# REPORT ON GEO-PHYSICAL ELECTRICAL LOGGING OF BOREHOLE

at

Village: Niwara

Baghpat, Baghpat, Uttar Pradesh

For

State Water Sanitation Mission (Jal Jeevan Mission)

UP Jal Nigam(Rural), Baghpat, U.P

*Submitted Through*

*M/s. L.C. Infra Projects Private Limited*

*Conducted by*

GLOBAL GROUND WATER CONSULTANTS

(Consulting Geologists & Geophysicists)

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Date: 18th August 2023

REPORT ON GEO-PHYSICAL RESISTIVITY LOGGING OF BOREHOLE

At

Village: Niwara

Baghpat, Baghpat, Uttar Pradesh

***Introduction:***

A deep borehole 142 (466 Feet) was drilled by working agency *M/s. LC Infra Projects Private Limited, Baghpat, U.P.* as a part of their scope work for development of tubewells under Jal Jeevan Mission Project of SWSM. GGWC conducted a Geophysical Resistivity logging in the above borehole using IGIS's Logger dated on 18th August 2023

Based on the interpretation of the Logging, the following litho logy has been inferred which tallies fairly well with the well-site litho-log based on mud-wash samples.

| ***Depth in m*** | | | ***Expected Litholog*** | ***Expected Quality*** |
|---|---|---|---|---|
| 0 | - | 3 | Surface Soil | |
| 3 | - | 6 | Fine sand | |
| 6 | - | 29* | Medium to fine sand | Good |
| 29 | - | 45* | Medium to coarse sand | Good |
| 45 | - | 48 | Sandy clay | |
| 48 | - | 60* | Medium sand | Good |
| 60 | - | 62 | Sandy clay | |
| 62 | - | 68 | Fine sand | Good |
| 68 | - | 78 | Clay | |
| 78 | - | 83 | Kankar clay | |
| 83 | - | 98 | Clay | |
| 98 | - | 119 | Kankar clay | |
| 119 | - | 121* | Kankar sand | Good |
| 121 | - | 142 | Clay | |

*Conclusions and Recommendations:*

1. The litholog inferred broadly tallies with that of the well-site litho-log.

2. The zones marked with asterisk (*) appear to be Aquifer Zones for possible development of tubewell.

3. As per thickness of the Aquifer the expected discharge is 50,000 LPH to 70,000 LPH.

4. Water Level is 6 m below ground level.

5. The Quality of water is good. However, it is recommended to have a chemical and bacteriological analysis of the water sample before using it for human consumption or for any other use.

6. The shallow aquifers are also recommended for development to get good quantity of water.

7. *All projections and recommendations are subject to the inherent limitations of the technique employed and there could be variations as the underground conditions are not always amenable to physical interpretations.*

*for Global Groundwater Consultants*


*Chief Executive*

## SP and Resistivity Curves

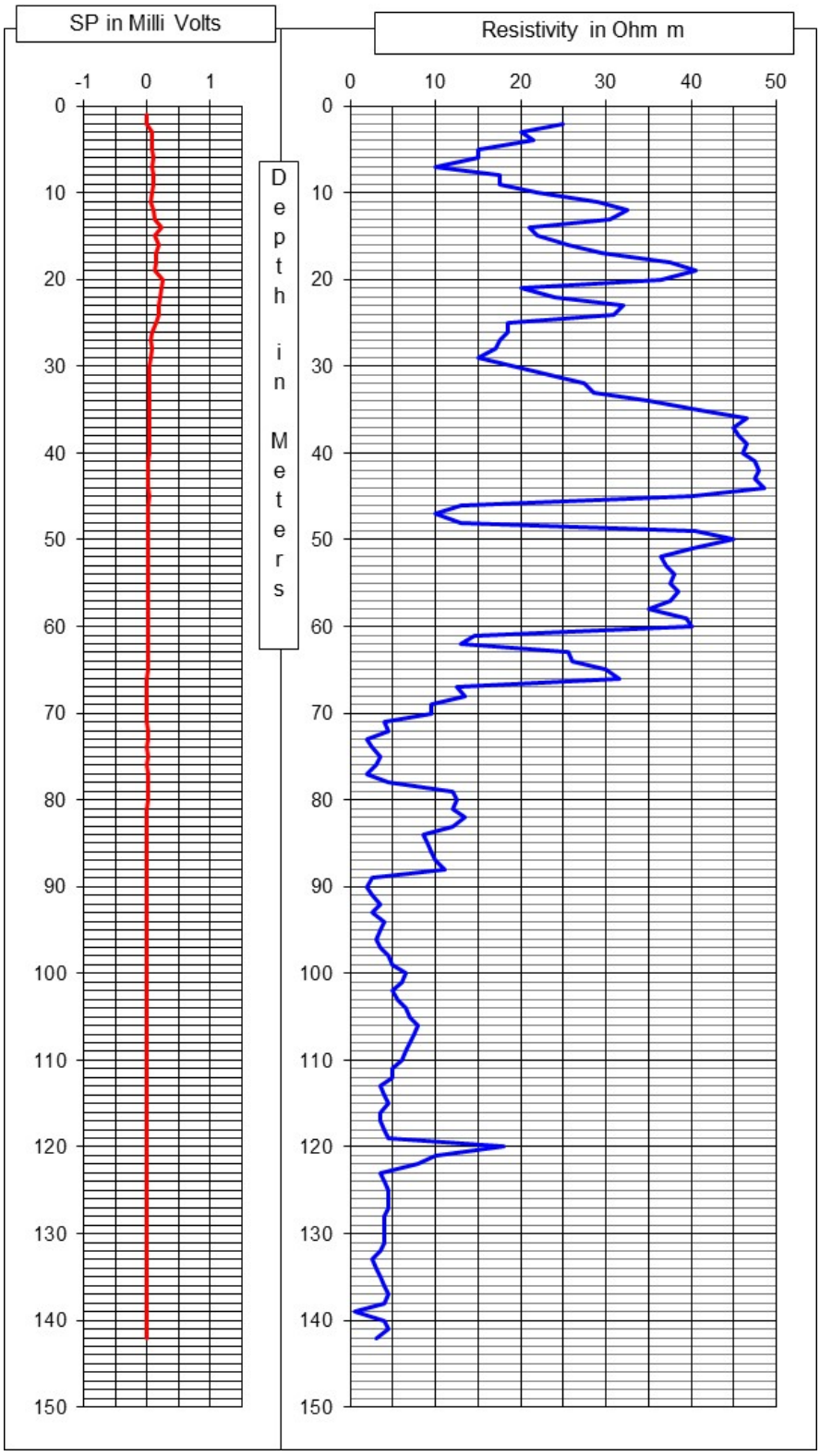


Photo of the Site at the time of Logging