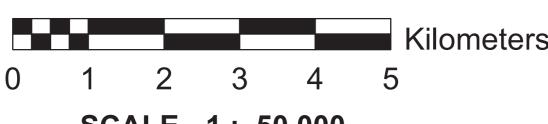
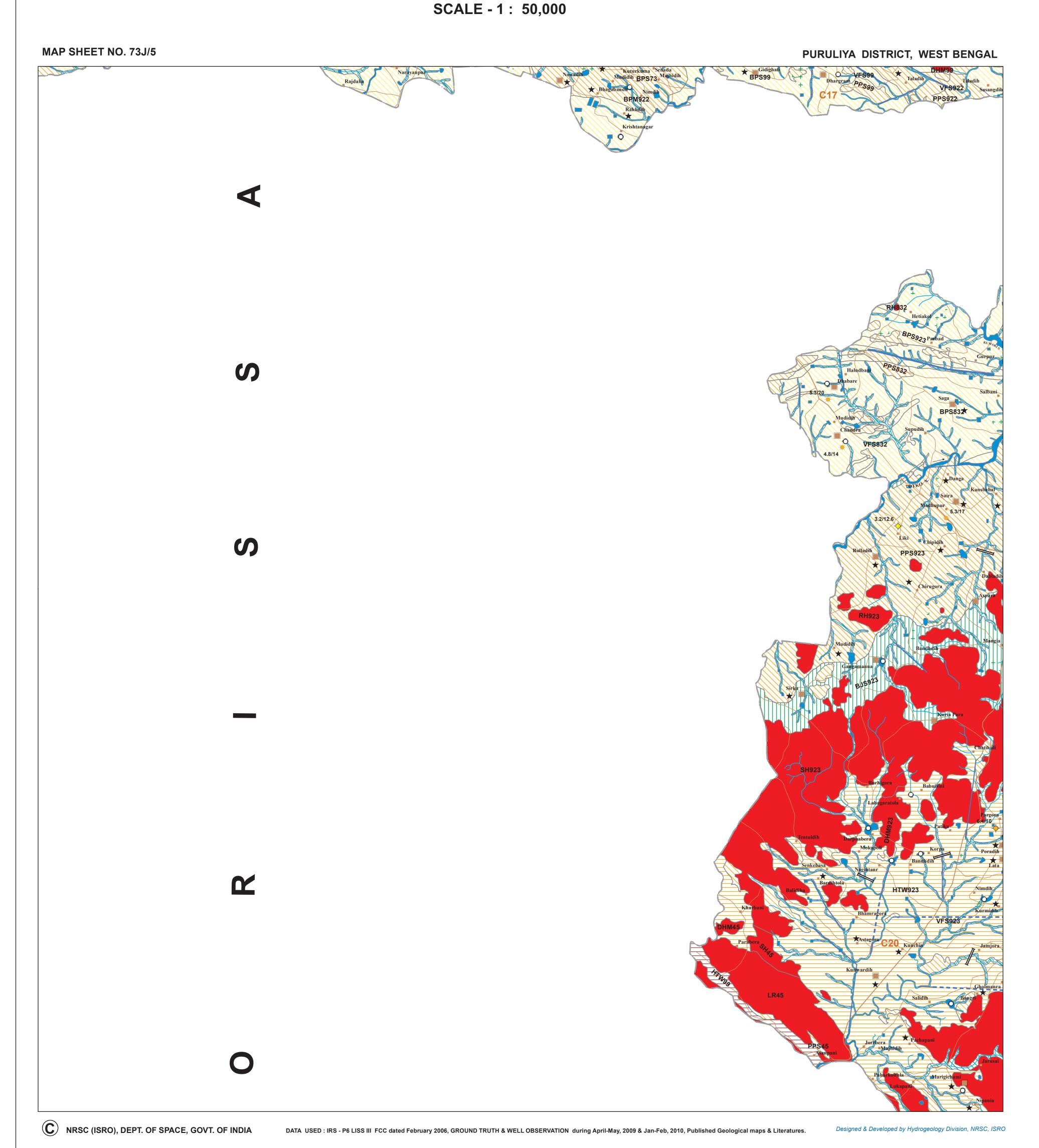
GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)







L E G E N D

MAP UNIT	GEOLOGICAL SEQUENC	-	GEOMORPHIC UNIT / LANDFORM	DEPTH TO WATER LEVEL	RECHARGE CONDITIONS		G R O	RECHARGE STRUCTURES	REMARKS					
(HYDROGEOMORPHIC UNIT) REPRESENTED IN THE MAP WITH		NOOK TIFE		PRE / POST- MONSOON (AVERAGE IN METERS)	BASED ON AVAILABILITY OF WATER	AQUIFER MATERIAL LS = LOOSE SEDIMENTS	TYPE OF WELLS SUITABLE	DEPTH RANGE OF WELLS (SUGGESTED)	YIELD RANGE OF WELLS (EXPECTED)	HOMOGENEITY IN THE UNIT & SUCCESS	QUALITY OF WATER POTABLE (P)	GROUND WATER IRRIGATED	SUITABLE & PRIORITY PT = PERCOLATION TANK CD = CHECK DAM	(PROBLEMS / LIMITATIONS)
ALPHANUMERIC CODE	(REPRESENTED IN THE MAP WITH NUMERIC CODE)		(REPRESENTED IN THE MAP WITH ALPHABETIC CODE)	NO. OF WELLS OBSERVED	(RAINFALL & OTHER SOURCES)	PR = PERMEABLE ROCK FIR = FISSURED ROCK FR = FRACTURED ROCK WR /= WEATHERED ROCK / WM WEATHERED MATERIAL IR = IMPERVIOUS ROCK IM = IMPERVIOUS MATERIAL	DW = DUG WELL RW = RING WELL BW = BORE WELL TW = TUBE WELL DBW /= DUG CUM-BORE WELL / DTW DUG CUM-TUBE WELL	MIN - MAX (IN METERS)	(EXPECTED) (in LPM or m ³ / day)	RATE OF WELLS (PROBABILITY) VERY HIGH HIGH MODERATE LOW	POTABLE (P) NON - POTABLE (NP) (INDICATE REASONS IF NON POTABLE)	AREA (APPROX. RANGE IN PERCENTAGE)	NB = NALA BUND RW = RECHARGE WELL DT = DESILTING OF TANK RP = RECHARGE PIT SD = SUBSURFACE DYKE RS = RECHARGE SHAFT ST = STORAGE TANK SCM = SOIL CONSERVATION MEASURES	
BPS73	Mafic Intrusives (Lr. Proterozoic - 1470 mill. yrs)	Anorthosite and Gabbroic Anorthosite (73)	Buried Pediplain Shallow (BPS)	2.6 - 8.69 DW - 20 HP - 1	Limited	WM+FR	DW TW/ BW	5 -10 40 - 60	< 5 m ³ /day 30 - 50 LPM	Low	Р	20%	RP High	Limited grounwater resources.Priority of recharge structures is high
PPS45	canics 100 mill.yrs)		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	Р	Nil	Not Required	Small units, recharge structures not required
LR45			Linear Ridge (LR)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone. Not suitable for groundwater development
SH45		Quartzite (45)	Structural Hill (RH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone. Not suitable for groundwater development
DHM45			Denudational Hill/ Moderately dissected (DHM)	No wells observed	-	-	-	-	-	-	-	-	-	Mainly run-off zone. Prospects limited to valley and fracture zones only
VF\$922	um Group zoic-2300- iill. vrs)	Epidiorite, Hornblende Schist	Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	100 - 125 LPM	Moderate	Р	10%	CD/DT Moderate	Prospects inferred as no well observed. Recharge condition is moderate with moderate groundwater prospects
BPM922	Singhbh (Lr. Protero: 2400 m	(922)	Buried Pediplain Moderate (BPM)	No wells observed	Moderate	WM+FR	DW TW/ BW	5 - 10 40 - 50	10 - 15 m ³ /day 100 - 125 LPM	Moderate	Р	Nil	Not Required	Very small units, recharge structures not required
VFS832	mplex mill.yrs.)		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	150 - 175 LPM	Moderate	Р	Negligible	DT Moderate	Prospects inferred as no wells observed. Recharge condition is moderate with moderate groundwater prospects
BPS832	neissic Co 300 - 2400	Granitoid Gneiss	Buried Pediplain Shallow (BPS)	4.8 - 5.3 HP - 2	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	10 - 15 m ³ /day 75 - 100 LPM	Low	Р	20%	RP High	Recharge structures will improve sustainability of groundwater sources
PPS832	nagpur Gr	(832)	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	Р	Nil	Not Required	Small units, sparse settlements, recharge structures not required
RH832	Chhota (Lower Pro		Residual Hill (RH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone. Not suitable for groundwater development
VFS923	rphics)		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	150 - 175 LPM	Moderate	Р	Nil	DT Moderate	Prospects inferred as no wells observed. Recharge condition is moderate with moderate groundwater prospects
BPS923			Buried Pediplain Shallow (BPS)	No wells observed	Limited	WM+FR	DW TW/ BW	5 - 10 40 - 60	5 - 10 m ³ /day 50 - 75 LPM	Low	Р	Negligible	RP High	Limited grounwater resources. Priority of recharge structures is high
PPS923			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	Р	Nil	Not Required	Very small units, recharge structures not required
BJS923	etamo	Mica Schist (923)	Bajada Shallow (BJS)	No wells observed	Moderate	LS Underlain by WM+FR	DW TW / BW	10 - 15 90 - 100	10 - 15 m /day 100 - 125 LPM	Moderate	Р	5%	Not Required	Recharge is moderate. Better yields at greater depths within fractured rocks
HTW923	Ider M		Hill Top Weathered (HTW)	6.4 DW - 1	Limited	WM+FR	DW TW / BW	<5 25 - 30	<5 m ³ /day 30 - 50 LPM	Low	Р	20%	Not Required	Prospects limited. Better prospects along fracture zones
RH923	ics (O	Morphics (Ol (Archaean)	Residual Hill (RH)	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone, not suitable for ground water development
SH923	morph (Arch		Structural Hill (SH) Denudational Hill/	No wells observed	-	-	-	-	-	-	-	-	-	Run-off zone, not suitable for ground water development
DHM923	Meta		Moderately dissected (DHM)	No wells observed	-	-	-	-	-	-	-	-	-	Mainly run-off zone. Prospects limited to valley and fracture zones only
VFS99	sified		Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW / BW	30 - 50	50 -75 LPM	Moderate	Р	Nil	DT High	Loose sediments and mostly weathered zone form the aquifer,recharge structure will enhar sustainability of groundwater prospects
BPS99	Unclas	Shale,Slate and	Buried Pediplain Shallow (BPS)	No wells observed	Limited	WM+FR	DW TW / BW	5 - 10 40 - 60	<5 m /day 30 - 50 LPM	Low	Р	10%	RP High	Priority of recharge structures is high since yield is low. Dug wells preferred
PPS99		Phyllite Unclassified Metamorphics	Weathered Pediplain Shallow (PPS)	No wells observed	Poor	FR	DW TW / BW	5 - 10 40 - 60	<5 m ³ /day 20 - 30 LPM	Low	Р	Nil	RP High	Priority of recharge structures is high since yield is low. Dug wells preferred
HTW99		(99)	Hill Top Weathered (HTW)	No wells observed	Limited	WM+FR	DW TW / BW	<5 25 - 30	<5 m ³ /day 20 - 30 LPM	Low	Р	5%	Not Required	Small units, recharge structures not required
DHM99			Denudational Hill/ Moderately dissected (DHM)	No wells observed	-	-	-	-	-	-	-	-	-	Mainly run-off zone. Prospects limited to valley and fracture zones only

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 be identified based on follow-up ground hydrogeological/geophysical surveys.

GROUND WATER PROSPECTS INFORMATION			HYDROLOGICAL INFO	STRUCTU	URAL INFORMAT	TION	BASE MA	P INFORMATION	LOCATION INFORMATION			
YIELD	COLOUR	DEPTH RANGE OF WELLS	DESCRIPTION	SYMBOL	DIPS	BEDDING	SCHISTOSITY/ FOLIATION	SYMBOL	DESCRIPTION	STATE INDEX	DISTRICT INDEX	
RANGE OF WELLS	CODE	SHALLOW MODERATE DEEP < 30 METERS 30 - 80 METERS > 80 METERS	CANAL / TANK IRRIGATED AREA GROUND WATER IRRIGATED AREA	F + +	GENTLE (<15) MODERATE (15 - 45)	<u>/</u>	A	NH - 2	NATIONAL HIGHWAY		250	
> 800 LPM	VIOLET		RIVER / STREAM (with sand)		STEEP (45 - 80)	<u></u>		SH - 9	STATE HIGHWAY		A A	
			WATER BODY / SPRING	₫/ ŏ	SUB - VERTICAL TO VERTICAL (> 80)	X	×		METALLED ROAD		C	
400 - 800 LPM	M INDIGO		CANAL RAIN GUAGE STATION (With average annual rainfall in mm)	800	ANTICLINE / ANTIFORM		←		OTHER ROAD	INDIA	The state of the s	
200 - 400 LPM	M BLUE		RECHARGE STRUCTURES	SUGGESTED HECK DAM	SYNCLINE / SYNFORM		←		RAILWAY	WEST BENGAL &	A-BIRBHUM	
100 - 200 LPM	M GREEN		NALA BUND RE DESILTING OF TANK ORE SUBSURFACE DYKE	TREND LINE			_/_	CITY / VILLAGE		B-BARDDHAMAN C-PURULIYA D-BANKURA E-PASCHIM MEDINIPUR		
50 - 100 LPM	YELLOW		MEASURES ST WELLS OBSERVED DURING FIELD YIELD RANGE BORE / YIELD RAN	NGE DUG WELL /	ESCARPMENT LITHOLOGY / GEOMORPHI	IC UNIT	William J	# / H	IABITATIONS : NON - COVERED (NC) PARTIALLY COVERED (PC)			
			IN LPM TUBE WELL IN m³/ day > 800 LPM → 15/70 > 400 m³		BOUNDARY	MINOR	MAJOR		BOUNDARY:	BLOCK INDEX	MAPSHEET INDEX	
30 - 50 LPM O	ORANGE		400 - 800 LPM - 15/70 200 - 400 m ³	, ,	FAULT	F——F	F——F		INTERNATIONAL	CIZ		
	-		200 - 400 LPM	, ,	THRUST	TI			STATE	ر ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا	731/4 731/8 731	
20 - 30 LPM	BROWN		50 - 100 LPM - 15/70 25 - 50 m ³		FRACTURE / LINEAMENT				DISTRICT BLOCK		-0.74	
10 - 20 LPM	PINK		30 - 50 LPM		(Inferred) SHEAR ZONE (Co	onfirmed / Inferred) S					73J/1 73J/5 73J	
			10 - 20 LPM	<u> </u>	· · · · · ·	onfirmed / Inferred)	D / DD	от	HER INFORMATION		220	
Prospects limited to valley portions only (Hills, Plateaus etc.)			< 10 LPM 15/70 < 5 m³/ Colour inside well symbol indicates yield range.	The figures on the top right		onfirmed / Inferred)	Q/Q - Q	Rain	fall : 1322 mm		73J/2 73J/6 73J	
Run-off zone/	RED		hand side of well indicate the depth to water lev DUG - CUM- BORE WELL	HAND PUMP WELL	PEGMATITIE VEIN (Co	onfirmed / Inferred)	P/P-P		ourse IMD)	C17 BARABAZAR C20 BANDOYAI	1	
Barrier for G.W. movement	t	(Inselberg / Ridge / Dyke etc.)	ARTESIAN WELL	OBSERVATION WELL OF G.W DEPT. / C.G.W.B.	Lithologic contacts are in	ferred at places & Ge	omorphic boundaries	(5	ource IMD)			
GEOIN	PREPARED BY GEOINFORMATICS & REMOTE SENSING CELL TECHNICAL GUIDANCE & QUALITY CHECK			QUALITY CHECK	PARTICIPATING ORGANIZATIONS			इसरो isro METHODOLOG	BY & PROJECT EXECUTION	SPONSORED BY RAJIV GANDHI NATIONAL DRINKING WATER MISSIO		
W.B. STAT DEPAR	TE COUNC RTMENT (GOVERN	CIL OF SCIENCE AND TECHNOLOGY OF SCIENCE AND TECHNOLOGY MENT OF WEST BENGAL OOR, BIKASH BHAVAN		SURVEY OF INDIA GEOLOGICAL SURVEY OF INDIA PHED, GOVT. OF WEST BENGAL STATE WATER INVESTIGATION DIRECTORATE, GOWB P.S.MAPS (LAND RECORD), GOVT OF WEST BENGAL			INDIAN SPACE RES	MOTE SENSING CENTRE SEARCH ORGANISATION (ISRO) SPACE, GOVT. OF INDIA	(P DEPARTMENT OF DRINI MINISTRY OF RI	HASE III B) KING WATER SUPPLY (DD) JRAL DEVELOPMENT MENT OF INDIA		