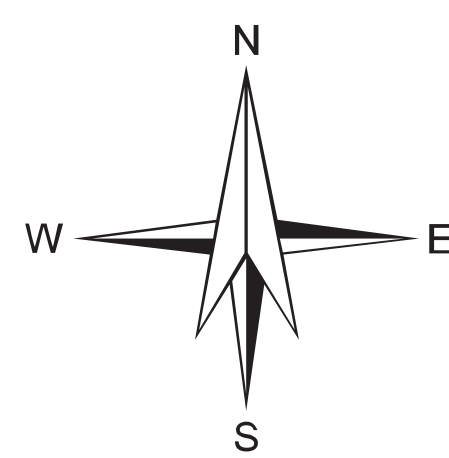
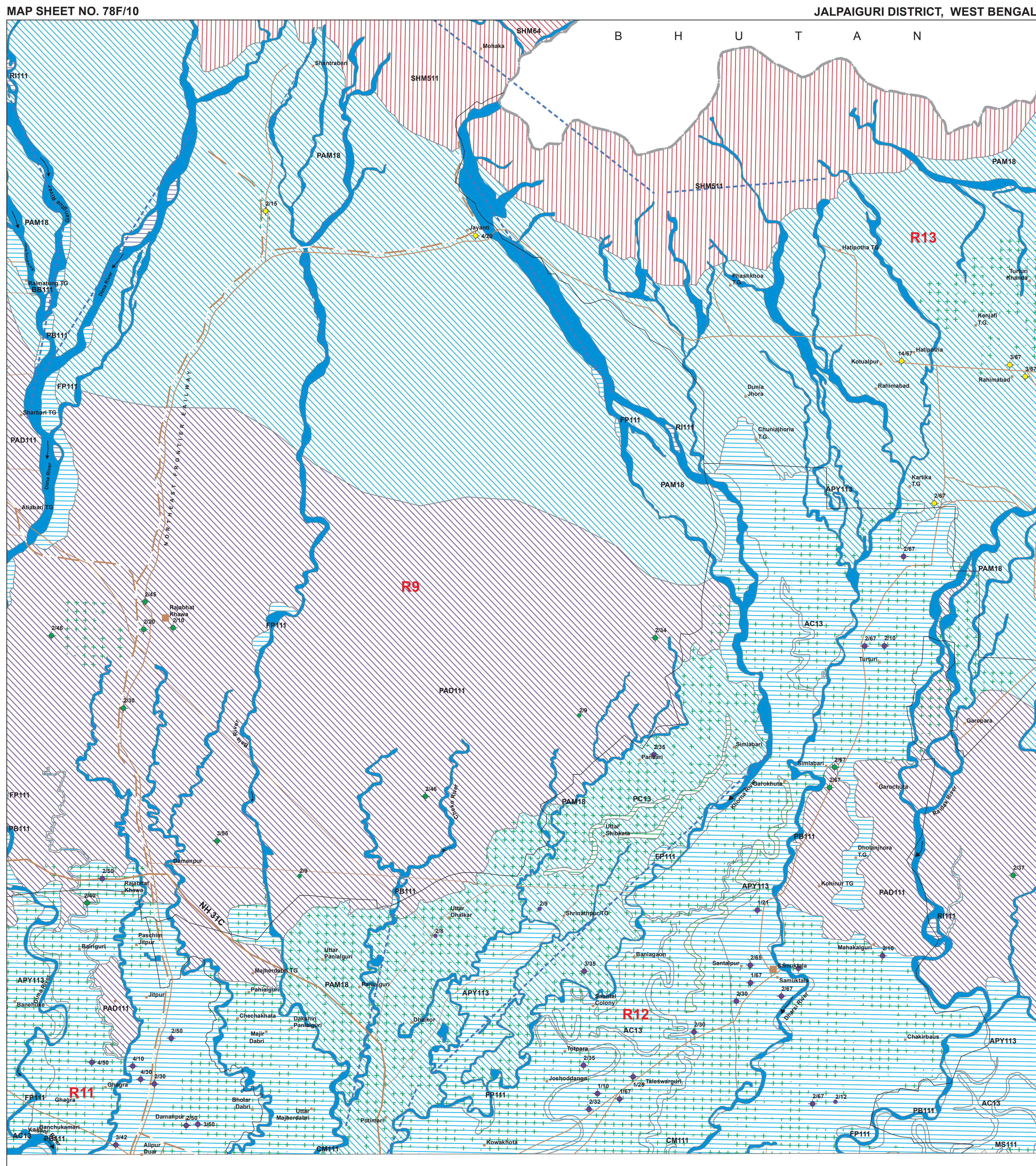


(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)

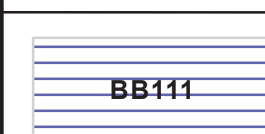
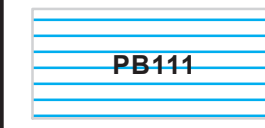
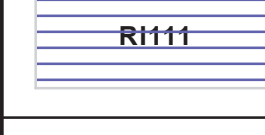
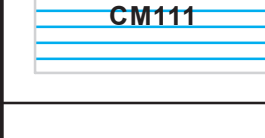
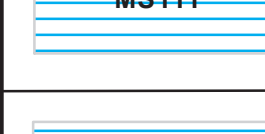

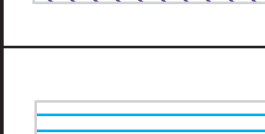
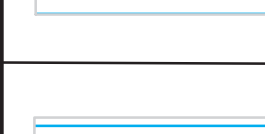
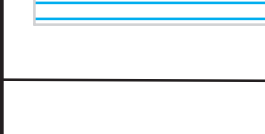
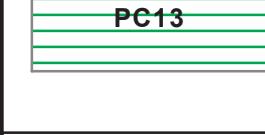





JALPAIGURI DISTRICT, WEST BENGAL



NRSC (ISRO), DEPT. OF SPACE, GOVT. OF INDIA. USED : IRS - P6 LISS III FCC dated February 2009, March 2009 & Nov 2011, GROUND TRUTH & WELL OBSERVATION during February-March 2011, Published GSI & SOI maps.

Designed & Developed by Hydrogeology Division, NRSC, ISRO

MAP UNIT (HYDROGEO MORPHIC UNIT) REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE  (COLOUR INDICATES YIELD RANGE AND MATCHING 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 PRIORITY (RECHARGE STRUCTURES PRIORITY)	RE MARKS (PROBLEMS / LIMITATIONS)	
					AQUIFER MATERIAL  LS - LOOSE SEDIMENTS PS - PERMEABLE ROCK FR - FISSURED ROCK IR - IMPERMEABLE ROCK MR - METACRYSTALLINE ROCK NR - NEARLY CRISTALLINE MATERIAL R - REINFORCED ROCK	TYPE OF WELLS SUITABLE  DW - DUG WELL RW - RIVER WELL TW - TUBE WELL DWM - DUG COMBINATION WELL DTW - DUG COMBINATION WELL	DEPTH RANGE OF WELLS (SUGGESTED)  MIN - MAX (IN METERS)	YIELD RANGE OF WELLS (EXPECTED)  (IN LPM OR M <sup>3</sup> /DAY)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY?)  VERY HIGH MODERATE LOW	QUALITY OF WATER (POTABLE (P) NON - POTABLE (NP))  (INDICATE REASON IF NON POTABLE)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)			
	Shaughson Formation / Present Day Deposits (Present Day)	Alluvium (Sand Dominant) (111)	Braid Bar (BB)	No Well Observed	Excellent	LS	TW	5-10 m	400-500 LPM	Very High	P	Nil	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.
			Point Bar (PB)	No Well Observed	Very Good	LS	TW	5-10 m	300-400 LPM	Very High	P	Nil	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.
			River Island (RI)	No Well Observed	Very Good	LS	TW	5-10 m	400-500 LPM	High	P	Nil	Not Required	Highly productive aquifer in shallow depth.Good recharge
			Cut-off Meander (CM)	No Well Observed	Very Good	LS	RW TW	10-20 m	300-400 LPM	Very High	P	55	Not Required	Highly productive shallow aquifers with good recharge.
			Meander Scar (MS)	No Well Observed	Very Good	LS	RW TW	10-15 m	200- 250 LPM	High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge.
			Flood Plain (FP)	No Well Observed	Very Good	LS	TW	<30 m	250-350 LPM	Very High	P	65	Not Required	Receives good recharge and forms shallow aquifer.Overall quality of the water is potable.
			Piedmont Alluvium Deep (PAD)	$\frac{3}{2}$ 13	Good	LS	TW	60-80 m	400-500 LPM	Moderate	P	5	Not Required	Good ground water prospect at greater depth as the principal aquifer occurs below PAM.
	Maida/Jaipalguri Formation (Early-Late Holocene)	Alluvium (Sand and Silt) (113)	Alluvium Plain Younger (APY)	$\frac{2}{2}$ 27	Good	LS	TW	25-30 m	200-250 LPM	High	P	98	Not Required	Highly productive aquifer at shallow depth with good recharge.
			Abandoned Channel (AC)	$\frac{3}{2}$ 1	Excellent to Very Good	LS	RW TW	10-15 m	250-300 LPM	Very High	P	Nil	Not Required	Highly productive shallow to aquifers with good recharge from base flow.
			Palaeo-channel (PC)	No Well Observed	Very Good	LS	RW TW	15-20 m	150-200 LPM	Very High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge.
	Shaligiri Formation (Pleistocene)	Alluvium (Gravel Dominant) (18)	Piedmont Alluvium Moderate (PAM)	$\frac{4}{3}$ 10	Good	LS	TW	40 - 60m	300-400 LPM	Moderate	P	45	Not Required	Good ground water prospect at greater depth along piedmont slope.
	Sheila (Pleistocene)	Sandstone & Conglomerate (511)	Structural Hill Moderately Dissected (SHM)	Essentially run-off zone. Drinking water sources primarily from springs and river/stream water. Limited prospects along intermontane valleys.										
				Thick bedded Dolomite (64)	Structural Hill Moderately Dissected (SHM)									
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 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]