

Geotechnical Engineer.

CURRICULUM VITAE (CV)

Position Title and No.	Geotechnical Engineer
Name of Expert:	Assay Gebremiceal Getahun
Date of Birth:	13th August 1977
Country of Citizenship/Residence	Ethiopia

Education	• Master's Degree in Geological Engineering, University, Mekelle, Ethiopia, 2009. • B.Sc. Degree in Geology, Addis Ababa University, Ethiopia, 2003. Other Training • Training program on GIS and Remote Sensing-based Landslide Identification and Mapping, Mekelle University and VLIR-Belgium, July-August 2008. • Training program on Irrigation Development, Tigray Water Resource Development Bureau, October - November 2004. • Training program on Computers & Windows XP, Microsoft Packages, and Networking Applications, Bureau of Finance and Economic Development of Tigray Region, along with Sheba College, New Millennium College, Tigray College, and Arsema Informatics Centre, June - August 2005
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Employment record relevant to the assignment:

Period	Employing Organization and your Title/Position, Contact Information for References	Country	Summary of Activities Performed Relevant to the Assignment
Feb 2025 – Present	POWER CHINA – SINOHYDRO Corporation Ltd Position: Project Quality Control and Geotechnical Engineer	Rwanda	• Supervision and monitoring of geotechnical investigations and QA/QC activities for dam, spillway, diversion works, and hydraulic structures. • Review of construction methodologies, technical documentation, and quality compliance procedures. • Supervision of drilling, grouting, water pressure testing, and construction materials investigations. • Monitoring of concrete quality, compaction works, and field/laboratory testing activities. • Preparation of technical reports, progress reports, and stakeholder presentations. • Coordination with project management teams to ensure compliance with technical specifications and construction standards.
May 2023 – Oct 2024	Employing Organization: SMEC International Pty Ltd Position Held:	Malawi	• Conducted detailed geotechnical investigations for the Lower Domasi Dam Project including dam foundation, spillway, and intake structures.

	Project Geotechnical Engineer Contact info for references Name: Mohammed ABUBEKER Position: Team Leader Email: mohammed.abubeker@smec.com Tel: +6281315751033/+265987088840		- Supervised core drilling, logging, water pressure testing, and geophysical investigations. - Coordinated field investigation teams and drilling crews during large-scale geotechnical investigations. - Performed geological characterization, interpretation of field test data, and geotechnical assessments. - Prepared feasibility-level and detailed geotechnical investigation reports. - Participated in technical meetings, presentations, and stakeholder coordination activities.
Nov 2017 – Jan 2023	Employing Organization: CGCOC – JWHC JV Position Held: Project Geotechnical and Geological Engineer Contact info for references Name: Wang Wencai Position: Project Manager Email: wangwencai@cgcoc.com.cn Tel: +251944098098	Rwanda / Tanzania / Burundi	- Planned and supervised geotechnical investigations and construction activities for hydropower, dam, tunnel, spillway, and powerhouse infrastructure. - Supervised underground excavation works, slope stabilization, drilling, blasting, and tunnel support systems. - Conducted foundation treatment and grouting works including curtain, consolidation, and contact grouting. - Performed geological mapping, core logging, laboratory investigations, and material suitability assessments. - Supervised installation and monitoring of geotechnical instrumentation systems. - Prepared technical reports, construction methodologies, and QA/QC documentation for major hydraulic infrastructure projects.
Jan 2012 – Oct 2017	SUR Construction PLC Position: Project Geotechnical Engineer	Ethiopia	- Conducted geotechnical investigations, foundation inspections, grouting supervision, and construction quality monitoring for dam and irrigation infrastructure projects. - Supervised construction of embankment dams, tunnels, spillways, intake structures, and irrigation infrastructure. - Managed borrow area investigations, quarry assessments, and construction materials evaluation. - Supervised compaction control, field density testing, and asphalt core placement activities. - Participated in design review, slope stability assessments, and construction methodology preparation. - Prepared geotechnical reports, instrumentation monitoring records, and technical evaluation reports.

2011 - 2013	Employing Organization: EFDR - Water Works Design and Supervision Enterprise Position Held: Senior Geotechnical / Geological Engineer Contact info for references Name: Dawit Abreha Position: Geotechnical and Technical Service Head Email: medaw2003@yahoo.com Tel: +251911123516	Ethiopia	• Led geotechnical and geological investigations for dams, tunnels, spillways, reservoirs, and diversion structures. • Conducted drilling, coring, geophysical surveys, permeability testing, and geological mapping activities. • Assessed construction material sources including rockfill, clay core, riprap, and alluvial deposits. • Supervised in-situ testing, laboratory testing, compaction monitoring, and QA/QC activities. • Prepared geotechnical feasibility reports, factual reports, and investigation documentation. • Coordinated planning and supervision of geotechnical investigation programs for major dam projects.
Sep 2009 – Jul 2011	Wollo and Dilla Universities Position: Technical Consultant & University Instructor / Researcher	Ethiopia	• Conducted groundwater investigations, geophysical surveys, and hydrogeological assessments. • Undertook engineering geological and geotechnical feasibility studies for dam and infrastructure projects. • Performed landslide investigations and slope stability assessments. • Prepared BOQs, technical reports, and groundwater development documentation. • Participated in research and technical consultancy assignments related to water resources and geotechnical engineering.
2008 - 2009	Employing Organization: SNNPRS Regional State Position Held: Geotechnical/ Geological Engineer Contact info for references Name: Mitiku Bedru Gochefo Title: Bureau Head	Ethiopia	• Site Investigation and Water Well Points Selection through hydrogeological and geophysical methods • Assessment and evaluation of the existing water supply and sanitation situation of the zones, woredas, and towns of the region. • Provided capacity building training to the water supply service office staffs of the zones, woredas, and towns of the region and prepared training manuals • Water supply access coverage for 3634 Rural Kebeles, and 90 Towns of 13 Zones, 133 Woredas and 8 special woredas of South Nations, Nationalities People Regional State with project cost of 5.2 Million Birr, Hawassa

			Study on Water Resource Potential & related socio-economic and environmental issues in Bilate River Sub Basin, Hawassa.
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Membership in Professional Associations and Publications	- Ethiopian Engineering Geological and Hydrogeological Association - Practicing Engineering Geologist, Water Resources Professional Practicing Certificate, Ethiopia
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Language Skills:	English	Speaking	Reading	Writing
	Excellent	Excellent	Excellent	Excellent
	Swahili	Excellent	Excellent	Excellent

Software Applications:	AutoCAD GIS Rockscience Packages Geoslope/Slide Hydrologs
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Adequacy for the Assignment:

Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks

Name of the assignment or Project: Lower Domasi Dam Feasibility and Detail Design Project.

Year: May 2023 to October 2024

Location: Malawi

Client: Southern Region Water Board

Main Project Features:

- 90 m High Dam**
- 920 m Crest Length**
- Spillway and Intake Structures
- Reservoir and Water Supply Infrastructure**
- Dam Foundation Investigations**
- Associated Hydraulic Structures and Water Conveyance Infrastructure.

Position Held: Project Geotechnical Engineer

Activities Performed:

- Conducted detailed geotechnical investigations for **dam foundations, spillways, intake structures, and associated hydraulic infrastructure.**
- Supervised core drilling, geological logging, water pressure testing, and geophysical investigations.
- Performed geological characterization and interpretation of subsurface conditions for major water retaining structures.
- Coordinated drilling crews and geotechnical investigation teams during large-scale field investigations.
- Supervised investigation works for **water supply infrastructure and associated hydraulic structures.**
- Conducted geophysical investigations and interpretation of seismic and ERT data for dam foundation assessment.
- Identified rock types, geological structures, weathering profiles, joints, shear zones, and discontinuities affecting hydraulic structures.
- Prepared factual reports, geotechnical investigation reports, and feasibility-level technical documentation.
- Participated in technical meetings and stakeholder presentations related to water infrastructure development projects.

Name of the assignment or Project: Muvumba Multipurpose Dam Construction & Power Plant Installation.

Year: February 2025 – Present.

Location: Rwanda

Client: SINOHYDRO Construction Corporation.

Main Project Features:

- Multipurpose Dam Development
- Spillway and Diversion Structures
- Power Plant Installation
- Intake Structures
- Water Regulation Infrastructure
- Foundation Treatment and Grouting Works.

Position Held: Project Quality Control and Geotechnical Engineer.

Activities Performed:

- Supervised geotechnical investigations and QA/QC activities for **dam foundations, spillways, diversion structures, and associated hydraulic infrastructure.**
- Supervised drilling, grouting, core logging, water pressure testing, and foundation treatment works.
- Conducted construction materials investigations and suitability assessments for embankment and hydraulic structure construction.
- Monitored concrete quality, compaction control, field density testing, and material compliance activities.
- Participated in review of construction methodologies, technical documentation, and quality assurance procedures.
- Supported project management teams through technical reviews and construction quality monitoring.
- Prepared technical reports, quality documentation, and project progress reports.
- Participated in stakeholder meetings and technical coordination activities related to major water infrastructure works.

Name of the assignment or Project: Zarema Mayday Dam Construction Project.

Year: January 2012 – October 2017.

Location: Ethiopia

Client: SUR Construction PLC.

Main Project Features:

- **154 m High Asphalt Core Embankment Dam**
- **920 m Crest Length**
- Cofferdam and Diversion Tunnel
- Spillway Structures
- **5.1 km Pressurized Intake Tunnel**
- Reservoir and Hydraulic Infrastructure
- Irrigation and Water Regulation Infrastructure.

Position Held: Project Geotechnical Engineer.

Activities Performed:

- Conducted detailed geotechnical investigations for **dam foundations, spillways, diversion tunnels, intake tunnels, and irrigation infrastructure.**
- Supervised foundation grouting works including **curtain grouting, consolidation grouting, and contact grouting.**
- Supervised underground tunnel excavations, drilling, blasting, and tunnel support systems.
- Conducted geological mapping, core logging, sampling, and laboratory testing activities.
- Monitored embankment compaction, field density testing, and construction quality control activities.
- Conducted construction materials investigations for embankment zones, riprap, clay core, and rockfill materials.
- Supervised asphalt core placement, compaction monitoring, and construction QA/QC procedures.
- Participated in design review, slope stability assessments, and geotechnical evaluation of hydraulic structures.

- Installed and monitored geotechnical instrumentation systems for dam safety monitoring.
- Prepared geotechnical reports, technical evaluations, and construction monitoring documentation.

Name of the assignment or Project: Kuraz Omo River Diversion Project.

Year: August 2011 – January 2012.

Location: Ethiopia

Client: Water Works Design and Supervision Enterprise.

Main Project Features:

- **River Diversion for Irrigation Development**
- Irrigation Canals and Conveyance Infrastructure
- Command Area Investigations
- Water Regulation Structures
- Hydraulic Infrastructure Investigations

Position Held: Senior Geotechnical / Geological Engineer.

Activities Performed:

- Conducted geotechnical and geological investigations for **river diversion structures, irrigation canals, and water conveyance infrastructure.**
- Performed drilling, sampling, geological mapping, and geophysical investigations.
- Assessed ground conditions and water tightness within irrigation command areas.
- Conducted construction materials investigations for hydraulic and irrigation infrastructure works.
- Participated in preliminary investigations for irrigation infrastructure development.
- Prepared factual reports, feasibility documentation, and geotechnical assessments for irrigation development works.

Name of the assignment or Project: Wolkite Irrigation and Sugar Development Project.

Year: August 2011 – January 2012

Location: Ethiopia

Client: Water Works Design and Supervision Enterprise.

Main Project Features:

- Irrigation Development Infrastructure
- Dam and Reservoir Structures
- River Diversion Structures
- Spillway and Intake Works
- Irrigation Conveyance Systems
- Command Area Development.

Position Held: Senior Geotechnical / Geological Engineer.

Activities Performed:

- Conducted geotechnical investigations for **dam foundations, spillways, intake structures, irrigation canals, and hydraulic infrastructure.**
- Performed drilling, coring, permeability testing, geological mapping, and geophysical investigations.
- Conducted reservoir investigations and water tightness assessments.
- Assessed construction material suitability for embankments, canals, and hydraulic structures.
- Supervised in-situ testing, compaction monitoring, and geotechnical QA/QC activities.
- Prepared geotechnical investigation reports and feasibility study documentation.
- Participated in planning and supervision of investigation programs for irrigation and water infrastructure projects.

Name of the assignment or Project: Tekezi River Diversion Project.

Year: January 2012 – October 2017.

Location: Ethiopia

Client: SUR Construction PLC.

Main Project Features:

- **River Diversion and Irrigation Intake Structures**

- **Pump House**
- **52 km Pipeline System**
- **Reservoir with Capacity exceeding 100,000 m³**
- **Irrigation Development for 7,000 Ha**
- Water Conveyance and Regulation Infrastructure.

Position Held: Project Geotechnical Engineer.

Activities Performed:

- Conducted geotechnical investigations for **river diversion works irrigation intake structures, pump house foundations, reservoir structures, and pipeline corridors.**
- Supervised drilling, sampling, geological mapping, and foundation investigations for hydraulic infrastructure.
- Conducted construction materials investigations and suitability assessments for embankment, concrete, and pipeline support works.
- Participated in geotechnical evaluation of **water conveyance infrastructure, reservoir foundations, and irrigation facilities.**
- Supervised compaction control, field density testing, and earthworks quality assurance activities.
- Participated in slope stability assessments and excavation support evaluations for hydraulic structures.
- Conducted construction monitoring and quality control activities in accordance with project specifications.
- Prepared geotechnical reports, investigation records, and technical recommendations for irrigation infrastructure development.

Name of the assignment or Project: Kalema Dam Project.

Year: January 2012 – October 2017.

Location: Ethiopia

Client: SUR Construction PLC.

Main Project Features:

- **Barrage Concrete Dam**
- **15 m High Dam Structure**
- **120 m Crest Length**
- **32 km Pipeline System**
- **3 Control Gates**
- **Irrigation Development for 3,000 Ha**
- Water Regulation and Distribution Infrastructure.

Position Held: Project Geotechnical Engineer.

Activities Performed:

- Conducted geotechnical investigations for **dam foundations, pipeline alignments, irrigation infrastructure, and hydraulic structures.**
- Participated in foundation inspections, geological mapping, and construction materials investigations.
- Conducted drilling, sampling, laboratory testing, and field-testing activities for hydraulic infrastructure works.
- Supervised earthworks, compaction operations, and construction quality control activities.
- Assessed borrow areas, quarry materials, and foundation suitability for dam and irrigation infrastructure construction.
- Participated in design review and geotechnical evaluation of barrage structures and associated hydraulic facilities.
- Prepared geotechnical reports, material assessment reports, and technical recommendations.

Name of the assignment or Project: Rusumo Falls Hydropower Construction Project.

Year: November 2017 – January 2023.

Location: Rwanda, Tanzania & Burundi.

Client: CGCOC – JWHC JV.

Main Project Features:

- Concrete Dam and Spillway Structures
- Power Intake Structures
- **1.7 km Head Race Tunnel**
- Powerhouse and Penstock Infrastructure
- Tailrace and Hydraulic Structures
- Foundation Treatment and Grouting Works.

Position Held: Project Geotechnical & Geological Engineer.

Activities Performed:

- Conducted detailed geotechnical investigations and construction supervision for **dam foundations, spillways, tunnels, intake structures, and hydraulic infrastructure.**
- Supervised underground excavations, drilling, blasting, and tunnel support systems including shotcrete, anchors, and steel ribs.
- Supervised foundation treatment works include **curtain grouting, consolidation grouting, and contact grouting.**
- Conducted geological mapping, core logging, field investigations, and laboratory testing activities.
- Participated in design review, construction methodology preparation, and technical evaluation of hydraulic structures.
- Supervised installation and monitoring of geotechnical instrumentation systems.
- Conducted quarry investigations and construction material suitability assessments.
- Prepared technical reports, geotechnical assessments, QA/QC documentation, and construction supervision records.

Name of the assignment or Project: Regional Water Development Projects.

Year: June 2008 – September 2009.

Location: Ethiopia.

Client: SNNPRS Regional State – Water Resource Development Bureau (WRDB).

Main Project Features:

- Water Supply Development Projects
- Micro Dams and Diversion Structures
- Water Wells and Spring Developments
- Rural Water Supply Infrastructure
- Water Resource Assessments and Planning.

Position Held: Geological / Geotechnical Engineer.

Activities Performed:

- Conducted hydrogeological and geotechnical investigations for **water supply schemes, micro dams, diversion structures, and water infrastructure projects.**
- Participated in site selection and development of water wells and rural water supply systems.
- Conducted geological mapping, geophysical investigations, and water resource assessments.
- Participated in regional water coverage studies and water resource planning activities.
- Conducted socio-economic and environmental assessments related to water development projects.
- Delivered technical training and capacity building support for regional water supply personnel.
- Prepared technical reports, investigation documentation, and water resource assessment reports.

Name of the assignment or Project: Water Development and Rural Road Projects.

Year: June 2003 – December 2005.

Location: Ethiopia.

Client: Tigray Regional State Water, Mine and Energy Bureau.

Main Project Features:

- Micro Dams and Diversion Structures
- Water Supply Wells and Spring Developments
- Water Ponds and Reservoirs
- Rural Water Infrastructure

- Rural Roads and Culverts.

Position Held: Junior Engineering Geologist & Hydrogeologist.

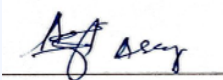
Activities Performed:

- Conducted geological and geotechnical investigations for **micro dams, diversion structures, water supply projects, and reservoirs.**
- Supervised drilling, well construction, and hydrogeological investigations for rural water supply systems.
- Conducted geological mapping, core logging, sampling, and laboratory investigations.
- Participated in construction materials investigations and assessment of borrow areas for infrastructure works.
- Supported supervision of culverts, rural roads, and associated drainage infrastructure.
- Participated in planning and implementation of water resource development projects and rural water infrastructure.

Expert's contact information	E-mail: assay2010@gmail.com
	Telephone: +251986082382 / +250780496637

Certification

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

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Name of Expert	Signature	Date