

GROUND WATER PROSPECTS MAP

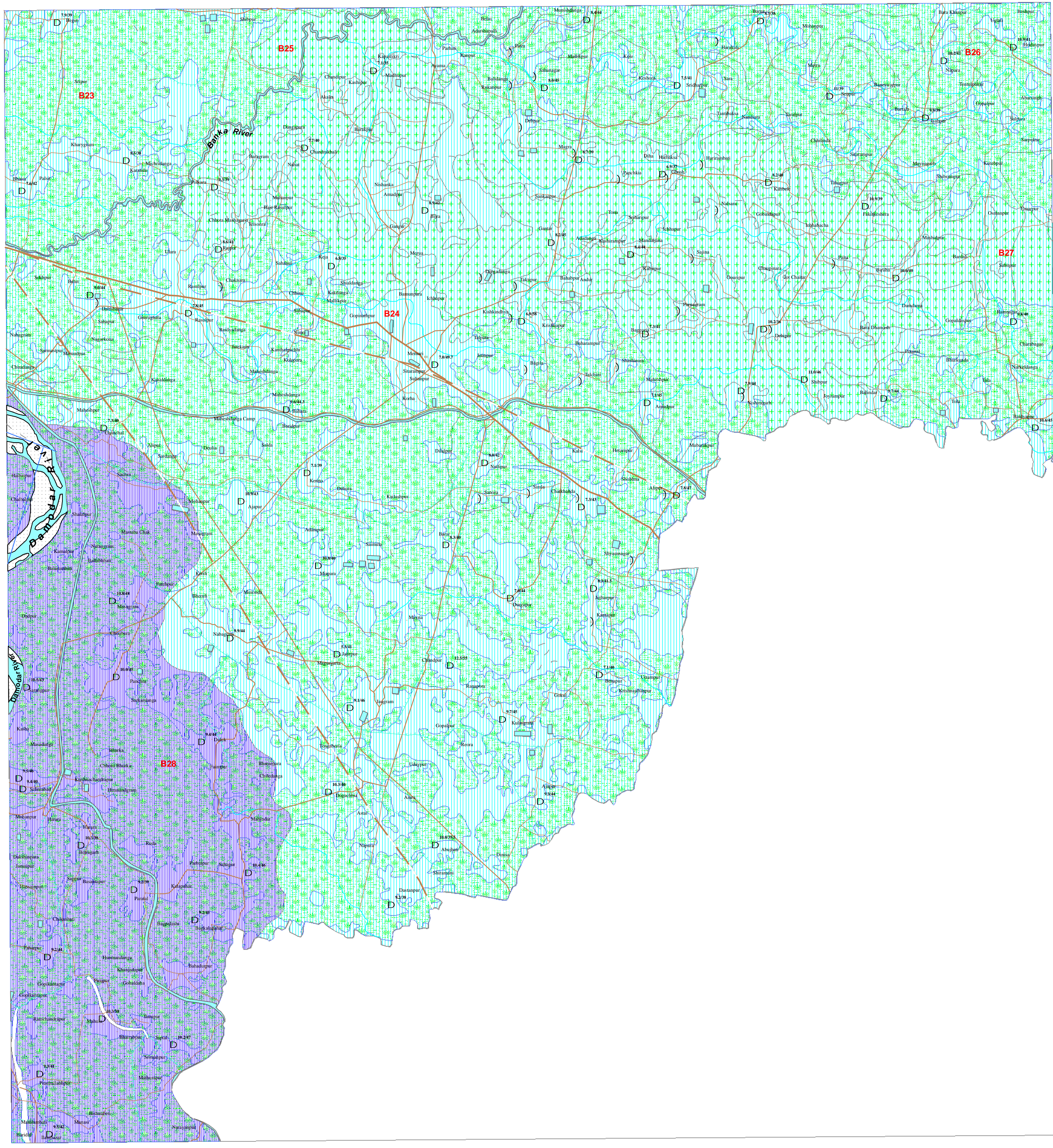
(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



SCALE - 1 : 50,000

BARDDHAMAN DISTRICT, WEST BENGAL

MAP SHEET NO. 79A/4



LEGEND

MAP UNIT (HYDROGEOLOGIC UNIT) REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE (COLOUR INDICATES YIELD RANGE AND HATCHING INDICATE DEPTH RANGE)	GEOLOGICAL SEQUENCE / ROCK TYPE (REPRESENTED IN THE MAP WITH NUMERIC CODE)	GEOMORPHIC UNIT / LANDFORM (REPRESENTED IN THE MAP WITH ALPHABETIC CODE)	DEPTH TO WATER LEVEL PRE / POST MONSOON (AVERAGE IN METERS) NO. OF WELLS OBSERVED	RECHARGE CONDITIONS BASED ON AVAILABILITY OF WATER (RAINFALL & OTHER SOURCES)	GROUND WATER PROSPECTS						RECHARGE STRUCTURES SUITABLE & PRIORITY	REMARKS (PROBLEMS / LIMITATIONS)
					AQUIFER MATERIAL	TYPE OF WELLS SUITABLE	DEPTH RANGE OF WELLS (OBSERVED) WELL DEPTH (IN METERS)	YIELD RANGE OF WELLS (EXPECTED) (in LPM or m ³ /day)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY) VERY HIGH HIGH MODERATE LOW	QUALITY OF WATER (NOTABLE BY NON-POTABLE/MP) (INCREASING FROM NORTH TO SOUTH)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)	
APY11	Alluvium (Sand Dominant) (11)	Alluvial Plain Younger (APY)	9.2 - 10.8 HP-15	Very Good	LS	DW TW	10 - 12 100 - 120	150 - 200 m ³ /day 450 - 500 LPM	Very High	NP	Nil	Not Required At depth range of 20m to 80m groundwater is non-potable due to Arsenic contamination primarily. At depth range of above 80m, Arsenic free groundwater may be available.
AOM13	Alluvium (Sand with Silt and Clay) (13)	Alluvial Plain Older (AOM)	5.3 - 12.5 HP-32 PW-01	Good	LS	DW TW	10 - 15 100 - 120	50 - 75 m ³ /day 250 - 300 LPM	High	NP	72%	Not Required At depth range of 20m to 80m groundwater is non-potable due to Arsenic contamination primarily. At depth range of above 80m, Arsenic free groundwater may be available.
AOD13	Alluvium (Sand with Silt and Clay) (13)	Alluvial Plain Older (AOD)	6.7 - 10.9 HP-23 PW-01	Good	LS	DW TW	15 - 20 120 - 140	50 - 75 m ³ /day 300 - 400 LPM	High	NP	50%	Not Required At depth range of 20m to 80m groundwater is non-potable due to Arsenic contamination primarily. At depth range of above 80m, Arsenic free groundwater may be available.
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 / 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 SHALLOW < 5 METERS MODERATE 5 - 10 METERS DEEP > 10 METERS	DESCRIPTION		SYMBOL	DIPS		SCHISTOSITY / FOLIATION	SYMBOL	DESCRIPTION	STATE INDEX	DISTRICT INDEX	BLOCK INDEX	MAPSHEET INDEX		
			SYMBOL		BEDDING											
> 800 LPM	VIOLET		CANAL/TANK IRRIGATED AREA			GENTLE (< 15)			NH - 2	NATIONAL HIGHWAY						
400 - 800 LPM	INDIGO		GROUND WATER IRRIGATED AREA			MODERATE (15 - 45)			SH - 9	STATE HIGHWAY						
200 - 400 LPM	BLUE		RIVER / STREAM (with sand)			STEEP (45 - 80)				METALLED ROAD						
100 - 200 LPM	GREEN		WATER BODY / SPRING			SUB-VERTICAL (TO VERTICAL, < 50)				OTHER ROAD						
50 - 100 LPM	YELLOW		CANAL			ANTICLINE / ANTIFORM				RAILWAY						
30 - 50 LPM	ORANGE		RAIN GAUGE STATION (With average annual rainfall in cm)			SYNCLINE / SYNFORM				CITY / VILLAGE						
20 - 30 LPM	BROWN		RECHARGE STRUCTURES SUGGESTED			ESCARPMENT				HABITATIONS - NON-COVERED (NC) PARTIALLY COVERED (PC)						
10 - 20 LPM	PINK		PERCOLATION TANK CHECK DAM NALA BUND DEWULFING TANK BURSURFACE DYKE SOIL CONSERVATION MEASURES			LITHOLOGY / GEOMORPHIC UNIT BOUNDARY				BOUNDARY : STATE DISTRICT BLOCK						
< 10 LPM	RED		YIELD RANGE IN LPM			FAULT				OTHER INFORMATION Rainfall : 1348mm (Source IMD)						
			WELLS OBSERVED DURING FIELD SURVEY			THRUST										
			WELLS OBSERVED DURING FIELD SURVEY			FRACUTURE / LINEAMENT (EVIDENT)										
			WELLS OBSERVED DURING FIELD SURVEY			SHEAR ZONE (Confirmed / Inferred)										
			WELLS OBSERVED DURING FIELD SURVEY			DYKE (Confirmed / Inferred)										
			WELLS OBSERVED DURING FIELD SURVEY			QUARTZ REEF (Confirmed / Inferred)										
			WELLS OBSERVED DURING FIELD SURVEY			PEGMATITE VEIN (Confirmed / Inferred)										
			WELLS OBSERVED DURING FIELD SURVEY			Lithologic contacts are inferred at places & Geomorphologic boundaries are gradual										
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