



Prairie Creek Mine, Northwest Territories

September 2012

www.canadianzinc.com

Forward-Looking Statements

Some of the statements in this presentation are forward-looking statements and as such are based on an assumed set of the geological and economic conditions and planned courses of action. These include estimates of mineral resources, future production levels and grades, expectations regarding mine production costs, expected trends in mineral prices and statements that describe Canadian Zinc Corporation's future plans, objectives or goals.

There is a significant risk that actual results will vary, perhaps materially, from results projected depending on such factors as changes in general economic conditions and financial markets, changes in prices for silver, zinc and lead metals, technological and operational hazards in mining and mine development activities, uncertainties inherent in the calculation of mineral reserves, mineral resources and metal recoveries, the timing and availability of financing, regulatory, governmental and other permitting approvals, labour relations and other risk factors listed from time to time in Canadian Zinc Corporation's Annual Information Form.

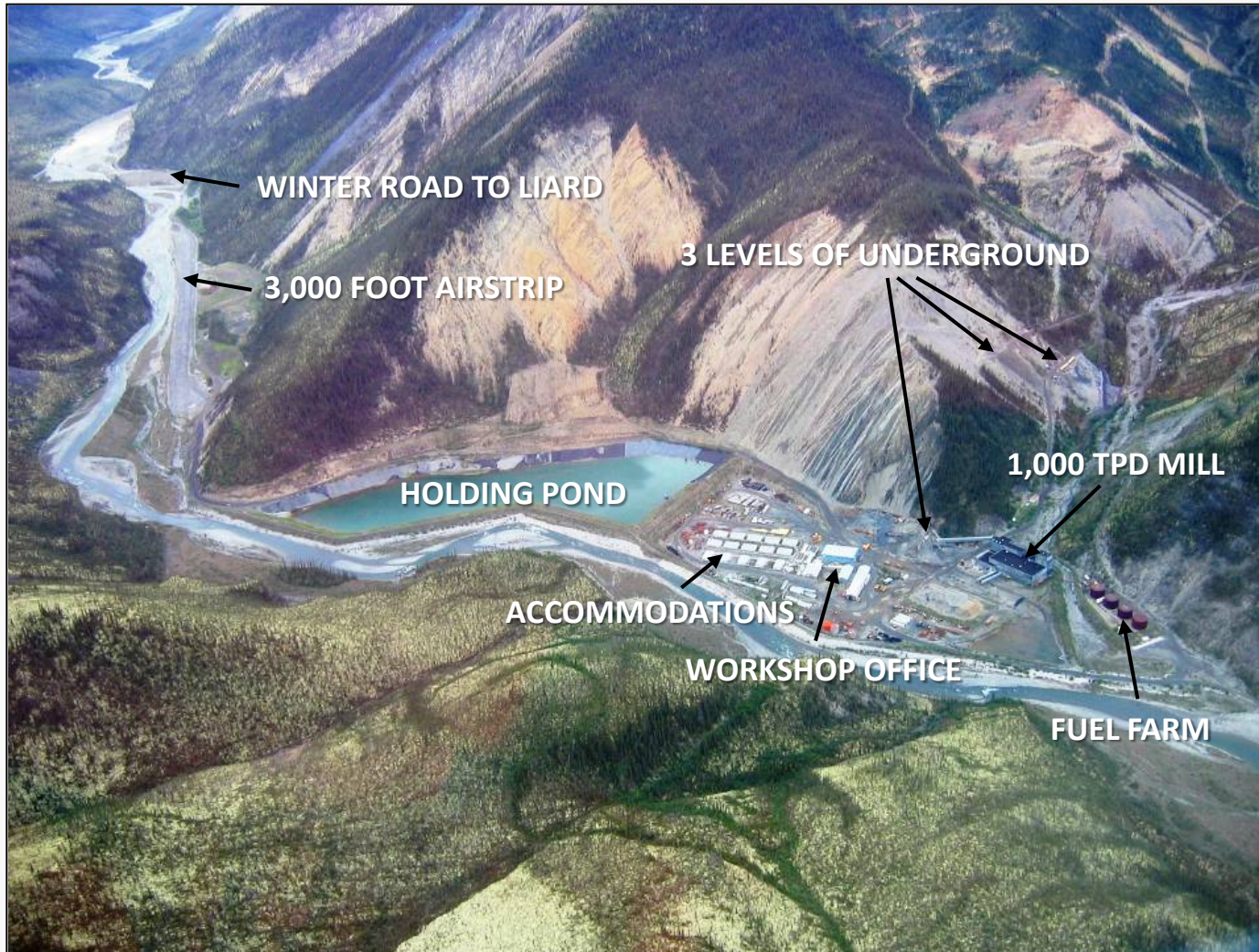
Canadian Zinc Corporation does NOT yet hold a permit for the operation of the Prairie Creek Mine.

Canadian Zinc Corporation (TSX:CZN)

Prairie Creek Highlights

- Canadian Zinc Corporation (“CZN”) owns 100% of the Prairie Creek Mine containing significant infrastructure valued at >\$200 million (current \$), including a 1,000 tpd mill, located in the Northwest Territories, Canada.
- Previously permitted operation, received positive Environmental Assessment now in final permitting phase with draft permit expected by year-end 2012.
- Recent completion of SNC-Lavalin Pre-Feasibility Study and AMC Mining Technical Report on Resources/Reserves includes:
 - Updated Resource Model and New Mining Reserves with reserves supporting an 11 year mine life.
 - Preliminary economic assessment suggests a pre-tax NPV₈ of \$253 million, IRR of 40.4%, Average annual EBIDTA of \$66 million and Payback Period of 3 years.
 - Proposed development timeline in tandem with permitting and start up in Q4 2014.
- One of the highest grade undeveloped silver-lead-zinc deposits in the world with significant exploration upside and potential for expanded production.

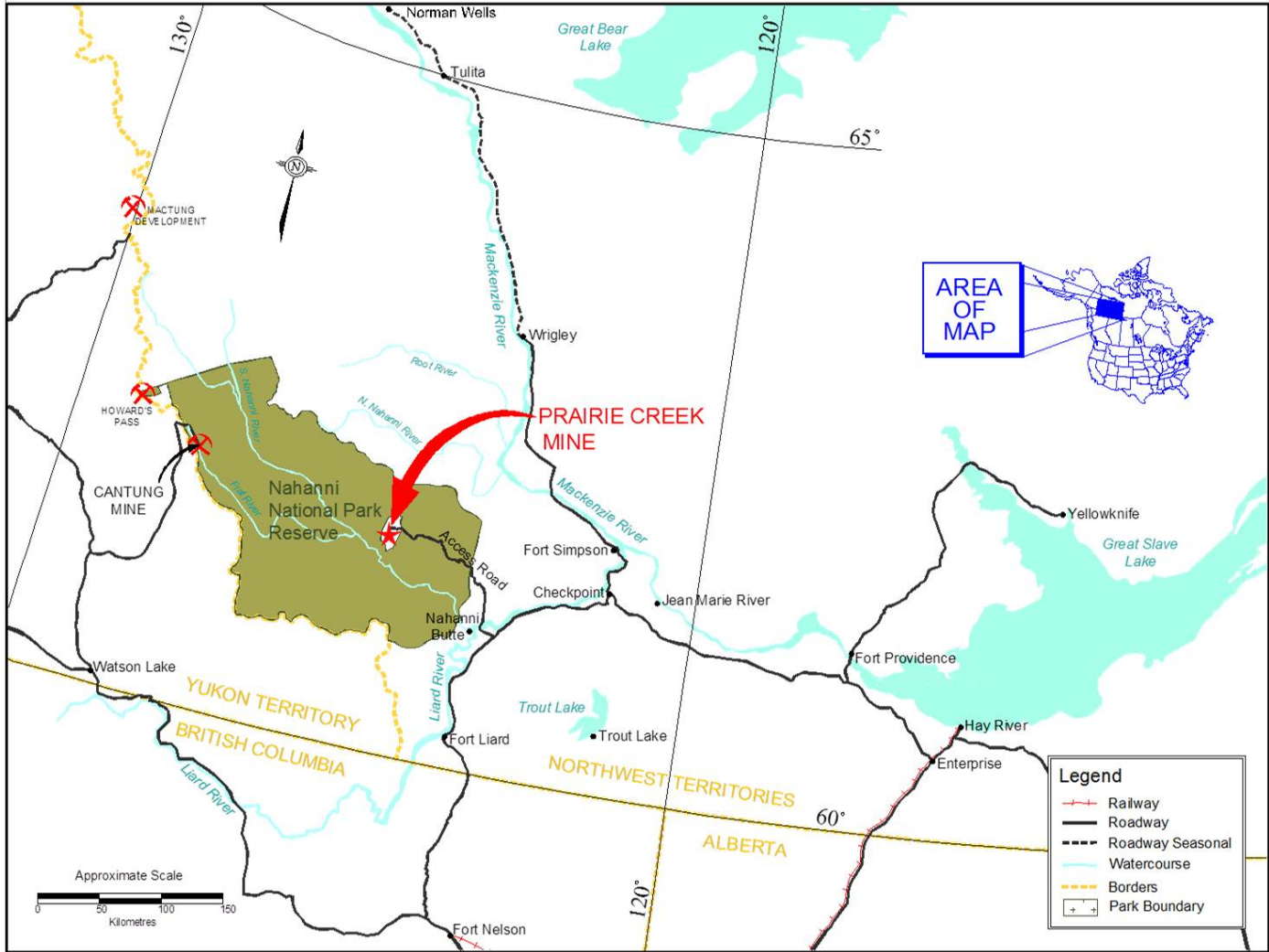
Prairie Creek Existing Infrastructure



Minesite Infrastructure valued at > \$200M



Prairie Creek Mine Location

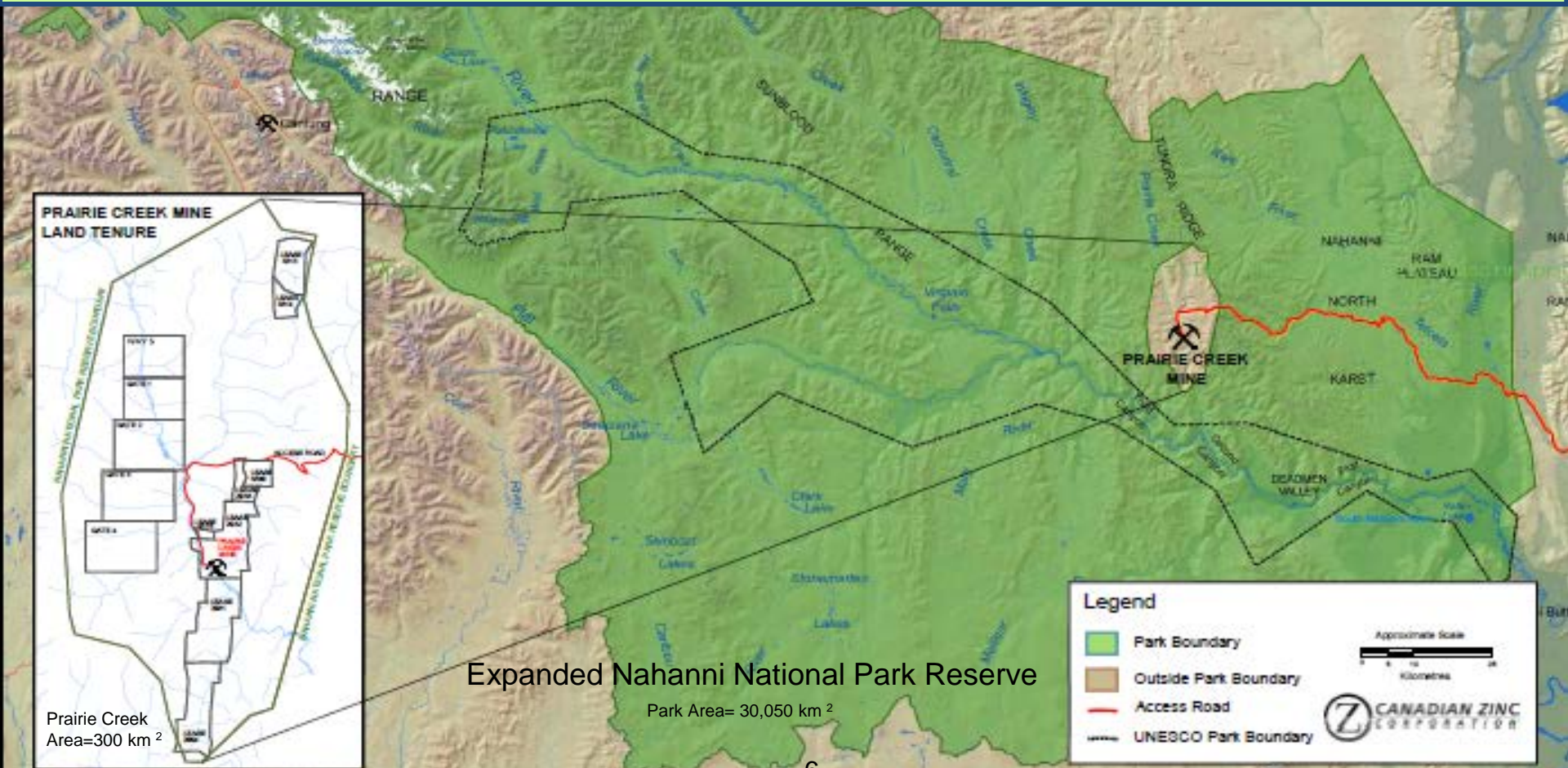


Nahanni National Park Reserve Expansion 2009

MEMORANDUM OF UNDERSTANDING WITH PARKS CANADA

Signed July 31, 2008 and Renewed March 5, 2012

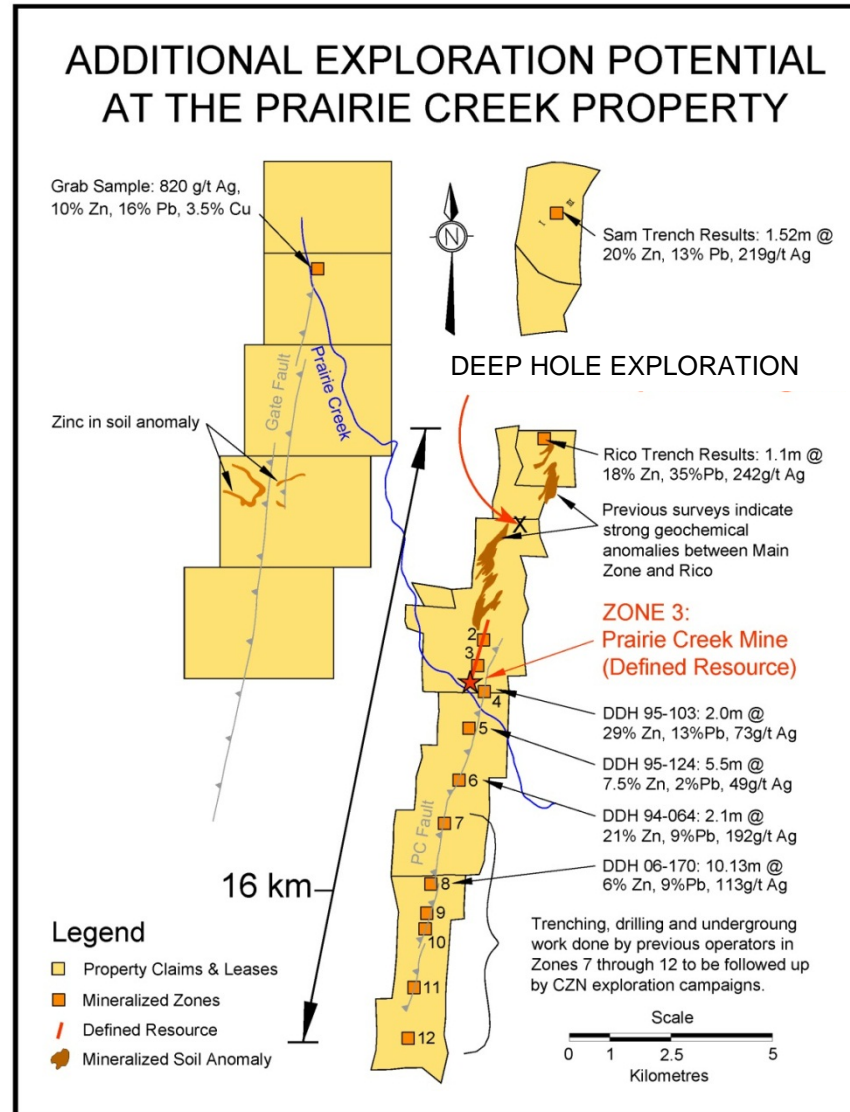
- Parks Canada and Canadian Zinc agree to work collaboratively, within their respective areas of responsibility, authority and jurisdiction, to achieve their respective goals of managing the Nahanni National Park (NNPR) and operating the Prairie Creek Mine.
 - The expanded NNPR excludes the Prairie Creek Mine and supports a balanced approach to resource development and conservation
 - In 2009, the Parks Act was amended solely for the NNPR and for the purpose of permitting access to the Prairie Creek Mine area.



Prairie Creek Exploration Potential

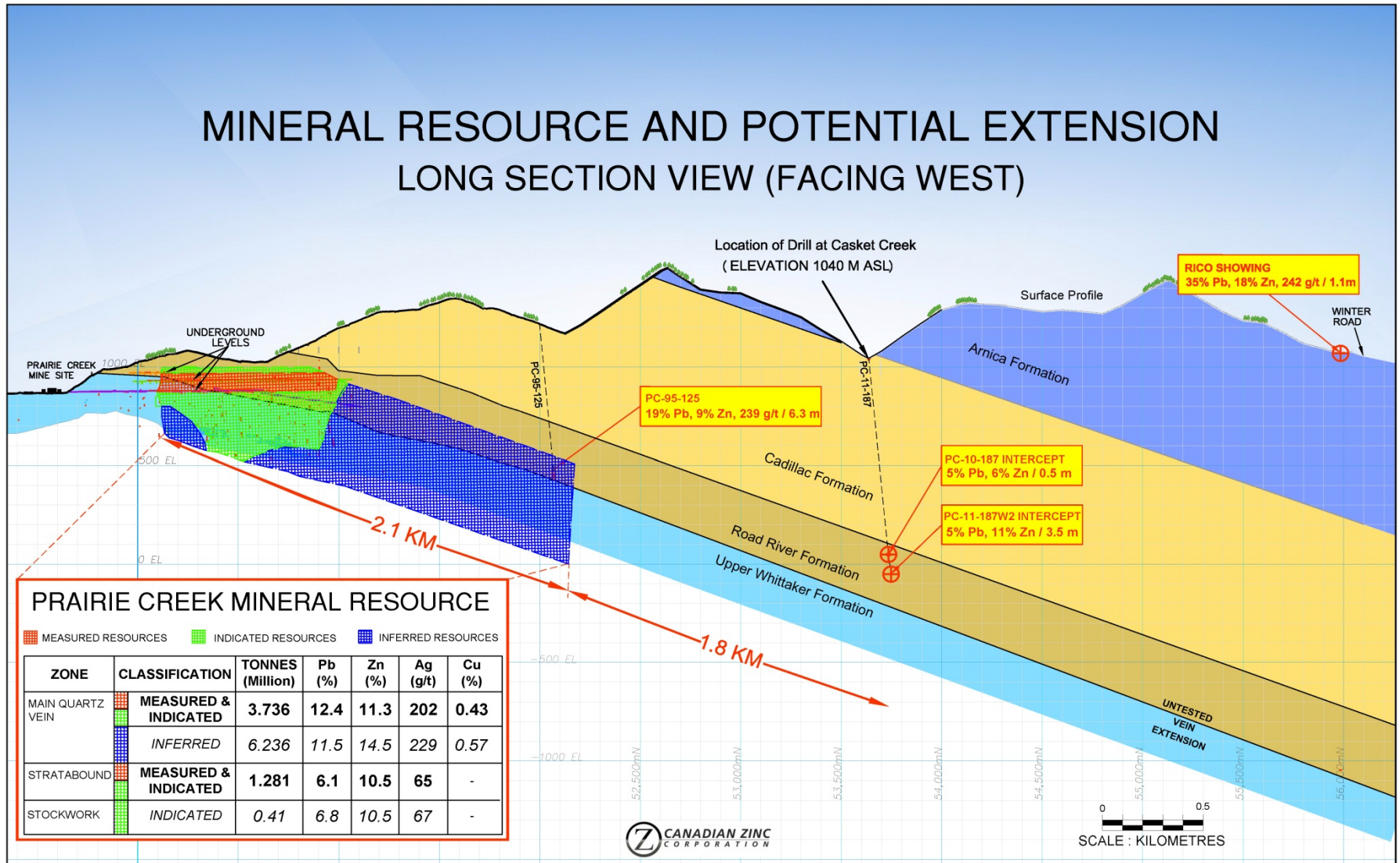
PRAIRIE CREEK PROPERTY TENURE:

- 1 Mining Claim
- 12 Mining Leases
- 2 Surface Leases
- Total 8,218 Ha.



Mineral Resource and 2012 Exploration Program

MINERAL RESOURCE AND POTENTIAL EXTENSION LONG SECTION VIEW (FACING WEST)



PRAIRIE CREEK MINERAL RESOURCE

MEASURED RESOURCES INDICATED RESOURCES INFERRED RESOURCES

ZONE	CLASSIFICATION	TONNES (Million)	Pb (%)	Zn (%)	Ag (g/t)	Cu (%)
MAIN QUARTZ VEIN	MEASURED & INDICATED	3.736	12.4	11.3	202	0.43
	INFERRED	6.236	11.5	14.5	229	0.57
STRATABOUND	MEASURED & INDICATED	1.281	6.1	10.5	65	-
STOCKWORK	INDICATED	0.41	6.8	10.5	67	-

Prairie Creek Mineral Resources and Reserves

Measured, Indicated and Inferred Resources
2011

Measured, Indicated and Inferred Resources
2012

Proven and Probable Mining Reserves
2012

Category	Tonnes	Zinc (%)	Lead (%)	Silver (g/t)
Measured	1,550,041	12.22	9.68	154.95
Indicated	4,290,288	10.16	9.98	163.34
Total	5,840,329	10.71	9.90	161.12
Inferred	5,541,576	13.53	11.43	214.80

Category	Tonnes	Zinc (%)	Lead (%)	Silver (g/t)
Measured	1,700,000	12.1	9.7	155
Indicated	3,731,000	10.2	10.5	162
Total	5,431,000	10.8	10.2	160
Inferred	6,239,000	14.5	11.5	229

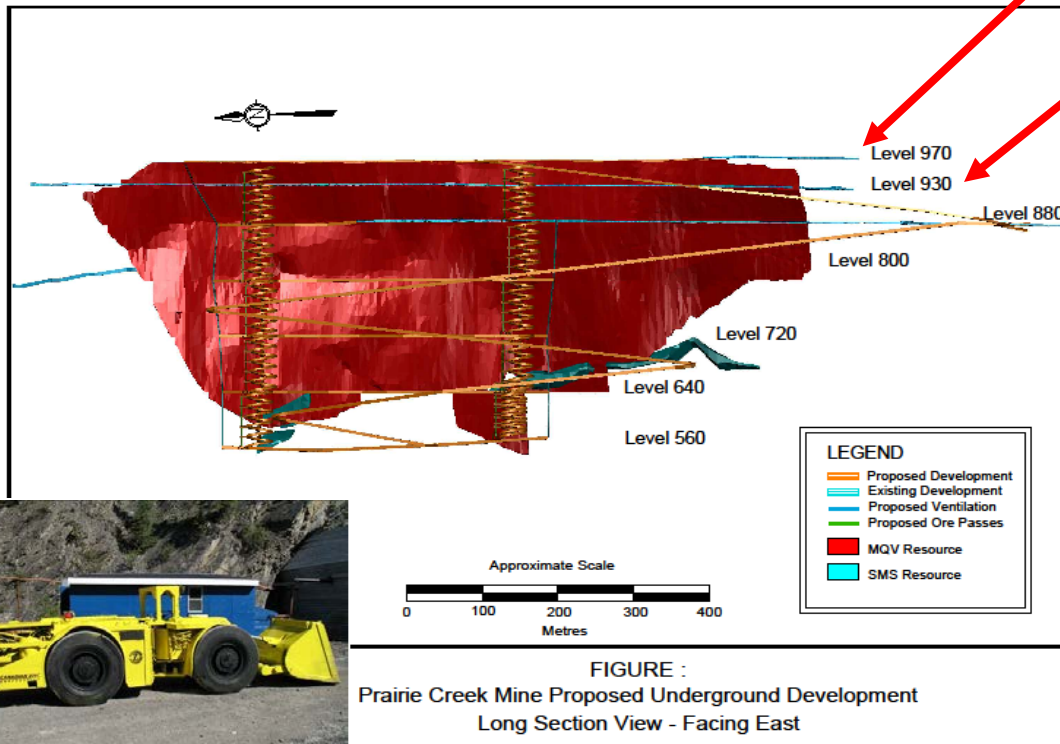
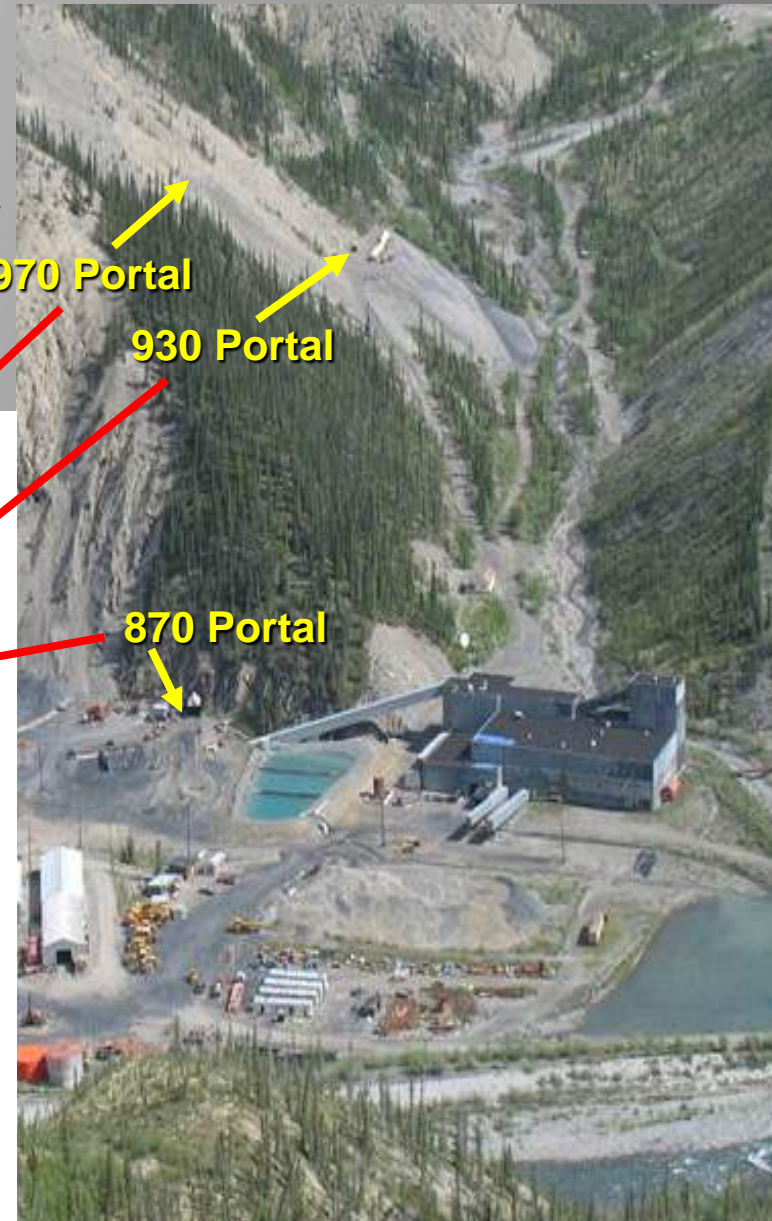
Category	Tonnes	Zinc (%)	Lead (%)	Silver (g/t)
QV - Proven	1,278,000	10.8	9.4	172
- Probable	3,140,000	8.7	10.5	165
- 2P	4,418,000	9.4	10.2	167
Stratabound - Probable	803,000	9.5	5.7	62
Total	5,222,000	9.4	9.5	151

- Excellent correlation with past estimate,
- Slight increase in combined resources,
- Independently verified by AMC,
- Significant upside with Inferred resources,
- 11 year project life based on M&I only.

- High degree of conversion from resources to reserves,
- 97% of M&I MQV Resources converted to Reserves,
- 57% of M&I SMS Resources converted to Reserves,
- Independently verified by AMC Mining Canada Ltd.

Prairie Creek Mine : Mining

- Mining rate: ~1,350 tonnes per day.
- 100% Underground cut-and-fill, utilizing paste backfill
- Mine life of 11 years based on Proven & Probable Reserves only
- Upgrading Inferred resources as mining progresses



Prairie Creek Mine : Milling

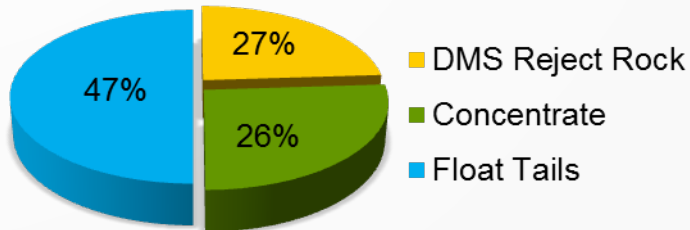


- DMS plant at front- end of mill removes ~27% of waste dilution
- Milling rate: ~1,000 tonnes per day, crush/grind/flotation
- Estimated recoveries: 75% for zinc, 88% for lead and 92% for silver
- Installation of paste backfill plant at back-end of mill
- Utilizes recirculated underground water from the Water Storage Pond

Innovative Waste Management

Waste Management

Prairie Creek Mine
Process Summary Per Tonne of
Mine Rock

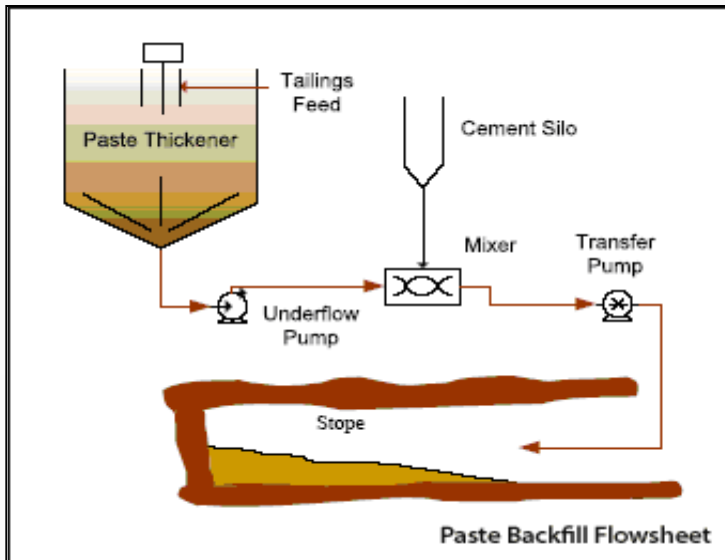


Approximately 27% of mine rock is removed from ore by the DMS Plant, reports either to Waste Rock Pile or Paste Backfill plant

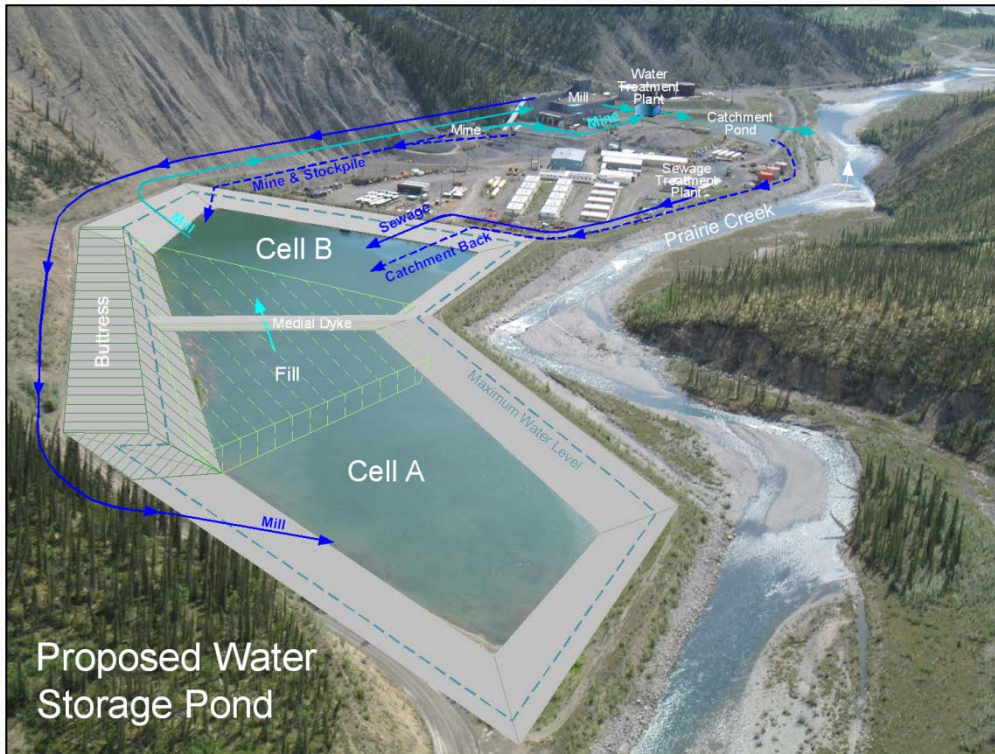
Waste rock is stored safely in waste rock storage area on surface, no ARD issues

100% of tailings are processed through the Paste Backfill plant and returned underground for final disposal

No tailings pond or mine legacy issues



Adaptive Water Management Plan



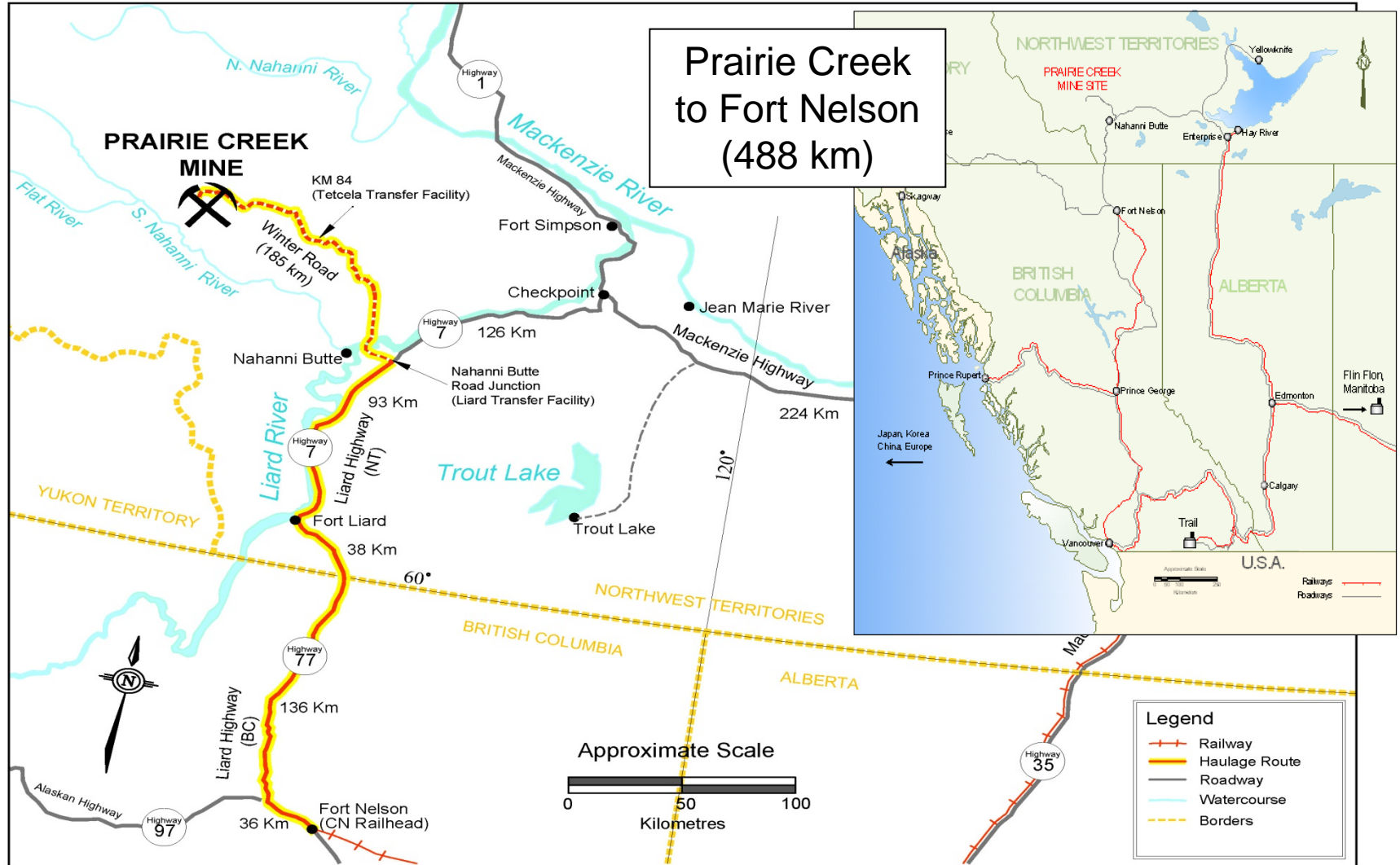
- Utilizes existing facilities
- Utilizes local mine water for process
- Recirculates process water
- Volume of treated effluent discharge is directly proportional to the volume of the receiving environment in order to Maintain balance to the ecosystem.



Local Winter Road Transport



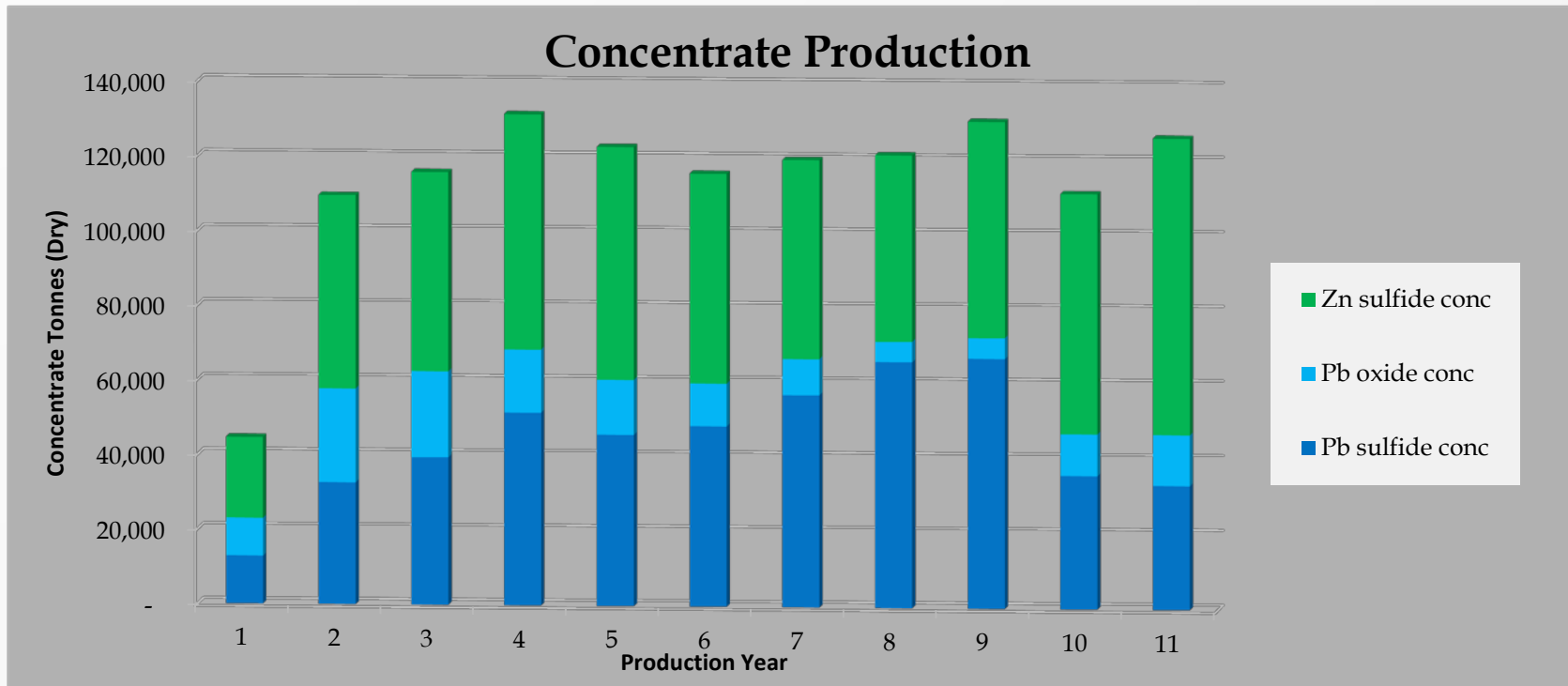
Regional Transport



Prairie Creek Pre-Feasibility Study – Transport

Expected Annual Concentrate and Metal Production

- (ZnS) with average annual production of **78 million lbs. zinc**
- (PbS+PbO) with average annual production of **93 million lbs. lead**
- Combined concentrates contain **2.2 million oz. silver**



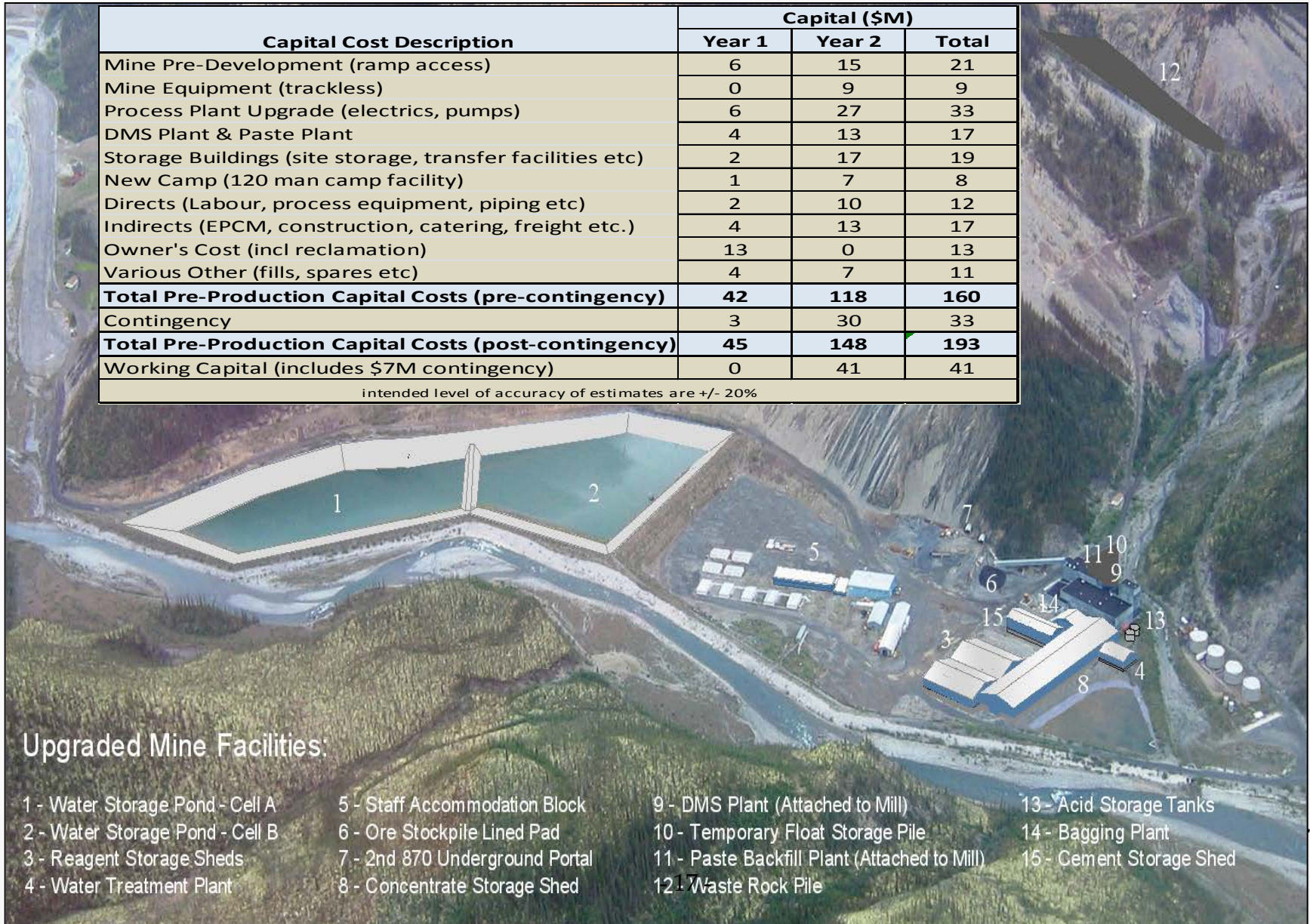
Prairie Creek Pre-Feasibility Study – Capital Costs

Capital Cost Description	Capital (\$M)		
	Year 1	Year 2	Total
Mine Pre-Development (ramp access)	6	15	21
Mine Equipment (trackless)	0	9	9
Process Plant Upgrade (electrics, pumps)	6	27	33
DMS Plant & Paste Plant	4	13	17
Storage Buildings (site storage, transfer facilities etc)	2	17	19
New Camp (120 man camp facility)	1	7	8
Directs (Labour, process equipment, piping etc)	2	10	12
Indirects (EPCM, construction, catering, freight etc.)	4	13	17
Owner's Cost (incl reclamation)	13	0	13
Various Other (fills, spares etc)	4	7	11
Total Pre-Production Capital Costs (pre-contingency)	42	118	160
Contingency	3	30	33
Total Pre-Production Capital Costs (post-contingency)	45	148	193
Working Capital (includes \$7M contingency)	0	41	41

intended level of accuracy of estimates are +/- 20%

Upgraded Mine Facilities:

- | | | | |
|---------------------------------|--------------------------------|--|--------------------------|
| 1 - Water Storage Pond - Cell A | 5 - Staff Accommodation Block | 9 - DMS Plant (Attached to Mill) | 13 - Acid Storage Tanks |
| 2 - Water Storage Pond - Cell B | 6 - Ore Stockpile Lined Pad | 10 - Temporary Float Storage Pile | 14 - Bagging Plant |
| 3 - Reagent Storage Sheds | 7 - 2nd 870 Underground Portal | 11 - Paste Backfill Plant (Attached to Mill) | 15 - Cement Storage Shed |
| 4 - Water Treatment Plant | 8 - Concentrate Storage Shed | 12 - Waste Rock Pile | |



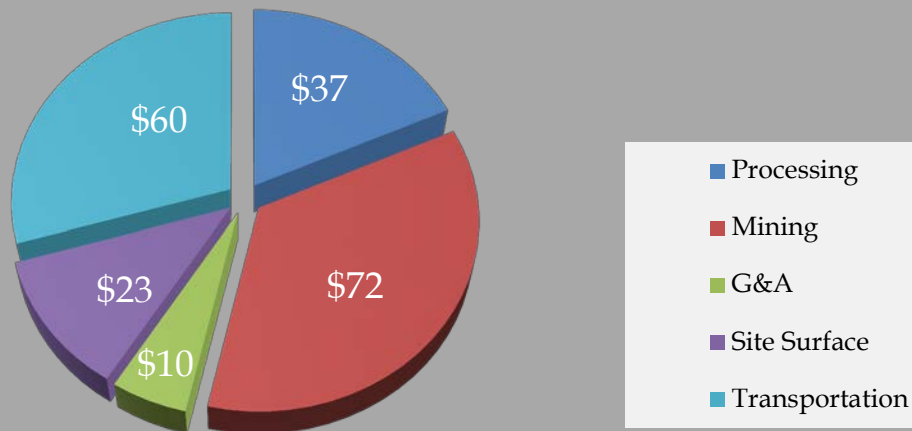
Prairie Creek Pre-Feasibility Study – Operating Costs & Metal Price Forecast

- Operating costs in a “typical” year
- Metal prices reflect consensus opinion of increasing lead and zinc prices in the medium term, declining to long term values

Transportation Costs (Winter Road Access)	
Annual Establishment of access road	\$4.3M
Annual Establishment of access road	\$1.4M
Annual Maintenance cost of access road	\$1.9M
Total Estimated trucking costs (to Fort Nelson)	\$115/t con
Total Estimated rail costs (Vancouver wharves)	\$100/t con

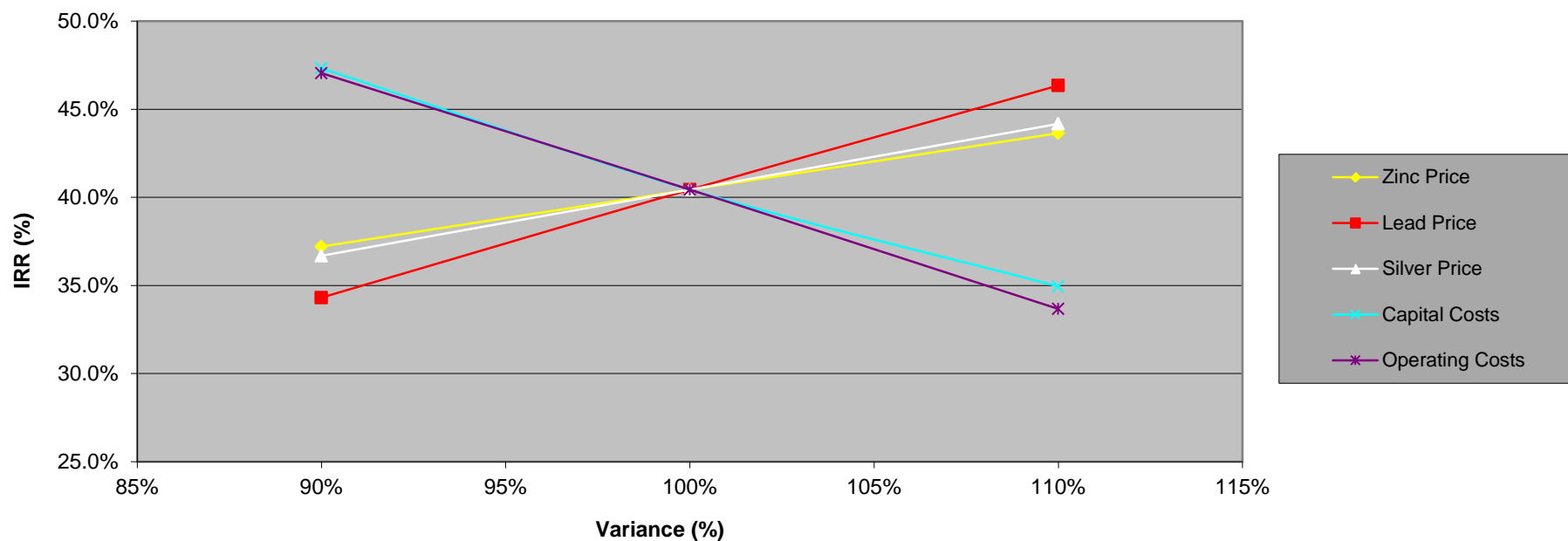
Base Metal Price Forecast (“Base Case”)			
	2014	2015	Long Term
Zinc (\$/lb)	\$1.20	\$1.20	\$1.00
Lead (\$/lb)	\$1.20	\$1.20	\$1.00
Silver (\$/oz)	\$28.00	\$28.00	\$26.00
C\$:US\$ exchange rate: C\$1/US\$			
Figures are estimated using Q2 2012 dollars			

Year 5 Operating Costs per Tonne Ore Mined



Prairie Creek Pre-Feasibility Study – Financial & Sensitivity Analysis

Sensitivity Chart



FINANCIAL ANALYSIS

Average annual EBITDA	\$66M
Pre-tax NPV @ 8% discount	\$253M
Pre-tax IRR	40.40%
Pre-tax payback period	3 years



First Nations Participation



Nahanni Butte (NDDB Band)

Nahanni Butte is the closest community to the mine (90 km) and is near the mine haulage route

Impact Benefits Agreements signed in 2011 support local First Nations Bands by enabling them to benefit and participate in an operating Prairie Creek Mine

Fort Simpson is located about 200 km from the mine and is the largest community in the Dehcho Region

Fort Simpson (LKFN Band)



Socio-Economic Agreement with GNWT

- CZN signed a Socio-Economic Agreement with the Government of the Northwest Territories in August 2011
- **Bob McLeod, Premier NWT, former Minister of Industry, Tourism and Investment:** “The signing of this Socio-Economic Agreement is a significant step in moving the process forward towards bringing the Prairie Creek Mine into operation, and that will translate into economic opportunities for Dehcho residents.”
- **Jackson Lafferty, Minister of Education, Culture and Employment:** “This is an excellent opportunity for Northerners to benefit from meaningful jobs and training, particularly in the Dehcho. I commend Canadian Zinc for their commitment to northerners and look forward to many job opportunities becoming available as a result of this project.”



Federal Government Provides \$3 Million for Aboriginal Training Initiatives for Prairie Creek Mine 2011-14



“MORE THAN A SILVER LINING” PARTNERSHIP INCLUDES:



Human Resources and Skills Development Canada



Canadian Northern Economic Development Agency

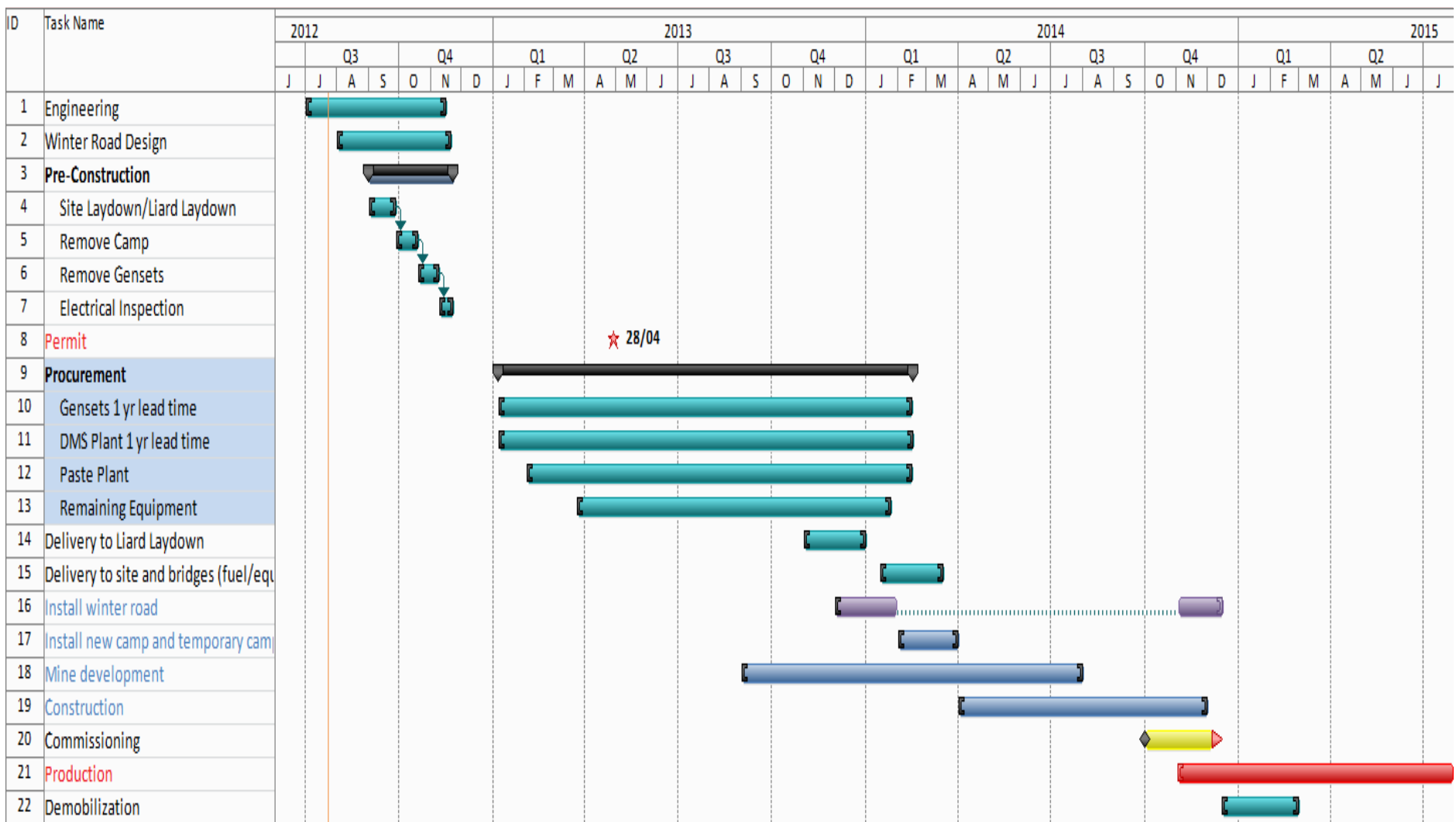


Mine Training Society
NORTHWEST TERRITORIES



AURORA
COLLEGE

Prairie Creek Proposed Development Program



Canadian Zinc Industry

Canadian zinc industry undergoing significant consolidation, indicating a hollowing out of TSX-listed zinc companies.

Major zinc mines expected to go offline in 2013-2015, analysts are expecting a zinc shortfall in 2013-2015.

Large zinc producers and smelters looking to secure additional supply of concentrates will have to consider acquisitions.

CZN is a junior zinc-lead company with significant advantages:

- High grade Zn-Pb-Ag resource
- Stable mining jurisdiction
- Established infrastructure



Canadian Zinc Industry

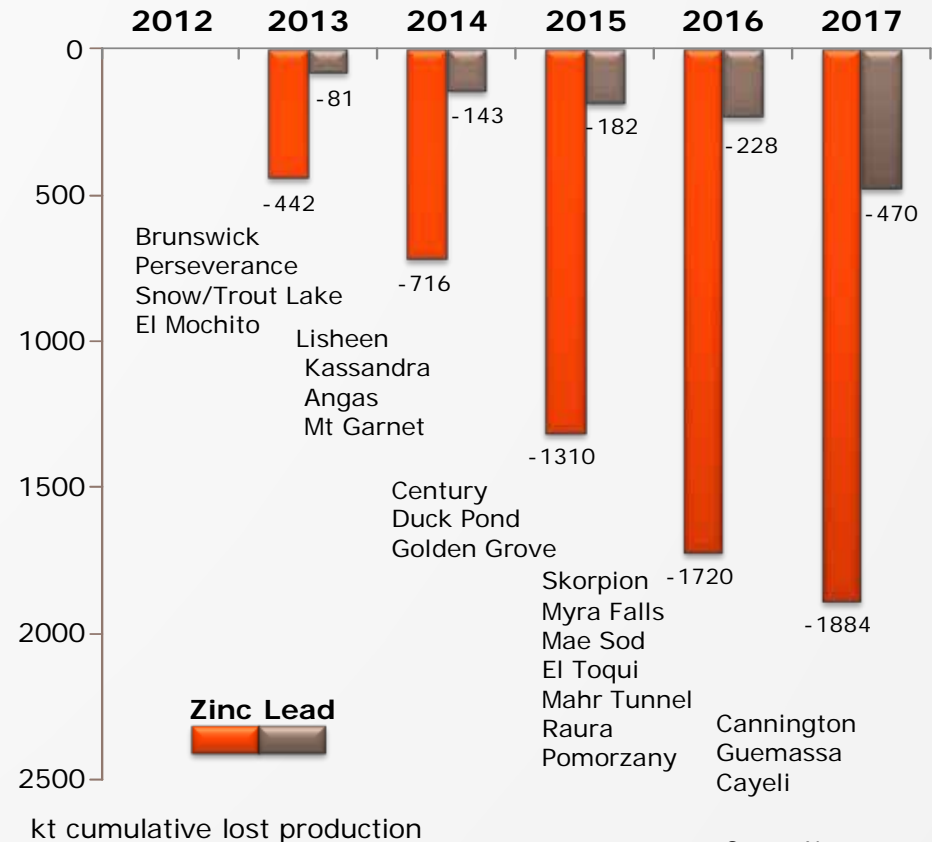
Several zinc and lead mines are expected to close as reserves become depleted

- Capacity closures by 2017:
 - Zinc: 1.9Mt
 - Lead: 0.5Mt
- New projects by 2017:
 - Zinc: 800kt
 - Lead: 150kt

CZN is one of a few remaining junior zinc companies

- Significant high grade reserve
- Stable mining jurisdiction
- Established infrastructure

Expected zinc and lead mine closures



Source: Xstrata

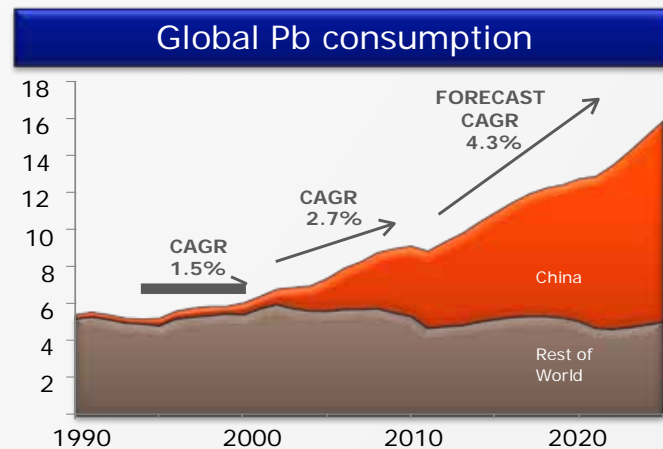
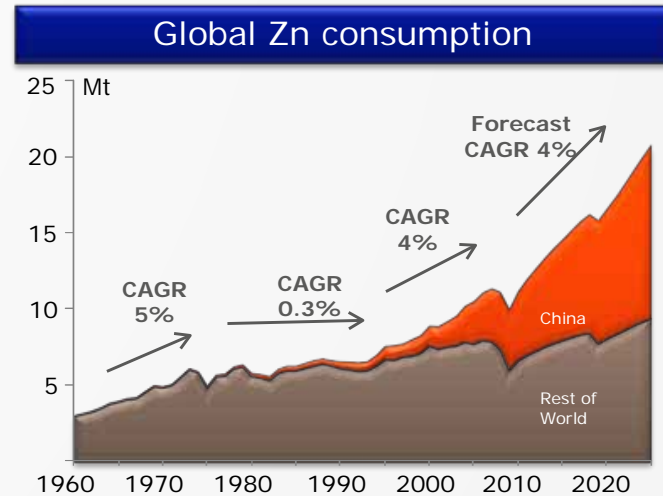
Strong Demand for Zinc and Lead

Global zinc demand to grow ~4% in coming years, driven by strong demand in the developing countries

- 5.8% annually in developing countries
- 1.5% annually in mature economies

Global lead demand also set for strong growth

- Growth rate of more than 4% driven by China and other developing countries
- Strong growth in lead-acid batteries (~80% of total lead consumption) driven by robust output of cars, e-bikes, motorbikes as well as by the large replacement sectors of these vehicles



Source: Xstrata

Directors and Management

Directors

John F. Kearney — Chairman, President & CEO: 35 years of experience in the mining industry worldwide. Currently also Chairman of Labrador Iron Mines and other companies and past president of the NWT & Nunavut Chamber of Mines.

Alan Taylor – Director, COO & VP Exploration: 25 years of mineral exploration experience formerly president of San Andreas Resources responsible for the significant increase in resources.

Brian Atkins – Director: Former partner with KPMG Chartered Accounts.

John A. MacPherson – Director: Founding Chairman of Canadian Zinc Corp., active in public markets, corporate finance and corporate development for over 30 years.

Dave Nickerson – Director: Former MLA and Minister of Health and Social Services of the Northwest Territories, also served as Chairman of the NWT Water Board.

Management

Trevor Cunningham – CFO, VP Finance and Corporate Secretary: Certified Management Accountant having experience with a number of other mineral resource companies.

David Harpley – VP Environmental Affairs: + 25 years experience as a hydrogeologist/environmental manager focused on mine permitting, closure issues, drainage strategies and water management.

Steve Dawson – VP Corporate Development: + 20 years experience as an exploration geologist, journalist and IR executive.

Joseph Lanzon – VP Corporate Affairs: + 20 years of experience in governmental affairs and in developing community partnerships with natural resource companies.

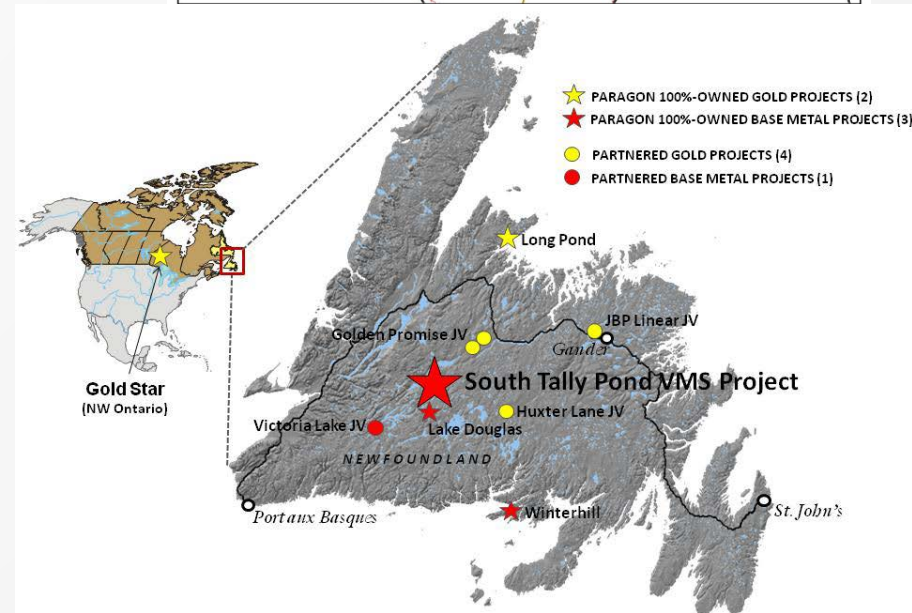
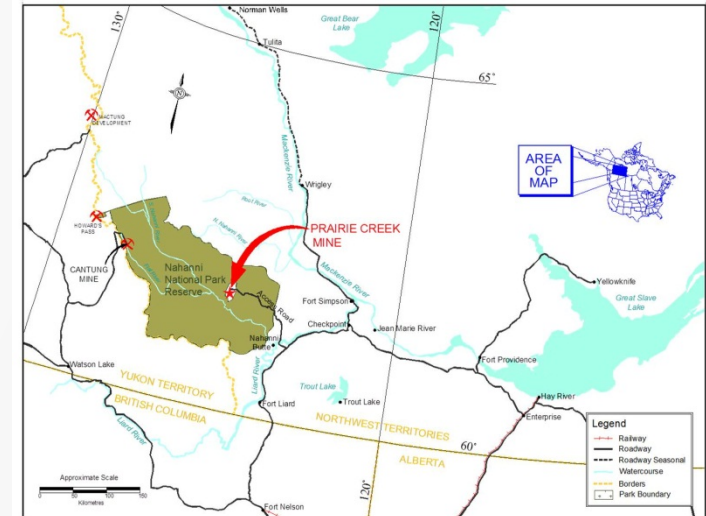
Chris Reeves – General Manager: +15 years experience in Regulatory Processes, Human Resources & Mine Training Programs and Environmental Monitoring.

Wilbert Antoine –Manager, Northern Development: + 30 years in the mining industry in operations and management positions.

Proposed Acquisition of Paragon Minerals

Acquisition Highlights

- Creation of a premier exploration and development company with 11 base and precious metals projects in established mining jurisdictions in Canada including the high grade the Prairie Creek Ag-Pb-Zn and South Tally Pond Zn-Cu VMS projects.
- The combined company will be better positioned to expand the current VMS resource and advance the South Tally Pond Project through feasibility studies.
- Provides Canadian Zinc entry into a well established mining district with significant potential for resource growth.
- Increased diversification across projects for Canadian Zinc and Paragon shareholders.
- Enhanced capital markets profile of the combined company.



Paragon Minerals – South Tally Pond Project

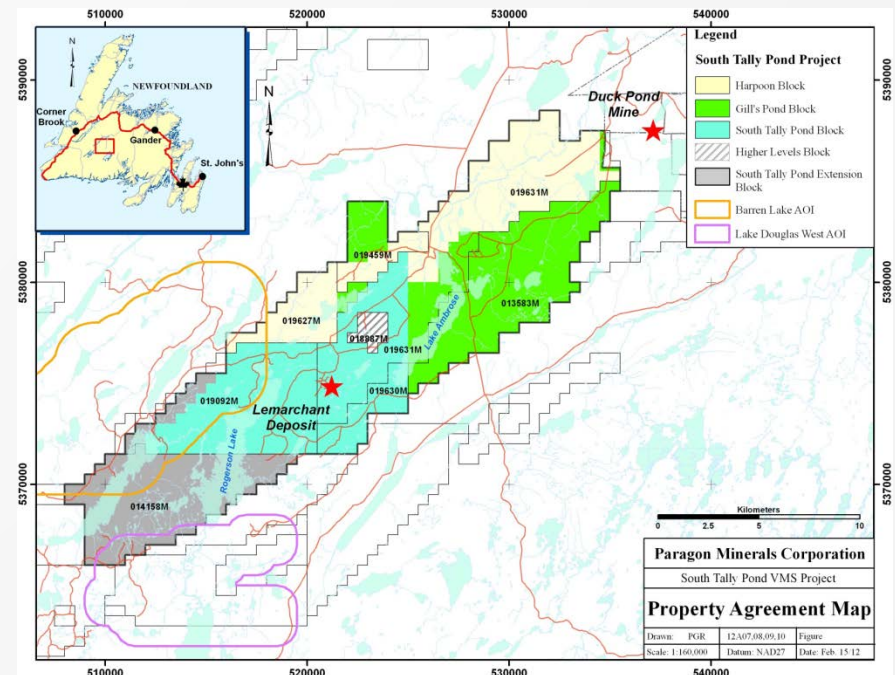
South Tally Pond – Lemarchant Deposit

A 261 km² property, along strike and southwest of the Duck Pond Mine.

Drilling concentrated in the Lemarchant area (20 km southwest of Duck Pond) which hosts a semi-massive to massive, precious metal-rich, zinc-copper-lead massive sulphide deposit.

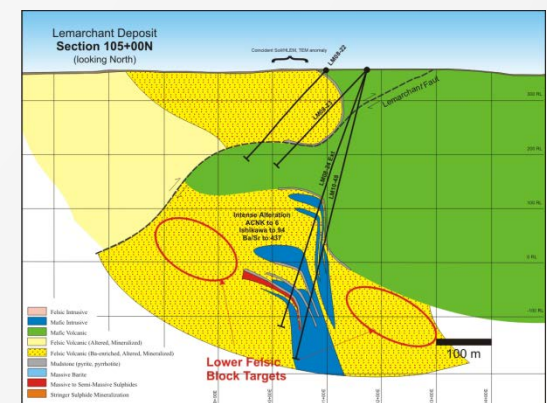
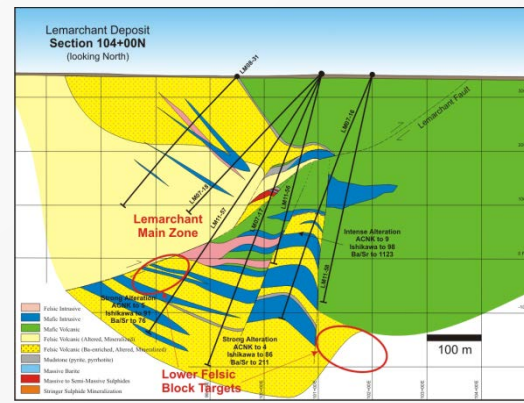
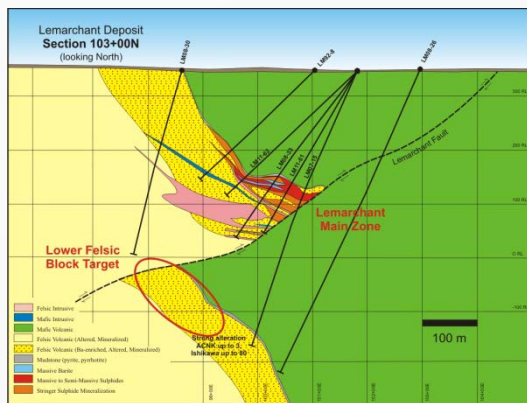
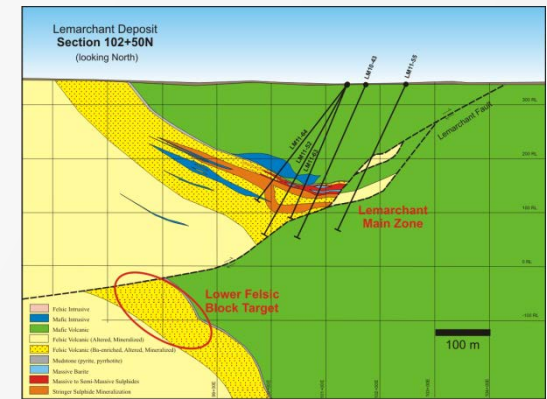
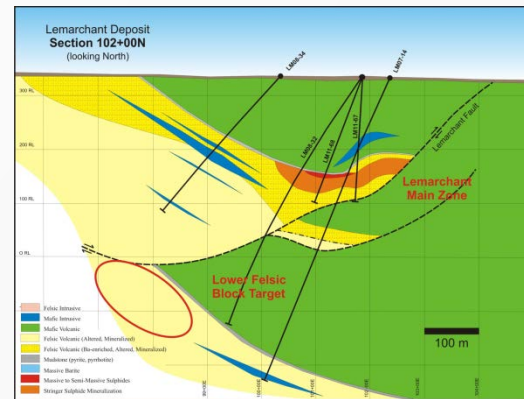
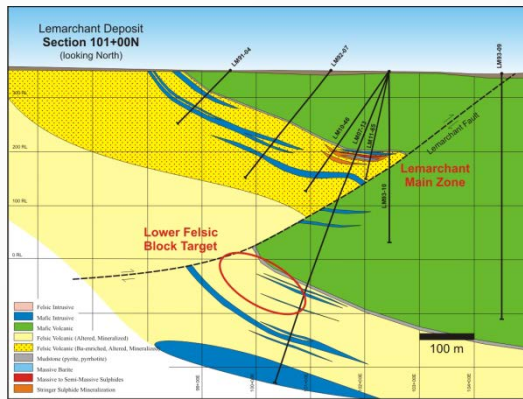
- Indicated Mineral Resource: **1.24 Mt @ 5.38% Zn, 0.58% Cu, 1.19% Pb, 1.01 g/t Au and 59.17 g/t Ag (15.40% ZnEQ).**
- Inferred Mineral Resource: **1.34 Mt @ 3.70% Zn, 0.41% Cu, 0.86% Pb, 1.00 g/t Au and 50.41 g/t Ag (11.97% ZnEQ).**

Several other targets at South Tally Pond remain untested.



Lemarchant Deposit – Room for Expansion

Lemarchant Deposit is defined to a vertical depth of 210 metres and remains open at depth and along strike



Capitalization Summary: CZN

- Symbol: TSX:CZN, OTCQB:CZICF
- Shares Outstanding, (Fully Diluted): 156.7M, (175.5M)
- Current Price, (52-Week High-Low): \$0.475, (\$0.87 - \$0.34)
- Market Capitalization (08/31/12): \$ 74.9M
- Cash & Short Term Investments (06/30/12): \$ 13.0M, No Debt
- Marketable Securities (VGM shares) (08/31/12): \$ 6.8M
- Analyst Coverage (report date, 12 month target price):
 - Canaccord: Orest Wowkodaw (March 2012- \$1.50; June-\$0.80)
 - Cormark: Cliff Hale-Sanders (Jan. 2012- \$1.40, June-\$1.00)
 - Mackie: Matt O'Keefe (Aug. 2012 - \$1.00)
 - Northern: Matthew Zylstra (April 2011- \$1.80)
 - Octagon: (Oct. 2011- \$1.75)
- Major Shareholders:
 - Sprott Asset Management (9.8%), Shandong Zhongrun Investment Holding (9.6%), Management & Insiders (2.0%)





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