Hannanmetals

TSXV:HAN
OTCPINK:HANNF

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

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.

26 July 2018

Australia to Europe: Our Group

Investment Highlights

- **100% ownership high grade mineralization, expandable at all scales,** 35,000 hectare land package;
- 2017/18 Work program has extensively derisked project: 40.6 line km 2D seismic survey defined multiple new high priority targets over a combined 12 kilometres trend immediately along strike and up dip from the Kilbricken resource;
- **Kilbricken** Zn-Pb-Ag discovery, **maiden resource of 2.7 million tonnes at 8.8% ZnEq**, indicated and **1.7 million tonnes at 8.2% ZnEq** inferred.
- Over the regional scale, multiple drill targets identified across much of the Clare project, highly mineralized, new zinc discoveries in outcrop
- **Zinc has tight supply fundamentals, Ireland is a leading global jurisdiction for zinc;**
- Work program: resource expansion drill program 4,000 metres Q3 18' – Q2 '19, metallurgical studies (Wardell Armstrong Q4 2018).

Corporate Metrics

TMX TSX Venture Exchange	HAN
OTCPink	HANNF
INSIDERS:	33%
SHARES ON ISSUE:	47.6 M
FULLY DILUTED:	64.7 M
RECENT PRICE (July 26):	C$0.14
52 WK HIGH/LOW:	$0.12/0.50
MARKET CAP:	C$6.6 M
CASH:	C$1.1 M
ENTERPRISE VALUE:	C$5.6 M

WARRANTS:

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

Clare project summary

2017 Project Highlights

- ✓ **Raised CDN$4.8m, listed Feb 2017**
- ✓ **Maiden resource**
- ✓ **Successful resource expansion program** – 7,000 metres
  DH 217 8m @ 37.8% Zn+Pb and 174 g/t Ag
- ✓ **Soil >200 km^2 regional soil survey.**
  - ✓ 1,200 pts covering unsampled areas.
- ✓ **Seismic**
  - ✓ 41.7km 2D seismic survey
  - ✓ Re-processed 27 km 2D data (Lundin)
  - ✓ 5km^2 3D seismic data

2018: Where we are going?

Drill Drill Drill

Drilling focusing on:

1. Leveraging on $30M sunk capital at Kilbricken. Resource expansion Initial exploration target:

   10Mt >10%Pb+Zn

2. Targeting big structures/1st order control to system from seismic data and geochemical anomalies

C$1M combined program Q3 '18-Q2 '19

Why Ireland?

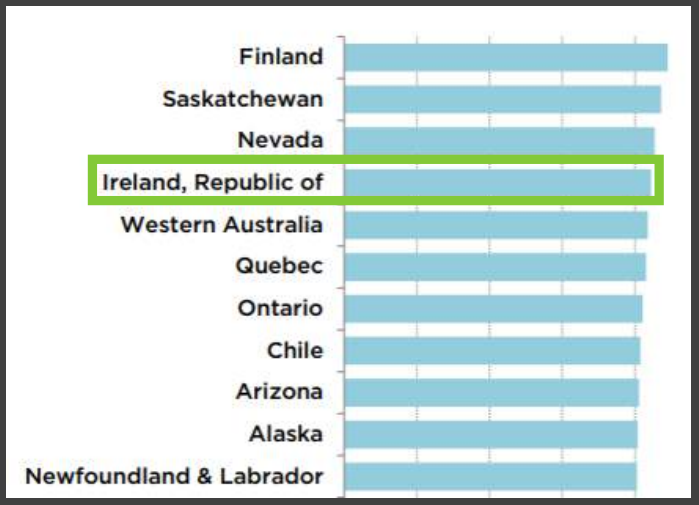
- Ireland is a **leading global jurisdiction** for zinc mining and exploration;
  - Ranked first in the world in terms of zinc discovered per sq. km;
  - One of largest zinc producing nations;
- "Irish Type" carbonate hosted deposits tend to be large and high grade;
- Ireland is an attractive jurisdiction for mining investment;
- **The country is poised for the next round of major discoveries >20(deep via technology shift.**

Fraser Institute Annual SURVEY OF MINING COMPANIES 2017

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

→ Huge benefits for developers

Investment Attractiveness Index



Source: https://www.fraserinstitute.org/sites/default/files/survey-of-mining-companies-2017.pdf

Directors

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

Nick DeMare (President): *CPA, CA*

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

Georgina Carnegie: *B.Com, AM Harvard*

Ciara Talbot: *BSc. (Honours)*

Mariana Bermudez - *Corporate Secretary*

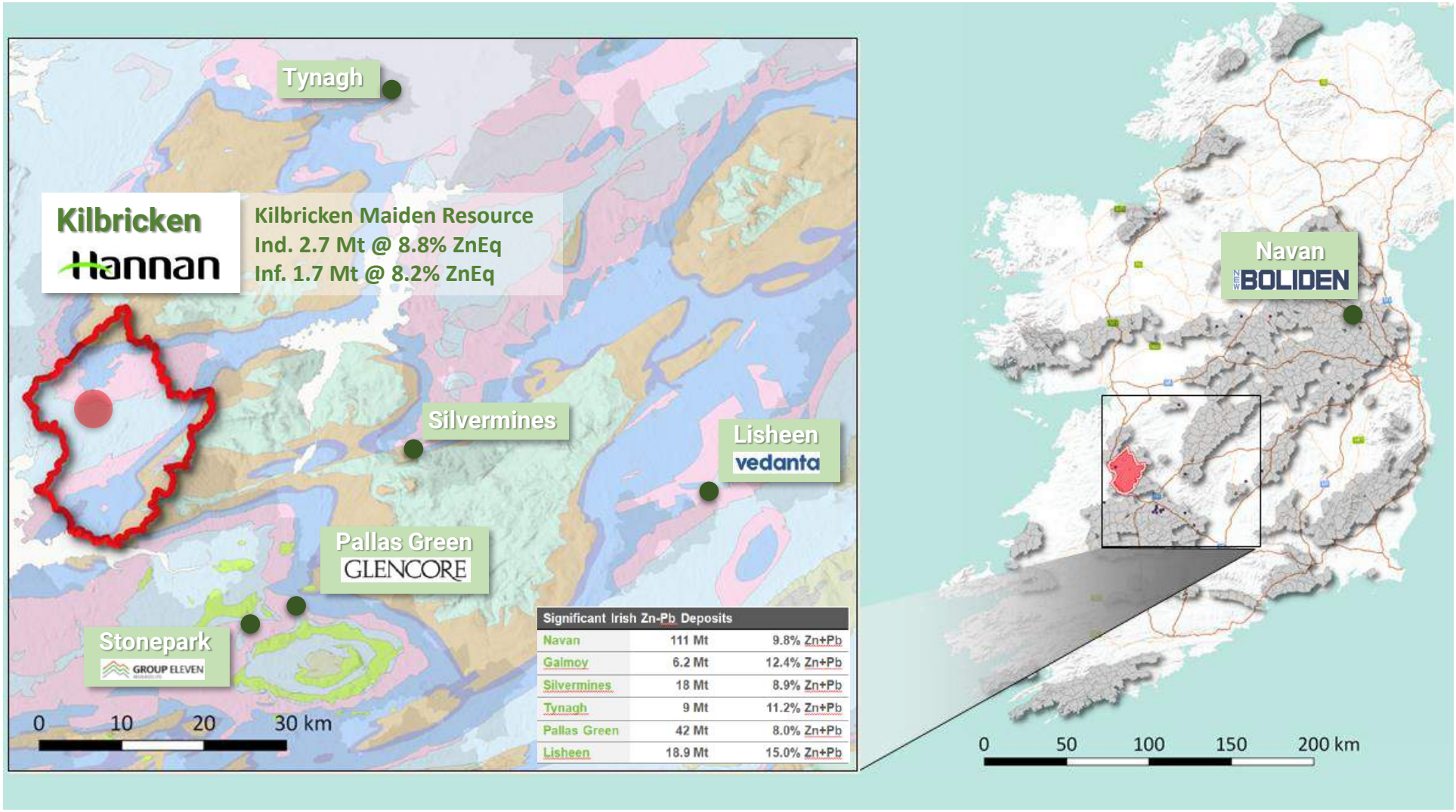
Hannan is managed by a group with careers built in the zinc industry. In recent years, the group has raised more than US$100M for European exploration and development. With a track record of success, and significant experience in gaining social licence to operate, Hannan is well place for continued growth.

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

The Irish Team

Full time	***Claire Duggan*** Project Geologist	***Lars Dahlenborg*** VP Exploration	***Graham Hartigan*** Senior Geotechnician
Part time	***Don Brooks*** Permitting and stakeholder relations	***Denise Roche Kelly*** Core logging support	***Patrick Duggan*** Geotechnical support
Regular consultants	***Majella O'Donnell*** Accounting, Cuddihy & Co	***John Colthurst*** Consulting Exploration geologist	***Mimi Crawford*** Environmental Advisor brg

Ireland: A Home of Zinc Mining

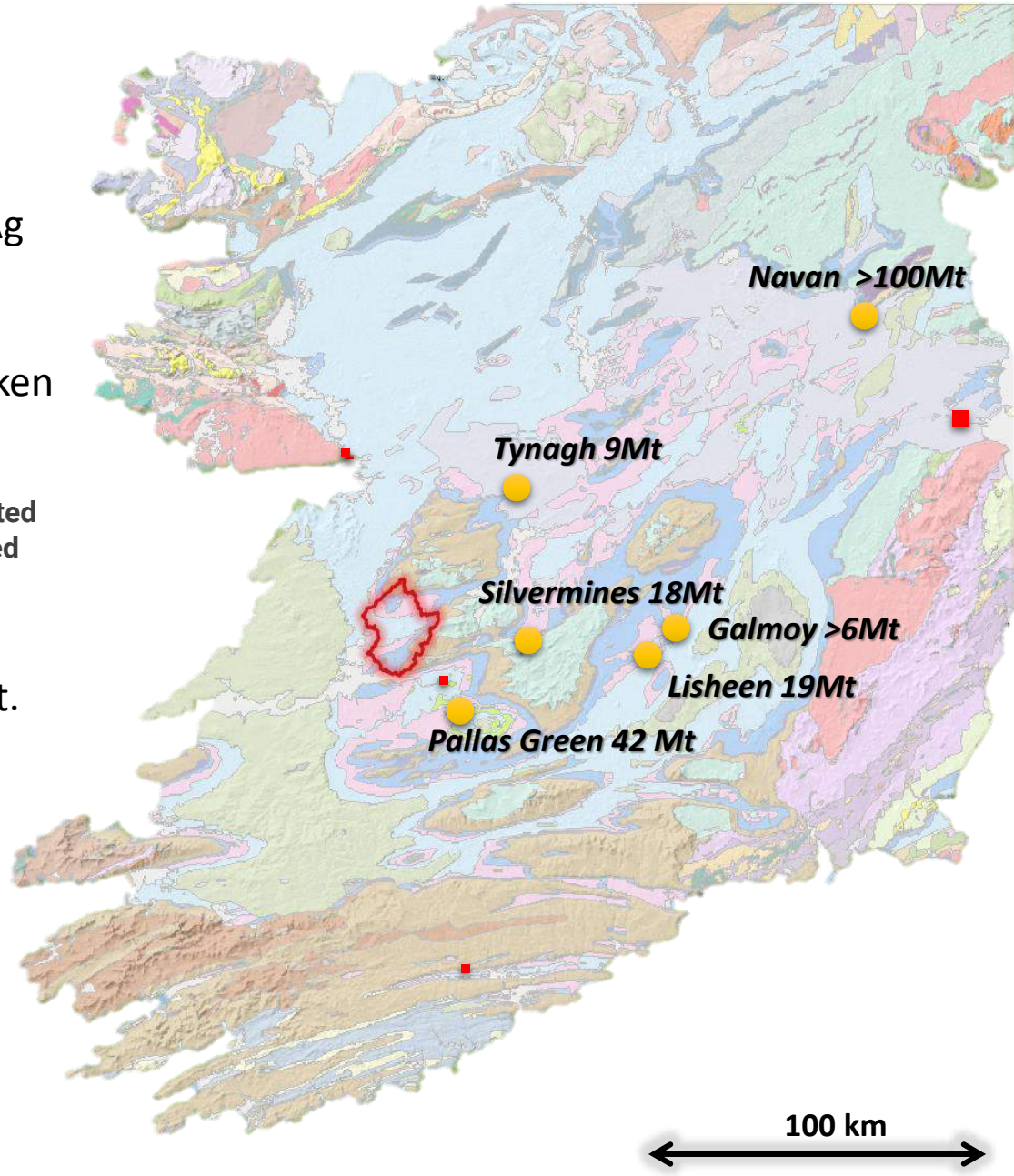


Significant Irish Zn-Pb Deposits		
Navan	111 Mt	9.8% Zn+Pb
Galmoy	6.2 Mt	12.4% Zn+Pb
Silvermines	18 Mt	8.9% Zn+Pb
Tynagh	9 Mt	11.2% Zn+Pb
Pallas Green	42 Mt	8.0% Zn+Pb
Lisheen	18.9 Mt	15.0% Zn+Pb

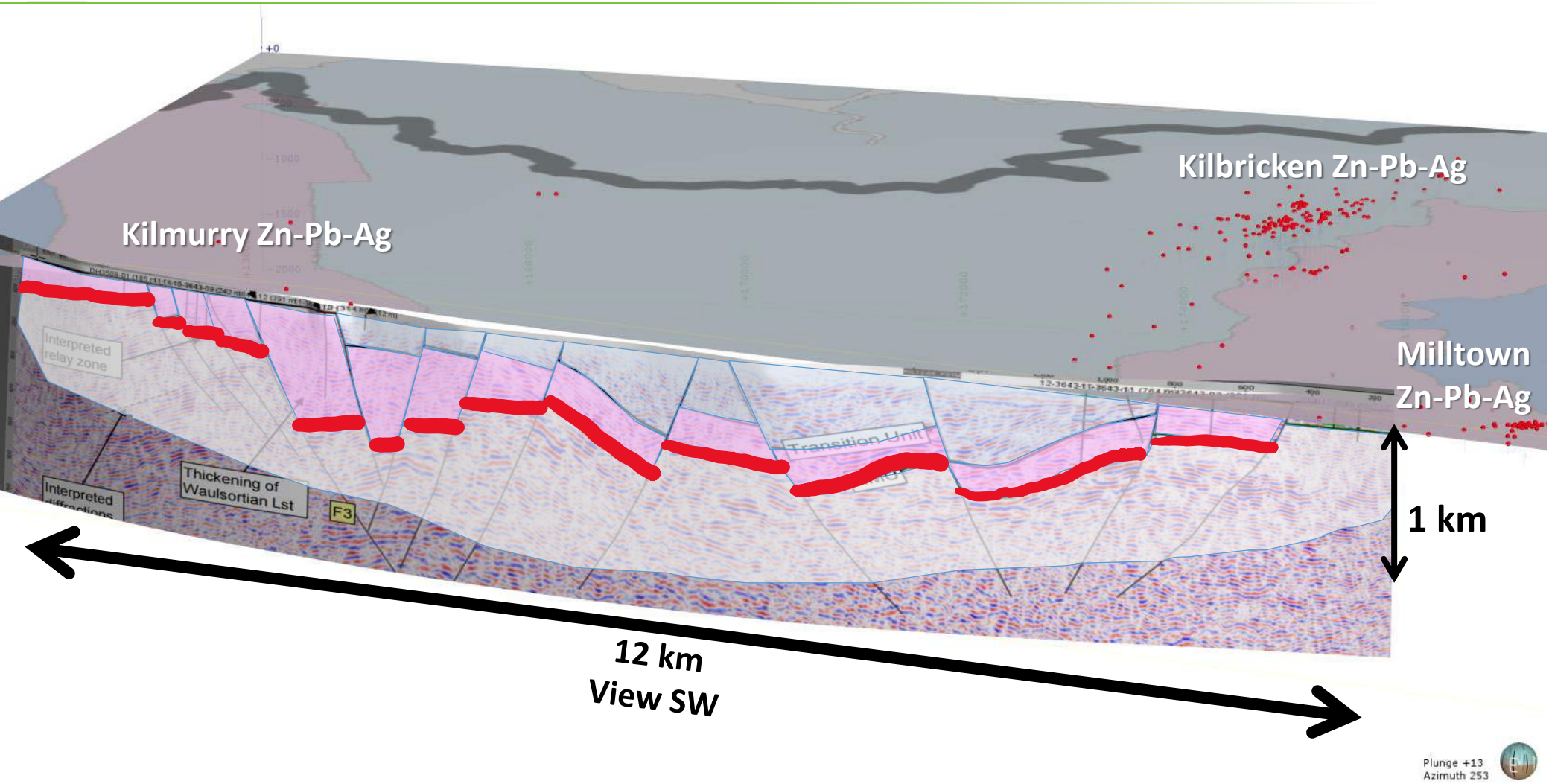
Within 80km diameter SW Ireland contains >100Mt >10% Zn+Pb

The Clare Project

- 350 km^2 exploration block
- Targeting Waulsortian hosted Zn-Pb-Ag carbonate replacement deposits
- Flagship prospect 100% owned Kilbricken Zn-Pb-Ag discovery.
  - **maiden resource**
    - **2.7 million tonnes at 8.8% ZnEq indicated**
    - **1.7 million tonnes at 8.2% ZnEq inferred**
- > 85 km^2 Waulsortian subcropping in license block and >100km^2 blind target.
- Work ongoing :
  - Planning 5000 m drill program
  - Seismic interpretation
  - Soil sampling
  - Field mapping



Geological Overview

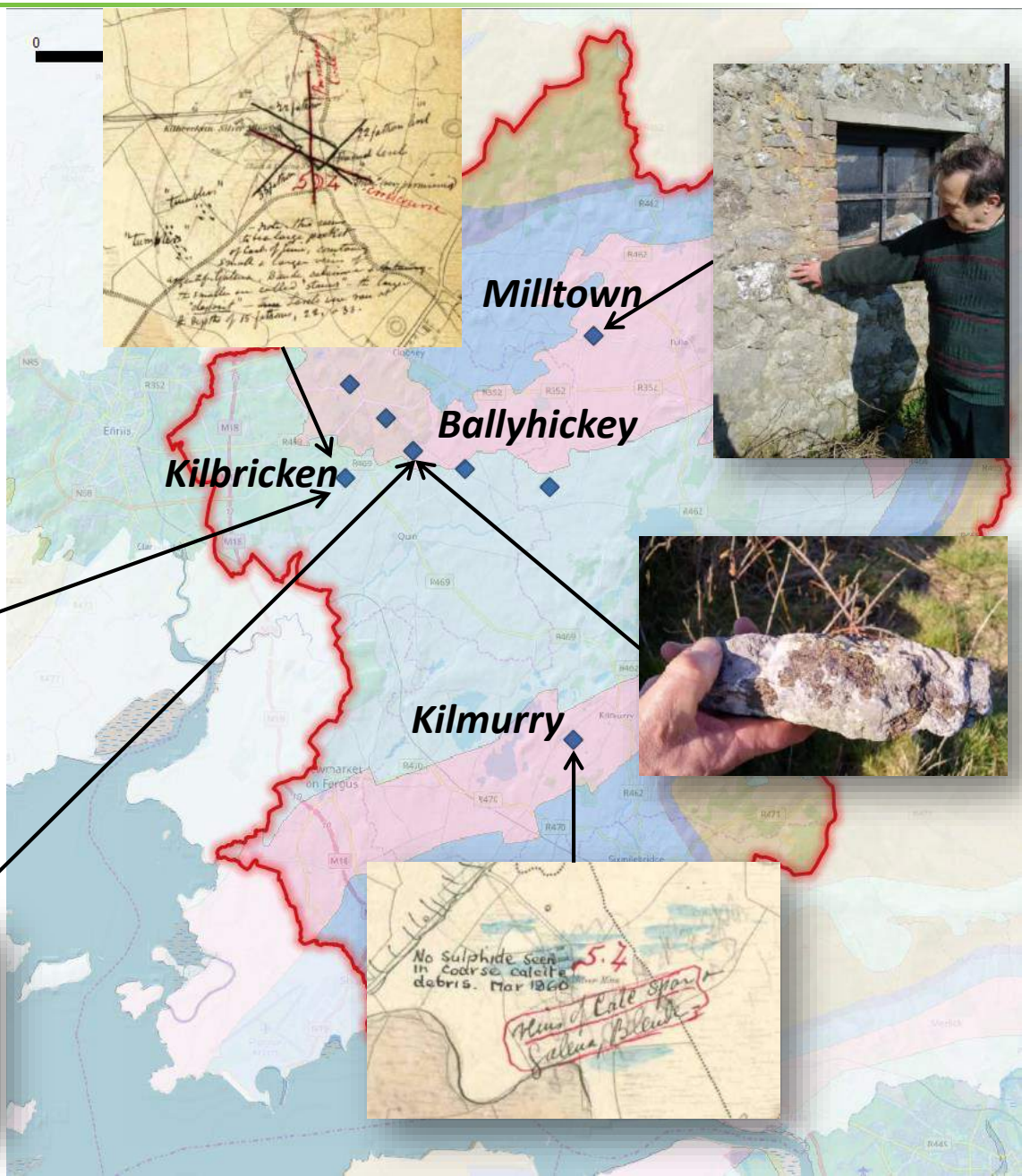


> 85 km^2 Base of Waulsortian reef subcropping in license block and >100km^2 blind target

Project History - Phase 1

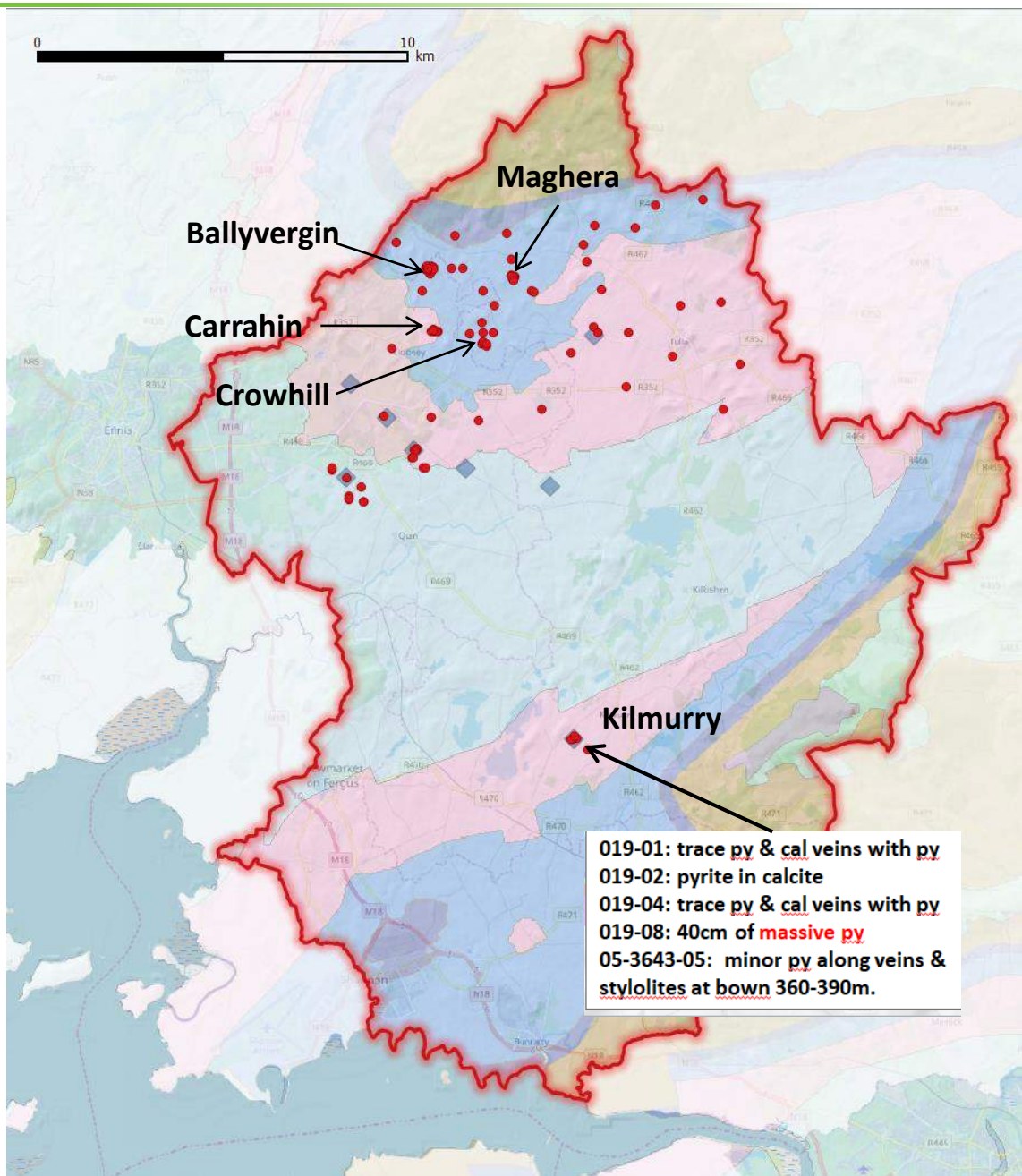
Victorian Era

- Calcite, Pb-Ag mining from rich calcite pods and veins



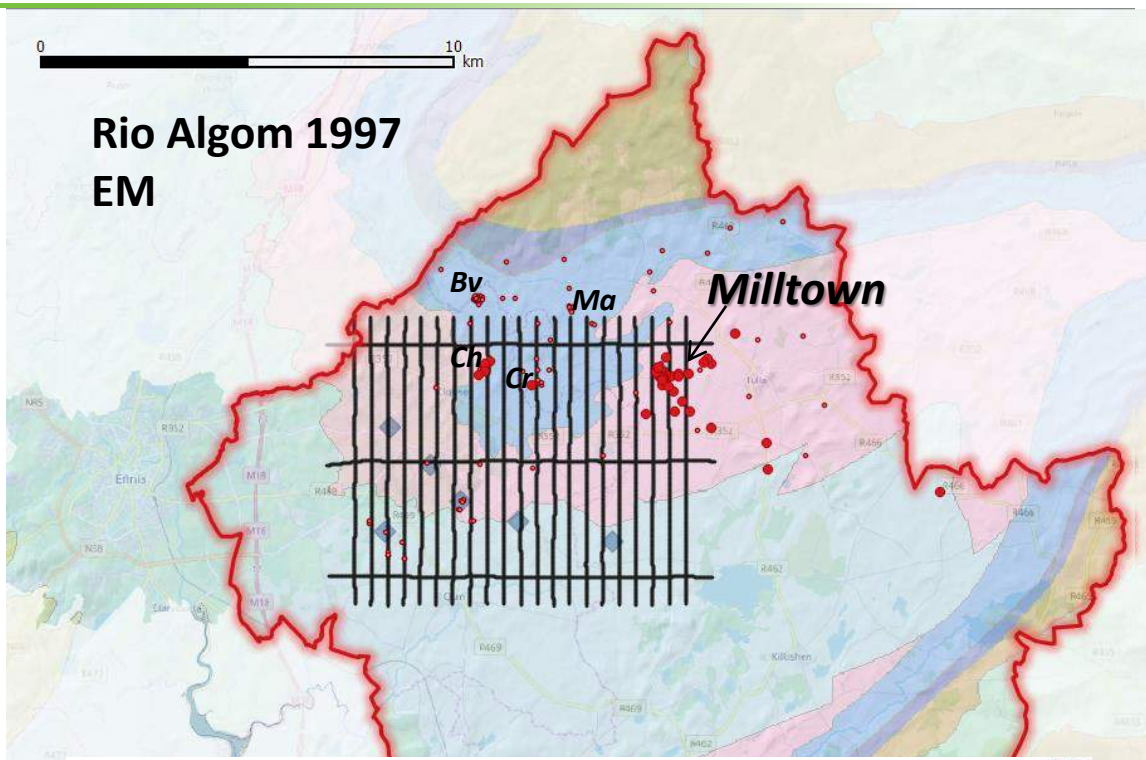
Project History – Phase II

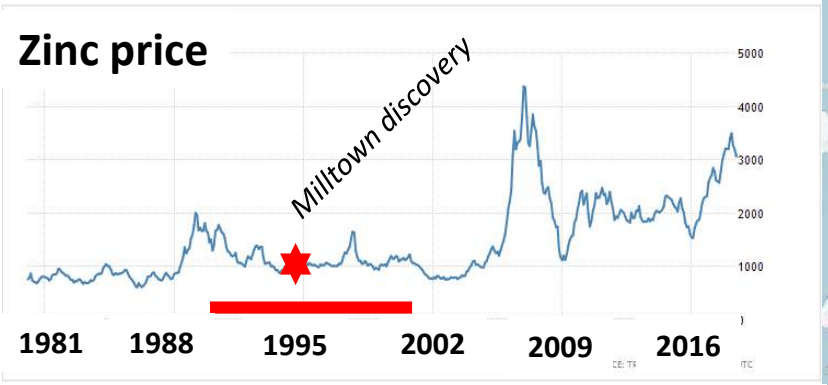
- 1960s- 1980s
- Exploration focus on shallow targets – sub-reef
- Discovery of Ballyvergin, Maghera, Carrahin and Crowhill
- First sign of mineralisation at Kilmurry



Project History – Phase III

- 1990s
- Discovery of Milltown
  - 400,000t @ 12% ZnPb, 75g/t Ag (Historic resource)
- Several airborne surveys within short timeframe





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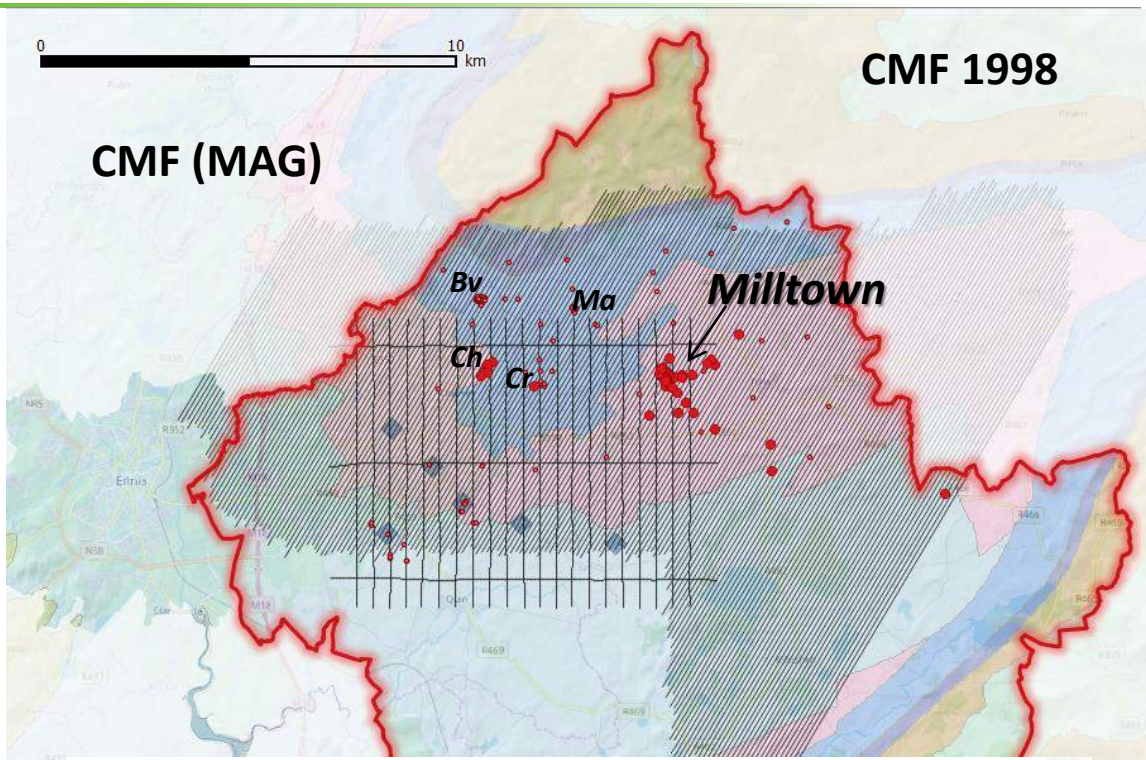

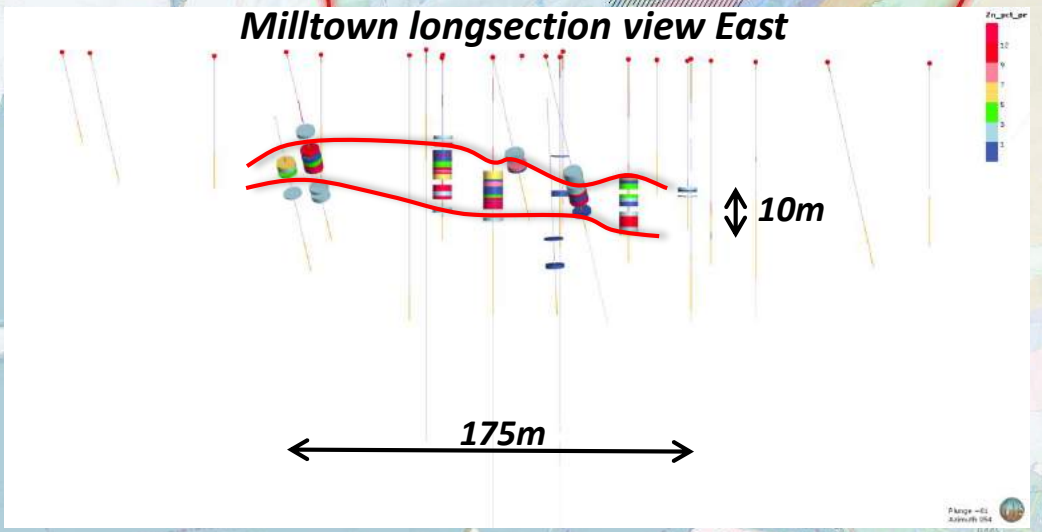

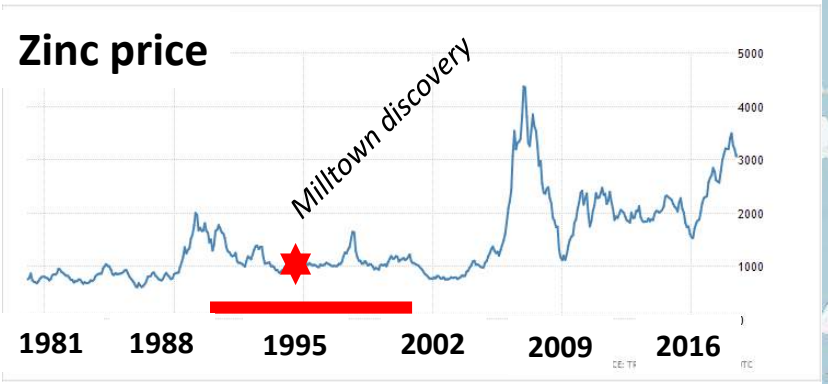

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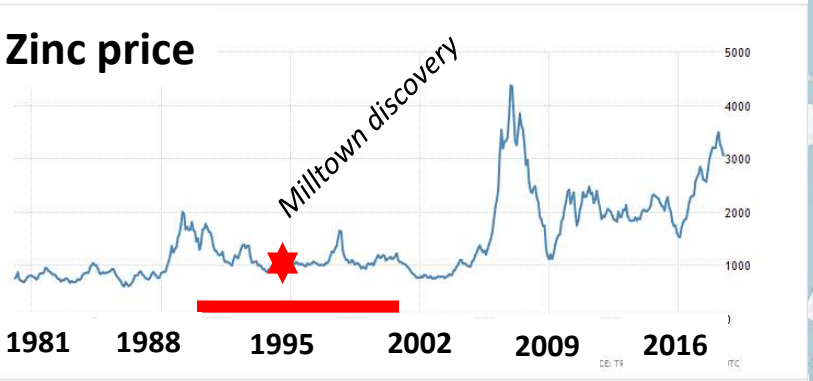
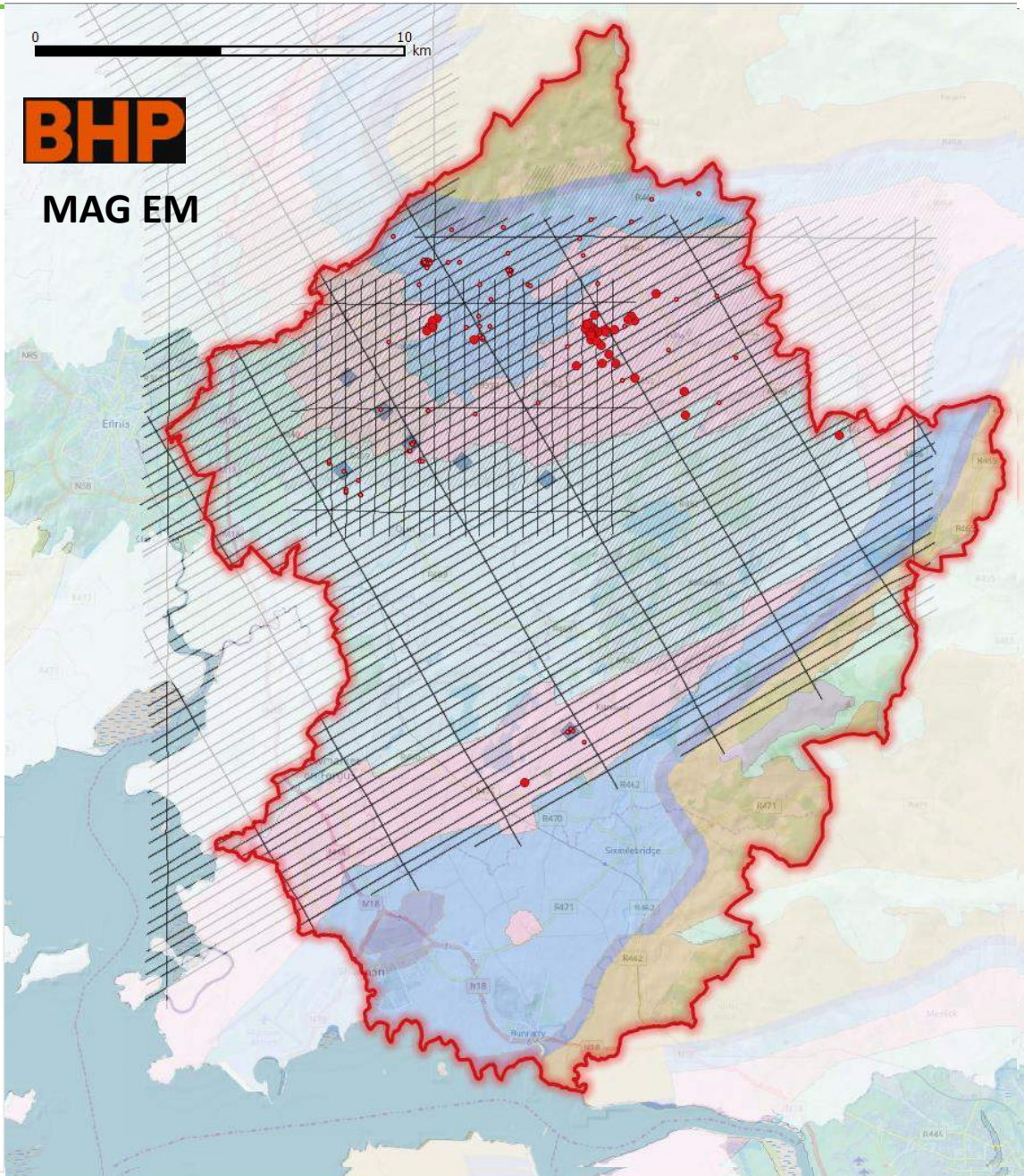
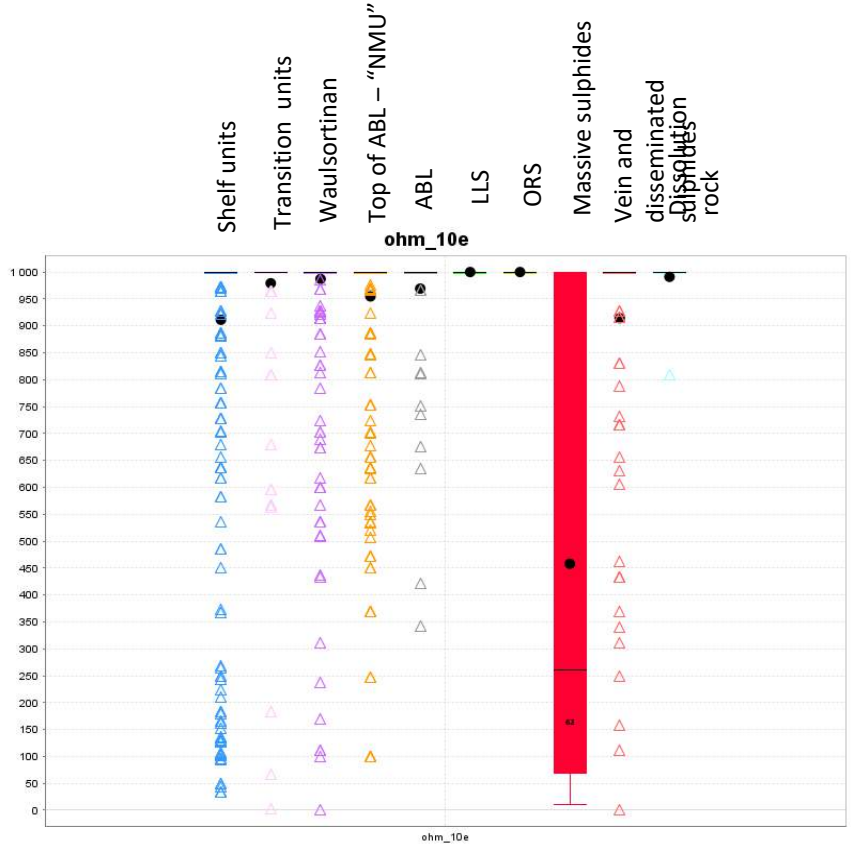
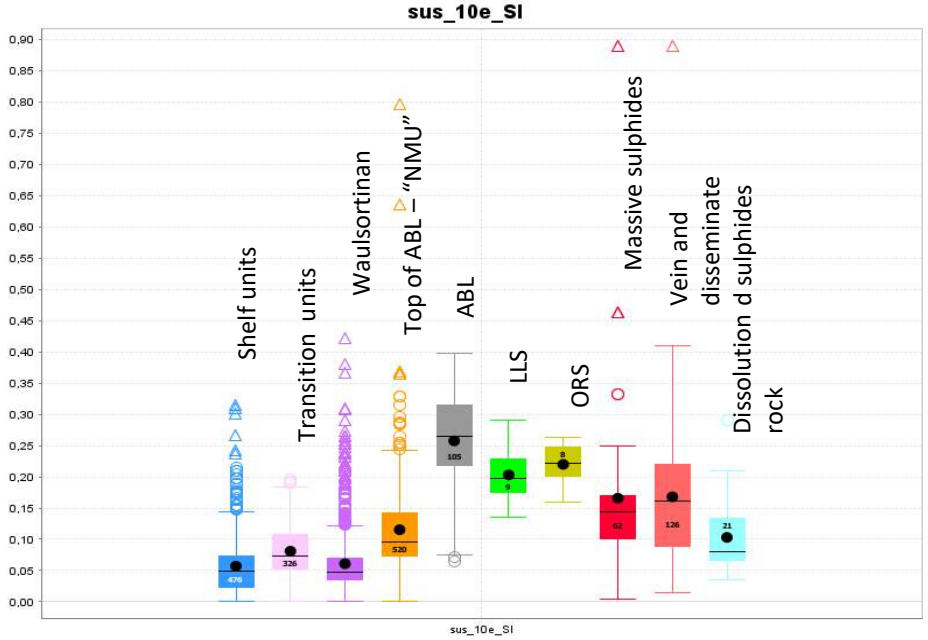




Petrophysics from Drill Core



Resistivity



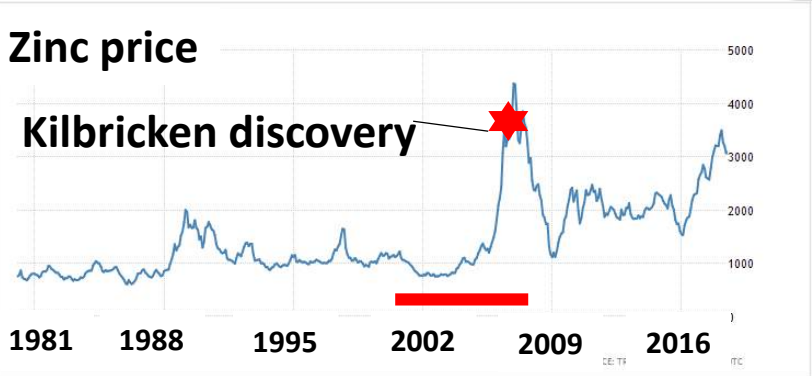
Magnetic susceptibility

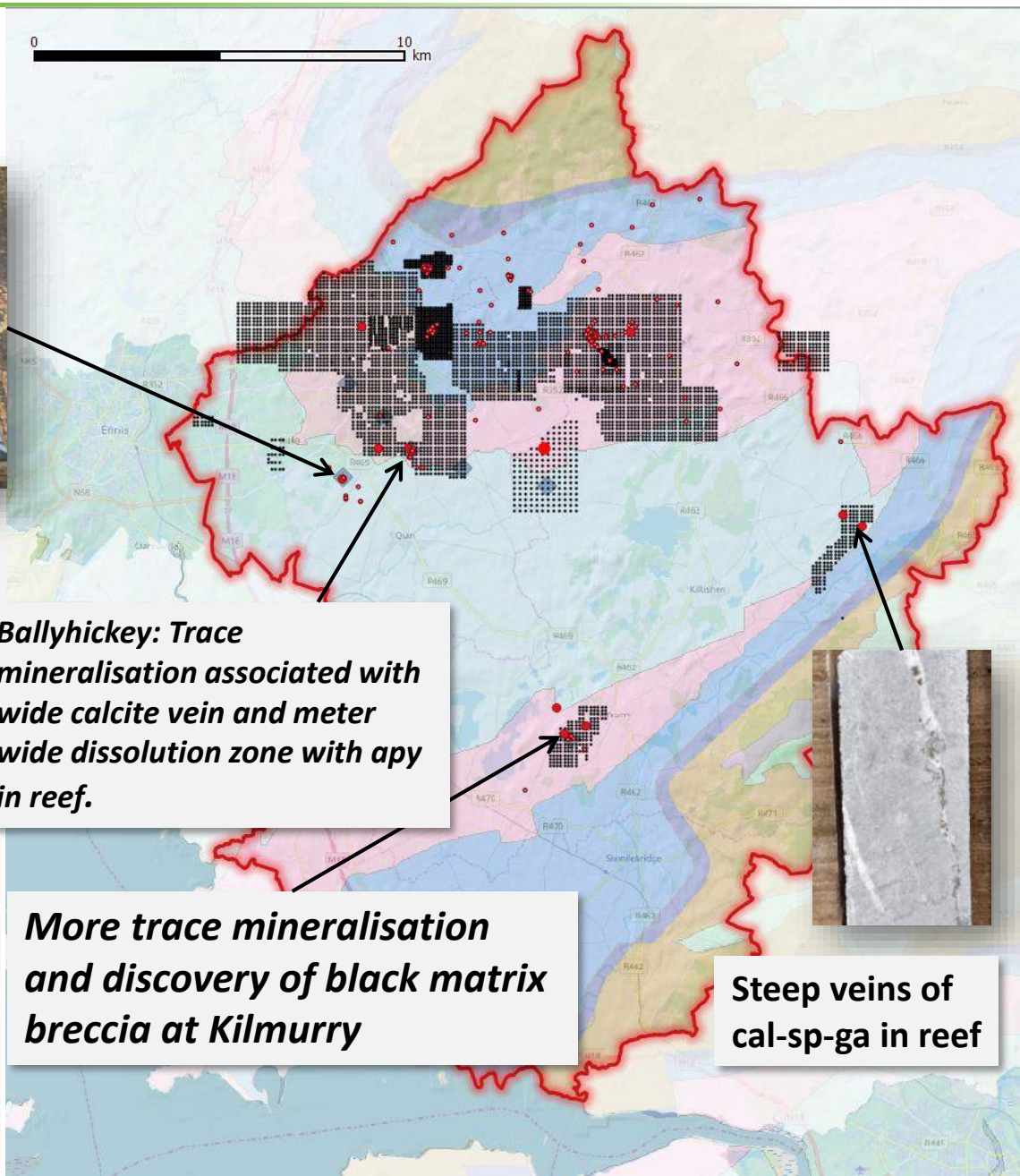
Project History – Phase IV

2000-2007 Exploration by Belmore

Kilbricken discovery DH 07-3679-04:
14.4m @ 10.3% Zn, 4.1% Pb, 57 ppm Ag

- **~5300 ah soil samples collected. Analyzed for Zn, Pb, Cu, (As)**





Ballyhickey: Trace mineralisation associated with wide calcite vein and meter wide dissolution zone with apy in reef.

More trace mineralisation and discovery of black matrix breccia at Kilmurry

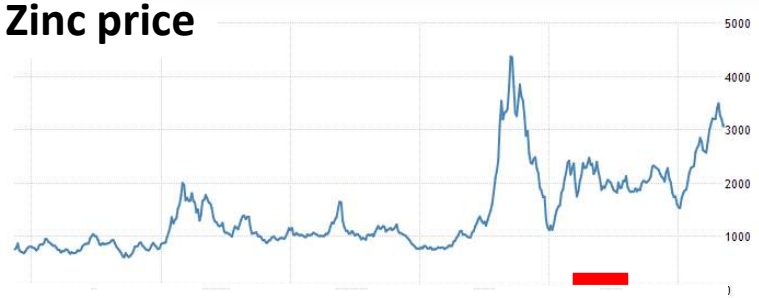
Steep veins of cal-sp-ga in reef

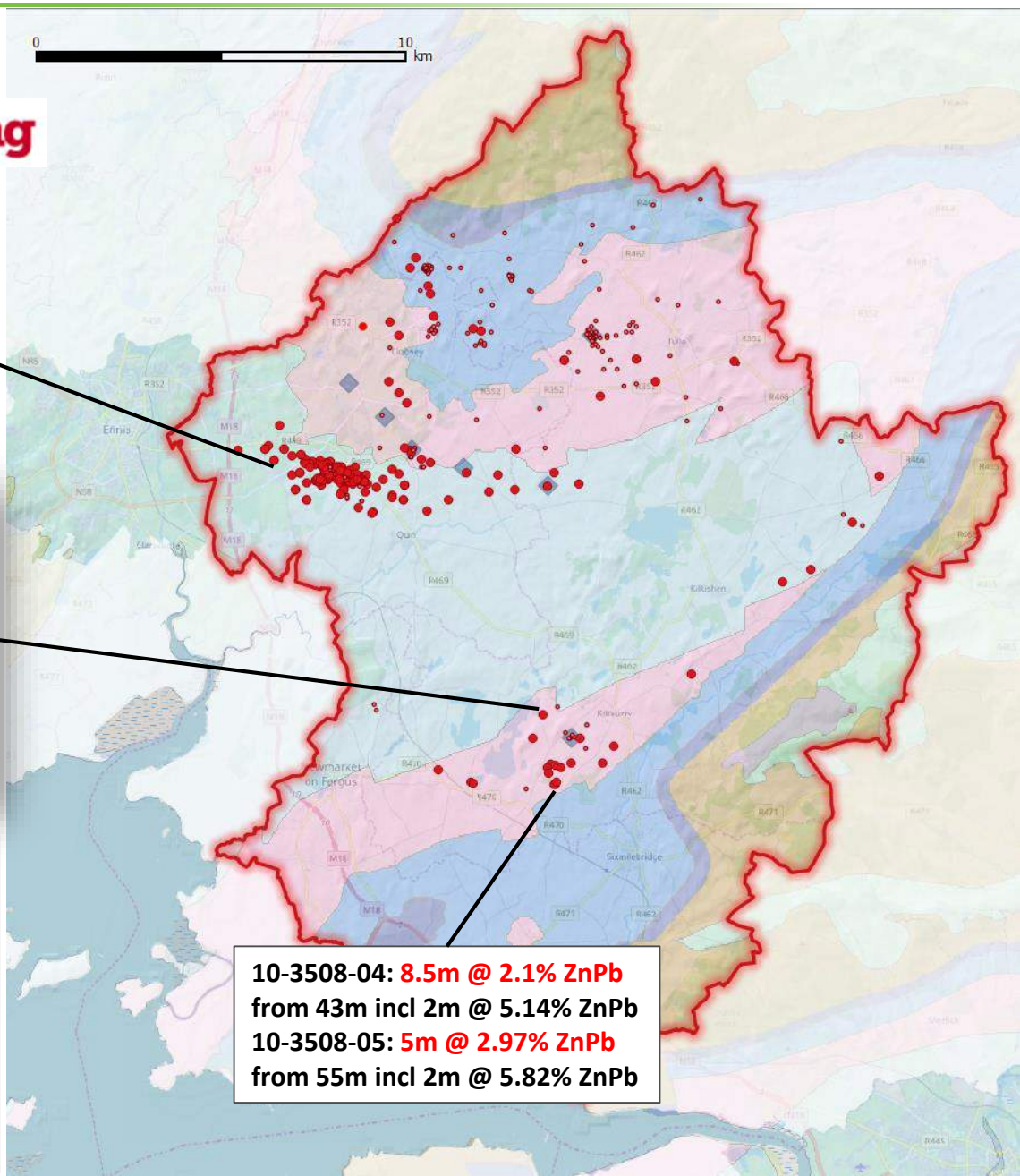
Project History – Phase V

2010-2012 Exploration by lundin mining

- 134,000 m of drilling

Discovery of two mineralized zones at Kilbricken





Kilbricken: Hannan Resource Expansion

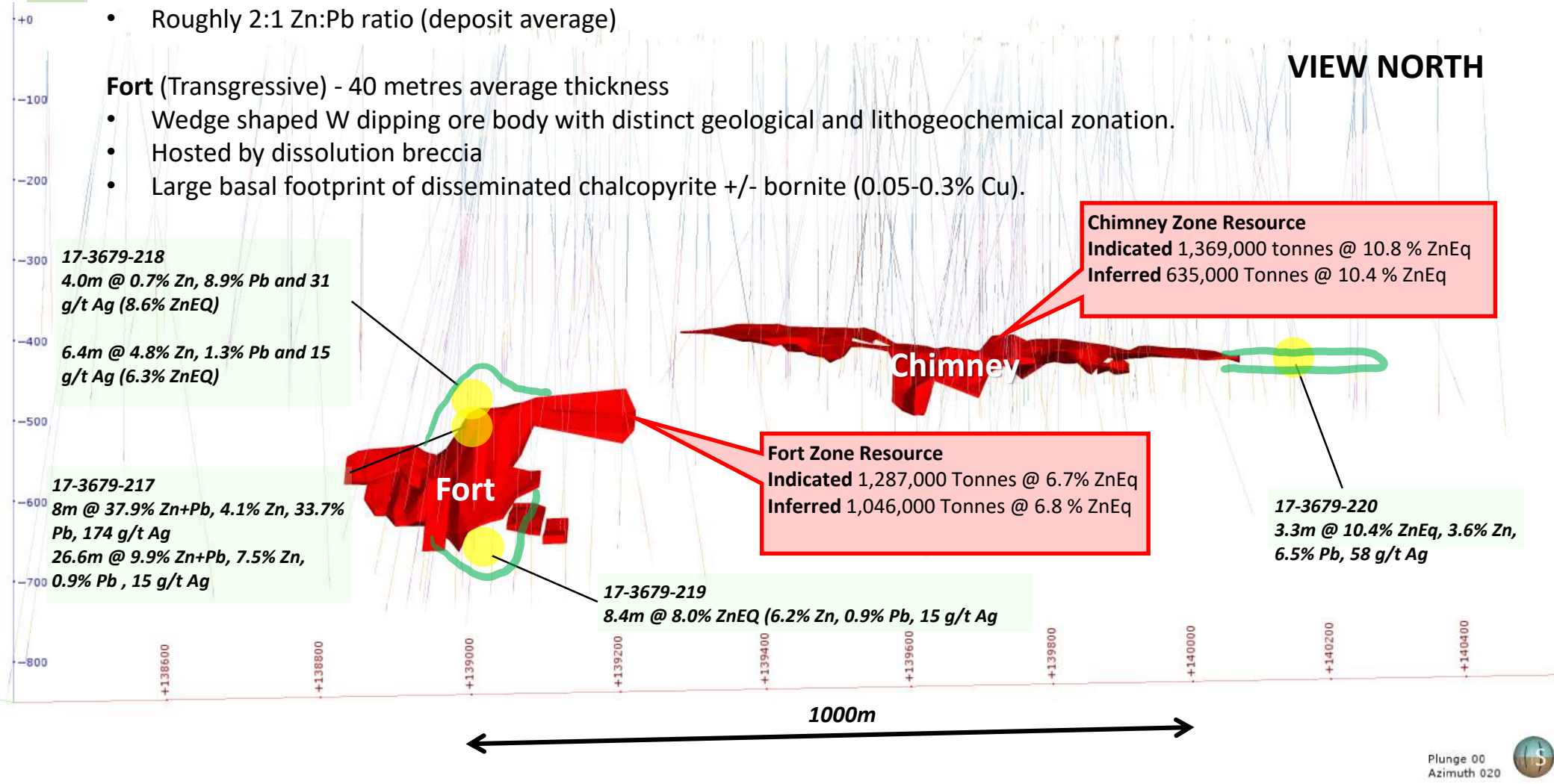
Two zones: Fort and Chimney

Chimney (Stratabound and transgressive) – 12 metres average thickness

- 75 % hosted within dissolution breccia at base of reef
- 25% encrinites or Waulsortian lenses at the top of ABL (in the NMU).
- Roughly 2:1 Zn:Pb ratio (deposit average)

Fort (Transgressive) - 40 metres average thickness

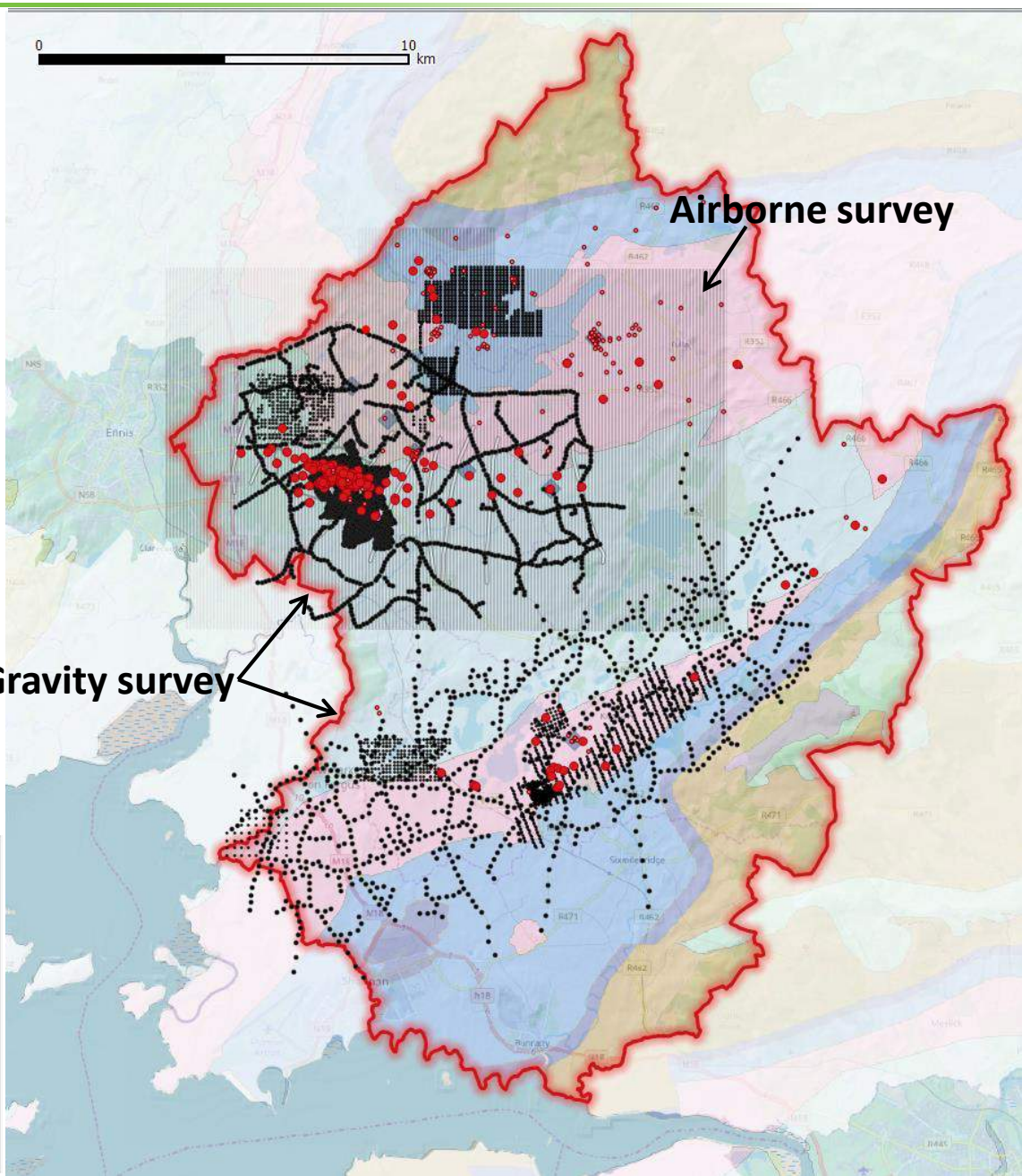
- Wedge shaped W dipping ore body with distinct geological and lithogeochemical zonation.
- Hosted by dissolution breccia
- Large basal footprint of disseminated chalcopyrite +/- bornite (0.05-0.3% Cu).



Project History – Phase V

2010-2012 Exploration by Lundin

- 134,000 m of drilling
- 5 km² 3D seismic survey
- 28 km 2D seismic survey
- 2,700 ah soil samples
- Airborne survey
- 3,500 gravity stations

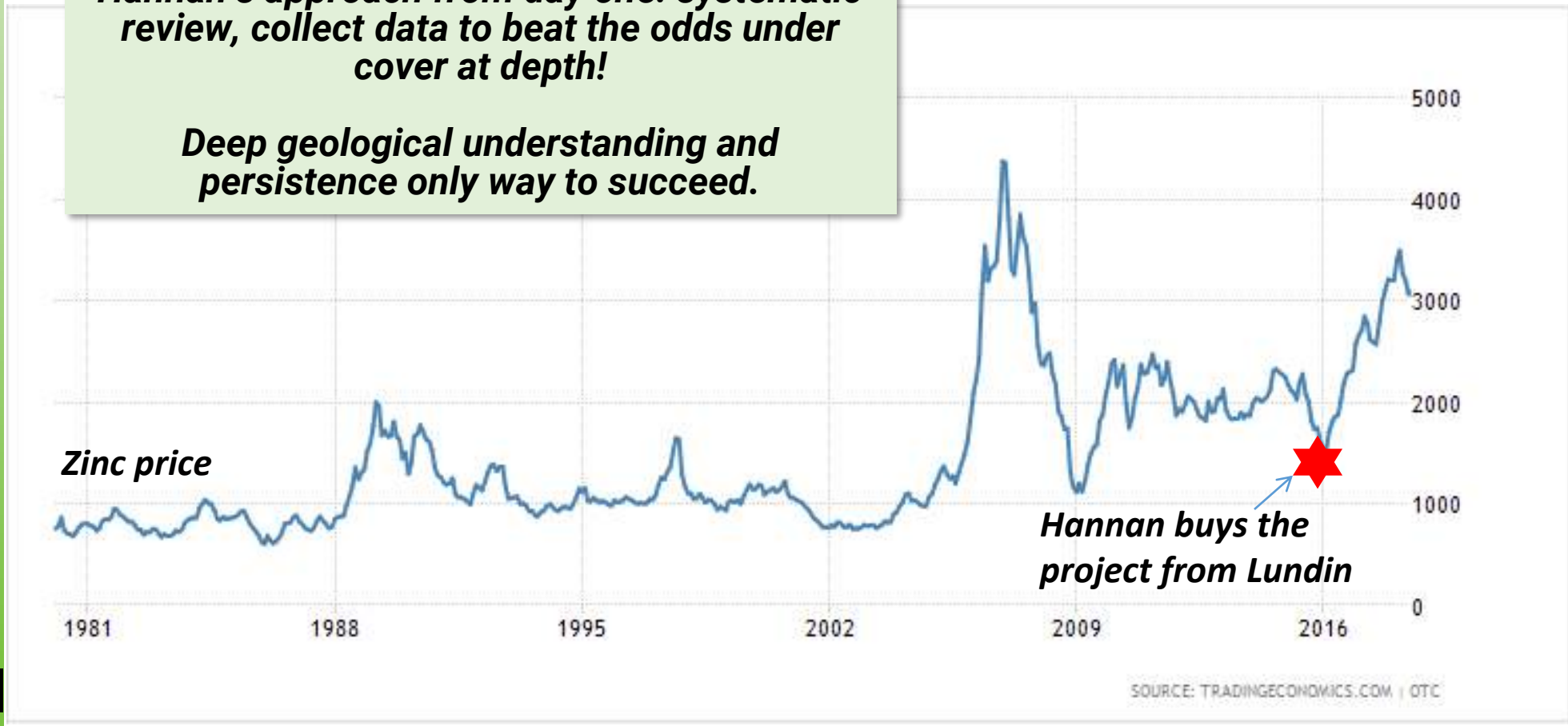


Project History

- Hannan purchases the license block from Lundin in December 2015.
- Drilling restarts in May 2017 after 5 year pause
- Project wide soil survey > 1,200 samples collected in 2017
- Seismic survey starts in October 2017

Hannan's approach from day one: systematic review, collect data to beat the odds under cover at depth!

Deep geological understanding and persistence only way to succeed.



Opportunity in Big Data

- Starting from first principles - building up data confidence
- No shortcuts – geology first. We are still mapping outcrops to reconstruct a first class bedrock map.
- Experts involved
  - **John Colthurst** (consulting geologist with > 25 yrs experience in the Clare basin)
  - **Glenn Morgan** (Morgan Seismic Services)
  - **Leigh Rankin** (consulting structural geologist)
  - **iCRAG (**John Walsh, John Guven, John Coneally, Roisin Kyne, Koen Torremans**)**
  - **Barry Murphy** (consulting structural geologist and gravity expert)
  - **Kurt Forester** (Metallurgical testwork)
  - **Charles Hope** (consulting seismic expert)
  - **Dave Coller** (consulting structural geologist)
  - **Alastair Beach** (consulting structural geologist)
  - **Eric Adam** (consulting seismic expert)
  - **Ian Campell** (AMAG processing, de-culturing and spectral depth filtering)
  - **Hannan's team** (Michael Hudson, Claire Duggan, Graham Hartigan, Lars Dahlenborg)

*(The **Lundin Team** and experts consultants involved with Lundin includes **Derek Rhodes, Murry Hitzman, John Walsh, Richard Unitt**.)*

Hannan Seismic Survey 2017

Why seismic?

- **Proven success in Ireland (Tara: Boliden)**
- **Project was already de-risked**
- **Only way to map lithology and structure undercover**

"While Kilbricken is an attractive prospect, it is by no means clear that this is the best target on the block or that Kilbricken sits astride the major structures in the area"

Murry Hitzman, Lundin site vist 2010, internal report

Seismic strategy

Three phases :

Acquisition

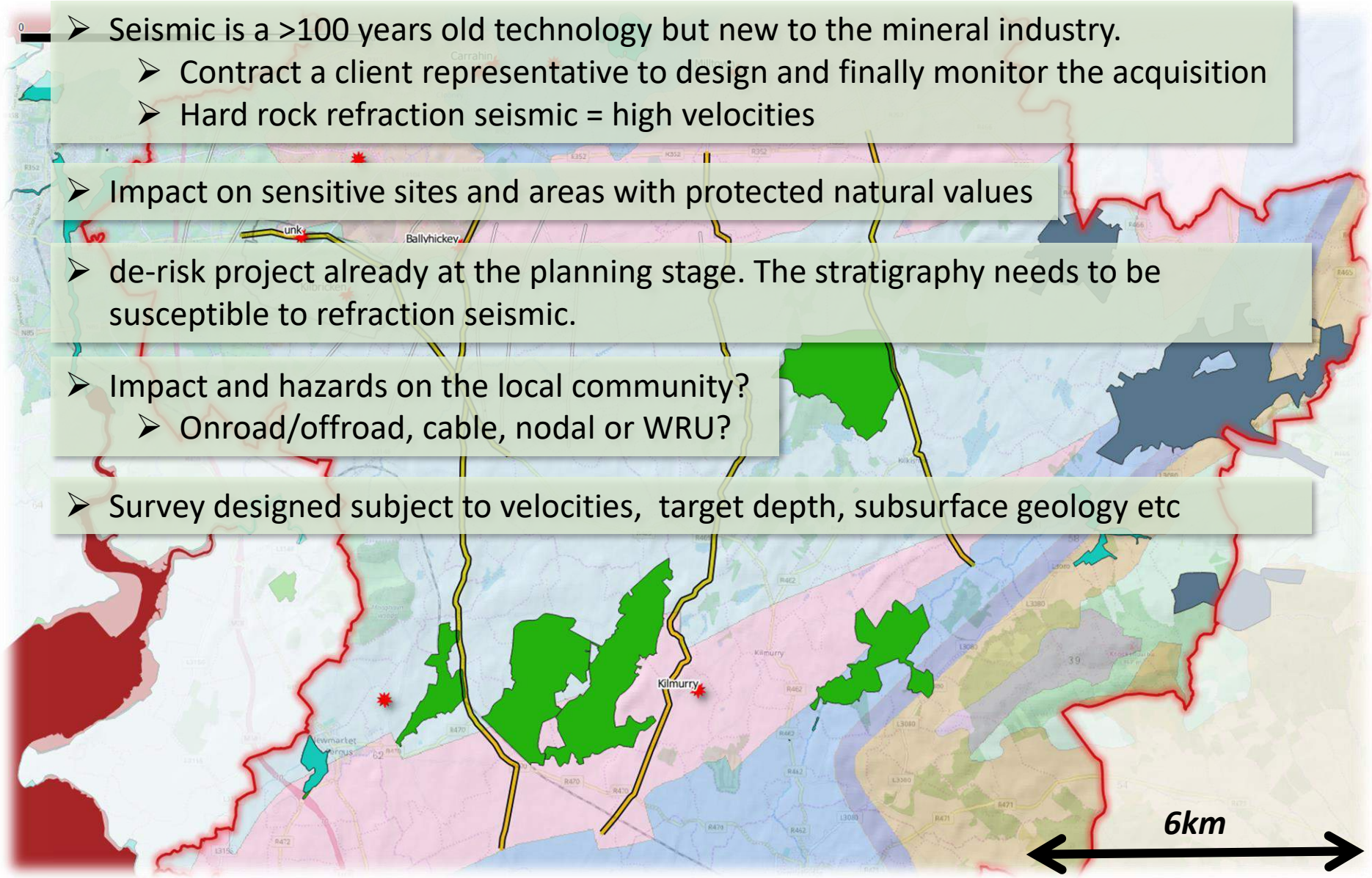
Processing

Interpretation

Acquisition

Processing
Interpretation

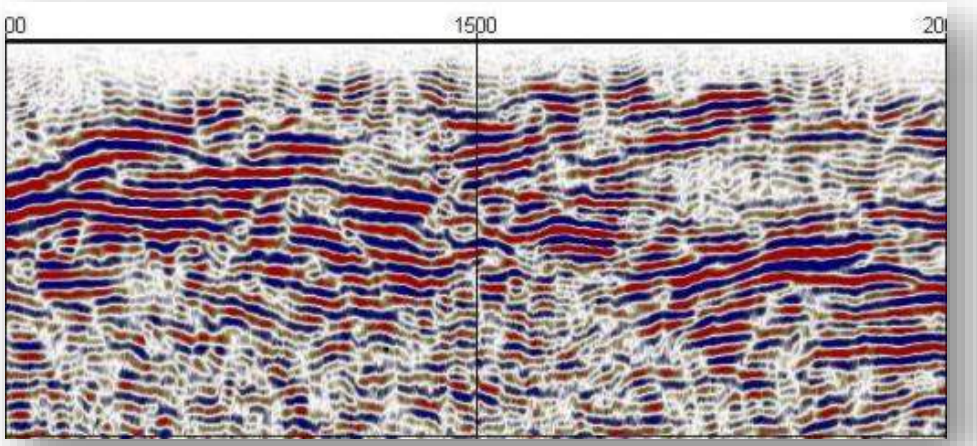
- Seismic is a >100 years old technology but new to the mineral industry.
  - Contract a client representative to design and finally monitor the acquisition
  - Hard rock refraction seismic = high velocities
- Impact on sensitive sites and areas with protected natural values
- de-risk project already at the planning stage. The stratigraphy needs to be susceptible to refraction seismic.
- Impact and hazards on the local community?
  - Onroad/offroad, cable, nodal or WRU?
- Survey designed subject to velocities, target depth, subsurface geology etc



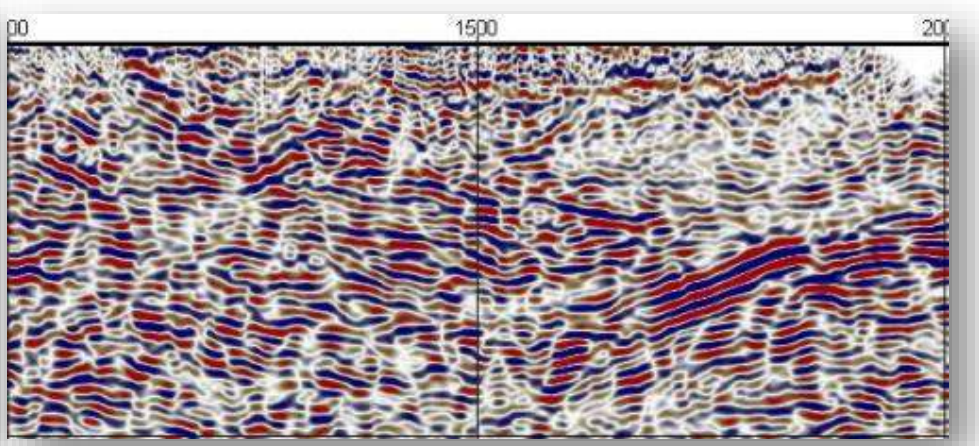
Processing

- A processing job from the mineral industry is “small potatoes” for the petroleum industry
- Processing trails will show you who has the interest and if it fits budget
- Get experienced seismic interpreter involved
- Drill hole constraints are key in a high velocity world

Same data processed by two different groups



17HAN04_post STM



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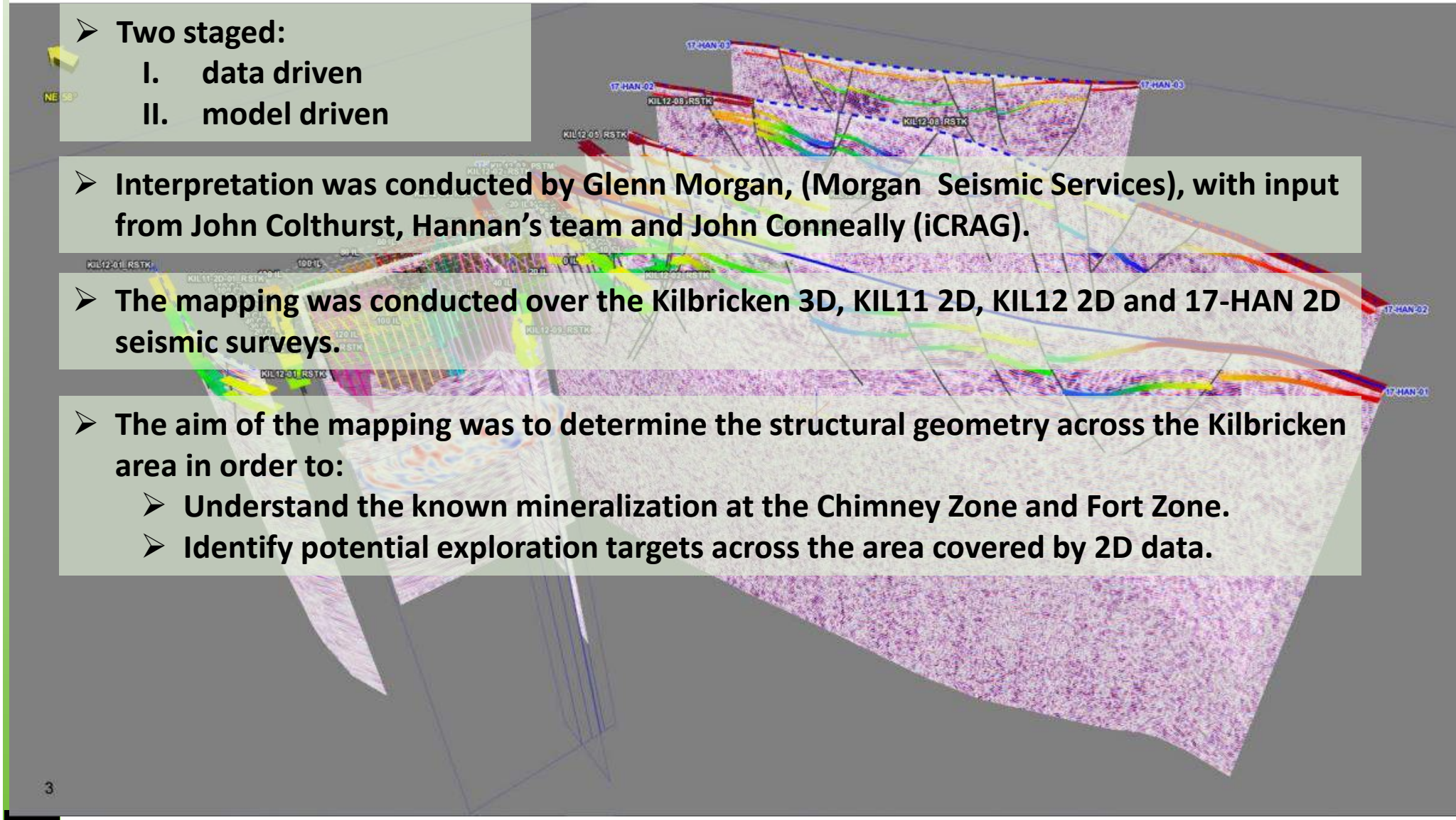
Interpretation

- Two staged:
  I. data driven
  II. model driven

- Interpretation was conducted by Glenn Morgan, (Morgan Seismic Services), with input from John Colthurst, Hannan's team and John Conneally (iCRAG).

- The mapping was conducted over the Kilbricken 3D, KIL11 2D, KIL12 2D and 17-HAN 2D seismic surveys.

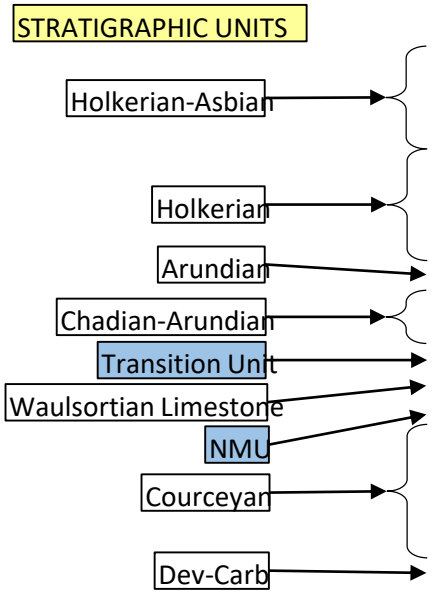
- The aim of the mapping was to determine the structural geometry across the Kilbricken area in order to:
  - Understand the known mineralization at the Chimney Zone and Fort Zone.
  - Identify potential exploration targets across the area covered by 2D data.



Interpretation – Data driven

➢Seismic mapping:

- ➢The stratigraphy was grouped into 9 units.
  - ➢Top Transition Unit (good acoustic impedance boundary)
  - ➢Top Nodular Micrite Unit (NMU) – corresponds with reasonable seismic reflectors.

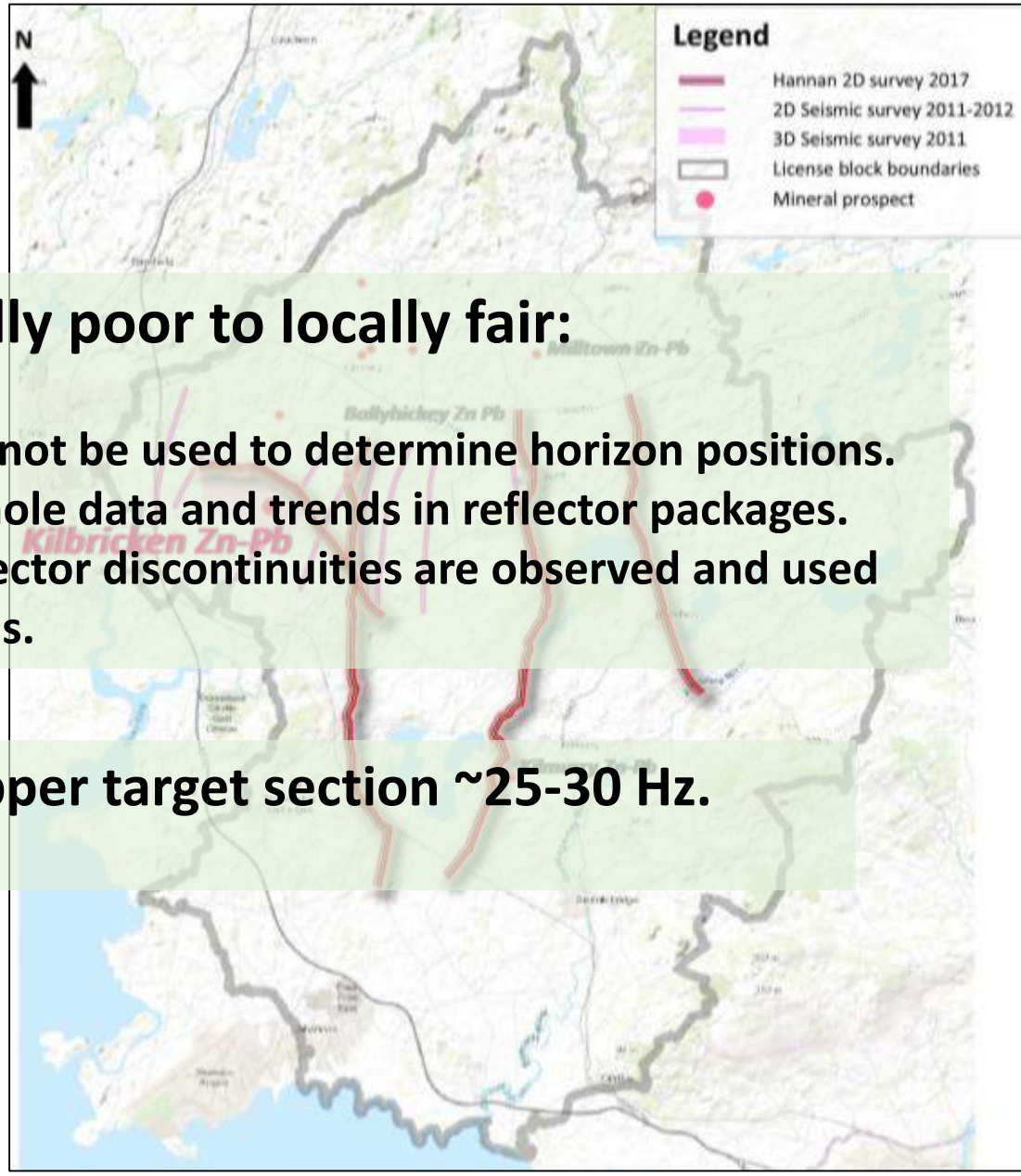


Age	Hannan stratigraphy Clare Project	Thickness
Brigantian	Aylecotty Chert Mbr, Burren Fm	>30m
Asbian	Burren Formation Caherscooby Oolite Mbr, Burren Fm Burren Formation	85m
Holkerian - Asbian	Upper Silty Calcarenite	>45m
Holkerian - Asbian	Doora Argillite	15 - 35m
Holkerian - Asbian	Upper fine Calcarenite	30m+
Holkerian - Asbian	Upper Clean Grainstone	10-20m
Holkerian	Argillaceous Calcarenite	22m
Holkerian	Middle Fine Grainstone	25m
Holkerian	Main Chert	15m
Holkerian	Middle Burrowed Unit	27m
Arundian	Lower Crinoidal Marker	8m
Chadian - Arundian	Lower Pale Grainstone	45m
Chadian - Arundian	Dark Fine Calcarenite	50m
Chadian	Transition (CHT)	40-70m
Courceyan - Chadian	Waulsortian Lst (WAL)	170-400m
Courceyan	NMU - Nodular Micrite Unit	20-35m
Courceyan	ABL-Argillaceous bioclastic limestones	80-140m
Courceyan	Ballymartin Fm	15-30
Courceyan	Ballyvergin Shale	3-9m
Courceyan	Ringmoylan Shale	20-30m
Courceyan	Mellon House Beds	12-25m
U Dev-L.Carb	Old Red Sandstone (ORS)	>100m
	unconformaty	
Silurian-Devonian	Basement	>>1km

Zn-Pb-Ag

Interpretation – Data driven

- **The seismic database**
  - 68km 2D data
  - 5 km² 3D data



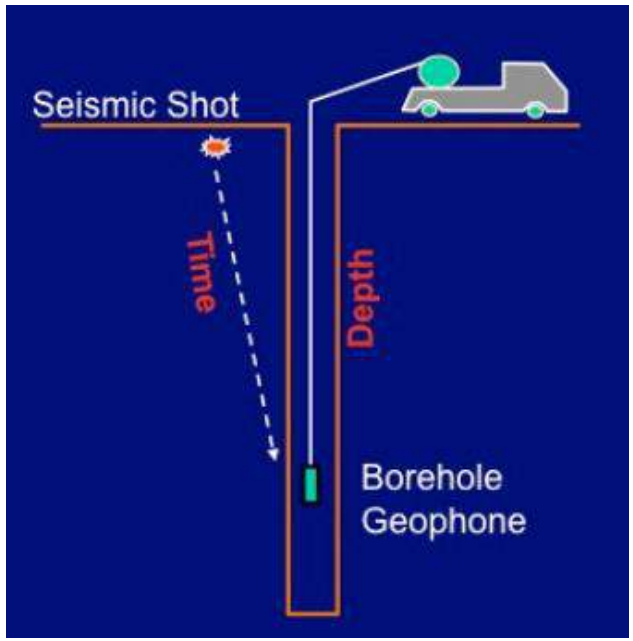
- **The data quality is generally poor to locally fair:**
  - Significant noise in places.
  - Individual seismic reflectors can not be used to determine horizon positions.
  - Horizon mapping relies on drill-hole data and trends in reflector packages.
  - Fault planes not imaged but reflector discontinuities are observed and used to determine likely fault locations.

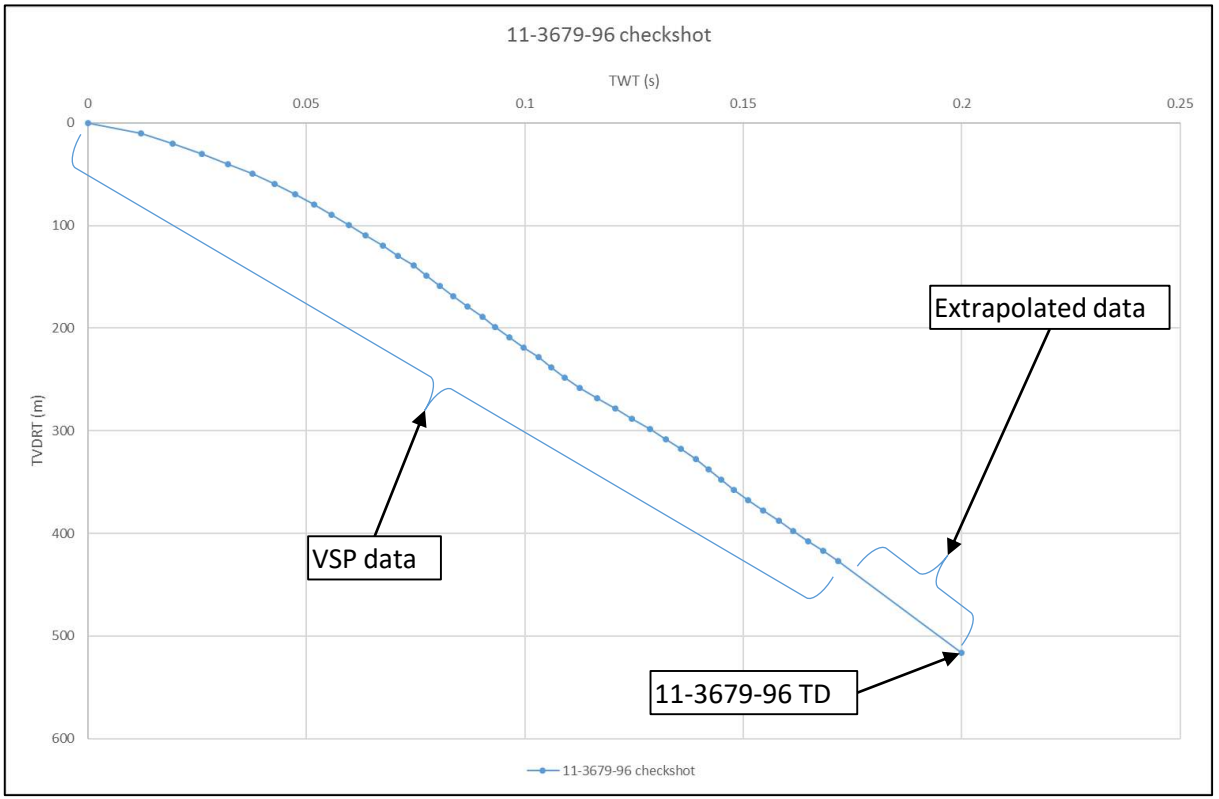
- **Dominant frequency of the upper target section ~25-30 Hz.**
  - 30-50m vertical resolution

MORGAN seismic services

Time-Depth Relationship

- **Time-depth relationship determined from Vertical Seismic Profile (VSP) in 11-3679-96.**

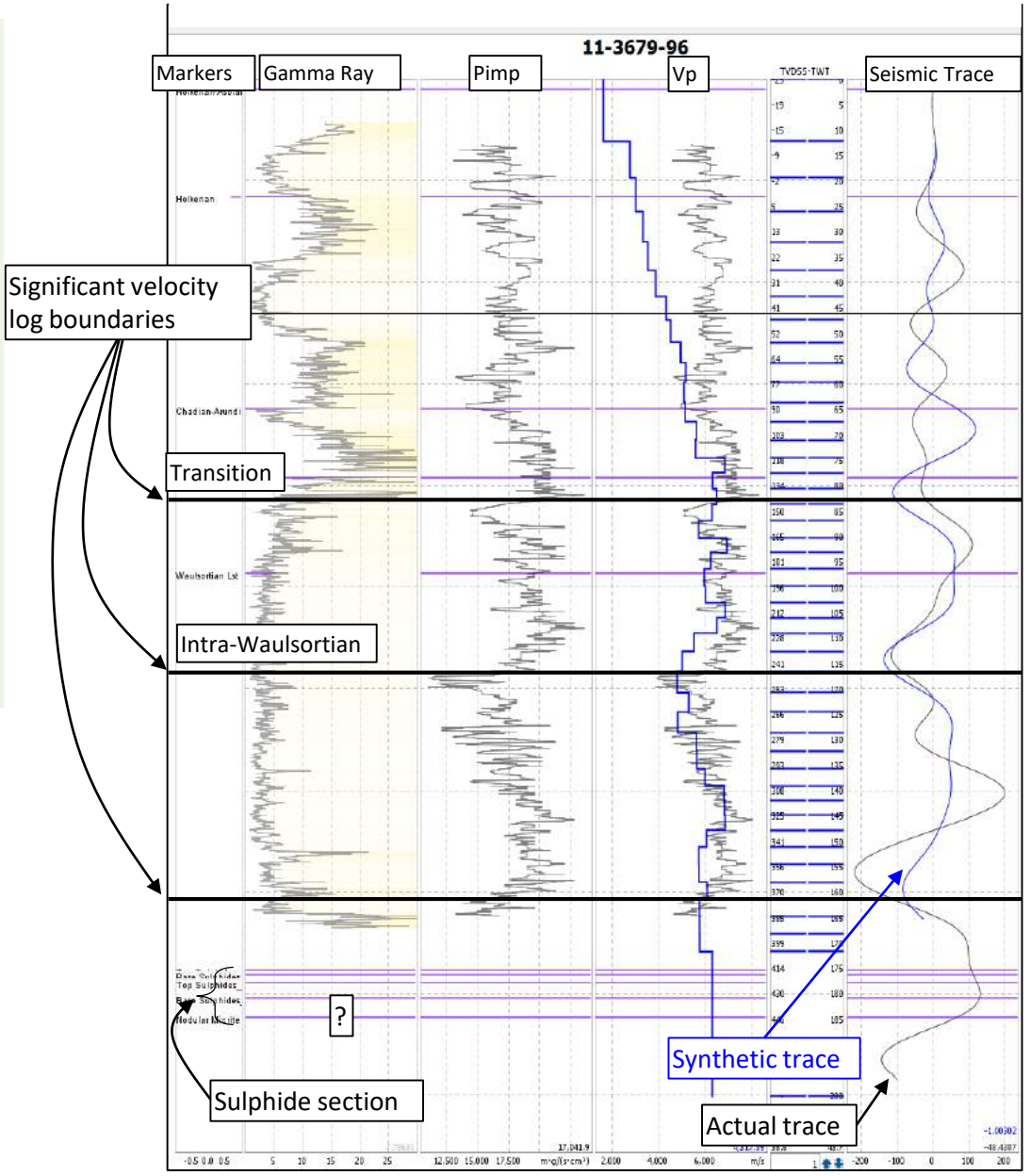




Interpretation – Data driven

- **Why VSP is so useful?**
- **True correlation between depth and time**
- **The synthetic seismogram shows:**
  - **Significant seismic events are expected at near Top Transition Unit and Intra-Waulsortian Limestone levels.**

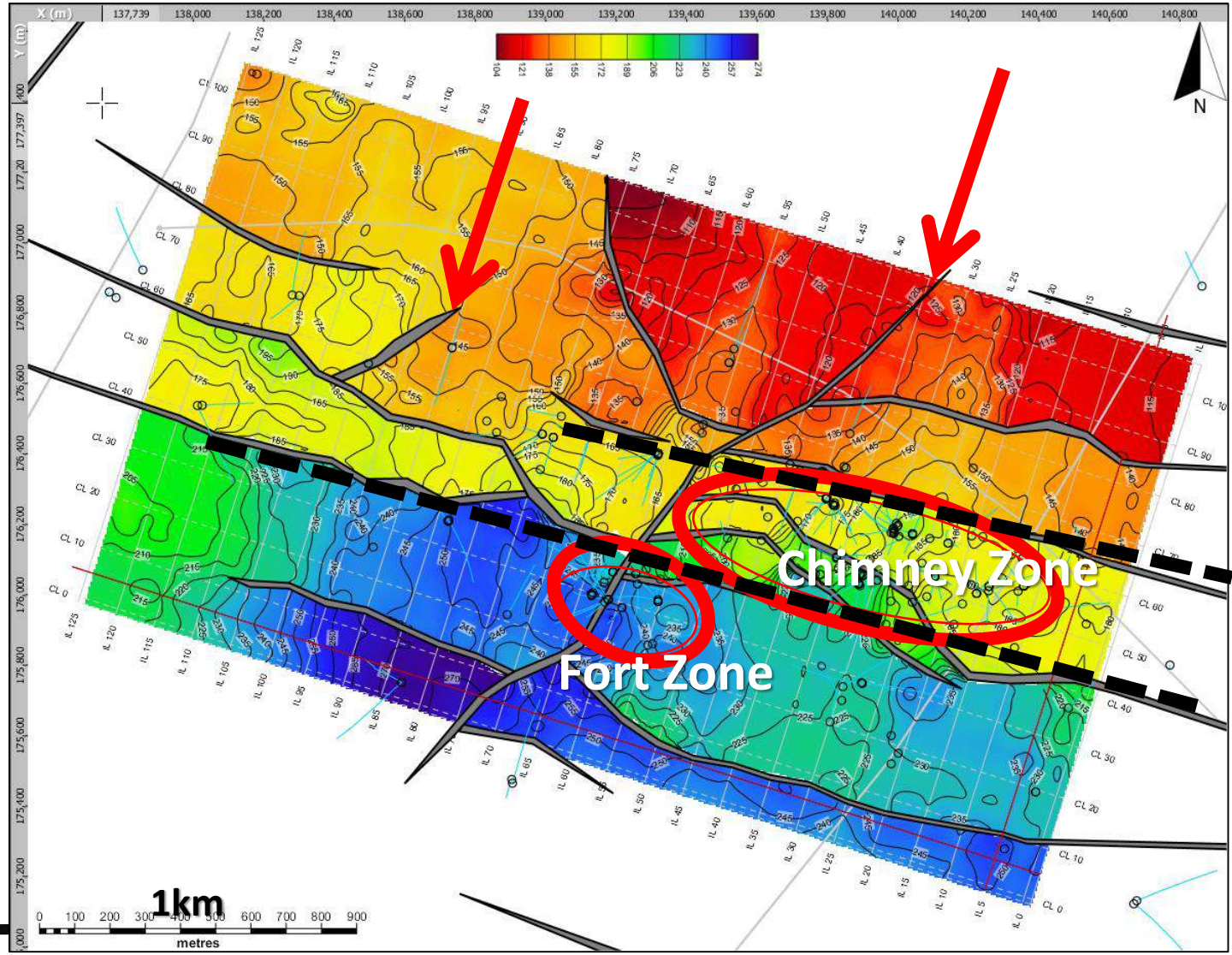
Synthetic Seismogram (11-3679-96)



NMU: TWT Structure Map

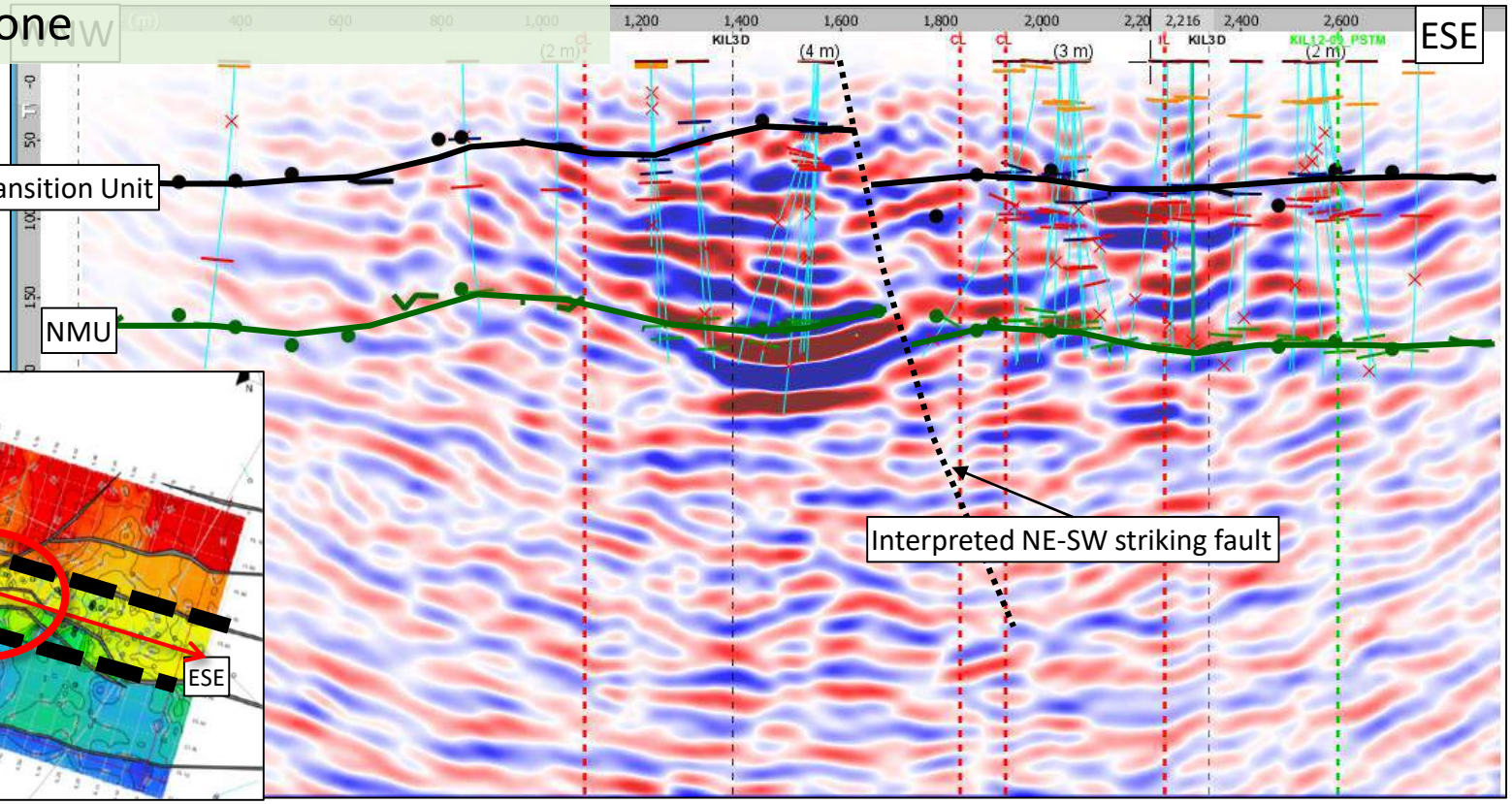
Kilbricken 3D area

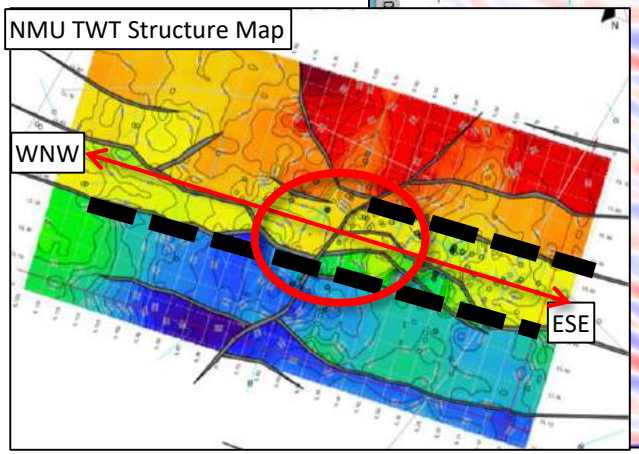
- **Kilbricken 3D:**
  - Mapping difficult due to poor data quality
- Drill holes helped constrain the model
- Significant outcome is the NE-SW structures



NE-SW Faults

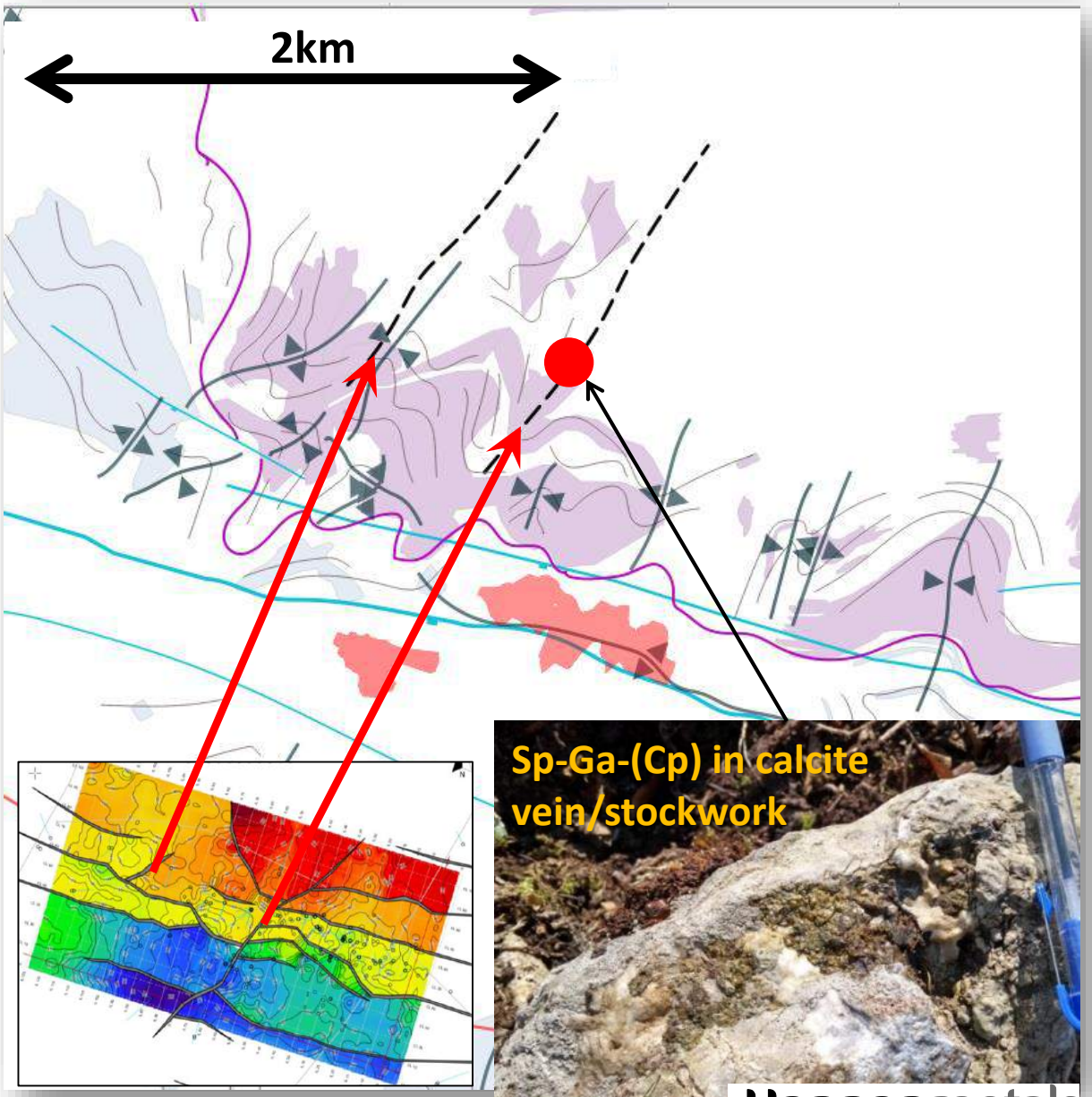
- NE-SW fault based on:
  - Significant thickening of the supra-Waulsortian section to the east and reflector offsets.
- Majority of thickening and reflector offsets suggest a SE-dipping fault with net normal displacement.
- Coincides with relay zone of the Chimney and the Fort Zone





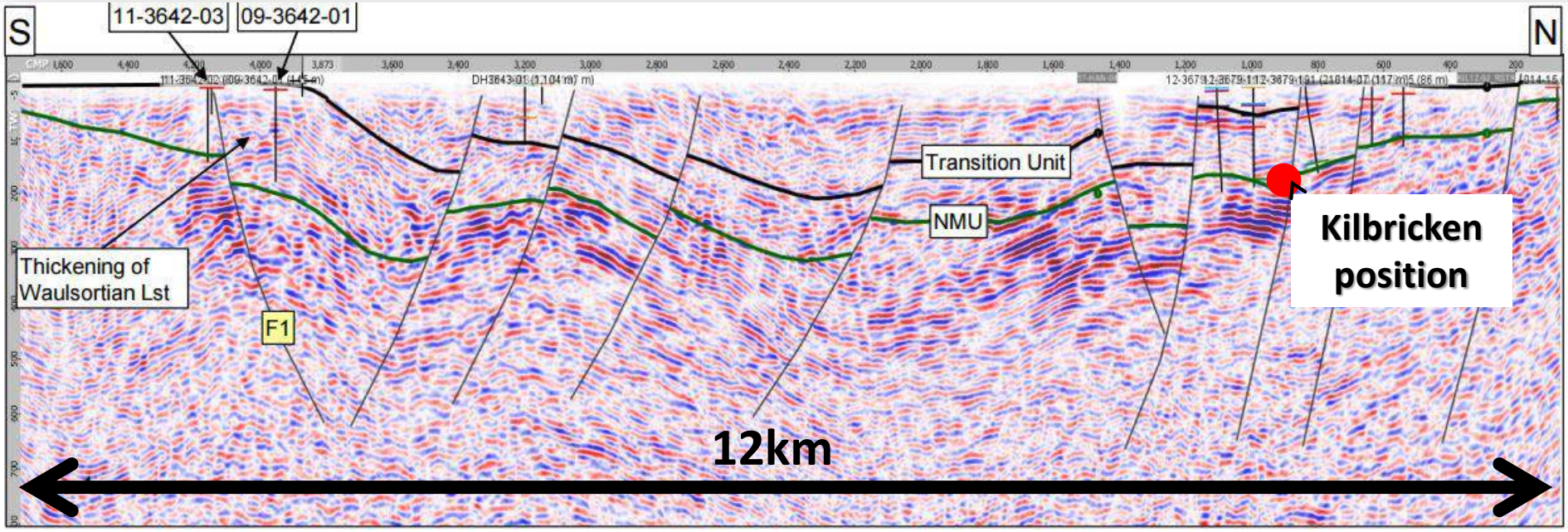
NE-SW Faults

- Strong support in detailed surface mapping
- Deformation is Variscan. The N-S orientation is an interference pattern related to strain bend around pre-existing structures.
- Hannan's latest outcrop discovery correlates with one zone



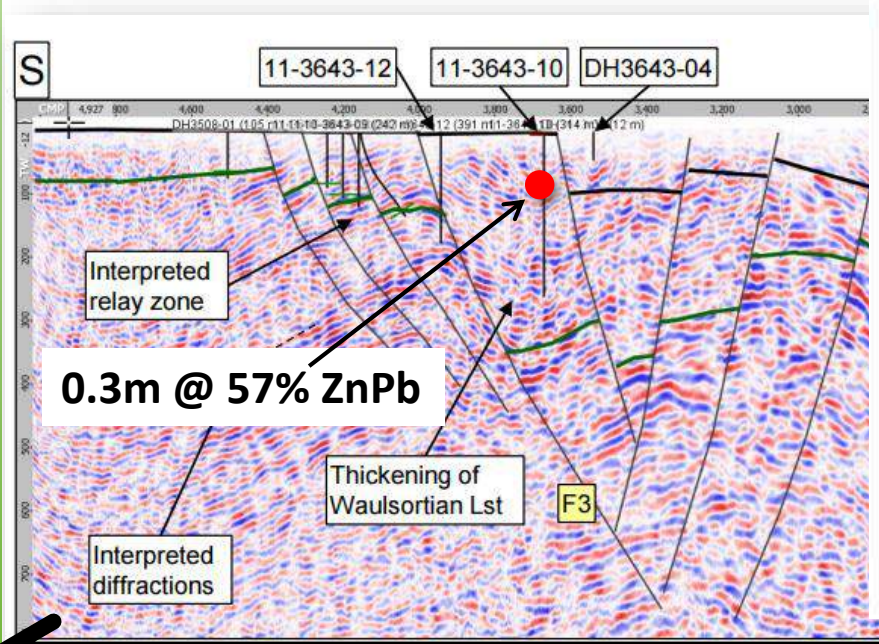
Interpretation 17HAN01

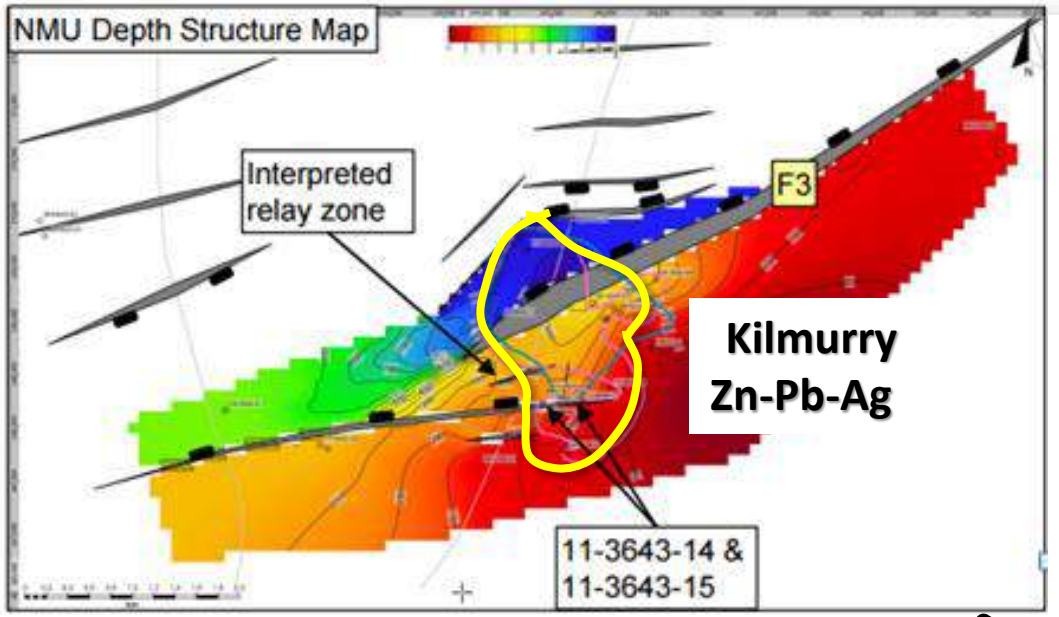
- Key markers for mapping is the high amplitude package and the “bland zone”
- Interpretation in North and South is constrained by drill holes
- DDH 09-3642-01 (proj. 145m W intersected +450m Waulsortian from surface
- F1 is a significant N dipping fault with ~200m vertical offset



Interpretation 17HAN02

- Northern and Southern end is constrained by drill holes
- F3 is a major fault with >750m vertical displacement. It is interpreted to be the northern bounding fault of a major relay zone
- Drill hole 11-3643-10 intersected >750m of Waulsortian.
- Kilmurry sits in the FW of the major relay zone.

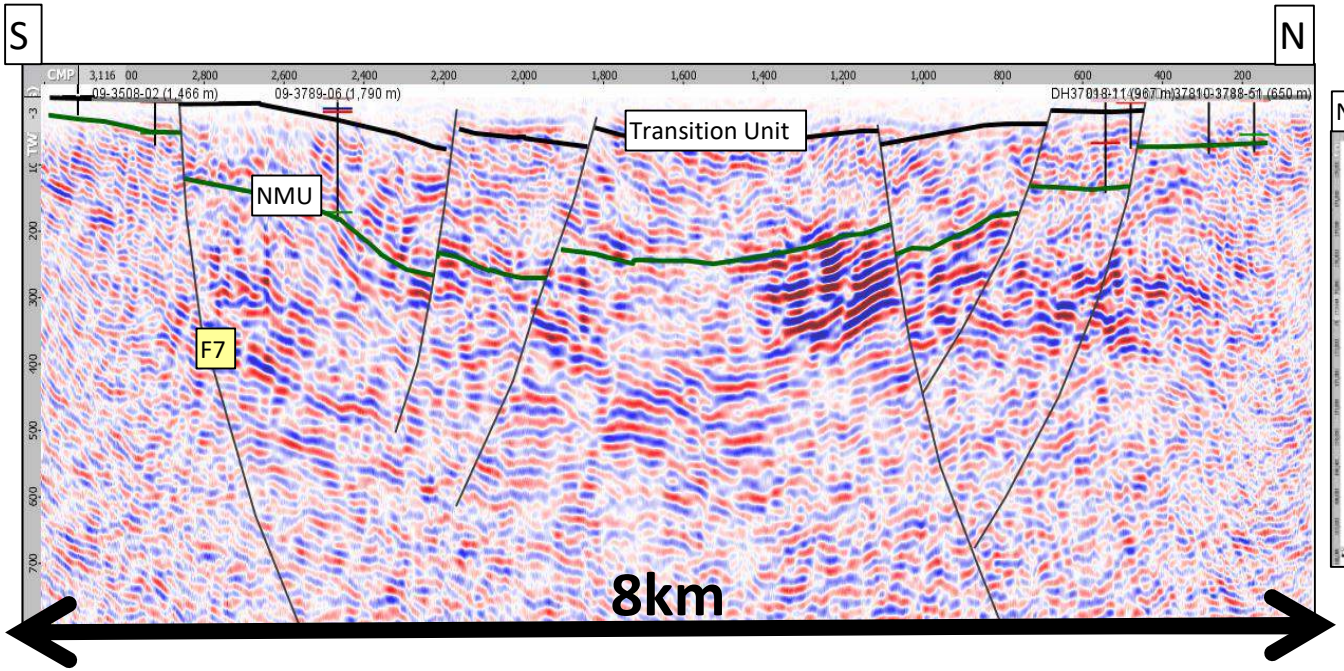


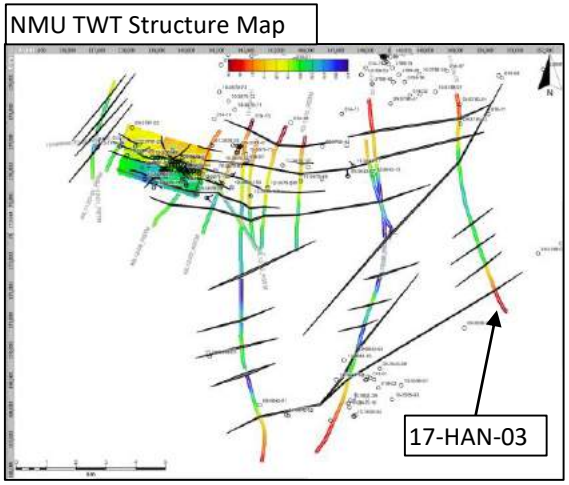


12km

Interpretation 17HAN03

- Interpretation is partly constrained by drill holes in the North and South
- 09-3789-06 (proj. 1790 m W) intersected 428 m Waulsortian from near surface.
- F7 is a significant N-dipping fault with 300m vertical offset





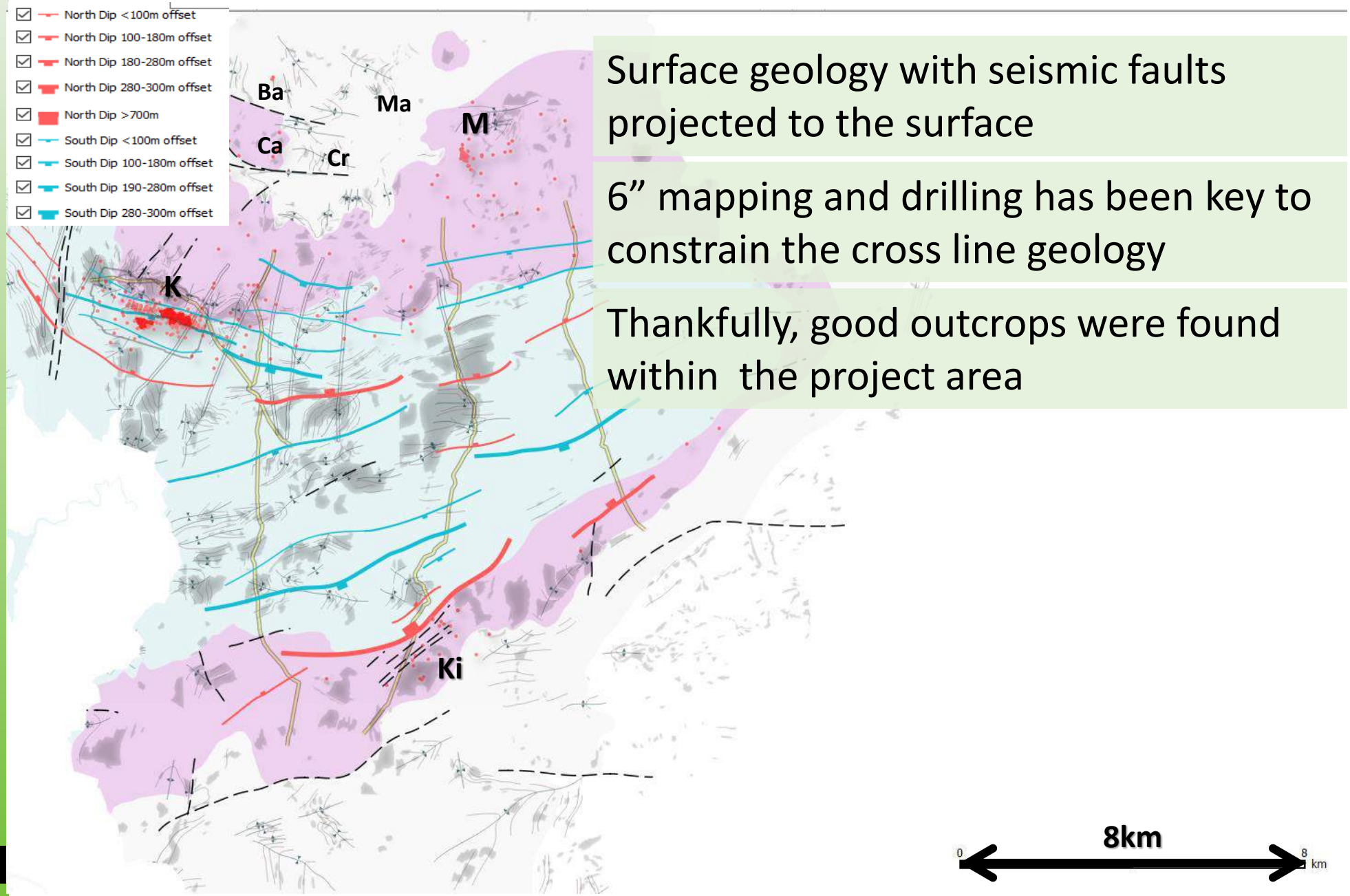
Interpretation – Model driven

- **Model driven** interpretation was conducted by Leigh Rankin, with input from Glenn Morgan, John Colthurst, iCRAG and Hannan's team.
- The purpose with this assessment is to identify the most prospective parts of the project.
- The key is to constrain the interpretation with good exploratory data

"In Ireland where the maps are on a scale of six inches to the mile, very great precision may be obtained, both as regards the lines of mineral veins, and the outcrop of coal beds…."

Instructions for the Local Directors of the Geological Survey of Great Britain and Ireland.
Henry de la Beche
22nd May 1845

Constraining the model

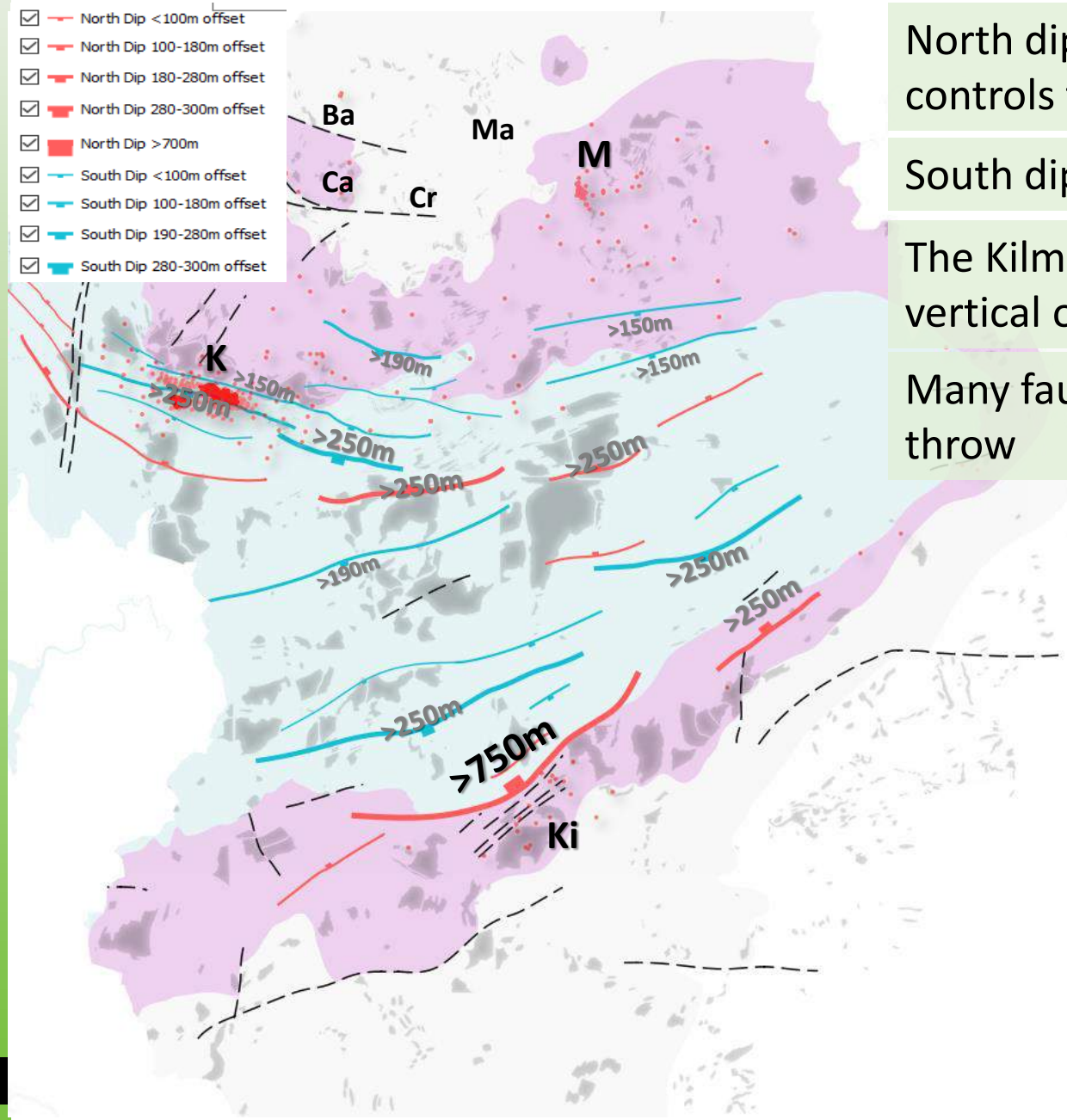


Surface geology with seismic faults projected to the surface

6” mapping and drilling has been key to constrain the cross line geology

Thankfully, good outcrops were found within the project area

Proposed basin controls



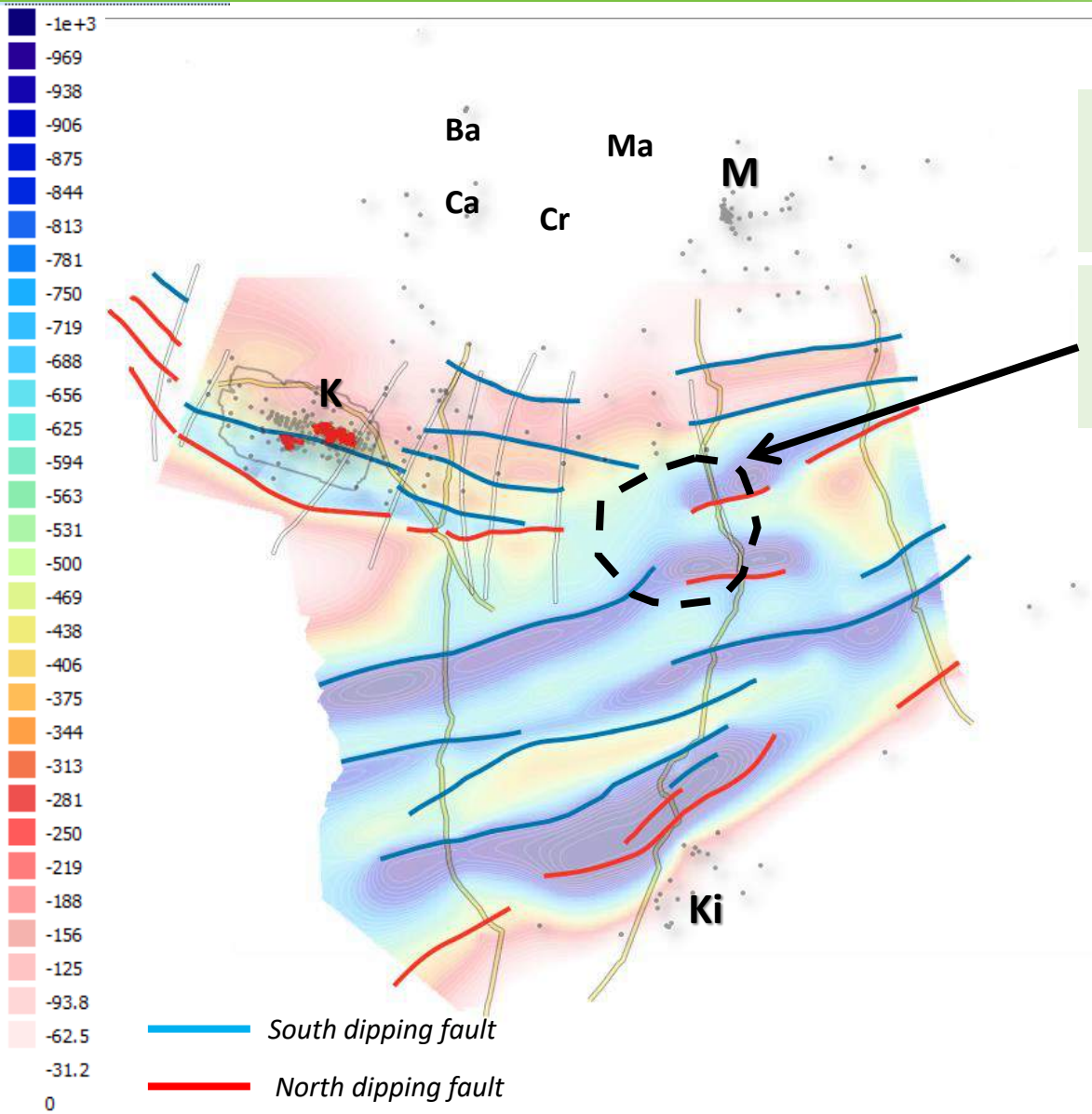
North dipping faults are first order and controls the basin margins

South dipping faults are 2nd order.

The Kilmurry fault shows more >750m vertical offset

Many faults have more than >250m throw

Structures at target depth

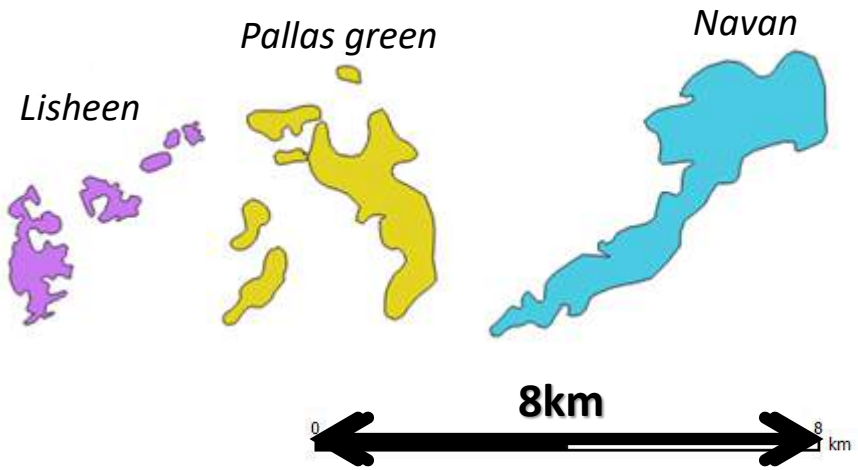


Depth to base of reef

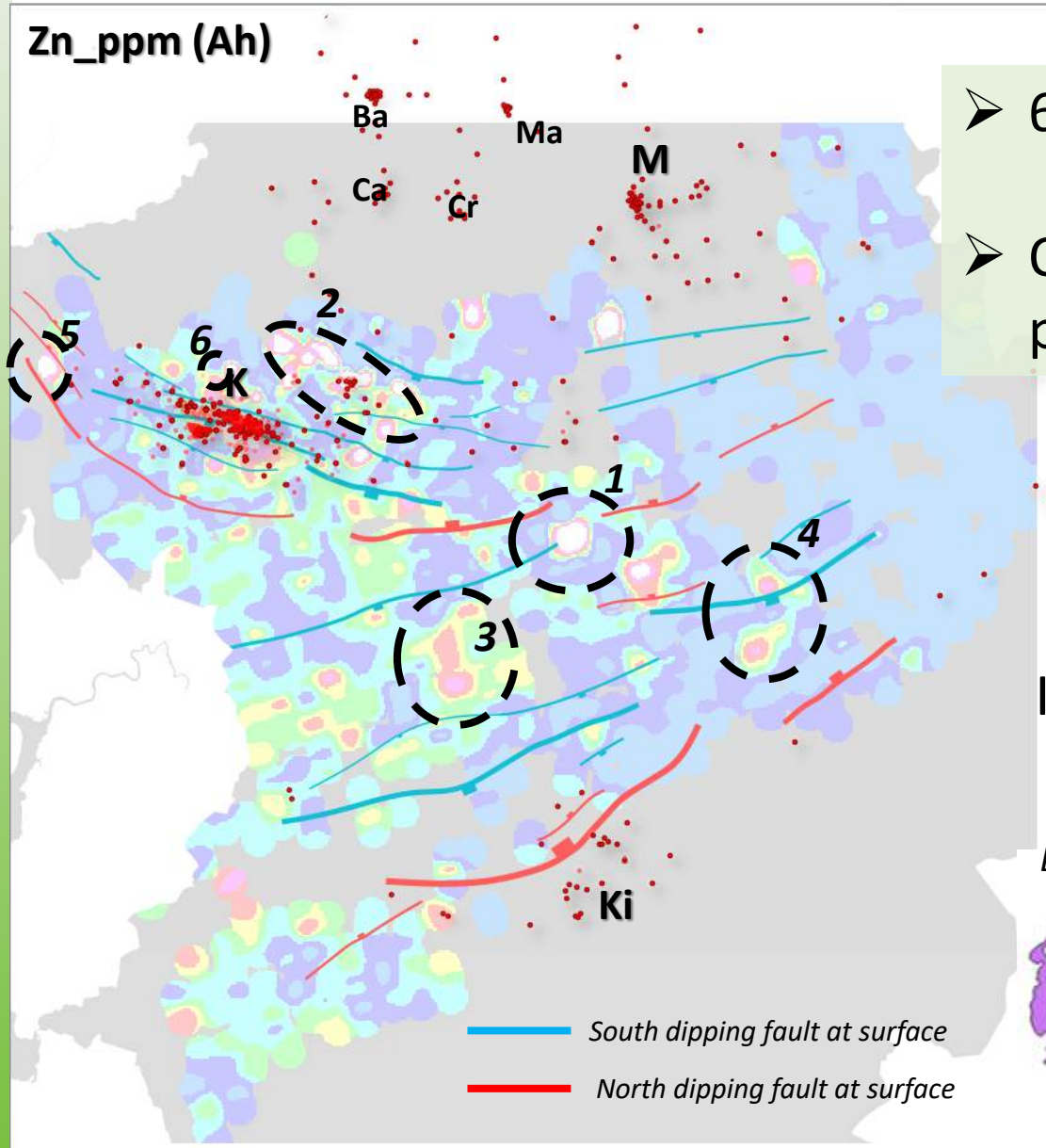
Target depth varies between 200-1000m

Converging fault trends and polarity change

Irish deposits at the same scale

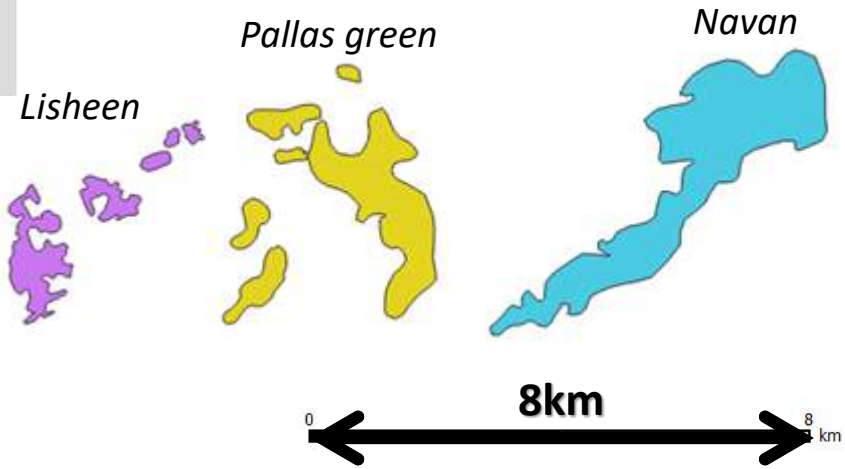


Surface Geochemistry



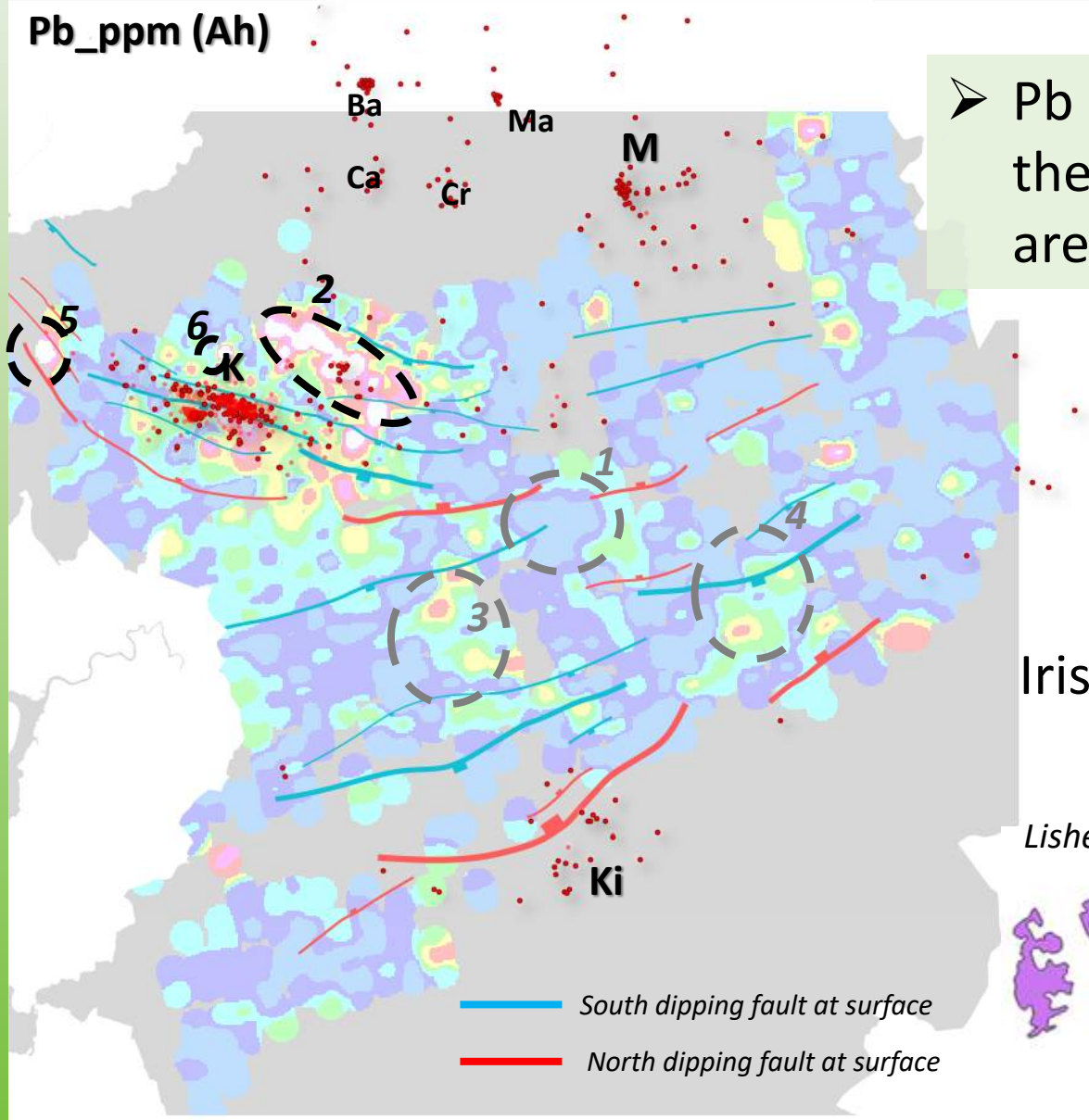
- 6 multipoint Zn anomalies
- Only Ballyhickey has been partially drill tested

Irish deposits at the same scale



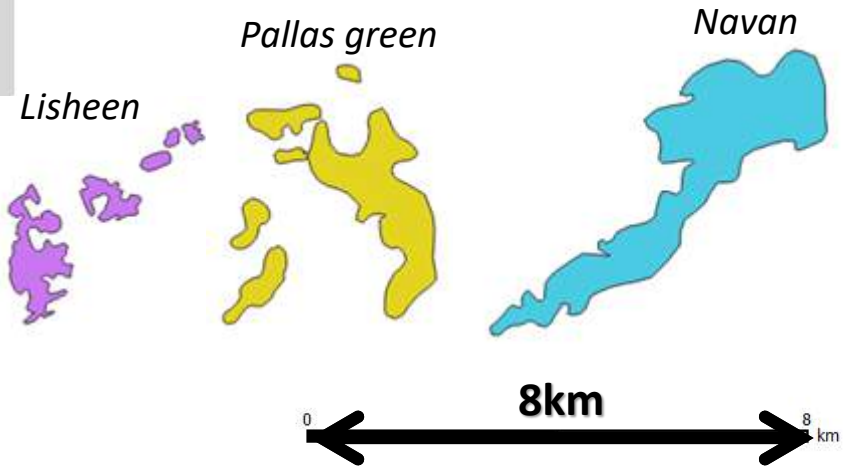
Samples collected by Hannan 2017-2018

Surface Geochemistry



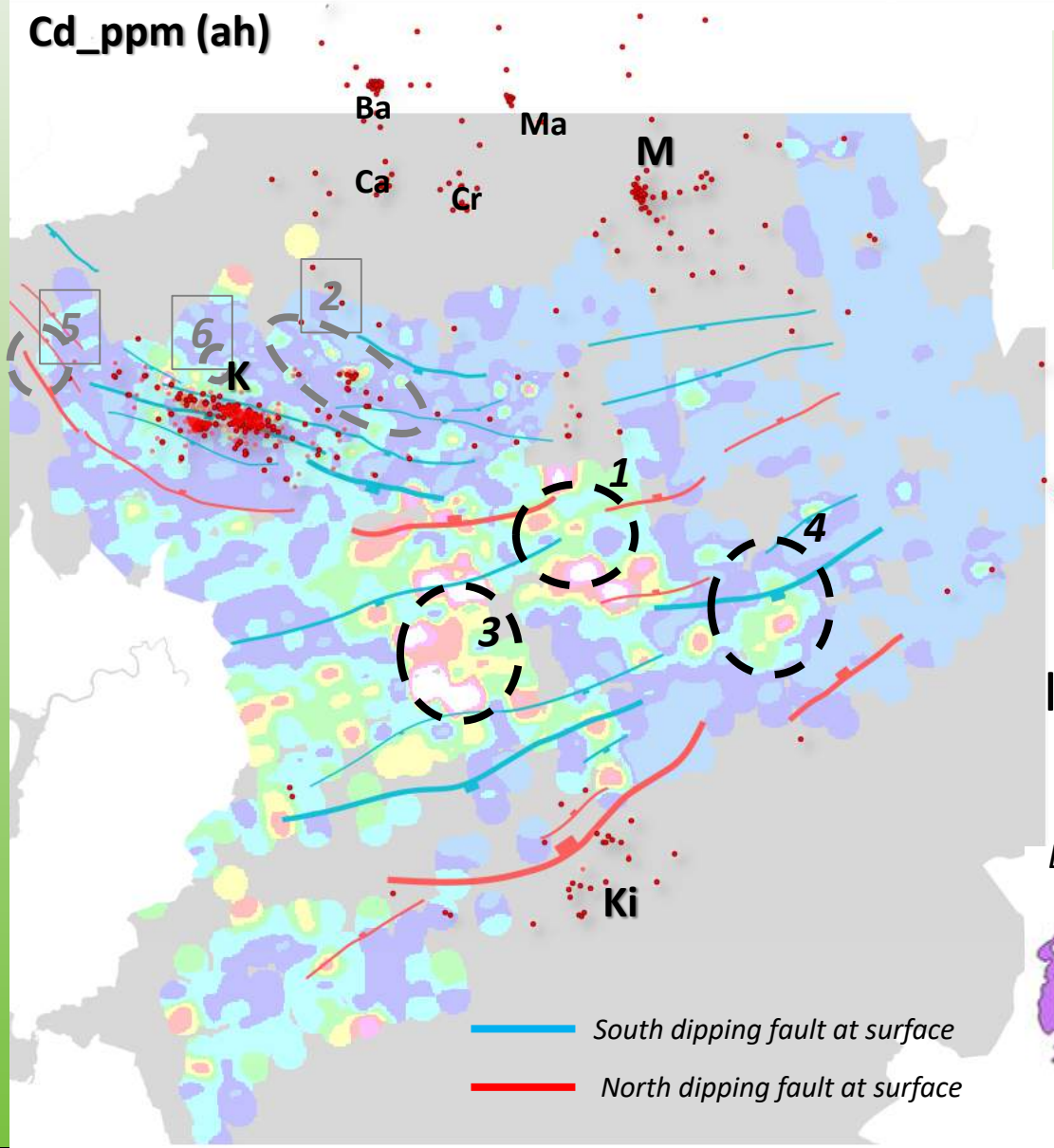
- Pb is strongly anomalous in the Kilbricken-Ballyhickey area

Irish deposits at the same scale



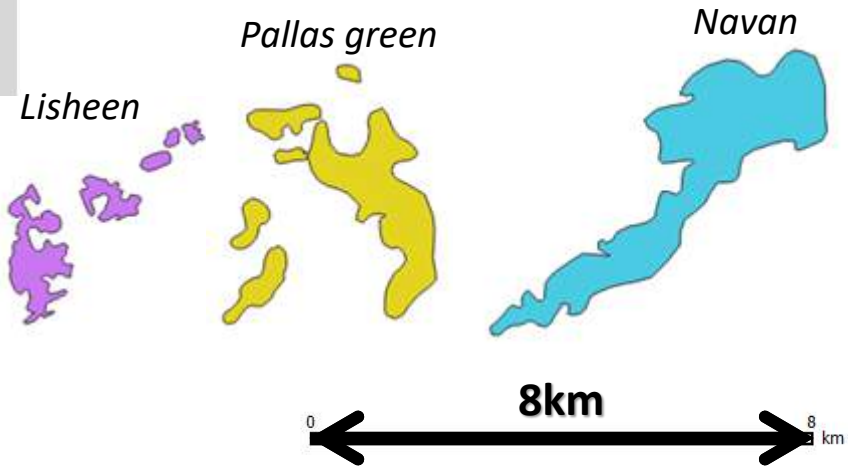
Samples collected by Hannan 2017-2018

Surface Geochemistry



- Cd is anomalous in the "center" of the basin and at Kilmurry
- Note that these Cd anomalies coincide with Zn anomalies

Irish deposits at the same scale



Samples collected by Hannan 2017-2018

Summary of new targets

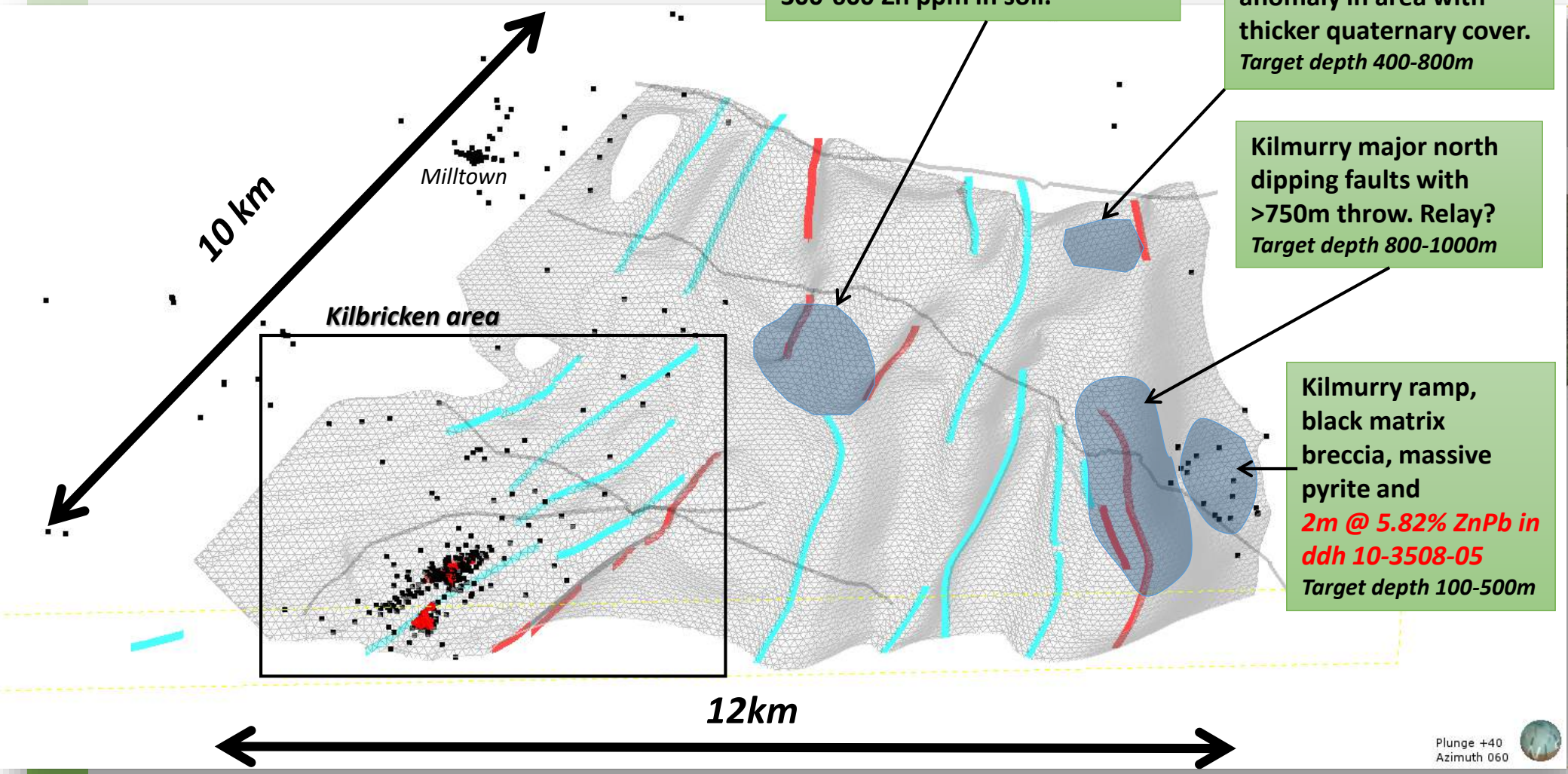
South dipping fault at surface
North dipping fault at surface
Drill hole at target depth

Converging fault trends with polarity change coinciding with mulitpoint Zn-Cd anomaly with 300-600 Zn ppm in soil.

Mulitpoint Zn-Cd anomaly in area with thicker quaternary cover.
Target depth 400-800m

Kilmurry major north dipping faults with >750m throw. Relay?
Target depth 800-1000m

Kilmurry ramp, black matrix breccia, massive pyrite and
2m @ 5.82% ZnPb in ddh 10-3508-05
Target depth 100-500m

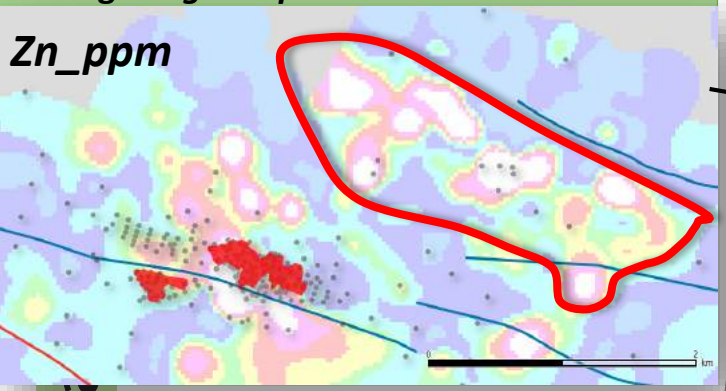


VIEW NE

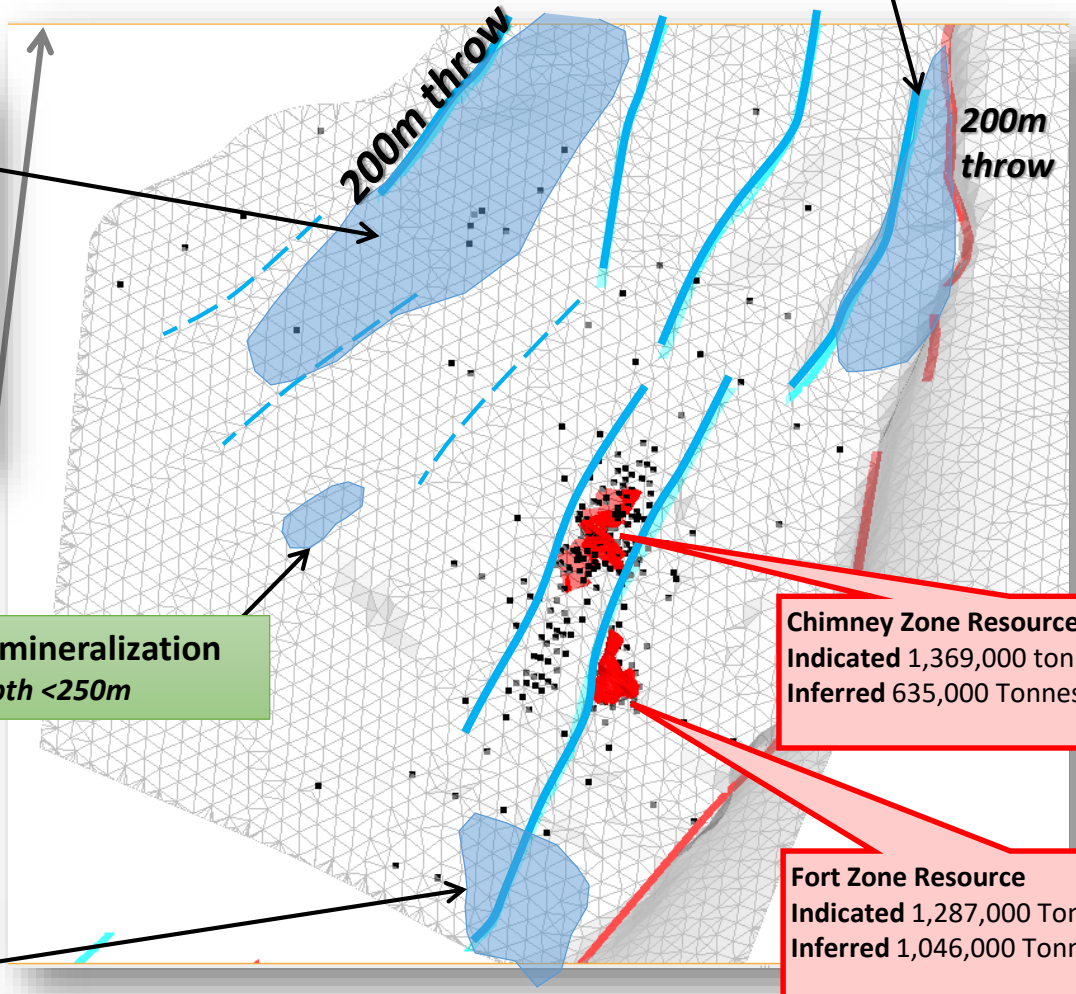
First order targets at Kilbricken

Converging fault trends and strong surface geochemistry with multipoint Zn-Cd anomaly
Target depth 650-850m

Ballyhickey fault panel 2.5 km x 600 m, strong surface geochemistry and dissolution and trace Zn-Pb mineralization in historic drilling. ***Target depth <250m***



VIEW NE



Outcrop mineralization
Target depth <250m

Chimney Zone Resource
Indicated 1,369,000 tonnes @ 10.8 % ZnEq
Inferred 635,000 Tonnes @ 10.4 % ZnEq

Fort Zone Resource
Indicated 1,287,000 Tonnes @ 6.7% ZnEq
Inferred 1,046,000 Tonnes @ 6.8 % ZnEq

South dipping fault at surface
North dipping fault at surface
Drill hole at target depth

>100m Complex collapse breccia. Converging fault trends.
Target depth 550-650m

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;
- Wardell Armstrong International Ltd, Truro, UK bench top metallurgical studies underway now, results April 18.

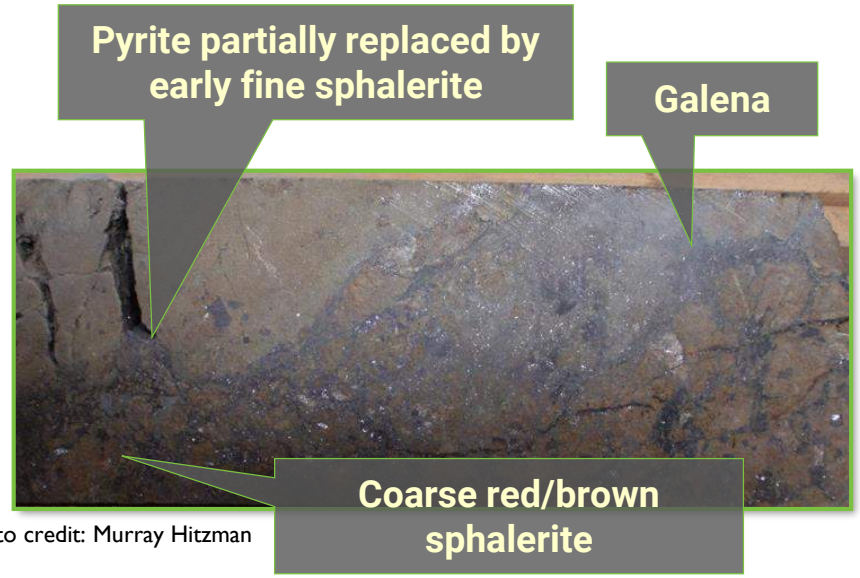
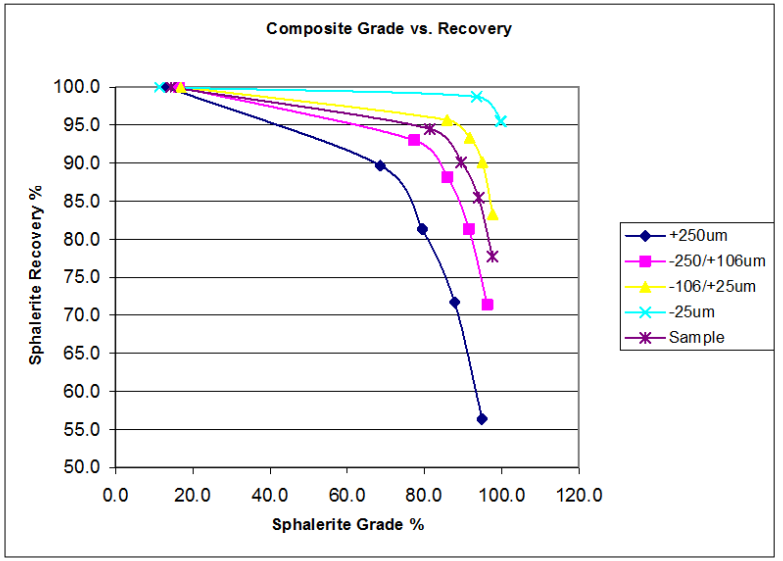


Photo credit: Murray Hitzman



News Flow, Project Growth in Right Market

- New zinc discovery made during last downturn - US$30M sunk capital;
- High grade mineralization, expandable at all scales, from near resource to prospect scale. 35,000 hectare land package with 40 km trend to test;
- Executing active work programs, significant project derisking:
  - Drill Drill Drill
  - 65km 2D seismic completed – playing the big game;
  - 4km drilling planned from Q3 2018
- Right Project, Right Time and Right Place.

Thank you