

Hours of pumping from source, Tubewell 6.5 Hrs at Intermediate stage.

Ref: SWSM Guidelines vide letter number 1499/E-46/2021 dt 12-02-21

Rate of flow m<sup>3</sup>/Hr at intermediate stage

m <sup>3</sup> /Hr	LPM		LPM
32.92	549	Say	550

Year/Stage	Demand (KLD)	Operating hours
Initial Stage Year 2022	153	4.65
Intermediate Stage Year 2037	214	6.50
Ultimate Stage Year 2052	276	8.38

### 1.6 SOURCE OF WATER SUPPLY

Water discharge of 550 LPM is required as per base year demand considering 6.5 hrs of pumping. Considering design flow at intermediate stage as 60% of safe yield from tubewell, minimum tubewell yield required is 920 LPM

Tube well yield required  $550/0.6 = 916.7$  LPM

Tube well yield required, roundedup	920 LPM
-------------------------------------	---------

Ref: DISTRICT GROUND WATER BROCHURE OF SANT RAVIDASNAGAR DISTRICT, UP, compiled by CGWB 2012-13. Exploratory tubewells drilled up to 144m to 307m have shown yields up to 2065 & 2876 LPM. Considering probable long term depletion of yield, the 2876 LPM may be taken as characteristic maximum yield potential of tube wells in the district.

Hence we assume that required yield is available in this proposed area. Hence 1 tubewell with discharge rate of 920 LPM has been considered for this project

### 1.7 REQUIREMENT OF TUBEWELLS & PUMPING HOURS

Table 17: Tubewell discharge calculation

Sn	Particulars	Stage / Year		
		2022	2037	2052
1	Population	2367	3306	4260
2	Rate of Water Supply LPCD	64.71	64.71	64.71
3	Daily Water Demand in KLD	153	214	276
4	Discharge of Tubewell Required in LPM	920	920	920
5	No of Tubewell Required	1	1	1
6	Actual Pumping Hrs	4.65	6.5	8.38

Note: As per SWSM Guidelines vide letter number 1499/E-46/2021 dt 12-02-21, this project is proposed to be operated entirely on Solar power & panels shall be installed to meet power requirements for intermediate stage, subject to availability of the required land area. No state power utility connection is proposed in this project for pumps, actuators & control system.

The suggestion by CE (E&M) vide his letter no. 130/2062-0087/21 dtd. 270521 ; para 8 - that for lighting and fan load provision of 2 kW load in solar plant, alongwith provision of inverter and battery may be made - shall be assessed during detail engineering.

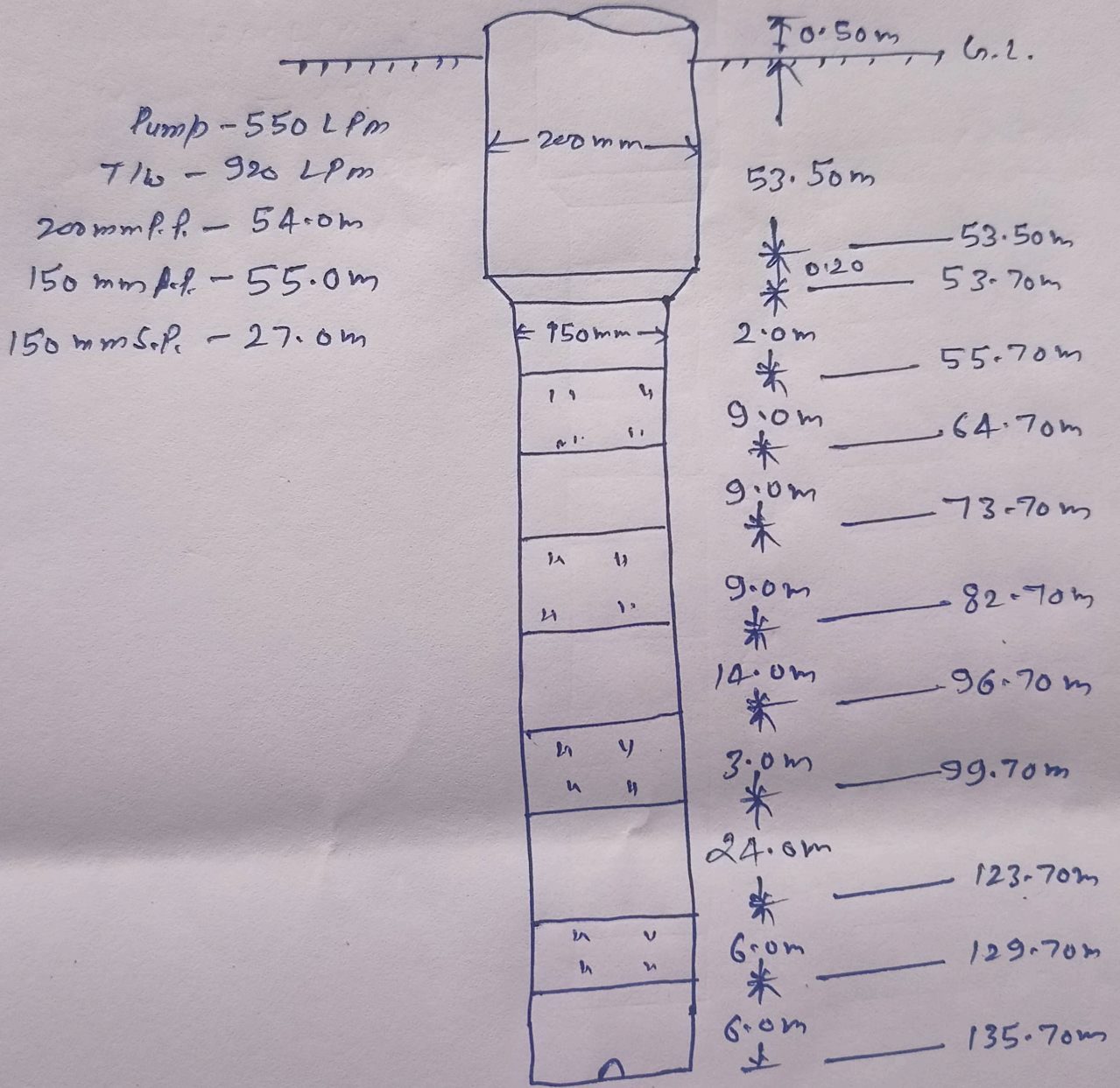






# Bamkat K Rash TIW

## Block - Deegh





# Aqua Xplore

(Groundwater Assessment & Allied Services)

243/5, New Colony Jiyamau, Hazratganj, Lucknow – 226001

Mob. 9918202546 / 9889323322, Email-aquaxploreko@gmail.com

Advisor- Dr. R. A. Yadav, ex- Manager (Groundwater), U. P. Jal Nigam

Ref 302 - B / AX - 2024

Date 02.03.2024

## Geophysical Borehole Logging Report

Name of the site : Bankat Khas, Block- Deegh

District : Sant Ravidas Nagar

Date : 02.03.2024

Depth logged : 150.0 mbgl

Depth drilled : 150.0 mbgl – as reported Rmf-12.0 Ohm-m Rw- 14.0 Ohm-m

Logged by : Aqua Xplore

Presence : Representative of M/S Shiv Borewell Company, Bhind

Based on the interpretation of geophysical logs, following information may be deciphered, particularly with respect to salinity of the formation water;

Sl.No.	Depth range(mbgl)	Thickness(m)	Remarks
1	35.0–40.0	5.0	Good all
2	50.0–65.0	15.0	
3	73.0–83.0	10.0	
4	96.0–100.0	4.0	
5	123.0–138.0	15.0	
6	144.0–148.0	4.0	

Note. All zones are intermixed with kankar.

for Aqua Xplore

CC;

1. Welspun Enterprises Limited, Sant Ravidas Nagar, U.P.
2. M/S Shiv Worwell Company, Infront of Harijan Thana, Bhind, M.P.-477001.