NIMA NAJAFI ANARAKI, M.Sc.



EDUCATION

M.Sc., Mining Engineering, Shahrood University of technology, Iran, 2014

B.Sc., Mining Engineering, Amir Kabir University of technology (Tehran polytechnic), Iran, 2012

SUMMARY

Nima has a B.Sc. and an M.Sc. in Mining Engineering and extensive international experience in both open-pit and underground mining operations. He joined Robertson GeoConsultants Inc. in 2025. His background includes a combination of mine planning, environmental management, and geochemical assessment, gained through fieldwork, consulting roles, and large-scale mining projects.

Nima's technical expertise includes 3D mine modeling, production scheduling, and the planning of surface and underground operations. He has hands-on experience with geochemical laboratory techniques such as XRF, XRD, and ICP-MS, and applies structured sampling protocols to support accurate decision-making. He has also contributed to economic investigations for operational optimization, market studies, and the development of prefeasibility and feasibility studies. His work emphasizes safety, operational efficiency, and sustainable mining practices.

PROFESSIONAL HISTORY

2025-present:	Geochemist, Robertson Geo Consultant (Part of SLR Consulting)
2022-2025:	Project Manager, Vangard TOO, Kazakhstan
2018-2022:	Planning and Scheduling Mine Engineer, Chromite Fars Co, Iran
2017-2018:	Mine Supervisor, Behavand Barad Co, Iran
2016-2017:	Tunnel Supervisor, Pasar consulting Co, Iran
2014-2016:	Mine Engineer, Kaz Azin Consulting Engineering Co, Iran
2012-2014:	Technical Assistant Engineer, Central Iron Ore Co, Iran (Part time)
2012-2013:	Technical Assistant Engineer, AUT, Iran (Part time)

PROJECT EXPERIENCE

WASTE ROCK DUMPS, TAILING MODELING AND DECONSTRACTION

Mine Langlois, Quebec, for Breakwater Resources Ltd. 2025-now

- Field investigations and waste rock sampling
- · Estimated volumes and developed deconstruction models for waste rock dumps
- Performed sampling and reconstruction modeling; monitored and controlled Potential Acid Generation (PAG)
- Developed volumetric 3D models of the Tailings Storage Facility (TSF), including beach profile modeling based on LiDAR or survey data.

Bouchard-Hebert Mine, Quebec, for Breakwater Resources Ltd. 2025- present

- · Field investigations, test pit operations, and waste rock sampling
- · Estimated volumes and developed deconstruction models for waste rock dumps
- Performed sampling and reconstruction modeling; monitored and controlled Potential Acid Generation (PAG) during the deconstruction process

Sandy Flat Mine, NT, Australia, For NT Government, 2025- present

- Conducted data analysis and 3D modeling of Waste Rock Dumps (WRDs)
- Created volumetric reports based on test pit modeling, Survey and LiDAR data.

Rum Jungle Mine, NT, Australia, For NT Government, 2025-present

- Modeled Waste Rock Dumps (WRDs) and conducted related data analysis
- Generated 3D models of test pits and completed volumetric assessments and documentation

MINE OPERATION

Shubarkol Coal Mine, Kazakhstan, For Shubarkol Premium Co, 2022-2025

- Mine production and waste extraction
- Responsible for meeting production targets while managing operational costs
- Planned and scheduled preventive maintenance for mining equipment
- Ensured compliance with safety standards during all operations
- Developed short-, medium-, and long-term operational mine plans
- Prepared and monitored operational budgets and cost controls

Chador Malu Iron Ore, Iran, For Behavand Barad Co, 2017-2018

- Managed annual operation of 20 million m³ of waste and ore
- Maintained stable production through monthly and quarterly scheduling
- Improved operational performance with focus on cost reduction per production unit
- Optimized drilling and blasting practices, including specific charge per ton and rock fragmentation optimization
- Supervised daily mining activities while ensuring safety and regulatory compliance
- Oversaw workforce coordination, equipment utilization
- Collaborated with engineering teams to meet production goals and enhance operations

Cheshmeh Bid (UG) and Anjrak (OP) Chromite Mines, Iran, For Chromite Fars Mining and industrial co, 2018-2022

- Supervised shaft, ramp, Incline tunnel, and stope development in underground operations
- Conducted safety inspections and ensured regulatory compliance
- Monitored recovery, dilution, and production; implemented improvements
- Oversaw drilling, blasting, mucking, and haulage activities
- Evaluated ground conditions and ventilation for safe operation
- · Coordinated with engineering and geology to meet production goals
- Supervised drilling, loading, and hauling operations in open-pit mining
- Monitored pit slopes, roads, and equipment to ensure safe and efficient operations

 Enforced safety protocols and conducted daily field inspections to ensure a hazard-free work environment

MINE PLANNING AND DESIGN

Cheshmeh Bid (UG) and Anjrak (OP) Chromite Mines, Iran, For Chromite Fars Mining and industrial co, 2018-2022

- Planning and design for access tunnels, ramps, and stopes to achieve production targets
- Mining methods selection and cost estimation
- Implemented practical safety improvements in mining operations
- Equipment selection based on operational needs
- Ore dilution and ore losses monitored and controlled.
- Optimized drilling and blasting practices for efficiency and cost-effectiveness
- Designed mine ventilation systems and managed underground air quality
- Defined budgets and controlled mining progress against targets
- Conducted market trend analysis and price forecasting

Emarat (UG) and Nakhlakh (UG) Zinc and Lead mines, Iran, For Kan Azin Co, 2014-2017

- Mining method selection using the UBC Mining Method Selection approach
- Developed 3D geological and structural models of the orebody
- Designed the main access entrance for the southern section of the deposit
- Enhanced drilling and blasting techniques to improve fragmentation and efficiency

Titanium Kahnoj, Iran, For Kan Azin Co, 2014-2017

- Developed geological block models and 3D orebody models
- Created economic block models and calculated ultimate pit limits
- Prepared mine plans and production schedules
- Mining equipment selection based on project needs
- Contributed to Pre-Feasibility (PFS) and Preliminary Scoping (PS) studies and compiled economic evaluation reports

Golgholeh OP Gold Mine, West Asia Cement and Chehel Koureh UG Copper Mine, Kan Azin Co, Iran 2014-2017

- Designed mine infrastructure and developed 3D orebody and underground network models
- Conducted feasibility studies, cost estimations, and pit optimization.
- Assessed geomechanical parameters and slope stability for technical analysis
- Optimized drilling, blasting, and operational parameters to reduce costs
- Selected mining equipment and forecasted resource consumption (explosives, fuel, etc.)
- Provided engineering support within multidisciplinary teams, delivering practical and costeffective mining solutions

GEOCHEMICAL INVESTIGATION, SAMPLING AND MODELING

Choghart OP Iron ore mine, For Iran Central Iron Ore Co, Iran 2012-2014

- Geochemical Investigations on REEs in N-NE Choghart Iron deposit and their economic evaluations
- 3D modeling of Apatite as byproduct in N/NE wall of Choghart pit using Datamine

National Study in AUT University, For AUT University, Iran, 2012-2013

- Study on primary and secondary sources of Arsenic and Gallium elements
- Geochemical sampling and investigation on Arsenic in of gold deposits in Iran
- Geochemical sampling and investigation on Gallium in of coal and bauxite deposits in Iran

SELECTED PUBLICATIONS

- Y. Shekarian; A. Hezarkhani; N. Najafi Anaraki; Arash Nikvar Hasani. "Geochemistry and Ore Petrography of REE-bearing Fe-Oxide Assemblages in Choghart Iron Deposit, Yazd, Iran." *Arabian Journal of Geosciences 10(12), June 2017,* DOI 10.1007/s12517-017-2986-0.
- Y. Shekarian; A. Hezarkhani; N. Najafi Anaraki; "Investigation on Rare Earth Elements Distribution in the Choghart Iron Mine and its Comparison with the other World Reservoirs, with special focus on Yttrium." Rahpouyan Geoscience & Technology Journal, 2015
- A. Fadaei; N. Najafi Anaraki; M. Taji; H. Aghajani. "Detonation firing system selection using expert system (Fuzzy Delphi analytic hierarchical process" First symposium on effect of earth science on Gilan state, Gilan, 2013.
- A. Hezarkhani; Y. Shekarian; N. Najafi Anaraki; A. Zahed. "Geochemical Investigation on Rare Earth Elements (REE's) in N-NE Choghart Iron Mine". Mining Development Journal, Iran, Vol. 51, November 2014, pp. 54-59."
- S. Naghne; F. Sereshki; M. Ataei; N. Najafi Anaraki "Analysis strategic parameters on Iran Aluminum industry using SWOT technique" 32rd National Geoscience s Symposium, Tehran, Iran, 2014
- 6) Y. Shekarian; A. Hezarkhani; Nima Najafi Anaraki; A. Zahed. "Modeling and Economic Evaluation of Rare Earth Elements (REE's) in N- NE Choghart Iron Mine". National Conference on Mining Science 2014. Mazandaran, Iran, September 2014.
- A. Hezarkhani; Y. Shekarian; Nima Najafi Anaraki; "Investigation on Rare Earth Elements (REE's) in N-NE Choghart Iron Mine according to Petrography Studies". 2thSymposium of Apllied Petrology, Khansaran University, Isfahan, Iran, September 2014
- A. Hezarkhani; Y. Shekarian; Nima Najafi Anaraki; A. Zahed. "Geochemical Investigation on Rare Earth Elements (REE's) in N-NE Choghart Iron Mine". National Conference on Mining Science 2014. Mazandaran, Iran, September 2014.
- A. Hezarkhani; Y. Shekarian; Nima Najafi Anaraki; A. Zahed. "Distribution of Rare Earth Elements (REE's) in N - NE Choghart Iron Mine".5th Conference of Mining Engineering. Tehran, Iran, October 2014.
- 10) A. Hezarkhani; Y. Shekarian; **Nima Najafi Anaraki**; A. Zahed. "Enrichment of Rare Earth Elements (REE's) in Choghart Iron Deposit, Bafq, Central Iran".6th Symposium of Iranian Society of Economic Geology, Zahedan, Iran, September 2014.
- 11) Y. Shekarian; A. Hezarkhani; Elham Rahimi; **Nima Najafi Anaraki**" Seeking Potential of Iron according to the ETM + Imagery and juxtaposing them with the Geological Model of the

Study Area Sheet 1: 100000 Bafg". National Congress of Iron and Steel, Zarand, Kerman, Iran, October 2014

- 12) Y. Shekarian; A. Hezarkhani; Nima Najafi Anaraki; A. Zahed "Investigation on Geochemical Separation Communities in the N-NE of the Choghart Iron Mine using Fractal Geometry; with a Special Focus on Rare Earth Elements". National Congress of Iron and Steel Industries, Zarand, Kerman, Iran, 14-16th October 2014
- 13) Y. Shekarian; A. Hezarkhani; Nima Najafi Anaraki; A. Zahed. "Pattern investigations on Rare Earth Elements (REE's) in N - NE Choghart iron deposit". 32nd National and 1st International Geoscience Congress, Rare Earth Elements and Technology. Yazd, Iran, 16th -19th February 2014.
- 14) Y. Shekarian; A. Hezarkhani; Jafar Shahrivar GhozIllu; **N. Najafi Anaraki**. "Investigation on Reservoirs of Rare Earth Elements (REE's) in the World and Iran, with special focus on Choghart Iron Mine". 33rd National Geoscience s Symposium, Tehran, Iran, March 2015.
- 15) **N. Najafi Anaraki**; Y. Shekarian; J. Shahrivarquzullu; A. Hezarkhani. "Investigation on Arsenic Primary Resources in Iran and Modeling Arsenic of Zarshoran Deposit". National Conference of Geology and Exploration of Resources. Shiraz, Iran, December 2014.