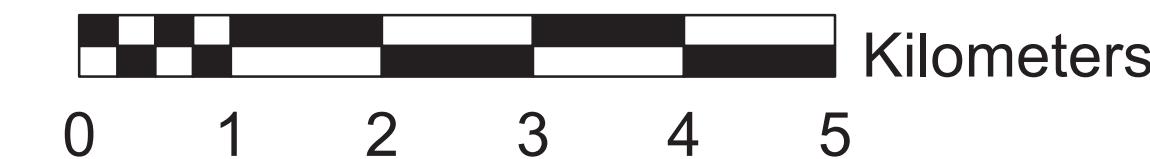


GROUND WATER PROSPECTS MAP

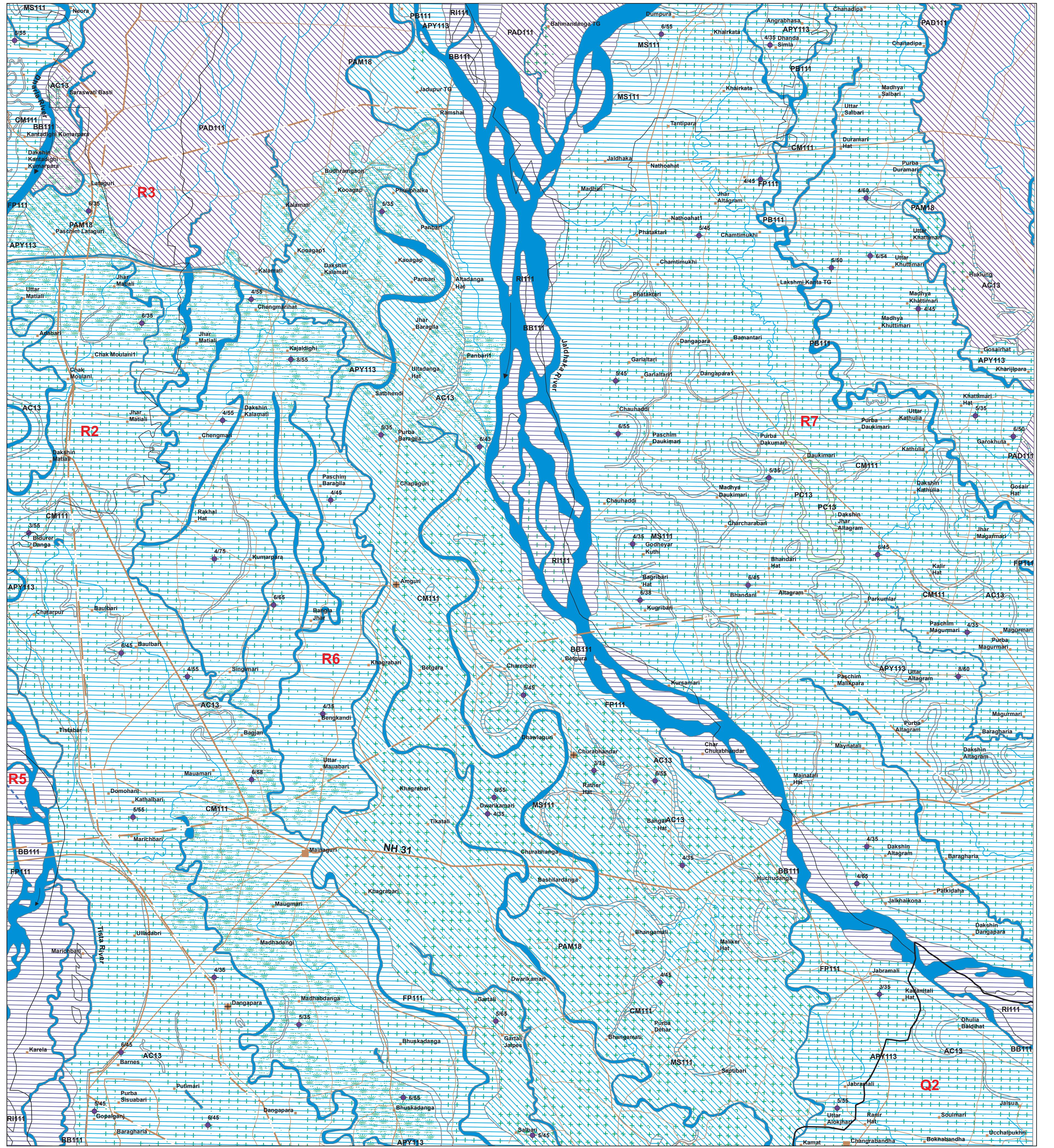
(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



SCALE - 1 : 50,000

MAP SHEET NO. 78B/1

KOCH BIHAR & JALPAIGURI DISTRICT, WEST BENGAL



 NRSC (ISRO), DEPT. OF SPACE, GOVT. OF INDIA

DATA USED : IRS - P6 LISS III FCC dated February 2009, March 2009 & Nov 2011, GROUND TRUTH & WELL OBSERVATION during February-March 2011, Published GSI & SOI map

os. *Designed & Developed by Hydrogeology Division, NRSC, ISRO*

MAP UNIT (HYDROGEOMORPHIC 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)	RECHARGE CONDITIONS BASED ON AVAILABILITY OF WATER NO. OF WELLS OBSERVED	G R O U N D W A T E R P R O S P E C T S							RECHARGE STRUCTURES SUITABLE & PRIORITY PT = PERCOLATION TANK CD = CHECK DAM NB = NALA BUND RW = RECHARGE WELL DT = DESILTING OF TANK RP = RECHARGE PIT SD = SUB-SURFACE DYKE RS = RECHARGE SHAFT ST = STORAGE TANK SCM = SOIL CONSERVATION MEASURES	R E M A R K S (PROBLEMS / LIMITATIONS)	
					AQUIFER MATERIAL (RAINFALL & OTHER SOURCES)	TYPE OF WELLS SUITABLE DW = DUG WELL RW = RING WELL BW = BORE WELL TW = TUBE WELL DBW = DUG CUM-BORE WELL / DTW = DUG CUM-TUBE WELL	DEPTH RANGE (SUGGESTED) MIN - MAX (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 POTABLE (P) NON - POTABLE (NP) (INDICATE REASONS IF NON POTABLE)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)			
BB111	Shaugao Formation / Present Day Deposit (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.
PB111			Point Bar (PB)	No Well Observed	Very Good	LS	RW 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.
RI111			River Island (RI)	No Well Observed	Very Good	LS	TW	5-10 m	400-500 LPM	High	P	Nil	Not Required	Highly productive aquifer at shallow depth.Good recharge
MS111			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.
CM111			Cut- off Meander (CM)	No Well Observed	Good	LS	RW TW	10-20 m	300-400 LPM	High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge from the river base flow.
FP111			Flood Plain (FP)	5 / 3 1	Very Good	LS	TW	<30 m	250-350 LPM	Very High	P	100	Not Required	Receives good recharge and forms shallow aquifer.Overall quality of the water is potable.
PAD111			Piedmont Alluvium Deep (PAD)	No Well Observed	Good	LS	TW	60-80 m	400-500 LPM	Moderate	P	2	Not Required	Good ground water prospect at greater depth as the principal aquifer occurs below PAM.
APY113		Alluvium (Sand and Silt) (113)	Alluvial Plain Younger (APY)	6 / 4 42	Good	LS	TW	25-30 m	200-250 LPM	High	P	80	Not Required	Highly productive aquifer at shallow depth with good recharge.
AC13	Maldal/Alpaiguri/Gangakoshi Formation (Early - Late Holocene)	Alluvium (Sand,Silt & Clay) (13)	Abandoned Channel (AC)	No Well Observed	Excellent to Very Good	LS	RW TW	10-15 m	250-300 LPM	Very High	P	45	Not Required	Highly productive shallow aquifers with good recharge from base flow.
PC13			Palaeo-channel (PC)	No Well Observed	Very Good	LS	RW TW	10-20 m	150-200 LPM	Very High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge.
PAM18	Samsung Formation (Lt.Pleistocene-Er. Holocene)	Alluvium (Gravel Dominant) (18)	Piedmont Alluvium Moderate (PAM)	6 / 4 13	Good	LS	TW	40-60 m	300-400 LPM	Moderate	P	85	Not Required	Good ground water prospect at greater depth along piedmont slope.

F _____ F / _____ / _____

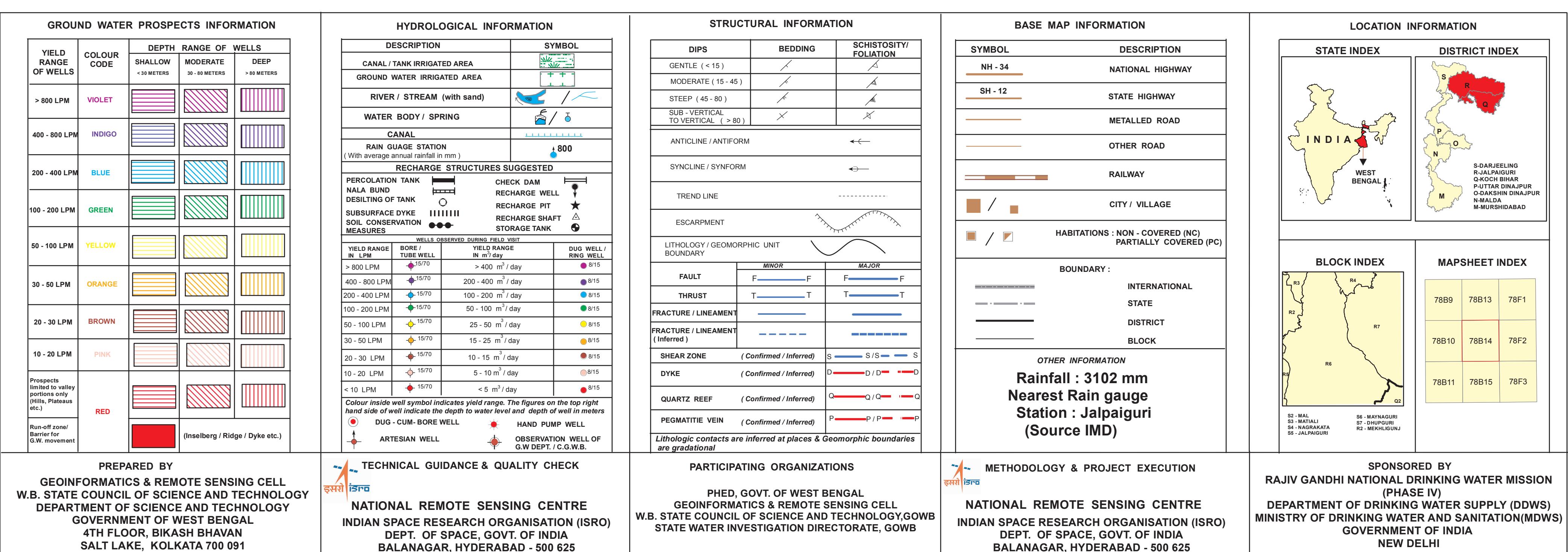
These are fault / fracture zones, which generally act as conduits for movement of ground water in hard rocks. Along these zones, the yields are significantly higher and wells are likely to be sustainable for longer duration. However, the inferred fractures need to be confirmed by detailed ground surveys.

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.



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