

COMPANY PROFILE
FOR
Quartz Drilling and Lab Pvt. Ltd.
(Geotechnical and Geophysical Investigations)



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NEPAL

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1. Introduction

Quartz Drilling and Lab (QDL) Pvt. Ltd. is an registered engineering investigation firm established under the act no. 18 of the year 2063 (2006) with the aim at providing engineering related investigation services. We deliver wide range of services that satisfy clients' needs for progressive geotechnical engineering, soil testing, core drilling, ERT survey developments works.

QDL has aimed to provide pragmatic and disruptive technology and cost-effective solutions to its clients. This in turn has helped QDL to earn reputation and business excellence in a very short period. QDL has highly qualified and experienced professionals on its rolls.

2. Services:

QDL provides core drilling and laboratory services for soil and rocks in order to evaluate the engineering properties of the sub-surface materials.

Drilling works:

QDL carry out the drilling works in every development works both in soil and rocks. We have two rotary drilling machines; one is Bohawa (Chinese) and another is Voltas 35 (Indian). Bohawa, a Chinese rotary drilling machine can drill up to 50 meters. Likewise, Voltas 35 can easily drill up to 200m into the Himalayan rocks. Similarly, QDL has few percussion machines and Auger Boring Machines along with the accessories. Percussion machines are generally used to drill the soft sub surface materials mainly in the terai region and valley fill sediments.

Laboratory Tests:

QDL aims to provide highly credible results for its clients that ultimately helps them to design a strong sub and super structures. Highly qualified and experienced lab technicians under the supervision of engineers, geotech engineers and geologist test the soil/rock materials in order to calculate the engineering properties of the sub surface materials.

We provide lab services for:

- Index Properties of Soil / Rock
- Standard and Modified Proctor
- California Bearing Ratio (CBR)
- Field CBR test
- UCS Test
- Point Load test
- Plate Load Test
- Unconfined Compression
- Direct Shear Test
- Consolidation
- Permeability

In- situ tests

We provide in-situ tests for,

- SPT/DCPT
- Permeability (constant and falling head) tests for soil.
- Lugeon tests (Water pressure tests) for rocks.
- SPT for road
- Field CBR tests

3. Electrical Resistivity Tomography (ERT) Survey

QDL Provides electrical resistivity survey for the delineation of sub-surface geology, mineral layer identification, hydrological investigation, differentiate the overburden and bed rock. We had Geomative 10 (GD10) brand machine having 1200m long cable. We can reveal the sub-surface data up to 300m depth from the surface.

GD-10 Series Geo-electrical System

GD-10 series is a new electrical geophysical exploration system with highly engineered & cutting edge technology with a revolutionary change. It is promoted to market focusing the best solution to meet emerging technological advancements, cost affordability, flexibility in field practices, the greatest accuracy in geo-electrical exploration, the enduring sustainability for a basic user to a progressive researcher.

GD-10 series supports 1D VES, 2D ERI and 3D ERT Resistivity/IP measurement, which are the versatile geophysical method apply for a broad range of applications, as groundwater and mineral exploration, infrastructure site investigations and so on.

Feature :

- ✓ Can measure the resistivity, time domain induced polarization method (IP) and spontaneous potential (SP);
- ✓ High power, wide range, high precision;
- ✓ Transmitter and receiver designed in one unit, light and portable;
- ✓ The unique sub-level centralized cable system realized the electrode switching by CL-10 cable leader, no electrode limit on measurement, which features light, low cost and easy operation.
- ✓ Using a unique scrolling technology, which can detects deeper than comparable instruments with no repeated measuring point. And the scrolling function is realized during detection, which improve the working efficiency.
- ✓ The data management platform, Geomative Studio, breaks through the bottleneck of traditional embedded software, which enrich the software function greatly;
- ✓ Designed with built-in GPS, can accurately determine the measurement coordinates;
- ✓ Multi-electrode cable with bi-direction design and dual take-outs enable the parallel electrodes for high power applications;
- ✓ Powerful self-checking function for the high-quality data during measurement, including Grounding R test, switcher test and cable leader test.
- ✓ Communication port for USB data transfer;
- ✓ Real-time data valuation, the time window can be set in IP survey;
- ✓ High reliability, security and robustness, can use in extremely harsh weather.

GD-10 Advanced 2D Multi-electrode Res Imaging System is the 2D ERI system with functions of SP survey, 1D Resistivity/IP sounding survey and 2D Resistivity Imaging survey. The mainframe including GD-10 mainframe and CS-60 multi-electrode switching box.

Power: 800V/1600Vp-p, 4A, 3200W

GD-10 mainframe



4. Working Areas:

We are expert in working different disciplines of development works.

Some defined working areas have been outlined below.

- Drilling and in-situ testing for **Hydropower**
- Drilling and in-situ testing for **Mines**
- Drilling and in-situ testing for **Bridges and Buildings**
- **Transmission lines** tower foundation soil testing
- **Sub-station** site soil testing
- **Soil resistivity measurement** of TL tower foundation
- **Mine investigation** and Quarry site investigation
- Geological and engineering geological mapping
- Electrical Resistivity tomography (**ERT**) survey for Hydropowers, Mines, Bridges, Slopes
- Soil and Rock testing laboratory.

5. Completed Projects

General Construction Experience				
Starting Month Year	Ending Month Year	Year	Contract Identification and Name and address of Employer Brief Description of the Works Executed by the Bidder	Client
Jan	Jan	2021	ERT survey and Geotechnical investigation of Zipline foundation and YoYo Resort, Bhaktpur	YoYo Zipline Pvt. Ltd.
Jan	Jan	2021	ERT Survey of Bhujung Khola Hydropower Project, Lamjung	Bhujung Hydropower Company Pvt. Ltd.
Dec	Dec	2021	ERT Survey of Dar Khola Hydropower Project, Myagdi	Dar Khola Hydropower Company Pvt. Ltd.
Nov	Nov	2021	ERT Survey of Khani Khola Dolakha Hydropower Project, Dolakha	SASA Engineering Company Pvt. Ltd.
Sep	Nov	2020	Geotechnical Investigation of Mainhiya-Sampatiya 132 kV Transmission Line Project, Nepal Electricity Authority	Nepal Electricity Authority
June	Aug	2020	Geotechnical Investigation of Burtibang Paudi-Amarai Tamghas Sandhikharka Gorushinge 132 kV Transmission Line Project, Nepal Electricity Authority, Contract No. BPTSG-074/75-01	Nepal Electricity Authority
Sep	Oct	2020	Electrical Resistivity Survey of Upper Brahmavani Hydropower Project, Sindhupalchok	Ekikrit Byapar Company Pvt. Ltd.
March	May	2020	Geotechnical Investigation of Hitar-Sitalpati (Arun Corridor) 400 kV Transmission Line Project	RGPC
February	March	2020	Core drilling works of Lower Likhu Hydropower Project, Ramechhap	Swet Ganga Hydropower and Construction Limited

August	September	2019	Geotechnical Investigation of Proposed Building Foundation at Jarankhu, Kathmandu	School
July	August	2019	Geotechnical Investigation of Proposed Building Foundation at Boudha, Kathmandu	Kapan Gumba
March	April	2019	Geotechnical Investigation of Proposed Chitwan Rangshala Foundation at Ratnanagar, Chitwan	District Sports Development Committee
May	June	2019	Geotechnical Investigation of Proposed Building Foundation at Kuleshwor, Kathmandu	Sunrays Trading Pvt. Ltd.
Jan	Feb	2019	Geotechnical Investigation of Likhu IV-New Tamakoshi 220 kV Transmission Line Project, Green Ventures Pvt. Ltd. Contract No. Likhu-IV/GVN/Package 05/2018	Green Ventures Pvt. Ltd.
March	May	2019	Geotechnical Investigation of Burtibang Paudi-Amarai Tamghas Sandhikharka Gorushinge 132 kV Transmission Line Project, Nepal Electricity Authority, Contract No. BPTSG-074/75-01	Nepal Electricity Authority
August	October	2019	Resitivity Survey of Soti Khola Hydropower Project, Manang	Cepad Hydro Consultants Pvt. Ltd.
November	December	2019	Electrical Resistivity Survey of Rauje Khola Hydropower Project, Solukhumbu	Cepad Hydro Consultants Pvt. Ltd.
October	June	2019	Core Drilling works of Khara Limesone Deposit, Rolpa	Samrat Cement Pvt. Ltd.
May	July	2019	Electrical Resistivity Survey of Brahmavani Hydropower Project, Sindhupalchok	Ekikrit Byapar Company Pvt. Ltd.
March	September	2018	Core Drilling works of Thara Limestone Deposit, Dang	Samrat Cement Pvt. Ltd.
March	July	2018	Geotechnical Investigation of Hongu Khola Hydropower Project, Solukhumbu	CEBTL Hydro Fund Limited
August	September	2018	Electrical Resistivity Survey of Chepe Khola Hydropower Project, Lamjung	
November	December	2018	Resitivity Survey of Richet Khola Hydropower Project, Gorkha	Richet Khola Hydropower Company Pvt. Ltd.

October	October	2018	Electrical Resistivity Survey and Geotechnical Investigation of Dudhkunda Khola Hydropower Project, Solukhumbu	Cepad Hydro Consultants Pvt. Ltd.
August	December	2017	Geotechnical Investigation of Dudhkoshi-6, Dudhkoshi-9 and Dudhkoshi-10 Hydropower Project, Solukhumbu	Cepad Hydro Consultants Pvt. Ltd.
July	August	2017	Geotechnical Investigation of Proposed Medical Building at Tandi, Chitwan	Bakulahar Ratnanagar Hospital
June	August	2017	Geotechnical Investigation of Middle Marsyandi-Dumre-Damauli 132kV Transmission Line & Substation Project, Nepal Electricity Authority, Contract No. MMDD/NCB/73-74/TL-1	Nepal Electricity Authority
August	September	2016	Geotechnical Investigation of Proposed Residential Building at Sitapaila-5, Kathmandu	
January	May	2016	Geotechnical Investigation of Liping Khola Hydropower Project, Sindhupalchok	Swacha Urja Pvt. Ltd.

6. Ongoing Projects

1. Geo-technical investigation of proposed building foundation at Chitwan
2. Geo-technical investigation of proposed building foundation at Maharajgunj
3. Geo-technical investigation of proposed building foundation at Bhaktpur
4. Geo-technical investigation of proposed building foundation at Lamjung
5. Geo-technical investigation of proposed building foundation at Khotang
6. ERT survey of Dudhkoshi-6 Hydropower Project, Solukhumbu
7. ERT survey of Luza Hydropower Project, Solukhumbu
8. ERT survey of Salque Khola Hydropower Project, Manang

7. Manpower

Manju Kandel	Managing Director
Dilandra Raj Pathak	Senior Geologist
Abinash Aryal	Geotechnical Engineer
Basant Bhandari	Engineering Geologist
Abiskar Regmi	Jr. Geologist
Santosh Poudel	Jr. Geologist
Manoj Damai	Accountant
Bhim Upreti	Lab Technician
Suraj Pathak	Administration
Nabin Magar	Driller
Ram Lal Tamang	Driller
Bikash Tamang	Driller
Krishna Thapa	Driller
Shukra Thapa Magar	Driller

Drilling work in Different sites







ERT Survey at different sites







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