

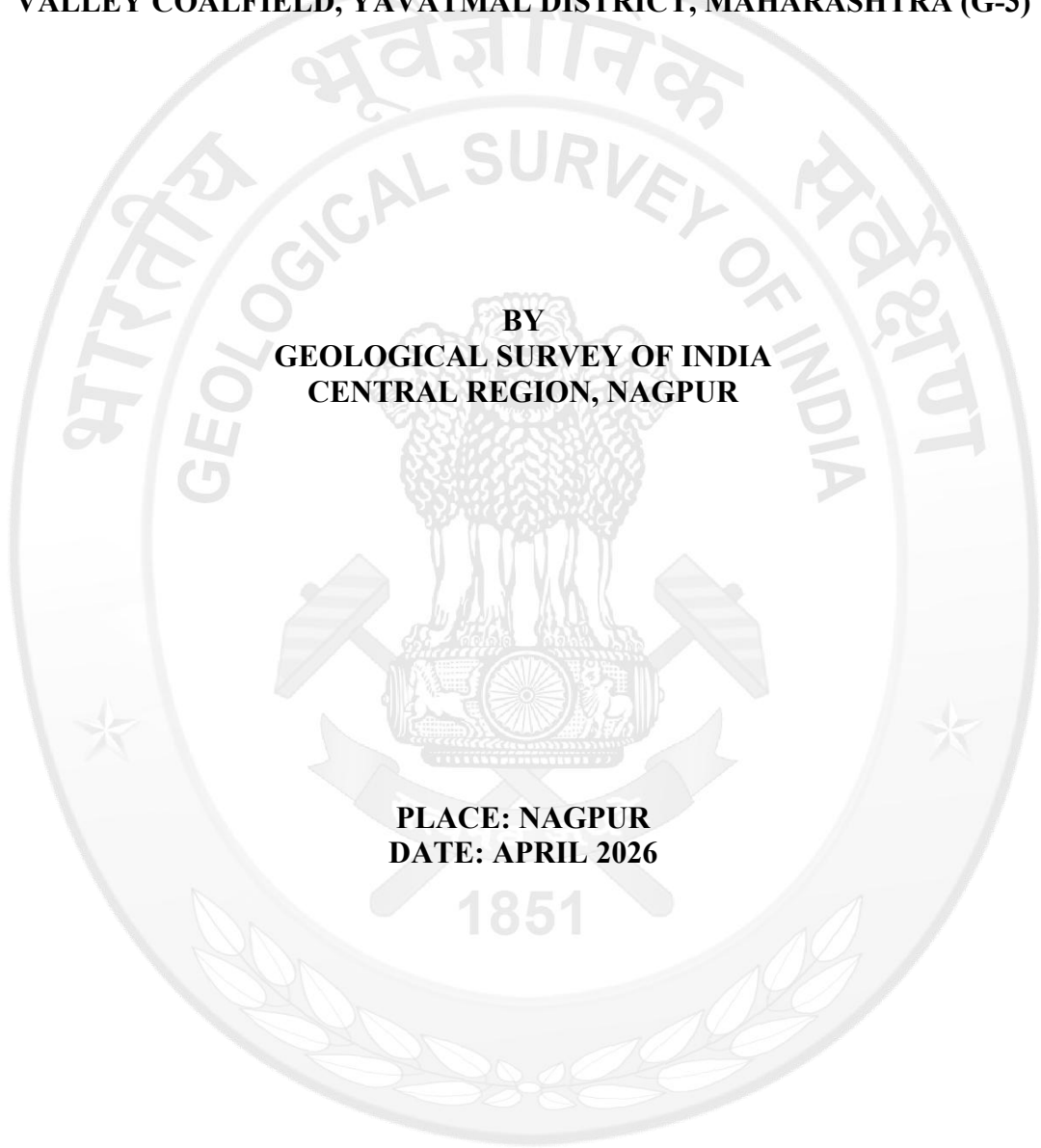
COMMODITY: COAL

**PRELIMINARY EXPLORATION FOR COAL IN DAHEGAON SECTOR, WARDHA
VALLEY COALFIELD, YAVATMAL DISTRICT, MAHARASHTRA (G-3)**

**BY
GEOLOGICAL SURVEY OF INDIA
CENTRAL REGION, NAGPUR**

**PLACE: NAGPUR
DATE: APRIL 2026**

1851



Summary of the Block for G3 Level Exploration

GENERAL INFORMATION ABOUT THE BLOCK

| Feature | Details |
|----------------------------------|--|
| Block ID | DAHEGAON SECTOR |
| Exploration Agency | Geological Survey of India, Central Region, Nagpur |
| Commodity | Coal |
| Mineral Belt / Geological Domain | Wardha Valley Coalfield |
| Block Area | 36 sq. km |
| Completion Period | One year |
| Objectives | 1) To establish strike and dip continuity of Barakar coal seams, under favorable structural set up in Dahegaon Area by infilling boreholes. 2) To assess additional coal resources in the area below the Deccan Trap. |
| Projected Outcome | Preliminary exploration data for resource appraisal and further advancement of the block. |
| Personnel | Two geoscientists |
| Expected Field Days | Officer-1: 90 days; Officer-2: 90 days; Supervisory Officer: 7 days |
| Toposheet / Degree Sheet | 55L/12 & 16 |
| District / State | Yavatmal / Maharashtra |

1. Location

BLOCK

| Cardinal Points | Latitude | Longitude |
|-----------------|------------------|----------------|
| A | 20° 14' 59.583"N | 78°41'52.238"E |
| B | 20° 14' 59.648"N | 78°43'42.238"E |
| C | 20° 14' 1.512"N | 78°44'8.513"E |
| D | 20° 13' 25.837"N | 78°44'10.398"E |
| E | 20° 13' 24.780"N | 78°44'27.837"E |
| F | 20° 11' 59.068"N | 78°45'18.412"E |
| G | 20° 10' 27.211"N | 78°44'2.361"E |

| Cardinal Points | Latitude | Longitude |
|-----------------|------------------|-----------------|
| H | 20° 13' 44.717"N | 78°40' 33.193"E |
| Tehsil/Taluk | Ralegaon | |
| District | Yavatmal | |
| State | Maharashtra | |

2. Area

| | |
|----------------------|--------------------|
| Block Area | 36 sq. km. |
| Forest Area | NIL |
| Government Land Area | Data not available |
| Private Land Area | Data not available |

3. Accessibility

| | |
|-----------------------|---|
| Nearest town | Wadki town, about 12 km to the north west |
| District headquarters | Yavatmal, about 85 km west of Dahegaon Sector |
| Nearest Rail head | Wani about 30 km northeast of Dahegaon Sector |
| Nearest Airport | Nagpur, 125 km |

4. Hydrography: Small seasonal streams and dam

5. Climate: sub tropical

6. Topography: Plains.

7. Availability of baseline geoscience data

| | |
|------------------|---|
| Geological map | Large-scale geological mapping and earlier G4 investigations by GSI in and around the block |
| Geochemical data | NIL |
| Geophysical data | NGPM. NAGMP |

8. Justification for taking up G3 level exploration

In Dahegaon area (FS 2024-25) two regional Barakar seam/zones namely Middle and Bottom have been intersected in the depth range of 201.60 m (WDH-3) to 577.20 m (WDH-1) with individual coal seam thickness varying from 0.50 m (WDH-1, Bottom seam) to 3.95m (WDH-1, Middle seam). In borehole WDH-1, coal seam has been intersected in the depth range of 551.70 m to 576.70 m and cumulative coal thickness is 8.85 m. In borehole WDH-3, coal seam/zone has been intersected in the depth range of 201.60 m to 208.23 m and cumulative coal thickness is 5.36 m. Coal quality studies indicate ash content varying between 21.23% and 38.07%, moisture between 5.09% and 8.52%, and gross calorific value (GCV) ranging from 3961 to 5704 kcal/kg, corresponding to G-6 to G-12 grade.

The total reconnaissance resource estimated for thick and thin seams of Dahegaon Area is 191.98 million tonnes.

Based on encouraging results of Dahegaon Area (FS: 2024-25), it is proposed to upgrade the Dahegaon Area (G-4) to Dahegaon Sector (G-3) to establish the strike and dip continuity of Barakar coal seams already established in Dahegaon Area and to assess the coal potentiality of the area. Proposed Dahegaon Sector (F.S. 2026-27), five boreholes with inter-borehole spacing of 800 m to 1600 m are to be drilled. The expected borehole depths will range from 500 m to 750 m, targeting the regional Barakar seams/zones, which are anticipated to occur between depths of 200 m to 650 m within the Barakar Formation. In addition to borehole drilling, an area of 36 sq. km will be covered through Large Scale Mapping at a scale of 1: 10,000.

PRELIMINARY EXPLORATION (G3) FOR COAL IN DAHEGAON SECTOR, WARDHA VALLEY COALFIELD, YAVATMAL DISTRICT, MAHARASHTRA.

1.1.0 INTRODUCTION

Dahegaon Sector is situated in the northwestern part of Wardha Valley Coalfield and precisely in the north east of previously explored Ashtona-Kothurla-Magli Area and Dewala-Mangli block. The Dahegaon Sector (FS: 2026-27), bounded by latitudes bounded by latitudes 20°10'27.211"N to 20°14'59.648" N and longitudes 78°40'33.193"E to 78°45'18.412"E, covers an area of 36 sq km and falls in part of Survey of India toposheet No. 55 L/12 and 16.

The proposed programme is designed to generate the geological, geochemical, and drilling data required for preliminary resource appraisal and to guide subsequent exploration.

2.1.0 BACKGROUND INFORMATION

The Dahegaon Sector (FS: 2026-27), bounded by latitudes bounded by latitudes 20°10'27.211"N to 20°14'59.648" N and longitudes 78°40'33.193"E to 78°45'18.412"E, covers an area of 36 sq km and falls in part of Survey of India toposheet No. 55 L/12 and 16. This area is situated in the northwestern part of Wardha Valley Coalfield and precisely in the north east of previously explored Ashtona-Kothurla-Magli Area and Dewala-Mangli block. The regional strike of the area is NW-SE with dips varying from 4° to 6° towards the southwest.

The Dahegaon Area (FS: 2024-25), a total of 1640.00m of drilling has been completed in three boreholes, WDH-1, WDH-2 and WDH-3. The thickness of Barakar Formation, is varies from 152.50 m (WDH-3) to 202.15 m (WDH-1). Two regional Barakar seam/zones namely Middle and Bottom have been intersected in the depth range of 201.60 m (WDH-3) to 577.20 m (WDH-1) with individual coal seam thickness varying from 0.50 m (WDH-1, Bottom seam) to 3.95m (WDH-1, Middle seam). In borehole WDH-1, coal seam has been intersected in the depth range of 551.70 m to 576.70 m and cumulative coal thickness is 8.85 m. In borehole WDH-3, coal seam/zone has been intersected in the depth range of 201.60 m to 208.23 m and cumulative coal thickness is 5.36 m. Band by band analysis shows that Ash and Moisture % of coal seams developed in Dahegaon Area, varies from 10.97% to 49.66% and 3.0% to 6.35% respectively. Gross calorific values of individual resourceable coal seams varies from 5704 kcal/kg to 3961 kcal/kg and the grade of the coal seam ranges from G-6 to G-12. A total of 36.00 sq. km was mapped on 1:25000 scale.

3.1.0 LOCATION AND ACCESSIBILITY

Dahegaon Sector is located in the Yavatmal District of Maharashtra and falls in part of Survey of India toposheet No. 55 L/12 and 16. Wardha Valley Coalfield is well connected by road and railways. Nagpur is about 125 km in the NNE and Yavatmal, the District headquarter is at a distance of about 80 km in the west from the area. Wani and Chikni are the nearest railway heads on Nagpur-

Kazipet broad gauge railway line of central Railway. Present area of exploration is well connected by metalled road to the nearest town Wadki, which is around 12km south-west of this block on NH-7. The area can be approached by NH-7 via Jamb, Hinganghat and Wadki. Metalled and un-metalled fair weather roads interconnect the small villages of the area.

4.1.0 PHYSIOGRAPHY, DRAINAGE AND CLIMATE

The present area in general has a flat rolling topography with elevation varying between 224.00m to 250.00m having from Mean Sea Level. The area is drained by few small nalas flowing towards north-east and north-west. These nalas show dendritic drainage pattern, mainly controlled by lithology and topography of Deccan Trap country. Most of the area is used as agricultural land.

5.1.0 PREVIOUS WORK

The Ashtona-Kothurla-Magli Area's (Mugal, V.V., (2009) exploration program has established three coal seams: The Top, Middle, and Bottom seams in the Barakar Formation. The coal horizons are bounded between grey shale at the top and very coarse-grained sandstone at the bottom. Three sections of the main composite seam occur intervening with dirt bands. The Bottom seam was intersected in borehole WAKM-3 with a thickness of 1.43m. The parting between the Bottom and Middle seam is 7.57m. The Middle seam intersected in WAKM-2 is 6.90m thick, including four dirt bands with a maximum thickness of 0.30m. The Top horizon is intersected by boreholes WAKM-2 and WAKM-3. In borehole WAKM-2 the parting thickness between the Top and Middle seam is 1.15m and 2.37m is in WAKM-3. The thickness of this horizon is 0.35 and 0.22 m. In the Ashtona-Kothurla-Mangli areas, a total indicated resources of 73.23 million tonnes of coal have been estimated.

In the Dewala-Mangli block (R. G. Khangar & L. Khasdeo (2012), one regional Barakar coal seam, namely, the Main Seam with three split sections have been identified in the present exploration block. These three split sections, namely, Top Seam, Middle Seam, and Bottom Seam were intersected between the depths of 349.41m and 482.75m with cumulative coal thickness ranging from 4.70 to 10.39 m. Among these, the Middle seam is the most important and economically significant coal seam. The seam cumulative coal thickness (considering $\geq 0.50\text{m}$ thick coal sections) ranges from 4.60 to 8.44m. The Bottom Seam is intersected as a single section in two boreholes, namely, WAKM-3 & WDM-4, with thicknesses of 1.43m & and 1.10m respectively. Qualitatively, the coal is relatively high in Ash, a non-coking type, and similar to the coal in other areas of Wardha Valley Coalfield. The Ash and Moisture content (%) of the split coal sections (considering $\geq 0.50\text{m}$ thick coal section) range from 21.96 to 41.50 % and from 2.78 to 7.07 % respectively. A total Indicated resource of 10.70 million tonnes of thick sections of Barakar coal belonging to Grade 'C' to 'F' between 300m and 600m depth range has been estimated over a total area of 1.51 sq km in the Dewala-Mangli block.

6.1.0 GEOLOGY OF THE AREA

The present area of exploration occupies the northern western part of Wardha Valley Coalfield. Rock exposures in the proposed area mainly consist of Deccan Trap.

7.1.0 OBJECTIVES OF THE PROPOSED EXPLORATION PROGRAMME

The present exploration programme has been formulated with the following objectives:

- i) To establish strike and dip continuity of Barakar coal seams, under favorable structural set up in Dahegaon area by infilling boreholes.
- ii) To assess additional coal resources in the area below the Deccan Trap.

8.1.0 PROPOSED SCHEME OF EXPLORATION

The proposed G3 exploration programme comprises geological mapping (1:10,000 scale), drilling, borehole geological and geophysical logging, coal sample collection and processing, and laboratory studies. The depth continuity, grade and thickness of coal seam/zone will be checked by drilling in 5 vertical boreholes with borehole spacing between 800m to 1600m and depths ranging from 500m to 750m. Borehole logging, core sampling, and laboratory analyses will support interpretation and preliminary resource appraisal. Selected samples will also be subjected to REE & Trace elements, Ge & Li studies. In addition, coal and associated rock samples will be analysed for rare earth elements (REEs), trace elements, Germanium (Ge), and Lithium (Li) in accordance with the latest guidelines issued by GSI.

9.1.0 QUANTUM OF WORK

| Item of Work | Unit | Proposed Quantum |
|---|--------|--|
| Large Scale Mapping (1:10,000) | sq. km | 36 |
| Subsurface exploration: drilling | m | 2400 |
| Borehole geophysical logging | m | 1200 |
| Coal samples (m) | nos. | 35 m |
| CPS (Nos.) | nos. | 10 nos. |
| Coal samples for REE & Trace elements, Ge & Li (Nos)* | nos. | 20 nos. |
| Resources Assessment | nos. | 5 boreholes (*Including 3 boreholes of Dahegaon Area_FS : 2024-25) |

10.1.0 COST

Summary of the Cost estimates

| Sl. No. | Item | Total Estimated Cost (Rs.) | Funding |
|---------|--------------------------------|----------------------------|---------|
| 1 | Geology and Survey | 0 | By GSI |
| 2 | Drilling | 19,140,000/- | NMEDT |
| 3 | Survey work | 0 | By GSI |
| 4 | Laboratory studies | 0 | By GSI |
| 5 | Geologist at HQ | 0 | By GSI |
| | Sub Total (1to 4) | 19,140,000/- | |
| 6 | Exploration Report Preparation | 0 | By GSI |
| 7 | Proposal Preparation | 0 | By GSI |
| 8 | Peer review charges | 0 | By GSI |
| 9 | Sub Total (1to8) | 19,140,000/- | By GSI |
| 10 | GST18% | 34,45,200/- | |
| | Total: | 22,585,200/- | |
| | Say Rs. In Lakh | 225.85/- | |

11.1.0 TIME SCHEDULE

The work programme is proposed for FS 2026–27, with field, laboratory, report writing, and circulation milestones as summarized below.

The proposed exploration programme is planned in such a way that all the activities like drilling, logging, core sampling and associated geological work and laboratory work will be completed within 10 months. Report writing will take 4 months with 2 months overlapping with laboratory analysis. Thus, the total duration of the project for completion of the above exploration will be 12 months from the date of commencement of the project.

| ANNEXURE 31 B | | | | | | | | | | | | | |
|---|-----------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Scheduled Time for Preliminary Exploration for Coal in Dahegaon Sector, Wardha Valley Coalfield, Yavatmal District, Maharashtra. | | | | | | | | | | | | | |
| | Months | Apr -26 | May -26 | Jun -26 | Jul- 26 | Aug -26 | Sep- 26 | Oct- 26 | Nov -26 | Dec -26 | Jan- 27 | Feb -27 | Mar -27 |
| Sl. No. | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | Surface drilling (1 rig) | | | | | | | | | | | | |



| Item of Work | | Unit | SoC-Item -SI No. NMEDT | Rates as per NMET SoC 2025 | Estimated Cost | | |
|---|-----------------|--|--------------------------|----------------------------|----------------|-------------------|-----------------|
| | | | | | Qty. | Total Amount (Rs) | |
| B. SURVEY WORK | | | | | | | |
| In case of outsourced | | | | | | | |
| 9 | a | Demarcation of lease boundary , Fixation of borholes and determination of coordinates and reduced level (RL) of the boreholes by DGPS (including charges of labourers deployed for the work)- use of CORS Network sstem for all DGPS is compulsory | Per Point of observation | 1.3.2 | 24,000.00 | 13 | ₹ 0.00 |
| Total Cost B (in case of out sourcing) | | | | | | | ₹ 0.00 |
| Item of Work | | Unit | SoC-Item -SI No. NMEDT | Rates as per NMET SoC 2025 | Estimated Cost | | |
| | | | | | Qty. | Total Amount (Rs) | |
| D. Drilling - OUT SOURCED | | | | | | | |
| 18.a | DRILLING | Drilling in/ Drilling in Soft rock/ Strata: HQ size borehole upto 400m Depth and NQ Size beyond 400m depth in case of NQ size drilling is done before 400m depth, the rate shall decrease by 20% | m | 2.2.1.1c | 5,500.00 | 0 | ₹ 0.00 |
| 18.b | | Drilling in/ Drilling in Hard rock/ Strata: HQ size borehole upto 400m Depth and NQ Size beyond 400m depth in case of NQ size drilling is done before 400m depth, the rate shall decrease by 20% | m | 2.2.1.1d | 10,000.00 | 0 | ₹ 0.00 |
| 18.c | | Drilling in/ Drilling in Very Hard rock/ Strata: HQ size borehole upto 400m Depth and NQ Size beyond 400m depth in case of NQ size drilling is done before 400m depth, the rate shall decrease by 20% | m | 2.2.1.1e | 12,650.00 | 0 | ₹ 0.00 |
| 18.d | | Drilling for Lignite | m | 2.2.1.1a | 4,783.00 | 0 | ₹ 0.00 |
| 18.e | | Drilling for Coal | m | 2.2.1.1b | 7,975.00 | 2400 | ₹ 19,140,000.00 |
| 18.a | | Mechanised Auger Drilling | m | 2.2.2.1 | 4,760.00 | 0 | ₹ 0.00 |

| | | | | | | | | | |
|---|------------------------------------|--|--------------|---------|---------|--|---------|--------|------------------------|
| | | for soft strata upto 30m depth | | | | | | | |
| 18.b | DRILLING RELATED EXPENDITURE HEADS | Hand Auger drilling in soft strata upto 30 m depth | m | 2.2.2.2 | | 3,808.00 | 0 | ₹ 0.00 | |
| 18.c | | RC Drilling | m | 2.2.3 | | 8,870.00 | 0 | ₹ 0.00 | |
| 18.d | | Non coring drilling | m | 2.2.4 | | 4,000.00 | 0 | ₹ 0.00 | |
| 19 | | Borehole Deviation Survey by Multishot survey tool (interval 6m; azimuth and inclination to be recorded) | per shot | 2.2.5 | | 330.00 | | 0 | ₹ 0.00 |
| 20 | | Land / Crop Compansation (in case the BH falls in agricultural Land) | per BH | 5.6 | | 30,000.00 | 5 | ₹ 0.00 | |
| 21 | | Construction of concrete Pillar (12"x12"x30") | per borehole | 2.2.7a | | 2,000.00 | 5 | ₹ 0.00 | |
| 22 | | Borehole plugging with cement | per borehole | 2.2.8 | | 10,000.00 | 5 | ₹ 0.00 | |
| 23 | | Miscellaneous Charges (Transportation of Drilling Rig, accommodation for Drilling Camp, Camp setting and winding, construction of approach road) | Lumpsum | 0 | 2.2.9.4 | For Drilling cost >2 Cr: 10 % of the Drilling Cost with a maximum ceiling of Rs.25 Lkh | 2500000 | ₹ 0.00 | |
| 24 | | Drill Core Preservation- One complete BH plus mineralised cores of all the BHs of the block/ prospect to be preserved in GI Core boxex and subsequently transported to the notified core repository. | per m | X | | 1,590.00 | 500 | ₹ 0.00 | |
| Total Cost D- outsourced | | | | | | | | | ₹ 19,140,000.00 |
| Total (Survey Work + Drilling) | | | | | | | | | ₹ 19,140,000.00 |
| GST 18% | | | | | | | | | ₹ 3,445,200.00 |
| Total Fund Required inclusive of 18% GST | | | | | | | | | ₹ 22,585,200.00 |
| | | | | | | | | | ~ 2.26 Cr |

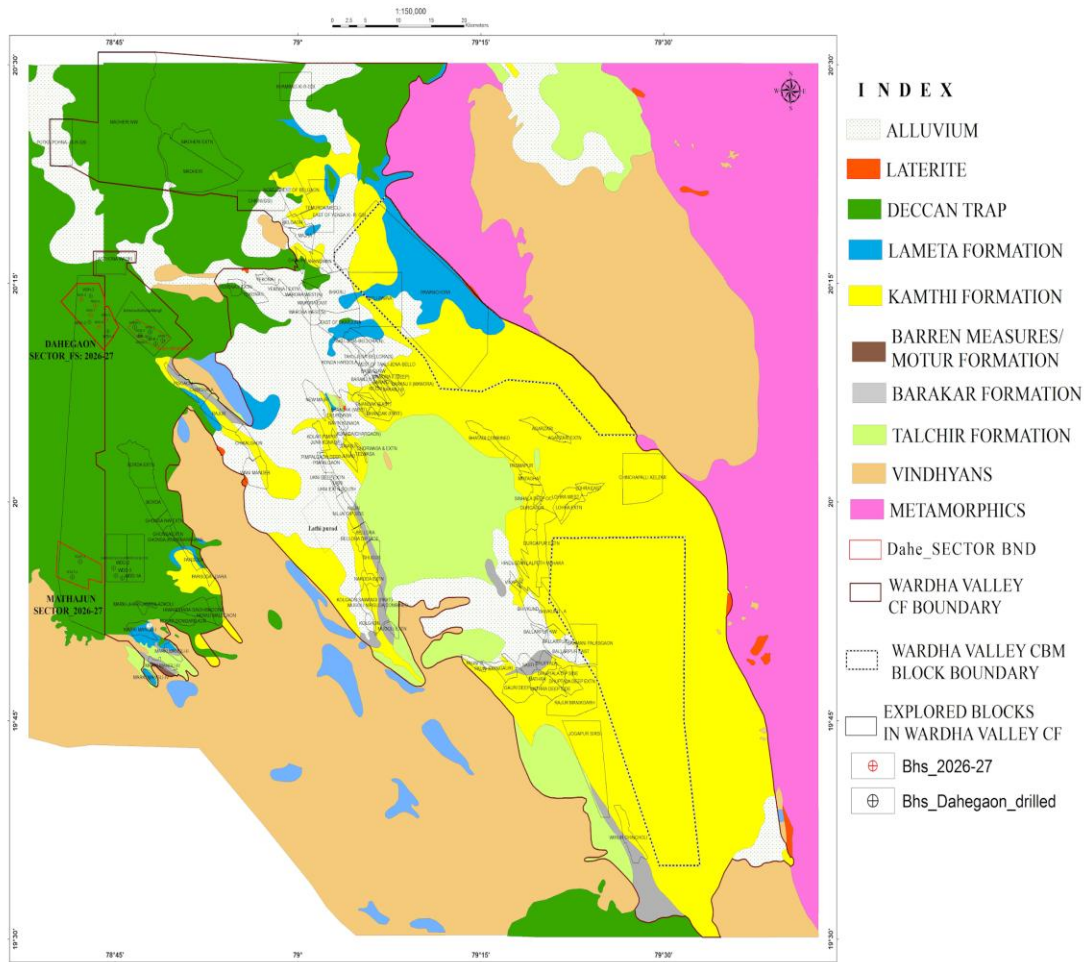
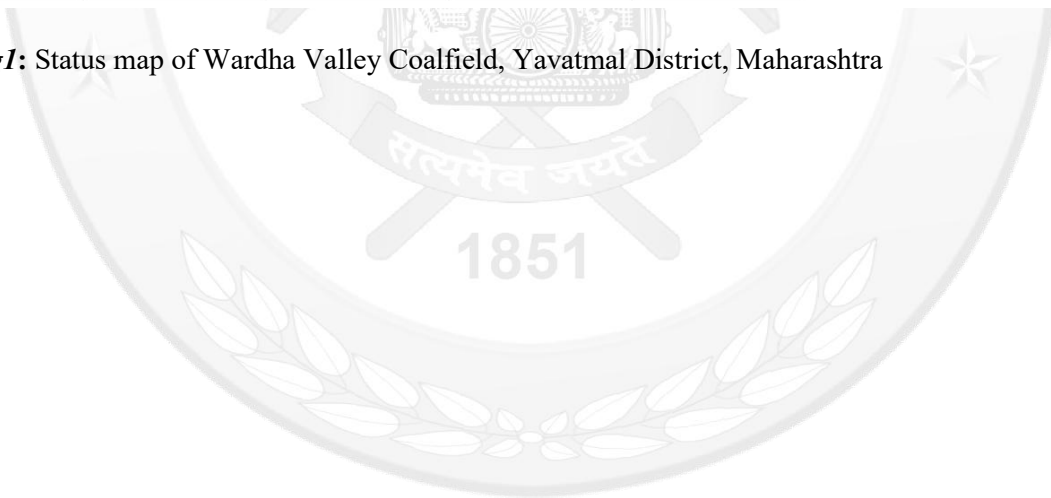


Fig1: Status map of Wardha Valley Coalfield, Yavatmal District, Maharashtra



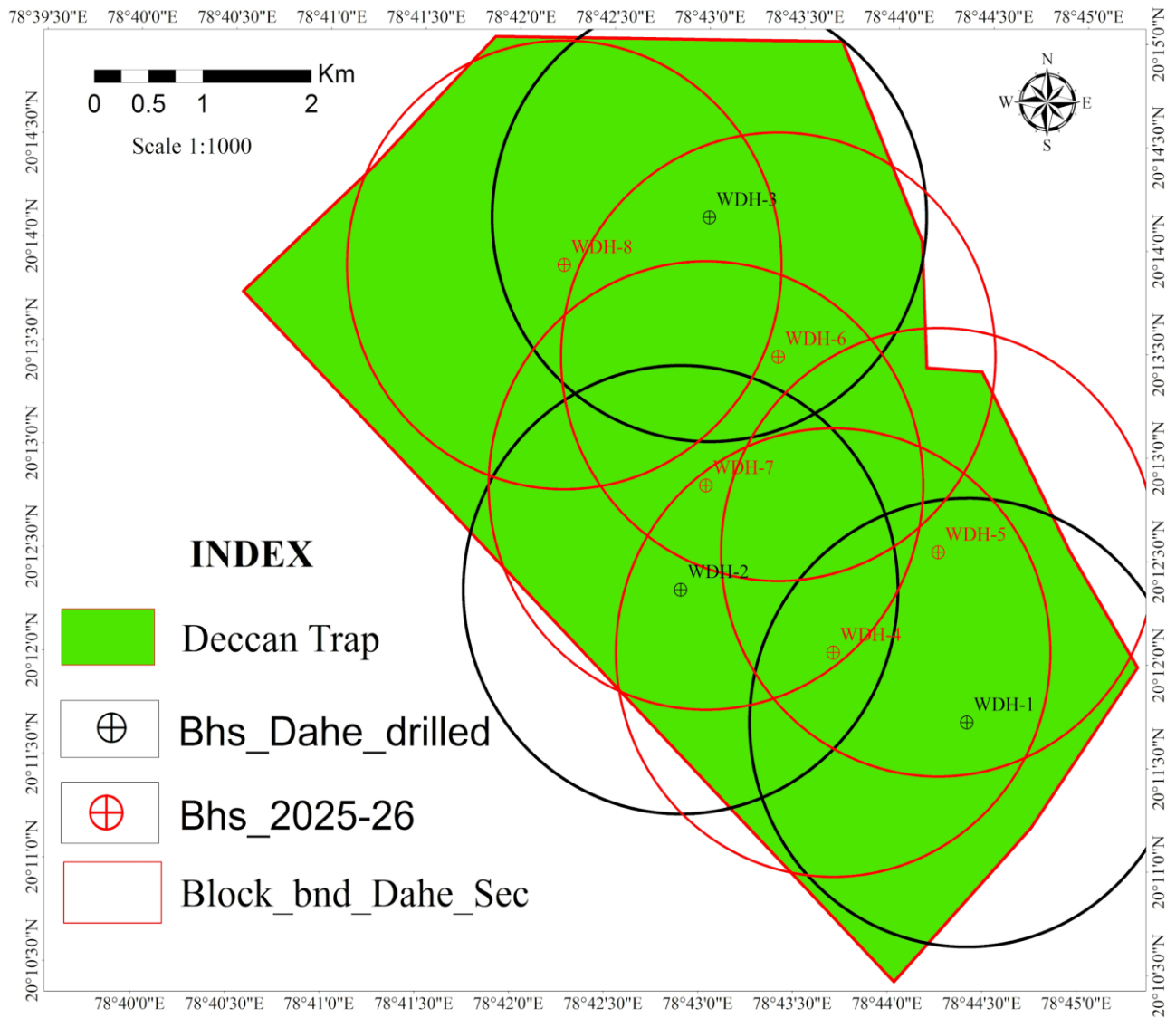
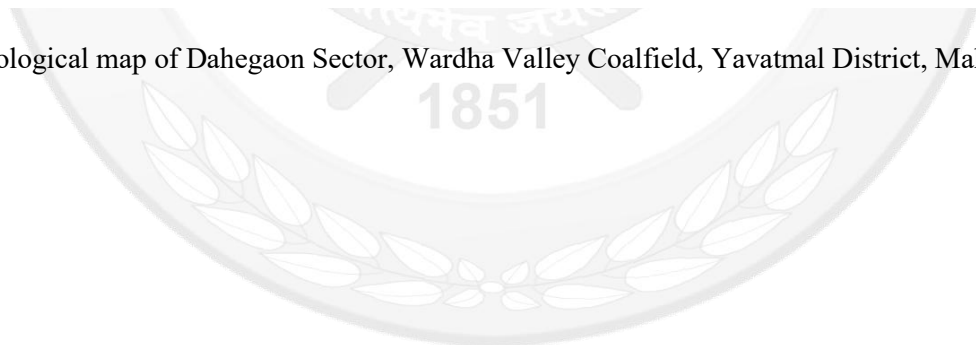


Fig.2. Geological map of Dahegaon Sector, Wardha Valley Coalfield, Yavatmal District, Maharashtra.





TS No. 55L/12 & 16

Fig.3. Borehole plan of proposed Dahegaon Sector, Wardha Valley Coalfield, Yavatmal District, Maharashtra.

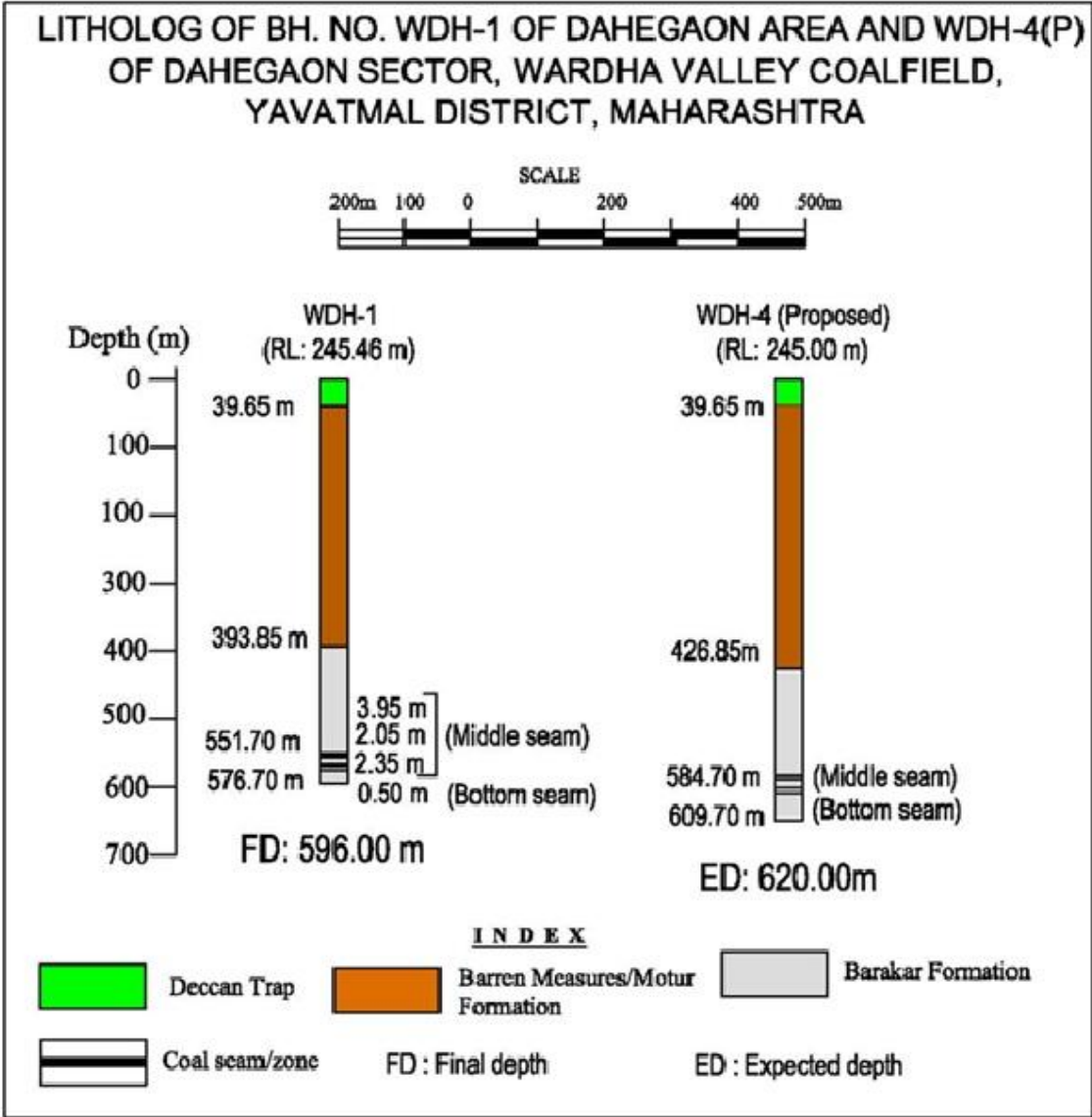


Fig. Graphic lithology of proposed borehole WDH-4, Dahegaon Sector, Wardha Valley Coalfield, Yavatmal District, Maharashtra.

