

M/S E.R. TECHNOLOGIES

(Govt. Contractor of PH & Civil Works & Electrical Works)

(Specialist in: Deep Tube well, Sick Tube well, Geological and Hydro-Geological Survey, Electric Logging of Borehole, Videography of Borehole, Water Sample & Soil Testing etc.

Ref	25/10/2023 Dated	
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REPORT OF ELECTRIC LOGGING OF BOREWELL DRILLED AT SITE VILLLAGE GOKALPUR, BLOCK PUWARKA, DISRICT SAHARANPUR, UTTAR PRADESH UNDER JAL JEEVAN MISSION

Introduction:

The borehole at the site was drilled to a depth of 140.00 meters, and the electric logging was conducted up to 140.00-meter depth using a continuous logger on Oct 25, 2023. The purpose of this logging was to assess the various subsurface strata and properties encountered during drilling, with a focus on resistivity measurements (LON -64" and SHN-16) and self-potential (SP) data. This report provides an analysis of the interpreted data and offers recommendations for further actions under the Jal Jeevan Mission.

LOGGING DATA

Name of agency	NKG Infrastructure Pvt Ltd.
Location	Gokalpur
Block	Puwarka
District	Saharanpur, U.P
Depth drilled (mbgl)	140
Depth logged (mbgl)	140
Water level (m)	10
LON -64" Resistivty (N-64)	Ohm.m (Blue)
SHN-16 Resistivity (N-16)	Ohm.m (Red)
Self-Potential (SP)	Mv (Green)

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Sr. No	Depth Range (m)		Zone Thickness(m)	LON -64" N Resistivity (ohm.m)	Probable Strata	Expected water Quality
	From	То				
1	0.00	5.00	5.00	>50	Top Soil	-
2	5.00	28.00	23.00	45	Medium Coarse Sand	-
3	28.00	31.00	3.00	29	Clay	-
4	31.00	43.00	12.00	69	Coarse Sand	-
5	43.00	45.50	2.50	36	Clay	-
6	45.50	50.00	4.50	67	Medium Coarse Sand	-
7	50.00	52.00	2.00	27	Clay	-
8	52.00	59.00	7.00	67	Coarse Sand	Good
9	59.00	65.00	6.00	26	Clay	-
10	65.00	75.00	10.00	66	Coarse Sand	Good
11	75.00	79.00	4.00	29	Clay	-
12	79.00	85.00	6.00	66	Coarse Sand	Good
13	85.00	88.00	3.00	25	Clay	-
14	88.00	92.00	4.00	70	Medium Sand	Good
15	92.00	94.50	2.50	29	Clay	-

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16	94.50	98.50	4.00	66	Medium Coarse Sand	Good
17	98.50	104.00	5.50	29	Clay	-
18	104.00	112.00	8.00	63	Coarse Sand	Good
19	112.00	126.50	14.50	25	Clay	-
20	126.50	133.00	6.50	64	Coarse Sand	Good
21	133.00	134.50	1.50	29	Clay	-

Recommendations:

Based on the interpreted strata data from the electric logging, the following recommendations are provided:

1. Screen Installation:

It is recommended to install screens against the **bold-marked strata** indicated in the interpretation above. These screens will help facilitate water inflow from the identified permeable zones.

2. Expected Water Quality:

The expected water quality in the zones marked as "Good" is anticipated to be favorable.

3. Tubewell Development:

To optimize water yield, it is advised to develop the tubewell using a high-capacity air compressor.

PARKASH KUMAR Hydrogeologist

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