

# A Nordic Iron Ore opportunity

8<sup>th</sup> Annual Exploration & Mining Investment Conference

Jernkontoret, Stockholm

November 15th 2011

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**Iron Ore**™



## Agenda

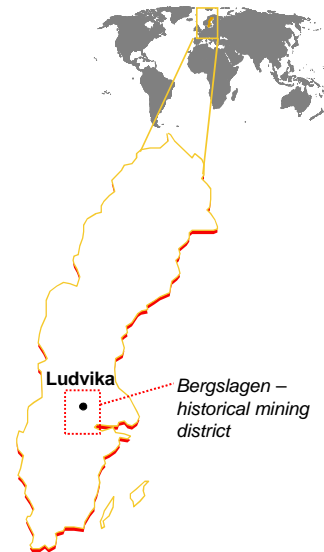
- I. Introduction
- II. Market conditions
- III. Project potential
- IV. Management
- V. Summary

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## Nordic Iron Ore

- An **iron ore** mining company based in Ludvika, Sweden
- Established in 2008 through contribution in kind of 12 exploration assets from Kopparberg Mineral AB, Archelon Mineral AB and IGE Nordic AB
- Two out of three main projects are **brownfield** – dormant since 1980
- Heading for **production in Q1 2015**



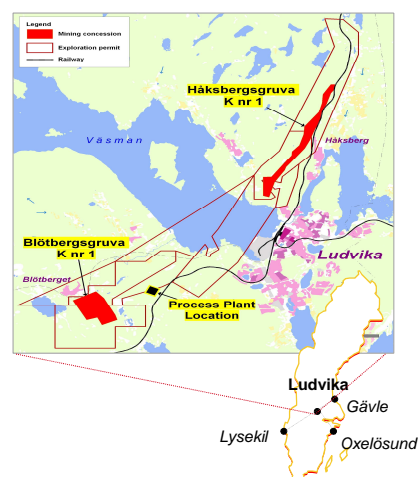
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## Ludvika mines

### Key facts

- Brownfield mines:
  - Blötberget (mining concession granted)
  - Håksberg (mining concession expected)
- Large mineral resources, high iron grade
  - 39 Mt indicated<sup>1</sup> (36-43%)
  - 22 Mt inferred<sup>1</sup> (36-43%)
- Existing mine infrastructure and railway access to three alternative ports for shipping
- Estimated CAPEX savings of SEK 500-600m
- Premium product: concentrate 67% Fe

### Mining concessions & expl. permits



**LARGE EXPANSION OPPORTUNITY: VÄSMAN**

<sup>1</sup>) Mineral resources for Blötberget and Håksberg are according to NI 43-101 standards for reporting mineral resources

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## Why now?

Excellent market conditions, with long term stable outlook



Great project potential at low risk



Strong management with proven track record

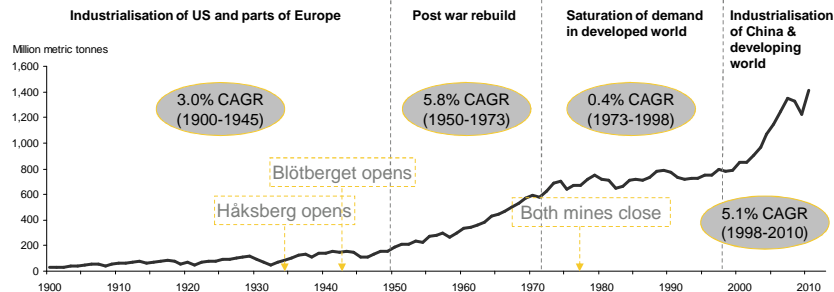


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## Demand for crude steel...

### Crude Steel Production 1900 – 2010



- Demand for iron ore highly correlated with global steel production (99% of iron ore supply being used in steel production)



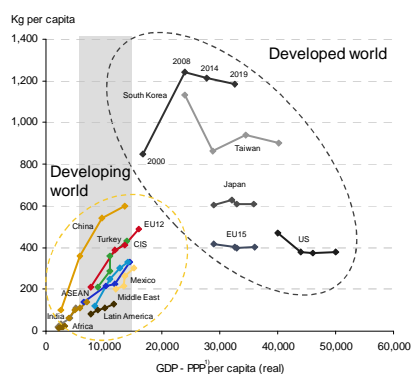
...FOLLOWS LONG INDUSTRIALISATION TRENDS AND...

Source: Steel Statistical Yearbook

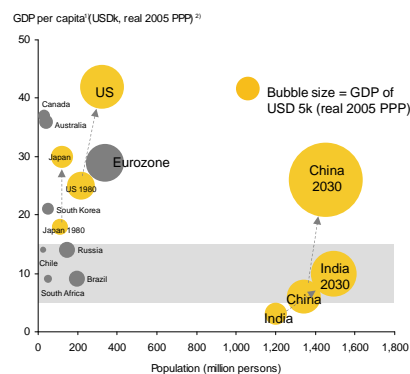
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## ...remains strong thanks to developing countries

### Steel consumption<sup>3</sup> vs. GDP/ capita



### Population vs. GDP per capita



- Denotes GDP per capita levels with high demand for commodities due to increased development in infrastructure



DEVELOPING COUNTRIES DRIVES STEEL CONSUMPTION

Source: ArcelorMittal, Worldsteel<sup>1</sup>, base steel demand scenario, Global insight, BHP Billiton analysis

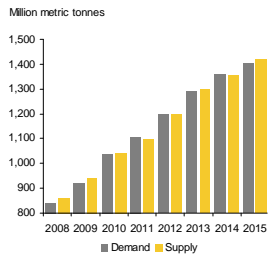
1) All figures for 2009 unless mentioned otherwise 2) PPP = Purchasing power parity

3) Consumption development 2000, 2008, 2014 and 2019

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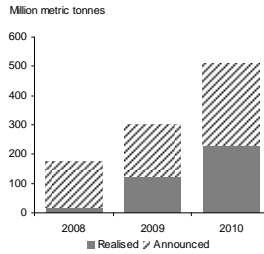
## Supply shortage will support high prices

### Seaborne iron ore supply and demand



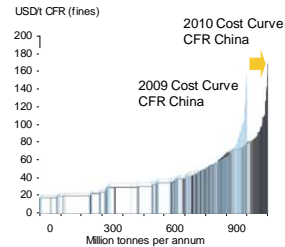
- Supply and demand balance for iron ore is relatively tight

### Share of iron ore prospects realised



- Far from all announced additional capacity is being realised

### High end cash cost curve supportive for high prices



- Chinese margin producers usually have very high OPEX costs



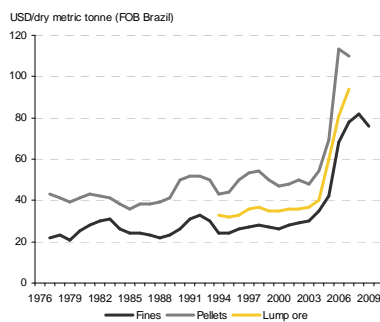
### CHINESE MARGIN PRODUCERS KEEP PRICES AT HIGH LEVELS

Source: Trademap, Macquarie, Rio Tinto - RTIO analysis

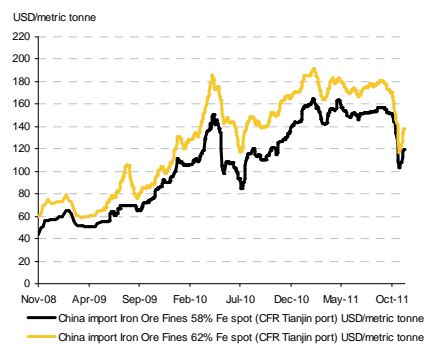
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## Higher grade iron ore trades at a premium

### Development of iron ore benchmark prices



### Higher grade iron ore trades at a premium



- Prices for iron ore reached record high levels in Q1 2011 of around USD 195/t
  - Currently trading at USD 138/t (62% Fe) and USD 119/t (58% Fe)<sup>1</sup>



### PRICES ARE EXPECTED TO REMAIN AT HIGH LEVELS

Source: Macquarie, Datastream

<sup>1</sup>) Prices as of 14 November 2011

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## Ludvika mines

### Brownfield projects

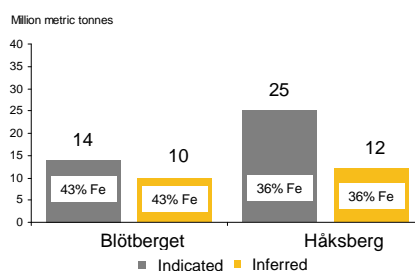
#### Blötberget

- Mining concession granted
- Production start Q1 2015

#### Håksberg

- Mining concession application submitted
- Production start Q1 2015

### Sizable mineral resources



### Expansion opportunity

#### Väsman

- Possible extension of the Håksberg ore field – connecting Håksberg and Blötberget
- Concession application in 2012
- Prel. economic assessment 2013

**New geomagnetic study:  
Exploration target of 600-650 Mt  
(average grade 29% Fe)**

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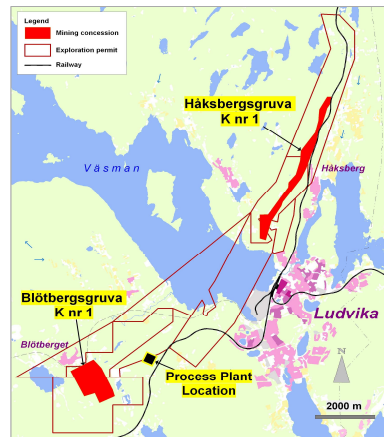
**POSSIBLY ONE OF SWEDEN'S LARGEST IRON ORE ASSETS**

Note: The mineral resources of Blötberget and Håksberg and the exploration target of Väsman are presented according to NI 43-101 standards for reporting mineral resources

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## Key targets of Ludvika Mines

### Project overview



### Production targets

#### – Blötberget and Håksberg

**Planned ROM<sup>1</sup>:** 5.5 mtpy<sup>2</sup>  
**Iron ore products:** 2.5 mtpy<sup>2</sup>  
 (conc. 67% Fe)  
**Pre-production:** 2012  
**Start production:** Q1 2015  
**Life of mine:** ~12 years

### Exploration target – Väsman

**Exploration target:** 600-650 Mt (19-47% Fe, average 29% Fe)  
 Geomagnetic survey & study finalised in October 2011

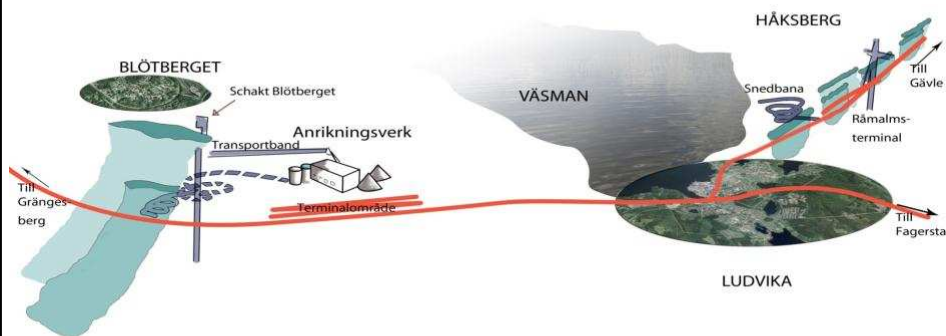


**LUDVIKA MINES – NOW REOPENING UNDER ONE OWNER**

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Note: The mineral resources for Blötberget and Håksberg are according to JORC standards for reporting mineral resources  
 1) ROM = Run of Mine 2) mtpy = million tonnes per year

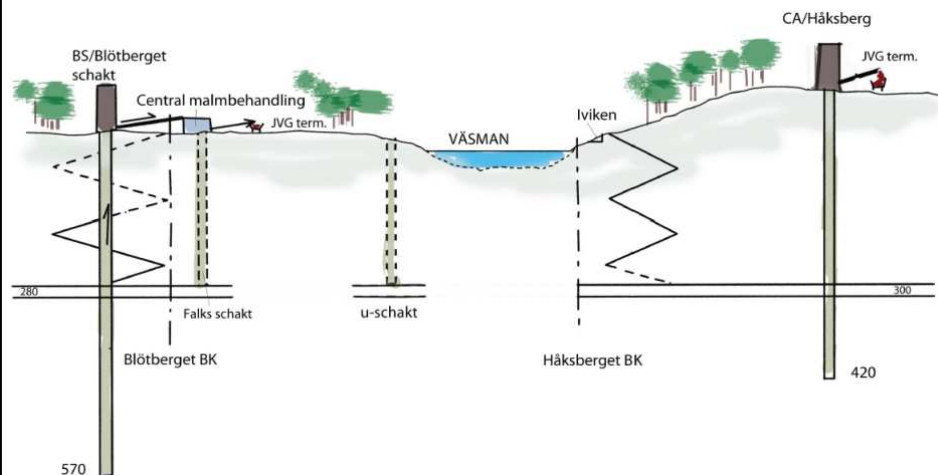
## Ludvika Mines - illustration



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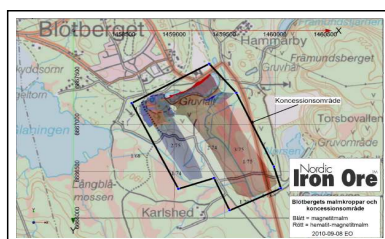


## Ludvika Mines



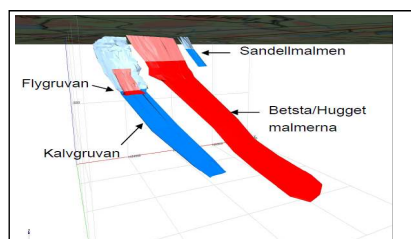
## Blötberget project

### Concession area



- Resources are generally open at depth and sideways
- Mining concession granted by the Mining Inspectorate of Sweden
- The cut off grade for resource calculations was historically around 30%, implying potential larger minable quantities

### Ore bodies



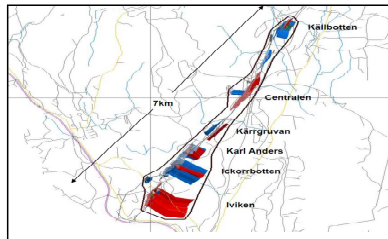
### Mineral resources

|                     | Indicated | Inferred |
|---------------------|-----------|----------|
| <b>Tonnage (Mt)</b> | 14        | 10       |
| <b>Grade</b>        | 43%       | 43%      |



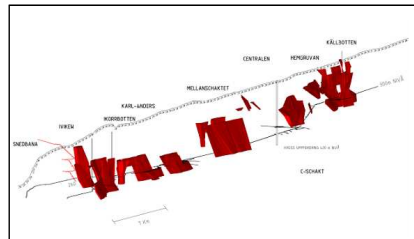
## Håksberg project

### Concession area



- Resources are generally open at depth
- Application for mining concession – submitted in March 2011
- Local and regional authorities has approved the application

### Ore bodies



### Mineral resources

|                     | Indicated | Inferred |
|---------------------|-----------|----------|
| <b>Tonnage (Mt)</b> | 25        | 12       |
| <b>Grade</b>        | 36%       | 36%      |



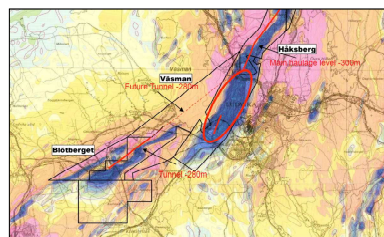
**MINING CONCESSION IS IMMINENT**

Note: The mineral resources for Blöberg and Håksberg are according to NI 43-101 standards for reporting mineral resources

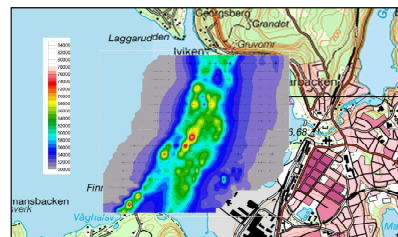
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## Väsman – expansion opportunity

### Magnetic field map



### Detailed geomagnetic study – as of March 2011



### Geomagnetic study findings – 9 October 2011

- Estimated exploration target<sup>1</sup> of 600-650 Mt down to 300 meters (magnetite mineralisation)
- Weighted average grade of 29% Fe (19-47% Fe)
- Hematite mineralisation not included in estimation
- Extensive drilling programme to be conducted to further assess and develop the mineralisation.

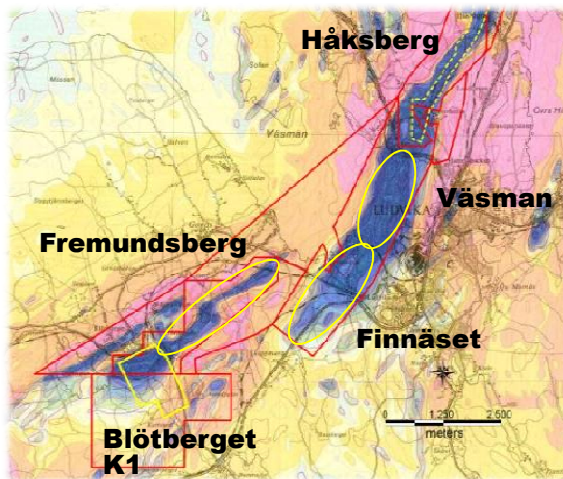


**NEW ESTIMATE: EXPLORATION TARGET OF 600-650MT, 28-30% FE)**

1) Exploration target defined according to NI 43-101 standards for reporting mineral resources

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## Ludvika Mines – Future developments

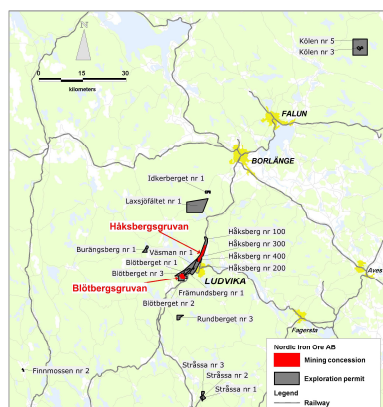


→ POSSIBILITIES FOR LONG TERM MINING OPERATIONS

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## Proximity of mines provides economies of scale

### Nordic Iron Ore asset portfolio



### Sole control of the entire ore field

- Economies of scale in mining, ore processing and exploration
- Use of common mine infrastructure such as:
  - Processing plant
  - Railroad
- Modern mining and processing techniques provides:
  - Competitive OPEX
  - Below average CAPEX/mtpy<sup>1</sup> for new mines
- Short time to production due to existing mine infrastructure



MAIN PROJECTS WILL LEVERAGE ON ECONOMIES OF SCALE

1) mtpy = million tonnes per year

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## Ideally situated in the centre of Sweden

### No production or distribution bottlenecks

- Located in the mining region of Bergslagen
  - Stability and political support
  - Access to skilled employees and subcontractors
- Railway links the mining sites to deep sea ports at Oxelösund and Gävle
  - Alternatives in Uddevalla and Lysekil
  - Significant capacity (25 ton axle load)
- Excellent power supply with access to the national grid
- Customers primarily located in Europe, Middle East and China
  - Opportunity to supply Europe at competitive transportation costs

### Multiple rail and port connections



**NO IRON ORE PROJECT WITHOUT ACCESS TO EFFICIENT RAIL ROAD INFRASTRUCTURE**

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## Brownfield project reduces risk

### Brownfield status implies low risk profile

- Reopening of old mines – Blötberget and Håksberg
  - Ore bodies known from previous production as well as from new analyses performed under current management
- Operation of these brownfield projects provides multiple benefits such as:
  - Access to extensive historical archives
  - Mining infrastructure to a large extent in place
  - Increased probability of permits approval
  - Access to skilled workforce

### Existing mine infrastructure

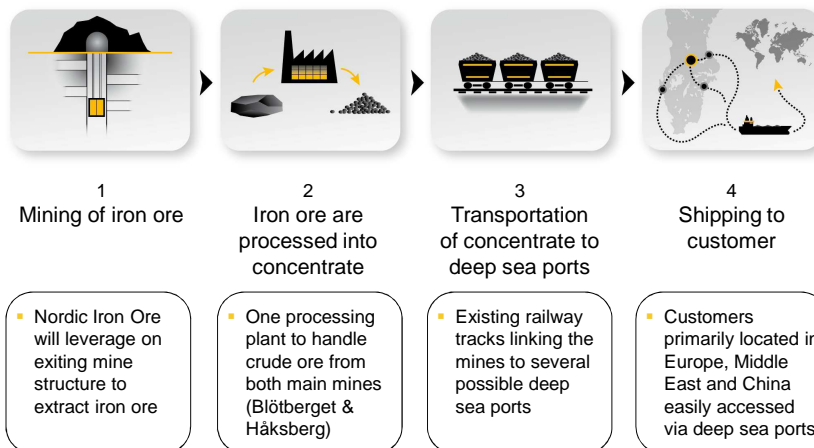


**BROWNFIELD PROJECT – CAPEX SAVING OF SEK 500-600m**

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## An efficient business set-up

### Illustrative overview of critical operational processes

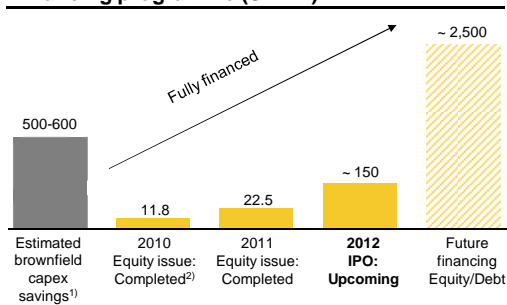


**HIGH QUALITY PRODUCT: CONCENTRATE 67% FE**

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## Shareholders and financing

### Financing programme (SEKm)



### Main shareholders

| Owner                     |       |
|---------------------------|-------|
| Bengtsson Tidnings AB     | 28.8% |
| Kopparberg Mineral AB     | 23.6% |
| Archelon Mineral AB       | 21.4% |
| Christer Lindqvist        | 5.0%  |
| IGE Nordic AB             | 3.6%  |
| Värman Invest AB          | 1.3%  |
| Starbo Bruk AB            | 1.3%  |
| Others                    | 14.9% |
| Local and regional owners | 35.1% |



**FINANCING TO BE CONDUCTED DURING 2012**

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1) Savings due to current instalments of shafts and underground roadways 2) Issue in kind and Private placement

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## Management

**Christer Lindqvist**  
Chief Executive Officer

*MSc in Metallurgy, Royal  
Institute of Technology*

*Former Director/Project  
Director of Dannemora  
Mineral, 20 years experience  
of project financing and  
management from the ABB  
Group. Chairman of  
Kopparberg Mineral AB, Terra  
Mining Ltd Botswana,  
Malmköpings nya Spritbolag  
AB Director of AEG Bioetanol  
SpZoo Poland*

**Lennart Eliasson**  
Chief Financial Officer

*MSc in Business &  
Administration, Uppsala  
University*

*Authorised Public Accountant  
1985, Partner at KPMG 1989,  
audit engagement partner in  
public and private enterprises  
and specialist in corporate  
finance and transaction  
services. VP Corporate  
Finance at Swedbank Markets  
for 9 years*

**Hans Thorshag**  
Project manager

*MSc in Mining, Royal Institute  
of Technology*

*Experience as project  
manager, production  
manager and mining  
specialist from LKAB,  
Boliden, Midroc Gold and  
Lundin Mining*

**Louise Sjögren**  
Chief geologist

*Master of Earth Science,  
University of Gothenburg*

*9 years experience from  
exploration and mining  
geology most recently from  
Boliden*

Supported by a dedicated team of consultants:

**RAMBOLL**

**GeoVista**

**Golder  
Associates**

**Vectura**

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## Board of Directors

### Ulf Adelsohn, Chairman of the Board

Master of Laws, Stockholm University

- Director of the Swedish Trade Council
- Former Minister of Transport & Communication
- Former Mayor of Stockholm
- Former Governor of Stockholm
- Former Chairman of SJ AB
- Former leader of the Swedish conservative party

### Christer Lindqvist, CEO & Director

MSc in Metallurgy, Royal Institute of Technology

- See Management

### Per Storm, Director

MSc in Metallurgy, Royal Institute of Technology

- CEO of Kopparberg Mineral
- Former CEO of Raw Materials Group
- Former Executive VP of Royal Swedish Academy of Sciences

### Anders Bengtsson, Director

MBA, Monterrey Institute of International Business

- CEO, Director and Partner of DIMITRA AB
- Partner of BT AB Invest
- Director of Bengtssons Värdepapper AB

### Jonas Bengtsson, Director

MSc in Business and Economics, Stockholm University

- Partner of BETAB Invest
- CEO and Director of Stenbe Fastigheter AB
- CEO and Director of Dala Press AB
- Director of Bengtssons Värdepapper AB
- Director of Jarlaparken kontorshotell AB

### Thomas Jansson, Director

MSc in Business and Economics, SSE

- CEO, deputy Director and Partner Hillen Consulting AB
- Board member Handelsbanken Ludvika
- Former Partner and member in Head of Line of Business KPMG AB
- Chairman of KPMG International Industrial Products Committee

### Lars-Göran Ohlsson, Director

MSc in Mining, Royal Institute of Technology

- CEO and Director of GEO-Management AB
- Director Koppar
- Former CEO of Dannemora Mineral AB
- Riddarhyttan Resources AB, LKAB Prospektering AB, and SGAB

## Past achievements and current agenda

### 2007

- Market analysis from Raw Materials Group

### 2008

- 13 exploration permits received from founders
- Foundation of Nordic Iron Ore

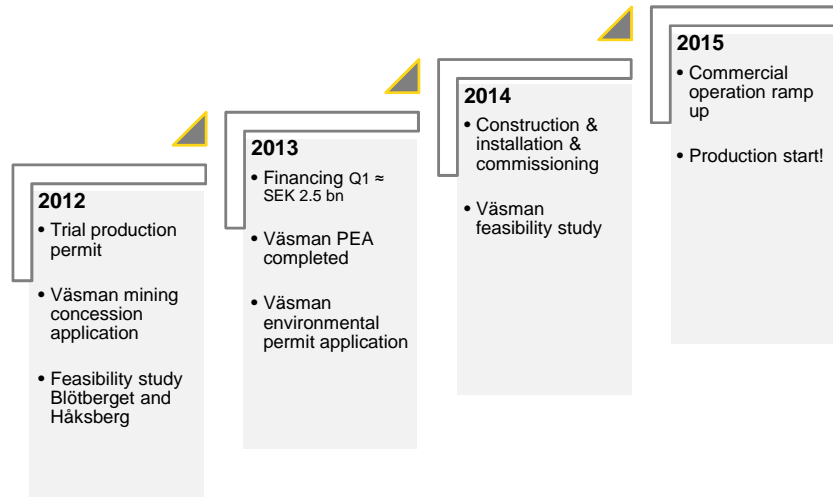
### 2010

- Acquisition of exploration permits for Håksberg, Väsman and Stråssa deposits
- Private placement of SEK 3.5m (Starbo bruk & Väsman invest)

### 2011

- Mining concession for Blötberget granted
- PEA finalised in October 2011
- Application for environmental permits for Blötberget and Håksberg, late 2011

## Nordic Iron Ore's development plan



## Key concerns and risk management

|                                     | Key concerns                                 | Risk mitigation   |
|-------------------------------------|--|---|
| PROJECT DEVELOPMENT                 | Appeal/delay in environmental permit process | <b>Proactive dialogue</b> with local community and environmentally considerate process          |
|                                     | Rail access                                  | <b>Cooperation agreement</b> with the Swedish Transport Administration signed                   |
|                                     | Access to land                               | <b>Mineral Act</b> provides necessary land access to industrial mining operations               |
| PROCUREMENT CONSTRUCTION PRODUCTION | Third round financing                        | <b>Keeping schedule</b> and maintain/develop relationships with current/potential investors     |
|                                     | Access of machinery and equipment            | <b>In-time ordering</b> of machinery and thorough evaluation of choice of equipment             |
|                                     | Recruitment of adequate personnel            | <b>Proactive pinpointing</b> of key personnel and marketing activities for recruitment purposes |
| MARKET                              | Decreasing price/demand                      | Negotiate <b>long-term contracts</b> with clients   |
|                                     |  | Assessment of possibilities of <b>hedging</b>   |



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## Summary

- Strong growth in global **demand** for steel, particularly in **developing countries**
- Sustainable demand and **supply shortage** supports **high long-term prices**
- **Premium pricing** for high grade/quality iron ore product

Excellent market conditions,  
with stable outlook



- Two mines linked together by unexplored large iron deposit under lake Väsman, creating a **integrated mine operation with a single owner**
- **Centrally located** with modern logistics to several deep-sea ports
- **Brownfield mines** – low risk, infrastructure in place and mine CAPEX savings of ≈ SEK 500-600m

Great project potential at  
low risk



- **Proven management and BoD** with experience from numerous years in the mining and transport industries
- Pragmatic project **planning assessing essential challenges** and risks

Strong management with  
proven track record



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Thank you