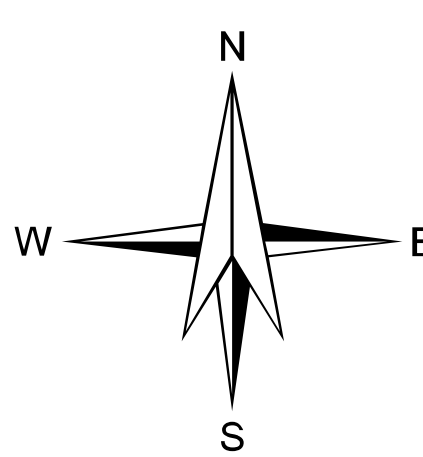


GROUND WATER PROSPECTS MAP

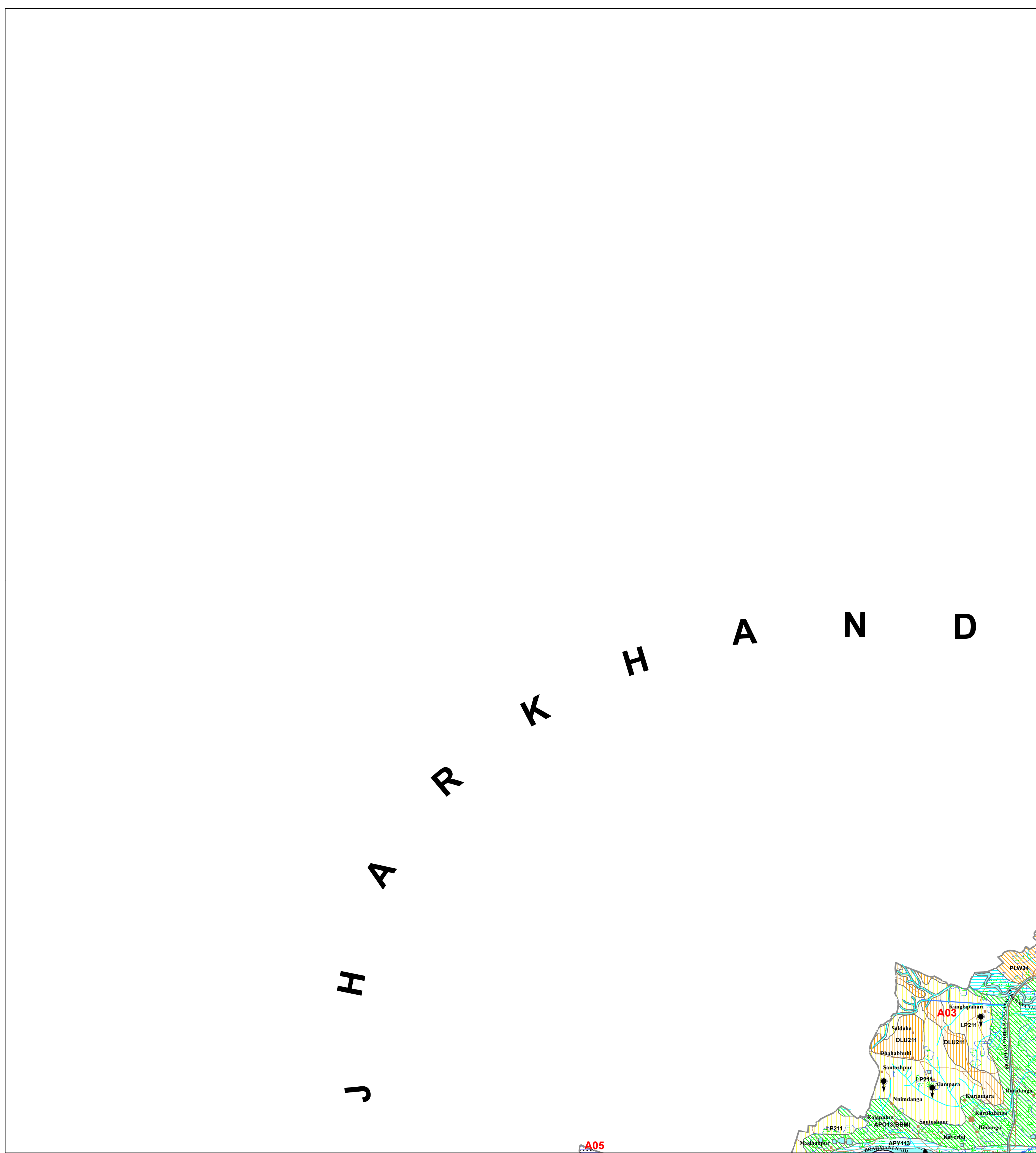
(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



SCALE - 1 : 50,000

MAP SHEET NO. 72P/11

BIRBHUM DISTRICT, WEST BENGAL



LEGEND

MAP UNIT (HYDROGEOLOGICAL UNIT REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE)	GEOLOGICAL SEQUENCE/ ROCK TYPE	GEOMORPHIC UNIT / LANDFORM	DEPTH TO WATER LEVEL (PRE / POST MONSOON (AVERAGE IN METERS))	RECHARGE CONDITIONS (BASED ON VARIABILITY OF WATER (RAINFALL & OTHER SOURCES))	GROUND WATER PROSPECTS							RECHARGE STRUCTURES SUITABLE & PRIORITY	RE MARKS (PROBLEMS / LIMITATIONS)
					AQUIFER MATERIAL	TYPE OF WELLS SUITABLE	DEPTH RANGE OF WELLS (METERS)	YIELD RANGE OF WELLS (EXPECTED) (IN LPM or m ³ /day)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)	QUALITY OF WATER (POSSIBLE OR NON-POSSIBLE (NP))	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)		
CB111	Alluvium (Sand Dominant) (111)	Channel Bar (CB)	5-6 2	Excellent	LS	RW TW	5-10	400-500	Very High	P	42%	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.
APY113	Alluvium (Sand and Silt) (113)	Alluvial Plain Younger (APY)	No wells observed	Very Good	LS	DW TW	10-12 20-30	125-150 m ³ /day 250-300 LPM	Very High	P	Nil	Not Required	Aquifer is formed of sandy part of alluvium. Recharge structures not required as good recharge conditions prevail.
APQ13	Alluvium (Sand, Silt and Clay) (13)	Alluvial Plain Older (APO)	No wells observed	Good	LS	DW TW	10-20 30-50	80-100 m ³ /day 175-200 LPM	High	P	Nil	Not Required	Aquifer is formed of sandy part of alluvium. Recharge structures not required as good recharge conditions prevail.
VFS211		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	50-60	75-100 LPM	Moderate	P	Nil	Not Required	Recharge structure will increase the sustainability of groundwater sources.
LP211	Laterite (Ferrocrete-hard crust, lateritic nodules and lithomarge clay) (211)	Lateritic Plain (LP) (Lithomarge clay)	No wells observed	Limited	WM+FR	DW TW / BW	15-20 50-60	25-50 m ³ /day 60-100 LPM	Moderate	P	Nil	RW High	Areas of exposed lithomarge clay. Fracture zones form the aquifer, recharge structures will enhance groundwater development.
DLU211		Dissected Lateritic Upland (DLU) (Hard crust and Lateritic nodules)	No wells observed	Nil to moderate	WM+IR (Impervious material)	TW / BW	80-100	30-50 LPM	Low	P	Nil	Not Required	Essentially run-off zone where hard capping is present. Areas of nodular laterites are recharge zones with deep water table conditions. Primary forest areas with sparse settlements. Not suitable for large scale development of groundwater.
PLW34	Amygdaloidal Basalt (34)	Plateau Weathered (PLW)	No wells observed	Limited	WM+FR	DW TW / BW	10-15 40-60	5-10 m ³ /day 50-100 LPM	Moderate	P	Nil	Not Required	Very small units, no settlements, recharge structures not required.

Note: F = 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.

Note: D = 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.