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23 November 2017

The Manager  
Company Announcements  
Australian Stock Exchange Limited  
Exchange Centre  
Level 6  
20 Bridge Street  
SYDNEY NSW 2000

Dear Sir/Madam

**RE: AUSTPAC RESOURCES N.L.**  
**ANNUAL GENERAL MEETING TO BE HELD ON 23 NOVEMBER 2017**  
**MANAGING DIRECTORS PRESENTATION**

We are pleased to provide the presentation of the Managing Director to the Annual General Meeting of Austpac Resources N.L. to be held on 23 November 2017.

Yours faithfully

N.J. Gaston  
Company Secretary

enc



# **Annual General Meeting**

## **23 November 2017**

### **Presentations:**

- **Mike Turbott – Managing Director**
- **Colin ILES – Director**
- **John Winter – GM Process & Technology Development**
- **Mike Smith – GM Exploration**

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# Current Status

- Technology
- Exploration

**Mike Turbott**  
**Managing Director**

# Zinc-Iron-Recovery Process



- Unique process to recycle zinc-contaminated steel mill by-products – Patents Pending
- First stage “proof of concept” commercial- scale testwork completed
- Funding facility to complete testwork program being finalised
- Discussions well-advanced with selected steelmakers interested in providing support and funding leading to technology licences

# EL 5291 (Nhill) – W. Victoria

- Regional geophysical anomalies suggested area is prospective for covered mineral systems
- Subsequent govt. work identified permissive Cambrian island arc setting
- Austpac received Vic. Govt. grant to co-fund first diamond core hole at Nhill – completed May 2017
- DH GG-01 intersected strongly hydrothermally altered volcanics with Zn-Au-Cu mineralisation
- Porphyry copper or VMS massive sulphide source?



# **Urban Minerals and the Circular Economy**

**Colin ILES**  
**Director - Operations**

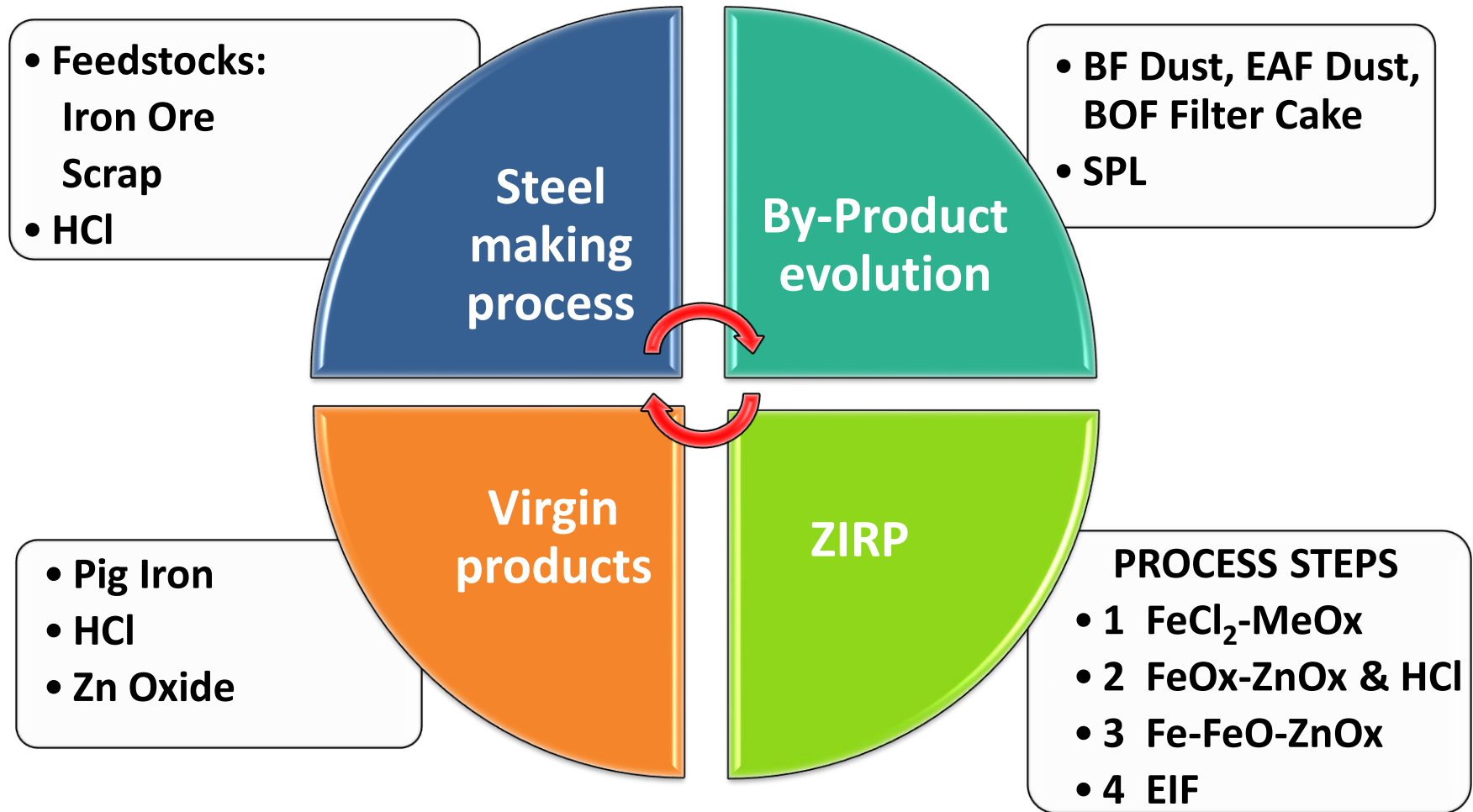
# Moving Forward



**This video of the first stage of  
Austpac's ZIRP process  
is available on the  
Company's website**



# ZIRP - A Circular Process



# Opportunity - EAF

## Estimated By-Product Dust Generation

	Steel production ,000 t	Fe Dust produced ,000 t	Fe contained ,000 t	Zn contained ,000 t
China	80,000	4,800	960	1,680
Europe 27	72,000	4,320	864	1,512
USA	48,000	2,880	576	1,008
Total	200,000	12,000	2,400	4,200

- EAF generates approx. 60 kg of dust per tonne of steel produced

# Opportunity - BOF

## Estimated By-Product Dust Generation

	Steel production ,000 t	Fe Dust produced ,000 t	Fe contained ,000 t	Zn contained ,000 t
China	730,000	11,680	5,022	701
Europe 27	108,000	1,728	743	104
USA	32,000	512	220	31
Total	870,000	13,920	5,986	835

- Integrated BOF steel mill generates approx. 15 kg per tonne of steel produced

# Business Model



- Develop global partnerships to engage and market process to the By-Product industry
- Sell the technology on a license fee basis
- Build in royalty fees to ensure an ongoing income
- Conduct proving programs on behalf of global partners in our Newcastle facility
- Develop a service agreement with all licensees to ensure success and referred business
- Continue R&D to keep the process relevant and expanding

# Milestones / Targets



- Complete test work program, 20 – 25 weeks
  - 20 tonnes raw material (Filter Cake & SPL)
  - Produce 5 – 7 tonnes of reduced Fe/Zn oxide pellets
  - Melt pellets; confirm physical & chemical nature of end products
- Negotiate licence fee for 40,000 tonne plant
  - Secure multi-million dollar fee
  - During 2018, complete construction of Newcastle plant to process 10 - 15,000 tonnes of furnace dust annually
  - Process material from local EAF steel producers
- Market process to global steel community
  - Take successful results to the global steel industry
  - Secure licencing fees and royalties
  - Investigate other By-Product generating industries

# Newcastle ZIRP Plant



- 10 - 15,000 tonne continuously operating facility
- Process locally sourced EAF dust
- Preliminary modelling shows plant will be commercially viable
- Run test programs on behalf of licensees globally, confirming outcome from their dust chemistry
- Continue R&D development of process as well as new By-Product minerals



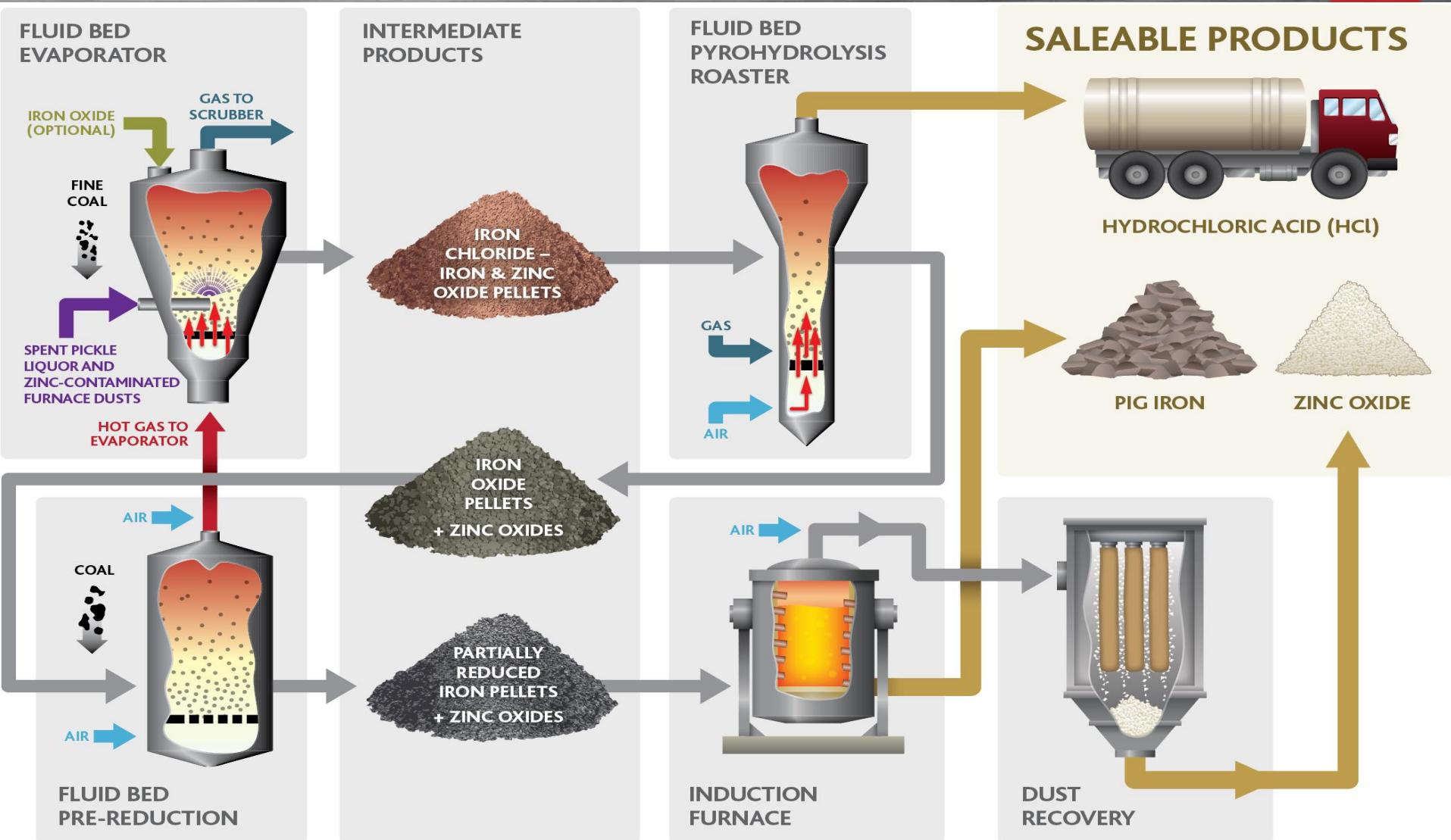
# **Austpac's Zinc, Iron & HCl Recovery Process (“ZIRP”)**

**John Winter**

**GM - Process & Technology  
Development**

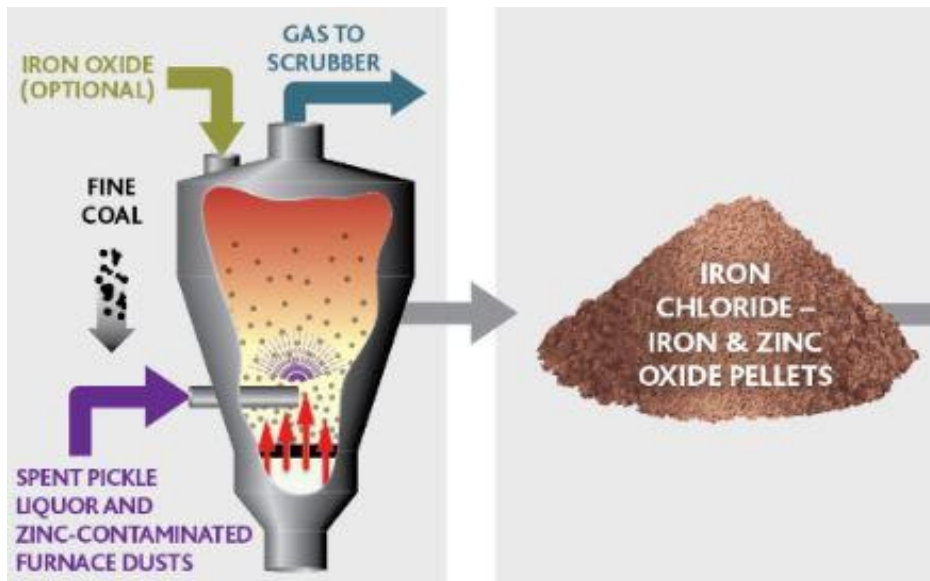


# Zinc-Iron Recovery Process





# ZIRP Stage 1 - EVAP

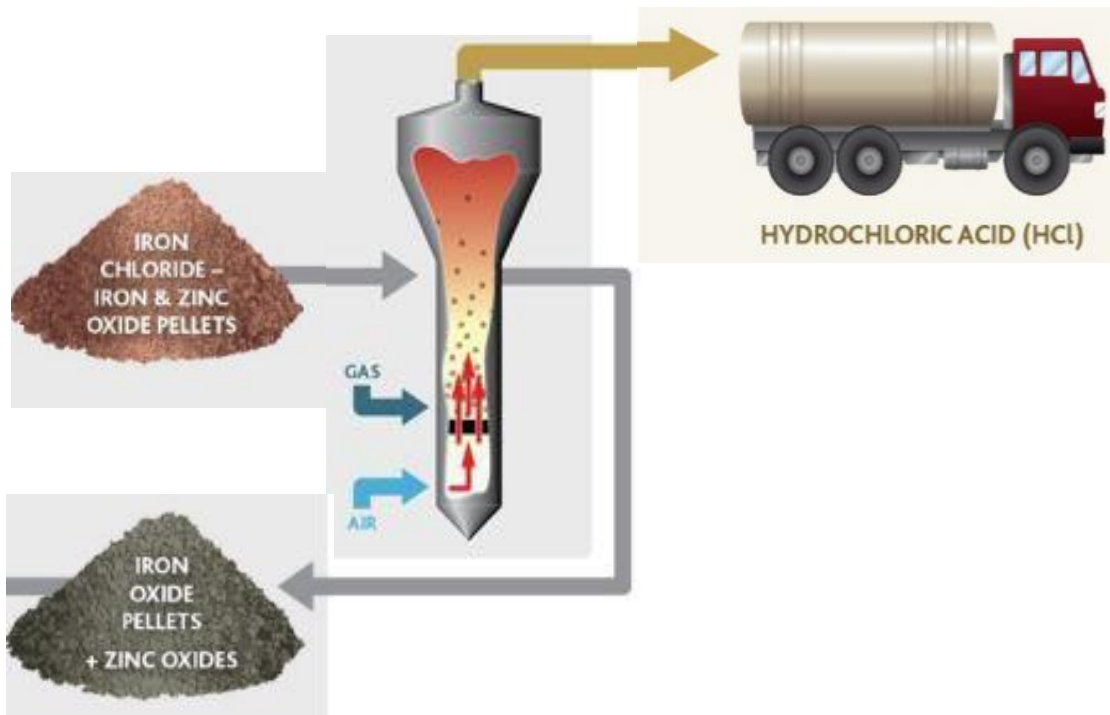


## Evaporation

- Locks furnace dust particles together with iron chloride

Key to the technology

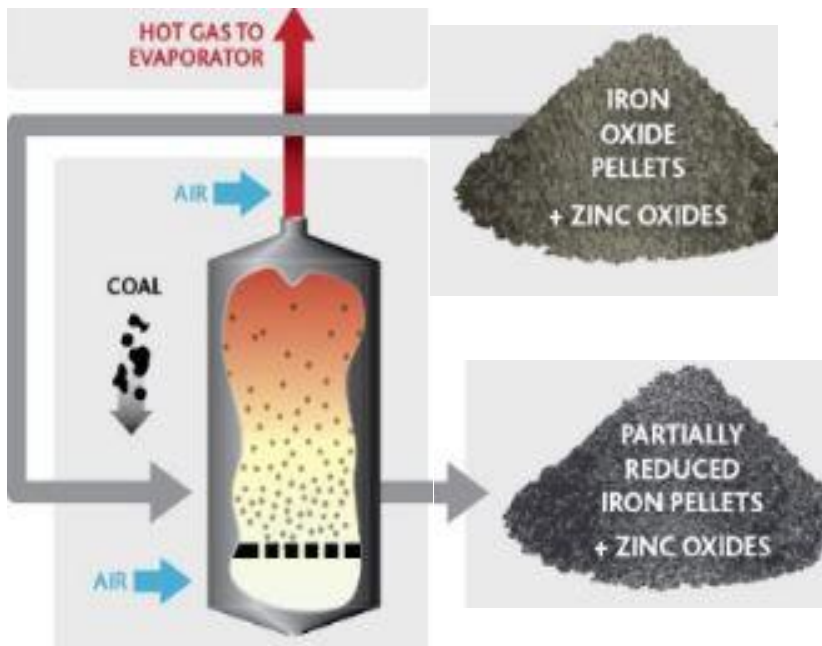
# ZIRP Stage 2 - PYRO



## Pyrohydrolysis

- Physically bonds dusts together with iron oxide (generated from the iron chloride) - **no contamination**
- Produces HCl gas
- Very low residual chlorides in iron oxide pellets

# ZIRP Stage 3 - FBPR



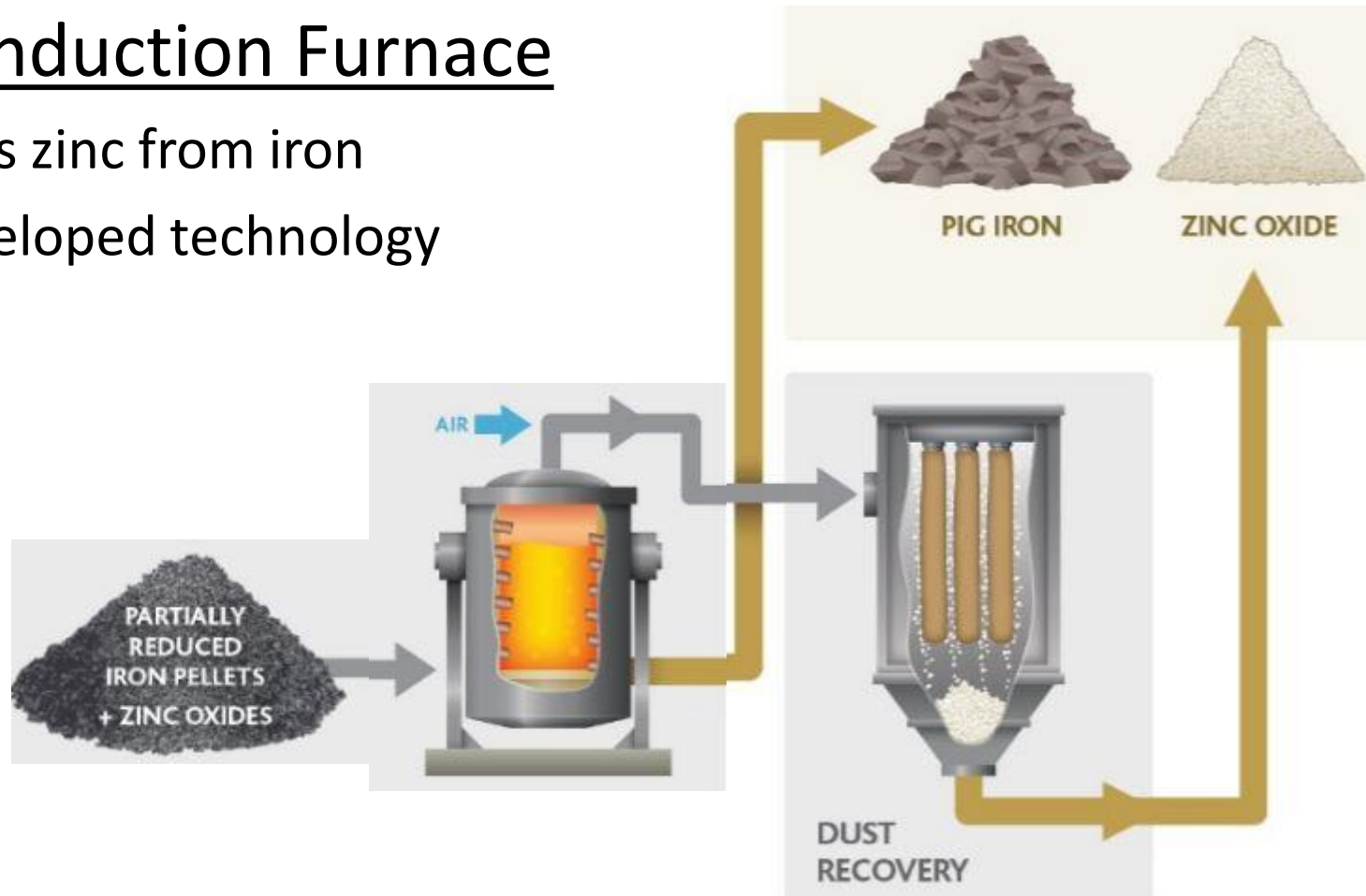
## Fluid Bed Pre-Reduction

- Pre-conditions iron for next stage with no loss of zinc
- Generates heat for EVAP
- Provides pre-heated feed to EIF
- Generates carbon for EIF melting

# ZIRP Stage 4 - EIF

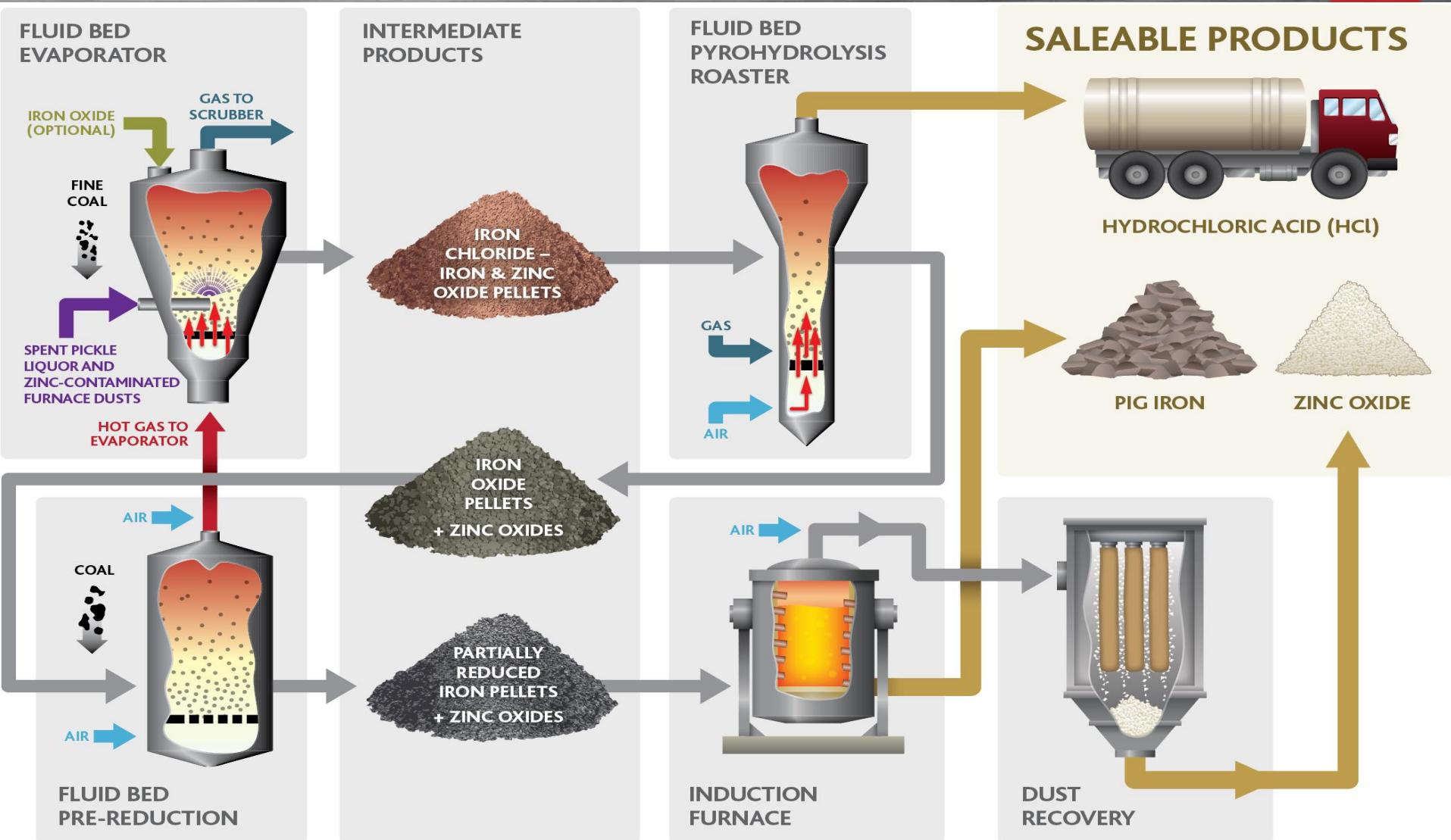
## Electric Induction Furnace

- Separates zinc from iron
- Well developed technology





# Zinc-Iron Recovery Process





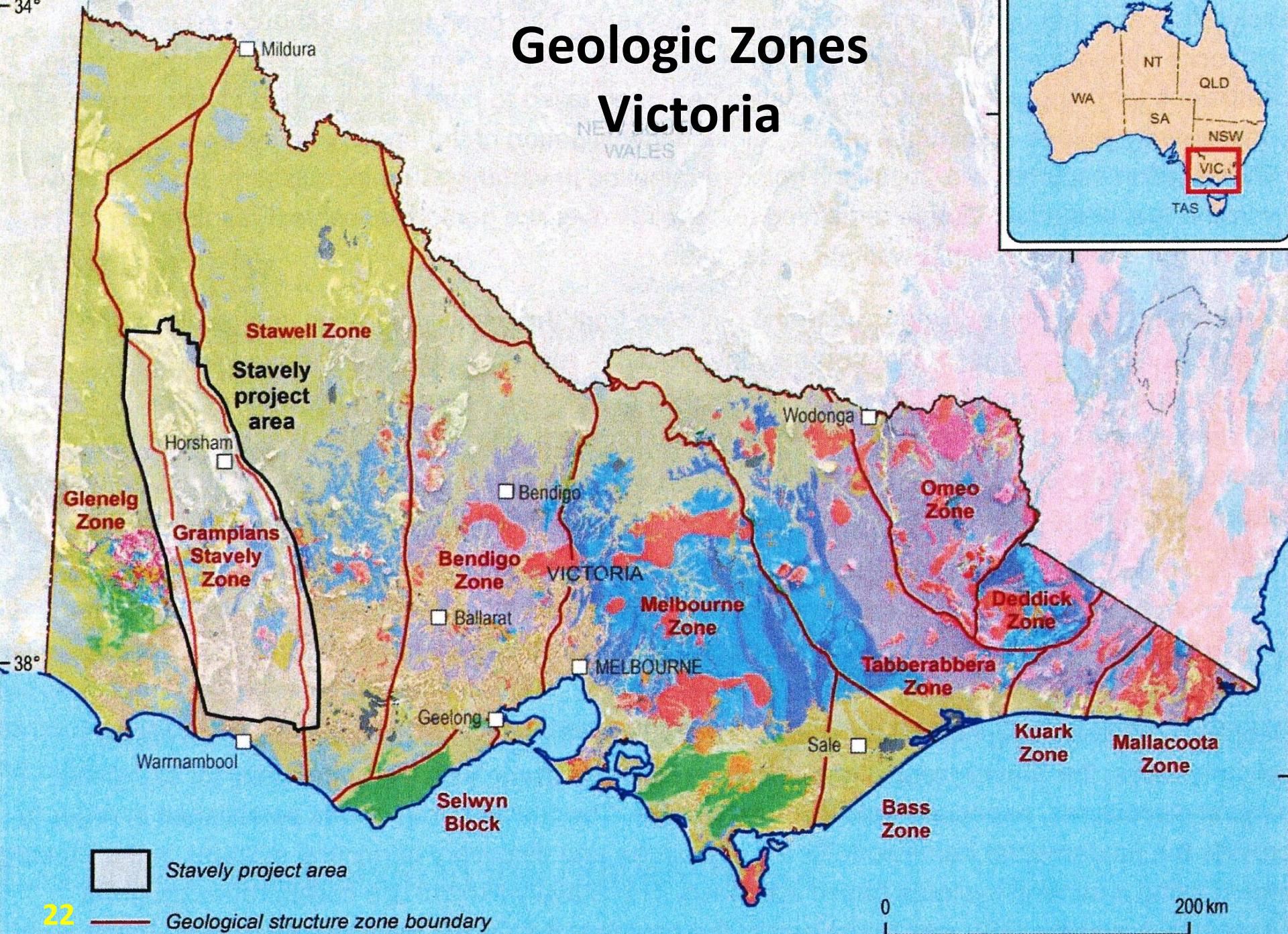
# **Cu-Pb-Zn-Au-Ag Exploration in Western Victoria**

**Mike Smith**  
**GM - Exploration**



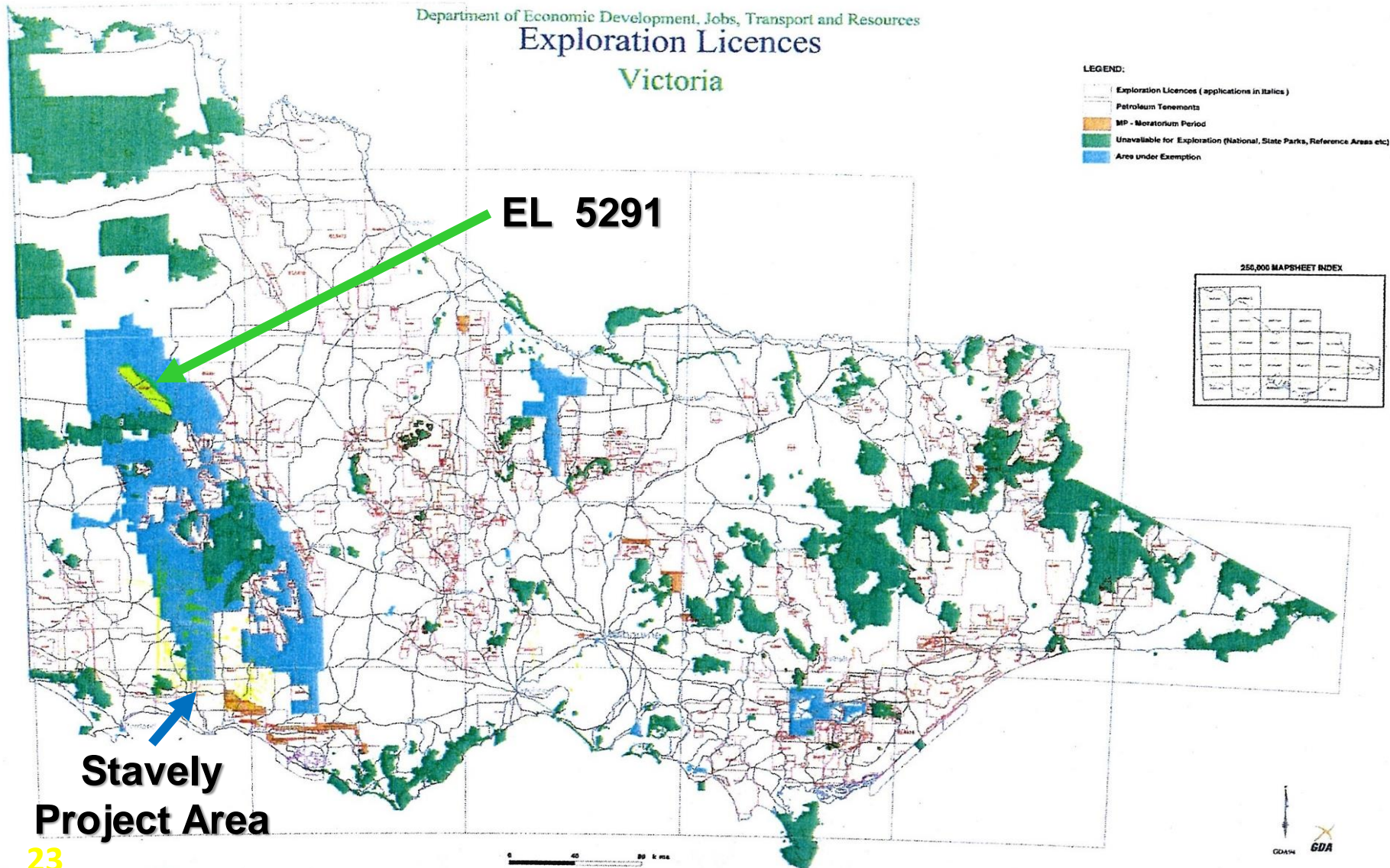
34°

# Geologic Zones Victoria





# EL 5291 - Nhill



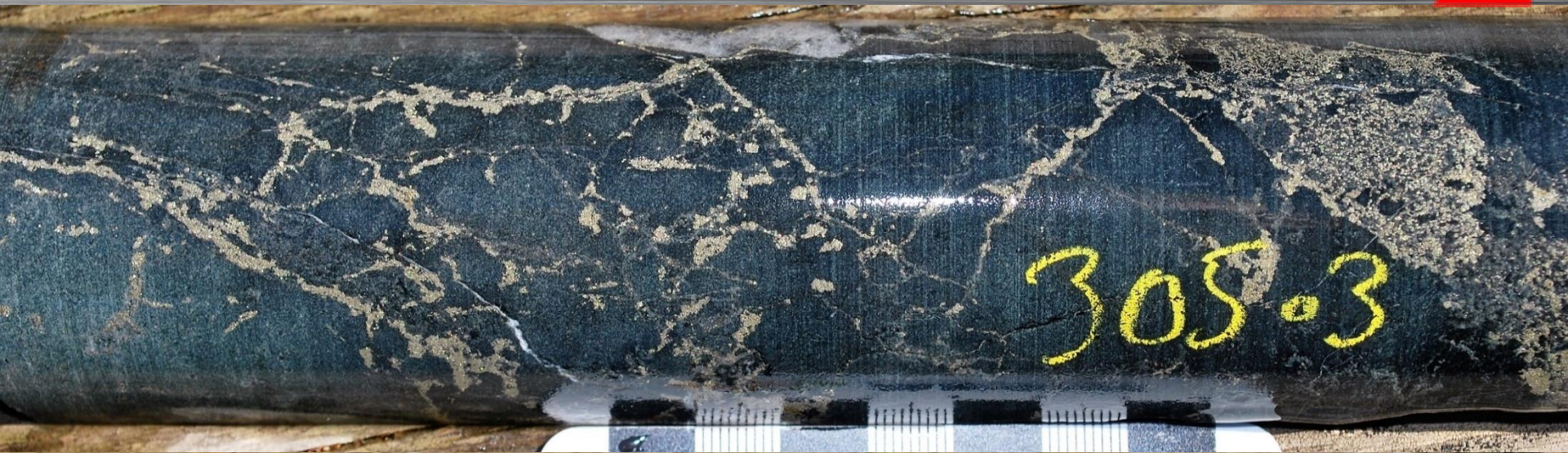


# Drillhole GG-01 May 2017





# Encouraging Drill Intercepts





# Strong Zinc Intercepts

Two intervals contain abundant visible sphalerite and pyrite:

- **0.5m at 3.6% Zn with 0.44 g/t Au** (intercept downhole from 308.0m to 308.5m)
- **0.5m at 1.2% Zn with 0.20 g/t Au** (intercept downhole from 324.0m to 324.5m; end of the hole)
- This mineralisation resulted from the introduction of metal-rich hydrothermal fluids into permeable breccia zones.
- Potential porphyry copper or VMS massive sulphide source

**The project requires GG-01 to be deepened, and the lateral extent of mineralisation assessed with further drillholes.**

**Discussions progressing with potential JV partners.**