

GRANGEX AB

Updated DFS confirming viability to produce high-grade iron ore at Dannemora

Johan Widmark | 2024-06-17 12:00

The announcement of the updated DFS for Dannemora showed, as expected, higher CAPEX and OPEX compared to the FS announced in December 2022, as a result of the general price increases seen in the past two years. Combined with the higher Iron Ore price, this meant only a slight adjustment of the Post-tax NPV (8%) from USD 205m in December 2022 to USD 200m now, thus confirming Dannemora's technical and economic viability to be a producer of high-grade magnetite concentrate. In our model however, we find it reasonable to account for a price premium from 65% up to 68%, which supports a Post-tax NPV of USD 247m.

With a final project financing and investment decision as the next step, and a new plan for Sydvaranger, we see several triggers in the coming 12-24 months that should drive a revaluation of the share. Our NPVs include a high degree of uncertainty especially for Sydvaranger, but we now find support for a total rNPV-based fair value for today's equity holders of SEK 73 (78) per share.

Minor adjustment of Post-tax NPV to USD 200m

The updated DFS has analyzed capital costs, operating costs and revenue on an annual basis over the full 13-year project life, comprising a 28-month pre-development period, followed by 11 years of mine production. In the updated DFS, Pre-tax NPV (8) is dialed down from USD 274m in Dec 2022 to USD 269m now, while Post-tax NPV is lowered from USD 205m to USD 200m. The new DFS also makes a slight upgrade of the OPEX per ton estimate, from USD 60.2 to USD 63.3 while accounting for a higher Iron Ore price in the model, from USD 129/t to USD 150/t and a higher Initial CAPEX from USD 178m to USD 215m.

With a post-tax IRR of 21.9%, and a payback period of 4.1 years from start of production, the updated DFS supports proceeding to the next stage of development and project financing. Then the start of the mine drainage is planned to begin as soon as the investment decision and full project financing are in place. As we now are already at summer and with the 28-month pre-development period in mind, we now see a clear risk that the production start might be further postponed into H1'2027.

Summary Changes of DFS Dec 2022 and Jun 2024

USDm	Dec 2022	Jun 2024
Initial CAPEX	178	215
Total CAPEX	196	262
Model Price estimate	129	150
OPEX per ton	54.7	63.3
NPV Pre-tax(8%)	274	269
NPV Post-tax(8%)	205	200
Payback period	3.7y	4.1y
Post-tax IRR	26.9%	21.9%

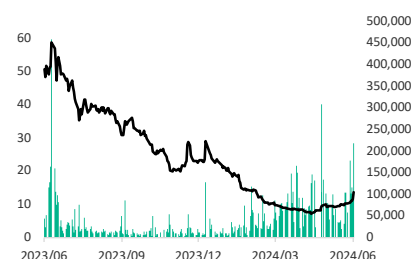
Source: Emergers, GRANGEX

GRANGEX AB

Current Price, SEK	13.5
Market Capitalisation (MSEK)	188.9
Number of Shares (Millions)	14.016
Cash (MSEK)	192.1
Net Debt (MSEK)	44.1
Enterprise Value (MSEK)	233.1
Market	Nordic SME

USD 160/t model price for 68% iron ore

Current indices for high-grade concentrate (MB65 or Platts IODEX65) are forecast to be at an average level of USD 150/t, which is approximately USD 20/t above the 62% Fe index (i.e. with an additional USD 6-7/t per extra Fe-unit above 62%). Extrapolating the Fe-premium up to 68% will result in USD 170/t for the Dannemora product on CFR China basis. In order to establish the Oxelösund Port FOB price, long-term freight rates from Brazil to China, freight rates from Brazil to Dannemora's customers and freight rates from Oxelösund



Port are applied, resulting in a long-term average price for the Dannemora product of approximately USD 151/t on a CFR China basis. In our model we find we find it reasonable to account for a linear price premium from 65% up to 68%, but to also take volatility into account, we used a model Iron Ore price of USD 160/t.

Set for now, but major raise on the near term horizon

With SEK 45m in cash at the end of Q1'24, the USD 0.5m payment for Sydvaranger, USD 17.5m royalty payment from Anglo American of which USD 3m has gone to reduce debt, we now estimate cash before operational costs to date at around SEK 192m. While this may seem like a lot compared to the SEK 189m Market Cap, it should be noted that GRANGEX now has to carry USD 5m in annual care and maintenance costs at Sydvaranger since May 2024.

Along with the case in Dannemora that already offers good potential value for shareholders, we also include Sydvaranger into our rNPV calculation, although we highlight that uncertainty in this side of the model is considerably higher, at least until the company presents an updated Feasibility study. That being said, the first data points from Sydvaranger indicate an even greater potential than in the previous DFS (i.e. an NPV well above USD 550m) when raising the output from blast furnace concentrate to direct reduction iron ore, and accounting for significantly higher iron ore prices.

Key milestones for investors

As the updated DFS for Dannemora has now been published, we look forward to:

- Final investment decision and commencement of drainage of Dannemora in H2'24/H1'25
- updated DFS for Sydvaranger later in 2024
- the major capital raise slated for 2024
- Production start in Dannemora in 2026/27
- Final Investment Decision for Sydvaranger

Timeline & Value attributable to current shareholders

	2024		2025		2026		2027	
	H1	H2	H1	H2	H1	H2	H1	H2
Dannemora		Final Investment Decision	Empty water	Initiate construc.			Production start	
Sydvaranger		Scoping Study	Updated Feasibility Study		Deferred payment USD 13m and Final Investment Decision		Production start	
Apatit project			DFS & Environ. permit application		Environ. Permit		Prod. start	
		USDM	SEKM				USDM	SEKM
(A) NPV Dannemora Unlevered (8%)		247	2,598		(F) NPV Sydvaranger Unlevered (8%)		1,108	11,636
(B) New Equity		55	578		(G) Anglo Financing		50	525
(C) New Debt Dannemora		160	1,680		(H) New Equity Sydvaranger		208	2,184
(D) NPV attributable to GRANGEX (Unl Risk adjustment		32	341		(I) New Debt Sydvaranger		462	4,851
(E) rNPV Dannemora		29	307		(J) NPV attributable to GRANGEX (Unl Risk adjustment		900	4,076
(L) Apatite project					(K) rNPV Sydvaranger		78	815
(M) Sala Bly							9	99
(N) Total Equity NPV			(E+K+L+M)				5	50
Existing Debt							121	1,271
Implied Equity Value Existing Shareholders GRANGEX, MSEK							23	236
Implied value, per share, SEK								73

Source: Emergers

Acquisition of Sydvaranger a highly promising business case

In late June 2023, GRANGEX signed the exclusive agreement to acquire Sydvaranger Mining AS, located in the northernmost part of Norway, consisting of a brownfield open-pit iron ore mine and a processing plant. The Sydvaranger mine dates back to the early 20th century but was forced into bankruptcy in 2015 by the then depressed iron ore prices. Now in care and maintenance mode, the mine currently employs 29 persons looking after it.

With an estimated annual production of 4 Mton and a life of mine of 20 years, this project is 4x the size of Dannemora in terms of annual production and 7x in terms of total production. The most recent DFS however showed a USD 550m NPV (8%), which is only about 2x that of Dannemora (assuming pre-tax numbers for both). This is explained by the fact that Sydvaranger produced blast furnace concentrate. But GRANGEX's plans to invest to raise output quality to meet the requirements of fossil free DRI quality iron ore, with an additional step that could take quality up to 60-70%.

Following the announcement of the acquisition of Sydvaranger Mining AS, GRANGEX has now entered a Royalty Agreement with Anglo American, securing part-funding for this acquisition and future operations in which Anglo American will provide USD 17.5m in exchange for a life-of-mine off-take and royalty of 3% of the production from Sydvaranger. The deal also covers a future USD 50m contribution at unspecified conditions, for the restart of Sydvaranger. This partnership significantly reduces risks for GRANGEX and supports its strategy to supply ultra-high-grade magnetite concentrate for 'green steel' sectors in Europe and globally. An updated Feasibility Study will be completed within 12 months post-acquisition, which will also define a sustainable tailings disposal method acceptable to both parties.

Bullish outlook for Dannemora's product

In addition to the financing structure and discount rate, there are other pieces in our valuation model that can have a large impact on the value for current equity holders. One of these factors is the Iron Ore price. Considering that high-quality >67% Fe concentrate will be essential to facilitate the green transition, while only ~4% of global iron ore production is of >67% Fe grade, this will command a price premium compared to 62% and 65% Fe grade. And with the high-grade iron ore market segment expected to grow at an 8% CAGR, from 110Mt today to 750Mt in 2050, this premium is likely to expand in future.

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