

ASAF KHAN

GEOLOGIST & GEOTECHNICAL

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Geologist & Geotechnical Engineer with over 5 years of experience in soil and rock engineering, underground excavation, drilling and grouting works for major hydropower and infrastructure projects. Skilled in core drilling/logging, TV logging, Permeability/lugeon test, and rock mass classification (Q-System, RMR, GSI, SMR). Experienced in tunnelling, slope stability, geological mapping, foundation treatment, and intelligent grouting systems (ART Level-3). soil and rock testing Proficient in AutoCAD-based geological modelling, borehole correlation, and technical reporting across projects in KSA and Pakistan

Professional Experience

Geotechnical Eng | ELBA Engineering LLC, Trojena Dam (Long Fresh Water Lack) NEOM | May 2024 – Pre Until Dec.

- Geotechnical Investigations: Led drilling operations, core logging, TV logging, sampling and in-situ tests to evaluate subsurface conditions for foundations, tunnels, and slopes.
- Advanced Testing & Tunnel/Dam Works: hydro-testing, hydro-jacking, probe drilling, endoscopic surveys, and MWD interpretation for dam foundations, tunnels, and Slope zones.
- Geological Mapping & Rock Mass Classification: tunnel/slope geological mapping and stability assessment using RMR, Q-System, GSI, and SMR.
- Grouting & Groundwater Control: Supervised consolidation, curtain, compaction, contact, and jet grouting (up to 5 MPa) using micro-fine cement, ART Level-3 intelligent systems, and advanced Chinese geotechnical instrumentation. Mix Designs preparation.
- Ground Support & Stabilization: Oversaw installation of rock bolts, anchors, shotcrete, wire mesh, and slope stabilization works across tunnels, penstock areas, and foundations.
- Reporting & Documentation: technical reports, borehole logs, lab summaries, geological cross-sections, AutoCAD drawings, and coordinated with consultants to ensure quality control and site progress.

Field Geologist Support | Assystem and Ali Al-Harbi Engineering Consultancy Company (RADICON) Saudi Arabia Mar 2023 - April 2024

- Core Drilling, logging, sampling, and borehole stabilization.
- Prepared and digitized borehole logs; lugeon/permeability and packer tests.
- slope stability analysis Tunneling mapping and foundation assessments.
- Delivered soil sampling, drilling, and test pits; ensured QA/QC of samples and field data.
- Measured soil permeability and assessed stability for design planning.
- Digitized borehole and lab data in Excel/Word
- Collected, analyzed, data; Geological maps, profiles, and cross-sections using GIS and AutoCAD.

Geologist | China Gezhouba Group Company Energy China (CGGC): (MDHP) project, KSA |Jan 2022 - Feb 2023

- Geotechnical Support work, Tunneling portal and slope stability assessments, drilling, logging, TV logging, and WPT/Lugeon tests.
- Geological mapping and rock mass classification (RMR, Q-System, GSI); evaluated foundation stability.
- Directed shotcrete, mesh, rock bolts, and anchors in tunnels and powerhouse zones. And Grouting.
- Supervised Grouting, lab and field tests (CBR, sieve, Atterberg limits, UCS, direct shear, plate load) per ASTM/BS standards.
- Prepared AutoCAD-based site maps, borehole logs, and technical reports; integrated geotechnical recommendations into project designs.

Site Geologist | Natural Resources Exploration Company, Mining Exploration Upper Dir, Pak and Afg |July 2020 - Dec 2021

- Carried out geological mapping and exploration across 10+ mineral sites; identified drilling targets and logged core samples.
- Geological mapping and site investigations across 10+ locations, identifying drilling targets and key subsurface features.
- Executed , permeability, and packer tests.
- Geotechnical field surveys including GPR, geophysical measurements, and structural assessments for foundation and slope stability evaluation.
- processed soil and rock samples, ensuring QA/QC and compliance with environmental and safety standards.
- Detailed field reports, borehole logs, and site layouts to support design, resource planning, and engineering decisions.

Education

- Bachelor degree in Geology from Bacha Khan university Charsadda, Peshawar Pakistan.
- Diploma in Information Technology Khyber Pakhtunkhwa Board of Technical Education.

Professional Trainings & Certifications

- NATM / TBM Tunneling Certification – ITA / ICE
- Underground Construction Management – ITA–AITES
- Rock Mechanics & Tunneling (RMRT) – ISRM
- Material testing ISRM Rock Mechanics Certification
- Slope Stability & Landslide Risk Assessment – IAEG / ISRM
- Grouting Technology Certification – ICOLD / ASCE
- Dam Safety & Foundation Treatment – ICOLD
- Advanced Drilling & Core Logging – IAEG / ISRM
- Google Data Analytics Certificate – AutoCad, Excel

Key Skills

AutoCAD, Civil 3D, GIS, Google Earth pro • Grouting Expert Analysis System, TDMS, PLAXIS, GeoStudio. TV Logging Software • Slide 6.0, Unwedge, Swedge, DIPS • MS Office (Excel, Word, PowerPoint)

Geotechnical investigation field & lab testing skills

- SPT • CPT • WPT • TCR • RQD • SCR • FDT • soil testing Trial Pits • Gradation • Proctor Compaction • Atterberg Limits, CBR • Concrete, Slump Testing, Aggregate, Asphalt, Marshall, GMM, GMB

Personal Information

- Languages: English, Arabic, Urdu and Chines
- Nationality: Pakistani
- Driving License: Valid Saudi driving license
- Iqama Status: Transferable

References

Available upon request.