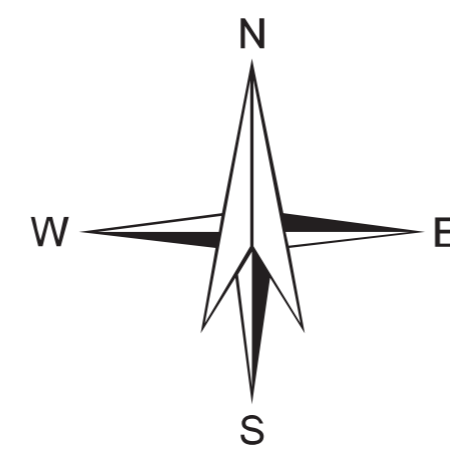
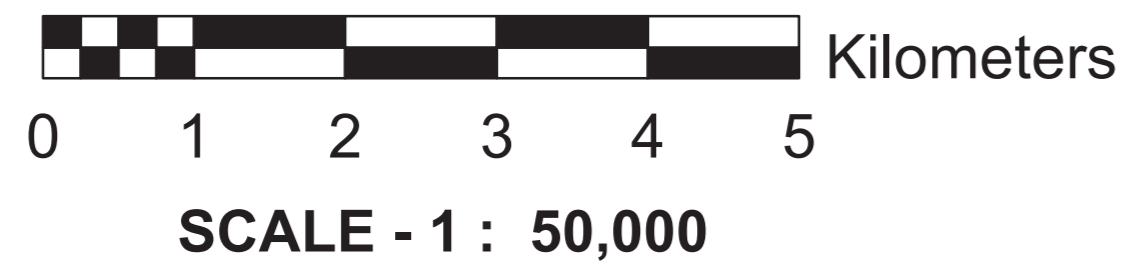


GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



MAP SHEET NO. 73J/1

PURULIYA DISTRICTS, WEST BENGAL



LEGEND

MAP UNIT (HYDROGEOLOGICAL 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) 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 (OBSERVED)	YIELD RANGE OF WELLS (EXPECTED) (IN LPM or m ³ /day)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)			QUALITY OF WATER (POTABLE OR NON-POTABLE?) (INCLUDE REASON IF NON-POTABLE)	GROUND WATER BRIGIATED AREA (APPROX. RANGE IN PERCENTAGE)
BPS73	Anorthosite and Gabbroic Anorthosite (73)	Buried Pediplain Shallow (BPS)	No wells observed	Limited	WM+FR	DW TW/BW	5-10 40-60	< 5 m ³ /day 30-50 LPM	Low	P	Nil	Not Required	Recharge structures not required since there are no settlements in the unit
VFS922	Epidiorite, Hornblende Schist (922)	Valley Fill Shallow (VFS)	No wells observed	Moderate	LS Underlain by WM+FR	TW/BW	30-50	100-125 LPM	Moderate	P	Nil	Not Required	Prospect inferred as no wells observed. Recharge structures not required since there are no settlements near the unit
BPM922		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	P	Nil	Not Required	Recharge structures not required since there are no settlements in the unit
PPS922		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	P	Nil	Not Required	Recharge structures not required since there are no settlements in the unit
RH922		Residual Hill (RH)	No wells observed	—	—	—	—	—	—	—	—	—	Run-off zone, not suitable for ground water development
BPM99	Shale, Slate and Phyllite-Unclassified Metamorphics (99)	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	P	Nil	Not Required	Recharge structures not required since there are no settlements in the unit

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 / — — — — — 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.

GROUND WATER PROSPECTS INFORMATION <table border="1"> <tr> <th>YIELD RANGE OF WELLS</th> <th>COLOUR CODE</th> <th>DEPTH RANGE OF WELLS</th> </tr> <tr> <td>> 800 LPM</td> <td>VIOLET</td> <td>SHALLOW (0-10 METERS)</td> </tr> <tr> <td>400-800 LPM</td> <td>INDIGO</td> <td>MODERATE (10-40 METERS)</td> </tr> <tr> <td>200-400 LPM</td> <td>BLUE</td> <td>DEEP (> 40 METERS)</td> </tr> <tr> <td>100-200 LPM</td> <td>GREEN</td> <td></td> </tr> <tr> <td>50-100 LPM</td> <td>YELLOW</td> <td></td> </tr> <tr> <td>30-50 LPM</td> <td>ORANGE</td> <td></td> </tr> <tr> <td>20-30 LPM</td> <td>BROWN</td> <td></td> </tr> <tr> <td>10-20 LPM</td> <td>PINK</td> <td></td> </tr> <tr> <td>Prospects inferred from satellite imagery (PPS, PPS922)</td> <td>RED</td> <td></td> </tr> </table>	YIELD RANGE OF WELLS	COLOUR CODE	DEPTH RANGE OF WELLS	> 800 LPM	VIOLET	SHALLOW (0-10 METERS)	400-800 LPM	INDIGO	MODERATE (10-40 METERS)	200-400 LPM	BLUE	DEEP (> 40 METERS)	100-200 LPM	GREEN		50-100 LPM	YELLOW		30-50 LPM	ORANGE		20-30 LPM	BROWN		10-20 LPM	PINK		Prospects inferred from satellite imagery (PPS, PPS922)	RED		HYDROLOGICAL INFORMATION <table border="1"> <tr> <th>DESCRIPTION</th> <th>SYMBOL</th> </tr> <tr> <td>CANAL / TANK IRRIGATED AREA</td> <td></td> </tr> <tr> <td>GROUND WATER IRRIGATED AREA</td> <td></td> </tr> <tr> <td>RIVER / STREAM (with sand)</td> <td></td> </tr> <tr> <td>WATER BODY / SPRING</td> <td></td> </tr> <tr> <td>CANAL</td> <td></td> </tr> <tr> <td>RAIN GUAGE STATION (With average annual rainfall in mm)</td> <td></td> </tr> <tr> <td colspan="2">RECHARGE STRUCTURES SUGGESTED</td> </tr> <tr> <td>PERCOLATION TANK</td> <td></td> </tr> <tr> <td>NALA BUND</td> <td></td> </tr> <tr> <td>DESILTING TANK</td> <td></td> </tr> <tr> <td>SUBSURFACE DYKE</td> <td></td> </tr> <tr> <td>SOIL CONSERVATION MEASURES</td> <td></td> </tr> <tr> <td>WELLS (Observed / Inferred)</td> <td></td> </tr> <tr> <td>RECHARGE DAM</td> <td></td> </tr> <tr> <td>RECHARGE WELL</td> <td></td> </tr> <tr> <td>RECHARGE PIT</td> <td></td> </tr> <tr> <td>RECHARGE SHAFT</td> <td></td> </tr> <tr> <td>STORAGE TANK</td> <td></td> </tr> </table>	DESCRIPTION	SYMBOL	CANAL / TANK IRRIGATED AREA		GROUND WATER IRRIGATED AREA		RIVER / STREAM (with sand)		WATER BODY / SPRING		CANAL		RAIN GUAGE STATION (With average annual rainfall in mm)		RECHARGE STRUCTURES SUGGESTED		PERCOLATION TANK		NALA BUND		DESILTING TANK		SUBSURFACE DYKE		SOIL CONSERVATION MEASURES		WELLS (Observed / Inferred)		RECHARGE DAM		RECHARGE WELL		RECHARGE PIT		RECHARGE SHAFT		STORAGE TANK		STRUCTURAL INFORMATION <table border="1"> <tr> <th>DIPS</th> <th>BEDDING</th> <th>SCHISTOSITY / FOLIATION</th> </tr> <tr> <td>GENTLE (< 15°)</td> <td></td> <td></td> </tr> <tr> <td>MODERATE (15-45°)</td> <td></td> <td></td> </tr> <tr> <td>STEEP (45-80°)</td> <td></td> <td></td> </tr> <tr> <td>SUB-VERTICAL TO VERTICAL (> 80°)</td> <td></td> <td></td> </tr> </table>	DIPS	BEDDING	SCHISTOSITY / FOLIATION	GENTLE (< 15°)			MODERATE (15-45°)			STEEP (45-80°)			SUB-VERTICAL TO VERTICAL (> 80°)			BASE MAP INFORMATION <table border="1"> <tr> <th>SYMBOL</th> <th>DESCRIPTION</th> </tr> <tr> <td>NH-2</td> <td>NATIONAL HIGHWAY</td> </tr> <tr> <td>SH-9</td> <td>STATE HIGHWAY</td> </tr> <tr> <td></td> <td>METALLED ROAD</td> </tr> <tr> <td></td> <td>OTHER ROAD</td> </tr> <tr> <td></td> <td>RAILWAY</td> </tr> <tr> <td></td> <td>CITY / VILLAGE</td> </tr> <tr> <td></td> <td>HABITATIONS: NON-COVERED (NC) PARTIALLY COVERED (PC)</td> </tr> <tr> <td></td> <td>BOUNDARY: STATE, DISTRICT, BLOCK</td> </tr> <tr> <td></td> <td>OTHER INFORMATION</td> </tr> </table>	SYMBOL	DESCRIPTION	NH-2	NATIONAL HIGHWAY	SH-9	STATE HIGHWAY		METALLED ROAD		OTHER ROAD		RAILWAY		CITY / VILLAGE		HABITATIONS: NON-COVERED (NC) PARTIALLY COVERED (PC)		BOUNDARY: STATE, DISTRICT, BLOCK		OTHER INFORMATION	LOCATION INFORMATION <table border="1"> <tr> <th>STATE INDEX</th> <th>DISTRICT INDEX</th> </tr> <tr> <td></td> <td></td> </tr> <tr> <th>BLOCK INDEX</th> <th>MAPSHEET INDEX</th> </tr> <tr> <td></td> <td></td> </tr> </table>	STATE INDEX	DISTRICT INDEX			BLOCK INDEX	MAPSHEET INDEX		
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