

Kathleen Baker

403-969-6554 | kebaker@ualberta.ca

SUMMARY OF QUALIFICATIONS

- MSc. Chemical Engineering student specializing in Engineering Safety and Risk Management
- 5 years of engineering experience including production engineering, field experience, academia and research in the energy and mining industries
- Empathy and analytical skills developed while conducting and analyzing 140+ interviews, to determine tailings hazards, using semi-structured interview techniques and NVIVO software
- Proven ability to communicate technical content to diverse audiences (verbal and written) during 3+ years of teaching, presenting, producing quality publications and interacting with Field staff
- Possesses excellent interpersonal, organizational and leadership skills developed while managing a small interdisciplinary research team and as a conference subcommittee chair

EDUCATION

Master of Science

September 2016–Graduation: January 2019

Chemical Engineering, University of Alberta

GPA: 4.0/4.0, “Sustainable Research” award (Faculty of Engineering Graduate Research 2017 Symposium)

Bachelor of Science

September 2008–May 2012

Chemical Engineering, University of Alberta

GPA: 3.7/4.0, First Class Standing

RELEVANT EXPERIENCE

Research Assistant

Edmonton, AB

University of Alberta

September 2016–present

- Developed tools (toolbox talks, visual dictionaries, bowties) for enhanced hazard identification and controls for oil sands tailings operations in consultation with oil sands operators and regional contractors
- Developed semi-structured interview questions and completed over 140 interviews with workers to improve hazard identification and controls in the oil sands tailings operations
- Analyzed five years of incidents from multiple oil sands companies to identify leading indicators
- Conducted field visits, during all seasons, to assess ground hazards associated with the oil sands tailings operations
- Authored, presented and discussed findings over ten times to industry, academia and public audiences including the 2018 Petroleum Safety Conference and the 2017 Canadian Chemical Engineering Conference
- Facilitated stakeholder collaboration between academia and industry through Energy Safety Canada
- Developed and delivered a technical training program on Risk Communication to internal and external stakeholders for Transport Canada, Minerva Canada and Methanex

Conference Coordinator and Social Subcommittee Chair

Edmonton, AB

CCWESTT 2018 Conference

May 2016–June 2018

- Coordinated session rooms, catering and a trade show for 400+ delegates at the Canadian Coalition of Women in Engineering Sciences Trades and Technology 2018 Conference
- Led the social committee in creating interesting and collaborative activities for delegates

Chemical Engineering Design II Teaching Assistant

University of Alberta

Edmonton, AB

January 2017–May 2018

- Evaluated and provided feedback on students' portfolio work throughout the semester and aided students with technical design questions for projects

Petroleum Engineering Technology Instructor

Northern Alberta Institute of Technology

Edmonton, AB

August 2013–May 2018

- Developed and delivered course content according to learning objectives for adult learners and provided expertise in courses such as: Safety Studies, Computer Applications, Production Optimization, Natural Gas: Field and Plant Operations, Project Evaluation and Technical Writing
- Coordinated field placements for students, assisted with the implementation of "Industry Day" and "NAIT Open House" and advised multiple students on their capstone projects
- Maintained a positive and healthy learning environment for students by managing people, behaviours, timelines and course material in accordance with NAIT standards

Production Engineer in Training

Lone Pine Resources

Calgary, AB

May 2012–June 2013

- Provided technical support to field staff at both natural gas and heavy oil assets, ran weekly meetings and conducted site visits
- Analyzed production, completed monthly decline analysis and identified optimization candidates in three fields: Hayter (CHOPS), Narraway (sweet gas) and Ojay (sour gas)
- Researched opportunities for natural gas liquids production in the Montney formation
- Monitored field operations to ensure compliance with Alberta Energy Regulator Standards
- Coordinated the implementation of a Management of Change system for field staff
- Created and presented technical proposals to increase oil and gas production and revenue
- Collaborated with the geology and reservoir teams to identify recompletion candidates and new drilling locations by analyzing well logs

ADDITIONAL EXPERIENCE

Early Career Professional Mentor/Mentee

Women in Science Engineering and Research Mentorship Program

Edmonton, AB

September 2017–May 2018

- Provided mentorship to a first-year engineering student by creating mock interviews, reviewing resumes and cover letters and discussing techniques for time and stress management

Conference Co-organizer Process Safety Management Sessions

Canadian Society for Chemical Engineering 2017 Conference

Edmonton, AB

October 2017

- Facilitated the process safety management sessions by introducing presenters and ensuring the session ran in accordance with the conference schedule

COMPUTER SKILLS

- Microsoft Office: Excel, Word, Project, Outlook and PowerPoint
- Petroleum Software: GeoScout, GeoVista, IHS Suite, Peloton Suite and Merak PEEP
- Economics Software: ValNav and AFE Navigator
- Database Software: NVIVO, SAP and Enablon

PRESENTATIONS

- Congreso Colombiano de Minería, Medellín, Colombia, May 2016
- Faculty of Engineering Graduate Studies Research Symposium, Edmonton, AB, June 2017

- 67th Canadian Chemical Engineering Conference, Edmonton, AB, October 2017
- Canadian Railway Ground Hazard Research Program Workshop, Kingston, ON, December 2017
- Petroleum Safety Conference, Banff, AB, May 2018
- Canadian Institute of Mining Convention, Vancouver, BC, May 2018
- GeoHazards 7, Canmore, AB, June 2018
- GeoEdmonton, Edmonton, AB, September 2018
- 68th Canadian Chemical Engineering Conference, Toronto, ON, October 2018

PUBLICATIONS

- Baker, K., Zettl, J., Macciotta, R., Hendry, M., and Lefsrud, L. 2018. Interim Report for Creative Sentencing: Protecting worker safety in Alberta by enhancing field level hazard assessments and training for ground hazards associated with tailings facilities, dams and transport systems. <https://doi.org/10.7939/R3BR8MX04>
- Baker, K., Zettl, J., Macciotta, R., Hendry, M., and Lefsrud, L. 2018. Protecting workers exposed to ground hazards through enhanced Field Level Hazard Assessment Tools. GeoHazards 7 Conference Paper.
- Baker, K., Zettl, J., Macciotta, R., Hendry, M., and Lefsrud, L. 2018. Protecting workers exposed to ground hazards through enhanced hazard identification and management tools. GeoEdmonton Conference Paper.
- Baker, K., Macciotta, R., Lefsrud, L. 2017. How can we see the unforeseeable? Enhancements to hazard identification, safety culture, and risk communication for preventing engineering accidents. Under Review.

TICKETS & PROFESSIONAL MEMBERSHIPS

- Class 5 Drivers License, safe driving record
- APEGA Member in good standing
- Defensive Driving
- OSSA Oil Sands Orientation
- First Aid
- H2S Alive
- WHMIS
- Canadian Coalition of Women in Engineering Sciences Trades and Technology Member
- Canadian Institute of Mining Member
- Canadian Society of Chemical Engineering Member
- Society of Petroleum Engineers Member
- Solar Power Society of Alberta Member