

Zinc

The Yukon is well-endowed with zinc deposits and has high potential for new discoveries in a variety of geological environments (sedimentary-exhalative, volcanic-hosted massive sulphide, Mississippi Valley and skarn settings).

Much of the eastern Yukon is underlain by the Selwyn Basin, a Neoproterozoic-Mississippian depositional basin that is characterized by off-shelf deep water anoxic shales in a basin bounded by platform carbonates. Three major periods of sedimentary-exhalative sulphide deposition have been recognized, including the Cambrian-aged Anvil camp, Silurian-aged Howard's Pass camp, and the Devonian-aged MacMillan Pass camp. The Anvil District contains five known pyritic massive sulphide deposits, with a total pre-production mineral inventory of 120.1 million tonnes averaging 9.3% combined lead-zinc; Howard's Pass has a combined inventory of 120 million tonnes averaging 7.5% combined lead-zinc, and this deposit is not completely defined and contains over 500 million tonnes of a lower grade zinc resource. The Mac Pass deposits (including the Tom and Jason) contain 23.3 million tonnes averaging 13.71% zinc-lead, 76.0 grams/tonne silver. These large mineral inventories, together with the continuous stratigraphy, bode well for the further mineral potential of the Selwyn Basin.



Volcanic-hosted massive sulphide (VMS) deposits (e.g., the Marg deposit) are also known to occur in the Selwyn Basin, and more recently were discovered in variably metamorphosed Upper Paleozoic sedimentary and volcanic rocks of the Yukon-Tanana Terrane. The massive sulphide deposits formed in continental-arc and back-arc-basin settings during rifting from the continental margin. Since the initial discovery of the Kudz Ze Kayah deposit by Cominco in 1994, four additional deposits (GP4F, Wolverine, Fyre and Ice) and numerous occurrences have been discovered in the Finlayson Lake district of southeastern Yukon. The two most promising zinc deposits, Kudz Ze Kayah and Wolverine, contain 11 million tonnes of over 8% combined zinc-lead-copper and 6 million tonnes over 15% combined zinc-lead-copper, respectively, each with precious metal values. The nature of VMS deposits to occur in clusters is indicative of high

potential in the Yukon-Tanana Terrane. Recent 1:50 000-scale regional mapping by the Yukon Geological Survey in the Finlayson Lake district has defined the stratigraphy hosting the VMS deposits. This increased understanding of the Yukon-Tanana Terrane, and the availability of airborne geophysical data in other areas of Yukon underlain by the Yukon-Tanana Terrane, will aid in the exploration for similar deposits in other areas of Yukon.

Several Mississippi Valley-type deposits and showings are hosted in Proterozoic carbonate rocks in northern Yukon. Skarn and replacement zinc mineralization, such as that at the Sa Dena Hes mine, is associated with Cretaceous plutons intruding the Paleozoic carbonate platforms of the continental margin. Exploration interest for both of these deposit types is increasing due to their favourable metallurgical qualities.

The XY sedimentary-exhalative deposit at Howard's Pass is in the area underlying the drill roads and trenches in this photo (exploration camp visible on the left). Significant new discoveries of lead-zinc mineralization were made in the 2005-2006 drilling programs. These tested over 40 km of favourable stratigraphy, including the Anniv deposit located 22 km to the northwest (up) from the XY.





The Faro open pit, pictured here in June 1979, produced over 50 million tonnes of ore grading 4.7% Zn, 2.1% Pb and 36 g/t Ag.

Silver-lead-zinc-copper breccia from the Blende property, north of Mayo.



Drilling on the Wolverine high-grade zinc-silver VMS deposit.

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Canada's Yukon



Zinc targets in Yukon



Sediment-associated (sedimentary-exhalative) zinc deposits

Deposit Owner/optioned to/contact	Zone(s) Year resource-reserve was calculated/reference	Mineral resource-reserve category‡/ Tonnage@ grade/commodity	Status Yukon MINFILE no.**
Howard's Pass Pacifica Resources Ltd. 1710-1177 Hastings Street W Vancouver, British Columbia Canada V6E 2L3 Telephone: 604-682-5474	XY, Anniv, Brodel zones March 2006 Technical report by Nilsson Mine Services Ltd.	Indicated* 33.5 Mt @ 5.52% Zn, 2.10% Pb Inferred 112.91 Mt@ 5.40% Zn, 2.14% Pb Potential resource 376 Mt @ 5.12% Zn, 1.90% Pb	<i>Deposit</i> 1972: Discovery. 1973: Winter road and airstrip construction. 1977: Road building. 1980-81: Underground development. 1991: Site cleanup. Completion of over 34 600 m of drilling on XY and Anniv zones. 2000: Drilling 717 m. 2005: Drilling 8317 m. 2006: Drilling. 105I 012/037
Faro <i>In receivership:</i> Wes Treleaven Senior Vice President Deloitte and Touche Inc. 1900-79 Wellington Street W Toronto, Ontario Canada M5K 1B9 Telephone: 416-601-4482 E-mail: wtrelaevan@deloitte.ca	Faro 1983 CIM Special Volume 37, p. 319-381	Geological resource Pre-production 57.6 Mt @ 4.7% Zn, 3.4% Pb, 36 g/t Ag	<i>Deposit mined out; currently on care and maintenance.</i> 1965: Discovery. 1965-1969: Exploration. 1969-1992: Production with some hiatus intervals. 105K 061
Swim <i>In receivership:</i> Wes Treleaven Senior Vice President Deloitte and Touche Inc. 1900-79 Wellington Street W Toronto, Ontario Canada M5K 1B9 Telephone: 416-601-4482 E-mail: wtrelaevan@deloitte.ca	Swim 1983 CIM Special Volume 37, p. 319-381	Historical calculation 4.3 Mt@ 4.7% Zn, 3.8% Pb, 42 g/t Ag	<i>Deposit, care and maintenance</i> 1964: Discovery. 1964-1976: Exploration. Total of 10 150 m of drilling. Deposit is roughly 460 m long and 150 m wide, with an average thickness of 21 m. 105K 046
Vangorda <i>In receivership:</i> Wes Treleaven Senior Vice President Deloitte and Touche Inc. 1900-79 Wellington Street W Toronto, Ontario Canada M5K 1B9 Telephone: 416-601-4482 E-mail: wtrelaevan@deloitte.ca	Vangorda 1996 Anvil Range Mining Corp. Annual Information Form	Pre-production Geological resource 7.1 Mt @ 4.3% Zn, 3.4% Pb, 48 g/t Ag, 0.75 g/t Au Proven reserve* 165 000 t @ 4.14% Zn, 3.27% Pb, 43 g/t Ag	<i>Open pit past producer, care and maintenance; deposit mined out</i> 1953: Discovery. 1979: Metallurgical and feasibility studies. Over 23 500 m of drilling. 1989: Bulk sampling. 1990-1993 and 1995-1996: Production. 105K 055
Grum <i>In receivership:</i> Wes Treleaven Senior Vice President Deloitte and Touche Inc. 1900-79 Wellington Street W Toronto, Ontario Canada M5K 1B9 Telephone: 416-601-4482 E-mail: wtrelaevan@deloitte.ca	Grum 1996 Anvil Range Mining Corp. Annual Information Form	Pre-production Proven reserve* 1 589 000 t @ 5.34% Zn, 3.56% Pb, 58 g/t Ag, 0.83 g/t Au Probable reserve* 17.06 Mt @ 4.34% Zn, 2.6% Pb 44 g/t Ag, 0.74 g/t Au	<i>Open pit past producer, care and maintenance</i> 1973: Discovery. 1976-1977: Underground development, feasibility study. 1979: Metallurgical testing. Total of over 75 000 m of drilling completed. 1995-1996 and 1997-1998: Production. 105K 056
Grizzly <i>In receivership:</i> Wes Treleaven Senior Vice President Deloitte and Touche Inc. 1900-79 Wellington Street W Toronto, Ontario Canada M5K 1B9 Telephone: 416-601-4482 E-mail: wtrelaevan@deloitte.ca	Grizzly (Dy) 1996 Anvil Range Mining Corp. Annual Information Form	Indicated* 17.24 Mt @ 6.39% Zn, 4.85% Pb, 71.6 g/t Ag, 0.75 g/t Au	<i>Deposit</i> 1953: Staked as part of Vangorda property. 1976: Discovery during deep drilling. Completion of 52 000 m of drilling to date. 105K 101

‡Mineral resource-reserve category: resource and reserve figures have been compiled from a variety of historical data sources that in most cases predate the implementation of National Instrument 43-101. Therefore, only those figures indicated by an asterisk (*) comply with National Instrument 43-101.

** The Yukon MINFILE is a computerized mineral inventory system that documents the exploration history and geology of metallic, industrial mineral and coal occurrences in the Yukon. The database contains detailed descriptions of 2612 separate mineral occurrences located throughout the Yukon.

Sediment-associated (sedimentary-exhalative) zinc deposits, *continued*

Deposit Owner/options to/contact	Zone(s) Year resource-reserve was calculated/reference	Mineral resource-reserve category‡/ Tonnage@ grade/commodity	Status Yukon MINFILE no.**
Clear Lake Energold Minerals Inc. 201-347 Bay Street Toronto, Ontario Canada M5H 2R7 Telephone: 416-362-6686	Clear Lake 1991 George Cross Newsletter, 03/04/1991, p. 2	Not defined 5 570 114 t @ 11.4% Zn, 2% Pb, 38.1 g/t Ag	<i>Deposit</i> 1965: Discovery. 1979: Airstrip construction. 1993: Baseline environmental studies. Over 18 700 m of drilling completed to date. 105L 045
Tom HudBay Minerals 201 Portage Avenue, Suite 1906, Winnipeg, Manitoba Canada R3B 3K6 Telephone: 204-949-4268	West zone 1986 CIM Special Volume 37, p. 100-115 East zone 1986 CIM Special Volume 37, p. 100-115	Indicated 6 864 800 t @ 7.16% Zn, 4.44% Pb, 42.6 g/t Ag Indicated 2 418 900 t @ 8.42% Zn, 11.13% Pb, 145.4 g/t Ag	<i>Deposit</i> 1951: Discovery. 1970-1971: Underground development, bulk sampling, metallurgical testing. 1980-1982: Underground development, engineering and environmental studies. Completion to date of over 27 200 m of drilling. 105O 001
Jason MacPass Resources/ HudBay Minerals 201 Portage Avenue, Suite 1906, Winnipeg, Manitoba Canada R3B 3K6 Telephone: 204-949-4268	Main, South and End zones 1983 CIM Special Volume 37, p. 87-99	Historical calculation 14.1 Mt @ 6.57% Zn, 7.09% Pb 79.9 g/t Ag	<i>Deposit</i> 1974: Discovery. 1982: Environmental studies. 1985: Feasibility studies. Total of 30 700 m of drilling completed to date. 105O 019

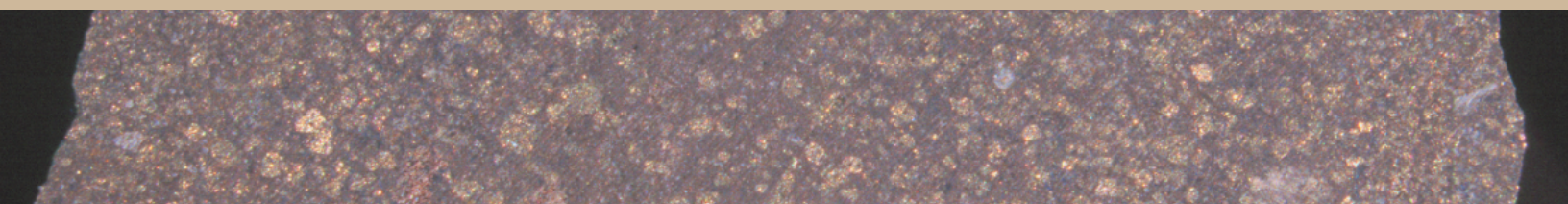
Aerial view of the Kudz Ze Kayah zinc-lead volcanic-associated massive sulphide deposit. This and the GP4F deposit occur within Devonian to Mississippian rocks of the Yukon-Tanana Terrane.



Volcanic-associated zinc deposits.

Deposit Owner/optioned to/contact	Zone(s) Year resource-reserve was calculated/reference	Mineral resource-reserve category‡/ Tonnage@ grade/commodity	<i>Status</i> Yukon MINFILE no.**
Wolverine Yukon Zinc Corporation 701-475 Howe Street Vancouver, British Columbia Canada V6C 2B3 Telephone: 604-682-5474	Wolverine and Lynx 2006 Technical report by Hatch Consulting	Measured 493 000 t @ 12.44% Zn, 1.18% Cu, 1.48% Pb, 298.8 g/t Ag, 1.50 g/t Au Indicated 3 968 000 t @ 12.10% Zn, 1.16% Cu, 1.59% Pb, 361.8 g/t Ag, 1.72 g/t Au Total 4 461 000 t @ 12.14% Zn, 1.16% Cu, 1.58% Pb, 354.8 g/t Ag, 1.70 g/t Au Inferred 1 693 000 t @ 12.16% Zn, 1.23% Cu, 1.74% Pb, 385.4 g/t Ag, 1.71 g/t Au	<i>Deposit</i> 1973: Original staking. 1995: Discovery. 1996: Airstrip construction. Over 42 000 m of drilling to date. Metallurgical tests and development plans completed. Feasibility study. 105G 072
Kudz Ze Kayah Teck Cominco Limited 600-200 Burrard Street Vancouver, British Columbia Canada V6C 3L9 Telephone: 604-687-1117	ABM 2003 Teck Cominco annual report	Indicated* 11.3 Mt @ 5.9% Zn, 1.5% Pb, 0.9% Cu, 137 g/t Ag, 1.3 g/t Au	<i>Deposit</i> 1993: Discovery. 1994-1995: Airstrip and tote road construction, 40-tonne bulk sample, engineering, metallurgical and environmental studies. Over 32 000 m of drilling. Environmental permitting completed, Class A water license signed. Active on other targets in area. 105G 117
GP4F Teck Cominco Limited 600-200 Burrard Street Vancouver, British Columbia Canada V6C 3L9 Telephone: 604-687-1117	GP4F 1998 Teck Cominco annual report	Inferred 1.5 Mt @ 6.4% Zn, 0.1% Cu, 3.1% Pb, 90 g/t Ag, 2 g/t Au	<i>Deposit</i> 1994: Staked, airborne geophysics. 1998: Drilling (1556 m), discovery. Active exploration on other targets in area. 105G 143
Marg Yukon Gold Corporation Suite 408, 347 Bay Street Toronto, Ontario Canada M5H 2R7 Telephone: 416-865-9790	Marg 2005 Technical report by P. Holbeck Vicking GeoScience	Indicated 4 646 200 t @ 1.8% Cu, 2.57% Pb, 4.79% Zn, 65.08 g/t Ag, 0.99 g/t Au Inferred 880 800 t @ 1.55% Cu, 1.9% Pb, 3.75% Zn, 50.42 g/t Ag, 0.95 g/t Au	<i>Deposit</i> 1965: Discovery. 1988: Airstrip and road construction. 1997: Preliminary metallurgical testing, winter road completed to facilitate development. Total of over 23 000 m of drilling to date. Deposit limits are open. 2006: Drilling. 106D 009
Hart River Calypso Acquisition Corp. 1180-625 Howe Street Vancouver, British Columbia Canada V6C 1G8 Telephone: 604-408-2212	Hart River 1969 Mineral Industry Report 1969 and 1970, p. 25. Also Canadian Mines Handbook 1971-72, p. 181	Not defined (originally reported as proven reserves) 523 849 t @ 3.65% Zn, 1.45% Cu, 0.87% Pb, 49.7 g/t Ag, 1.41 g/t Au	<i>Deposit</i> 1955: Discovery. 1968-1971: Winter road construction, underground development, 5989 m of surface and underground drilling, feasibility study completed. 1993-1994: 3208 m of additional drilling. 116A 009
Wolf Atna Resources Limited (66%) and YGC Resources Limited (34%)	Wolf 2000 Atna website (reported as in-house resource)	Not defined 4.1 Mt @ 6.2% Zn, 1.8% Pb, 84 g/t Ag	<i>Deposit</i> 1955: Discovery. 1967: Road construction. Total of 10 508 m of drilling completed to date. 2000: Completion of engineering studies indicating that upper portion of the ore body could be mined by open-pit methods. 105G 008

Massive-sulphide mineralized rock in drill core from the GP4F deposit.



Skarn/replacement zinc deposits.

Deposit Owner/optioned to/contact	Zone(s) Year resource-reserve was calculated/reference	Mineral resource-reserve category‡/ Tonnage@ grade/commodity	Status Yukon MINFILE no.**
Sa Dena Hes Teck Cominco and Korea Zinc Company Limited Teck Cominco Limited 600-200 Burrard Street Vancouver, British Columbia Canada V6C 3L9 Telephone: 604-687-1117	Jewelbox and Burnick 2003 Teck Cominco Limited Annual Report	Pre-production resource 5.1 Mt@ 12.7% Zn, 4.2%Pb, 64 g/t Ag Remaining resource Indicated 2 190 000 t @ 10.4% Zn, 2.6% Pb	<i>Underground past producer, mill, care and maintenance</i> 1962: discovery. 1963: road construction. 1990-92: underground development, mill construction, produced until Dec. 1992 when closed due to low metal prices. 105A 012
McMillan Noranda BCE Place, 200-181 Bay Street Toronto, Ontario Canada M5J 2T3 Telephone: 416-982-7111	Main 1991 Assessment report #092920 South 1991	Historical calculation 1.1 Mt @ 8.3% Zn, 4.1% Pb, 62 g/t Ag Historic calculation 400 000 t @ 1.7% Zn, 9.3% Pb, 214 g/t Ag	<i>Deposit</i> 1892: Discovery. 1930: First staked. Since then a total of 15 204 m of drilling completed. 1990: Trenching to test for gold potential. 1993: Reclamation program. 095D 006

Mississippi Valley-type zinc deposits.

Deposit Owner/optioned to/contact	Zone(s) Year resource-reserve was calculated/reference	Mineral resource-reserve category‡/ Tonnage@ grade/commodity	Status Yukon MINFILE no.**
Goz Almaden Minerals Limited 1103-750 Pender Street W Vancouver, British Columbia Canada V6C 2T8 Telephone: 604-689-7644	Goz 1989 George Cross Newsletter, 05/19/89, p. 2	Historical calculation 2 494 758 t @ 11% Zn	<i>Deposit</i> 1973: Discovery, prospecting, mapping, geochemistry. 1974: Mapping, drilling (2024 m). 1975: Geochemistry, mapping, drilling (4195 m). 106C 020
Craig Falconbridge Limited BCE Place, 200-181 Bay Street Toronto, Ontario Canada M5J 2T3 Telephone: 416-982-7111	West zone 2002 Canadian Mines Handbook 2001/02, p. 233	Not defined 874 980 t @ 8.5% Zn, 13.5% Pb, 123 g/t Ag	<i>Deposit</i> 1976: Discovery. Completion of over 6600 m of drilling to date. 106C 073

Vein/breccia associated zinc deposits.

Deposit Owner/optioned to/contact	Zone(s) Year resource-reserve was calculated/reference	Mineral resource-reserve category‡/ Tonnage@ grade/commodity	Status Yukon MINFILE no.**
Logan Yukon Zinc Corporation (60%) & Almaden Minerals Limited (40%) Yukon Zinc Corporation 701-475 Howe Street Vancouver, British Columbia Canada V6C 2B3 Telephone: 604-682-5474	Main zone Report by Hatch Associates Ltd, March 2004	Inferred* 13.08 Mt @ 5.1% Zn, 23.7 g/t Ag	<i>Deposit</i> 1979: Discovery. 1987: Construction of airstrip. Total of over 16 400 m of drilling. 2000: prefeasibility study. 2003: Engineering studies. 105B 099
Blende Eagle Plains Resources/ Blind Creek Resources 1500-675 West Hastings Street, Vancouver, British Columbia, Canada V6B 1N2 Telephone: 604-669-6463	West zone 2004 Technical report by B. Price, Oct. 2004	Inferred* 15.3 Mt @ 3.04% Zn, 3.23% Pb, 67.5 g/t Ag	<i>Deposit</i> 1975: Discovery. 1989: Road construction. 1991: Metallurgical studies. Completion to date of 16 500 m of drilling. 2004: Geochemistry, mapping and prospecting. 106D 064
Andrew Ron Berdahl Mile 7.3 Carcross Road Whitehorse, Yukon Telephone: 867-668-4963 E-mail: rberdahl@yukon.net	Andrew Personal communication R. Berdahl (internal Noranda report)	Not defined 1 106 226 t @ 12.4% Zn, 6.9% Pb, 19.2 g/t Ag, 55.4 ppm Ge	<i>Deposit</i> 1967: Originally staked. 1999: Restaked. 2000: Discovery. 2001-2002: Drilling. 105K 089

