

## Tim Kuhl

### Principal Geologist

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#### Professional Summary

Mr. Kuhl has +35 years' experience in the mineral industry ranging from exploration, development and, mine operations. Experience includes exploration and drill project design and management, construction of geological models and resource estimates, grade control, mine designs and reconciliation. Experience includes gold, silver, copper, lead, zinc, nickel, cobalt, platinum, palladium and coal. Country experience includes Canada, Mexico, USA, Peru, Chile, Argentina, Brazil, Colombia, Russia, Kyrgyzstan, Indonesia, Australia, South Africa and D.R. Congo.

#### Representative Experience

- Atlantic Nickel, Bahia, Brazil: Magmatic nickel sulfide project. Resources model updates, Grade Control, Reconciliation, Geometallurgy.
- Detour Gold, Canada, Open pit gold mine. Reconciliation, grade control and process study.
- Veladero, Barrick, Argentina. Heap leach gold project. Reconciliation study.
- Tantauatay, Buenaventura, Peru gold project: Open pit heap leach gold mine. Reconciliation and grade control study. Geological, resource and geometallurgical models for underground studies.
- Kumtor, Centerra Gold, Kyrgyzstan: Reconciliation, grade control and process study.
- La Preciosa, Coeur, Mexico, underground silver-gold project: Resource model update.
- Cerro Lindo, Votorantim, Peru, copper-lead-zinc underground project: Resource-reserve audit, mine-mill reconciliation and resource model update.
- Pasco Complex, Votorantim, Peru. Copper-lead-zinc underground project. Reconciliation audit and resource model updates.
- Platreef, Ivanhoe, Platinum, palladium underground project in Bushveld Igneous Complex, South Africa: Database, geology and resource model updates and drillhole spacing studies.
- Sudbury, Ontario Operations, Vale, Canada: Resource/reserve model audits.
- Tenke Fungurume, Freeport McMoRan, Central African Copper Belt, Congo, Data collection and implementation into short-range models, ore control and reconciliation.
- Soroako, PT Vale Indonesia, Indonesia: Nickel Laterite. Reconciliation and cut-off grade review
- Bingham Canyon, Rio Tinto, UT: Review Standard Operating Procedures for resource and reserve updates, reconciliation processes, update of EDA and kriging plans. Mine to Mill reconciliation.
- Ak-Sug, Intergeo, Tuva Republic, Russia, copper-molybdenum porphyry deposit: Resource model update, and drillhole spacing study.
- Nokomis, Twin Metals Minnesota, MN, Birch Lake copper-nickel-platinum-palladium-gold-silver-cobalt deposit. Resource model update.
- Afton-Ajax, Abacus Minerals, BC, Canada: Resource model and updated NI 43-101 Technical Reports for a copper-gold porphyry project.

- Paz del Rio, Votorantim, Colombia, metallurgical coal. Database audit and resource model update.
- Grande Cache, Grande Cache Coal, Canada, metallurgical coal. NI 43-101 Technical Reports.
- Fort Knox, Kinross, AK, 2009, Open-pit gold deposit. Reconciliation audit.
- Karakaene, ArcelorMittal, Senegal: Mbah iron-ore deposit. Resource model.
- Antamina, Minera Antamina, Peru, open-pit copper-zinc-molybdenum mine. Resource model updates
- Quintette, Elk Valley Coal, Canada, metallurgical coal. Geological review of resource model.
- Roman, Peace River Coal, Canada, metallurgical coal. Geological review of a resource model.
- Galore Creek, NovaGold, Canada: Resource model review for copper-gold project.
- Red Dog, Teck Cominco, Alaska. Mineral resource model audit, NI 43-101 Technical Report.
- Los Chancas, Southern Peru Copper, Peru, porphyry copper-molybdenum. Resource model audit.
- Kalgoorlie, Placer Dome, Australia: Kanowna Belle and Paddington gold projects. Resource model audits and NI 43-101 Technical Report.
- Resource/Reserve Audits, CVRD, Brazil, 2006: Reviews of resource models and mine plans for the Northern Iron System (Carajas), the Sossego copper project and the Azul manganese mine

### Employment History

Mine Technical Services, Principal Geologist, 2020 to present  
Wood Group USA, Principal Geologist, 2005 to 2020  
Apollo Gold, Exploration Manager, 2004 to 2005  
TransAlta Centralia Mining, Senior Geologist, 2001 to 2004  
Cliffs Mining, Senior Mine Engineer, Hibbing Taconite Company, 1998 to 2001  
Newmont/Santa Fe Pacific Gold, Senior Geologist, Senior Mine Engineer, 1993 to 1998  
Lac Minerals, Project Manager Rosebud Project, 1991 to 1993  
Meridian Gold, Senior Mine Geologist, 1985 to 1991  
Nerco Minerals, Exploration Geologist, 1980 to 1984  
Homestake Mining Company, Uranium Geologist, 1976 to 1978  
Getty Oil Company, Petroleum Engineer, 1975 to 1976

### Education

B.Sc. Geological Engineer, South Dakota School of Mines and Technology, 1975  
M.Sc. Geology, South Dakota School of Mines and Technology, 1982  
Certificate in Geostatistics, University of Alberta, Canada, 2007

### Computer Skills

Vulcan, MineSight, Datamine, Gemcom, SGeMS, Sage2001, Supervisor, ARCGis

### Professional Affiliations

Society of Mining Metallurgy and Exploration (SME), Registered Member  
Registered Professional Geologist, Washington State, USA