Baffinland Iron Mines LP
Mary River Expansion Stage 3

Definitive Study Report

Section 1 – Executive Summary

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1. Executive Summary

1.1 Introduction

Baffinland Iron Mines (BIM) currently operates the Mary River iron ore mine in Nunavut, Canada. Ore is currently mined, crushed, screened and then trucked to Milne Port, where it is stockpiled until it can be shipped off site during the arctic summer. Two product types are produced, a lump ore between 32 mm and 6 mm and a fine sinter-feed ore of 6 mm or less. The ore is one of the highest grade products being produced in the world today and requires no subsequent processing before being fed to sinter plants or blast furnaces.

BIM plans to increase the production rate of the mine to 12 million tonnes per annum (Mtpa), shipping the output through Milne Port. This will be achieved by upgrading the mine fleet, constructing a rail line from the mine to the port, building a new crushing and screening facility at the port, construction of larger ore stockpiles and building a second ore dock and ship loader.

The base cost estimate (US$ 936.7 Million[1]) equates to a capital intensity of US$ 134 t/annum production increase (7Mt); after consideration of lease potential to reduce capital requirements by US$55 Million, the incremental project capital intensity falls to $ 126 t/annum of production increase (7Mt) , and will provide an operation cost of US$ 16.66 /tonne product after initial ramp-up (excluding port operations and shipping). Capital intensity and operating cost relative to similar projects and operations are shown in Figure 1-1 and Figure 1-2.

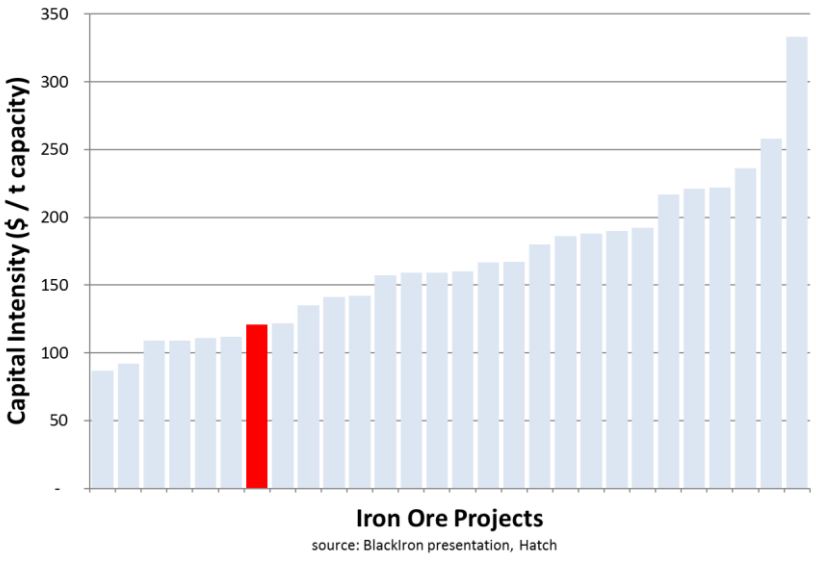

Figure 1-1: Iron Ore Project Capital Intensity (after capture of operating leases)

[1] In line with Arcelor Mittal Guidelines. Arcelor Mittal requires +/-10 to +/- 15% accuracy on the estimate. The estimate is reported to have an accuracy range of -11.6 to +12.2 over a 90% confidence interval around the mean estimate value. The estimate aligns with the requirements of an AACE Class 3 Estimate.

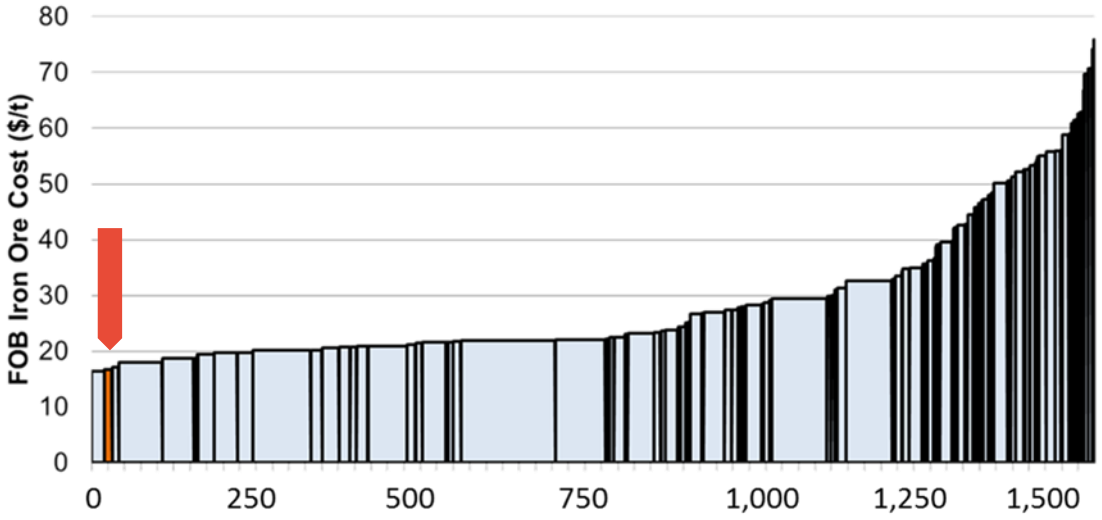

Figure 1-2: 015 SLN Global FOB Iron Ore Cost

The basis of the cost estimate is firm bids received for a substantial portion of the capital cost estimate.

The direct cost (excluding owners cost and contingency) 84% of the estimated capital cost has been obtained from firm market costs won from competitive tenders, see Figure 1-3. Major contracts for Bulk Materials Handling and Earthworks are in final contract negotiations.

The substantial firm (near contract award) pricing contained in the capital cost estimate provides the rationale for determining contingency at a p75 level.

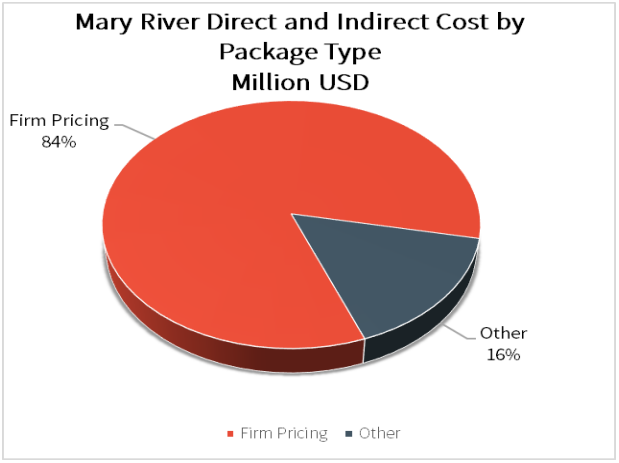

Figure 1-3: Capital Cost - Cost Source

1.2 Project Objective

The expansion project objective is to increase the volume of iron ore shipped from Milne Port in the defined shipping season each year to 12 million tonnes, maximize the lump product, while minimizing capital expenditure and operating cost, resulting in a low cost sustainable operation.

1.3 Project Summary

The proposed Expansion Project scope developed during the Stage 3 Study includes:

- Expansion of mine equipment fleet with larger haul trucks, drills, shovel(s) and associated support equipment and facilities implemented over a progressive transition period (mine fleet required after 2019 included in the sustaining capital estimate)
- Development of a mine Site primary crushing system and rail loading area (rail car loading with front end loaders).
- Installation of a railway system, rolling stock and associated support equipment and facilities to transport ore from the mine to the port.
- Installation of automated rail ore unloading facility at Milne Port with conveyor discharge to stockpile;
- Installation of a Milne Port secondary crushing and screening plant.
- Development of new lump ore stockpiles,7.8 Mt capacity, with associated stacker-reclaimer which can reclaim at 16,000 t/h and feed the new ore dock and ship loading system.
- Installation of a new ore dock (Ore Dock #2) with a single dual linear shiploader to load both Panamax and Cape size vessels.
- Expansion of existing support infrastructure at Mary River and Milne Port.

Site layouts for the Mine Site, Railway and Milne Port are shown on the following pages in Figure 1-4,Figure 1-5 and Figure 1-6.

Planned production ramp-up for the project, based on existing operations achieving a production rate of 5 Mtpa, is summarized in Table 1-1

Table 1-1: Production Ramp-up by Year

Year	Calendar Year Production (Mt)	Tonnes Shipped Open Water (Mt)
2018	6.0	5.2
2019	8.0	5.5
2020	12.0	11.9
2021	12.0	12.0

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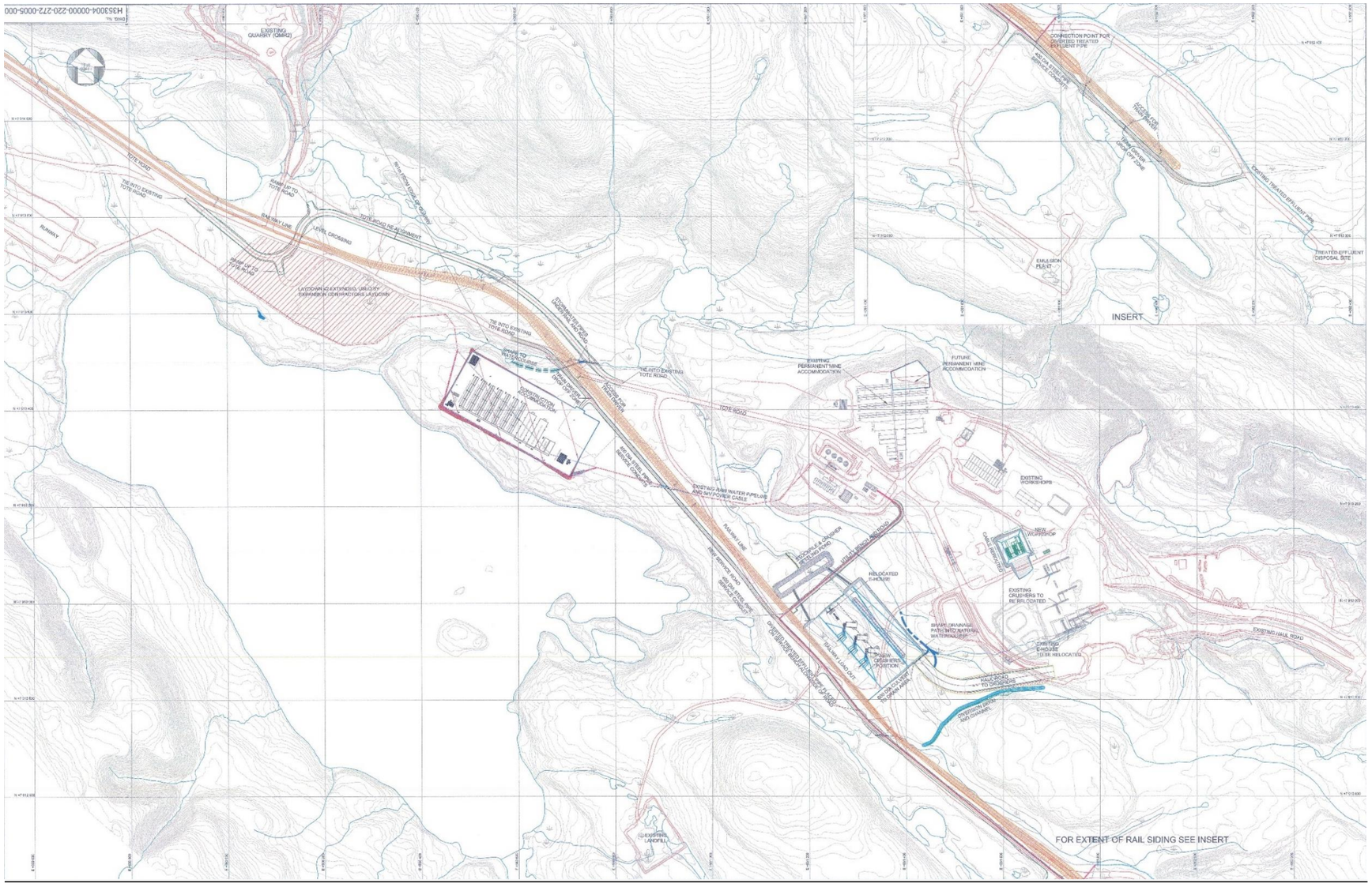


Figure 1-4: Minesite Layout

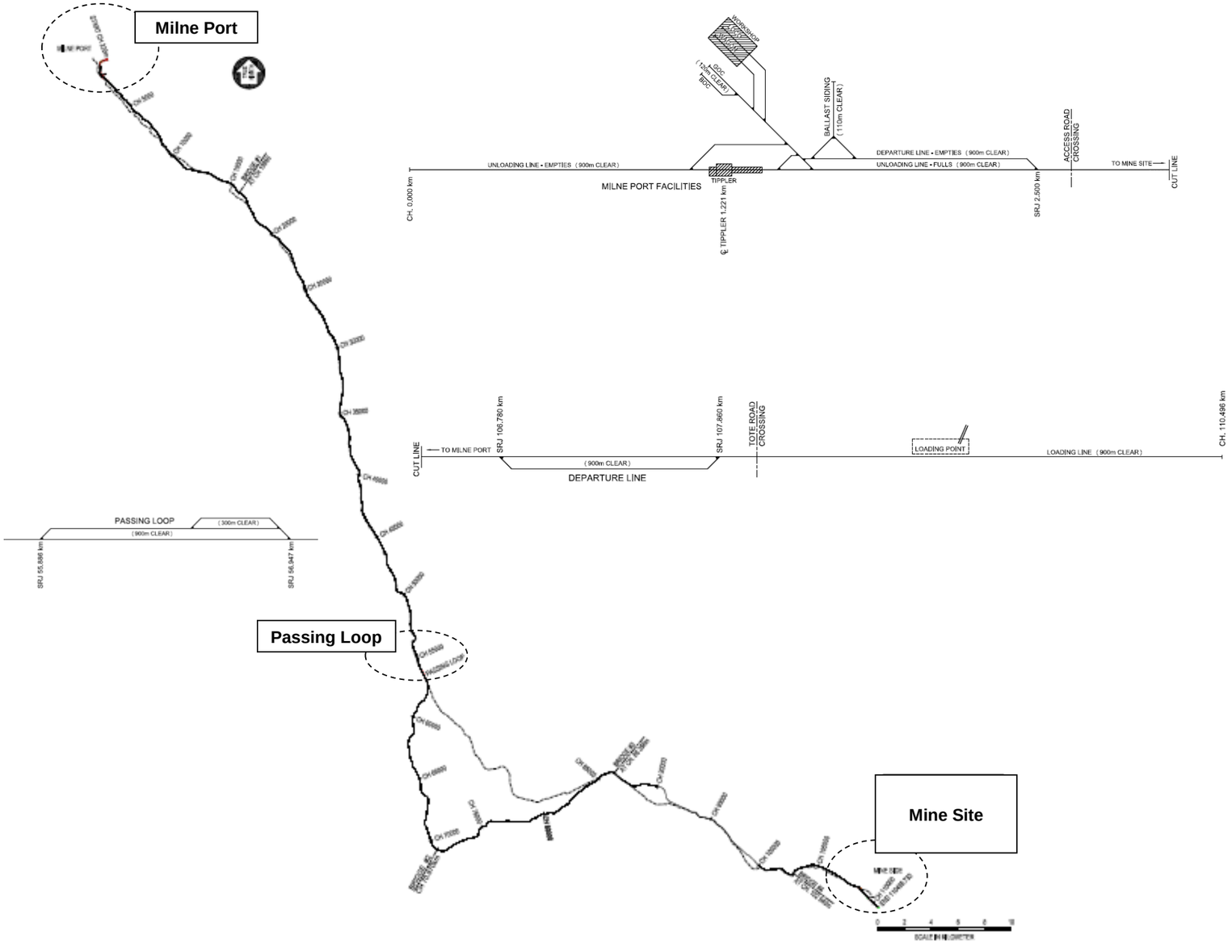


Figure 1-5; Rail Alignment

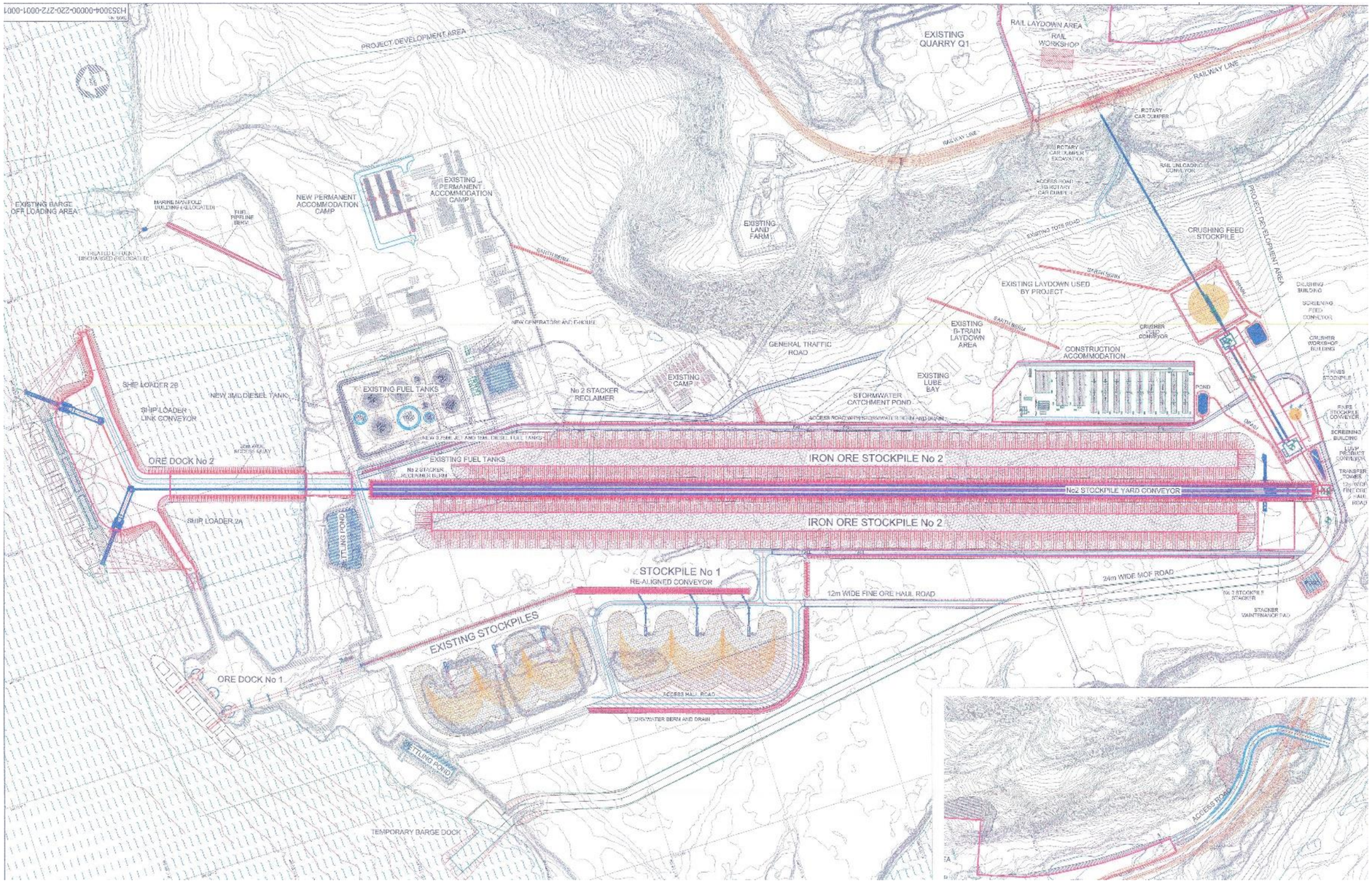


Figure 1-6 Milne Area Layout

1.4 Resources and Reserves

Mineral Resources in this report were estimated in accordance with NI 43-101 and CIM resource classification definitions. The effective date of this Mineral Resource estimate is December 31, 2016 and the estimate is based on the surveyed open pit topographic surface as at year end (EOY) 2016. The resource estimate incorporates exploration and definition diamond drilling, and channel sampling data up to and including 2014 as well as production blast hole drilling to EOY 2016. RPA is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

Table 1-2 summarizes the Mineral Resource estimates, exclusive of Mineral Reserves, for the Mary River DSO iron deposits with an effective date of December 31, 2016.

Table 1-2: Summary of Mineral Resources - December 31, 2016

Category	Tonnes (Mdmt)	Tonnes (Mwmt)	Fe %	P %	S %	Mn %	SiO_2 %	Al_2O_3 %
Deposit No. 1								
Measured	309	311	65.9	0.028	0.25	0.21	2.6	1.2
Indicated	117	118	65.3	0.038	0.36	0.22	3.1	1.0
M+I	426	429	65.7	0.031	0.28	0.21	2.8	1.2
Inferred	73	74	65.5	0.036	0.50	0.28	2.5	0.9
Deposit No. 2 – as of Nov. 7, 2013								
Indicated	26	26	65.7	0.021	0.01	0.02	4.5	0.8
Inferred	38	38	63.1	0.031	0.02	0.01	8.5	0.9
Deposit No. 3 – as of Nov. 7, 2013								
Inferred	271	273	66.1	0.035	0.01	0.06	1.9	1.1
Totals Deposit Nos. 1, 2, and 3								
Measured	309	311	65.9	0.028	0.25	0.21	2.6	1.2
Indicated	143	144	65.4	0.035	0.30	0.18	3.4	1.0
M+I	452	455	65.7	0.030	0.26	0.20	2.8	1.1
Inferred	382	385	65.7	0.035	0.10	0.10	2.7	1.0

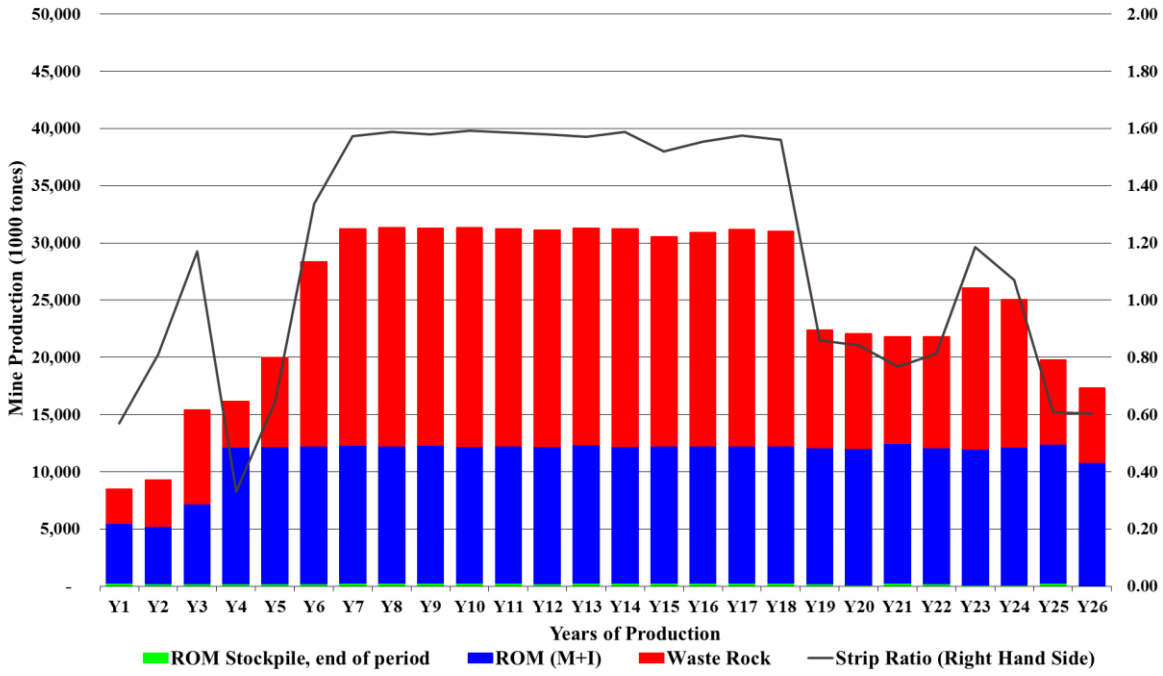
Notes:

1. Mineral Resources for Deposit No. 1 have been estimated as of Dec. 31, 2016. Estimates for Deposit Nos. 2 and 3 are in progress, and, pending completion, estimates as of Nov. 7, 2013 are listed.
2. CIM Definition Standards are followed for Mineral Resources.
3. Mineral Resources are estimated at a cut-off grade of 55% Fe for Deposit No. 1 and 60% Fe for Deposit Nos. 2 and No. 3.
4. Mineral Resources are estimated using a long-term iron ore price of $70/t Fe, and a US$/C$ exchange rate of 1.28 C$/US$.
5. Bulk density is based on a formula relating bulk density to iron content.
6. Mineral Resources are reported in dry and wet tonnes, and dry grades. In situ moisture is estimated to be 0.7%.
7. Mineral Resources are inclusive of Mineral Reserves.
8. Numbers may not add due to rounding.

1.5 Mining

The mine plan has been updated. The smoothed production plan is shown in Figure 1-7.

Figure 1-7: Final feasibility study mine plan, Source: RPA



1.6 Railway

A new rail system will transport ore from the Mine Site to Milne Port to support the increased production, improve operational reliability and reduce operating costs. The new rail system, when commissioned, will completely replace the existing truck haul operation.

The rail system generally comprises of:

- Mine loading area located adjacent to the new primary crusher arrangement. Trains will be loaded by front end loader.
- Main line, nominally 110km in length, connecting the Mine Site to Milne Port. One siding will be positioned approximately mid-way along the main line for passing of trains.
- Port terminal with rotary car unloading system for offload of ore and rail operations and maintenance facilities.

Rail system key parameters are summarized in Table 1-3.

Table 1-3: Rail Alignment Parameters

Item	Value	Comment
Total main line length	110.5 km	
Number of bridges	4	Steel girder type
Number of level crossings	5	Excluding yard track
Maximum gradient – loaded uphill	1.5%	
Maximum gradient – empty uphill	3.0%	
Number of trains	2	
Number of locomotives per train	2	One at each end
Number of wagons per train	72	Up to maximum 80
Length of train	~800 m	
Total payload per train	7,630 t	Weight of iron ore carried
Maximum speed	60 km/h	
Average speed, loaded train	45 km/h	Average from Mine to Port
Operating cycle time	9 hrs	
Number of loaded trains per day	5-6	

Rail gradients of 1.5% loaded and 3.0% empty have been proposed due to the undulating terrain and to minimize disturbance of the ground in areas of permafrost. A benchmarking comparison of these gradients to similar operations is shown in Table 1-4.

Railway support facilities and equipment commensurate with the scale of operation planned will be provided, including rolling stock workshop, mobile servicing and maintenance equipment, and automated equipment to detect rolling stock faults (“wayside equipment”).

Table 1-4: Rail Gradient Benchmarks

Country	Rail Line	Ruling gradient (Loaded)	Ruling gradient (Empty)
Norway	Ofotbanen Ore Line	0%	1.80%
Western Australia	FMG	0.23%	0.50%
Western Australia	BHP- Goldsworthy & Mount Newman	0.33%	1.50%
South Africa	Iron Ore export line	0.40%	1.00%
Western Australia	RIO- Hamersley & Robe Valley	0.40%	0.40%
India	Haryana - Maharashtra	0.50%	0.50%
Western Australia	Roy Hill Railway - Iron ore	0.50%	0.50%
South Africa	Coal Export Line	0.63%	1.52%
Alaska	Fairbanks Railway	1.00%	1.00%
Brazil	MRS	1.00%	1.00%
Canada	Canadian National	1.00%	1.00%
Sweden	Malmbanan Ore Line	1.40%	1.70%
Canada	**Baffinland Iron Mines (Proposed)**	**1.50%**	**2.20%**

1.7 Ore Handling

A block flow diagram summarizing the planned ore handling system is shown in Figure 1-8. The system comprises of:

- Primary crushing using the existing 3 jaw crushers (with modifications) and train loading at the Mine Site.
- Secondary crushing (a single large cone crusher) and product screening (two triple deck screens) at Milne Port.
- Stockpiling of fines in the existing stockpile area for Ship Loader #1; reclaimed using the existing mobile equipment reclaim.
- Stockpiling of lump in a new stockpile area for Ship Loader #2 using an automated boom stacker; reclaimed with a bucketwheel reclaimer.

The upgraded system will simplify ore transport between sites by rationalizing to a single intermediate product (instead of managing transport of two different products, lump and fines) and will reduce the degradation of the lump ore by reducing handling after final screening.

During the Stage 3 Definitive Study tender packages for the Design and Build of the Ore Handling System which includes facilities to produce lump and fines at Milne from ore dumped into an automated train unloader through to fines stacking, lump stacking and reclaiming and supply of a new shiploader were issued to five international major bulk materials contractors. Firm bids were received from multiple contactors. Bids received supported the viability of the process (contractors agreed to accept performance warranties) and viability of equipment selected and equipment capacities noted in the Stage 2 Study. Capital and operating costs used in this study have been based on firm pricing received. After completion of the capital cost estimate, commercial negotiations have concluded allowing selection of a single vendor. Commercial negotiations have realised a reduced price from the selected vendor. Savings made provide an additional contingency buffer in the CAPEX estimate relative to his package.

In negotiating the Design Build offer for package CM001, the following changes will be incorporated into the equipment supplied by the contractor:

- Two secondary crushers will be provided in place of one. Contractors noted the use of a single crusher will reduce lump production, i.e. increase fines by approximately 6%.
- A single stacker reclaimer will be provided in place of a stand-alone stacker and reclaiming machine for the lump stockpiles. Stacking operations will occur all year except the shipping season. Reclaiming lump at 16,000 tonne per hour will occur during the shipping season with lump or from the screening plant bypassing the stacker for direct shiploading.
- A single dual linear radial shiploader will be provided capable of servicing both Panamax and Cape size vessels from Dock #2.

Modular erection concepts will be applied by the contractor to enable offsite pre-assembly, pre-commissioning and single piece shipment to site, under contractor control of the following:

- Train unloader barrel, mechanism, bins and feeders
- Crusher Building
- Screening Building
- Stacker/Reclaimer unit
- Shiploader

Pre-assembly of conveyor units into 20m sections will further minimise construction work force size and minimise on site construction risk.

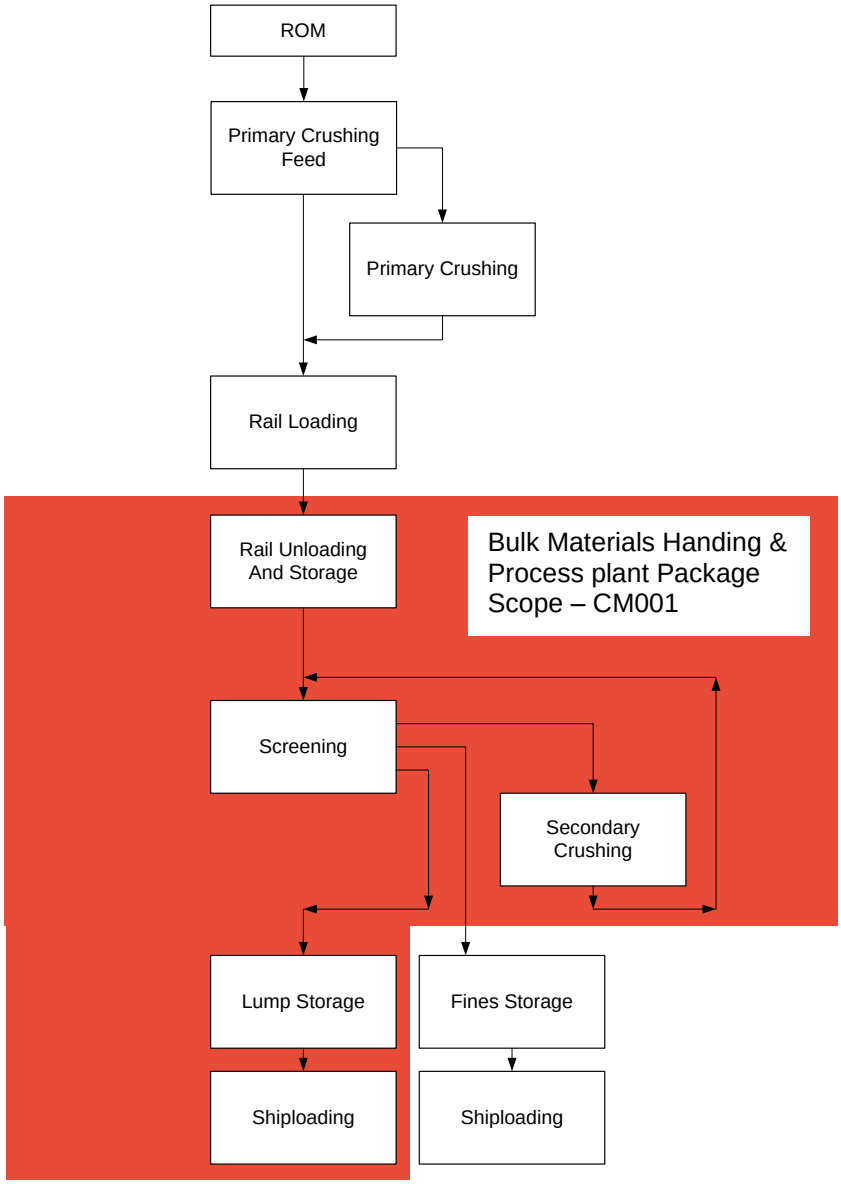


Figure 1-8: 12 Mtpa Simplified Process Block Flow Diagram

1.8 Ship Loading

Increasing annual production with the proposed project configuration requires shipping of 9.2 Mt lump ore and 2.8 Mt fine ore from Milne Port during the “open water” season utilizing market available ships.

To achieve the planned operation a new ore dock capable of berthing Cape Size ships and loading them at a rate of up to 16,000 t/h will be constructed. The existing dock will also remain in operation, loading ships up to Panamax in size.

The proposed configuration will load all lump ore from the new dock and all fine ore from the existing dock, however the layout is configured in a manner which facilitates loading of either product from both docks utilizing mobile equipment.

Ship loading operation to achieve 9.2Mt lump and 2.8Mt fines shipment, utilizing ships expected to be available on-market, is summarized in Table 1-5.

Table 1-5: Ship Loading Operations Summary

Period	Dates	Ship Type	Ships Loaded Dock #1	Ships Loaded Dock #2
Early Season	Jul 25 – Aug 14	Ice Class	14x Supramax	24x Panamax
Mid-Season	Aug 15 – Sep 20	Non-ice class	22x Panamax	28x Cape Size
Late Season	Sep 21 – Oct 15	Ice Class	8x Supramax*	24x Panamax

*Loading of fines at Dock #1 has been maximized early season during milder weather conditions. There is surplus capacity to load additional Supramax ships Late Season if required.

1.9 Project Schedule

An execution schedule has been developed and validated with schedules included within assessed firm bid proposals for contracts bid during the Stage 3 Study. The schedule is based on phased issue of permits and licences and start of construction work within the ambit of existing permits pending receipt of supplementary permits refer to Figure 1-9.

Since the Stage 2 Study, a revision to dates for receipt of permits has been received. The nature of construction which is tied to material deliveries in short annual shipping windows has allowed for the slippage to be accommodated by absorbing project float. The project schedule captures dates shown in Table 1-6.

Permit	Stage 2 Study	Stage 3 Study Forecast	Permit Enables
Project Certificate	30 Mar ‘18	30 Oct 2018	
Revised Land Lease	30 Apr ‘18	31 Oct 2018	
DFO Authorisation – Ore Dock	30 Jul ‘18	01 Jan 2019	Start of Marine structures
DFO Authorisation – New Water Crossings	30 Jul ‘18	01 Jan 2019	Start of bridges, rail diversion areas
CTA Rail Permit	30 Jul ‘18	28 Feb 2019	Start of rail superstructure

Table 1-6: Project Permit Dates

Schedule analysis indicated achievement of mechanical completion and commissioning work is achievable in 2019. The commissioning of plant late into the 2019 shipping season precludes scheduling of Cape size vessels until the 2020 shipping season. Following commissioning in 2019, land based ramp up of the mine, rail, crushing and screening, and stockpiling work will continue towards the 12mtpa production rate as quickly as possible. Shipping at the 12Mtpa rate will begin in 2020 upon arrival of Cape size export vessels at Dock #2.

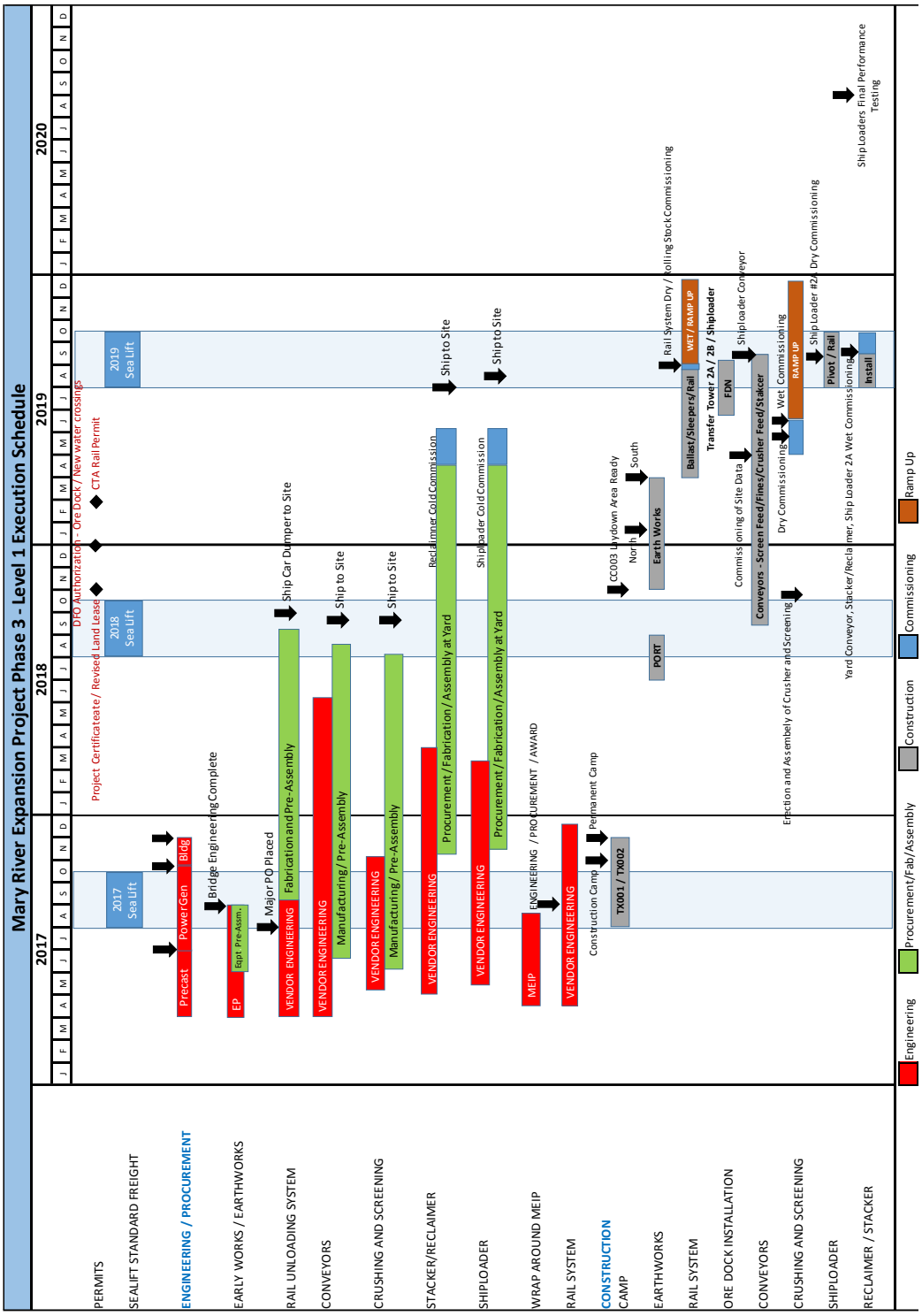


Figure 1-9: Level 1 Project Schedule

1.10 Project Development and Execution

The project will be executed by a small Owner Team supported by an EPCM contractor. The contractual relationships are shown in Figure 1-10.

The EPCM contractor is responsible for project delivery from receipt of Run of Mine ore (ROM) at the primary crusher pad at Mary River Mine to lump ore discharge onto ships at Milne and fine ore reclaim at the port at Milne.

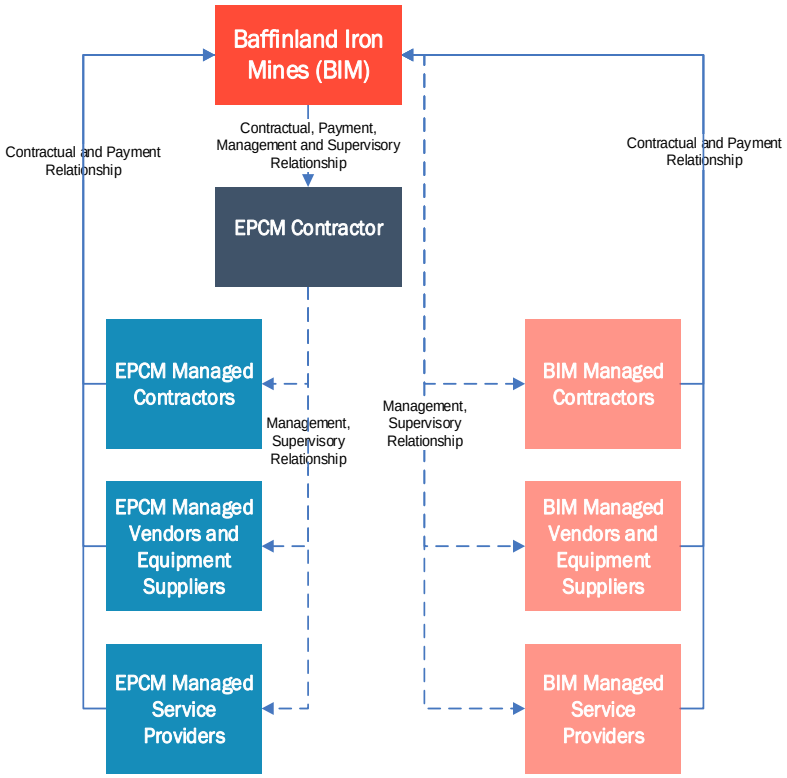


Figure 1-10: EPCM Model

1.11 Capital Cost Estimate

1.11.1 Capex Summary

The total cost of the project is estimated to be US$ 936.7[2][3] million including a contingency of US$40.3 million. There are opportunities to potentially reduce the projected cost by $54.8 million by replacing some of the capital equipment with operational leases. Further opportunities exist to negotiate contact prices to levels lower than reported in the capital cost estimate; these opportunities will be progressed following submission of this report.

A summary of the capital cost estimate by production area is listed in Table 1-7. The total installed cost summary by WBS and Cost Type is listed in Table 1-7.

Table 1-7: Total Installed Cost by Production Area US$ millions

	Total
1000 - Mine	43.4
2000 - Iron Ore Process Plant And Onsite Infrastructure	39.7
3000 - Rail	282.8
4000 - Port	253.9
5000 - Other Off Site Infrastructure	0
Direct	**619.8**
6000 - Construction Facilities And Support	199.6
7000 - Implementation Contractor's Services	47.5
Indirect	**247.1**
8000 - Owner's Cost	**29.6**
9000 - Contingency / Escalation / Risk[4]	**40.3**
Total before the following	**936.7**
Operating Leases/off-balance sheet arrangements[5]	**(62)**
Total	**874.7**

[2] Estimated at exchange rates 0.7355 USD:CAD and 1.0867 USD:EUR (April 27, 2017)
[3] In ljne with Arcelor Mittal Guidelines. Arcelor Mittal requires +/-10 to +/- 15% accuracy on the estimate. The estimate is reported to have an accuracy range of -11.6 to +12.2 over a 90% confidence interval around the mean estimate value.
[4] Contingency assessed by BIM at the P75 level from the QRA model. In anticipation of expected further savings to be negotiated in major construction contracts CM001, CC002, CC003 and CG001 plus other smaller contracts, BIM has assessed this level of contingency to be appropriate.
[5] It is expected that in the normal course, operating leases or other off-balance sheet arrangements will be put in place for supply of locomotives, wagons, certain mining equipment, construction equipment, rail maintenance equipment, power generating sets and fuel tanks required for the project.

Table 1-8: Total Installed Cost by WBS and Cost Type (USD Millions)

	Equipment	Material	Labour	Freight	Sub-Contract	Total
1000 - Mine	17.9	1.2	1.3	0.0	23.1	43.4
2000 - Iron Ore Process Plant And Onsite Infrastructure	31.9	1.5	0.1	0.0	6.2	39.7
3000 - Rail	30.9	0.0	0.3	0.3	251.3	282.8
4000 - Port	79.1	13.7	65.7	0.1	95.2	253.9
5000 - Other Off Site Infrastructure	0.0	0.0	0.0	0.0	0.0	0
Direct	**159.7**	**16.3**	**67.5**	**0.4**	**375.9**	**619.8**
6000 - Construction Facilities And Support	4.4	4.1	5.0	80.7	105.4	199.6
7000 - Implementation Contractor's Services	0.2	0.0	3.5	0.0	43.8	47.5
Indirect	**4.7**	**4.1**	**8.5**	**80.7**	**149.2**	**247.1**
8000 - Owner's Cost	0.0				**29.6**	**29.6**
9000 - Contingency / Escalation / Risk[6]	0.0				**40.3**	**6.34**
Total before the following	**164.4**	**20.5**	**75.9**	**81.1**	**594.9**	**936.7**
Operating Leases/off-balance sheet arrangements	(62)					**(62)**
Totals						**874.7**

The accuracy level established for the estimate over a 90% confidence interval over the mean project cost (p50=US$879m) is -14.2% and +15.6%.

Opportunities and risks exist which may influence the capital cost estimate. During the next stages of the project opportunities to further refine pricing and optimize the scope and project definition will be pursued.

The estimate excludes allowances for foreign exchange variation; import duties and customs clearance charges; working capital; cost of finance; cost of feasibility study and permitting; sunk costs; taxes; and owners management reserve.

[6].Contingency set at the value required for the project to realise a 75% chance of underrun, value set by BIM.

1.11.2 Direct Cost

The direct cost is summarized in Table 1-9 below.

Table 1-9: Direct Cost Summary by WBS

Description	WBS	USD Millions	% of Direct Cost
Mine	**1000**	**43**	**7%**
Site Development	1500	4.5	1%
Services & Utilities	1600	1.4	0%
Mobile Equipment	1700	10.1	2%
Mine Ancillary Facilities	1800	17.1	3%
Mine Materials Handling	1900	10.3	2%
Iron Ore Process Plant And Onsite Infrastructure	**2000**	**40**	**6%**
Process Plant	2300	36.3	6%
Utilities & Onsite Infrastructure	2800	0.7	0%
Process Ancillary Facilities	2900	2.8	0%
Rail	**3000**	**283**	**46%**
Terminals / Yards	3100	35.7	6%
Mainline CN 2.80 km to 90.00 km	3200	152.8	25%
Mainline Ch 90.00 km to CH 106.00 km	3300	33.4	5%
Sidings	3400	2.9	0%
Bridges	3500	21.0	3%
Locomotives & Rolling Stock	3600	29.7	5%
Services & Utilities	3700	0.0	0%
Rail Ancillary Facilities	3900	7.1	1%
Port	**4000**	**254**	**41%**
Port terminal	4100	80.6	13%
Ore Handling	4200	62.2	10%
Wharf & Marine Structures	4600	34.2	6%
Loadout	4700	44.3	7%
Utilities & On-site Infrastructure	4800	32.6	5%
Port Ancillary Facilities	4900	0.0	0%
Total Direct Costs		**620**	**100%**

1.11.3 *Indirect Costs*

Indirect costs include items that are necessary for the completion of the project, but are not directly related to the direct construction costs.

The Indirect cost estimate has been reviewed area by area and adjusted based on duration, effort and weightage against overall project duration. See Table 1-10 below:

Table 1-10: Indirect Cost Summary

Description	WBS	USD Millions
Construction Facilities And Support	**6000**	**200**
Construction Facilities	6100	4.9
Construction Support	6200	36.6
Construction Equipment, Tools And Supplies	6300	31.1
Material Transportation to Site (if not included in the direct costs)	6400	80.8
Project Accommodation	6700	46.2
Implementation Contractor's Services	**7000**	**48**
EPCM - Labour & Expenses	7100	47.5
Owner's Cost	**8000**	**30**
Owner's Cost During Implementation Phase	8100	29.6
Contingency / Escalation / Risk	**9000**	**6.34**
Contingency / Escalation / Risk	9100	6.34
Total Indirects, Owner's Cost, Contingency		**284**

1.11.4 *Owner's Costs*

An estimate, defined by BIM, has been included to cover those tasks that will be managed directly by the Owner.

Quarry royalties have been directly calculated.

1.11.5 *Project Contingency*

Contingency is a provision for unknown project costs increases, which may occur, but which cannot be accurately quantified for estimating purposes due to the lack of complete, and detailed information, as well as limited engineering development of the current PFS Phase. For the purpose of this study a contingency factor has been recommended based on the experience of the study team, developed by evaluating project maturity the level of engineering.

Project contingency has been selected by BIM from outputs arising from a Quantitative Risk Analysis and Monte Carlo simulation of expected final capital cost. Contingency has been

selected as being the amount that will provide a 75% probability of project underrun which equates to a sum of US$40.3m. The level of contingency has been set, taking into account the following;:

- The very high proportion of cost (84% of costs excluding owners cost and contingency) is based on firm bids capable of being rendered to lump sum contracts.
- Post estimate closure negotiations for with contractor CM001 have realised further cost savings of approximately 6%, relative to the estimate.
- Contract negotiations for packages CC002 and CC003 for earthworks and EPCM are showing downward cost trends relative to the estimate.

With these factors in mind, BIM has confidence that a P75 contingency level for this project is appropriate.

1.11.6 Project Cash Flow

	Total Capital Cost	Cash Flow Typle	Total 2017	TOTAL 2018	TOTAL 2019	TOTAL 2020	TOTAL
Capital Cost $US millions	936,838	Commitment	853,944	62,525	15,498	4,871	936,838
		Incurred	275,919	407,845	237,253	15,821	936,838
		Invoiced	223,635	391,747	280,515	40,941	936,838
		Cashflow	146,393	413,274	310,912	66,259	936,838
Cumulative Cost $US millions	936,838	Commitment	853,944	916,469	931,967	936,838	936,838
		Incurred	275,919	683,764	921,017	936,838	936,838
		Invoiced	223,635	615,382	895,897	936,838	936,838
		Cashflow	146,393	559,667	870,579	936,838	936,838

Table 1-11: Capital Cost Flow

1.12 Operating Cost and Sustaining Capital Estimate

The estimate has been compiled utilizing information from the project team and Baffinland. The coordination and compilation of information, assumptions and inputs from multiple contributors is a key component of this estimate. Client Standards and the practices and procedures have been used where applicable.

Estimated average life of mine unit operating costs are approximately $16.66 per tonne product[7]. As shown in Figure 1-11.

[7] Estimated at exchange rate 0.7355 USD:CAD

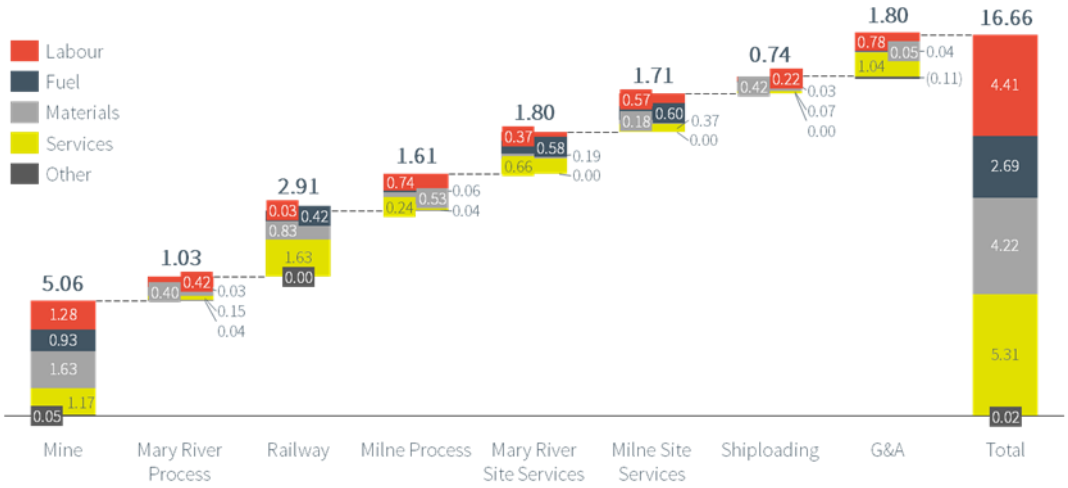


Figure 1-11: Operating Costs Averaged Over the Period 2019 to 2041, $US/tonne

Variation in operating cost year to year are largely driven by changes in the stripping ratio that occurs within the mine.

1.12.1 Operating Cost Estimate Basis

The estimate has been based on 12Mtpa operating rate of product shipped.

The operating cost has been estimated to a level of appropriate for this stage of engineering. This Study is intended to produce a capital estimate roughly equivalent to an AACE Class 3 capital spending estimate of +/-15% with 10-15% contingency. This operating cost estimate aims to achieve a similar level of accuracy, and can be considered to have an Canadian Dollar accuracy of -5% to +15%. At the time this report was prepared, Stage 3 mine plan was not yet complete, therefore the mine plan and associated mining costs are based on the previous Stage II mine plan. Operating costs for shipping and navigational support are not included.

The estimate has been assembled in Canadian dollar terms. Overall costs will be converted to United States Dollars using the average exchange rate of 0.7355 USD per CAD for the month August 2016.

1.12.2 Labour

Labour quantifications has been based on the organization structure and workforce numbers provided by BIM with adjustments to reflect the additional equipment operations.

1.13 Risk Management

During the Study risk reviews were carried out including informal risk identification. Key risks identified include:

- Capital cost increase due to:
  - Schedule Delay

- Rail Earthworks Cost (quantity and/or unit cost variations).

The receipt of lump sum bids for major contracts with liquidated damages provisions for performance and schedule provide a substantial mitigation to this risk element. Aggressive pursuit of permits remains the mitigation to ensure permit approvals do not slip beyond provisions contained in the schedule.

- Project schedule delay possible due to:
  - Project Certificate and Associated Environmental Permit Delay's
  - Project Funding Release
  - Major Equipment Lead Times
  - Ship Loader Installation and Commissioning.

  Firm bids received for the supply of the majority of the equipment supply along with liquidated damages terms provide strong risk mitigation measures put in place during the Study.
- Operations cost/production impact due to:
  - Iron Ore Market Price
  - Product Quality
  - Unable to Achieve Design Capacity
  - Rail Tie Replacement.
- Health and Safety risk from:
  - Plane Crash
  - Rail Collision.

As the project advances through the next stage, increased definition will change the project risk profile and allow the project team to develop appropriate treatment plans for all key project risks to a higher level of detail. Opportunities to improve project economics and parameters even further will also be considered in the next phases.

1.14 Financial Analysis

The following summarises the financial performance of the project to increase production from 5 Mtpa (currently) to 12 Mtpa (planned) for the Mary River Project.

Average, undiscounted average unit cash flows for the life of mine are shown below. Working capital is excluded as it is negligible over the life of mine.

Table 1-12: Cash flow summary over life of mine

Cash flow summary, $US/t	Average, LoM
Revenue	$71.62
Operating costs	(18.06)[8]
Freight and port charges	(6.14)
Royalties and overheads	(1.82)
EBITDA	45.60
Capital spending	(5.12)
EBITDA less Capital Spending	40.48

The resulting project net present value (NPV) is summarized in the tables below. NPVs include impact of pre-existing selling price, tax, royalties and financing supplied by Baffinland and included in their financial model.

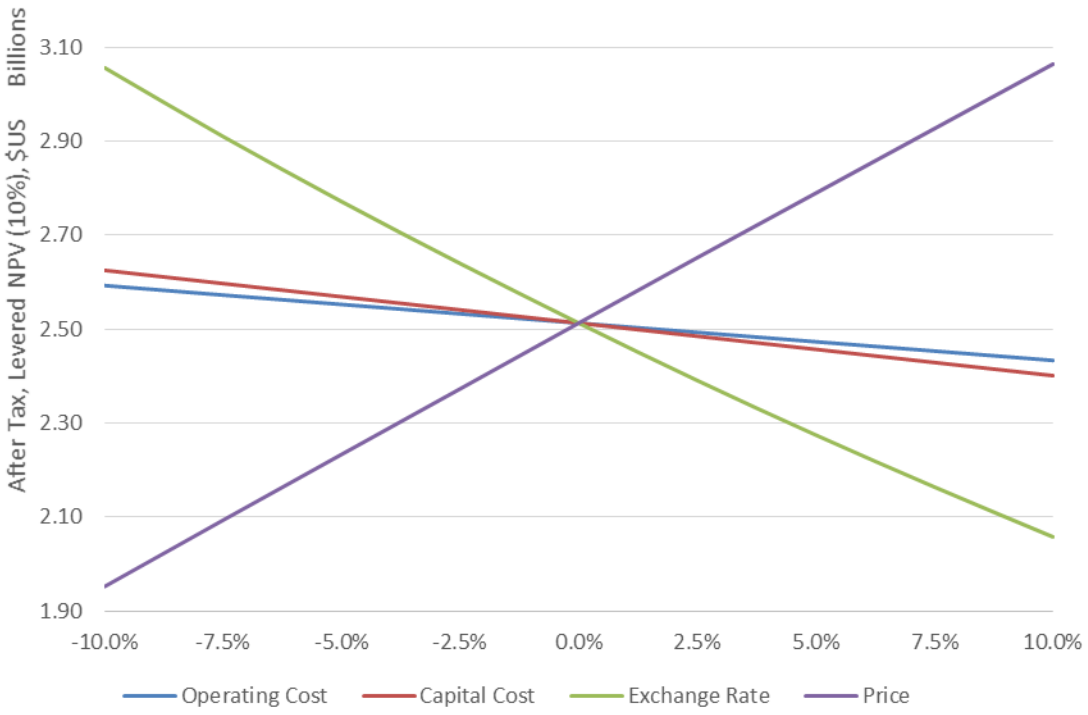
Table 1-13: NPV summary, $US millions (excluding sunk costs)

Discount rate	Pre-tax unlevered	After-tax levered
7%	5,869	3,549
8%	5,233	3,156
10%	4,201	2,513

A sensitivity analysis was performed to examine the impact to after tax, levered NPV from changes in forecast benchmark price, exchange rate, capital costs and operating costs.

[8] Operating costs averaged over the period 2017 to 2041

Figure 1-12: Net Present Value Sensitivity at 10% of After Tax, Levered Cash Flow



Benchmark prices which directly impact revenue are the largest sensitivity. Capital costs and operating costs are largely denominated in Canadian Dollars, while revenues are in US Dollars. Exchange rate showing the second largest sensitivity is therefore expected.