



Parent Company of Canadian Zinc

March 3, 2021

Kimberly Murray
Regulatory Specialist
Mackenzie Valley Land and Water Board
7th Floor, 4922 48th St.
PO Box 2130
Yellowknife, NT
X1A 2P6

Jonathan Tsetso
Nahanni National Park Reserve
Parks Canada
PO Box 348
Fort Simpson NT
X0E 0N0

Dear Ms. Murray and Mr. Tsetso:

Re: **Independent Technical Review Panel, Member Replacement
Prairie Creek Mine All Season Road, MV/PC2014F0013, MV/PC2014L8-0006**

Current Panel member David Watt recently took up a position with Allnorth. To avoid any future potential conflict of interest, we are proposing to replace David with a new member.

Lee Deslauriers is being proposed by the Panel and Canadian Zinc as David's replacement. We believe Lee has comparable experience, which includes traffic management. CV's for both David and Lee are attached.

If Lee's appointment is approved by the Board and Parks, the Panel's Terms of Reference will be updated to reflect the new member.

We look forward to your decision.

Sincerely,
CANADIAN ZINC CORPORATION

David P. Harpley
VP Permitting

Lee Deslauriers
StoneCroft Engineering Ltd.
2218-B Airport Drive, Campbell River, BC, V9H 0E2
c. 250.203.4900 | lee@stonecroftengineering.ca



Ernest Kragt
Road Project Director - NorZinc
650 West Georgia Street, Suite 1710, Vancouver, BC, V6B 4N9

February 11, 2021

Dear Ernest,

Please accept this cover letter, resume and supporting documents in response to your request for qualifications for **Transportation Specialist** as a member of the Technical Panel for the Prairie Creek ASR Project. This letter briefly outlines how my diverse background in design, construction, operations and management of resource roads and structures from both a forestry and mining perspective makes me uniquely qualified for this position.

I am a senior Professional Engineer (BC/Yukon) and Registered Professional Forester (BC) with a degree in Forest Operations and Forest Engineering from UBC and over 25 years in the natural resources sector. I have a diverse background having worked in industry, government, consulting and as an auditor. I've designed, inspected, and/or overseen construction of over 1000 major structures and hundreds of kilometers of technical resource roads, bringing a focus on safety, cultural interests, environmental stewardship, practicality, economy and operational efficiency. I have experience with the most challenging resource access projects in steep and remote terrain and in many different geographic areas of Western Canada.

My experience has its foundations in the coastal BC forest industry where controlling road costs are a primary focus for the operability of a development. I have since completed extensive work in other sectors such as power and mining. I'd like to highlight a few examples for you that are particularly relevant. As the road and bridge design consultant for the Cape Scott Wind Farm access roads, I completed preliminary reconnaissance and ground truthing, locating and designing over 30 major stream crossing structures, and designed over 30km of road for accessing 52 wind turbines in a challenging and environmentally sensitive area adjacent to Cape Scott Provincial Park on Northern Vancouver Island. With over 8 years as a specialist Road and Structure Auditor for the BC Forest Practices Board (FPB), I function as an independent and objective auditor; considering safety, operability, compliance with legislation, professional practice standards, sediment and erosion control. I participated in the FPB Special Investigations on Bridge Planning, Design and Construction in 2013 and 2019. In addition to my work experience, I also volunteer as a former Chair of the Engineers and Geoscientists in the Resource Sector Division of EGBC and with the Joint Practices Board of EGBC/ABCFFP. In 2020, I co-authored the *Guidelines for Professional Services in the Forest Sector – Crossings (Version 3)* that are mandatory throughout British Columbia, are relevant to NWT projects and are designed to be consistent with the *BCFS Engineering Manual*.

Thank you for reviewing this application. If successful, I would look forward to building a productive working relationship with NorZinc. I will seek to obtain my PEng designation in Northwest Territories as soon as possible. Please let me know if you have any questions or would like to discuss anything in regard to my application.

Respectfully submitted,

A handwritten signature in blue ink that reads "Lee Deslauriers".

Lee Deslauriers, PEng, RPF
Principal & Managing Engineer
Enclosures: Resume, References and Technical Road Design Examples

Lee Deslauriers, PEng, RPF

StoneCroft Engineering Ltd.

2218-B Airport Drive, Campbell River, BC, V9H 0E2

Phone: 778.346.1818 (Office), 250.203.4900 (Cellular), Email: lee@stonecroftengineering.ca

Professional Experience

Principal & Managing Engineer, StoneCroft Engineering Ltd, Campbell River (April 2006 – Present)

- Operations management, crew supervision and professional mentoring, quality control, client development, project management, human resources management
- Design of engineered stream crossing structures on resource roads, including major bridges, culverts, embedded fish passage culverts and open-bottom arches
- Design of steep, technical resource roads, retaining walls, engineered rock cuts/ fills and earthworks
- On site construction engineer for over 100 major stream crossings, with a thorough working knowledge of bridge installation processes, site preparation, launching girders, bridge assembly, addressing remote installation constraints/issues and sawyer for technical log crib / bridge building
- Design of dryland log sort yards and camp-run log dumps with fixed and floating skidways, fixed and live A-frame structures and carriages for watering and dewatering log bundles, “direct to barge” log transfer facilities and booming grounds
- Design of barge grids, walkways, ramps, floats and breakwaters, various light civil projects
- Design of parks and recreational structures including cable cars and foot bridges
- Hydrologic and hydraulic analysis of stream crossing structures
- Using available Climate Tools to predict effects of various future climate change scenarios on design peak flows and sensitivity analysis
- River engineering and training works for protection of infrastructure, water quality and fish habitat
- Detailed construction cost estimation of multiple design options
- Project management and supervision of major construction contracts >\$2M
- Preparation of *Construction Assurance Statements* and *Record Drawings* as Engineer of Record (POR)
- Detailed structural inspections and load ratings of resource bridges
- Load ratings of log stringer bridges, consistent with Canadian Highway Bridge Design Code (CAN/CSA-S6) and Engineering Design in Wood (CAN/CSA-086)
- Specialist Road and Bridge auditor for Forest Practices Board of BC (2013-present)
- Work with clients to manage safety, structural, environmental and maintenance risks to their infrastructure. Develop detailed maintenance and replacement plans on a priority basis.
- Appraisals and valuation of resource roads and bridges
- Detailed road and bridge deactivation plans
- Total Station and Real-Time Kinematic (RTK) GNSS site surveys and construction layout
- Design and drafting using *AutoCAD Civil 3D* software
- Maintenance and structural repairs on bridges

Practices Forester (Engineering), BC Timber Sales, Seaward Business Area, Port McNeill (2004-2006)

- Administered contracts and directed the work of professional service consultants and multi-phase area development contractors
- Field reconnaissance and evaluation of road access and logging chance for Timber Sale operating areas
- Bridge site surveys using a total station, bridge inspections
- Bridge, road and log dump conceptual designs, hydraulic calculations for design peak flows
- Bridge construction supervision, road construction supervision and measure-up for contract payment
- Phase costing analysis of all planning, road, and bridge construction, harvesting, transportation and delivery to market, projecting estimated revenues using log market values to determine profitability of operations
- First Aid Attendant (OFA Level 3), Occupational Health and Safety, Ecosystem-Based Management and Environmental Management System Committees

Compliance & Enforcement Technician, Ministry of Forests and Range, Port McNeill (2003–2004)

- Harvesting, road, and bridge construction compliance inspections for major licensees
- Investigations for cedar log theft on the central coast, preparation of evidence for Crown Counsel

Owner, Consulting Forest Engineer, Quatsino Sound Contracting, Port McNeill / Powell River, (2000-2003)

- Layout, survey, and design of roads and cut blocks for conventional and helicopter harvesting, timber cruising, bridge inspections, *GPS* surveys. Coordinated and assisted with various professional assessments.

Summer Student, MacMillan Bloedel Ltd., Port McNeill Division (1998)

- Assisted with layout and design of forest roads and cut blocks, silviculture surveys

Summer Student, Ministry of Forests, Small Business Forest Enterprise Program, Port McNeill (1995-1997)

- Assisted with layout and design of forest roads and cut blocks, silviculture surveys

Professional Association Memberships

- Professional Engineer (#32053), Engineers and Geoscientists BC (EGBC)
- Professional Engineer (#2746), Engineers Yukon
- Registered Professional Forester (#4154), Association of BC Forest Professionals (ABCFFP)
- Engineers and Geoscientists in the Resource Sector Division of EGBC

Education History

- Exchange abroad (Engineering), University of Stellenbosch, South Africa (2002)
- ***Bachelor of Science Degree (Forest Operations and Forest Engineering)***, University of British Columbia (2001)
- Exchange abroad (Forest Engineering), University of Canterbury, Christchurch, New Zealand (1999)
- Maxwell Ralph Jacobs Award, Institute of Foresters of Australia / New Zealand School of Forestry (1999)

Appointments, Technical Presentations and Volunteer Experience

- Joint Practices Board of ABCFP/ EGBC, Crossings Task Force and Co-Author of *“Guidelines for Professional Services in the Forest Sector – Crossings Version 3”*, (2016-2021)
- Presented: Professional Practice Guidelines - Professional Services in the Forest Sector: Crossings (Version 3.0), What You Need to Know as a Forest Professional, for ABCFP Virtual Annual Conference February 2021
- Presented: Designing Resource Road Stream Crossings Considering Climate Change - Case Studies from Coastal BC, for FPInnovations in a webinar series on Climate Change and Resource Infrastructure, Jan 2021
- Co-Author: *Field Assessment of Two Coatings for Corrugated Steel Pipes: Galvanized and Aluminized Type 2*, FPInnovations, January 2020
- Presented: *“Pipestem PS14, Road Design and Construction Review”* to 2018 MFLNRORD Coast Engineering Planning Meeting, Nanaimo
- Past Chair (2017-2018) – Engineers and Geoscientists in the Resource Sector Division of EGBC
- Chair (2016-2017) – Engineers and Geoscientists in the Resource Sector Division of EGBC
- AGM Coordinator (2015-2016) – Engineers and Geoscientists in the Resource Sector Division of EGBC
- Vice-Chair (2014-2015) – Engineers and Geoscientists in the Resource Sector Division of EGBC
- Specialist Road and Structure Auditor, BC Forest Practices Board (2013-Present), took part in 2013 and 2019 Special Investigations on *Bridge Planning, Design and Construction*.
- Presented: *“Design Flood Hydrology in the Resource Industry – Review of Current Practice”* at APEGBC Professional Development Event in Richmond, 2017
- Presented: *“Resource Industry Crossing Structure Resilience in the Context of Climate Change”* at APEGBC Professional Development Event: in Richmond, 2017
- Presented: *“Matsiu Creek: A Case Study on the Large-Scale, Long Runout Landslides and how Better Operational Planning Can Manage the Risks”* at APEGBC Annual Conference, Victoria, 2016
- Co-Host, *FP Innovations Field Tour of Embedded and Arch Culverts*, Powell River, 2015
- Presented: *“Bridge Designs and Maintenance for Managing Sediment”* at Western Forest Products’ Annual Planning Meeting in Campbell River, 2012

- Presented: *“Design Concepts for Mitigating Environmental Impacts from Coastal Log Dumps”* at APEGBC Conference in Victoria, 2009
- Delivered training: *“Introduction to Forest Bridges and Bridge Inspections”* to WFP Holberg Operation, 2008
- Presented: *“Techniques for Improving Safety on Steep Roads”* at FORREX *“Strategies to Improve the Safety and Competitiveness of Coastal Forest Operations”*, Campbell River, 2006
- Team Leader/ Patroller, Mount Cain Volunteer Ski Patrol, 2002-2020

Training and Certifications

Technical Training

- Climate Change and Crossing Design (FPInnovations)
- Real-Time Kinematic (RTK) GNSS surveying
- Construction Contract Management (APEGBC)
- Hydrologic and Hydraulic Design of Culverts (EGBC)
- Geosynthetic Reinforced Soil (APEGBC)
- Retaining Wall Design and Rehabilitation (EPIC)
- Geotechnical Engineering and Resource Road Workshop (EPIC)
- Fluvial Geomorphology (APEGBC)
- Design and Construction of Rock Protection in Stream Channels (APEGBC)
- Advanced Professional Reliance in Natural Resource Sector (ABC FP)
- Buried Structures Seminar (Armtec)
- AutoCAD Civil 3D Design and Drafting
- RoadEng Civil Design (Softree)
- Innovative Bridge Designs (US GeoBridge)
- Environmental Management Systems Level 2
- Ecosystem-Based Management (CFCI)

- Species at Risk (MFLNRO)
- Archaeological and Culturally Modified Tree Inventory Training (RISC)

Safety / First Aid Training

- Resource Road Light Truck Driver Safety Training
- Incident Investigations 1 (WorkSafe BC)
- Outdoor Emergency Care (OEC) First Aid, US National Ski Patrol (2010-2020)
- OFA Level 1 First Aid and Transportation Endorsement (WorkSafe BC)
- Industrial Fall Protection and Rescue
- Restricted Radio Operators Certificate
- Occupational Health and Safety
- Helicopter Safety
- Industrial ATV Rider Safety Course
- Avalanche Awareness (WorkSafe BC)
- Avalanche Skills Training Level 2 (Avalanche Canada)
- Crew Boat Operator Safety (MED A3)
- Aircraft Ditching, Underwater Egress & Sea Survival Course (Pro Aviation Safety)
- Chainsaw Operator Safety (WorkSafe BC)

DAVID J. WATT, R.P.F

3814 Barnes Drive
Prince George, B.C., V2N 0G3
Home Telephone: 250-964-4421
Cell Phone: 250-640-1899
Email: d.watt1@telus.net

WORK EXPERIENCE:

WOODLANDS MANAGER

May 2001 – March 2017

*Nechako Group of Companies (L&M Lumber, Nechako Lumber, Premium Pellet, Nechako Green Energy)
Vanderhoof, B.C.*

As Woods Manager, and a member of the Senior Management Team, I reported directly to the CEO of the Nechako Group of Companies.

Responsibilities included:

- Overall responsibility for Woodlands Operations, including silviculture, harvesting, operations, and scaling for a modern sawmill/Planer Mill complex that consumes 860,000 m³ per year.
- Hiring, supervising and mentoring of woods staff and company scalers.
- Management of two replaceable Forest Licenses, two non-replaceable Forest Licenses and a community Forest Agreement.
- Developed the annual operating plan, capital budget and strategic plan for the woods operations.
- Negotiated contracts with silviculture, operations and harvesting contractors.
- Purchased approximately 400,000 m³ of Timber from First Nations, BCTS and many private sellers on a yearly basis.
- Negotiated of chip contracts with local pulp mills.
- Negotiated of Sales Agreements for pulp logs, residual fiber and sawlogs that were surplus to the needs of the Nechako Group.
- Implemented the company's Environmental Management System, Forest Information Management System, Sustainable Forest Management System, Log Inventory Management System and Safety Management Systems.
- Developed long term relationships with first nations, local government, secondary timber processors, and other major licensee's.
- Represented L&M in Victoria meeting with Directors of Branches, Assistant Deputy Ministers, Deputy Ministers and the Minister of Forests.

Indicators of Performance

- Developed a proposal for the District of Vanderhoof Community Forest and negotiated a 10 year agreement with the District of Vanderhoof for the timber from the New Community Forests License.
- Negotiated access to and management of two Non-replaceable Forest Licenses with Local Forest Nations.
- Developed an employment plan with the senior management team that employs 20 local first nations in the Nechako Groups operation.
- Developed a mutually beneficial long term relationship with a local secondary manufacturer.

External Relationships:

- Member of the COFI Forestry Committee (14 Years)
- Director for Tackla Track and Timber Ltd and Tackla Forest Management (15 Years)
- President of Tweedsmuir Forest Ltd (Lakes/Morrice IFPA)
- Director for the Vanderhoof IFPA
- Member of FP Innovations Public Advisory Committee
- Canadian Producer Representative on the Sustainable Biomass Partnership Stakeholder Committee
- COFI Alternate/Representative on TSAC

Resume of David J. Watt, RPF

LOGGING AND ROAD SUPERVISOR

September 1998 – May 2001

Abitibi Consolidated Ltd.

Mackenzie, B.C.

Responsible for the company's harvesting and road construction operations at the north end of Williston Lake. Responsibilities included:

- Management of two large camps (90+ persons per camp).
- Annual budget for the harvesting, capital and operational construction projects, road maintenance and logging camps.
- Negotiated the contracts for logging, road building, road maintenance and catering.
- Supervised three full phase logging and road construction contractors, two road maintenance contractors and one catering contractor.
- Supervised wet and dry dump facilities.
- Supervised full time harvesting and camp staff. (six staff employed directly by ACI).
- Developed Performance Management Targets for direct reports.
- Liaison with the two First Nations communities located in this operating area.

ROAD SUPERVISOR

May 1996 – September 1998

FINLAY FOREST INDUSTRIES INC.

Supervisor: Les Skaalid

Mackenzie, B.C.

Responsible for the company's road and bridge construction program and the road deactivation program. Responsibilities included:

- Budgeting for the years capital and operational construction projects (Capital 12-14 million per year, operational 3 to 5 million per year).
- Negotiated contracts for logging, road construction and bridge construction.
- Supervised of up to six road construction contractors, three contract road supervisors, and two bridge construction contractors. During an average year we would construct approximately 300 km of road, deactivate 200 km of road and construct 30 major drainage structures.
- Direct supervision of the company's road construction side, including the supervision of union employees, purchasing supplies, and purchasing/leasing new equipment.
- Completing of the deactivation and maintenance section of the five year development plan.
- Planning and costing of addendum projects with the Ministry of Forests.
- Developing the company's operational database (in co-operation with Allnorth Consultants).

LOGGING SUPERVISOR

September 1994 - May 1996

FINLAY FOREST INDUSTRIES INC.

Supervisor: Les Skaalid

Mackenzie, B.C.

Responsibilities included:

- The delivery of approximately 450,000 m³ per year of cable and conventional timber to the mill on time and within budget.
- Supervision of three conventional and two cable contractors, as well as the supervision of three road maintenance contractors.
- Management of a 120 man camp and associated staff.
- Supervision of the winter dry-dump, spring reload, and summer wet dump facilities for one operating area.
- Construction of roads, bridges, scale sites and ice bridges.

Resume of David J. Watt, RPF

OPERATIONS FORESTER

FINLAY FOREST INDUSTRIES INC.
Mackenzie, B.C.

April 1993 - September 1994
Supervisor: Steve Knowles

Duties Included:

- Preparing cruise plan submissions and supervising cruising contractors.
- Layout and mapping of cable and conventional cutting permits.
- Preparing of cutting permit submissions.
- Liaison with the Ministry of Forests on these permits.

Education

University of British Columbia Bachelor of Science in Forestry Degree
Vancouver, B.C. (1989 - 1992)

Major Courses:

- Advanced Forest Harvesting
- Advanced Wildlife Management
- Forest Economics

College of New Caledonia University Transfer Program
Prince George, B.C. (1986-1989)

- Business Administration and Accounting
- Psychology and Criminology

Specialized Training

- ❖ BC Interior Log Scaling Course – Interior Scalers License Issued
- ❖ BC Interior Waste and Residue Surveyor's Course – Waste and Residue Surveyors Issued
- ❖ BC Forest Service I-200 Basic Incident Command System
- ❖ Supervisory Safety Management Training
- ❖ Transportation of Dangerous Goods Training
- ❖ Level I Avalanche Safety for Transportation and Resource Industry
- ❖ Hydraulic and Hydrologic Design of Culverts
- ❖ Forest Road Construction Practices
- ❖ ABCFP Discipline and Ethic

Professional Affiliations

- ❖ Member in good standing of the ABCFP – RPF Designation attained in 1994
- ❖ Member of the ABCFP Standing Investigation Committee since 2014

References

Steve Kozuki, R.P.F.

Director of Revenue Branch – Ministry of Forests, Lands and Natural Resource Operations
Telephone: 250-356-9807

Archie MacDonald, R.P.F.

General Manager Forestry – Council of Forest Industries
Telephone: 250-215-2205

Torral Scott

Former Director – L&M Lumber & Premium Pellet
Telephone: 250-567-0930

David Philpott

Owner – BC Custom Timber Ltd, Vanderhoof, B.C.
Telephone: 250-567-1032