

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

32

Actual Strata Chart of BHARSAR REORGANISATION WATER SUPPLY SCHEME, BLOCK-BIRNO, ZONE 4, GRAM PANCAHYAT- MADHOPUR MISHRAULI TW-1
Under Jal Jeevan Mission, District- Ghazipur (U.P.)

PHYSICAL STRATA			Drilling and assembly 300 MM 600MM	MS Ring Collar length	BGL including MS Ring Collar
S.No	BGL in meter				
	From	to	Formation		
	0	6	clay		
	6	20	Kankad Clay		
	20	46	very Fine Sand With Kankad		
	46	50	clay		
	50	56	Kankad with fine sand		
	56	62	Kankad Clay		
	62	78	Kankad with fine sand		
	78	112	Kankad Clay		
	112	148	Kankad Clay		
	148	218	Kankad Clay		
	218	234	Fine Sand with kankad		
	234	312	Kankad Clay		
	312	358	Kankad with very fine sand		
			AGL 0.50	0	
			6.08	P.P.	0.000 5.580
			6.08	P.P.	0.000 11.660
			6.02	P.P.	0.000 17.680
			6.00	P.P.	0.000 23.680
			6.00	P.P.	0.000 29.680
			6.01	P.P.	0.000 35.690
			0.55	P.P.	0.000 36.240
			2.51	S.P.	0.000 38.750
			3.50		0.000 42.250
			3.50	S.P.	0.000 45.750
			4.50		0.000 50.250
			3.00	S.P.	0.000 53.250
			0.75	P.P.	0.000 54.000
					59.400

Logging





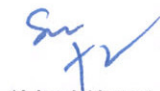
Date-05.10.2023

S.N.	Depth Range		Thickn ess	Remark
	From	to		
1	22	32	10	Good
2	36	39	3	Good
3	42	46	4	Good
4	50	54	4	Moderate

Note-

1. Fine band of kankar are intermixed with almost all the zone.
2. Quality of ground water is deteriorating marginal to saline below 62.0 mbgl to till depth logged
3. Please ensure pre-monsoon water level before lower the well assembly

DETAILS		AS PER DPR		ACTUAL	
1	Proposed Discharge	280.000	LPM		
2	Clear Depth of bore 600mm	0	Mbgl	59.400	Mbgl
3	Clear Depth of bore 500mm	65	Mbgl	0.000	Mbgl
4	Clear Depth of bore 450mm	360	Mbgl	358.000	Mbgl
5	Plane pipe 300MM	0	m	45.490	m
6	Plane pipe 200MM	60	m	0.000	m
7	Plane pipe 150MM	258	m	0.000	m
8	Slotted pipe 300MM	0	m	9.010	m
9	Slotted pipe 200MM	0	m	0.000	m
10	Slotted pipe 150MM	12	m	0.000	m
11	Date of lowering	09-10-2023			

 (.....) Company Repre. M/S VSAIPPL-SMC JV, Ghazipur (U.P)	 (.....) TPIA Medhaj Techno Concept Pvt. Ltd., Ghazipur	 (A. Srivastava) Junior Engineer Division Office (E/M), U.P. Jal Nigam (Rural), Varanasi	 (Nitish Kumar) Assistant Engineer Division Office (E/M), U.P. Jal Nigam (Rural), Varanasi	 (Adarsh Verma) Exe. Engineer Division Office (E/M), U.P. Jal Nigam (Rural), Varanasi
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GEO INSTRUMENTS & TECHNIC'S

(A Division of Geophysical Exploration and Instrumentation)

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

Ref:GIT:UP: PJM:23-24:LS:K- 261
Dated: 24-09-2023

GEOPHYSICAL BOREHOLE LOGGING REPORT

Site: Madhavpur Mishrauli
Block: Birno
District: Ghazipur
State: Uttar Pradesh
Date of Logging: 23-09-2023
Drilling Depth: 360.0 m bgl
Logging Depth: 358.0 m bgl
Rm -12.0 Ωm Rw - 13.0 Ωm

Borehole Drilled by: M/s VSAIPPL SMC JV, 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 - 32	10	Good
2.	36 - 39	03	Good
3.	42 - 46	04	Good
4.	50 - 54	04	Moderate

- Note: 1. Fine bands of kankar are intermixed with almost all the zones.
2. Quality of ground water is deteriorating marginal to saline below 62.0 m bgl to till depth logged.
3. Please ensure pre-monsoon water level before lower the well assembly.

For Geo Instruments & Technic's

(S. Shukla)

280 LPM
200 X 150
500 X 450
60 + 258 + 12

3.5.0
3.0
BP = 1 m

अधीक्षण अभियन्ता,
महोदय.

जल जीवन मिशन कार्यक्रम अन्तर्गत पेयजल योजना ब्लॉक-बिरनो, जोन 4, ग्राम पंचायत - माधोपुर मिश्रीली TW No 1. जनपद गाजीपुर में 200x150 एम0एम0 व्यास साइज के 360/330 मीटर गहरे नलकूप का निर्माण किया जाना है एवं उक्त नलकूप से 280 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 05.10.2023 को नलकूप के बोर की इलेक्ट्रिक लार्गिंग करायी गयी, जिसका विवरण निम्नानुसार है :-

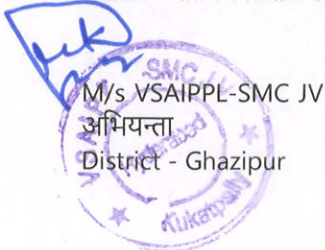
PHYSICAL STRATA			S.N.	Depth Range		Thickness	Remark	
S.No.	BGL meter	Formation		From	to			
	0	6	clay	1	22	32	10	Good
	6	20	Kankad Clay	2	36	39	3	Good
	20	46	very Fine Sand With Kankad	3	42	46	4	Good
	46	50	clay	4	50	54	4	Moderate
	50	56	Kankad with fine sand	Note- 1.Fine band of kankar are intermixed with almost all the zone. 2.Quality of ground water is deteriorating marginal to saline below 62.0 mbgl to till depth logged 3.Please ensure pre-monsoon water level before lower the well assembly				
	56	62	Kankad Clay					
	62	78	Kankad with fine sand					
	78	112	Kankad Clay					
	112	148	Kankad Clay					
	148	218	Kankad Clay					
	218	234	Fine Sand with kankad					
	234	312	Kankad Clay					
	312	358	Kankad with very fine sand					

अनुबन्ध में उपरोक्त नलकूप से 280 ली०प्र०मि० श्राव प्राप्त करने हेतु Enterance Velocity 0.015m/sec पर 12 मीटर स्लाटेड पाइप का प्राविधान किया गया है। इलेक्ट्रिक लार्गिंग के उपरान्त प्राप्त स्ट्रेटा के अनुसार अधिकतम 9 मीटर ही स्लाटेड पाइप डाली जा सकती है।

Physically encountered Strata एवं लार्गिंग रिपोर्ट का निरीक्षण करने पर पाया गया कि उक्त के अन्तर्गत Aquifer Very Fine Sand with Kankad & Kankad with Fine Sand का है एवं लार्गिंग रिपोर्ट के अनुसार केवल 9 मीटर स्लाटेड पाइप ही लोवर की जा सकती है, जिससे 280 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 9 मीटर की लम्बाई में Enterance area को बढ़ाकर आवश्यक वांछित श्राव प्राप्त करने का प्रयास किया जा सकता है। उल्लेखनीय है यदि 9 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 18.00 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 54.00 मीटर गहरे नलकूप जिसमें 9 मीटर स्लाटेड पाइप का उपयोग किया जायेगा, आपको तकनीकी स्वीकृति हेतु संलग्न कर प्रेषित है। कृपया अनुमोदन करना चाहें।

संलग्नक- लार्गिंग रिपोर्ट की छायाप्रति



संगणक

जूनियो इंजीनियर

सहायक अभियन्ता

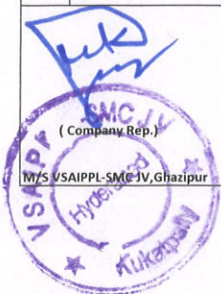
अधिशायी अभियन्ता

अधीक्षण अभियन्ता

For Construction of 358/54 mts. deep 300 X 300 mm. dia assembly size T.W. inspite of 360/330 mts. deep 200 X 150 mm. dia assembly size T.W. by D.C. Rig Machine at BHARSAR REORGANISATION WATER SUPPLY SCHEME, BLOCK-BIRNO, ZONE 4, GRAM PANCAHYAT- MADHOPUR MISHRAULI TW1

Sl.No	Item of work	Unit	Rate	Cost As Per Cover Aggrement (360/330 mts. deep 200 X 150 mm. dia assembly size)		Expenditure as per Actual Work Executed at Site due to adverse Geophysical Condition (358/54 mts. deep 300 X 300 mm. dia assembly size)	
				Qty	Amount (Rs)	Qty	Amount (Rs)
1	2	3	4	5	6	7	8
2.00	Drilling of borehole for tubewell construction by DC/RC/DTH/Rig Machine including transporation, erection, dismantling, of Rig and associated T&P complete in all respect including required all material labor etc.						
2.01	Transporation, installation, Dismantling of Rig machine and logging of bore hole		156159.07	1	1,56,159.07	1	1,56,159.07
2.02	Tube well construction				-		-
2.03	DC/RC Drilling up to 100Mtr.				-		-
2.04	400 MMO	Rmt	2192.71		-		-
2.05	450 MMO	Rmt	2454.95	35	85,923.19	40	98,197.93
2.06	500 MMO	Rmt	2717.19	65	1,76,617.39		-
2.07	600 MMO		3241.68		-	60	1,94,500.52
2.08	DC/RC Drilling from 101 MT. To 200 Mtr.Deep				-		-
2.09	450 MMO	Rmt	2774.63	100	2,77,463.01	100	2,77,463.01
2.10	500 MMO	Rmt	3033.75		-		-
2.11	600 MMO	Rmt	3551.98		-		-
2.12	DC/RC Drilling from 201 Mtr. To 300 Mtr.Deep				-		-
2.13	450 MMO	Rmt	3158.99	100	3,15,899.12	100	3,15,899.12
2.14	500 MMO	Rmt	3363.28		-		-
2.15	600 MMO	Rmt	3771.87		-		-
2.16	DC/RC Drilling from 301 Mtr. To 400 Mtr.Deep & above				-		-
2.17	450 MMO	Rmt	3703.10	60	2,22,185.90	58	2,14,779.71
2.18	500 MMO	Rmt	3907.39		-		-
2.19	600 MMO	Rmt	4315.99		-		-
2.20	DTH Drilling upto 200.0 Mtr.Deep				-		-
2.21	200/165 MMO (in over burden/Hard Rock)		1248.25		-		-
2.22	Development / Flushing of tubewell		2895.94		-		-
3.00	Tubwell Assembly:				-		-
3.01	MSERW Pipe plain pipe as per IS 4270				-		-
3.02	100 MMO	Rmt	926.20		-		-
3.03	150 MMO	Rmt	1897.34	258	4,89,513.72		-
3.04	200 MMO	Rmt	2546.43	60	1,52,785.80		-
3.05	300 MMO		3794.68		-	45.49	1,72,619.99
3.06	MSERW Pipe slotted pipe as per IS 8110				-		-
3.07	100 MMO	Rmt	1364.94		-		-
3.08	150 MMO	Rmt	2796.08	12	33,552.96		-
3.09	200 MMO	Rmt	3828.43		-		-
3.10	300 MMO	Rmt	5181.33		-	9.01	46,683.75
3.11	MS fittings such as clamp, bail plug, reducer, well cap. Girder & support structure	Job	32249.79	1	32,249.79	1	32,249.79
3.12	MS fittings such as ring & centre guide		471.02	330	1,55,436.48	54.5	25,670.57
4.00	Lowering of above assembly with welding of parts complete in all respect with all required material , T&P , labour, etc				-		-
4.01	Lowering up to 100 Mtr. Deep				-		-
4.02	100 MMO MSERW Plane/Slotted Pipe	Rmt	177.57		-		-
4.03	150 MMO MSERW Plane/Slotted Pipe	Rmt	385.46	40	15,418.38		-
4.04	200 MMO MSERW Plane/Slotted Pipe	Rmt	389.45	60	23,367.24		-
4.05	300 MMO MSERW Plane/Slotted Pipe	Rmt	489.31	0	-	54	26,422.96
4.06	Lowering from 101 Mtr. To 200 Mtr. Deep				-		-
4.07	150 MMO MSERW Plane/Slotted Pipe	Rmt	442.38	100	44,237.98		-
4.08	200 MMO MSERW Plane/Slotted Pipe	Rmt	589.97	0	-		-
4.09	300 MMO MSERW Plane/Slotted Pipe	Rmt	881.17		-		-
4.10	Lowering from 201 Mtr. To 300 Mtr. Deep				-		-
4.11	150 MMO MSERW Plane/Slotted Pipe	Rmt	569.55	100	56,955.15		-
4.12	200 MMO MSERW Plane/Slotted Pipe	Rmt	678.69	0	-		-
4.13	300 MMO MSERW Plane/Slotted Pipe	Rmt	896.96		-		-
4.14	Lowering from 301 Mtr. To 400 Mtr. Deep & above				-		-
4.15	150 MMO MSERW Plane/Slotted Pipe	Rmt	425.93	30	12,777.99		-
4.16	200 MMO MSERW Plane/Slotted Pipe	Rmt	498.30	0	-		-
4.17	300 MMO MSERW Plane/Slotted Pipe	Rmt	643.04		-		-
	Total Amount				22,50,543.17		15,60,646.41
	Say				22,50,543.00		15,60,646.00

Net Savings Amount Rs. 6,89,897.00
Net Savings In Percentage 30.65%



[Signature]
(TPIA Rep.)
Medhaj Techno Concept Pvt. Ltd., Ghazipur

[Signature]
(Computer)

[Signature]
Junior Engineer
[Signature]
Ass. Engineer
[Signature]
Div Accountant

[Signature]
Ex. Engineer

[Signature]
Sup. Engineer
Circle office (E/M), UPJN, Vns

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

ZONE-4

ESTIMATE FOR

MADHOPUR MISHROULI AND DANDI KHURD GROUP OF GRAM PANCHAYAT WATER SUPPLY SCHEME

UNDER - JJM

BLOCK - VERNO, DISTRICT - GHAZIPUR

Estimate of Cost of Tubewell construction

Sl No.	Item of work	No.	L	B	H/D	Qty	Rate	Unit	Amount	Remarks
1	Drilling of Borehole for Tube well construction by DC/RC/TTH Rig Machine including transportation, erection, dismantling of Rig and associated T&P complete in all respect including required all material labor etc.									As per RFP
1.1	Transportation, Installation Dismantling of Rig machine and logging of bore hole					2	1,56,378	Job	3,12,756	
1.2	DC/RC Drilling up to 100 Mtr.									
1.2.1	500 MMØ					130	2,721	Rmt	3,53,730	
1.2.2	450 MMØ					70	2,458	Rmt	1,72,087	
1.3	DC/RC Drilling from 101 MT. To 200 Mtr. Deep									
1.3.1	450 MMØ					200	2,779	Rmt	5,55,784	
1.3.2	Development - Hauling of tubewell						2,900	Hrs	-	
1.4	DC/RC Drilling from 201 Mtr. To 300 Mtr. Deep									
1.4.1	450 MMØ					200	3,163	Rmt	6,32,684	
1.5	DC/RC Drilling from 301 Mtr. To 400 Mtr. Deep & above									
1.5.1	450 MMØ					120	3,708	Rmt	4,44,995	
1.4	Tube Well Assembly									
1.4	MSERW plain pipe, As per IS 4270									
1.4.1	200 MMØ					120	2,550	Rmt	3,06,000	
1.4.2	150 MMØ					516	1,900	Rmt	9,80,400	
1.5	MSERW Pipe slotted pipe, as per IS 8119									
1.5.1	200 MMØ					0	3,834	Rmt	-	
1.5.2	150 MMØ					24	2,800	Rmt	67,200	
1.5.2	MS fittings such as clamp, ball plug, reducer, well cap, girdel & support structure					2	32,295	LS	64,590	
1.5.3	MS fittings such as ring & centre guide					660	472	Rmt	3,11,309	
2.0	Lowering of above assembly with welding of parts complete in all respect with all required material, T&P, labour, etc.									As per RFP
2.1	Lowering up to 100 Mtr. Deep									
2.1.1	200 MMØ MSERW Plain/Slotted Pipe					120	390	Rmt	46,800	
2.1.2	150 MMØ MSERW Plain/Slotted Pipe					80	386	Rmt	30,880	
2.2	Lowering from 101 Mtr. To 200 Mtr. Deep									
2.2.1	150 MMØ MSERW Plain/Slotted Pipe					300	443	Rmt	88,600	
2.3	Lowering from 201 Mtr. To 300 Mtr. Deep									
2.3.1	150 MMØ MSERW Plain/Slotted Pipe					200	570	Rmt	1,14,000	
2.4	Lowering from 301 Mtr. To 400 Mtr. Deep & above									
2.4.1	150 MMØ MSERW Plain/Slotted Pipe					60	427	Rmt	25,592	
2.5	Supplying and unconsolidated packing of gravel with suitable size					159.00	7,500	Cum	11,92,500	As per RFP
3.0	Development of Tube well									As per RFP
3.1	Transportation, Installation Dismantling of 250/400/600 PSI Compressor					2	92,152	Job	1,84,304	
3.2	Charges for Development by 600 PSI Compressor per hour					120	4,214	Hrs	5,05,662	
3.3	Transportation, Installation Dismantling of 1/3 Cusec OP Unit and Yield test, water test					1	1,05,237	Job	2,10,474	
3.4	Charges for Development of TW by 1 cusec OP Unit					200	994	Hr	1,98,886	
	Total								67,99,223	
									Say (In Lacs)	67.99