



Minerals for a sustainable future

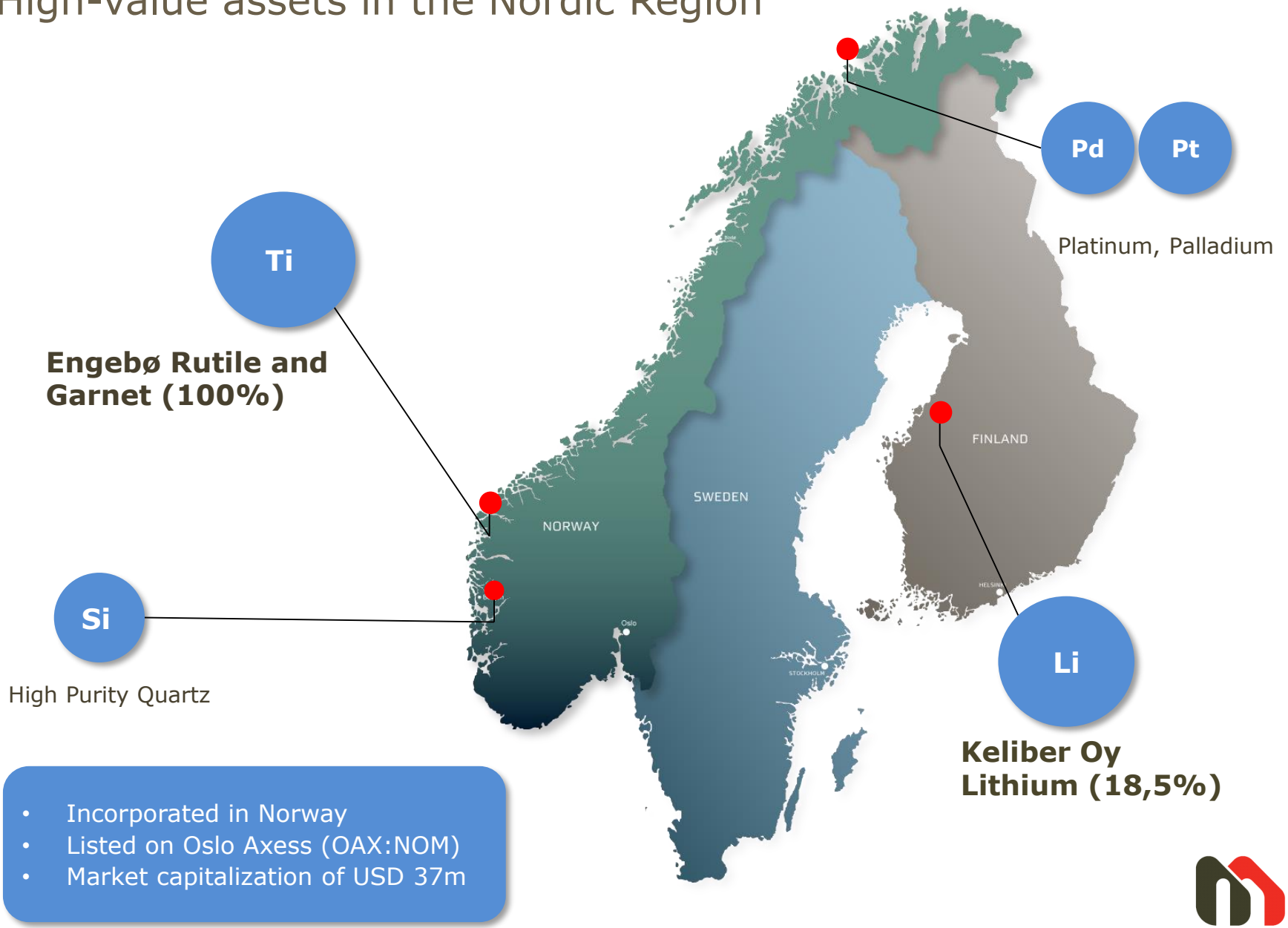


2019 EXHIBITOR



**NORDIC
MINING** OAX: NOM

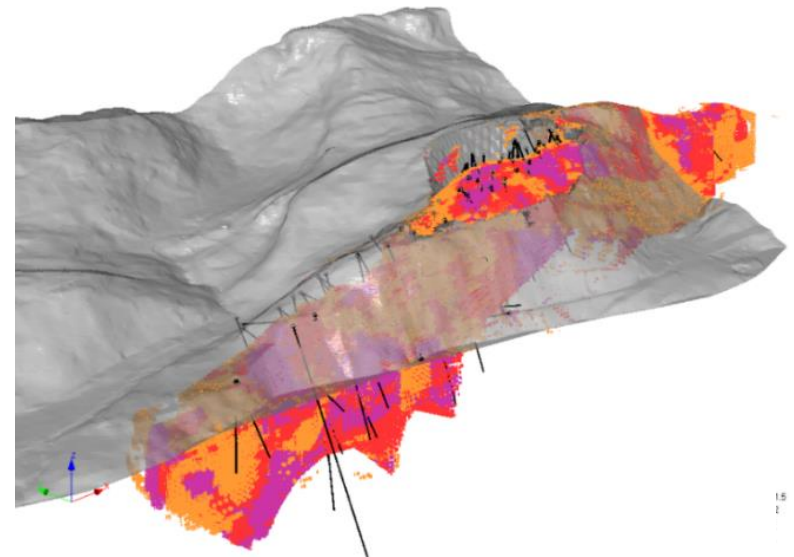
High-value assets in the Nordic Region



Engerbø Rutile and Garnet

Large eclogite deposit located at tidal waters

- ✓ Outcropping deposit with unknown extension to depth
- ✓ Geotechnically stable orebody allows for effective mining
- ✓ Low impurities, negligible content of heavy metals and radioactive elements
- ✓ Easy transition from open pit to underground mining



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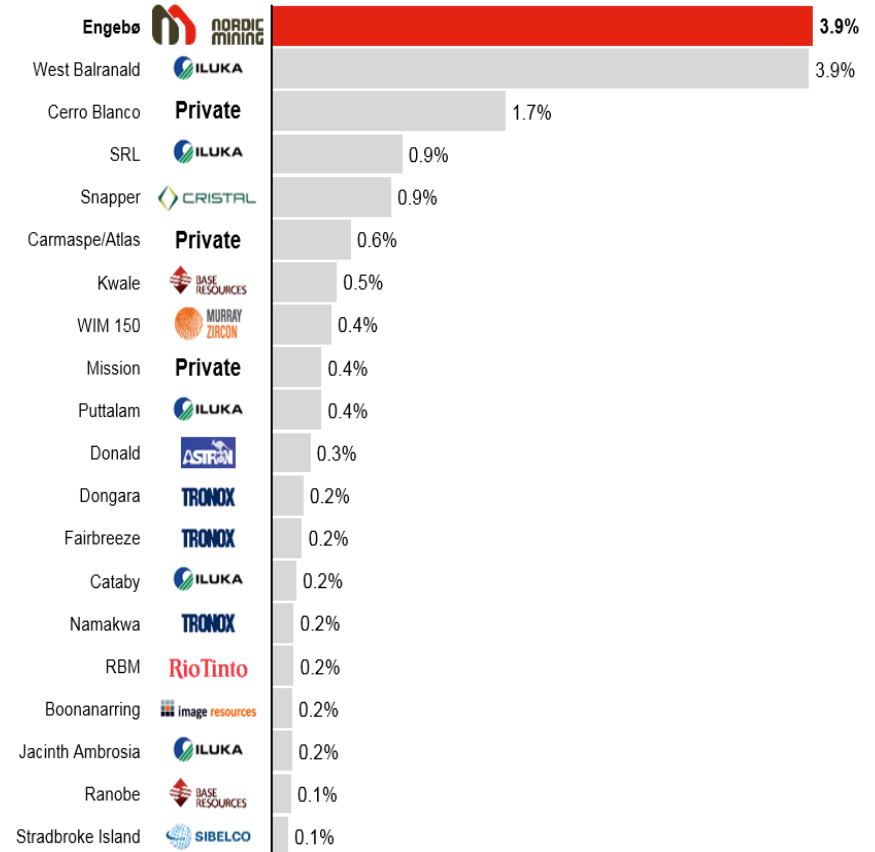
High grade mineralisation of rutile and garnet

Mineral resource and reserve classifications*

	3% cut-off grade		
	Tonnage Mt	TiO ₂ %	Garnet %
Measured	15	3.97%	44.6%
Indicated	78	3.87%	43.6%
Measured & indicated	93	3.89%	43.7%
Inferred	138	3.86%	43.5%

	Ore reserves		
	Tonnage Mt	TiO ₂ %	Garnet %
Proven	10.194	3.81%	43.4%
Probable	31.702	3.35%	39.5%

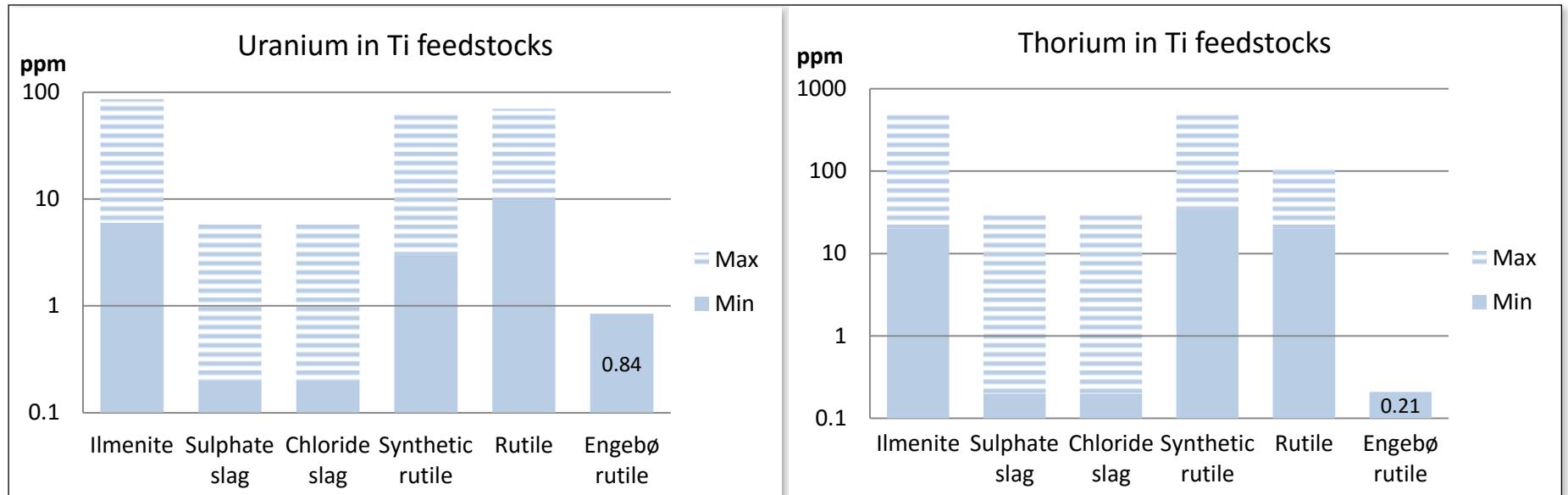
Among the highest rutile grades



* Resource estimates and reserve statement completed by Competent Person Adam Wheeler, corresponding to the guidelines of the JORC Code (2012 edition).

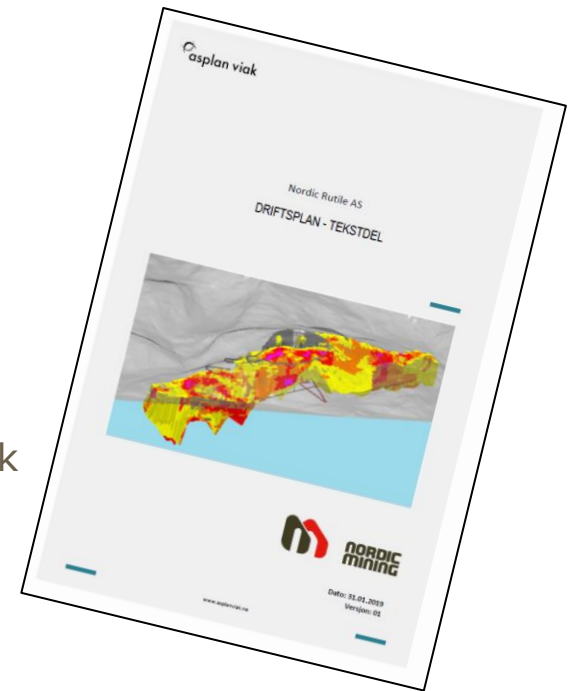


Low radioactive impurities vs other Ti feedstocks



Engerbø progress highlights – towards construction

- Engagement of financial debt advisor on 30 January
- HOA with Japanese trading house for rutile offtake and financing signed on 31 January
- Application for operational license filed on 1 February
- Framework for environmental monitoring filed to the Norwegian Environment Agency in December 2018
- Process test work moving forward; bulk program test work finalized
- Testing of waterjet cutting with Engerbø garnet confirms high performance
- Procurement bid packages are currently issued to the market
- Regulation process with local municipalities on water and infrastructure getting ready for public hearings



Rutile and Garnet - unique mineral properties, increasing demand

Garnet

Current world production: ~ 1.4 million tonnes



WATERJET CUTTING



SAND BLASTING



ABRASIVES



Tests have demonstrated that Engebø can produce coarse and fine garnet suitable for a broad range of applications

Rutile

Current world production: ~ 0.8 million tonnes



PIGMENT



WELDING RODS



TITANIUM



Tests have demonstrated that Engebø can produce 95% TiO₂ rutile suitable for pigment and titanium

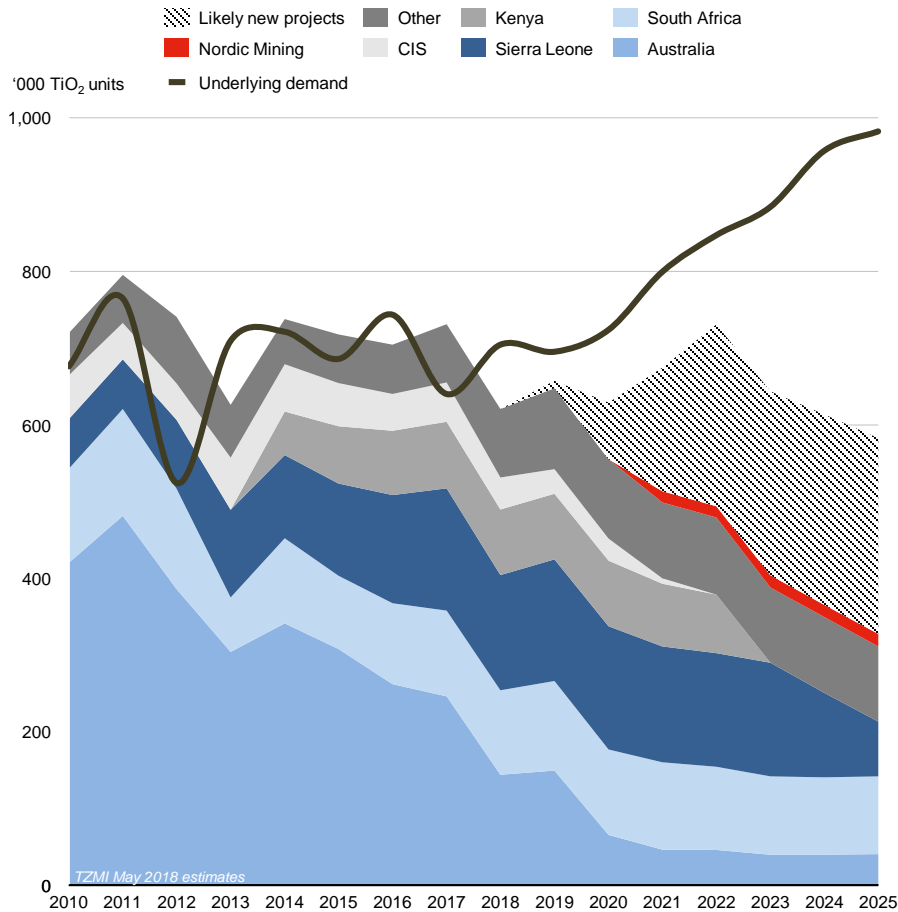


Titanium dioxide – a part of daily life

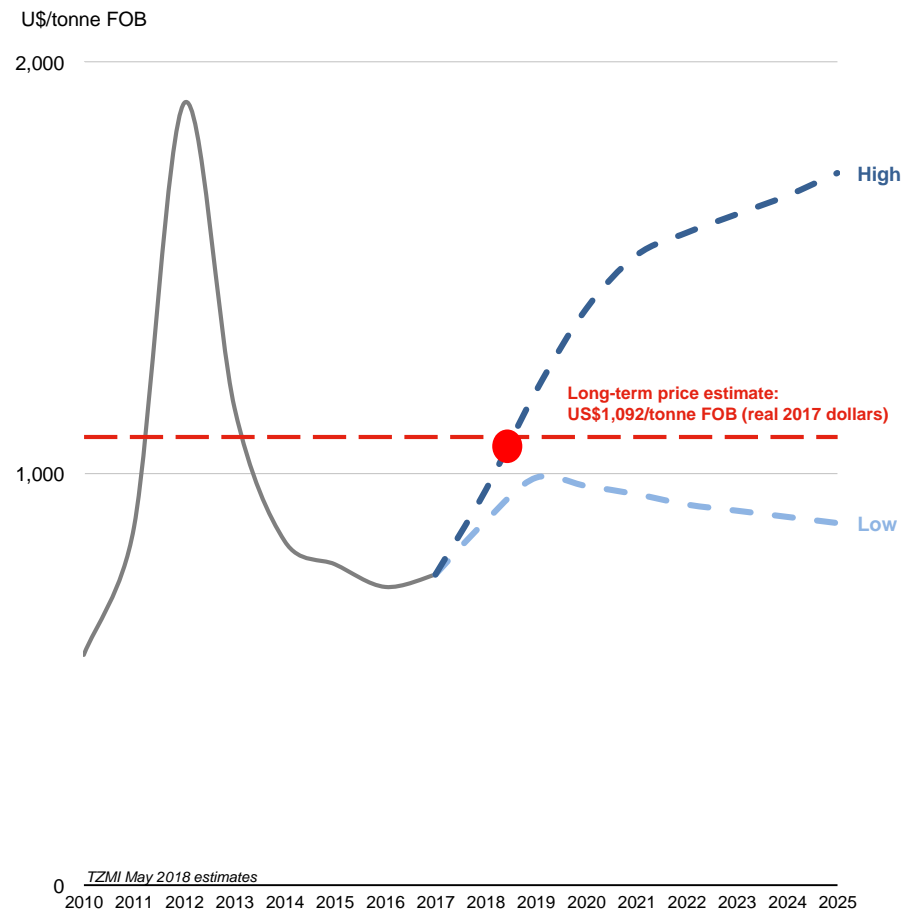


Rutile prices forecasted to increase with growing demand

Global rutile demand has outpaced supply...



...driving rutile prices up



Ideally situated for sales to Europe and overseas



Heads of Agreement on rutile offtake and financing

- Nordic Mining has signed a Heads of Agreement with a reputable Japanese trading house related to long term offtake for rutile and participation in the construction financing for the Engebø project.

Logistical advantage to European markets

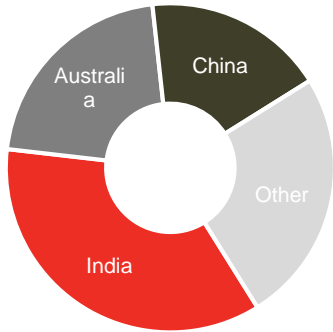
- The largest pigment manufacturers in Europe have chloride technology that benefits from high grade feedstock
- Plant-to-plant shipment
- Engebø will be the 2nd European producer of rutile and the first producer of garnet



The first European producer of industrial garnet

Garnet market and price assumptions

Current world production

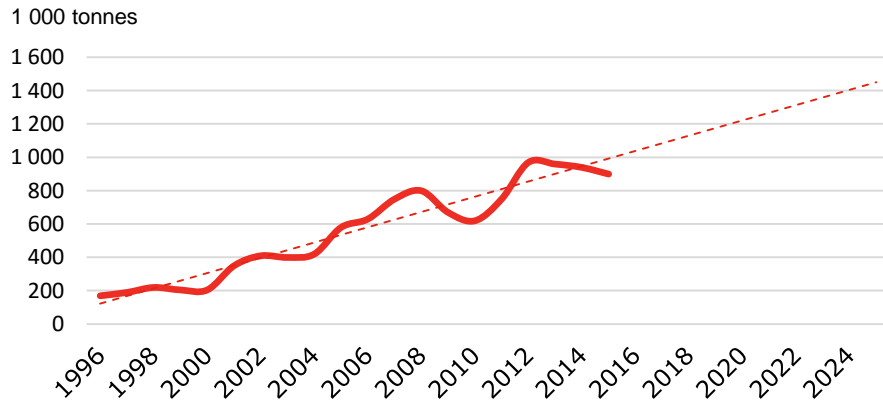


- Emerging mineral with strong growth in the waterjet cutting markets
- Currently no European production
- Engebø is one of few hard rock deposits with almandine garnet
- Engebø will produce commercial end-products:
 - 80 mesh waterjet
 - 100 mesh waterjet
 - 30/60 mesh blast market
- PFS garnet price assumption of USD 250/tonne in real terms based on a basket of the three products with roughly equal weighting

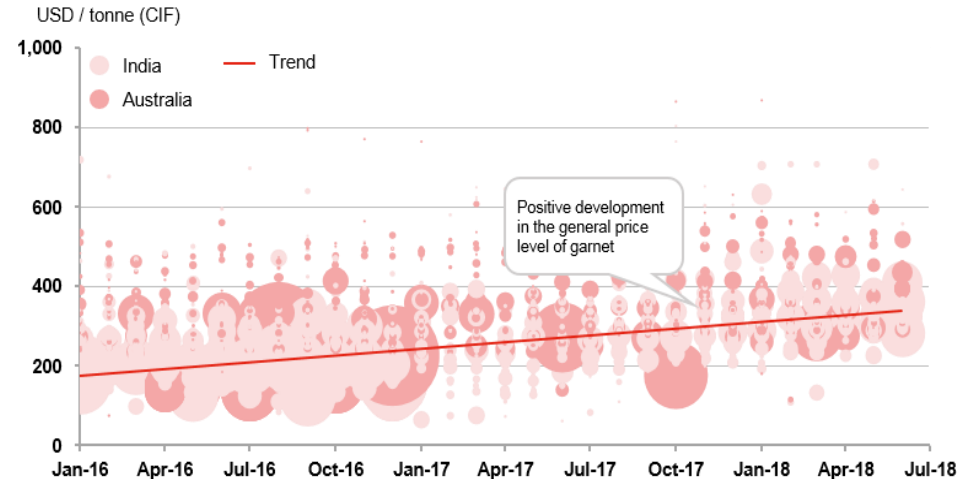
Estimated garnet price, Engebø PFS

Product / Case	Low price	High price
80 mesh waterjet	USD 267/t	USD 289/t
100 mesh waterjet	USD 267/t	USD 289/t
30/60 mesh grades	USD 289/t	USD 311/t
PFS garnet basket price	USD 250/t	

Estimated garnet consumption (excl. China)



Price trend for garnet



Note: USD/EUR = 0.9 used for price calculations (as in PFS)
 Source: TAK Industrial Mineral Consultancy (2017), TZMI (May 2018)

Cooperation with The Barton Group for Garnet

The Barton Group

- Barton, a family owned company founded in 1878, is a leading US garnet producer and distributor with a strong foothold, particularly in the North American markets
- Over the years, Barton has played a leading role in developing the fast-growing application of waterjet cutting technology where garnet is the dominant mineral
- Barton operates a garnet mine in the state of New York (US), and has extensive experience in production of hard-rock garnet
- In addition to serving the North American market, Barton supplies high-performance garnet abrasives throughout Western Europe, South America, Southeast Asia and China



Heads of Agreement

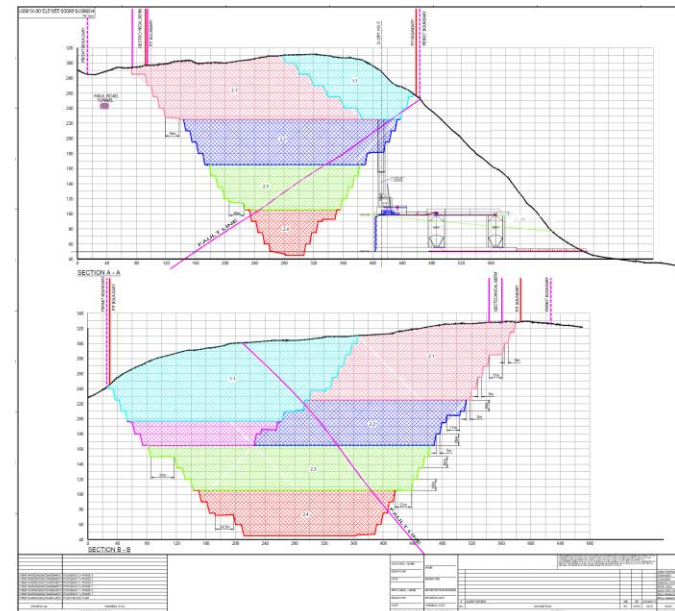
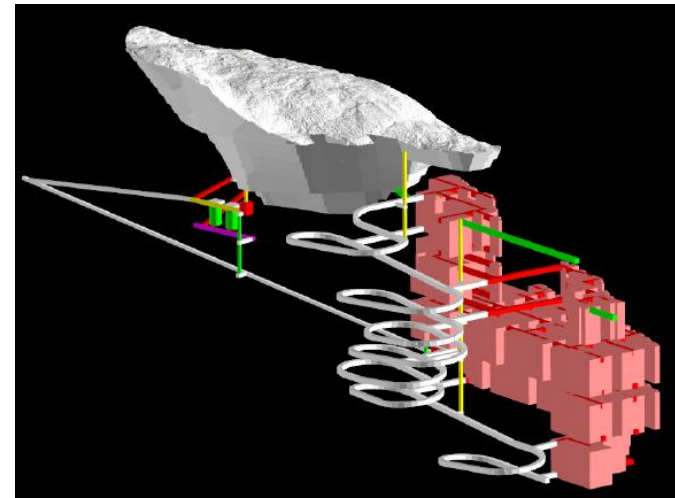
- Nordic Mining has entered into a Heads of Agreement with Barton Group, a MoU partner since 2011, which will be further developed based on the following main principles:
 - **Offtake agreement for North America**
 - Exclusive distribution by Barton of Engebø garnet
 - The garnet will be sold and distributed under Barton's brand name for high-quality products
 - **Joint-venture agreement for other markets**
 - Jointly owned company for sale and distribution to markets outside of North America
 - **Financing of pre-construction project development**
 - Barton intends to participate in the pre-construction financing of the Engebø project
 - **Construction financing**
 - Barton intends to participate in the construction financing of the Engebø project as an industrial anchor investor
 - The form and amount of Barton's contribution will be further negotiated and evaluated as part of the total solution for project financing

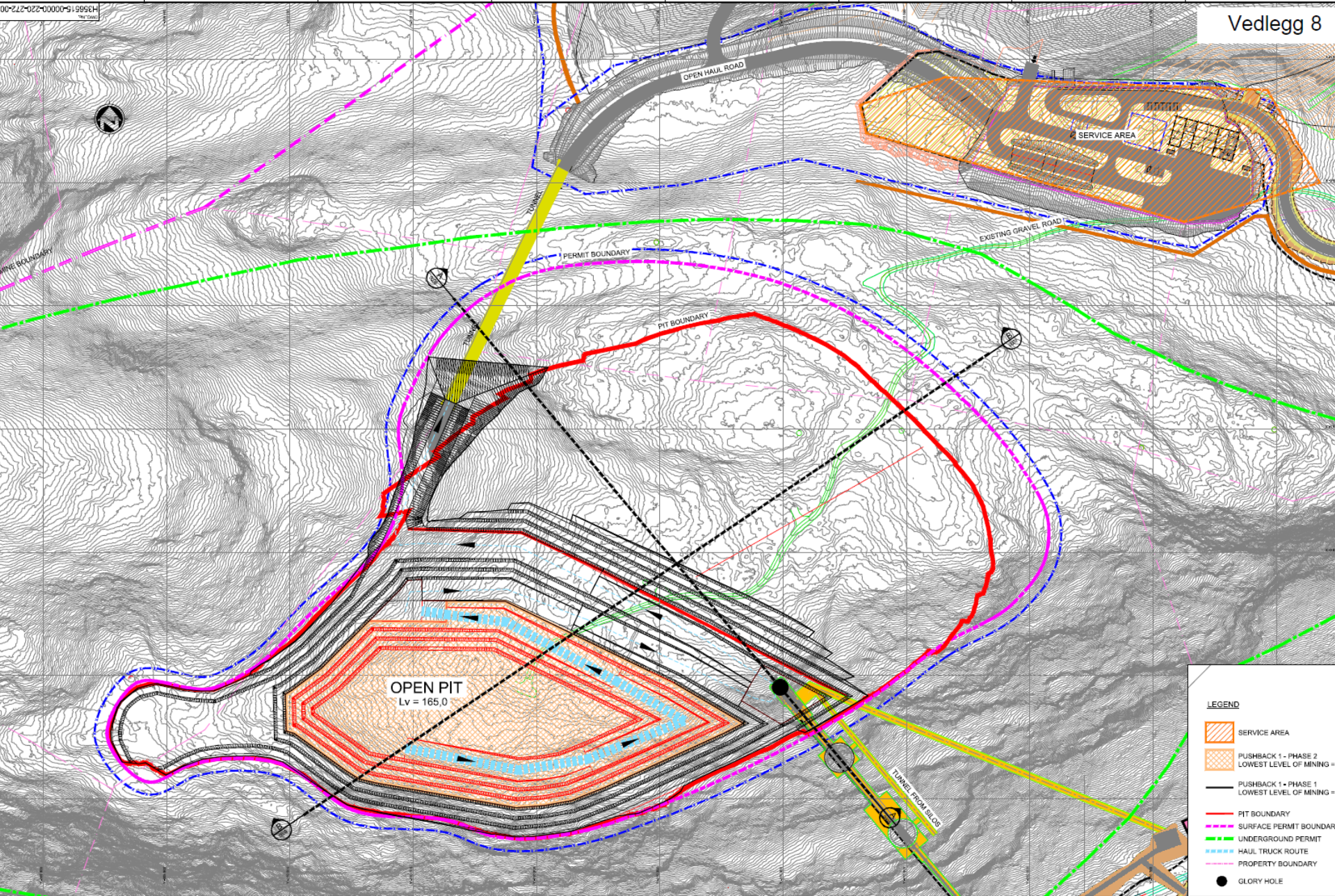
BARTON
Global leader in garnet abrasives



Favourable internal logistics

- ✓ >16 years open pit mining
- ✓ Rich ore in the early years
- ✓ Low stripping ratio
- ✓ Glory hole concept with underground crushing facility
- ✓ Underground silos enables ore storage and operational flexibility
- ✓ Minimum haulage distance
- ✓ Limited visual impact
- ✓ Open pit gives easy access to underground ore





LEGEND

- SERVICE AREA
- PUSHBACK 1 - PHASE 2
LOWEST LEVEL OF MINING =
- PUSHBACK 1 - PHASE 1
LOWEST LEVEL OF MINING =
- PIT BOUNDARY
- SURFACE PERMIT BOUNDARY
- UNDERGROUND PERMIT
- HAUL TRUCK ROUTE
- PROPERTY BOUNDARY
- GLORY HOLE

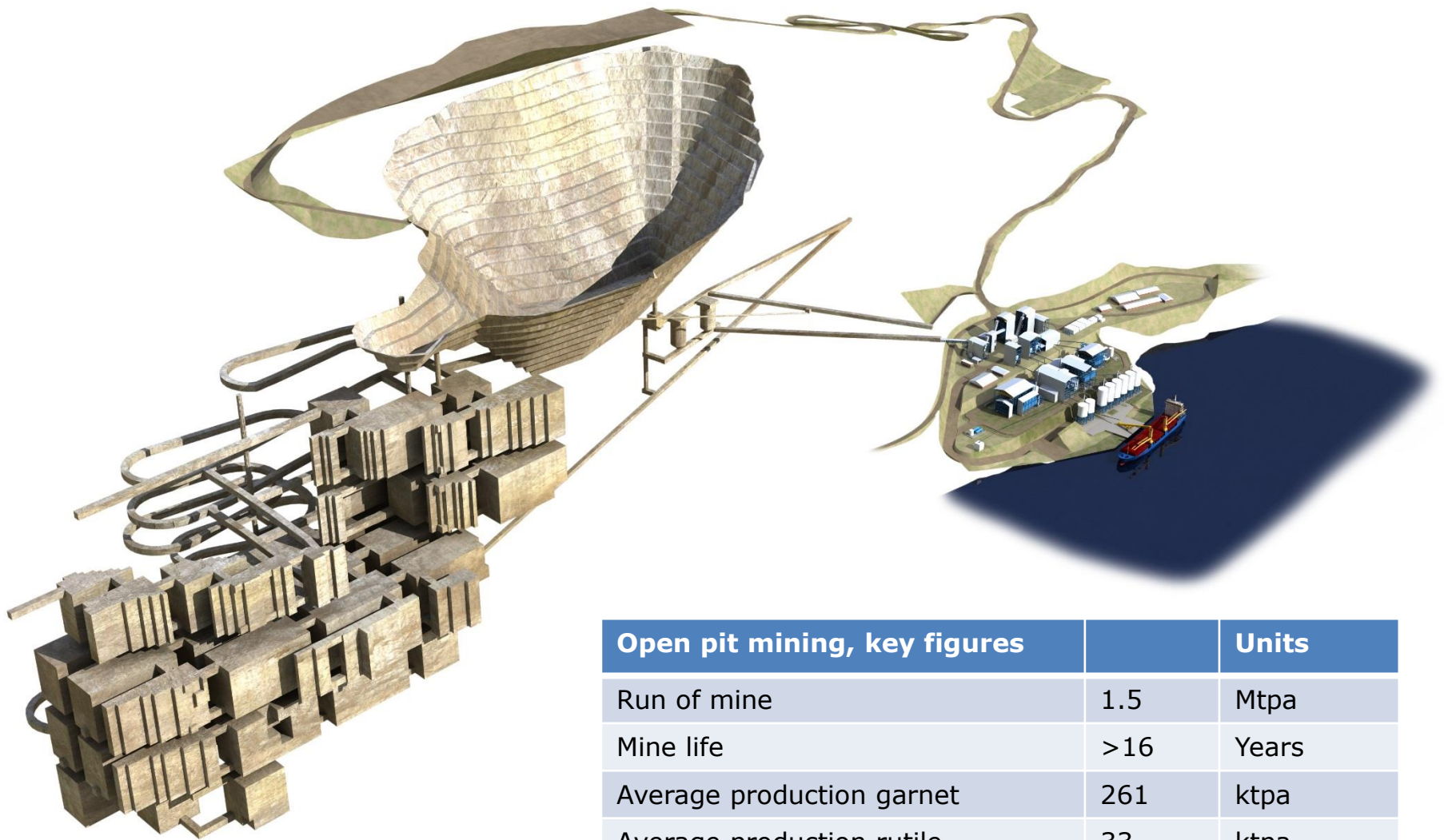
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00-22-022-0000-001		PUSHBACK 2 - PHASE 4
00-22-022-0000-002		PUSHBACK 2 - PHASE 3
00-22-022-0000-003		PUSHBACK 2 - PHASE 2
00-22-022-0000-004		PUSHBACK 2 - PHASE 1
00-22-022-0000-005		PUSHBACK 1 - PHASE 2
00-22-022-0000-006		PUSHBACK 1 - PHASE 1
00-22-022-0000-007		PLANT BLOCK PLAN

DATE	BY	CHKD	DATE	DESCRIPTION

DATE	BY	CHKD	DATE	DESCRIPTION

HATCH

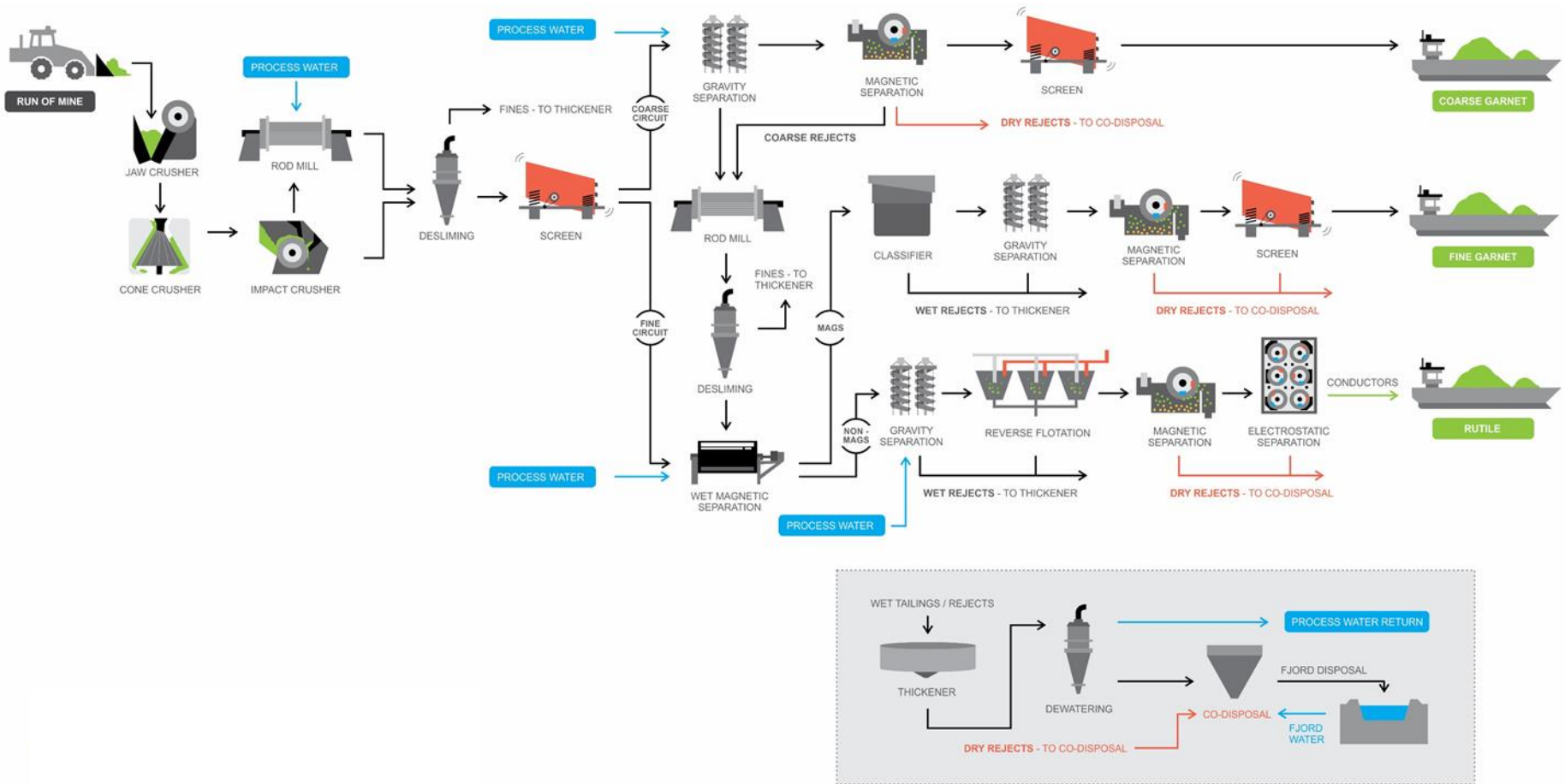
DATE	BY	CHKD	DATE	DESCRIPTION



Open pit mining, key figures		Units
Run of mine	1.5	Mtpa
Mine life	>16	Years
Average production garnet	261	ktpa
Average production rutile	33	ktpa
Strip ratio	1.34	Waste/ore

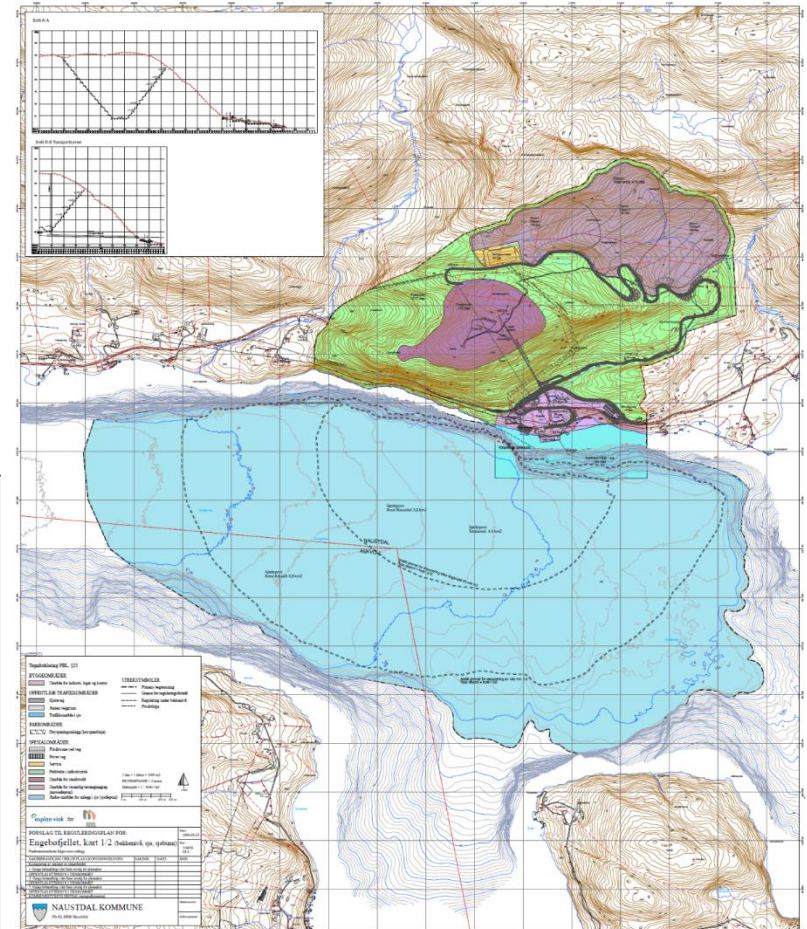
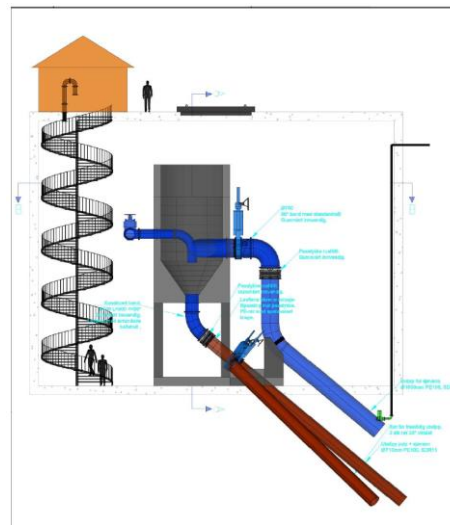
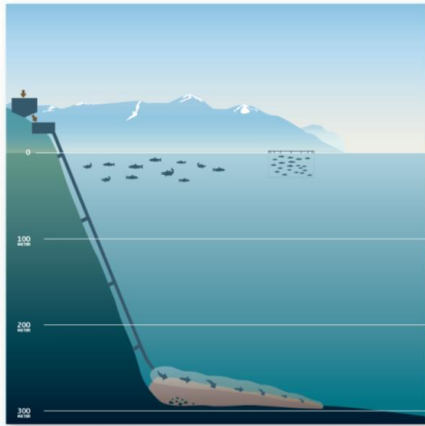


Flowsheet of rutile and garnet process



Zoning plan and environmental permits fully granted

- ✓ Deep-sea disposal offers safe and sustainable tailings solution
- ✓ The tailings will mainly sediment within the regulated area
- ✓ The currents in the tailings area are moderate and there is limited risk for erosion currents
- ✓ Continuous monitoring of the sea disposal will be implemented



Permits allows for future capacity expansions and lifetime extension

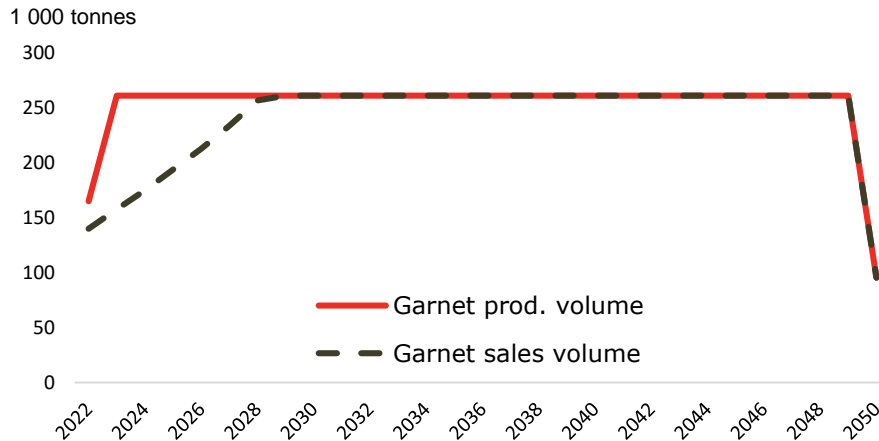


A solid business case

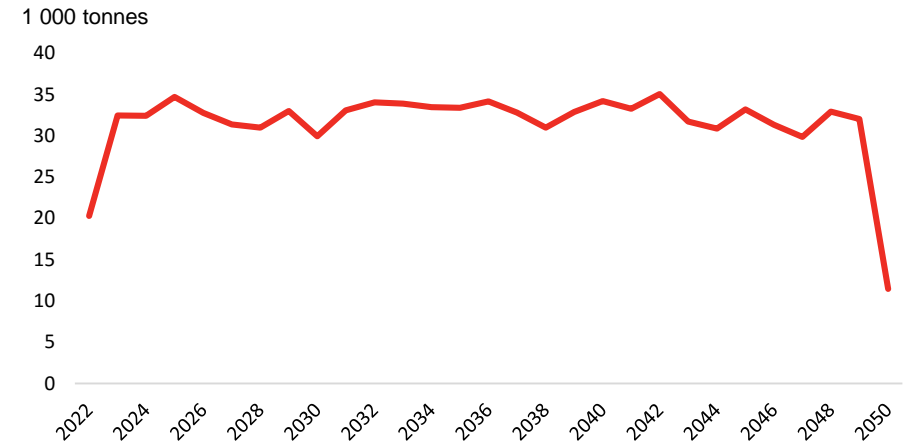
Assumptions	Value	Unit
Garnet price	250	USD/tonne
Rutile price	1 070	USD/tonne
Garnet sales (from ~2027)	261 000	Tonnes per annum
Rutile sales (average)	32 500	Tonnes per annum
Opex per sales tonne ¹	87	USD/tonne
Construction capex	207	USDm
Deferred capex	17	USDm

Output	Value	Unit
Pre-tax NPV @ 8%	332	USDm
Pre-tax IRR	23.8%	%
Life of mine	29	years
Payback period	Less than 5	years
Post-tax NPV @ 6.8%	305	USDm
Post-tax IRR	20.8%	%

Garnet sales and production volume



Rutile sales and production volume

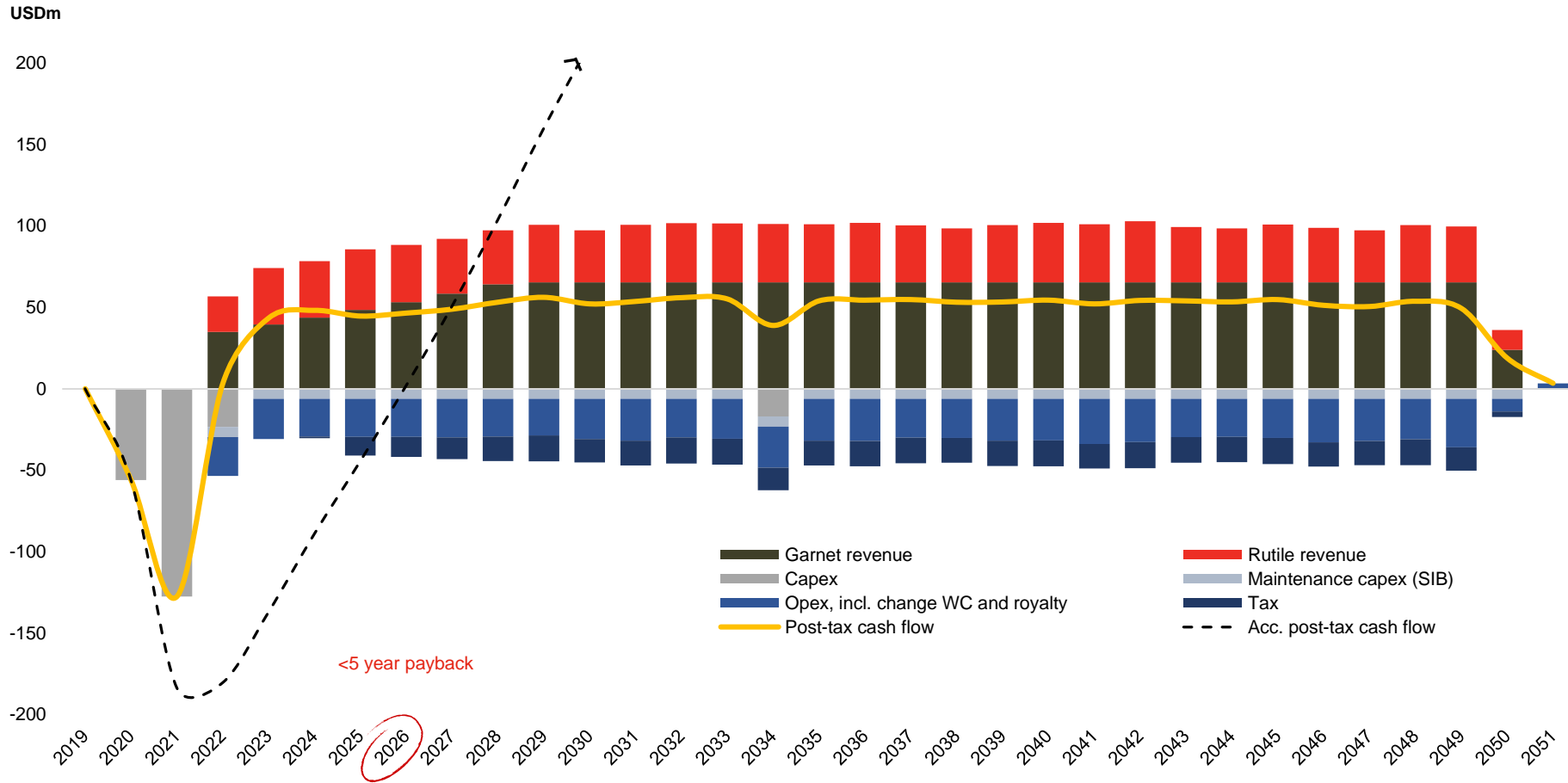


Note: 1) Based on total sales volume for rutile and garnet
Source: Engebø PFS, extended by one year



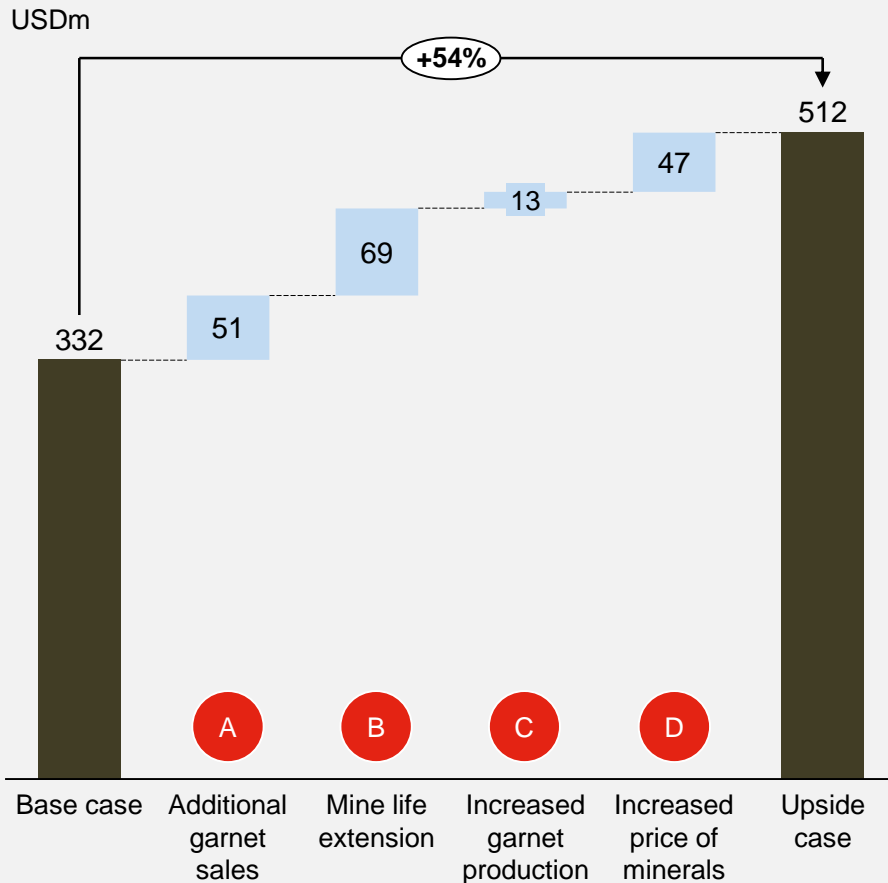
Attractive, long term cash flow

<5 year payback period, IRR >20%



Base case with upside opportunity and flexibility

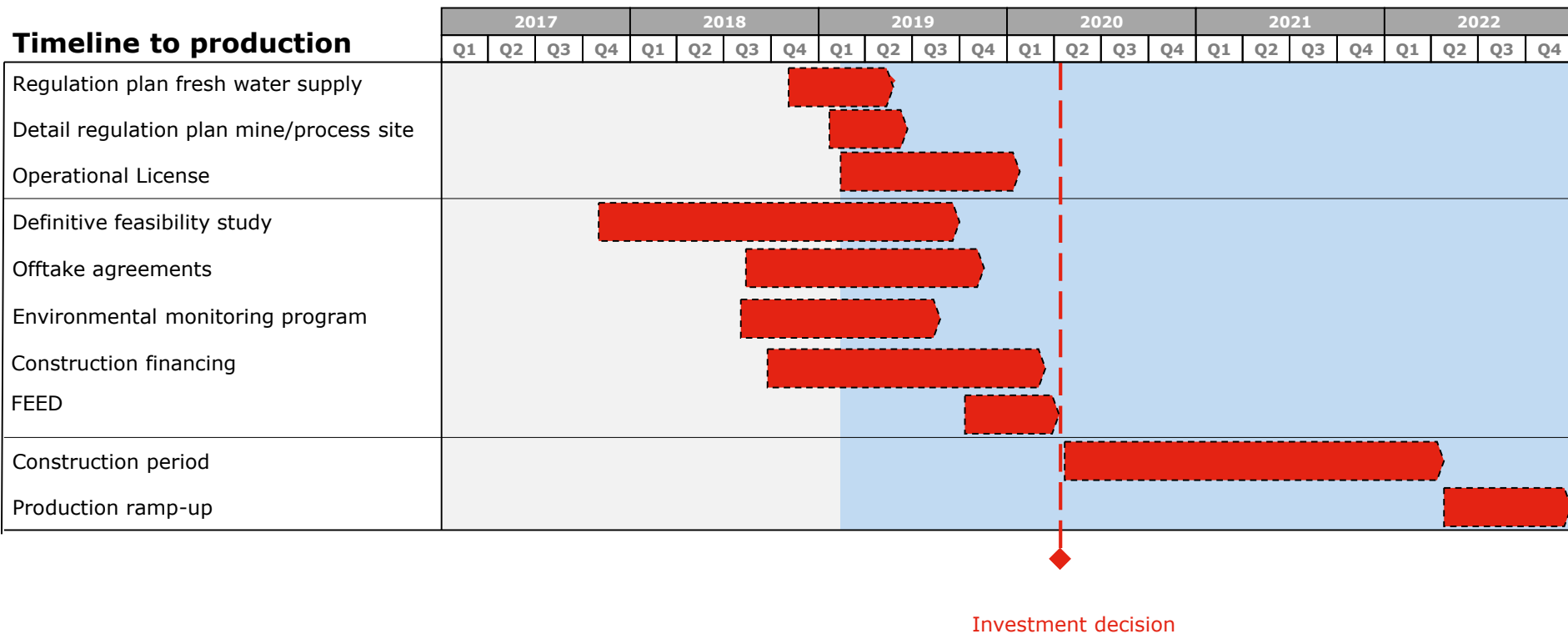
NPV (pre-tax) upside potential to the PFS base case



- A USD 51m upside potential**
 - Garnet sales in line with production during the initial ten years
- B USD 69m upside potential**
 - Extension of mine life to 40 years by including Inferred Resources
- C USD 13m upside potential**
 - Increased production of garnet in the seventh year to meet expected garnet sales of 300 000 tonnes per year
- D USD 47m upside potential**
 - Assuming garnet sales averaging a price of USD 275/t and an average rutile price of USD 1,092/t¹
- X**
 - Utilization of the lower grade trans-eclogite (in addition to the high grade ferro-eclogite in the base case) will be investigated further; may offer flexibility and potential upside to the Life of Mine

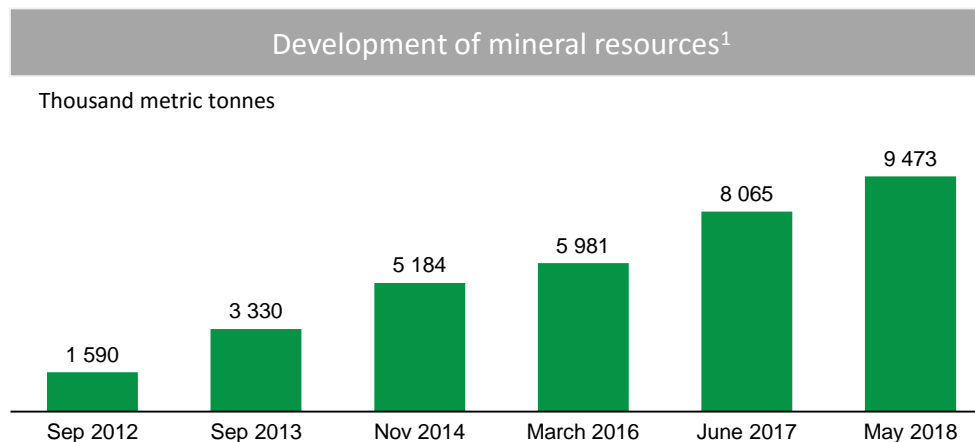


Enggebø, tentative timeline towards production



First producer of battery grade lithium in Europe

- In February 2019, Keliber completed a share issue with total gross proceeds of EUR 10m
- The proceeds will be used for pre-construction development work and financing preparations, i.a. IPO
- State-owned company Finnish Minerals Group is largest shareholder with 24.3%
- Nordic Mining's shareholding is 18.5%, second largest shareholder



Note: 1) Estimates performed by Competent Persons in accordance with JORC Code (2012 edition) and with 0.5% Li₂O cut-off Source: Keliber EUR/USD = 1.1746



Global megatrend

Towards a more mobile and sustainable world

Global needs to reduce CO₂ emission and improve air quality in big towns

Changes in consumer behavior



Accelerated investment in the lithium value chain

Global electrification of transportation with continuing political and regulative support.

Nordic Quartz (100%) - Development in High Purity Quartz



Project highlights

- JORC compliant resource estimates of 2.9 million tonnes (indicated) and 1.3 million tonnes (inferred)
- Substantial volumes in massive quartz zones (>95% quartz content)*
- Estimated NPV of USD 60 million @ 8% WACC in scoping study based on annual production of 5,000 tonnes of HPQ
- Superior product quality demonstrated for advanced applications/markets

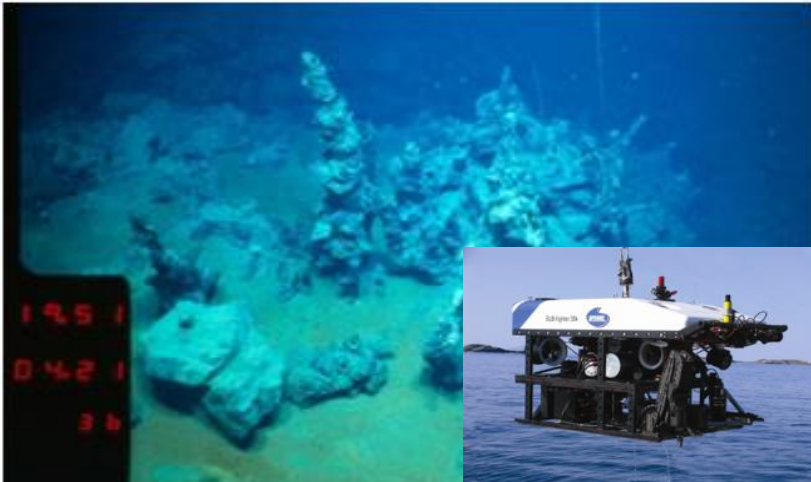
Key features

- Outcropping hydrothermal quartz deposit
- Low in critical elements as Ti, Al, Fe, P, Na, K, Li, B
- Ideally situated, close to infrastructure and port
- Small-scale mining operation for HPQ production; 20 – 30,000 tonnes ore per year
- Limited environmental impact





Pioneer in seabed mineral exploration in Norway



Company highlights

- Nordic Ocean Resources (NORA) has taken a pioneering initiative for exploration of Norway's seabed mineral resources
- NORA has established in-house competence and excellent network with national and international companies and institutions
- NORA has participated in a pre-project for the first estimation of possible mineral resources in the Norwegian Economic Zone (EEZ)



Norway is launching legislation for seabed minerals

- NORA has applied for exploration licenses in the Norwegian EEZ, and has ambition to be the first company exploring for seabed minerals in Norway
- NORA participates in the MARMINE project which have been granted NOK 25 million from the Norwegian Research Council
- A MARMINE exploration cruise was executed in 2016; mineral sample analysis and processing test work to be reported



Board of Directors and Management

Management team



Ivar S. Fossum, CEO

- 12 years with Nordic Mining (since founding)
- 20 years experience from management positions in Norsk Hydro and FMC Technologies



Birte Norheim, CFO

- Broad management experience from various companies in the natural resources and infrastructure sector, i.a. as CEO of Njord Gas Infrastructure AS and VP Finance of Sevan Marine ASA



Mona Schanche, VP Exploration

- 10 years with Nordic Mining
- Geologist with broad mining background



Lars K. Grøndahl, Senior Advisor

- 12 years with Nordic Mining (since founding)
- Broad experience from various industrial management positions



Kenneth Nakken Angedal, Project Manager Engebø

- Broad management and project coordination experience from various management positions in the ABB Group

Board of Directors



Tarmo Tuominen, Chairman

- Deputy CEO in Nordkalk and Chairman of the Geological Survey of Finland (GTK)
- Geology and mining background



Kjell Roland, Deputy chairman

- Previous experience CEO of Norfund, partner and CEO in ECON Management AS and ECON Analysis
- Finance / economics background



Mari Thjømøe, Board member

- Extensive executive and board experience from oil and gas, finance and investment management (e.g. Equinor, Norsk Hydro and KLP)
- Finance / industry background



Eva Kaijser, Board member

- More than 18 years of experience in the Swedish mining industry, including 11 years in Boliden
- Finance / industry background

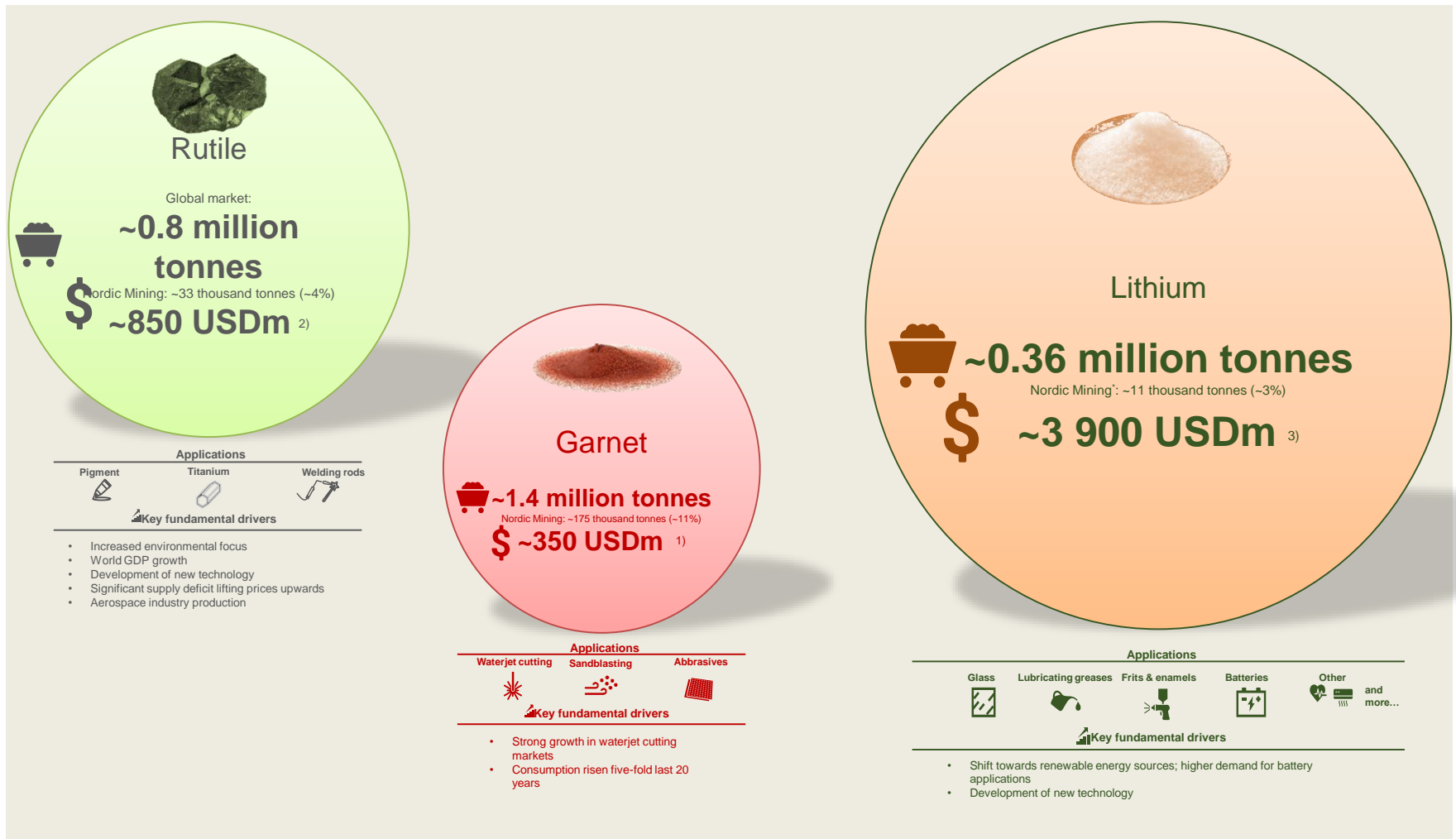


Kjell Sletsjøe, Board member

- Comprehensive international management experience from mining, coatings and construction industries as well as consulting
- Technical / financial background



Valuable markets for Nordic Mining's minerals



Source: Keliber DFS, Engebø PFS, TAK Industrial Mineral Consultancy, TZMI,

Notes: 1) Annual sales assuming garnet price of USD 250/t (Engebø - PFS) and sales=production ; 2) Annual sales assuming rutile price of USD 1,070/t (Engebø - PFS) and sales=production ; 3) Annual sales assuming lithium carbonate price of USD 10,910/t (Keliber - DFS) and sales=production



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