

| Project | Client Type | Location | Scope of Work | Date |
|---|-------------|-----------------|--|---------|
| Investigation into domestic water pipe failure | Undisclosed | Ontario, Canada | Domestic water pipe failures due to pitting corrosion; investigating cause. | Current |
| Corrosion Control Plan for operating gold mine | Gold Mine | Nunavut, Canada | Supporting the development of a site-wide corrosion management plan to ensure corrosion risk due to saline water is managed throughout operations. Designed to zipper into existing asset management plan structure. Corrosion engineering input into failure of piping, tanks, structure, concrete. Designing ongoing integrity program. Focus on high quality data collection to allow future decision making (budgets, resources, scheduling, risk) and service life analysis. | Current |
| Corrosion Control Plan for new-build potash mine | Potash Mine | SK, Canada | Developing a Corrosion Control Policy for operations as part of design. Combining this with a detailed plan for technical field data collection/monitoring, optimization of RBI programs and corrosion maintenance activities. Creating corrosion models to predict service life and data inputs to interface with project digital twin. | Current |
| Corrosion engineering input into potash mine design | Potash Mine | SK, Canada | Technical de-risking of design of concrete, steel and underground assets for a new potash facility to ensure 70-year service life. Corrosion engineering input into piping, tanks, structure, concrete design. In-depth concrete modeling and design of embedded monitoring system to track corrosion risk. | Current |

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| Drilling rod failure | Drilling company | Ontario, Canada | Premature drilling rod failure due to corrosion and environmentally assisted corrosion. Investigation and recommendations for remedial actions. | 2021 |
| Material selection for SAG mill liners | Gold Mine | Dominican Republic | Analysis of operational and physical data to determine the cause of failure of SAG Mill liners and optimize material selection. | 2021 |
| Process tank corrosion | Nickel Mine | MI, USA | NDT inspection, analysis and recommended repairs for process tanks to extend service life. | 2020 |
| Steel bridge portfolio optimisation | Municipal | ON, Canada | Phase 1 of scope collected corrosion field data to populate a service life prediction model for steel bridges to allow portfolio optimization and review of design/repair strategies (Phase 2). | 2020 |
| Corrosion risk analysis at landfill site | Landfill Site | QB, Canada | Carried out a corrosion risk analysis for residential properties due to intermittent, elevated landfill gas emissions. | 2020 |
| Cathodic protection to repair existing port loading structure | Coal Terminal Port | BC, Canada | Inspection, design, commissioning and inspection for cathodic protection for an existing port structure – switched the CP to a galvanic type system to allow team on remote site to more easily upkeep and maintain system. | 2019-2020 |
| Corrosion Control Plan for operating | Gold Mine | Dominican Republic | Developed a full Corrosion Control Management Plan, connecting technical corrosion issues to business level KPIs. Plan | 2018-2020 |

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| gold mine | | | is now in implementation by the local team with ICE in support. Technical input provided for integrity monitoring programs / repair designs for structures, tanks, vessels, piping (wear/corrosion/pitting). | |
| Corrosion monitoring program | Gold Mine | Dominican Republic | Designed corrosion data collection and inspection program for process tanks and structural assets across site. | 2019 |
| Structural corrosion monitoring for office building design | New office building (coastal location) | CA, USA | Working with multinational technology company to design their new 4000-person office in The Bay area. Corrosion risk and design input into the selection and durability of weathering steel. | 2019 |
| Repair of Mechanically Stabilised Earth (MSE) Wall | Gold Mine | Dominican Republic | Tracked the degradation of MSE wall over 5 years. Modelled service life to determine optimal point of intervention. Designed repair of acidic corrosion attack of rebar. Included cathodic protection and embedded monitoring to continue data collection for risk tracking. Use of embedded concrete monitoring and cathodic protection in the concrete repair. | 2019 |
| Underground Tunnel corrosion | Gold Mine | Dominican Republic | Tracked the acidic degradation of the galvanized steel tunnel (which runs underneath the stockpile) using NDT, inspection and monitoring. Modelled service life to push for urgent repair. Collapse would have caused long-term shutdown, costs of \$100sM and possibly injury/loss of life. | 2019 |

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| Structural steel inspection and repair | Gold Mine | DRC | Inspection of site wide structural assets and design of a data collection program to inform future maintenance activities | 2019 |
| Corrosion Control Plan improvement for waste water treatment works | Municipal | ON, Canada | Took an existing corrosion policy and improved it in-line with best practices, strengthening the link between operational activities and C-suite level concerns. Input into inspection approaches to allow work order prioritization. | 2018 |
| Corrosion Control Plan for new-build gold mine | Gold Mine | Nunavut, Canada | Technical de-risking of Arctic gold mine design where process water has high salinity. First installation for mining of an embedded concrete corrosion remote monitoring system. | 2018 |
| International corrosion research program for concentrate shipping | Mining Associations (MAC, ICA, ICMM) | Canada, Australia, UK | Project involved ~15 mining companies Worldwide. ICE worked as Specialist Research Director through ICMM to direct three major research programs. Large complex group of stakeholders worked to improve IMO / EU regulations for corrosivity testing of mineral concentrates in shipping. | 2018 |
| Corrosion risk review of Process Plant design | Junior Silver Mine | Nunavut, Canada | Early concern in project about saline water impact on the design. ICE carried out an early risk review with the project team to identify highest risks and developed a budget estimate for the project. | 2018 |
| Materials and coating | Zinc Mine | Alaska, USA | Carried out a design review to identify corrosion risks and evaluate current project | 2018 |

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| selection for pumphouse | | | specifications for structural materials and coatings to ensure durability. | |
| Internal corrosion of seawater pipeline | Copper Mine | Chile | Carried out a corrosion risk review on the corrosion and corrosion control system in a seawater conveyance line. Analysis revealed microbial corrosion causing risks to production and environmental compliance. Recommended structured approach to risk mitigation and inspection. | 2018 |
| Failure investigation for cast iron components | Flywheel Technology Company | Canada | Components were shipped to client and located in a coastal region. Recommendations for coatings and materials to increase component longevity. | 2017 |