

October 6, 2017

30 Forensic Engineering
40 University Avenue,
Toronto, ON
M5J 1T1

Dear Sir,

This is to request your consideration of my qualifications for the advertised position of Principal Geotechnical Engineer with 30 Forensic Engineering.

I am currently a Senior Tailings Engineer with Hatch Associates' Mining and Metal Group in Mississauga, Ontario. I have 40 years of experience in consulting geotechnical engineering and have a well round experience in all spectrum of geotechnical engineering ranging from site investigation, foundation engineering, slope stability, dam engineering to mine waste engineering. I have managed geotechnical design and construction supervision of large foundation projects and infrastructure projects. I have been appointed as team leader responsible for the management and supervision of a number of large scale site investigation projects. I have worked in North America, Malaysia, Hong Kong, Tanzania and Peru.

I have good engineering judgement. I have the technical knowledge and experience that can provide mentorship to junior professionals. I can travel and do site reviews. I believe I will add value to 30 Forensic Engineering.

Please review the attached resume which outlines my briefly experience and qualification. I look forward to elaborate my qualification in a personal interview.

Yours Truly,



Raymond Wong, P.Eng.

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PROFESSIONAL GEOTECHNICAL ENGINEER

Seasoned professional in the practice of geotechnical engineering. Major experience in the design and construction of earth and rock fill dams as well as mine tailings dams. Geotechnical team leader for projects in deep foundations and excavations, bridges, highways, transmission corridors and slope stabilization. International work experience included North America, Malaysia, Hong Kong, Tanzania and Peru.

PROFESSIONAL EXPERIENCE

Senior Tailings Engineer (2017-present): Hatch Associates, Mississauga, Ontario

- Project manager and Engineer of Record for the construction supervision of two tailings impoundment dams for a palladium mine in Northern Ontario.
- Design review of a series of existing tailings impoundment dams and provide subsequent update design recommendations for new dam construction for an expanded tailings management facility of the Pena Colorado Mine in Mexico.

Principal Geotechnical Engineer (2014–2017): Foth Canada Corporation, Toronto, Ontario

- As technical team leader providing in-house geotechnical support to various mining, civil and environmental engineering projects in the U.S.A.
- Prepared geotechnical reports and design of containment plans for reactive mine wastes to support permit to mine applications for a large taconite mine and a polymetallic mine in the Mid-West, USA.
- Developed geotechnical design guides and standard operation procedures for various market sectors.

Senior Geotechnical Engineer (2007–2013): Golder Associates Ltd., Mississauga, Ontario

- Supervised a team of field engineers in the site investigation works for:
 - (i) The Kabanga Nickel Project in Tanzania (contract value in exceed of 2 M US\$).
 - (ii) The refurbishment of a pump storage reservoir in Niagara Falls, Ontario, Canada for the Ontario Power Generation (contract value in exceed of 1.5 M US\$).
- Responsible for technical support, logistics, drill site access, scheduling and site safety.
- Prepared foundation investigation reports for the mine plant facilities for the Kabanga Nickel Project and the Detour Gold Project.
- Managed the construction QC/QA supervision of the construction of foundations and earthworks for the Detour Gold Mine start up, Ontario, Canada. Supervised a team of inspectors for a construction period of 20 months. Liaised with EPCM consultant and Owner.
- Managed the design and construction supervision of a tailings dam stage raising for the Young Davidson Gold Mine in northern Ontario for two construction seasons. Prepared design reports and drawings to the Ministry of Natural Resources (MNR) of Ontario for construction permit approval in accordance to the Lakes and River Improvement Act. Liaised with Owner and MNR.
- Mentoring of junior engineers and student interns.

Senior Geotechnical Engineer (2006–2007): AMEC Earth and Environmental, Toronto, Ontario

- Responsible for the geotechnical investigation and reports of various building developments and municipal engineering projects.
- Prepared proposals.
- Supervised site staff.

Director Geotechnical Division (1999–2004): MOUCHEL PARKMAN ASIA LIMITED, HONG KONG

- Managed the Geotechnical Division with a staff of 10.
- Prepared proposals and business development.
- Provided geotechnical reports and design to Mouchel Parkman Asia's various divisions (structures, environmental, highways and power).
- Noticeable projects included :
 - (i) Feasibility study for a second crossing comprising a cable stay bridge between Hong Kong and mainland China.
 - (ii) Feasibility study for the upgrading an existing 8 km highway to double carriage ways through steep hilly, coastal terrain and dense housing developments. Design include numerous slope stabilization, new slopes, retaining walls, sea walls, bored pile wall, foot bridges and via ducts.

- (iii) Project Manager for the Landslip Prevention Works for the Geotechnical Engineering Office of the Hong Kong Government that involved the construction of stabilization works of 45 unstable slopes. Assisted resident site staff on evaluating contractor's claim and verification of variation orders. Contract values in excess of US\$10 million.

Technical Manager (1994–1998): TERRA GEOTECHNICS SDN BHD, KUALA LUMPUR, MALAYSIA

- Responsible for the review of design and reports; advised on technical matters; proposal preparation and some degree of business development; recruiting and evaluation of professional staffs and staffing for projects.
- Carried out value engineering and identified areas of potential savings of up to 7 M US\$ by proposing alternative design of a 2 km piled embankment in lieu of viaduct over soft ground for the new high speed rail link between Kuala Lumpur and the new international airport.
- Conducted geotechnical feasibility study to assist the turn key contractor, Transfield Project (M) Sdn Bhd, in the design and cost proposal of the proposed 600 m long, 10 m diameter tunnel in karstic limestone formation. Utilized Ground Penetration Radar technique to identify potential sink holes and unstable ground.
- Designed and carried out construction supervision of a 15 m high concrete face rock fill dam for controlling of runoff in an abandon open mine.
- Designed high capacity bored piles up to a 6000 kN capacity using the "load transfer" method resulting in saving of over 1500 m of piles for the Kuala Lumpur Light Rail Transit System II.
- Conducted investigation of foundation failure of a newly constructed 274 kV substation near Penang, Malaysia for Siemens Electrical Engineering. Carried out remedial design and construction supervision using micro-piling technique.

Senior Geotechnical Engineer (1990–1994): SNC-LAVALIN INC., VANCOUVER, B.C., CANADA

- Lead designer for the proposed 240 MV power plant addition to the existing Keenleyside Dam for B.C. Hydro Authority. Design responsibility included power house excavations in rock, stability of the approach and tailrace channels and coffer dams.
- Conducted deficiency investigation on behalf of B.C. Hydro Authority of the following dams:
 - (i) Keenleyside Dam - investigation of the causes of high uplift pressures in the spillway and lock section and subsequent design and construction supervision of remedial works. A paper was subsequently published in the *Canadian Geotechnical Journal*, Vol. 30 (1993).
 - (ii) Mica Dam - evaluation of the core performance of the 240 m high dam including the potential of hydraulic fracturing by finite element method.
 - (iii) Terzaghi Dam - study of potential earthquake induced permanent deformation and cracking of the embankment dam as well as study the effect of raising the dam for additional storage.

Senior Geotechnical Engineer

- (1988–1990): **GOLDER ASSOCIATES LTD., VANCOUVER, B.C., CANADA**
- (1984 – 1988): **MAA ENGINEERING CONSULTANT (HK) LTD., HONG KONG**

Geotechnical Engineer:

- (1980 – 1983) **GOLDER ASSOCIATES LTD., TORONTO, ONTARIO, CANADA**
- (1978 – 1979): **HARDY ASSOCIATES (1978) LTD., VANCOUVER, B.C., CANADA**
- (1977): **KLOHN LEONOFF CONSULTANTS LTD., WINNIPEG, MANITOBA, CANADA**
- (1973 – 1976): **DAMES AND MOORE, CALGARY, ALBERTA THEN TORONTO, ONTARIO, CANADA**

EDUCATION

M.Sc. Geotechnical Engineering, Queen's University at Kingston, Ontario, Canada
B.Sc. (Hon.) Civil Engineering, Queen's University at Kingston, Ontario, Canada

TECHNICAL SKILL

Proficient in: Microsoft Office Suite; Geostudio SLEOP/W, SEEP/W and SIGMA/W;
Mathcad

VOLUNTEE WORK

- Ship Liaison Crew for visiting fleets at the Toronto Tall Ship Festival, 2012 and 2016.
- Profession Assessment Assessor, Hong Kong Institute of Engineers, 2001 – 2004.