

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



PURULIYA DISTRICT, WEST BENGAL



LEGEND

MAP UNIT (HYDROGEOGRAPHIC UNIT) (REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE) (COLOUR INDICATES YIELD RANGE AND HATCHING INDICATES 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 (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 (SUGGESTED)	YIELD RANGE OF WELLS (EXPECTED)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)	QUALITY OF WATER (POTABLE / NON POTABLE)# (INCLUDE REASON IF NON POTABLE)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)			
	Singhbhum Group (6. Formation: 200 - 240 mly. yrs) Hornblende Schist	Arctothorite and Gabbroic Arctothorite (73)	Buried Pedipain Shallow (BPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m /day 30 - 50 LPM	Low	-	5%	RP High	Due to high run-off and poor infiltration, recharge structures are required to maintain sustainability of groundwater resources
		Quartzite (45)	Linear Ridge (LR)	No wells observed	-	-	-	-	-	-	-	-	-	Run- off zone. Not suitable for ground water development
		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	100 - 125 LPM	Moderate	P	10%	CD/DT Moderate	Prospects inferred as no well observed. Recharge condition is moderate with moderate groundwater prospects	
		Buried Pedipain Moderate (BPM)	No wells observed	Moderate	WM+FR	DW TW / BW	5 - 10 40 - 50	10 - 15 m ³ /day 100 - 125 LPM	Moderate	P	Negligible	RP Moderate	Weathered material and underlying fractured rock form the aquifer. Sustainability of ground water yield can be increased with recharge structures	
		Buried Pedipain Shallow (BPS)	4.7 - 6.8 DW - 4 HP - 1	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 50 - 75 LPM	Low	P	35%	RP High	Limited groundwater resources. Priority of recharge structures is high	
		Weathered Pedipain 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	Essentially run-off zone. Recharge structure may help in limited groundwater development	
		Residual Hill (RH)	No wells observed	-	-	-	-	-	-	-	-	-	-	Run-off zone. Not suitable for groundwater development
		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	150 - 175 LPM	Moderate	P	Nil	CD/DT Moderate	Prospects inferred as no wells observed. Recharge condition is moderate with moderate groundwater prospects	
		Buried Pedipain Moderate (BPM)	No wells observed	Moderate	WM+FR	DW TW / BW	5 - 10 40 - 50	15 - 25 m ³ /day 150 - 175 LPM	Moderate	P	15%	RP Moderate	Recharge structure will improve ground water prospects	
		Buried Pedipain Shallow (BPS)	3.75 - 10 DW - 30 HP - 10	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	10 - 15 m ³ /day 75 - 100 LPM	Low	P	18%	RP/DT High	Recharge Structures will improve sustainability of groundwater sources	
	Weathered Pedipain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 30 - 50 LPM	Low	P	Negligible	RP High	Due to high run off and poor infiltration, recharge structures are required to maintain sustainability of groundwater sources		
	Chotanagpur Gneissic Complex (Lower Formation: 200 - 240 mly. yrs) Granitoid Gneiss (832)	Bajada Shallow (BJS)	5.69 - 6.23 DW - 2	Moderate	LS Underlain by WM+FR	TW / BW	10 - 15 90 - 100	15 - 25 m ³ /day 150 - 175 LPM	Moderate	P	Negligible	Not Required	Recharge is moderate. Better yields at greater depths within fractured rock	
		Residual Hill (RH)	No wells observed	-	-	-	-	-	-	-	-	-	-	Run-off zone. Not suitable for ground water development
		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	50 - 75 LPM	Moderate	P	Nil	CD/DT High	Loose sediments and mostly weathered zone form the aquifer, recharge structures will enhance sustainability of groundwater prospects	
		Buried Pedipain Moderate (BPM)	No wells observed	Moderate	WM+FR	DW TW / BW	5 - 10 40 - 50	5 - 10 m ³ /day 50 - 75 LPM	Moderate	P	Negligible	Not Required	Recharge structures not required since there are no settlements in the unit	
		Buried Pedipain Shallow (BPS)	4.68 - 8.62 DW - 13 HP - 1	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	<5 m ³ /day 30 - 50 LPM	Low	P	35%	RP/RW High	Priority of recharge structures is high since yield is low. Dug wells preferred	
		Weathered Pedipain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	<5 m ³ /day 20 - 30 LPM	Low	P	Negligible	RP/RW High	Priority of recharge structures is high since yield is low. Dug wells preferred	
		Residual Hill (RH)	No wells observed	-	-	-	-	-	-	-	-	-	-	Runoff zone. Not suitable for ground water development
		Denudational Hill/ Moderately dissected (DHM)	No wells observed	-	-	-	-	-	-	-	-	-	-	Mainly run-off zone. Prospects limited to valley and fracture zones only
		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	100 - 125 LPM	Moderate	P	10%	CD Moderate	Prospects inferred as no well observed. Recharge condition is moderate with moderate groundwater prospects	
		Buried Pedipain Moderate (BPM)	No wells observed	Moderate	WM+FR	DW TW / BW	5 - 10 40 - 50	10 - 15 m ³ /day 100 - 125 LPM	Moderate	P	Negligible	RP Moderate	Weathered material and underlying fractured rock form the aquifer. Recharge structures will improve sustainability of groundwater resources	
	Mica Schist (923)	Buried Pedipain Shallow (BPS)	2.3 - 7.05 DW - 6 HP - 1	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 50 - 75 LPM	Low	P	10%	RP High	Recharge structures will improve sustainability of groundwater sources	
		Weathered Pedipain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	5 - 10 m ³ /day 30 - 50 LPM	Low	P	Negligible	RP High	Due to high run-off and poor infiltration, recharge structures are required to maintain sustainability of groundwater sources	
		Bajada Shallow (BJS)	No wells observed	Moderate	LS Underlain by WM+FR	DW TW / BW	10 - 15 90 - 100	10 - 15 m ³ /day 100 - 125 LPM	Moderate	P	Nil	Not Required	Recharge is moderate. Better yields at greater depths within fractured rocks	

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