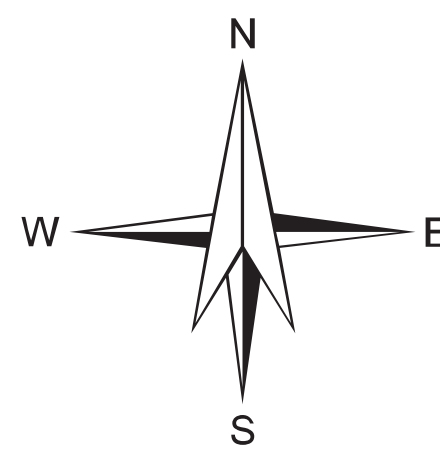


0 1 2 3 4 5 Kilometers

SCALE - 1 : 50,000



MAP SHEET NO. 73I/13

BARDHAMAN DISTRICT, WEST BENGAL



MAP UNIT (HYDROGEO MORPHIC UNIT) REPRESENTED IN THE MAP WITH ALPHABETIC 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)	RECHARGE CONDITIONS BASED ON AVAILABILITY OF WATER (RAINFALL & OTHER SOURCES)	GROUND WATER PROSPECTS										RECHARGE STRUCTURES SUITABLE & PRIORITY PT = PRECIPITATION TANK CD = CHECK DAM NA = NALA RAMP ST = STONE TRAP DF = DRAINAGE FILL SO = SUBSIDENCE DITCH RI = RECHARGE INFANT STW = STONE TRAP SCM = SOLID COMPRESSION MEASURES	RE MARKS (PROBLEMS / CAUTIONS)
					AQUIFER MATERIAL	TYPE OF WELLS SUITABLE	DEPTH RANGE OF WELLS (SUGGESTED)	YIELD RANGE OF WELLS (EXPECTED)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)	QUALITY OF WATER (POTABLE (P) NON - POTABLE (NP) (INDICATE SEASON F NOR POTABLE)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)	PT / CD / NA / ST / DF / SO / RI / STW / SCM				
	Alluvium (Sand Dominant) (111)	Channel Bar (CB)	5 - 6 2	Excellent	LS Underlain by WM+FR	RW TW	5 - 10	400-500	Very High	P	42%	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.			
	Sandstone (Supra Panchet) (Mahadeva Formation) (512)	Buried Pediplain Shallow (BPS)	5 - 5.38 DW - 2 HP - 1	Limited	WM+FR	DW TW / BW	5 - 10 40 - 50	15 - 25 m ³ /day 75 - 100 LPM	Low	P	Negligible	RW / DT High	Aquifer conditions modified by coal mining activities Groundwater development may not be sustainable in the long run			
	Shale with Sandstone Bands (Panchet Formation) (55)	Valley Fill Shallow (VFS)	No wells observed	Good	LS Underlain by WM+FR	DW TW / BW	30 - 50	100 - 125 LPM	Moderate	P	Nil	CD Moderate	Prospects inferred as no wells observed. Recharge condition is moderate with moderate groundwater prospects			
		Buried Pediplain Shallow (BPS)	No wells observed	Limited	WM+FR	DW TW / BW	15 - 20 40 - 60	5 - 10 m ³ /day 50 - 100 LPM	Low	P	Nil	RW / DT High	Weathered and fractured Sandstone form the aquifer Better prospects along fracture zones			
	Sandstone & Shale with Coal (Ranigiri Formation) (531)	Valley Fill Shallow (VFS)	No wells observed	Good	LS Underlain by WM+FR	TW / BW	20 - 25	75 - 100 LPM	Moderate	P	Nil	Not Required	Aquifer conditions modified by coal mining activities Groundwater development may not be sustainable in the long run Areas of piped water supply			
		Buried Pediplain Shallow (BPS)	No wells observed	Moderate	WM+FR	DW TW / BW	5 - 10 20 - 30	10 - 15 m ³ /day 30 - 50 LPM	Low	P	Negligible	Not Required	Aquifer conditions modified by coal mining activities Groundwater development may not be sustainable in the long run Areas of piped water supply			
		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	50 - 75 LPM	Moderate	P	Nil	RW / DT Moderate	Groundwater prospects moderate, recharge structures will improve the sustainability of groundwater			
		Buried Pediplain Shallow (BPS)	3.21 HP - 1	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	< 5 m ³ /day 30 - 50 LPM	Low	P	Nil	RW / DT High	Prospects limited along fracture zones			
	Weathered Pediplain Shallow (PPS)	No wells observed	Poor	FR	TW / BW	40 - 60	20 - 30 LPM	Low	P	Negligible	Not Required	Very small unit, recharge structure not required				
	Sandstone & Shale with Coal (Barakar Formation) (532)	Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	20 - 25	75 - 100 LPM	Moderate	P	Nil	CD Moderate	Aquifer conditions modified by coal mining activities Groundwater development may not be sustainable in the long run Areas of piped water supply			
		Weathered Pediplain Shallow (PPS)	No wells observed	Limited	FR	DW TW / BW	5 - 10 20 - 30	5 - 10 m ³ /day 30 - 50 LPM	Low	P	Nil	Not Required	Aquifer conditions modified by coal mining activities Groundwater development may not be sustainable in the long run Areas of piped water supply			
	Boulder Bed with Sandstone (Tachir Formation) (513)	Valley Fill Shallow (VFS)	No wells observed	Good	LS Underlain by WM+FR	TW / BW	30 - 50	150 - 175 LPM	Moderate	P	Negligible	DT Moderate	Ground water prospects good. Recharge structures will increase groundwater development			
		Buried Pediplain Shallow (BPS)	No wells observed	Moderate	WM+FR	DW TW / BW	5 - 10 40 - 60	15 - 25 m ³ /day 75 - 100 LPM	Low	P	Nil	RW / DT High	Weathered and fractured Sandstone form the aquifer Better prospects along fracture zones			
		Weathered Pediplain Shallow (PPS)	No wells observed	Limited	FR	DW TW / BW	5 - 10 40 - 60	10 - 15 m ³ /day 30 - 50 LPM	Low	P	Nil	RW / DT High	Essentially run-off zones. Recharge structures may help in limited ground water development			
	Granitoid Gneiss (832)	Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	150 - 175 LPM	Moderate	P	Negligible	CD Moderate	Prospects inferred as no wells observed. Recharge condition is moderate with moderate groundwater prospects			
		Buried Pediplain Shallow (BPS)	2.6 - 3.5 DW - 2 HP - 1	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	10 - 15 m ³ /day 75 - 100 LPM	Low	P	Negligible	RP High	Recharge structures will improve sustainability of groundwater sources			
		Weathered Pediplain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 30 - 50 LPM	Low	P	Nil	RP High	Due to high run-off and poor infiltration, recharge structures are required to maintain sustainability of groundwater sources			
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 --- O / 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.																

[illegible]