Zinc Market
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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) and on EDGAR (www.sec.gov).
Zinc Market
Producing Concentrates and Custom Zinc Metal

Zinc in concentrate
Tailor-made zinc jumbos with galvanized sheet steel
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Zinc Concentrate Deficit Since 2015

Mine Production Growth
Insufficient to Balance Market

Source: Teck, CNIA, Wood Mac, NBS

Imported Spot TCs at Historical Lows

Source: Teck
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Planned Projects Won’t Meet Long-Term Demand

Zinc Mine Production Peaks in 2020

**Existing and Fully Committed Mines**

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

Source: Teck, Wood Mackenzie
Chinese Mined Zinc Production at 5-Year Low

Down 11% m/m in July 2017 & down 6% y/y YTD
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Limited Chinese Response to Higher Prices

**Estimated Mine Growth Rarely Achieved**

Source: Antaike, 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
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Chinese Smelter Production Constrained

- 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

Source: NBS/CNIA
Chinese Zinc Smelter Cut in 1H 2017

- Smelter Utilization Rates Declining
- Demand for Zinc Metal Imports Increasing

**Smelter Utilization Rates Declining**

- Overall smelter utilization rate
- Large smelters (>200kt)
- Medium-sized smelters (100-200kt)
- Small smelters (20-100kt)

**Demand for Zinc Metal Imports Increasing**

- China zinc production
- Demand for imports

Source: SMM, Antaike, BGRIMM, Teck
China is Important to the Zinc Market

**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
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Metal Inventories Close to Historical Lows

• 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

Source: LME/SHFE

Plotted to September 8, 2017
• 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
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Pinch Point Reached

Zinc Prices vs. Days of Reported Stocks

Source: LME, SHFE, Wood Mackenzie

Data plotted from 2000 to September 7, 2017
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Defending / Expanding Zinc Market

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.

Source: IZA, New York State Thruway Authority, Zinc.org
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Red Dog Seasonality

- 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

1. Average of 2010 to 2016.
Attractive Red Dog Concentrate Quality

- 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)
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Red Dog Zinc Concentrate Sales Distribution Shows Consistency

2000
- Europe: 46%
- Asia: 28%
- Canada: 26%

2016
- Europe: 37%
- Asia: 33%
- Canada: 30%
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Red Dog Lead Sales Distribution Reflects Market Evolution

**2000**
- Europe: 52%
- Asia: 48%

**2016**
- Asia: 97%
- Canada: 3%
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Trail Refined Metal Sales
Primarily the United States

**Zinc**
- United States: 84%
- Asia: 10%
- Canada: 6%

**Lead**
- United States: 98%
- Asia & Other: 2%
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Summary

• 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