



Macmillan Pass: Growing a Giant

January 2022



FIREWEEDZINC
TSX-V: FWZ OTCQB: FWEDF

DISCOVERY
GROUP
EXPLORE • DISCOVER • DEVELOP

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PEA Cautionary Note:

Readers are cautioned that the PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA results will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Additional work is needed to upgrade these mineral resources to mineral reserves.

Forward-Looking Statements

This news release contains “forward-looking” statements and information relating to the Company and the Macmillan Pass Project that are based on the beliefs of Company management, as well as assumptions made by and information currently available to Company management. Such statements reflect the current risks, uncertainties and assumptions related to certain factors including but not limited to, without limitations, exploration and development risks, expenditure and financing requirements, general economic conditions, changes in financial markets, the ability to properly and efficiently staff the Company’s operations, the sufficiency of working capital and funding for continued operations, title matters, First Nations relations, operating hazards, political and economic factors, competitive factors, metal prices, relationships with vendors and strategic partners, governmental regulations and oversight, permitting, seasonality and weather, technological change, industry practices, and one-time events. Additional risks are set out in the Company’s prospectus dated May 9, 2017 and filed under the Company’s profile on SEDAR at www.sedar.com. Should any one or more risks or uncertainties materialize or change, or should any underlying assumptions prove incorrect, actual results and forward-looking statements may vary materially from those described herein. The Company does not undertake to update forward-looking statements or forward-looking information, except as required by law.

NI43-101 Qualified Person:

Brandon Macdonald P.Geol., CEO and Director of Fireweed Zinc, and a Qualified Person under the meaning of Canadian National Instrument 43-101, is responsible for the technical information in this presentation. Leon McGarry, P.Geol., Senior Resource Geologist for CSA Global Canada Geosciences Ltd. is independent of Fireweed Zinc Ltd. and a ‘Qualified Person’ as defined under Canadian National Instrument 43-101. Mr. McGarry is responsible for the Mineral Resource Estimate and directly related information in this presentation. Michael Makarenko, P.Eng., Project Manager for JDS Energy and Mining, Inc., is independent of Fireweed Zinc Ltd. and a ‘Qualified Person’ as defined under Canadian National Instrument 43-101. Mr. Makarenko is responsible for the PEA results and directly related information in this presentation.

Why Zinc? Why Fireweed?



Nascent Bull Market for Base Metals

- Recent crisis has highlighted fragility in metals market



Massive Global Stimulus Incoming

- Fiscal stimulus will focus on infrastructure which is bullish for Zinc



FWZ's Macmillan Pass is a Clear Standout

- MacPass stands above in terms of scale, economics, and upside potential



Big Names Already Paying Attention

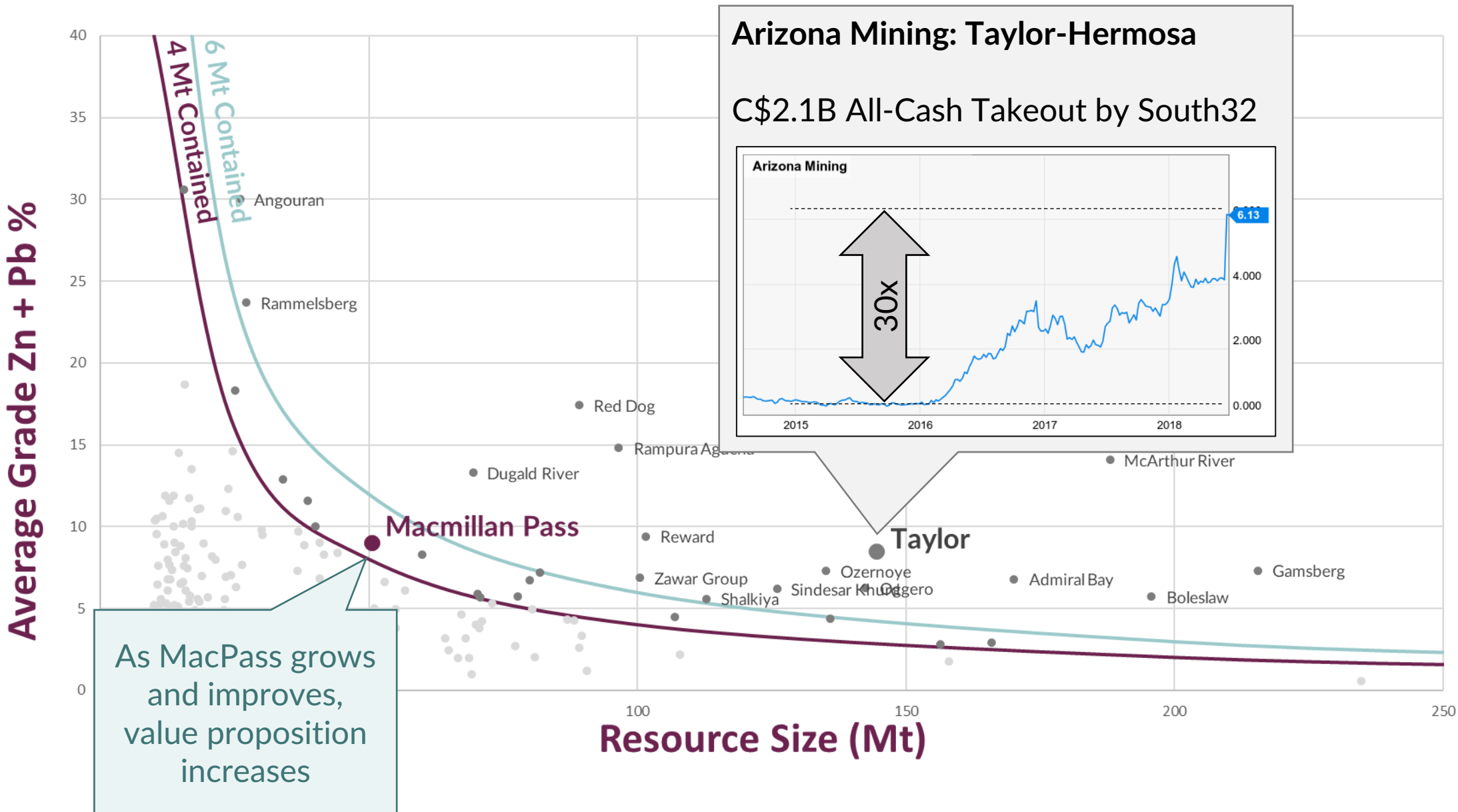
- Teck has invested, others are watching



2021 Program was Game-Changing

- Massive potential at new "Boundary West" and beyond

What's the Prize for Zinc?



About Fireweed Zinc

Board of Directors

John Robins

Executive Chairman & Director

- Founder, Executive Chairman & Director of Kaminak Gold Corporation
 - \$520M T/O by Goldcorp
- Director of Elemental Royalties, K2 Gold, Bluestone Resources
 - In 2020 Mr. Robins' companies have raised >\$100M
- Winner of AMEBC's H.H. "Spud" Huestis Award 2008

Brandon Macdonald

CEO & Director

- Chairman of Commander Resources Ltd
- Ex Macquarie Bank
- BSc Geology UBC, MBA Oxford University
- Long history of work in Yukon including zinc projects

George Gorzynski

- VPX Impact Silver

Adrian Rothwell

- CEO Lucky Minerals
- Formerly Goldcorp

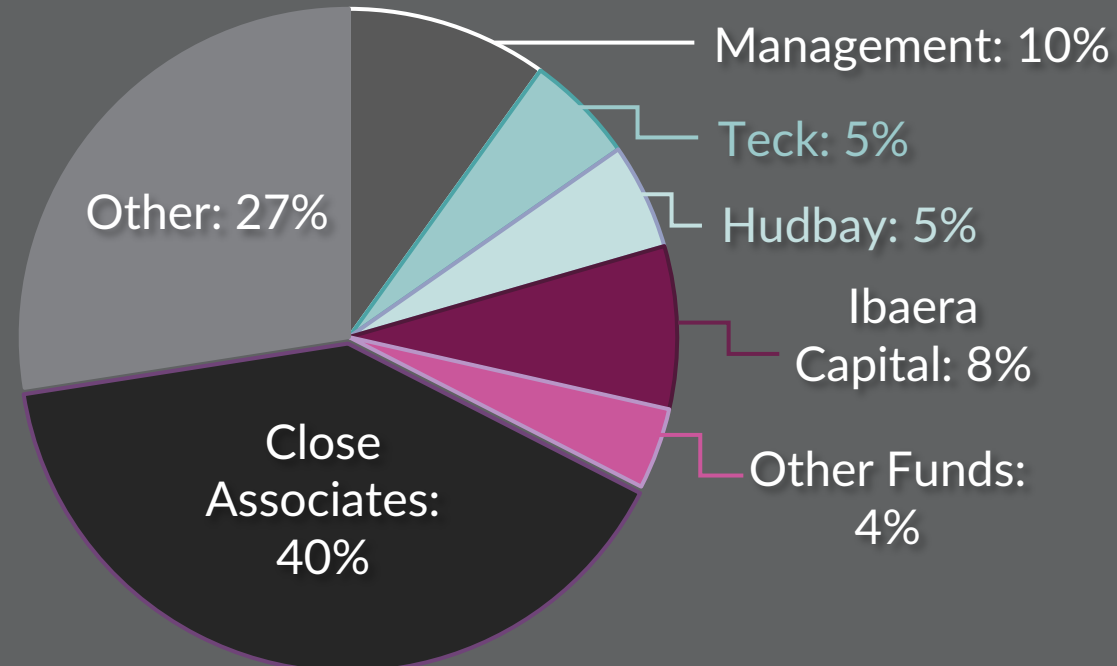
Marcus Chalk

- Principal Gencap Mining
- Formerly Scotiabank

Peter Hemstead

- CFO Bluestone Resources

Ownership



Share Structure (Dec 31)

Issued and Outstanding	74,897,032
Agent's Warrants	214,601
Investor Warrants	7,416,737
Options	4,892,000
Performance Shares	3,700,000
Fully-Diluted	91,120,370

Macmillan Pass Location & Infrastructure

Project accessible via "Canol Road"



▲ Macmillan Pass Project

Railhead



Deep Sea Port with access to Asia



Teck Smelter



2018 Resource Update and PEA

Tom and Jason only, historical drilling plus 2017 verification program

Resource Update					
	Mt	Zn %	Pb %	Ag g/t	ZnEq %
Indicated Total	11.2	6.59	2.48	21.33	9.61
Inferred Total	39.5	5.84	3.14	38.15	10.00
Zinc		Lead		Silver	
Ind.	0.74Mt (1.6Blbs)	0.28Mt (0.62Blbs)		7.7 MOz	
Inf.	2.23Mt (4.91Blbs)	1.22Mt (2.67Blbs)		48.4 MOz	



Preliminary Economic Assessment*	
After-Tax IRR	24%
After-Tax NPV8	C\$448M
Initial CAPEX	C\$404M
Mine Life	18 years
Life-of-Mine Tonnage	32.7 Mt

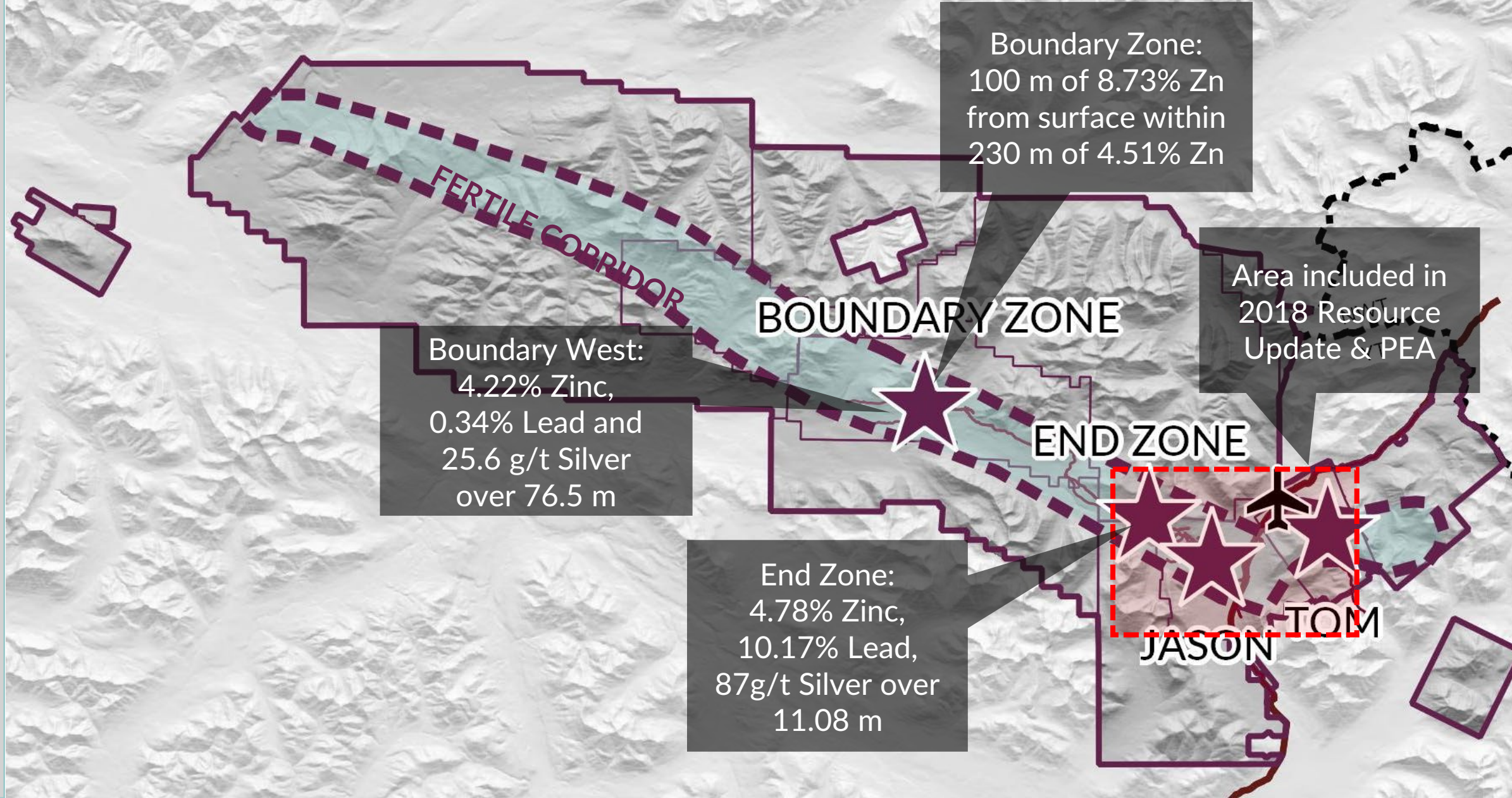
* Using US\$1.21/lb Zn, \$0.98/lb Pb, \$16.80/oz Ag

However... Both Resource and PEA are now stale, and do not include:

- Additional drilling at **Tom & Jason** will both **expand resource** and **improve grades** in some zones
- **Boundary Zone** has no resource yet, and massive size potential
- **Additional engineering** to improve pits, metallurgy and optimize mine plan
- **Government \$71M funding** commitment to access roads, included as project CAPEX in 2018 PEA, now offset

Updated **Resource Statement** and new **Economic Studies** will reflect these improvements, and add to an already **World-Class Resource** and **Robust Mine Plan**

Macmillan Pass – 940 sq km



Boundary Zone:
100 m of 8.73% Zn
from surface within
230 m of 4.51% Zn

Area included in
2018 Resource
Update & PEA

BOUNDARY ZONE

Boundary West:
4.22% Zinc,
0.34% Lead and
25.6 g/t Silver
over 76.5 m

END ZONE

End Zone:
4.78% Zinc,
10.17% Lead,
87g/t Silver over
11.08 m

JASON

TOM

Boundary Zone – Grade & Scale

Why is Boundary so important?

2019 Drilling:

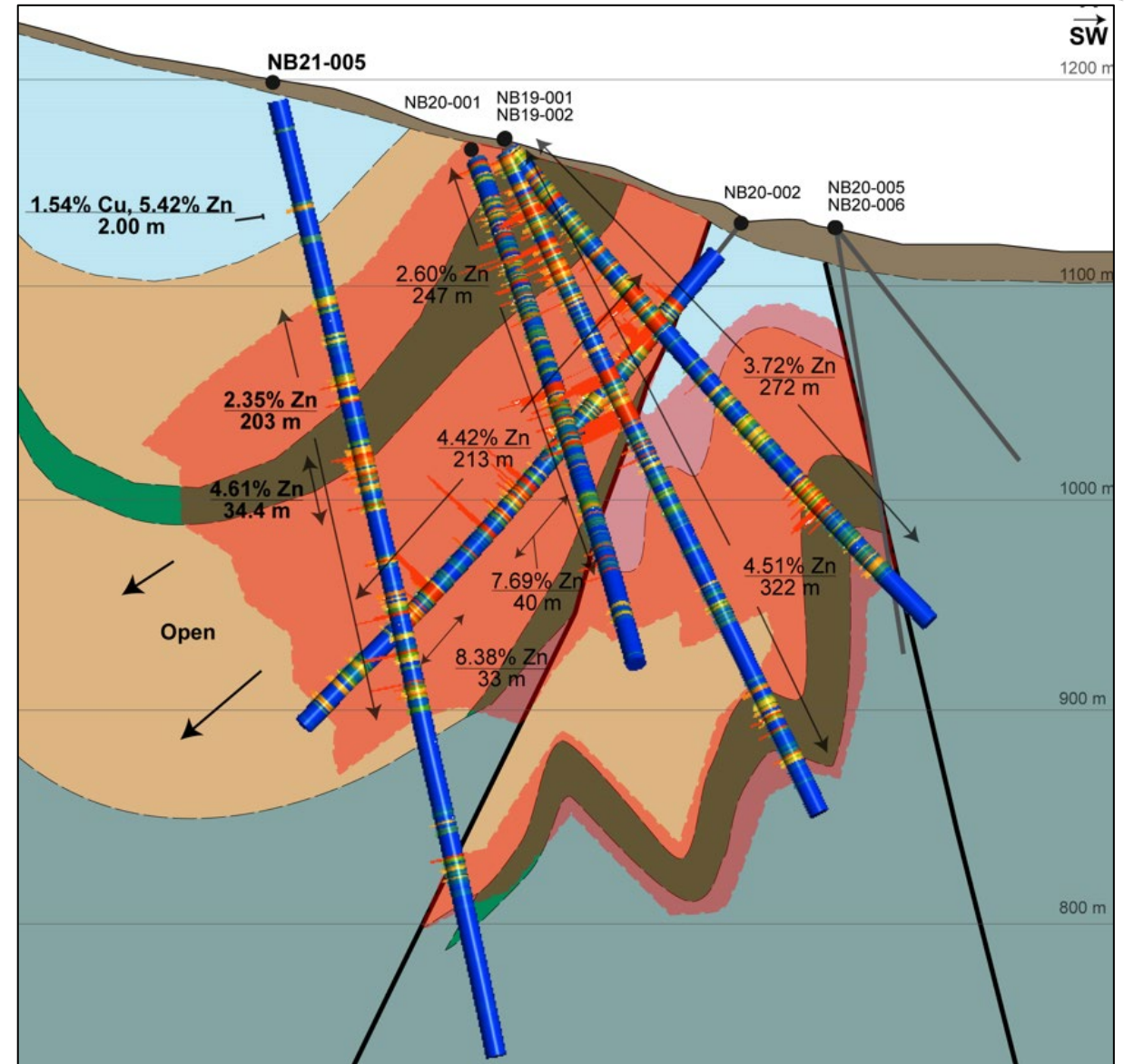
- NB19-002:
 - 230 m of 4.51% Zn from surface
 - Including 100 m of 8.73% Zn
 - With 6.4m of 43.5% Zn
- NB19-001:
 - 230 m of 3.72% Zn from surface
 - Including 97 m of 6.08% Zn

2020 Drilling:

- Demonstrated massive scale
- Confirmed a vein stockwork
- NB20-002:
 - 213m of 4.42% Zn
 - Including 25.58% Zn over 5.81 m

2021 Drilling:

- First discovery of copper mineralization at Boundary
- Significantly extended zinc zone down-dip
- NB21-005:
 - 1.54% Cu, 5.42% Zn over 2 m

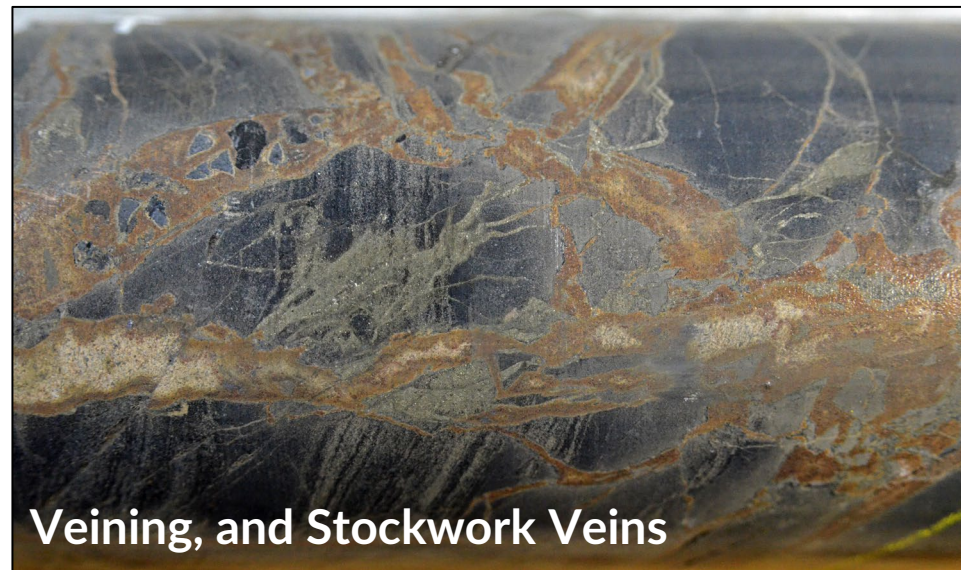


Boundary Zone – Mineralization Styles

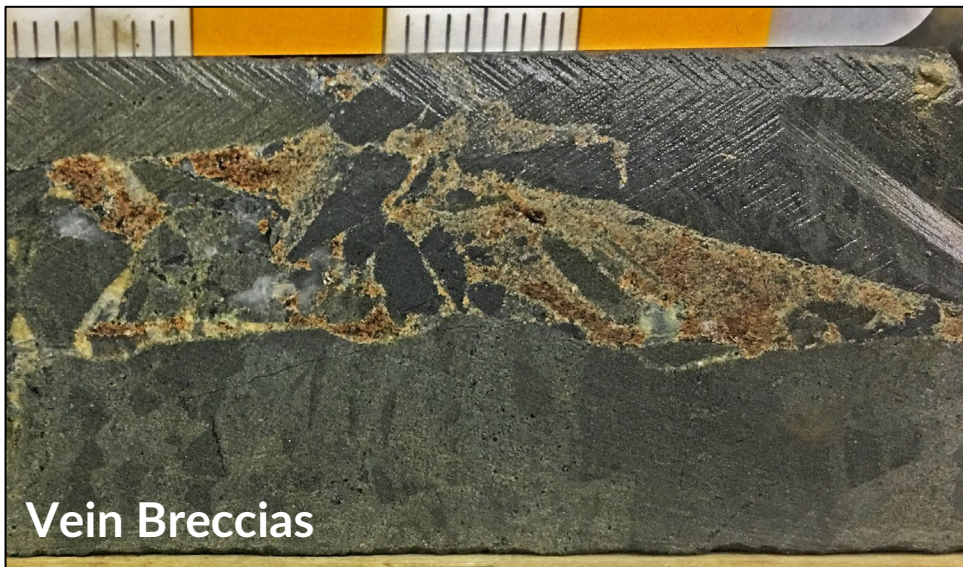
Mineralization is very different in character to Tom & Jason



Matrix Infill & Clast Replacement



Veining, and Stockwork Veins



Vein Breccias



Thick Banded Veins

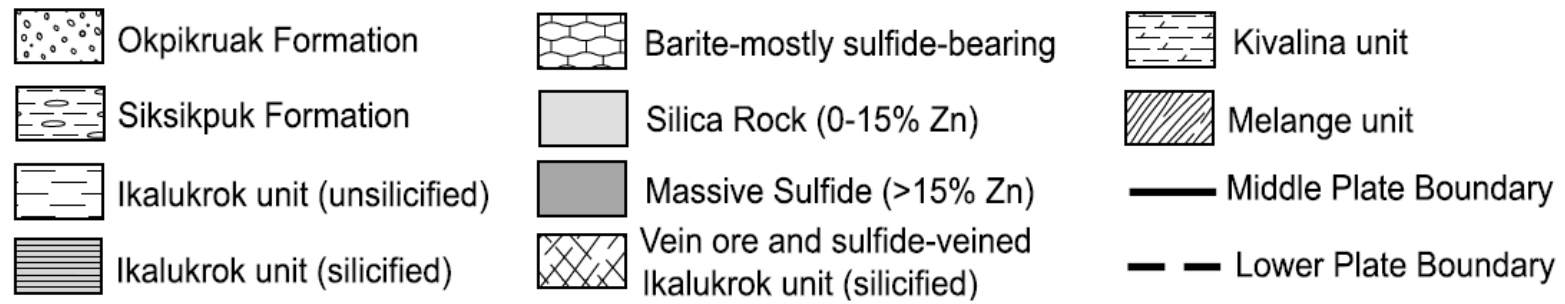
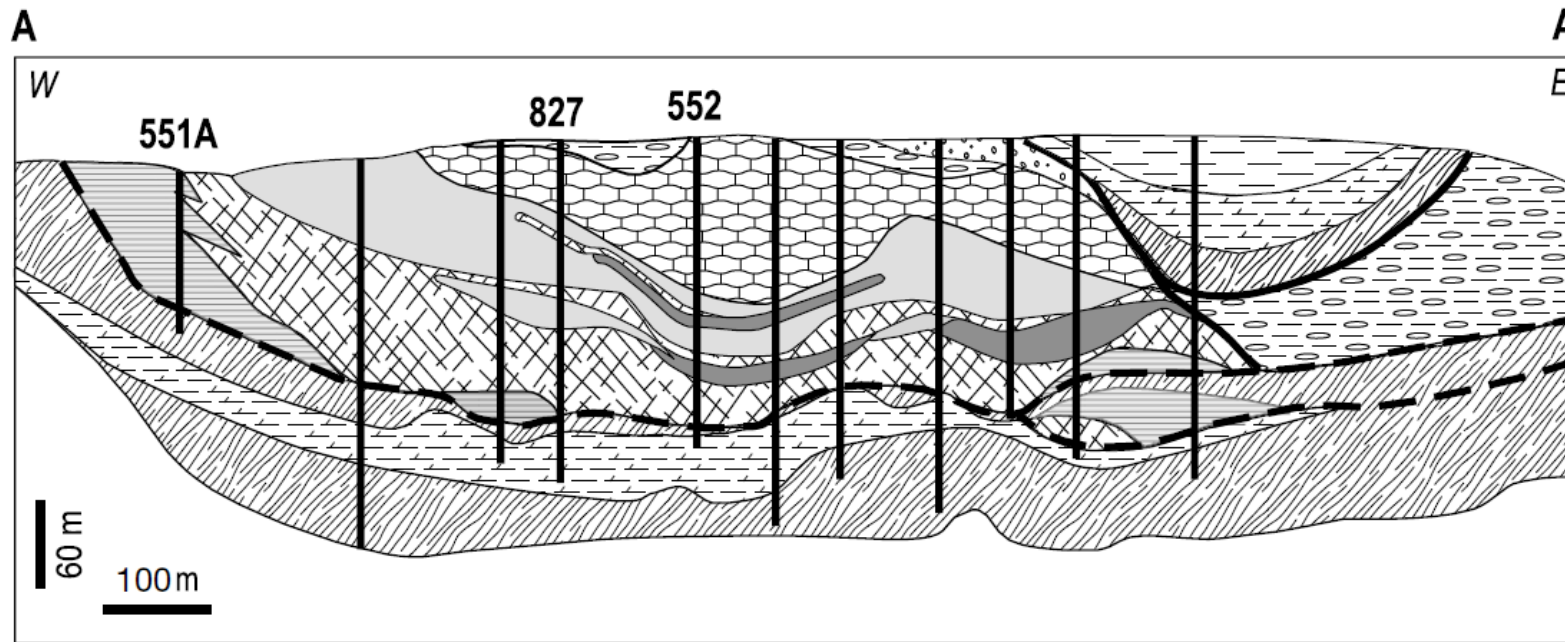
Geological Analogue for Boundary – Red Dog

- Red Dog is an analogue and a model for exploration going forward
- Original exploration at Boundary did not reveal barite hosted massive sulphides

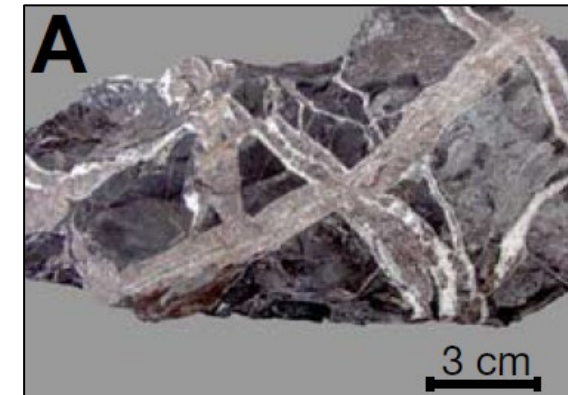
Red Dog vein ore



(From Kelley et al, 2004)

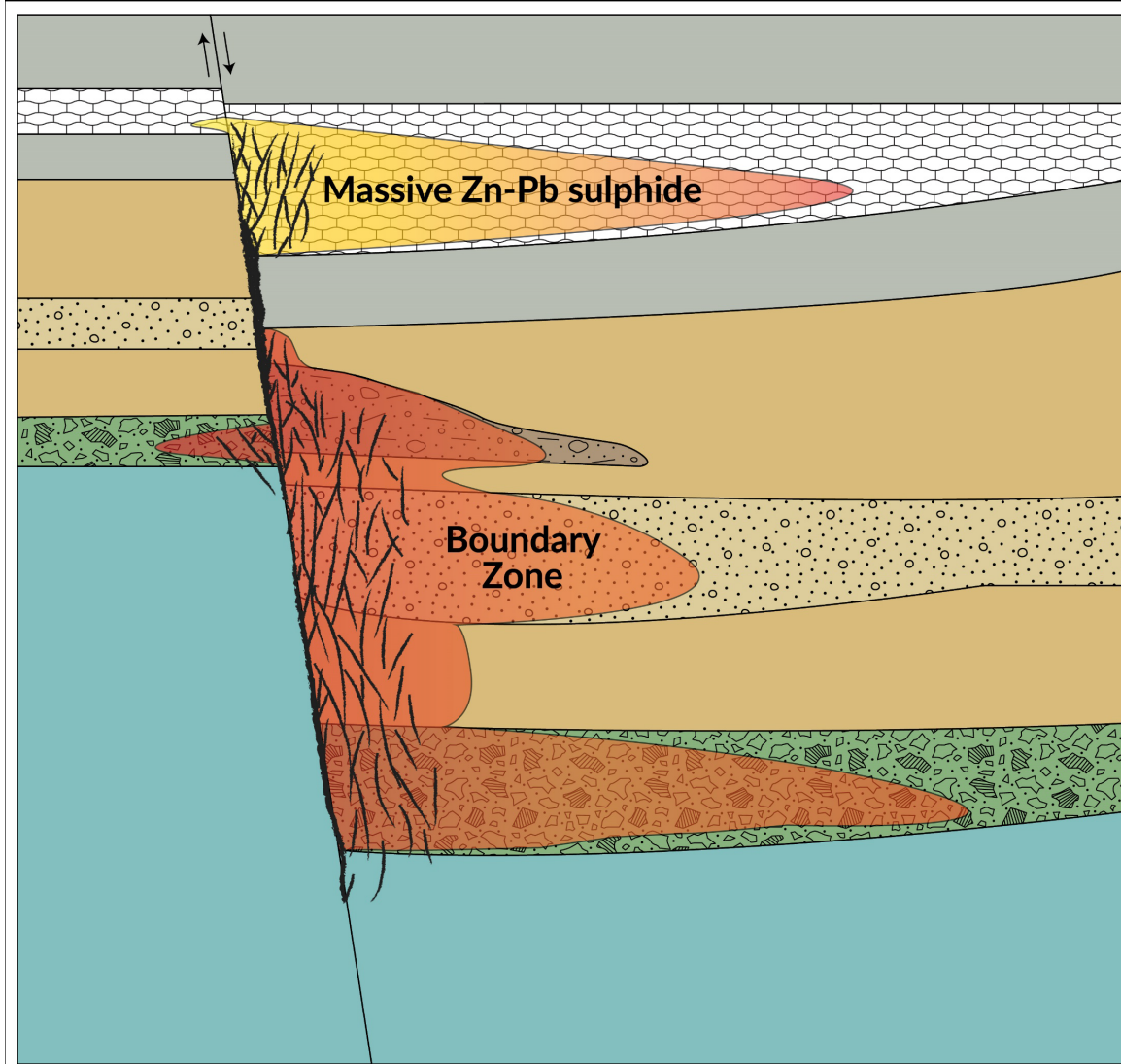


(From Slack et al, 2004)

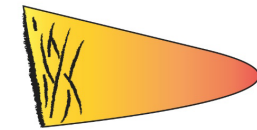


(From Leach et al, 2004)

Pre-2020 Conceptual Geology of Boundary

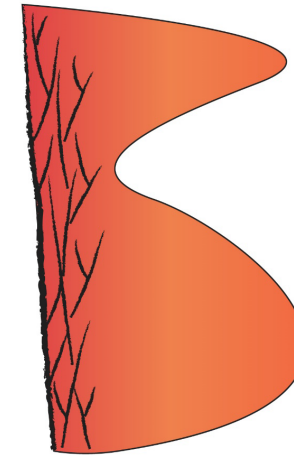


Conceptual Target



Massive Zn-Pb sulphide:
Massive sphalerite-galena replacing barite layers.

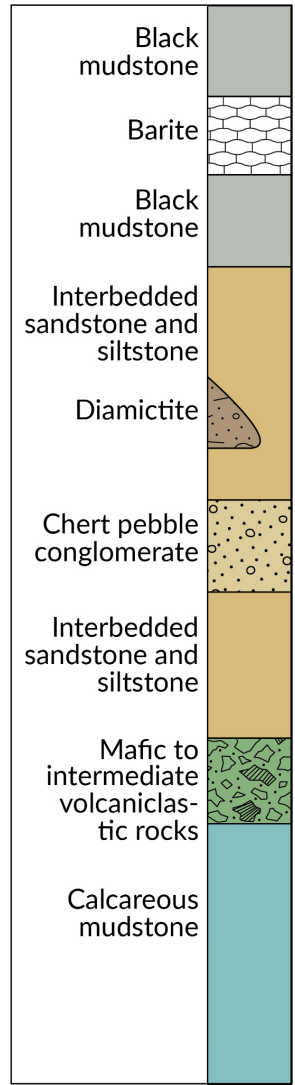
Geology drilled and exposed at Boundary Zone (pre-2020)



Feeder-type mineralization:
Sphalerite and galena in massive veins, stockworks and replacing coarse clastic rocks or volcanoclastic rocks.

Stratabound replacement of matrix and clasts in coarse clastic rocks

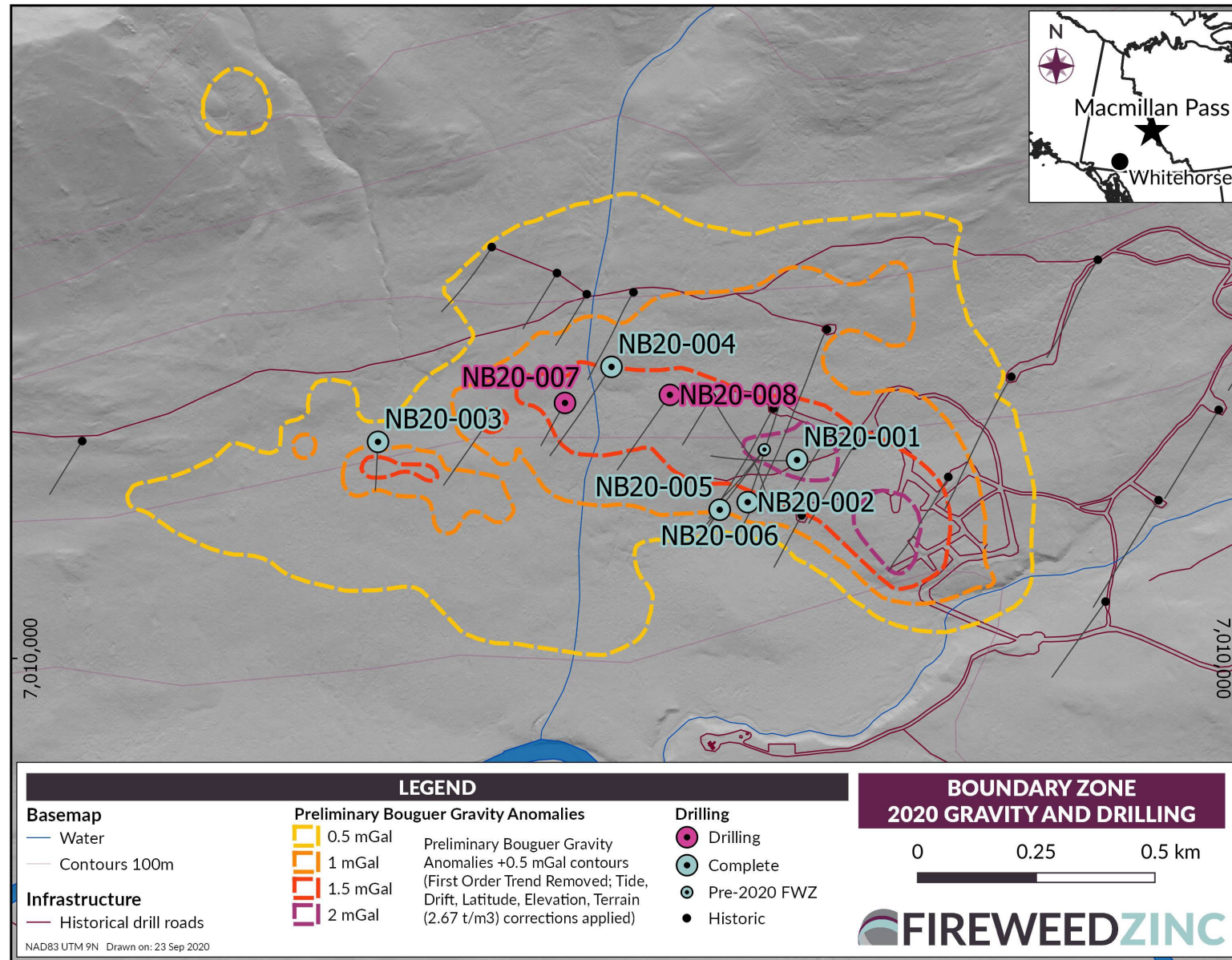
High-grade sphalerite veins and vein-breccias



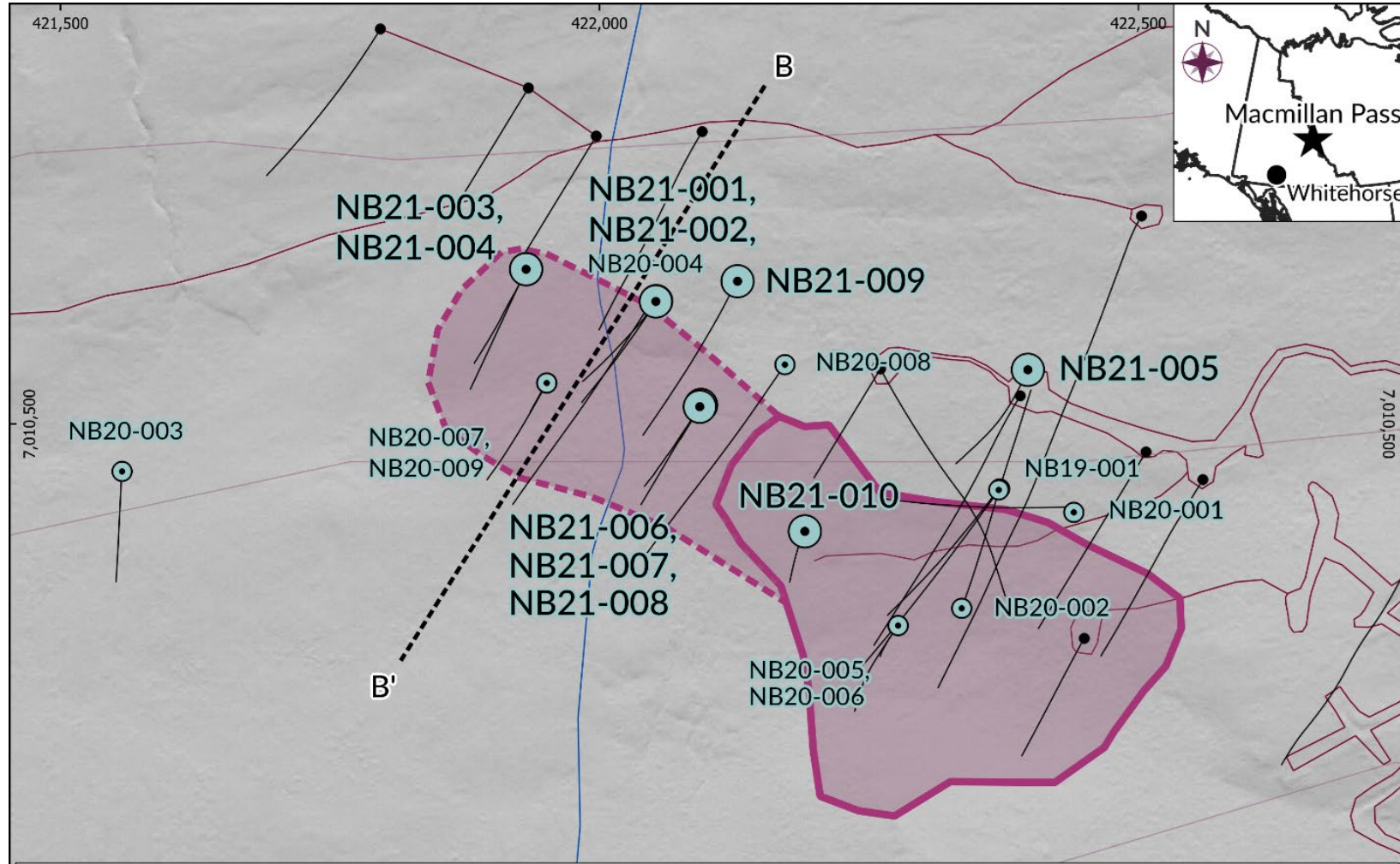
Boundary Zone Growing

Two test gravity lines were run over Boundary Zone in 2019, showing a clear response. An additional 50 line-km of gravity completed in August 2020 shows intriguing results:

- Gravity high over Boundary extends 200m east and 800m west from areas of drilling
- Drilling at western end of anomaly has successfully demonstrated presence of mineralization (assays pending)



Boundary Zone - 2021 Drilling



LEGEND		
Basemap	Deposits	Drill holes
— Water	Projected mineralization	FWZ 2021
— Contours 100m	Approximate Boundary West 2021 target	FWZ pre-2021
Infrastructure		Historic
— Historical drill roads		

BOUNDARY ZONE 2021 DRILLING

0 100 200 m

FIREWEEDZINC

NAD83 UTM 9N Drawn on: 15 Sep. 2021

West Boundary: 2020 - 2021 Results

Results from West Boundary drilling have arrived and the zone shows promise.

NB20-009:

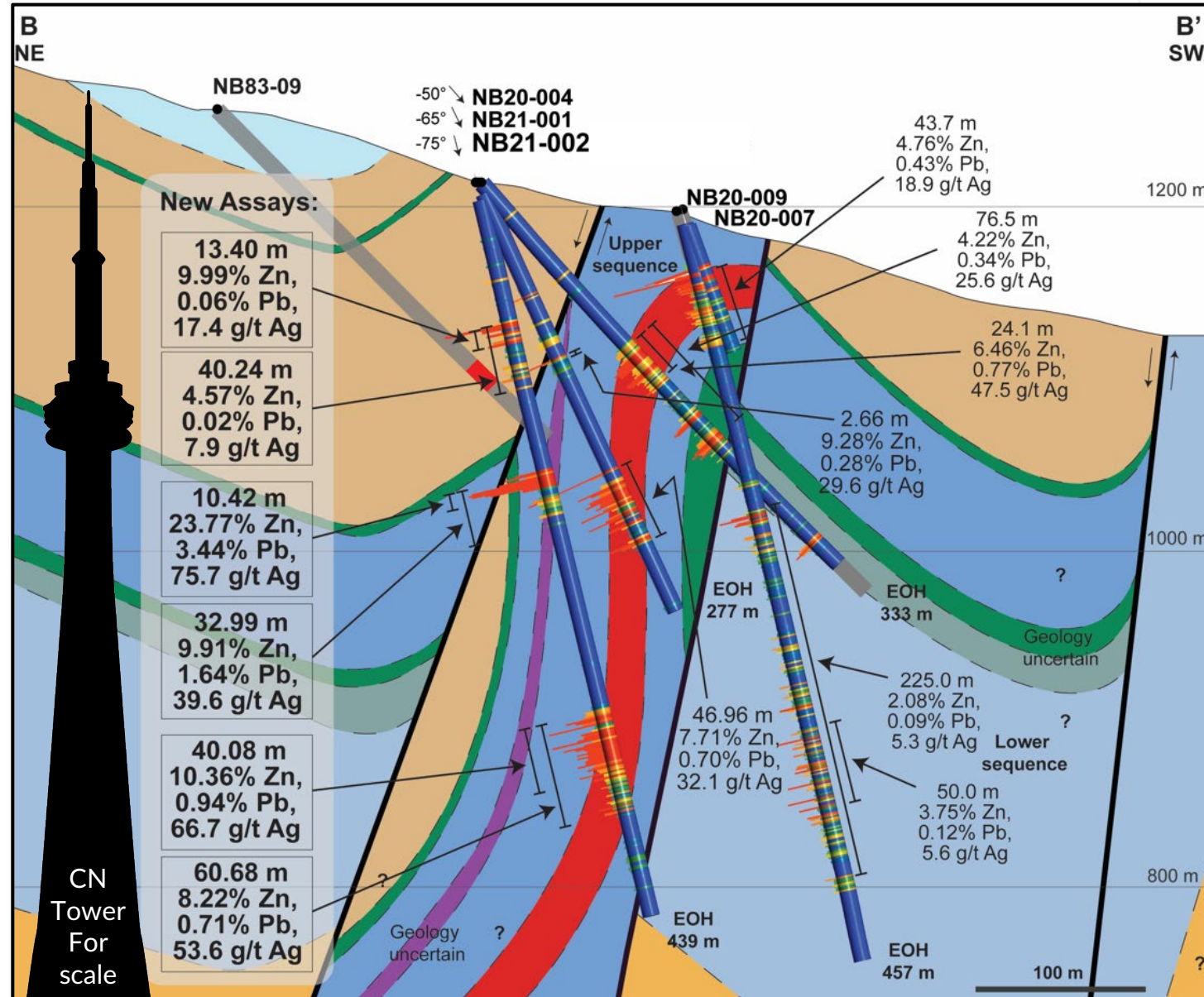
- Upper Sequence:
 - 4.76% Zn, 0.43% Pb 18.9g/t Ag over 43.7m
- Lower Sequence:
 - 2.08% Zn over 225m
 - Inc 20m of 3.7% and 50m of 3.75%

NB21-002

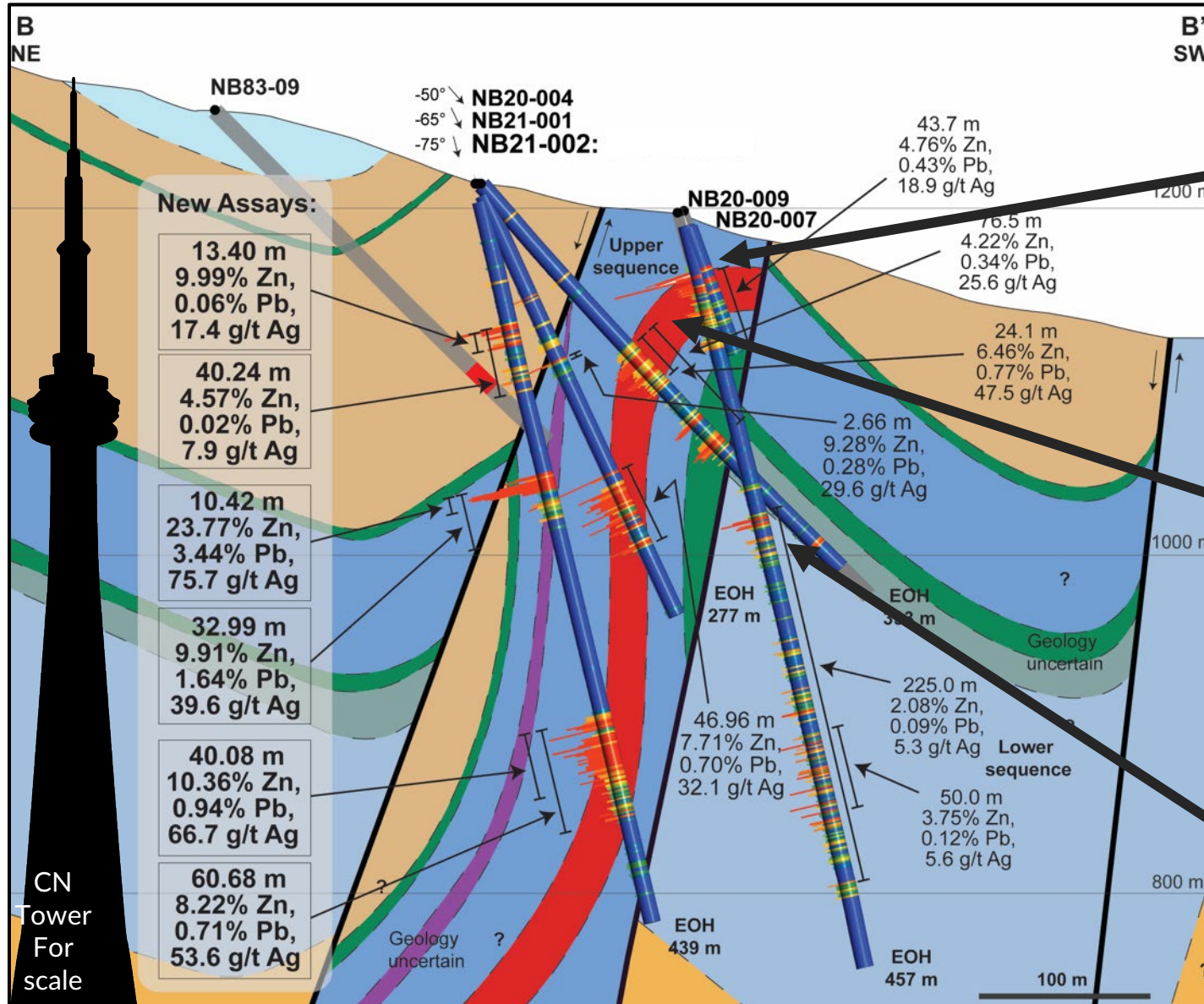
- 9.91% zinc over 32.99 m
 - 23.77% zinc over 10.42 m

NB21-005:

- 1.54% Cu, 5.42% Zn over 2 m



Boundary West: New Mineralization Styles



Tom/Jason Style

Stratiform & Barite-Hosted

Red Dog Style

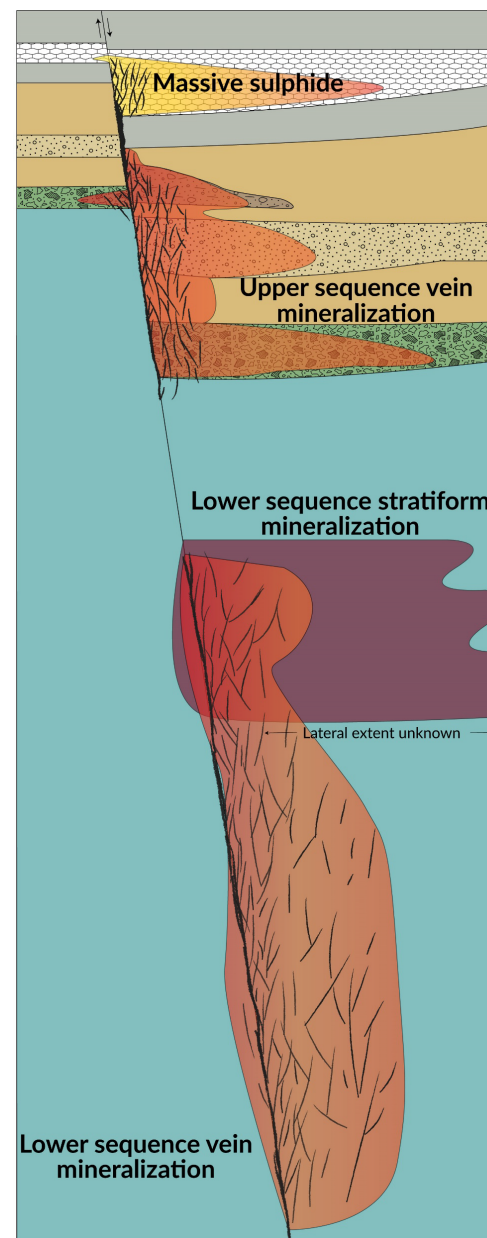
Massive Pyrite-Sphalerite

Howard's Pass Style

Late Ordovician – Early Silurian

New Conceptual Geology of Boundary

- **Massive sulphide cap and replacement** discovered at Boundary West; potentially more sphalerite rich towards feeder
- **Multiple pulses of mineralization** at Boundary Zone
- **Long-lived hydrothermal system** with overprinting episodes of mineralization; large time-integrated fluid flux
- **Fault system points to deep architecture** and crustal scale plumbing system
- High potential for forming **very large deposit**



Massive sulphide
Massive pyrite-sphalerite-galena replacing barite layers.

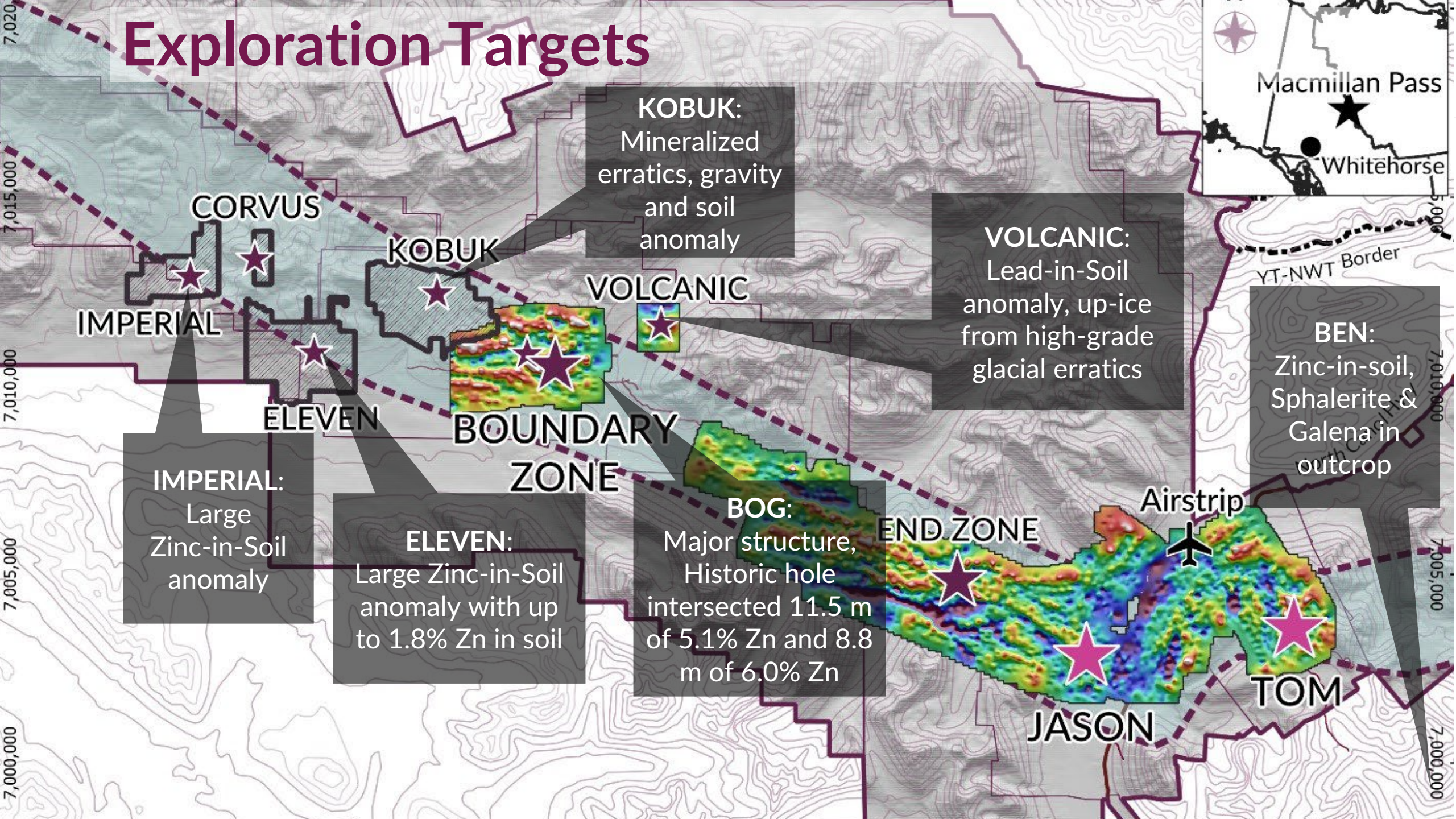
Upper sequence vein mineralization
Feeder-type mineralization: Sphalerite and galena in massive veins, stockworks and replacing coarse clastic rocks or volcaniclastic rocks.
Stratabound replacement of matrix and clasts in coarse clastic rocks
High-grade sphalerite veins and vein-breccias

Lower sequence stratiform mineralization
Stratiform disseminated sphalerite mineralization: Howard's Pass style hosted by Early Silurian to Upper Ordovician rocks

Lower sequence vein mineralization
Sphalerite-pyrite-galena veins overprinting the stratiform mineralization

Black mudstone
Barite
Black mudstone
Interbedded sandstone and siltstone
Diamictite
Chert pebble conglomerate
Interbedded sandstone and siltstone
Mafic to intermediate volcaniclastic rocks
Siliceous and calcareous mudstones

Exploration Targets



KOBUK:
Mineralized
erratics, gravity
and soil
anomaly

VOLCANIC:
Lead-in-Soil
anomaly, up-ice
from high-grade
glacial erratics

BEN:
Zinc-in-soil,
Sphalerite &
Galena in
outcrop

CORVUS

KOBUK

VOLCANIC

IMPERIAL

ELEVEN

BOUNDARY
ZONE

IMPERIAL:
Large
Zinc-in-Soil
anomaly

ELEVEN:
Large Zinc-in-Soil
anomaly with up
to 1.8% Zn in soil

BOG:
Major structure,
Historic hole
intersected 11.5 m
of 5.1% Zn and 8.8
m of 6.0% Zn

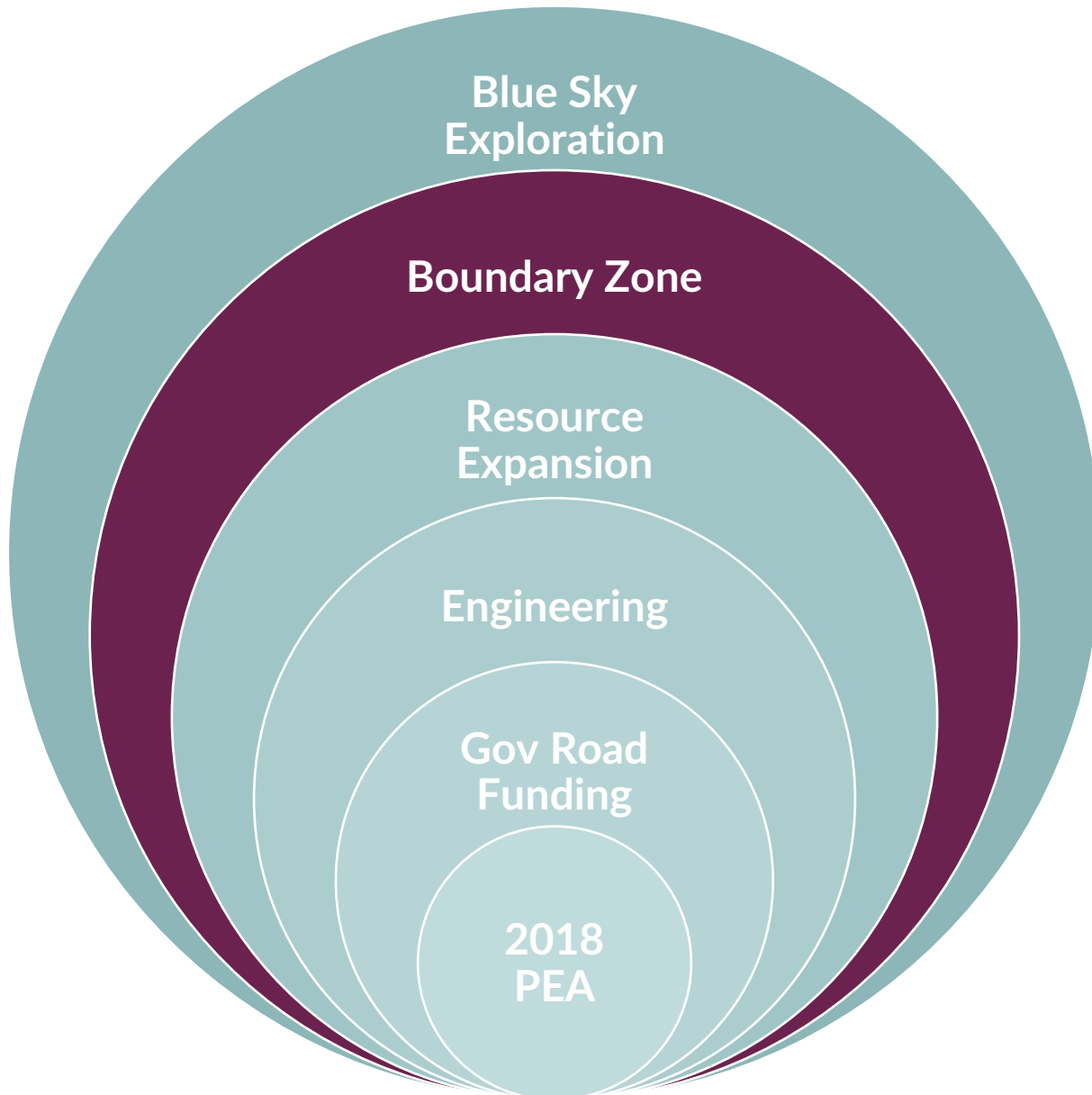
END ZONE

Airstrip

JASON

TOM

Blueprint for Value Creation



2018 PEA Establishes **Base Case**, then add:

- **Government C\$71M funding of road** reduces up front **CAPEX**
= **More NPV**
- **Engineering Optimizations** increase pit size at **Tom** using new **Geotech/Geochem** data
= **More NPV**
- **Resource Expansion** at both **Tom & Jason** improve mine life & throughput
= **More NPV**
- **Boundary Zone** maiden resource, and integration, creates larger mine plan
= **More NPV**
- **Exploration Potential** elsewhere blue sky, could lead to expanded mine life
= **More NPV**

Near-Term Road Map

	Exploration	Engineering	ESG
<div style="text-align: center;"> <div style="background-color: #4b1d3d; color: white; padding: 10px; margin-bottom: 5px;">2022</div> <div style="background-color: #803366; color: white; padding: 10px; margin-bottom: 5px;">2023</div> </div>	<p>Drilling for new resource Expand Boundary Zone West (BZW), Boundary, Tom & Jason</p> <p>New Targets Geophysics (Muon), geochem, etc</p> <p>New Global Resource Tom + Jason + Boundary + BZW</p>	<p>Boundary Zone Metallurgical Test Results</p> <p>Engage Study Teams</p> <p>Trade-Off Studies</p> <p>Updated PEA based on new resource and new learnings</p>	<p>Expand baseline sampling programs</p> <p>Continuing Engagement and Consultation with First Nations and Regulators</p> <p>Continue creating opportunities for local employment and contracts, and service agreements</p>
<p>Targeting:</p>	<ul style="list-style-type: none"> • Top 15 Zn+Pb+Ag Project • Largest held by a junior, by a good margin 	<ul style="list-style-type: none"> • > Billion Dollar NPV • Top 10 Production Profile • 1st or 2nd Quartile Costs 	<ul style="list-style-type: none"> • De-risked project • Accelerated permitting timeline • Roadmap to production

True "Tier 1" Project

Contact



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Vancouver, British Columbia,
V6C 2V6

APPENDIX: Macmillan Pass Project Timeline

Historical Era (1950s to 1990s)

Discovery & Fragmented Ownership



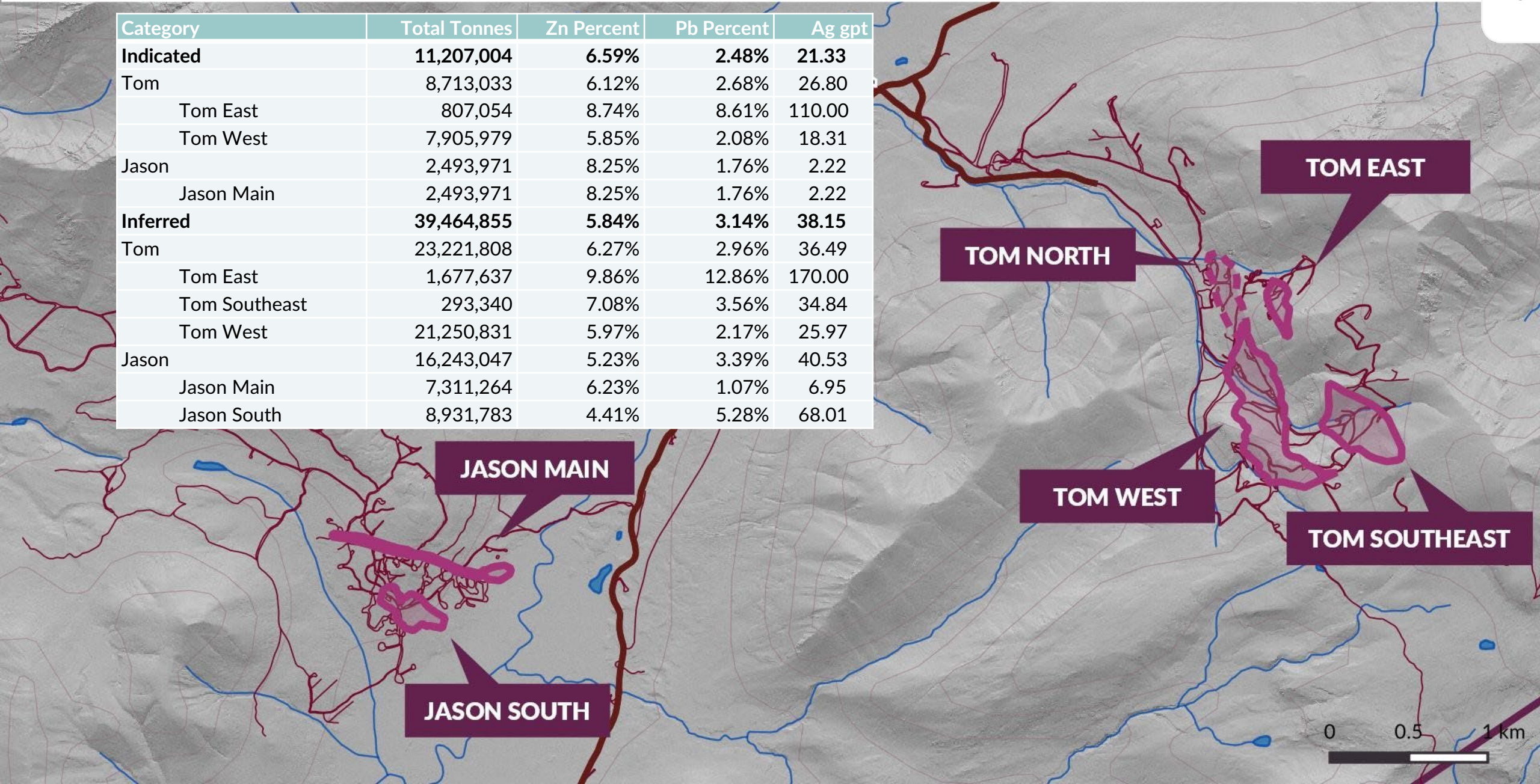
Modern Era (2000s to Now)

Consolidation & Advancement



APPENDIX: 2018 Resource

Category	Total Tonnes	Zn Percent	Pb Percent	Ag gpt
Indicated	11,207,004	6.59%	2.48%	21.33
Tom	8,713,033	6.12%	2.68%	26.80
Tom East	807,054	8.74%	8.61%	110.00
Tom West	7,905,979	5.85%	2.08%	18.31
Jason	2,493,971	8.25%	1.76%	2.22
Jason Main	2,493,971	8.25%	1.76%	2.22
Inferred	39,464,855	5.84%	3.14%	38.15
Tom	23,221,808	6.27%	2.96%	36.49
Tom East	1,677,637	9.86%	12.86%	170.00
Tom Southeast	293,340	7.08%	3.56%	34.84
Tom West	21,250,831	5.97%	2.17%	25.97
Jason	16,243,047	5.23%	3.39%	40.53
Jason Main	7,311,264	6.23%	1.07%	6.95
Jason South	8,931,783	4.41%	5.28%	68.01

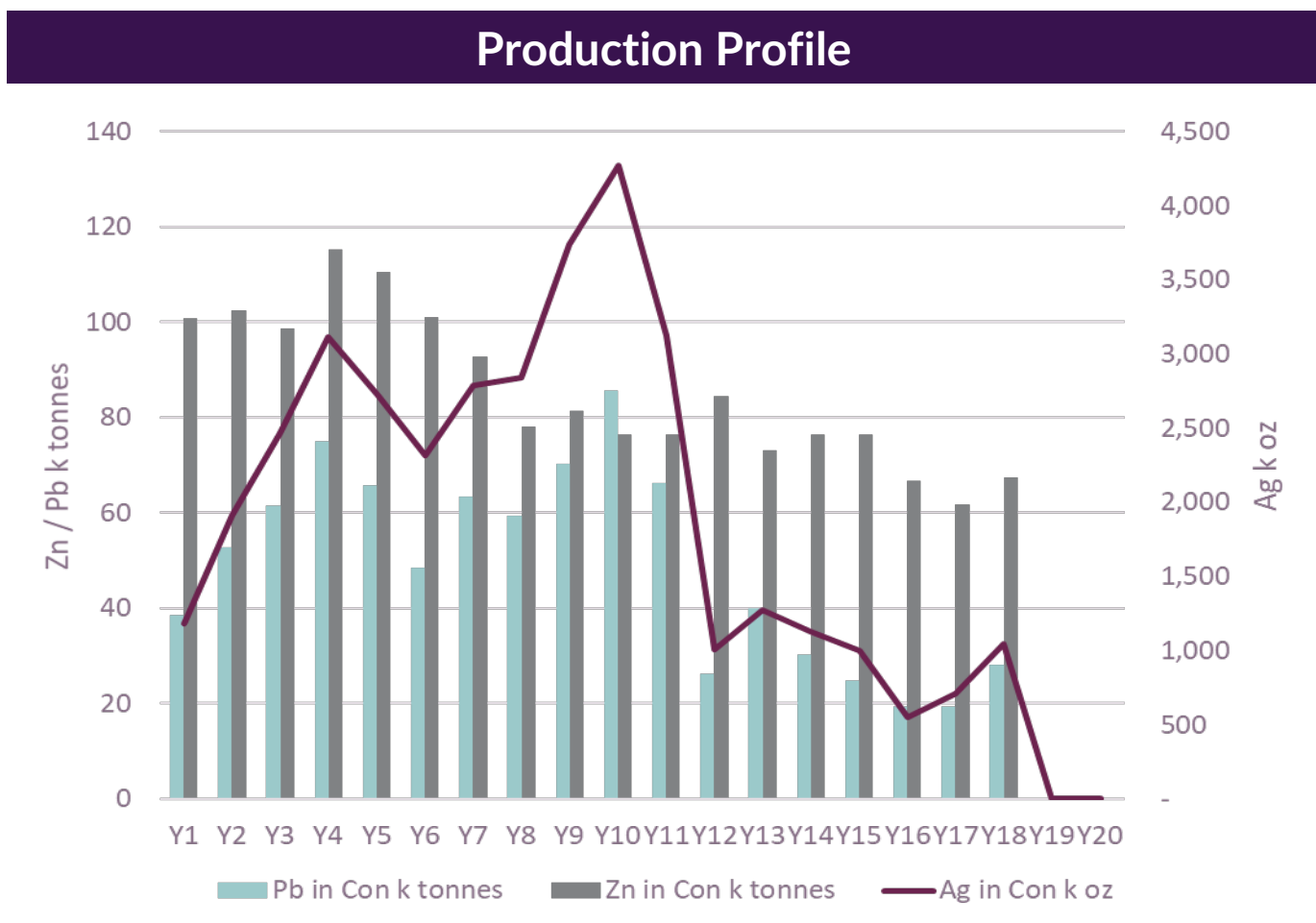


APPENDIX: May 2018 PEA Production

- With more appropriate engineering assumptions pit life could be extended to 5+ years pushing underground development to after payback
- Potential to mine other zones, such as Boundary Zone, in parallel could significantly increase production profile

Open Pit	
Mineralized Tonnes	4,229kt
Waste Tonnes	20,934kt
Strip Ratio	5.0
Production Life	3 years

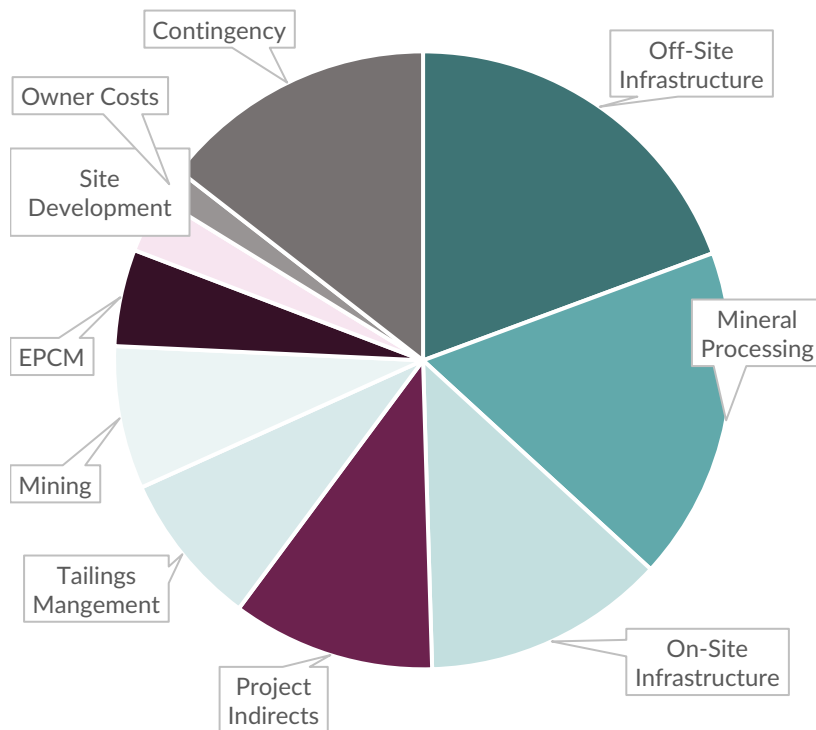
Underground	
Mineralized Tonnes	28,427kt
Lateral Development	100km
Vertical Development	5.8km
Production Life	16 years



APPENDIX: May 2018 PEA CAPEX

- Initial Capex can easily be financed, particularly given likely price of a silver stream if that route is chosen
- Elimination of “off site infrastructure” cost is possible

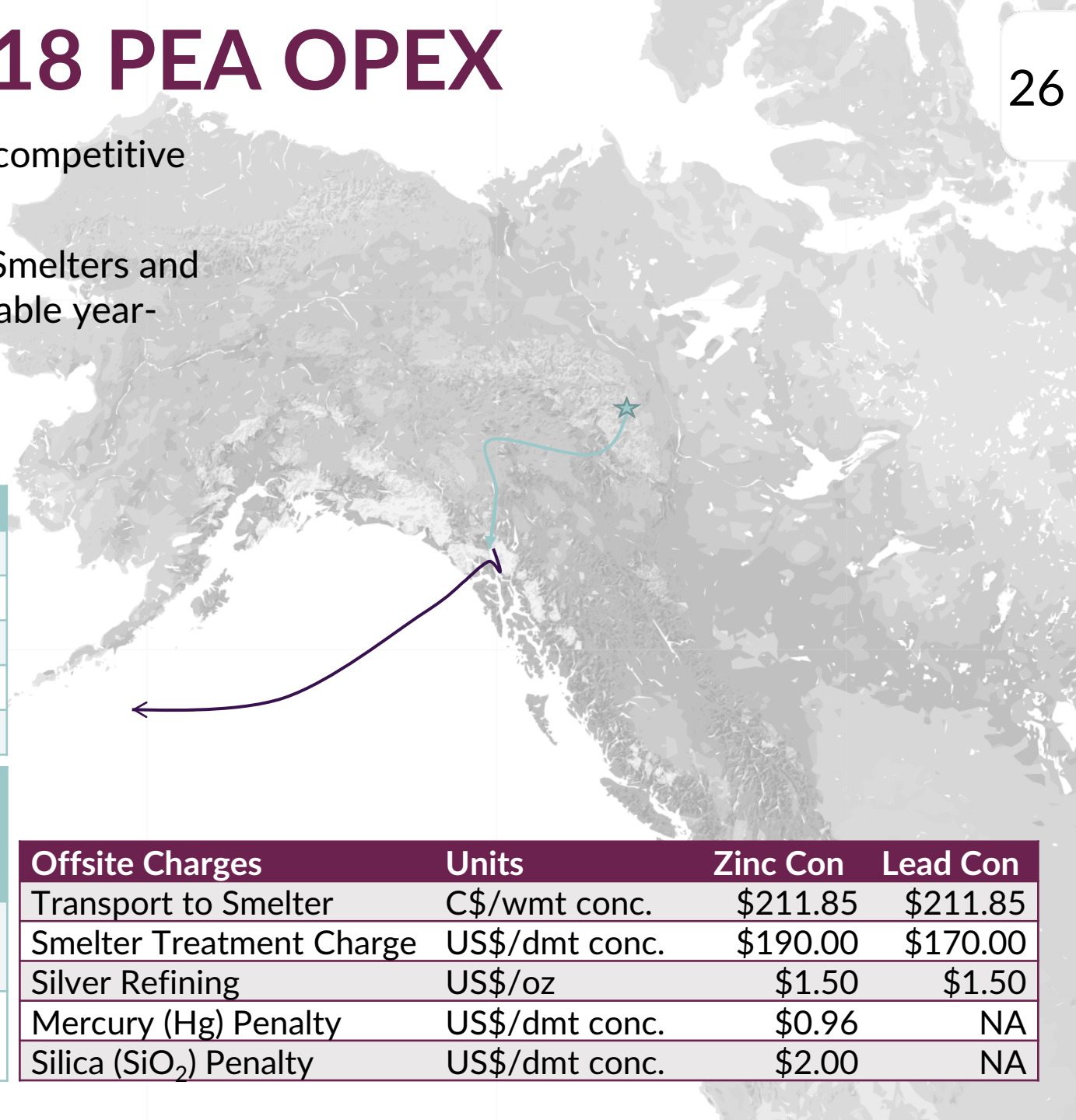
Pre-Production CAPEX Distribution



	Initial (C\$000)	Sustaining (C\$000)	Total (C\$000)
Mining	30,300	378,400	408,700
Site Development	12,000	1,100	13,100
Mineral Processing	70,600	5,500	76,100
Tailings Management	32,700	113,900	146,600
On-Site Infrastructure	51,400	14,800	66,200
Off-Site Infrastructure	78,300	6,700	85,000
Closure	-	56,700	56,700
Direct Costs	275,300	571,500	846,800
Project Indirects	43,000	-	43,000
EPCM	20,500	-	20,500
Indirect Costs	63,500	-	63,500
Owner's Costs	7,000	-	7,000
Contingency	58,600	72,300	130,900
Total Project	124,400	649,800	1,074,200

APPENDIX: May 2018 PEA OPEX

- On-site and Off-site costs combine for a competitive all-in cost structure on production
- Despite remote location access to Asian Smelters and Teck’s smelter in British Columbia is available year-round without being cost prohibitive



Operating Costs		
OP Mining	C\$/t mined	\$4.45
UG Mining	C\$/t mined	\$52.02
Processing	C\$/t	\$22.92
G&A	C\$/t	\$10.37
All-In OPEX	C\$/t	\$82.00

Costs per Payable lb Zn	Net of By-Product	Co-Product
Cash Cost (inc Offsite Costs)	US\$0.47	US\$0.76
Adjusted Cash (w Sustaining Capex)	US\$0.64	US\$0.86

Offsite Charges	Units	Zinc Con	Lead Con
Transport to Smelter	C\$/wmt conc.	\$211.85	\$211.85
Smelter Treatment Charge	US\$/dmt conc.	\$190.00	\$170.00
Silver Refining	US\$/oz	\$1.50	\$1.50
Mercury (Hg) Penalty	US\$/dmt conc.	\$0.96	NA
Silica (SiO ₂) Penalty	US\$/dmt conc.	\$2.00	NA

APPENDIX: May 2018 PEA Metallurgy

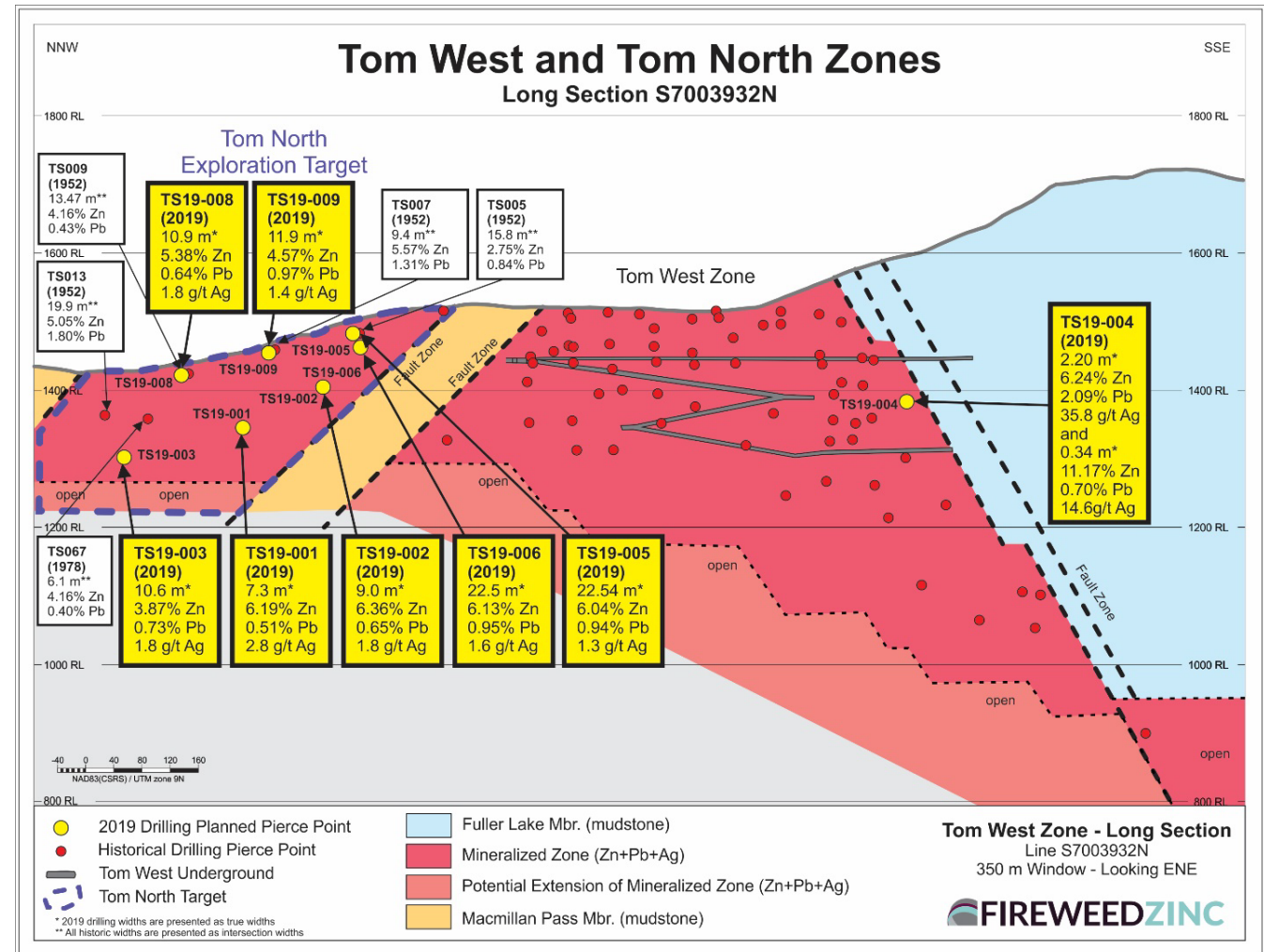
- Feed is very amenable to standard processing methods consistent with other SEDEX mines
- This metallurgy applies to Tom & Jason only, no met tests have been done on Boundary, which is a much coarser grained system.
- Standard comminution and flotation flow sheet including:
 - 2 crusher, 1 SAG mill, 1 ball mill
 - Stirred mills for regrind
 - Selective two and three-stage flotation to produce Zn and Pb concentrates
- Primary Grind to 50um, Secondary to:
 - 15um for Pb
 - 25um for Zn
- Low Energy Consumption for Grinding
 - SCSE of 7.82 and 9.2 kWh/t
 - BWi from 8.8 to 14.0 kWh/t
- Attractive Concentrate
 - High Grade
 - Low iron in concentrates: 1.5% Fe in zinc concentrate
 - Potential modest penalties on Hg (155pm) and SiO2 (4%) in Zn Con

Product	Assay Grade			Recovery %		
	Zn %	Pb %	Ag g/t	Zn	Pb	Ag
Flotation Feed	7.29	3.22	44	100	100	100
Zinc Concentrate	58.4	2.2	88	88.9	7.5	22
Lead Concentrate	8.9	61.5	688	4.8	75.4	59

Resource Expansion: Tom North

Tom North Provides Potential Open Pit Mine Life

- No drilling since 1978 (one hole); most holes in 1951 and 1952
 - Tom North was not included in 2018 resource update
- Intersections of up to 22.5 m at 6.1% Zn, 1.0% Pb in short holes
 - Shallow intersections suggest potential amenability to open-pit
- 2019 Drilling successfully hit on 7 holes
 - Inferred resource now possible
 - May add >1 year to open pit mine life



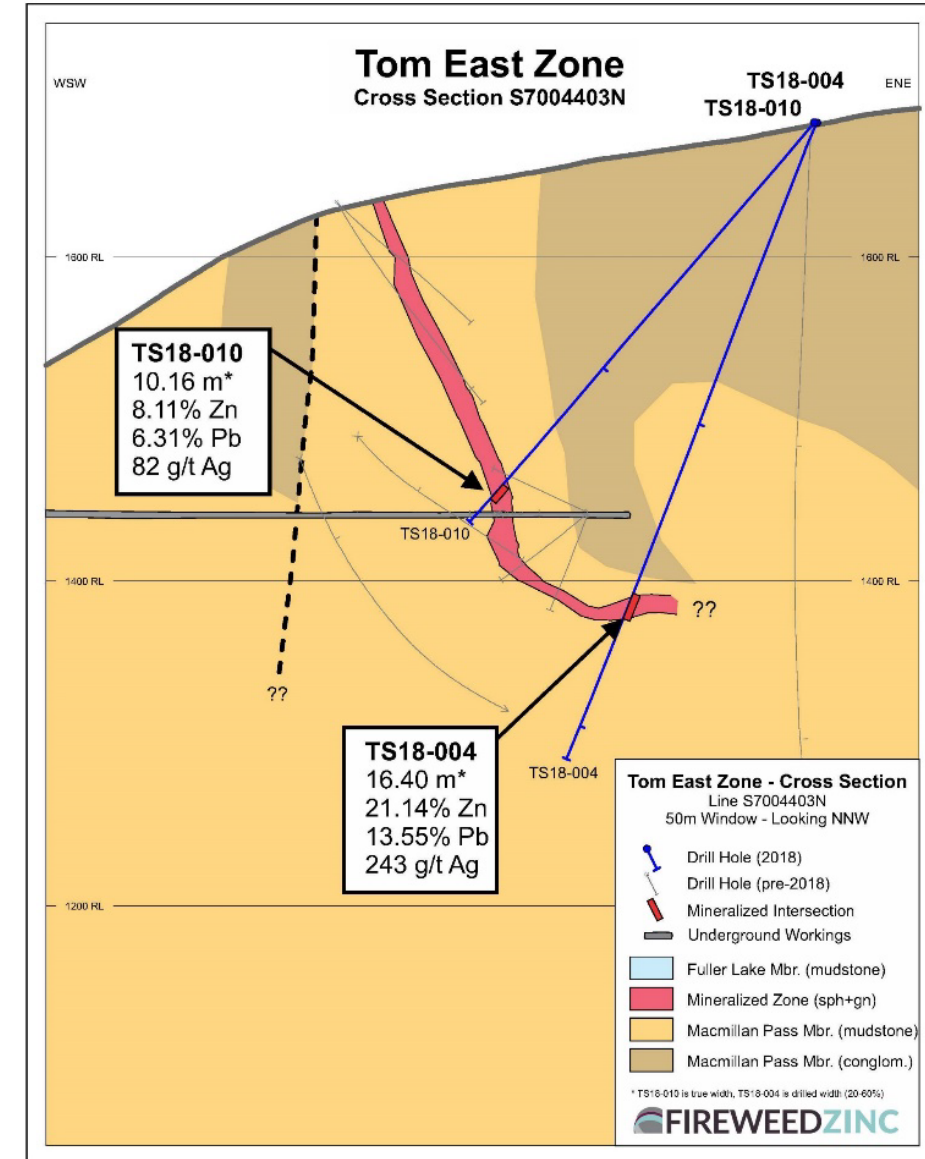
Resource Expansion: Tom East

Tom East Surprises with More High-Grade

2018 TOM EAST ZONE DRILL RESULTS

Hole No.	Interval (m)	Zinc (%)	Lead (%)	Silver (g/t)
TS18-004	16.41	21.14	13.55	242.8
Including	8.70	23.88	19.42	332.9
Including	3.00	35.66	18.49	312.7
Including	1.55	15.57	35.65	542.1

- Tom East Zone may be folded
 - Structural thickening or higher grades in hinge-zones of folds?
- Tom East remains open at depth
 - Previously was thought to terminate at depth
 - Is there further upside potential in this high-grade zone?



Resource Expansion: Jason Syncline

Low Hanging Fruit for Expanding Jason

- Syncline remains untested at depth
 - Connecting two sides of Jason may yield a significant amount of additional resource tonnage
 - Possible structural thickening at hinge and enrichment
- Lower Jason South Zone is now understood to be a fault offset of Jason South
 - No follow-up on high-grade intersections in offset zone, eg:
 - 13.8 m of 7.2% Zn, 5.3% Pb, 118 g/t Ag
 - 9.2 m of 1.6% Zn, 16.5% Pb, 92 g/t Ag
 - These intersections sit outside the 2018 Resource Statement
 - Additional drilling here should add high-grade tonnes

