



Closure of a Remote Lead & Zinc Mine in the Northwest Territories: Effective Project Management & Overcoming Challenges

The O'Connor Lake Mine, a former copper, lead and zinc mine located on an island off the east shore of O'Connor Lake, approximately 190 kilometers southeast of Yellowknife, was successfully remediated in 2024. This northern remote site, managed by the federal government, is only accessible by helicopter or aircraft equipped with floats during the summer months. The mine, which operated between 1949 and 1952, produced 4,300 tonnes of rock and 900 tonnes of ore. After mining operations ceased, the site was abandoned and fell into disrepair, presenting hazards such as dilapidated structures, hazardous building materials, open mine workings, a waste rock pile, and scattered debris.

The remediation and closure of the O'Connor Lake Mine, including the various stages of site assessment that were required to reach this point, was a multiyear and multiphase project that involved a comprehensive project management approach. This effort involved collaboration between various stakeholders including the federal government custodian, a joint venture remediation contractor, and SLR Consulting. Throughout the project, invaluable input was also received from members of the local community of Fort Resolution following several engagement events. Additionally, the First Nations' within whose traditional territory the mine was located played a key role during execution of the project. The Deninu Kųę First Nation are a major shareholder in FORWARD Mining, the joint venture Prime Contractor who completed the remediation works. Community members from Fort Resolution were involved in the initial site assessment and supported SLR's site crew in the field.

This case study outlines some of the key stages of work completed to successfully assess and remediate this unique northern site, focusing on the perspectives of the federal custodian, the Prime Contractor, and consultant. The presentation will highlight some of the project management and technical challenges encountered, discuss how the team overcame these challenges through collaborative problem solving, and highlights the importance of community engagement and partnership in such projects.

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Kate is based in Calgary and is a Professional Geologist in both the Province of Alberta and the Northwest Territories, with over 20 years of experience in the environmental consulting industry (15 years with SLR in Canada). Kate has been involved with numerous Environmental Site Assessments, audit, remediation and risk management projects at federal sites across Canada, including abandoned mine sites in the north..