

Avirup Kar

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Core Summary Experience

PROJECT MANAGEMENT: Complied and presented project management reports detailing changes in scope, schedule, budget and potential project issues. Served as a single point of contact for all internal and external stakeholder(s).

SITE INVESTIGATIONS AND DATA INTERPRETATION: Performed quality assurance and control for construction of civil and mining infrastructures. Completed interpretation of subsurface investigation data to provide design parameters. Complied reports for subsurface investigations and site characterization for tunneling and mining projects.

MODELLING: Geotechnical modelling experience includes static and seismic analysis of earth dams and slope stability analyses. Familiar with geotechnical and civil software programs including ArcGIS, AutoCAD, LPILE, SLIDE, SLOPE/W, and SEEP/W.

Education

Bachelor of Applied Science in Civil Engineering | June 2018 | University of Waterloo

Experience

ENGINEER IN TRAINING | WOOD PLC | MAY 2018 TO PRESENT

Lion One Metals, Tuvatu Gold Project, Viti Levu, Fiji

Involved in preliminary feasibility study (PFS) level design for the tailings storage facility (TSF) and associated water management facilities (WMFs) for Tuvatu Gold Project development.

- Prepared prefeasibility level design for the tailings storage facility (TSF) by evaluating dam stability and deformation.
- Performed material take-offs for proposed tailings storage facility (TSF), Sediment Control Dam and Diversion Dam to determine capital expenditure (CAPEX).
- Completed mixed design to determine percentage of sand and crushed rock to be used as filter resulting in savings of ~CAD\$1.5 million.

Metrolinx/Infrastructure Ontario, 401 Rail Tunnel, Toronto, Ontario

Assisted to support the design and construction of 180 m long, 8 m wide tunnel under highway 401 and 409 lanes.

- Performed Cone Penetration Tests (CPTs) interpretation to calculate undrained shear strength, soil friction angle, relative density, shearwave velocity, shear modulus, and E_{50} .

Kirkland Lake Gold Inc., Macassa Mine, Kirkland Lake, Ontario

Involved in construction monitoring and engineering support to determine any concerns due to ongoing and new construction works.

- Supervised the installation of deep soil mixing columns for improvement of foundation soil along a portion of a dam, proposed to be constructed as part of North Tailings Storage Facility.
- On-site quality assurance inspector for Stage 2 Stabilization Berm and North Tailings Storage Facility.

Greenstone Gold Mines, Hardrock Project, Geraldton, Ontario

Involved in detailed design level design for the tailings management facility (TMF), and associated structures, proposed in the immediate vicinity of the TMF for Hardrock Project development.

- Prepared Scope of Work document and Technical Specifications as part of Tailings Management Facility Starter Dam Construction Tender Documents
- Prepared liquefaction potential assessment of MacLeod Historic Tailings and foundation soils, and static and post-liquefaction stability analysis of North Perimeter Buttresses that surround north section of historic tailings area.
- Led coordination efforts for the 2019 geotechnical investigation program in support of the detailed design of the tailings management facility.

Barrick Gold Corporation, Bicroft Uranium Site, Cardiff, Ontario

- Performed annual and semi-annual on-site dam safety inspection of tailings storage facility with Engineer of Record (EOR).
- Performed project management activities to arrange bi-weekly site inspections with sub-contractors and process monthly invoicing.

IAMGOLD, Côté Gold Feasibility Study, Gogama, Ontario

- Performed material take-offs for proposed site structures (tailings dam, seepage collection pond dams, creek realignments, seepage collection ditch) for Côté Gold feasibility study to determine capital expenditure (CAPEX) and sustaining expenditure (SUSEX).
- Created memorandum summarizing the geotechnical characterization of dry tailings stack.

GEOTECHNICAL ENGINEERING INTERN | ARUP | SEPTEMBER 2017 TO DECEMBER 2017

- Assisted in the tender design for Stage 2: Ottawa Light Rail Transit (Confederation Line Extension East and West) construction including tunneling, surface tracks/stop construction and elevated guide way.
- Assisted in the tender design for Hurontario Light Rail Transit including surface tracks/stop construction, elevated guide way construction and maintenance and storage facility.
- Completed various analysis for Edmonton Valley Line LRT by examining laterally loaded pile foundations, overhead catenary system (OCS) pole foundations, and pre-construction and excavation design scenarios for proposed rock berm.

ENGINEERING INTERN | AMEC FOSTER WHEELER | JANUARY 2017 TO APRIL 2017 & MAY 2016 TO AUGUST 2016

- Provided engineering support by creating design options on SLOPE/W for a Coal Ash Landfill Expansion Area to evaluate the slope stability near the Lambton Generating Station for Ontario Power Generation.
- Assisted in Geotechnical Investigations Report – Tailings Management Area (Investigation Data and Interpretations) for Rainy River Gold Project.

ENGINEERING STUDENT | CITY OF MARKHAM | SEPTEMBER 2015 TO DECEMBER 2015

- Developed and implemented five instruction manuals about Backflow Prevention submission system available in City of Markham website.

ENGINEERING INTERN | ONTARIO MINISTRY OF TRANSPORTATION | JANUARY 2015 TO APRIL 2015

- Co-authored technical report to summarize information on quantities and quality of granular materials supplied for road base, sub-base, backfill and other purposes.

ISBN 978-1-4606-5600-6 (Print); ISBN 978-1-4606-5601-3 (PDF)