Hannanmetals

TSXV:HAN
OTCPINK:HANNF

...turning zinc experience into success at the district-scale, high grade, Kilbricken discovery in Ireland....

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www.hannanmetals.com

Disclaimer

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Qualified Person: The qualified person for Hannan’s projects, Michael Hudson, CEO for Hannan, and a Fellow of the Australasian Institute of Mining and Metallurgy, has reviewed and verified the contents of this presentation.

19 October 2017

Right Project - Right Time - Right Place

Why Hannan Metals?

- **100% ownership** of the flagship high-grade **Kilbricken** Zn-Pb-Ag-Cu discovery in Ireland, **maiden resource July 10 2017:**
  - Total **indicated** mineral resource of **2.7 million tonnes at 8.8% ZnEq**, including **1.4 millions tonnes at 10.8% Zneq**;
  - Total **inferred** mineral resource of **1.7 million tonnes at 8.2% ZnEq**, including **0.6 million tonnes at 10.4% Zneq**;
- **Grade and expandable at all scales, from near resource to prospect scale**, 32,000 hectare land package with 40 km trend to test;
- **Zinc has tight supply fundamentals, Ireland is a leading global jurisdiction for zinc;**
- Exploration and management team with **decades of zinc exploration experience**;
- Work program includes: resource expansion drill program 8,500m (2 rigs), metallurgical studies, 42km 2D seismic, regional soils

Corporate Metrics

TMX TSX Venture Exchange	HAN
OTCPink	HANNF
INSIDERS:	33%
SHARES ON ISSUE:	38.0 M
FULLY DILUTED:	49.2 M
RECENT PRICE:	C$0.285
52 WK HIGH/LOW:	$0.24/0.51
MARKET CAP:	C$10.5 M
CASH:	C$3.5 M
ENTERPRISE VALUE:	C$7.0 M

WARRANTS:

3,038,000 @ $0.40 exp. Feb '18
389,750 @ $0.40 exp. Aug '18
112,500 @ $0.40 exp. Aug '18
118,950 @ $0.20 exp. Nov '18
5,442,486 @ $0.40 exp. Aug '19
737,500 @ $0.10 exp. Mar '20

OPTIONS:

30,000 @ $0.10 exp. Dec '18
75,000 @ $0.40 exp. Feb '20
65,000 @ $0.45 exp. May '20
75,000 @ $0.40 exp. Jul '20
100,000 @ $0.30 exp. Jul '20
1,071,000 @ $0.10 exp. Nov '21
50,000 @ $0.20 exp. Feb '22

Management Team

DIRECTORS

Michael Hudson (Chairman & CEO): *B.Sc. (Hons), MBA, FAusIMM, MAIG*

During a career spanning 26 years Mr Hudson has developed/ financed exploration properties worldwide. Following ten years exploring and developing zinc-lead projects with Pasminco Ltd, the largest global integrated zinc producer at the time, he progressed to the junior mining sector. As Founder and Director of companies including Mawson Resources Ltd (TSX:MAW) and Leading Edge Materials Corp (TSXv:LEM), Mr Hudson has delivered both exploration and commercial success.

Nick DeMare (President): *CPA, CA*

David Henstridge: B.Sc. (Hons), *FAusIMM, MAIG, MGSAust*

Georgina Carnegie: *B.Com, AM Harvard*

Michael Iannacone: *B.Com, CPA, CA*

MANAGEMENT TEAM

Lars Dahlenborg (VP Exploration): *M.Sc, MAIG*

Exploration geologist with 10 years experience in Sweden, Finland, Peru and Australia. He has been critical to advancement on recent discoveries including the Rompas-Rajapalot gold project in northern Finland and the Norra Kärr HREE deposit in Southern Sweden.

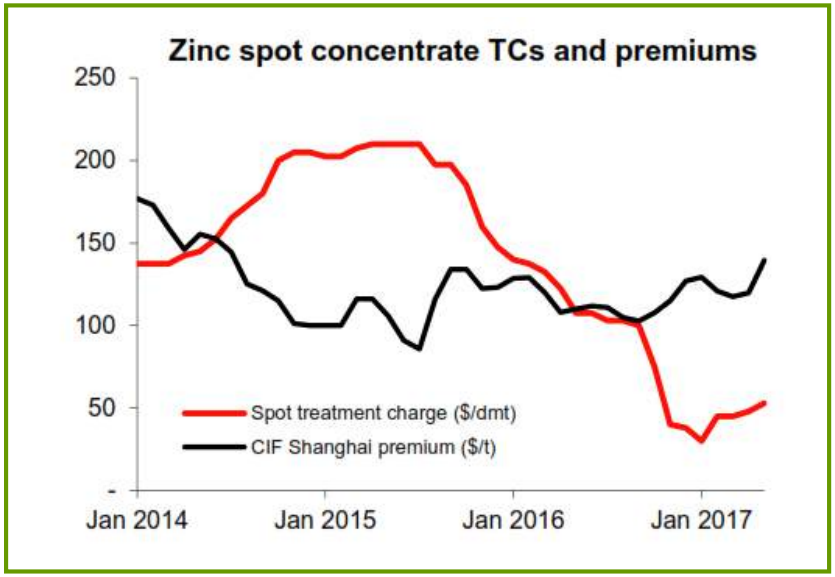
Mariana Bermudez (Corporate Secretary)

Hannan is managed by a group with careers built in the zinc industry. In recent years, the group has raised more than US$100M for European exploration and development. With a track record of success, and significant experience in gaining social licence to operate, Hannan is well place for continued growth.

The old Kilbricken Mine, a Victorian era Pb-Zn mine worked 1834-1854. A Cornish Engine House is still visible today.

Why Zinc?

- **Tight supply fundamentals**
- LME inventories are down 35% to 6-year lows, with zinc prices approaching 5-year highs, while smelter treatment charges halved
- **Closure of the major zinc mines**
- Zinc exploration has been limited over the past 30 years

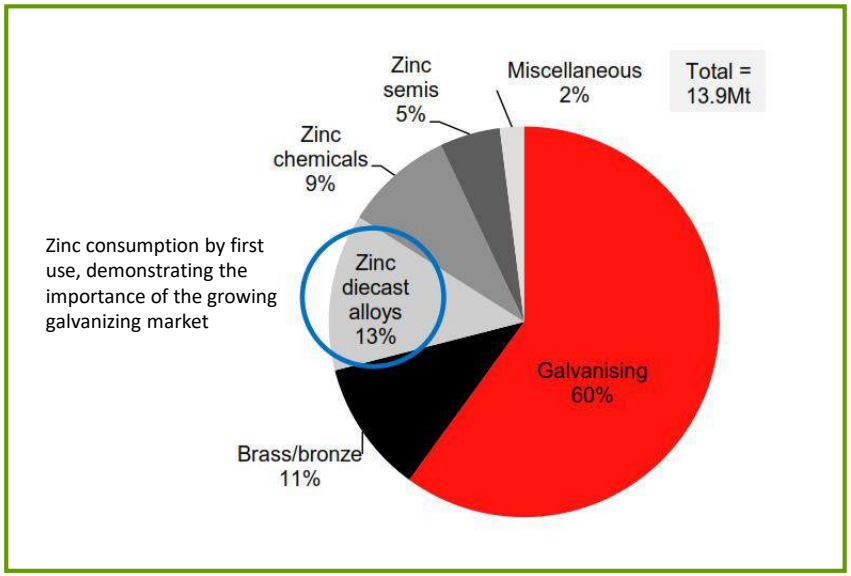


Source: CRU, Macquarie Research, June 2017

The Facts on Zinc

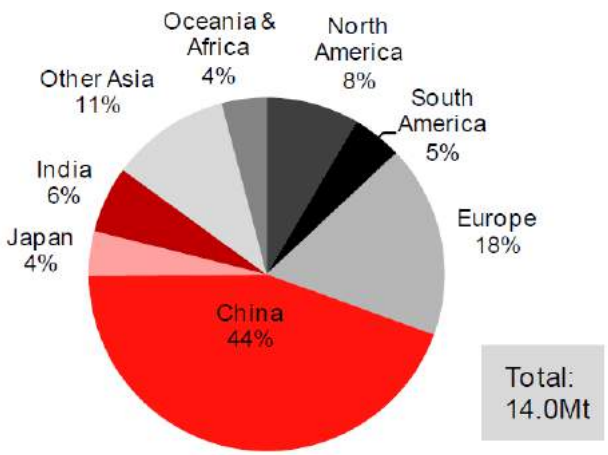
Zinc is a metal for the majors, with large discoveries as targeted by Hannan Metals, prone for takeover. Annual zinc production totals approximately 14 million tonnes. Major mines operating are:

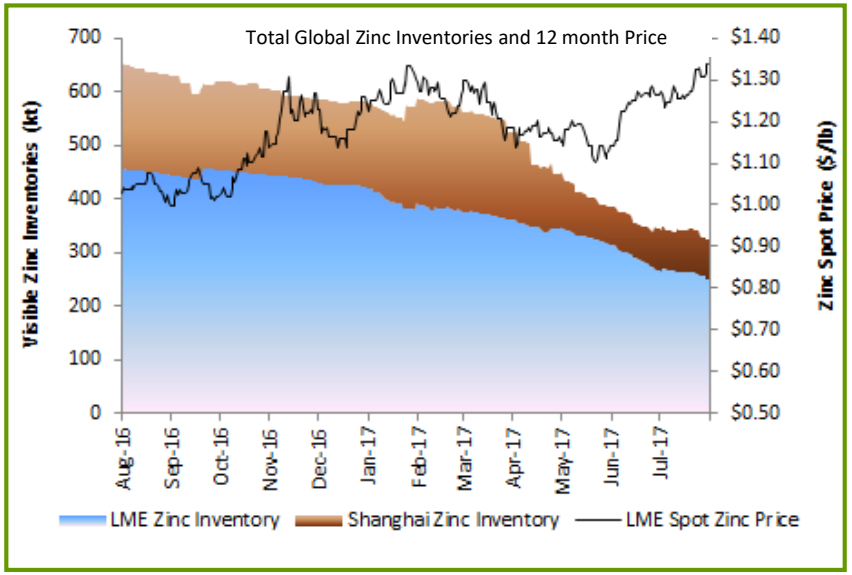
Name	Country	Owner	T Zn Mined 2015
Red Dog	USA	Teck	567,000
Rampura Ag.	India	Vedanta	510,000
Mount Isa	Australia	Glencore	478,000
McArthur Riv.	Australia	Glencore	272,000
Antamina	Peru	Glencore/BHP	191,000
Cerro Lindo	Peru	Votorantim	177,000
Penasquito	Mexico	Goldcorp	176,000
Tara	Ireland	Boliden	133,000



Source: Source: LME, Wood Mackenzie, CRU, ILZSG, Macquarie Research, May 2017, Scotia Bank

2015 Zinc Production shows widespread distribution, and highlights the prominent role played by European producers





Why Ireland?

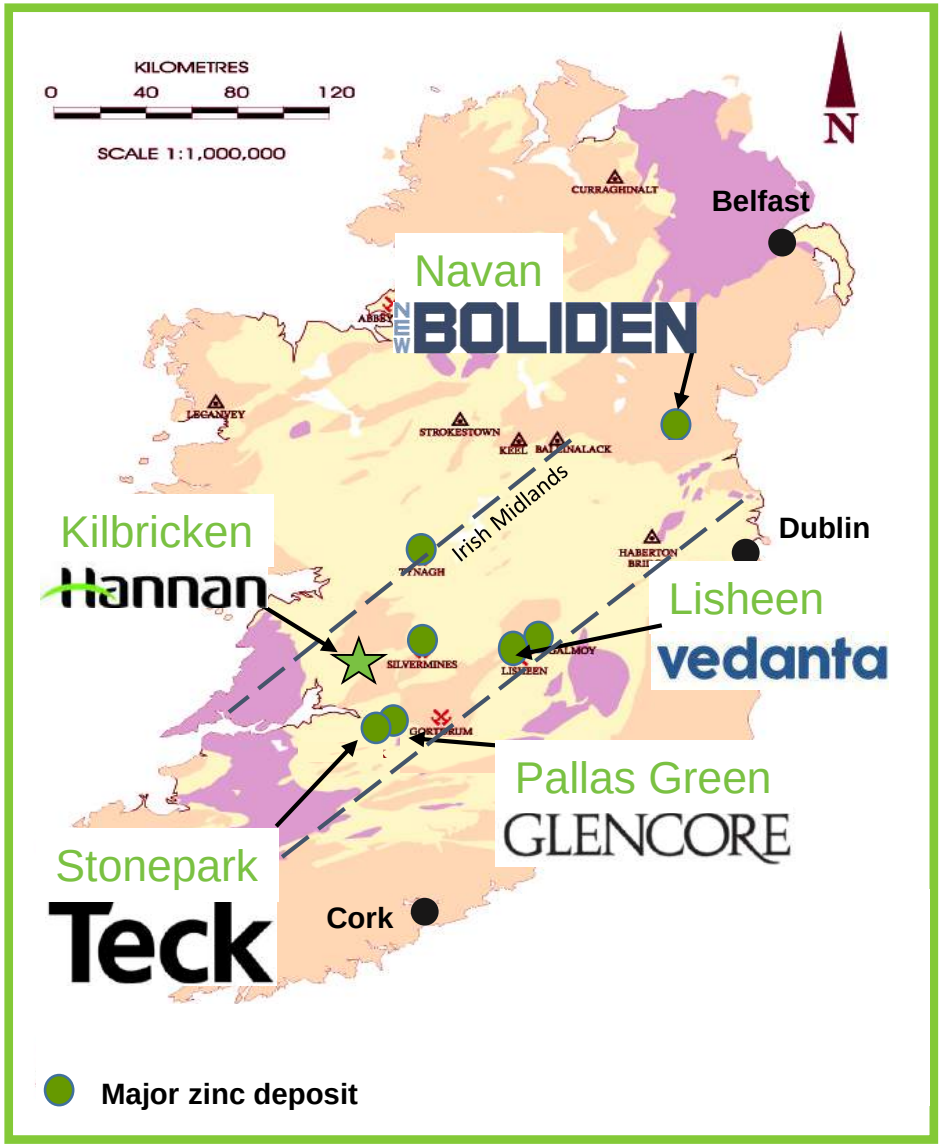
- Ireland is a **leading global jurisdiction** for zinc mining and exploration;
  - Ranked first in the world in terms of zinc discovered per sq. km;
  - In 2015, 10th largest zinc producing;
- "Irish Type" carbonate hosted deposits tend to be large and high grade;
- Ireland is an attractive jurisdiction for mining investment;
- **The country is poised for the next round of major discoveries >200m via technology shift.**

- ✓ Safe
- ✓ Cheap Grid Power
- ✓ Water
- ✓ Roads
- ✓ Skilled Workforce
- ✓ Airport
- ✓ No FIFO

→ Huge benefits for developers

https://www.fraserinstitute.org/categories/mining

Ireland: A Home of Zinc Mining

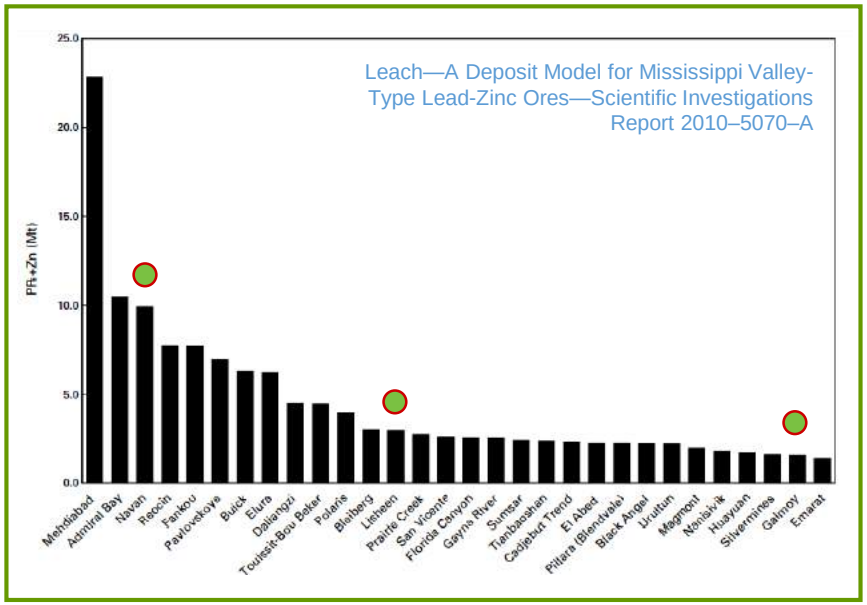


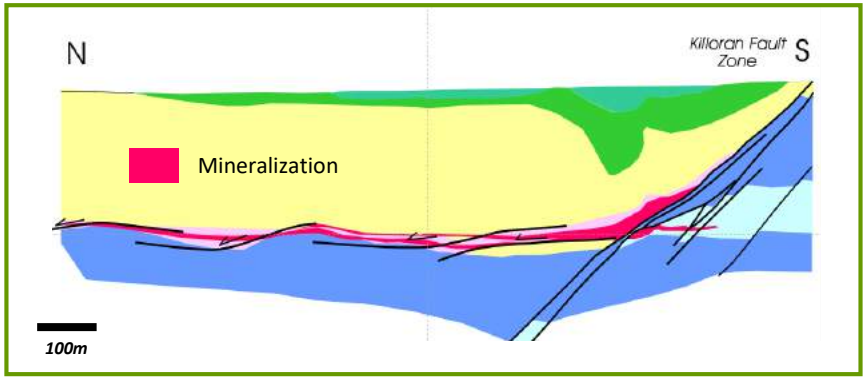
Significant Irish Zn-Pb Deposits		
Navan	111 Mt	9.8% Zn+Pb
Galmoy	6.2 Mt	12.4% Zn+Pb
Silvermines	18 Mt	8.9% Zn+Pb
Tynagh	9 Mt	11.2% Zn+Pb
Pallas Green	42 Mt	8.0% Zn+Pb
Lisheen	18.9 Mt	15.0% Zn+Pb

Since 1960, 15 "Irish-type" deposits with >1 Mt zinc/lead ore have been discovered, including the world class Navan/Tara (>100 Mt). The high grade, shallow occurrence and clean metallurgy of the orebodies, allow for a relatively low cost of mining.

“Irish Style” Deposits – An Attractive Target

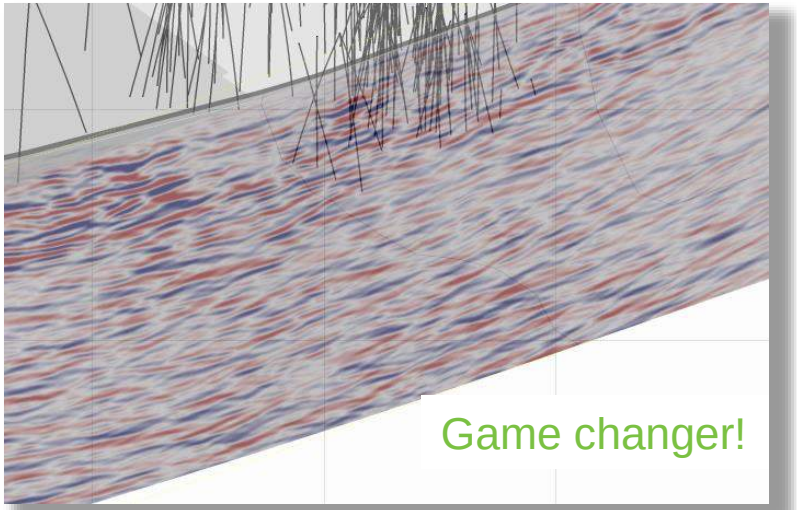
- “Irish Style” deposits are a sub-set of the carbonate hosted MVT-deposits that are well known and studied globally. Three of the 30 largest MVT deposits are in Ireland;
- Deposits controls and characteristics include:
  - they are epigenetic;
  - they are not associated with igneous activity;
  - they are hosted mainly by dolostone and limestone;
  - dominant minerals are sphalerite, galena, pyrite, marcasite, dolomite, and calcite, whereas barite is typically minor to absent and fluorite is rare;
  - they occur in platform carbonate sequences commonly at flanks of basins or foreland thrust belts;
  - commonly stratabound, may be locally stratiform;
  - they typically occur in large districts;
  - the ore fluids were basinal brines with ~10 to 30 wt. percent salts;
  - the most important ore controls are faults and fractures, dissolution collapse breccias, and lithological transitions;
  - sulfides occur as replacement of carbonate rocks and to a lesser extent, open-space fill;
  - alteration consists mainly of dolomitization, host-rock dissolution, and brecciation.





Example cross section of a typical “Irish Style” deposit (Lisheen) showing the close association of ore (in pink) to large scale, often syn-sedimentary basin faults. Mineralizing fluids were interpreted as moving from the sedimentary basin, along faults to be concentrated in flat-lying carbonate horizons.

Kilbricken: Victorian to Modern Era



Kilbricken was discovered in 2007 by Belmore Resources, 166 years after and 400m below a 1834 Victorian era mine.

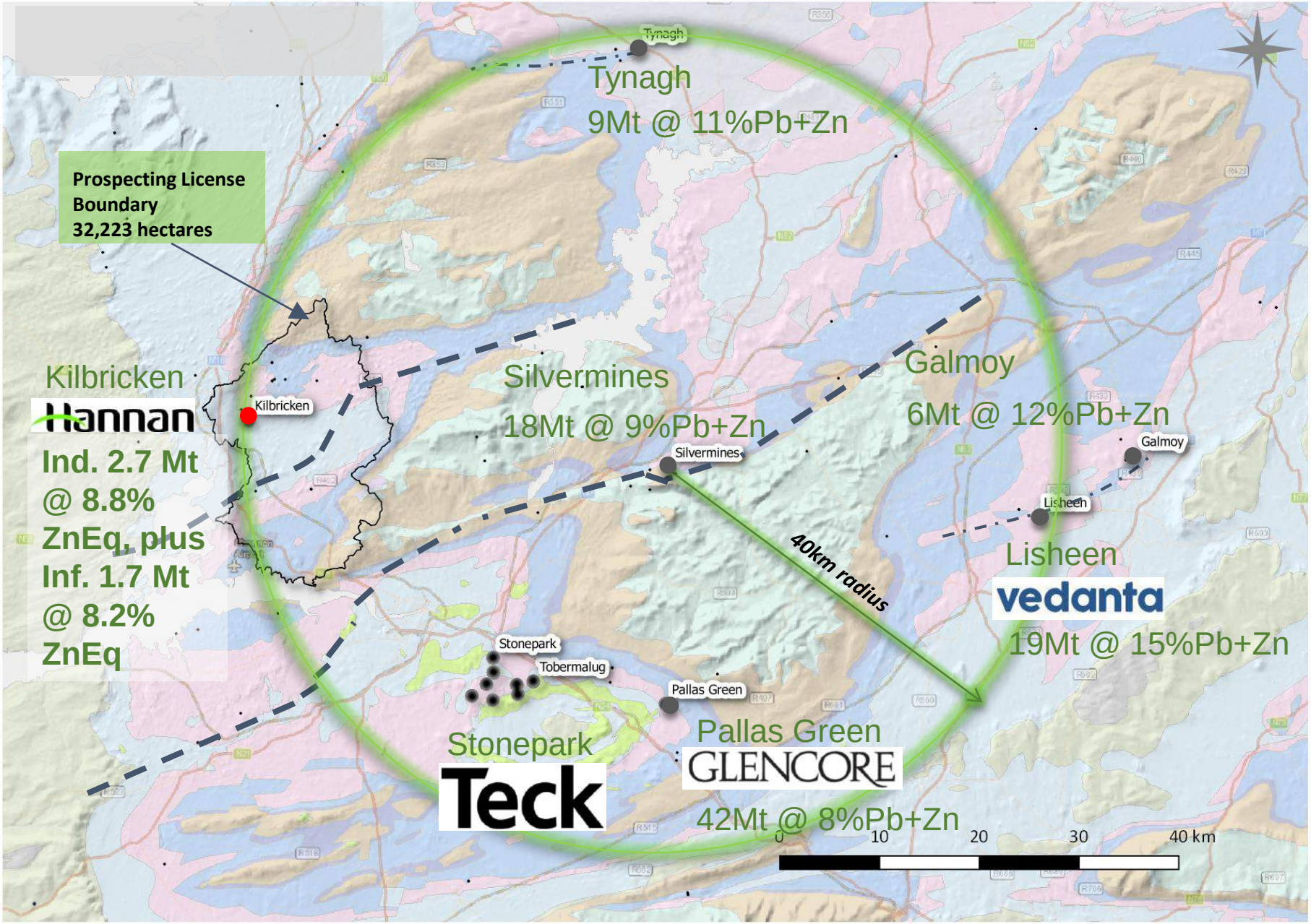
Subsequently bought by Lundin Mining Ltd for an implied price of £16m (or €20m).

Since then, 278 holes for 134,000m of diamond drilling have been completed on the project, which is ready to explore and expand.

Acquisition

Consideration US$1M. Lundin retains a 2% net smelter royalty, subject to a 0.5-per-cent buyback right for US$5M and a one-time bonus payment of US$5M decision to mine.

Regional Setting 100Mt @ >10%Zn-Pb



Maiden Resource a Strong Start

Indicated

Zone	Cutoff ZnEq%	Tonnes	Zn%	Pb%	Ag g/t	Cu%	ZnEq%	SG
Chimney	5	1,369,000	5.6	4.2	66	0.1	10.8	3.5
Fort	5	1,287,000	3.7	1.4	34	0.5	6.7	3.0
Total	5	2,656,000	4.7	2.9	50	0.3	8.8	3.2

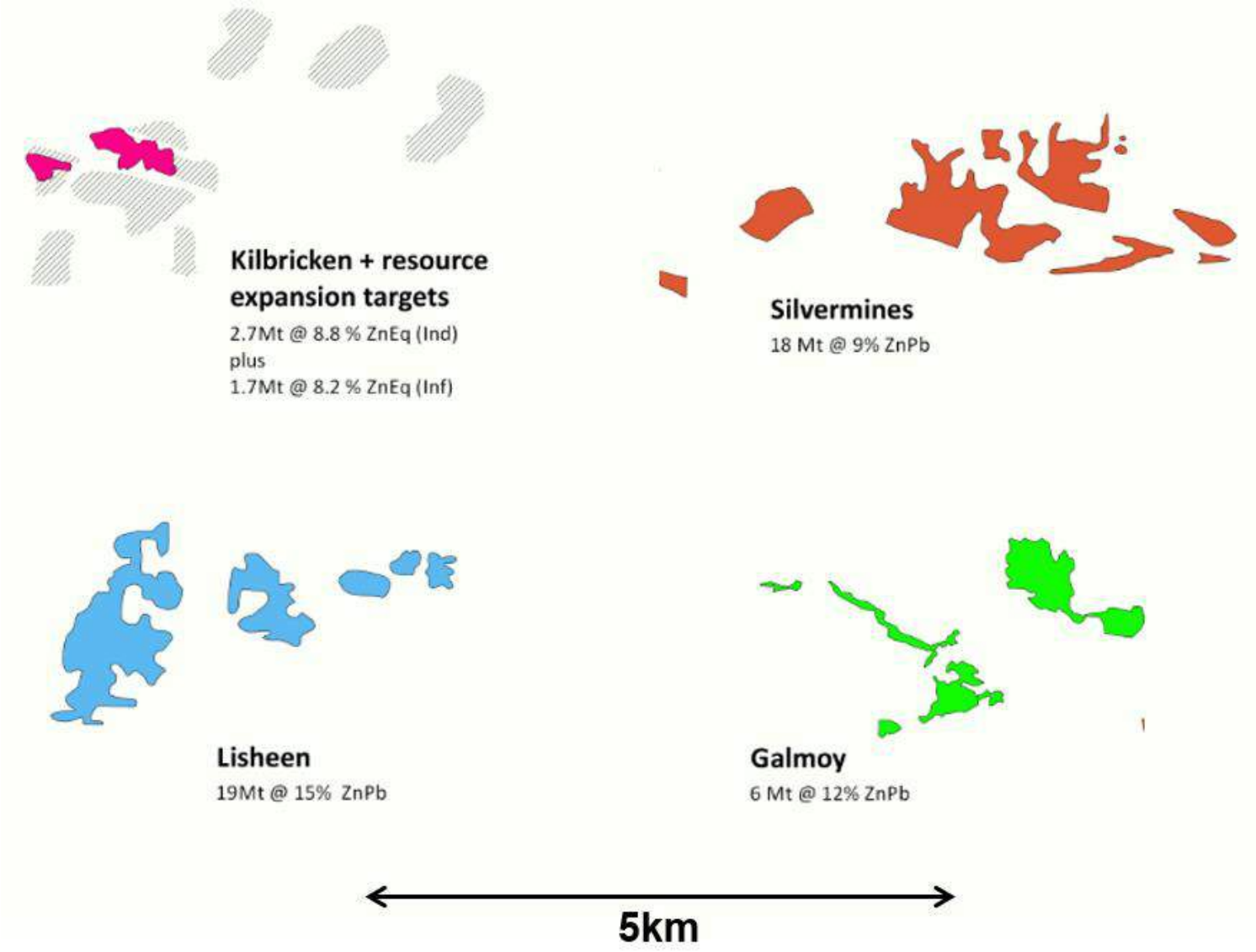
Inferred

Zone	Cutoff ZnEq%	Tonnes	Zn%	Pb%	Ag g/t	Cu%	ZnEq%	SG
Chimney	5	635,000	5.9	3.6	61	0.1	10.4	3.4
Fort	5	1,046,000	3.4	2.5	30	0.3	6.8	3.0
Total	5	1,681,000	4.4	2.9	41	0.2	8.2	3.1

1. Immediately ranks Kilbricken as one of the top ten base metal deposits discovered in Ireland by tonnes and grade;
2. Two styles of mineralization. The upper Chimney Zone is classic high-grade (>10% Zneq) Irish stratabound mineralization targeted by Hannan. Averages 12m thickness. The lower Fort Zone was found later and has been tested with fewer drill holes. Averages 40m thickness;
3. Importantly, the initial resource is expandable at all scales;

Irish Style Systems Form Multiple Bodies

Kilbricken is no different



Mining in Ireland

- Galmoy pre-mine resource was 6.2Mt @ 12.4% Zn+Pb or 1,691Mlbs
- Kilbricken current resource is 514Mlbs ZnEq Indicated plus 302Mlbs ZnEq Inferred, a strong start
- Medium term target for Hannan is 2.2Blbs contained @ 10% ZnEq

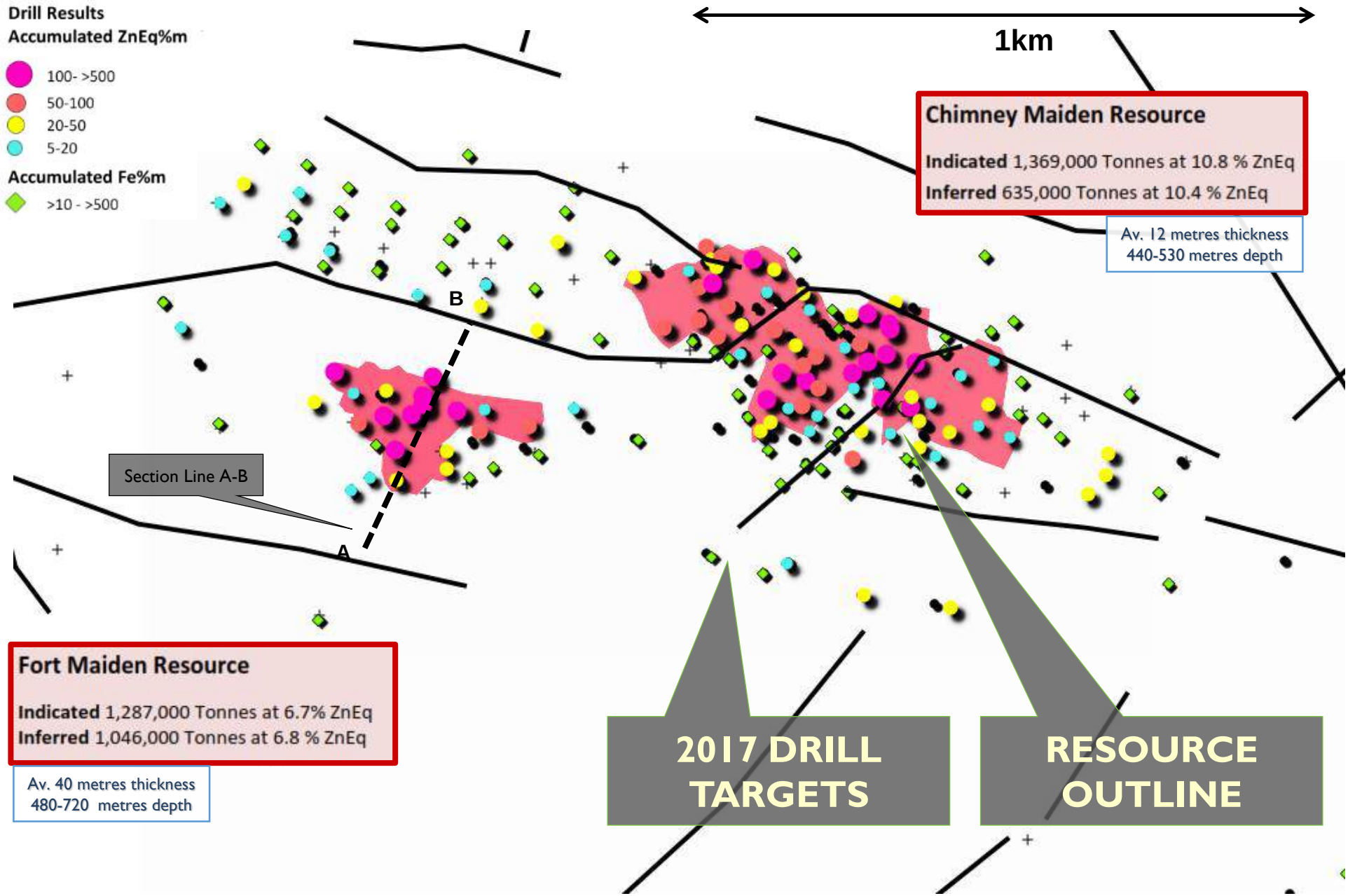
Source: http://www.siteforce.com.au/projects.html

- Discovered in 1984, UG mining commenced in 1997 (Arcon). Employed 200 local people and a further 25 contractors (650,000t/y to 750,000t/y). Lundin Mining merged with Arcon (**valuation of €93.4m**) in 2005. Mining ceased in 2009 (12 year mine life).
- Lisheen 2010, 5.8Mt @ 12.8% Zn+Pb sold to Vedantta US$308M

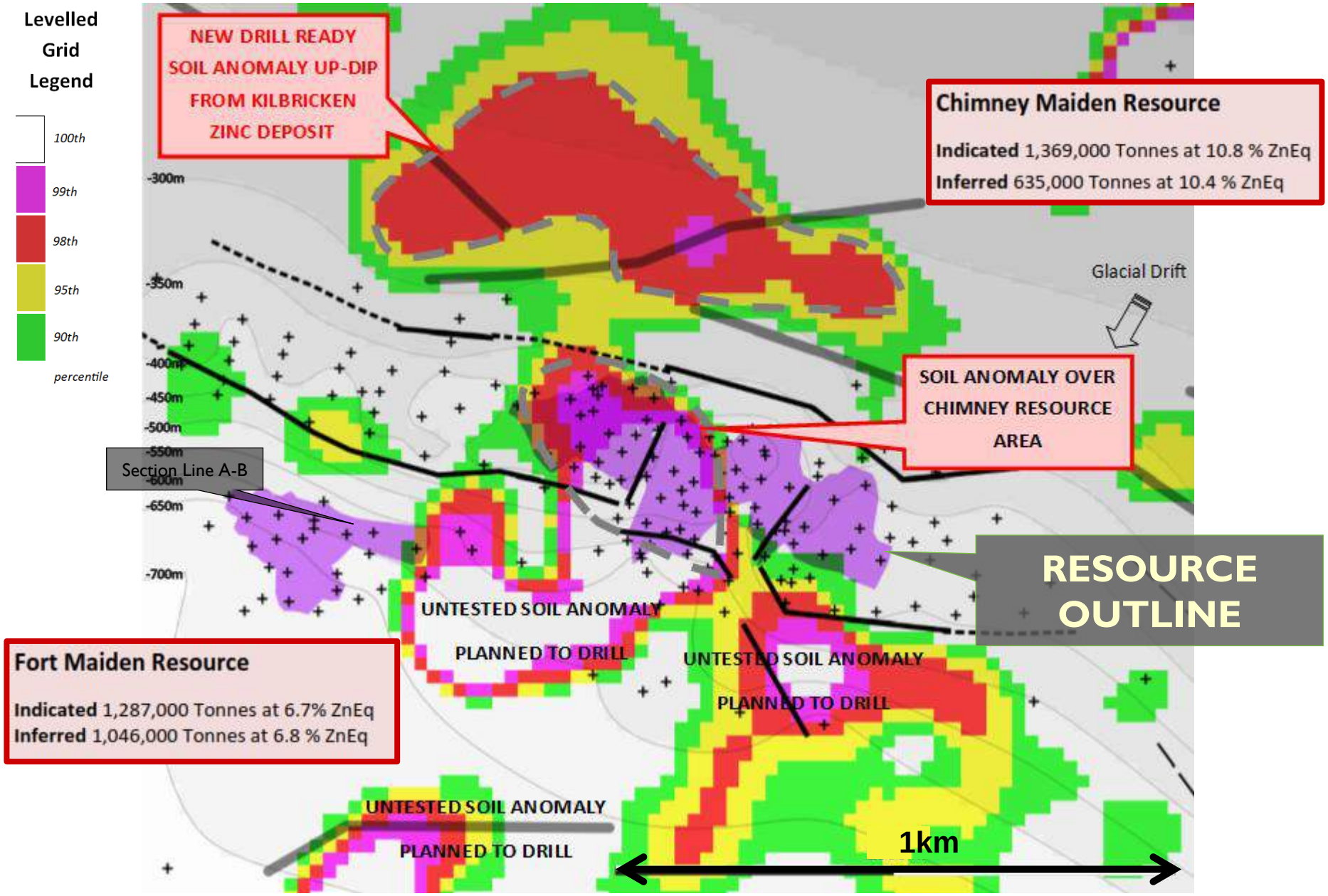
Expansion Opportunities at all Scales

1. Further delineate underground potential around current resource area. Drilling now ongoing;
2. Test conceptual and advanced exploration targets within 1-5 km defined by seismic data, lithogeochemistry and soil geochemistry;
3. Test for first order mineralization in 40 km Waulsortian host that exists within 100% owned 32,223 hectares prospecting licences.

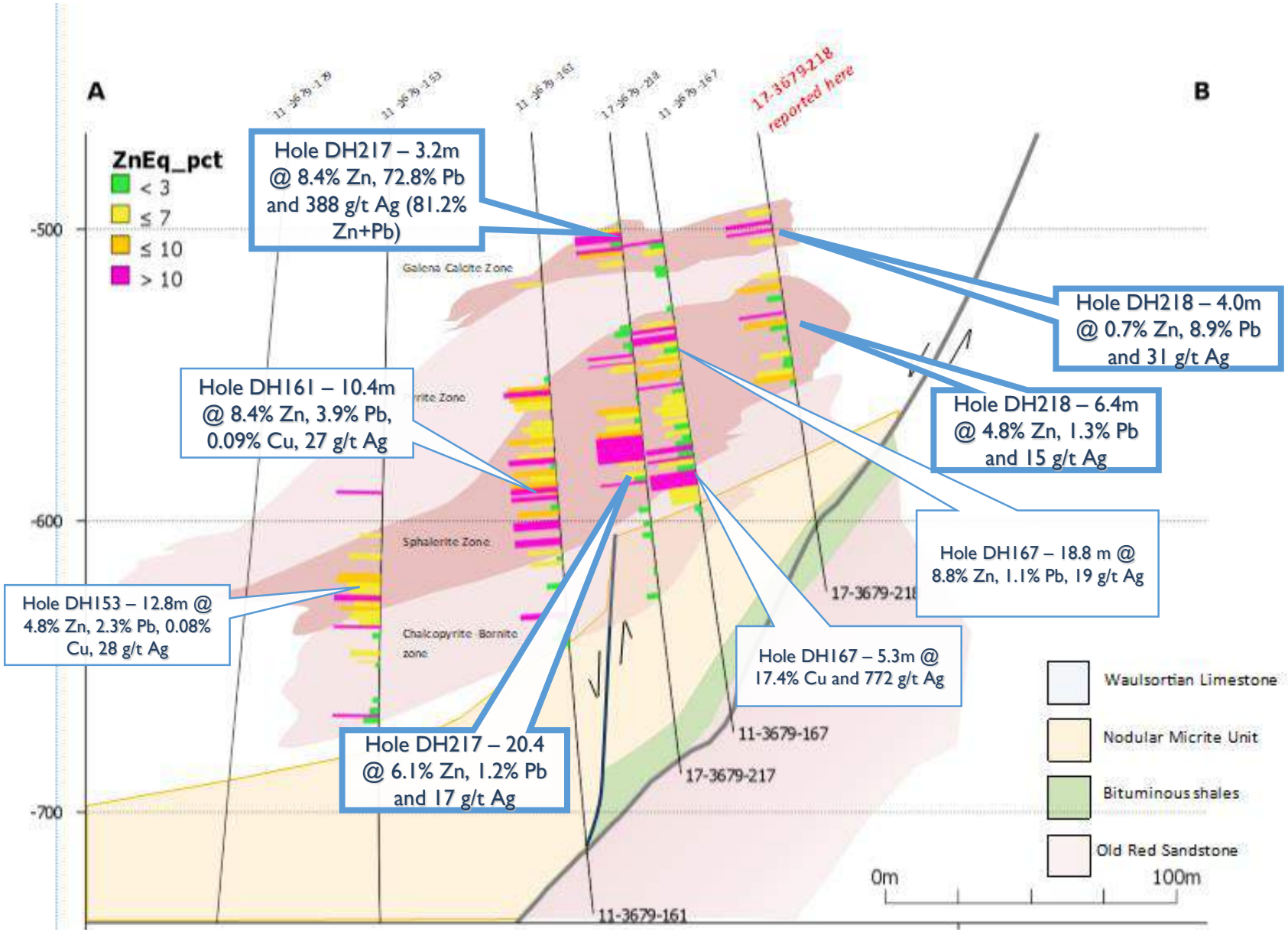
Deposit Scale: Plan View



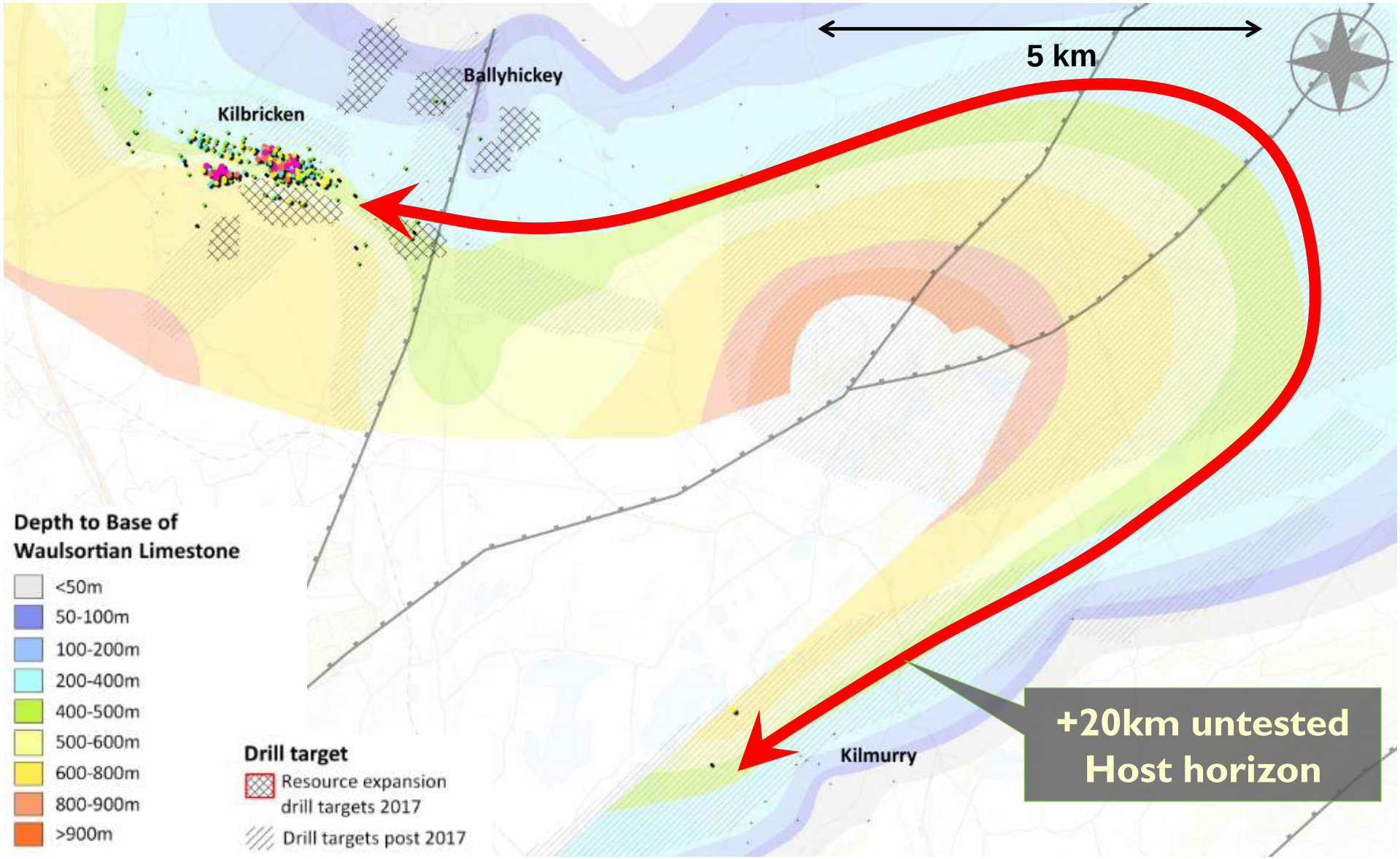
Zinc in Soil


Levelled Grid Legend
100th
99th
98th
95th
90th
percentile
NEW DRILL READY SOIL ANOMALY UP-DIP FROM KILBRICKEN ZINC DEPOSIT
Chimney Maiden Resource
Indicated 1,369,000 Tonnes at 10.8 % ZnEq
Inferred 635,000 Tonnes at 10.4 % ZnEq
Glacial Drift
SOIL ANOMALY OVER CHIMNEY RESOURCE AREA
-300m
-350m
-400m
-450m
-500m
-550m
-600m
-650m
-700m
Section Line A-B
RESOURCE OUTLINE
UNTESTED SOIL ANOMALY
PLANNED TO DRILL
UNTESTED SOIL ANOMALY
PLANNED TO DRILL
Fort Maiden Resource
Indicated 1,287,000 Tonnes at 6.7% ZnEq
Inferred 1,046,000 Tonnes at 6.8 % ZnEq
UNTESTED SOIL ANOMALY
PLANNED TO DRILL
1km

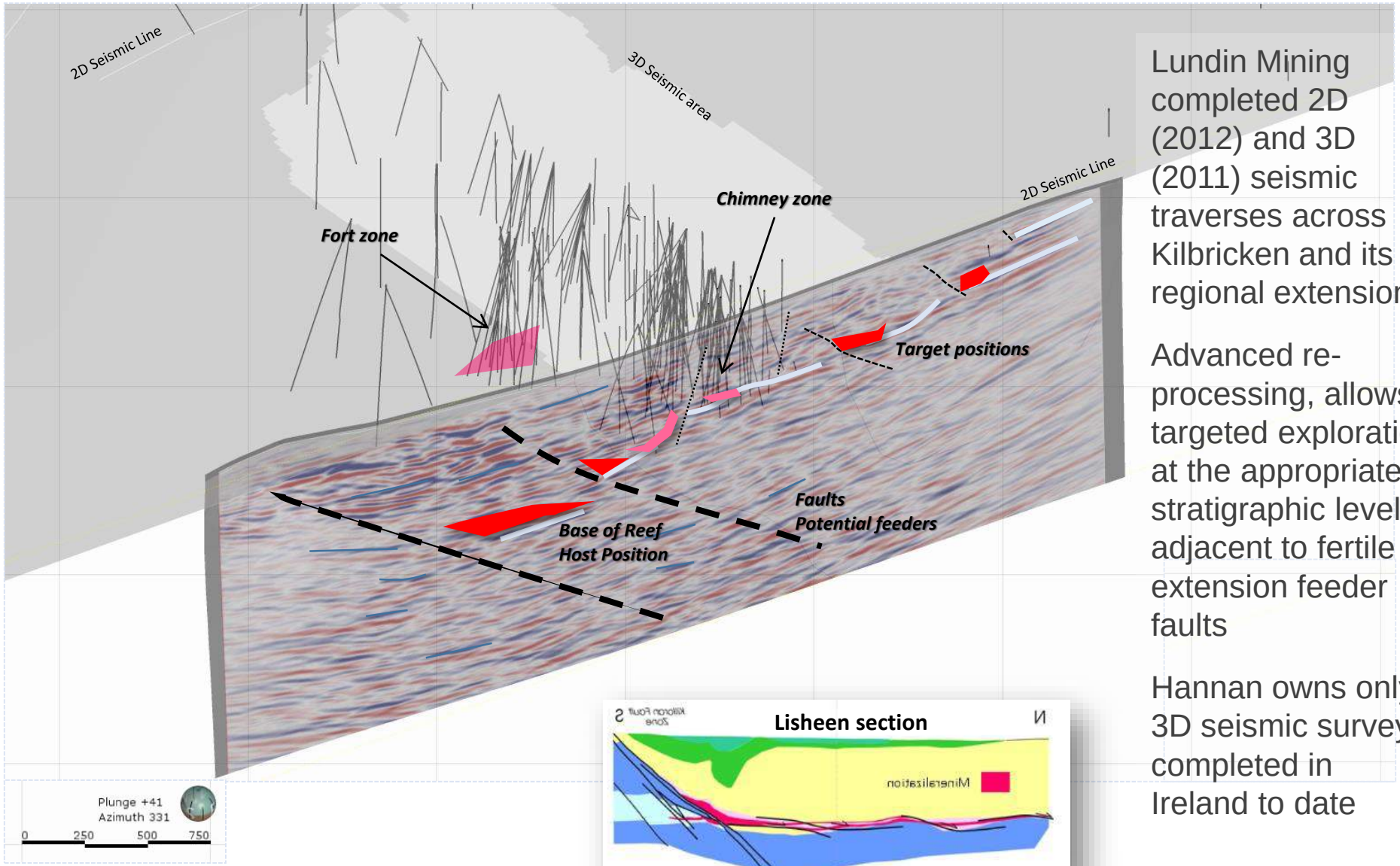
Drilling 2017 Fort Zone



Regional Expansion Opportunities



Hardrock Seismic Technology: Game Changer

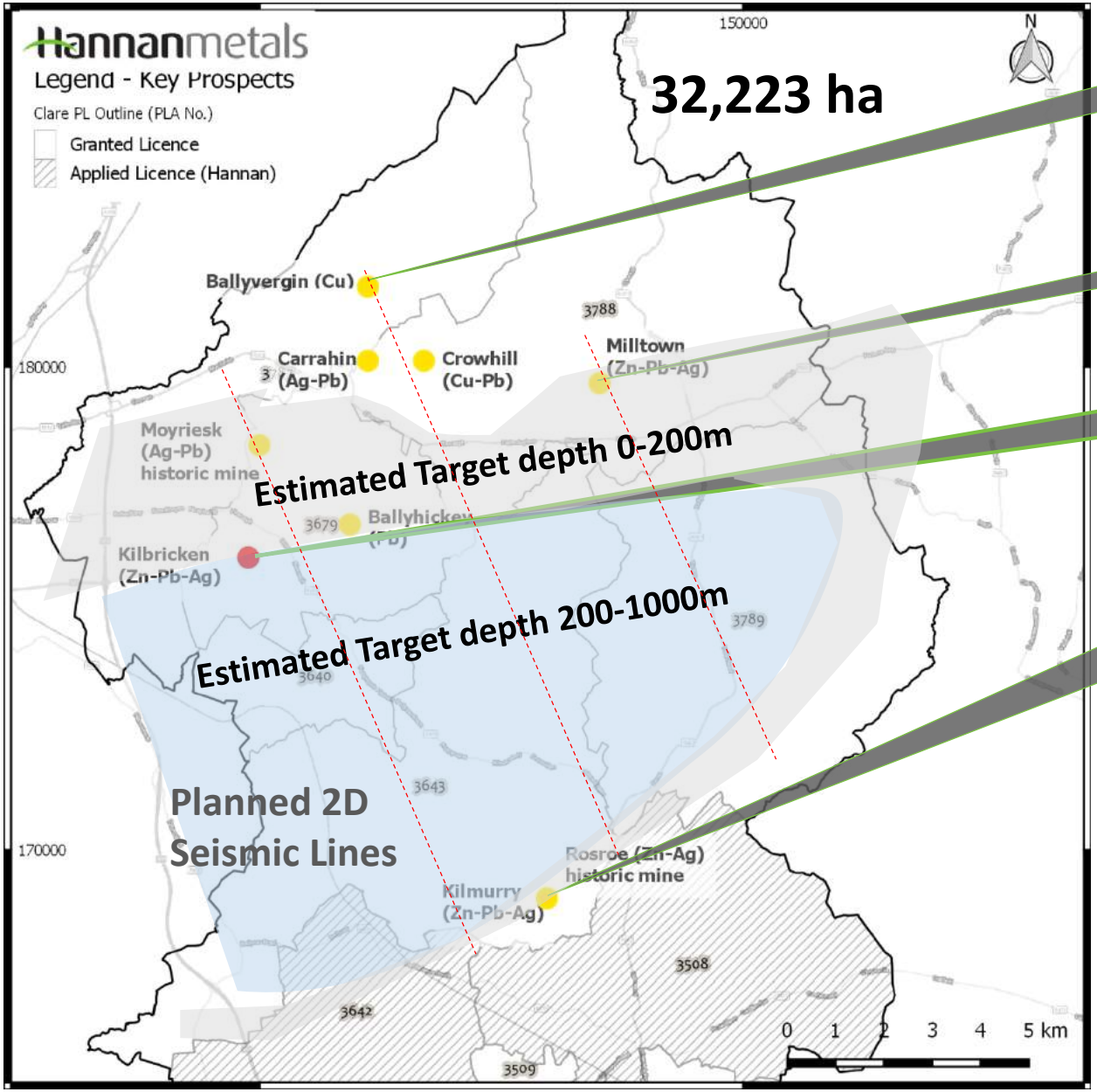


Lundin Mining completed 2D (2012) and 3D (2011) seismic traverses across Kilbricken and its regional extensions

Advanced re-processing, allows targeted exploration at the appropriate stratigraphic levels, adjacent to fertile extension feeder faults

Hannan owns only 3D seismic survey completed in Ireland to date

Clare: Shallow to deep opportunities



Ballyvergin Cu Deposit
Inc. 31.5m @ 1.0% Cu

Milltown Zn/Pb Deposit
Inc.13.3m @ 5.8% Pb and 10.5% Zn

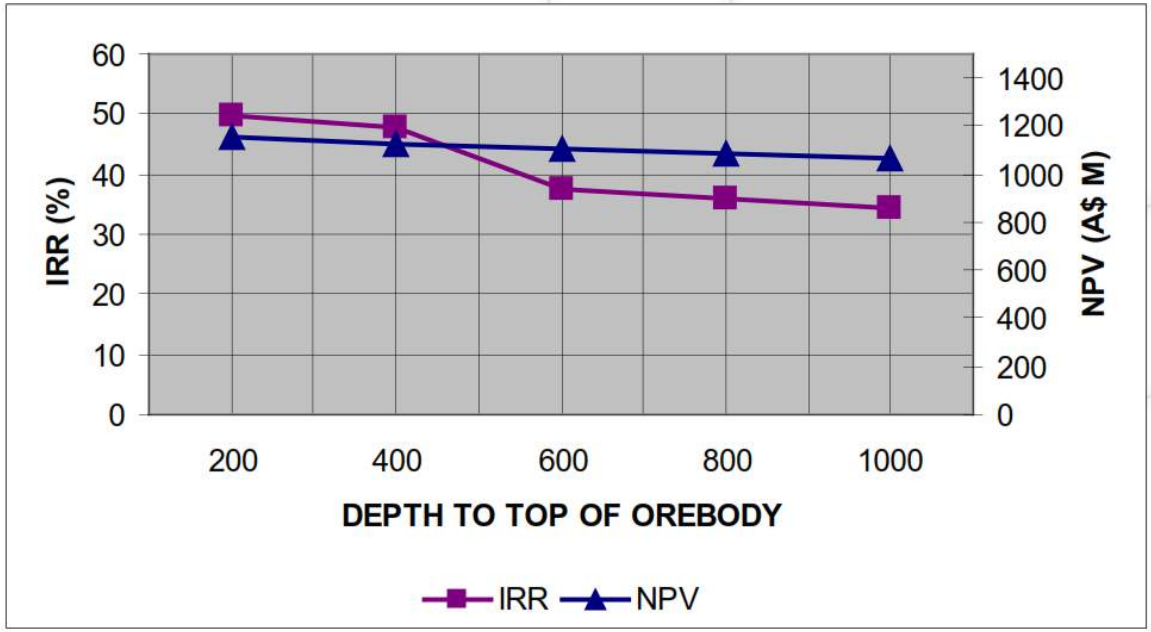
Kilbricken Deposit
Zn Pb Ag Cu

Kilmurry Prospect
2 mineralised holes – 8.5m @ 2.1% Zn+Pb and 4.3m @ 2.8% Zn+Pb

In Ireland, claims holders include: Teck, Boliden, Vedanta, Glencore, Aventus, Group Eleven, Erris, Unicorn, Connemara.
PLs issued for 6 years. If work and expenditure satisfactory, normal practice licence re-issued

Exploration the Challenge, Not Mining

- Kilbricken/Irish advantages:
  - Grade
  - Globally competitive drill rates (€74/m)
  - Predictable ore systems with aid from seismics
  - US$25M exploration database



Centre for EXPLORATION TARGETING

Modelling for a Voisey's Bay style orebody in remote WA
(30 Mt @ 2.5% Ni, 2.0% Cu; 20m thick 60 degree dip)

Hronsky (2005)

Kilbricken Mineralogy: No Red Flags

Mineralogical test work by SGS on 14 samples. Findings based on what is mineralogically possible, under ideal separation conditions

For composite sample results:

- Sphalerite grades between 98% and 81% for recoveries of 78% to 95%, respectively.
- Galena grades between 98% and 84% for recoveries of 88% to 96%, respectively;
- No red flags for deleterious metals;
- Conventional Pb-Zn flotation circuit envisaged;
- Hannan Metals will undertake further bench top metallurgical studies during its **Phase** 1 drill program.

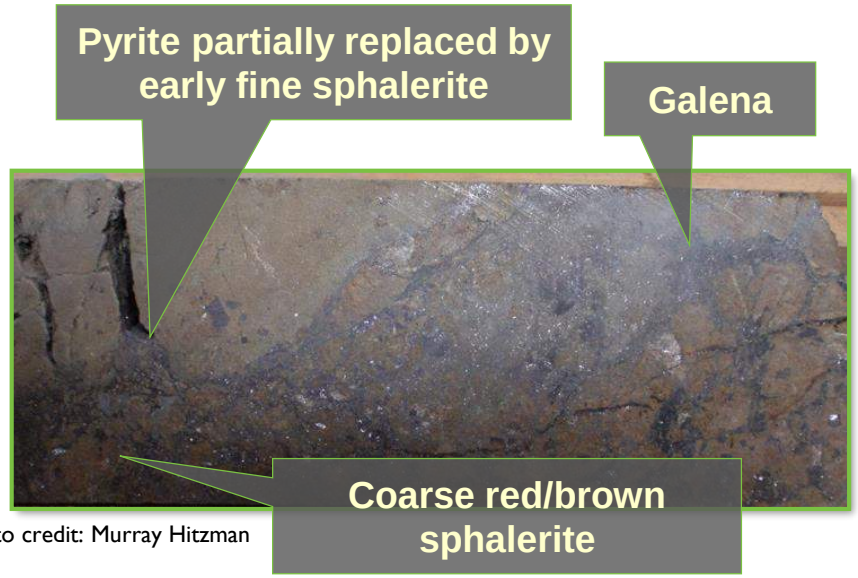
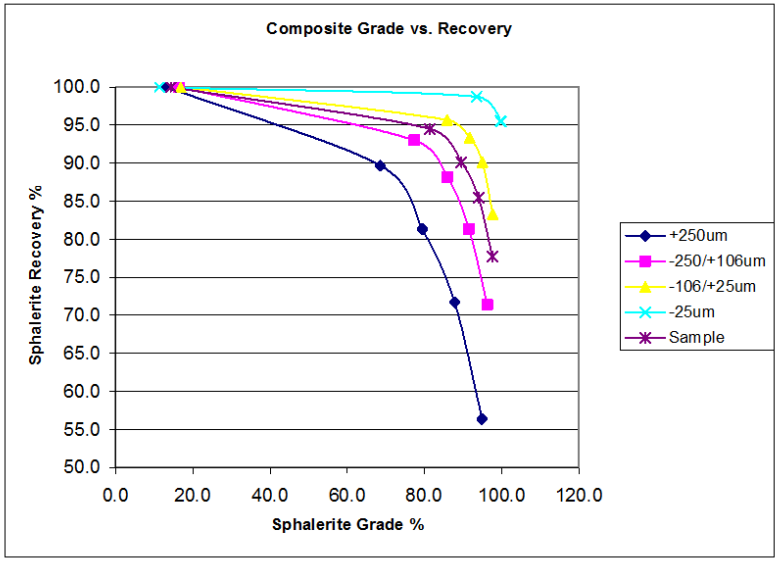


Photo credit: Murray Hitzman



For more information : info@hannanmetals.com

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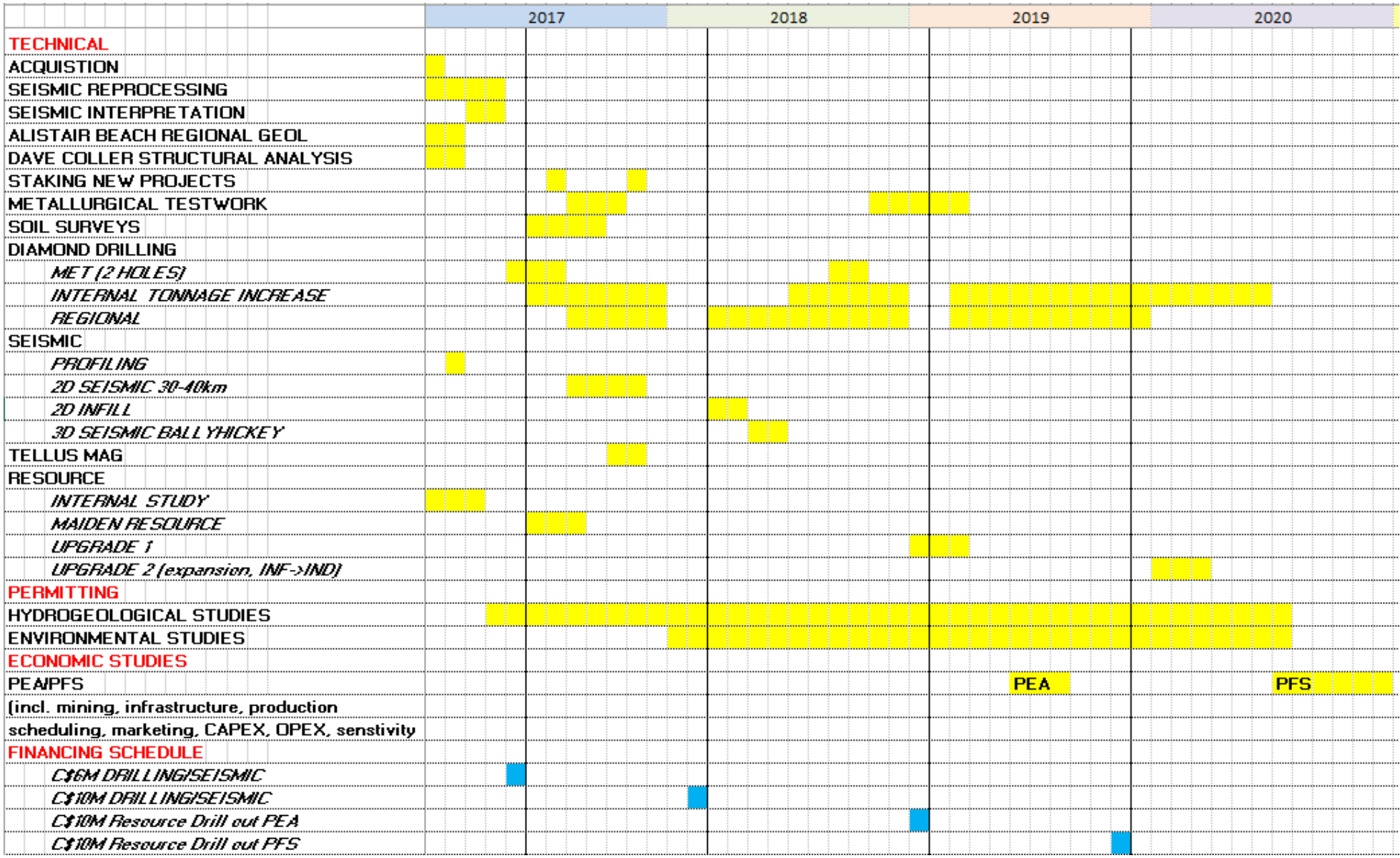
Right Project - Right Time - Right Place

Appendix 1: Budget - options

- $2.0M 5 month global budget 6km drilling, $500K seismics 1000 soil samples to Dec
- Includes non-discretionary budget C$1M/year

Appendix 2 – Longer Term Project Schedule