The British Columbia Ministry of Energy and Mines MINFILE database contains 4510 zinc occurrences; of these occurrences, 589 list zinc as the primary commodity. There are 569 past producers, and one recent producer, Myra Falls (092F 330). B.C.'s largest producer was the Sullivan Mine (082FNE052), which yielded nearly 8 million tonnes of zinc over 100 years of production.

Global production of zinc in 2014 was approximately 12 million tonnes. Most (60%) is used for galvanizing steel, 15% for zinc based alloys used in die casting, 14% for brass and bronze, 8% for compounds containing zinc oxide or zinc sulphate, and most of the remainder is used in other alloys (source: International Zinc Association).

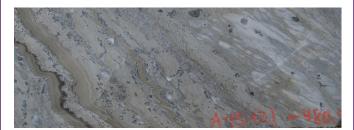
Zinc Resources												
Deposit	Category t (x10 <sup>6</sup> )	Gra %Zn	des %Cu	%Pb	Au (g/t)	Ag (g/t)	Year					
Cirque North	Hist 38.5	8		2.2		47.2	1991					
Cirque South	Hist 15.5	6.9		1.4		32						
Akie	Ind 12.7 Inf 16.3	8.4 7.4		1.7 1.3		13.7 11.6	2012					
Myra Falls	M+I 7.36 Inf 2.08	6.41 6.13	1 0.54	0.66 0.71	1.72 2.22	66.31 109.53	2014					
Ruddock Creek	M+I 6.2 Inf 6.7	6.5 6.33		1.3 1.2			2013					
Tulsequah Chief	Ind 6.8 Inf 0.2	5.9 4	1.2 0.67	1.1 0.76	2.4 1.81	85 62	2012					
Kutcho Creek	M+I 11.3 Inf 1.1	3.28 2.04	2.2 1.74		0.39 0.35	37 31	2014					
Robb Lake	Hist 6.45	7.11		Combined Zn+Pb			1984					
Driftpile Creek	Hist 18.15	2.4		Combined Zn+Pb			1979					
Red Bird	Hist 2.18	18.5		6.5		68.5	1986					
Wigwam	Hist 7.7	3.54		2.14		20	1969					
Duncan	Hist 9	2.9		2.7			1962					
J&L	M+I 2.4 Inf 4.5	4.16 2.99		2.21 2.21	6.81 5.19	66.95 67.8	2011					

## **Contact Information**

Vancouver Mineral Development Office www.gov.bc.ca/mineraldevelopment

Suite 300, 865 Hornby St. Vancouver, B.C. V6Z 2G3 Tel: (604) 660-3332 Fax (604) 775-0313





## Akie

- ▶ Owned and operated by Canada Zinc Metals Corp.
- ▶ SEDEX Zn-Pb-Ag in Paleozoic basin (Kechika Trough)
- Advanced exploration project with drill indicated resources (see table). Resources are open to expansion



## Cirque

- Joint venture between Teck Resources Limited (50%), and Korea Zinc Co., Ltd. (50%)
- ▶ SEDEX Zn-Pb-Ag in Paleozoic basin (Kechika Trough)
- Advanced exploration project with historical resource estimate (see table)



## **Ruddock Creek**

- Operated by Imperial Metals Corporation
- Proposed underground operation
- Pre-application stage of environmental assessment

# **Zinc** in British Columbia British Columbia Geological Survey Information Circular 2015-12









# **Selected Zinc Deposits in British Columbia**

## **B.C. Zinc Deposit Types**

SEDEX •

Sedimentary Exhalative Zn-Pb-Ag (SEDEX) deposits are found mainly in Proterozoic to Paleozoic deep-water basin strata of the Purcell anticlinorium, Kechika trough, Kootenay terrane and metamorphic complexes of southern B.C. The Sullivan SEDEX deposit is in Mesoproterozoic shales of Purcell basin. In northeastern B.C., the Akie (MINFILE No. 094F 031) and Cirque (094F 008) advanced projects are hosted by Late Devonian shales of the Kechika trough, a southern extension of Selwyn basin. Deposits with Broken Hill type characteristics are Neoproterozoic to Cambrian and found in the cover sequences of metamorphic complexes in southern B.C. (Ruddock Creek 082M 084, Cotton Belt 082M 086).

#### Carbonate hosted



Mississippi Valley type Pb-Zn mineralization is mainly in Proterozoic to Paleozoic platform carbonate rocks, usually on the flanks of sedimentary basins (Robb Lake 94B005, Monarch 082N 019, Kicking Horse 082N 020). Those with Irish type characteristics are mainly near contacts with Early Cambrian carbonate rocks of the Kootenay terrane (H.B. 082FSW004, Reeves MacDonald 082FSW026, Jersey 082FSW009). Carbonate hosted non-sulphide Zn mineralization is possible near Mississippi Valley, Broken Hill, and Irish type deposits.

## Volcanogenic massive sulphide (VMS)



Kuroko type Zn-Cu-Pb-Ag-Au VMS deposits in British Columbia typically contain up to about 10 million tonnes of ore. Larger examples include Britannia (092GNW003) and Myra Falls. The deposits may be any age and form during seafloor volcanism, typically in back-arc settings. Besshi type VMS may contain significant zinc, such as Goldstream (082M 141) in the Lardeau Group (Cambrian to Devonian). Another cluster of Besshi occurrences, including Granduc (104B 021) is in the Stuhini Group (Upper Triassic). Also late Triassic, Windy Craggy is a large Besshi deposit in northwestern B.C. Cyprus type Cu (Zn) deposits may also contain significant zinc (Chu Chua 092P 140).

#### Skarn and Manto



Polymetallic Ag-Pb-Zn mantos are typically small, high-grade deposits hosted by limestone and dolostone. Targeted for their Ag content, they may contain recoverable Zn. They are replacement deposits commonly associated with polymetallic veins and skarns. Bluebell (082FNE043), Swannell (094C 005) and Silvertip (104O 038) are among B.C. examples. Pb-Zn skarns are commonly distal to other skarns and some porphyry deposits such as Lustdust (093N 009). British Columbia examples are small; only a few thousand tonnes have been produced from almost 100 examples.

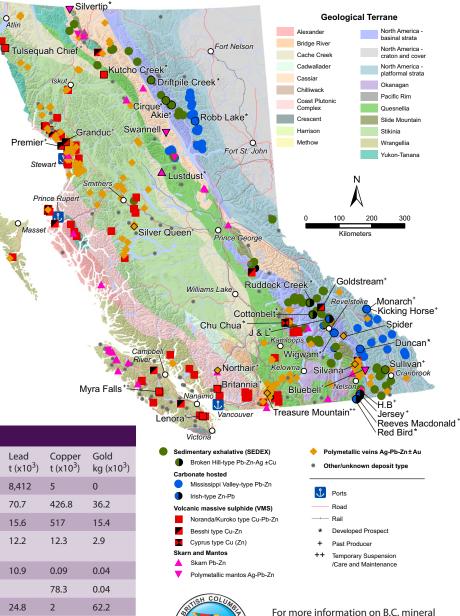
## Veins



Polymetallic veins in British Columbia are precious metals targets, but may also produce zinc and lead. Examples include Silvana (082FNW050) and others of the Slocan Camp, and the recently active Treasure Mountain (092HSW016).

Zinc Production											
Deposit	Milled t (x10 <sup>3</sup> )	Zinc t (x10 <sup>3</sup> )	Silver kg (x10 <sup>3</sup> )	Lead t (x10 <sup>3</sup> )	Copper t (x10 <sup>3</sup> )	Gold kg (x10 <sup>3</sup> )					
Sullivan	150,000	7,995	9,264	8,412	5	0					
Myra Falls	30,246	1,479	1,120	70.7	426.8	36.2					
Britannia	47,463	125.3	180.9	15.6	517	15.4					
Tusequah Chief	934	56.6	105.8	12.2	12.3	2.9					
Spider	124	11.5	53.5	10.9	0.09	0.04					
Goldstream	2,211	8	26.2		78.3	0.04					
Premier	5,877	8	1,333	24.8	2	62.2					
Northair	475	7.3	26.3	5.3	0.4	5.2					
Silver Queen	191	5.1	13.7	0.7	0.4	0.01					
Lenora	120	1.9	10.7	0.2	3.6	0.4					

Windy Craggy



deposit profiles, visit:

MineralDepositProfiles

www.empr.gov.bc.ca/Mining/Geoscience/

Updated November, 2015 Contributors: GC, BN, TS