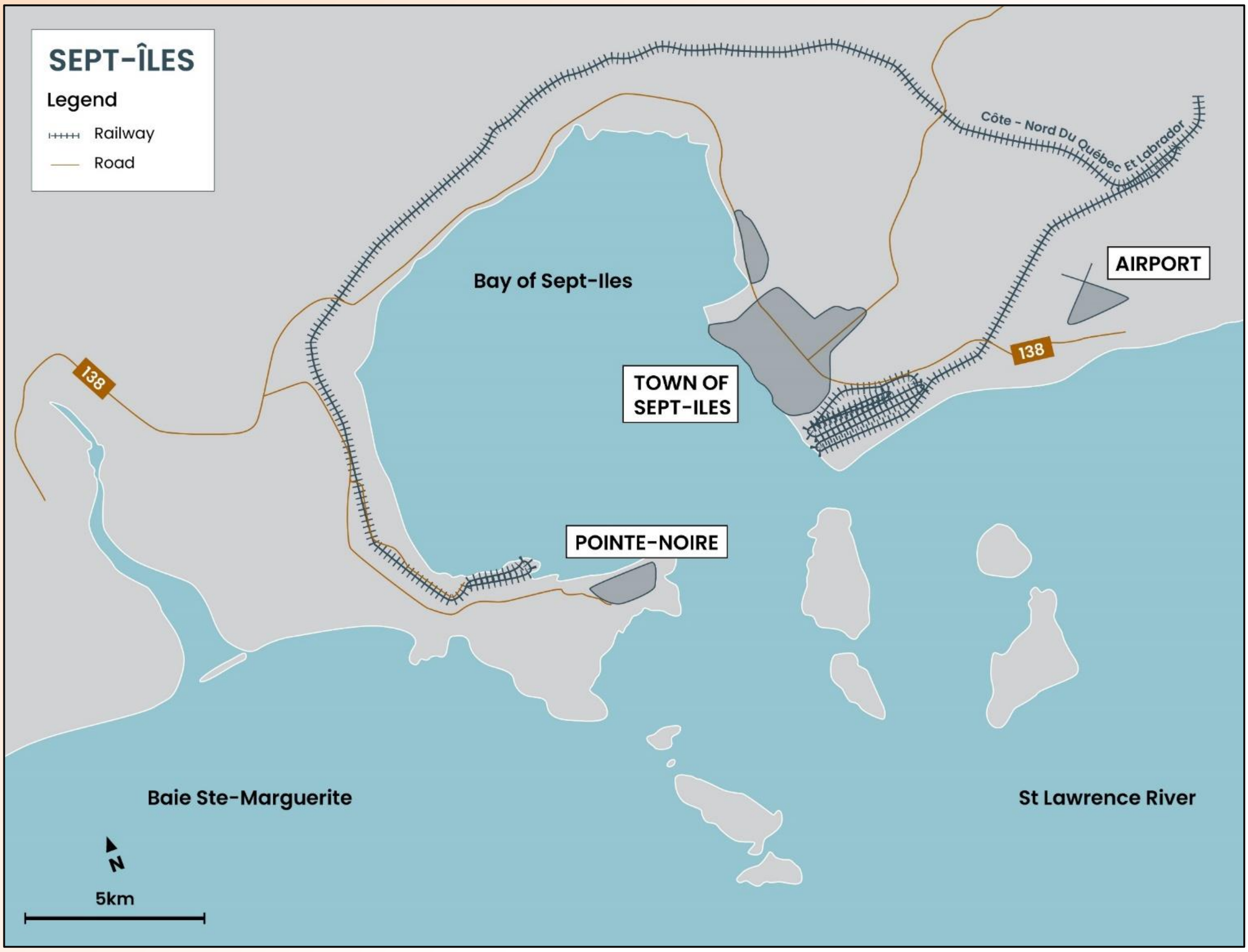


Figure 49: Sept-Iles and Pointe Noire Locality

Assessment of available regional port infrastructure indicates technical feasibility for accommodating Iron Bear project throughput requirements through via existing facilities with strategic modifications. Benchmarking against current operations demonstrates combined regional capacity significantly exceeding project requirements, with the Port of Sept-Iles handling comparable iron ore concentrate volumes and Pointe Noire providing additional capacity for bulk commodity operations. Capital investment for port infrastructure modifications and handling equipment is estimated at US $200 to 350 million depending on facility selection and automation levels, with annual port handling and shipping costs projected at US $4 to 6 per tonne based on current regional benchmarks.

Storage capacity represents a critical component requiring substantial infrastructure investment regardless of facility selection. Iron ore concentrate storage requires automated stacking and reclaiming systems for efficient inventory management, and comprehensive dust suppression systems for environmental compliance. The storage system must accommodate shipping patterns with capacity for approximately 4-6 weeks of production (approximately 2 million tonne storage facility).

Rail access infrastructure evaluation indicates varying degrees of modification required depending on facility selection. Existing QNS&L connections to Sept-Iles provide established rail dumping facilities with potential for capacity expansion to accommodate increased throughput. Potential use of Pointe Noire would require assessment of rail connection optimisation, potentially including new siding construction or upgrading existing connections to handle unit train operations efficiently.

Ocean transportation costs indicate regional competitiveness with other iron ore export regions, particularly for European and Eastern North American markets. The established shipping routes, regular vessel availability, and experienced service providers create favourable conditions for competitive freight rates. The seasonal shipping restrictions require strategic marketing and customer relationship management but represent manageable operational constraints based on regional precedent.

This scoping study assessment indicates that regional port infrastructure provides viable options for Iron Bear project ocean transportation requirements, though substantial capital investment may be required for facility modifications and handling system upgrades. The combination of existing deep-water access, established bulk handling experience, and proven shipping logistics creates a foundation for successful port operations.

The recommendation is to initiate detailed discussions with regional port operators during the Pre-Feasibility Study phase to evaluate specific facility availability, modification requirements, and commercial terms. Comprehensive port facility assessments should be conducted to finalise infrastructure upgrade requirements and develop detailed capital and operating cost estimates. Early engagement with shipping and logistics service providers should be prioritised to establish operational frameworks and validate ocean transportation cost assumptions.

Figure 50: Aerial view of Port Pointe Noire with iron storage infrastructure

5.6 Personnel and Site Logistics

The logistics system must operate under the same severe winter conditions affecting all project infrastructure, with temperatures reaching minus 40°C, extended periods of snow accumulation exceeding 3 metres, and seasonal restrictions on certain transportation modes.

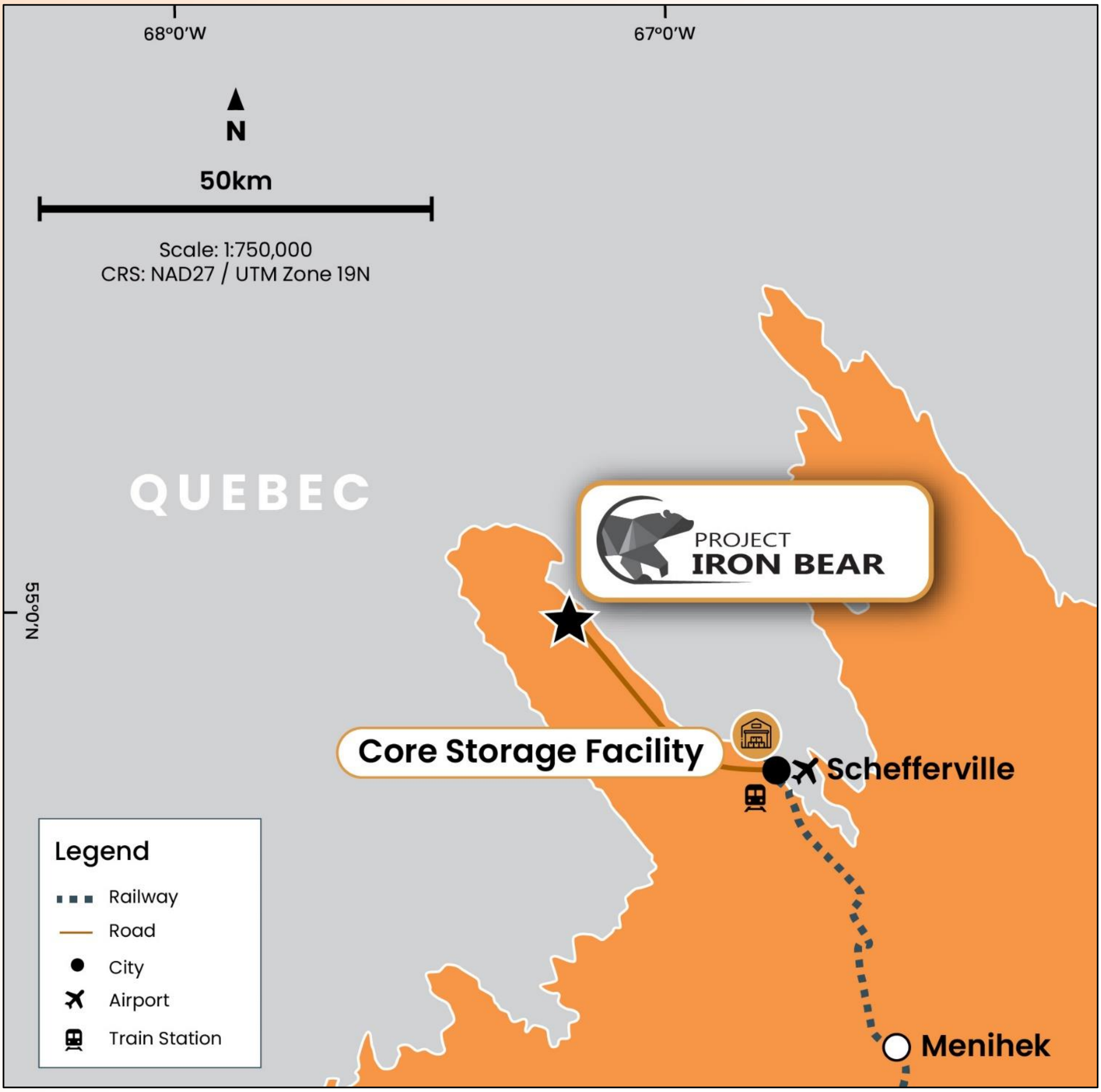


Figure 51: Local Map of Schefferville

Based on operational examples from local mining operations, the logistics framework requires comprehensive winter operations protocols including:

- All-weather road maintenance equipment and dedicated crews for continuous access
- Heated storage facilities for sensitive equipment and materials with backup power systems
- Winter-rated personnel transportation equipment and emergency shelter capabilities
- Strategic stockpiling of critical supplies and materials to ensure continuity during extended weather events

- Comprehensive emergency response protocols addressing medical evacuation and supply delivery under severe weather conditions

Based on analysis of regional mining logistics and preliminary assessments of site requirements, the Iron Bear logistics framework would incorporate the following preliminary components and operational parameters.

Table 28: Preliminary Site Access and Transportation Infrastructure

Parameter	Specification
Primary Access Route	Upgraded existing forestry/mining roads from Schefferville
Maintenance Requirements	Year-round with enhanced winter protocols
Distance to Site	Approximately 45 kilometres from Schefferville
Emergency Access	Helicopter landing pad and winter road connections

Table 29: Preliminary Personnel and Supply Chain Logistics

Parameter	Specification
Workforce Transportation	Mixed FIFO and Schefferville-based operations
Primary Personnel Base	Schefferville with charter aircraft connections
Daily Workforce Transport	Ground transportation for local workforce
Accommodation Strategy	Combination on-site camp and Scheffferville housing
Supply Delivery Frequency	Weekly scheduled deliveries, emergency as required
Medical Facilities	On-site first aid with helicopter evacuation capability

Construction logistics present unique challenges given the remote location and scale of equipment required for modern iron ore mining operations. Major equipment transport would use multiple delivery methods including rail transport to Schefferville followed by specialised heavy-haul trucking, helicopter transport for specific components, and winter road systems for seasonal delivery of oversized items. The proximity to the rail corridor provides significant advantages for delivering large equipment components, reducing dependency on more expensive air transport options.

Personnel transportation and accommodation logistics emphasise Schefferville's existing infrastructure while incorporating FIFO components for specialised positions and personnel preferring alternative arrangements. The strategy includes establishing satellite housing in Schefferville for permanent and rotational workforce members, charter aircraft services connecting to regional centres, and daily ground transportation between Schefferville and the mine site. This approach supports local economic development while providing operational flexibility and cost management advantages.

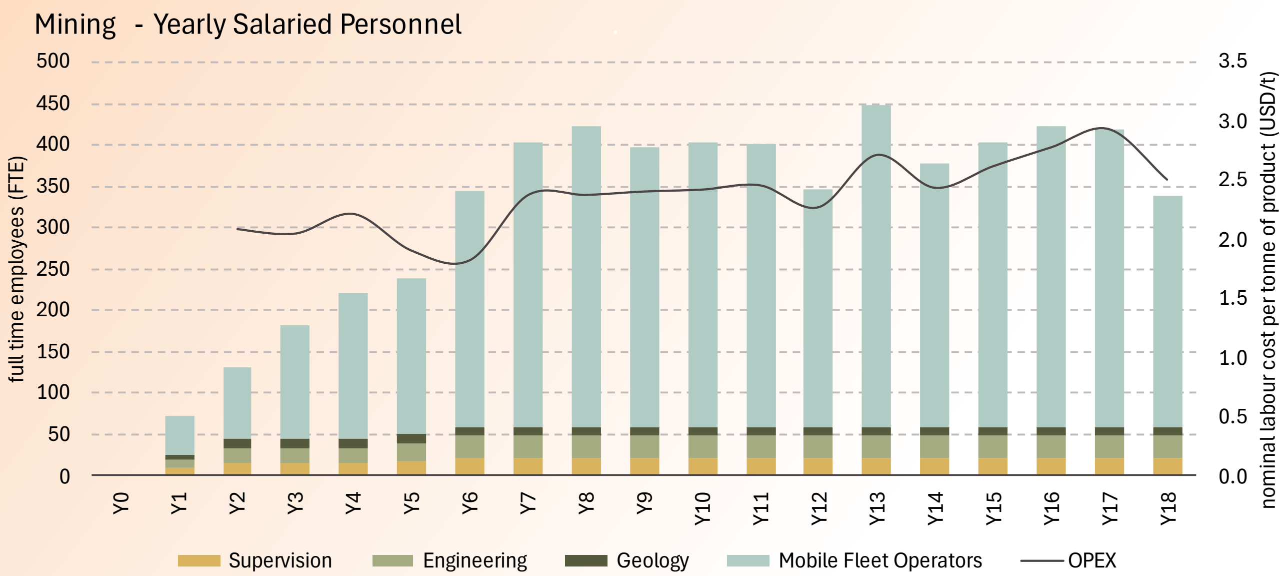


Figure 52: Mining, Yearly Salaried Personnel (FTE) - Base Case - Scenario A1, B5, C9

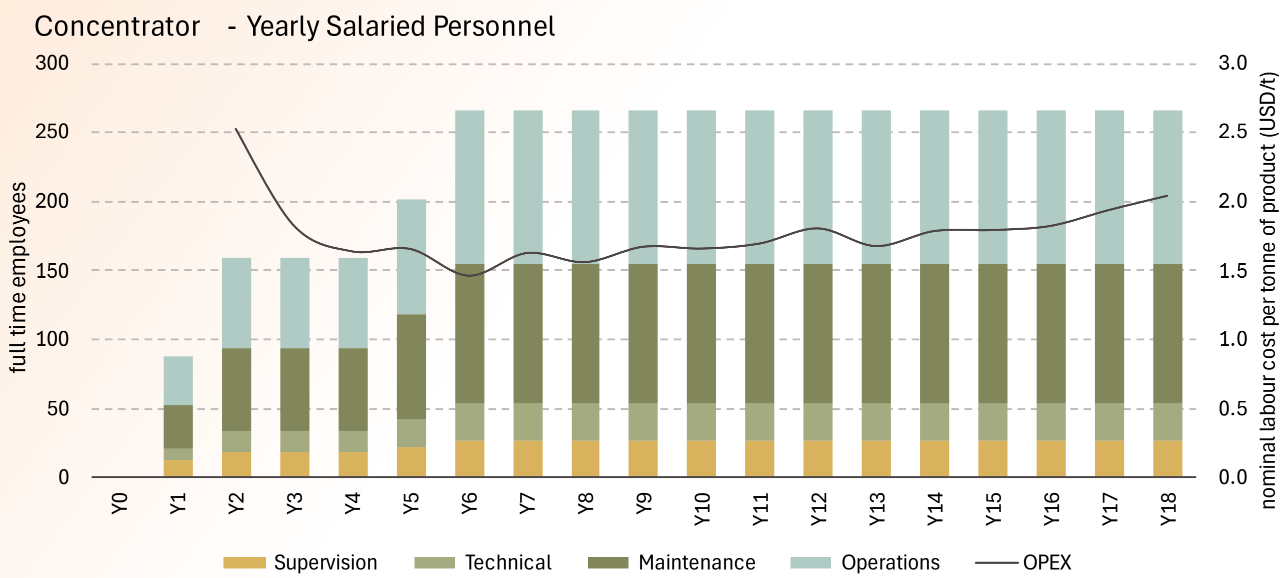


Figure 53: Concentrator, Yearly Salaried Personnel (FTE) - Base Case - Scenario A1, B5, C9

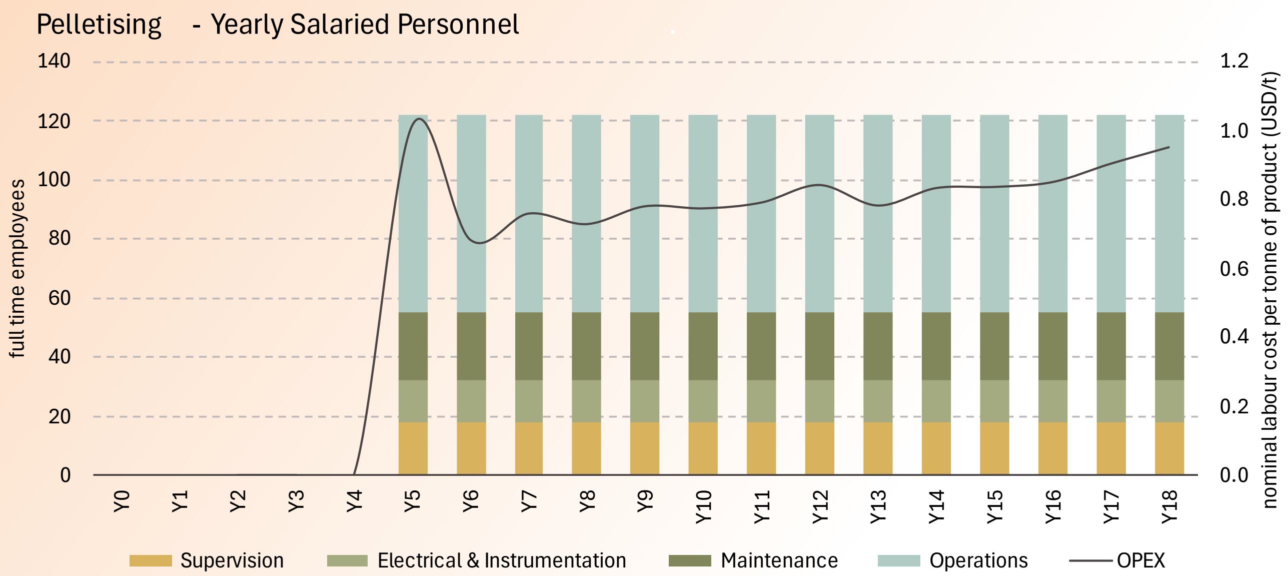


Figure 54: Pelletising, Yearly Salaried Personnel (FTE) - Base Case - Scenario A1, B5, C9

Integration with existing regional logistics infrastructure provides significant operational and cost advantages. Established relationships between regional carriers, suppliers, and service providers enable efficient supply chain development and reduce infrastructure investment requirements. The proximity to existing mining operations creates opportunities for shared logistics services, consolidated shipping arrangements, and mutual emergency response capabilities.

This scoping study assessment indicates that comprehensive logistics support for the Iron Bear project is technically feasible with existing regional infrastructure and established operational models. The combination of Schefferville's strategic proximity to rail and air infrastructure, existing mining industry presence, and transportation connections via Sept-Iles provides a strong foundation for efficient logistics operations.

The recommendation is to proceed with detailed logistics planning during the Pre-Feasibility Study phase, including assessments of existing road conditions, detailed supply chain analysis, and finalisation of personnel transportation strategies. Early engagement with regional logistics providers and emergency response services should be prioritised to establish operational frameworks and identify infrastructure upgrade requirements.

06
ENVIRONMENTAL, SOCIAL & GOVERNANCE

6. Environment, Social, & Governance

6.1 Regulatory

The Iron Bear Project will operate within a comprehensive regulatory framework governed by both federal and provincial legislations. Based on the Project's scale and characteristics as a magnetite iron ore operation, several key regulatory pathways will govern the environmental approval process.

Considering the transboundary nature of the Project, particular care must be taken regarding potential impacts at the Quebec-Labrador border. Though no mining activities are planned within Quebec engagement with Quebec-based Indigenous communities will be essential given their asserted rights in the Project area and participation in existing agreements related to the Labrador Trough iron ore developments and also considering that various scenarios for product processing and shipping may have transport, processing or export infrastructure shared between the provinces or located in whole or part in Quebec.

Navigating this complex regulatory landscape requires strategic planning, early and meaningful engagement with Federal, NL and Quebec regulators and Indigenous and non-Indigenous communities, and the development of a robust environmental management system that demonstrates commitment to sustainability and regulatory compliance.

6.1.1 Legislative Frameworks for Mineral Licences

The legislative framework for mineral licences in the Province of NL is primarily governed by the following key statutes and regulations:

3. **Mineral Act (RSNL 1990, Chapter M-12)**
    - This is the primary legislation governing mineral rights in the province.
    - It defines what constitutes a mineral and outlines the rights and responsibilities of mineral licence holders.
    - It also covers the conversion of mineral licences to mining leases, transfer of rights, and penalties for non-compliance.
4. **Mineral Regulations (CNR 1143/96)**
    - These regulations set out the procedural and administrative details for acquiring and maintaining mineral licences. They cover:
        - Map staking process (via Mineral Rights Administration System (MIRIAD),
        - Fees and security deposits,
        - Assessment work requirements (Sections 47 & 48),
        - Extensions and waivers under certain conditions (e.g., Condition 2).
        - Of note, MIRIAD is the provincial online platform used for map staking, claim management, and application submissions.

In addition, while not directly governing mineral licences the Quarry Materials Act and Petroleum and Natural Gas Act exclude quarry materials (e.g., sand, gravel, stone) and petroleum and natural gas, respectively, from the definition of "mineral" under the Mineral Act, clarifying jurisdictional boundaries.

6.1.2 Impact Assessment Act (IAA)

At the federal level, the Project is anticipated to require assessment under the Impact Assessment Act (**IAA**), specifically through the Physical Activities Regulations, Section 18(c), which designates new metal mines with an ore production capacity equal to or greater than 5,000 t/day as requiring a formal federal assessment. The Project may also require an Environmental Assessment pursuant to the Canadian Energy Regulator Act if alternative transport infrastructure to the railroad is proposed (slurry pipeline). In addition, the Minister may also designate a physical activity that is not prescribed by regulations, if, in their opinion, the carrying out of that physical activity may cause adverse effects within federal jurisdiction or direct or incidental adverse effects.

6.1.3 Environmental Assessment Act and Regulations in Newfoundland and Labrador

At the provincial level, the Newfoundland and Labrador (**NL**) Environmental Protection Act (**EPA**) and associated Environmental Assessment Regulations will govern the Project's Environmental Assessment (**EA**) approval. According to Section 33(2) of the NL EA Regulations, undertakings engaged in mineral mining require formal Environmental Assessment Registration. The Environmental Assessment Division (**EAD**) of the NL Department of Environment and Climate Change (**NL DECC**) administers this process, evaluating EA Registration (Registration) submissions and consulting with relevant government departments, the public and Indigenous groups.

Following Registration, the Project will likely require the preparation of an Environmental Impact Statement (**EIS**), given the scale of the proposed operation and precedents established by similar mining Projects in the region. The EIS will need to incorporate comprehensive component studies for all physical, biological, and socioeconomic valued components potentially affected by the Project. Public and Indigenous consultation will be integral to this process, with significant focus on early engagement with the five Indigenous groups that have asserted traditional rights in the Project area.

Upon EIS approval and release from the EA process, the Project will require numerous provincial and federal permits prior to construction and operation. Key provincial authorizations include Certificates of Approval for construction and operation of industrial facilities, permits to alter bodies of water, water use licenses, approval of waste management plans, a Development Plan (**DP**) and a Rehabilitation and Closure Plan (RCP) with associated financial assurance. The NL Department of Industry, Energy and Technology (NL DIET) will issue Mining and Surface Leases following submission of legal land surveys and approval of the DP, RCP, and financial assurance.

A non-exhaustive list of potential regulatory requirements for the mining activities is presented in the table below:

Table 30: Prospective Regulatory Requirements

Permit / Approval / Licence / Authorisation	Legislation / Regulation Reference	Agency
Provincial (NL)		
Environmental Assessment Approval	**Environmental Protection Act and Environmental Assessment Regulations**	NL DECC - EAD
Certificate of Approval for Construction and/or Operation of Industrial Facilities	**Environmental Protection Act**	NL DECC -– Pollution Prevention Division, Industrial Compliance Section
Certificate of Approval for Generator Operation	**Environmental Protection Act** and Air Pollution Control Regulations	
Permit to Alter a Body of Water (Culvert, Bridge, Dam, Fording, Pipe Crossing/Water Intake, Stream Modification, Infilling/Dredging, Flood Risk Area, Miscellaneous works within 15 m)	**Water Resources Act**	NL DECC - Water Resources Management Division
Water Use Licences		
Commercial Cutting Permit	**Forestry Act**	Department of Fisheries, Forestry, and Agriculture
Operating Permit		
Crown Lands Lease (if outside Surface Lease)	**Lands Act**	Department of Fisheries, Forestry, and Agriculture - Lands Branch
Notice of Intent (intrusion on 15 m of a shoreline)		
Public Utilities Board Exemption (Order in Council)	**Electrical Power Control Act / Public Utilities Act**	Public Utilities Board of Newfoundland and Labrador / Board of Commissioners of Public Utilities

Permit / Approval / Licence / A Permit / Approval / Licence / Authorisation uthorisation	Legislation / Regulation Reference	Agency
Provincial (NL)		
Section 19 – Economic Activity Permit under the NL Endangered Species Act (ESA)	**Endangered Species Act (ESA)**	Department of Fisheries, Forestry, and Agriculture – Wildlife Division
Quarry Development Permit	**Quarry Materials Act**, Quarry Materials Regulations	NL DIET, Mineral Lands Division
Surface and Mining Leases	**Lands Act**	NL DIET, Mineral Development Division (in consultation with Department of Fisheries, Forestry, and Agriculture - Lands Branch)
Development Plan and Rehabilitation and Closure Plan and Financial Assurance	**Mining Act**	NL DIET, Mineral Development Division
Building Accessibility Registration Exemption Request and Fire and Life Safety Plans Review (National Building Code of Canada)	**Building Accessibility Act, Fire Protection Services Act**	Digital Government and Service NL
Certificate of Approval for Waste Management System (Landfill or Incinerator if applicable)	**Environmental Protection Act,** Air Pollution Control Regulations, Storage of PCB Wastes Regulations and Waste Management Regulations, 2003	
Food Establishment Licence	**Food Premises Act,** Food Premises Regulations	
Fuel Storage Tank Registration	Storage and Handling of Gasoline and Associated Products Regulations, 2003, under the **Environmental Protection Act**	
Preliminary Permit to Develop Land (Highway Access Permit)	**Urban and Rural Planning Act**, Protected Road Zoning Regulations, & Works, Services and **Transportation Act**	
Used Oil or Glycol Storage Application for Registration / Approval	Used Oil and Used Glycol Control Regulations, Used Oil Control Regulations	
Contractor's Specifications for Registration of Pressure Piping Systems	Boiler, Pressure Vessel and Compressed Gas Regulations under the **Public Safety Act** (O.C. 96-427)	
Certificate of Approval for Transportation of Waste Dangerous Goods / Hazardous Waste	**Environmental Protection Act**	NL DECC; Pollution Prevention Division, Waste Management Section

Permit / Approval / Licence / A Permit / Approval / Licence / Authorisation uthorisation	Legislation / Regulation Reference	Agency
Federal		
Application for a Licence to Fish for Scientific, Experimental, or Educational Purposes	**Fisheries Act**	Department of Fisheries and Oceans Canada (DFO)
Fisheries Act Authorisation Permitting Serious Harm to Fish		
DFO Request for Review or Notification form: Code of Practice		
Storage Tank Regulations	Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations, Canadian **Environmental Protection Act**, 1999	Environment and Climate Change Canada (ECCC)
Land Use Approval (General)	**Civil Air Navigation Services Commercialisation Act**	Nav Canada
Land Use Approval (Cranes)		
Aeronautical Assessment for Obstruction Evaluation	**Aeronautics Act**; Canadian Aviation Regulations	Transport Canada
Transport Canada Exemption under the Canadian Navigable Waters Act (CNWA)	**Canadian Navigable Waters Act (CNWA)**	

6.1.4 Regulatory Timeline Considerations

The timeline for a mining project of this nature, based on NL regulations, typically includes:

- Initial environmental screening and identification of red flag items (3 months)
- Baseline data collection (12-24 months)
- EA Registration preparation (**NL**) (6-9 months)
- Formal EA process (12-18 months for NL process. *Could take longer if Federal EA is also required*)
- Post-EA permitting (6-12 months)

Coordination with Indigenous communities will be integrated throughout the regulatory process, with focused engagement beginning at the earliest stages of Project development to ensure meaningful consultation and adherence to the principles of free, prior and informed consent.

6.2 Environmental

The Iron Bear Project requires comprehensive baseline studies to characterise the existing environmental and social conditions, establishing a foundation for the EA and future monitoring programmes. These studies will follow a systematic methodology designed to meet regulatory requirements and inform Project design decisions.

The baseline study programme, shown in Table 31, will begin with a desktop environmental screening phase to compile and analyse existing information from government databases, previous environmental assessments in the region, scientific literature, and Indigenous knowledge sources. This initial screening will help identify critical risk items or "red flag" environmental constraints that might affect Project design or require special consideration. Once these initial constraints are identified, a workshop with the Project engineering team will be conducted to review potential interactions, assess significance, and identify appropriate mitigation measures. Contributions from various groups gathered as part of the Community Engagement Plan will also be considered.

Table 31: Summary of Baseline Studies

Element	Desktop	Dedicated Field Study Required	Field Study Particulars
Atmospheric Environment and Climate	Yes	Yes	Noise and Air Quality Monitoring in Summer 2025
Surface Water, and Hydrology	Yes	Yes	Surface Water and Hydrological Data in Summer 2025
Terrain, Soils, Geochemistry	Yes	Yes	Samples and Data in Summer 2025
Wetlands and Rare Plants	Yes	No	Wetlands will be a component of the ELC so dedicated surveys are unnecessary
Ecological Land Classification	Yes	Yes	Ground-truthing of habitat types to be conducted opportunistically in 2025
Fish and Fish Habitat	Yes	Yes	Electrofishing and stream sampling to be conducted in late summer 2025.
Birds	Yes	Yes	Point count bird surveys to be conducted in June 2025
Species at Risk (SAR) and Species of Conservation Concern (SCC)	Yes	Yes	SAR and SCC field surveys will be necessary in 2025, including bats, Short-eared Owl, Rusty Blackbird, Bank Swallow, and SAR insects.
Terrestrial Wildlife and Habitat	Yes	No	Opportunistic observations will be recorded during other field activities.
Human Environment	Yes	No	N/A
Historic, Heritage, and Cultural Resources	Yes	Possibly	Dedicated field study may be necessary depending on results of the desktop study
Traditional Land Use Study	Yes	No	N/A
Other Land Uses Study	Yes	No	N/A
Indigenous Health, Community Services, and Infrastructure	Yes	Possibly	A survey of the Indigenous communities may be required.
Economy, Employment and Business	Yes	No	N/A
Socioeconomic Factors Study	Yes	No	N/A
Socioeconomic Organisation Study (incl. Demographics, Education, etc.)	Yes	No	N/A
Political Systems	Yes	No	N/A
Demographic Factors, Population Dynamics, Historical Trends	Yes	No	N/A
Education Status and Trends	Yes	No	N/A

6.3 Rehabilitation and Closure Planning

The Iron Bear Project's Rehabilitation and Closure Planning (**RCP**) is guided by a comprehensive framework and will be designed to fulfill environmental, social, and regulatory obligations while creating a stable, self-sustaining post-mining landscape. The closure strategy should adopt a holistic approach that integrates with operational planning from the earliest Project stages.

The primary objectives of the RCP will be:

- To establish physically and chemically stable landforms that pose no unacceptable risk to public health and safety, minimise environmental impacts, and support sustainable post-mining land uses.
- To progressively rehabilitate disturbed areas during operations to minimise the rehabilitation burden at closure and demonstrate rehabilitation success.
- To restore ecosystem functionality to the extent practicable, with emphasis on re-establishing native vegetation communities adapted to the northern Quebec-Labrador climate.
- To protect surface and groundwater quality through appropriate management of potential contaminant sources.
- To fulfill all regulatory requirements and align with indigenous land use objectives and stakeholder expectations.

The RCP will need to address the unique challenges associated with the Project's northern location, including short growing seasons, permafrost considerations, and extreme weather events. The plan incorporates adaptive management principles to allow refinement as operational experience and monitoring data become available.

Figure 55: Schefferville township in winter

6.4 Communities and Indigenous Groups

Identifying the non-Indigenous communities of interest and the Indigenous groups who affirm Aboriginal Rights (pursuant to Section 35 of the Constitution Act, 1982) to the Iron Bear Project area is the first step towards establishing meaningful engagement, managing expectations and integrating social considerations into key Project components early on, thus contributing to the long-term success and social acceptability of the project.

A map will be developed to identify non-Indigenous communities of interest and Indigenous groups and establish a foundation for the human environment characterisation. This map will namely illustrate key project features alongside administrative boundaries, water bodies, protected areas, land uses, major infrastructure, non-Indigenous communities of interest and Indigenous groups' treaty and traditional lands.

6.4.1 Identified Non-Indigenous Local Communities of Interest and Demography

The Iron Bear Project area, including the mine site and potential transportation route to the Pointe-Noire export facility, is expected to involve the following non-Indigenous communities of interest:

- **Schefferville**, located in Quebec province approximately 30 km southeast from the Iron Bear Project mine site, with a population of approximately 244 residents and predominantly French-speaking;
- **Labrador City**, located in Newfoundland and Labrador province approximately 235 km south from the Iron Bear Project mine site, with a population of approximately 9 011 residents and predominantly English-speaking;
- **Wabush**, located in Newfoundland and Labrador province approximately 250 km south from the Iron Bear Project mine site, with a population of approximately 1 964 residents and predominantly English-speaking;
- **Sept-Îles**, located in Quebec province near the Pointe-Noire export facility, approximately 540 km south from the Iron Bear Project mine site, with a population of approximately 24 569 residents and predominantly French-speaking.

Labrador City and Wabush are the two communities in Newfoundland and Labrador that are closest to Iron Bear Project mine site.

6.4.2 Identified Indigenous Groups with Traditional Rights Claims

The Iron Bear Project is located in a region of significant importance to several Indigenous groups, each with asserted rights and distinct interests, languages and relationships to the land. Engaging with these Indigenous groups early and in a meaningful and respectful manner is essential to the project's success and aligns with both regulatory requirements and the company's commitment to responsible development. Five Indigenous groups have been identified as asserting traditional rights and claims to territories that overlap with the Iron Bear Project area. They are briefly described in the following sections:

6.4.2.1 Innu Nation

Innu Nation represents approximately 3,200 Labrador Innu, primarily living in the First Nation communities of Sheshatshiu (Sheshatshiu Innu) and Natuashish (Mushuau Innu). Each First Nation elects its own Band Council and the Chiefs of both Councils are members of the Executive Council of Innu Nation. The Labrador Innu claim ancestral rights to the Project area. They speak Innu-aimun and English. They have established a significant presence in the resource development sector, having signed Impact and Benefit Agreements (**IBAs**) with several mining companies operating in Labrador including Rio Tinto Iron Ore Company (**IOC**), Tata Steel Minerals Canada (**TSMC**), and Vale. In 2008, Innu Nation signed the New Dawn Agreement (Tshash Petapen Agreement) with the Government of Newfoundland and Labrador, resolving key issues related to their land claim and hydroelectric developments. In 2011, Innu Nation signed with the Newfoundland and Labrador and federal governments a Land Rights Agreement-in-Principle, which serves as the basis for ongoing treaty negotiations. In June 2025, Innu Nation and Hydro-Québec signed an agreement-in-principle to resolve grievances over the Churchill Falls project.

6.4.2.2 Innu Takuaikan Uashat Mak Mani-Utenam (ITUM)

Innu Takuaikan Uashat Mak Mani-Utenam (**ITUM**) has over 5,000 members with two reserves near Sept-Îles, Quebec. ITUM claims ancestral rights to parts of Quebec and Labrador (Nitassinan) and has traditionally used land and resources in the Schefferville region, including traplines in the area. ITUM members speak Innu-aimun and French, followed by English to a lesser extent. The community has developed significant business capacity, including partnerships in Tshiuetin Rail Transportation, the Apuiat wind energy project and Sichuun, which offers fibre-based high-speed Internet, television and telephone services. ITUM has signed IBAs with mining operators in the Labrador Trough and previously signed exploration agreements with companies operating in their traditional territory, including a 2012 agreement with Cap-Ex Ventures. ITUM has signed agreements with Hydro-Québec and has also filed lawsuits against Hydro-Québec, including a lawsuit filed in 2023 for damages caused by the Churchill Falls project. The community includes a team of environmental guardians who monitor land use and environmental conditions in their territory, reflecting their commitment to environmental stewardship. In 2023, ITUM invested in a 13Mt iron ore pit through an agreement with ArcelorMittal to acquire mining experience and expertise. Moreover, the Société de développement économique Uashat mak Mani-Utenam (SDEUM), ITUM's economic development arm, helps start up and acquire businesses as well as manage partnerships to avail of business opportunities with major companies, especially in the mining sector.

6.4.2.3 Naskapi Nation of Kawawachikamach

The Naskapi Nation of Kawawachikamach (**NNK**) has approximately 1,500 members based in Quebec 15 km northeast of Schefferville. NNK members speak Naskapi and English, followed by French to a lesser extent. They are signatories to the Northeastern Quebec Agreement (1978), the second modern treaty in Canada, and have political autonomy since 1984. The community claims ancestral rights to parts of Labrador, with traditional land and resource use in the Project area. They have developed substantial economic presence in the region, including part ownership of Tshiuetin Rail Transportation and a majority ownership of Sichuun. The NNK has a 20% equity position in the LabMag deposit. It has signed IBAs with IOC and TSMC, as well as exploration agreements with other mining companies. The NNK has developed both a Naskapi Nation Mining Policy and a Naskapi Nation Consultation and Engagement Policy that outline its expectations for resource development in its territory throughout the project lifecycle.

6.4.2.4 Nation Innu of Matimekush-Lac John

Nation Innu Matimekush-Lac John (**NIMLJ**), has over 1,000 members living on two reserves in Quebec, near Schefferville, who assert ancestral rights to parts of Quebec and Labrador with traditional land and resource use in the Project vicinity. Members of NIMLJ speak Innu-aimun and French, followed by English to a lesser extent. The community has signed IBAs with IOC and TSMC, and with Québec Iron Ore with ITUM. NIMLJ declined an offer from NNK to share equity and benefits negotiated for the LabMag project. NIMLJ has developed economic partnerships with NNK and ITUM, including part ownership of Tshiuetin Rail Transportation and Sichuun. NIMLJ is also a partner in the Apuiat wind energy project.

6.4.2.5 NunatuKavut Community Council

NunatuKavut Community Council (**NCC**) is a Métis group that represents approximately 6,000 members who live primarily in central and southern Labrador. NCC members predominantly speak English, while Inuktitut, historically spoken by the community, is no longer in active use but is the focus of revitalization efforts. NCC claims rights to parts of Labrador, including the Project area, and has signed agreements with IOC and TSMC. In 2019, NCC and Canada signed an MOU establishing a Recognition of Indigenous Rights and Self-Determination discussion table, though this has been contested by other Indigenous groups in the region. A 2024 Federal Court ruling determined that the MOU does not afford NCC members Indigenous rights as established by Section 35 of the Canadian Constitution.

6.4.3 Approach to Indigenous Engagement

Building positive relationships with Indigenous communities will require a comprehensive, culturally appropriate approach and rights-based engagement that recognizes the unique language, history, governance structures, and priorities of each Indigenous group. Based on previous experience in the region, several key principles should guide Indigenous engagement as described below. The Indigenous engagement approach will remain flexible and may be adjusted over time to respond to the specific needs, priorities, and evolving circumstances of each Indigenous group:

6.4.3.1 Early Engagement

Early and sustained engagement that begins well before the EA and regulatory submissions and continues throughout the Project lifecycle is essential. This allows for Indigenous knowledge, values and concerns to be incorporated into Project planning and design and for relationships to develop based on mutual understanding and respect.

6.4.3.2 Transparency and Accountability

Transparency regarding Project plans, potential impacts, and benefits will help build trust with communities that may have experienced disappointment with resource development Projects in the past. Complete and accessible information about the Project, presented in appropriate formats and languages, demonstrates respect for community decision-making processes. Transparency must also be accompanied by mechanisms for accountability, including clear processes for feedback and follow-up.

6.4.3.3 Support

Meaningful engagement requires addressing structural and capacity-related barriers. Capacity support may therefore be needed to enable meaningful participation in consultation activities. This could include funding for community coordinators, translators, technical reviews of Project documentation, traditional knowledge studies, or other mechanisms that address potential power imbalances in the consultation and engagement process.

6.4.3.4 Cultural Protocols and Governance Recognition

Recognition of cultural protocols and governance structures is important for engagement that respects Indigenous groups' values and authority. This includes working through appropriate leadership channels while ensuring broader community participation, particularly from Elders, youth, and traditional land users.

6.4.3.5 Meaningful Benefits

Engagement should lead to tangible and meaningful benefits that address community priorities and aspirations and should be negotiated and co-developed through IBAs or other kinds of participation agreements. These typically include provisions for employment, training, business opportunities, financial benefits such as equity or co-ownership, environmental monitoring, and cultural protection measures.

6.4.3.6 Consistency in Engagement

While each Nation is unique, with distinct governance systems, priorities and engagement protocols, it is essential to maintain a fair, respectful and consistent approach across all interactions. The Project team will implement mechanisms to ensure engagement efforts are balanced, consistent and culturally appropriate. Upholding this principle will help foster mutual respect, reduce the risk of inter-community tension, and demonstrate the proponent's commitment to fair engagement practices.

6.4.3.7 Consent and Shared Decision-Making

While current legal interpretations do not require consent in all cases, the Project proponent recognises the importance of striving for free, prior and informed consent (**FPIC**) as outlined in the United Nations Declaration on the Rights of Indigenous Peoples Act (**UNDRIP**). This principle will guide efforts to co-develop agreements and engagement processes that support shared decision-making and mutual benefit.

07
MARKETING

Modifying Factors 7

PARAMETER	UNIT	VALUE
62% Fe Price (2030)	90	USD / DMT CFR GCC
65% Fe Price (2030)	113	USD / DMT CFR GCC
Blast Furnace Concentrate Price (2030)	132	USD / DMT CFR GCC
Direct Reduction Pellet Price (2030)	184	USD / DMT CFR GCC
Freight (CFR GCC) - Cost (2030)	23	USD / DMT

DMT = Dry Metric Tonne

7. Marketing & Products

7.1 Macro-Economic Outlook

While the global economic outlook remains challenged by ongoing trade tensions and China's property sector difficulties, the iron ore market is expected to stabilize through 2025-2026. China's steel demand is forecast to decline by 1.5% in 2025 following an expected 4.4% decline in 2024[8], though sustained population growth and infrastructure spending necessitates continued global steel production, with blast furnace-based production expected to remain the dominant steel production route. Electric arc furnace production based on scrap and direct reduced iron continues its gradual gain of production share, though the transition faces constraints from scrap collection efficiency and the limited availability of high-grade ores suitable for DRI production.

The proportion of high-grade iron ore with >67% Fe is relatively small globally, creating opportunities for premium products. Direct Reduction capacity is expanding globally, with demand for merchant DR-grade pellets projected to increase to 58.5 million tonnes by 2026[9] and 81.2 million tonnes by 2032, from 47 million tonnes in 2022. This growth is driven by the steel industry's decarbonization efforts and the potential for 50% lower Scope 3 emissions when using DR pellets for DRI-EAF steelmaking compared to traditional blast furnace routes.

The Iron Bear high-grade concentrates of 69% Fe (BF Concentrate) and 71% Fe (DR Concentrate) are positioned to capture significant premiums in this evolving market structure. DR-grade material represents the higher end of commercially available iron ore, typically grading 67% Fe and above, with maximum commercially available grades around 68-69% Fe. The project's strategic location in the established Quebec-Labrador iron ore district provides access to traditional blast furnace customers, emerging direct reduction operations, and newer low-carbon steel production technologies.

A key differentiating factor is the low silica content in the Iron Bear DR concentrate, which translates to a low Electric Arc Furnace electricity consumption, which some other projects cannot claim.

As the project advances, maximising DR-grade concentrate production capacity would enhance revenue potential and market positioning, particularly given the continuing tight supply conditions for DR-grade pellets and the established premium structure.

7.2 Steel Demand and Production Split

Global steel production is projected to continue growing toward 2030, with the global iron ore market valued at approximately US $275 billion in 2024 and expected to grow at a 4.0% CAGR through 2030. Asia-Pacific remains the dominant region, accounting for approximately 70% of global iron ore consumption[10], with China holding over 71% of the regional market.

While global steel production declined by 1.6% in the first nine months of 2024, with the World Steel Association downgrading short-term demand outlook, the long-term fundamentals remain supportive. India continues to lead steel production growth, increasing by 5.9% annually, while substantial production capacity additions are planned globally through 2030.

The shift toward higher-grade iron ore consumption continues as steelmakers optimise furnace productivity and environmental performance. By product type, pellets hold the largest revenue share at 56.3% of the market, reflecting their superior performance characteristics and environmental compliance advantages.

---

[8] Source: World Steel Association, https://worldsteel.org/media/press-releases/2024/october-2024-crude-steel-production/
[9] Source: Fastmarkets, https://www.fastmarkets.com/insights/proposal-to-launch-dr-grade-iron-ore-pellet-premium-weekly-indicator/
[10] Source: Grand View Research, https://www.grandviewresearch.com/industry-analysis/iron-ore-market-report

7.3 Long Term Forecasting of Indices

Long term prices for reference iron ore grades and other raw materials are forecast by multiple analyst firms and financial institutions. For this report Wood Mackenzie's views are used as the base case, with commentary provided versus consensus numbers and those of other providers.

Wood Mackenzie's current iron ore price forecast on a 62% Fe fines basis CFR China is US $99 for 2025 and USD $95 for 2026, reflecting expectations of continued supply growth and moderate demand recovery. Current spot prices around US $95 per tonne represent a decline from earlier 2024 levels, though seasonal restocking activity is expected to provide price support through the first quarter of 2025.

The benchmark 62% Fe benchmark is forecast to reach US $82/DMT CFR China (real 2024) [US $ 94/DMT CFR China (nominal)] in the long term (2030), with;

The 65% Fe benchmark at US $99/DMT CFR China (real 2024). This is calculated as an 18% premium/DMTU, which is deemed to fall within an expected premium of 15 – 30%.

$$\% \, Premium = \frac{\left(\frac{65 \, Benchmark}{65\%}\right)}{\left(\frac{62 \, Benchmark}{62\%}\right)} * 100$$

Premium structures for higher-grade products remain robust despite overall price pressures. The 65% Fe benchmark maintains an approximate 18-20% premium per dry metric tonne unit over the 62% Fe benchmark, consistent with established value-in-use relationships. DR-grade pellet premiums currently range from US $45-55 per tonne over the 65% Fe index, though these premiums have compressed from higher levels earlier in 2024 due to softer steel demand, and are expected to increase to as high as US $75/t DR pellet longer term.

7.4 Current pricing outcomes on seaborne market

The below chart shows price relativities for selected iron ore benchmark grades. It should be noted that from 2017 to 2023 the 65%Fe Concentrate index (orange) was at parity with the 65%Fe fines price (blue). Since 2023 however there has been a divergence, with the 65%Fe concentrate price trading at a discount to the 65%Fe fines price. This trend is expected to be structural in the long term, especially since the Fastmarkets 67.5%Fe index was released in 2023. This new 67.5%Fe (green) index has consistently traded at parity with 65%Fe fines index, essentially replacing the previous concentrate index.

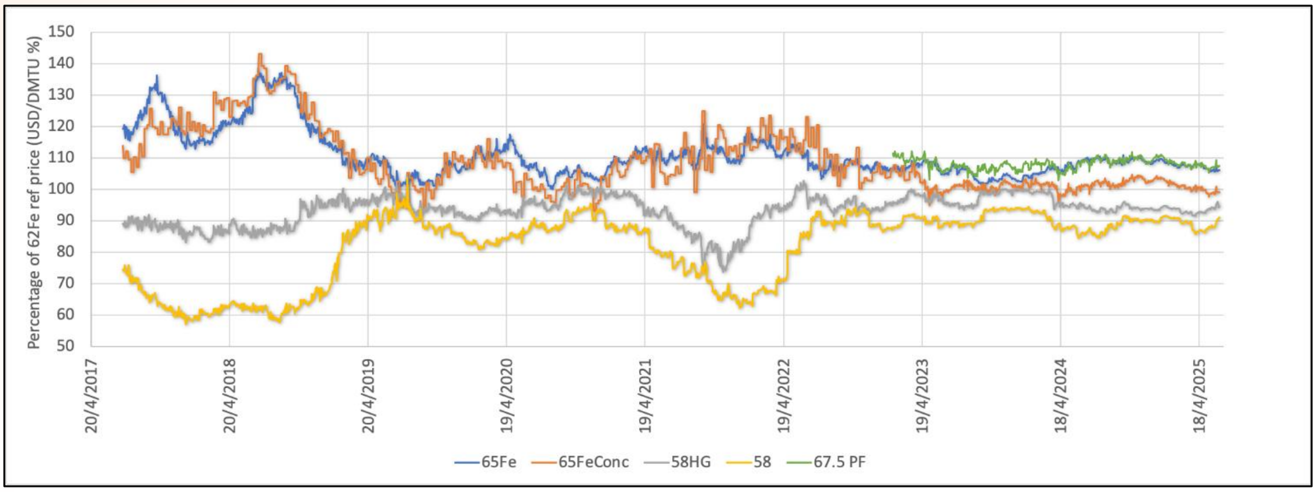


Figure 56: : Historical iron pre price relativities (2017 to current – Source: Fastmarkets).

In the blast furnace and sinter plant world, there is limited substitution of magnetite allowed in a hematite ore blend to still maintain all the required sinter metallurgical properties required in a large blast furnace. End-users will argue this point commercially, while producers will argue the energy benefits of magnetite over hematite, which are not insignificant. In a soft market where steel mills are not profitable, energy savings are of less VIU importance, and conversely higher steel plant profitability periods allow for higher-grade burdens where magnetites and other higher-grade ores start to shine.

As an aside, lower-grade ores' pricing outcomes mirror those of the higher-grade materials, receiving larger discounts when higher-grade premiums are attained.

The specification for the Fastmarkets 67.5% Fe index as well as the Platts 67%Fe pellet feed CFR Middle East are given below, together with the evaluated Iron Bear products.
It can be seen from the table that the Iron Bear products have significantly lower silica and higher Fe, implying that the reference ores contain other elements/compounds not published by Platts and Fastmarkets. It has been assumed that the missing elements are CaO and MgO, though some MnO and TiO_2 may also be present. Shaded areas in the benchmark chemistries are assumed values to obtain reasonable chemical totals.

Products	Grades (%)											CCS	LTD
	FeT*	SiO2	Al2O3	MgO	CaO	MnO	P	S	LOI	Sum	Moisture		+6.3mm
Iron Bear DR Concentrate	71.0	1.2	0.09	0.065	0.080	0.036	0.01	0.00	-3.1	99.9	3.0		
Iron Bear BF Concentrate	69.1	3.5	0.10	0.135	0.132	0.052	0.01	0.00	-2.8	99.8	3.0		
Platts 62	62.0	4.0	2.25				0.09	0.02	5.0	99.9	8.0		
Platts 65	65.0	2.0	1.40			0.2	0.09	0.02	3.2	99.8	8.5		
Fastmarkets 67.5	67.5	3.0	0.50	1.0	1.0		0.02	0.03	-2.5	99.5	8.0		
Platts 67.0 CFR ME	67.0	2.5	0.50	0.4	0.4		0.03	0.01	0.3	99.8	9.5		
Platts BF Pellet 65%Fe CFR China	65.0	5.0	0.35				0.02	0.00				250	
Platts BF Pellet 65% Fe Atlantic Basin	65.0	3.0	0.50										80.0
Platts DR Pellet 67.5%Fe	67.5	1.5	0.50									300	
Iron Bear BF Pellet	66.6	3.7	<0.1	0.150	1.010	0.050	0.01	<0.01				323	93.6
Iron Bear DR Pellet	68.4	1.5	<0.1	0.080	0.620	0.040	<0.01	<0.01				346	

*FeT *Fe_2O_3 X 0.688*

Figure 57: Iron Bear products specifications versus benchmarks

The predicted Fe contents of the Iron Bear concentrates both fall within the Fastmarkets 67.5% Fe assessment range. Of note is the planned low moisture content due to drying throughout the year. If products are sold on a CFR basis this will save ~5% on shipping costs, and potentially rail costs as well.

Similarly, the Iron Bear pellets produced during testwork so far offer superior chemistry to the benchmark pellet specifications, mostly due to the lack of alumina in the Iron Bear products. Metallurgical properties are also well above the Platts normalisation specification for both BF and DR pellets.

7.5 Premium Forecast for Iron Bear Products

Value in Use (VIU) modelling was performed using thermodynamic models developed in Outotec HSC Chemistry. The first model consists of a sinter plant, blast furnace and hot metal pre-treatment facilities representative of an integrated steel plant. The model is calibrated on reference ores, e.g. Platts 62 and IOCJ as a portion of the blended ore, and then the reference ores are replaced with the ores to be evaluated. The economic portion of the model is calibrated by assessing the relative change in value of IOCJ versus Platts62 against current and forecast 65% Fe premiums.

The output of this modelling is a breakeven VIU that provides a net-zero cost impact on the operating steelplant by adjusting the input price of the evaluated ore. A list of the main economic drivers in the models are given below.

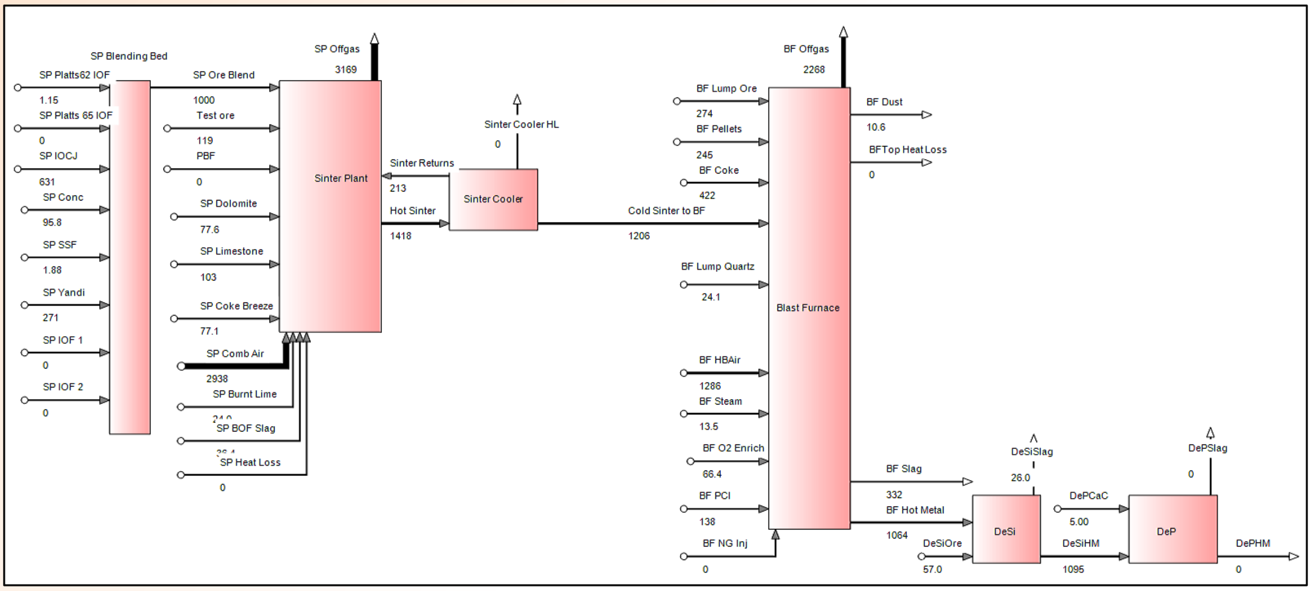


Figure 58: Schematic of integrated steel plant VIU model

Similar to the integrated steel plant model, a second model consisting of a pellet plant (**PEP**), direct reduction plant (**DRP**) and electric arc furnace (**EAF**) was used to evaluate DR concentrates as well as DR pellets. This model allows the use of various fuel sources for the pellet plant (of interest for this study are natural gas and heavy fuel oil (**Bunker C**), as well as concentrate through the pellet plant, or merchant pellet introduced directly into the DRP

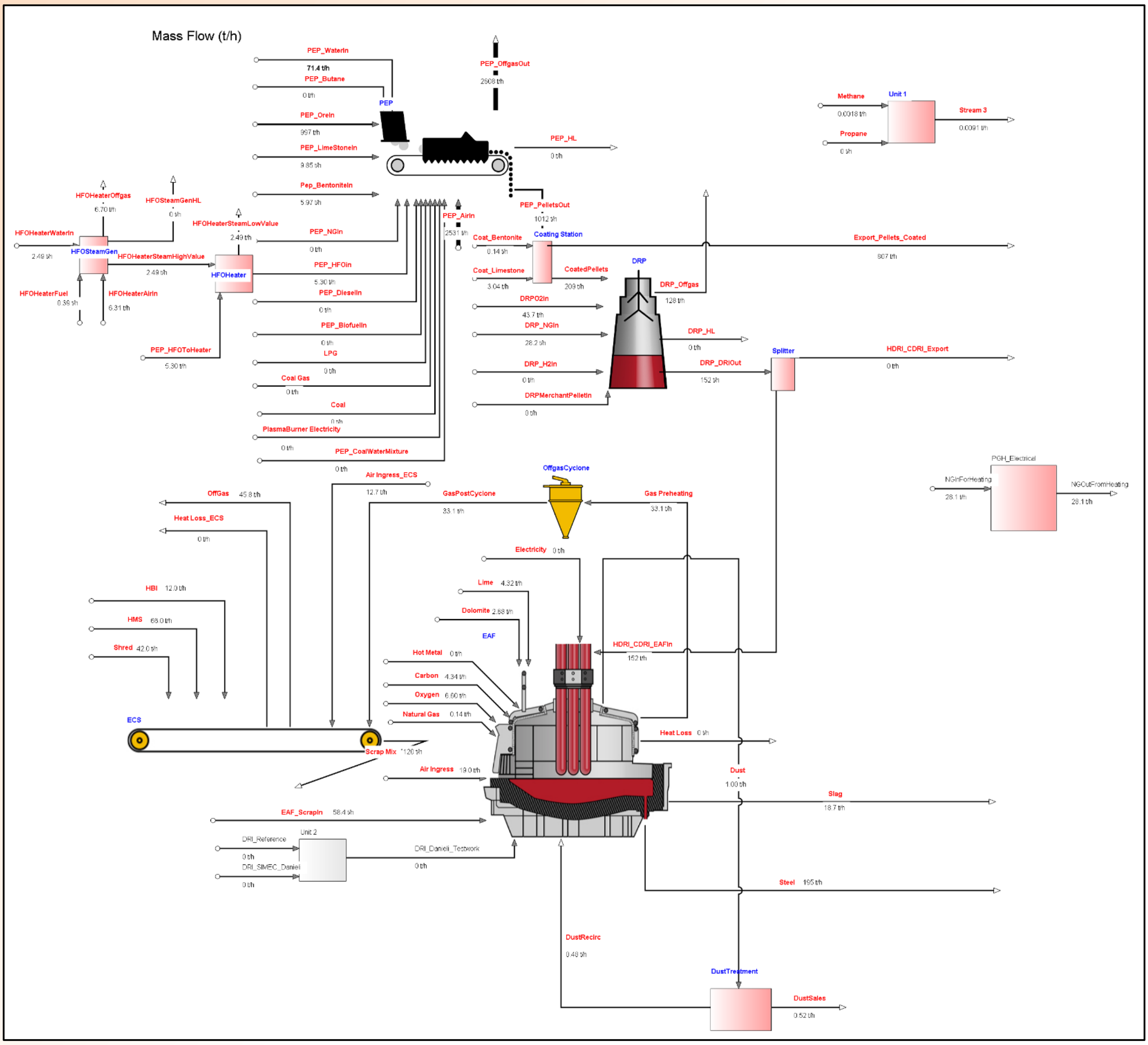


Figure 59: Schematic of DRI-based steelmaking VIU model.

.

The modelling shows that from a technical perspective, significant premiums are possible, ascribed to the low impurity levels of the Iron Bear products. In practice, Cyclone Metals is considered a small volume, new market entrant, and as such may attract a commercial discount for its products even though the products may be worth more on technical merit. The modelling outcomes are shown below:

Table 32: VIU Outcomes for Iron Bear Products

	Modelled VIU outcome
Iron Bear BF Concentrate	13% premium over Platts65
Iron Bear DR Concentrate	16% premium over Platts65 (material replacement-dependent)

Another VIU methodology employed by many entities is to just use the VIU adjustment factors as published by Platts, Fastmarkets, and the like.

For this example, Fastmarkets penalty rates for 10 June 2025 were used as they are considered representative of longer-term values. This values the BF and DR concentrate premiums at USD10.80 and USD18.60/t product respectively. Expressed as a percentage of reference price with a base price of USD90/DMT, this equates to 10.7% and 18% premiums/DMTU for the two products.

While crude, this methodology arrives at similar VIU premiums as modelled, and the recommended values stand, though many will consider the values as too conservative.

Later study phases should include revised VIU modelling, customer selection and segmentation, and MOUs with potential offtake customers.

Table 33: VIU Adjustment Factors for Iron Bear Products

VIU Adjustment factors	Platts65 (base)	Adjustment / 1%	Iron Bear BF	Delta VIU BF	Iron Bear DR	Delta VIU DR
Fe	65	1.82	69.1	7.462	71	10.92
SiO2	2	-1.91	3.5	-2.865	1.2	1.528
Al2O3	1.4	-3.73	0.1	4.849	0.1	4.849
P	0.09	-0.13	0.01	0.0104	0.01	0.0104
S	0.02		0.01	0	0.01	0
Moisture	8	-0.26	3	1.3	3	1.3
USD/t Delta VIU				**10.8**		**18.6**

Our VIU assumptions for Table 33 are:

- High-grade Fe (>63.5% Fe) adjustment of US$1.82 per percentage point difference to benchmark
- Lump premium of US$8.60/t over the 62% Fe fines index
- Blast furnace pellet premium of US$43.00/t over the 65% Fe fines index
- Alumina adjustment of US$3.73 per percentage point difference to benchmark (previously US$1.60)
- 4.5%-6% Silica ores adjustment of US$1.91 per percentage point difference to benchmark
- <0.08% Phosphorus ores adjustment of US$0.13 per 0.01% point difference
- Ocean freight = USD 26 per tonne Sept-Iles to Middle East

Though it is known that a Development Agreement exists with Vale, the potential of Vale marketing these products in the future is not guaranteed, and as such has been ignored. This should be re-evaluated in later study phases.

The following premiums are thus suggested for Iron Bear products:

Table 34: Iron Bear Premiums

Product	Product premium recommendation for Scoping study phase
BF Concentrate	10%premium with Platts65 pricing per DMTU
DR Concentrate	10% premium with Platts65 pricing per DMTU
BF Pellet	Asian 65% Fe BF pellet premium
DR Pellet	Long term forecast DR pellet premiums

It is acknowledged that these product premiums appear quite conservative, but later study phases should allow more aggressive assumptions to be made / MOUs signed to secure some proportion of sales volumes.

Figure 60: Iron Bear DR pellets produced at COREM

IRON BEAR

CYCLONE METALS LTD

08 ECONOMIC EVALUATION

Modifying Factors 8

PARAMETER	UNIT	VALUE
Weighted Average Cost of Capital (WACC)	8	%
Inflation	2.5	% per annum
Mining Tax	15	%
Provincial Tax	15	%
Federal Tax	15	%
Selling, General, and Administrative (SG&A)	4	% of Gross Revenue
Depreciation	25	% per annum
Exchange Rate - CAD to USD	0.72	USD to CAD
Exchange Rate - AUD to USD	0.65	USD to AUD
Power - Unit Cost (2030)	5	US cents / kWh
Brent Oil / Bunker Fuel - Unit Cost (2030)	75	USD / BOE
Diesel - Unit Cost (2030)	1.21	USD / litre

8. Economic Evaluation

8.1 Capital Cost Estimate

The capital expenditure (**CAPEX**) estimate has been developed to support the evaluation of multiple development scenarios for the project. This Class 5 estimate provides order-of-magnitude capital costs for various production capacities, transportation methods, and power supply options to enable comparative analysis and inform decision-making for the next phase of project development.

The estimate covers the preferred scenario of a 25Mt per annum blast furnace concentrate operation with a 9.1Mt pellet plant located at Pointe Noire, utilising rail transport and renewable hydro/wind power supply.

Alternative scenarios with different capacities (12.5Mt to 50Mt p.a.), transportation modes (Rail versus Slurry Pipeline), and power sources (Churchill Falls versus Menihek Hydro & Wind) are also evaluated to provide a comprehensive basis for option selection.

All capital costs are expressed in USD with a base date of April 2025 and include provisions for direct costs, indirect costs, contingency, and future escalation to support project planning and investment decisions.

8.1.1 Accuracy of Estimate

The capital cost estimate has been estimated to the AACE Class 5 estimate guidelines with an anticipated accuracy level range between -25% to +50%.

The capital cost estimate has been developed for the purpose of alternative scheme analysis between various capacities, vendors, and product options, and to determine high level suitability to proceed to the next stage, based on limited information.

Table 35: AACE Estimate Guidelines

	Primary Characteristic		Secondary Characteristic	
Estimate Class	**Maturity Level of Project Definition Deliverables** *Expressed as % complete project definition*	**Purpose of Estimate**	**Estimating Methodology**	**Expected Accuracy Range** *Low and High Range at an 80% confidence interval*
Class 5	0% to 2%	Concept Screening	Capacity factored, parametric models, judgement	L: -20% to -50% H: +60% to +200%
Class 4	1% to 15%	Study or Feasibility	Equipment factored of parametric models	L: -15% to -30% H: +40% to +100%
Class 3	10% to 40%	Budget Authorization or Control	Semi-detailed unit costs	L: -10% to -20% H: +20% to +60%
Class 2	30% to 75%	Control or Bid	Detailed unit costs	L: -5% to -15% H: +10% to +40%
Class 1	65% to 100%	Check Estimate or Tender	Detailed unit costs	L: -3% to -10% H: +6% to +30%

8.1.2 Basis of Estimate

Class 5 estimates do not estimate to full details by discipline i.e. Quantity, Manhours, Labour Costs, Material costs and detailed indirect costs, both contractor and owners team. Rather the estimate is developed based on either the capacity of a plant e.g. 5Mt p.a. crusher, with costs taken from a similar project or factored based on through put from a range of project.

Other elements can be estimated based on overall length for example rail track cost per km. Both these costs are all in costs and will include all disciplines, Civil works, Structural, Mechanical Electrical etc.

When utilising data from other projects considerations need to be made to ensure that like for like comparisons are made, considerations from past data was allowed to ensure the following were considered ensuring costs are not double up or excluded.

- Location of work
- Confirming indirect costs were included or excluded
- Land acquisitions
- Services to site

Indirect costs for Owners Team, EPCM contracting, Commissioning, Spares and First Fills, travel and accommodation were included on top of the direct costs through a percentage of the directs, with a fixed fee of $50m allowed for future studies and environmental charges, as this has no proportional relation to the overall direct cost spend of the chosen option.

Prior to the current iteration of cost, options for a 21MTp.a. and 7MTp.a. plant were assessed, Cyclone Metals engaged Capisce Qs to review and assess the base rates, indirect factors and logic behind the escalation and scaling methodology to ensure the cost model matches industry expectations.

In addition to the review Capisce Qs undertook a probabilistic risk analysis to determine the estimate accuracy for both options. A probabilistic risk analysis is not typically carried out on Class 5, where a deterministic contingency is typically applied, however the view was taken to determine the impact of capacity factoring on the estimate, with the results showing an increase to both the range and base contingency the further the base varied from the base number.

An updated probabilistic risk analysis was not carried out due to the number of options and alternatives, but the results were carried forward with an increase in risk applied the further the model varied from the base factor.

Previous results showed the following:

- 21MTp.a. - from base estimate to P50 + 24.4%, P10 to P50 – 27.8%, and P90 to P10 + 36.1%
- 7MTp.a. - from base to P50 + 21.5%, P10 to P50 – 23.7%, and P90 to P10 + 28.2%

As the project definition is further developed in the next phase of the project, the level of detail within the estimate will increase with vendor support being sourced for the supply of major equipment. The current class 5 estimate will be used as a reference with cost variances tracked to ensure the chosen options is still proving to be the most cost-effective solution.

The next phase of estimation will also see further details applied to the indirect cost build up where they will be compared against the schedule to ensure the appropriateness and synergies between the two.

8.1.3 Work Breakdown Structure (WBS)

The estimate has been broken to the breakdown structure below, with some items being broken down to a third level to allow for build-up and scaling, but due to the level of the current estimate and scope all costs will be reported at the level 1 of the WBS.

Table 36: Work Breakdown Structure (WBS)

WBS Level 1	WBS Level 2			
Direct Costs				
Mining	Mobile Fleet	Mine Preparation	Support, Infrastructure, Tailings And Services	
Concentrator	Dry Processing	Wet Processing	Filtration, Process Water & Stockpiling	Process Buildings & Infrastructure
Flotation	Silica Flotation			
Pelletisation	Pellet Plant			
Tailings	Bergaz			
Logistics	Slurry Pipeline	Water Return	Non Slurry (Concentrate Storage, Rail Sidings & Load Out)	
Rail	Fleet	Track Construction		
Port	Port Infrastructure			
Power	Power Generation	Camp Infrastructure	Power Plant	Transmission Lines
Indirect Costs				
Owners Costs				
EPCM				
Other Indirect Costs	Commissioning	Spare & First Fill	Travel & Accommodation	Studies & Environmental Bond
Contingency				

As the scope of the project develops a common WBS will be produced that all project control functions will align to ensure a cohesive alignment between the estimate, schedule and cost spend reports. it is anticipated that the WBS will include the following levels:

- Facility (including direct, indirect and owners team)
- Work Package (including main EPCM, external utility provider, rail contractor etc.)
- Location (including mine site, port site, remote site (Pumping station or Substation) etc.)
- Commodity (including equipment supply, installation, concrete, steel E&I etc.)

8.1.4 Structure of Estimate

The estimate was set up to allow a variety of options for capacities and over a range of options totalling 192 individual variations of combinations.

This section of the report covers the preferred option of 25Mt of Concentrator Capacity with a 9.1 MT pellet plant located in Pointe Noire (**Scenario A1**), with the product transported by rail and power supplied via Hydro & Wind Power option, with comparisons for the following options:

- **Scenario B5** – 25Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Rail - with Churchill Falls power (**change power source**)
- **Scenario C9** – 25Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Slurry Pipeline - with Hydro/Wind power (**change rail to slurry**)
- **Scenario D17** - 12.5Mt p.a. of Concentrator Capacity - via Rail - with Hydro/Wind power (**reduction in capacity**)
- **Scenario E129** - 50Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Rail - with Hydro/Wind power (**increase in capacity**)

8.1.5 Fleet Purchase

Mining fleet capital costs have been estimated from recently received market pricing for the assumed dump trucks, excavators, loaders, dozers and production drills. Minor ancillary fleet purchasing has not been priced which is determined to be immaterial to the mining fleet capital outlay for a class 5 estimate. Minor ancillary fleet only makes up 15% of the total mining fleet unit numbers, with the capital cost portion anticipated to be materially lower at 5% based on available industry benchmark cost data.

The market pricing for fleet purchases was benchmarked against other available data to be within a +/- 5% tolerance. Escalation has been applied within the financial model to the capital costs for future fleet purchases.

Capital costs for all mining fleet including ancillary units will need to be included in the next study phase to support the increase in level of accuracy requirements.

8.1.6 Direct Cost Basis

The direct cost basis for the current capital expenditure estimate was predominantly derived from the 2020 rescoping study commissioned by M3 Metals Corp and undertaken by Hatch. This comprehensive study provided a detailed cost framework which served as the foundation for scaling and adapting costs to the current project scenarios.

The 2020 Hatch study established cost estimates across all major work breakdown structure elements, including:

- Mine operations and infrastructure - providing base costs for mining equipment, site preparation, and associated facilities
- Processing plant components - detailed estimates for crushing, grinding, magnetic separation, and dewatering equipment
- Infrastructure and utilities - comprehensive costs for power distribution, water systems, buildings, and site services

The 2020 study utilized AACE Class 5 estimation methodology with equipment costs based on vendor budget quotations and recent historical data from similar projects. These costs were expressed in Canadian dollars with a December 2019 base date, providing a reliable foundation for the current estimate adjustments.

For the present study, the Hatch cost database has been updated and scaled appropriately for the various capacity scenarios under consideration (ranging from 12.5Mt to 50Mt per annum). Scaling factors and capacity adjustments have been applied using established industry methodologies, with particular attention to major equipment sizing and associated civil, mechanical, and electrical installation costs.

Table 37: Direct Cost Basis of Estimate

WBS Level 1	WBS Level 2	Basis
Mining	Mobile Fleet	Estimated on a $ per unit based on anticipated requirements
	Mine Preparation	Factored from previous 2020 Hatch Rescoping Study
	Support, Infrastructure, Tailings and Services	
Concentrator	Dry Processing	Factored from previous 2020 Hatch Rescoping Study
	Wet Processing	
	Filtration, Process Water & Stockpiling	
	Process Buildings & Infrastructure	
Flotation	Silica Flotation	Taken from previous recent study for a similar size plant and adjusted for location
Pelletisation	Balance of Plant	Taken from previous recent study for a similar size plant and adjusted for location
	Core	
	Utilities	
	Other	
Tailings	Bergaz	Based on conventional thickening and dewatering on tailings from comparable magnetite project
Rail	Fleet	Estimated on a $ per unit based on anticipated requirements
	Track Construction	Based on a $/km rate
Slurry	Slurry Pipeline	Slurry and water pipelines costs built up based on a typical meterage cost tested against a $/"dia/m against other projects. Pumping costs factored as a $/duty kW requirement
	Water Return	
Port	Concentrate Shed	Factored from previous 2020 Hatch study for 4MTpa shed
	Services and Conveyor	
	Ship Loading	
Power	Wind / Hydro	Cost from 2025 Hatch Power Study
	Transmission Lines	
Water	Water Treatment	Based on anticipated water throughput of previous treatment projects
	Pipeline	

8.1.7 Indirect Cost Basis

Indirect costs have been applied as per the percentages listed in Table 38, where the base data did not already include for the project indirect costs. The benchmarks for the Pelletising, Tailings, Slurry, Power and Port allowed for indirect costs, so to ensure consistency, the indirect modifying factors were not applied.

Table 38: Indirect Capital Costs - Modifying Factors

Indirect Cost	Cost Basis
Owners Costs	4% of Direct CAPEX
EPCM	11% of Direct CAPEX
Commissioning	2% of Direct CAPEX
Spare & First Fill	1% of Direct CAPEX
Travel & Accommodation	1.5% of Direct CAPEX
Engineering & Environmental	$50m fixed fee per stage

8.1.8 Escalation and FOREX

Costs were estimated to the base date of April 2025 with provision for future escalation allowed at a provision of 2.5% compounded annually.

All costs are expressed in USD, where projects were utilised in other native currencies the following exchange rates were utilised:

- CAD to USD - $0.72
- AUD to USD - $0.65

8.1.9 Working and Sustaining Capital

Working and sustaining capital is the amount required to maintain and continue the current operations over the life of the project.

Due to the level and class of project this has been worked out through a percentage of CAPEX approach utilising the following provisions in

Sustaining Capital	% of Capex
Mining	3.0%
Concentrator	2.5%
Flotation	3.0%
Pelletising	0.8%
Tailings	2.5%
Logistics	2.0%
Rail	0.5%
Slurry	2.5%
Port	0.5%
Power	0.8%
Water	8.5%

.

Table 39: Sustaining Capital Modifying Factors (All Scenarios)

Sustaining Capital	% of Capex
Mining	3.0%
Concentrator	2.5%
Flotation	3.0%
Pelletising	0.8%
Tailings	2.5%
Logistics	2.0%
Rail	0.5%
Slurry	2.5%
Port	0.5%
Power	0.8%
Water	8.5%

8.1.10 Installation Factor

The estimate developed by Hatch was built from applying an installation factor to the supply cost of the equipment to cover off all installation and associated wrap around infrastructure. The same process was undertaken by Cyclone however these factors were increased to better match previous experience. Capisce QS reviews these factors against industry norms and past project and agreed with the increase as applied by Cyclone.

As these factors can vary between site to site and process to process this factor was included within the Monte Carlo Ranging.

8.1.11 Contingency

Contingency has been allocated based on the facility and the anticipated costs. The contingency figure is intended to provide the estimate with a 50% confidence level with the 80% confidence range being indicated by the estimate accuracy range.

Capisce QS completed a Monte Carlo ranging analysis to help further understand the required level of contingency required and to assess the overall accuracy of the estimate, only two options were reviewed being the 7Mt and 21Mt of DR Pellet transported by rail.

Table 40 outlines the output of the Monte Carlo analysis, the P value noted below represents the confidence level or the probability of that number or lower being achieved. For example, P90 value provides a 90% likelihood of that value or lower being achieved or conversely a 10% chance of that number being achieved. The spread between the P10 and P90 provides an 80% confidence level, and this number co-aligns with the estimate ranges provided by the AACE as listed in Table 35.

Contingency is listed as the difference between the base estimate and the P50 value.

Table 40: Estimate Accuracy (Source: Capisce QS)

	21Mt DR Pellet		7Mt DR Pellet	
Base Estimate	US $ 6,642.4 M	P19.1	US $ 2,410.1 M	P17.8
P50	US $ 8,259.9 M	+ 24.4% from base	US $ 2,928.1 M	+ 21.5% from base
P10	US $ 5,962.1 M	- 27.8% from P50	US $ 2,235.4 M	- 23.7% from P50
P90	US $ 11,239.0 M	+ 36.1% from P50	US $ 3,754.0 M	+ 28.2% from P50

As noted from the above table, and the figures below, the 21Mt option contains more risk requiring a larger contingency and a wider confidence range, this is due to the amount of scaling from the 4Mt original estimate. On top of these provisions, an additional allowance was made for a scaling variation in such a manner that provides an additional contingency proportional to the deviation from the base case to allow for fairer comparison between the options.

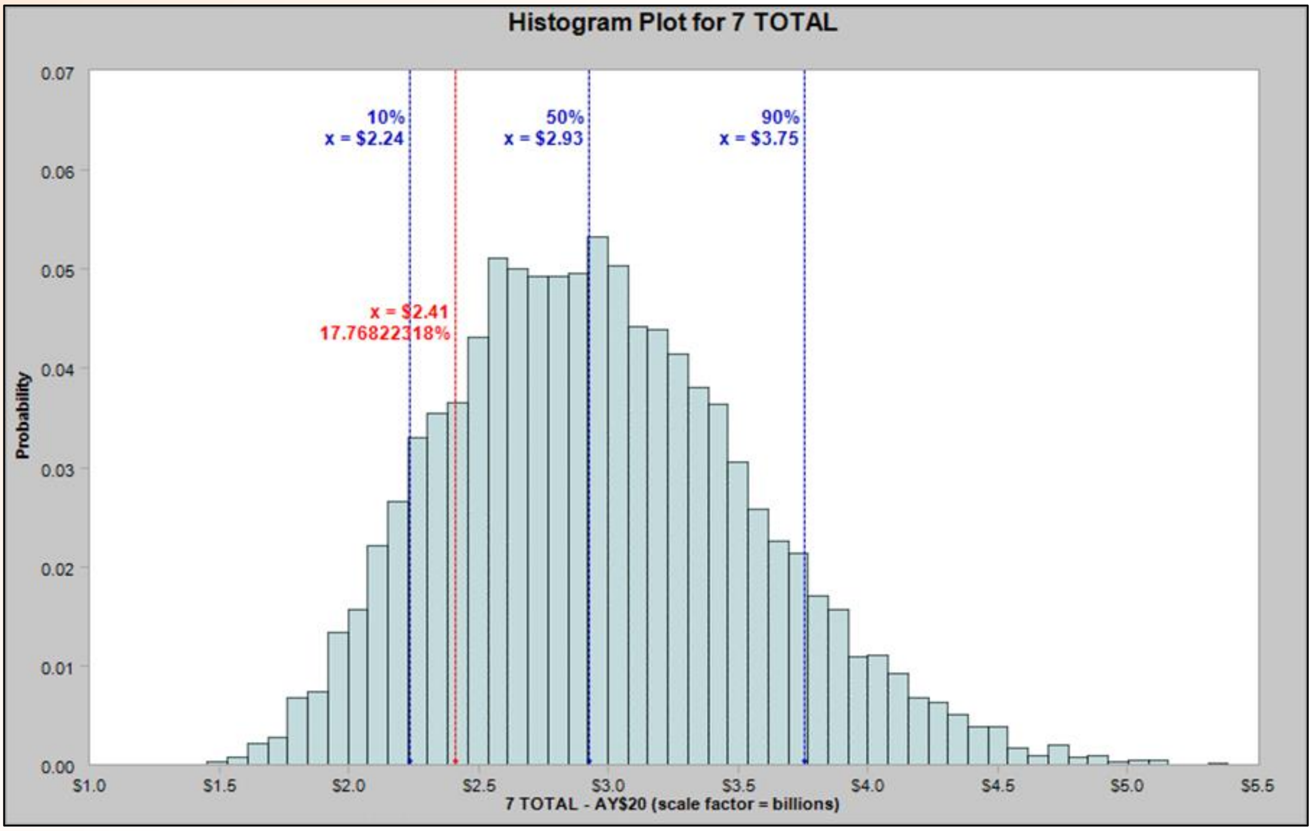


Figure 61: 7Mt p.a. Monte Carlo Histogram (Source: Capisce QS)

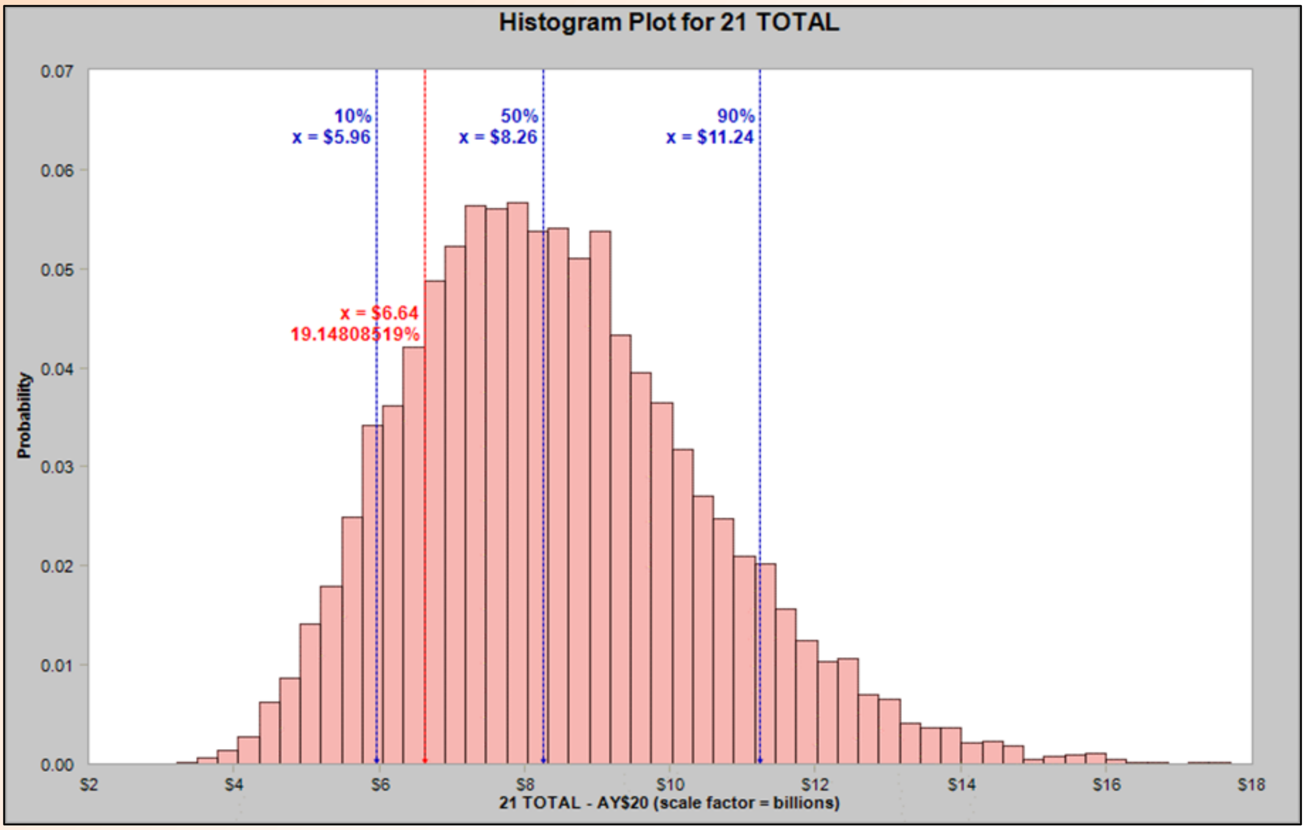


Figure 62: 21Mt p.a. Monte Carlo Histogram (Source: Capisce QS)

The Monte Carlo review considered arrange of items with factors being applied to each estimate items with additional provision for correlation, as each factor ranged will have both an individual and shared impact on the costs as there will be a level of consistency over all the items within the estimate as each one will be governed by the same economic and site conditions at the time of construction. The following items were considered in the ranging:

- Base Supply Cost
- Scale Factor
- Install Factor
- Install unit rates (i.e. Rail Track)
- Indirect Percentages
- Provision for contingent risk items.

8.1.12 Estimate Summary

This section presents the capital cost estimates for each evaluated scenario, broken down by major Work Breakdown Structure (WBS) Level 1 categories. All costs are expressed in millions of US dollars with a base date of April 2025. Figure 63 shows the nominal forecast operational expenditure for Scenario A1, with the sustaining capital expenditure as USD per tonne of product sold.

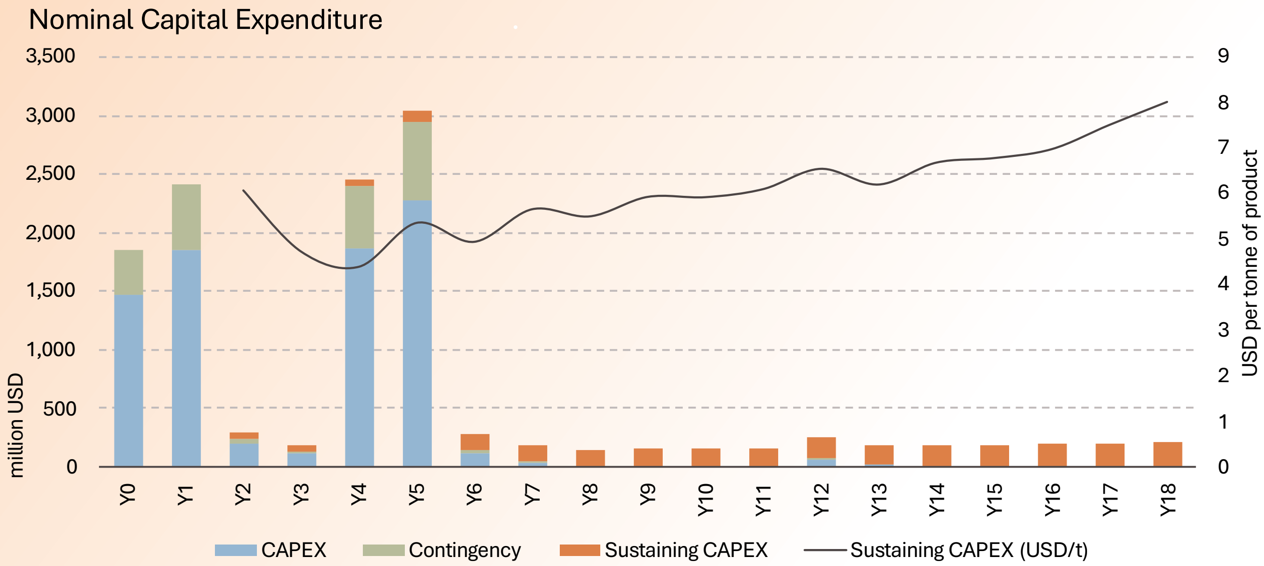


Figure 63: Nominal Capital Expenditure - Scenario A1

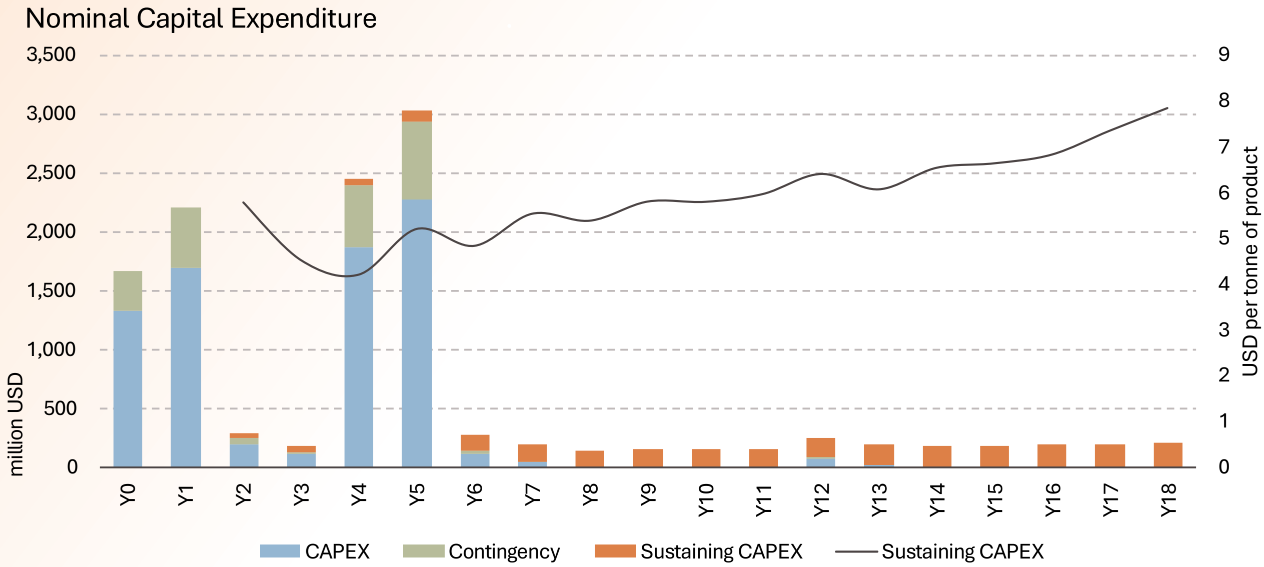


Figure 64: Nominal Capital Expenditure - Scenario B5

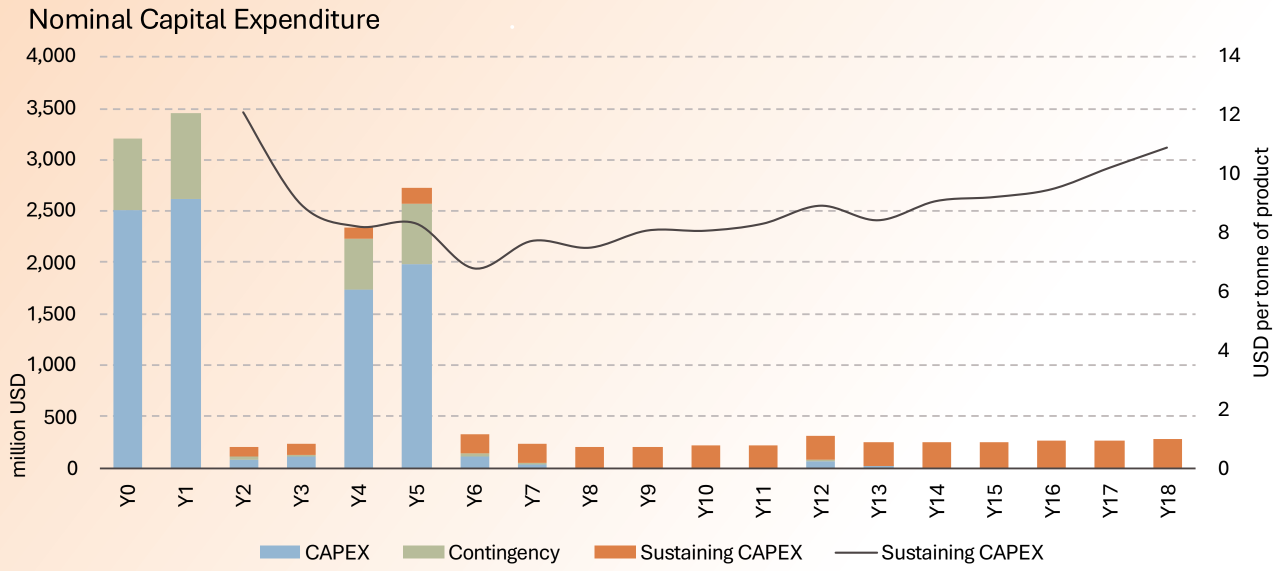


Figure 65: Nominal Capital Expenditure - Scenario C9

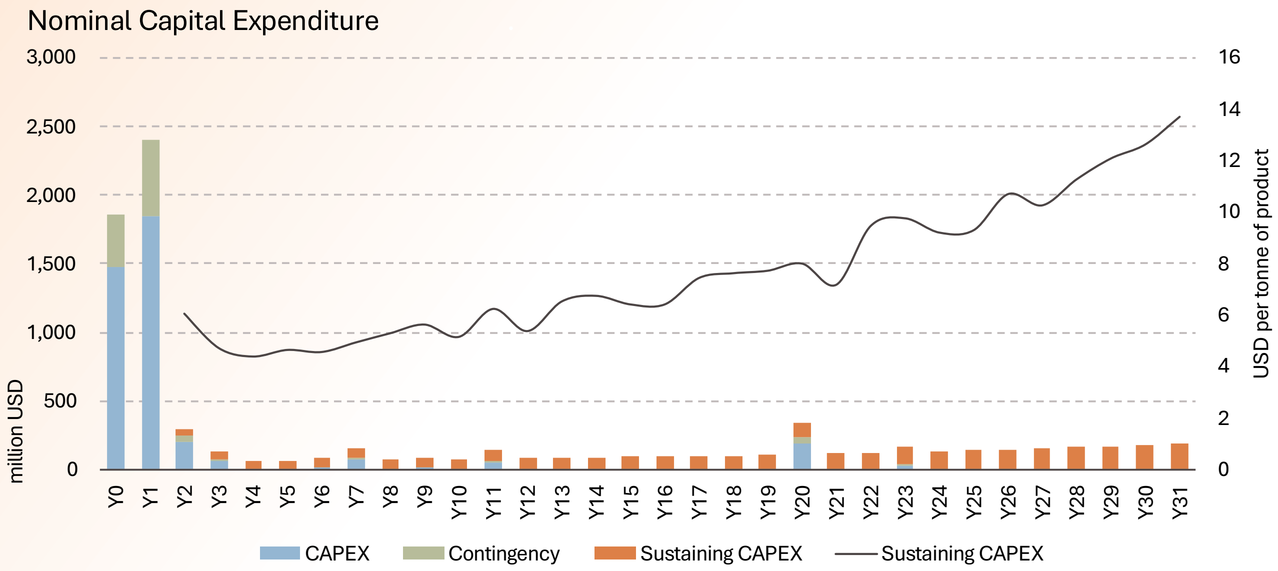


Figure 66: Nominal Capital Expenditure - Scenario D17

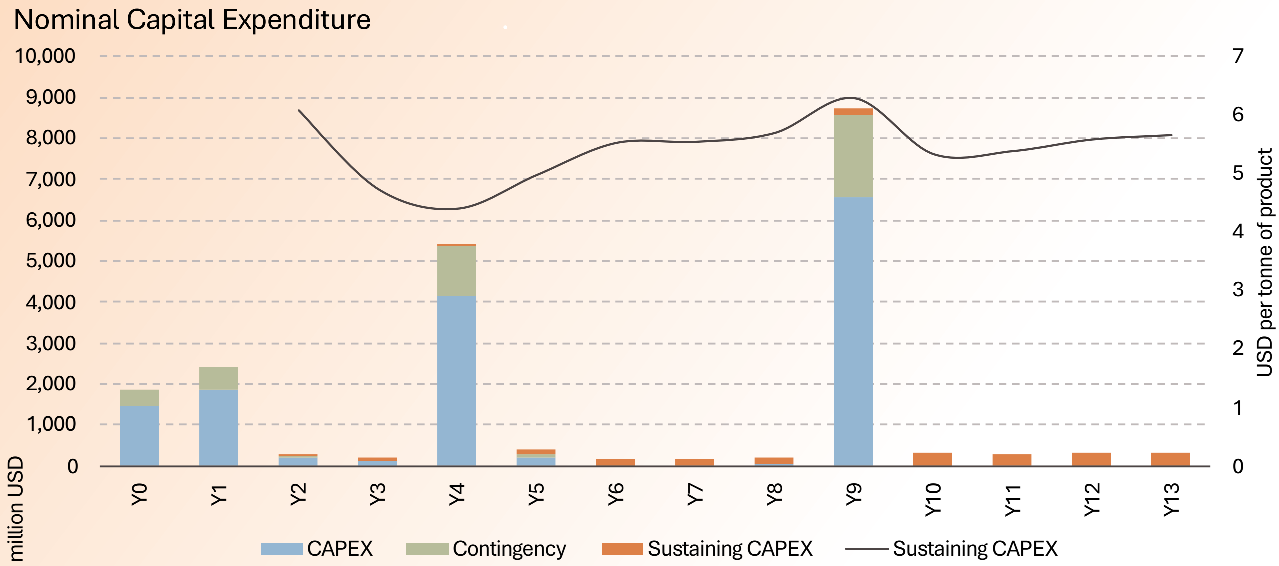


Figure 67: Nominal Capital Expenditure - Scenario E129

Each scenario summary provides both pre-production capital requirements and total project capital expenditure over the initial development period. The cost structure is organized into three main categories: direct costs covering all physical infrastructure and equipment; indirect costs including owners' costs, EPCM services, and construction indirects; and contingency provisions reflecting the current level of project definition.

The estimates are presented at the P50 confidence level, with accuracy ranges of -25% to +50% shown to reflect the Class 5 estimation methodology – a wider range than in 2024 to account for more options being evaluated. These ranges account for the conceptual level of engineering and the inherent uncertainties associated with the early project development stage.

The cost breakdowns enable direct comparison between scenarios and support decision-making for the preferred development path, with particular focus on the capital efficiency of different capacity, transportation, and power supply alternatives.

Table 41 shows the estimate summary for Scenario A1, the Base Case, with comparisons for the following options shown in :

- **Scenario B5** – 25Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Rail - with Churchill Falls power (change power source)
- **Scenario C9** – 25Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Slurry Pipeline - with Hydro/Wind power (change rail to slurry)
- **Scenario D17** - 12.5Mt p.a. of Concentrator Capacity - via Rail - with Hydro/Wind power (reduction in capacity)
- **Scenario E129** - 50Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Rail - with Hydro/Wind power (increase in capacity)

Table 41: CAPEX Summary - Scenario A1 – Base Case

WBS Level 1	Scenario A1 - $M USD	
	Pre-Production	Total
Mining	$ 252	$ 718
Concentrator	$ 830	$ 1,521
Flotation	$ -	$ 72
Pelletising	$ -	$ 1,050
Tailings	$ 77	$ 199
Rail	$ 588	$ 943
Slurry	$ -	$ -
Power	$ 1,137	$ 2,149
Water	$ 10	$ 26
Port	$ 127	$ 317
Direct Costs	$ 3,022	$ 6,997
Indirect		
Owners Costs	$ 67	$ 131
EPCM	$ 185	$ 361
Indirects	$ 176	$ 393
Indirect Costs	$ 428	$ 885
Contingency		
Contingency	$ 975	$ 2,230
Total		
CAPEX	$ 4,426	$ 10,113
Range (-25%)	*$ 3,319*	*$ 7,584*
Range (+50%)	*$ 6,639*	*$ 15,169*

Table 42: CAPEX Summary - Scenario B5, C9, D17, E129

	Scenario B5		Scenario C9		Scenario D17		Scenario E129	
WBS Level 1 ($M USD)	**Pre-Production**	**Total**	**Pre-Production**	**Total**	**Pre-Production**	**Total**	**Pre-Production**	**Total**
Mining	$ 252	$ 718	$ 252	$ 718	$ 252	$ 386	$ 252	$ 1,231
Concentrator	$ 830	$ 1,521	$ 830	$ 1,521	$ 830	$ 830	$ 830	$ 4,436
Flotation	$ -	$ 72	$ -	$ 72	$ -	$ -	$ -	$ 72
Pelletisation	$ -	$ 1,050	$ -	$ 1,050	$ -	$ -	$ -	$ 1,050
Tailings	$ 77	$ 199	$ 77	$ 199	$ 77	$ 88	$ 77	$ 344
Rail	$ 588	$ 943	$ -	$ -	$ 588	$ 731	$ 588	$ 1,751
Slurry	$ -	$ -	$ 2,298	$ 2,298	$ -	$ -	$ -	$ -
Power	$ 855	$ 1,867	$ 1,137	$ 2,149	$ 1,137	$ 1,164	$ 1,137	$ 3,337
Water	$ 10	$ 26	$ 10	$ 27	$ 10	$ 18	$ 10	$ 51
Port	$ 127	$ 317	$ 127	$ 317	$ 127	$ 127	$ 127	$ 594
Direct Costs	$ 2,740	$ 6,715	$ 4,733	$ 8,352	$ 3,022	$ 3,345	$ 3,022	$ 12,867
Indirect Costs								
Owners Costs	$ 67	$ 131	$ 44	$ 94	$ 67	$ 79	$ 67	$ 302
EPCM	$ 185	$ 361	$ 120	$ 257	$ 185	$ 216	$ 185	$ 830
Indirects	$ 164	$ 381	$ 253	$ 454	$ 176	$ 190	$ 176	$ 637
Indirect Costs	$ 416	$ 873	$ 417	$ 805	$ 428	$ 485	$ 428	$ 1,768
Contingency								
Contingency	$ 884	$ 2,139	$ 1,527	$ 2,669	$ 975	$ 1,072	$ 975	$ 4,284
Total								
CAPEX	$ 4,040	$ 9,727	$ 6,677	$ 11,826	$ 4,426	$ 4,902	$ 4,426	$ 18,919
Range (-25%)	*$ 3,030*	*$ 7,295*	*$ 5,008*	*$ 8,870*	*$ 3,319*	*$ 3,677*	*$ 3,319*	*$ 14,190*
Range (+50%)	*$ 6,061*	*$ 14,591*	*$ 10,015*	*$ 17,739*	*$ 6,639*	*$ 7,353*	*$ 6,639*	*$ 28,379*

The range above utilises the previous ranges determined by the probabilistic ranging completed, the ranging is suitable for the selected option only and does not allow for the requitement to move to another estimated option, for example the range in the Hydro/Wind Option does not allow for the movement to Churchill Power Supply. Calculated as -28% +36%, however for economic modelling actually used as -25% to +50% to account for unknown uncertainties and a wider range of options considered.

8.2 Operating Expense Estimate

The operating cost breakdown developed covers all activities from mining through to ocean freight.

8.2.1 Accuracy of Estimate

Similar to the capital cost estimate, the operating cost estimate has also been to estimate to AACE Class 5 estimate guidelines with an anticipated accuracy level range between -25% to +50%.

The operational cost estimate has been developed for the purpose of alternative scheme analysis between various capacities, vendors, and product options, and to determine high level suitability to proceed to the next stage, based on limited information.

8.2.2 Basis of Estimate

The operational cost estimate was developed utilising metrics from the same dataset as the capital costs estimate through either:

- units per tonne produced including
  - Mining
  - Processing
  - Product
  - Water
  - Power
  - Consumables

- Factor of Capital Cost
- Asset Replacement
- Labour Man Count
- Mining Equipment Fleet either factored, benchmarked or calculated on first principles including fleet unit numbers, diesel usage and maintenance costs
- Operating hours of equipment and processes

The metrics were taken from a range of projects and considerations were made for the site's climate and colder weather operations in comparison to other projects benchmarked.

We anticipate that the next phase of the project will allow additional details to be used in building up the estimate with the use of installed power lists allowing the build-up of site power consumptions, through vendor support we will seek asset replacement costs and life expectancy.

8.2.3 Estimate Summary

The estimate summary for Scenario A1, the Base Case with comparisons for the following options below:

- **Scenario B5** – 25Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Rail - with Churchill Falls power (**change power source**)
- **Scenario C9** – 25Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Slurry Pipeline - with Hydro/Wind power (**change rail to slurry**)
- **Scenario D17** - 12.5Mt p.a. of Concentrator Capacity - via Rail - with Hydro/Wind power (**reduction in capacity**)
- **Scenario E129** - 50Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Rail - with Hydro/Wind power (**increase in capacity**)

Figure 68 shows the nominal forecast operational expenditure estimate for Scenario A1, the preferred option of 25Mt of BF Concentrate Production Target with a 9.1 MT pellet plant located in Pointe Noire with the product transported by rail and power supplied via Hydro & Wind Power option.

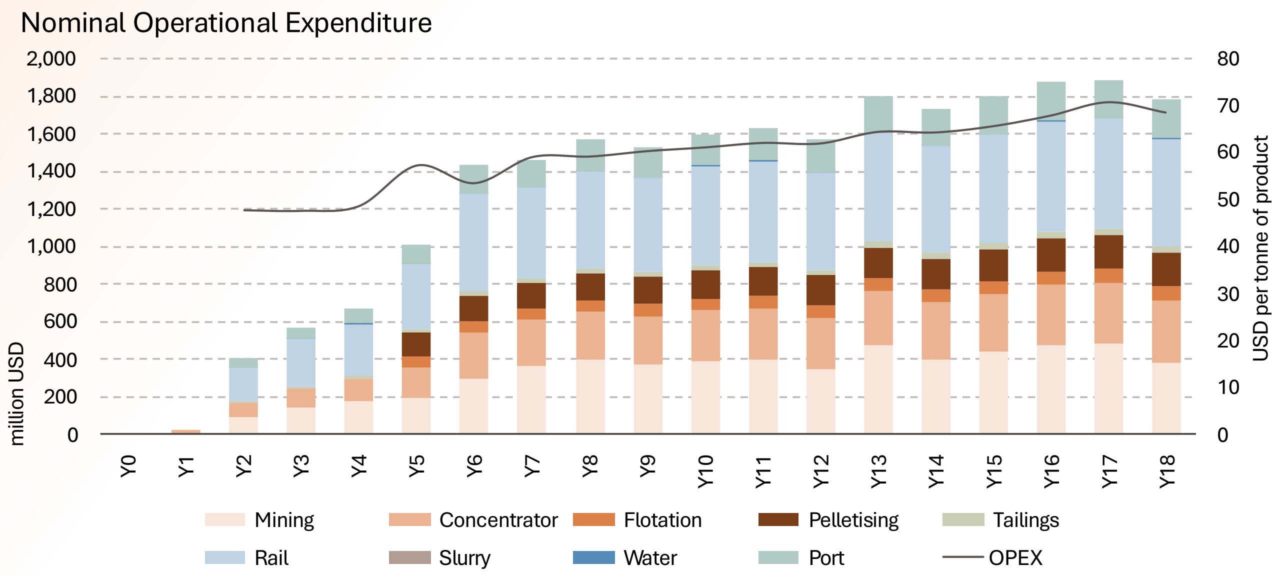


Figure 68: Nominal Operational Expenditure - Scenario A1 and B5

Table 43: OPEX Estimate Summary - Base Case - Scenario A1

WBS Level 1 (USD)	A1	Unit (Nominal Year 6)
Mining	$ 10.69	USD / t of sales
Concentrator	$ 9.42	USD / t of sales
Flotation	$ 6.61	USD / t of DR Concentrate
Pelletising	$ 14.97	USD / t of pellets
Tailings	$ 1.06	USD / t of sales
Rail	$ 19.06	USD / t of sales
Slurry	-	USD / t of sales
Water	$ 0.09	USD / t of sales
Port	$ 5.86	USD / t of sales
FOB at Pointe Noire		
Blast Furnace Concetrate	$ 46.19	USD / t of BF Concentrate
Direct Reduction Pellets	$ 67.77	USD / t DR Pellet
Ocean Freight	$ 24.11	USD / t of sales
CFR to GCC		
Blast Furnace Concetrate	$ 70.30	USD / t of BF Concentrate
Range (-25%)	*$ 52.72*	*USD / t of BF Concentrate*
Range (+50%)	*$ 105.45*	*USD / t of BF Concentrate*
Direct Reduction Pellets	$ 91.88	USD / t DR Pellet
Range (-25%)	*$ 68.91*	*USD / t DR Pellet*
Range (+50%)	*$ 137.82*	*USD / t DR Pellet*

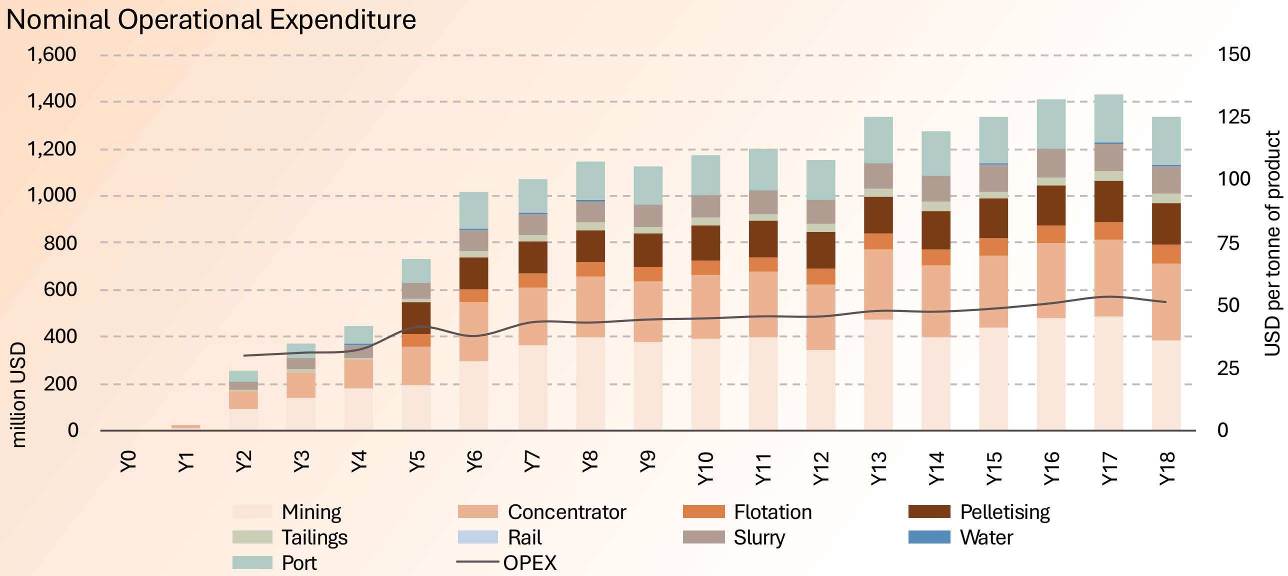


Figure 69: Nominal Operational Expenditure - Scenario C9

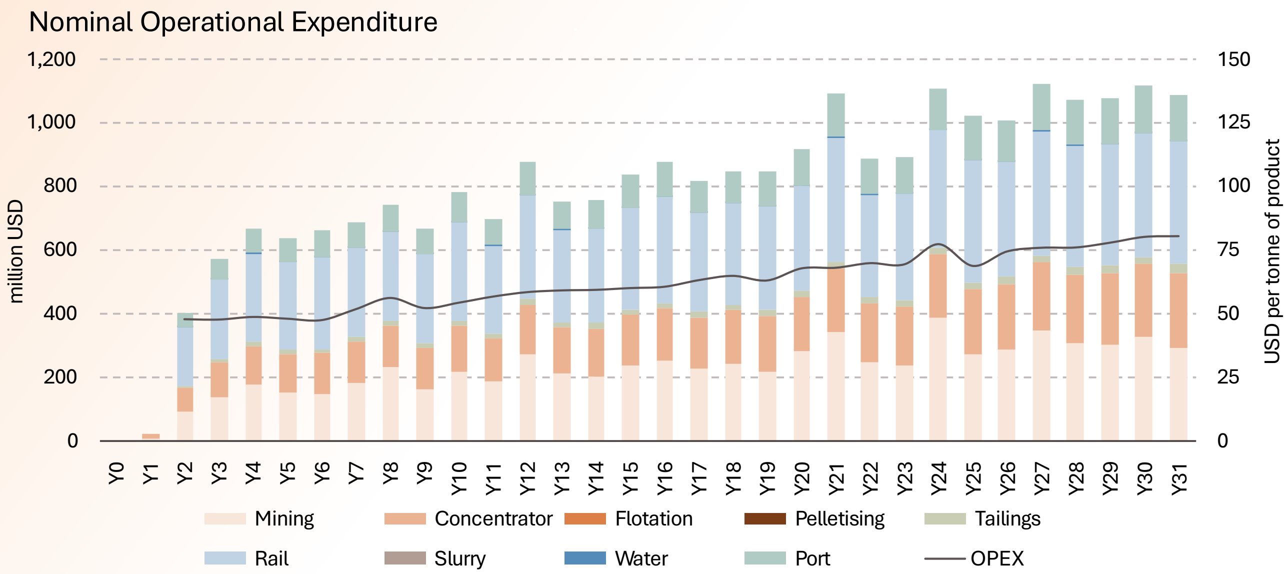


Figure 70: Nominal Operational Expenditure - Scenario D17

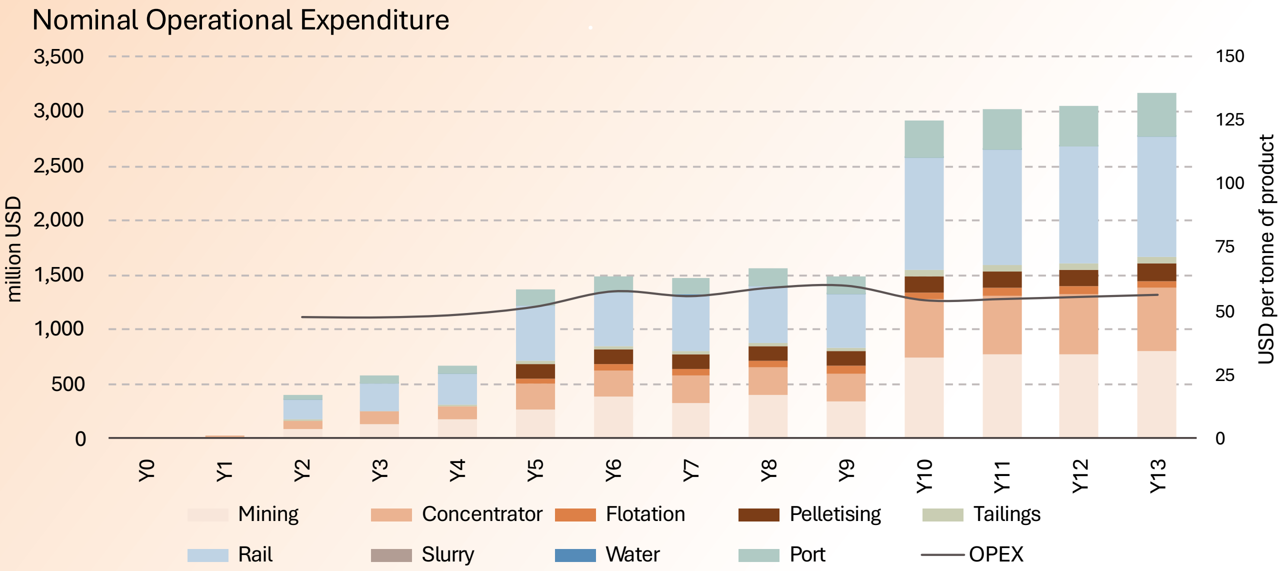


Figure 71: Nominal Operational Expenditure - Scenario E129

Table 44: OPEX Estimate Summary - Scenario B5, C9, D17, and E129

WBS Level 1 (USD)	B5	C9	D17	E129	Unit (Nominal Year 6)
Mining	$ 10.69	$ 10.69	$ 11.27	$ 12.18	USD / t of sales
Concentrator	$ 9.42	$ 9.44	$ 9.46	$ 9.33	USD / t of sales
Flotation	$ 6.61	$ 6.46	-	$ 6.61	USD / t of DR Concentrate
Pelletising	$ 14.97	$ 14.97	-	$ 14.97	USD / t of pellets
Tailings	$ 1.06	$ 1.06	$ 0.99	$ 1.05	USD / t of sales
Rail	$ 19.06	-	$ 21.22	$ 19.22	USD / t of sales
Slurry	-	$ 3.40	-	-	USD / t of sales
Water	$ 0.09	$ 0.09	$ 0.08	$ 0.09	USD / t of sales
Port	$ 5.86	$ 5.86	$ 5.86	$ 5.86	USD / t of sales
FOB at Pointe Noire					
Blast Furnace Concentrate	$ 46.19	$ 30.55	$ 48.87	$ 47.73	USD / t of BF Concentrate
Direct Reduction Pellets	$ 67.77	$ 51.98	-	$ 69.31	USD / t DR Pellet
Ocean Freight	$ 24.11	$ 24.11	$ 24.11	$ 24.11	USD / t of sales
CFR to GCC					
Blast Furnace Concentrate	$ 70.30	$ 54.65	$ 72.98	$ 71.84	USD / t of BF Concentrate
Range (-25%)	$ 52.72	$ 40.99	$ 54.74	$ 53.88	USD / t of BF Concentrate
Range (+50%)	$ 105.45	$ 81.98	$ 109.47	$ 107.76	USD / t of BF Concentrate
Direct Reduction Pellets	$ 91.88	$ 76.09	$ 24.11	$ 93.42	USD / t DR Pellet
Range (-25%)	$ 68.91	$ 57.06	$ 18.08	$ 70.06	USD / t DR Pellet
Range (+50%)	$ 137.82	$ 114.13	$ 36.16	$ 140.13	USD / t DR Pellet

As per the Capital Estimate, a range of -25% to +50% was applied to the estimated OPEX numbers.

8.3 Financial Evaluation

8.3.1 Valuation Methodology

Various plant configurations producing ~12.5, 25 and 50 Mt p.a. or products comprising blast furnace concentrate, direct reduction concentrate, and direct reduction pellets have been evaluated by means of a techno-economic valuation model for the proposed magnetite ming operation near Schefferville. The forecast after tax free cash flows have been discounted at an average weighted cost of capital of 8%, in nominal terms. The net present value (**NPV**) for each configuration has been calculated assuming the mine, processing equipment and infrastructure is a stand-alone business which mines its own resource, beneficiates and transports to port of loading at cost, and sell the concentrates / DR pellets at market prices to export customers.

The model uses US dollars (**USD**), in real terms, as its functional currency. Relevant sections of the model such as tax depreciation, tax loss calculations and working capital calculations are performed in nominal terms to facilitate the carry-over of figures and balances from one year to another. Real free cash flow figures are converted to nominal terms for discounting. The valuation date is 1 July 2025.

Three main production target scenarios were evaluated. The first, and base case, assumes an unconstrained mine production schedule which allows the production of ~25 Mt p.a. of BF and / or DR concentrates, with a large straight-grate pellet plant to operate at 9.1 Mt p.a. capacity, for 18 years.

The second scenario is constrained to 12.5 Mt p.a. of concentrate production over 30 years, and the third scenario constrained to 50 Mt p.a. of products for 13 years.

The model has been reviewed and audited by both Paul Vermeulen and Paul Berend with no adverse findings or outstanding issue identified. The model is appropriate for the scoping study stage. Ongoing work will include benchmarking to identify potential cost elements that might not have been assessed.

8.3.2 Depreciation

Table 45: Asset Depreciation Modifying Factors

WBS Level 1	% of Capex
Mining	25.0%
Concentrator	25.0%
Flotation	25.0%
Pelletising	25.0%
Tailings	25.0%
Rail	25.0%
Slurry	25.0%
Port	25.0%
Power	25.0%
Water	25.0%

Depreciation has been applied to all capital assets using the declining balance method at a rate of 25% per annum.

The 25% declining balance rate has been consistently applied across all asset categories: mining equipment and infrastructure, concentrator facilities, flotation equipment, pelletising plant, tailings management facilities, logistics infrastructure, rail systems, slurry pipeline, port facilities, power infrastructure, and water systems.

Depreciation is also applied to sustaining CAPEX.

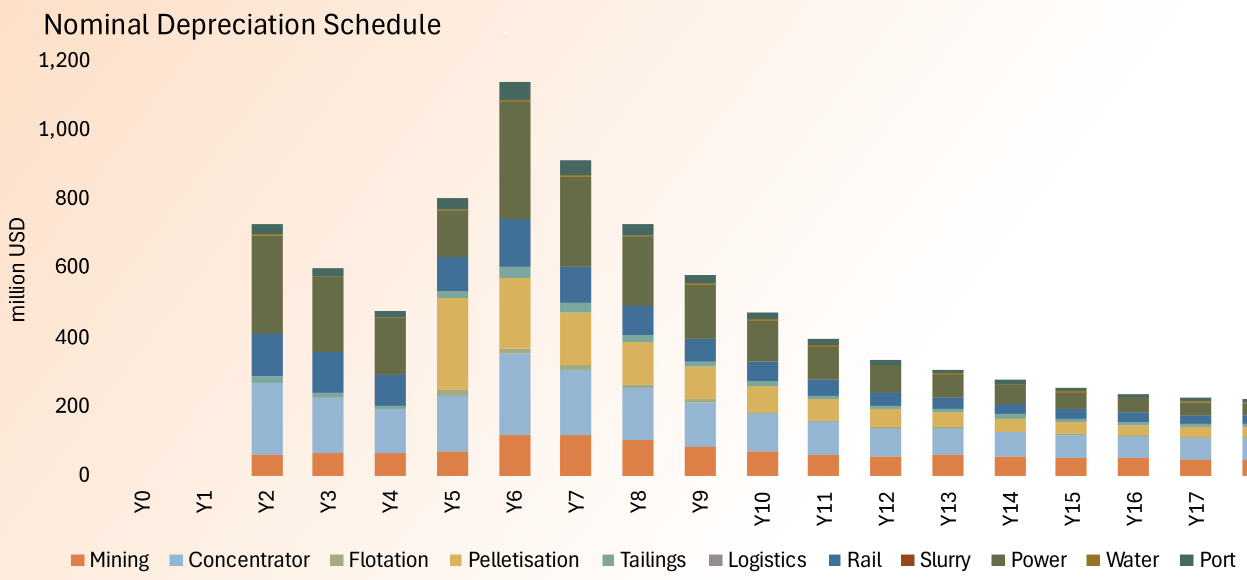


Figure 72: Nominal Depreciation Schedule - Scenario A1

This methodology aligns with standard mining industry practices in Newfoundland Labrador and provides an appropriate basis for investment evaluation at the conceptual study level, feeding directly into taxable income and cash flow projections for the overall project economic assessment.

8.3.3 Life-of-Mine Cash Flows

A Discounted Cash Flow financial model was developed and used to evaluate multiple operating strategies and production targets, see below for the cash flows over life-of-mine.

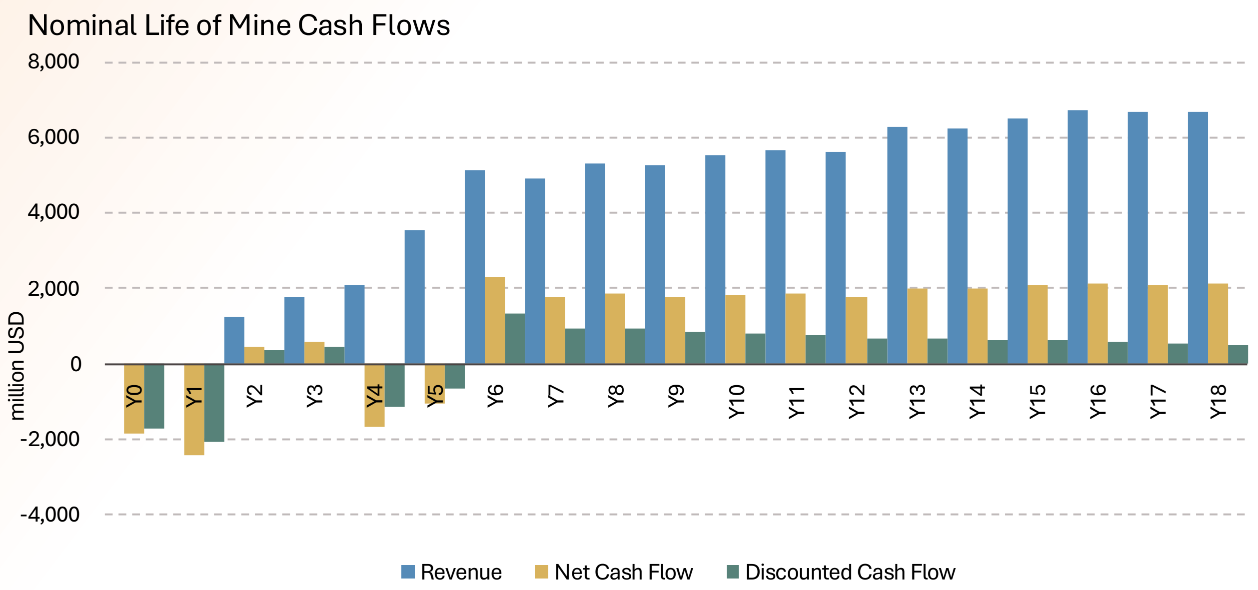


Figure 73: Nominal Life-of-Mine Cash Flows - Scenario A1

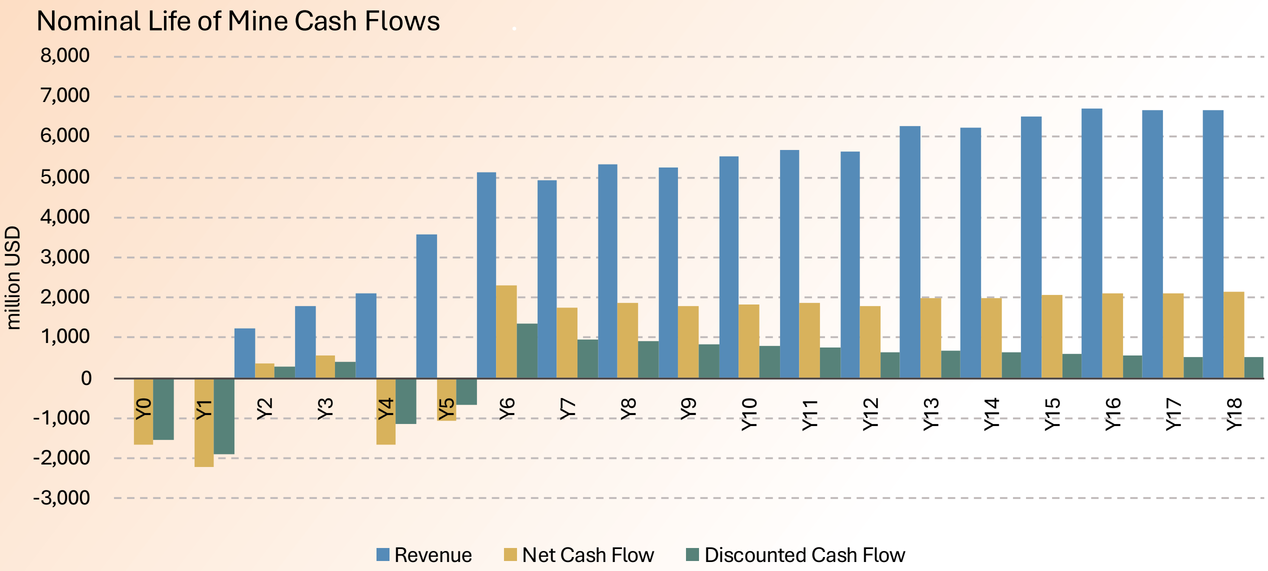


Figure 74: Nominal Life-of-Mine Cash Flows - Scenario B5

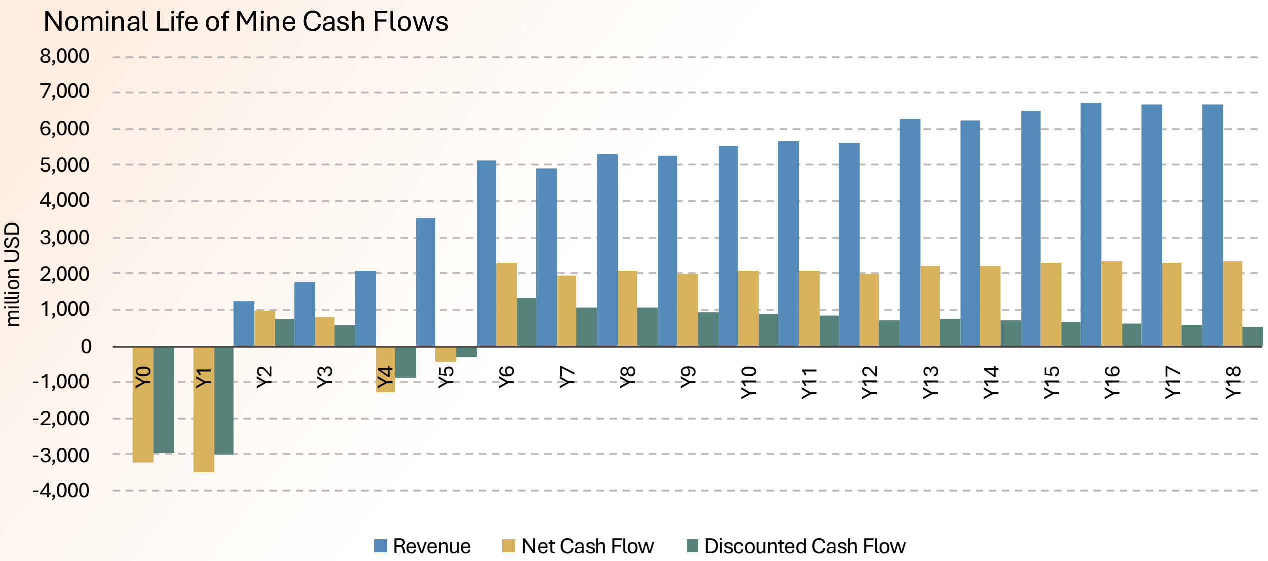


Figure 75: Nominal Life-of-Mine Cash Flows - Scenario C9

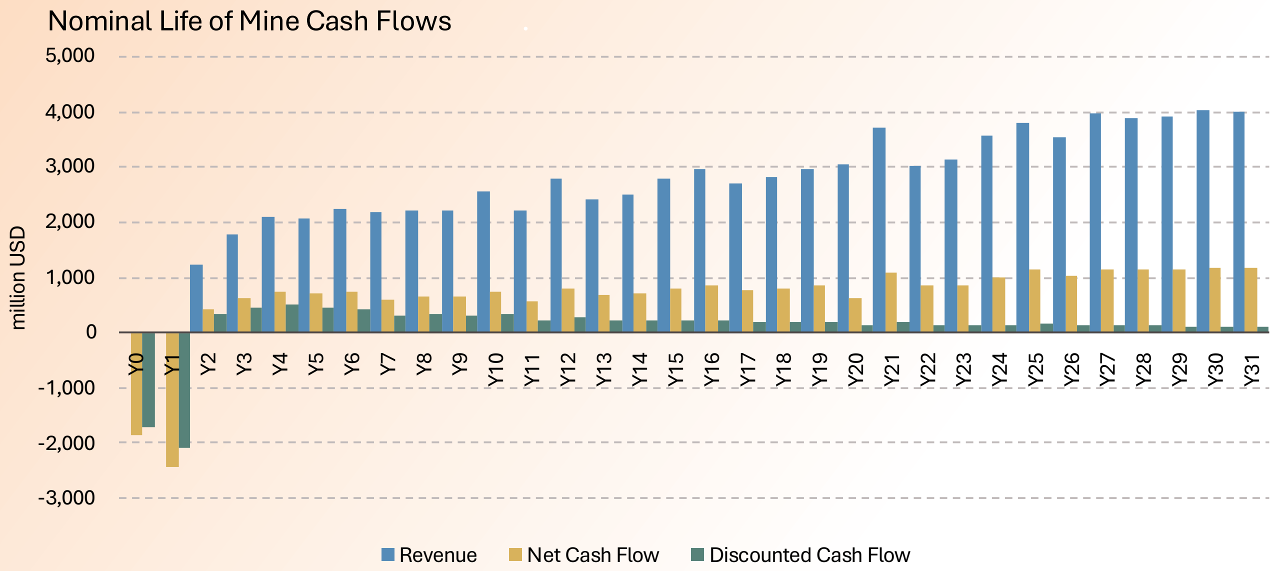


Figure 76: Nominal Life-of-Mine Cash Flows - Scenario D17

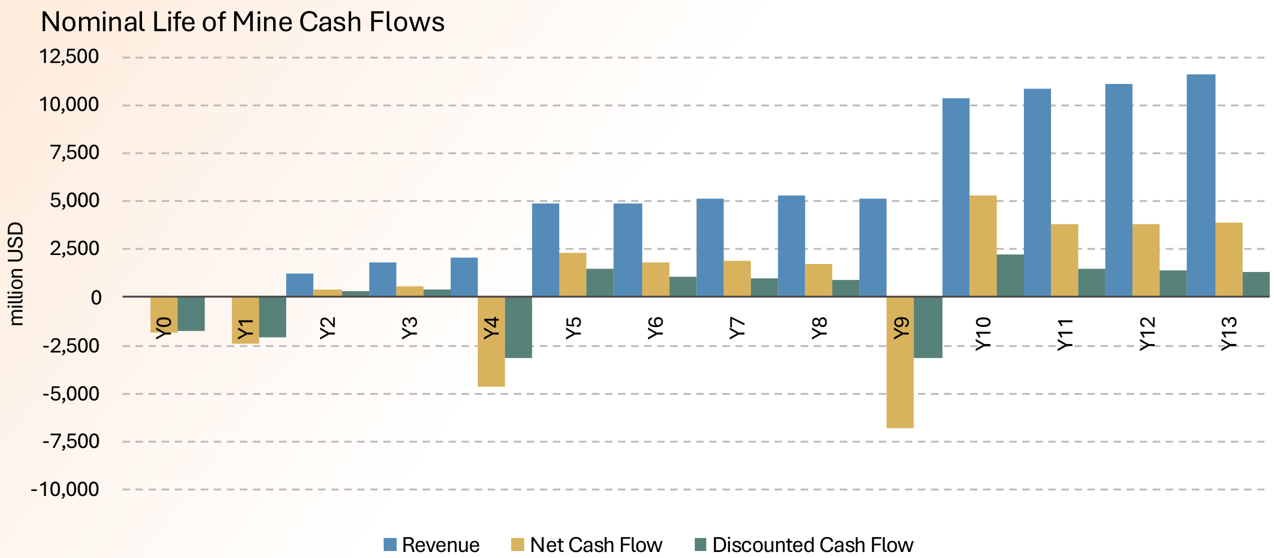


Figure 77: Nominal Life-of-Mine Cash Flows - Scenario E129

The model includes separate modules for mining, processing, tailings management, infrastructure, rail, marketing and other. A full mass and water balance is incorporated with processing yields from test work reflected accurately. Carbon dioxide emission intensities for the different fuel types and electricity sources are based on Quebec and Newfoundland Labrador Government guidelines, even though the actual electricity consumption will be based on 100% renewable energy. The discrepancy in the NL numbers for electricity will be queried with responsible bodies in a later study phase.

Diesel consumption for mining fleet and rail has been based on public data, including the 2012 PEA, and processing electricity requirements calculated from test work data, metallurgical process models and verified using published Bond work formulae.

Pelletising fuel consumptions was modelled using finite element process models, and labour requirements for the different plant sections were based on 2012 data as well as more recent benchmarks, e.g. labour requirements on a modern straight-grate pelletising facility.

Long term price forecasts for 62% Fe and 65% Fe products, together with pellet premiums are based on Wood Mackenzie price forecasts. No published data for DR concentrate product premiums could be sourced and has been based on pro-rata premiums from the published Fastmarkets 67.5% Fe premiums for blast furnace concentrates.

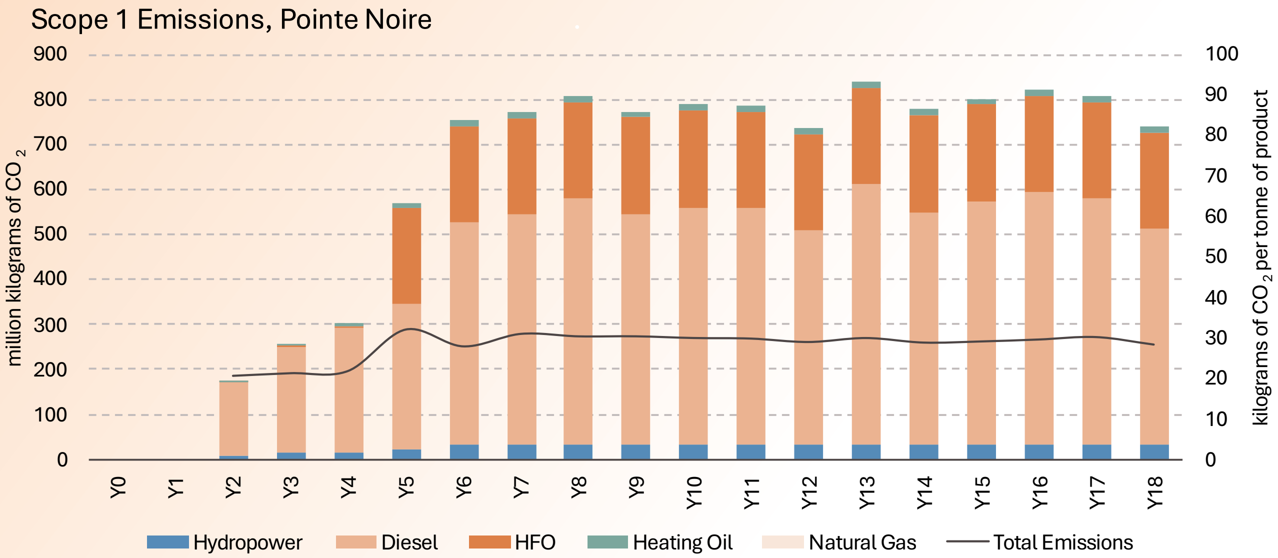


Figure 78: Scope 1 Emissions at Pointe Noire - Scenario A1

8.3.4 Terminal Value Estimates

At the end of the Life of Mine (**LOM**), each scenario is associated with a Terminal Value which reflects the value of the future production of the Iron Bear mine, after the end of the explicit period of forecast. The continued production of the mine beyond the LOM is constrained by the amount of Inferred mineral resource which is eventually converted to the Indicated category. The level of conversion is uncertain and depends on future exploration activities and other geological factors, therefore a conservative approach to Terminal Value estimation is recommended.

The total Inferred mineral resource is currently 14.5 billion tonnes at 29.44% Fe. Utilising a conservative conversion rate of 20% from Inferred to Indicated mineral resource, would yield greater than 2.8 billion tonnes of additional Indicated mineral resource – sufficient to support an additional life of mine of 30-years in the base case 25 Mt p.a. scenario. This assumes an 80% loss rate which has been deemed improbable, and as such Cyclone is confident that additional exploration holds a high probability to substantially improve the volume of Indicated mineral resource and therefore support reasonable assumptions for a terminal value estimation.

Three methods were used to estimate the Terminal Value for each production target scenario:

1. **Perpetuity Method assuming a 2% growth rate:**

   This is the most common method for estimating a Terminal Value. The stable FCF at the final year of production is assumed to persist 'ad infinitum' with a 2% growth rate. The additional FCF are discounted back to year 0. This method is not well adapted for mining as this assumes an infinite mineral resource, however, remains an industry standard.

2. **Value of 'ore in the ground' method:**

   This method is commonly used for early-stage mining projects and is based on allocating a value to each tonne or mineral resource in the ground. Typically, this is done by estimating the net margin for each tonne of ore mined (assuming realistic yield and mining losses) with an appropriate discount reflecting the stage of the project. In the case for Iron Bear, the financial modelling for Scenario A1, Base Case, delivers an average margin of USD 36/t of mineralised material. Considering the current scoping study phase, we have elected to apply a conservative 90% discount, resulting in a value of USD 3.6/t of mineralised material value in the ground. This ratio is applied to remaining mineralized material in the ground at the end of the explicit period (**LOM**) and then discounted back to year 0.

3. **Non-Perpetuity Method with 20 years extension and 0% growth rate:**

   This method is similar to the first method in that it assumes that the final year of production cash flows are extended into the future. However, the projection period is limited to twenty years (which has been deemed reasonable considering the existing volume of Inferred mineral resource estimate at the end of the LOM period) with no growth applied.

Table 46: : Terminal Value Estimates

			TERMINAL VALUE (USD million)		
SCENARIO	**PRODUCTION**	**LOM (Yr)**	**Perpetuity Method**	**Value in the Ground**	**Non-Perpetuity Method**
A1	BASE - 25 Mt p.a.	18	7,827	11,746	4,882
B5	BASE - 25 Mt p.a.	18	7,836	11,746	4,887
C9	BASE - 25 Mt p.a.	18	8,625	11,746	5,380
D17	LOW - 12.5 Mt p.a.	31	1,225	3,992	764
E129	HIGH - 50 Mt p.a.	13	20,716	17,338	12,921

The Non-Perpetuity Method delivers the lowest Terminal Value estimates and the Value in the Ground the highest. Given that the project is at the scoping study, the most conservative method has been selected to estimate the value of the production of the Iron Bear Mine after the explicit forecast period.

8.3.5 Net Present Value

The results presented in this section are primarily for the preferred 25 Mt p.a. Production Target (**Base Case**) configuration. It is assumed to operate under the unconstrained production schedule scenario except where explicitly reported otherwise such as where sensitivity analysis results are reported for the constrained operating schedule.

The NPV for the project is US$9,792M at an 8% nominal discount rate with 1 July 2025 valuation date. The IRR is 18.51% and the payback period from 1st production is 7 years.

Table 47 presents the NPV for the five chosen scenarios. The NPV reduces to US$3,349M at the 12.5 Mt p.a. BF Concentrate production scenario (**Low Case**) with a 14.8% IRR and a 6 year pay-back period from 1st production.

Table 47: Net-Present-Values of Iron Bear Project (all scenarios)

		A1	B5	C9	D17	E129
Production Target	-	BASE	BASE	BASE	LOW	HIGH
NPV	USD $M	**9,792**	**10,057**	**10,327**	**4,113**	**14,543**
IRR	%	18.51%	19.28%	16.82%	14.99%	19.15%
Pre-Production CAPEX	USD $M	4,264	3,879	6,653	4,264	4,264
Total CAPEX	USD $M	10,296	9,911	12,010	5,026	19,287
FOB OPEX Yr. 6 BF Concentrate	USD / t	45.7	45.7	29.8	47.4	49.6
FOB OPEX Yr. 6 DR Pellets	USD / t	67.1	67.1	51.3	-	71.1

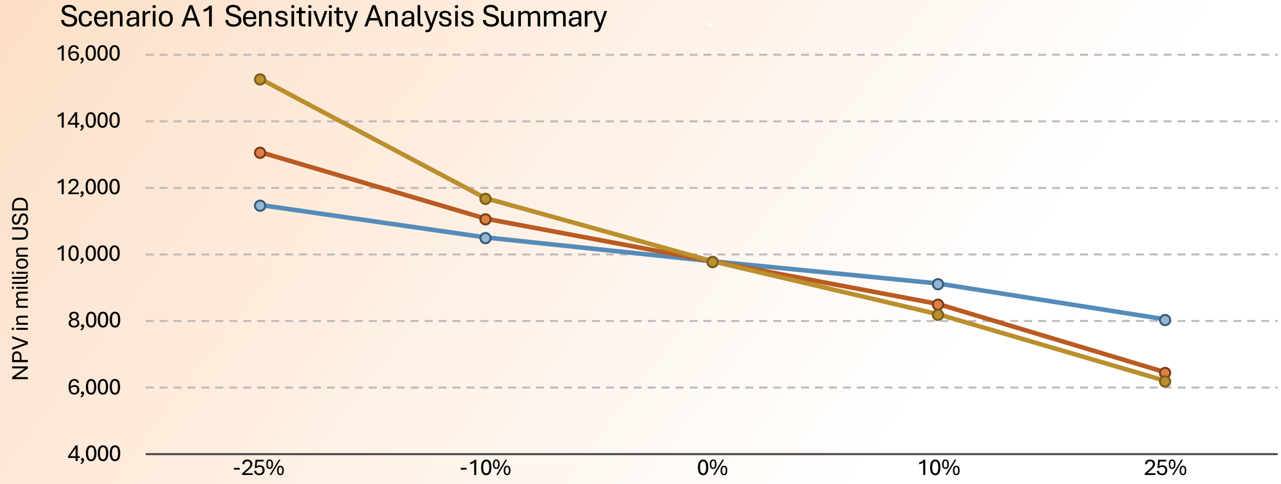
8.3.6 Sensitivity Analysis

The sensitivity analysis employs both univariate and multivariate approaches consistent with AACE International guidelines for Class 5 estimates. Key variables are tested at ±10% and ±25% ranges, reflecting typical input uncertainty bands for scoping-level studies. These ranges align with industry experience for similar magnetite iron ore projects in established mining jurisdictions, where parameter variations of this magnitude are commonly observed between study phases and actual operating performance.

The sensitivity analysis for Scenario A1, the Base Case, with the following options is presented below:

- **Scenario B5** – 25Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Rail - with Churchill Falls power (**change power source**)
- **Scenario C9** – 25Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Slurry Pipeline - with Hydro/Wind power (**change rail to slurry**)
- **Scenario D17** - 12.5Mt p.a. of Concentrator Capacity - via Rail - with Hydro/Wind power (**reduction in capacity**)
- **Scenario E129** - 50Mt p.a. of Concentrator Capacity / with 9.2Mt p.a. of Pelletising Capacity - via Rail - with Hydro/Wind power (**increase in capacity**)

The project economics are most sensitive to iron ore prices, capital costs, and processing recoveries. A 25% reduction in iron ore prices reduces NPV by approximately 30%.



	-25%	-10%	0%	10%	25%
CAPEX	$11,501	$10,482	$9,792	$9,102	$8,031
OPEX	$13,055	$11,095	$9,792	$8,489	$6,444
WACC (8%)	$15,275	$11,700	$9,792	$8,184	$6,218

Figure 79: Sensitivity Analysis of CAPEX, OPEX, and WACC - Scenario A1

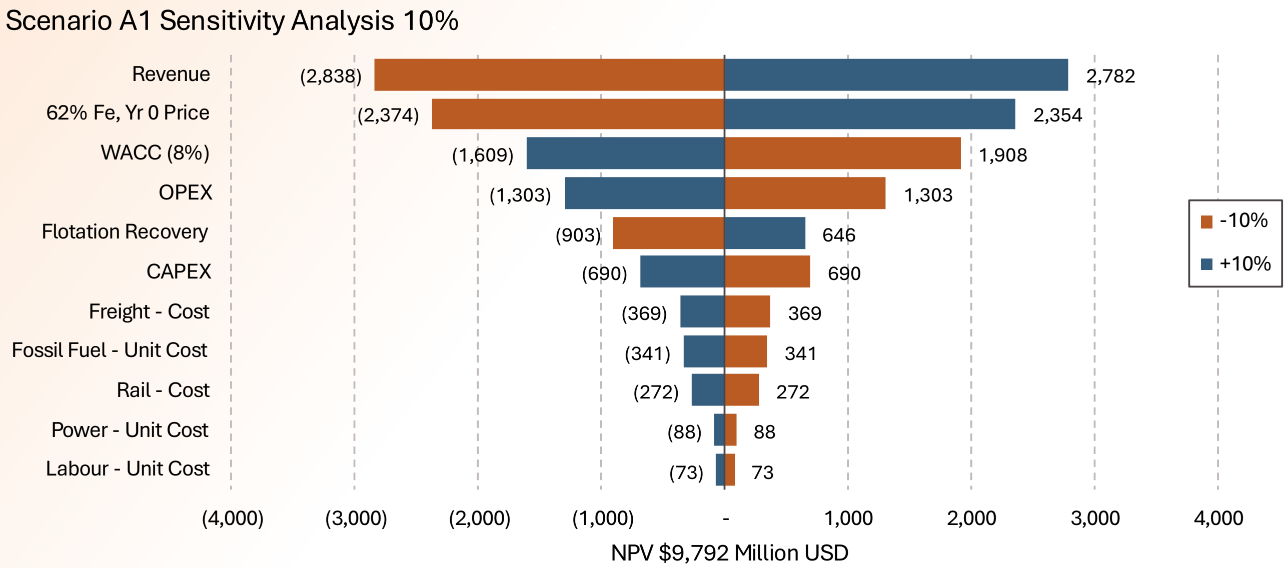


Figure 80: Sensitivity Analysis +/- 10% - Scenario A1

Scenario A1 Sensitivity Analysis 25%

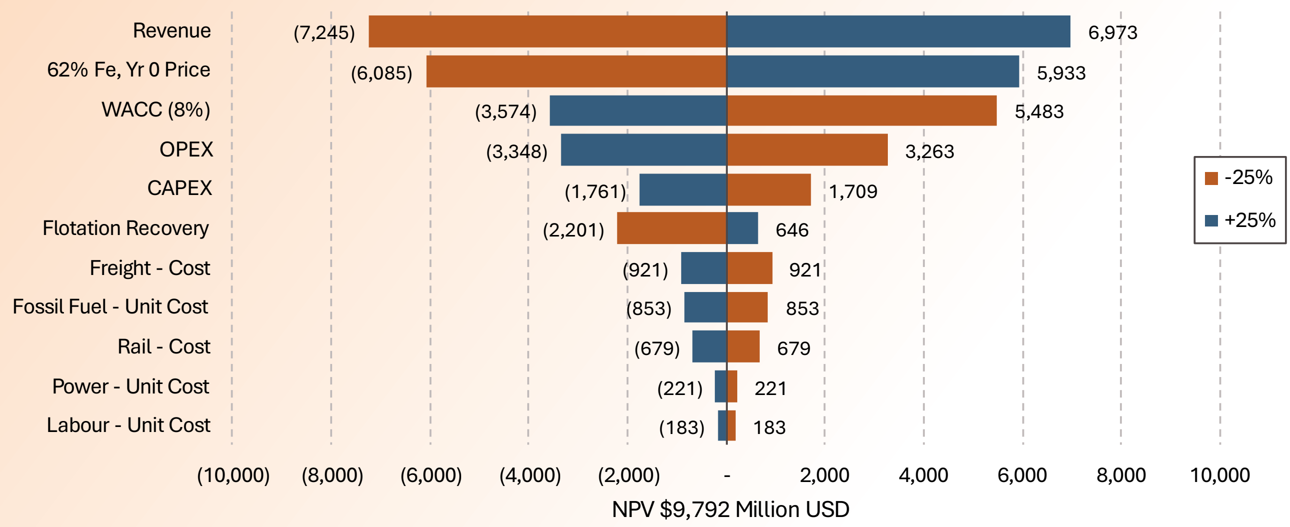


Figure 81: Sensitivity Analysis +/- 25% - Scenario A1

Scenario B5 Sensitivity Analysis 25%

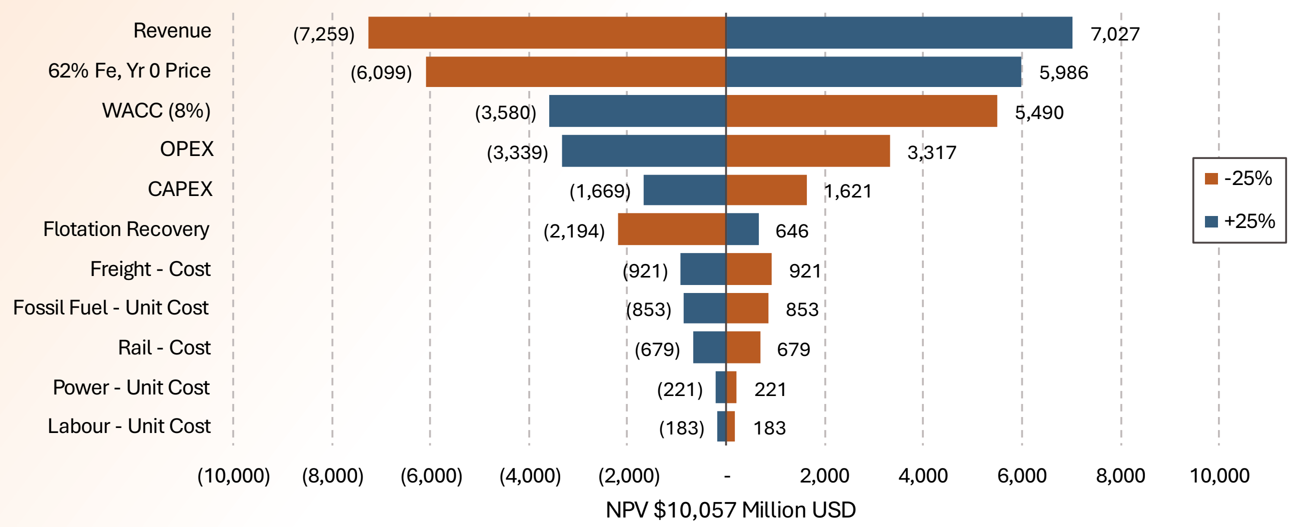


Figure 82: Sensitivity Analysis +/- 25% - Scenario B5

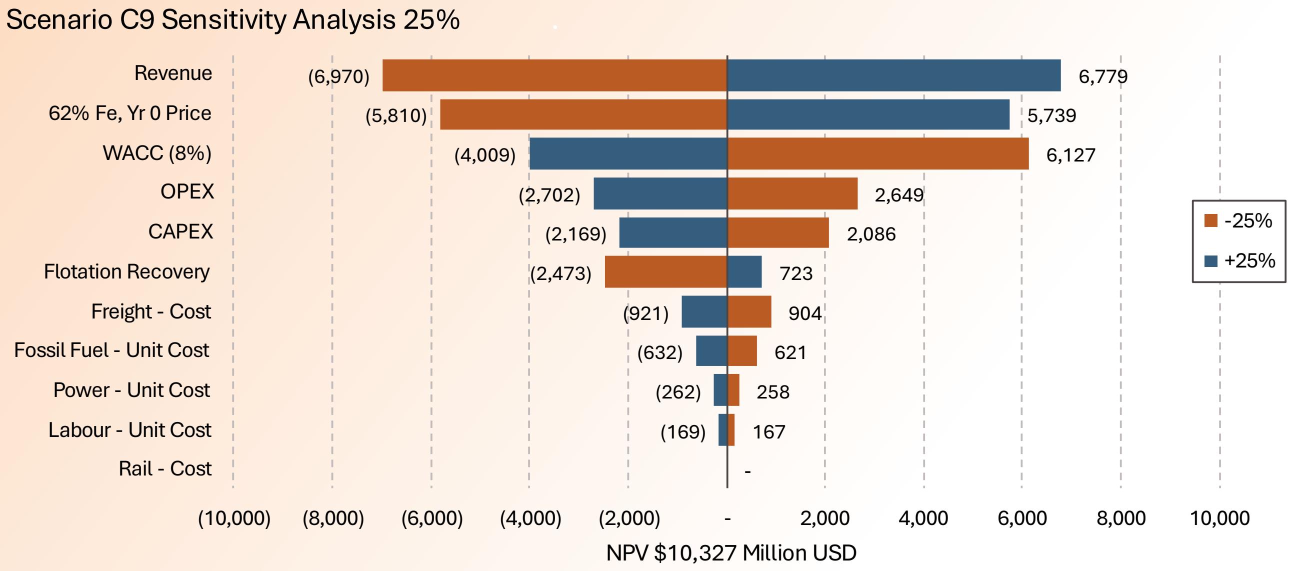


Figure 83: Sensitivity Analysis +/- 25% - Scenario C9

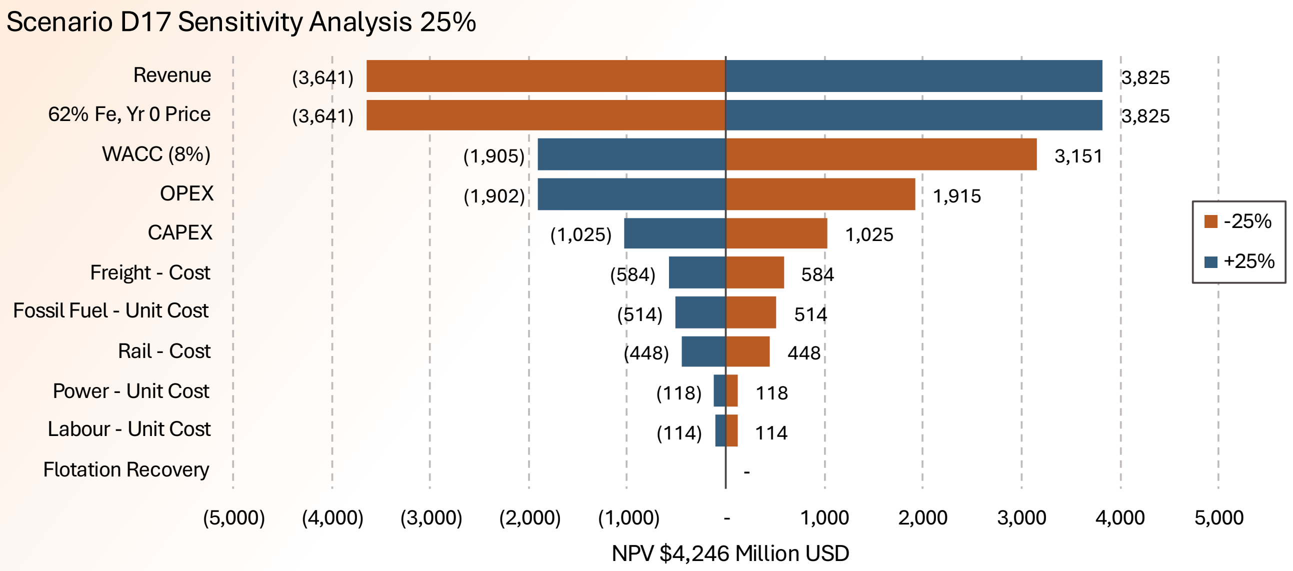


Figure 84: Sensitivity Analysis +/- 25% - Scenario D17

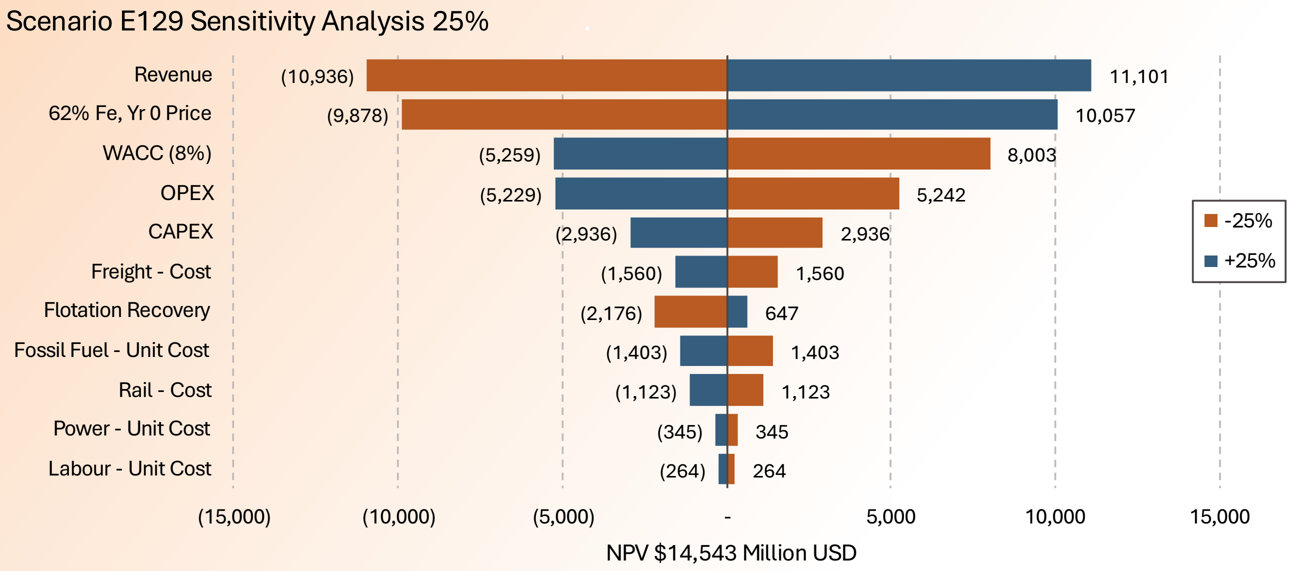


Figure 85: Sensitivity Analysis +/- 25% - Scenario E129

8.4 Project Funding

Based on the results of this study, the Project will require additional engineering studies and working capital requirements of approximately $120M USD and pre-production capital investment of approximately $4,426M USD.

The Company believes the high-quality iron ore concentrate specifications demonstrated in this study will be instrumental in facilitating project development and funding. The favourable economics presented in this study provide the Board with confidence that project financing can be secured when needed.

Funding is anticipated to be obtained through the existing agreement with Vale, contingent upon Vale's decision to proceed to Phase 2. This partnership structure provides an established framework for project financing and development, leveraging Vale's expertise and financial capacity in iron ore operations.

In the event that Vale elects not to proceed to Phase 2, alternative funding mechanisms will be pursued through established project financing frameworks, incorporating debt facilities, equity investment, strategic partnerships, or partial divestment of project interests. Any such alternative financing arrangements would be contingent upon achieving critical project development objectives and regulatory approvals.

While the Company maintains a positive outlook regarding funding prospects through the Vale agreement, standard risks associated with joint venture agreements remain applicable. There can be no guarantee that Vale will proceed to Phase 2, or that required development capital will be available on acceptable terms within the necessary timeframes.

Given these inherent uncertainties in project financing, investors are cautioned against making investment decisions based exclusively on this study's findings. The availability and terms of future funding remain subject to Vale's Phase 2 decision, project advancement, and broader economic factors beyond the Company's control.

8.5 Forward Work Plan

The next phase of study, should this opportunity progress to the feasibility phase, will require a higher level of detail to be developed for both the operating and capital cost estimates. The higher level of detail only becomes feasible once a single go-forward alternative is selected for further study. It is expected that an integrated mine production schedule will also be developed. The current mine production schedule assumed DR concentrate will be sold to export customers.

8.6 Project Risks

The future performance of the Iron Bear Project may be influenced by a range of factors, many of which are largely beyond the control of the Company and the Directors. The key risks that have a direct influence on the Company, its Project and activities are set out below (The risks identified below are not exhaustive and additional risks may emerge during project advancement).

The company believes that there are reasonable grounds that project can address all identified risks and receive all development requirements within expected timeframes.

8.6.1 Environmental Risks

Groundwater and Surface Water: Magnetite mining involves dewatering operations, which can impact groundwater levels and potentially affect nearby ecosystems. Managing water quality, including potential contamination from acid mine drainage, is crucial.

Waste Management/Tailings Facility: Large volumes of waste rock and tailings are generated in magnetite processing, requiring careful planning for disposal and potential environmental impacts. Limited tailings testwork has been completed to date and the current concept design is based on dry tailings projects used in coal and other hematite iron ore operations.

Dust and Noise: Mining and processing activities can generate dust and noise, impacting surrounding communities and requiring mitigation measures. Given the remote location of the Iron Bear mineral resources, the Company considers this risk to be relatively low.

Biodiversity: Projects need to assess and mitigate potential impacts on flora and fauna, including threatened species, during both construction and operation. While further environmental studies are required, no critically threatened species have so far been identified.

Greenhouse Gas Emissions: Magnetite projects can have higher Scope 1 emissions than some other iron ore operations due to the energy-intensive nature of processing. The Company however believes that the significant reliance on renewable energy, in particular hydro and wind, will lessen greenhouse gas emissions.

8.6.2 Operational Risks

Processing Challenges: Magnetite ore requires specialized processing, including grinding, magnetic separation and reverse flotation to produce DR and BF concentrates. Unexpected technical issues during processing can lead to delays and cost overruns.

Infrastructure Development: The Iron Bear Project will require significant investment in new infrastructure, including roads, power supply, water supply, and potentially port facilities. Access to reliable and affordable base load power is critical to the success of Iron Bear.

Geotechnical Risks: Ground conditions and potential for slope instability in open pit mines require careful assessment and management. Given the very low stripping rations compared to other magnetite projects, the Company considers geotechnical risks at the Iron Bear Project to be relatively low.

Mine Development: Possible future development of mining operations at the Iron Bear Project is dependent on a number of factors including, but not limited to, the acquisition and/or delineation of economically recoverable mineralisation, favourable geological conditions, receiving the necessary approvals from all relevant authorities and parties, seasonal weather patterns, unanticipated technical and operational difficulties encountered in extraction and production activities, mechanical failure of operating plant and equipment, shortages or increases in the price of consumables, spare parts and plant and equipment, cost overruns, access to the required level of funding and contracting risk from third parties providing essential services.

Resource and reserves: Whilst the Company intends to undertake additional exploratory work with the aim of defining further resources and upgrading existing inferred to indicated resources, no assurances can be given that additional exploration will result in the determination of a resource.

Labour and Skills: Securing skilled personnel for both construction and operation, especially in remote locations, can be a challenge. The Iron Bear project is a large-scale iron ore development that demands highly qualified personnel particularly in the areas of metallurgy, logistics and community relations. There is no guarantee that the Company will be able to secure, either in its own right or through the Iron Bear Joint Venture, adequately skilled personnel. The Company has however secured a highly professional team with appropriate experience supported by human resources from Vale.

Supply Chain: Ensuring reliable supply of consumables, such as grinding media and reagents, is essential for continuous operation.

8.6.3 Financial Risks

Operating Costs: Operating costs, including energy consumption, reagent usage, and labour, can be significant and unforeseen increases could adversely affect the financial viability of the Iron Bear Project.

Market Volatility: Iron ore prices can fluctuate, impacting the profitability and viability of magnetite projects. Markets for DR concentrate in particularly are in their nascent stages so there are significant risks around price volatility in the early phases of the project life cycle.

8.6.4 Other Risks

Cultural Heritage and Community Relations: Respecting and safeguarding cultural heritage—both physical and intangible—is a critical responsibility during project development. Iron Bear must actively engage with Indigenous communities that have asserted ancestral and cultural connections to the project area. This collaboration is essential to proactively identify culturally significant elements and determine appropriate protection measures. Given the number of Indigenous groups involved, cultural heritage remains a significant area of risk. Building and maintaining respectful, transparent and constructive relationships with these communities is vital to the long-term success of Iron Bear's operations.

Regulatory Approvals: Obtaining necessary environmental and other regulatory approvals can be time-consuming and complex. Therefore, if the Company discovers an economically viable mineral deposit that it intends to develop, it will, among other things, require various approvals, licence and permits before it will be able to mine the deposit. There is no guarantee that the Company will be able to obtain all required approvals, licenses, and permits.

09
APPENDICES

9. Appendices

Table 48: JORC Table 1 - Section 1

Section 1 Sampling techniques and data.		
(Criteria in this section apply to all succeeding sections)		
Criteria	**JORC Code explanation**	**Commentary**
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	For the 2011 drilling, sampling was done on a geological basis, with mostly 3 m samples split coaxially using a mechanical core splitter. Neither field standards or blanks were inserted into the sample stream, but core duplicates were collected. Samples were marked in the core trays using aluminium tags etched with the sample numbers and stapled to the core tray at the end of each sample interval. Neither hand-held measurements of core magnetic susceptibility nor core photography were completed. Core for the 2012 programme was taken to a dedicated core yard where it was similarly split, sampled and photographed.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	The 2011 diamond core drilling programme comprised 42 BTW (42.0 mm Ø) drill holes for 5,662.3 m The 2012 programme consisted of 72 drillholes for 22,359 m at mostly BTW and then NQ (47.6 mm Ø)
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Drill sample recovery was recorded for all drillholes, measuring block to block core recovery against stated depth. The Competent Person considers that due to the nature of the drilling and geology, sample bias is unlikely to result from poor recovery.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged.	All core was logged qualitatively and quantitatively for the 2012 downhole geophysics exercise. For the 2011 drilling, logging recorded drillhole azimuth and dip, rock code, rock description, foliation/banding angle with respect to core axis and estimate of magnetite by unit. The above was undertaken with the 2012 drilling in addition to geotechnical logging, core photography and downhole geophysics. The Competent Person considers that the logging protocols are sufficient to support estimation of a Mineral Resource.

Subsampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all subsampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled.	For the 2011 programme, core was split in the field with a mechanical splitter. For the 2012 programme, core was sawn in half at a dedicated core yard with a diamond saw. Half core was submitted for assay, with some whole core being submitted for both assay, density determination and metallurgical testing. In all cases, appropriate blanks, standards, and duplicates were taken or added to demonstrate sample representativity and identify any sampling bias. The Competent Person considers to be appropriate the measures taken to demonstrate that sample protocols were appropriate and unbiased.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Samples were sent to one of three laboratories, with standards, blanks, duplicates, and cross-laboratory checks undertaken to an appropriate standard. Geophysical tools were calibrated at site with the exception of density, where a relative measurement was made. The Competent Person considers the measures taken to be appropriate to support estimation of a Mineral Resource.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	Samples were verified with random duplicate samples taken by an independent Mineral Resource estimation consultant and cross-check laboratory assaying. The Competent Person considers the measures taken to be appropriate to support estimation of a Mineral Resource.
Location of data points	Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	The 2012 drilling campaign was surveyed by handheld GPS, with resurveying of collars being undertaken by professional surveyor in 2012. The licences are defined by NAD27 UTM datum and various working grids are NAD83 or NAD84 datum and the relationship between NAD27 and the later systems is not completely defined for the region. The Competent Person understands that there are no material errors in location.
Data spacing and distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	Most cross sections contained at least three holes, and many had more than ten holes passing through the mineralised zones. Sampling was undertaken on lithological boundaries, composited to 3m intervals in all cases.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Drilling was oriented in the field to intersect mineralisation perpendicularly, according to field observations of its strike. The Competent Person considers this to be appropriate and does not consider that this approach will introduce material bias.
Sample security	The measures taken to ensure sample security.	Samples were transported from the field to a secure yard in Schefferville where they variously processed and stored. All work was undertaken under a Supervising Geologist.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The Cap-Ex drilling, sampling and assaying protocols were independently checked by the Mineral Resource estimation consultant in 2013. No material discrepancies or biases were identified.

Table 49: JORC Table 1 - Section 2

Section 2: Reporting of Exploration Results		
(Criteria in this section apply to all succeeding sections)		
Criteria	**JORC Code explanation**	**Commentary**
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	Iron Bear comprises ten graticular licenses totalling 7,275 ha under applicable Labrador and Newfoundland mining law. Six of the ten licenses were staked by prior owner, Cap-Ex and the other four Licenses were acquired through purchase and sale agreements and remnant royalties remain. Four Aboriginal parties claim Native Title over various parts of Iron Bear.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Iron Bear was originally explored by IOCC and the Canadian Government. Most of the exploration was undertaken by Cap-Ex Iron Ore, of Vancouver, the predecessor company to M3 Metals Inc, vendor of the project.
Geology	Deposit type, geological setting, and style of mineralisation.	The deposit is a taconite banded ion formation of the Lake Superior type, partially metamorphosed to greenschist facies and subject to thrust faulting that has resulted in tectonic repetition and thickening of mineralisation.
Drillhole information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: • easting and northing of the drillhole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	Drilling information is not reported in this Release due to its volume and the fact that it has been comprehensively reported elsewhere (refer SEDAR, M3 Metals release 23 March 2013, CLE ASX Release 19 June 2023) Mineralised intersections have not been reported in detail because the Competent Person advises that reporting of magnetite mineralisation at Iron Bear is complicated by the complex structural geology of the deposit and the nature of reporting mineralisation based on both grade and metallurgical recovery. The Competent Person observes consistent broad intersections of recoverable magnetite, associated with haematite and is satisfied that the drilling information supports this interpretation.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	Drillholes were sampled according to geology and the resultant information composited into 3m composites for modelling, inclusive of internal waste. Magnetite grades were determined by Davis Tube or proprietary Satmagan analysis and compared to the results of downhole magnetic susceptibility measurements. This results in formation of a regression that estimated magnetite grade from total iron grade. The Mineral Resource estimate was based on assay results.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').	The structural geology of Iron Bear is complicated and there is observed to be considerable local variation in the orientation of drilling in relation to individual units. Drilling was undertaken as perpendicular as possible to the strike of the deposit, as measured at the location of each drill collar.

Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.	Diagrams are included at relevant sections in this Report. The Competent Person has taken and has attributed these diagrams from various material prepared by Haren, ResPot, Cyclone, Cap-Ex, WGM and M3 and has no reason to doubt their accuracy or veracity.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Mineralisation has been reported at a variety of cut-off grades and appropriate statistics are reported for the relevant elements
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	There have been various photogrammetric and geophysical surveys at Iron Bear at various times that have contributed to understanding of the geology of the deposit. These have been the subject of a recent intensive collation and interpretation campaign that has resulted in material improvements and extensions to the understanding of the continuity of both grade and geology. The Competent Person considers these to have been undertaken in an appropriate manner
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Mineralisation is open along strike in both directions and at depth, albeit truncated by basement at around 480m beneath the surface topography. The Competent Person recommends that the Indicated Mineral Resource be used to underpin an economic Scoping Study (as defined by the JORC Code) of the mineralisation.

Table 50: JORC Table 1 - Section 3

Section 3 Estimation and Reporting of Mineral Resources		
(Criteria in this section apply to all succeeding sections)		
Criteria	**JORC Code explanation**	**Commentary**
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	The drilling database was independently reviewed and audited by the Mineral Resource consultant using appropriate data verification algorithms.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	The Competent Person at the time of publishing the Mineral Resource Estimate had twice visited the Iron Bear project and had personally collected samples and verified reports and observations on which this Mineral Resource estimate relies. The Competent Person at the time of publishing the Mineral Resource Estimate had separately attended the St Johns offices of the Labrador Geological Survey and verified historic data.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	The Competent Person observes that the geology is locally complicated, but the overall taconite geology and distribution is well understood, at the scale of an Inferred and Indicated Mineral Resource applied to bulk mineralisation. The continuity of the mineralisation is considered to be good, based on the drilling, geophysical interpretation, geostatistical analysis and geological mapping. It is likely that further drilling will bring considerable detailed variation to sectional interpretation but is unlikely to change the overall understanding of the mineralisation.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource	The Mineral Resource estimate for Iron Bear is defined along approximately 10,000 m of strike length and a range of 5,000 to 7,500 m of width for the central portion, to a depth pf 400m.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non- grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units.	The Mineral Resource estimate for Iron Bear was prepared based on drillhole data to the end of 2012. The Mineral Resource is reported above 250 m elevation level (about 350 m from surface using block sizes of 20 mx x 100 my x 20mz and is based on results from 81 diamond drillholes totalling 23,735 m. Holes from earlier drilling were excluded if they did not intersect the entire mineralised zone. The drillhole spacing along the strike is approximately 600 m and the hole spacing on the cross sections varied from 60 m to about 250 m and with vertical depths ranging from of 50 m to 400 m. A modelling cut-off grade was applied at 10% magFe and used to create the constraining wireframes. Grade interpolation was based on equal length regular downhole composites of 3 m, generated from raw drillhole intervals. The original assay intervals were different lengths and required normalization to a consistent length. The statistical distribution of the %TFe and %magFe samples demonstrates good normal

	Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	distributions and no grade capping was used in the Mineral Resource estimation. Bulk density was determined from pulps of 315 samples using a gas comparison pycnometer. Experimental variograms were prepared using the composited assay dataset for magFe and TFe. Variograms were constructed from the average strike (140°) and the general dip (-20°NE) and a search ellipsoid was designed incorporating an axis of anisotropy and applied parameters to interpolate grade. An Ordinary Kriging algorithm was used to interpolate the blocks. Dynamic rotation was applied, based on thrust geometry and geophysical interpretation. Search ellipses were derived from variography at 1,750mX by 300mY by 50mZ. For each interpolation, the number of 3m informing composites was set at: Minimum = 5 Maximum = 20 Maximum per hole = 20 The Competent Person considers that this is appropriate at this level of confidence and in this style of mineralisation. The geological interpretation was extended beyond the more densely drilled parts of the deposit in accordance with confidence in the data compilation.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are reported on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	Cut-off grades were applied based on observation of nearby operations in similar geology and the presence of a natural magnetite cut-off in the taconite.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	No mining assumptions have been made other than that were it to be mined, Iron Bear would engage conventional cold-weather truck-and- shovel iron ore mining techniques, as practised over an extensive period elsewhere in the region.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	Metallurgical assessments indicates that the magnetite at Iron Bear is readily separable using conventional wet magnetic separation techniques resulting in a 95.5% recovery to produce a 68.9% Fe concentrate at 3.4% SiO_2 content. The produced concentrate is amenable to further upgrade using reverse flotation methods to 70.6% Fe and 1.2% SiO_2 at an overall 88.9% magnetite recovery including a secondary 67.0% Fe, 4.6% SiO_2 product. Bond Work Index (BWi) is indicated at around 16.7 kWh/t.

Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	The M3 Metals PEA examined potential tailings disposal options and did not report any impediment to tailings disposal at a preliminary level.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Bulk density was estimated into the block model by using a regression based on total iron content. The regression was based on laboratory specific gravity measurements of core and estimated bulk densities determined by downhole geophysics.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity, and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit	No audits or reviews have been undertaken of the current Mineral Resource estimate. It will be revised during Cyclone's proposed Scoping Study process.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	The Competent Person considers the Mineral Resource estimate to be an adequate global estimation of the mineralisation, which shows good geological continuity between drill sections. The mineralisation has been projected beyond the more densely drilled sections, based on this geological and geostatistical continuity and the evidence of geophysics and geological mapping. Statistical analysis of the data supports this view . Locally, the deposit shows great variability as a result of the mineralisation being stacked by thrust faults. This will require resolution by further drilling but the Competent Person does not consider it to be material for a global estimate in an iron ore deposit. Further drilling and resolution of local geology is required to increase confidence to an Indicated categorisation or better.

Table 51: List of drillholes used for metallurgical test work

Database Hole ID	From	To	Length	Mass (kg)
DDH103-003	15.6	20.9	5.3	11.01
DDH103-003	20.9	26.7	5.8	12.05
DDH103-003	26.7	32.7	6	12.47
DDH103-003	32.7	38.5	5.8	12.05
DDH103-003	38.5	44.5	6	12.47
DDH103-003	44.5	50.5	6	12.47
DDH103-003	50.5	56.4	5.9	12.26
DDH103-003	69	74.9	5.9	12.26
DDH103-003	74.9	80.2	5.3	11.01
DDH103-003	80.2	85	4.8	9.98
DDH103-003	85	92.3	7.3	15.17
DDH103-003	92.3	98	5.7	11.85
DDH103-003	98	103.4	5.4	11.22
DDH103-003	103.4	108	4.6	9.56
DDH103-003	108	115.6	7.6	15.79
DDH103-003	115.6	121.5	5.9	12.26
DDH103-003	121.5	127.3	5.8	12.05
DDH103-040	17.3	21.6	4.3	8.94
DDH103-040	21.6	25.8	4.2	8.73
DDH103-042	44.3	49.8	5.5	11.43
DDH103-042	55.8	61.5	5.7	11.85
DDH103-042	55.8	61.5	5.7	11.85
DDH103-042	61.5	67.9	6.4	13.30
DDH103-042	67.9	72.9	5	10.39
DDH103-044	76.6	82.2	5.6	11.64
DDH103-044	82.2	87.9	5.7	11.85
DDH103-044	87.9	93.6	5.7	11.85
DDH103-044	93.6	99.5	5.9	12.26
DDH103-044	99.5	105.3	5.8	12.05
DDH103-044	105.3	110.8	5.5	11.43
DDH103-044	110.8	117.3	6.5	13.51
DDH103-066	55.5	61.4	5.9	12.26

DDH103-066	84	89	5	10.39
DDH103-066	118.9	124.5	5.6	11.64
DDH103-066	157	162.6	5.6	11.64
DDH103-066	162.6	168.5	5.9	12.26
DDH103-066	168.5	173.4	4.9	10.18
DDH103-066	173.4	179.3	5.9	12.26
DDH103-066	179.3	185	5.7	11.85
DDH103-066	185	190.8	5.8	12.05
DDH103-066	190.8	196.6	5.8	12.05
DDH103-066	196.6	202.4	5.8	12.05
DDH103-066	202.4	208.3	5.9	12.26
DDH103-066	208.3	214.2	5.9	12.26
DDH103-066	214.2	220	5.8	12.05
DDH103-066	220	225.6	5.6	11.64
DDH103-066	225.6	231.6	6	12.47
DDH103-083	160.2	165.9	5.7	11.85
DDH103-083	165.9	171.8	5.9	12.26
DDH103-083	171.8	177	5.2	10.81
DDH103-084	8.2	14.9	6.7	13.92
DDH103-084	14.9	20.7	5.8	12.05
DDH103-084	20.7	26.3	5.6	11.64
DDH103-084	26.3	31.8	5.5	11.43
DDH103-084	31.8	37.7	5.9	12.26
DDH103-084	37.7	43.4	5.7	11.85
DDH103-084	43.4	48.7	5.3	11.01
DDH103-084	48.7	54.6	5.9	12.26
DDH103-084	61	64.7	3.7	7.69
DDH103-084	64.7	72	7.3	15.17
DDH103-084	72	77.8	5.8	12.05
DDH103-084	77.8	83.5	5.7	11.85
DDH103-084	83.5	89	5.5	11.43
DDH103-084	89	94.7	5.7	11.85
DDH103-084	94.7	100.4	5.7	11.85
DDH103-084	100.4	106.4	6	12.47

DDH103-084	106.4	112.1	5.7	11.85
DDH103-084	112.1	118.1	6	12.47
DDH103-084	118.1	123.8	5.7	11.85
DDH103-084	123.8	129.7	5.9	12.26
DDH103-084	129.7	135.6	5.9	12.26
DDH103-084	131.8	137.5	5.7	11.85
DDH103-084	135.6	141.2	5.6	11.64
DDH103-084	141.2	147.2	6	12.47
DDH103-084	147.2	153.2	6	12.47
DDH103-084	153.1	159.6	6.5	13.51
DDH103-084	159.6	164.3	4.7	9.77
DDH103-084	164.3	170.3	6	12.47
DDH103-084	170.3	176	5.7	11.85
DDH103-084	176	181.8	5.8	12.05
DDH103-144	49.7	54.1	4.4	9.14
DDH103-144	54.1	58.6	4.5	9.35
DDH103-144	58.6	62.9	4.3	8.94
DDH103-144	62.9	67.2	4.3	8.94
DDH103-144	67.2	71.6	4.4	9.14
DDH103-144	71.6	76	4.4	9.14
DDH103-144	76	80.5	4.5	9.35
DDH103-144	80.5	85	4.5	9.35
DDH103-144	85	89.2	4.2	8.73
DDH103-144	89.2	93.7	4.5	9.35
DDH103-144	93.7	98.1	4.4	9.14
DDH103-144	98.1	103.3	5.2	10.81
DDH103-144	103.3	107.7	4.4	9.14
DDH103-144	107.7	112	4.3	8.94
DDH103-144	112	116.4	4.4	9.14
DDH103-144	116.4	120.8	4.4	9.14
DDH103-144	120.8	125.4	4.6	9.56
DDH103-144	125.4	129.7	4.3	8.94
DDH103-144	129.7	134.1	4.4	9.14
DDH103-144	134.1	138.6	4.5	9.35

DDH103-144	138.6	143	4.4	9.14
DDH103-144	143	147	4	8.31
DDH103-144	147	151.7	4.7	9.77
DDH103-144	151.7	156.3	4.6	9.56
DDH103-145	107.5	111.8	4.3	8.94
DDH103-145	138.3	142.8	4.5	9.35
DDH103-145	142.8	147.2	4.4	9.14
DDH103-145	173	177.7	4.7	9.77
DDH103-145	177.7	182	4.3	8.94
DDH103-145	207.6	212	4.4	9.14
DDH103-145	212	216.4	4.4	9.14
DDH103-145	216.4	220.8	4.4	9.14
DDH103-63	274.8	280.6	5.8	12.05
DDH103-63	280.6	286.3	5.7	11.85
DDH103-63	286.3	292.1	5.8	12.05