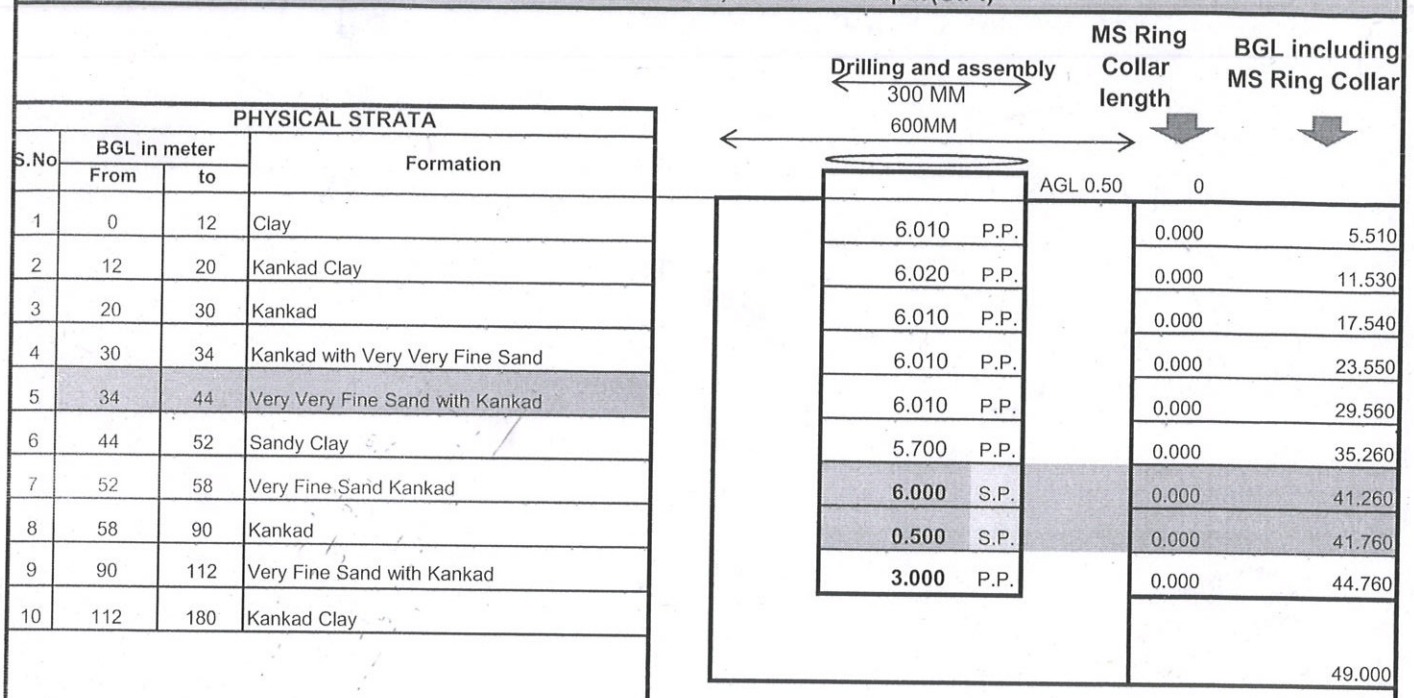


## M/S VSAIPPL-SMC JV, Ghazipur (U.P)

Actual Strata Chart of MARDAH REORGANISATION WSS, BLOCK - MARDAH, ZONE 1, GRAM PANCHAYAT - MARDAHA T.W-4

Under Jal Jeevan Mission, District- Ghazipur(U.P.)



**Logging Report**  
Date-16.08.2023

| S.N. | Depth Range | Thickn ess | Remark   |
|------|-------------|------------|----------|
|      | From to     |            |          |
| 1    | 22 28       | 6          | Good     |
| 2    | 35 42       | 7          | Good     |
| 3    | 54 57       | 3          | Moderate |

Note-  
1. Fine Band of Kankar are intermixed with almost all the zones.  
2. Zone Sl. No. 3 is highly intermixed with fine bands of kankar.  
3. Quality of ground water is deteriorating marginal to saline below 92 m bgl to till depth logged.

| DETAILS |                           | AS PER DPR |      | ACTUAL     |      |
|---------|---------------------------|------------|------|------------|------|
| 1       | Proposed Discharge        | 600.000    | LPM  |            |      |
| 2       | Cear Depth of bore 600mm  | 0          | Mbgl | 49.000     | Mbgl |
| 3       | Cear Depth of bore 500mm  | 65         | Mbgl | 0.000      | Mbgl |
| 4       | Clear Depth of bore 450mm | 200        | Mbgl | 180.000    | Mbgl |
| 5       | Plane pipe 300MM          | 0          | m    | 38.760     | m    |
| 6       | Plane pipe 200MM          | 60         | m    | 0.000      | m    |
| 7       | Plane pipe 150MM          | 96         | m    | 0.000      | m    |
| 8       | Slotted pipe 300MM        | 0          | m    | 6.500      | m    |
| 9       | Slotted pipe 200MM        | 0          | m    | 0.000      | m    |
| 10      | Slotted pipe 150MM        | 24         | m    | 0.000      | m    |
| 11      | Date of lowering          |            |      | 25.08.2023 |      |

|   |   |   |  |                                     |
|---|---|---|--|-------------------------------------|
| <br>(.....)<br><b>Company Repre.</b><br>M/S VSAIPPL-SMC<br>JV, Ghazipur (U.P) | <br>(.....)<br><b>TPIA</b><br>Medhaj Techno Concept Pvt. Ltd., Ghazipur | <br>(A. Srivastava)<br>Junior Engineer<br>Division Office (E/M), U.P. Jal Nigam (Rural), Varanasi | <br>(Nitish Kumar)<br>Assistant Engineer | <br>(Adarsh Verma)<br>Exe. Engineer |
|---|---|---|--|-------------------------------------|



Tele Fax : +91-0522-246-5512(O)  
 Mob. : + 91 - 9415141232, 9554034123  
 E-mail : geo.instrument@outlook.com

# GEO INSTRUMENTS & TECHNIC'S

(A Division of Geophysical Exploration and Instrumentation)

Sales & Service Dealer : Upton Borehole logging system, UPTRON INDIA LTD., LUCKNOW

Ref:GIT:UP: PJM:23-24:LS: K-136  
 Dated: 16-08-2023

## GEOPHYSICAL BOREHOLE LOGGING REPORT

Site: Mardah Old Campus Z-1  
 Block: Mardah  
 District: Ghazipur  
 State: Uttar Pradesh  
 Date of Logging: 16-08-2023  
 Drilling Depth: 220.0m bgl  
 Logging Depth: 180.0 m bgl  
 Rm -19.0Ωm Rw -20.0Ωm

Borehole Drilled by: M/s Vikrant, Ghazipur, Uttar Pradesh

Based on the interpretation of Self Potential (SP), Short Normal (N-16"), Long Normal (N-64") and Lateral (6') geophysical logs following informations/granular zones have been deciphered with respect to Salinity only:

| Sl. No. | Depth Range (m bgl) | Thickness (meter) | Remark (Quality of Aquifer Water) |
|---------|---------------------|-------------------|-----------------------------------|
| 1.      | 22 - 28             | 06                | Good                              |
| 2.      | 35 - 42             | 07 - 6.50         | Good                              |
| 3.      | 54 - 57             | 03                | Moderate                          |

- Note: 1. Fine bands of kankar are intermixed with almost all the zones.  
 2. Zone Sl. No. 3 is highly intermixed with fine bands of kankar.  
 3. Quality of Ground water is deteriorating marginal to saline below 92.0 m bgl to till depth logged.

For Geo Instruments & Technic's

*S. Shukla*  
 (S. Shukla)

60 + 96 + 24  
 200 X 150  
 600L PM

30 x 30  
 3525  
 6.50 41.75  
 3 44.75  
 49

*ell*



अधीक्षण अभियन्ता,  
महोदय.

जल जीवन मिशन कार्यक्रम अन्तर्गत पेयजल योजना ब्लॉक - मरदह, जोन 1, ग्राम पंचायत - मरदह T.W-4. जनपद गाजीपुर में 200x150 एम0एम0 व्यास साइज के 200/180 मीटर गहरे नलकूप का निर्माण किया जाना है एवं उक्त नलकूप से 600 ली०प्र०मि० श्राव लिया जाना प्रस्तावित है।

अनुबन्ध सं०- 475/ED/PHASE 2/2022-23/VII दिनांक 27.02.2023 के माध्यम से M/s VSAIPPL-SMC IV, District-Ghazipur द्वारा नलकूप निर्माण कार्य सम्पादित कराया जा रहा है। दिनांक 16.08.2023 को नलकूप के बोर की इलेक्ट्रिक लागिंग करायी गयी, जिसका विवरण निम्नानुसार है :-

| Date-16.08.2023  |             |    |           | PHYSICAL STRATA |       |              |                                 |             |
|--|-------------|----|-----------|-----------------|-------|--------------|---------------------------------|-------------|
| S.N.   | Depth Range |    | Thickness | Remark          | S.No. | BGL in meter |                                 | Formation   |
|  | From        | to |           |                 |       | From         | to                              |             |
| 1  | 22          | 28 | 6         | Good            | 1     | 0            | 12                              | Clay        |
| 2  | 35          | 42 | 7         | Good            | 2     | 12           | 20                              | Kankad Clay |
| 3  | 54          | 57 | 3         | Moderate        | 3     | 20           | 30                              | Kankad      |
| Note-  |             |    |           | 4               | 30    | 34           | Kankad with Very Very Fine Sand |             |
| 1.Fine Band of Kankar are intermixed with almost all the zones.                                    |             |    |           | 5               | 34    | 44           | Very Very Fine Sand with Kankad |             |
| 2.Zone SI. No. 3 is highly intermixed with fine bands of kankar.                                   |             |    |           | 6               | 44    | 52           | Sandy Clay                      |             |
| 3.Quality of ground water is deteriorating marginal to saline below 92 m bgl to till depth logged. |             |    |           | 7               | 52    | 58           | Very Fine Sand Kankad           |             |
|  |             |    |           | 8               | 58    | 90           | Kankad                          |             |
|  |             |    |           | 9               | 90    | 112          | Very Fine Sand with Kankad      |             |
|  |             |    |           | 10              | 112   | 180          | Kankad Clay                     |             |

अनुबन्ध में उपरोक्त नलकूप से 600 ली०प्र०मि० श्राव प्राप्त करने हेतु Entrance Velocity 0.015m/sec पर 24 मीटर स्लाटेड पाइप का प्राविधान किया गया है। इलेक्ट्रिक लागिंग के उपरान्त प्राप्त स्ट्रेटा के अनुसार अधिकतम 6.5 मीटर ही स्लाटेड पाइप डाली जा सकती है।

Physically encountered Strata एवं लागिंग रिपोर्ट का निरीक्षण करने पर पाया गया कि उक्त के अन्तर्गत Very Very Fine Sand with Kankad का है एवं लागिंग रिपोर्ट के अनुसार केवल 6.5 मीटर स्लाटेड पाइप ही लोवर की जा सकती है, जिससे 600 ली०प्र०मि० श्राव प्राप्त किया जाना सम्भव नहीं है। ऐसी स्थिति में 150 मि०मी० स्लाटेड पाइप के स्थान पर 300 मि०मी० व्यास साइज की स्लाटेड पाइप का उपयोग किया जाय तो 6.5 मीटर की लम्बाई में Entrance area को बढ़ाकर आवश्यक वांछित श्राव प्राप्त करने का प्रयास किया जा सकता है। उल्लेखनीय है यदि 6.5 मीटर लम्बाई में 150 मि०मी० के स्थान पर 300 मि०मी० व्यास साइज की स्लाटेड पाइप का उपयोग किया जाय तो Opening entrance area 150 मि०मी० व्यास साइज के 13 मीटर पाइप के बराबर आयेगी, जो Aquifer structure के दृष्टिगत उचित होगा एवं वास्तविक श्राव यील्ड टेस्ट के उपरान्त डिप्रेशन की मानकों के गणना के दृष्टिगत स्पष्ट हो पायेगा। अनुबन्ध में निहित प्राविधान के अनुसार श्राव की प्रतिपूर्ति फर्म की स्वयं का उत्तर दायित्व में है, अतएव श्राव प्रतिपूर्ति न होने पर फर्म द्वारा द्वितीय नलकूप निर्माण कराते हुए पूरा किया जायेगा एवं भुगतान के संबंध में राज्य पेयजल स्वच्छता मिशन (एसडब्ल्यूएसएम) द्वारा सक्षम स्तर से स्वीकृति उपरान्त नियमानुसार किया जायेगा।

अतः प्राप्त एक्यूफर के दृष्टिगत 300x300 मि०मी० व्यास साइज के 45 मीटर गहरे नलकूप जिसमें 6.5 मीटर स्लाटेड पाइप का उपयोग किया जायेगा, आपको तकनीकी स्वीकृति हेतु संलग्न कर प्रेषित है। कृपया अनुमोदन करना चाहें।

संलग्नक- लागिंग रिपोर्ट की छायाप्रति

M/s VSAIPPL-SMC JV  
District - Ghazipur

संगणक

जूनि० इंजी०

सहायक अभियन्ता

अधिशासी अभियन्ता

अधीक्षण अभियन्ता



VARIATION STATEMENT AGAINST C.A. NO-475/ED/PHASE-2/2022-23/VII, Date-27-02-2023

For Construction of 180/44.76 mts. deep 300 X 300 mm. dia assembly size T.W. inspite of 200/180 mts. deep 200 X 150 mm. dia assembly size T.W. by D.C. Rig Machine at MARDAH REORGANISATION WSS,BLOCK - MARDAH,ZONE 1,GRAM PANCHAYAT - MARDAHA T.W-4

| Sl No | Item of work   | Unit | Rate        | Cost As Per Cover Agreement (200/180 mts. deep 200 X 150 mm. dia assembly size) |              | Expenditure as per Actual Work Executed at Site due to adverse Geophysical Condition (180/44.76 mts. deep 300 X 300 mm. dia assembly size) |             |
|-------|--|------|-------------|---|--------------|--|-------------|
|       |  |      |             | Qty   | Amount (Rs)  | Qty  | Amount (Rs) |
| 1     | Transportation, Installation Dismantling of Rig machine and logging of bore hole.  | Job  | 1,56,159.07 | 1   | 1,56,159.07  | 1  | 1,56,159.07 |
| 2     | Tubewell construction: Drilling of Borehole for Tubewell construction by DC/RC/DTH Rig Machine including transportation, erection, dismantling of Rig and associated T&P complete in all respect including required all material labour etc. |      |             |   |              |  |             |
| 3     | DC/RC Drilling up to 100 Mtr.  |      |             |   |              |  |             |
| 4     | 600 MMØ  | Rmt  | 3,241.68    |   |              | 49   | 1,58,842.09 |
| 5     | 500 MMØ  | Rmt  | 2,717.19    | 65  | 1,76,617.35  |  |             |
| 6     | 450 MMØ  | Rmt  | 2,454.95    | 35  | 85,923.25    | 51   | 1,25,202.45 |
| 7     | DC/RC Drilling from 100Mtr. To 200 Mtr.  |      |             |   |              |  |             |
| 8     | 600 MMØ  | Rmt  | 3,551.98    |   |              |  |             |
| 9     | 500 MMØ  | Rmt  | 3,033.75    |   |              |  |             |
| 10    | 450 MMØ  | Rmt  | 2,774.63    | 100   | 2,77,463.00  | 80   | 2,21,970.40 |
| 11    | DC/RC Drilling from 200 Mtr. To 300 Mtr.   |      |             |   |              |  |             |
| 12    | 500 MMØ  | Rmt  | 3,363.28    |   |              |  |             |
| 13    | 450 MMØ  | Rmt  | 3,158.99    |   |              |  |             |
| 14    | DC/RC Drilling from 300 Mtr. To 400 Mtr.   |      |             |   |              |  |             |
| 15    | 450 MMØ  | Rmt  | 3,703.10    |   |              |  |             |
| 16    | Tubewell Assembly:   | Rmt  | 3,794.68    |   |              | 38.76  | 1,47,081.80 |
| 17    | MSERW plain pipe As per IS 4270  |      |             |   |              |  |             |
| 18    | 300 MMØ  | Rmt  | 2,546.43    | 60  | 1,52,785.80  |  |             |
| 19    | 200 MMØ  | Rmt  | 1,897.34    | 96  | 1,82,144.64  |  |             |
| 20    | MSERW slotted pipe as per IS 8110  |      |             |   |              |  |             |
| 21    | 150 MMØ  | Rmt  | 2,796.08    | 24  | 67,105.92    |  |             |
| 22    | 300 MMØ  | Rmt  | 3,828.43    |   |              |  |             |
| 23    | MS Borewell cap fixture including fitting charges  | Rmt  | 5,181.33    |   |              | 6.5  | 33,678.62   |
| 24    | MS fittings such as clamp, bail plug, reducer, well cap, girder & support structure.   | Job  | 32,249.78   | 1   | 32,249.78    | 1  | 32,249.78   |
| 25    | MS fittings such as ring & centre guide  | Rmt  | 471.01      | 180   | 84,781.80    | 45.26  | 21,317.91   |
| 26    | Lowering of Tube well Assembly: Lowering of above assembly with welding of parts complete in all respect with all required material, T&P, labour, etc.   |      |             |   |              |  |             |
| 27    | Lowering of MSERW Plain/Slotted Pipe up to 100 Mtr. Deep   |      |             |   |              |  |             |
| 28    | 300 MMØ MSERW Plane/Slotted Pipe   | Rmt  | 489.31      |   |              | 44.76  | 21,901.52   |
| 29    | 200 MMØ MSERW Plane/Slotted Pipe   | Rmt  | 389.45      | 60  | 23,367.00    |  |             |
| 30    | 150 MMØ MSERW Plane/Slotted Pipe   | Rmt  | 385.45      | 40  | 15,418.00    |  |             |
| 31    | Lowering of MSERW Plane/Slotted Pipe from 100 Mtr. To 200 Mtr. Deep  |      |             |   |              |  |             |
| 32    | 150 MMØ MSERW Plane/Slotted Pipe   | Rmt  | 442.37      | 80  | 35,389.60    |  |             |
| 33    | 200 MMØ MSERW Plane/Slotted Pipe   | Rmt  | 589.97      |   |              |  |             |
| 34    | 300 MMØ MSERW Plane/Slotted Pipe   | Rmt  | 881.17      |   |              |  |             |
| 35    | Lowering of MSERW Plane/Slotted Pipe from 200 Mtr. To 300 Mtr. Deep  |      |             |   |              |  |             |
| 36    | 150 MMØ MSERW Plane/Slotted Pipe   |      | 569.55      |   |              |  |             |
| 37    | 200 MMØ MSERW Plane/Slotted Pipe   |      | 678.69      |   |              |  |             |
| 38    | 300 MMØ MSERW Plane/Slotted Pipe   |      | 896.96      |   |              |  |             |
|       | Lowering of MSERW Plane/Slotted Pipe from 300 Mtr. To 400 Mtr. Deep  |      |             |   |              |  |             |
|       | 200 MMØ MSERW Plane/Slotted Pipe   |      | 498.30      |   |              |  |             |
|       | <b>Total Amount</b>  |      |             |   | 12,89,405.21 |  | 9,18,403.63 |
|       | Say  |      |             |   | 12,89,405.00 |  | 9,18,404.00 |

Net Savings Amount Rs. 3,71,001.80  
Net Savings In Percentage 28.77%

  
(Company Rep.)

  
(TPIA Rep.)

  
(Computer)

  
(Junior Eng)

Ass. Engineer

  
Div. Accountant

  
Ex. Engineer

  
Sup. Engineer

M/S VSAIPPL-SMC JV, Ghazipur

Medhaj Techno Concept Pvt. Ltd., Ghazipur

Division Office(E/M), Division Office(E/M), U.P. Jal Nigam(Rural), Varanasi

Circle office (E/M), UPJN, Vns

MARDAHA REORGANISATION WATER SUPPLY SCHEME  
 "UNDER JAL JEEVAN MISSION"  
 TEHSIL - GHAZIPUR, BLOCK - MARDAH  
 DISTRICT - GHAZIPUR

Bill of Quantity - TUBEWELL CONSTRUCTION

| S.No. | SOR NO      | Item of work  | No. | L     | B | H/D | Qty | Rate      | Unit | Amount     |
|-------|-------------|---|-----|-------|---|-----|-----|-----------|------|------------|
| 1     | As per RFP. | Drilling of Borehole for Tube well construction by DC/RC/DTH Rig Machine including transportation, erection, dismantling of Rig and associated T&P complete in all respect including required all material labor etc. |     |       |   |     |     |           |      |            |
| 1.1   | 2.01        | Transportation, Installation Dismantling of Rig machine and logging of bore hole  |     |       |   |     | 1   | 156159.07 | Job  | 156,159.07 |
| 1.2   |             | DC/RC Drilling up to 100Mtr.  |     |       |   |     |     |           |      |            |
| 1.2.1 | 2.06        | 500 MMØ   | 1   | 65    |   |     | 65  | 2717.19   | Rmt  | 176,617.39 |
| 1.2.2 | 2.05        | 450 MMØ   | 1   | 35    |   |     | 35  | 2454.95   | Rmt  | 85,923.19  |
| 1.3   |             | DC/RC Drilling from 101 MT. To 200 Mtr.Deep   |     |       |   |     |     |           |      |            |
| 1.3.1 | 2.09        | 450 MMØ   | 1   | 100   |   |     | 100 | 2774.63   | Rmt  | 277,463.01 |
| 1.4   |             | DC/RC Drilling from 201 MT. To 300 Mtr.Deep   |     |       |   |     |     |           |      |            |
| 1.4.1 | 2.13        | 450 MMØ   | 1   | 0     |   |     | 0   | 3158.99   | Rmt  | -          |
| 1.5   |             | DC/RC Drilling from 301 MT. To 400 Mtr.Deep   |     |       |   |     |     |           |      |            |
| 1.5.1 | 2.17        | 450 MMØ   | 1   | 0     |   |     | 0   | 3703.10   | Rmt  | -          |
| 1.6   | 2.2         | DTH Drilling upto 200.0 Mtr.Deep - 165/200 MMØ (in over burden/Hard Rock).  | 1   | 0     |   |     | 0   | 0.00      | Rmt  | -          |
| 1.7   | 2.22        | Development / Flushing of tubewell  | 0   |       |   |     | 0   | 2895.94   | Hrs  | -          |
| 1.8   | 3.01        | Tube Well Assembly  |     |       |   |     |     |           |      |            |
| 1.8.1 | 3.04        | MSERW plane pipe  |     |       |   |     |     | 0.00      |      |            |
| 1.8.2 | 3.03        | 200 MMØ   | 1   | 60    |   |     | 60  | 2546.43   | Rmt  | 152,785.80 |
| 1.9   |             | 150 MMØ   | 1   | 96    |   |     | 96  | 1897.34   | Rmt  | 182,144.64 |
| 1.9.1 | 3.08        | MSERW Pipe slotted pipe as per IS 8110  |     |       |   |     |     |           |      |            |
|       |             | 150 MMØ   | 1   | 24.00 |   |     | 24  | 2796.08   | Rmt  | 67,105.92  |



