

# Teck

## Zinc Market

September 19, 2017

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Both these slides and the accompanying oral presentations contain certain forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and forward-looking information within the meaning of the Securities Act (Ontario) and comparable legislation in other provinces (collectively referred to as forward-looking statements). Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Teck to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These forward-looking statements include statements relating to a projected zinc deficit, zinc inventory and pricing projections, smelter production and capacity projections, potential expansion of the zinc market and consistency and reliability of Red Dog concentrate.

These forward-looking statements involve numerous assumptions, risks and uncertainties and actual results may vary materially. The forward-looking statements in these slides and accompanying oral presentation are based on assumptions including, but not limited to, assumptions about zinc production, zinc use, smelter production and capacity, general business and economic conditions, the accuracy of our Red Dog reserve estimates and geological results and the future performance of Red Dog. The foregoing list of assumptions is not exhaustive.

Factors that may cause actual results to vary materially include, but are not limited to, changes in commodity and power prices, changes in market demand for zinc, acts of foreign governments, inaccurate geological and metallurgical assumptions, inaccurate zinc market assumptions, unanticipated operational difficulties, and changes or deterioration in general economic conditions.

We assume no obligation to update forward-looking statements except as required under securities laws. Further information concerning assumptions, risks and uncertainties associated with these forward-looking statements and our business can be found in our most recent Annual Information Form, as well as subsequent filings of our management's discussion and analysis of quarterly results, all filed under our profile on SEDAR ([www.sedar.com](http://www.sedar.com)) and on EDGAR ([www.sec.gov](http://www.sec.gov)).

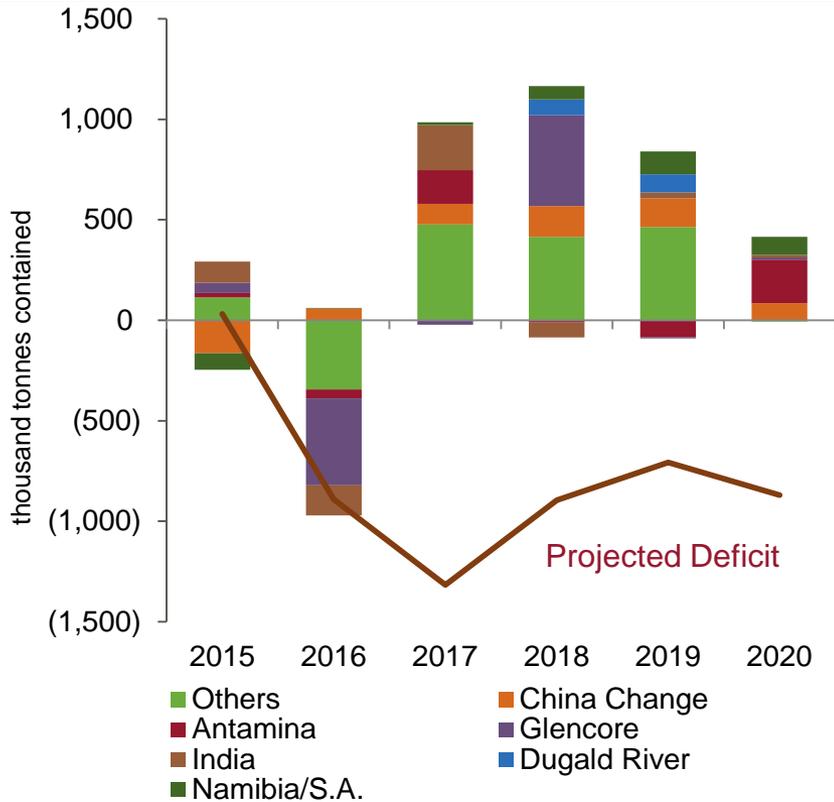


*Zinc in concentrate*



*Tailor-made zinc jumbos with galvanized sheet steel*

### Mine Production Growth Insufficient to Balance Market



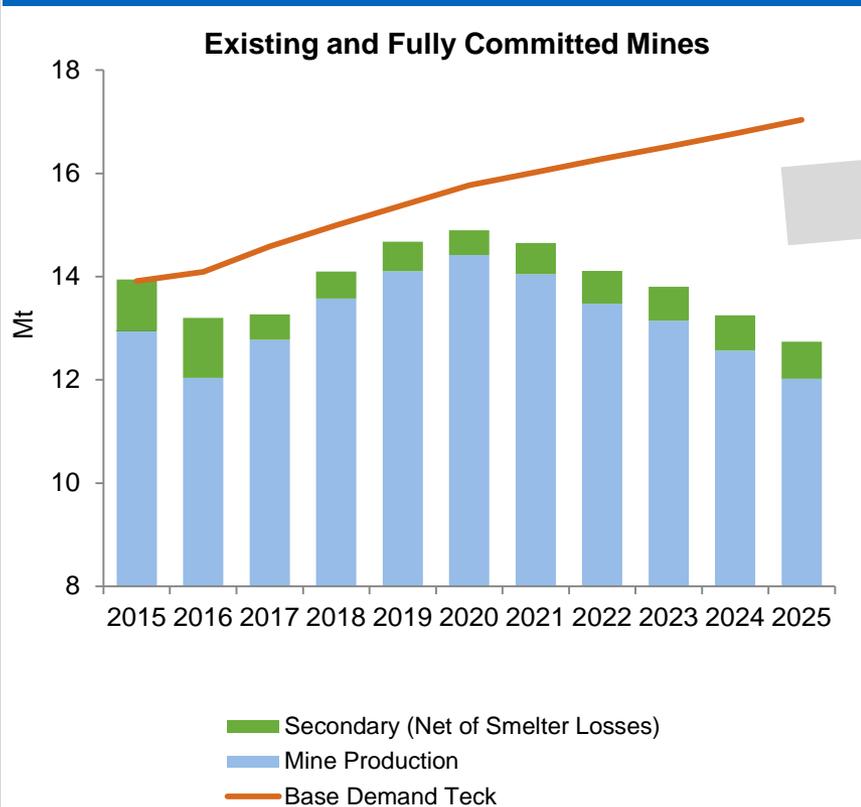
Source: Teck, CNIA, Wood Mac, NBS

### Imported Spot TCs at Historical Lows

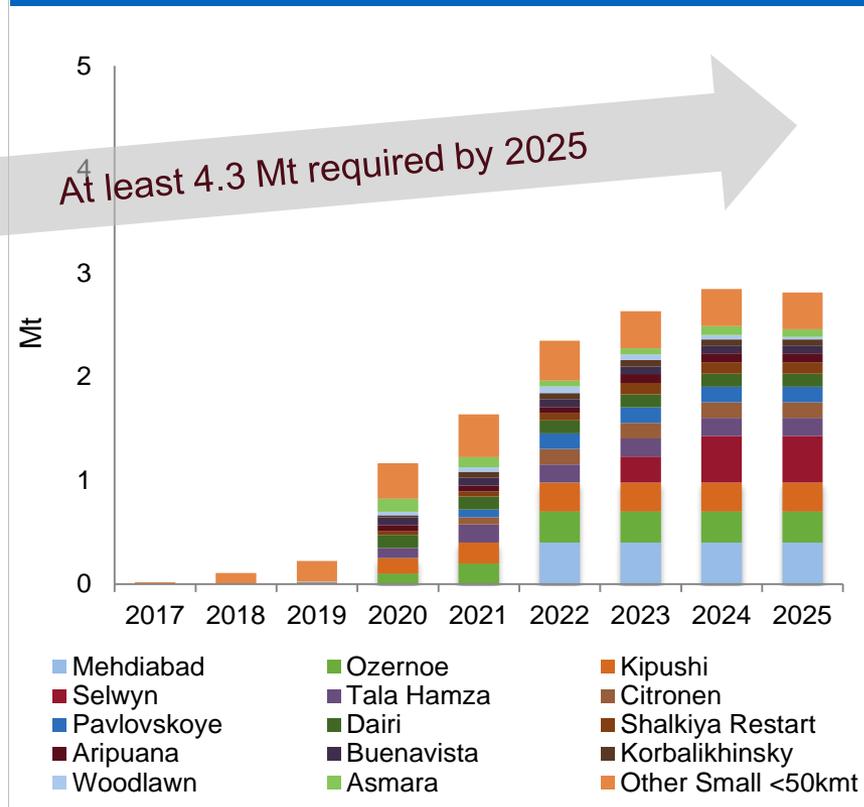


Source: Teck

## Zinc Mine Production Peaks in 2020



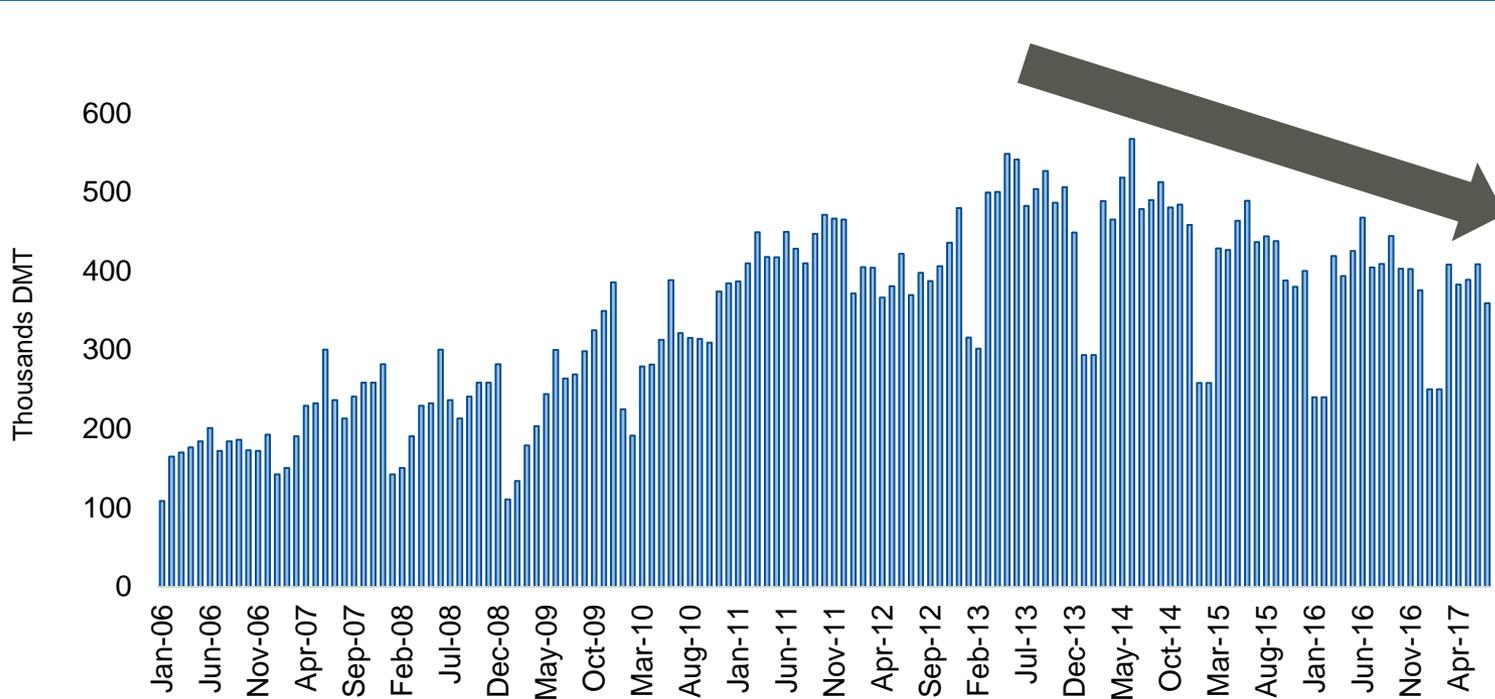
## Uncommitted Projects Insufficient



## Demand Scenarios

- Low Growth (2.3%): 4.3 Mt of uncommitted projects needed by 2025
- High Growth (3.0%): 5.2 Mt of uncommitted projects needed by 2025

## Monthly Chinese Mined Zinc Production

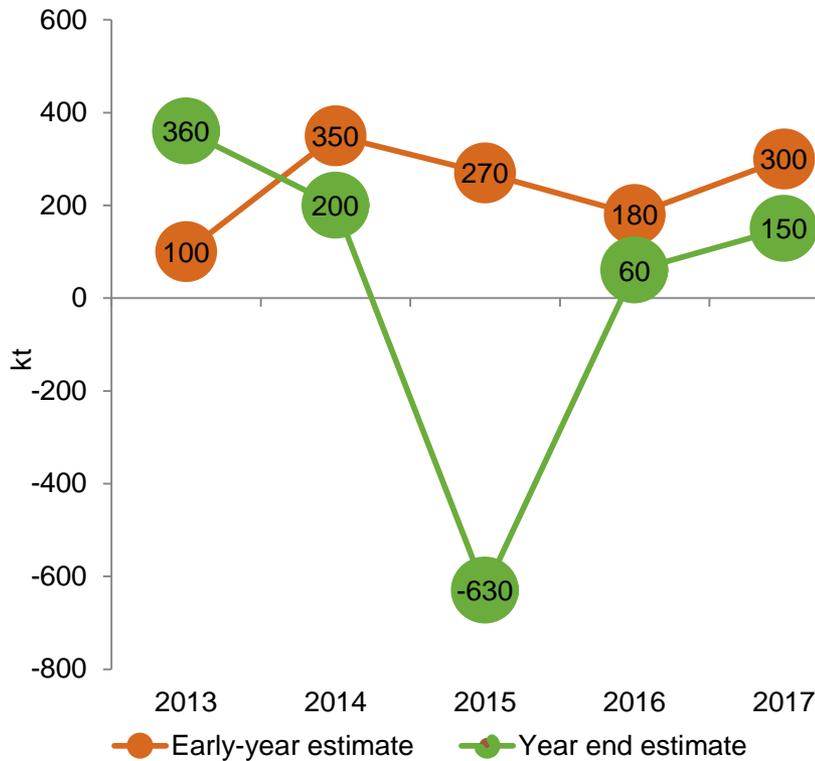


Source: CNIA

Plotted to July 2017

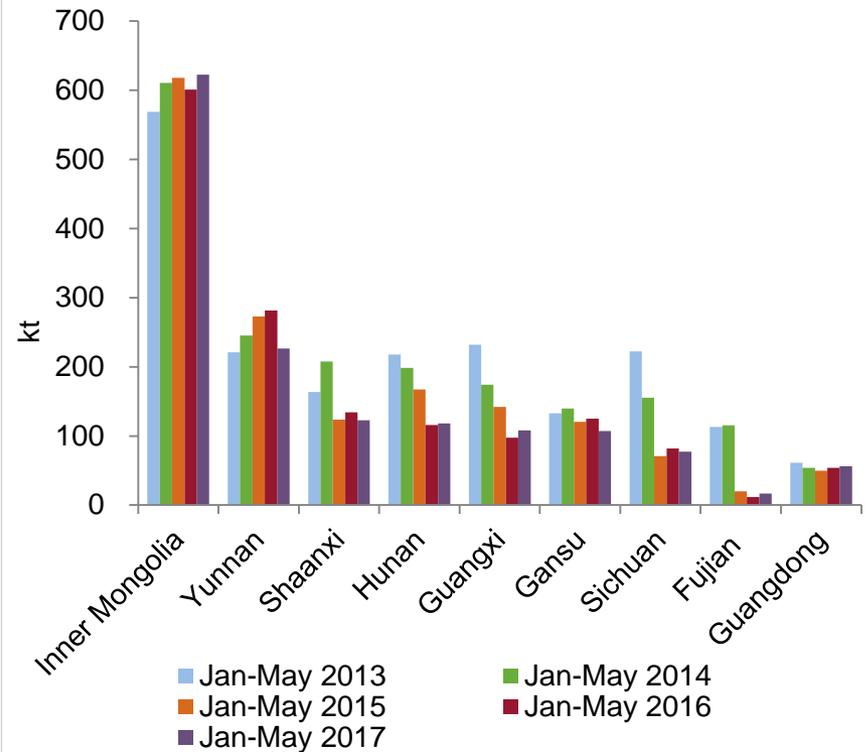
Down 11% m/m in July 2017 & down 6% y/y YTD

## Estimated Mine Growth Rarely Achieved

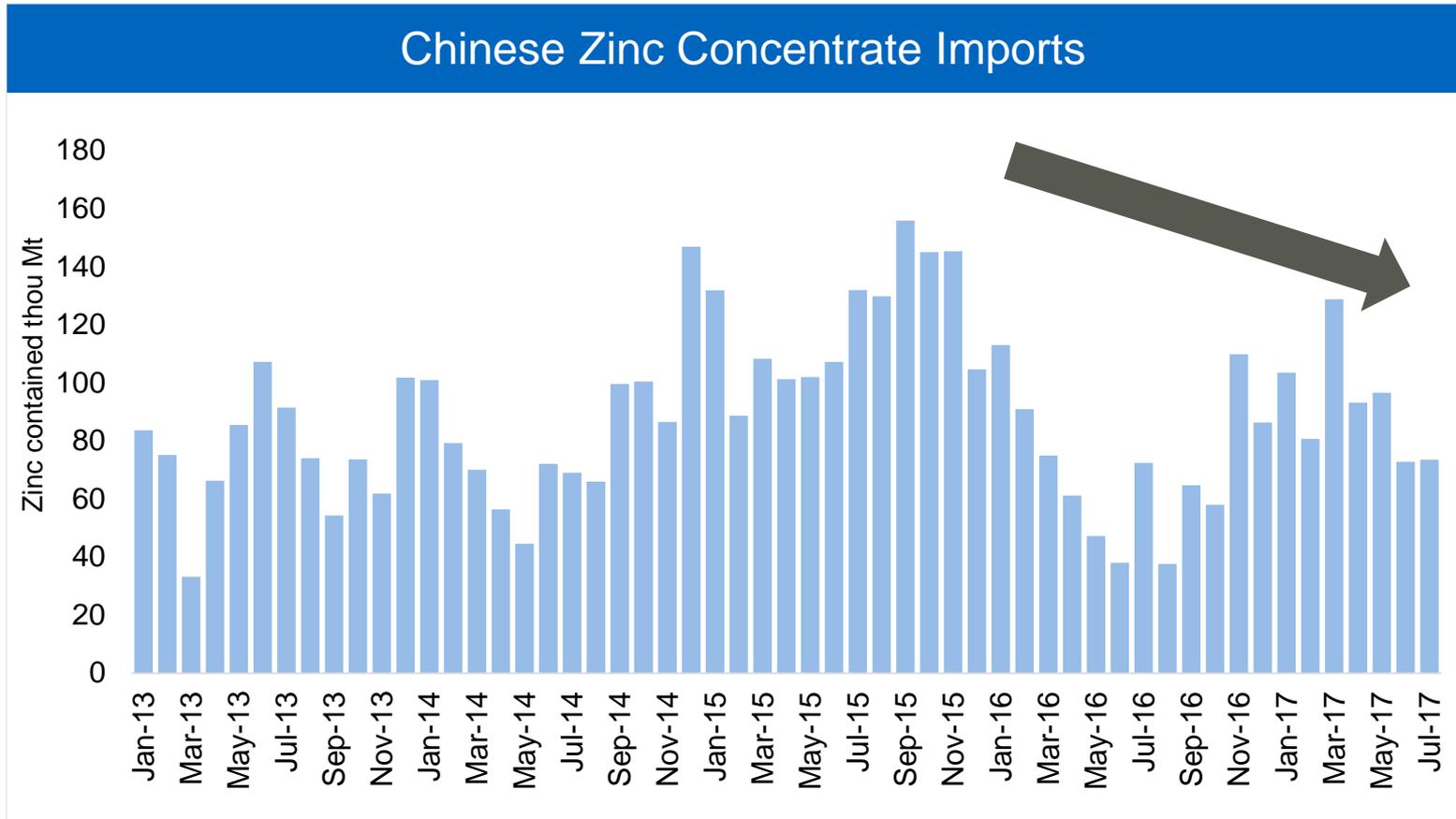


Source: Antaika, BGRIMM, Teck

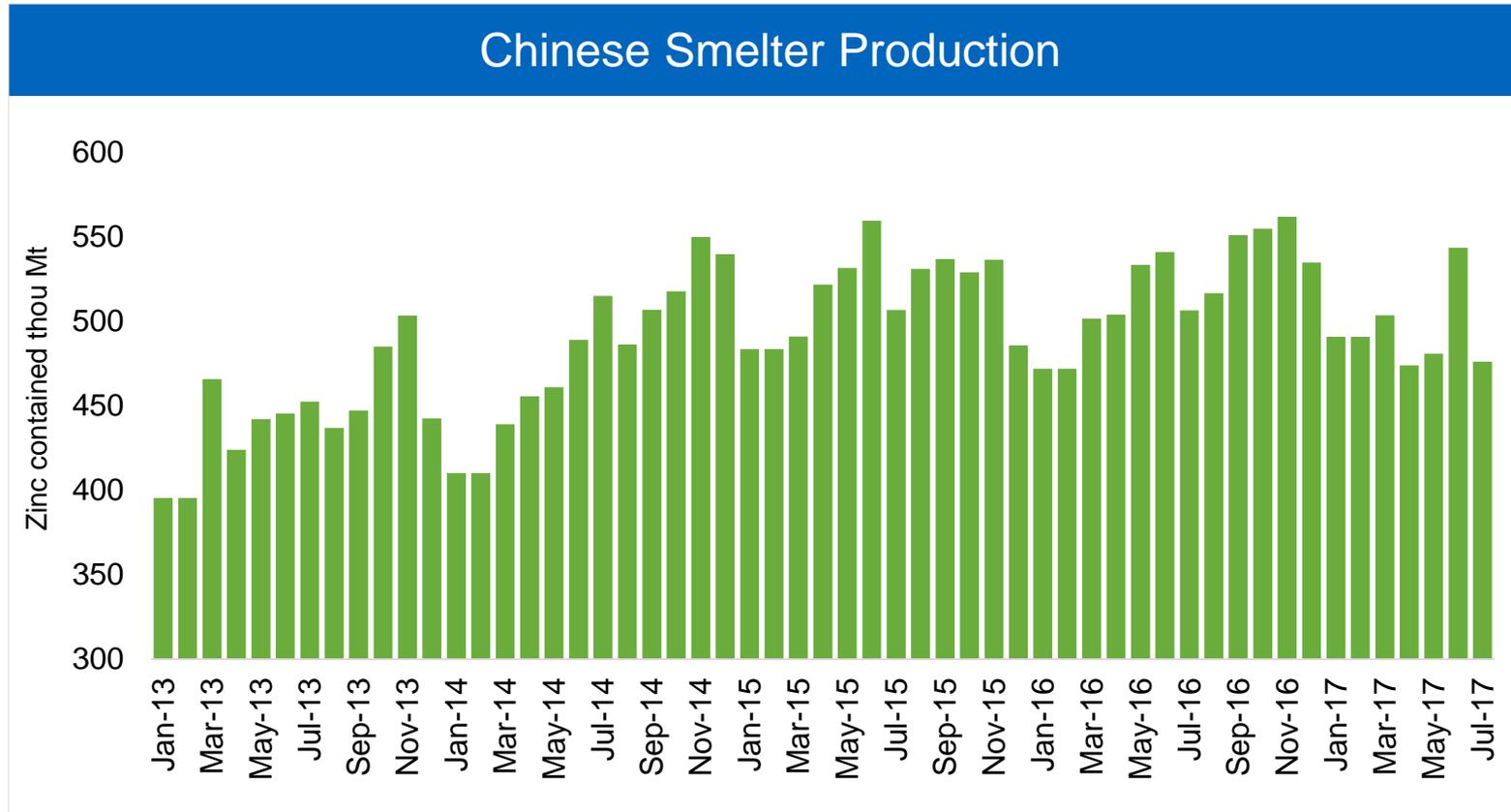
## Environmental/Safety Inspections Constraining Zinc Mine Production



Source: CNIA/NBS

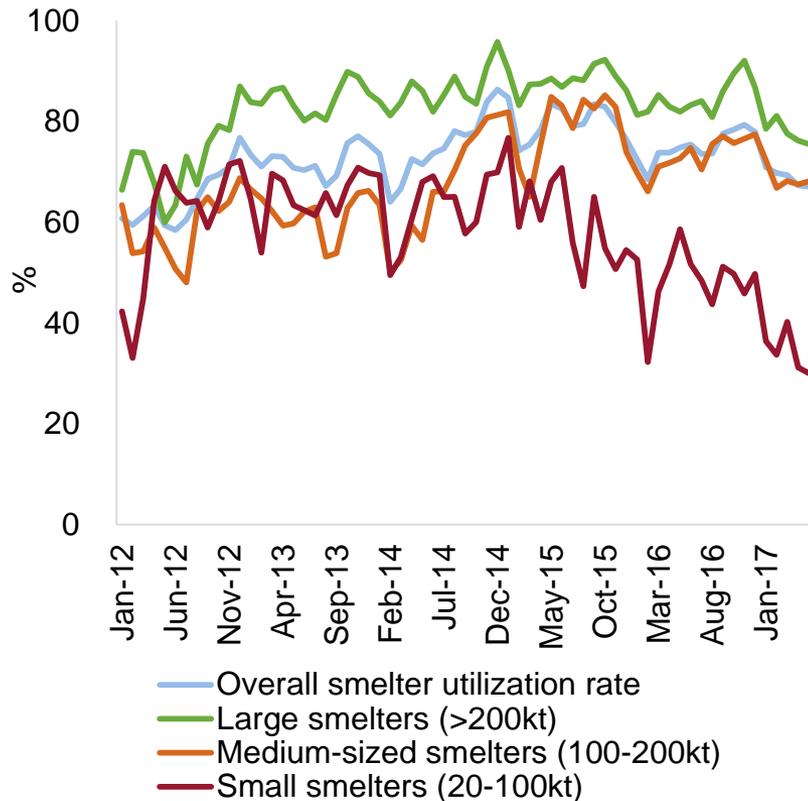


- Massive destocking in 2016
- Year-to-date to June 2017, stocks risen 35%
- Concentrate inventories currently at historic lows



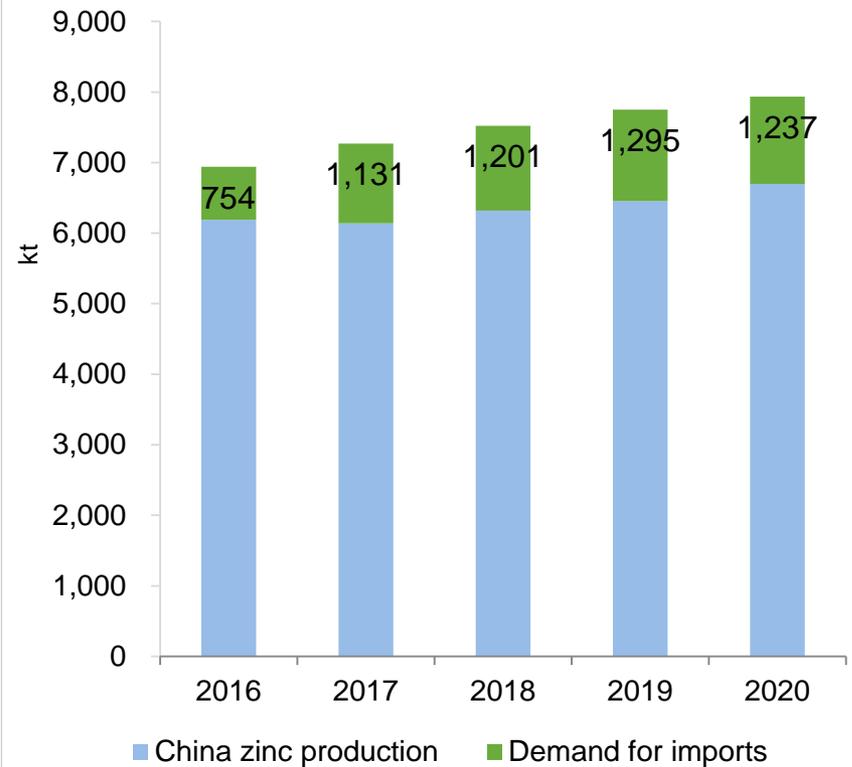
- Down 2% y/y YTD July – Down 6% MoM
- Cuts to Chinese refined production March-June (~100-170 kmt)
- Improvement in spot TCs has improved Chinese smelter profitability
- Expect concentrate stock draw down as winter inventory not built

## Smelter Utilization Rates Declining



Source: SMM

## Demand for Zinc Metal Imports Increasing



Source: Antaike, BGRIMM, Teck

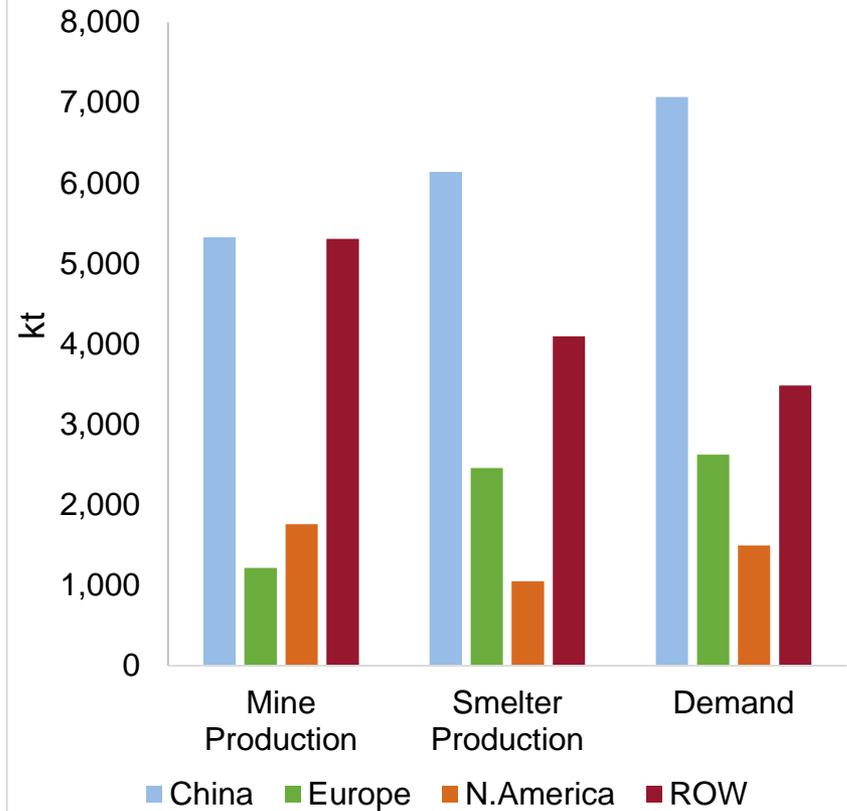
## Supply

- 40% of global mine production
- 45% of global smelter production
- 32% of global coated sheet production
  - Grew from 20% in 2010

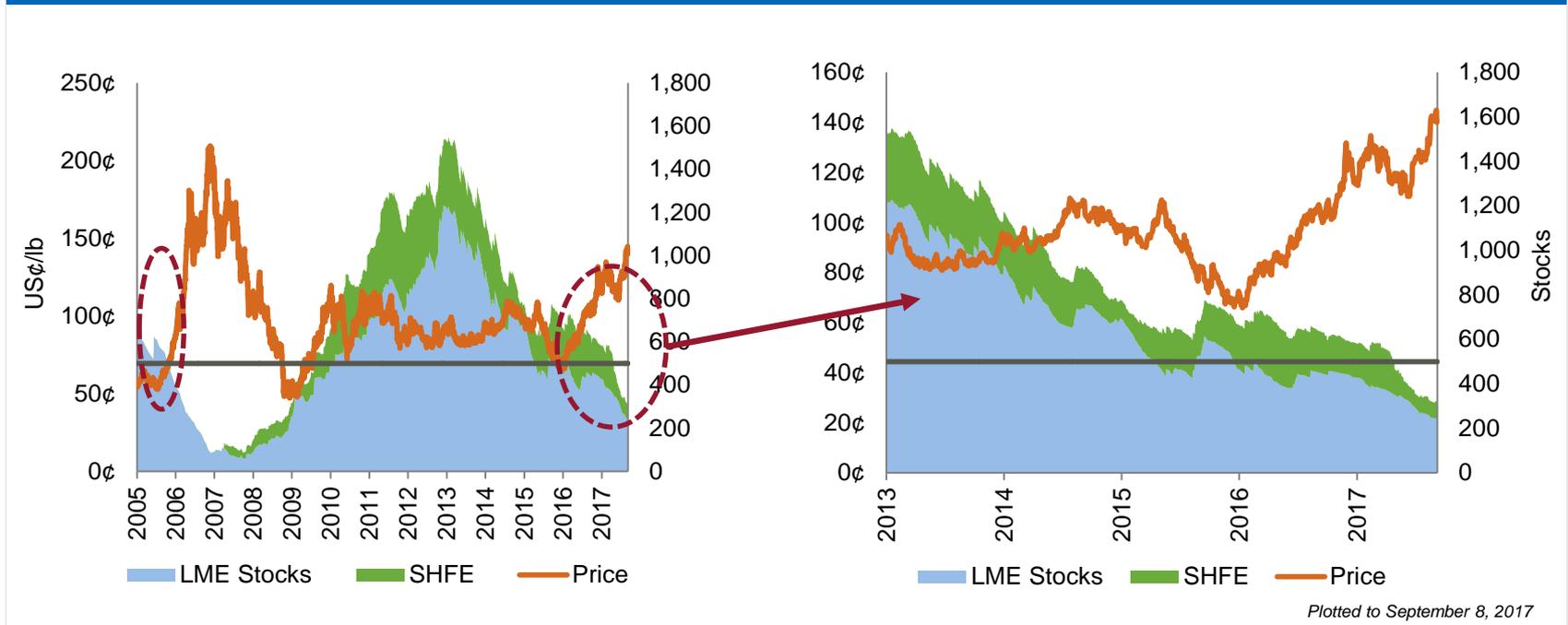
## Demand

- 48% of global refined demand

### China Has a Significant Impact Globally

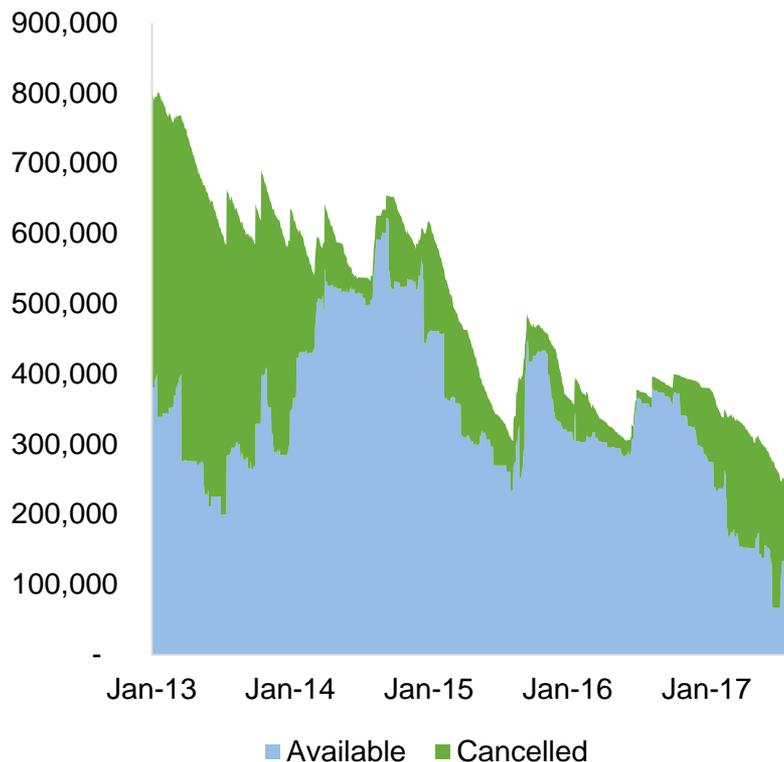


## Daily Zinc Prices &amp; Stocks



- Below 2005/2006 levels, with LME and SHFE down 259 kt in 2017
- SHFE down 130 kt since March peak
- Price is now reacting
- May be more hidden stocks available, with some enroute to Asia

## NOLA Cancelled Metal

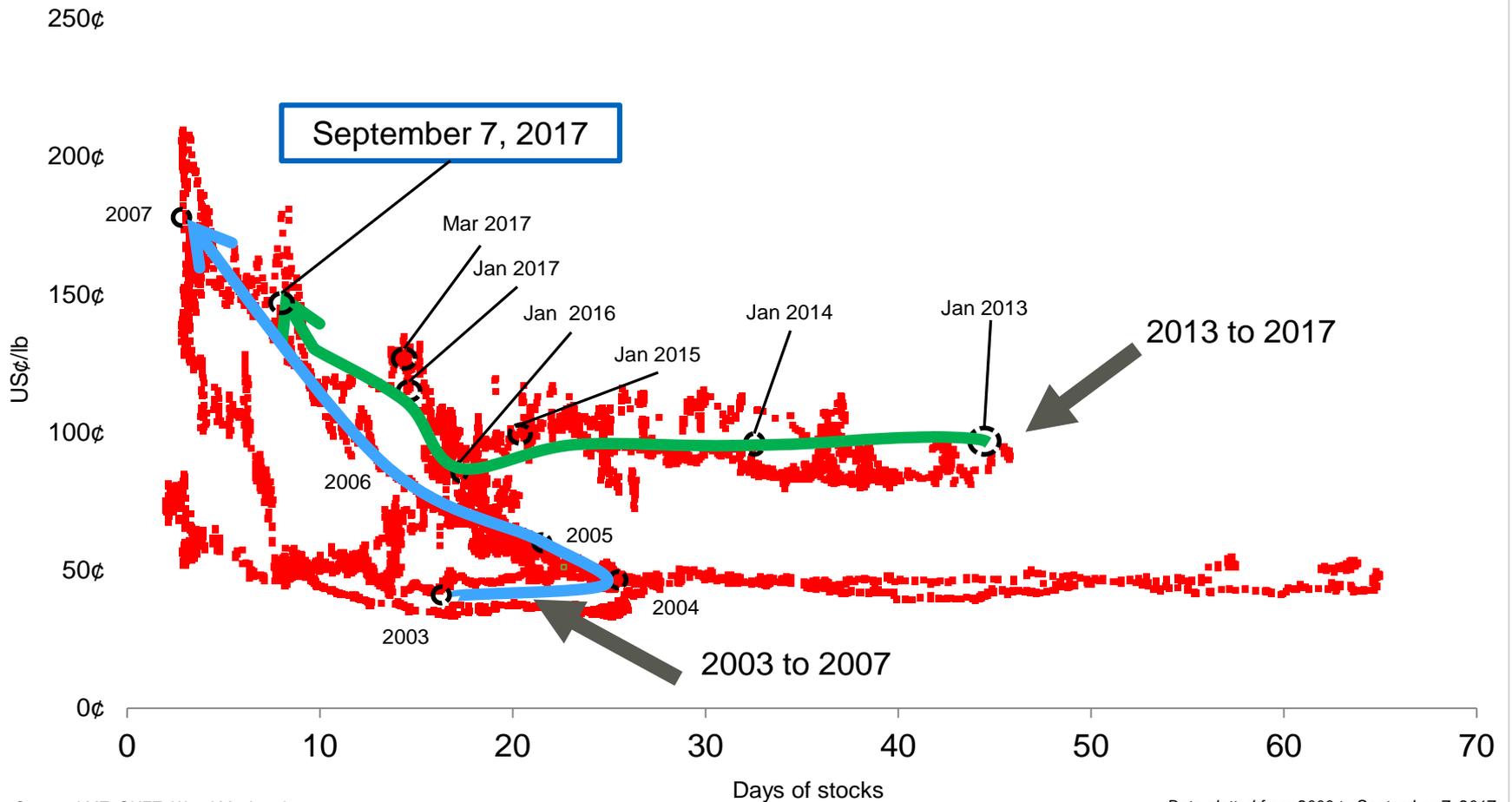


- 94% of LME stocks in New Orleans (NOLA)
- LME metal is slab zinc
  - 70% of US demand is from steel mills demanding customized jumbos
- Majority of NOLA zinc is:
  - European origin
  - Duty unpaid (1.2%): 1.6¢ premium on \$3,000/t zinc
- Majority of zinc from ~2008-2010
  - Concerns about condition
  - Has white rust, which causes high dross
- Customers rejecting NOLA material

Cancelled stocks unavailable for lending/borrowing on LME contracts

# Pinch Point Reached

## Zinc Prices vs. Days of Reported Stocks



Source: LME, SHFE, Wood Mackenzie

Data plotted from 2000 to September 7, 2017

## Giga Steel

Ultrahigh-strength & galvanizable competes well with aluminum.



## Zinc Thermal Spray

Portable technology to spray molten zinc onto a steel surface .



## Continuous Galvanized Rebar

High productivity process which enables coated rebar to be shaped in the field.

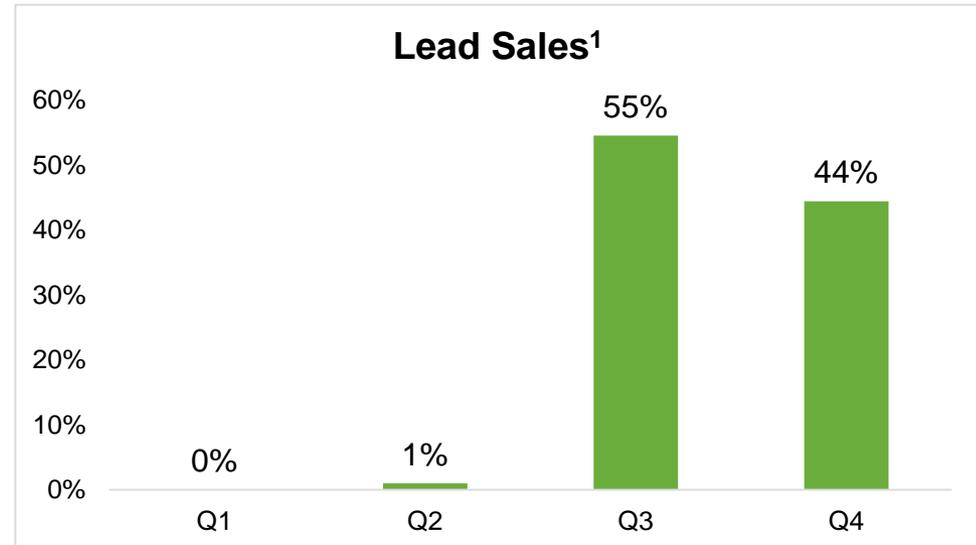
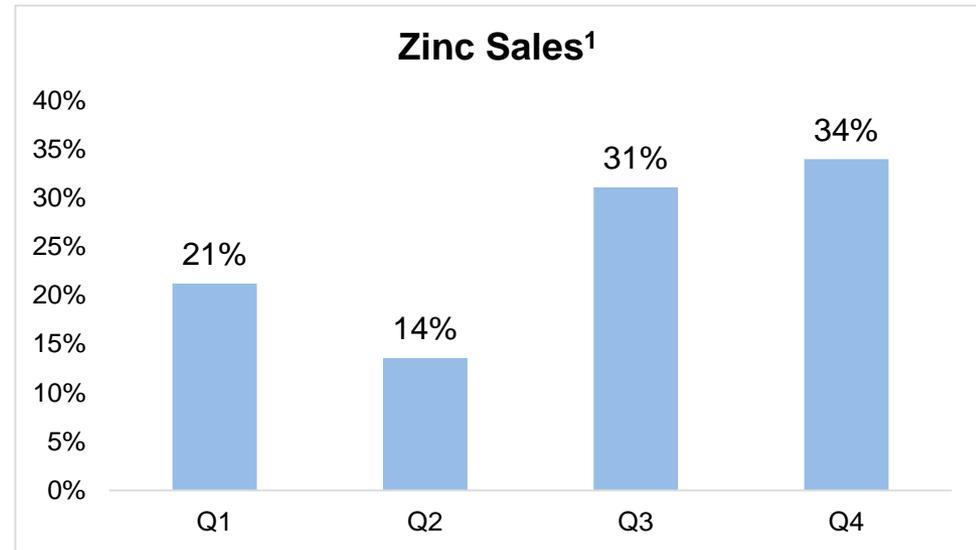


## Zinc Micro-Nutrient Fertilizer

Zinc micronutrient in fertilizer well accepted and growing market.



- Operates 12 months
- Ships ~ 4 months
- Shipments to inventory in Canada and Europe; Direct sales to Asia
- ~65% of zinc sales in second half of year
- ~100% of lead sales in second half of year



## Consistent, Reliable Supply of Zinc Concentrate

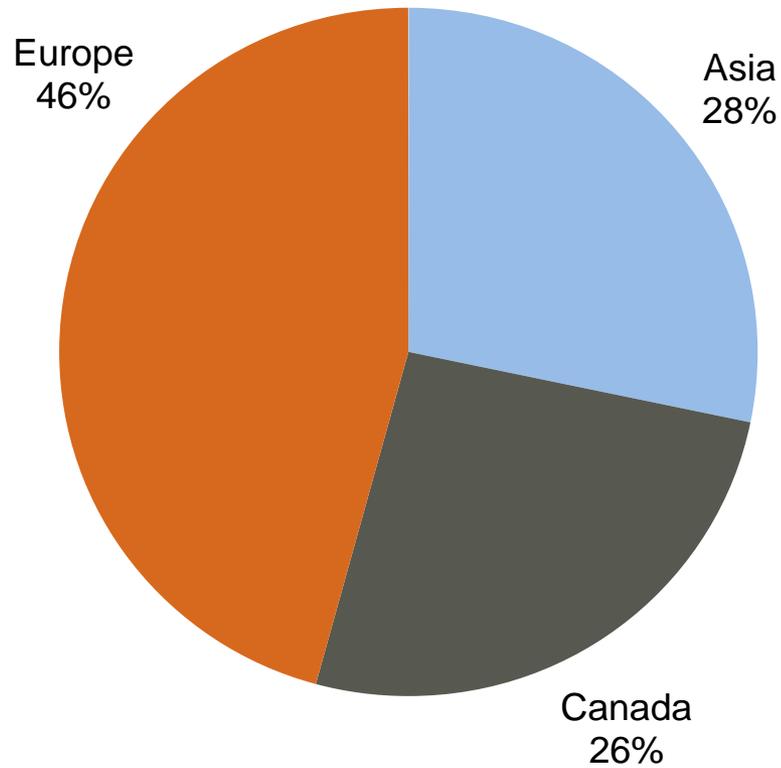
- Low iron
- Base feed for our customers
- Good zinc grade
- Low precious metal content (silver value: ~\$15/dmt)

## Clean Lead Concentrate

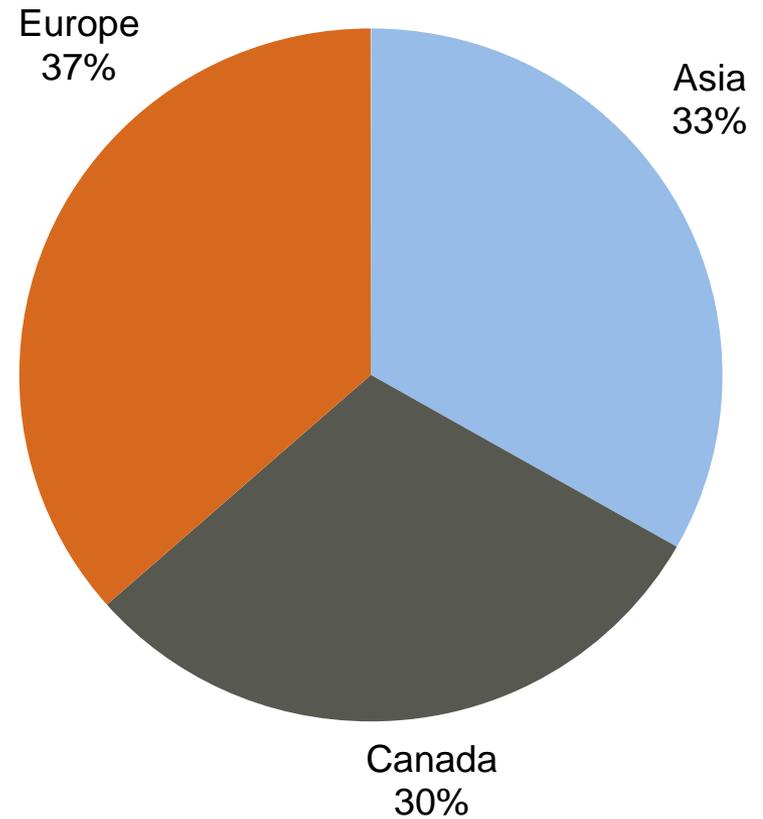
- High zinc content; by-products valued in China
- Low precious metal content (silver value: ~\$250/dmt)

# Red Dog Zinc Concentrate Sales Distribution Shows Consistency

**2000**

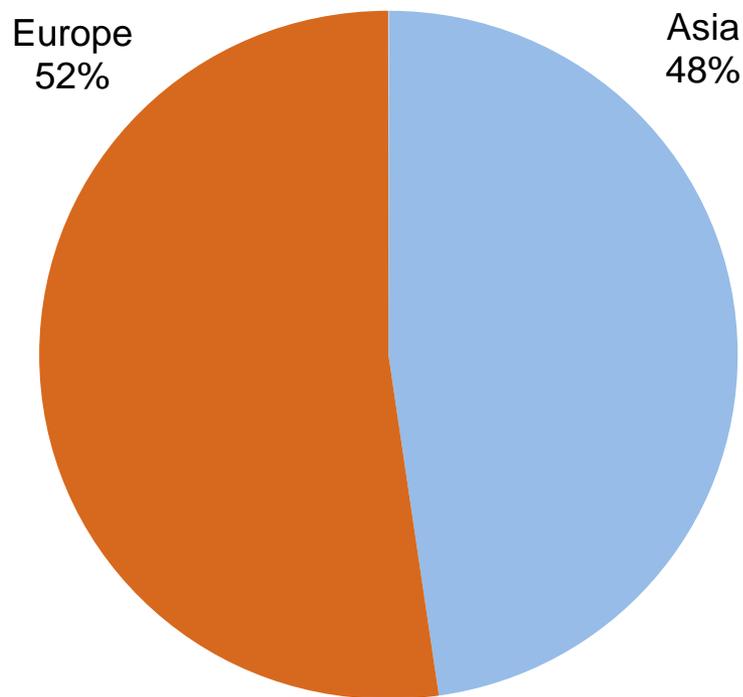


**2016**

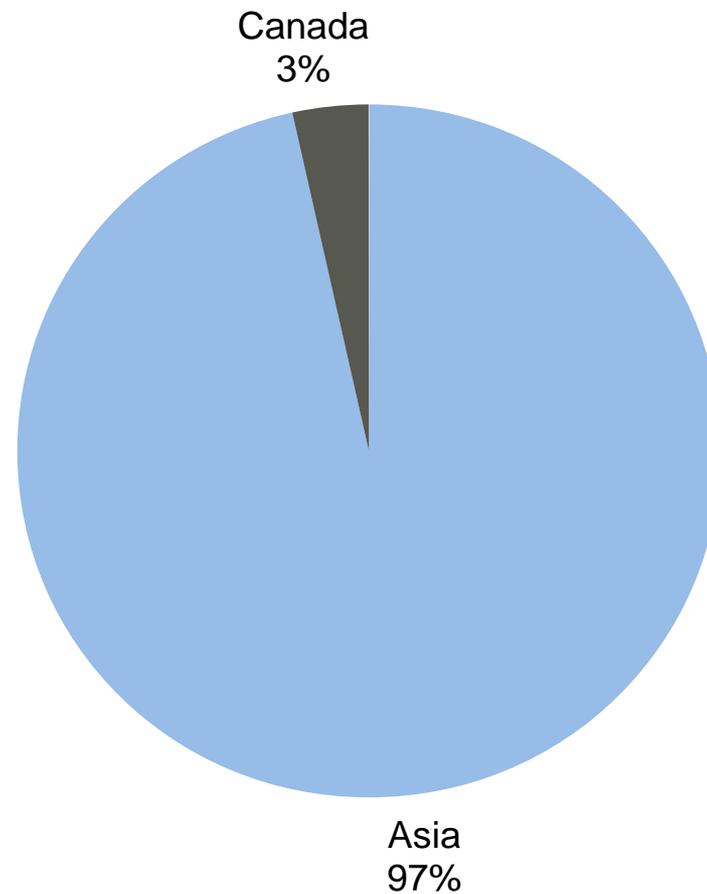


# Red Dog Lead Sales Distribution Reflects Market Evolution

**2000**

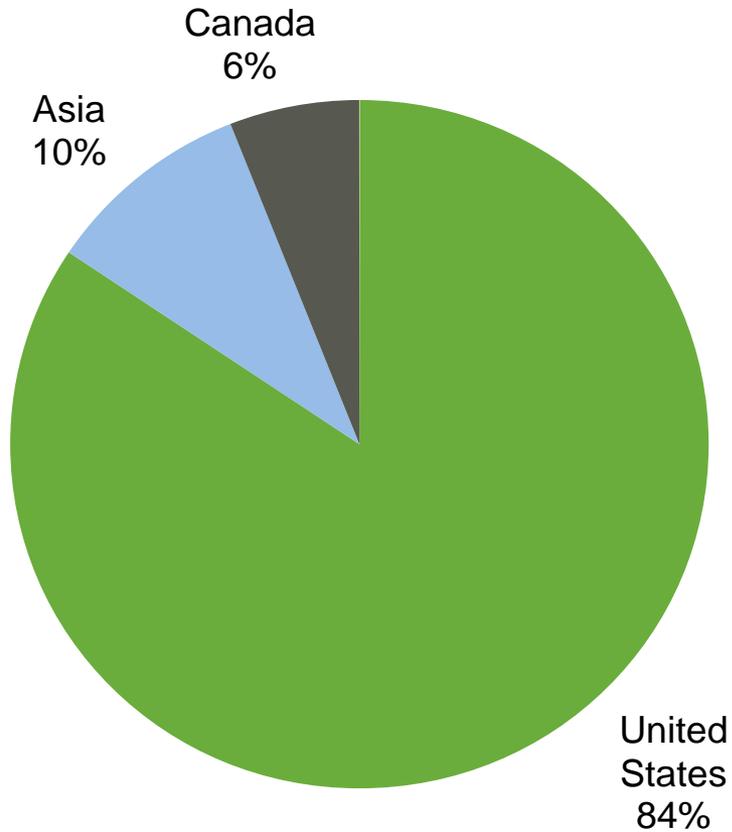


**2016**

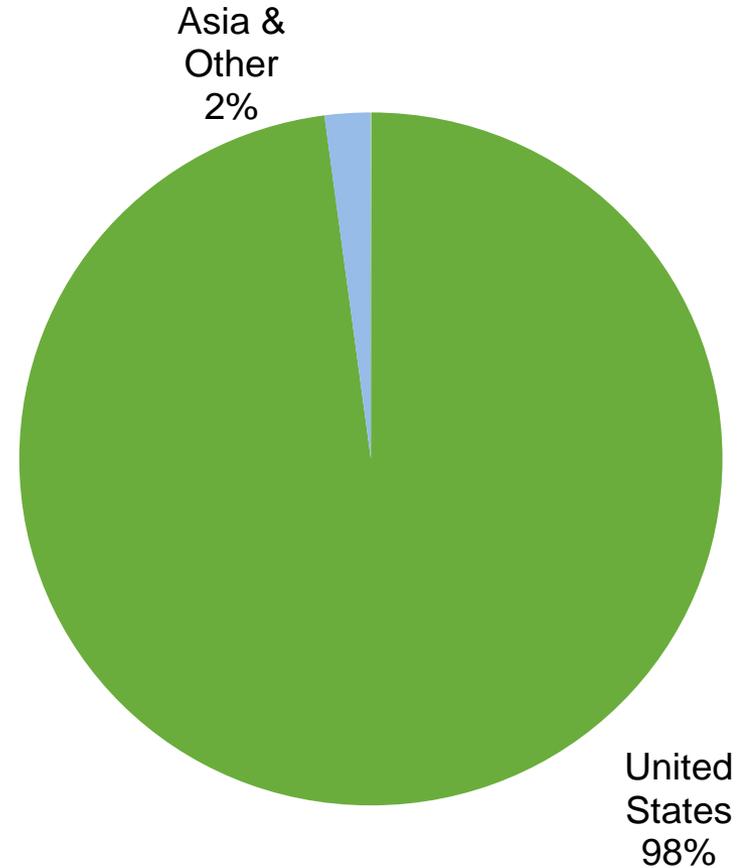


# Trail Refined Metal Sales Primarily the United States

## Zinc



## Lead



- The “Zinc Gap”: outlook is for a strong market
- Red Dog zinc concentrate customer base stable
- Red Dog zinc concentrate quality is a base feed for our customers
- Red Dog lead concentrate quality favorable in China, the largest market



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