যাদবপুর বিশ্ববিদ্যালয়

Faculty of Engineering & Technology
DEPT. OF CONSTRUCTION ENGINEERING

JADAVPUR UNIVERSITY
BLOCK - LB, PLOT - 8, SECTOR - III, SALT LAKE,
KOLKATA - 700 098, INDIA

LABORATORY TEST RESULTS

Date: 30.03.2016

Testing done for : The Peerless General Finance & Investment Co. Ltd.

Letter Ref. No : Nil Dated: 22.03.2016

Name of Work : Sinking of deep tube well.

Location : At Matridham Residential Complex, Jairambati, (Dist.- Bankura) 2nd Site.

Name of Agency : Auxiliary Tubewell Drillers of 102, Block-B, Bangur Avenue, Kol-55.

Sample Collection : 22.03.2016

Type of test : Bacteriological and Chemical test of Drinking Water.

Test Results :

Sl. No.	Parameters	Results	Limits	Test Method Specifications IS: 10500-91Amendment No.1-93
1.	Total Dissolved Solids mg/l (Max.)	470	500	As per IS 14543-1998 and Amendment No. 3 May 2001 for packaged drinking water specification
2.	Turbidity, NTU (Max.)	1.65	2	
3.	Copper, mg/l (Max.)	<0.01	0.1	
4.	Iron, mg/l (Max.)	0.103	0.10	
5.	Nitrate, mg/l (Max.)	0.20	45	
6.	Fluoride, mg/l (Max.)	0.80	1.0	
7.	Alkalinity, mg/l (Max.)	128.0	200	
8.	Calcium, mg/l (Max.)	60.0	75	
9.	Arsenic, mg/l (Max.)	0.00	0.05	
10.	Mercury, mg/l (Max.)	<0.001	0.001	
11.	pH value	6.90	5.5 to 9.0	APHA 20th Edition, Sec.4500,p 4 4-87
12.	BOD at 27° C (mg/1)	1.23	3.0 (Max)	IS:3025 (Part-44) 1993
13.	COD (mg/1)	15.0	250 (Max)	APHA 20th Edition, Sec.4500,p 4 177
14.	Total Hardness (mg/1 $CaCO_3$)	84.0	200 (Max)	APHA 20th Edition, Sec.2340C,p 2 37
15.	Total Coliforms Count, MPN/100 ml	Nil	**	APHA 20th Edition, 9221 B & C
16.	E. Coli (MPN/100 ml)	Nil	**	APHA 20th Edition, 9221 F
17	Fecal Coliform (MPN/100 ml)	Nil	**	APHA 20th Edition, 9221 E

** **Desirable Limits**

a) Throughout any year, 95% of samples should not contain Coliform organisms in 100 ml.
b) No sample should contain E.Coli in 100ml.
c) No sample should contain more than 10 Coliform organisms per 100 ml.
d) Coliform organisms should not be detected in 100 ml of any two consecutive samples.

Note: Tests were carried out for Drinking Water on the sample supplied by the client.

Dr.Subhajit Saraswati
Professor
Department of Construction Engineering
Jadavpur University

REPORT ON ELECTRO-LOGGING FOR THE BORE HOLE DRILLED (2ND BORE HOLE) AT JAYRAMBATI MATRIDHAM, FOR THE PEERLESS GENERAL FINANCE AND INVESTMENT CO. LTD.

BY

GEOPROBE CONSULTANCY

GEOPHYSICAL INVESTIGATION
For Ground Water Prospecting in hard rock &
Alluvial formations
(Both Resistivity and Electro-logging)

CONTACT NO. 84200 00363

C. R. Das (Consultant Geophysicist)
MSc Geophysics-IIT Kharagpur
Retired 'Sc-D',
Central Ground Water Board
Ministry of Water Resources
Govt. of India

REPORT ON ELECTRO-LOGGING FOR THE BORE HOLE DRILLED (2ND BORE HOLE) AT JAYRAMBATI MATRIDHAM, FOR THE PEERLESS GENERAL FINANCE AND INVESTMENT CO. LTD.

Agency: Auxiliary Tube Well Drillers, 102, Block-'B', Bangur Avenue, Kolkata-700 055

INTRODUCTION

The borehole drilled 2nd at Jayrambati Matridham, for the Peerless General Finance and Investment Co. Ltd. has been electrically logged down to 530 ft bgl (161.54 mbgl) against the depth drilled 560 ft bgl (170.69 mbgl) by using multi-electrode logging unit on 11th February, 2016. The work has been carried out in presence of concerned Engineer at site & that of drilling organization. In the borehole both the SP and Resistivity logs were recorded successfully with the characteristic developments against various sub-surface litho-units. The logs have been interpreted and the results are discussed in the following paragraphs. The zones identified are as:

IDENTIFIED ZONES
1.91.44-109.73 m bgl
2.109.73-124.97 m bgl
3.128.02-152.40 mbgl
4.152.40-161.54 mbgl

INTERPRETED RESULTS OF THE LOGS AND THE LITHOLOGY

Depth in metre	Interpreted Results
00.00-03.05	No records
03.05-06.10	Clayey sand
06.10-27.43	Sand, medium-coarse with kankar & gravels
27.43-85.34	Sandy clay
85.34-91.44	Sand, fine with little clay
91.44-109.73	Sand, fine

109.73-124.97	Sand, fine-medium, fine % moderate
124.97-128.02	Sandy clay
128.02-152.40	**Sand, fine-medium-coarse, medium % moderate**
152.40-161.54	Sand, fine (expected to be iron rich)

ZONES RECOMMENDED

The following Granular zones has been recommended for screening towards construction of tube well for augmenting the ground water supply, based on granularity, potentiality and quality of water in the aquifers:-

A) **128.02 -152.40 mbgl (420-500 ft bgl)**

With minor adjustment

QUALITY OF WATER

Observing the characteristics developments of both the logs it may be inferred that the quality of water in the recommended granular zones are fresh in nature.

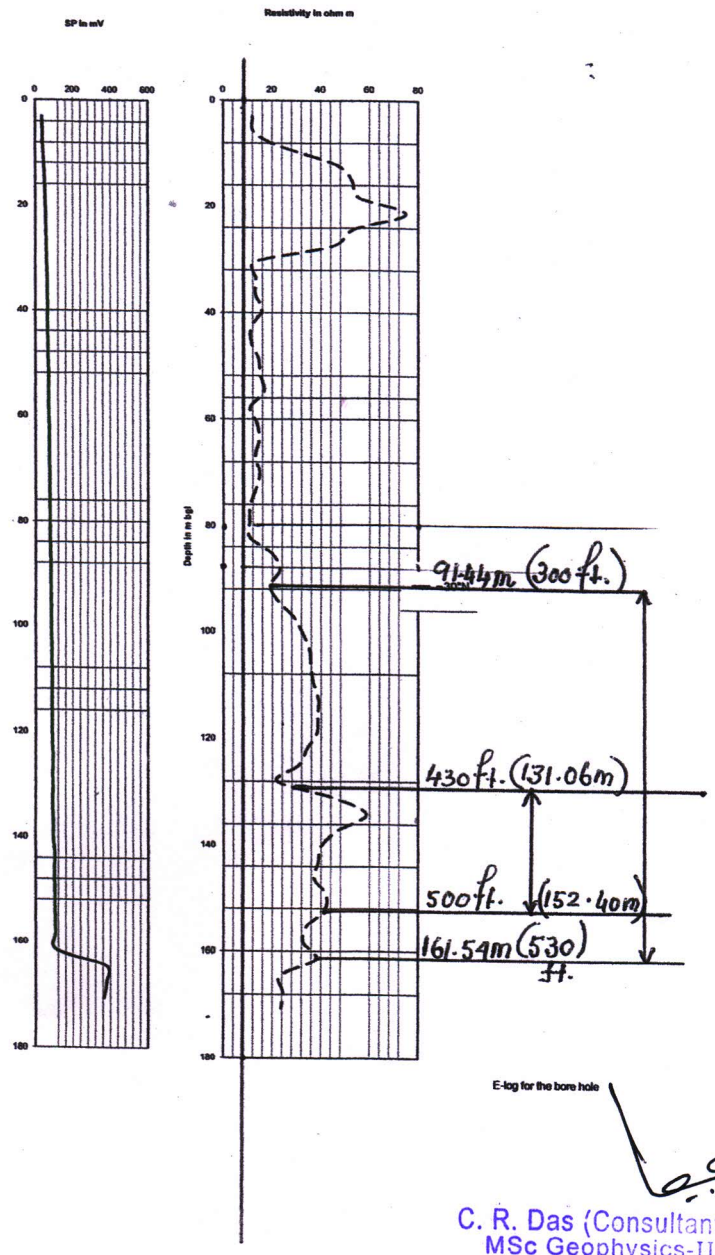
Date:

For Geoprobe Consultancy

C. R. Das (Consultant Geophysicist)
MSc Geophysics-IIT Kharagpur
Retired 'Sc-D',
Central Ground Water Board
Ministry of Water Resources
Govt. of India

E-log for the borv bore hole at Jayram bati Matridham, hoogli

Depth m	SP mV	in Ohm m
3.05	36	11.94
6.1	38.4	12.9
9.14	41	25.5
12.19	45.5	46.4
15.24	49.6	53
18.29	51.4	55.4
21.34	54.7	74.9
24.38	55.6	53.2
27.43	57.9	45.1
30.48	60.3	12.8
33.53	62.5	13.3
36.58	63.3	13.1
39.62	64.2	15.8
42.67	64.4	11.52
45.72	66.1	11.41
48.77	67.3	14.4
51.82	69.9	15
54.86	70.6	16.7
57.91	70.3	10.98
61	71.9	13.9
64.01	73.8	14.6
67.06	73.2	13
70.1	74.7	14.9
73.15	75.4	13.3
76.2	75.9	10.93
79.25	76.3	10.67
82.3	77.7	10.92
85.34	79.4	20.1
88.39	80	23.1
91.44	80.5	19.1
94.49	82.5	22.8
97.54	83.5	29.2
100.58	83.4	32.7
103.63	85.6	35.4
106.68	86.1	35.9
109.73	87.5	36.9
112.78	87.4	39
115.82	87.5	38.6
118.87	88.1	38.4
121.92	89.8	34.3
124.97	93.2	30.9
128.02	91.6	22
131.06	92.2	45.2
134.11	91.4	58.7
137.16	94.3	47.2
140.21	93.9	40
143.26	100.9	38.9
146.3	100	37.2
149.35	101	42.1
152.4	102.2	41.4
155.45	104.6	34.1
158.5	105.6	32.8
161.54	107.3	38
164.59	376	23.3
167.64	380	24.4
170.69	365	23.7



E-log for the bore hole

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