

**Department of Geology**  
**Report on Training Programme: Usage of Resistivity Apparatus in Groundwater Exploration**

**Date of Training:** [Insert Date(s)]

**Venue:** Department of Geology, [Your College Name]

**Organized By:** Department of Geology

**In Collaboration With:** Jalanidhi Geo Services, Eluru

**Number of Faculty Trained:** 6

**Number of Internship Students Trained:** 33

### **1. Introduction**

In its continued efforts to enhance practical and field-based learning, the Department of Geology organized a specialized training program on the **usage of resistivity apparatus for groundwater exploration**. The focus of the training was on familiarizing participants with two key devices used in geoelectrical methods: **PQWT** (Portable Quantum Water Detector) and **DDR3-SRM** resistivity meter.

The training was conducted in collaboration with **Jalanidhi Geo Services**, a reputed organization engaged in groundwater and geophysical investigations. The program provided both theoretical and hands-on exposure to participants.

### **2. Objectives of the Training**

- To understand the principles of resistivity surveys used in groundwater exploration.
- To gain hands-on experience in operating PQWT and DDR3-SRM equipment.
- To learn **Schlumberger configuration** techniques in vertical electrical sounding (VES).
- To prepare faculty and students for independent resistivity surveys in academic and consultancy contexts.

### **3. Participants**

- **Faculty Members:** All the 6 faculty members from the Department of Geology participated in the training to enhance their technical proficiency in geophysical field methods.
- **Internship Students:** A total of **33 students** undergoing long-term internship with the department also took part and benefited from the intensive field practice and demonstrations.

## 4. Training Content

The training was delivered in two segments:

### A. Theoretical Session

- Overview of Geophysical Methods in Groundwater Studies
- Working principles of PQWT and DDR3-SRM
- Advantages and limitations of different resistivity configurations
- Introduction to Schlumberger Array method

### B. Practical Demonstration and Field Training

- Step-by-step guidance on setting up the PQWT and DDR3-SRM
- Conducting field resistivity measurements using Schlumberger configuration
- Real-time data acquisition and interpretation
- Troubleshooting and best practices in field conditions

## 5. Outcome and Impact

- **Faculty Enhancement:** Faculty members gained confidence in handling modern resistivity apparatus and planning field surveys, strengthening the department's capability for research and consultancy.
- **Student Skill Development:** Internship students received practical exposure, significantly enriching their understanding of applied geophysics.
- **Departmental Capacity Building:** The training has enabled the Department to conduct in-house groundwater investigations and contribute towards societal outreach.

## 6. Feedback and Suggestions

Participants expressed their satisfaction with the clarity, hands-on approach, and practical relevance of the training. Many suggested regular follow-up workshops and joint field investigations with industry partners.

## 7. Acknowledgements

The Department extends heartfelt thanks to **Jalanidhi Geo Services** for their expert guidance and technical support. The enthusiasm and active participation of faculty and students made the program a grand success.

## 8. Photo Gallery

