

DISTRICT GROUND WATER BROCHURE OF PILIBHIT DISTRICT, U.P.

(A.A.P.: 2012-13)

By

R.K. Rajput

Scientist 'B'

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DISTRICT AT GLANCE

1. GENERAL INFORMATION

i. Geographical Area (Sq. Km.)	:	3499
ii. Administrative Divisions (As on 2012)	:	
Number of Tehsil/Block		3/7
Number of Panchayat/Villages		1216
iii. Population (as on 2001 census)	:	1645183
iv. Density of Population per Sq.Km.	:	470
v. Average Annual Rainfall (mm)	:	1256

2. GEOMORPHOLOGY

Major Physiographic Units	:	Tarai, Khader (younger alluvium) Older Alluvium
Major Drainages	:	Sarda, Chauka, Gomti, Khannaurs, Mala and Desha

3. LAND USE (Sq. Km.)

a) Forest area	:	80010 hectare
b) Net area sown	:	240085 hectare
c) Cultivable area	:	378315 hectare

4. MAJOR SOIL TYPES

: Tarai Soil, Khader

5. AREA UNDER PRINCIPAL CROPS

: Rice, Wheat, Sugarcane, Sunflower

6. IRRIGATION BY DIFFERENT SOURCES

(Areas and Numbers of Structures) (Sq.Km.)

Dugwells / Persean Wheel	:	Nil or very low
Tubewells/Borewells	:	26 Govt. Tubewells 162242 Private Tubewells
Canals	:	56046 Km.
Other Sources	:	545
Net Irrigated Area	:	218859 hectare
Gross Irrigated Area	:	63%

7. NUMBERS OF GROUND WATER MONITORING : WELLS OF CGWB (As on 31-3-2013)

No. of Dugwells	:	8
No. of Piezometers	:	4

8. PREDOMINANT GEOLOGICAL FORMATIONS

Alluvium

9. HYDROGEOLOGY

Major water bearing formation : Sand fine to Coarse
(Pre-monsoon Depth to water level during 2012) : 3.30 - 5.63 mbgl
(Post-monsoon Depth to water level during 2012) : 2.00 - 4.65 mbgl
Water level fluctuation during year 2011-12 : 0.90 to 2.73 m/year

10. GROUND WATER EXPLORATION BY CGWB

No of wells drilled (EW, OW, PZ, SH, Total) : EW-1, OW-1
Depth range (m) : 363 mbgl
Discharge (litres per second) : 1000-2000 LPM
Storativity (S) : -
Transmissivity (m²/day) : -

11. GROUND WATER QUALITY

Presence of Chemical constituents more than permissible limit (e.g. EC, F, As, Fe) : 'Fe' more than 2 mg/l
Type of water : Good

12. DYNAMIC GROUND WATER RESOURCES (2009)-in MCM

1111243.30 ham
Net Annual Ground Water Availability : 123253.50 ham
Existing Gross Ground Water Draft for Irrigation : 75494.60 ham
Provision for Domestic and Industrial Requirement Supply for 2025 : 5718.75 ham
Existing Gross Ground Water Draft for All Uses : 77941.82 ham
Stage of Ground Water Development : 45% to 89% Safe

13. AWARENESS AND TRAINING ACTIVITY

Mass Awareness Programmes organized : NIL
Date : -
Place : -
No. of participants : -
Water Management Training Programme organized : NIL
Date : -
Place : -
No. of participants : -

14. EFFORTS OF ARTIFICIAL RECHARGE & RAINWATER HARVESTING

Projects completed by CGWB (No & Amount spent) : NIL
Projects under technical guidance of CGWB (Numbers)

- 15. GROUND WATER CONTROL AND REGULATION** : NIL
- Number of OE Blocks : NIL
- No of Critical Blocks : NIL
- No of blocks notified : NIL
- 16. MAJOR GROUND WATER PROBLEMS AND ISSUES** : No problem, only presence of Iron more than 2 ppm, resulting staining teeth etc.

DISTRICT GROUND WATER BROCHURE OF PILIBHIT DISTRICT, U.P.

(A.A.P.: 2012-13)

By

R.K. Rajput

Scientist 'B'

1.0 INTRODUCTION

The Pilibhit district is north-eastern most district of Ruhelkhand division in U.P., Which is situated in sub himalayan belt on the southern border of Nepal. It lies between Latitudes 28⁰06' and 28⁰53' North and Longitude 79⁰37' and 80⁰30' East, falling in the survey of India Toposheet No. 53P and 62 D with an area of 3499 Sq. Km.

Administratively the district is divided in three tehsils namely Pilibhit, Bisalpur and Puranpur. There are only 7 development blocks in the district namely – 1- Lalahni Khera, 2- Amaria, 3- Marori, 4- Puranpur, 5- Bilsanda, 6- Bisalpur and 7- Berkhera block.

Table-1

TEHSIL AND BLOCKWISE GEOGRAPHICAL AREA

Sl. No.	Tehsil	Block	Area (Sq. Km.)
1.	Pilibhit	(i) Amaria	405.7
		(ii) Marori	297.5
		(iii) Lalauri Khera	218.0
2.	Bisalpur	(i) Bara Khera	313.0
		(ii) Bilsanda	354.9
		(iii) Bisalpur	264.5
3.	Puranpur	(i) Puranpur	1211.8

1.1 DRAINAGE:

The district Pilibhit is drained by the rivers as given below-

Sarda: It enters in Pilibhit district in the extreme north at tehsil Puranpur about 500 mt. above Mundia Ghat. Then it flows south east direction through the

district, taking a tortuous course as it travels the low lying area in the east of Puranpur and finally leaves the district in the north of Nahrosa, where it passes into Lakhimpur Kheri.

Chauka: The Chauka or Chuka is a perennial stream that follows the line of the old high bank and marked the old westerly course earlier adopted by the Sardar. It has a course of about 40 kms. through marshy land in the district and joins the Sardar near Motiaghat.

Gomti: The central portion of Pilibhit is drained by the river Gomti and its tributaries. The Gomti rises near village Madho Tanda (Maina Kot) but does not assume a definite channel for some distance. It increases in volume towards the south of the tehsil Puranpur after being joined by Gonchai & two other small tributaries of Gomti – The Jhunkna and Barhowa.

Khanaut: This river flows through the area lying to the west of Gomti. Rising in the forest near Jamaria, It flows south west and pass Shahgarh to the north eastern corner of tehsil Bisalpur. It joined by few tributaries i.e. Khawa, Mala and Sakaria.

Deoha: This stream originate in the southern slopes of the lower hills in Patti Chargarh of Nainital district. It enters in the district in the extreme north and forms the boundary between the Pilibhit and Jahanabad, flowing southwards.

Lakes: There are large number of minor swamps and depressions but only few are of greater extent. They serve as reservoirs for the purpose of irrigation.

Irrigation: The irrigation facilities in the district has been mostly confined to many large and small river flow irrigation scheme. The existing canal system in the district has been linked with the barrage. The Sardar high & low level canal irrigate nearly 50833 hectare during Kharif and Rabi seasons in the district. Irrigation through ground water is the major source in the area. 48% of irrigation is done through dug wells, tubewells, pumping sets (private tubewells) etc.

1.2 STUDIES/ACTIVITIES CARRIED OUT BY C.G.W.B.:

The entire area of Pilibhit district has been hydrogeologically surveyed in 1970 by the ground water wing at G.S.I.; Subsequently the entire district has been hydrogeologically (Reappraisal) surveyed by Dr. A.N. Lal, Sc. 'C' (1994-95), Shri

R.K. Rajput, Astit. Hydrogeologist (2002-03) and Dr. K.S. Pandey, Sc. 'C' compiled district report of Pilibhit district. The water levels and chemical quality of ground water are being regularly monitored through National Hydrograph Stations in the district by Central Ground Water Board. An exploratory tubewell at Pilibhit was drilled by the department down to the depth of 363 m.b.g.l.

2.0 CLIMATE AND RAINFALL

The average annual rainfall as per record of Pilibhit district is 1255.9 mm. The monsoon in the district sets in last week of June till middle of September. The district received maximum rains from June to August. Winter rains occurs in January and February, but year 2002, 2008 recorded no rainfall from January to April.

The maximum mean monthly atmospheric temperature 39⁰C has been recorded during the month of May and minimum (8⁰C) in January. The temperature generally starts increasing from February and reaches to maximum in May/June (highest temperature 44⁰C). After June temperature decreases and touches minimum in January. The mean percentage of relative humidity in the district varies from 49 to 67%. Light to moderate south-westerly winds prevail in the winter and early summer period. At the end of summer, easterly and northeasterly winds set in and continue throughout the monsoon period. The mean wind velocity is 5.1 K.M.P.H. and potential transpiration is 1402.8 mm has been recorded.

3.0 GEOMORPHOLOGY AND SOIL TYPES

Topographically the district can be divided in two distinct tracts. In the north and north west the tract is a continuation of the Tarai belt. Though there are no hill the level surface is characterised by many troughs and depressions making the beds of river and water courses which carry at the surface drainage. The low basins, known as Khader (younger sediments) differ greatly in character from the upland sediments of Bangers (older sediments) which marks the watershed. Otherwise the slope at the country from north to south is more or less uniform.

3.1 SOILS:

Pilibhit district obviously has undergone diversified pedogenesis depending upon the composition of the parent materials Paleo-geographical & climatic conditions to which it was subjected. Only these soils group which have got strategic significance in present day land utilization are described in the Table-2, as per U.S. Soil Survey Staff (1975)

Table-2

SOIL CHARACTERISTICS OF PILIBHIT DISTRICT, U.P.

Order	Suborder	Local Name	Description of Soil
Hollis-ic	Hoplaguolls	Tarai Soils	The tarai soil have developed on calcareous, medium to moderately coarse textured materials under predominate influence of mixed forest vegetation in the northern part of the district. It is essentially fine grained soils, comprising clay and silt in humus marshy & swampy environment.
Enti Sols	Undifluents	Younger alluvium soil (Khader)	These soils are restricted in northern Gangetic plain which are deficient in Nitrogen, Phosphate, but enriched in potash lime. The general texture of the soil in the area is sandy to sandy loam. The younger soil are laden with moisture often rendering these area flood prone.

4.0 GROUND WATER SCENARIO

4.1 HYDROGEOLOGY:

District Pilibhit is underlain by quaternary alluvium comprising sand, clay, silt gravel and kankar in varying proportions. The area falls under interfluvial area of Ganga and Sarada which is a part of Indo-Gangetic plains. Tarai belt occurs in the northern fringe of the districts comprising mainly sand pebbles beds interbedded with clays. South of Tarai belt is underlain by the deposits of the older genetic alluvium composed of fine to medium grained sand and clay with kankar in varying proportions. Further south, lies the belt of younger alluvium of recent age which

occupies the lower grounds at thick sequence of clay, silt and sand with occasional kankar. The general geological sequence over the district is given as below.

Table-3

GEOLOGICAL SUCCESSION OF PILIBHIT DISTRICT, U.P.

System	Age	Formation	Lithology
Quaternary	Recent to upper Pleistocene	Newer Alluvium	Fine sand, silt clay admixed with gravel.
	Upper Pleistocene	Older Alluvium	Clay with kankar and sand of different grades.

4.2 OCCURRENCE OF GROUND WATER:

The ground water occurs in the granular sediments within the zone of saturation under water table conditions in the shallow aquifer and deeper aquifer below 50 m. depth occurs under semiconfined to confined conditions. At few places in the Tarai belt the ground water occurs under high hydrostatic pressure resulting in free flow conditions in the Puranpur tehsil.

4.3 SUB SURFACE GEOLOGY:

The granular zones encountered at different depths consist of unconsolidated alluvial formation as inferred from the tubewells constructed by state agencies and Central Ground Water Board. Three water bearing zones have been identified within the depth of 350 mbgl

1. Shallow zones down to the depth at 50 m.
2. Middle zone ranging between 50 to 150 mbgl depth, which is most potential and prospective.
3. Below 150 mbgl upto 350 mbgl, which was explored by C.G.W.B. at Pilibhit, zone is not very potential with respect to the middle zone and is mixed with fine sand and clay but few layers of sand may be having good yield.

4.4 DEPTH TO WATER LEVEL:

Pre and post monsoon depth to water level data was observed through 12 National Hydrograph Stations falling in the Pilibhit district, for the year 2011-12. The depth to water level during the pre monsoon (May) ranges from 3.30 to 5.63 mbgl, mostly area showing more than 2 mt. water level/ The depth to water level during the post monsoon period range between 2.00 and 4.65 mbgl. The block wise average of water level is given below:

Table-4

S. No.	Blocks	Average water level (Premonsoon 2012)	Average water level (Postmonsoon 2012)	Fluctuation (m)
1.	Bisalpur	5.20	3.96	1.24
2.	Bilsanda	4.30	2.25	2.05
3.	Puranpur	3.30	2.00	1.30
4.	Amaria	5.15	4.65	0.50
5.	Barkhsa	3.92	2.52	1.40
6.	Lalaun Khera	-	-	-
7.	Marari	5.15	4.63	0.50
	Average	4.50	3.33	1.16

4.5 SEASONAL FLUCTUATION:

On the basis of pre and post monsoon water level data the rise in water level, in all the blocks varies from 0.50 to 2.05 meter. The maximum rise is recorded in Bilsanda block, which falls in the Tarai belt and about 60% area is covered by forest land. The minimum rise is recorded in the Amaria block and Marai blocks that is 0.50 m. (Older alluvium) during the year 2012.

4.6 LONG TERM WATER LEVEL FLUCTUATION:

The water level data of National Hydrograph Station around the district shows, that the water level is almost stable. The long-term water level trend from 1998 to 2012 at Bargad Chauraha is 0.0015 m/year rise and remaining stations shows stable condition of water level. Thus there is no alarming situation with respect to declining or rising trends of water levels.

4.7 GROUND WATER RESOURCE:

Pilibhit district is an agriculture dominated district, i.e. 90% population lives in the rural areas and their main source of income is agriculture & agro based cottage industries like rice mills, sugar mills, rapeseed oil mills and trading of wheat, paddy and other cereals. In the Pilibhit district about 72% of the gross irrigation is through ground water and remaining by surface water through canal system of Sarada river.

In order to plan development of ground water, it is essential to estimate ground water resource potential. The dynamic resource is replenishable annually by precipitation, irrigation, return flow, canal and tank seepage etc. The U.P. State Ground Water Department in consultation with Central Ground Water Board has estimated blockwise dynamic ground water methodology at GEC-1997, as shown in Table-5. As per table all the blocks of Pilibhit district are categorised as safe for further development of ground water.

4.8 STATUS OF GROUND WATER DEVELOPMENT:

The present level of ground water development in the district is 63.24%. Leaving balance of 42040.51 ham for further development (Table 5 and 7). This may create additional irrigation facilities at 85% (i.e. 35733.41 ham) of total balance beeping in view. The availability of ground water resource for further development and prevailing hydrogeological scenario as deciphered from studies carried out so far, a blockwise further ground water development plan has been workout and given in Table-7 and ground water situation in the district is given in Table-8 for ready reference.

Table-5

DYNAMIC GROUND WATER RESOURCES OF PILIBHIT DISTRICT

(As on 2009)

Sl. No.	Assessment Units Blocks/District	Command	Net Ground Water Availability (in ham)	Existing Gross Ground Water Draft for Irrigation (in ham)	Existing gross ground water draft for domestic & industrial water supply	Existing gross ground water draft for all uses (5+6)	Provision for domestic & industrial requirement supply for 2025	Net Ground Water Availability for Future Irrigation Development (4-5-8)	Stage of Ground Water Development (7/4)×100 (in %)	Category of Block
		Non Command								
1	2	3	4	5	6	7	8	9	10	11
1	Amaria	-	12763.43	9901.43	377.49	10278.92	882.84	1979.16	80.53	Safe
2.	Barkhera	-	9790.24	8192.92	267.74	8460.66	623.53	973.79	86.42	Safe
3.	Bilsanda	-	9680.24	7679.86	292.44	7972.30	558.21	1442.17	82.36	Safe
4.	Bisalpur	-	7109.99	5642.44	246.96	5889.40	558.21	909.34	82.83	Safe
5.	Lalauri Khera	-	8448.65	6335.94	250.18	6586.12	606.67	1506.04	77.95	Safe
6.	Marori	-	10278.22	8838.26	324.34	9162.60	798.15	641.81	89.15	Safe
7.	Puranpur	-	65182.72	28903.75	688.07	29591.82	1691.14	34587.83	45.40	Safe
	Total		123253.50	75494.60	2447.22	77941.82	5718.75	42040.51	63.24	Safe

Table-6

BLOCKWISE PROPOSAL OF GROUND WATER DEVELOPMENT FOR IRRIGATION PURPOSE, DISTRICT PILIBHIT, U.P.

S. No.	Block	Net G.W. availability for future irrigation development (ham)	G.W. Available for irrigation (ham) 85% of Col 3	G.W. proposed to be utilised for development (ham) 70% of Col 4	Proposed Structure		Additional Irrigation potential may be created (ha.) (Average depth of irrigation water adopted 0.50 m) (Col. 5/5)
					<i>No. of state tubewells (taking 50% of Col. 5 unit draft 12.8 ham)</i>	<i>Private tubewell borings with pumping sets (taking 50% of col. 5 unit draft 1.8 ham)</i>	
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
1.	Amaria	1979.16	1682.28	1177.60	460	327	2355.20
2.	Barkhera	973.00	827.05	578.93	226	160	1157.86
3.	Bilsanda	1442.17	1225.84	858.09	335	283	1716.18
4.	Bisalpur	909.34	772.93	541.05	211	150	1082.10
5.	Lalauli Khera	1506.04	1280.13	896.09	350	355	1792.18
6.	Marori	641.81	545.53	381.87	149	106	763.74
7.	Puranpur	34587.83	29399.65	20579.75	8038	5716	41159.30
	Total	42039.35	35733.41	25013.38	9083	7097	50026.56

The ground water situation in the district is given below:

Table-7

Geological formation in entire district	Wells feasible	Rigs suitable	Depth of wells/TW (m)	Discharge (LPM)	Type of pump/water lifting device	Drinking water wells & supply based on G.W.	Free flow condition in the district
Soft rock (Alluvium) "sand fine to coarse mixed with gravel"	Dugwells	Manual	10 to 20 m	As per water lifting device	Rope & bucket/Persian wheel/Dhakli	In few locality it is in use for drinking purpose	-
	Hand pump/India Mark II	Hand boring set or by rotary, R Rotary Rigs	20-30	50 to 100	Manual	Used for drinking water	Artesian conditions are preventing in the Tarai area near Puranpur & Bisalpur tehsil with a discharge of 200 to 1000 lpm with 1 to 3 m head agl.
	Shallow tubewells	Rotary rigs direct/ reverse/ manual by boring set	30-100	800-2000	Electric motor/ generator set motors/diesel pump set	Mostly for irrigation/for water supply for drinking purposes in the municipality / town area	
	Deep tubewells	Rotary (Direct)	Below 200 mbgl	2000 to 3000	Electric motor set only	For irrigation of drinking use as per demand	

4.9 GROUND WATER QUALITY:

For evaluation of chemical quality of ground water of the representative water samples from India Mark II hand pump (generally 40 to 50 m deep) were collected and analysed in the chemical laboratory of CGWB, NR, Lucknow. The results of chemical analysis of water samples are given below:

Table-8

S.N.	Location	Type of Sample	EC microsiemens /cm at 25°C	pH	CO ₃	HCO ₃	Cl	NO ₃	SO ₄	F	Ca	Mg	TH as CaCO ₃	Na	K	TDS	As	Silica
1.	Amaria	India-II	353	7.8	0	220	14	nd	nd	0.33	36	9.7	130	30	2.4	212	-	-
2.	Barkhera	India-II	477	3.2	0	293	7.1	0.1	6	0.17	36	17	160	44	3.5	286	-	-
3.	Bilsanda	India-II	441	7.8	0	268	14	nd	10	0.33	32	19	160	40	4.3	285	-	-
4.	Bisalpur	India-II	484	8.1	0	305	7.1	nd	nd	0.26	24	12	110	69	3.3	290	-	-
5.	Dalauri Khera	India-II	580	8.0	0	342	7.1	nd	0.16	nd	38	39	230	33	4.6	348	-	-
6.	Marori	India-II	456	8.0	0	281	7.1	0.11	6	7.4	40	24	200	21	3.7	274	-	-
7.	Puranpur	India-II	301	8.2	0	195	14	nd	nd	0.06	32	9.7	120	25	2.6	181	-	-
8.	Pilibhit City	India-II	471	7.7	0	275	21	0.04	8	0.17	40	19	180	36	3.5	283	-	-

As per above chemical results of samples the electrical conductivity of Pilibhit is in range of 301 to 580 μ s/cm, which is in permissible limit. The Fluoride is in range

of 0.17 to 0.33 mg/l. Over all the ground water is fit for drinking, domestic & irrigation use. Arsenic (toxic element) is not recorded in the ground water samples.

5.0 GROUND WATER MANAGEMENT STRATEGY

5.1 GROUND WATER DEVELOPMENT:

The entire district Pilibhit is suitable for the ground water development through deep tubewells & shallow tubewells. As this area receive sufficient rainfall near the recharge zone (Bhabhar) and maximum area is covered by forest area.

5.2 WATER CONSERVATION AND ARTIFICIAL RECHARGE:

All the seven blocks of Pilibhit district falls in the safe category as per assessment of ground water potential by U.P. Govt. and C.G.W.B. and water levels are also shallow (between 3.30 to 5.63 m with fluctuation ranging between 0.90 to 2.73 m). Therefore interventions such as artificial recharge are not required, except in the municipal area of Pilibhit town due to pressure of population. However, proper management of ground water for sustainability is required.

6.0 GROUND WATER RELATED ISSUES AND PROBLEMS

The water logging conditions are prevailing along the Sarda canal / canals due to seepage and in the uncultivated land. Iron is present in the ground water in the Tarai belt (Ranges 1 to 300 or more) which caused staining of teeth and clothes, in some pockets, Flouride and Arsenic are also reported which require micro level surveys by water sampling.

7.0 AWARENESS AND TRAINING ACTIVITY

7.1 MASS AWARENESS PROGRAMME (MAP) AND WATER) MANAGEMENT TRAINING PROGRAMME (MMTP) BY C.G.W.B.:

No mass awareness programme / management training programme (MMTP) have been organised by C.G.W.B. in Pilibhit district till date.

7.2 PARTICIPATION IN EXHIBITION, MELA, FAIR ETC.:

No such type Mela / Fair / Exhibition is organised by C.G.W.B. Govt. of India, Ministry of Water Resources.

7.3 PRESENTATION AND LECTURES DELIVERED IN PUBLIC FORUM / RADIO / T.V. / INSTITUTION OF REPUTE / GRASSROOTS ASSOCIATION / NGO / ACADEMIC INSTITUTION:

The programme on ground water time to time broadcaste on T.V. / Radio under National or regional programme.

8.0 AREA NOTIFIED BY C.G.W.A./S.G.W.A.

Nil.

9.0 RECOMMENDATIONS

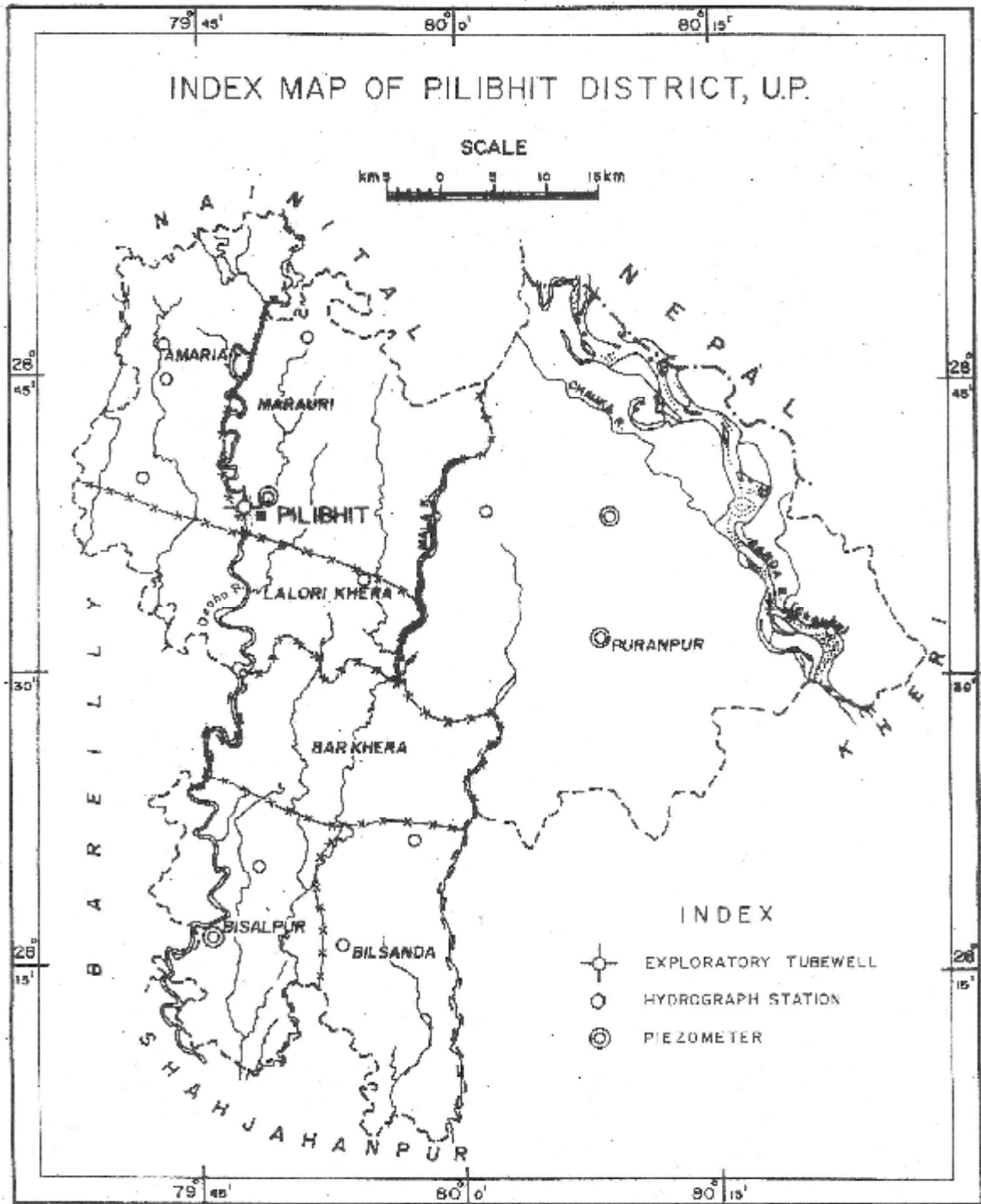
Suitability of ground water for irrigation, domestic and industrial uses for its quality point of view shows that concentration of chemical constituents of all the cations, and anion are within permissible limit, Except few pockets where Flouride and Iron is present in excess limit. At Puranpur the toxic element Arsenic (0.014 ppm) is also reproted. Therefore it is essential that the study of water quality by sampling shallow & deep (confined aquifer) may be taken on priority basis as the aim of Govt. of India / UNICEF etc. is to provide the pure & safe water for domestic use.

For keeping the level of development within "Safe" category it is advisable to develop only 85% of annual ground water balance. The area is feasible for shallow and deep tubewells without any alarming situation.

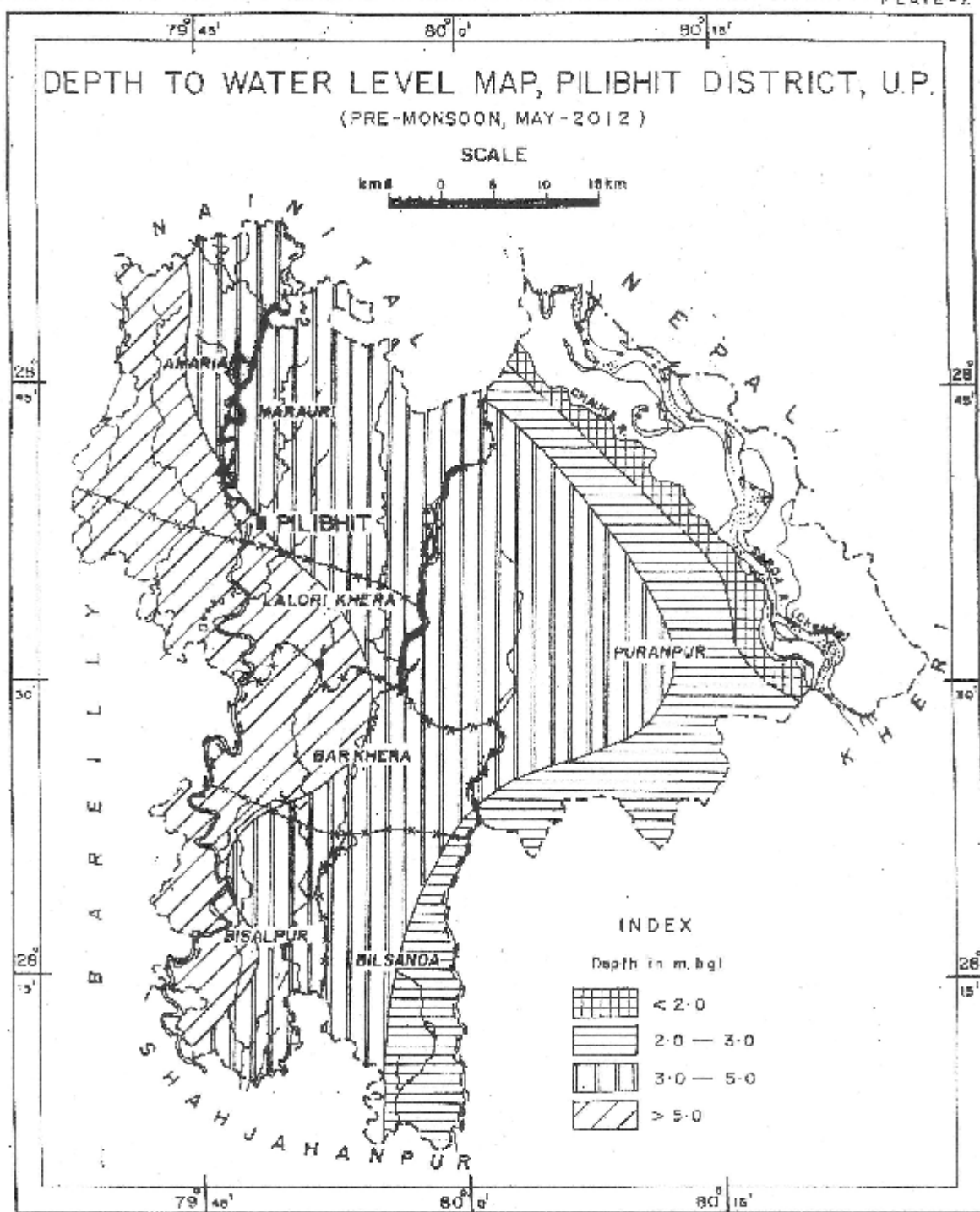
Shallow tubewell with discharge of 20 m³/hr and shallow cavity tubewells with 50 to 70 m³/hr discharge may be constructed in tarai belt whereas deep and medium tubewell with 100 to 200 m³/hr discharge may be constructed in older and younger alluvium of Central Ganga Plain.

Although good network of canal command of Sarada river having length of 400Km exist in the area, possibility of conjunctive use of surface water and ground water may be taken up to avoid problem of water logging and soil salinisation in the early stage. It is therefore recommended to have regular monitoring of water levels along and across the canal to check up possibility of water logging and deterioration of chemical quality.

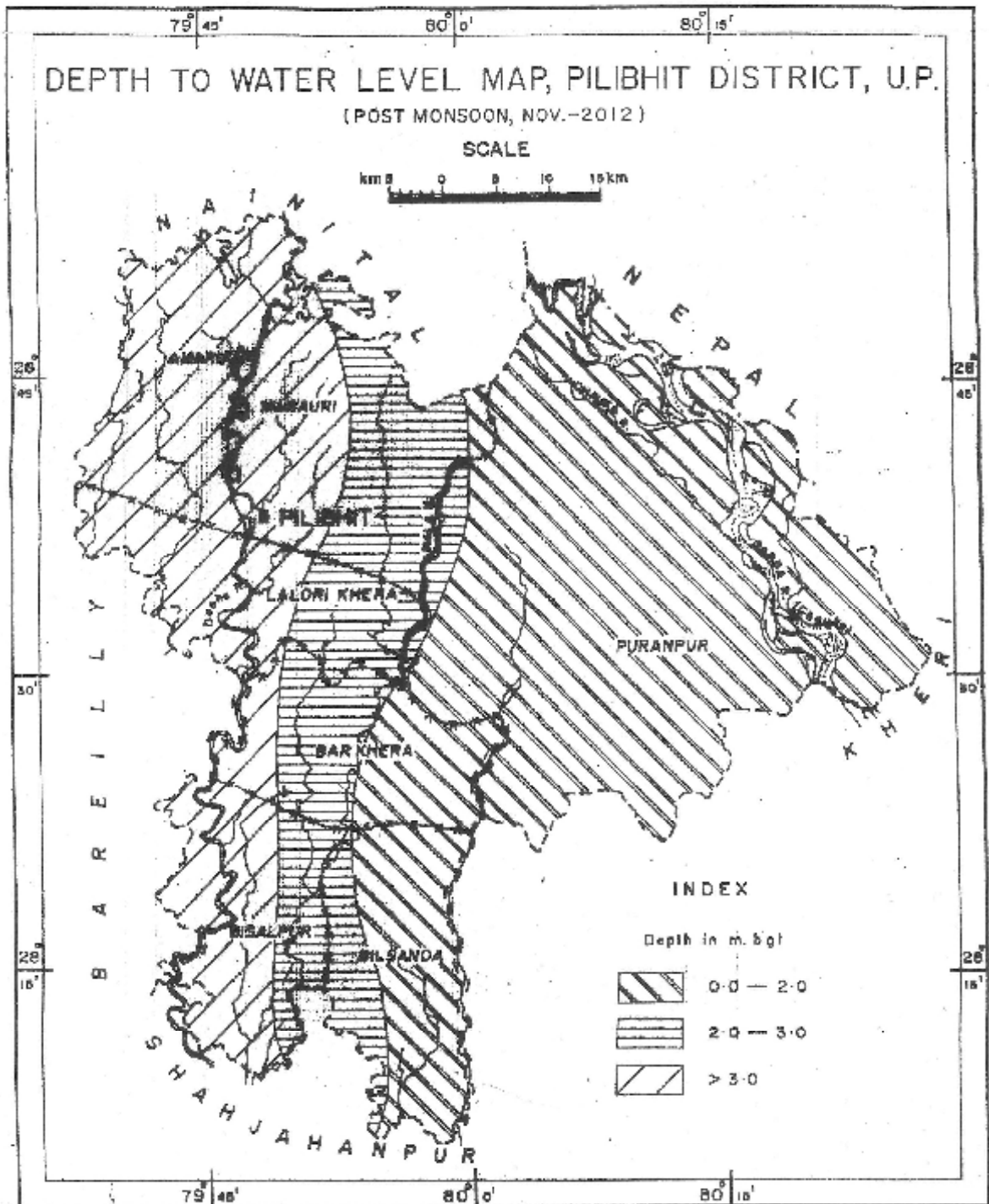
Keeping in view the reappraisal study for the year 1994-95 of Pilibhit district and reappraisal in the year 2002-03, there are no major changes in the quality, water level and ground water development etc. of district.



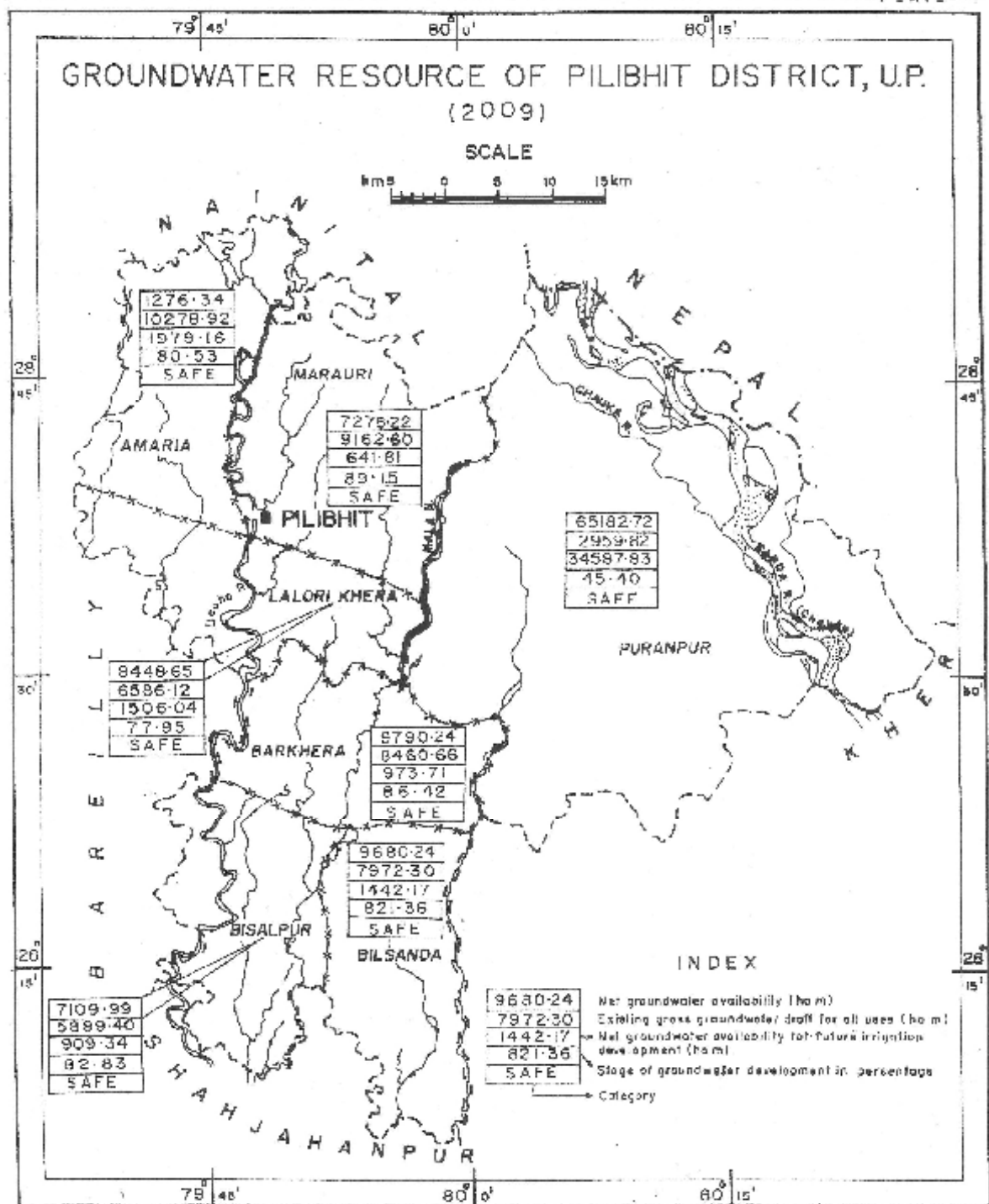
C G W B, N R, (RAKESH), D.O.No.7345/95 (N. Chandra) Drg. No. 4768 /13



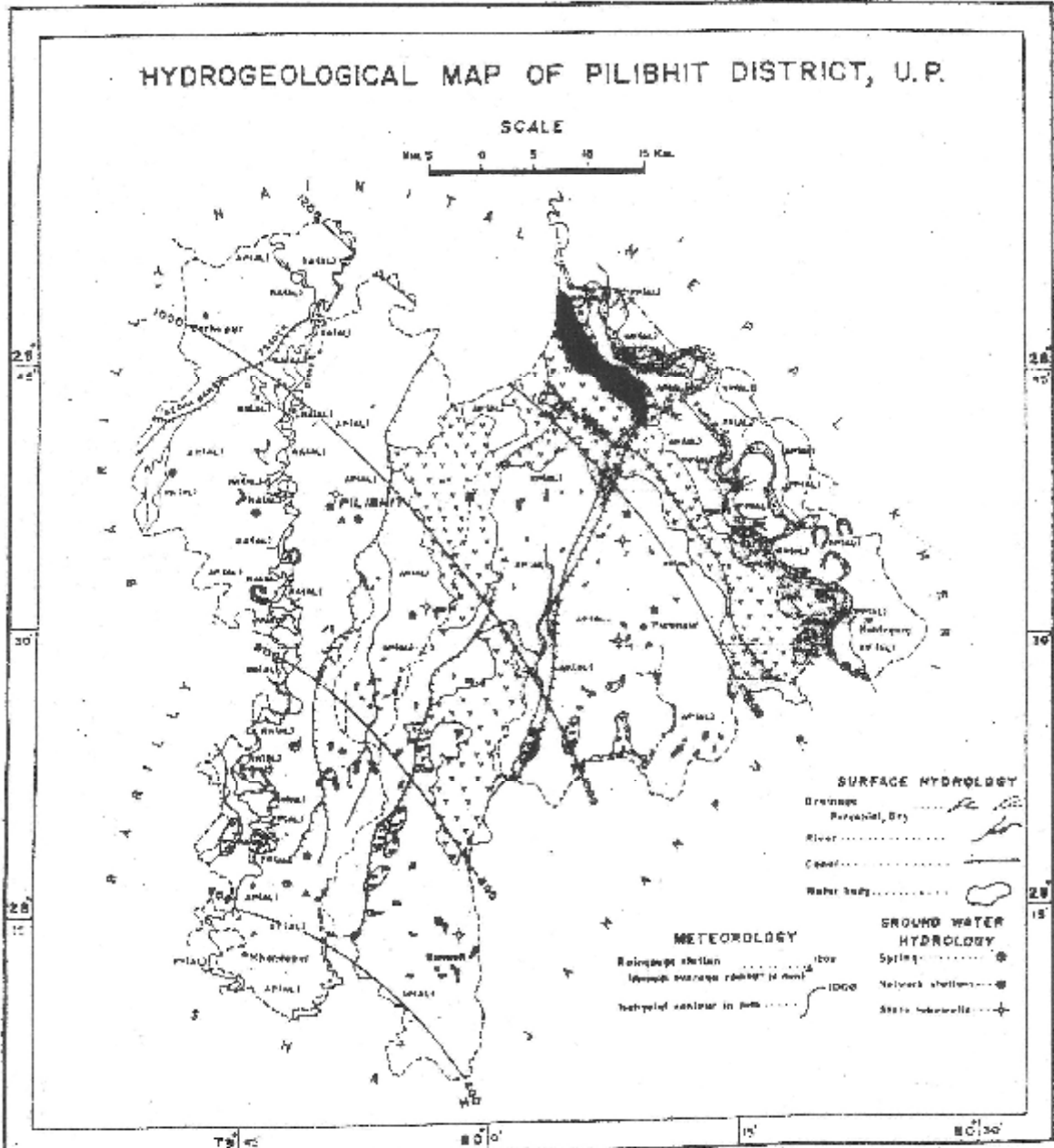
C.G. W.B., N.R., (RAKESH), D.O.No.7345/95 (N.Chandra) Drg. No. 4769/13



C.G.W.B., NR, (RAKESH), D.O.No.7345/95 (N.Chandra) Drg. No. 4770/13



C O W B, N R, (RAKESH), D.O.No.7345/95 (N.Chandra) Org. No. 4771/13



G.G.W. B., N.R., Drg. no. 4772 /13.

Source-R.S.A.C.