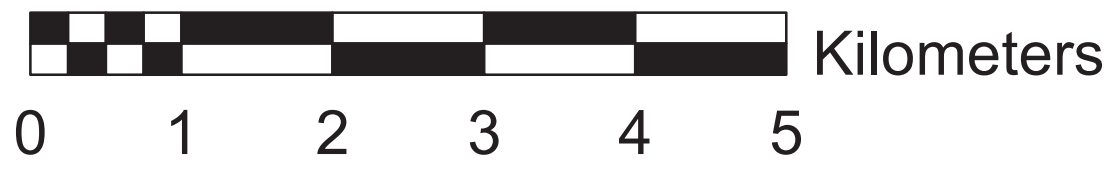


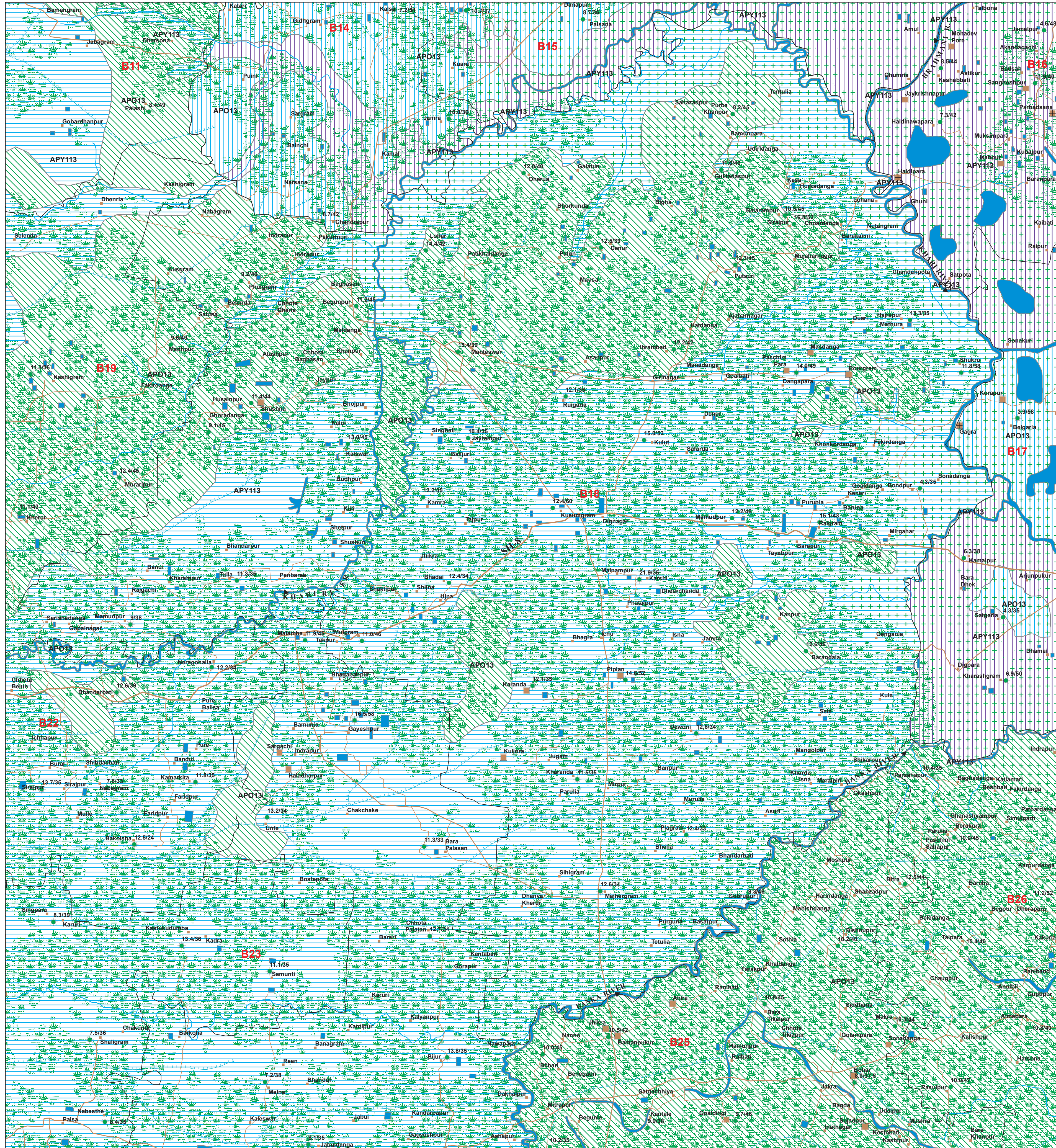
GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



MAP SHEET NO. 79A/3

BARDHAMAN DISTRICT, WEST BENGAL



LEGEND

MAP UNIT (HYDROGEO MORPHIC UNIT) REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE (COLOUR INDICATES YIELD RANGE AND HATCHING INDICATE DEPTH RANGE)	GEOLOGICAL SEQUENCE / ROCK TYPE	GEOMORPHIC UNIT / LANDFORM	DEPTH TO WATER LEVEL PRE / POST-MONSOON (AVERAGE IN METERS)	RECHARGE CONDITIONS BASED ON AVAILABILITY OF WATER	GROUND WATER PROSPECTS							RECHARGE STRUCTURES SUITABLE & PRIORITY	REMARKS (PROBLEMS / LIMITATIONS)	
					AQUIFER MATERIAL	TYPE OF WELLS SUITABLE	DEPTH RANGE OF WELLS (SUGGESTED)	YIELD RANGE OF WELLS (ESTIMATED)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)	QUALITY OF WATER POSSIBLE PT. NON-POTABLE (NP)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)			
					LS = LOOSE SEDIMENTS PS = POSSIBLE ROCK FR = FRACTURED ROCK WR = WEATHERED ROCK IR = IMPERVIOUS ROCK	DW = DUG WELL RW = RIG WELL TW = TUBE WELL DOW = DUG CUM SOLE WELL OTW = OIL CUM TUBE WELL	MW- MAX (IN METERS)	Yield Range (in LPM and / day)	VERY HIGH HIGH MODERATE LOW					
<div>APY113</div>	Pleistocene / Quaternary / Recent Alluvium (Upper Holocene - Present Day)	Alluvial Plain Younger (APY)	4.6 - 11.9 HP - 2	Very Good	LS	TW	80 - 100 m	500 - 600 LPM	Very High	NP (As) [At shallow depth]	Negligible	Not Required	At shallow depth range of 20m to 80m groundwater is non-potable due to arsenic contamination primarily. At depth range of above 100m, arsenic free ground water may be available.	
<div>APY113</div>		Alluvial Plain Younger (APY)	4.6 - 11.9 HP - 2	Very Good	LS	DW TW	10 - 12 20 - 30	100 - 125 m ³ /day 200 - 250 LPM	Very High	P	Negligible	Not Required	Aquifer is formed of sandy part of alluvium. Recharge structures are not required as good recharge condition prevails	
<div>APO13</div>	Siltstone / Sandstone / Claystone / Shale (Upper Pleistocene to Early Holocene)	Alluvial Plain Older (APO)	3.9 - 21.9 PW - 7 HP - 57	Good	LS	TW	100 - 120	300 - 400 LPM	High	NP (As) [At shallow depth]	40%	Not Required	At shallow depth range of 20m to 80m groundwater is non-potable due to arsenic contamination primarily. At depth range of above 100m, arsenic free ground water may be available.	
<div>APO12</div>		Alluvial Plain Older (APO)	8.0 - 16.8 PW - 4 HP - 25	Good	LS	DW TW	15 - 20 30 - 50	50 - 75 m ³ /day 150 - 200 LPM	High	P	20%	Not Required	Aquifer is formed of sandy part of alluvium. Recharge structures are not required as good recharge condition prevails	
F --- F / --- / --- These are fault / fracture zones, which generally act as conduits for movement of ground water in hard rocks. Along these zones, the yields are significantly higher and wells are likely to be sustainable for longer duration. However, the inferred fractures need to be confirmed by detailed ground surveys.														
D --- D / O --- Q --- P --- P D --- D / Q --- Q / P --- P These are dykes, quartz reefs and pegmatite veins, which generally act as barriers for ground water movement.														
N.B.-The depth range and yield range of wells may vary within the unit because of certain inhomogeneities. Fractures/Lineaments which are clearly observed / inferred from the satellite image are indicated on the map. There could be some obscured fractures which also influence the ground water prospects. Locations of the recharge structures shown in the map are tentative. This map is useful for narrowing down the target zones, and exact location on the ground for wells and recharge structures should be identified based on follow-up ground hydrogeological/geophysical surveys.														

GROUND WATER PROSPECTS INFORMATION				HYDROLOGICAL INFORMATION				STRUCTURAL INFORMATION				BASE MAP INFORMATION				LOCATION INFORMATION						
YIELD RANGE OF WELLS	COLOUR CODE	DEPTH RANGE OF WELLS			DESCRIPTION	SYMBOL	DIPS	BEDDING	SCHISTOSITY / FOLIATION	SYMBOL	DESCRIPTION	STATE INDEX	DISTRICT INDEX	BLOCK INDEX	MAPSHEET INDEX							
		SHALLOW < 10 METERS	MODERATE 10-30 METERS	DEEP > 30 METERS																		
> 100 LPM	VIOLET				CANAL / TANK IRRIGATED AREA		GENTLE (< 15°)		SH - 2		NATIONAL HIGHWAY			MODERATE (15 - 45°)		SH - 3		STATE HIGHWAY				
200 - 400 LPM	BLUE				RIVER / STREAM (with sand)		STEEP (45 - 90°)				METALLED ROAD											
100 - 200 LPM	GREEN				WATER BODY / SPRING		SUB-VERTICAL (90 - 180°)				OTHER ROAD											
50 - 100 LPM	YELLOW				CANAL		ANTICLINE / ANTIFORM				RAILWAY											
30 - 50 LPM	ORANGE				RAIN GAUGE STATION (With average annual rainfall in mm)		SYNCLINE / SYNFORM				CITY / VILLAGE											
20 - 30 LPM	BROWN				RECHARGE STRUCTURES SUGGESTED						HABITATIONS - NON - COVERED (NC) PARTIALLY COVERED (PC)											
10 - 20 LPM	PINK				PERCOLATION TANK						BOUNDARY:											
Prospects limited to valley portions only (Info. Plotted only)	RED				MALE RIND						INTERNATIONAL											
Run-off pond					DEBILTING OF TANK						STATE											
Run-off pond					SANDWICH DYE						DISTRICT											
Run-off pond					SOIL CONSERVATION MEASURES						BLOCK											
Run-off pond					WELL SCHEDULE						OTHER INFORMATION											
Run-off pond					WELL SCHEDULE						Rainfall : 1348mm (Source IMD)											
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