GOVERNMENT OF JHARKHAND

DISTRICT SURVEY REPORT (DSR) FOR

MINOR MINERALS (STONE)

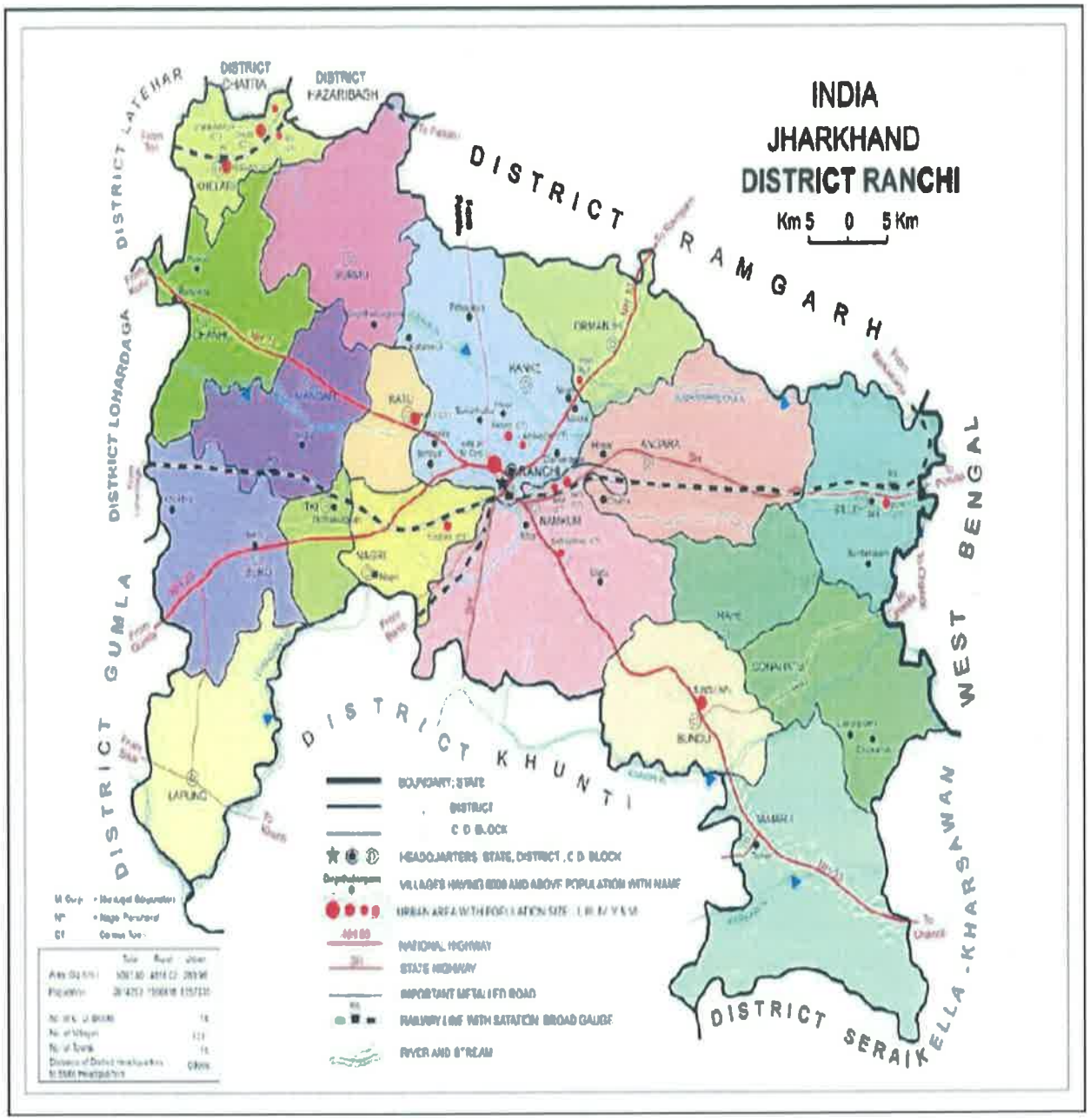
OTHER THAN SAND MINING OR RIVER BED MINING

FOR RANCHI DISTRICT

As per Notification No.- S.O.3611 (E), dated: 25th July, 2018, of
Ministry of Environment Forest and Climate change, Government of India, New Delhi

OCTOBER, 2024

Prepared by: Sub-Divisional Committee for District Survey Report, Ranchi



A BRIEF INTRODUCTION OF RANCHI DISTRICT

Jharkhand state came into existence after the division of Bihar state in the year 2000 on 15th November. Jharkhand state is recognized by the name Chhotanagpur during undivided Bihar state. The word Jharkhand can be divided in "Jhar" means forest and "Khand" means land i.e. "Jharkhand – a land of forest".

The capital of the state is Ranchi, and it is situated in the central part of the state. This is the largest plateau land of the state covering the area of more than 5000 sq.km. its limiting coordinates are 22^{0}52' to 23^{0}45' North latitude and 84^{0}45' to 85^{0}50' East longitude. It is bounded by Damodar basin in the North, Singhbhum plain in the south, Sudernarekha and Kharkari Rivers in the southeast. District of West Bengal lies on the eastern side.

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29/11/2024
Member Secretary
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CHAPTER – I INTRODUCTION

1.1 Regulatory Frame Work

EIA notification 1994 published by MoEF & CC mandated that all mining project of all major minerals having lease area more than 5Ha. will have to obtain environment clearance from designated regulatory authority. Mining projects for minor minerals were exempted from obtaining environment clearance.

EIA notification No. S.O. 1533 (E) dated 14/09/2006 mandates that all activities listed in the schedule attached with the notification are required to obtain environment clearance from competent regulators. Mining activities are listed at Sl. No. 1(a) in the schedule. This notification exempted mining activities having lease area less than 5 Ha. from obtaining environment clearance.

Hon'ble Supreme Court in its judgement at 27th February, 2012 in 1A No. 12-13 of 2011 in special leave petition (C) No. 10628-19629 of 2009 in the matter of Deepak Kumar VS State of Haryana & other made prior environment clearance mandatory for minor minerals irrespective of area of mining lease.

In order to comply with judgment of Hon'ble Supreme Court the MoEF & CC issued S.O. 141(E) dt. 15/01/2016. Further the MoEF & CC vide notification S.O. 3611 (E) dt. 25/07/2018 provided the details on structure of DSR for minor mineral.

1.2 Preparation of District Survey Report

PROCEDURE FOR PREPARATION OF DISTRICT SURVEY REPORT OF MINOR MINERALS OTHER THAN SAND MINING OR RIVER BED MINING

The District Survey Report shall be prepared for each minor mineral in the district separately and its draft shall be placed in the public domain by keeping its copy in Collectorate and posting it on district's website for twenty-one days. The comments received shall be considered and if found fit, shall be incorporated in the final Report to be finalised within six months by the SEIAA. The District Survey Report for minor minerals other than sand mining or River bed mining shall be as per structure mentioned below: -

FORMAT FOR PREPARATION OF DISTRICT SURVEY REPORT FOR MINOR MINERALS OTHER THAN SAND MINING OR RIVER BED MINING

(1) Introduction;

(2) Overview of Mining Activity in the District;

(3) General Profile of the District;

(4) Geology of the District;

(5) Drainage of Irrigation pattern;

(6) Land Utilisation Pattern in the District: Forest, Agricultural, Horticultural, Mining etc.

(7) Surface Water and Ground Water scenario of the district

(8) Rainfall of the district and climatic condition;

(9) Details of the mining leases in the District as per the following format

Sl. No.	Name of the Minera	Name of the Lessee	Address & Contact No. of Lessee	Mining lease Grant Order No. & date	Area of Mining lease (ha)	Period of Mining lease (Initial)		Period of Mining lease (1st/2nd...renewal)	
						From	To	From	To
1	2	3	4	5	6	7	8	9	10

Date of commencement of Mining Operation	Status (Working / Non-Working / Temp. Working for dispatch etc.)	Captive/ Non-Captive	Obtained Environmental Clearance (Yes/No), If Yes Letter No with date of grant of EC.	Location of the Mining lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
11	12	13	14	15	16

(10) Details of Royalty or Revenue received in last three years;

(11) Details of Production of Minor Mineral in last three years;

(12) Mineral Map of the District;

(13) List of Letter of Intent (LOI) Holders in the District along with its validity as per the following format:

Sl. No.	Name of the Mineral	Name of the Lessee	Address & Contact No. of Letter of Intent Holder	Letter of Intent Grant Order No. & date	Area of Mining lease to be allotted	Validity of LoI	Use (Captive / Non-Captive)	Location of the Mining lease (Latitude & Longitude)
1	2	3	4	5	6	7	8	9

(14) Total Mineral Reserve available in the District;

(15) Quality /Grade of Mineral available in the District;

(16) Use of Mineral;

(17) Demand and Supply of the Mineral in the last three years;

(18) Mining leases marked on the map of the district;

(19) details of the area of where there is a cluster of mining leases viz. number of mining leases, location (latitude and longitude);

(20) Details of Eco-Sensitive Area, if any, in the District;

(21) Impact on the Environment (Air, Water, Noise, Soil, Flora & Fauna, land use, agriculture, forest etc.) due to mining activity;

(22) Remedial Measures to mitigate the impact of mining on the Environment;

(23) Reclamation of Mined out area (best practice already implemented in the district, requirement as per rules and regulation, proposed reclamation plan);

(24) Risk Assessment & Disaster Management Plan;

(25) Details of the Occupational Health issues in the District. (Last five-year data of number of patients of Silicosis & Tuberculosis is also needs to be submitted);

(26) Plantation and Green Belt development in respect of leases already granted in the District;

(27) Any other information.

The State Environment Impact Assessment Authority (SEIAA) based on the nature and type of minor mineral in the District may include the additional parameters in the District Survey Report in consultation with the Department of Mines and Geology of the concerned State Government. The District Survey Report shall form the basis for application for environmental clearance, preparation of reports and appraisal of projects. The Report shall be updated once every five years";

Chapter – II Overview of Mining Activity in the District;

The district has leases of both major & minor minerals. Therefore, mining of both major minerals and minor minerals are evident in the district. The important minerals are Coal, Limestone, Quartz, Feldspar, Sand, Building Stone, Decorative Stone, Murom and Brick Clays. The mining of all these minerals are regulated as per different minerals concession rules of Jharkhand.

There are 37 working mines in the district for building stones.

Table 1 Overview of the Mining Activity in the District

Mineral	Operational	Lease Expired	Proposed
Stone	37	22	20
Earthwork	150		
Sand			19
Coal	4	7	
Quartz			
Limestone	1	2	
Quartz and Feldspar	2		

Chapter – III General Profile of the District;

General Profile of the district is given below in the Table 4;

Table 2 : General Profile of the District

District	Ranchi
Headquarter	Ranchi
No. of Sub Division	02
No. of Blocks	18
No. of Panchayats	305
No. of Villages	1,311
Area (Sq. Km.)	5,097
No. of Police Stations	48
Water Bodies	Subarnarekha River Jumar River Kanchi River Damodar River South Koel River Kharkhai River Bhur River Saphi River Lohagara River Mur River Sapahi River Kanke Reservoir Hatia Reservoir Getalsud Reservoir
Toposheet	F45A14, F45A15, F4516, F45B2, F45B3, F45B4, F45B6, F45B7, F45B8, F45B10, F45B11, F45B12, F45B15, F45B16, F45H9 & F45H13
Co-ordinate	Longitude: 22°52'N to 23°43'N Latitude: 84°51'E to 85°51'E
Total Population	29,14,253
Male Population	14,94,937
Female Population	14,19,316
Percentage urban Population	14.51%

Percentage Rural Population	85.49%
Sex Ratio	949
Child Sex Ratio (0-6)	980
Percentage Literacy **Male-** **Female-**	 72.59% 58.21%
ST Population	10,42,016
SC Population	1,52,943
Total Workers	11,42,867
Total Male Worker	7,43,967
Total Female Worker	3,98,900
Total Main Workers	7,56,176
Total Male Main Workers	5,53,949
Total Female Main Workers	2,02,227
Total Marginal Worker	3,86,691
Total Male Marginal Worker	1,90,018
Total Female Marginal Worker	1,96,673
Total Non-Worker	17,71,386
Total Male Non-Worker	7,50,970
Total Female Non-Worker	10,20,416

(Source: Census, 2011)

Chapter – IV Geology of the District

4.1 Regional Geological set up Dunn (1929) described the geology of north Singhbhum and parts of Ranchi district. The granitic rocks of this area have been designated by him as the Chhotanagpur granite gneiss. According to Dunn, the granites show intrusive relationship with the country rock e.g., schists and epidiorite. The contact of granite with the schist and gneiss is often straight due to extreme regularity of folding of the adjoining schistose rock into which this granitic rock has been emplaced. Chotanagpur Granite Gneissic Complex (CGGC)/ Chotanagpur Granite Complex (CGC) is an ENE–WSW trending high-grade terrain in the eastern part of Central Indian Tectonic Zone (CITZ) and covers an area of about 80,000 km2 . The high-grade gneissic terrain of Chhotanagpur highland, consisting dominantly of amphibolite to granulite facies rocks, is juxtaposed between two low-grade mobile belts: the North Singhbhum Mobile Belt (NSMB) consisting of a Mesoproterozoic volcano-metasedimentary sequence in the south (Saha, 1994) and the Mahakoshal Mobile Belt (MMB) with low-grade Proterozoic metasediments, granitoids and mafic-ultramafic rocks partly covered by Ganga alluvium in the north (Roy and Devrajan, 2000). The MMB, a manifestation of the SonNarmada (SONA) mega lineament, forms the northern edge of the Central Indian Tectonic Zone (CITZ). The extension of the MMB along the northern boundary of the CGGC, however, has not been investigated in detail although one study suggests that the SONA megalineament extends below the Ganga alluvium and the Bengal Basin to join with the Brahmaputra lineament in northeastern India (Sen, 1991). The E-W Gondwana basins along the Damodar Graben, a branch of SONA, roughly divide the CGC into two sub-equal sectors. The graben is demarcated by a steep, faulted southern margin (Mukhopadhyay, 1986). On the basis of some distinctive features Mahadevan (2002) subdivided CGGC from south to North into a number of more or less east-west trending belts, viz.

(i) South Palamau – Gumla – Ranchi – Purulia Belt;

(ii) Daltonganj (N.Palamau) – Hazaribagh belt;

(iii) North Garhwa – Chatra – Giridih – Deoghar – Dumka belt;

(iv) The Bihar Mica belt and

(v) Rajgir – Kharagpur belt.

The study area (toposheet 73E/3) shown as red box in Fig. 3.1 falls within the South Palamau – Gumla – Ranchi – Purulia Belt within the CGGC. The area represents a highly metamorphosed and deformed Archaean (?) terrain consisting of a group of para-metamorphic rocks intruded by syntectonic basic rock, which was subsequently metamorphosed to same grade as the country rock. Late and post tectonic 14 pegmatite and quartz veins are intrusive into gneisses. The para-metamorphics include micaschist, calc-granulite, amphibolite and quartzite. Syntectonic basic rocks are represented by metadolerite, metanorite, metagabbro and younger amphibolite. The pretectonic igneous activity which is characterized by small bodies of maficultramafic intrusives exposed as hornblende schist and tremolite- actinolite schist

Table 3.1 Stratigraphic succession of the study area (Toposheet. no. 73E/03) (Reference: Based on compiled Geological Map after GSI)

Lithology Formation Group Laterite Cenozoic Dolerite Intrusive Cretaceous to Paleogene Pegmatite vein 1.1.1 Granite Gneiss Chotanagpur Gneissic Complex Neo-Proterozoic Archaen (?) to Proterozoi

Calc-silicate rock Unclassified Metamorphics Archean to Paleo Proterozoic Phyllite/shale/slate Hornblende schist/Amphibolit

4.2 Structure

The Chhotanagpur Gneissic Complex (CGGC) has undergone polyphase deformations, magmatism and metamorphism (Sen, 1947; Chatterjee, 1936; Roy, 1977; Sen and Manna, 1976; Kumar et al., 1984; Mazumder, 1996). The area under investigation comprised of a vast tract of agricultural land with very few exposures. Parallel laminations as primary structure is observed in calc silicate rocks in southern part of toposheet towards south of Nagri village (Fig. 3.2).In general two sets of foliation are one trending NE-SW and the other trending NW-SE with dip varying from 30° to 55°and 30° to 50°.In the northern part of the area augen structure in the granitic rock has been observed near Murumgara village.(Fig:3.3)

4.3 Metamorphism

The rocks of CGGC are complexly deformed and metamorphosed showing varying degrees of metamorphism ranging from greenschist (mostly in SE part of CGGC) to granulite facies (central and eastern parts of CGGC) and exhibiting mainly amphibolite facies (Bhattacharya, 1976; Banerji, 1991; Mahadevan, 2002 and Sharma 2009). In the present area, no significant mineral assemblages could be observed in hand specimen and going by the regional study in the area, the rocks may have undergone greenschist facies of metamorphism.

4.4 Mineral Potentiality

Major mineralization of economic importance has not been reported from the study area. Local quarries are found in southern part of the area where calc silicate rocks are exposed in the ridges. The rocks from these quarries are mainly used for the purpose of building material.

The area is represented by four prominent lithologies viz Chhotanagpur Granite Gneiss Complex, Unclassified Metamorphics occur as enclaves and discrete outcrops within CGGC, younger dolerite dykes are also present and laterite bodies occur in the central part of the area.

4.2.1 Unclassified metamorphics

The Unclassified Metamorphics are the oldest rock types present in this area. It is a complex of meta-igneous/meta-volcanic rocks with associated metasedimentary rocks. In Figure 4.1 this group is represented by intercalated sequence of Phyllite, slate, shale, cal-silicate, mica schist and and thin band of hornblende /amphibolite and occur as enclaves within CGC and mapped mainly in the southern part of the study area. During course of sampling, rocks of Unclassified Metamorphics have been observed in the form

of phylliteshale intercalated sequence and calcsilicate rock. In calc silicate rock colour banding of few mm to about 1cm is preserved (Fig 3.2) and elephant skin weathering is also observed in the calc-silicate rock. Elephant skin weathering is observed in the exposure. (Fig:4.2.1)

4.2.2. Granite Gneiss of Chotanagpur Gneissic complex:

The granite gneiss occupying the major portion of the area are medium grained gneissose rocks with equigranular texture. In the northern part of toposheet, near village Murumgara, augen gneisses (Fig 3.3) are observed. In hand specimens they are pink, grey and pinkish grey in colour according to the colour of the potash feldspar and abundance of the mafic minerals. Garnet is a rare constituent. 4.2.3 Intrusives: Pegmatite and Quartz veins: Pegmatite veins intrusive into the Archaean rocks have a variable strike. In the northern part of the area the trend is N-S with 65° towards E while in the southern portion it is trends roughly EW However, in places they occur parallel to the joints.

Granite Gneiss:

Granite gneiss is the major rock type of the area, exposed as small mounds, linear ridges, and as small scattered outcrops within the low lying plain areas observed near Chamguru, Cheri, Manatu, Kmare, Chatakpur, Dhilwakhuta, Barwatoli, Dimbabur and near Horhap.The gneisses show gradational contact with the mica schist. Amphibolite shows sharp contact with the granite gneiss and occurs as small enclaves in it. The strike of foliation of the gneisses in general, varies from E-W to NW-SE and NE-SW with moderate (20°-50°) dip towards north. The rocks show great heterogeneity in structure, texture and mineral composition. Most of the rock types are foliated or gneissose whereas at few places, rocks with weakly developed gneissosity are also present. The texture varies from fine to medium grained hypidiomorphic to coarse grained porphyroblastic (at places having porphyritic appearance) with large phenocrysts of feldspars.

Mica Schist: The mica schist occur as bands within the granite gneisses trending roughly East-West. It is exposed along the railway track near Tatitsilwai and Chatra village. Schist having flat, sheet like mineral grains in preferred orientation. The schist here is composed of quartz, feldspar and muscovite giving shiny appearance. the schists and the gneisses are generally gradational. The schists, near the Horhap reserved forest are biotite rich and highly feldspathic. They grade into gneisses both the strike of the bands

Amphibolite: Amphibolite migmatite. They have been noted in stone quarry near Tungritoli, in granites near Horhap. The texture is fine to medium grained, dark grey in colour, granular and composed of amphibole, biotite, plagioclase, quartz etc. It is both massive and foliated in nature.

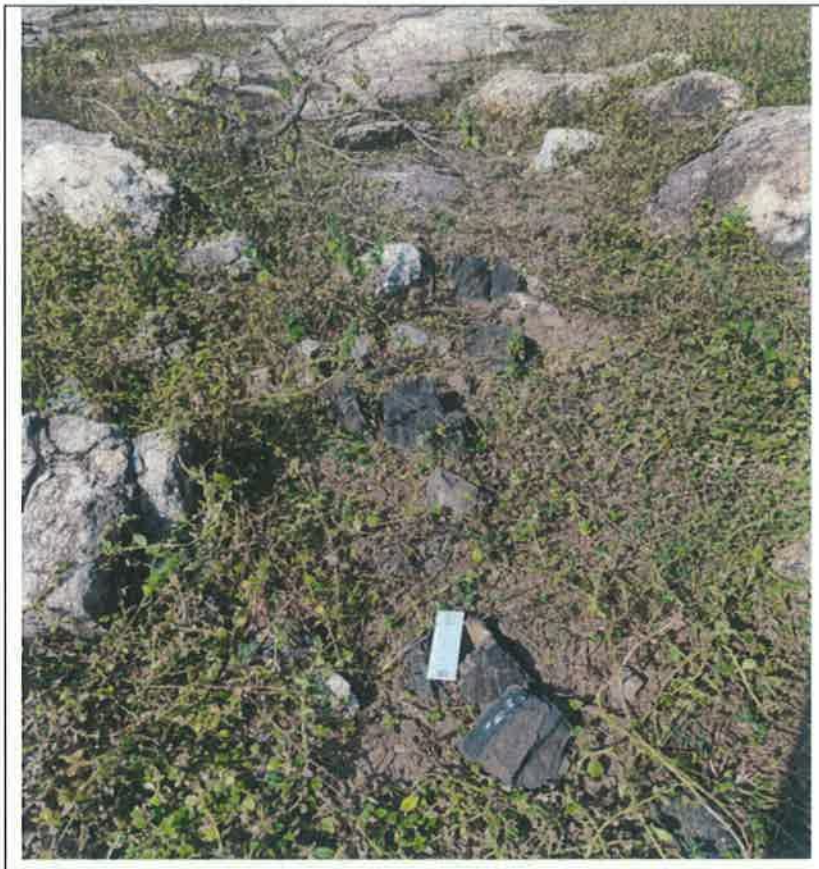


Fig. : Outcrop of Amphibolite near Horhap (23°19′41.67"N, 85°28′45"E)

Quartzite/Quartz schist: contact with granite in the southern part of the study area near Tiskilitoli, Karrutoli, Bartoli, and Gutuatoli villages. The mineral composition is mainly quartz with minor amount of muscovite and a little feldspar. Garnet is also noted in the quartzite. The quartzite is hard and compact at few places and is highly weathered and has developed schistosity at some places. Schistosity is marked by thin alternate micaceous and quartzo small weathered exposures. Two sets of foliation are prominent, one parallel to the regional trend is ENE-WSW and the other is NNW 12 Amphibolite generally occurs as enclave within the granite, gneiss and migmatite. They have been noted in stone quarry near Tungritoli, in granites near Horhap. The texture is fine to medium grained, dark grey in colour, granular and composed of lagioclase, quartz etc. It is both massive and foliated in nature. Fig3.3: Outcrop of Amphibolite near Horhap Quartzite/Quartz schist: The quartzite occurs as an E-W trending lenticular body in contact with granite in the southern part of the study area near Tiskilitoli, Karrutoli, Bartoli, and Gutuatoli villages. The mineral composition is mainly quartz with minor amount of a little feldspar. Garnet is also noted in the quartzite. The quartzite is hard and compact at few places and is highly weathered and has developed schistosity at some places. Schistosity is marked by thin alternate micaceous and quartzo-feldspathic layers.

It occurs as small weathered exposures. Two sets of foliation are prominent, one parallel to the regional WSW and the other is NNW-SS

Fig 3.4 Outcrop of Quartzite near Ubariya

3.4 Structures: The structures observed in the study area is as

3.4.1. Bedding: Bedding was observed in Granite Gneiss. The trend W and dip amount is 5° (Fig 3.5).

Fig 3.5. Banding observed in Granite Gneiss near Gagi (23°27'43.952"N, 85°17'15.47"E)

Dolerite: Dykes of dolerite are observed to be intrusive into the rocks of the Archaean formationand is observed in the southern part of the area towards south of Nagri village.

Laterite Laterite exposures are scattered in the south-central part of the area near Paryago, Bero and eastern part of Nagri village. Fig:4.2.2

Fig 4.2.1:Calc silicate rock exposed in the southern part of the area.

Fig:4.2.2 Laterite exposed in the in the eastern part of Nagri village.

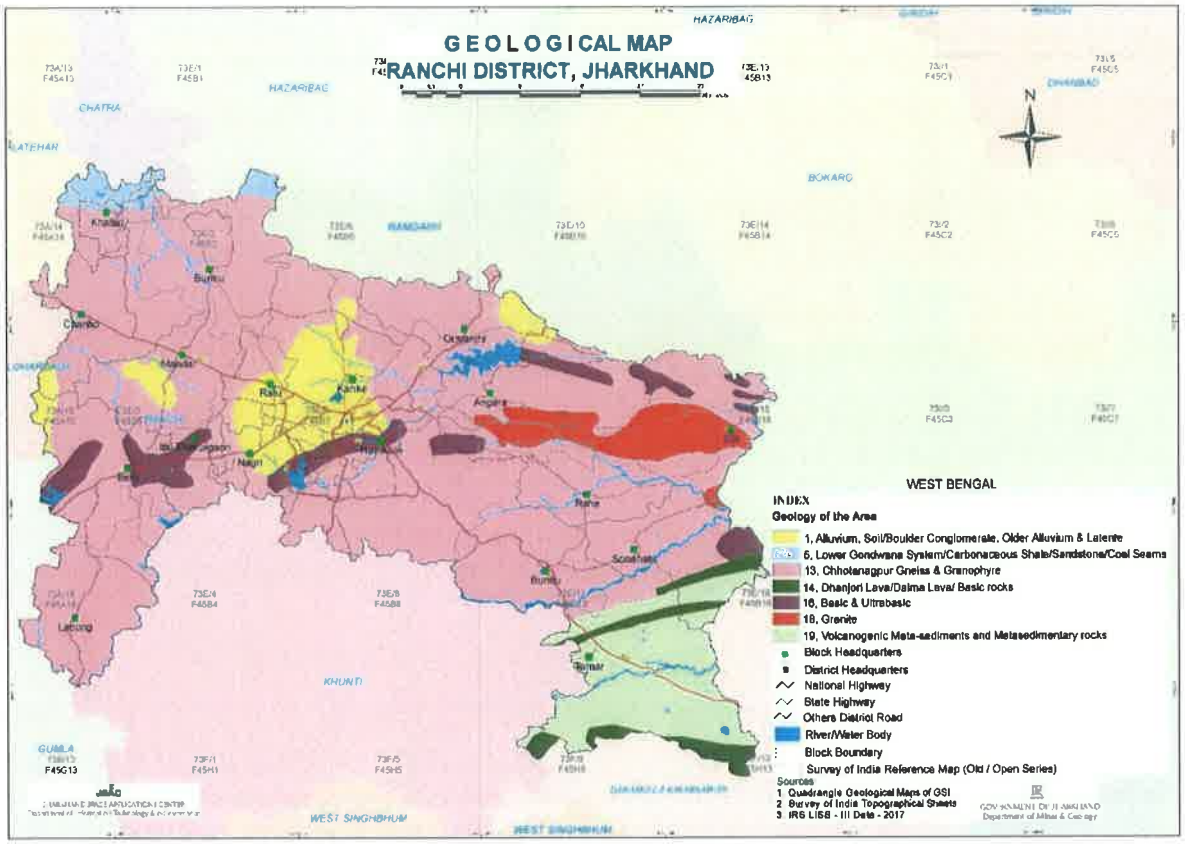


Figure 1 Geological Map of the District *(Source- Mines & Geology Website)*

Chapter – V Drainage of Irrigation pattern;

The district is highly dissected by rivers of varying magnitude. The major water divide in the district runs north to south direction through the Ratu and Lodhma. The area in the eastern part of the water divide is drained by Subarnrekha and the western part of the divide is drained by South Koel and Karo. The important river basins are the Subarnrekha, the South Koel, the Damodar and the Karkari. The Kanchi and Raru are the tributaries of river Subarnrekha. The South Koel originates from Piska near Ranchi. The Karkari River drains the south eastern part of the district.

Figure 2 Drainage Map of Ranchi District

(Source: Ground Water Information Booklet (September 2013) Publiched by CGWA)

Chapter – VI Land Utilisation Pattern in the District: Forest, Agricultural, Horticultural, Mining etc.

Year Wise Land Utilisation Statistics in the district of Ranchi is given below in Table 8;

Table 3 Classification of Land Utilisation Statistics in the District

(Thousand hectares)

Year	Reporting Area	Forest Area	Area under Non-agricultural use	Barren & unculturable land	Permanent pastures & other grazing land	Land under misc. tree groves not included in Net area	Culturable waste land	Fallow land other than Current fallow	Current fallow	Net area sown
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2018-19	486423	91293	32655	25377	1268	3035	26368	57043	86462	162922
2019-20	486423	91293	32281	25376	1285	2973	23918	36978	80666	191653
2020-21	486423	91293	32366	24959	1221	2895	22888	39895	94219	176687

Source: DSO, Ranchi

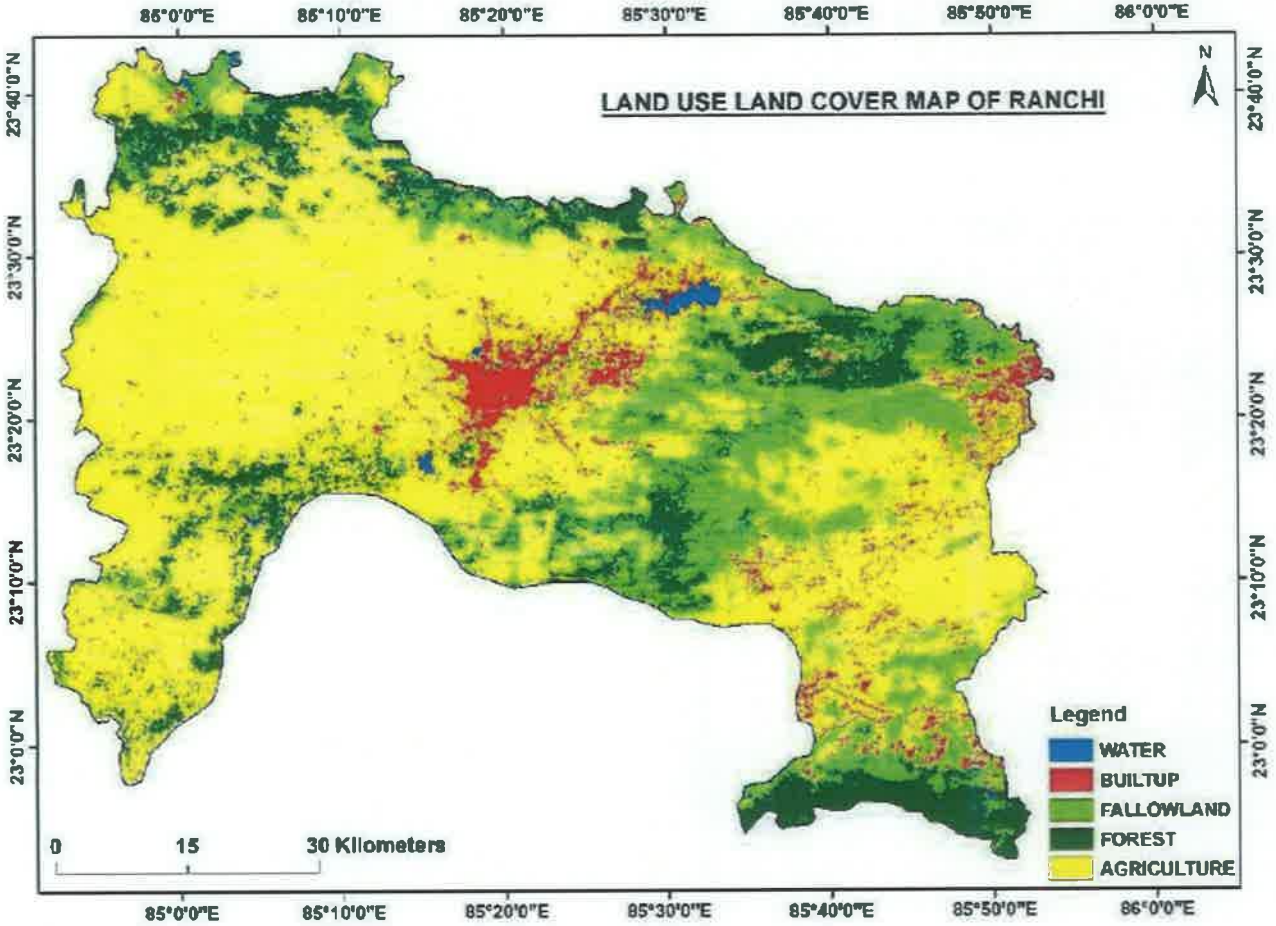


Figure 3 Land Use Map (Source : JSAC)

Chapter – VII Surface Water and Ground Water scenario of the district

7.1 Surface Water

S. No.	Name of the River or Stream	Total Length in the District	Place of origin	Altitude at Origin
1.	Subarnarekha River	46	Piska	720
2.	Jumar River	24	Thakur Gaon	660
3.	Kanchi River	90	Bandhea	756
4.	Damodar River	20	Chulha Pani	931
5.	Lohagara River	28	Khartango	705

Water Reservior

Name	Purpose	River	District	Basin	Length (m)	Max Height above Foundation (m)
Getalsud Dam	Hydroelectric, Irrigation, Drinking / Water Supply	Subarnarekha	Ranchi	Subarnarekha	3800	**36.1**
Hatia Dam	Irrigation	Subarnarekha	Ranchi	Subarnarekha	4525	**24**

Source: Water Resources Information System (WRIS)

7.2 Ground Water

The ground water assessment has been done based on the recommendation of the GEC-1997.The ground water assessment has been carried on block wise basis during 2009 and the assessment varies between Burmu (3832ha-m) and Burmu (1661ha-m). Kanke block is in over-exploited category while Ratu block is in Semi-critical category while other blocks are in safe category. The net annual replenishable ground water resources of the district is 35072 ha-m. The gross ground water draft for all uses is 13954 ha-m and allocation for domestic and Industrial requirement up to year 2034 is 5080 ha-m. The present stage of ground water development of the district as on 31st march 2009 is 40% At present maximum ground water development is in Kanke block (112.4%) and minimum ground water development is in Angara block (9%).

7.3 Hydrogeological Profile of the zones

The district is having varied hydrogeological characteristics due to which ground water potential differs from one region to another. It is underlain by Chotanagpur granite gneiss of pre-Cambrian age in three-fourth of the district. In Ratu and Bero blocks thick lateritic capping is placed above granite gneiss. A big patch of older

alluvium is found in Mandar block extending from Brombay and murma areas. Khelari (northernmost portion) area consists of Limestone rocks.

Aquifer systems

Two types of aquifers are found. Weathered aquifer and fractured aquifers. Thickness of weathered aquifers varies from 10-25 m in granite terrain and 30-60m in lateritic terrain. In weathered aquifer ground water occurs in unconfined condition while in fractured aquifer ground water occurs in semi confined to confined condition.

Aquifer geometry

The aquifer geometry for shallow and deeper aquifer has been established through hydro geological studies, exploration and the surface and sub-surface geophysical studies in the district.

Shallow aquifer

The shallow aquifers are being tapped through dug wells, dug -cum borewells and hand pumps. The thickness of weathered mantle varies from 5 to 20 m.bgl. In lateritic terrain many dug wells dry up during summer months. Hand pumps generally tap first fracture zones and its depth is 30-40 m.bgl.

Deeper aquifer

In granite gneiss terrain area first fracture occurs between 50-70 m and second fracture is found between 100-120 m depth. Discharge of borewells varies between 10 to 30 m3/hr in these areas. Drawdown varies between 13 to 20 m. In lateritic terrain of Nagri first fracture zone is found between 60 to 75 m.bgl and second fracture zone is between 90 to100 m.bgl. Third set of fracture can be found between 150-200m.bgl depth. Discharge may vary between 15 to 25 m3/hr. Drawdown may vary between 20-25 m.

Table 4 Ground Water Level (Secondary Data)

District	Block	Location	Depth to Water Level (m bgl)			
			2021			2022
			May	August	November	January
Ranchi	Angara	Angara1	6.1	3.6	4.2	5.06
Ranchi	Namkom	Hinoo		11.1	9.05	5.76
Ranchi	Ratu	Bajra	3.1	3.75	2.9	4.1
Ranchi	Nagri	Bandhea	11.2	6.1	6.63	7.14
Ranchi	Angara	Barwadag	2.1	3.55	2.9	2.67
Ranchi	Bero	Berro		3.5	Dry	Dry
Ranchi	Chanho	Bijupara Tangar	2.7	3.89	2.3	3.05
Ranchi	Mandar	Bishakhatanga	1.9	3.25	2.32	5.17
Ranchi	Kanke	Bit More	2.6	2.6	2.25	3.48
Ranchi	Kanke	Boreya Phed				Closed
Ranchi	Ratu	Brambey	6.85	10.5	4.31	5.67

Ranchi	Kanke	Bukru		5.38	Filled up	Filled
Ranchi	Bundu	Bundu	4.9	1.82	2.97	4.6
Ranchi	Kanke	Bunti	1.6	1.21	1.26	1.66
Ranchi	Burmoo	Burmoo	7.8	5.05	4.95	
Ranchi	Itki	Chachgura	8.4	3.05	3.65	5.6
Ranchi	Ormanjhi	Chutupalu	1.7	2.5	1.16	3.6
Ranchi	Angarha	Gondlipokhar	1.8	1.6	2.05	3.2
Ranchi	Kanke	Harmu	9.1	7.1	4.81	6.36
Ranchi	Kanke	Harmu Hhc	18.4	8.15	8	12.04
Ranchi	Namkum	Hatia	4.1	4.51	3.45	4.03
Ranchi	Ratu	Hurhuri	3.1	1.5	1.81	4.16
Ranchi	Itki	Itki	4.8	2.4	3.7	5.1
Ranchi	namkom	Jamchuan Kgbav		9.1	7.2	7.23
Ranchi	Angara	Jonha	3.1	3.55	3.28	3.53
Ranchi	Kanke	Kanke1	1.3		0.88	0.88
Ranchi	Ratu	Khatitanr	2.1	2	2.5	2.65
Ranchi	Namkom	Kharsidag				4.8
Ranchi	Silli	Kita	2.1	2.5	2.1	2.62
Ranchi	Itki	Kurgi		12.25		
Ranchi	Namkom	Lalganj		2.45		4.5
Ranchi	Namkom	Lowadih	6.5	4.21	3.8	5.1
Ranchi	Namkom	Mahilong Forest Nur		7.2		6
Ranchi	Mandar	Mandar	2.8	2	2.45	3.5
Ranchi	Namkom	Military Farm Namkom		13.54		5.63
Ranchi	Namkom	Hatia		13.8		4.03
Ranchi	Ormanjhi	Ormanji	4.1	2.1	3.95	4.08
Ranchi	Silli	Patrahatu	1.3	1	0.87	0.8
Ranchi	Kanke	Pithoria	2.6	1.85	2.15	3.2
Ranchi	Namkom	Rampur	1.5	2	5.35	5.6
Ranchi	Kanke	Ranchi		2.45		2.82
Ranchi	Kanke	Ranchi College		6.1		
Ranchi	Tamar	Rangamati	2.8	3.2	4.55	5.21
Ranchi	Silli	Silli	3.4	3.31	4.35	5.28
Ranchi	Namkom	Siramtoli	3.1	3.45	4.05	4.38
Ranchi	Namkom	Sithipokhartoli		5		2.45
Ranchi	Sonahatu	Sonahatu	1.3	1.1	1.13	
Ranchi	Chanho	Sonsbazar	3.1	2.1	3.3	4.25
Ranchi	Kanke	Sukurhutu				
Ranchi	Bundu	Taimara	3.6	3.25	5.06	6.59
Ranchi	Tamar	Tamar	5.8	2.1	3.15	5.99
Ranchi	Ormanjhi	Ukrid	3.2	2.68	2.77	2.92
Ranchi	Kanke	Daily Market	3.7	10.65	5.15	6.05
Ranchi	Namkom	Chutiya (Sani	1.6	0.9	1.09	0.8

		Mandir)				
Ranchi	Namkom	Tati Silway(E.F.)	3.8	4.6	4.02	4.85
Ranchi	Ormanjhi	Tungri Tola		7.5		4.35
Ranchi	Ormanjhi	Hombai B.I.T. Mesra		5.1		5.28
Ranchi	Kanke	Hillview		3.1	Abandoned	
Ranchi	Kanke	Ramkrishna mission Morabadi	2.1	2.39	3.05	6.05
Ranchi	ormanjhi	Hochar		4		4.05
Ranchi	Kanke	Kanke Chowk		1.5		3.1
Ranchi	Kanke	Sukurhutu	1.6	2.93	2.55	3.17
Ranchi	Namkom	Ladnapiri	3.6	3.55	3.05	4.35
Ranchi	namkom	Pindarcom	4.1	4.35	4.35	5.6
Ranchi	Namkom	Kharsidag	5.1	4	4.25	4.8
Ranchi	Namkom	Mani Tola (Doranda)	1.8	2.33	1.09	1.75
Ranchi	Namkom	Hanuman Mandir (Near AG.Office)	5.5	6.1	5.04	5.98
Ranchi	Namkom	Bridge Ford School	2.1	5.1	3.1	4.2

Source : GROUND WATER YEAR BOOK, JHARKHAND Published By CGWA

PRESENT SCENARIO

In the district, ground water table in series of open wells lying in the identified potential mining zones were measured in wells on 14/08/2024. Table below gives details of such wells, their location, ground RL, Depth of ground water table & RL of GWT.

Table 5 Ground Water Level (Primary Data)

SL.NO	LATITUDE	LONGITUDE	GROUND RL (m)	Depth of Ground Water Table (m)
1	23°15'32.64"N	85°17'24.53"E	657	3.3
2	23°24'35.66"N	85°40'10.16"E	569	1.5
3	23°26'15.03"N	85°39'19.58"E	473	4.2
4	23°26'16.53"N	85°36'28.91"E	532	3.5
5	23°29'20.01"N	85°06'51.77"E	683	1.0
6	23°30'52.28"N	85°09'19.98"E	670	1.2

7	23°25'30.98"N	85°15'54.93"E	672	3.5
8	23°25'31.10"N	85°15'54.30"E	672	3.8

Depth of ground water table at different location have been recorded based on following data:

I. Data published by CGWB has some observation wells spread over the district. They have published data on depth of GWT corresponding to these observation wells. These data have been recorded in DSR.

II. At several locations depth of GWT have been measured in open dug wells in different zones.

These data have also been recorded in the DSR.

Primary data & secondary data provided in the DSR are site specific.

Actual depth of GWT at certain location may vary from observed data due to geological formation at this location. In such cases, GWT may be measured where need is felt.

Deep Aquifer Details

Through Outsource Drilling (WAPCOS)

Sl.No.	Location	Block	Co-ordinate	Depth Drilled	Casing Depth/ Dia.	Fractures encountered	Static Water level	Discharge (Comp)	Discharge (Pumping Test)	Draw down	Specific Capacity	T	S	Formation	Year
				m	m/mm	m	m bgl.	m^3/hr	m^3/hr	m	m^3/hr./m.	m^2/day			
1	Banuwadih	Silli	85°49'22.7" 23°26'24.4"	135	41.7	101.59 – 103 108 - 109.63 110.33 - 112.87	4.63	6.48	3.6	1.08		33.72		Granite Gneiss	2020-21
2	Sonahatu	Sonahatu	85°42'28.7" 23°11'01.6"	204	36.08	58.0-59.0	7.4	1.584				0.789		Granite Gneiss	2020-21
3	Tarai	Tamar	85°49'50.2" 22°58'25.6"	204	15	15.79-18.39 19.67-20.93	5.83	0.756				0.135		Granite Gneiss	2020-21
4	Roladih	Tamar	85°44'41.9" 23°01'07.2"	204	23.64	24.2-24.7	0.3	9	3.24	-		23.85		Granite Gneiss	2020-21
5	Dolaicha	Lapung	84°58'11.9" 23°11'08.2"	201	7.8	nil	4.4	Nil				0.55		Granite Gneiss	2020-21
6	Koinara	Lapung	84°55'28.2" 23°09'16.8"	170	8	92.5,100	12.10	27	21.6	12.86		47.52	$3.3x10^{-4}$	Granite Gneiss	2020-21
	OW		84°55'28.2" 23°09'16.8"	98	7.05	95	12.04	36		1				Granite Gneiss	2020-21
7	Churi Madhya	Khelari	85°01'32.6" 23°39'43.0"	159	22.5	38.1-38.6	15.88	42.84	3.24	1.75		32.44		Gondwana	2020-21
8	Patrahatu	Silli	85°45'43" 23°17'28.7"	121	30.2	108.9-109.47	11.0	42.84	3.6	2.16		15.82		Granite Gneiss	2020-21

Source : AQUIFER MAPPING AND MANAGEMENT OF GROUND WATER RESOURCES published by CGWA

Chapter – VIII Rainfall of the district and climatic condition;

Table 6 Month Wise Rainfall Data

District - Ranchi **Unit - mm**

District/Month	Jan.	Feb.	March	Aprill	May	June	July	Agu.	Sept.	Oct.	Nov.	Dec.	Total
2001	3.3	7.5	36.8	17.7	23.4	384.3	359.1	168.7	89.1	110.2	0.0	0.0	**1200.10**
2002	18.5	5.5	15.0	7.2	22.7	235.3	166.4	279.4	261.5	71.9	2.0	1.8	**1087.20**
2003	0.7	35.9	27.8	8.2	13.8	127.1	266.3	230.0	203.0	315.9	8.1	4.5	**1241.30**
2004	5.0	4.2	3.2	52.8	37.0	151.4	181.8	333.4	163.6	114.9	0.0	3.9	**1051.20**
2005	20.9	17.1	11.3	2.2	15.2	122.3	235.4	230.4	165.0	46.9	5.3	6.9	**878.90**
2006	0.0	0.0	25.7	16.3	141.3	188.9	455.6	381.0	218.2	35.3	5.8	0.0	**1468.10**
2007	0.0	66.4	34.4	22.6	48.0	127.6	379.0	303.7	340.7	43.5	12.0	0.0	**1377.90**
2008	7.9	4.0	11.7	9.6	32.6	374.6	479.8	258.9	177.1	18.6	0.0	0.0	**1374.80**
2009	1.2	0.0	4.2	0.4	113.7	80.2	297.8	257.9	288.5	79.1	4.3	0.9	**1128.20**
2010	0.6	8.0	0.0	9.8	19.4	105.5	186.6	160.9	220.2	63.0	8.2	24.2	**806.40**
2011	13.1	1.6	2.7	13.1	52.3	395.4	192.7	493.0	364.5	49.5	0.0	0.0	**1577.90**
2012	46.6	17.5	9.4	12.6	3.1	80.8	306.7	317.1	271.4	34.2	54.3	9.5	**1163.20**
2013	0.0	11.7	4.7	14.9	61.1	162.3	220.0	225.0	94.2	312.7	0.0	0.0	**1106.60**
2014	10.0	38.0	35.1	1.0	113.7	153.7	306.7	257.9	288.5	63.0	0.0	0.0	**1267.60**
2015	15.1	3.3	9.5	86.7	24.7	155.6	370.8	226.8	57.4	39.8	0.9	0.0	**990.54**
2016	4.4	6.5	14.1	0.4	54.7	105.6	299.9	368.0	239.2	0.0	0.0	0.0	**1092.80**
2017	0.0	0.0	0.3	76.5	29.2	132.1	648.2	270.0	77.6	84.9	0.4	0.0	**1319.20**
2018	0.0	0.5	0.0	14.0	32.9	101.2	261.1	250.0	157.3	10.4	0.0	44.3	**871.70**
2019	1.6	0.0	34.3	9.0	36.5	106.6	186.6	246.7	108.9	51.0	0.0	9.8	**791.00**
2020	22.1	11.3	25.5	18.8	22.0	169.2	249.4	288.6	125.5	32.2	0.0	0.0	**964.59**
Total	**171.0**	**239.0**	**305.7**	**393.8**	**897.3**	**3459.7**	**6049.9**	**5547.4**	**3911.4**	**1577.0**	**101.3**	**105.8**	**22759.23**
Average	**8.5**	**11.9**	**15.3**	**19.7**	**44.9**	**173.0**	**302.5**	**277.4**	**195.6**	**78.9**	**5.1**	**5.3**	**1137.96**

Source: DSO, Ranchi

Climatic Condition in the District

The climate of this district is characterized by dry hot summer, mild humid post monsoon season and well distributed rainfall during the monsoon season. The year may be divided into four seasons. The summer season is from March to first week of June. The period from second week of June to September is the southwest monsoon season. October is a transitional month between southwest monsoon and winter conditions. The winter season is from the end of November to February.

RAINFALL

Records of rainfall in the district are available for eleven raingauge stations for period ranging from 13 to 46 years. The details of rainfall at these stations and for the district as a whole are given in Tables 1 and 2. The average annual rainfall in the district as a whole is 1277.2 mm. July is the rainiest month of the year with an average rainfall of 335.1 mm. The variation in the rainfall from year to year is large.

About 84% of annual rainfall is received during southwest monsoon months June to September. In the fifty year period from 1951 to 2000, there were 45 years for which annual data is available. Among these, the highest annual rainfall amounting to 170% of the annual normal occurred in 1961, while the lowest annual rainfall which was only 43% of the normal, occurred in 1979. There were nine years in this period when annual rainfall was less than 80% of the normal and there was one occasion each when such a low rainfall occurred in two consecutive years. It is seen from Table 2 that the rainfall was between 1001 mm and 1600 mm in 32 years out of 45.

On an average there are 70 rainy days (i.e. days with rainfall of 2.5 mm or more) in a year in the district. This number varies from 60 at Chainpur to 77 at Palkot.

The heaviest rainfall recorded in 24 hours at any station in the district was 261.1 mm at Chainpur on 06 October 1936.

TEMPERATURE

As there is no meteorological observatory in the district, the climatological description of the district which follows is based on the data of meteorological data of Ranchi observatory in the neighbouring district, where similar climatological conditions prevail. Temperatures begin to drop rapidly from mid November. January is the coldest month with the mean maximum temperature at about 23ºC and the mean minimum temperature at about 10ºC. In association with cold waves which affect the district in the winter months in the wake of western disturbances which move across north India, the minimum temperature may go down to 5ºC on individual days. Temperatures begin to rise steadily after February till first week of June. May is the hottest month of the year with mean maximum temperature at about 37ºC and mean minimum temperature at about 23ºC. On some days in latter part of summer and early part of June the maximum temperature may be above 40ºC. The weather cools down with the advance of the southwest monsoon into the district by about second week of June. The temperatures begin to drop appreciably with the withdrawal of the monsoon by first week of October.

HUMIDITY

In the southwest monsoon season the air is generally humid with the relative humidity above 80%. The air is generally dry in winter and summer season. The driest part of the

year is summer season when the relative humidity is low, especially in the afternoon, when they are about 30%.

CLOUDINESS

During the southwest monsoon months skies are generally heavily clouded to overcast. In the rest of the year skies are generally clear or lightly clouded. On somedays in winter, when western disturbances affect the weather of the district, skies are heavily clouded. Cloudiness increases in later part of summer especially in the afternoon.

WINDS

Winds are generally light to moderate with some increase in force in later part of summer and southwest monsoon season and light in the rest of the year. In winter months winds are mainly from northwesterly direction. In April south-westerlies winds begin to appear and become predominant with the advance of the monsoon season. In southwest monsoon season though winds blow from southwesterly or westerly direction, on some days in the afternoon winds blow from directions southeasterly or easterly. In October, northerly and northwesterly winds appear and strengthen in the winter season

SPECIAL WEATHER PHENOMENA

Depressions originating in the Bay of Bengal during the southwest monsoon season affect the weather of the district and its neighbourhood during their northwestward movement after crossing the coast. This causes gusty winds and widespread heavy rain. Thunderstorms occur throughout the year. Its frequency is more in latter part of summer and southwest monsoon season. Thunderstorms during the period February to June are sometimes accompanied by squally weather, less frequently with hail and dust storm. Fog occurs occasionally in winter months.

Source : Climate of Jharkhand, issued by Climatological Publication Section of Indian Meteorological Department, Government of Jharkhand.

Chapter – IX Details of the Mining Leases in the District

Table 7 Details of running mining leases in the district

Sl. No.	Name of the Mineral	Name of the Lessee	Address & Contact No. of Lessee	Mining lease Grant Order No. & date	Area of Mining lease (ha)	Period of Mining lease (Initial)		Period of Mining lease (1st/2nd...renewal)		Date of commencement of Mining Operation	Status (Working / Non Working / Temp. Working for dispatch etc.)	Captive/ Non-Captive	Obtained Environmental Clearance (Yes/No), If Yes Letter No with date of grant of EC.	Location of the Mining lease (Latitude & Longitude)	Method of Mining (Opencast / Underground)
						From	To	From	To						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Stone	Sri Binod Kumar, S/o Jagdeo Prasad, New Bandhgari, Dipatoli, P.S. Sadar, Ranchi	New Bandhgari, Dipatoli, P.S. Sadar, Ranchi	1012/M 23-06-15	1.25 Ha EC as per surface plan	07-11-2015	07-10-2025	NA	NA	07-11-2015	Working	Non-Captive	EC / SEIAA/2014-15/431/2014/830dt .- 30.04.2015	Lat - 23°27'05.7" to 23°27'09.5"Long - 85°33'53.9" to 85°34'02.5	Opencast
2	Stone	M/s Damodar Enterprises, Part. 1. Sri Sri Prabhat Kumar, S/o Sri Mahesh Prasad and 2. Sri Avinash Kumar, S/o Sri Mahesh Prasad, Vill. Saraiyatola, Jainagar, P.O. Sonda 'D', P.S. Patratu, Dist. Ranchi	Vill. Saraiyatola, Jainagar, P.O. Sonda 'D', P.S. Patratu, Dist. Ranchi	987/M 27-11-21	2.404 Ha E.C	22.10.22	27.05.27	NA	NA	12-06-2022	Working	Non-Captive	EC / SEIAA/2022-23/2637/2022/244 dt.- 02.09.2022	Lat - 23°26'04.2742" to 23°26'09.4946"Long - 85°38'44.8762" to 85°38'53.8382"	Opencast
3	Stone	Md. Ramiz Raja, S/o Md. Naseem Khan, Bariatu Basti, P.O. Bariatu, Dist. Ranchi	Bariatu Basti, P.O. Bariatu, Dist. Ranchi	1009/M 30-11-22	2.47 Ha E.C	01.03.23	09.08.27	NA	NA	04-03-2023	Working	Non-Captive	EC / SEIAA/2022-23/2716/2023/382 dt.- 31.01.2023	Lat - 23°25'25.97" to 23°25'32.98"Long - 85°36'43.13" to 85°36'53.42"	Opencast
4	Stone	M/s Creo Sales India Pvt. Ltd., Part. Sri Santosh Kumar, S/o Lt. Hiralal, 407 Commerce Tower, Main Road, Ranchi	407 Commerce Tower, Main Road, Ranchi	578/M 10-05-16	16.18 Ha E.C	08-04-2016	08-03-2026	NA	NA	08-04-2016	Working	Non-Captive	EC / SEIAA/2015-16/1963/2015/2628 dt.- 31.12.2015	Lat - 23°31'5.84" to 23°30'05.8"Long - 85°08'20.92" to 85°08'31.42"	Opencast
5	Stone	Sri Hauqim Ansari, S/o Sri Aziz Ansari, Vill. Karketta, P.O. Malsiring, P.S. Pithoria, Dist. Ranchi	Vill. Karketta, P.O. Malsiring, P.S. Pithoria, Dist. Ranchi	786/M 04-07-16	2.82 /2.42 Ha E.C as per surface plan	02-02-2018	02-01-2028	NA	NA	02-02-2018	Working	Non-Captive	EC/ DEIAA/2015-16/02/87 DT.- 24.08.2017	Lat - 23°25'48.08" to 23°25'29.75"Long - 85°14'19.27" to 85°15'12.19"	Opencast
6	Stone	M/s Maa VindyawasiniStone,Prop. Shri Satyendra Kumar Singh,S/o Shri BhikhariSingh,SanjaynagarColony,Sainagar ,Po+Ps-Ratu,Dist-Ranchi	,SanjaynagarColony,Sainagar ,Po+Ps-Ratu,Dist-Ranchi	1725/M 24-12-16	4.05 Ha as per surface plan	16-01-2018	15-01-2028	NA	NA	16-1-18	Working	Non-Captive	EC/DEIAA/2017-18/70/113 dt.-	Lat - 23°27'42.10" to 23°27'48.20"Long - 85°15'44.60" to 85°15'56.10"	Opencast

7	Stone	Ms Ecotech Coal Industries Pvt Ltd,Dir. Shri KawachKumar,Nirmal C-16,Ashok Nagar,Ranchi	Nirmal C-16,Ashok Nagar,Ranchi	782/M 04-07-16	16.39 Ha EC and surface plan	24-10-2018	23-10-2028	NA	NA	24-10-18	Working	Non-Captive	EC/SEIAA/2015-16/1930/2015/149 dt.-28 Aug 2017	Lat - 23°28'2.98" to 23°18'14.68"Long - 85°14'15.75" to 85°13'33.99	Opencast
8	Stone	1. Sri Rameshwar Dayal Singh S/o Late BijeshwardayalSingh,Vill-Tendar,Ranchi,2. Sri Santosh Agarwal,S/o Late Jage ram Agarwal,Po-Khelari,Ps-Macluskiganj,Dist-Ranchi	,Vill-Tendar,Ranchi,,Po-Khelari,Ps-Macluskiganj,Dist-Ranchi	783/M 04-07-16	4.04 Ha EC as per surface plan	14-08-2018	13-08-2028	NA	NA	14-8-18	Working	Non-Captive	EC/DEIAA/2016-2017/03/95 dt.- 26 Aug 2017	Lat - 23°25'41.47" to 23°25'49.62"Long - 85°14'42.20" to 85°14'51.14"	Opencast
9	Stone	1. Sri Suresh Mahto, S/o Sri Binod Mahto, Vill. Piska Nagri, P.O.+P.S. Nagri, Dist. Ranchi and 2. Sri Madho Toppo, S/o Lt. Chamru Toppo, Vill. Bandhya, P.O. Halhu, P.S. Nagri, Dist. Ranchi	Vill. Piska Nagri, P.O.+P.S. Nagri, Dist. Ranchi and Vill. Bandhya, P.O. Halhu, P.S. Nagri, Dist. Ranchi	82/M 23-01-16	1.21 Ha EC	14-01-2017	13-01-2027	NA	NA	14-1-17	Working	Non-Captive	EC/SEIAA/2015-16/1232/15/2123 dt.- 15 Dec 2015	Lat - 23°16'21.40" to 23°16'25.38"Long - 85°13'27.09" to 85°13'36.72"	Opencast
10	Stone	M/s Maa Mundeshwari Stone Mines, Prop. Smt. Neelam Singh, House No. 21, Nilanchal Kothi Compound, Ratu Road, Piska More, Ranchi	House No. 21, Nilanchal Kothi Compound, Ratu Road, Piska More, Ranchi	617/M 28-07-22	1.715Ha EC	10.02.23	01.03.27	NA	NA	02-10-2023	Working	Non-Captive	EC / SEIAA/2022-23/2653/2022/292 dt.- 12.12.2022	Lat-23°16'31.43" to 23°16'37.27"Long-85°13'47.30" to 85°13'54.23"	Opencast
11	Stone	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	1557/M 17-11-16	1.347	02-08-2018	02-07-2028	NA	NA	02-08-2018	Working	Non-Captive	EC/DEIAA/2016-17/84/94 dt 26-08-17	Lat - 23°15'23.28" to 23°15'30.26"Long - 85°29'02.13" to 85°29'07.27"	Opencast
12	Stone	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	1556/M 17-11-16	2.77	02-08-2018	02-07-2028	NA	NA	02-08-2018	Working	Non-Captive	EC/DEIAA/2016-17/87/100 dt 26-08-17	Lat - 23°15'16.71" to 23°15'20.53"Long - 85°28'38.89" to 85°28'42.84"	Opencast
13	Stone	Dandar Nirman Pvt. Ltd., Director Sri Rahul Pandey, S/o Sri Surendra Pandey, Sukhdeonagar, Ratu Road, Ranchi	Sukhdeonagar, Ratu Road, Ranchi	153/M 08-02-16	3.642 Ha EC	05-04-2016	05-03-2026	NA	NA	05-04-2016	Working	Non-Captive	EC / SEIAA/2015-16/1444/2015/2271 dt.- 30.12.2015	Lat - 23°14'46.2984" to 23°14'38.0368"Long - 85°27'21.4705" to 85°27'10.666"	Opencast
14	Stone	Sri Vikrant Singh, S/o Sri Radheshyam Singh, Manas Niwas, Bank Colony Road, Hesal, Hehal Ranchi	, Bank Colony Road, Hesal, Hehal Ranchi	2167/M 26-12-15	2.37 Ha EC	01-04-2016	01-03-2026	NA	NA	01-04-2016	Working	Non-Captive	EC/SEIAA/2015-16/1414/15/1806 dt-23 Nov 2015	Lat - 23°15'50.38" to 23°15'51.58"Long - 85°16'52.18" to 85°10'55.92"	Opencast
15	Stone	M/s Konark Traders, Prop. Sri Roshan Kumar, S/o Sri Binod Mahto, Vill. Tupudana, P.O. Hatia, P.S. Dhurwa, Ranchi	Vill. Tupudana, P.O. Hatia, P.S. Dhurwa, Ranchi	893/M 26-10-21	1.45	02.09.22	01.09.32	NA	NA	09-02-2022	Working	Non-Captive	EC/SEIAA/2022-23/2582/2022/161 dt 18 july 2022	Lat - 23°11'54.89" to 23°12'00.39"Long - 85°18'21.57" to 85°18'28.63	Opencast
16	Stone	Sri Prabhunath Pathak, S/o Lt. Laxmi Narayan Pathak, Anand Nagar, Harmu Housing Colony, P.O. Harmu, P.S. Argora, Dist. Ranchi	Anand Nagar, Harmu Housing Colony, P.O. Harmu, P.S. Argora, Dist. Ranchi	59/M 18-01-16	2.50 Ha EC as per surface plan	02-02-2016	02-01-2026	NA	NA	02-02-2016	Working	Non-Captive	EC/SEIAA/2015-16/1909/15/2353 dt.- 30 Dec 2015	Lat - 23°30'59.56" to 23°31'06.65"Long - 85°31'27.27" to 85°31'39.25"	Opencast

17	Stone	M/s Devanti Projects Pvt. Ltd., Director Sri Amit Kumar, S/o Sri Anil Kumar Sahu, Sahu Nagar, Madhukam, Piska More, Ranchi	, Sahu Nagar, Madhukam, Piska More, Ranchi	740/M 23-06-16	1.13 Ha EC	14-08-2018	13-08-2028	NA	NA	14-8-18	Working	Non-Captive	EC/DEIAA/2015-2016/24/32 dt.- 09 Mar 2017	Lat - 23°32'11.37"Long - 85°25'19.58	Opencast
18	Stone	M/s Bansidhar Construction Company Pvt. Ltd., Prop. Sri Prakash Kumar Singh, Chief Executive Officer Sri Ram Naresh Singh, Azad Nagar, Near Primary School, Bhuli, Dhanbad	Azad Nagar, Near Primary School, Bhuli, Dhanbad	962/M 27-08-20	0.65	17-08-2021	08-02-2026	NA	NA	17-8-21	Working	Non-Captive	EC/SEIAA/2020-21/2329/2020/35	Lat - 23°32'26.1891" to 23°32'23.1154"Long - 85°29'37.6853" to 85°29'39.5642"	Opencast
19	Stone	M/s Hardrock Infra, Part. 1. Sri Moiz Akhtar, S/o Sri Shamim Akhtar, 64 H.B. Road, Thadpakhna, Ranchi 2. Sri Varun Lalwani, S/o Sri Moti Lal Lalwani, Imam Kothi, H.B.Road, Kokar, Ranchi 3. Sri Nitesh Sharda, S/o Sri N.K. Sharda, 101' Kishan Apartment, P.P. Compound, Ranchi	64 H.B. Road, Thadpakhna, Ranchi Imam Kothi, H.B.Road, Kokar, Ranchi , 101' Kishan Apartment, P.P. Compound, Ranchi	961/M 27-08-20	1.555	30.12.21	16.10.26	NA	NA	30-12-21	Working	Non-Captive	EC/SEIAA/2021-22/2415/2021/ 129	Lat -23°31'07.5" to 23°31'11.1"Long - 85°26'41.4" to 85°26'44.1"	Opencast
20	Stone	M/s R.N. Construction, Part. 1. Sri Rajendra Prasad, S/o Meet Narayan Prasad, Vill.+P.O. Surajpura, P.S. Padma, Dist.- Hazaribagh 2. Jh Naresh Kumar, S/o Kapil Dev Prasad Mehta, Vill. Vikash Nagar, Sarle, P.O.+P.S. Sadar, Dist.- Hazaribagh	Vill.+P.O. Surajpura, P.S. Padma, Dist.- Hazaribagh Vill. Vikash Nagar, Sarle, P.O.+P.S. Sadar, Dist.- Hazaribagh	665/M 06-07-21	1.44 Ha EC	02.03.22	19.12.26	NA	NA	03-02-2022	Working	Non-Captive	EC/SEIAA/2021-22-2426/2021/133 dt.- 23 Sep 2021	Lat -23°31'14.10" to 23°31'18.10"Long - 85°32'22.00" to 85°32'31.20"	Opencast
21	Stone	M/s Hardrock Infra, Part. 1. Sri Moiz Akhtar, S/o Sri Shamim Akhtar, 64 H.B. Road, Thadpakhna, Ranchi 2. Sri Varun Lalwani, S/o Sri Moti Lal Lalwani, Imam Kothi, H.B.Road, Kokar, Ranchi 3. Sri Nitesh Sharda, S/o Sri N.K. Sharda, 101' Kishan Apartment, P.P. Compound, Ranchi	, 64 H.B. Road, Thadpakhna, Ranchi , Imam Kothi, H.B.Road, Kokar, Ranchi , 101' Kishan Apartment, P.P. Compound, Ranchi	961/M 27-08-20	0.66 Ha as per surface plan	18.01.22	31.10.26	NA	NA	18-1-22	Working	Non-Captive	EC/SEIAA/2021-22/2460/2021/195	Lat -23°31'07.5" to 23°31'11.1"Long - 85°26'41.4" to 85°26'44.1"	Opencast
22	Stone	S.S.Mining, Part. 1. Sri Manoj Kumar Singhania and 2. Sri Subhra Bose, 101, Mangalmurti Heights, Harmu Road, Ranchi	101, Mangalmurti Heights, Harmu Road, Ranchi	664/M 06-07-21	1.823	4.8.22	27.2.27	NA	NA	08-04-2022	Working	Non-Captive	EC/SEIAA/2021-22/2470/2021/28 dt.- 16 Apr 2022	23°30'58.40" to 23°31'04.08"85°26'56.05" to 85°27'03.08"	Opencast
23	Stone	M/s Lalkeshwar Stone Chips Pvt. Ltd., Part. 1. Sri Lalkeshwar Mahto, 2. Sri TulshiKharwar 3. Ram Nandan Mahto, Vill. Gunja, P.O.	Vill. Gunja, P.O. Hendebili, P.S. Ormanjhi, Dist. Ranchi	379/M 31-02-22	1.33 Ha EC	26.11.22	15.08.27	NA	NA	26-11-22	Working	Non-Captive	EC / SEIAA/2022-23/2625/2022/246 dt.- 02.09.2022	Lat - 23°30'15.76" to 23°30'19.73"Long - 85°31'28.50" to 85°31'34.93"	Opencast

		Hendebili, P.S. Ormanjhi, Dist. Ranchi													
24	Stone	M/s Jai Balaljii Construction, Prop. Sri Santosh Kumar Gupta, Kali Babu Street, Upper Bazar, Ranchi	Kali Babu Street, Upper Bazar, Ranchi	378/M 31-03-22	1.74 Ha EC as per surface plan	20.01.23	07.12.27	NA	NA	20-1-23	Working	Non-Captive	EC/SEIAA/2022-23/2647/2022/305 dt.-13 Dec 2022	Lat - 23°30'11.76" to 23°30'17.91"Long - 85°31'26.84" to 85°31'32.60"	Opencast
25	Stone	M/s Lavanya Devlopers, Part-shri Ashok Kumar Dhanuka, S/o Om Prakash Dhanuka, Add- 505, Mangal Murti Heights, Near Vishal Megamart, Harmu Road Ranchi	Add- 505, Mangal Murti Heights, Near Vishal Megamart, Harmu Road Ranchi	613/M 25-07-22	2.68 Ha EC	14.06.2023	12.01.2028	NA	NA	14-6-23	Working	Non-Captive	EC / SEIAA/2022-23/2663/2022/300 dt.- 13.12.022	Lat - 23°30'26.77" to 23°30'34.14"Long - 85°31'39.33" to 85°31'46.22"	Opencast
26	Stone	M/s Rubal Stones Mines, Prop-Shri Satyendra Kumar, S/o Ram Prasad, Near Neeche Tola Shiv Mandir Po+PsKorambe Thana Gola, Dist Ramgarh	Near Neeche Tola Shiv Mandir Po+PsKorambe Thana Gola, Dist Ramgarh	186/M 04-02-23	1.06	11.08.2023	12.05.2028	NA	NA	08-11-2023	Working	Non-Captive	EC/SEIAA/2023-24/2813/2023/132 dt.- 09 Jun 2023	Lat - 23°24'43.59" to 23°24'47.77"Long - 85°40'18.55" to 85°40'22.86"	Opencast
27	Stone	Sri Sumit Kumar, S/o Sri Anil Kumar Sahu, Near Galaxia Mall, Sahu Nagar, P.S. Sukhdeonagar, Hehal, Ranchi	Near Galaxia Mall, Sahu Nagar, P.S. Sukhdeonagar, Hehal, Ranchi	92/M 25-01-17	1.67 Ha EC	02-08-2018	02-07-2028	NA	NA	02-08-2018	Working	Non-Captive	EC/DEIAA/2015-16/77/9 dt.-26 Aug 2017	Lat - 23°16'56.25" to 23°17'03.25"Long - 85°12'40.64" to 85°12'47.68	Opencast
28	Stone	M/s Bhuneshwari Stone Crusher, Prop. Sri Dwarika Nath Chaudhary, Qr. No.- B III-493 (T), HEC Colony, Dhurwa, Ranchi- 834004	Qr. No.- B III- 493 (T), HEC Colony, Dhurwa, Ranchi- 834004	898/M 27-10-21	2.83 Ha EC	02-08-2018	02-07-2028	NA	NA	02-08-2018	Working	Non-Captive	EC/SEIAA/2022-23/2685/2022/348 dt.-29-12-22	Lat - 23°16'44.05" to 23°16'51.87"Long - 85°27'41.91" to 85°27'50.70	Opencast
29	Stone	Sri Krishna Kumar , S/o Lt. Kedar Nath Tiwari, Near Shyam Sweets, Chandani Chowk, Hatia, P.S. Jagarnathpur, Ranchi	Near Shyam Sweets, Chandani Chowk, Hatia, P.S. Jagarnathpur, Ranchi	81/M 23-01-16	0.809 Ha EC	29-02-2016	28-02-2026	NA	NA	29-2-16	Working	Non-Captive	EC/SEIAA/2015-16/1274/15/2154 dt.-12 Dec 2015	Lat - 23°10'6.33" to 23°10'6.47"Long - 85°07'8.56" to 85°07'8.68"	Opencast
30	Stone	Sri Manglu Oraon, S/o Sri Bauna Oraon, Vill. Bermad, P.O. Hatia, P.S. Dhurwa, Dist. Ranchi	Vill. Bermad, P.O. Hatia, P.S. Dhurwa, Dist. Ranchi	53/M 18-01-16	0.81 Ha EC as per surface plan	02-08-2016	02-07-2026	NA	NA	02-08-2016	Working	Non-Captive	EC/SEIAA/2015-16/1180/15/2178 dt.- 15 Dec 2015	Lat - 23°15'59.5" to 23°16'02.8"Long - 85°17'47.2" to 85°17'49.6"	Opencast
31	Stone	Sri Suresh Kumar Baitha, S/o Lt. Puran Baitha, Vill.+P.O. Rajaulatu, P.S. Namkum, Dist. Ranchi and Sri Rajesh Kachap, S/o Sri Jagarnath Kachap, Vill. Lupungtoli, P.O. Rajaulatu, P.S. Namkum, Dist. Ranchi	Vill.+P.O. Rajaulatu, P.S. Namkum, Dist. Ranchi and Vill. Lupungtoli, P.O. Rajaulatu, P.S. Namkum, Dist. Ranchi	785/M 04-7-16	1.21 Ha EC	16-01-2018	15-01-2028	NA	NA	16-1-18	Working	Non-Captive	EC/DEIAA/2015-16/18/88 dt.- 24 Aug 2017	Lat - 23°17'55.24" to 23°17'53.12"Long - 85°27'02.37" to 85°27'03.56	Opencast
32	Stone	M/s Hero Hardrock Harvestors, Part. Sri Shiv Kumar, S/o Lt. Hiralal, 407, Commerce Tower, Main Road, Ranchi	407, Commerce Tower, Main Road, Ranchi	61/M 18-01-16	2.02 Ha as per surface plan	02-11-2016	02-10-2026	NA	NA	02-11-2016	Working	Non-Captive	SEIAA/2015-16/1591/2015/2343 dt.-30 Dec 2015	Lat - 23°12'13.1" to 23°12'20.8"Long - 85°18'28.0" to 85°18'36.0"	Opencast
33		Navratan Mines, Part. 1. Sri Akchat Singh Bhardwaj 2. Rohit Kumar Sahu and others,	New Morabadi, P.S.- Bariatu, Dist.- Ranchi	1328/M 23-11-23	0.485	22-11-23	19-03-28	NA	NA	22-11-23	Working	Non-Captive	SEIAA/2023-24/2929/291 date 06-10-2023	Lat - 23°34'09.56" to 23°34'14.20"Long - 85°31'09.13" to 85°31'09.08"	Opencast

		New Morabadi, P.S.- Bariatu, Dist.- Ranchi													
34	Stone	M/s Elite Power Project & Construction Pvt. Ltd., Director Shri Prashant Kumar Verma, S/o Shri Bishnu Dev Verma, 3D VatikaAppartment Bank Road. Po- GPO, PS- KotwaliDist- Ranchi	M/s Elite Power Project & Construction Pvt. Ltd., Director Shri Prashant Kumar Verma, S/o Shri Bishnu Dev Verma, 3D VatikaAppartment Bank Road. Po- GPO, PS- KotwaliDist- Ranchi	397/M 09-03-23	0.90 Ha Ec	11.08.2023	09-10-2027	NA	NA	08-11-2023	Working	Non-Captive	EC / SEIAA/2023-24/2815/2023/131 dt.- 03.06.2023	Lat - 23°32'14.54" to 23°32'18.90"Long - 85°28'59.69" to 85°29'05.02"	Opencast
35	Stone	Ms shrishti works pvt ltd dir- sri abhishek anand, s/o lt binod singh and 2. Smt shilpi singh w/o sri abishek anand vill sidharthpur colony, near axis bank, manpur, gaya , bihar	vill sidharthpur colony, near axis bank, manpur, gaya , bihar	1094/M 16-12-22	2.938	13-01-24	26-08-28	NA	NA	13-01-24	Working	Non-Captive	EC / SEIAA/2022-23/2724/2023/703 dt.- 01 -02.2023	Lat - 23°24'56.50" to 23°25'00.37"Long - 85°40'19.20" to 85°40'12.13"	Opencast
36		Silver Stone Works, Part. 1. Sri Manoj Kumar Singhania, S/o Sri Shyam Sundar Singhania, 2. Sri Neeraj Kumar Sharma, S/o Sri Gyan Chand Sharma, 101, Paramsukh Apartment, Modi Complex, Kamlakant Road, Sukhdeonagar, Ranchi	101, Paramsukh Apartment, Modi Complex, Kamlakant Road, Sukhdeonagar, Ranchi	1434/M 15-12-23	1.05	01-06-2024	01-11-2028	NA	NA	01-06-2024	Working	Non-Captive	EC / SEIAA/2023-24/3021/2023/469 dt.- 02 -11.2023	Lat - 23°32'23.4502" to 23°32'28.1088"Long - 85°29'32.4578" to 85°29'40.004"	Opencast
37	Stone	m/s kanchan sahvitri and sons, part 1. Sri rangnath choubey, s/o dinanath choubey and 2. Sri jai Shankar kumar,s/o lt. Umesh Sharma, flat no – C1, Block B Bhaskar complex, tagore hill road morabadi, ranchi	, flat no – C1, Block B Bhaskar complex, tagore hill road morabadi, ranchi	1074/M 05-09-23	1.45	01-08-2024	29-09-28	NA	NA	01-08-2024	Working	Non-Captive	EC / SEIAA/2023-24/2933/2023/297 dt.- 06 -10.2023	Lat - 23°38'24.50" to 23°38'30.87"Long - 85°10'35.894" to 85°10'40.232"	Opencast
38	Stone	Sri Binod Mahto, S/o Lt. Doman Mahto, Vill. Tupudana, Dhurwa, Ranchi	Vill. Tupudana, Dhurwa, Ranchi	1609/M 04-09-15	1.21			12-02-2014	12-01-2024	12-02-2014	Non-Working	Non-Captive	EC/SEIAA/2015-16/770/2015/1206 dt.-31 Aug 2014	Lat - 23°11'25.76" to 23°11'30.9"Long - 85°18'51.55" to 85°18'40"55.67"	Opencast
39	Stone	Sri RanthaMahli, S/o Lt. BalkuMahli and Sri Ravi Shankar Sahu, S/o Sri Dhaneshwar Sahu, Vill. Bedwari, P.O. Childag, P.S. Angara, Ranchi	Vill. Bedwari, P.O. Childag, P.S. Angara, Ranchi	1610/M 04-09-15	0.81 Ha as per surface plan	10-03-2015	10-02-2025	NA	NA	10-03-2015	Non-Working	Non-Captive	EC / SEIAA/2015-16/744/2015/1113 dt.- 21.07.2015	Lat - 23°24'32"Long - 85°28'41"	Opencast
40	Stone	M/s Veer Stone Part- Shri Abhishek Anand, Siddhartha Colony Near Axis Bank Manpur Gaya, Bihar (2) part Anand Murti B/560/2 Near Rajendra Bhawan Dhurwa, Ranchi	Siddhartha Colony Near Axis Bank Manpur Gaya, Bihar B/560/2 Near Rajendra Bhawan Dhurwa, Ranchi	705/M 05-09-22	2.94	22.06.2023	26.03.2028	NA	NA	22-6-23	Non-Working	Non-Captive	EC / SEIAA/2022-23/2689/2022/320 dt.- 28.12.2022	Lat - 23°25'03.95" to 23°25'10.5"Long - 85°39'45.43" to 85°39'45.96"	Opencast
41	Stone	Dumaro Sand Mining Projects, Prop. Sri Rahul Kumar, S/o Sri Mansukh Lal, Flat No. 104, Sn Tulsi Apartment, Near HDFC School, Bariatu Road, Ranchi	Flat No. 104, Sn Tulsi Apartment, Near HDFC School, Bariatu Road, Ranchi	1082/M 12-10-17	1.73	02-08-2018	02-07-2028	NA	NA	02-08-2018	Non-Working	Non-Captive	EC/DEIAA/2015-16/82/111 dt 28-08-17	Lat - 23°29'04.71" to 23°29'09.21"Long - 85°03'39.10" to 85°03'45.73"	Opencast

42	Stone	Sri Mohsin Hasan Raja, S/o Md. Nasim Khan, Vill.+P.O.+P.S. Bariatu, Ranchi	Vill.+P.O.+P.S. Bariatu, Ranchi	1695/M 17-12-16	4.45 Ha as per surface plan	12-04-2017	12-03-2027	NA	NA	12-04-2017	Non-Working	Non-Captive	EC/DEIAA/2015-16/69/81 dt 24-08-17	Lat - 23°29'56.83" to 23°30'08.66"Long - 85°21'38.45" to 85°21'45.23"	Opencast
43	Stone	Urja Coal and Mines Pvt. Ltd., Director Sri Litesh Jha, S/o Sri Surendra Prakash Jha, C-16, Park Road, Ashok Nagar, Road No.1, Ranchi	C-16, Park Road, Ashok Nagar, Road No.1, Ranchi	93/M 23-01-16	10.11 Ha as per surface plan	10-03-2016	10-02-2026	NA	NA	10-03-2016	Non-Working	Non-Captive	EC/SEIAA/2015-16/1463/15/2312	Lat - 23°27'10.48" to 23°27'10.56"Long - 85°15'12.19" to 85°15'12.48"	Opencast
44	Stone	M/s Hiralal Sand And Ballast Company Ltd., Part. Sri Santosh Kumar, S/o Lt. Hiralal, Fourth Floor, Karni Heights, Club Road, Ranchi	Fourth Floor, Karni Heights, Club Road, Ranchi	60/M 18-01-16	3.70 Ha as per surface plan	02-11-2016	02-10-2026	NA	NA	02-11-2016	Non-Working	Non-Captive	EC/SEIAA/2015-16/1592/15/2316	Lat - 23°25'27.1" to 23°25'33.9"Long - 85°15'25.6" to 85°15'33.7"	Opencast
45	Stone	Sri Rahul Kumar, S/o Sri Mansukh Lal, Flat No. 104, Sn Tulsi Apartment, Near HDFC School, Bariatu Road, Ranchi	, Flat No. 104, Sn Tulsi Apartment, Near HDFC School, Bariatu Road, Ranchi	letter no 1081 dated 12-10-17	2.00 Ha as per surface plan	02-08-2018	02-07-2028	NA	NA	02-08-2018	Non-Working	Non-Captive	EC/DEIAA/2015-16/83/112 dt.-28 Aug 2017	Lat - 23°15'39.24" to 23°15'47.63"Long - 85°27'00.89" to 85°27'06.66"	Opencast
46	Stone	Smt Sheela Singh ,w/o Shri Ravi Bhushan Singh,BhushanNiwas,ShulkaColony,Hinoo,Ranchi	Smt Sheela Singh ,w/o Shri Ravi Bhushan Singh,BhushanNiwas,ShulkaColony,Hinoo,Ranchi	635/M 26-05-16	0.8	NA	NA	17-06-2016	16-06-2026	17-6-16	Non-Working	Non-Captive	EC/SEIAA/2015-16/1580/2015/257	Lat - 23°10'5.5" to 23°10'11.3"Long - 85°13'53.1" to 85°14'1.7"	Opencast
47	Stone	Sri Haricharan Ram Prajapati, S/o Sri Dev Narayan Prajapati, Vill. Tupudana, P.O.+P.S. Hatia, Ranchi	Sri Haricharan Ram Prajapati, S/o Sri Dev Narayan Prajapati, Vill. Tupudana, P.O.+P.S. Hatia, Ranchi	116/M 01-02-16	0.81 as per surface plan	NA	NA	04-02-2016	04-01-2026	04-02-2016	Non-Working	Non-Captive	EC/SEIAA/2015-16/1323/2015/2155 dt.- 15 Dec 2015	Lat - 23°15'37.0" to 23°15'38.7"Long - 85°17'16.8" to 85°17'20.9"	Opencast
48	Stone	Maa Bhawani Stone Works, Part. Sri Sanjay Kumar Gupta, S/o Sadhu Charan Sahu, Vill. Tupudana, P.O. Hatia, Dist. Ranchi	Maa Bhawani Stone Works, Part. Sri Sanjay Kumar Gupta, S/o Sadhu Charan Sahu, Vill. Tupudana, P.O. Hatia, Dist. Ranchi	2170/M 26-12-15	1.618 Ha as per surface plan	13-03-2016	03-12-2026	NA	NA	13-3-16	Non-Working	Non-Captive	EC/SEIAA/2015-16/1114/2015/1747 dt 26-10-15	Lat - 23°15'46.1" to 23°15'49.3"Long - 85°16'59.7" to 85°17'06.0"	Opencast
49	Stone	M/s Hiralal and Company, Part. Sri Shiv Kumar, S/o Lt. Hiralal, F- 14, City Centre, Club Road, Ranchi	, F- 14, City Centre, Club Road, Ranchi	265/M 09-03-16	4.86 Ha as per surface plan	05-10-2016	05-09-2026	NA	NA	05-10-2016	Non-Working	Non-Captive	EC/SEIAA/2015-16/1967/2015/2626 dt.-31 Dec 2015	Lat - 23°11'55.30" to 23°12'3.34"Long - 85°19'23.50" to 85°19'35.20"	Opencast
50	Stone	Sri Sanjay Kumar Rai ,S/o Bharat Rai,Vill-Mahadev Toli,Po-Rajaulatu,Ps-Namkum,Dist-Ranchi	Vill-Mahadev Toli,Po-Rajaulatu,Ps-Namkum,Dist-Ranchi	1133/M 27-08-16	2.63 Ha as per surface plan	08-04-2018	13-08-2028	NA	NA	08-04-2018	Non-Working	Non-Captive	EC/DEIAA/2015-16/79/108 dt.- 27 Aug 2017	Lat - 23°18'18.00" to 23°18'23.50"Long - 85°27'32.50" to 85°27'44.30"	Opencast
51	Stone	Sri Gopal Kumar Ishwar, S/o Sri Umesh Prasad Ishwar, Booty More, Hanuman Nagar, Ranchi and Sri Kishore Ranjan Singh, S/o Sri Awdhesh Kishore Prasad Singh, Sri Ram Regency, Flat No. 303, Hari Om Tower, Ranchi	Booty More, Hanuman Nagar, Ranchi and Sri Ram Regency, Flat No. 303, Hari Om Tower, Ranchi	1715/M 21-12-16	1.01 Ha as per surface plan	02-08-2018	02-07-2028	NA	NA	02-08-2018	Non-Working	Non-Captive	EC/DEIAA/2015-16/59/78	Lat - 23°31'40.85" to 23°31'44.44"Long - 85°29'52.17" to 85°29'55.71"	Opencast

52	Stone	Sri Mohsin Hasan Raja, S/o Md. Nasim Khan, Vill.+P.O.+P.S. Bariatu, Ranchi	Vill.+P.O.+P.S. Bariatu, Ranchi	547/M 05-05-16	2.36 Ha	24-07-2016	23-07-2026	NA	NA	24-7-16	Non-Working	Non-Captive	EC/SEIAA/2015-16/1656/56	Lat - 23°29'11.82" to 23°29'16.05"Long - 85°35'28.57" to 85°35'36.12"	Opencast
53	Stone	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	1554/M 17-11-16	2.32	02-08-2018	02-07-2028	NA	NA	02-08-2018	Non-Working	Non-Captive	EC/DEIAA/2015-2016/14/83 dt 24-08-17	Lat - 23°15'16.71" to 23°15'20.53"Long - 85°28'38.89" to 85°28'42.84"	Opencast
54	Stone	Mrs Asha Rani Tete D/o Shri Teleshfarekido Near D.T 1207 Dhurwa Ranchi.	Near D.T 1207 Dhurwa Ranchi.	885/M dt 25-10-21	0.708	26.06.2023	25.05.2028	NA	NA	26-6-23	Non-Working	Non-Captive	EC / SEIAA/2021-22/2540/2021/31 dt.- 16.04.2022	Lat - 23°31'28.0933"N to 23°31'32.3703"N Long - 85°32'18.1188"E to 85°32'21.3442E"	Opencast
55	Stone	Sri Sandip Kumar, S/o LT. Narendra Singh Munda, Vill.+P.O.+P.S. Sonahatu, Ranchi	Vill.+P.O.+P.S. Sonahatu, Ranchi	1744/M 28-09-15	0.75 Ha as per surface plan	01-02-2016	01-01-2026	NA	NA	01-02-2016	Non-Working	Non-Captive	EC / SEIAA/2015-16/1042/2015/1566 dt.- 09.09.2015	Lat - 23°12'36.0" to 23°12'41.0"Long - 85°42'58.9" to 85°43'13.4"	Opencast
56	Stone	Sri Sri Hari Murarka, Lake Avenue Road, Kanke Road, Ranchi	Lake Avenue Road, Kanke Road, Ranchi	370/M 10-03-05	43.61	03.05.2005	02.05.2025	NA	NA	05-03-2005	Non-Working	Non-Captive	NA	Lat - 23°18'48" to 23°19'30"Long - 85°45'30" to 85°45'50"	Opencast
57	Stone	M/s Mineral Resources, Pro. Sri Prabhat Tekriwal, S/o Sri Aatma Ram Agrawal, 13, 14, P Industrial area, Namkum, Ranchi	13, 14, P Industrial area, Namkum, Ranchi	918/M 04-07-09	5.67	07.09.09	06.09.29	NA	NA	09-07-2009	Non-Working	Non-Captive	NA	Lat - 23°30'40" to 23°30'56"Long - 85°20'46" to 85°20'58"	Opencast
58	stone	Niraj kumar singh, s/o sri jitendra prasad singh, address - B-201, vainandani apartment, sadabahar chowk ps namkum dist ranchi, jharkhand	address - B-201, vainandani apartment, sadabahar chowk ps namkum dist ranchi, jharkhand	1126/M 17-10-17	1.31 Ha	02-08-2018	17-07-28	NA	NA	17-07-28	Non-Working	Non-Captive	EC/DEIAA/2015-16/14/83 Dated-24-08-17	Lat - 23°30'32 .76" N to 23°30'27.50 "N Long - 85°26'52.24"E to 85°26'55.20"E	Opencast
59	Stone	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	1555/M 17-11-16	2.24 Ha EC and surface plan	02-08-2018	02-07-2028	NA	NA	02-08-2018	Non-Working	Non-Captive	EC/ DEIAA/2016-17/87/100 DT.-26.08.2017	Lat - 23°15'17.9959" to 23°15'25.5300"Long - 85°28'24.3857" to 85°28'34.4384"	Opencast
60	Stone	Sri Pradip Kumar Jha, S/o Sri Jamun Jha, Vill. Tea Garden, Bargawan, P.O.+P.S. Namkum, Dist. Ranchi	Vill. Tea Garden, Bargawan, P.O.+P.S. Namkum, Dist. Ranchi	1558/M 17-11-16	0.93 Ha EC as per surface plan	02-08-2018	02-07-2028	NA	NA	02-08-2018	Non-Working	Non-Captive	EC/DEIAA/2016-17/901-101 dt.-26 Aug 2017	Lat - 23°16'56.5116" to 23°17'2.5040"Long - 85°27'50.1251" to 85°27'55.4808"	Opencast
61	Stone	K.V.S. Mines and Minerals, Part. 1. Sri Sandip Kumar Jaiswal and others, Blue Safair Apartment, Flat No.- B, Block D, Dhela Toli, Near	Blue Safair Apartment, Flat No.- B, Block D, Dhela Toli,	1403/M 08-12-23	1.88	01-08-2024	10-06-2028	NA	NA	01-08-2024	Non-Working	Non-Captive	EC/SEIAA/2023-24/2880/2023 DATE 21-08-16	Lat - 23°25'13.09" to 23°25'17.54"Long - 85°39'31.23" to 85°39'38.32"	Opencast

		Sohrai Bhawan, Harmu, Ranchi	Near Sohrai Bhawan, Harmu, Ranch												
62	Stone	R.B Engicom , prop - sri rahul kumar shah and sri jyoti bhushan kumar, add- house no F-82, P C Colony, kankarbagh near madhuban apartment, sampatchak, dist patna bihar pin 800020	add- house no F-82, P C Colony, kankarbagh near madhuban apartment, sampatchak, dist patna bihar pin 800020	1354/M 29-11-23	2.02	01-03-2024	10-02-2028	NA	NA	01-03-2024	Non-Working	Non-Captive	EC/SEIAA/2023-24/2932/2023/ 283 DATE 06-10-23	Lat - 23°24'56.40" to 23°25'03.30"Long - 85°40'04.06" to 85°40'10.01"	Opencast

Source: District Mining Office, Ranchi

Table 8 *All lapsed lease list*

Sl. No.	Name of the Mineral	Name of the Lessee	Address & Contact No. of Lessee	Area of Mining lease (ha)	Period of Mining lease (Initial)		Period of Mining lease (1st/2nd...renewal)		Date of commencement of Mining Operation	Status (Working / Non Working / Temp. Working for dispatch etc.)	Captive/ Non-Captive	Latitude	Longitude
					From	To	From	To					
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Stone	Sri Parasnath Bhogta, S/o Sri Kali Charan Bhogta, Vill. Saheda, P.O. Baksidih, P.S. Sikidiri, Dist. Ranchi and Md. Khalid, S/o Md. Rahim, Vill. Kute, P.O. Sandi, P.S. Sikidiri, Dist. Ranchi	Vill. Saheda, P.O. Baksidih, P.S. Sikidiri, Dist. Ranchi and Vill. Kute, P.O. Sandi, P.S. Sikidiri, Dist. Ranchi	2.86	07-10-2007	07-09-2017	NA	NA	07-10-2007	lapes	Non-Captive	23°27'28"	85°36'29"
2	Stone	Sri Bipin Lal, S/o Lt. Chandu Lal, Basant Bihar, Road No. 1 Harmu, and Sri Deepak Bhagat, S/o Lt. Dinesh Bhagat, C/92, Harmu Housing Colony, Ranchi	Road No. 1 Harmu, and , C/92, Harmu Housing Colony, Ranchi	1.05	21/04/2008	20/04/2018	NA	NA	21/04/2008	lapes	Non-Captive	23°23'40.54"	85°31'23.09"
3	Stone	Sri Neeraj Kumar Singh, S/o Sri Brahmdeo Singh, Harihar Singh Road, Morabadi, Dist. Ranchi	Harihar Singh Road, Morabadi, Dist. Ranchi	1.5	12-11-2006	12-10-2016	NA	NA	12-11-2006	lapes	Non-Captive	23°21'0.68"	85°29'39.38"
4	Stone	Sri Satyendra Prasad Agrawal,		1.26	05-10-2006	05-09-2016	NA	NA	05-10-2006	lapes	Non-Captive	23°23'41.79"	85°29'40.16"
5	Stone	M/s R.V. Stone, Prop. Sri R.P. Gupta, S/o Lt. R.D. Prasad, Vill./P.O. Getalsud, Angada, Dist. Ranchi	Vill./P.O. Getalsud, Angada, Dist. Ranchi	1.53	26/06/2009	25/06/2019	NA	NA	26/06/2009	lapes	Non-Captive	23°27'01"	85°34'42"
6	Stone	M/s Sachin Stone, Prop. Sri Fatebahadur Singh, S/o Sri Ramshray Singh, Vill./P.O./P.S. Tatisilwey, Dist. Ranchi	Vill./P.O./P.S. Tatisilwey, Dist. Ranchi	0.98	19/12/2009	18/12/2019	NA	NA	19/12/2009	lapes	Non-Captive	23°21'7.19"	85°29'33.73"
7	Stone	M/s Maa Jagdamba Stone Works, Prop. Sri Sanjiv Kumar, S/o Sri Rajan Prasad Singh, Vill./P.O./P.S. Angada, Dist. Ranchi	Vill./P.O./P.S. Angada, Dist. Ranchi	0.64	08-03-2009	08-02-2019	NA	NA	08-03-2009	lapes	Non-Captive	23°24'0.91"	85°31'14.15"
8	Stone	Smt. Tizrani Devi, W/o Sri Bal Kishore Sahi, Vill/P.O. Jonha, P.S. Angara, Ranchi	Vill/P.O. Jonha, P.S. Angara, Ranchi	1.7	06-04-2011	01-03-2021	NA	NA	06-04-2011	lapes	Non-Captive	23°23'46.11"	85°31'7.1"
9	Stone	M/s Maa Laxmi Industries , Pro. Sri Rajdeo Singh, S/o Sri Jai Singh, Vill./P.O. Namkum, Dist. Ranchi	Vill./P.O. Namkum, Dist. Ranchi	4.75	18/10/2011	17/10/2021	NA	NA	18/10/2011	lapes	Non-Captive	23°23'29.69"	85°29'58.83"
10	Stone	Sri Lal Bibhuti Bhushan Nath Shahdeo, S/o Lal Rajeshwar Nath Shahdeo, Simaliya, Ranchi	Simaliya, Ranchi	1.5	25/22/2010	24/11/2020	NA	NA	25/22/2010	lapes	Non-Captive	23°15'57.16"	85°1'24.28"

11	Stone	Sri Ramesh Ojha, S/o Sri Bans Narayan Ojha, Vill. Sewadih, P.O. Brambe, P.S. Mandar, Dist. Ranchi and Sri Morarji Oraon, S/o Lt. Gahna Oraon, Vill. Gurgai Patratoli, P.O. Gurgai, Dist. Ranchi	Vill. Sewadih, P.O. Brambe, P.S. Mandar, Dist. Ranchi and Vill. Gurgai Patratoli, P.O. Gurgai,dist ranchi	4			NA	NA		lapes	Non-Captive	23°29'33.43"	85°9'6.6"
12	Stone	Sri Aklesh Singh, S/o Sri Bhupal Singh, Vill. Chund, P.O. Bargadi, Dist. Ranchi and Sri Devi Dayal Singh, S/o Lt. Jai Karan Singh, Vill./P.O. Sundil, P.S. Ratu, Dist. Ranchi	Vill. Chund, P.O. Bargadi, Dist. Ranchi and Vill./P.O. Sundil, P.S. Ratu, Dist. Ranchi	1	03-01-2008	28/02/2018	NA	NA	03-01-2008	lapes	Non-Captive	23°32'29.19"	85°9'55.52"
13	Stone	Sri Sheo Nandan Mahto, S/o Lt. Charku Mahto, Vill. Duli, P.O. Diva Nagar, P.S. Khelari, Ranchi	Vill. Duli, P.O. Diva Nagar, P.S. Khelari, Ranchi	1			NA	NA		lapes	Non-Captive	N/A	N/A
14	Stone	M/s Stone Cutters Dadia Gurgai A0 S0 S0 Ltd.		1	06-05-2007	06-04-2017	NA	NA	06-05-2007	lapes	Non-Captive	23°29'36.48"	85°9'5.58"
15	Stone	Sri Laxman Gop, S/o Sri Jagdish Gop, Vill. Sewadih, P.O. Bargada, P.S. Mandar, Ranchi	Vill. Sewadih, P.O. Bargada, P.S. Mandar, Ranchi	0.55	04-10-2007	04-09-2017	NA	NA	04-10-2007	lapes	Non-Captive	23°28'49.42"	85°8'49.76"
16	Stone	Sri Baneshwar Sahu, S/o Lt. Gauri Nath Sahu, Vill. Bansari, P.O. Baraudi, Dist. Ranchi	Vill. Bansari, P.O. Baraudi, Dist. Ranchi	2	01-05-2005	01-04-2015	NA	NA	01-05-2005	lapes	Non-Captive	23°31'29"	85°12'08"
17	Stone	Sri Janardan Sahu, S/o Sri Ramwrat Sahu, Vill. Bansari, P.O. Baraudi, Dist. Ranchi	Vill. Bansari, P.O. Baraudi, Dist. Ranchi	1	12-05-2006	12-04-2016	NA	NA	12-05-2006	lapes	Non-Captive	23°31'17.46"	85°12'2.1"
18	Stone	Sri Anil Kumar Sahu, S/o Sri Ram Kunwar Sahu, Vill./P.O. Chorpa, P.S. Chanho, Ranchi	Vill./P.O. Chorpa, P.S. Chanho, Ranchi	1	29/03/2006	28/03/2016	NA	NA	29/03/2006	lapes	Non-Captive	23°31'55.34"	85°7'17.18"
19	Stone	Sri Janardan Sahu, S/o Sri Ramwrat Sahu, Vill. Bansari, P.O. Baraudi, Dist. Ranchi	Vill. Bansari, P.O. Baraudi, Dist. Ranchi	1	18/05/2004	17/05/2014	NA	NA	18/05/2004	lapes	Non-Captive	23°31'26"	85°12'10"
20	Stone	Sri Sudarshan Prasad Jayswal, S/o Sri Laxmi Narayan Jaiswal, Vill. Nauz, P.O. Ginjothakurgaon, Dist. Ranchi	Vill. Nauz, P.O. Ginjothakurgaon, Dist. Ranchi	1	20/12/2005	19/12/2015	NA	NA	20/12/2005	lapes	Non-Captive	23°31'45"	85°10'02"
21	Stone	Sri Dinesh Prasad, S/o Sri Jageshwar Prasad, Vill. Sosai, P.O. Budmu, Dist. Ranchi	Vill. Sosai, P.O. Budmu, Dist. Ranchi	1	12-06-2005	12-05-2015	NA	NA	12-06-2005	lapes	Non-Captive	23°35'58.09"	85°10'25.05"
22	Stone	Sri Laxmi Narayan Prasad, and Sri Bhola Prasad, S/o Lt. Thakur Prasad, Vill. Nauz, P.O. Ginjothakurgaon, Dist. Ranchi	Vill. Nauz, P.O. Ginjothakurgaon, Dist. Ranchi	2	08-03-2010	08-02-2020	NA	NA	08-03-2010	lapes	Non-Captive	23°32'46"	85°8'35"
23	Stone	Sri Dasrath Mahto, S/o Sri Anu Mahto, Vill./P.O. Makka, P.S. Budmu, Dist. Ranchi	Vill./P.O. Makka, P.S. Budmu, Dist. Ranchi	1.2	01-10-2007	01-09-2017	NA	NA	01-10-2007	lapes	Non-Captive	23°31'56"	85°09'15"
24	Stone	Sri Panne Nath Mahto, S/o Lt. Budhu Mahto, Vill. Surid, P.O. Budmu, Dist. Ranchi	Vill. Surid, P.O. Budmu, Dist. Ranchi	2	15/05/2008	14/05/2018	NA	NA	15/05/2008	lapes	Non-Captive	23°32'19.38"	85°10'23.31"

25	Stone	Sri Laxmi Narayan Prasad, S/o Lt. Thakur Prasad, Vill. Nauz, P.O. Ginjothakurgaon, Dist. Ranchi	Vill. Nauz, P.O. Ginjothakurgaon, Dist. Ranchi	2	14/04/2010	13/04/2020	NA	NA	14/04/2010	lapes	Non-Captive	23°31'46"	85°10'03'
26	Stone	M/s Stone Cutters Kulbe Audhogik Sahyog Samiti Ltd., Mantri Sri Somra Munda, S/o Lt. Chaita Munda, Vill. Kulbe, P.O. Ginjothakurgaon, P.S. Budmu, Ranchi	Vill. Kulbe, P.O. Ginjothakurgaon, P.S. Budmu, Ranchi	2	11-06-2007	11-05-2017	NA	NA	11-06-2007	lapes	Non-Captive	23°32'17.82"	85°10'21.58"
27	Stone	Sri Kant Lal Tirkey, S/o Sri Shankar Tirkey, Vill. Adra, P.O. Gurgao, Ranchi and Sri Basant Kumar Sahu, S/o Sri Narayan Sahu, Vill./P.O. Mudma, P.S. Mandar, Dist. Ranchi	Vill. Adra, P.O. Gurgao, Ranchi and Vill./P.O. Mudma, P.S. Mandar, Dist. Ranchi	2	27/10/2008	26/10/2018	NA	NA	27/10/2008	lapes	Non-Captive	23°29'20.7"	85°8'15.71"
28	Stone	Sri Jhibra Munda, S/o Sri Etwa Munda, Vill. Kulwe, P.O. Ginjothakurgaon, P.S. Budmu, Ranchi	Vill. Kulwe, P.O. Ginjothakurgaon, P.S. Budmu, Ranchi	2	17/05/2008	16/05/2018	NA	NA	17/05/2008	lapes	Non-Captive	23°32'22.25"	85°10'20.61"
29	Stone	Sri Ram Pratap Munda, S/o Sri Anand Munda, Vill. Kulwe, P.O. Ginjothakurgaon, P.S. Budmu, Ranchi	Vill. Kulwe, P.O. Ginjothakurgaon, P.S. Budmu, Ranchi	2.75	28/11/2008	27/11/2018	NA	NA	28/11/2008	lapes	Non-Captive	23°32'12.16"	85°10'0.95"
30	Stone	Sri Khalil Ansari, S/o Md. Kurban Ansari, Vill./P.O. Mudma, P.S. Mandar, Dist. Ranchi	Vill./P.O. Mudma, P.S. Mandar, Dist. Ranchi	2.78	18/10/2008	17/10/2018	NA	NA	18/10/2008	lapes	Non-Captive	23°29'26.54"	85°9'7.14"
31	Stone	Sri Samsul Seikh, S/o Sri Alim Seikh, and Sri Bindeshwar Tirkey, S/o Lt. Gonda Tirkey, Sri Sulendra Mahli, S/o Sri Dineshwar Mahli, Vill. Adra, P.O. Gurgai, P.S. Budmu, Ranchi	Vill. Adra, P.O. Gurgai, P.S. Budmu, Ranchi	2	25/10/2008	24/20/2018	NA	NA	25/10/2008	lapes	Non-Captive	23°29'24.99"	85°8'42.17"
32	Stone	M/s Mahila Mata Samiti Samooh Prop. 1 Smt Roobina Khatoon and Smt. Soni Devi, Vill. Gurgai Patratoli, P.O. Gurgai, P.S. Budmu, Dist. Ranchi	Vill. Gurgai Patratoli, P.O. Gurgai, P.S. Budmu, Dist. Ranchi	3	02-09-2009	02-08-2019	NA	NA	02-09-2009	lapes	Non-Captive	23°29'38.58"	85°9'0.54"
33	Stone	Sri Haribansh Yadav, S/o Sri Sadhu Mahto, Vill. Dadiya, P.O. Gurgai, P.S. Budmu, Ranchi	Vill. Dadiya, P.O. Gurgai, P.S. Budmu, Ranchi	3.5	22/05/2009	21/05/2019	NA	NA	22/05/2009	lapes	Non-Captive	23°31'53"	85°8'40"
34	Stone	Sri Manowar Alam, S/o Lt. Md. Hussain, Vill./P.O. Brambe, P.S. Mandar, Ranchi	Vill./P.O. Brambe, P.S. Mandar, Ranchi	1.3	22/05/2009	21/05/2019	NA	NA	22/05/2009	lapes	Non-Captive	23°29'38.71"	85°9'3.97"
35	Stone	Sri Rajnikant Chaubey, S/o Sri Ram Prasad Chaubey, and Sri Rangnath Chaubey, S/o Sri Dinanath Chaubey, Vill. Nauz, P.O. Gurgai, Dist. Ranchi	Vill. Nauz, P.O. Gurgai, Dist. Ranchi	1	21/07/2009	20/07/2019	NA	NA	21/07/2009	lapes	Non-Captive	23°32'06"	85°09'18"

36	Stone	Sri Lal Sunil Kr. Nath Shahdeo, S/o Lt. Lal Ajit Kumar Nath Shahdeo, Vill./P.O. Ginjothakurgaon, Budmu, Ranchi	Vill./P.O. Ginjothakurgaon, Budmu, Ranchi	1	10-07-2009	10-06-2019	NA	NA	10-07-2009	lapes	Non-Captive	23°31'46"	85°09'57"
37	Stone	Sri Binay Shahdeo, S/o Sri Lal Jai Kumar Nath Shahdeo, Vill. Ginjothakurgaon, P.O. Budmu, Ranchi	Vill. Ginjothakurgaon, P.O. Budmu, Ranchi	1	10-07-2009	10-06-2019	NA	NA	10-07-2009	lapes	Non-Captive	23°31'45"	85°10'04"
38	Stone	Sri Charka Munda and Sri Sunil Ojha, P.O./P.S. Ratu, Ranchi	P.O./P.S. Ratu, Ranchi	4	30/06/2010	29/06/2020	12-02-2014	12-01-2024	30/06/2010	lapes	Non-Captive	23°29'26.3"	85°8'47.85"
39	Stone	1. Sri Bimal Tirkey, S/o Shahdeo Tirkey, 2. Sri Shankar Mahto, S/o Lt. Shahdeo Mahto, 3. Sri Jagarnath Mahto, S/o Balu Mahto, Vill. Adra, P.O. Gurgai, P.S. Bumdu, Ranchi	Vill. Adra, P.O. Gurgai, P.S. Bumdu, Ranchi	1	01-07-2008	01-06-2018	NA	NA	01-07-2008	lapes	Non-Captive	23°29'8.91"	85°8'26.84"
40	Stone	Sri Raju Khalkho, S/o Sri Sadhnu Oraon, Vill. Sewadih, P.O.Bargadi, Ranchi and Sri Sashikant Ojha, S/o Sri Bans Narayan Ojha, Vill. Ojhwalia, P.S. Kochas, Dist. Rohtas	Vill. Sewadih, P.O.Bargadi, Ranchi and Vill. Ojhwalia, P.S. Kochas, Dist. Rohtas	0.6	13/03/07	03-12-2017	NA	NA	13/03/07	lapes	Non-Captive	N/A	N/A
41	Stone	sri Budhdeo Oraon, S/o Lt. Charka Oraon, Vill. Dadiya, P.O. Gurgai, P.S. Budmu, Dist. Ranchi	Vill. Dadiya, P.O. Gurgai, P.S. Budmu, Dist. Ranchi	1	11-02-2007	11-01-2017	NA	NA	11-02-2007	lapes	Non-Captive	23°31'45""	85°10'02"
42	Stone	Sri Pawan Jaiswal, S/o Sri Prem Jaiswal, Vill./P.O. Ginjothakurgaon, P.S. Budmu, Ranchi	Vill./P.O. Ginjothakurgaon, P.S. Budmu, Ranchi	1.18	03-04-2011	03-03-2021	NA	NA	03-04-2011	lapes	Non-Captive	23°31'58"	85°09'13"
43	Stone	Sri Sidhnath Mahto, S/o Sri Indranath Mahto, Vill. Ginjothakurgaon, Dist. Ranchi	Vill. Ginjothakurgaon, Dist. Ranchi	3	01-08-2009	01-07-2019	NA	NA	01-08-2009	lapes	Non-Captive	23°12'20"	85°09'13"
44	Stone	1. Sri Ramas Oraon, S/o Bhoura Oraon, Vill. Sewadih, P.O. Brambe Barmari, P.S. Mandar, Dist. Ranchi 2. Sri Mahabir Oraon, S/o Sri Bhanu Oraon, Vill. Sewadih, P.O. Brambe Barmari, P.S. Mandar, Dist. Ranchi 3. Sri Mahesh Tirkey, S/o Shankar Tirkey, Vill. Adra, P.O. Gurgai, P.S. Budmu, Ranchi	Vill. Sewadih, P.O. Brambe Barmari, P.S. Mandar, Dist. Ranchi and Vill. Sewadih, P.O. Brambe	1.75	01-07-2008	01-06-2018	NA	NA	01-07-2008	lapes	Non-Captive	23°29'20.63"	85°8'53.87"
45	Stone	Sri Parwej Alam, S/o Sri Abdul Kudus, Vill./P.O. Tangar, P.S. Chanho, Dist. Ranchi	Vill./P.O. Tangar, P.S. Chanho, Dist. Ranchi	2.5	22/05/2008	21/05/2018	NA	NA	22/05/2008	lapes	Non-Captive	23°29'19.5"	85°1'25.27"
46	Stone	Sri Umesh Sahi, S/o Lt. Ripusudan Sahi, Vill./P.O. Tangar, Ranchi	Vill./P.O. Tangar, Ranchi	2.53	25/04/2007	24/04/2017	NA	NA	25/04/2007	lapes	Non-Captive	23°29'16.62"	85°0'41.31"

47	Stone	Md. Jawed Akhtar, S/o Lt. Imdad Hussain, Vill./P.O. Tangar, P.S. Chanho, Dist. Ranchi	Vill./P.O. Tangar, P.S. Chanho, Dist. Ranchi	1	06-02-2008	06-01-2018	17-06-2016	16-06-2026	06-02-2008	lapes	Non-Captive	23°29'42.02"	85°0'54.16"
48	Stone	Sri Ajeet Kumar Singh,S/o Lt. Jagat Pal Singh, Vill. Masmano, P.S. Chanho, Dist. Ranchi	Vill. Masmano, P.S. Chanho, Dist. Ranchi	1.5	13/06/2008	06-12-2018	04-02-2016	04-01-2026	13/06/2008	lapes	Non-Captive	23°29'42.02"	85°0'54.16"
49	Stone	Sri Yogendra Yadav, S/o Lal deo Yadav, Vill. Badhaiya, P.O. Tangar, P.S. Chanho, Dist. Ranchi	Vill. Badhaiya, P.O. Tangar, P.S. Chanho, Dist. Ranchi	1.16	31/07/2008	30/07/2018	NA	NA	31/07/2008	lapes	Non-Captive	23°29'42.02"	85°0'54.16"
50	Stone	Sri Sukhdeo Oraon, S/o Lt. Etwa Oraon, Vill. Bijupara, P.O. Tangar, P.S. Chanho, Ranchi	Vill. Bijupara, P.O. Tangar, P.S. Chanho, Ranchi	1.2	01-11-2010	01-10-2020	NA	NA	01-11-2010	lapes	Non-Captive	23°29'42.02"	85°0'54.16"
51	Stone	Sri Vishwanath Pratap Singh, S/o Sri Krishna Singh, Vill. Rol Badhaiya, P.O. Tangar, P.S. Chanho, Ranchi	Vill. Rol Badhaiya, P.O. Tangar, P.S. Chanho, Ranchi	1	01-11-2010	01-10-2020	NA	NA	01-11-2010	lapes	Non-Captive	23°29'18.98"	85°1'28.36"
52	Stone	Sri Sujit Kumar Sahu, S/o Sri Lal Prasad Sahu, Vill./P.O. Choreya, Chanho, Ranchi	Vill./P.O. Choreya, Chanho, Ranchi	1	25/07/2010	24/07/2020	NA	NA	25/07/2010	lapes	Non-Captive	23°29'15.06"	85°3'35.07"
53	Stone	Sri Bhuneshwar Lal, S/o Lt. Bigal Das, Vill. Rol Badhaiya, P.O. Tangar, P.S. Chanho, Ranchi	Vill. Rol Badhaiya, P.O. Tangar, P.S. Chanho, Ranchi	1	31/07/2010	30/07/2020	NA	NA	31/07/2010	lapes	Non-Captive	23°29'42"	85°00'34"
54	Stone	Sri Dilip Singh, S/o Sri Sagar Singh, Vill. Murto, P.S. Chanho, P.O. Silagai, Dist. Ranchi	Vill. Murto, P.S. Chanho, P.O. Silagai, Dist. Ranchi	2	04-02-2007	04-01-2017	NA	NA	04-02-2007	lapes	Non-Captive	N/A	N/A
55	Stone	Sri Avinash Kumar Singh		2.6	25/10/2007	24/10/2017	NA	NA	25/10/2007	lapes	Non-Captive	23°27'14.98"	85°15'20.89"
56	Stone	Sri Dinesh Karkatta, S/o Sri Govind Kerketta, Vill. Hehal Tangar Toli, P.O. Hehal, Ranchi	Vill. Hehal Tangar Toli, P.O. Hehal, Ranchi	1	05-02-2011	05-01-2021	NA	NA	05-02-2011	lapes	Non-Captive	23°25'31.75"	85°15'32.92"
57	Stone	M/s Vaishnav Stone Works, Prop. Sri Bimleshwar Dayal Singh, S/o Ratneshwar Dayal Singh, Vill. Piska More Dayal Nagar, Ranchi	Vill. Hehal Tangar Toli, P.O. Hehal, Ranchi	2	17/09/2010	16/09/2020	NA	NA	17/09/2010	lapes	Non-Captive	23°25'15.04"	85°14'59.9"
58	Stone	Sri Safikh Ansari, S/o Sakhir Ansari, Vill. Hothkonki, P.O. Ichapidi, Ranchi	Vill. Hothkonki, P.O. Ichapidi, Ranchi	1	12-03-2010	12-02-2020	NA	NA	12-03-2010	lapes	Non-Captive	23°31'16.53"	85°16'34.7"
59	Stone	Sri Shyam Sunder Ram, S/o Lt. Dhanu Ram, Vill. Balu, P.S. Pithoriya, Kanke, Dist. Ranchi	Vill. Balu, P.S. Pithoriya, Kanke, Dist. Ranchi	2	25/02/2007	24/02/2017	NA	NA	25/02/2007	lapes	Non-Captive	23°30'08"	85°19'33"
60	Stone	Sri Manoj Kumar Singh,		2.23	23/12/2008	22/12/2018	NA	NA	23/12/2008	lapes	Non-Captive	23°25'46.2"	85°15'24.8"
61	Stone	Sri Ram Naresh Mahto, S/o Sri Prayag Mahto, Devi Mandap Road, Hesal, Ranchi	Devi Mandap Road, Hesal, Ranchi	1.75	06-02-2010	06-01-2020	NA	NA	06-02-2010	lapes	Non-Captive	23°26'54.56"	85°15'18.95"

62	Stone	Sri Lal Bholanath Shahdeo, S/o Lt. Lal Rajeshwar Nath Shahdeo, Vill. Simaliya, Ratu, Ranchi	Vill. Simaliya, Ratu, Ranchi	3	03-04-2011	03-03-2021	NA	NA	03-04-2011	lapes	Non-Captive	23°22'20.33"	85°14'46.2"
63	Stone	Sri Sachin Agrawal, S/o Sri Santosh Agrawal, Khelari Bazar, P.S. Mekluskiganj, Dist. Ranchi	Khelari Bazar, P.S. Mekluskiganj, Dist. Ranchi	3	17/12/2011	16/12/2021	NA	NA	17/12/2011	lapes	Non-Captive	23°25'31.75"	85°15'32.92"
64	Stone	Sri Nasimul Huqe, S/o Sarafful Haqe, Vill. Dumri, P.O. Charki Dumri, P.S. Mandar, Dist. Ranchi	Vill. Dumri, P.O. Charki Dumri, P.S. Mandar, Dist. Ranchi	1.5			NA	NA		lapes	Non-Captive	23°24'51.05"	84°59'25.48"
65	Stone	Sri Sahabuddin Ansari, S/o Lt. Madar Ansari, Vill. Jhikpur, P.O. Jhikpur Dumri, P.S. Mandar, Ranchi	Vill. Jhikpur, P.O. Jhikpur Dumri, P.S. Mandar, Ranchi	1	12-06-2007	12-05-2017	NA	NA	12-06-2007	lapes	Non-Captive	23°24'51.05"	84°59'25.48"
66	Stone	Ali Mohammad Ansari		1.62	07-02-2004	07-01-2014	NA	NA	07-02-2004	lapes	Non-Captive	23°22'36.88"	85°4'7.27"
67	Stone	M/s Chaubey Stone Works, Prop. Sri Praveen Chauber, Station Road, Rai, Ranchi	Station Road, Rai, Ranchi	10.8	15/03/2010	14/03/2020	NA	NA	15/03/2010	lapes	Non-Captive	23°27'26.9"	85°4'15.18"
68	Stone	Smt. Neelam Kispota, W/o Shahdeo Kispotta, Vill. Jojosiring, P.O. Hatia, Dist. Ranchi	Vill. Jojosiring, P.O. Hatia, Dist. Ranchi	1.6	01-07-2008	01-06-2018	NA	NA	01-07-2008	lapes	Non-Captive	23°15'40"	85°16'45"
69	Stone	Sri Manoj Kachap, S/o Sri Sukra Kachapp, Vill. Pugru, P.O. Hatia, Dist. Ranchi	Vill. Pugru, P.O. Hatia, Dist. Ranchi	1			NA	NA		lapes	Non-Captive	23°12'20"	85°19'17"
70	Stone	Smt. Pratima Oroan, W/o Sri Ramesh Oraon, Vill./P.O. Jamchuwa, P.S. Namkum, Ranchi	Vill./P.O. Jamchuwa, P.S. Namkum, Ranchi	1	31/11/2007	30/11/2017	NA	NA	31/11/2007	lapes	Non-Captive	23°15'38.82"	85°27'3.82"
71	Stone	Sri Bhuwal Kachap, S/o Lt. Somra Kachap, Vill. Thurkitola, Balsiring, P.S. Hatia, Ranchi	Vill. Thurkitola, Balsiring, P.S. Hatia, Ranchi	1	06-05-2007	06-04-2017	NA	NA	06-05-2007	lapes	Non-Captive	23°15'46"	85°16'53"
72	Stone	Sri Birbal Baitha,		1.2			NA	NA		lapes	Non-Captive	23°21'45"	85°28'27"
73	Stone	M/s Hosana Stone Works, Prop. Sri Anil Nayak, S/o Sri Kaleshwar Nayak, K.M. Mallik Gali, H.B. Road, Lalpur, Ranchi	K.M. Mallik Gali, H.B. Road, Lalpur, Ranchi	1			NA	NA		lapes	Non-Captive	23°13'40"	85°27'49"
74	Stone	Sri Sanjay Kumar, S/o Sri Baijnath Sahu, Vill./P.O. Tatisilwey, Dist. Ranchi	Vill./P.O. Tatisilwey, Dist. Ranchi	2.67	14/02/2008	13/02/2018	NA	NA	14/02/2008	lapes	Non-Captive	23°21'54"	85°28'04"
75	Stone	Sri Ranjit Kumar, S/o Sri Kishori Prasad, Dhurwa, Ranchi	Dhurwa, Ranchi	2.2	06-05-2007	06-04-2017	NA	NA	06-05-2007	lapes	Non-Captive	23°12'18.72"	85°18'31.08"
76	Stone	Sri Manish Kumar, S/o Sri Binod Kumar, Vill. Lower Karamtoli, Morabadi, Dist. Ranchi	Vill. Lower Karamtoli, Morabadi, Dist. Ranchi	1.5	06-05-2007	06-04-2017	NA	NA	06-05-2007	lapes	Non-Captive	23°15'49"	85°16'55"
77	Stone	Sri Sunil Kumar Lakda, S/o Sri Sukher Lakda, Vill. Tupudana, P.O./P.S. Hatia, Dist. Ranchi	Vill. Tupudana, P.O./P.S. Hatia, Dist. Ranchi	0.91	12-04-2006	12-03-2016	NA	NA	12-04-2006	lapes	Non-Captive	23°14'11.66"	85°18'36.19"

78	Stone	Smt. Sheela Singh, W/o Sri Ravi Bhushan Singh, Bhushan Niwas, Sukhla Colony, Ranchi	Bhushan Niwas, Sukhla Colony, Ranchi	2	18/06/2006	17/06/2016	NA	NA	18/06/2006	lapes	Non-Captive	23°11'14.11"	85°20'14.17"
79	Stone	Sri Deepak Kumar and Roopak Kumar Singh		6.55	06-11-2004	06-10-2014	NA	NA	06-11-2004	lapes	Non-Captive	23°15'43.08"	85°26'49.88"
80	Stone	M/s Munda Stone Works		2	04-10-2006	04-09-2016	NA	NA	04-10-2006	lapes	Non-Captive	23°14'48"	85°15'18"
81	Stone	Sri Vijay Kumar Gupta		3	25/05/2009	24/05/2019	NA	NA	25/05/2009	lapes	Non-Captive	23°14'17.89"	85°18'36.04"
82	Stone	Sri Santosh Kumar Singh		1.75	05-03-2005	05-02-2015	NA	NA	05-03-2005	lapes	Non-Captive	23°12'20"	85°19'17"
83	Stone	Sri Lal Sachindra Nath Shahdeo, S/o Sri Lal Bimal Nath Shahdeo, Vill. Balsiring, P.O. Hatia, Ranchi	Vill. Balsiring, P.O. Hatia, Ranchi	2.4	05-03-2005	05-02-2015	NA	NA	05-03-2005	lapes	Non-Captive	23°15"38"	85°16'53"
84	Stone	Smt. Sheela Singh, W/o Sri Ravi Bhushan Singh, Bhushan Niwas, Sukhla Colony, Ranchi	Bhushan Niwas, Sukhla Colony, Ranchi	2.75	31/05/2008	30/05/2013	NA	NA	31/05/2008	lapes	Non-Captive	23°11'14.11"	85°20'14.17"
85	Stone	Sri Rajendra Prasad Somani, Tupudana, Dhurwa, Ranchi	Tupudana, Dhurwa, Ranchi	2.25	04-12-2003	04-11-2013	NA	NA	04-12-2003	lapes	Non-Captive	23°12'17.66"	85°18'34.63"
86	Stone	Sri Bipin Kumar Tiwari, S/o Sri Ambika Tiwari, Hesal, Devi Mandap Road, P.O. Hehal, P.S. Sukhdeonagar, Ranchi	Hesal, Devi Mandap Road, P.O. Hehal, P.S. Sukhdeonagar, Ranchi	2	12-06-2011	12-05-2021	NA	NA	12-06-2011	lapes	Non-Captive	23°13'37.34"	85°16'9.59"
87	Stone	Sri Lal Deepak Nath Shahdeo, S/o Lal Naresh Nath Shahdeo, Vill. Balsiring, P.O. Hatia, Ranchi	Vill. Balsiring, P.O. Hatia, Ranchi	2.25	13/10/2010	10-12-2020	NA	NA	13/10/2010	lapes	Non-Captive	23°15'50"	85°16'53"
88	Stone	Pandey Nitendra Nath Roy, S/o Pandey Birendra Nath Roy, Devi Mandap Road, Hesal, P.O. Hehal, P.S. Sukhdeonagar, Ranchi	Devi Mandap Road, Hesal, P.O. Hehal, P.S. Sukhdeonagar, Ranchi	1	07-07-2011	07-06-2021	NA	NA	07-07-2011	lapes	Non-Captive	23°18'20.85"	85°27'43.91"
89	Stone	Sri Jagarnath Prajapati, S/o Sri Nand Kishore Prajapati, Vill. Tupudana, P.O. Hatia, Ranchi and Sri Jitendra Singh, S/o Sri Ram Krishna Singh, Vill. Tintara, P.O. Koderma, Dist. Koderma	Vill. Tupudana, P.O. Hatia, Ranchi and Vill. Tintara, P.O. Koderma, Dist. Koderma	2	07-01-2011	30/06/2021	NA	NA	07-01-2011	lapes	Non-Captive	23°11'51.49"	85°18'12.62"
90	Stone	Sri Bhola Prasad Singh, S/o Sri Arjun Singh, Club Road, Main Road, Ranchi	Club Road, Main Road, Ranchi	4.35	05-09-2011	05-08-2021	NA	NA	05-09-2011	lapes	Non-Captive	23°18'30.82"	85°27'57.89"
91	Stone	Sri Lal Santosh Nath Shahdeo, S/o Lal Tarkeshwar Nath Shahdeo, VILL. Balsiring, P.O. Hatia, Ranchi	VILL. Balsiring, P.O. Hatia, Ranchi	3	27/04/2011	26/04/2021	NA	NA	27/04/2011	lapes	Non-Captive	23°12'17.8"	85°18'35.1"
92	Stone	Sri Birendra Kumar Singh, S/o Sri Bihari Singh, Vill. Bargawan, P.O./ P.S. Namkum, Ranchi	Vill. Bargawan, P.O./ P.S. Namkum, Ranchi	2	04-04-2011	04-03-2021	NA	NA	04-04-2011	lapes	Non-Captive	23°18'21"	85°27'42"

93	Stone	Sri Vikrant Kumar, S/o Lt. Sachidanand Pd. Singh, Chutia, Ranchi	Chutia, Ranchi	1.18	01-04-2011	01-03-2021	NA	NA	01-04-2011	lapes	Non-Captive	23°15'45"	85°16'46"
94	Stone	Sri Sheo Nayak, S/o Koka Nayak, Tupudana, P.O. Hatia, Ranchi	Hatia, Ranchi	1.24	12-12-2007	12-11-2017	NA	NA	12-12-2007	lapes	Non-Captive	23°15'52"	85°16'48"
95	Stone	Sri Lilu Tirkey, S/o Lt. Munga Tirkey and Sri Pawan Tirkey, S/o Lt. Mangra Tirkey, Vill/P.O. Mahadeotoli, P.S. Namkum, Ranchi	Vill/P.O. Mahadeotoli, P.S. Namkum, Ranchi	1.75	24/06/2010	23/06/2020	NA	NA	24/06/2010	lapes	Non-Captive	23°18'27"	85°28'01"
96	Stone	Sri Tulsi Charan Sahu, S/o Lt. Bal Gobind Sahu, Pawan Colony, Hinoo Chowk, P.S. Doranda, Ranchi	Hinoo Chowk, P.S. Doranda, Ranchi	3.3	30/05/2010	29/05/2020	NA	NA	30/05/2010	lapes	Non-Captive	23°12'18.12"	85°18'39.77"
97	Stone	Sri Abhisekh Kumar Singh, S/o Sri Satyadeo Singh, Hinoo, Ranchi	Hinoo, Ranchi	1.5	29/12/2009	28/12/2019	NA	NA	29/12/2009	lapes	Non-Captive	23°12'21"	85°19'11"
98	Stone	M/s Ram Carring Corp.		1.25	13/03/2006	03-12-2016	NA	NA	13/03/2006	lapes	Non-Captive	23°12'19"	85°19'17"
99	Stone	Sri Raj Kumar, S/o Sri Vijendra Kumar, Court Compound, Circular Road, Ranchi	Court Compound, Circular Road, Ranchi	2	29/12/2009	28/12/2019	NA	NA	29/12/2009	lapes	Non-Captive	23°12'4.372"	85°25'3.34"
100	Stone	M/s Durga Metal Works, Prop. Sri Ranjan Kumar Sinha, S/o Sri Birendra Kumar Sinha, Road No. 2, Hawai Nagar, P.O. Hatia, Ranchi	, Road No. 2, Hawai Nagar, P.O. Hatia, Ranchi	1.05	16/12/2009	15/12/2019	NA	NA	16/12/2009	lapes	Non-Captive	23°13'15.12"	85°19'15.33"
101	Stone	Sri Bimal Kumar, S/o Sri Doman Singh, Irrigation Colony, Dhurwa, Ranchi	Irrigation Colony, Dhurwa, Ranchi	1.82	11-12-2009	11-11-2019	NA	NA	11-12-2009	lapes	Non-Captive	23°15'44"	85°17'00"
102	Stone	Sri Sheo Narayan Singh, S/o Lt. Hansrah Singh, Hatia, Ranchi	Hatia, Ranchi	2	20/12/2009	19/12/2019	NA	NA	20/12/2009	lapes	Non-Captive	23°11'26.8"	85°18'55.12"
103	Stone	Sri Lal Rajendra Nath Shahdeo, S/o Sri Tarkeshwar Nath Shahdeo, Vill. Balsiring, P.O./P.S. Hatia, Ranchi	Vill. Balsiring, P.O./P.S. Hatia, Ranchi	2	12-03-2009	12-02-2019	NA	NA	12-03-2009	lapes	Non-Captive	23°15'43"	85°16'49"
104	Stone	Dhananjay Mahto, S/o Sri Jaglal Mahto, Vill. Lali Rol Toli, P.O./P.S. Namkum, Ranchi	Vill. Lali Rol Toli, P.O./P.S. Namkum, Ranchi	1.3	11-12-2009	11-11-2019	NA	NA	11-12-2009	lapes	Non-Captive	23°18'25.57"	85°28'0.21"
105	Stone	M/s Priya Stone , Sri Uma Singh, W/o Sri Harish Singh, Vill./P.O. Tatisilwey, Dist. Ranchi	Vill./P.O. Tatisilwey, Dist. Ranchi	1	11-12-2009	11-11-2019	NA	NA	11-12-2009	lapes	Non-Captive	23°21'58"	85°28'11"
106	Stone	Kali Prajapati, S/o Lt. Ram Waran Prajapati, Vill. Tupudana, P.O. Hatia, Ranchi	Vill. Tupudana, P.O. Hatia, Ranchi	2.5	15/10/2009	14/10/2019	NA	NA	15/10/2009	lapes	Non-Captive	23°12'11.91"	85°18'37.18
107	Stone	Smt. Chandeshwari Devi, W/o Sri Aslok Yadav, Q.No. B- 19, Sector- 3, H.E.C., Dhurwa, Ranchi	Q.No. B- 19, Sector- 3, H.E.C., Dhurwa, Ranchi	1	17/08/2009	16/08/2019	NA	NA	17/08/2009	lapes	Non-Captive	23°15'47"	85°16'49"

108	Stone	Smt. Rinki Singh, W/o Lt. Rakesh Ranjan Singh, Q.No. B- 733, Sector- 2, Dhurwa, Ranchi	Q.No. B- 733, Sector- 2, Dhurwa, Ranchi	1	23/05/2009	22/05/2019	NA	NA	23/05/2009	lapes	Non-Captive	23°13'15.47"	85°19'5.44"
109	Stone	Sri Brajesh Stone , Pro. Meera Singh, Vill./P.O. Tatisilwey, Ranchi	Vill./P.O. Tatisilwey, Ranchi	1.8	04-05-2009	04-04-2019	NA	NA	04-05-2009	lapes	Non-Captive	23°22'04"	85°27'51"
110	Stone	Sri Krishna Mahto, S/o Sri Ganesh Mahto, Vill./P.O. Tatisilwey, Ranchi	Vill./P.O. Tatisilwey, Ranchi	1	29/01/2009	28/01/2019	NA	NA	29/01/2009	lapes	Non-Captive	23°22'01"	85°28'01"
111	Stone	Sri Binod Kumar, S/o Sri Raghaw Singh, P.O. Hatia, P.S. Jagarnathpur, Ranchi	P.O. Hatia, P.S. Jagarnathpur, Ranchi	1	06-05-2008	06-04-2018	NA	NA	06-05-2008	lapes	Non-Captive	23°13'14.76"	85°19'11.93"
112	Stone	Sri Lilu Sahu, S/o Lt. Bandhu Sahu, Vill./P.O. Hatia, Dist. Ranchi	Vill./P.O. Hatia, Dist. Ranchi	2	06-02-2008	06-01-2018	NA	NA	06-02-2008	lapes	Non-Captive	23°15'40"	85°17'20"
113	Stone	Sri Ram Bilas Sarda, S/o Lt. Ram Kumar Sharda, Nai Mohalla, Doranda, Ranchi	Nai Mohalla, Doranda, Ranchi	1.13	03-04-2008	03-03-2018	NA	NA	03-04-2008	lapes	Non-Captive	23°16'22"	85°21'01"
114	Stone	Sri Raj Gautam, S/o Phuna Sahu, Vill./P.O. Hatia, P.S. Jagarnathpur, Dist. Ranchi	Vill./P.O. Hatia, P.S. Jagarnathpur, Dist. Ranchi	2	03-12-2008	03-11-2018	NA	NA	03-12-2008	lapes	Non-Captive	23°12'7.65"	85°18'24.59"
115	Stone	Sri Ibrar Ansari, S/o Sri Rojid Ansari, Vill. Pindarkom, P.O. Sithiyo, P.S. Dhurwa, Dist. Ranchi	Vill. Pindarkom, P.O. Sithiyo, P.S. Dhurwa, Dist. Ranchi	1.2	14/02/2008	13/02/2018	NA	NA	14/02/2008	lapes	Non-Captive	23°15'43.27"	85°15'54.16"
116	Stone	Sri Vijay Toppo, S/o Bandhana Toppo, Mahadeotoli, Rajaulatu, Ranchi	Mahadeotoli, Rajaulatu, Ranchi	1.82	08-04-2010	08-03-2020	NA	NA	08-04-2010	lapes	Non-Captive	23°18'21"	85°27'35"
117	Stone	Sri Ranjan Kumar and Sri Laxam Rajak, Kadru, Ranchi	Kadru, Ranchi	1.7	23/09/2010	22/09/2020	NA	NA	23/09/2010	lapes	Non-Captive	23°11'29.96"	85°18'51.95"
118	Stone	Sri Vishal Kumar Tiwari, S/o Sri Virendra Tiwari, Gauri Shankar Nagar, P.O./P.S. Doranda, Ranchi	Gauri Shankar Nagar, P.O./P.S. Doranda, Ranchi	2	29/11/2007	28/11/2017	NA	NA	29/11/2007	lapes	Non-Captive	23°12'8.21"	85°18'24.1"
119	Stone	Sri Ranjit Singh, S/o Sri Manmohan Singh, Vill. Mansarowar, House No. 8, Asselori Chowk, P.O. Hatia, P.S. Dhurwa, Ranchi	Vill. Mansarowar, House No. 8, Asselori Chowk, P.O. Hatia, P.S. Dhurwa, Ranchi	3	03-02-2009	03-01-2019	NA	NA	03-02-2009	lapes	Non-Captive	23°12'11.57"	85°18'36.82"
120	Stone	Sri Kameshwar Prasad Kunwar, S/o Sri Jagarnath Mahto, Vill. Silwey, P.O. Tatisilwey, Ranchi	Vill. Silwey, P.O. Tatisilwey, Ranchi	1	22/05/2009	21/05/2019	NA	NA	22/05/2009	lapes	Non-Captive	23°21'48"	85°18'11"
121	Stone	Sri Mangra Kachap, S/o Sri Duka Kachap, Vill. Kiski, P.O. Hulhundu, P.S. Hatia, Ranchi	Vill. Kiski, P.O. Hulhundu, P.S. Hatia, Ranchi	1.95	07-10-2009	07-09-2019	NA	NA	07-10-2009	lapes	Non-Captive	23°14'09"	85°19'48"
122	Stone	M/s Mahadeotoli Puther Cutting, Part. 1. Sri Etwa Toppo, S/o Lt. Nathu Toppo 2. Sri Mukesh Badaik, S/o Sri Gupteshwar Baraik, Vill. Mahadeotoli, Rajaulatu, Ranchi	Vill. Mahadeotoli, Rajaulatu, Ranchi	5	30/10/2009	29/10/2019	NA	NA	30/10/2009	lapes	Non-Captive	23°18'24.04"	85°28'6.73"

123	Stone	Sri Shailendra Pratap Narayan Singh, S/o Sri Rana Pratap Singh, Morabadi, Harihar Singh, Jamindar House, P.S. Bariatu, Ranchi	Morabadi, Harihar Singh, Jamindar House, P.S. Bariatu, Ranchi	1.2	01-11-2010	01-10-2020	NA	NA	01-11-2010	lapes	Non-Captive	23°21'45"	85°28'12"
124	Stone	Sri Ram Krishna Mahto, S/o Ganesh Mahto, Vill. Ambatoli, P.O./P.S. Tatisilwey, Ranchi	Vill. Ambatoli, P.O./P.S. Tatisilwey, Ranchi	1	01-11-2010	01-10-2020	NA	NA	01-11-2010	lapes	Non-Captive	23°22'01"	85°28'01"
125	Stone	Sri Ratnu Kujur, S/o Sri Ratan Kujur, Vill./P.O. Mahilong, P.S. Tatisilwey, Ranchi	Vill./P.O. Mahilong, P.S. Tatisilwey, Ranchi	2	01-11-2010	01-10-2020	NA	NA	01-11-2010	lapes	Non-Captive	23°21'00"	85°25'23"
126	Stone	Sri Mangal Toppo, S/o Sukhram Toppo, Mahadeotoli, Rajaulatu, Namkum, Ranchi	Mahadeotoli, Rajaulatu, Namkum, Ranchi	1.25	05-12-2010	05-11-2020	NA	NA	05-12-2010	lapes	Non-Captive	23°18'22"	85°27'32"
127	Stone	M/s Satyam Stone Works, Prop. Smt. Krishna Sagar, W/o Sri Anant Sagar, H 44, Harmu Housing Colony, Ranchi	H 44, Harmu Housing Colony, Ranchi	4	19/10/2009	18/10/2019	NA	NA	19/10/2009	lapes	Non-Captive	23°11'26.27"	85°19'0.68"
128	Stone	Sri Birsa Tirkey, S/o Sri Budhu Tirkey, Vill. Bermad, P.O. Hatia, Dist. Ranchi	Vill. Bermad, P.O. Hatia, Dist. Ranchi	1	26/03/2011	25/03/2021	NA	NA	26/03/2011	lapes	Non-Captive	23°15'42"	85°17'17"
129	Stone	Sri Binod Oraon, S/o Lt. Charku Oraon, Vill. Balsiring, P.O. Hatia, P.S. Hatia (Dhurwa), Dist. Ranchi	Vill. Balsiring, P.O. Hatia, P.S. Hatia (Dhurwa), Dist. Ranchi	1	14/03/2011	13/03/2021	NA	NA	14/03/2011	lapes	Non-Captive	23°15'44"	85°16'44"
130	Stone	Sri Manoj Kachap, S/o Sri Sukra Kachap, Vill. Pugru, Kubatoli, P.O. Hatia, Ranchi	Vill. Pugru, Kubatoli, P.O. Hatia, Ranchi	0.72	14/03/2011	13/03/2021	NA	NA	14/03/2011	lapes	Non-Captive	23°12'17"	85°17'49"
131	Stone	Smt. Anita Devi, D/o Lt. Sukhdeo Sahni, Vill. Aara, P.O. Mahilong, P.S. Tatisilwey, Dist. Ranchi	Vill. Aara, P.O. Mahilong, P.S. Tatisilwey, Dist. Ranchi	1.25	14/03/2011	13/03/2021	NA	NA	14/03/2011	lapes	Non-Captive	23°20'58"	85°25'24"
132	Stone	Sri Naresh Oraon, S/o Lt. Birsa Oraon, Vill. Lalkhatanga, Naya Bhusur, P.O./ P.S. Hatia, Dist. Ranchi	Vill. Lalkhatanga, Naya Bhusur, P.O./ P.S. Hatia, Dist. Ranchi	0.97	18/05/2011	10-04-2020	NA	NA	18/05/2011	lapes	Non-Captive	23°14'41.23"	85°25'11.46"
133	Stone	Sri Mahesh Hembrom, S/o Sri Laxman Hembron, Vill. Mahadeotoli, P.O. Rajaulatu, P.S. Namkum, Ranchi	Vill. Mahadeotoli, P.O. Rajaulatu, P.S. Namkum, Ranchi	1.75	24/05/2011	23/05/2021	NA	NA	24/05/2011	lapes	Non-Captive	23°18'33.05"	85°27'54.99"
134	Stone	Sri Brajesh Singh, S/o Sri Chandresh Singh, Vill/P.O. Tatisilwey, Ranchi	Vill/P.O. Tatisilwey, Ranchi	1.2	14/03/2011	13/03/2021	NA	NA	14/03/2011	lapes	Non-Captive	23°22'04"	85°27'51"
135	Stone	M/s Maa Kali Metals, Prop. Sri Ravindra Kumar Ghosh, Hatia, Ranchi	Hatia, Ranchi	2.7	06-04-2010	06-03-2020	NA	NA	06-04-2010	lapes	Non-Captive	23°15'04"	85°25'27"
136	Stone	Sai Stone Works, Prop. Smt. Hema Verma, Sukla Colony, Hinoo, Ranchi	Sukla Colony, Hinoo, Ranchi	1	03-04-2011	03-03-2021	NA	NA	03-04-2011	lapes	Non-Captive	23°13'27.43"	85°18'37.79"

137	Stone	Sri Navin Somani, S/o Sri Rajendra Prasad Somani, Tupudana, Hatia, Ranchi	Tupudana, Hatia, Ranchi	1.5	19/02/2011	18/02/2021	NA	NA	19/02/2011	lapes	Non-Captive	23°15'41"	85°16'52"
138	Stone	Sri Shivanand Rai, S/o Vijay Rai, Rajaulatu, Namkum, Ranchi	Rajaulatu, Namkum, Ranchi	2.8	03-04-2011	03-03-2021	NA	NA	03-04-2011	lapes	Non-Captive	23°18'33.05"	85°27'54.99"
139	Stone	Sri Lal Kishun Kumar Roy, S/o Shiv Narayan, Rai, Ulidih, Rajaulatu, Namkum, Ranchi	Rai, Ulidih, Rajaulatu, Namkum, Ranchi	1	03-04-2011	03-03-2021	NA	NA	03-04-2011	lapes	Non-Captive	23°18'27"	85°26'14"
140	Stone	Sri Krishna Mohan Prajapati, S/o Sri Kali Prajapati, Vill. Tupudana Chowk, P.O./P.S. Hatia, Dist. Ranchi	Vill. Tupudana Chowk, P.O./P.S. Hatia, Dist. Ranchi	1.5	07-06-2011	07-05-2021	NA	NA	07-06-2011	lapes	Non-Captive	23°15'26"	85°17'09"
141	Stone	M/s Shankar Stone Works, Prop. Sri Shankar Mahto, S/o Sri Raghunath Mahto, Vill. Haratu, P.O. Tatisilwey, Dist. Ranchi	Vill. Haratu, P.O. Tatisilwey, Dist. Ranchi	1.26	18/05/2004	17/05/2014	NA	NA	18/05/2004	lapes	Non-Captive	23°20'57"	85°26'17"
142	Stone	Smt. Geeta Sharma, W/o Lt. Arun Kumar, Namkum Tea Garden, P.S. Namkum, Dist. Ranchi	Namkum Tea Garden, P.S. Namkum, Dist. Ranchi	1.9	31/08/2011	30/08/2021	NA	NA	31/08/2011	lapes	Non-Captive	23°15'36.48"	85°27'4.27"
143	Stone	Sri Rajendra Kumar Rai, S/o Sri Hari Rai, Vill./P.O. Rajaulatu, P.S. Namkum, Ranchi	Vill./P.O. Rajaulatu, P.S. Namkum, Ranchi	1.75	05-11-2011	05-10-2021	NA	NA	05-11-2011	lapes	Non-Captive	23°18'33.05"	85°27'54.99"
144	Stone	Smt. Kamla Devi, W/o Lt. Sukhdeo Gop, Vill. Balsiring, P.O./P.S. Hatia, Ranchi	Vill. Balsiring, P.O./P.S. Hatia, Ranchi	2.1	19/12/2011	18/12/2021	NA	NA	19/12/2011	lapes	Non-Captive	23°15'47"	85°17'00"
145	Stone	M/s Madhucon Projects Ltd., Authorise Signatory Sri A Raju, S/o Venkat Raju, Madhucon House, 1129/A, Road No. 36, Jubli Hills, Hyderabad. Present Address. Ashadip Apartment, Jorar, Namkum, Ranchi	Madhucon House, 1129/A, Road No. 36, Jubli Hills, Hyderabad. Present Address. Ashadip	5.48	21/12/2011	20/12/2021	NA	NA	21/12/2011	lapes	Non-Captive	23°12'6.488"	85°24'39.941"
146	Stone	M/s Madhucon Projects Ltd., Authorise Signatory Sri A Raju, S/o Venkat Raju, Madhucon House, 1129/A, Road No. 36, Jubli Hills, Hyderabad. Present Address. Ashadip Apartment, Jorar, Namkum, Ranchi	Madhucon House, 1129/A, Road No. 36, Jubli Hills, Hyderabad. Present Address. Ashadip Apartment, Jorar, Namkum, Ranchi	4.65	21/12/2011	20/12/2021	NA	NA	21/12/2011	lapes	Non-Captive	23°12'6.46"	85°24'39.83"
147	Stone	M/s Madhucon Projects Ltd., Authorise Signatory Sri A Raju, S/o Venkat Raju, Madhucon House, 1129/A, Road No. 36, Jubli Hills, Hyderabad. Present Address. Ashadip Apartment, Jorar, Namkum, Ranchi	Madhucon House, 1129/A, Road No. 36, Jubli Hills, Hyderabad. Present Address. Ashadip Apartment,	5.8	19/12/2011	18/12/2021	NA	NA	19/12/2011	lapes	Non-Captive	23°12'6.46"	85°24'39.83"

			Jorar, Namkum, Ranchi										
148	Stone	Sri Manish Kumar Singh, S/o Sri Narendra Kumar Singh, Radha Mandir, Namkum, Ranchi	Radha Mandir, Namkum, Ranchi	1.82	25-02-2012	24-02-2022	NA	NA	25-02-2012	lapes	Non-Captive	23°15'42.09"	85°26'43.74"
149	Stone	Sri Raj Kumar Das, S/o Lt. Pavitra Kishore Das, Vill. Charadih, P.O. Karma, Dist. Koderma and Sri Gopal Kumar Ishwar, S/o Sri Umesh Prasad Ishwar, Vill. Gudma, P.O. Sarayranjan, Dist. Samastipur.	Vill. Charadih, P.O. Karma, Dist. Koderma and Vill. Gudma, P.O. Sarayranjan,	2.8	29/05/2007	28/05/2017	NA	NA	29/05/2007	lapes	Non-Captive	23°32'49.6"	85°29'2.34"
150	Stone	Sri Prakash Mehta, S/o Lt. Lal Chand Mehta, P.O./P.S./Dist. Koderma	P.O./P.S./Dist. Koderma	2.29	19/02/2011	18/02/2021	NA	NA	19/02/2011	lapes	Non-Captive	23°32'38.15"	85°29'6.37"
151	Stone	M/s Piska stone works, Part. 1. Sri Ramdhan Bedia, S/o Lt. Dev Narayan Bedia, Vill. Piska, P.O. Ichadag, P.S. Ormanjhi, Dist. Ranchi and 2. Sri Amanat Ansari, S/o Asgar Ansari, Vill. Anandi Dumartoli, P.S. Ormanjhi, Ranchi	Vill. Piska, P.O. Ichadag, P.S. Ormanjhi, Dist. Ranchi and Vill. Anandi Dumartoli, P.S. Ormanjhi, Ranchi	6.54	07-01-2011	30/07/2021	NA	NA	07-01-2011	lapes	Non-Captive	23°32'29"	85°29'08"
152	Stone	M/s Chotanagpur Stone Works, Part. 1. Sri Amanat Ansari, S/o Asgar Ansari, Vill. Anandi Dumartoli, P.S. Ormanjhi, Ranchi	Vill. Anandi Dumartoli, P.S. Ormanjhi, Ranchi	5.28	01-04-2011	01-03-2021	NA	NA	01-04-2011	lapes	Non-Captive	23°32'31.7"	85°29'6.91"
153	Stone	Sri Naresh Prasad Sahu, S/o Sri Narayan Prasad Sahu, Vill. Palu, P.S. Ormanjhi, Dist. Ranchi	Vill. Palu, P.S. Ormanjhi, Dist. Ranchi	2.15	30/11/2008	29/11/2018	NA	NA	30/11/2008	lapes	Non-Captive	23°32'00"	85°29'12"
154	Stone	Sri Mohsin Hasan Raja, S/o Md. Nasim Khan, Vill./P.O. Bariatu, Ranchi	Vill./P.O. Bariatu, Ranchi	1.17	08-03-2009	08-02-2019	NA	NA	08-03-2009	lapes	Non-Captive	23°31'22.25"	85°24'43.99"
155	Stone	Sri Sukhdeo Bedia, Sri Dasrath Bedia, Piska, Ichadag, Ormanjhi, Ranchi	Piska, Ichadag, Ormanjhi, Ranchi	4.82	05-12-2010	05-11-2020	NA	NA	05-12-2010	lapes	Non-Captive	23°32'20"	85°29'40"
156	Stone	Sri Tirathnath Bedia, S/o Sri Likwa Bedia, Piska, Ichadag, Ormanjhi, Ranchi	Piska, Ichadag, Ormanjhi, Ranchi	1.37	10-01-2010	30/09/2020	NA	NA	10-01-2010	lapes	Non-Captive	23°32'27"	85°29'08"
157	Stone	Sri Amit Kumar Munda, S/o Lt. Madho Munda, Vill./P.O. Ichadag, P.S. Ormanjhi, Ranchi	Vill./P.O. Ichadag, P.S. Ormanjhi, Ranchi	0.9	19/02/2011	18/08/2021	NA	NA	19/02/2011	lapes	Non-Captive	23°32'23.33"	85°29'6.55"
158	Stone	Sri Bhotan Munda, S/o Lt. Langra Munda, Vill./P.O. Ichadag, P.S. Ormanjhi, Ranchi	Vill./P.O. Ichadag, P.S. Ormanjhi, Ranchi	2.66	07-06-2011	07-05-2021	NA	NA	07-06-2011	lapes	Non-Captive	23°33'37"	85°30'51"
159	Stone	M/s Leynid Enterprises, Main Road, Ranchi	Main Road, Ranchi	3.55	02-12-2004	01-12-2014	NA	NA	02-12-2004	lapes	Non-Captive	23°32'40.82"	85°28'38.97"

160	Stone	Sri Pankaj Jain, S/o Lt. Lal Chand Jain, Din Bandhu Lane, Upper Bazar, Ranchi	Din Bandhu Lane, Upper Bazar, Ranchi	2.4	08-02-2012	07-02-2022	NA	NA	08-02-2012	lapes	Non-Captive	23°29'36"	85°32'54"
161	Stone	Sri Abhisekh Prasad, S/o Sri Tripurari Prasad, C/o Lt. Devi Prasad, I.P.S., Shivpuri, Kanke Road, Ranchi	I.P.S., Shivpuri, Kanke Road, Ranchi	2	08-02-2012	07-02-2022	NA	NA	08-02-2012	lapes	Non-Captive	23°29'34"	85°32'57"
162	Stone	Sri Surendar Prasad		1.2	12-10-2011	12-09-2021	NA	NA	12-10-2011	lapes	Non-Captive	23°16'38"	85°13'56"
163	Stone	Smt. Meena Devi		1.57	07-10-2010	07-09-2021	NA	NA	07-10-2010	lapes	Non-Captive	23°24'44.534"	85°10'31.269"
164	Stone	M/s Raj Stone Works , Pro. Sri Surender Prasad		1.6	21/02/2008	20/02/2018	NA	NA	21/02/2008	lapes	Non-Captive	23°16'37"	85°13'58"
165	Stone	Sri Anil Rai and Sri Navnit Kachap		2.07	03-02-2009	03-01-2019	NA	NA	03-02-2009	lapes	Non-Captive	23°17'07"	85°13'42"
166	Stone	Sri Surendar Prasad		1.3	12-12-2011	12-11-2021	NA	NA	12-12-2011	lapes	Non-Captive	23°16'39"	85°14'00"
167	Stone	Sri Bhagirath Mahto, Sri Dhaneshwar Mahto, Sri Baleshwar Mahto,		2.5	11-02-2007	11-01-2017	NA	NA	11-02-2007	lapes	Non-Captive	23°18'25.67"	85°49'26.43"
168	Stone	Sri Dhani Ram Mahto		2	26/11/2010	25/11/2020	NA	NA	26/11/2010	lapes	Non-Captive	23°21'49.18"	85°47'40.94"
169	Stone	Sri Ratan Lal Mahto and Smt. Seema Karzee		1.7	11-09-2008	11-08-2018	NA	NA	11-09-2008	lapes	Non-Captive	23°18'28.63"	85°49'32.73"
170	Stone	Sri Prafull Kumar Mahto, S/o Sri Shivnath Mahto, Vill/P.O. Tutkinawadih, P.S. Silli, Dist. Ranchi	Vill/P.O. Tutkinawadih, P.S. Silli, Dist. Ranchi	2.01	29/06/2011	28/06/2021	NA	NA	29/06/2011	lapes	Non-Captive	23°19'27.38"	85°49'51.59"
171	Stone	Smt. Niruwa Devi, W/o Sri Feku Lohra, Sareyad, Sonahatu, Ranchi	Sareyad, Sonahatu, Ranchi	1	03-04-2011	03-03-2021	NA	NA	03-04-2011	lapes	Non-Captive	23°12'22"	85°43'58"
172	Stone	Sri Sitanath Mahto, S/o Lt. Teju Mahto, Vill. Didsir, Vill. Jamudag, P.S. Sonahatu, Dist. Ranchi	Vill. Didsir, Vill. Jamudag, P.S. Sonahatu, Dist. Ranchi	1	18/10/2011	17/10/2021	NA	NA	18/10/2011	lapes	Non-Captive	23°12'30.42"	85°42'43.27"
173	Stone	M/s Madhucon Projects Ltd., Authorise Signatory Sri A Raju, S/o Venkat Raju, Madhucon House, 1129/A, Road No. 36, Jubli Hills, Hyderabad. Present Address. Ashadip Apartment, Jorar, Namkum, Ranchi	Madhucon House, 1129/A, Road No. 36, Jubli Hills, Hyderabad. Present Address. Ashadip Apartment, Jorar, Namkum, Ranchi	10	10-06-2013	02-07-2017	NA	NA	10-06-2013	lapes	Non-Captive	23°05'35"	85°38'51"

Source: District Mining Office, Ranchi

Table 9 List of Stone Blocks in Ranchi District Proposed by Department of Geology

Sl. No.	Mouza	Khata no.	Plot no	Area (Ha)	Limiting Coordinates
1	Katingkela	99	169(p), 1635(p), 323(p)	6.10	Latitude: N23°08'01.82" to N23°08'08.99" Longitude: E 84°55'19.93" to E 84°54'35.43"
2	Lali	268	805(P)	13.16	Latitude: N23°18'08.25" to N23°18'22.14" Longitude: E 85°28'45.88" to E 85°29'01.56"
3	Lali	268	1297(P)	9.32	Latitude: N23°18'04.24" to N23°18'18.00" Longitude: E 85°29'05.55" to E 85°29'18.67"
4	Ulatu		11654, 11661, 11660, 11667, 11659, 14388, 14387, 14386, 14385, 14341, 14340, 14338, 14339, 14337, 14336, 11673, 11671, 11670, 11669, 11668, 11665, 11666	2.38	Latitude: N23°15'26.12" to N23°15'30.97" Longitude: E 85°28'44.79" to E 85°28'58.09"
5	Sorha	36	167(P)	7.71	Latitude: N23°13'43.74" to N23°13'57.36" Longitude: E 85°18'56.43" to E 85°19'06.40"
6	Chapawar	14	65,66,67,68,69,73,58 etc	2	Latitude: N23°31'00" to N23°32'00" Longitude: E 85°25'00" to E E 85°26'00" "
7	Chaprakocha	-	70,71 etc	2	Latitude: N23°31'06" to N23°32'00" Longitude: E 85°26'00" to E E 85°27'00"
8	Jhiki, PO-Koisara, thana + Circle-Lapung,	4 & 5	103,100,96,97,173,110,95,102,107,107	10	Latitude: N23°09'00" to N23°10'00" Longitude: E 85°56'00" to E 85°60'00"

9	Beti, Circle-Angara	78	1167,1597,1924,2041,2249,2331,2333,2335,	6	
10	Mauja-Kurchudih, Tamar Block	39	284		Latitude: N23°04'20" to N23°05'00" Longitude: E 85°47'30" to E 85°48'30"

Source – Assistant Director, Department of Geology, Ranchi & Local People

Table 10 List of applications in the District Mining Office, Ranchi

S. No.	Name of Applicant	Area	Mineral	Details of Land Location	Co-ordinate
1	Sarvashree Tangent Construction Pvt. Ltd. Authorized Signatory Shri Sabu K. Shankaran, Father KK Shankaran, 2B Ramsakhi Tower, Khunti Road, Police Station Tupudana, District Ranchi.	4.71 Acre	stone	Mouza-Hajam, Police Station Tupudana, Police Station No. 281. Khata No. 67. Plot No. 278, Rakwa- 4.71 Acre	Lat - 23°11'25" to 23°11'40"Long - 85°18'40" to 85°18'55"
2	Shri Santosh Mining Enterprises, Prof. Shri Gopal Kumar Ishwar, father Shri Umesh Prasad Ishwar, 2196 Hanuman Nagar, Moharram Toli. Booti Mode, Bariatu, District Ranchi.	3.22 Acre	stone	Mauza-Gurgai, Police Station Ormanjhi, Police Station No. 69, Khata No. 53, 20, 48, Plot No. 5, 09, 08, 10 (Ash), Area 3.22 Acre.	Lat - 23°30'50" to 23°31'40"Long - 85°30'50" to 85°31'50"
3	Mukesh Kumar Bedia, father Shri Ramdhan Bedia, village, P.O. Ichadaag, police station Ormanjhi, district Ranchi and Tanveer Ansari, father Amanat Ansari, village Dumartoli, Nandi, police station Ormanjhi, district Ranchi.	1.35 Acre.	stone	Mauza-Echadagh, Police Station Ormanjhi, Police Station No. 43, Khata No. 88, 52, Plot No. 1312, 1313, 1319, Area 1.35 Acre.	Lat - 23°11'20" to 23°12'59"Long - 85°17'30" to 85°19'37"
4	Shri Shailendra Pratap Narayan Singh, Father Shri Rana Pratap Singh, Village 101. Anjali Apartment Harhir Singh Road, Morabadi, Ranchi.	2.80 acres	stone	Mauza-Kuchyu, Police Station-Angada, Police Station No.-71. Khata No. 107, Plot No. 230, Area - 280 acres	Lat - 23°32'02" to 23°32'56"Long - 85°28'40" to 85°29'35"
5	Sarvashree Rapyari Mines and Minerals Pvt. Ltd., Director Shri Rampravesh Paswan, father Sitaram Paswan, permanent address Hadhad, Police Station-Pratappur, District-Chatra, present address-Neediki PHD Colony, Bariatu Road, District Ranchi.	3.07 Acre	stone	Mauza Badri, Police Station Anagada, Police Station No. 59. Khata No. 9, 10, 96, 44, Plot No. 414 (Part), 415 (Part), 412, 411, 529, 528,527, 526, 525 Area 3.07 Acre	Lat - 23°25'42" to 23°26'37"Long - 85°38'39" to 85°29'43"

6	Sarvashree Mangalam Stone Mines Part 1. Sushil Kumar Singh father Mangaldev Narayan Singh, residence village Adhaura Po-Pansa, police station Haidernagar, district Palamu. 2. Abhishek Kumar, father Purendra Kumar Singh, village Barauli, P.O. Barauli, police station Jamhore, district Aurangabad	2.95 acres	stone	Mauja-Bisa, Police Station Angada, Police Station No. 50, Khata No. 192, 193, Plot No. 4189 (Part). 4190 and 4191 area 2.95 acres	Lat - 23°26'12" to 23°27'27"Long - 85°37'29" to 85°38'43"
7	Sarvashree Silver Stone Mines Part 1. Manoj Kumar Singhania Father Shri Shyamsundar Singhania, Residence 101 Paramsukh Apartment Kamalkant Road, Rani Sati Mandir Lane Police Station Sukhdevanger District Ranchi. 2. Neeraj Kumar Sharma Father Shri Gyan Chand Sharma, Ward No. 05, Bharoliya Khurd (207) Una-174303 Himachal Pradesh.	0.90.5 Acre.	stone	Mauza Piska, Police Station Ormanjhi, Police Station No. 44, Khata No. 11. Plot No. 175 (Part) and 176, Area 0.90.5 Acre.	Lat - 23°24'02" to 23°24'49"Long - 85°34'24" to 85°35'48"
8	Sarvashree Silver Stone Mines Part 1. Manoj Kumar Singhania Father Shri Shyamsundar Singhania, Res. 101 Paramsukh Apartment Kamalankant Road, Rani Sati Mandir Lane Police Station Sukhdevanger District Ranchi. 2. NeerajKumar Sharma, father Shri Gyan Chand Sharma, Ward No. 05, Bharoliya Khurd (207) Una- 174303 Himachal Pradesh	1.22 Acre	stone	Mauza Piska, Police Station Ormanjhi, Police Station No. 44, Khata No. 11 and 61, Plot No. 179, 180, Area 1.22 Acre	Lat - 23°31'27" to 23°32'50"Long - 85°29'03" to 85°29'58"
9	Mr. Santosh Mining Prof. Gopal Kumar Ishwar 9 Father Mr. Umesh Prasad Ishwar, 2196 Hanuman Nagar Moharramtoli Buti Mode Bariatu District-Ranchi.	3.99 Acre	stone	Mauza-Gurgai, Police Station Ormanjhi, Police Station No. 69, Khata No. 53, 20, 48, 60, Plot No. 05, 3.99 Acre	Lat - 23°32'00" to 23°32'53"Long - 85°29'04" to 85°29'58"
10	Sarvshree Chhotanagpur Stone Works Prof. Ram Bahadur Singh, Father Shri Krishna Singh, Sunaina Bhawan, Harihar Singh Road Munda Bagicha, Morabadi, District Ranchi.	1.22 Acre	stone	Mauza Piska, Police Station Ormanjhi, Police Station No. 44, Khata No. 11, Plot No. 175 (part) and 176, 177 and 179 (part) Area 2.42.25 acres	Lat - 23°11'00" to 23°11'53"Long - 85°18'03" to 85°19'30"

11	Balu Oraon S/o – Madheya Oraon, Vill- Jhiki Gujru Toli, Po- Koyacra, Lapung, Dist- Ranchi	3.99 Acre	Stone	Mauza Piska, Police Station No-44, Khata No- 18, 72, 33, 55, 81, 82, 03, 85 Plot no 1603, 1604, 1605, 1606, 1623, 1629,1630 1631, 1632, 1633, 1638, 1616(P) Area-3.99 Acre	
12	Sumit kumar bhatacharya S/o sonot kumar bhatacharya and prem kumar karmali S/o ramprasad karmali vill- lalpur dist ranchi and kochra, nima toil patratu, dist ramgarh	0.84	Stoen	Mauza Piska, khata No- 78, Plot No- 567 Area-0.84 Acre	

Table 11 Other Potential Resource Area in the District

Si no.	Area Details	Bounding Coordinates
1.	Mauja – Kurchudih, Block – Tamar, Thana no.- 192, Plot No. – 284, Khata no. - 39	A - 23°4'44.3"N 85°47'21.3" E B - 23°4'44" N 85°48'10.8" E C - 23°4'23.3" N 85°48'8.7"E D - 23°4'27" N 85°47'20.9"E

Source - District Mining Office, Ranchi;

Note : Any other area which may be found feasible for stone mining shall beincluded in the DSR prospectively.

Chapter -X Details of Royalty or Revenue received in last three years;

Unit: Rupess in Lakhs

Mineral	2023-2024	2022-2023	2021-2022
Stone	306504632	175784788	122655565
Earthwork		81.68	213.78
Coal	696660976	664942873	568161085
Limestone	342000	504000	96000

(Source: District Mining Office, Ranchi)

Chapter – XI Details of Production of Minor Mineral in last three years;

UNIT: CUM

Mineral	2023-2024	2022-2023	2021-2022
Stone (cft)	50479599.5	23909396.75	27018809 cft
Sand	0	0	0
Coal (MT)	1719535	1929725	1668336.22
Limestone (MT)	2860.81	3060.35	5498.77

(Source: District Mining Office, Ranchi)

Chapter – XII Mineral Map of the District;

Figure 4 Mineral Map of the District ***(Source-JSAC)***

Chapter – XIII **List of Letter of Intent (LOI) Holders in the District along with its validity as per the following format:**

Sl. No.	Name of the Mineral	Name of the Lessee	Address & Contact No. of Letter of Intent Holder	Letter of Intent Grant Order No. & Date	Area of Mining Lease to be allotted	Validity of LOI	Use (Captive / Non-Captive)	Location of the Mining Lease (Latitude & Longitude)
1	2	3	4	5	6	7	8	9
1	Stone	Shri Shashi Shankar Kumar, Father Devnandan Prasad, Flat No. 405, Hill Heart Apartment, Tagore Hill Road, Morabadi, District - Ranchi	Flat No. 405, Hill Heart Apartment, Tagore Hill Road, Morabadi, District Ranchi	LetterNo.1272/M. Date28.10.23	Mauza Chaprakocha, Police Station Ormanjhi, Thana No. 38. Khata No. 57 and 94, Plot No. 91 (part), 92 (part), 95, Area 2.10 acres		Non-captive	Lat - 23°30'58.6919"N to 23°31'04.1418"N Long - 85°27'02.6203"E to 85°27'06.0518"E
2	Stone	Mr. Dinesh Kumar Choudhary, S/o Late Ramesh Choudhary, Village- Salhan, Po.- Angada, Police Station Angada, District Ranchi	Village- Salhan, Po.- Angada, Police Station Angada, District Ranchi	Letter No1337/M. Date 28.11.23	Mauza Banadag, Police Station Angada, Police Station No. 53, Khata No. 04, Plot No. 400 (Part), Area 2.00 Acre		non-captive	Lat - 23°27'00.57" N to 23°27'04.11"N Long - 85°34'25.86"E to 85°34'30.47"E

3	Stone	M/s Lalkeshwar Stone Chips, Prof. Shri Lalkeshwar Mahato, Father Late Babu Ram Mahato, Village Gunja. Po-Hendebeli, Police Station-Ormanjhi, District Ranchi	Village Gunja. Po-Hendebeli, Police Station-Ormanjhi, District Ranchi	LetterNo.1336/M. Date - 28.11.23	Mauza Piska, Police Station Ormanjhi, Police Station No. 44, Khata No. 81. 83. Plot No.-375, 376, 380, 382, 385, 381, Area 2.76 Acre.		non-captive	Lat - 23°32'20.04"N to 23°32'25.16"N Long - 85°29'12.14"E to 85°29'16.13"E
4	Stone	M/s Hardrock Info, Part 0 (1) Mr. Moiz Akhtar, Father Mr. Shamim Akhtar, 64. H.B. Road, Thadpakhana, 64 H.B. Road, Thadpakhana, Near Masjid, Ranchi (2)Shri Varun Lalwani, father Moti Lal Lalwani Imam Kothi Shantaman Nagar, HB Road,	64. H.B. Road, Thadpakhana, 64 H.B. Road, Thadpakhana, Near Masjid, Ranchi (2)Shri Varun Lalwani, father Moti Lal Lalwani Imam Kothi Shantaman Nagar, HB Road, Kokar, Ranchi and (3) Shri Nitesh Sharda, father Shri NK Sharda, Flat No. 101, Kishan Apartment, P.P. Compound, Ranchi	LetterNo.1330/M. Date 24.11.23	Mauza Chaprakocha, Police Station Ormanjhi, Police Station No. 38, Khata No. 62, Plot No. 72. 73 (Part), 74 (Part), Area 1.65 Acre		non-captive	Lat - 23°32'20.04"N to 23°32'25.16"N Long - 85°29'12.14"E to 85°29'16.13"E

		Kokar, Ranchi and (3) Shri Nitesh Sharda, father Shri NK Sharda, Flat No. 101, Kishan Apartment, P.P. Compound, Ranchi						
5	Stone	Vasundhara Realtech Pvt. Ltd. Director Shri Nirpender Singh Sangwan, father Hoshiar Singh Sangwan, House No. 212, Sector 9C. Chandigarh, Police Station-District Chandigarh- 160009	House No. 212, Sector 9C. Chandigarh, Police Station-District Chandigarh- 160009	LetterNo.1125/M. Date23.09.23	Mauza - Biramkel,Thana - Lapung, Khata No. 41, 21, 38. 23, 19. Plot No. 170, 173, 179, 205, 206, 185, 148, 186, 187, 189, 190, 178, 188, Area 7.48 acres		non-captive	Lat - 23°08'25.4143" to 23°08'32.7908" Long - 84°57'15.7016" to 84°57'27.3261"

6	Stone	Sir Shiv Stone and Crusher, Part 1. Shri Ajay Kumar, Father Late Dinesh Prasad Singh,Village- Shanti Bhawan, Parvati Nagar, Gym Galli, Sidho-Kanhu Park, Police Station- Gonda, District Ranchi 2. Mr. Satish Prasad, father Ritlal Mandal, Village- Gatalsud, Police Station- Sadar, District- Ranchi and 3. Mr. Monu Kumar, Father Umesh Kumar, Village- Masodha, Paliganj, District- Patna,	,Village- Shanti Bhawan, Parvati Nagar, Gym Galli, Sidho-Kanhu Park, Police Station- Gonda, District Ranchi 2. Mr. Satish Prasad, father Ritlal Mandal, Village- Gatalsud, Police Station- Sadar, District- Ranchi and 3. Mr. Monu Kumar, Father Umesh Kumar, Village- Masodha, Paliganj, District- Patna, State-Bihar- 801110	Letter No. 44/M.Date 08.01.24	Mauza- Kuchhu, Police Station- Angada, Police Station No. 71, Khata No. 99, Plot No. 1500, 1502, Area 5.77 Acre.		non-captive	Lat - 23°25'18.36"N to 23°25'24.35"N Long - 85°39'50.90"E to 85°39'56.80"E

		State-Bihar-801110						
7	Stone	Sir Bhuneshwari Crusher Stone, Prof. Shri Dwarika Nath Chaudhary, Father ShriDinanath Chaudhary, Quarter No. B-III-493(T), HEC Colony, Dhurva, Ranchi.	, Quarter No. B-III-493(T), HEC Colony, Dhurva, Ranchi.	Letter No. 255/M. Date 16.02.24	Mauza Khambha and Harmu, Police Station Itki, Police Station No. 88, 93, Khata No. 03, 23, 32, 35, 04, Plot No. 115, 536, 537, 539, 555, 560, 561, Area 6.48 acres.		non-captive	Lat - 23°16'27.00"N to 23°16'40.00"N Long - 85°06'23"E to 85°06'56.00"E
8	Stone	Maa Ambe Mining and Minerals, Authorized Part 0 Sangeeta Kumari	Village Aravalli Enclave, Flat No. 201, P.O. Hehal, Police Station Sukhdevnagar, District Ranchi.	Letter No. 269/M. Date 17.02.24	Mauza No. Pedaidih, Police Station- Tamad, Police Station 224, Khata No. 122, Plot 1581		non-captive	Lat - 23°06'45.61"N to 23°06'51.32"N Long -

		Agarwal, W/o Mr. Rahul Agarwal, Village Aravalli Enclave, Flat No. 201, P.O. Hehal, Police Station Sukhdevnagar, District Ranchi.			(Part), Area 7.30 Acre			85°40'55.64"E to 85°41'02.64"E
9	Stone	Kingstone Mining and Minerals, Part 0 Sangeeta Kumari Agarwal, husband Mr. Rahul Agarwal, Village Aravali Enclave, Plot No. 201. P.O.- Hehal, Police Station- Sukhdevnagar, District Ranchi and Mr. Deepak Kumar, Father Chandreshwar Prasad Singh, Village Deputy Para, Police	, Village Aravali Enclave, Plot No. 201. P.O.- Hehal, Police Station- Sukhdevnagar, District Ranchi and Mr. Deepak Kumar, Father Chandreshwar Prasad Singh, Village Deputy Para, Police Station- Lalpur. ,District Ranchi	Letter No. 270/M. Date 17.02.24	Mauja Pedaidih, Police Station- Tamad, Police Station Number- 224, Khata Number- 122, Plot Number 1581 (Part), Area 5.00 Acre		non-captive	Lat - 23°06'50.78"N to 23°06'56.07"N Long - 85°40'55.62"E to 85°41'01.87"E

		Station- Lalpur. ,District Ranchi						
10	Stone	M/s Damodar Minerals Pvt. Ltd	Director - Sri Gajanand Prasad, At - House no. - 118, Saraiya Tola, Jai Nagar Siur, Thana - Patratu, District - Ramgarh		Mauza - Kuchu, Thana - Angara, Thana no - 71		non-captive	Lat - 23°26'09.55"N to 23°26'14.87"N Long - 85°38'40.75"E to 85°38'48.46"E

(Source: District Mining Office, Ranchi)

Chapter – XIV Total Mineral Reserve available in the District;

SN	LESSEE	total avilable resoruces as per mining plan (tonne)
1	Sri Binod Kumar, S/o Jagdeo Prasad, New Bandhgari, Dipatoli, P.S. Sadar, Ranchi	678997
2	M/s Damodar Enterprises, Part. 1. Sri Prabhat Kumar, S/o Sri Mahesh Prasad and 2. Sri Avinash Kumar, S/o Sri Mahesh Prasad, Vill. Saraiyatola, Jainagar, P.O. Sonda 'D', P.S. Patratu, Dist. Ranchi	1419526
3	Md. Ramiz Raja, S/o Md. Naseem Khan, Bariatu Basti, P.O. Bariatu, Dist. Ranchi	656223
4	M/s Creo Sales India Pvt. Ltd., Part. Sri Santosh Kumar, S/o Lt. Hiralal, 407 Commerce Tower, Main Road, Ranchi	33273989
5	Sri Hakim Ansari, S/o Sri Aziz Ansari, Vill. Karketta, P.O. Malsiring, P.S. Pithoria, Dist. Ranchi	3861701
6	M/s Maa Vindyawasini Stone,Prop. Shri Satyendra Kumar Singh,S/o Shri Bhikhari Singh,Sanjay nagar Colony,Sai nagar ,Po+Ps-Ratu,Dist-Ranchi	6895095
7	Ms Ecotech Coal Industries Pvt Ltd,Dir. Shri Kawach Kumar,Nirmal C-16,Ashok Nagar,Ranchi	65218244
8	1. Sri Rameshwar Dayal Singh S/o Late Bijeshwar dayal Singh,Vill-Tendar,Ranchi,2. Sri Santosh Agarwal,S/o Late Jage ram Agarwal,Po-Khelari,Ps-Macluskiganj,Dist-Ranchi	3929008.35
9	1. Sri Suresh Mahto, S/o Sri Binod Mahto, Vill. Piska Nagri, P.O.+P.S. Nagri, Dist. Ranchi and 2. Sri Madho Toppo, S/o Lt. Chamru Toppo, Vill. Bandhya, P.O. Halhu, P.S. Nagri, Dist. Ranchi	447744
10	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	259706.25
11	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	472590.99
12	Dandar Nirman Pvt. Ltd., Director Sri Rahul Pandey, S/o Sri Surendra Pandey, Sukhdeonagar, Ratu Road, Ranchi	1076066.95

13	Sri Vikrant Singh, S/o Sri Radheshyam Singh, Manas Niwas, Bank Colony Road, Hesal, Hehal Ranchi	1559418
14	M/s Konark Traders, Prop. Sri Roshan Kumar, S/o Sri Binod Mahto, Vill. Tupudana, P.O. Hatia, P.S. Dhurwa, Ranchi	814805
15	Sri Prabhunath Pathak, S/o Lt. Laxmi Narayan Pathak, Anand Nagar, Harmu Housing Colony, P.O. Harmu, P.S. Argora, Dist. Ranchi	2305385
16	M/s Devanti Projects Pvt. Ltd., Director Sri Amit Kumar, S/o Sri Anil Kumar Sahu, Sahu Nagar, Madhukam, Piska More, Ranchi	788754
17	M/s Bansidhar Construction Company Pvt. Ltd., Prop. Sri Prakash Kumar Singh, Chief Executive Officer Sri Ram Naresh Singh, Azad Nagar, Near Primary School, Bhuli, Dhanbad	36227
18	M/s Hardrock Infra, Part. 1. Sri Moiz Akhtar, S/o Sri Shamim Akhtar, 64 H.B. Road, Thadpakhna, Ranchi 2. Sri Varun Lalwani, S/o Sri Moti Lal Lalwani, Imam Kothi, H.B.Road, Kokar, Ranchi 3. Sri Nitesh Sharda, S/o Sri N.K. Sharda, 101' Kishan Apartment, P.P. Compound, Ranchi	451634
19	M/s R.N. Construction, Part. 1. Sri Rajendra Prasad, S/o Meet Narayan Prasad, Vill.+P.O. Surajpura, P.S. Padma, Dist.- Hazaribagh 2. Jh Naresh Kumar, S/o Kapil Dev Prasad Mehta, Vill. Vikash Nagar, Sarle, P.O.+P.S. Sadar, Dist.- Hazaribagh	299956.5
20	M/s Hardrock Infra, Part. 1. Sri Moiz Akhtar, S/o Sri Shamim Akhtar, 64 H.B. Road, Thadpakhna, Ranchi 2. Sri Varun Lalwani, S/o Sri Moti Lal Lalwani, Imam Kothi, H.B.Road, Kokar, Ranchi 3. Sri Nitesh Sharda, S/o Sri N.K. Sharda, 101' Kishan Apartment, P.P. Compound, Ranchi	1017865
21	S.S.Mining, Part. 1. Sri Manoj Kumar Singhania and 2. Sri Subhra Bose, 101, Mangalmurti Heights, Harmu Road, Ranchi	927936
22	M/s Lalkeshwar Stone Chips Pvt. Ltd., Part. 1. Sri Lalkeshwar Mahto, 2. Sri Tulshi Kharwar 3. Ram Nandan Mahto, Vill. Gunja, P.O. Hendebili, P.S. Ormanjhi, Dist. Ranchi	1343300
23	M/s Jai Balaljii Construction, Prop. Sri Santosh Kumar Gupta, Kali Babu Street, Upper Bazar, Ranchi	997120

24	M/s Lavanya Devlopers, Part- shri Ashok Kumar Dhanuka, S/o Om Prakash Dhanuka, Add- 505, Mangal Murti Heights, Near Vishal Megamart, Harmu Road Ranchi	2055688
25	M/s Rubal Stones Mines, Prop- Shri Satyendra Kumar, S/o Ram Prasad, Near Neeche Tola Shiv Mandir Po+Ps Korambe Thana Gola, Dist Ramgarh	1152432
26	Sri Sumit Kumar, S/o Sri Anil Kumar Sahu, Near Galaxia Mall, Sahu Nagar, P.S. Sukhdeonagar, Hehal, Ranchi	1168645
27	M/s Bhuneshwari Stone Crusher, Prop. Sri Dwarika Nath Chaudhary, Qr. No.- B III- 493 (T), HEC Colony, Dhurwa, Ranchi- 834004	3030221
28	Sri Krishna Kumar Tiwari, S/o Lt. Kedar Nath Tiwari, Near Shyam Sweets, Chandani Chowk, Hatia, P.S. Jagarnathpur, Ranchi	597012
29	Sri Manglu Oraon, S/o Sri Bauna Oraon, Vill. Bermad, P.O. Hatia, P.S. Dhurwa, Dist. Ranchi	623562
30	Sri Suresh Kumar Baitha, S/o Lt. Puran Baitha, Vill.+P.O. Rajaulatu, P.S. Namkum, Dist. Ranchi and Sri Rajesh Kachap, S/o Sri Jagarnath Kachap, Vill. Lupungtoli, P.O. Rajaulatu, P.S. Namkum, Dist. Ranchi	853115
31	M/s Hero Hardrock Harvestors, Part. Sri Shiv Kumar, S/o Lt. Hiralal, 407, Commerce Tower, Main Road, Ranchi	1646568
32	M/s Elite Power Project & Construction Pvt. Ltd., Director Shri Prashant Kumar Verma, S/o Shri Bishnu Dev Verma, 3D Vatika Appartment Bank Road. Po- GPO, PS- Kotwali Dist- Ranchi	379537
33	M/s Shrishti Works Pvt. Ltd., Director- 1. Sri Abhisekh Anand, S/o Lt. Binod Singh and 2. Smt. Shilpi Singh, W/o Sri Abhisekh Anand, Vill.- Sidharthpur Colony, Near Axis Bank, Manpur, Gya, Bihar	2278168
34	Navratan Mines, Part. 1. Sri Akchat Singh Bhardwaj 2. Rohit Kumar Sahu and others, New Morabadi, P.S.- Bariatu, Dist.- Ranchi	32025
35	Silver Stone Works, Part. 1. Sri Manoj Kumar Singhania, S/o Sri Shyam Sundar Singhania, 2. Sri Neeraj Kumar Sharma, S/o Sri Gyan Chand Sharma, 101, Paramsukh Apartment, Modi Complex, Kamlakant Road, Sukhdeonagar, Ranchi	642332.43

36	M/s Kanchan Savitri and Sons, Part. 1. Sri Rangnath Chaubey, S/o Dinanath Chaubey and 2. Sri Jai Shankar Kumar, S/o Lt. Umesh Sharma, Flat No.- C1, Block B, Bhaskar Complex, Tagore Hill Road, Morabadi, Ranchi	954213
37	M/s Maa Mundeshwari Stone Mines, Prop. Smt. Neelam Singh, House No. 21, Nilanchal Kothi Compound, Ratu Road, Piska More, Ranchi	196754
38	Sri Binod Mahto, S/o Lt. Doman Mahto, Vill. Tupudana, Dhurwa, Ranchi	1535475
39	Sri Rantha Mahli, S/o Lt. Balku Mahli and Sri Ravi Shankar Sahu, S/o Sri Dhaneshwar Sahu, Vill. Bedwari, P.O. Childag, P.S. Angara, Ranchi	1922776
40	M/s Veer Stone Part- Shri Abhishek Anand, Siddhartha Colony Near Axis Bank Manpur Gaya, Bihar (2) part Anand Murti B/560/2 Near Rajendra Bhawan Dhurwa, Ranchi	876600
41	K.V.S. Mines and Minerals, Part. 1. Sri Sandip Kumar Jaiswal and others, Blue Safair Apartment, Flat No.- B, Block D, Dhela Toli, Near Sohrai Bhawan, Harmu, Ranchi	5114326
42	Dumaro Sand Mining Projects, Prop. Sri Rahul Kumar, S/o Sri Mansukh Lal, Flat No. 104, Sn Tulsi Apartment, Near HDFC School, Bariatu Road, Ranchi	
43	Sri Mohsin Hasan Raja, S/o Md. Nasim Khan, Vill.+P.O.+P.S. Bariatu, Ranchi	
44	Urja Coal and Mines Pvt. Ltd., Director Sri Litesh Jha, S/o Sri Surendra Prakash Jha, C-16, Park Road, Ashok Nagar, Road No.1, Ranchi	309999
45	M/s Hiralal Sand And Ballast Company Ltd., Part. Sri Santosh Kumar, S/o Lt. Hiralal, Fourth Floor, Karni Heights, Club Road, Ranchi	
46	Sri Rahul Kumar, S/o Sri Mansukh Lal, Flat No. 104, Sn Tulsi Apartment, Near HDFC School, Bariatu Road, Ranchi	3980880
47	Smt. Sheela Singh, W/o Sri Ravi Bhushan Singh, Bhushan Niwas, Sukhla Colony, Hinoo, Ranchi	1775433
48	Sri Haricharan Ram Prajapati, S/o Sri Dev Narayan Prajapati, Vill. Tupudana, P.O.+P.S. Hatia, Ranchi	
49	Maa Bhawani Stone Works, Part. Sri Sanjay Kumar Gupta, S/o Sadhu Charan Sahu, Vill. Tupudana, P.O. Hatia, Dist. Ranchi	1520176

50	M/s Hiralal and Company, Part. Sri Shiv Kumar, S/o Lt. Hiralal, F- 14, City Centre, Club Road, Ranchi	1736504
51	M/s Hiralal and Company, Part. Sri Shiv Kumar, S/o Lt. Hiralal, F- 14, City Centre, Club Road, Ranchi	794835
52	Sri Sanjay Kumar Rai ,S/o Bharat Rai,Vill-Mahadev Toli,Po-Rajaulatu,Ps-Namkum,Dist-Ranchi	1032752
53	Smt. Manjusha Lal, D/o Lt. Murari Lal, Tulsi Bhawan, Pawan Colony, Hinoo, P.S.-Doranda, Dist.-Ranchi	1516965
54	Sri Gopal Kumar Ishwar, S/o Sri Umesh Prasad Ishwar, Booty More, Hanuman Nagar, Ranchi and Sri Kishore Ranjan Singh, S/o Sri Awdhesh Kishore Prasad Singh, Sri Ram Regency, Flat No. 303, Hari Om Tower, Ranchi	807754
55	Sri Mohsin Hasan Raja, S/o Md. Nasim Khan, Vill.+P.O.+P.S. Bariatu, Ranchi	1024358
56	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	231414.3
57	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	272448
58	Mrs Asha Rani Tete D/o Shri Teleshfare kido Near D.T 1207 Dhurwa Ranchi.	171056
59	Sri Sandip Kumar, S/o LT. Narendra Singh Munda, Vill.+P.O.+P.S. Sonahatu, Ranchi	131098
60	M/s Mineral Resources, Pro. Sri Prabhat Tekriwal, S/o Sri Aatma Ram Agrawal, 13, 14, P Industrial area, Namkum, Ranchi	667327
61	Sri Pradip Kumar Jha, S/o Sri Jamun Jha, Vill. Tea Garden, Bargawan, P.O.+P.S. Namkum, Dist. Ranchi	2585188
62	Sri Sri Hari Murarka, Lake Avenue Road, Kanke Road, Ranchi	667327
63	R.B Engicom , prop - sri rahul kumar shah and sri jyoti bhushan kumar, add- house no F-82, P C Colony, kankarbagh near madhuban apartment, sampatchak, dist patna bihar pin 800020	2585188
TOTAL		**175601444 Tonne**

Chapter – XV Quality /Grade of Mineral available in the District;

Stone available in the district is mainly of Building Stone & Aggregates; Coal found in the district is of G7 to G12 grade.

Chapter – XVI Use of Mineral

When talking about stone as a mineral, it is wedely used in different industries as building materials. Decorative stone and aggregates.

The common uses are mentioned as below;

- ✓ Millions of tones of crushed rock are needed annually for road base, paving, ready mixed concrete and asphalt.
- ✓ Basalt: It is quarried and crushed as "Blue Metal" which is used as road base, and in reinfored concrete as aggregate.
- ✓ Although wood, straw and mud is used for houses in some parts of the world, most buildings are preferred to be build of stone.
- ✓ Building Wells
- ✓ Material for foundation and walling of buildings, dams, bridges, etc.
- ✓ Aggregate
- ✓ Stone Walls
- ✓ Roof tile in the form of slates
- ✓ Morrum for covering and flooring of road surface.

In Ranchi District stone being used in construction works and road projects. Stone from the mine can be directly used as boulders of different sizes for river anti-erosion, dam construction, embankment work, etc. after crushing into different sizes of aggregate, it can be used in construction and road projects.

(Source: Old DSR)

Chapter – XVII Demand and Supply of the Mineral in the last three years;

Demand for the stone and brick was fulfilled by the operational mines in the district.

Last three years production is given below;

UNIT: CUM

Minor Mineral	2020-2021	2021-2022	2022-2023
Stone	26596381.75	26596381.75	23909396.75

(Source: District Mining Office, Ranchi)

Demand Forecast for Stone

Major consumes of stone chips are road projects such as National Highway, State Highway, Express ways, Pradhan Mantri Gram Sadar Yojna, Pradhan Mantri Awas Yojna and other infrastructure projects.

A list of government sponsored projects are enclosed in Annexure – I.

All these infrastructural projects of public importance would need stone chips for successful completion.

Average demand for the district during last three years works out to ... Cum.

Estimated demand of stone in future may be 3 to 4 times of the current average demand.

Chapter – XVIII Mining Leases marked on the map of the District

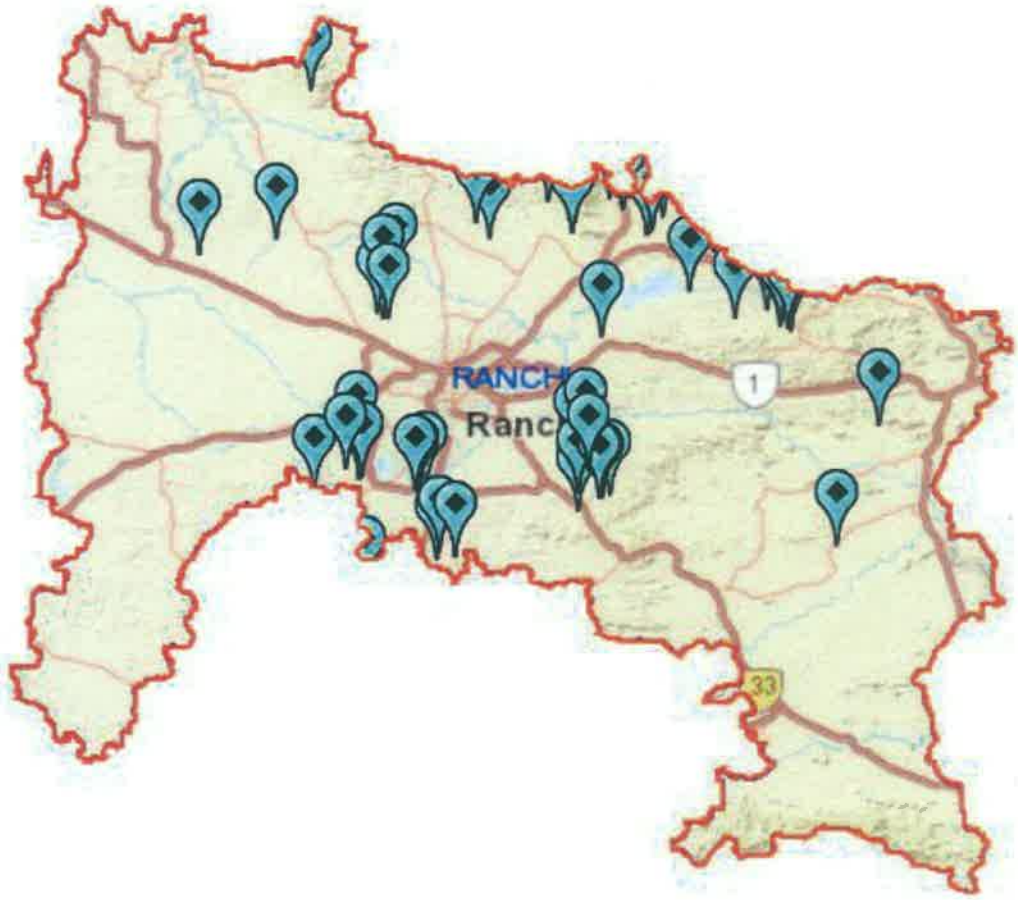


Figure 5 Running/Working Mining Leases in the District

RANCHI DISTRICT: Updated District Survey Report for Stone

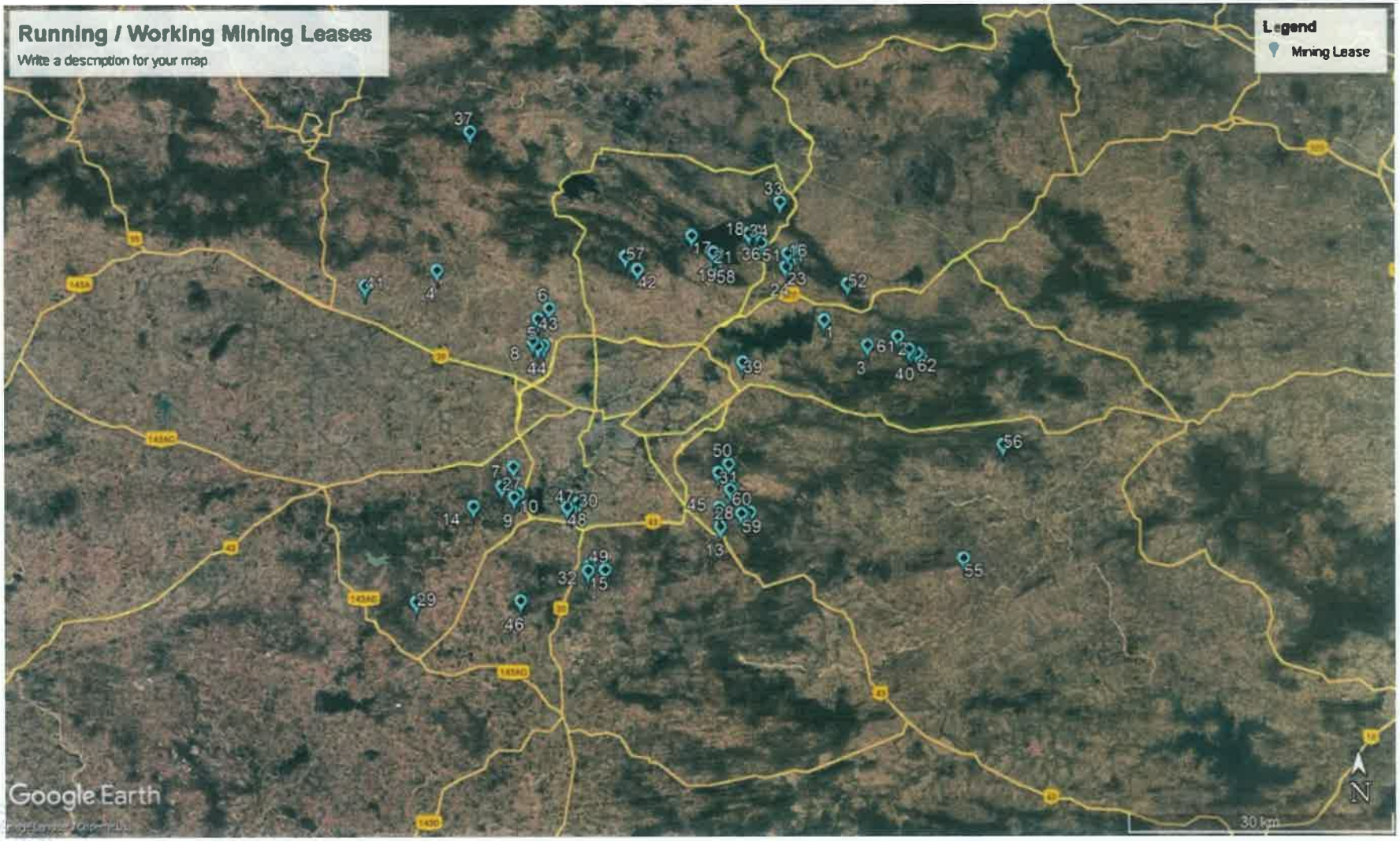


Figure 6 Expired Mining Leases in the District

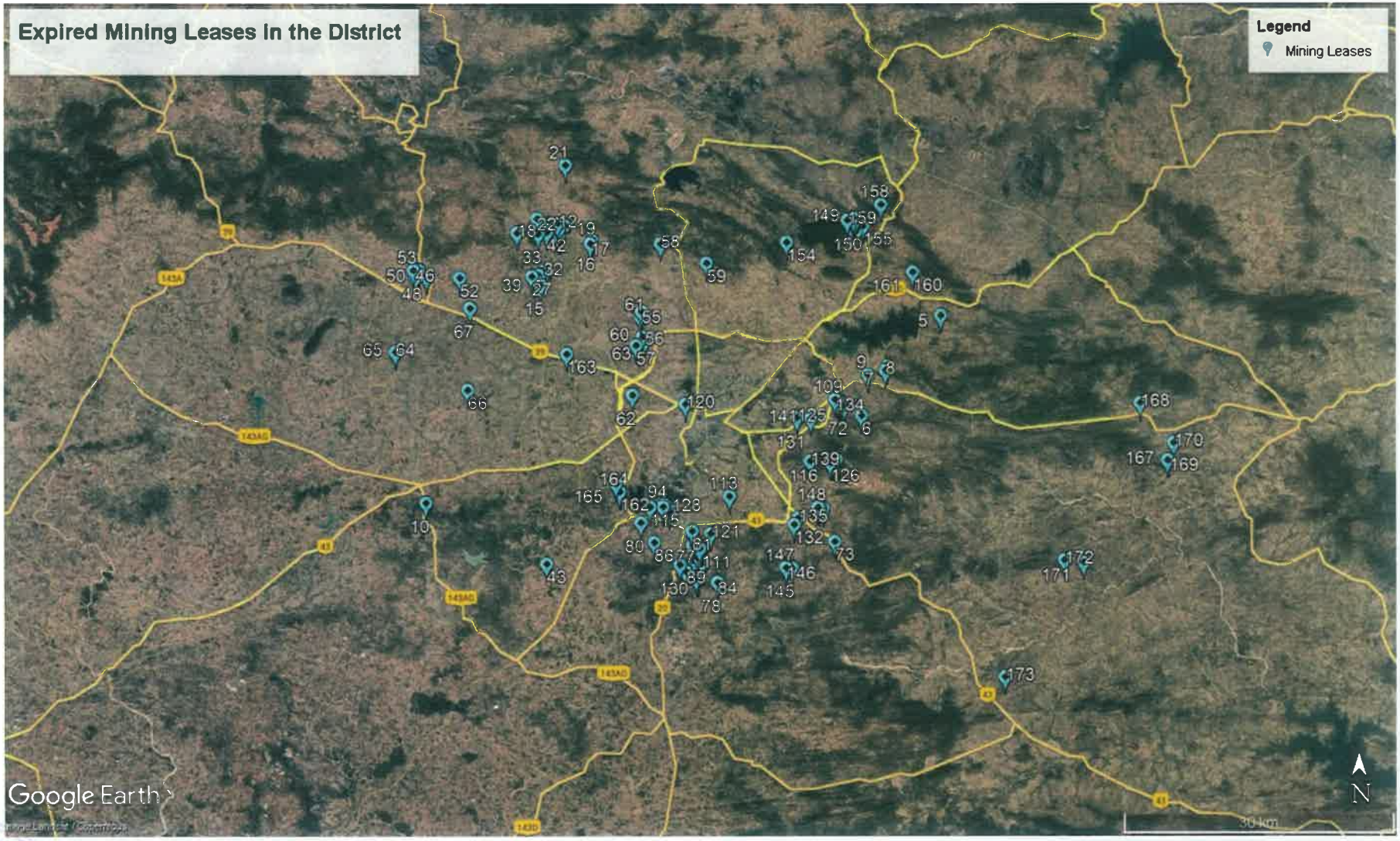


Figure 7 LOI Holders in the District

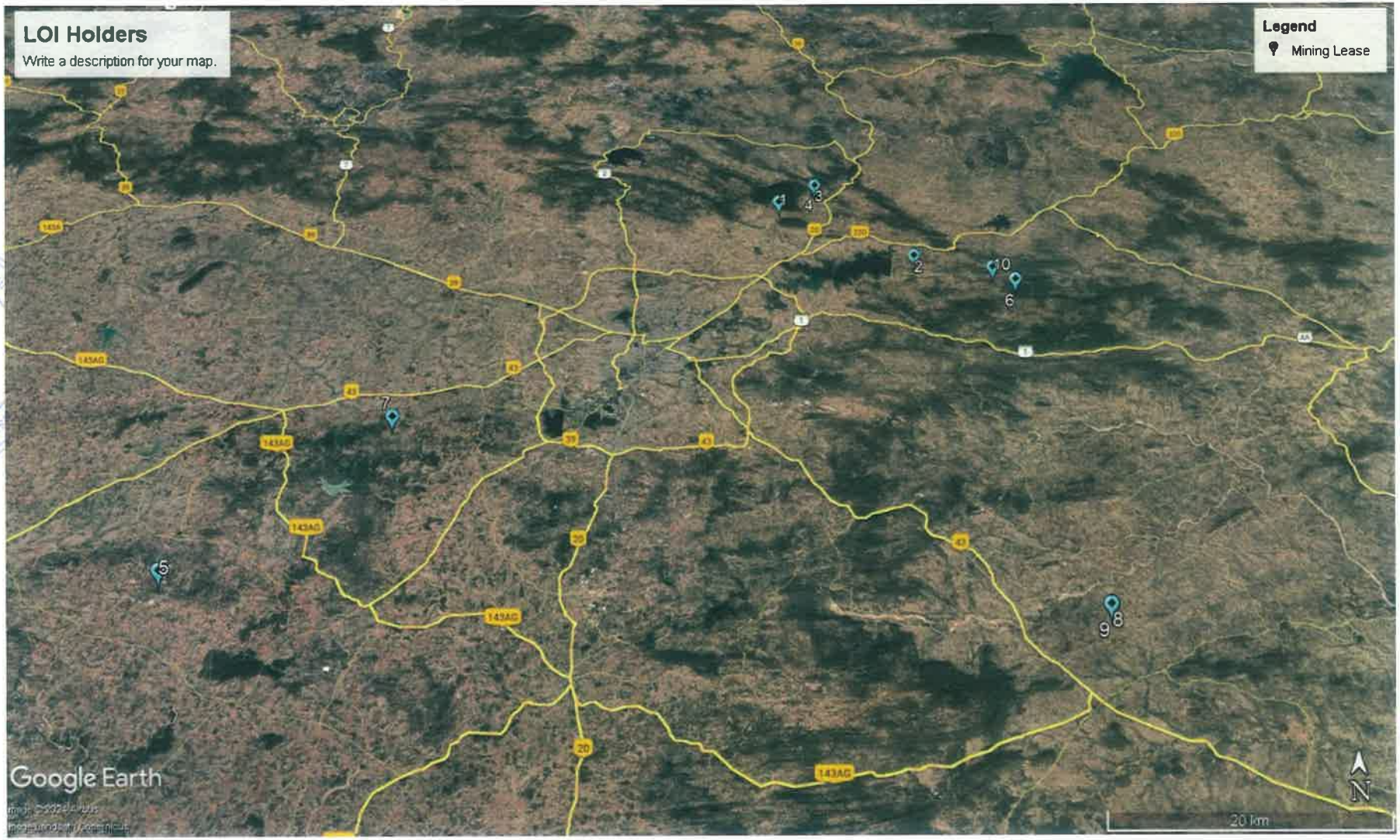
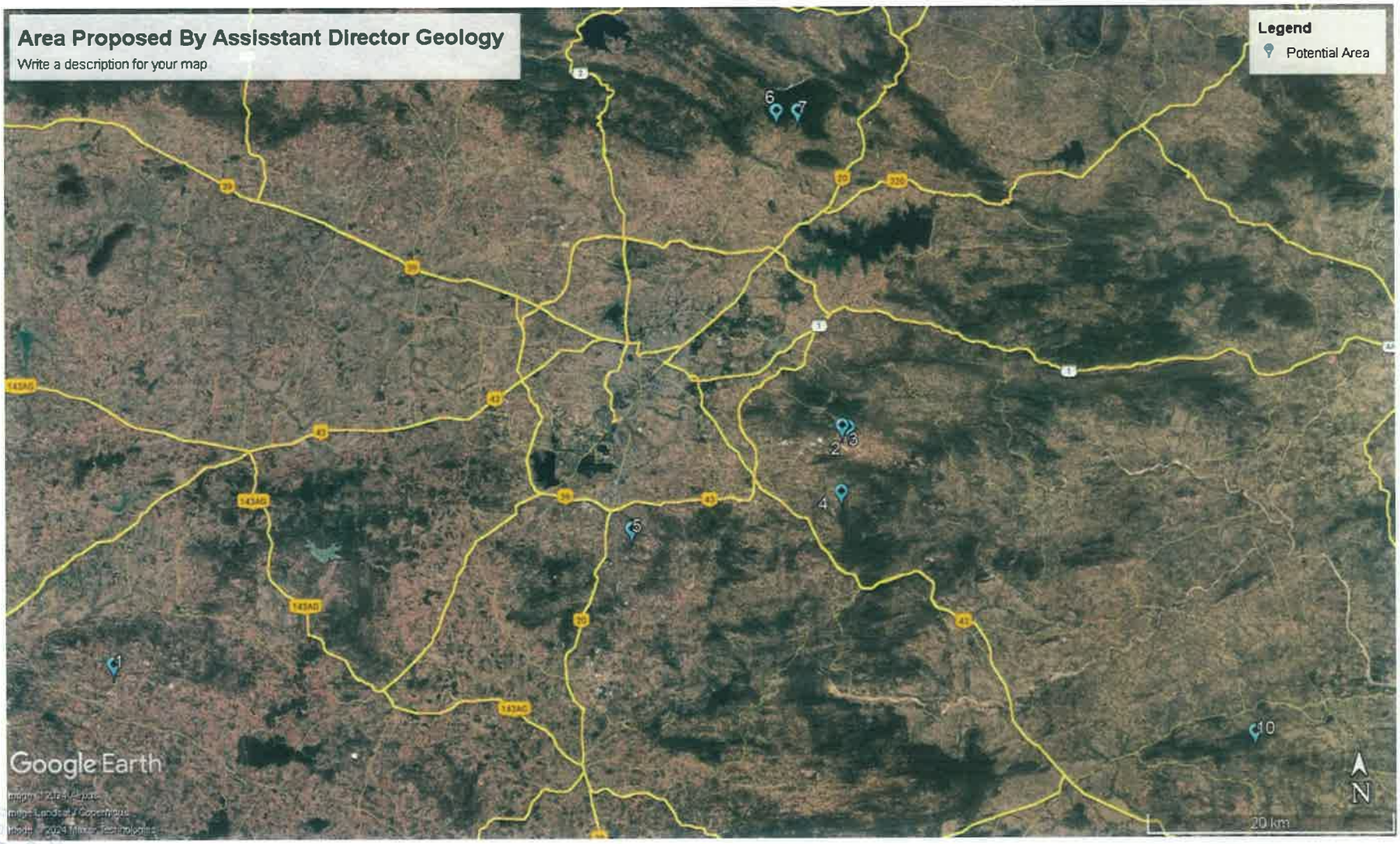


Figure 8 **Potential Area Proposed by Assistance Geology**


Area Proposed By Assisstant Director Geology
Write a description for your map
Legend
Potential Area
Google Earth
20 km
N

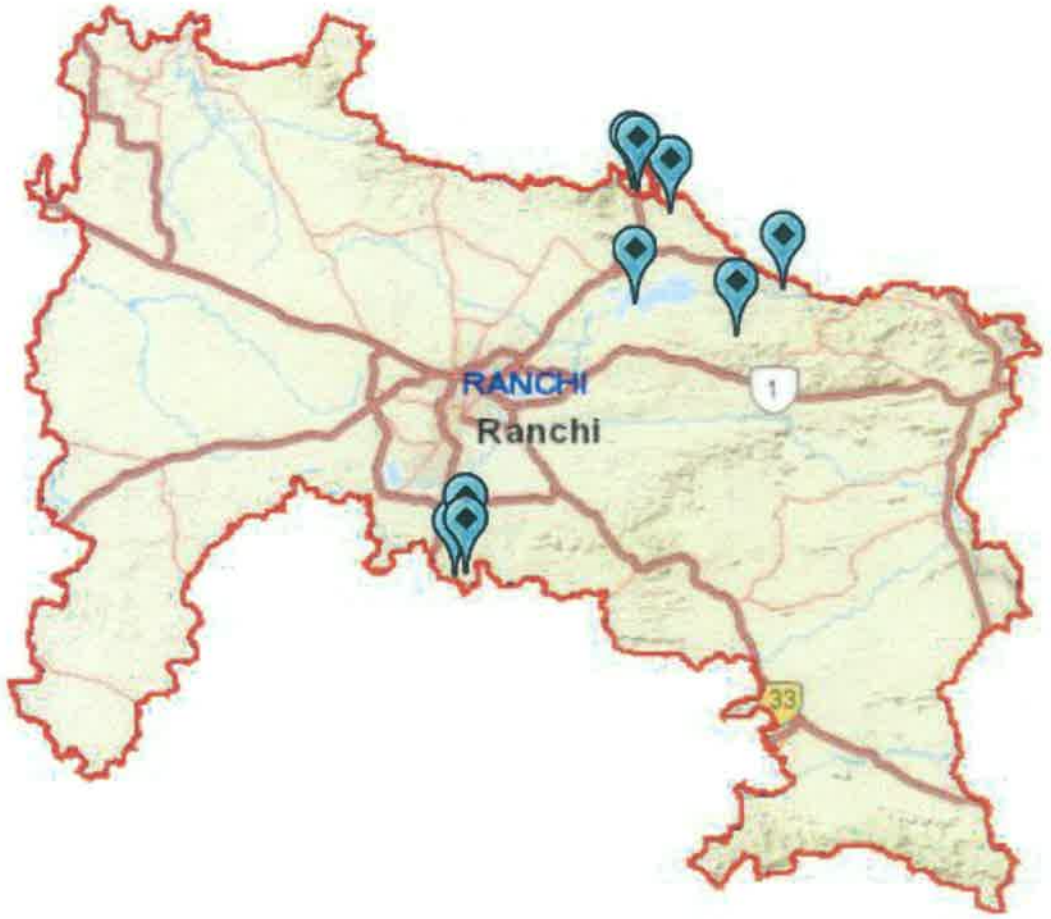
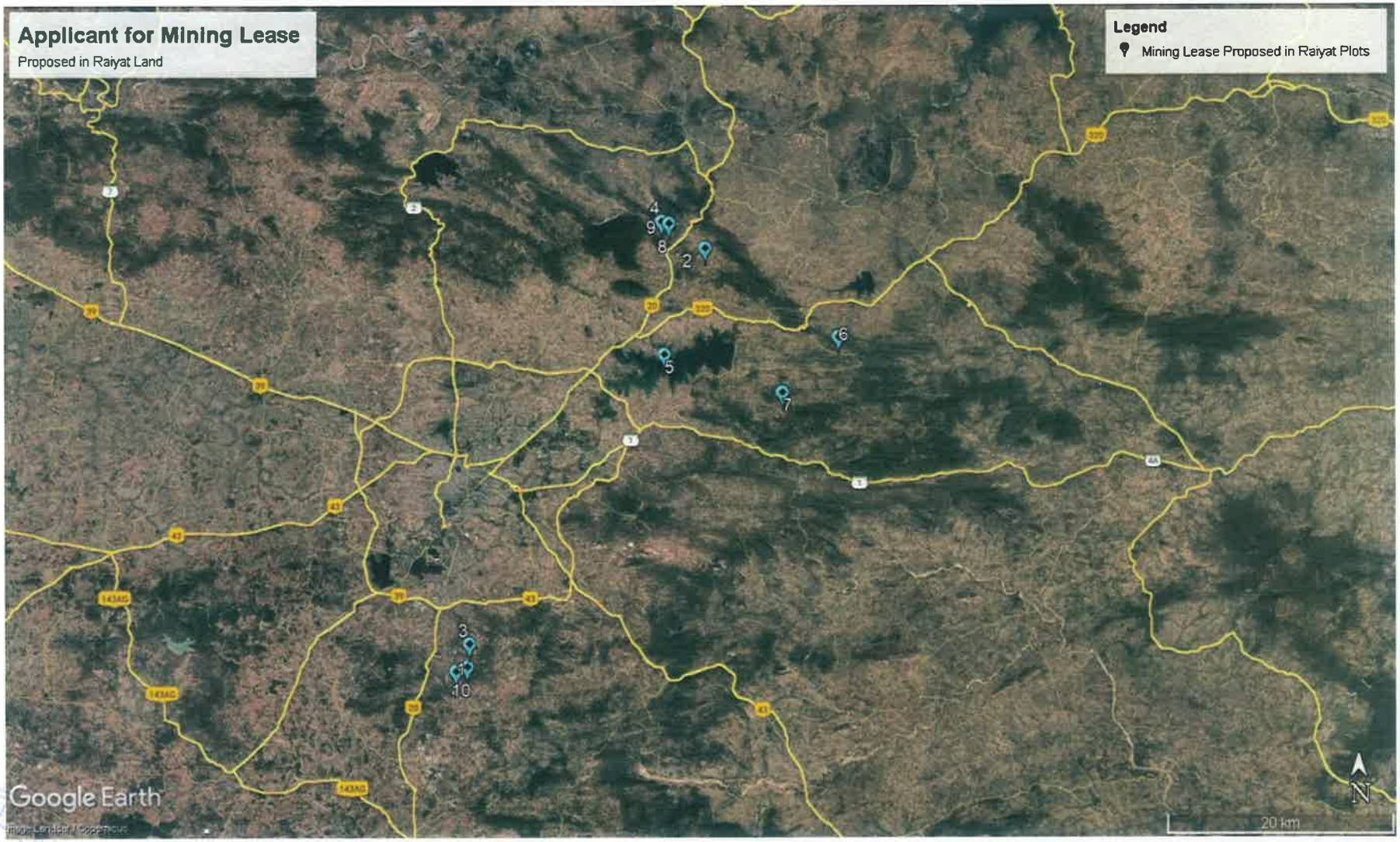


Figure 9 Applicant proposed Mining Lease in Raiyat Plots




Approved

Chapter – XIX Details of the area of where there is a cluster of mining leases viz. number of mining leases, ocation (latitude and longitude);

Cluster of mining lease will be declared by District Mining Officer before Environment Clearance.

Chapter – XX Details of Eco-Sensitive Area, if any, in the District;

Eco-Sensitive Zones notified by Ministry of Environment, Forest and Climate Change in Jharkhand are listed below;

1. Dalma Wildlife Sanctuary
2. Hazaribagh Wildlife Sanctuary
3. Betla National Park
4. Palamau Wildlife Sanctuary
5. Mahuadanr Wolf Sanctuary
6. Udwa Lake Bird Sanctuary
7. Gauatam Buddha Sanctuary
8. Palkot Wildlife Sanctuary
9. Parasnath & Topchanachi Sanctuary
10. Koderma Wildlife Sanctuary
11. Lawalong Wildlife Sanctuary

No eco-sensitive area in the district as per Ministry of Environment, Forest and Climate Change.

Source : https://moef.gov.in/moef/rules-and-regulations/esz-notifications/index.html

Chapter – XXI Impact on the Environment (Air, Water, Noise, Soil, Flora & Fauna, land use, agriculture, forest etc.) due to mining activity;

Chapter – XXII Remedial Measures to mitigate the impact of mining on the Environment;

AMBIENT AIR QUALITY	
IMPACT	**MITIGATION MEASURES**
Typical impact on Air Quality due to mining activities are; ❑ Dust Generation due to ✓ Site Preparation ✓ Drilling ✓ Blasting ✓ Crushing ✓ Transportation on haul road or unpaved road ❑ Emission of Noxious Gases ✓ Operation of mining equipment ✓ Blasting ✓ Transportation	To mitigate the impact some suggestive measures are; ❑ Dust Generation ✓ Adopt a wet drilling system this will minimize dust generation during drilling process . ✓ Practice controlled blasting to minimize generation of dust. ✓ Regular water sprinkling on haul road. ✓ Install wet dust suppression system in crushing and screening plant. ✓ Regular water sprinkling on unpaved roads. ✓ Dust generation from road also depends on speed of transport vehicles. There should be speed restriction of 20 KMPH on unpaved road ❑ Emission of Noxious Gases ✓ Use of optimal quantity of explosive in blasting. ✓ To ensure that transportation vehicles have "Pollution Under Control Certificate". ✓ Regular repair and maintenance of mining equipment & transportation vehicle. ✓ Proper repair and maintenance of road. ❖ Raise Green Belt in safety zone. ❖ Avenue plantation along a both sides of Link Road

Ambient Air Quality in the District

PM10	PM2.5	NOX	SO2
62.93	31.57	27.87	13.30
85.67	48.00	20.50	8.07
64.33	-	18.00	7.07
72.33	-	19.33	7.00
71.33	-	22.67	7.70

Source : JSPCB

The Air Quality Index is 72, which falls into the "Satisfactory" category, indicating that air quality is generally acceptable with minor breathing discomfort to sensitive people.

Good (0-50)	*Minimal Impact*	*Poor (201 – 300)*	*Breathing discomfort to people on prolonged exposure*
Satisfactory (51-100)	*Minor breathing discomfort to sensitive people*	*Very Poor (301-400)*	*Respiratory illness to the people on prolonged exposure*
Moderate (101-200)	*Breathing discomfort to the people with lung, heart disease, children and older adults*	*Severe (>401)*	*Respiratory effects even on healthy people*

WATER QUALITY	
IMPACT	**MITIGATION MEASURES**
Typical impact on Water Quality due to mining activities are; ❑ Run-off of sediments due to ✓ Site Preparation ✓ Dumping of OB ✓ Crushing ✓ Drilling ❑ Contamination of oil or chemical in water (surface & ground water) due to ✓ Dumping of OB ✓ Drilling ✓ Blasting ✓ Spills due to transportation	To mitigate the impact some suggestive measures are; ❑ Run-off ✓ Provide garland drains around quarry to intercept surface run-off from high elevation to quarry and divert it to collection cum desilting pond. ✓ Provide foot drain along toe of external dump. Foot drain will collect run-off from external dump and divert to storage cum desilting pond for proper treatment ❑ Water Contamination ✓ Water pump out from quarry will need to be diverted to storage cum desilting pond for treatment. ✓ Proposed effluent treatment plant (ETP). ✓ Regular repair & maintenance of equipment & vehicles. ✓ Movement of heavy vehicles may be restricted to lease area and road so that leaking oil & grease may not contaminate water quality. ❖ **PROMOTE ZERO LIQUID DISCHARGE (ZLD).**

NOISE LEVEL	
IMPACT	**MITIGATION MEASURES**
Increase in noise level due to various mining activities such as operation of mining equipment, movement of vehicles, drilling, blasting & crushing.	To mitigate the impact some suggestive measures are; ✓ Mining operation to be confined to day shift only ✓ At machineries to be repaired and maintained regularly. ✓ Raise Green Belt in safety zone. ✓ Avenue plantation along a both sides of Link Road ✓ Regular repair and maintenance of mining equipment & transportation vehicle. ✓ Proper repair and maintenance of road. ✓ Speed restriction of 20 KMPH on unpaved road. ✓ Acoustic Barrier along the periphery of mining lease at critical points.

Material	NRC (Noise Reduction Coefficient)	Transmission Loss (dB)	Other Properties
Concrete	0.20 – 0.30	**30 – 40**	**High density, durable, long lifespan**
Metal (Steel)	0.05 – 0.10	25 – 35	**Lightweight, can be perforated**
Wood	0.15 – 0.25	20 – 30	**Natural, aesthetically pleasing**
Acrylic/Polycarbonate	0.05 – 0.10	20 – 30	**Transparent, UV resistant**
Green Walls	0.40 – 0.50	15 – 25	**Environmentally friendly, absorbs CO2**
Earth Berms	0.30 – 0.40	20 – 35	**Natural appearance, requires space**

SOIL QUALITY	
IMPACT	**MITIGATION MEASURES**
Mining Activities are likely to impact on soil quality as; ❑ Loss of topsoil ❑ Productivity of Soil ❑ Contamination of oil or chemical in Soil	To mitigate the impact some suggestive measures are; ❑ Loss of topsoil ✓ Topsoil are to be removed & stored in an identified area. In order to conserve the quality of topsoil, grass cover are to be developed on topsoil dumps, Such conserved topsoil may be used for land reclamation & development of greenbelt. ❑ Productivity of Soil ✓ Movement of heavy mining machineries on agriculture land and productive land should be restricted. ❑ Contamination of oil or chemical in Soil ✓ Movement of heavy vehicles may be restricted to lease area and road so that leaking oil & grease may not contaminate soil quality.

BIO-DIVERSITY	
IMPACT	**MITIGATION MEASURES**
Mining Activities are likely to impact on Bio-Diversity of the region as; ❑ Habitat Destruction ❑ Ecosystem Disruption ❑ Damaging	Considering importance of impact of environmental impact on eco-system in the study area, a series of mitigation measures are incorporated in planning of stone mine & its operation such mitigation measures are given below; ✓ Mine site are selected considering siting criteria prescribed by Government (JSEIAA / JSPCB / MOEF & CC). ✓ Avoid site which have tree cover. ✓ Avoid site through which drainage channels passes through. ✓ **Ecological Assessment:** Conduct a thorough ecological survey to identify species and habitats present. ✓ **Buffer Zones:** Establish buffer zones around sensitive habitats to minimize disturbance. ✓ **Minimize Habitat Destruction:** Plan site layout to avoid key habitats and minimize vegetation clearing. ✓ **Translocation:** Consider translocating significant flora and fauna to safe areas. ✓ **Restoration Plans:** Develop a habitat restoration plan for post-mining activities. ✓ **Wildlife Corridors:** Ensure wildlife corridors are maintained to facilitate animal movement. If a wildlife corridor passes through or around a mining lease area, a Wildlife Conservation Plan will be prepared. These measures help protect biodiversity and mitigate the environmental impact of stone mining.

Flora

Botanical Name	Family	Local Name
Shorea robusta	Dipterocarpaceae	Sal, Sakhua, Saray, Sarjom
Terminalia tomentosa	Combretaceae	Asan, Asana
Buchnania latifolia	Anacardiaceae	Piyar, Achar, Chironji
Madhuca latifolia	Sapotaceae	Mahua, modhcam, moha
Lagerstromia parviflora	Lythraceae	Sidha
Semicarpus anacardium	Anacardiaceae	Bhelwa
Diospyros melanoxylon	Ebenaceae	Kend, Kendu, Chirchiri
Anogeissus latifolia	Combretaceae	Dhau, Dhautha
Boswellia serrata	Burseraceae	Salai
Adina cordifolia	Rubiaceae	Karam
Cassia fistula	Caesalpiniaceae	Amaltas, Banderlori
Croton oblongifolius	Euphorbiaceae	Putri
Holarrhina antidysenterica	Apocynaceae	Koraiya, Kurchi
Mangifera indica	Anacardiaceae	Aam
Syzygium cumini	Myrtaceae	Jamun
Soyamida febrifuga	Meliaceae	Rohan
Butea monosperma	Fabaceae	Palas, Dhak
Bridelia retusa	Euphorbiaceae	Kaj
Bombax ceiba	Bombacaceae	Semal
Pterocarpus marsupium	Fabaceae	Paisar, Bijasal
Aegle marmelos	Rutaceae	Bel
Terminalia belerica	Combretaceae	Bahera
Ehretia laevis	Boraginaceae	Raipan
Acacia catechu	Mimosaceae	Khair
Ficus bengalensis	Moraceae	Bargad
Tamarindus indica	Caesalpinaceae	Imli
Ficus religiosa	Moraceae	Pipal

Azadirachta indica	Meliaceae	Neem
Cassia siamea	Caesalpiniaceae	Chakundi
Schleichera oleosa	Sapindaceae	Kusum
Anogeissus pendula	Combretaceae	Dhaw
Ailanthus excelsa	Simaroubaceae	Ghorkaranj
Gmelina arborea	Verbenaceae	Gamhar
Emblica officinalis		Awala, Amla
Dalbergia sissoo	Fabaceae	Sisam
Dendrocalamus strictus	Poaceae	Bamboo

Fauna

Common Name	Scientific Name	Schedule (Indian Wildlife Protection Act, 1972)	IUCN Status (Indian Red Data Book)
Indian Hare	*Lepus nigricollis*	Schedule IV	Least Concern
Indian Elephant	*Elephas maximus*	Schedule I	Endangered
Sloth Bear	*Melursus ursinus*	Schedule I	Vulnerable
Hyaena	*Hyaena hyaena*	Schedule III	Near Threatened
Neelgai or Blue Bull	*Boselaphus tragocamelus*	Schedule III	Least Concern
Wild Boar	*Sus scrofa*	Schedule III	Least Concern
Leopard	*Panthera pardus*	Schedule I	Vulnerable
Wild Cat	*Felis chaus*	Schedule II	Least Concern
Indian Wild Dog	*Cuon alpinus*	Schedule II	Endangered
Indian Fox	*Vulpes bengalensis*	Schedule II	Least Concern
Indian Jackal	*Canis aureus*	Schedule II	Least Concern
Indian Grey Mongoose	*Herpestes edwardsi*	Schedule II	Least Concern
Indian Giant Squirrel	*Ratufa indica*	Schedule II	Least Concern
Indian Palm Squirrel	*Funambulus palmarum*	Schedule IV	Least Concern
Black-naped Hare	*Lepus nigricollis*	Schedule IV	Least Concern
Large Bandicoot Rat	*Bandicota indica*	Not Listed	Least Concern
Lesser Bandicoot Rat	*Bandicota bengalensis*	Not Listed	Least Concern
Common Yellow Bat	*Scotophilus heathi*	Not Listed	Least Concern
Painted Bat	*Kerivoula picta*	Not Listed	Least Concern
Barking Deer	*Muntiacus muntjak*	Schedule III	Least Concern

Schedule I: Absolute protection, the highest level of legal protection.
Schedule II: High protection, allowed hunting with permits.
Schedule III & IV: Lesser protection; regulated hunting is allowed.
Schedule V: Vermin, species that can be hunted.

Birds

Sl. No.	English Name	Latin Name
1.	Babbler, Common	Turdoides caudatus
2.	Barbet,Crimson-breasted or Coppersmith	Megalaima haemacephala
3.	Bird, Black	Turdus merula
4.	Bird, Tailor	Orthotomus sutorius
5.	Bittern, Chestnut	Ixobrychus cinnamomeus
6.	Bulbul, Red-vented	Pycnonotus cafer
7.	Crow, House	Corvus splendens
8.	Crow, Jungle	Corvus macrorhynchos
9.	Curlew	Numenius arquata
10.	Dove, Little Brown	Streptopelia senegalensis
11.	Duck, Pintail	Anas acuta
12.	Eagle, Crested Hawk	Spizaetus cirrhatus
13.	Eagle, Crested Serpent	Spilornis cheela
14.	Eagle, Short-toed	Circaetus gallicus
15.	Eagle, Tawny	Aquila rapax
16.	Fowl, Red Jungle	Gallus gallus
17.	Heron, Grey	Ardea cinerea
18.	Hoopoe	Upupaepops
19.	Hornbill, Common Grey	Tockus birostris
20.	Hornbill, Malabar Pied	Authracoceros coronatus
21.	Ibis, Black	Pseudibis papillosa
22.	Kingfisher, White- breasted	Halcyon smyrnensis
23.	Kite, Brahminy	Haliastur Indus
24.	Koel	Eudynamys scolopacea
25.	Lapwing, Redwattled	Vanellus indicus
26.	Lapwing, Yellow-wattled	Vanellus malabaricus
27.	Lark, Red-winged Bush	Mirafra erythroptera
28.	Lark, Refous-tailed Finch	Ammomanes phoenicurus
29.	Lorikeet	Loriculus vernalis
30.	Minivet, Scarlet	Pericrocotus flammeus
31.	Munia, Black-headed	Lonchura Malacca
32.	Munia, Green	Estrilda Formosa
33.	Munia, Red or Waxbill	Estrilda amandava
34.	Munia, Spotted	Lonchura punctulata
35.	Munia, White-backed	Lonchura striata
36.	M unia, White-throated	Lonchura malabarica
37.	Myna, Bank	Acridotheres ginginianus
38.	Myna, Grey-headed	Sturnus malabaricus
39.	Myna, Indian	Acridotheres tristis
40.	Myna, Jungle	Acridotheres fuscus

41.	Myna, Pied	Sturnus contra
42.	Myna,Brahminy or Black- headed	Sturnus pagodarum
43.	Nightjar, Common Indian	Caprimulgus asiaticus
44.	Nuthatch, Chestnut- bellied	Sitta castanea
45.	Oriole, Black-headed	Oriolus xanthornus
46.	Oriole, Golden	Oriolus oriolus
47.	Owl, Barn or Screech	Tyto alba
48.	Owl, Brown Fish	Bubo zeylonensis
49.	Parakeet, Alexandrine or Large Indian	Psittacula eupatria
50.	Parakeet, Blossom- headed	Psittacula cya nocephala
51.	Pigeon, Common	Treron phoenicoptera
52.	Pipit, Indian	Anthus novaeseelandiae
53.	Pitta, Indian	Pitta brachyuran
54.	Plover, Little Ringed	Charadrius dubius
55.	Redshank	Tringatotanus
56.	Robin, Indian	Saxicoloides fulicata
57.	Robin, Magpie	Copsychus saularis
58.	Roller or Blue Jay	Coracias benghalensis
59.	Sandgrouse, Common	Pterocles exustus
60.	Sandgrouse, Painted	Pterocles indicus
61.	Shrike, Large Cuckoo	Coracina novaehollandiae
62.	Shrike, Rufous-backed	Lanius schach
63.	Skylark, Indian Small	Alauda guagula
64.	Sparrow, House	Passer domesticus
65.	Sparrow, Yellow-Throated	Petronia xanthocollis
66.	Spurfowl, Red	Galloperdix spadicea
67.	Stilt, Blackwinged	Himantopus himantopus
68.	Stint, Little	Calidris minutes
69.	Stork, White	Ciconia ciconia
70.	Stork Whit-necked	Ciconia episcopus
71.	Strok Black neck	Ephippiorhynch us asiaticus
72.	Sunbird purple	Nectarinia asiatica
73.	Sunbird ,Purple-rumped	Nectarinia zeylonica
74.	Swallor,Redrumped or Striated	Hirundo
75.	Swallow,common	Hirundo rustica
76.	Swallow,Wire-tailed	Hirundo smithii
77.	Swift,crested tree	Hemiprocne longipennis
78.	Swift,House	Apus affinis
79.	Swift,Palm	Cypsiurus parvus
80.	Teal,Common	Anas crecca
81.	Tern,IndianWhiskered	Chlidonias hybrid
82.	Tern,River	Sterna aurantia

83.	Tit,Grey	Parus major
84.	Vulture,WhitScavenger or pharaoh's chicken	Neophron percnopterus
85.	Vulture,White-backed or Bengal	Gyps bengalensis
86.	Wagtail,Grey	Motacilla caspica
87.	Wagtail,Large Pied	Motacilla maderaspatensis
88.	Wagtail,White	Motacilla alba
89.	Wagtail,Yellow	Motacilla flava
90.	Wagtail,Yellow-headed	Motacilla citreola
91.	Warbler,Ashy Wren	Prinia socialis
92.	Warbler,Indian Wren	Prinia subflava
93.	Warbler,Streaked Fantail	Cisticola juncidis
94.	Waterhen,White-breasted	Ama urornis phoenicurus
95.	Weaver Bird,Baya	Ploceus philippinus
96.	Weaver Bird,Black-breasted	Ploceus benghalensis

Reptiles

Common Name	Botanical Name	Schedule (Indian Wildlife Protection Act, 1972)	IUCN Status (Indian Red Data Book)
Monitor Lizard	*Varanus monitor*	Schedule I	Least Concern
Chameleon	*Chamaeleon calcarata*	Schedule II	Not Evaluated
King Cobra	*Ophiophagus hannah*	Schedule II	Vulnerable
Cobra	*Naja naja*	Schedule II	Least Concern
Python	*Python molurus*	Schedule I	Near Threatened
Viper	*Vipera russelli*	Schedule II	Least Concern
Krait	*Bungarus caeruleus*	Schedule IV	Least Concern
Rat Snake	*Ptyas mucosus*	Schedule II	Least Concern
Common Blind Snake	*Indotyphlops braminus*	Schedule IV	Least Concern
Common Green Whip-snake	*Ahaetulla nasuta*	Schedule IV	Least Concern
Checkered Keelback	*Xenochrophis piscator*	Schedule IV	Least Concern
Water Snake	*Enhydris enhydris*	Schedule IV	Least Concern
Tree Snake	*Dendrelaphis species*	Schedule IV	Least Concern
Wolf Snake	*Lycodon aulicus*	Schedule IV	Least Concern

Common Name	Botanical Name	Schedule (Indian Wildlife Protection Act, 1972)	IUCN Status (Indian Red Data Book)
Tortoises	*Testudo travancorica*	Schedule IV	Vulnerable

Fishes

Siluriformers	Cypriniformes
Ompok bimaculatus (Bloch.)	Labeo rohita (Ham.)
Wallago attu (Bl.& Schn.)	Labeo calbasu (ham.)
Mystus bleekeri (Day)	Labeo bata (Ham.)
Mystus tengara (Ham.)	Catla catla (Ham.)
Mystus vittatus (Bloch.)	Cirrhnus mrigala (Ham.)
Bagarius bagarius (Ham.)	Puntius ticto (Ham.)
Ailia colia (Ham.)	P.sarana sarana (Ham.)
Clupisoma garua (Ham.)	Osteobrama cotio cotio (Ham.)
Heteropneustes fossilis (Bloch.)	Synbranchiformes
Clarius batrachus (Linn.)	Monopterus cuchia (Ham.)
Siluriformes	Mastacembelus pancalus (Ham.)
Ompok bimaculatus (Bloch.)	Mastacembelus armatus (Lac.)
Wallago attu (Bl.& Schn.)	Macrognathus aual (Schn)
Mystus bleekeri (Day)	Labeo rohita (Ham.)
Mystus tengara (Ham.)	Labeo calbasu (ham.)
Mystus vittatus (Bloch.)	Perciformes
Bagarius bagarius (Ham.)	Channa punctatus (Bloch.)
Ailia colia (Ham.)	Channa orientalis (Sch.)
Clupisoma garua (Ham.)	Channa striata (Bloch.)
Heteropneustes fossilis (Bloch.)	
Clarius batrachus (Linn.)	
Osteog lossiformes	Cyprinodontiformes
Notopterus notopterus (Pallas.)	Gambusia affinis (Baird & Gira rd)
Chitala chitala (Ham.)	Mugliformes
Clupeiformes	Rhinomugil corsula (Ham.)
Gudusia chapra (Ham.)	Cyprinodontiformes

Source : Forest Department, Ranchi

Chapter – XXIII Reclamation of mined out area (best practice already implemented in the district, requirement as per rules and regulation, proposed reclamation plan);

23.1 General

In most of cases stone is mined out by opencast method of mining which creates. a quarry pit. It constitutes loss of value of a Land Resource. Also, a potential risk to human being & animal. with this consideration, mine pit must be Reclaimed after resource is exhausted & mining operations are closed.

Reclamation of mined-out areas is crucial for restoring ecological balance and ensuring sustainable land use post-mining. In Ranchi district, one of the best practices already implemented for reclamation is the creation of water reservoirs in mined-out areas.

23.2 Options for Remediation

Scenario A: Mining Area with Overburden

In this scenario, the stone reserve is covered by a layer of overburden consisting of soil or weathered rock. Mining operations should proceed with the removal of this overburden, which should be stored in a non-mining area. Once mining operations are complete, the overburden can be used to backfill the pit, or it can be left as is and reclaimed biologically. After backfilling, the quarry will be reclaimed.

Benefits:

- **Environmental Restoration:** Backfilling the pit with overburden or biologically reclaiming it ensures that the landscape is restored, reducing visual impact and preventing soil erosion.
- **Land Reuse:** Reclaimed land can be used for various purposes, such as agriculture, recreation, or natural habitat, promoting sustainable land management.
- **Ecosystem Recovery:** Biological reclamation supports the restoration of local flora and fauna, enhancing biodiversity and ecological balance.

Scenario B: Mining Area without Overburden

In this scenario, there is no overburden. Therefore, the quarry will be reclaimed immediately after mining operations are completed. Rainwater will naturally fill the void, creating a water reservoir.

Benefits:

Groundwater Recharge: The water body facilitates groundwater recharge in the area, helping to restore and sustain local aquifers.

Pisciculture: The newly created water body can be utilized for pisciculture (fish farming), providing economic opportunities and supporting local fish populations.

Irrigation: The water stored in the reservoir can be used for irrigation in nearby agricultural areas, enhancing crop yields and supporting local agriculture.

In Ranchi district, one of the best practices already implemented for reclamation is the creation of water reservoirs in mined-out areas.

23.3 Safety measures

Mine pit- filled with water after mining operation are over & mine is closed is a major Source for drowning of people & animals.

Measures must be taken to restrict free access to water body. One quarry must be fenced & wicket gate with locking arrangement must be provided.

Chapter – XXIV Risk Assessment & Disaster Management Plan

24.1 General

Mining activities are associated with risk that can turn into hazard to life & health if not addressed in time & adequately. This need to be identified & mitigation measures are to be provided to prevent it on measures to be taken to minimise its effects.

24.2 Categorisation of Risks

Risk associated with mining projects may be, broadly, categorised into two categories namely on site & off site Risk. They are described below.

24.3 On Site Risks

On site risks that need to be addressed are desorbed.

Offsite Risks: Mining and allied activities may also cause offsite risk.

Risk Assessment & its Preventive Measures

Particulars	Risk Assessment	Preventive Measures
Natural	**Flooding** of opencast working due due to heavy rains ingress of water from nearby water body i.e. river, reservoir etc. **Earthquake** Earthquake in the area may cause damage to life & property. **Land slide** There might be Land slide in external dump or high wall of opencast mine	**Flooding** The drainage plan (Dewatering scheme) of the mine has to be prepared considering the maximum rainfall in the area corresponding to maximum quantity of water accumulated in quarry, sufficient capacity of pump need to be prodded for preventing flooding of quarry. **Earthquake** If the mine is in zone iii & above of impact of earthquake must be integrated with planning & design of the project. **Land Slide** To prevent land slide in the mine following measures need to be taken care nature of rock corresponding to ✓ Proper slope to be provided to advancing bench of the mine ✓ Proper slope (45° - 50°) to be provided for terminal slope to the quarry ✓ External dump has to be properly planned with proper side slope to prevent slope failure. ✓ External dump should be located on a stable ground with load bearing capacity to support load of external dump. ✓ External dump should be proper drainage plan to prevent building up of internal hydraulic pressure.
Mechanical	Operation of mine involves use of a number of Heavy earth moving Machines including Drills, Backhoe, Shovel, dumper	✓ Toe wall with foot drain. ✓ Regular training to equipment operator ✓ Regular repair & maintenance of equipment

	etc. Operation of these equipment's may cause accident leading to loss of life or equipment's similarly material including row material, waste material & product are to be transported by road using dumper, tipper. Unregulated transportation may lead to road accident	
Electrical	Project operation requires operation of electrical equipment. They are operated on high voltage & use cables. Use of electrical equipment may cause fire or electrocution	✓ Electrical system needs to be designed following relevant prevailing rules as per Act. ✓ Regular maintenance and upkeep of cables, switches etc.
Fire	Operation of mine requires use of electrical power & diesel oil. Use of electrical power & oil may cause Fire	✓ Safe storage of diesel. ✓ No Smoking Zone. ✓ Maintenance of electrical wires ✓ The electrical cables with PVC sheath to prevent over heating and fire. ✓ The cables should have wire with appropriate size of core to carry required current. ✓ Provision for fire alarm and arrangement for firefighting appliances.
Blasting & Vibration	Operation of mine needs blasting using explosives.	✓ Proper design of Blasting pattern to ensure ground vibration within limit ✓ Use of optimal quantity of explosives

	Unattended & unplanned blasting may cause accident. The planed blasting may cause ground vibration outside the lease area that may affect stability of structures located in close vicinity **Ground Vibration** The planed blasting may cause ground vibration outside the lease area that may affect stability of structures located in close vicinity	✓ Hooter should be used to inform & warn workman before blasting in done.
Environmental Pollution	Mining activities may cause health risks for workmen they may be due to exposure to high level of dust or noise in work area. Project activities may generate environmental pollution that may attest health of people living in vicinity of lease area	✓ All workmen to be provided with ear mutt & mask ✓ Pollution control measures to minimise environmental pollution such as raised plantation in Safety Zone, avenue plantation and dust suppression. ✓ Regular health check-up of workman as per DGMS Rules. ✓ Trucks with Pollution under control certificate to be allowed
Road Accidents	Major Causes of road accidents are; Over Speed	Follow provision in Motor Vehicles Act, 1988 & its amendment

	Non-Observance of traffic rules & traffic signs Mechanical Failure of Vehicle	Ministry of Road Transport has published S.O. 1522 (E) prescribing speed limits on different types of roads for different category of vehicle State Govt. are empowered to fix speed limits within their state. In addition, Section 112 of Motor Vehicles (Driving) Regulation, 2017 prohibits drivers to exceed prescribed speed limit on a road. Table below gives speed limits prescribed by Central Govt. Speed limit sign board need to fixed on access road.

Maximum speed per hour in kilometres on roads in India April 2018

S. No.	Class of Motor Vehicles	Expressway with Access Control	4 lane and above divided carriageway (roads with Median strips/Dividers)	Road within Municipal Limits	Other Roads
(1)	(2)	(3)	(4)	(5)	(6)
1.	Motor vehicles used for carriage of passengers comprising not more than eight seats in addition to the driver's seat (M1 category vehicles)	120	100	70	70
2.	Motor vehicles used for carriage of passengers comprising nine or more seats in addition to the driver's seat (M2 and M3 category Vehicles)	100	90	60	60
3.	More vehicles used for carriage of goods (All N category Vehicles)	80	80	60	60
4.	Motor Cycles	80*	80	60	60
5.	Quadricycle	-	60	50	50
6.	Three wheeled vehicles	-	50	50	50

* If permitted to ply on Expressway.

In addition, proper sign boards to be provided near densely populated area, school, hospital, etc. & road intersections.

Road ramblers to be provided near school, hospital, densely populated area and road intersection.

24.4 Disaster Management Plan

Provision of Siren

Arrangement to be made to provide siren to inform workman about occurrence of accident and instruction that on hearing siren mining activities to be stopped & assemble at pre – determined area

First Aid centre

A first aid centre to be provided next to mine office.

Arrangement for Medical Aid

Arrangement shown be in place so that services ambulance can be available for rescue of injured workmen Provided medical attendance to them. For this purpose, Hospital/Nursing homes with ambulance facility need to be identified.

Arrangement to be made for information to police and local administration

An executive to be nominated who is responsible for handling disaster situation.

Mine office should serve as control room with telephone facility phone number of hospitals, police station, local administration should be readily available.

24.5 Conclusion

Keeping above in consideration, proper risk and disaster management plan need to be developed along with mining plan for all mining project. Operated strictly following DGMS rules. D.M.P. Will have following components. All mines should be planned.

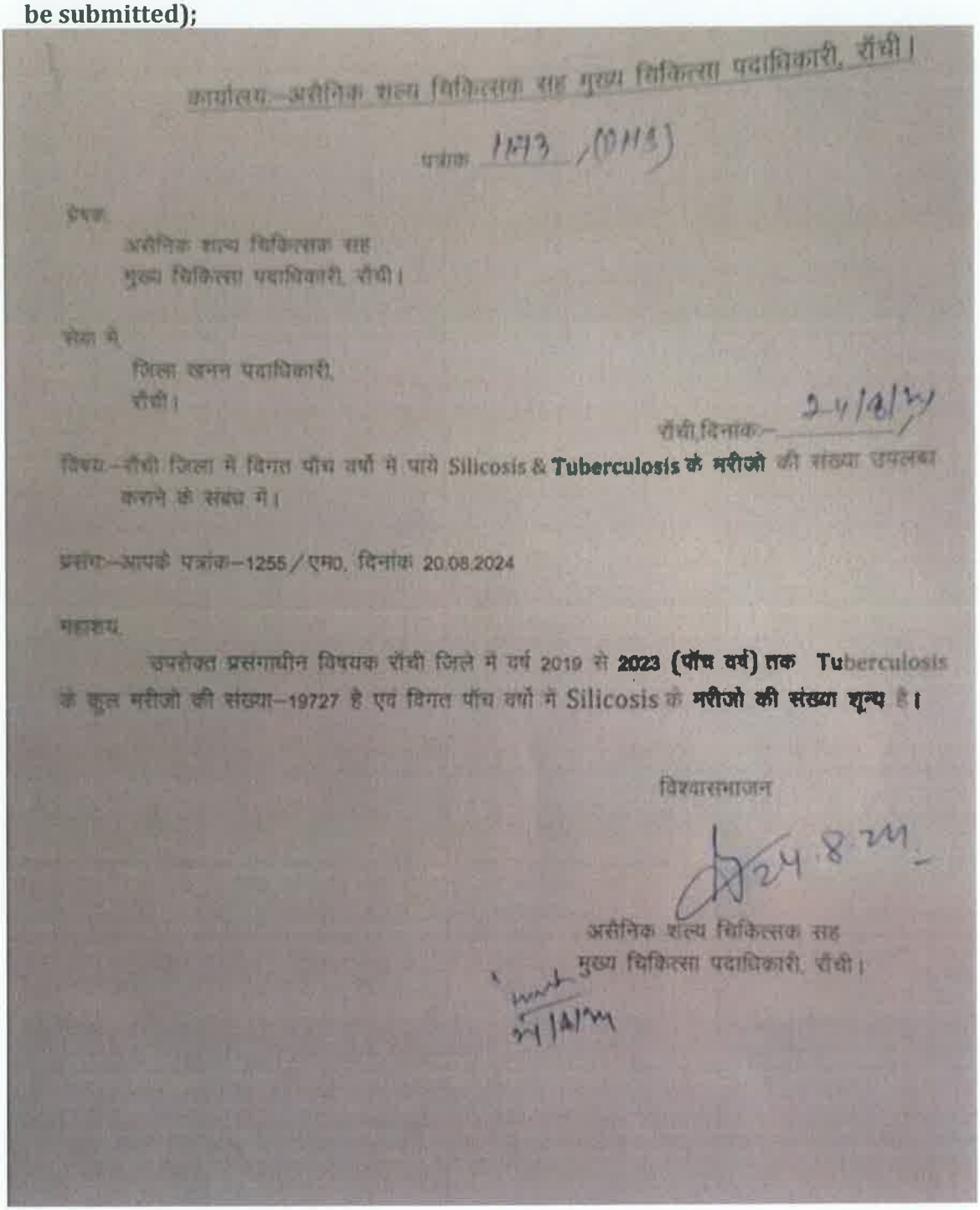
24.5 Risk & their Probability

RISK IDENTIFIED	PROBABILITY
Fire in diesel stored for operation of equipments. In most of places electrical power is not available.	**LOW** As proponents procure diesel on daily basis in absence of proper storage.
Blasting for mining of stone. On an average a stone mine would produce 250 T / Day in small stone mines. This will use approx. 35 Kg of explosives. This produces ground vibration and fly rock. Vibration may affect stability of structure & fly rock may injure people.	**LOW** Since mines are located 500m away from habitated area problem of ground vibration & fly rock are of low risk.
Road Accident This may be due to movement of vehicles on road carrying minerals.	**LOW** As number of vehicles per day in small mine may be 25-30 trips per day. Advice vehicles operator to control speed near habitation area.
Electrocution In case of mines which operated on electrical power. Power cables are used. There is risk of electrocution.	**LOW**
Environmental Pollution Due to; ✓ Blasting ✓ Drilling ✓ Handling ✓ Transporting	**MEDIUM** Environmental Pollution can be controlled by suitable mitigative measures including; ✓ Using optimal quantity of explosive. ✓ Water Sprinkling on drilling site. ✓ Trucks carrying product stone to be covered. ✓ Regular water sprinkling on haul road. ✓ Vehicles with pollution under control certificate. ✓ Plantation in safety zone. ✓ Avenue plantation along link road.

Natural Risk	
Earthquake	**LOW** As district fall in Zone II which is low risk zone.
Flood	**LOW** ✓ All identified potential areas are away from river. ✓ Proper arrangement for dewatering of quarry during the monsoon period.
Slope Failure	**LOW** Mineral resource is massive deposit having no shear planes. Hence land slide risk is low. Moreover, running slope will be maintain at 75° to avoid slope failure.

LOW	**MEDIUM**	**HIGH**
0% to 30%	30% to 60%	60% to 100%

Chapter – XXV Details of the Occupational Health issues in the District. (Last five-year data of number of patients of Silicosis & Tuberculosis is also needs to be submitted);



कार्यालय–असैनिक शल्य चिकित्सक सह मुख्य चिकित्सा पदाधिकारी, राँची।

पत्रांक 1693 /(OHS)

प्रेषक

असैनिक शल्य चिकित्सक सह
मुख्य चिकित्सा पदाधिकारी, राँची।

सेवा में,

जिला खनन पदाधिकारी,
राँची।

राँची,दिनांक– 24/8/24

विषय–राँची जिला में विगत पाँच वर्षों में पाये Silicosis & **Tuberculosis के मरीजो** की संख्या उपलब्ध कराने के संबंध में।

प्रसंग–आपके पत्रांक–1255/एम0, दिनांक 20.08.2024

महाशय,

उपरोक्त प्रसंगाधीन विषयक राँची जिले में वर्ष 2019 से **2023 (पाँच वर्ष) तक Tuberculosis** के कुल मरीजो की संख्या–19727 है एवं विगत पाँच वर्षों में Silicosis के **मरीजो की संख्या शून्य** है।

विश्वासभाजन

24.8.24

असैनिक शल्य चिकित्सक सह
मुख्य चिकित्सा पदाधिकारी, राँची।

24/8/24

The **TB Scheme** in Ranchi, Jharkhand, operates under the National Tuberculosis Elimination Program (NTEP) of India, which aims to eliminate tuberculosis (TB) by 2025. The program focuses on early diagnosis, treatment, and prevention of TB through a network of government health facilities.

Key Features of the TB Scheme in Ranchi, Jharkhand:

1. **Free Diagnosis and Treatment:**
   - Patients can access free TB diagnosis and treatment services at government hospitals and designated health centers.
2. **DOTS (Directly Observed Treatment, Short-course):**
   - The DOTS strategy ensures that patients adhere to their treatment regimen. Health workers supervise the intake of medication to prevent drug resistance and ensure recovery.
3. **Nutritional Support:**
   - Under the Nikshay Poshan Yojana, TB patients receive financial support for their nutritional needs during the treatment.
4. **Awareness Campaigns:**
   - Various awareness campaigns are conducted to educate the public about TB symptoms, transmission, and the importance of completing the treatment.
5. **Active Case Finding:**
   - Health workers actively screen vulnerable populations, such as those in tribal areas and remote villages, to identify TB cases early.
6. **Community Engagement:**
   - The program involves community health volunteers to support TB patients and ensure that they adhere to their treatment.
7. **Collaboration with NGOs:**
   - The TB program often collaborates with local NGOs and community organizations to enhance outreach and provide support to TB patients.

Chapter – XXVI Plantation and Green Belt development in respect of leases already granted in the District;

26.1 Status of Plantation & Greenbelt Development in respect of lease already granted in the District

Plantation were raised in safety zone as prescribed in Environment Clearance (EC) & Consent to Operate (CTO) conditions. Average survival rate was 40% -50%. However, on closure of mine the project site was abandoned. In such circumstances, the tree covers were decreases due to lack of maintenance and absence of security. Only in a few cases some of trees planted in safety zone are available.

26.2 Propose Plantation and green belt within the lease area and around it serve different purposes including

- Mitigate air pollution
- Minimise the carbon foot print as it serves as sink & sequester carbon di – oxide produce oxygen
- Control soil erosion & helps in maintaining soil moisture
- It has aesthetic function as it screens the sight of the mine
- It also abets noise

26.3 Location

- Plantation / green belt in mining project should be developed at following location
- Safety zone: - 7.5m wide strip aEdge of lease area they should be planted @ 2.5m c/c.
- Backfield area of part of quarry is proposed to be backfield with overburden material removed in course of mining of stone then plantation has to be raised over this area.
- Upper Benches of Mine - in lease it is proposed to use the quarry for water storage, then at post closure stage upper benches of quarry should be used for raising plantation.
- Unused Area - in those caser remains, unused then that area has to be used for development of green belt
- External dump

External dumps, if not liquidated at closure of mine has to be used

for raising plantation.

- Strip Plantation along. Both sides of link road

26.4 Species

Green belt/plantation should be developed using tree & shrubs. Species should be selected on following consideration.

- Native species

- Require less maintenance

- Are resistant to pollution

Species should be selected in consultation with local forest officials.

26.5 Protection & Care

Arrangement for protection of plantation against grazing by animals & other anthropogenic pressure should be made.

Arrangement for proper watering has to be provided.

Plantation needs protection & care for at lease 3 years.

SN	LESSEE	Area for Safety Zone Ha	No of plants prepose @ 1600 plants per Ha	Actual Exsiting trees on site	diffrence
1	Sri Binod Kumar, S/o Jagdeo Prasad, New Bandhgari, Dipatoli, P.S. Sadar, Ranchi	0.56	896	45.00	851.00
2	M/s Damodar Enterprises, Part. 1. Sri Prabhat Kumar, S/o Sri Mahesh Prasad and 2. Sri Avinash Kumar, S/o Sri Mahesh Prasad, Vill. Saraiyatola, Jainagar, P.O. Sonda 'D', P.S. Patratu, Dist. Ranchi	0.559	896	20.00	876.00
3	Md. Ramiz Raja, S/o Md. Naseem Khan, Bariatu Basti, P.O. Bariatu, Dist. Ranchi	0.76	1900	175.00	1725.00
4	M/s Creo Sales India Pvt. Ltd., Part. Sri Santosh Kumar, S/o Lt. Hiralal, 407 Commerce Tower, Main Road, Ranchi	2.65	4240	15+F37	#VALUE!
5	Sri Hakim Ansari, S/o Sri Aziz Ansari, Vill. Karketta, P.O.	0.47	452	30.00	422.00

	Malsiring, P.S. Pithoria, Dist. Ranchi				
6	M/s Maa Vindyawasini Stone,Prop. Shri Satyendra Kumar Singh,S/o Shri Bhikhari Singh,Sanjay nagar Colony,Sai nagar ,Po+Ps-Ratu,Dist-Ranchi	0.59	944	40.00	904.00
7	Ms Ecotech Coal Industries Pvt Ltd,Dir. Shri Kawach Kumar,Nirmal C-16,Ashok Nagar,Ranchi	1.03	1648	20.00	1628.00
8	1. Sri Rameshwar Dayal Singh S/o Late Bijeshwar dayal Singh,Vill-Tendar,Ranchi,2. Sri Santosh Agarwal,S/o Late Jage ram Agarwal,Po-Khelari,Ps-Macluskiganj,Dist-Ranchi	0.64	1204	10.00	1194.00
9	1. Sri Suresh Mahto, S/o Sri Binod Mahto, Vill. Piska Nagri, P.O.+P.S. Nagri, Dist. Ranchi and 2. Sri Madho Toppo, S/o Lt. Chamru Toppo, Vill. Bandhya, P.O. Halhu, P.S. Nagri, Dist. Ranchi	0.5	800	40.00	760.00
10	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	0.313	500	30.00	470.00
11	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	0.73	1176	35.00	1141.00
12	Dandar Nirman Pvt. Ltd., Director Sri Rahul Pandey, S/o Sri Surendra Pandey, Sukhdeonagar, Ratu Road, Ranchi	0.419	670	40.00	630.00
13	Sri Vikrant Singh, S/o Sri Radheshyam Singh, Manas Niwas,	0.72	1152	90.00	1062.00

	Bank Colony Road, Hesal, Hehal Ranchi				
14	M/s Konark Traders, Prop. Sri Roshan Kumar, S/o Sri Binod Mahto, Vill. Tupudana, P.O. Hatia, P.S. Dhurwa, Ranchi	0.54	864	220.00	644.00
15	Sri Prabhunath Pathak, S/o Lt. Laxmi Narayan Pathak, Anand Nagar, Harmu Housing Colony, P.O. Harmu, P.S. Argora, Dist. Ranchi	0.9	1440	50.00	1390.00
16	M/s Devanti Projects Pvt. Ltd., Director Sri Amit Kumar, S/o Sri Anil Kumar Sahu, Sahu Nagar, Madhukam, Piska More, Ranchi	0.2	320	70.00	250.00
17	M/s Bansidhar Construction Company Pvt. Ltd., Prop. Sri Prakash Kumar Singh, Chief Executive Officer Sri Ram Naresh Singh, Azad Nagar, Near Primary School, Bhuli, Dhanbad	0.1	250	100.00	150.00
18	M/s Hardrock Infra, Part. 1. Sri Moiz Akhtar, S/o Sri Shamim Akhtar, 64 H.B. Road, Thadpakhna, Ranchi 2. Sri Varun Lalwani, S/o Sri Moti Lal Lalwani, Imam Kothi, H.B.Road, Kokar, Ranchi 3. Sri Nitesh Sharda, S/o Sri N.K. Sharda, 101' Kishan Apartment, P.P. Compound, Ranchi	0.23	368	35.00	333.00
19	M/s R.N. Construction, Part. 1. Sri Rajendra Prasad, S/o Meet Narayan Prasad, Vill.+P.O. Surajpura, P.S. Padma, Dist.- Hazaribagh 2. Jh Naresh Kumar, S/o Kapil Dev Prasad Mehta, Vill. Vikash Nagar, Sarle, P.O.+P.S. Sadar, Dist.- Hazaribagh	0.51	1275	415.00	860.00

20	M/s Hardrock Infra, Part. 1. Sri Moiz Akhtar, S/o Sri Shamim Akhtar, 64 H.B. Road, Thadpakhna, Ranchi 2. Sri Varun Lalwani, S/o Sri Moti Lal Lalwani, Imam Kothi, H.B.Road, Kokar, Ranchi 3. Sri Nitesh Sharda, S/o Sri N.K. Sharda, 101' Kishan Apartment, P.P. Compound, Ranchi	0.36	360	290.00	70.00
21	S.S.Mining, Part. 1. Sri Manoj Kumar Singhania and 2. Sri Subhra Bose, 101, Mangalmurti Heights, Harmu Road, Ranchi	0.61	600	300.00	300.00
22	M/s Lalkeshwar Stone Chips Pvt. Ltd., Part. 1. Sri Lalkeshwar Mahto, 2. Sri Tulshi Kharwar 3. Ram Nandan Mahto, Vill. Gunja, P.O. Hendebili, P.S. Ormanjhi, Dist. Ranchi	0.37	925	250.00	675.00
23	M/s Jai Balaljii Construction, Prop. Sri Santosh Kumar Gupta, Kali Babu Street, Upper Bazar, Ranchi	0.47	1175	35.00	1140.00
24	M/s Lavanya Devlopers, Part- shri Ashok Kumar Dhanuka, S/o Om Prakash Dhanuka, Add- 505, Mangal Murti Heights, Near Vishal Megamart, Harmu Road Ranchi	0.65	650	150.00	500.00
25	M/s Rubal Stones Mines, Prop- Shri Satyendra Kumar, S/o Ram Prasad, Near Neeche Tola Shiv Mandir Po+Ps Korambe Thana Gola, Dist Ramgarh	0.29	725	200	525.00
26	Sri Sumit Kumar, S/o Sri Anil Kumar Sahu, Near Galaxia Mall, Sahu Nagar, P.S. Sukhdeonagar, Hehal, Ranchi	0.6	1500	25.00	1475.00
27	M/s Bhuneshwari Stone Crusher, Prop. Sri Dwarika Nath	0.86	2150	500.00	1650.00

	Chaudhary, Qr. No.- B III- 493 (T), HEC Colony, Dhurwa, Ranchi-834004				
28	Sri Krishna Kumar Tiwari, S/o Lt. Kedar Nath Tiwari, Near Shyam Sweets, Chandani Chowk, Hatia, P.S. Jagarnathpur, Ranchi	0.286	715	350.00	365.00
29	Sri Manglu Oraon, S/o Sri Bauna Oraon, Vill. Bermad, P.O. Hatia, P.S. Dhurwa, Dist. Ranchi	0.25	400	150.00	250.00
30	Sri Suresh Kumar Baitha, S/o Lt. Puran Baitha, Vill.+P.O. Rajaulatu, P.S. Namkum, Dist. Ranchi and Sri Rajesh Kachap, S/o Sri Jagarnath Kachap, Vill. Lupungtoli, P.O. Rajaulatu, P.S. Namkum, Dist. Ranchi	0.37	250	30.00	220.00
31	M/s Hero Hardrock Harvestors, Part. Sri Shiv Kumar, S/o Lt. Hiralal, 407, Commerce Tower, Main Road, Ranchi	0.25	400	35.00	365.00
32	M/s Elite Power Project & Construction Pvt. Ltd., Director Shri Prashant Kumar Verma, S/o Shri Bishnu Dev Verma, 3D Vatika Appartment Bank Road. Po- GPO, PS- Kotwali Dist- Ranchi	0.42	672	20	652.00
33	M/s Shrishti Works Pvt. Ltd., Director- 1. Sri Abhisekh Anand, S/o Lt. Binod Singh and 2. Smt. Shilpi Singh, W/o Sri Abhisekh Anand, Vill.- Sidharthpur Colony, Near Axis Bank, Manpur, Gya, Bihar	0.72	1080	50	1030.00
34	Navratan Mines, Part. 1. Sri Akchat Singh Bhardwaj 2. Rohit Kumar Sahu and others, New Morabadi, P.S.- Bariatu, Dist.- Ranchi	0.255	408	40	368.00

35	Silver Stone Works, Part. 1. Sri Manoj Kumar Singhania, S/o Sri Shyam Sundar Singhania, 2. Sri Neeraj Kumar Sharma, S/o Sri Gyan Chand Sharma, 101, Paramsukh Apartment, Modi Complex, Kamlakant Road, Sukhdeonagar, Ranchi	0.444	710	150	560.00
36	M/s Kanchan Savitri and Sons, Part. 1. Sri Rangnath Chaubey, S/o Dinanath Chaubey and 2. Sri Jai Shankar Kumar, S/o Lt. Umesh Sharma, Flat No.- C1, Block B, Bhaskar Complex, Tagore Hill Road, Morabadi, Ranchi	0.51	816	150	666.00
37	M/s Maa Mundeshwari Stone Mines, Prop. Smt. Neelam Singh, House No. 21, Nilanchal Kothi Compound, Ratu Road, Piska More, Ranchi	0.56	896	20	876.00
Minor Mineral Non-Working Lease List (Stone)					
SN	**LESSEE**				
1	Sri Binod Mahto, S/o Lt. Doman Mahto, Vill. Tupudana, Dhurwa, Ranchi	0.317	400		400.00
2	Sri Rantha Mahli, S/o Lt. Balku Mahli and Sri Ravi Shankar Sahu, S/o Sri Dhaneshwar Sahu, Vill. Bedwari, P.O. Childag, P.S. Angara, Ranchi	0.102	125	10.00	115.00
3	M/s Veer Stone Part- Shri Abhishek Anand, Siddhartha Colony Near Axis Bank Manpur Gaya, Bihar (2) part Anand Murti B/560/2 Near Rajendra Bhawan Dhurwa, Ranchi	0.6	900	300.00	600.00
4	K.V.S. Mines and Minerals, Part. 1. Sri Sandip Kumar Jaiswal and others, Blue Safair Apartment, Flat No.- B, Block D, Dhela Toli,	0.43	1075	40	1035.00

	Near Sohrai Bhawan, Harmu, Ranchi				
5	Dumaro Sand Mining Projects, Prop. Sri Rahul Kumar, S/o Sri Mansukh Lal, Flat No. 104, Sn Tulsi Apartment, Near HDFC School, Bariatu Road, Ranchi	0.385	965	120.00	845.00
6	Sri Mohsin Hasan Raja, S/o Md. Nasim Khan, Vill.+P.O.+P.S. Bariatu, Ranchi	0.84	1345	15.00	1330.00
7	Urja Coal and Mines Pvt. Ltd., Director Sri Litesh Jha, S/o Sri Surendra Prakash Jha, C-16, Park Road, Ashok Nagar, Road No.1, Ranchi			10.00	0.00
8	M/s Hiralal Sand And Ballast Company Ltd., Part. Sri Santosh Kumar, S/o Lt. Hiralal, Fourth Floor, Karni Heights, Club Road, Ranchi			15.00	-15.00
9	Sri Rahul Kumar, S/o Sri Mansukh Lal, Flat No. 104, Sn Tulsi Apartment, Near HDFC School, Bariatu Road, Ranchi	0.766	1216	25.00	1191.00
10	Smt. Sheela Singh, W/o Sri Ravi Bhushan Singh, Bhushan Niwas, Sukhla Colony, Hinoo, Ranchi				0.00
11	Sri Haricharan Ram Prajapati, S/o Sri Dev Narayan Prajapati, Vill. Tupudana, P.O.+P.S. Hatia, Ranchi	0.17	425	20.00	405.00
12	Maa Bhawani Stone Works, Part. Sri Sanjay Kumar Gupta, S/o Sadhu Charan Sahu, Vill. Tupudana, P.O. Hatia, Dist. Ranchi	0.19	475	30.00	445.00
13	M/s Hiralal and Company, Part. Sri Shiv Kumar, S/o Lt. Hiralal, F-14, City Centre, Club Road, Ranchi			25.00	

14	M/s Hiralal and Company, Part. Sri Shiv Kumar, S/o Lt. Hiralal, F-14, City Centre, Club Road, Ranchi	0.8	1280	10.00	1270.00
15	Sri Sanjay Kumar Rai ,S/o Bharat Rai,Vill-Mahadev Toli,Po-Rajaulatu,Ps-Namkum,Dist-Ranchi	0.68	1700	50.00	1650.00
16	Smt. Manjusha Lal, D/o Lt. Murari Lal, Tulsi Bhawan, Pawan Colony, Hinoo, P.S.-Doranda, Dist.-Ranchi	0.5	1250	70.00	1180.00
17	Sri Gopal Kumar Ishwar, S/o Sri Umesh Prasad Ishwar, Booty More, Hanuman Nagar, Ranchi and Sri Kishore Ranjan Singh, S/o Sri Awdhesh Kishore Prasad Singh, Sri Ram Regency, Flat No. 303, Hari Om Tower, Ranchi	0.29	725	100.00	625.00
18	Sri Mohsin Hasan Raja, S/o Md. Nasim Khan, Vill.+P.O.+P.S. Bariatu, Ranchi	0.522	1305	10.00	1295.00
19	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	0.607	975	200.00	775.00
	M/s JPL Enterprises, Prop. Sri Niraj Kumar Singh, S/o Sri Jitendra Prasad Singh, B- 201, Binandani Apartment, Sadabahar Chowk, Namkum, Ranchi	0.4	750	30.00	720.00
20	Mrs Asha Rani Tete D/o Shri Teleshfare kido Near D.T 1207 Dhurwa Ranchi.	0.306	475	145.00	330.00
21	Sri Sandip Kumar, S/o LT. Narendra Singh Munda, Vill.+P.O.+P.S. Sonahatu, Ranchi	0.21	504	15.00	489.00
22	M/s Mineral Resources, Pro. Sri Prabhat Tekriwal, S/o Sri Aatma Ram Agrawal, 13, 14, P Industrial area, Namkum, Ranchi	0.16	250	10	240.00

23	Sri Pradip Kumar Jha, S/o Sri Jamun Jha, Vill. Tea Garden, Bargawan, P.O.+P.S. Namkum, Dist. Ranchi	0.346	554	80.00	474.00
24	Sri Sri Hari Murarka, Lake Avenue Road, Kanke Road, Ranchi		0		0.00
25	R.B Engicom , prop - sri rahul kumar shah and sri jyoti bhushan kumar, add- house no F-82, P C Colony, kankarbagh near madhuban apartment, sampatchak, dist patna bihar pin 800020	0.16	1525	0	

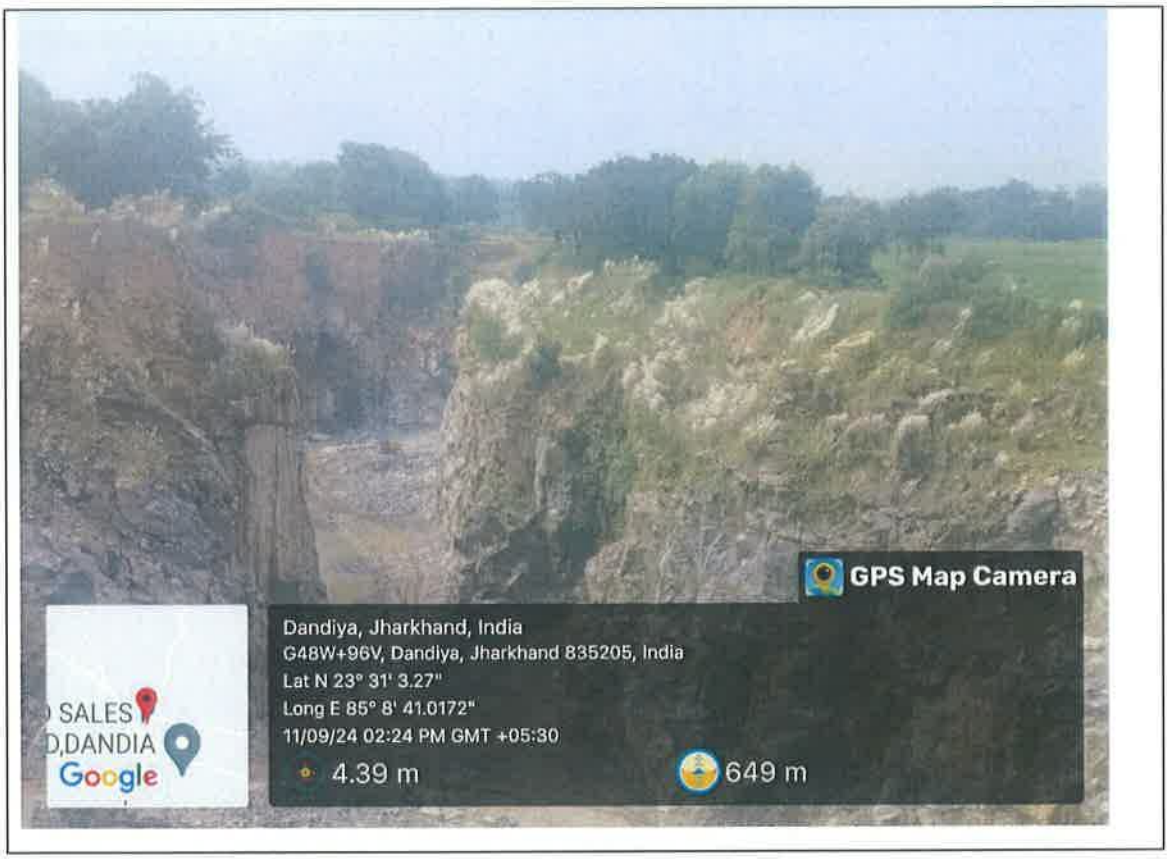
Out of 62 leases total, 37 number of mines are operational at the time of preparation of District Survey Report & rest 25 mines are temporarily non-working.

The Deputy Commissioner thorugh District Mining Officer will ensure that the respective mines owner of the respective leases shall complete the plantation within six months from the date of approval of District Survey Report.

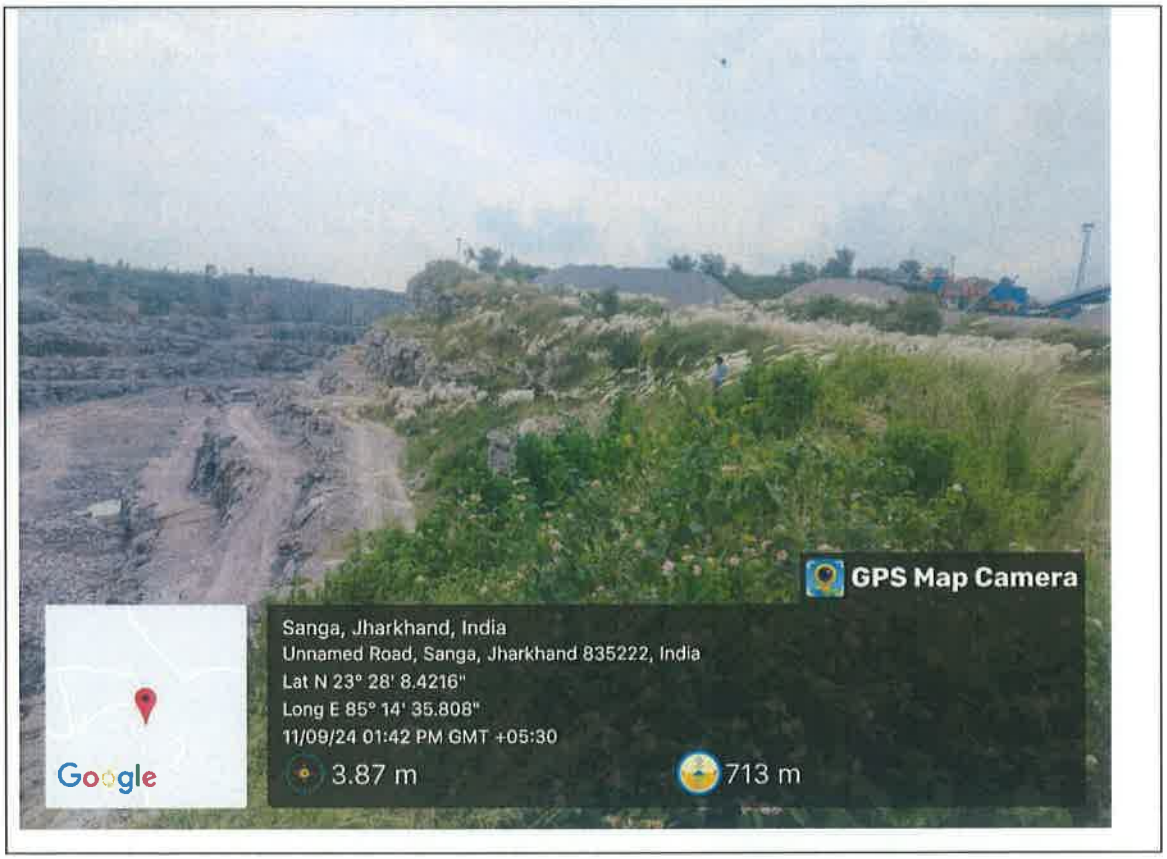
Number of tree on site	45
Name of Mining Lease Holder	Sri Binod Kumar
Location	Mauza – Banadag, Block - Angada
Area for plantation as per plan	0.27 Ha
Number of tree proposed in Mining Plan	432

Number of tree on site	90
Name of Mining Lease Holder	M/S Damodar Enterprises
Location	Mauza - Kuchu, Block - Angara
Area for plantation as per plan	
Number of tree proposed in Mining Plan	

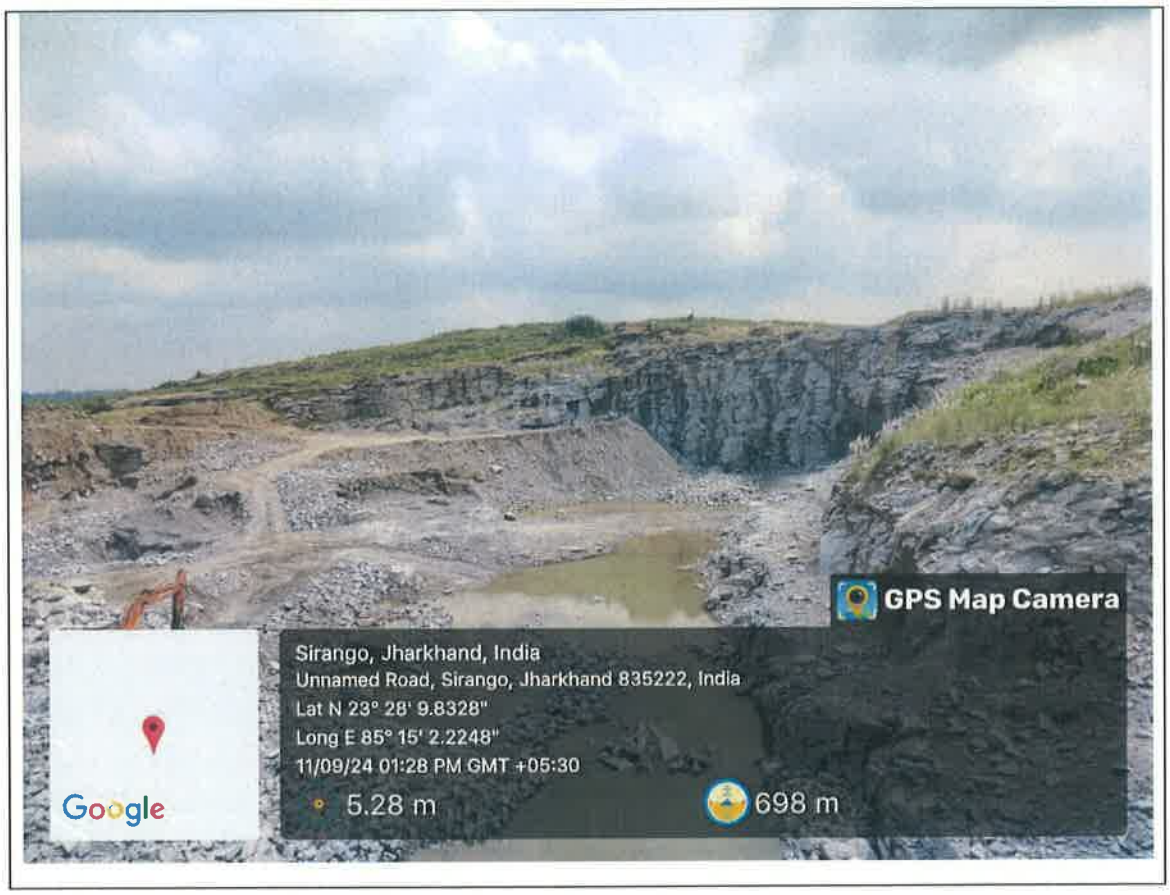
Number of tree on site	60
Name of Mining Lease Holder	Md Ramiz Raja
Location	Mauza – Nawagarh, Block - Angara
Area for plantation as per plan	
Number of tree proposed in Mining Plan	



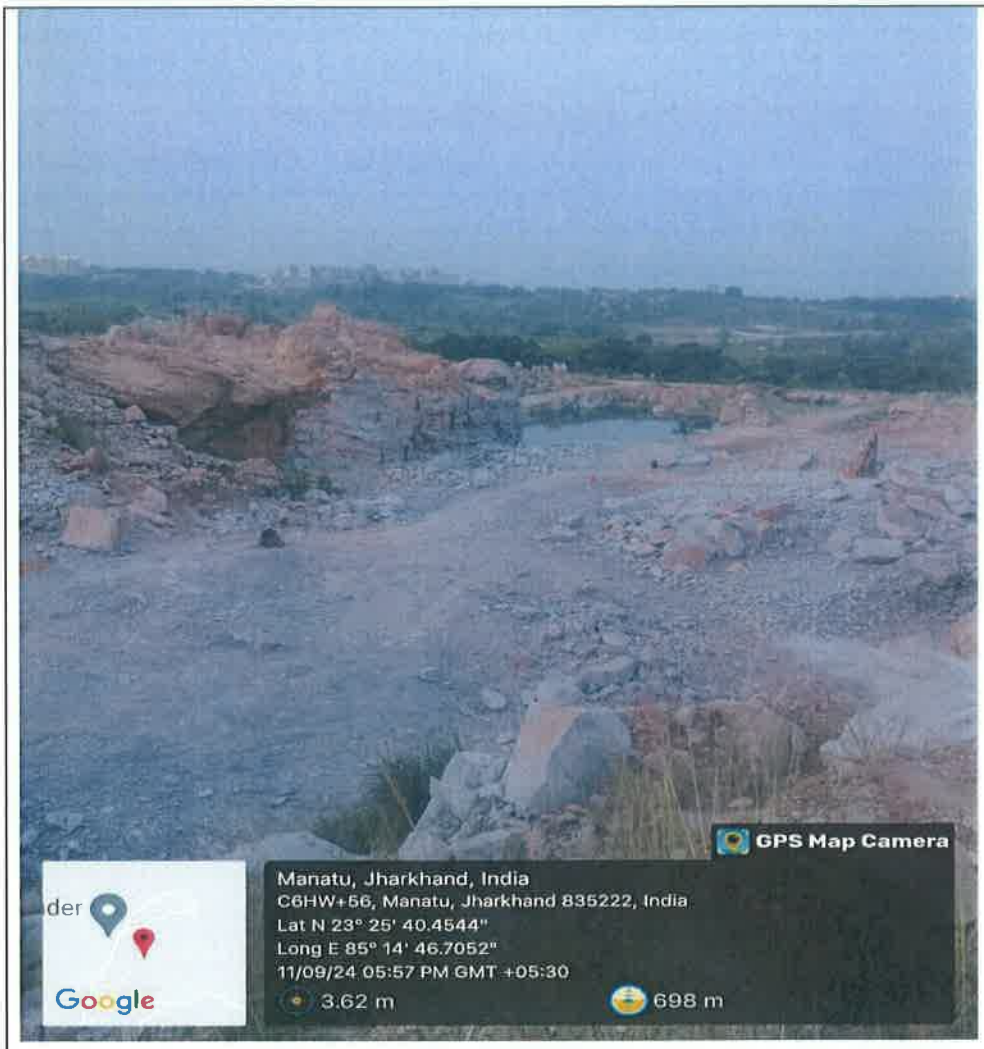
Number of tree on site	15
Name of Mining Lease Holder	M/s Creo Sales India Pvt. Ltd.
Location	Mauza – Dandiya, Block - Budmu
Area for plantation as per plan	2.65 Ha
Number of tree proposed in Mining Plan	4240



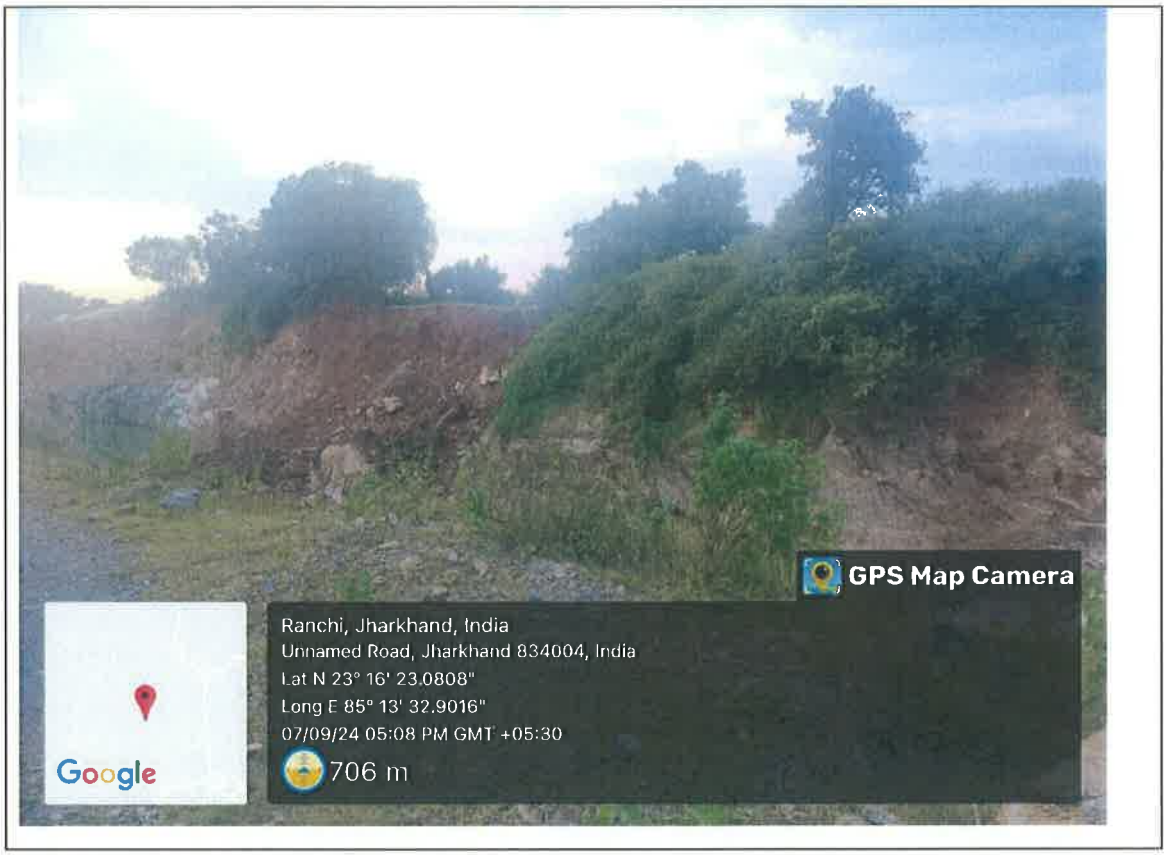
Number of tree on site	30
Name of Mining Lease Holder	Sri Hakim Ansari
Location	Mauza – Sanga, Block - Kanke
Area for plantation as per plan	0.47 Ha
Number of tree proposed in Mining Plan	752



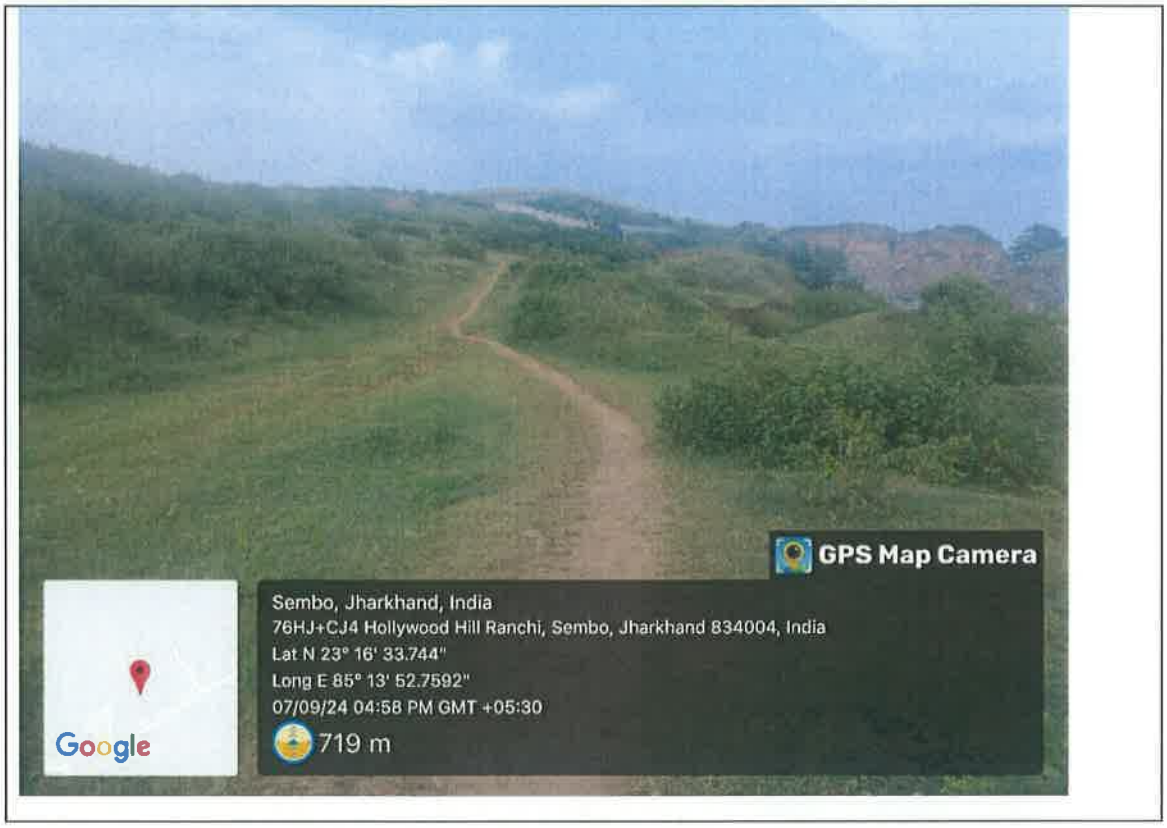
Number of tree on site	10
Name of Mining Lease Holder	M/s Ecotech Coal Industries Pvt. Ltd.
Location	Mauza – Sirango, Block - Kanke
Area for plantation as per plan	1.03 Ha
Number of tree proposed in Mining Plan	1648



Number of tree on site	10
Name of Mining Lease Holder	Sri Rameshwar Dayal Singh
Location	Mauza – Manatu, Block - Kanke
Area for plantation as per plan	0.64 Ha
Number of tree proposed in Mining Plan	1024

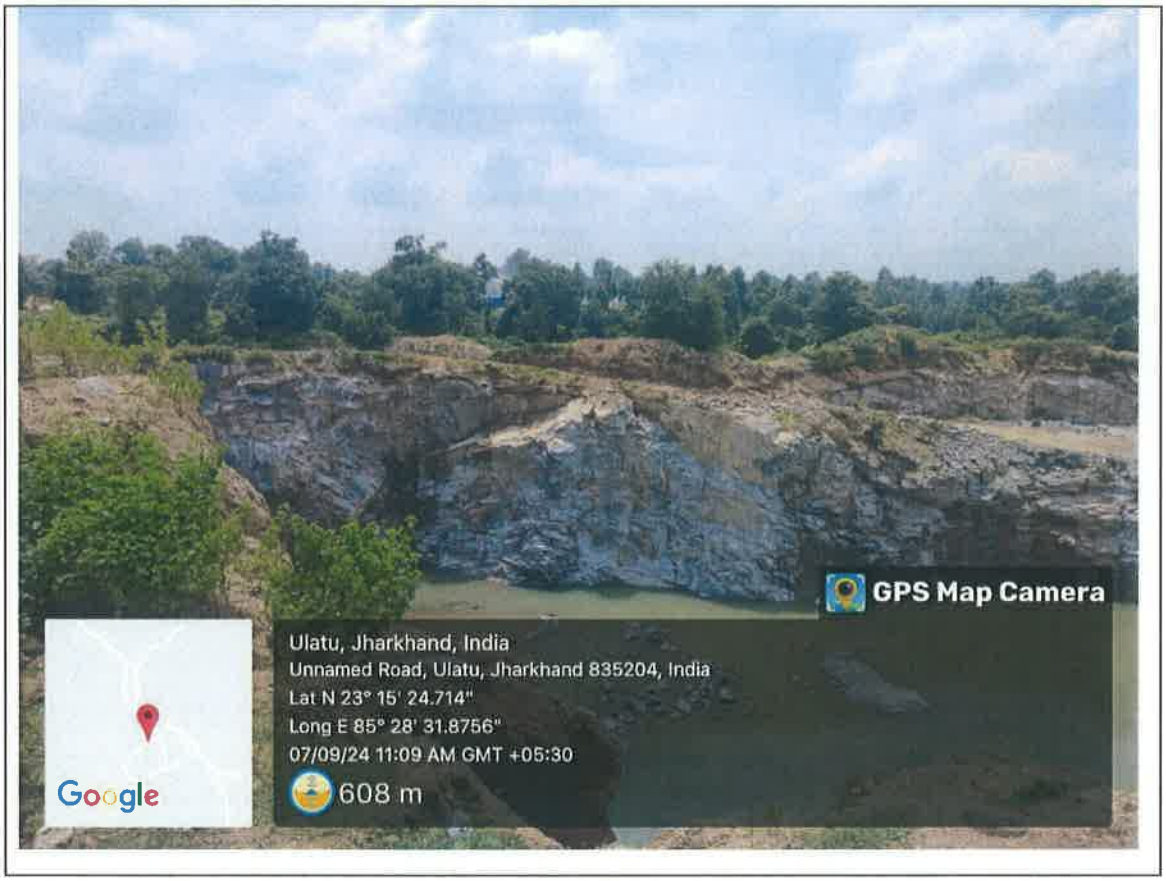


Number of tree on site	40
Name of Mining Lease Holder	Sri Suresh Mahto
Location	Mauza – Singhpur, Block – Nagri
Area for plantation as per plan	0.50 Ha
Number of tree proposed in Mining Plan	800



Number of tree on site	20
Name of Mining Lease Holder	M/s Maa Mundeshwari Stone Mines
Location	Mauza – Singhpur, Block - Nagri
Area for plantation as per plan	0.56 Ha
Number of tree proposed in Mining Plan	896

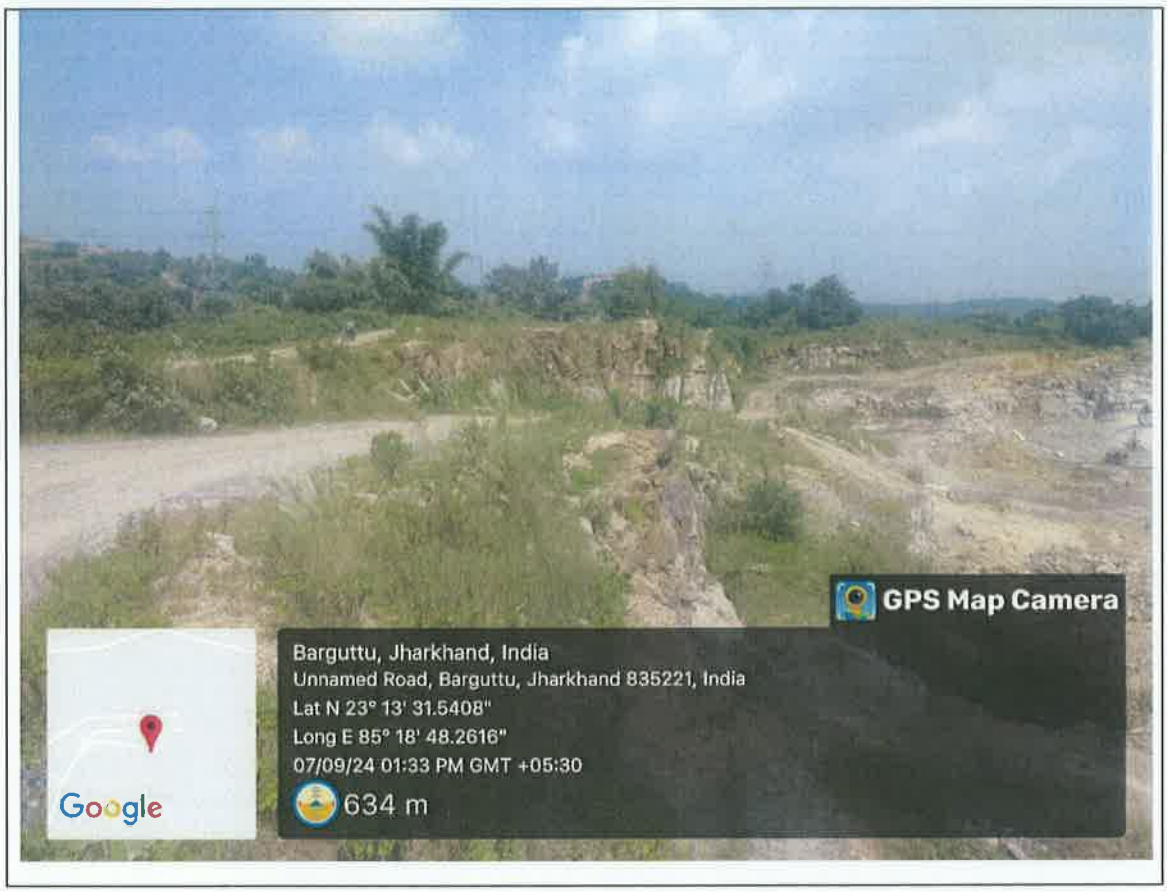
Number of tree on site	20
Name of Mining Lease Holder	Sri Binod Mahto
Location	Mauza – Hazam, Block - Namkum
Area for plantation as per plan	
Number of tree proposed in Mining Plan	



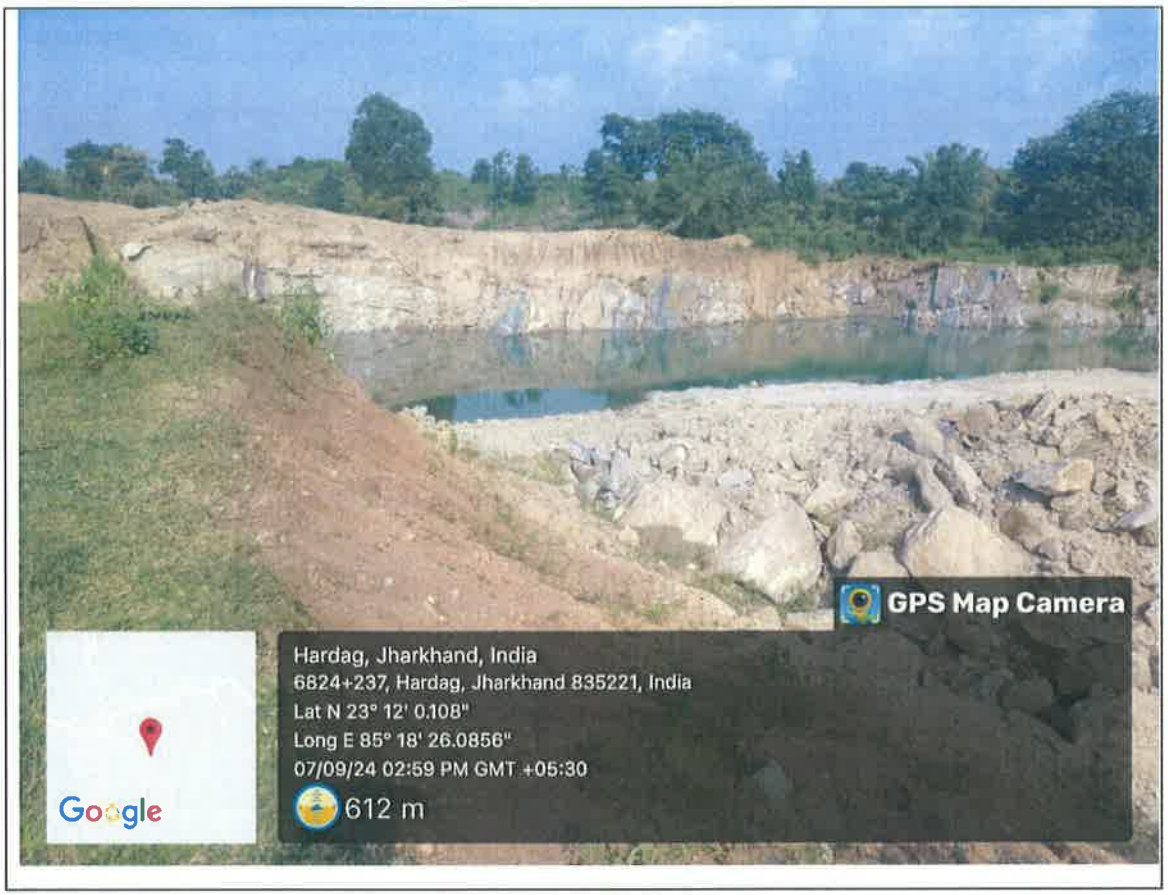
Number of tree on site	150
Name of Mining Lease Holder	M/s JPL Enterprises
Location	Mauza – Ulatu, Block - Namkum
Area for plantation as per plan	0.734 Ha
Number of tree proposed in Mining Plan	1175

Number of tree on site	120
Name of Mining Lease Holder	M/s JPL Enterprises
Location	Mauza – Ulatu, Block - Namkum
Area for plantation as per plan	1.01 Ha
Number of tree proposed in Mining Plan	1616

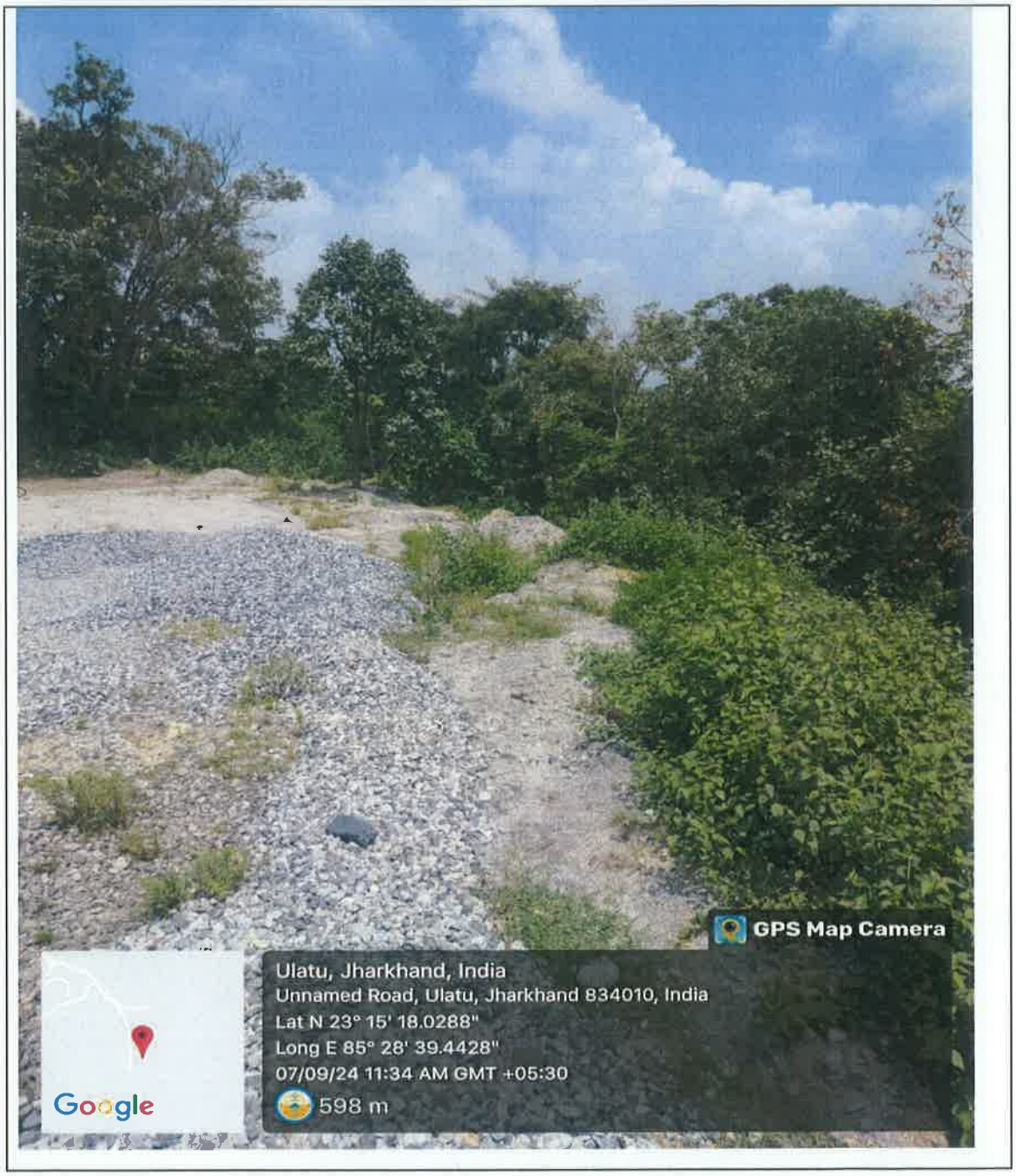
Number of tree on site	120
Name of Mining Lease Holder	Dandar Nirman Pvt. Ltd.
Location	Mauza – Ulidih, Block - Namkum
Area for plantation as per plan	
Number of tree proposed in Mining Plan	



Number of tree on site	90
Name of Mining Lease Holder	Sri Vikrant Singh
Location	Mauza – Sorha, Block - Namkum
Area for plantation as per plan	0.70 Ha
Number of tree proposed in Mining Plan	1120



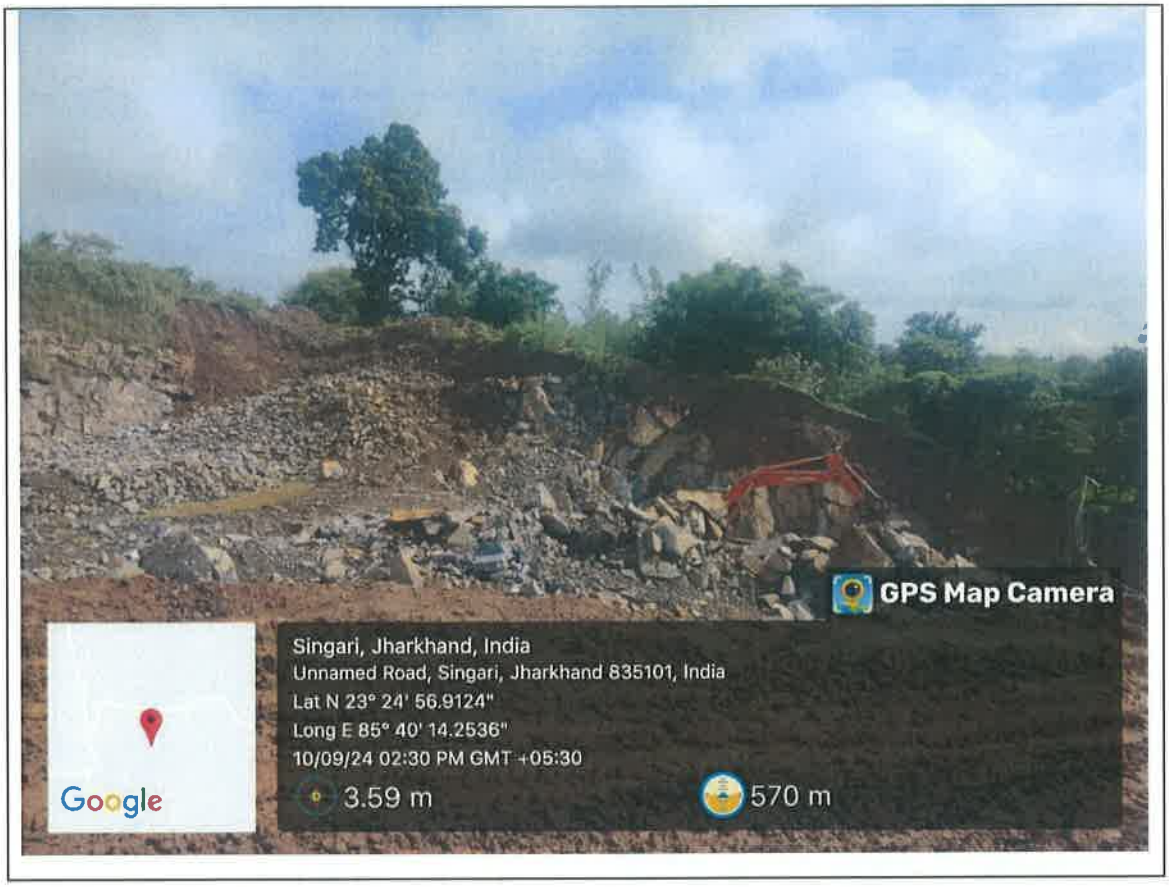
Number of tree on site	220
Name of Mining Lease Holder	M/s Konark Traders
Location	Mauza – Hardag, Block - Namkum
Area for plantation as per plan	0.54 Ha
Number of tree proposed in Mining Plan	864



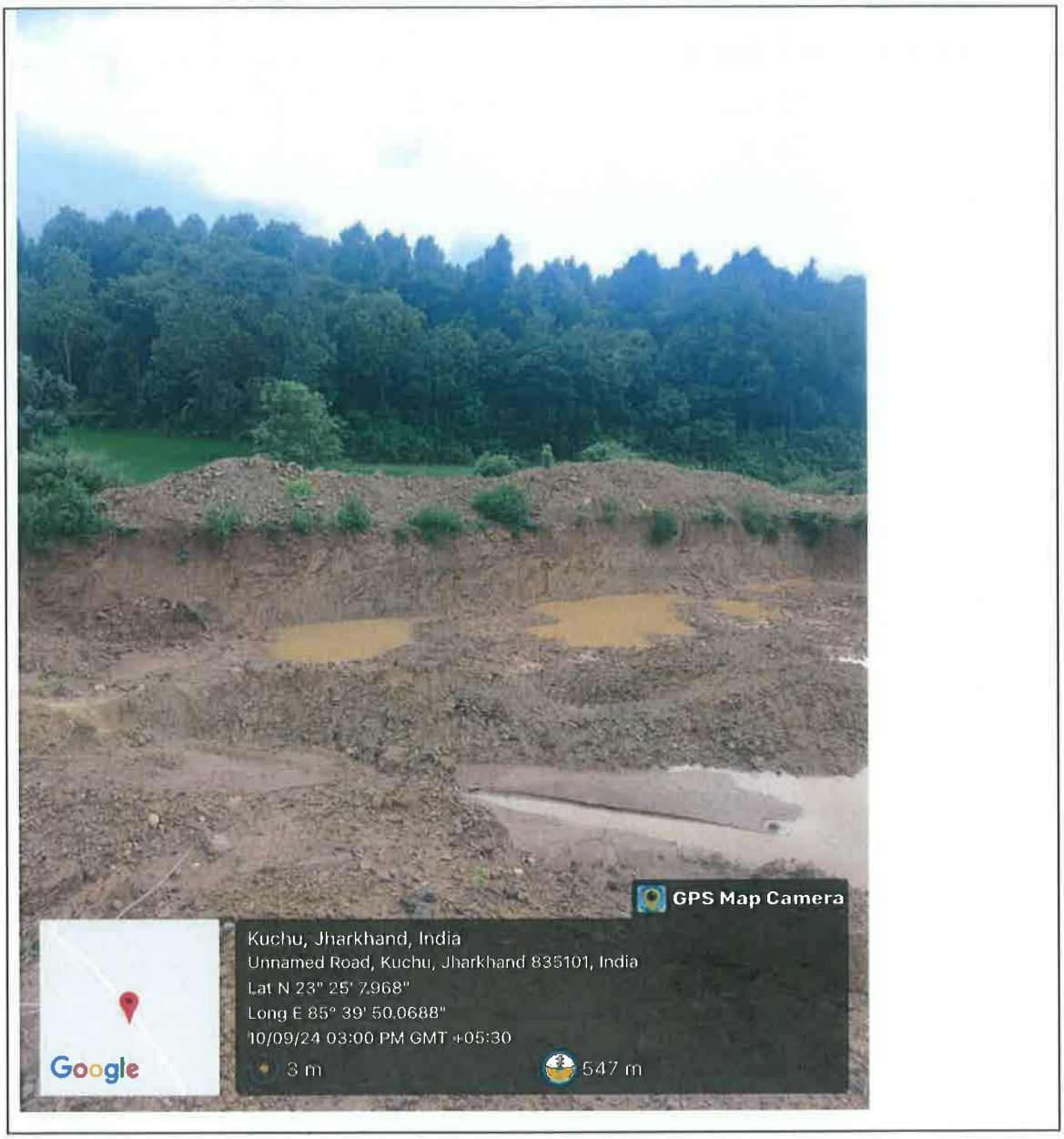
Number of tree on site	20
Name of Mining Lease Holder	M/s Lalkeswar Stone Chips Pvt. Ltd.
Location	Mauza – Gurgai, Block - Ormanjhi
Area for plantation as per plan	
Number of tree proposed in Mining Plan	

Number of tree on site	30
Name of Mining Lease Holder	M/s Jai Balaji Construction
Location	Mauza – Gurgai, Block - Ormanjhi
Area for plantation as per plan	
Number of tree proposed in Mining Plan	

Number of tree on site	50
Name of Mining Lease Holder	M/s Rubal Stone Mines
Location	Mauza – Singari, Block - Angara
Area for plantation as per plan	
Number of tree proposed in Mining Plan	

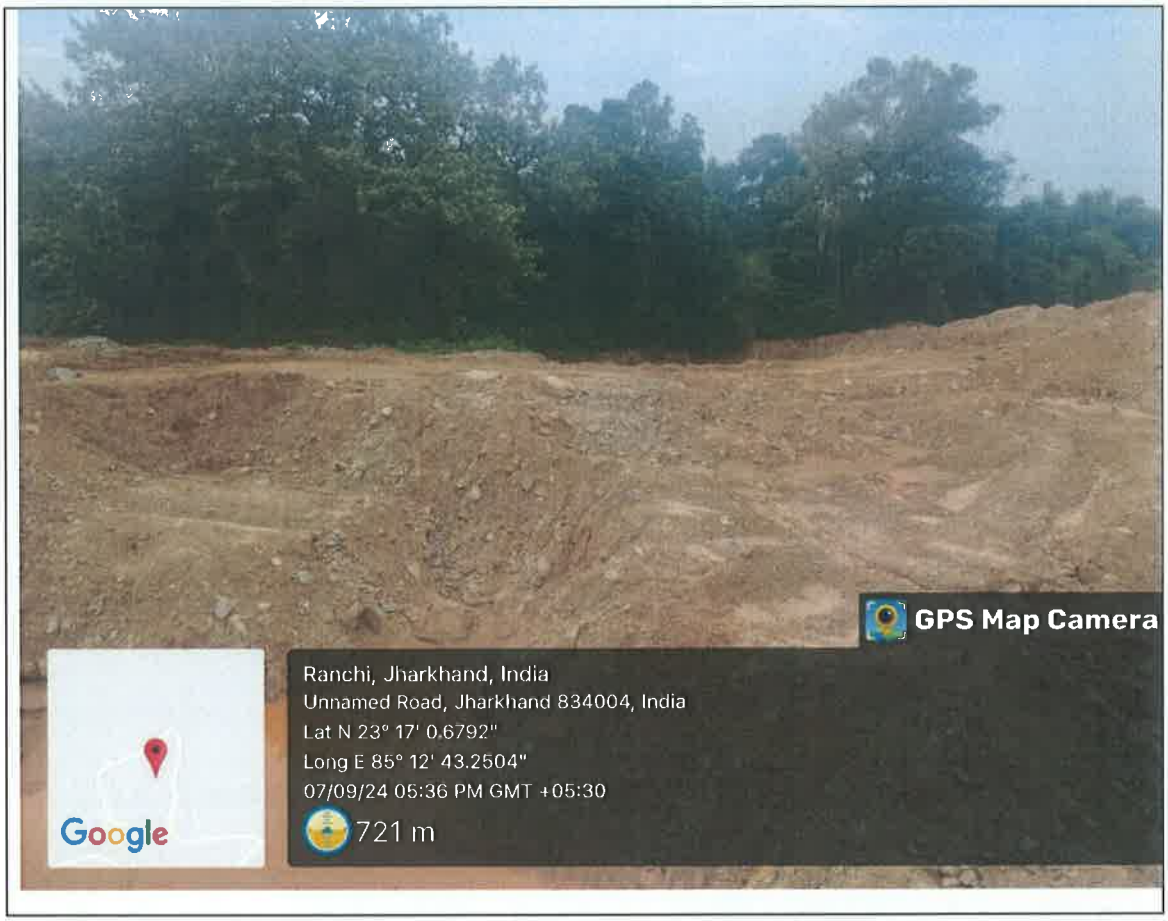


Number of tree on site	60
Name of Mining Lease Holder	M/s Shristi Works Pvt. Ltd.
Location	Mauza – Singari, Block - Angara
Area for plantation as per plan	0.72 Ha
Number of tree proposed in Mining Plan	1152



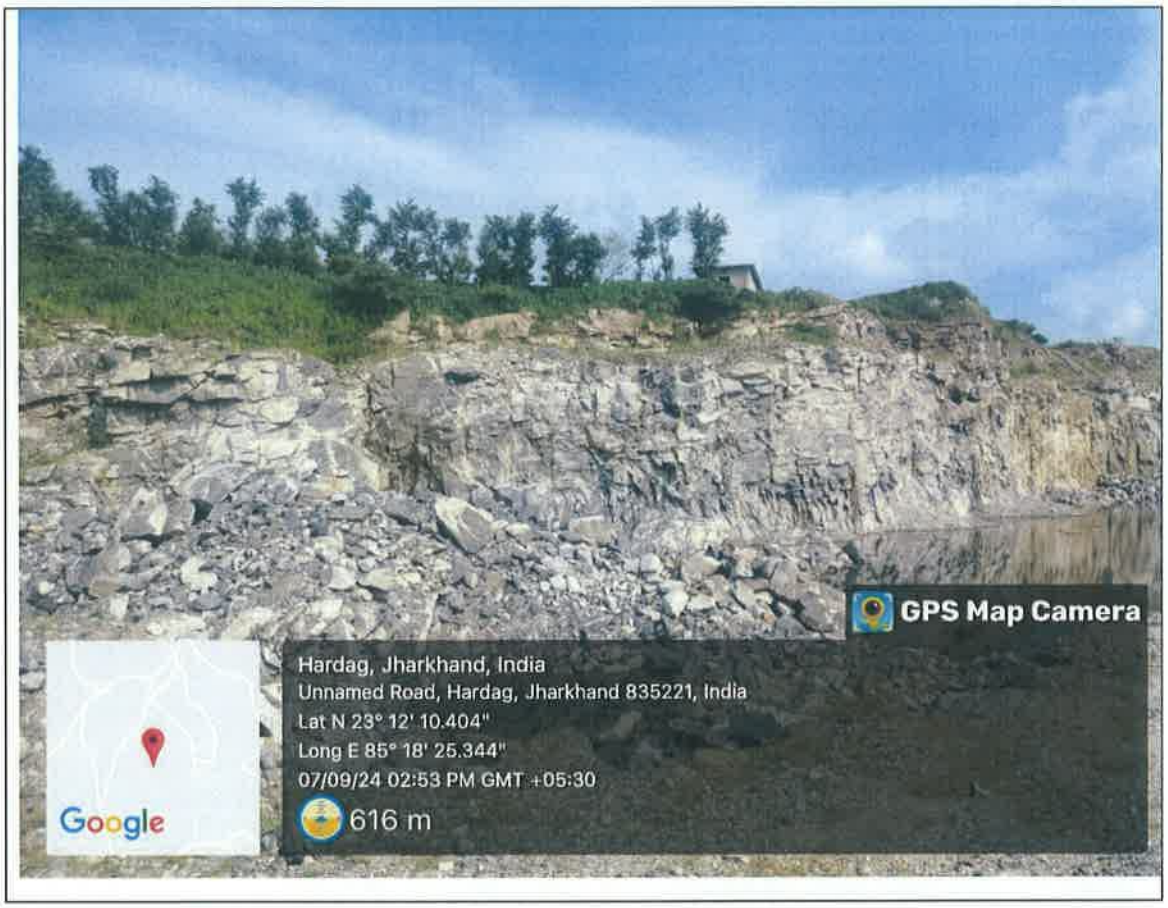
Number of tree on site	40
Name of Mining Lease Holder	K.V.S Mines and Minerals
Location	Mauza – Kuchu, Block - Angara
Area for plantation as per plan	
Number of tree proposed in Mining Plan	

Number of tree on site	150
Name of Mining Lease Holder	M/s Kanchan Savitri and Sons
Location	Mauza – Umedanda, Block - Budmu
Area for plantation as per plan	0.51 Ha
Number of tree proposed in Mining Plan	816



Number of tree on site	350
Name of Mining Lease Holder	Sri Sumit Kumar
Location	Mauza – Halhu, Block - Nagri
Area for plantation as per plan	
Number of tree proposed in Mining Plan	

Number of tree on site	10
Name of Mining Lease Holder	Sri Krishna Kumar Tiwari
Location	Mauza – Balsiring, Block - Namkum
Area for plantation as per plan	
Number of tree proposed in Mining Plan	



Number of tree on site	120
Name of Mining Lease Holder	M/s Ganga Construction
Location	Mauza – Hardag, Block - Namkum
Area for plantation as per plan	
Number of tree proposed in Mining Plan	

Number of tree on site	25
Name of Mining Lease Holder	Sri Rahul Kumar
Location	Mauza – Jamchuwan, Block -
Area for plantation as per plan	0.766 Ha
Number of tree proposed in Mining Plan	1226

Number of tree on site	10
Name of Mining Lease Holder	Rantha Mahali
Location	Mauza – Bedwari, Block – Angara
Area for plantation as per plan	0.371 Ha
Number of tree proposed in Mining Plan	125

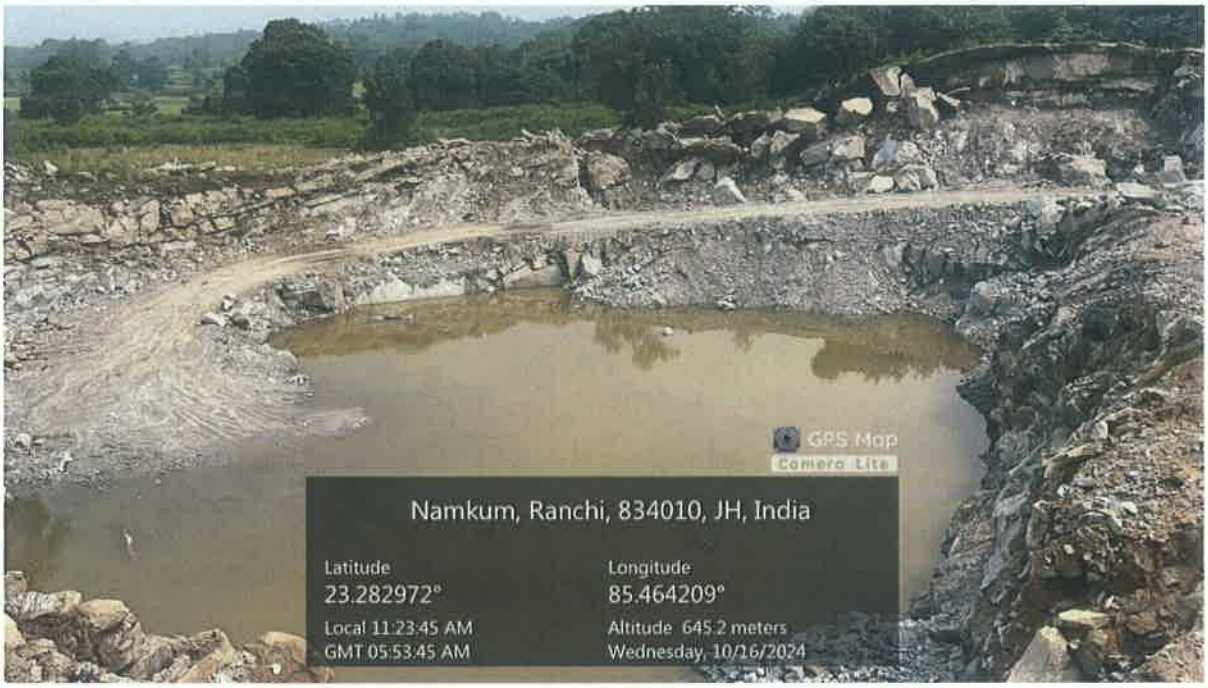
Number of tree on site	20
Name of Mining Lease Holder	M/s Elite power
Location	Mauza –, Ichadag Block – Ormanjhi
Area for plantation as per plan	0.42 Ha
Number of tree proposed in Mining Plan	672

Number of tree on site	40
Name of Mining Lease Holder	Navratan Mines
Location	Mauza –, Chutupalu Block – Ormanjhi
Area for plantation as per plan	0.255 Ha
Number of tree proposed in Mining Plan	408

Number of tree on site	15
Name of Mining Lease Holder	Urja Coal and mines PVT Ltd
Location	Mauza –Manatu, Block – Kanke
Area for plantation as per plan	
Number of tree proposed in Mining Plan	

Number of tree on site	15
Name of Mining Lease Holder	M/s Hiralal Sand and Ballast Company
Location	Mauza –Manatu, Block – Kanke
Area for plantation as per plan	
Number of tree proposed in Mining Plan	

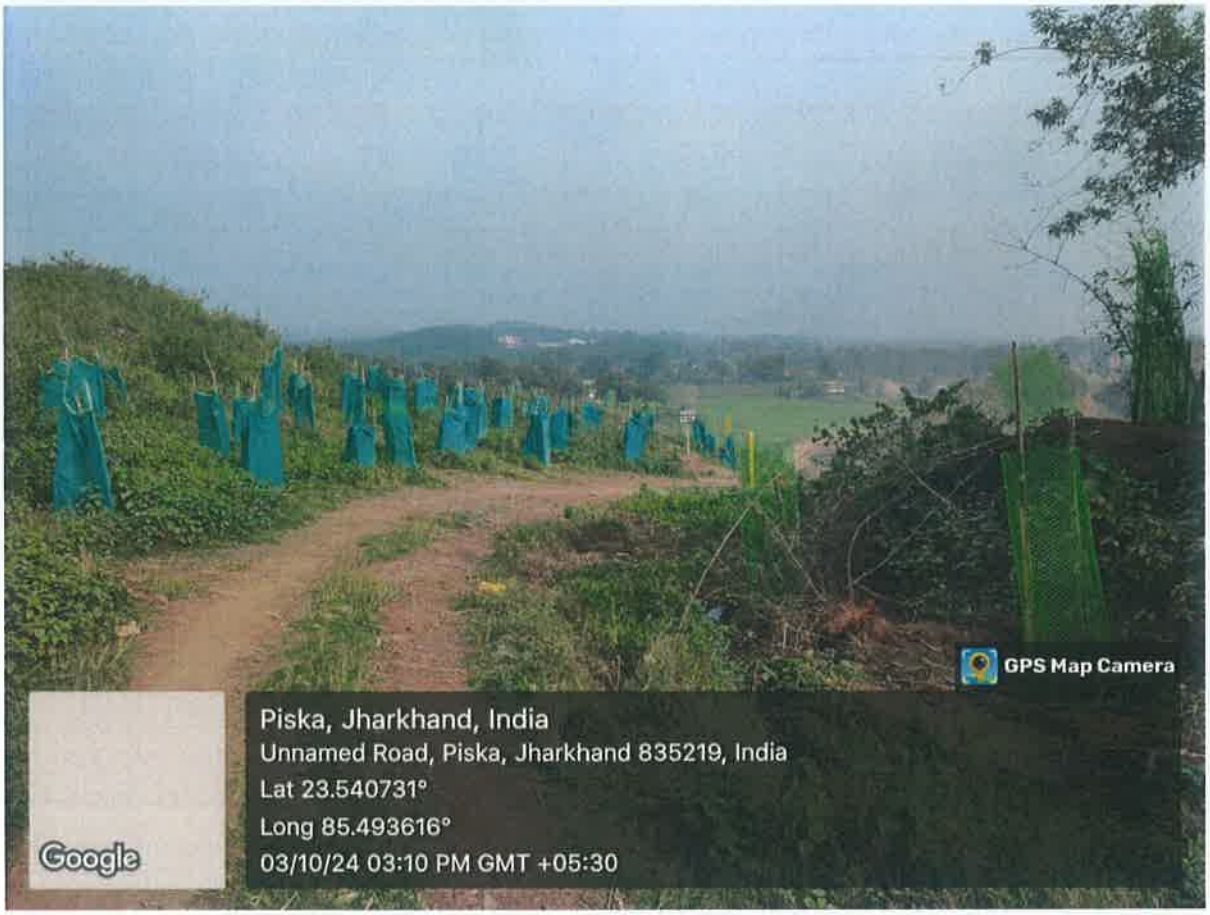
Number of tree on site	300
Name of Mining Lease Holder	M/s Veer Stone
Location	Mauza –Singari, Block – Kanke
Area for plantation as per plan	0.6 Ha
Number of tree proposed in Mining Plan	900



Number of tree on site	80
Name of Mining Lease Holder	Sri Pradeep Kumar Jha
Location	Mauza –Ulatu, Block – Namkum
Area for plantation as per plan	0.346 Ha
Number of tree proposed in Mining Plan	554

Number of tree on site	145
Name of Mining Lease Holder	Asha Rani Tete
Location	Mauza –Jaidiha, Block – Ormanjhi
Area for plantation as per plan	0.306 Ha
Number of tree proposed in Mining Plan	475

Number of tree on site	30
Name of Mining Lease Holder	Suresh Kumar Baitha
Location	Mauza –Ulatu, Block – Namku
Area for plantation as per plan	0.37 Ha
Number of tree proposed in Mining Plan	250



Number of tree on site	150
Name of Mining Lease Holder	Silver Stone Works
Location	Mauza –Piska, Block – Ormanjhi
Area for plantation as per plan	0.444 Ha
Number of tree proposed in Mining Plan	710

Number of tree on site	35
Name of Mining Lease Holder	Hardrock Infra
Location	Mauza –Chaprakocha, Block – Ormanjhi
Area for plantation as per plan	0.23 Ha
Number of tree proposed in Mining Plan	368

Number of tree on site	300
Name of Mining Lease Holder	S S Mining
Location	Mauza –Chaprakocha, Block – Ormanjhi
Area for plantation as per plan	0.61 Ha
Number of tree proposed in Mining Plan	600

Number of tree on site	40
Name of Mining Lease Holder	M/s Maa Vindhyavasini Stone
Location	Mauza –Chamguru, Block – Kanke
Area for plantation as per plan	0.59 Ha
Number of tree proposed in Mining Plan	944

Approved

Number of tree on site	50
Name of Mining Lease Holder	Prabhunath Pathak
Location	Mauza –Gurgain, Block – Ormanjhi
Area for plantation as per plan	0.9Ha
Number of tree proposed in Mining Plan	1440

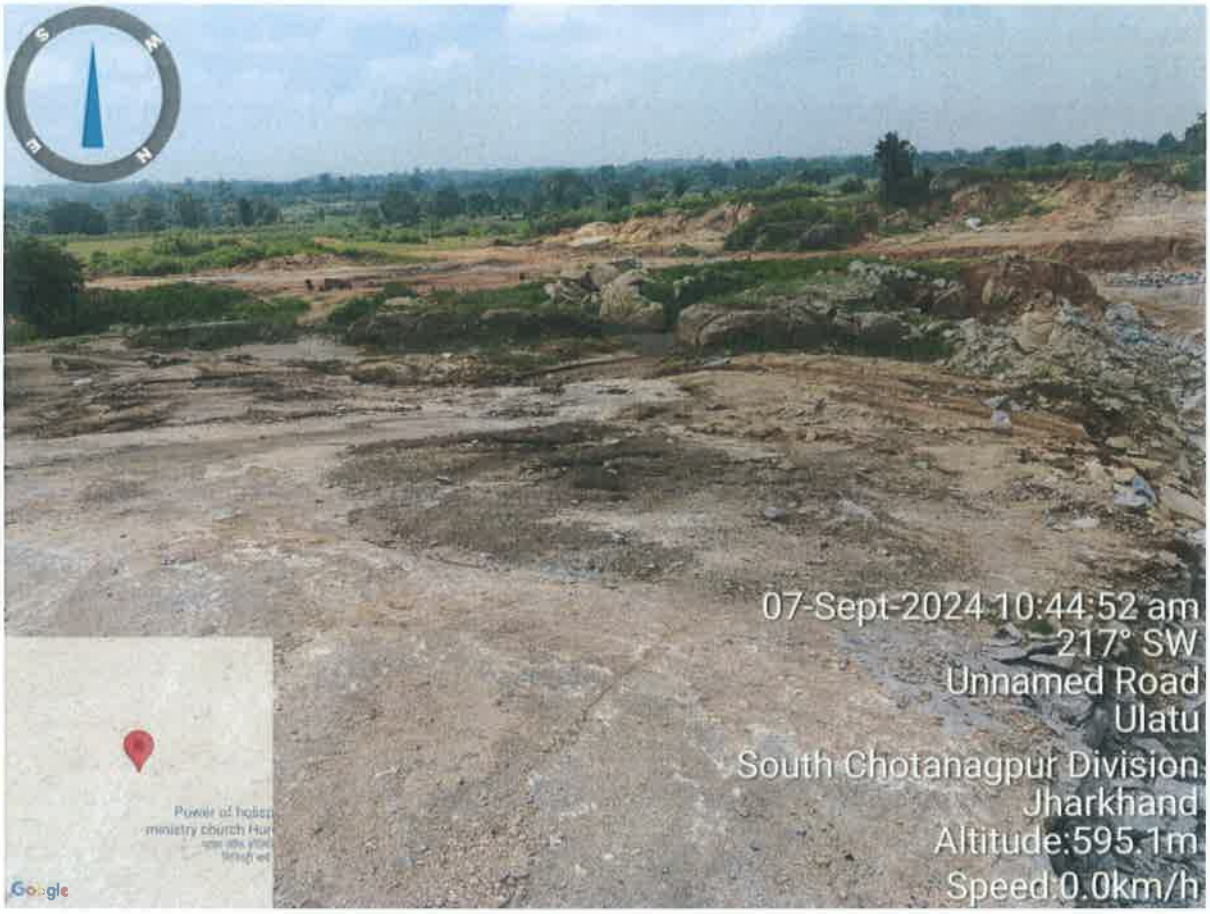
Number of tree on site	150
Name of Mining Lease Holder	Lavanya Devleper
Location	Mauza –Gurgain, Block – Ormanjhi
Area for plantation as per plan	0.65Ha
Number of tree proposed in Mining Plan	650

Number of tree on site	250
Name of Mining Lease Holder	M/s Lalkeshwar Stone Chips Pvt. Ltd
Location	Mauza –Gurgai, Block – Ormanjhi
Area for plantation as per plan	0.37Ha
Number of tree proposed in Mining Plan	925

Number of tree on site	30
Name of Mining Lease Holder	Maa Bhawani Stone Works
Location	Mauza –Balsiring, Block – Namkum
Area for plantation as per plan	0.19Ha
Number of tree proposed in Mining Plan	475

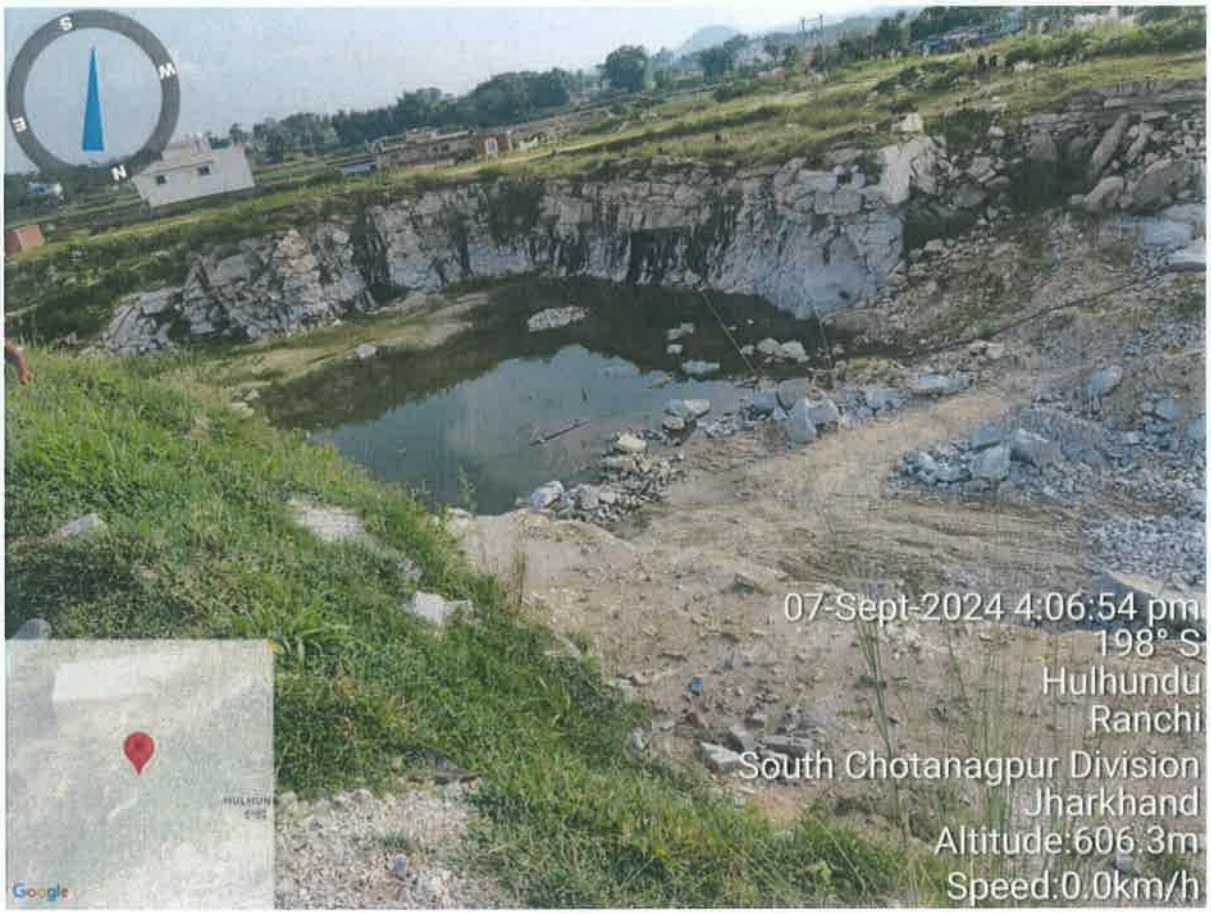
Number of tree on site	100
Name of Mining Lease Holder	Sri Gopal Kumar Ishwar
Location	Mauza –Dunde, Block – Ormanjhi
Area for plantation as per plan	0.29 Ha
Number of tree proposed in Mining Plan	725

Number of tree on site	100
Name of Mining Lease Holder	M/s Banshidhar Construction
Location	Mauza –Piska, Block – Ormanjhi
Area for plantation as per plan	0.1Ha
Number of tree proposed in Mining Plan	250

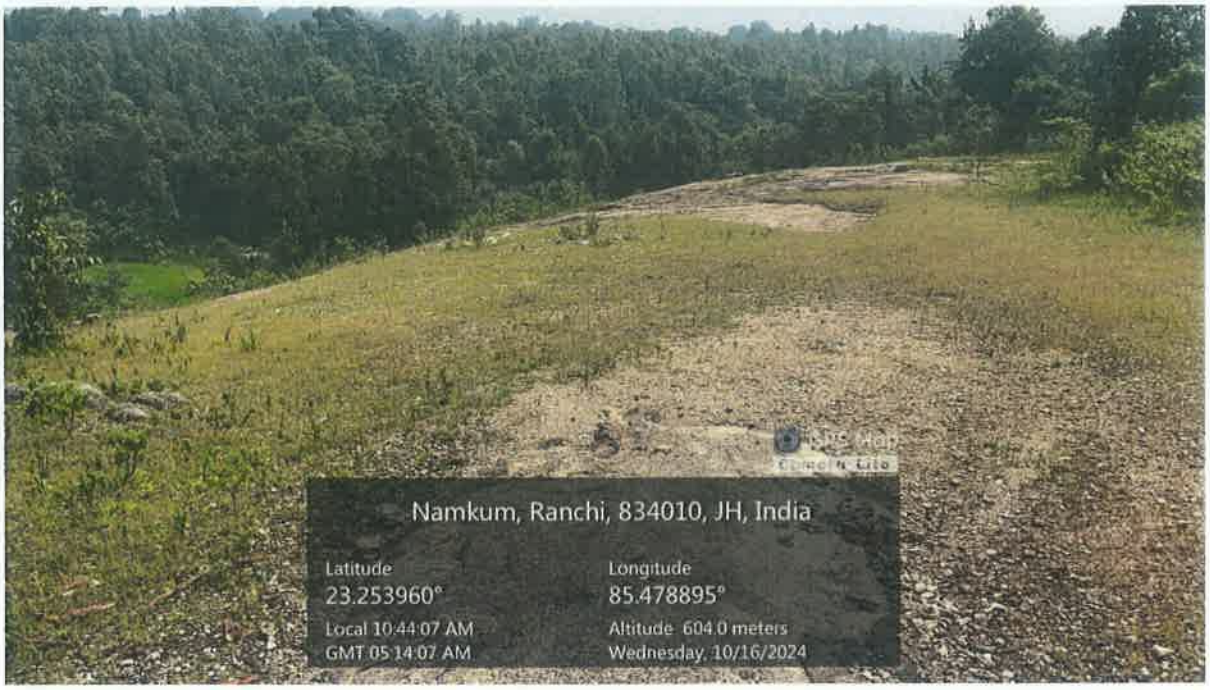


Number of tree on site	500
Name of Mining Lease Holder	M/s Bhuneshwari Stonr Crusher
Location	Mauza –Ulatu, Block – Namkum
Area for plantation as per plan	0.86Ha
Number of tree proposed in Mining Plan	2150

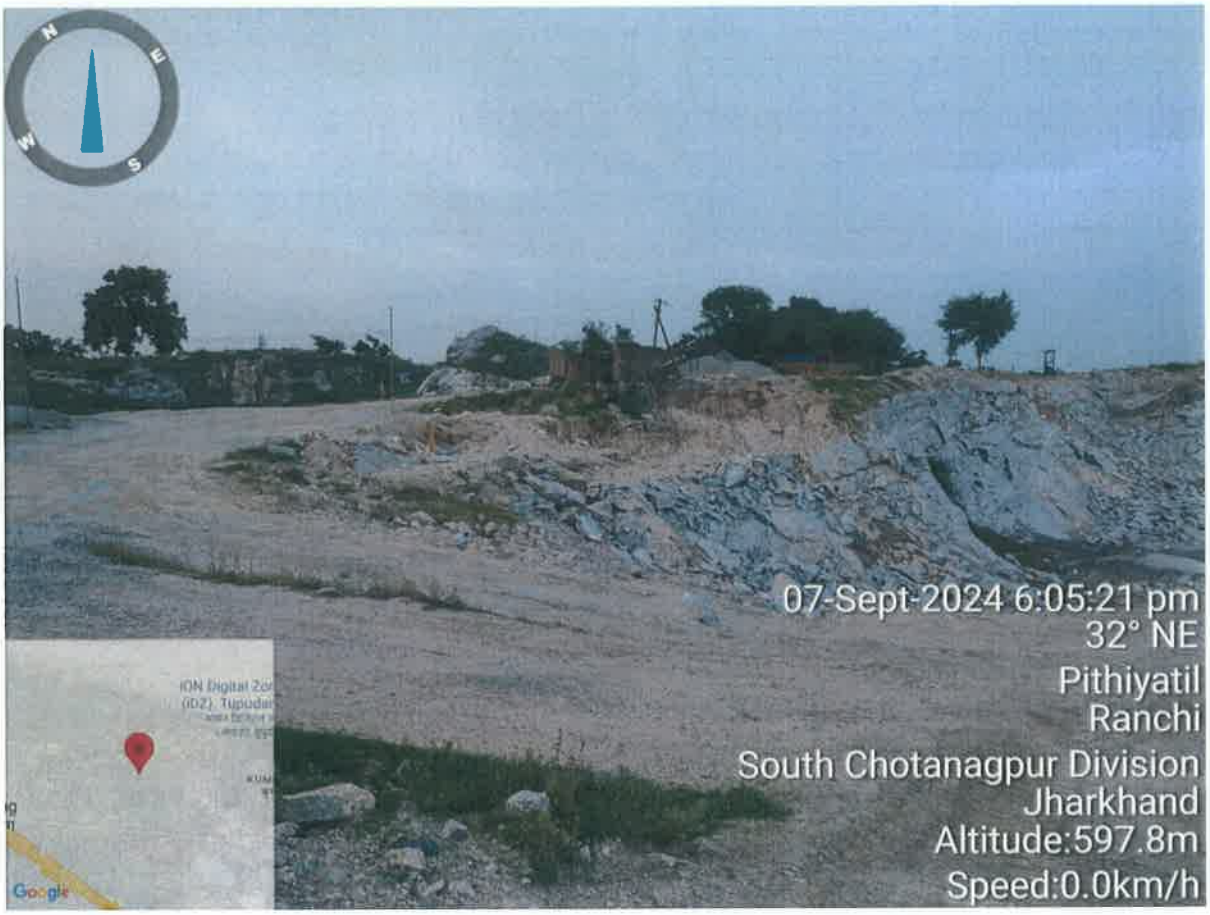
Number of tree on site	70
Name of Mining Lease Holder	M/s Devanti Projects Pvt. Ltd
Location	Mauza –Hindedili Block – Ormanjh
Area for plantation as per plan	0.2 Ha
Number of tree proposed in Mining Plan	320



Number of tree on site	70
Name of Mining Lease Holder	Smt. Manjusha Lal
Location	Mauza –Hordag, Block – Namkum
Area for plantation as per plan	0.5 Ha
Number of tree proposed in Mining Plan	1250



Number of tree on site	200
Name of Mining Lease Holder	M/s JPL Enterprises
Location	Mauza –Ulatu, Block – Namkum
Area for plantation as per plan	0.607 Ha
Number of tree proposed in Mining Plan	975



Number of tree on site	150
Name of Mining Lease Holder	Manglu oraon
Location	Mauza –Barmad, Block – Namkum
Area for plantation as per plan	0.25 Ha
Number of tree proposed in Mining Plan	400

Number of tree on site	415
Name of Mining Lease Holder	M/s R N Construction
Location	Mauza –Ganeshpur, Block – Ormanjhi
Area for plantation as per plan	0.51 Ha
Number of tree proposed in Mining Plan	1275

Number of tree on site	120
Name of Mining Lease Holder	Dumaro Sand Mining Projects
Location	Mauza –Mahthatoli, Block – Chanho
Area for plantation as per plan	0.385 Ha
Number of tree proposed in Mining Plan	965

Number of tree on site	15
Name of Mining Lease Holder	Sri Mohsin Hasan Raja
Location	Mauza –Kumhariya, Block – Kanke
Area for plantation as per plan	0.84Ha
Number of tree proposed in Mining Plan	1345

Chapter – XXVII Other

27.1 Reference

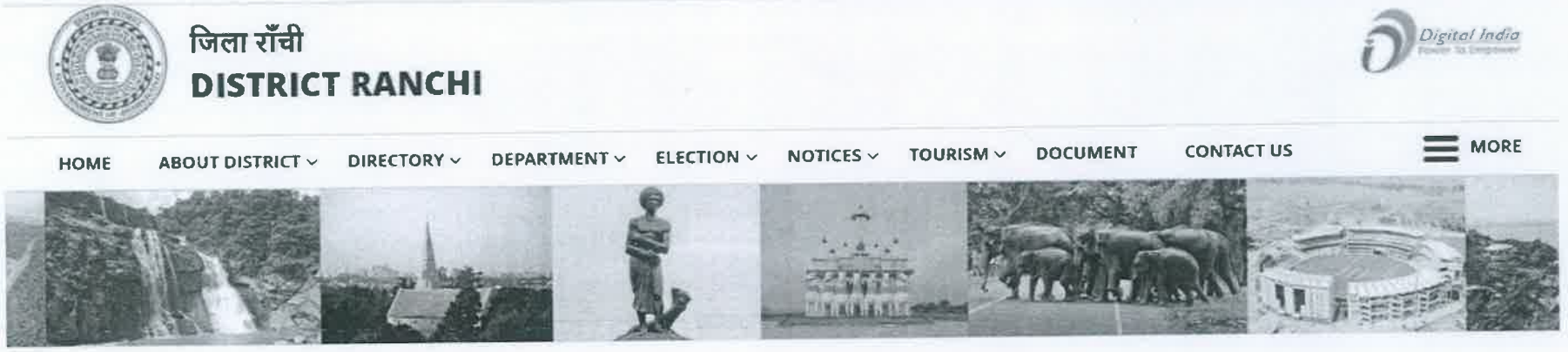
CONTENT as per Notification No.- S.O.3611 (E), dated: 25th July, 2018,	**Status**	**Reference**
(1) Introduction;	**Complied** (Chapter - I)	**Sub-Divisional Committee**
(2) Overview of Mining Activity in the District;	**Complied** (Chapter - II)	**District Mining Office**
(3) General Profile of the District;	**Complied** (Chapter - III)	**1. Census Report, 2011** **2. District Statistical Handbook** **3. Report on slope, aspect and altitude of Ranchi District published by JSAC**
(4) Geology of the District;	**Complied** (Chapter - IV)	**Department of Mines & Geology**
(5) Drainage of Irrigation pattern;	**Complied** (Chapter - V)	**Ground Water Information Booklet Ranchi District, Jharkhand State** **Published by CGWB**
(6) Land Utilisation Pattern in the District: Forest, Agricultural, Horticultural, Mining etc.	**Complied** (Chapter - VI)	**District Statistical Handbook**
(7) Surface Water and Ground Water scenario of the district	**Complied** (Chapter - VII)	**1.Aquifer Maps and Ground Water Management Plan of Ranchi District, Jharkhand State, Published by CGWB** **2. Information Booklet Ranchi District, Jharkhand State Published by CGWB** **3. Water Resources Information System**

(8) Rainfall of the district and climatic condition;	**Complied** (Chapter - VIII)	**Aquifer Maps and Ground Water Management Plan of Ranchi District, Jharkhand State, Published by CGWB** **India Meteorological Department & Climate of Jharkhand, issued by Climatological Publication Section of Indian Meteorological Department, Government of Jharkhand.**
(9) Details of the mining leases in the District as per the following format	**Complied** (Chapter - IX)	**District Mining Office**
(10) Details of Royalty or Revenue received in last three years;	**Complied** (Chapter - X)	**District Mining Office**
(11) Details of Production of Minor Mineral in last three years;	**Complied** (Chapter - XI)	**District Mining Office**
(12) Mineral Map of the District;	**Complied** (Chapter - XII)	**Department of Mines & Geology**
(13) List of Letter of Intent (LOI) Holders in the District along with its validity as per the following format:-	**Complied** (Chapter - XIII)	**District Mining Office**
(14) Total Mineral Reserve available in the District;	**Complied** (Chapter - XIV)	**District Mining Office**
(15) Quality /Grade of Mineral available in the District;	**Complied** (Chapter - XV)	**Department of Mines & Geology**
(16) Use of Mineral;	**Complied** (Chapter - XVI)	**Sub-Divisional Committee**
(17) Demand and Supply of the Mineral in the last three years;	**Complied** (Chapter - XVII)	**Department of Mines & Geology**
(18) Mining leases marked on the map of the district;	**Complied** (Chapter - XVIII)	**Department of Mines & Geology**

(19) details of the area of where there is a cluster of mining leases viz. number of mining leases, location (latitude and longitude);	**Complied** (Chapter – XIX)	**Department of Mines & Geology**
(20) Details of Eco-Sensitive Area, if any, in the District;	**Complied** (Chapter - XX)	**Sub-Divisional Committee**
(21) Impact on the Environment (Air, Water, Noise, Soil, Flora & Fauna, land use, agriculture, forest etc.) due to mining activity;	**Complied** (Chapter - XXI)	**Sub-Divisional Committee**
(22) Remedial Measures to mitigate the impact of mining on the Environment;	**Complied** (Chapter - XXII)	**Sub-Divisional Committee**
(23) Reclamation of Mined out area (best practice already implemented in the district, requirement as per rules and regulation, proposed reclamation plan);	**Complied** (Chapter - XXIII)	**Sub-Divisional Committee**
(24) Risk Assessment & Disaster Management Plan;	**Complied** (Chapter - XXIV)	**Sub-Divisional Committee**
(25) Details of the Occupational Health issues in the District. (Last five-year data of number of patients of Silicosis & Tuberculosis is also needs to be submitted);	**Complied** (Chapter - XXV)	**District TB Officer, Ranchi**
(26) Plantation and Green Belt development in respect of leases already granted in the District;	**Complied** (Chapter - XXVI)	**Sub-Divisional Committee**
(27) Any other information.	**Complied** (Chapter - XXVII)	

27.2 Public Consultation

The District Survey Report was prepared for Stone (Minor Mineral) in the District separately and its draft was placed in the public domain dated 19/06/2024 by keeping its copy in Collectorate and posting it on district's website for twenty-one days.



District Survey Report for Minor Mineral other than sand mining or river bed mining

District Survey Report for Minor Mineral other than sand mining or river bed mining				
Title	**Description**	**Start Date**	**End Date**	**File**
District Survey Report for Minor Mineral other than sand mining or river bed mining	District Survey Report for Minor Mineral other than sand mining or river bed mining	19/06/2024	19/06/2025	View (2 MB) It no 865 (193 KB)

No comments/suggestions were received during the period of public consultation.
This report is being recommended and forwarded to SEIAA from Sub-Divisional Committee, Ranchi for its approval.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India


Network: 8 Jul 2024 at 1:06:34 PM IST
Local: 8 Jul 2024 at 1:06:34 PM IST
N 23.540247° , E 85.494262°
India


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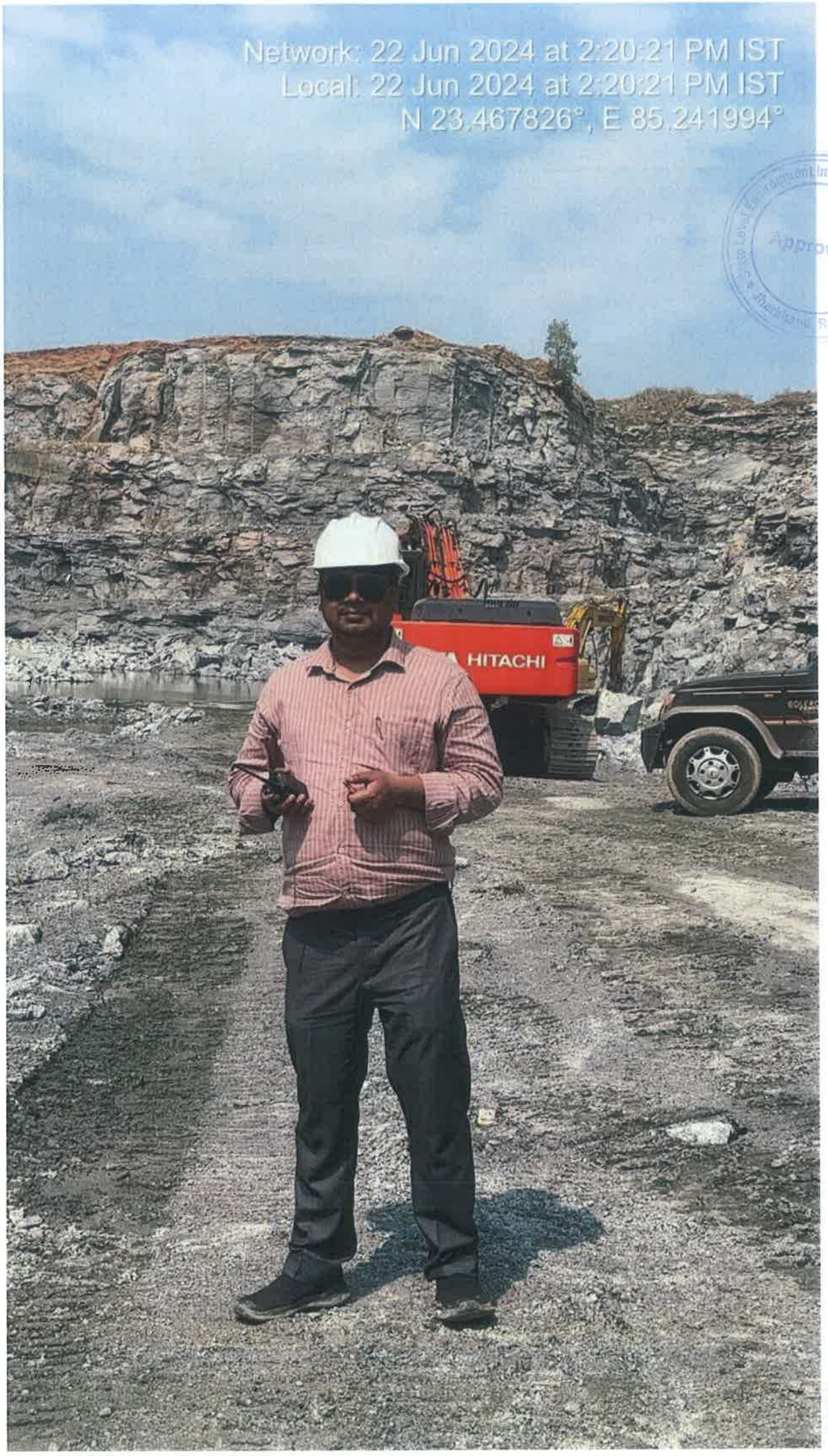
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HITACHI


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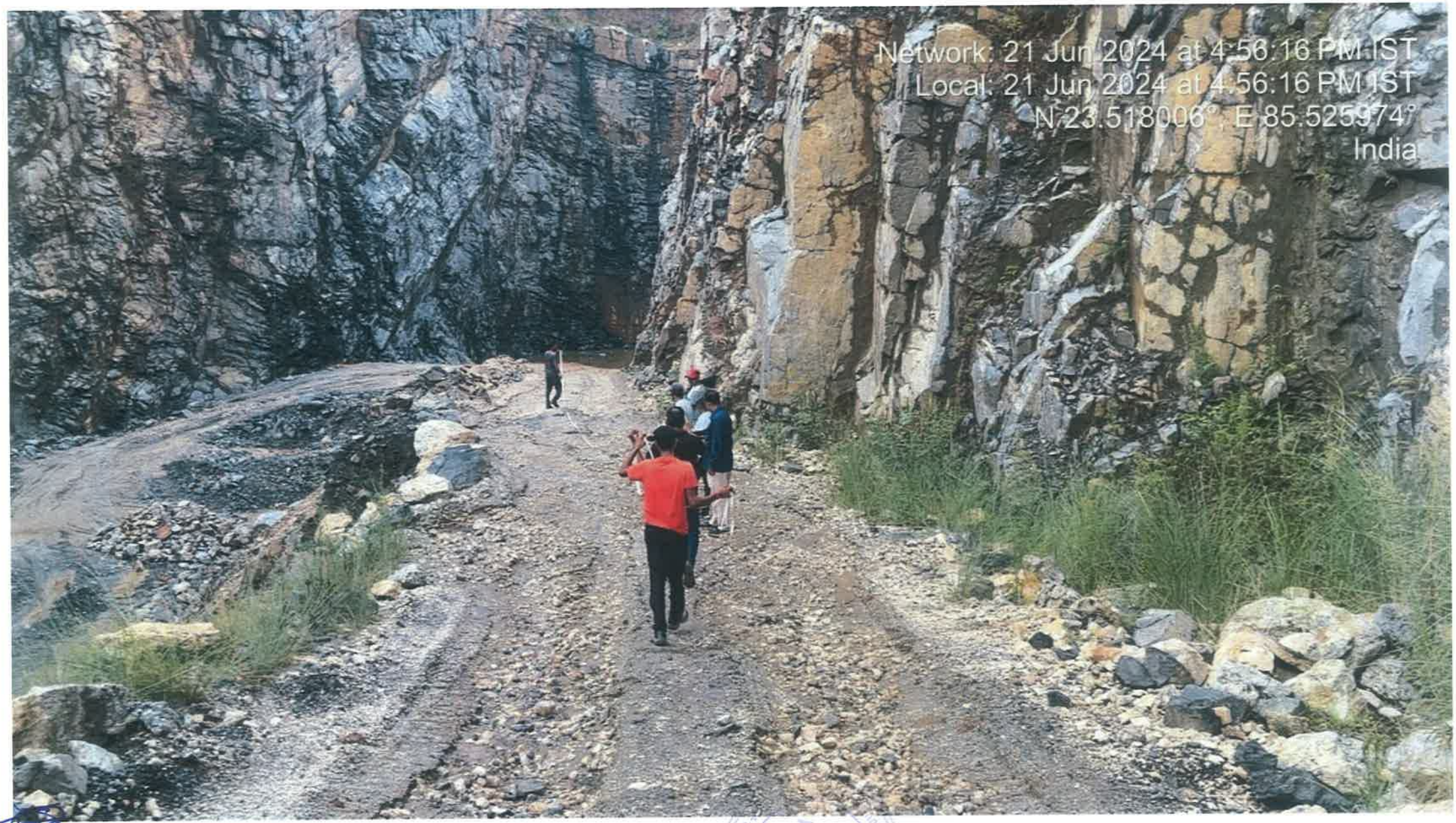
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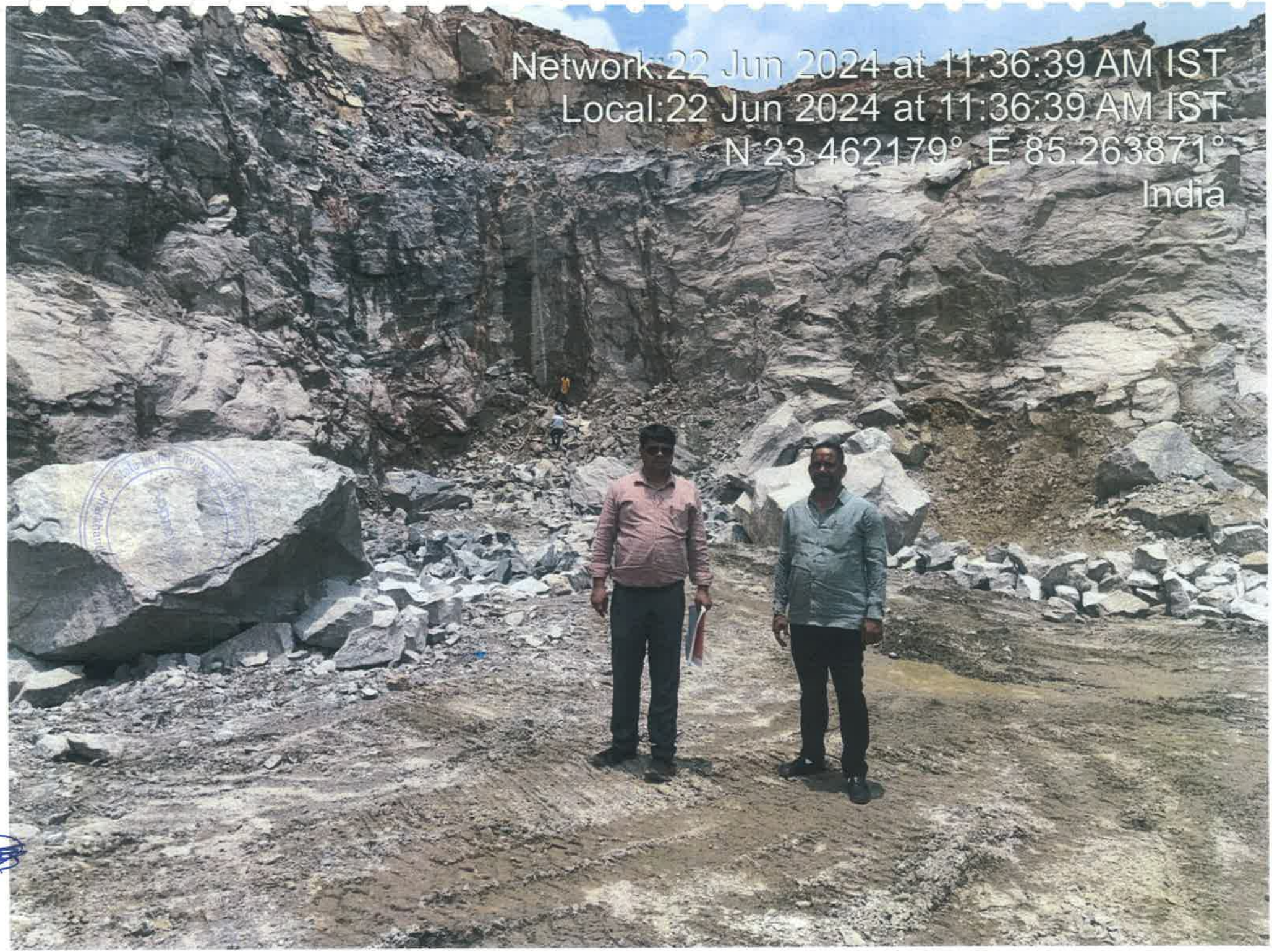
India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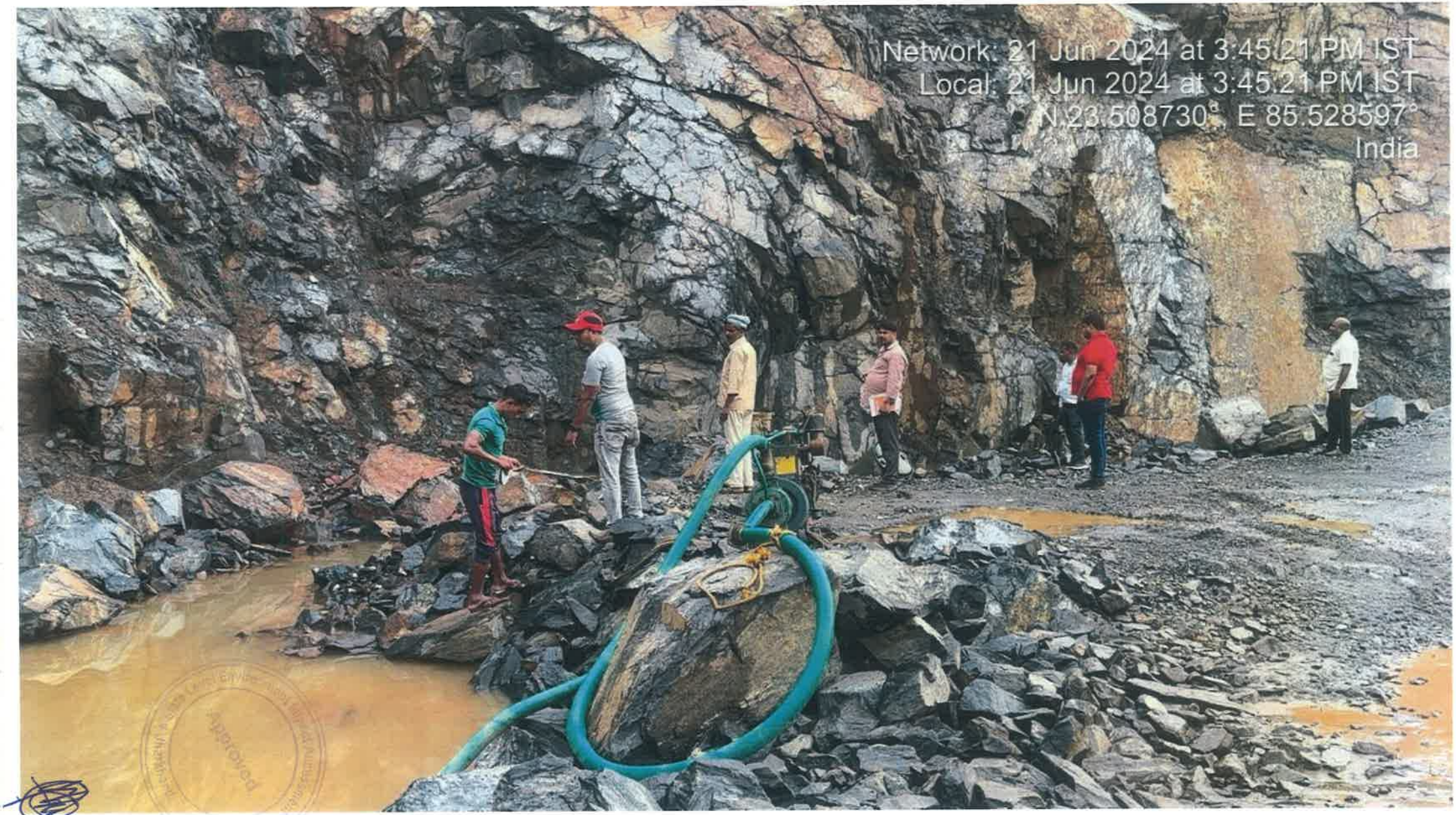
Local:22 Jun 2024 at 11:36:39 AM IST
N 23.462179° , E 85.263871°
India


Network: 21 Jun 2024 at 12:35:00 PM IST
Local: 21 Jun 2024 at 12:35:00 PM IST
N 23.503909° E 85.524785°
India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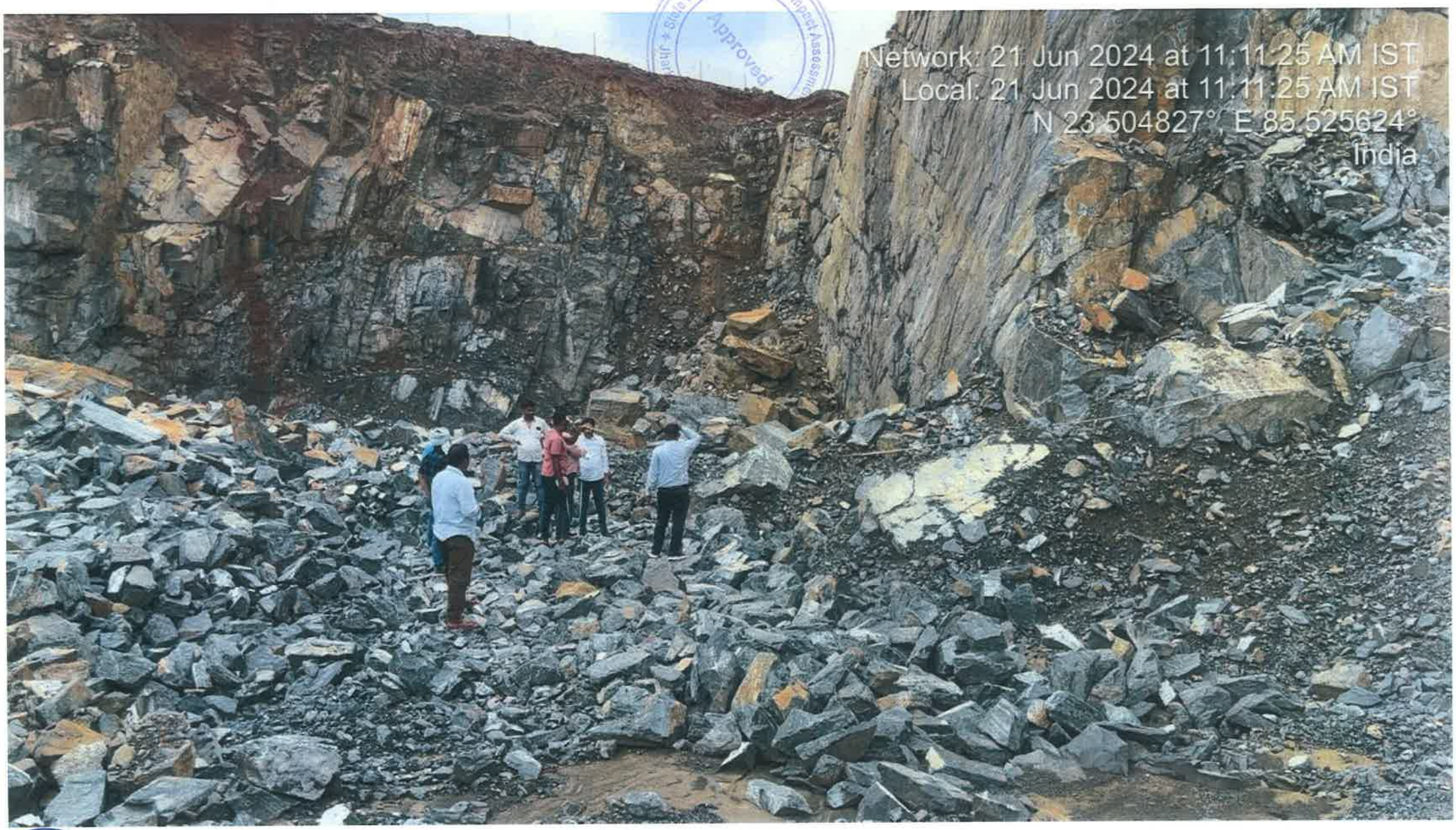
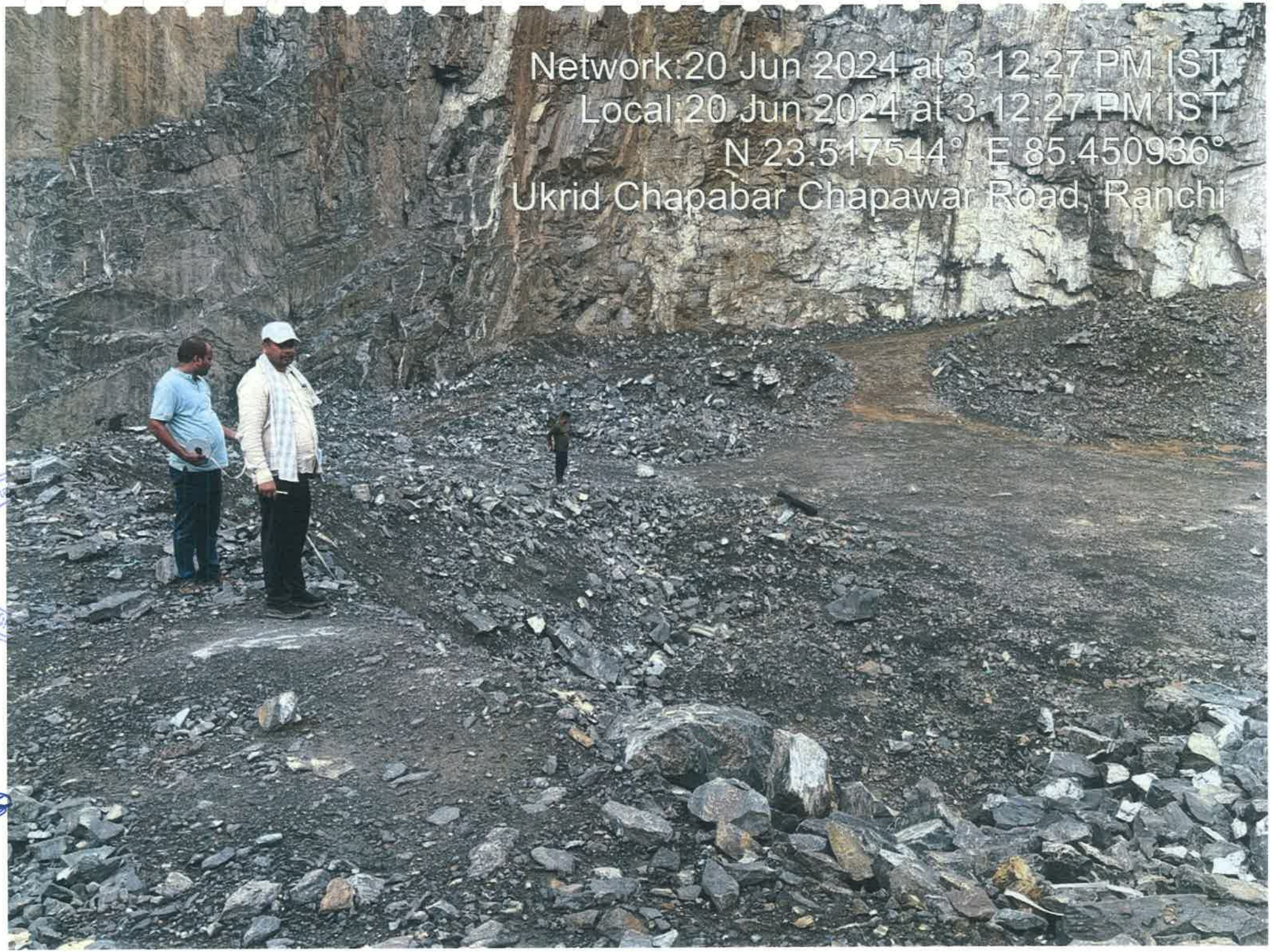
Local: 21 Jun 2024 at 3:45:21 PM IST
N 23.508730°, E 85.528597°
India


Network: 21 Jun 2024 at 11:11:25 AM IST
Local: 21 Jun 2024 at 11:11:25 AM IST
N 23.504827°, E 85.525624°
India


Network: 20 Jun 2024 at 5:22:52 PM IST
Local: 20 Jun 2024 at 5:22:52 PM IST
N 23.535655°, E 85.426573°
Ranchi 835219
JH
India


Network: 21 Jun 2024 at 11:13:38 AM IST
Local: 21 Jun 2024 at 11:13:38 AM IST
N 23.504827°, E 85.525624°
India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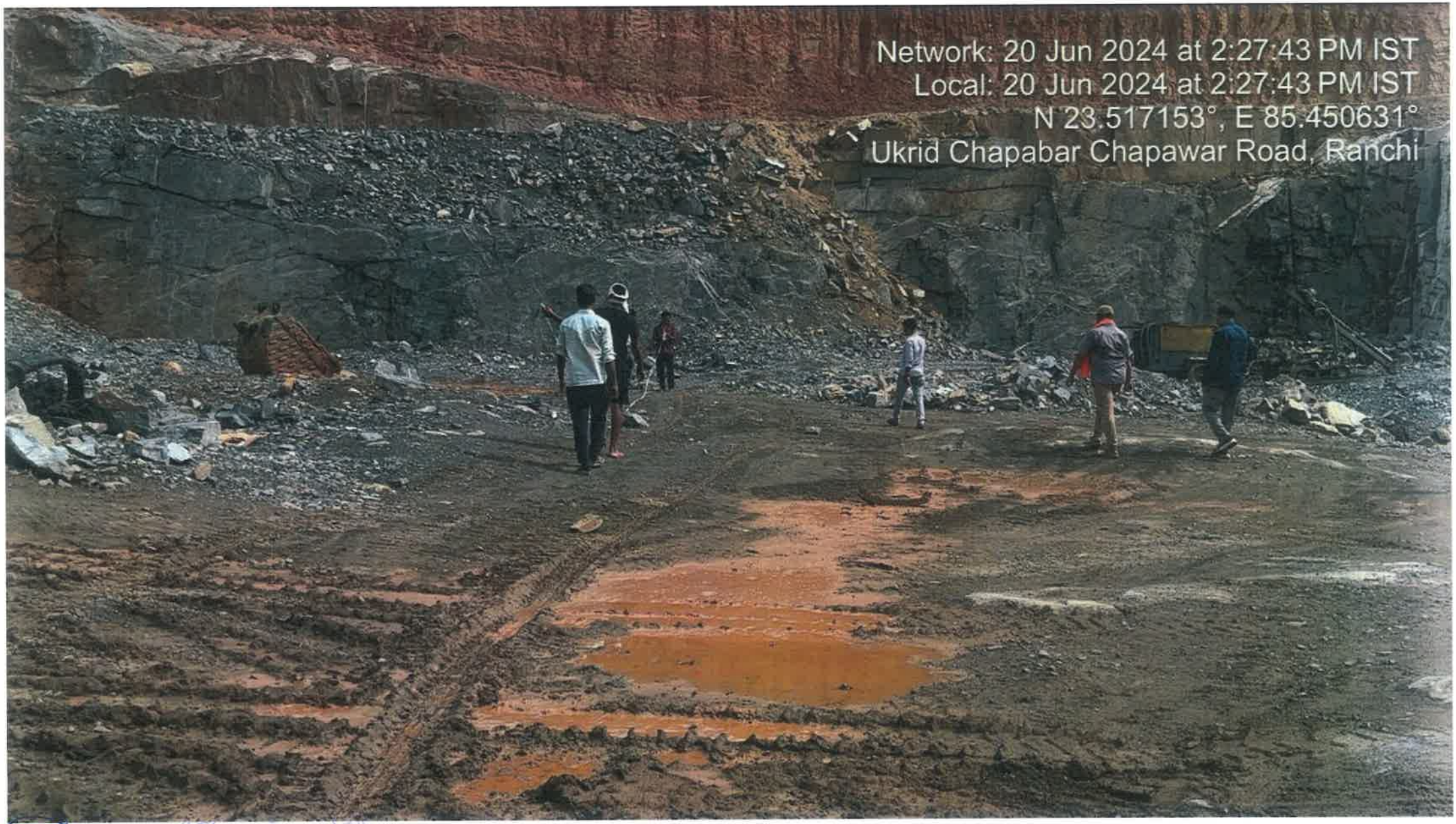
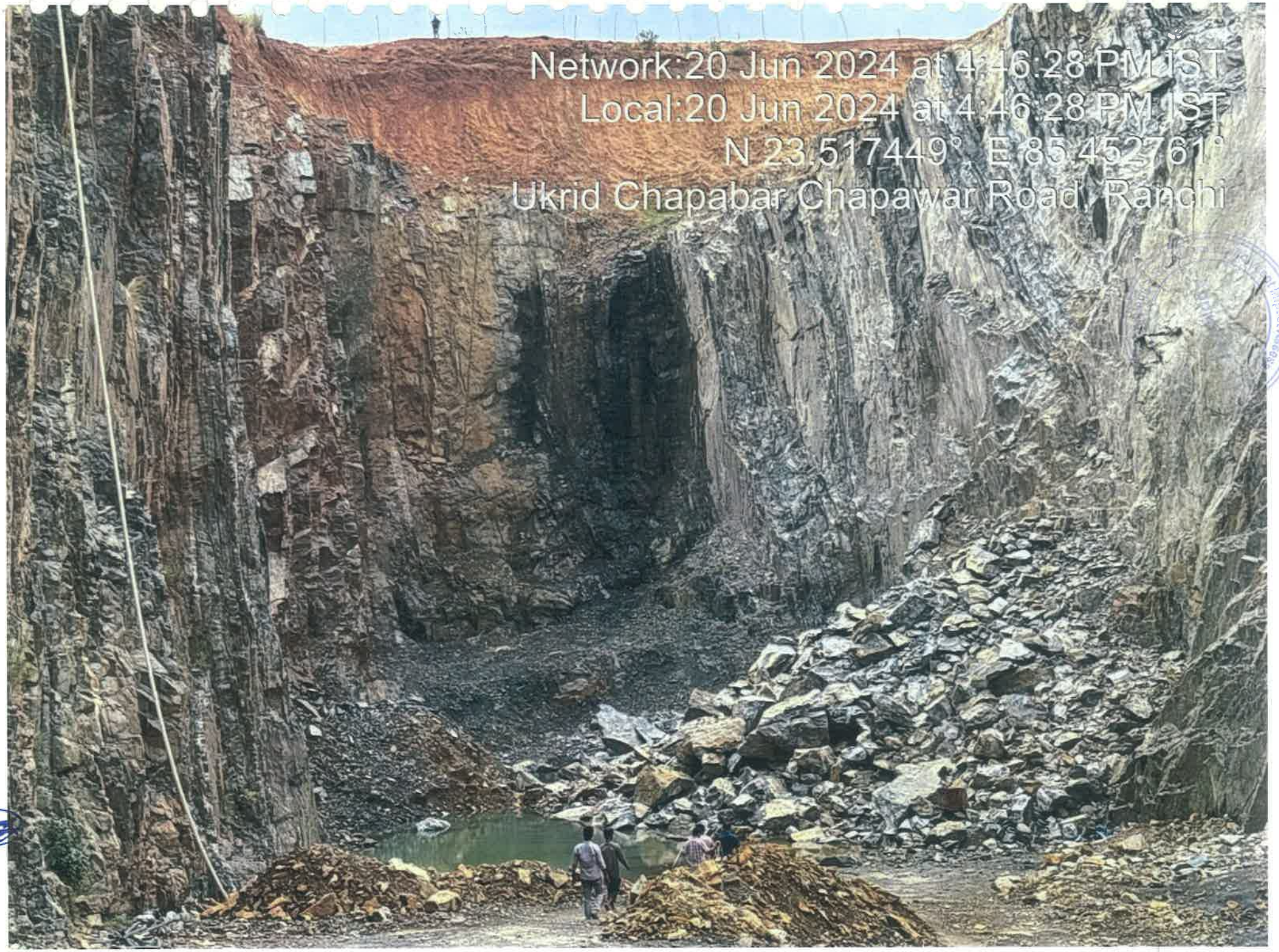
N 23.517544°, E 85.450936°
Ukrid Chapabar Chapawar Road, Ranchi


Network: 20 Jun 2024 at 2:27:43 PM IST
Local: 20 Jun 2024 at 2:27:43 PM IST
N 23.517153°, E 85.450631°
Ukrid Chapabar Chapawar Road, Ranchi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Local:20 Jun 2024 at 4:46:28 PM IST
N 23.517449° , E 85.452761°
Ukrid Chapabar Chapawar Road, Ranchi


Network: 20 Jun 2024 at 1:01:35 PM IST
Local: 20 Jun 2024 at 1:01:35 PM IST
N 23.517823°, E 85.449891°
Ukrid Chapabar Chapawar Road, Ranchi

झारखण्ड राज्य प्रदूषण नियंत्रण पर्षद
JHARKHAND STATE POLLUTION CONTROL BOARD
REGIONAL OFFICE, C.T.I. COLONY, E-1, DHURWA, RANCHI

पत्रांक 836 दिनांक: 19.07.2024

प्रेषक,

रामानन्द अन्जान
क्षेत्रीय पदाधिकारी,
क्षेत्रीय कार्यालय, राँची।

सेवा में,

जिला खनन पदाधिकारी,
राँची।

विषयः– राँची जिला में अवस्थित इकाईयों का परिवेशीय, वायु की गुणवता का विश्लेषण प्रतिवेदन उपलब्ध कराने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में सूचित करना है कि आपसे दूरभाष पर हुई बातचीत के तदनुसार राँची जिला में अवस्थित इकाईयों का परिवेशीय, वायु की गुणवता का विश्लेषण प्रतिवेदन संलग्न कर आवश्यक कार्रवाई हेतु ई–मेल द्वारा भेजी जा रही है।

अनु0–यथो0

विश्वासभाजन

19/07/2024
(रामानन्द अन्जान)
क्षेत्रीय पदाधिकारी, राँची।

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

Niraj, Hindi letter-4/2021 R.O. 2pg. 896

EPIC LabTech Private Limited
Laboratory Services Division
CIN: U74999JH2022PTC019685

Certified by :- ISO 9001:2015 (Quality Management System),
ISO 45001:2018 (Occupational Health & Safety Management System)
Accredited by :- Jharkhand State Pollution Control Board

Analytical Test Report

Test Report (QMS – 9001:2015) **Test Report No.** **RP016623360901** **Issue date** **12.09.2023/14:20**

Discipline	Chemical	Group	Atmospheric Pollution
Sub Group	Ambient Air		
Issue to	M/s – **JAI BABA STONE (STONE CRUSHER)**, PISKA, ICHADAG, ORMANJHI, RANCHI, JHARKHAND	Unique Lab Report	N/A
		Contact Person	Mr. SANJAY KUMAR
		Contact Number	9798800302
		Email Id	mrajput2021@gmail.com
Application No.	**17149077**	Order Date	**30-08-2023/14:18**

QMS References (*Steps of Traceability Chain*)

Customer Registration No.	EPIC/PCB/0166	Sampling Vaucher Number	EPIC/PCB/0166/01
Sample Booking Number	EPIC-C-AP-AAQ-36/09	Sample's Code	AAQ-36/09

Sampling Reference Industry Type Stone Crusher

Sampling Start (D/T)	06.09.2023 / 09:00	Sampling End (D/T)	07.08.2023 / 07:20
Sampling Status	Conducted ✓ Received ✗	Sample collected by	Lab's representative

Sampling method used IS 5182 and CPCB Air Manual Volume – 1 (NAAQM/36/2012-13)

Weather condition	Cloudy	Temperature (°C)	32	Humidity %	63	Wind direction	40° - 220°
S. Location A	Near Entrance of Unit			GPS coordinate		23°31' 00.27" / 85°30' 17.49"	
S. Location B	South west corner of Unit			GPS coordinate		23°30' 59.82" / 85°30' 16.43"	
S. Location C	South corner of Unit			GPS coordinate		23°30' 59.35" / 85°30' 17.17"	

Test performed at laboratory's permanent facility and results relate only to the sample tested in prescribed Date & time
Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5 % in all testing area as per IS 196:1966

Test start date 08.09.2023/ 10:40 Test completion date 12.09.2023/14:00

Sl	Test Parameters	Method used	Unit	Results A	Results B	Results C	Limits	MU%	DR
1.	Particulate Matter (PM_{10})	IS:5182 (P-23) 2006	µg/m³	68.9	73.5	76.4	100	± 3.2	✓
2.	Fine Particulate Matter ($PM_{2.5}$)	IS 5182 (P-24) 2019	µg/m³	28.9	31.4	34.4	60	± 6.7	✓
3.	Sulphur Dioxide (SO_2)	IS:5182 (P-2) 2001 RA 2012	µg/m³	10.3	13.7	15.9	80	± 7.5	✓
4.	Nitrogen Dioxide (NO_2)	IS:5182 (P-6) 2006 RA 2012	µg/m³	24.6	27.9	31.1	80	± 4.5	✓
			AQI				77, Satisfactory		

--Test result End --

Health Consequence Minor breathing discomfort to sensitive people

Statement of conformity Results comply with prescribed limit of Environmental (Protection) Rules, 1986

Opinions and interpretations Unit was not operational during sampling,

Contractual Notes

1. *The laboratory accepts responsibility for content of this report.*
2. *This report shall not be reproduced except in full or part as advertisement or evidence in court of law, without written approval of the CEO.*
3. *Any complaint about this report should be communicated in writing within 7 days of its issue. For Complaint log kindly contact (0651-4666392),*
4. *Total liability of EPIC LabTech Pvt/ Ltd. will be limited to invoiced amount only.*
5. *In case of feedback/ complaints, please send an email at epiclabtech@gmail.com*
6. *All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges*
7. *Decision rule employed, taking into account the level of risk as per statistical assumptions.*
8. *Opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report.*

Approved

QC checks Calibration of Equipment checked ✓ Reference Material checked ✓ Laboratory Technical record checked ✓

Tested by	Verified by	Issue by
Section Head	Technical Head	Laboratory Head

Only Concerned for
Jharkhand State Pollution Control Board
Application No. 17149077

Indrapuri, Road No. - 5, Ranchi, Jharkhand - 834005, India
0651 4666392 9304973994 9304973994 epiclabtech@gmail.com

EPIC LabTech Private Limited
Laboratory Services Division
CIN:-U74999JH2022PTC019685

EPIC LabTech Pvt. Ltd.

Certified by :- ISO 9001:2015 (Quality Management System),
ISO 45001:2018 (Occupational Health & Safety Management System)
Accredited by :- Jharkhand State Pollution Control Board

Analytical Test Report

Test Report (QMS – 9001:2015) **Test Report No.** **RP016623360902** **Issue date** **12.09.2023/14:25**

Discipline	Chemical	Group	Atmospheric Pollution
Sub Group	Ambient Noise		

Issue to	M/s – **JAI BABA STONE (STONE CRUSHER),** PISKA, ICHADAG, ORMANJHI, RANCHI, JHARKHAND	Unique Lab Report	N/A
		Contact Person	Mr. SANJAY KUMAR
		Contact Number	9798800302
		Email Id	mrajput2021@gmail.com

Application No.	**17149077**	Order Date	**30-08-2023/14:18**

QMS References (Steps of Traceability Chain)

Customer Registration No.	EPIC/PCB/0166	Sampling Vaucher Number	EPIC/PCB/0166/01
Lab Assignment Number	EPIC-C-AP-AN-36/09	Sample's Code	AN-36/09

Sampling Reference		Industry Type	Stone Crusher
Sampling Start (D/T)	06.09.2023 / 09:00	Sampling End (D/T)	07.08.2023 / 07:20
Sampling Status	Conducted ✓ Received ✗	Sample collected by	Lab's representative

Sampling method used IS 9876:1981 (RA 2007) & CPCB MethodS.O.50 (E) dated 11/01/2010

Weather condition	Temperature (^{0}C) 32	Humidity %	63	Wind direction	40^0 - 220^0
S. Location A	Near Entrance of Unit	GPS coordinate	$23^0$31' 00.27" / $85^0$30' 17.49"		
S. Location B	South west corner of Unit	GPS coordinate	$23^0$30' 59.82" / $85^0$30' 16.43"		
S. Location C	South corner of Unit	GPS coordinate	$23^0$30' 59.35" / $85^0$30' 17.17"		

Test performed at laboratory's permanent facility and results relate only to the sample tested in prescribed Date & time
Laboratory is maintaining, Temperature 27 ± 2^{0}C and Relative Humidity 65 ± 5 % in all testing area as per IS 196:1966

Test start date 08.09.2023/ 10:40 Test completion date 12.09.2023/14:00

Sl	Test Parameters	Method used	Unit	Results A	Results B	Results C	Limits	MU%	DR
1.	Leq (Day time)	IS: 9989:1981	dB (A)	62.8	63.1	58.6	75	± 2.4	✓
2.	Leq (Night time)	IS: 9989:1981	dB (A)	49.7	53.9	46.2	70	± 2.4	✓
3.	Level Max (L max)	IS: 9989:1981	dB (A)	68.0	69.7	65.8	-	-	
4.	Level Min (L min)	IS: 9989:1981	dB (A)	45.3	41.0	38.5	-	-	

- Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
- Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
- dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale(A) which is relatable to human hearing.

	Area	Day Time	Night time
A	Industrial Area	75.0	70.0
B	Commercial Area	65.0	55.0
C	Residential Area	55.0	45.0
D	Silence Zone	50.0	40.0

Health Consequence Difficulty in hearing conversation

Statement of conformity Results comply with Noise Pollution (Regulation and Control) Rules, 2000.

Opinions and Interpretations Unit was not operational during sampling.

Contractual Notes

1. *The laboratory accepts responsibility for content of this report.*
2. *This report shall not be reproduced except in full or part as advertisement or evidence in court of law, without written approval of the CEO.*
3. *Any complaint about this report should be communicated in writing within 7 days of its issue. For Complaint log kindly contact (0651-4666392).*
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6. *All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges*
7. *Decision rule employed, taking into account the level of risk as per statistical assumptions.*
8. *Opinions does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report.*

QC checks Calibration of Equipment checked ✓ Reference Material checked ✓ Laboratory Technical record checked ✓

Only Concerned for
Jharkhand State Pollution Control Board
Application No. 17149077

Tested by	Verified by	Issue by
Section Head	Technical Head	Laboratory Head

Indrapuri, Road No. - 5, Ranchi, Jharkhand - 834005, India
0651 4666392 9304973994 9304973994 epiclabtech@gmail.com

SCIENTIFIC RESEARCH LABORATORY

An ISO 9001:2015 (QMS) & OHSMS 45001:2018 Certified Organization
Accredited by NABL & Jharkhand State Pollution Control Board
Analytical & Environmental Engineering Laboratory
Address: C-144, Aman Green City, Road No. 04, Pundag, Ranchi- 834 004, Jharkhand
Tele No.: 0651-4057244, Mobile: 94701 30700, E-mail: srlranchilab@gmail.com

TC 11163

TEST REPORT

Test Report No.	: SRL/UM-CPP/FEB-AAQ/24/274	Report Issue Date	: 03.02.2024
Application No.	: *18252588*	Application Date	: 10.01.2024

Customer's Name & Address	**Sample Details**	
Captive Power Plant (2 x 10MW) Of M/s Usha Martin Limited. At.: Tatisilwai, P.S.: Taisilwai, District: Ranchi- 835 103, Jharkhand.	Type of Sample	: Ambient Air
	Date of Sampling	: 29.01.2024 to 30.01.2024
	Sample Receipt Date	: 30.01.2024
	Analysis Date	: 31.01.2024 to 02.02.2024
	Sample Collected by	: SRL Team

Weather Condition: Clear	Ambient Temperature (^{0}C) : 23	Relative Humidity (%) : 62
Atmospheric Pressure (mmHg): 762	Wind Speed (km/hr.) : 9.0	Wind Direction : NNW

TEST RESULTS

Sl. No.	Parameters	Unit	Results	Standards Value*	Test Method
1. Sampling Location: Near CPP Entrance Gate					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	82.00	100	IS: 5182 (Part- 23) 2006
II.	Respirable Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	46.00	60	IS: 5182 (Part- 24) 2006
III.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	08.40	80	IS: 5182 (Part- 2) 2001
IV.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	20.00	80	IS: 5182 (Part- 6) 2006
2. Sampling Location: Near Coal Yard					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	89.00	100	IS: 5182 (Part- 23) 2006
II.	Respirable Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	50.00	60	IS: 5182 (Part- 24) 2006
III.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	07.80	80	IS: 5182 (Part- 2) 2001
IV.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	21.00	80	IS: 5182 (Part- 6) 2006
3. Sampling Location: Near Boiler No. 139					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	86.00	100	IS: 5182 (Part- 23) 2006
II.	Respirable Particulate Matter ($PM_{2.5}$)	$\mu g/m^3$	48.00	60	IS: 5182 (Part- 24) 2006
III.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	08.00	80	IS: 5182 (Part- 2) 2001
IV.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	20.50	80	IS: 5182 (Part- 6) 2006

*National Ambient Air Quality Standards (NAAQS).

Note:
1. The results relate only to the items sampled and tested.
2. Test report shall not be reproduced except in full without written approval of the laboratory.

Approved

(Dr. Niraj Kumar Singh)
Authorized Signatory

-- End of the Report --

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Accredited by NABL & Jharkhand State Pollution Control Board
Analytical & Environmental Engineering Laboratory
Address: C-144, Aman Green City, Road No. 04, Pundag, Ranchi- 834 004, Jharkhand
Tele No.: 0651-4057244, Mobile: 94701 30700, E-mail: srlranchilab@gmail.com

TC 11163

TEST REPORT

Issued to:	Test Report No.	: SRL/UM-CPP/FEB-N/24/275
Captive Power Plant (2 x 10MW) Of M/s Usha Martin Limited. At.: Tatisilwai, P.S.: Taisilwai, District: Ranchi- 835 103, Jharkhand.. (Application No.: *18252588 dt. 10.01.2024*)	Report Issue Date	: 03.02.2024
	Date of Sampling	: 29.01.2024 & 30.01.2024
	Sample Receipt Date	: 30.01.2024
	Analysis Date	: 31.01.2024

Nature and Description of Sample	: Ambient Noise
Weather Condition	: Clear
Atmospheric Temperature (^{0}C)	: 23
Name of the Sample Collecting Officer	: SRL Team
Any Other Information (if any)	: Nil

AMBIENT NOISE MONITORING DATA

Sl. No.	Monitoring Location	Date of Monitoring	Sound Pressure Level, dB(A)	
			Day Time (06.00-22.00 hr.)	Night Time (22.00-06.00 hr.)
1.	Near CPP Entrance Gate	29.01.2024 & 30.01.2024	58.4	44.7
2.	Near Coal Yard	29.01.2024 & 30.01.2024	49.2	46.5
3.	Near Boiler No. 139	29.01.2024 & 30.01.2024	64.7	62.8

Norms: National Ambient Air Quality Standards (NAAQS) in respect of Noise as per CPCB, New Delhi,
Industrial Area : Day Time 75 dB(A) Leq and Night Time 70 dB(A) Leq
Commercial Area : Day Time 65 dB(A) Leq and Night Time 55 dB(A) Leq
Residential Area : Day Time 55 dB(A) Leq and Night Time 45 dB(A) Leq
Silence Zone : Day Time 50 dB(A) Leq and Night Time 40 dB(A) Leq

Niraj

Dr. Niraj Kumar Singh
(Authorized Signatory)

-- End of the Report --

Approved

SCIENTIFIC RESEARCH LABORATORY

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Tele No.: 0651-4057244, Mobile: 94701 30700, E-mail: srlranchilab@gmail.com

TC 11163

TEST REPORT

Issued to:	Test Report No.	: SRL/UM-CPP/FEB-WW/24/277
Captive Power Plant (2 x 10MW) Of M/s Usha Martin Limited. At.: Tatisilwai, P.S.: Taisilwai, District: Ranchi- 835 103, Jharkhand. *(Application No.: 18252588 dt. 10.01.2024)*	Report Issue Date	: 03.02.2024
	Sample Receipt Date	: 30.01.2024
	Analysis Date	: 30.01.2024 to 02.02.2024
	Lab. Sample No.	: WW-26

Type of Sample	: Effluent Water	Sample Quantity	: 1 Litre
Date of Sampling	: 30.01.2024	Sample Condition	: Refrigerated
Weather Condition	: Clear	Sampling Method	: APHA 23rd Edition, 1060B
Location of Sample	: Adm. Building Outlet	Sample Collected by	: SRL Team

TEST RESULTS

Sl. No.	Parameters	Results	Regulatory Standard			Test Method
			Inland Surface Water Body	Public Sewer	On Land Irrigation	
1.	Temperature, ^{0}C	25.5	-	-	-	APHA 23rd Edn. 2550 B
2.	Conductivity, µmhos/cm	1024	-	-	-	APHA 23rd Edn. 2510 B
3.	pH	7.3	5.5 – 9.0	5.5 – 9.0	5.5 – 9.0	APHA 23rd Edn. 4500H+ B
4.	Total Suspended Solids, mg/l	28	100	600	200	APHA 23rd Edn. 2540 D
5.	Total Dissolved Solids, mg/l	858	-	-	-	APHA 23rd Edn. 2540 C
6.	BOD (3 days at 27 ^{0}C), mg/l	24	30	350	100	IS: 3025 (Part 44) 1993
7.	COD (as O_2), mg/l	176	250	-	-	IS: 3025 (Part 58) 2006
8.	Oil & Grease, mg/l	<5	10	20	10	IS: 3025 (Part 39) 1991

Note:
1. The results relate only to the items sampled and tested.
2. Test report shall not be reproduced except in full, without written approval of the laboratory.
3. Sample shall be discarded after 15 days from the date of issue of the test reports.

Niraj

(Dr. Niraj Kumar Singh)
(Authorized Signatory)

-- End of the Report –

Approved

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Analytical & Environmental Engineering Laboratory
Address: C-144, Aman Green City, Road No. 04, Pundag, Ranchi- 834 004, Jharkhand
Tele No.: 0651-4057244, Mobile: 94701 30700, E-mail: srlranchilab@gmail.com

TC 11163

TEST REPORT

Issued to:	Test Report No.	: SRL/UM-CPP/FEB-ST/24/276
Captive Power Plant (2 x 10MW) Of M/s Usha Martin Limited. At.: Tatisilwai, P.S.: Taisilwai, District: Ranchi- 835 103, Jharkhand. (Application No.: *18252588 dt. 10.01.2024*).	Report Issue Date	: 03.02.2024
	Date of Sampling	: 29.01.2024
	Sample Receipt Date	: 30.01.2024
	Analysis Date	: 31.01.2024 to 02.02.2024

A. INFORMATION OF PHYSICAL CHARACTERISTICS OF STACK

Stack number if any	: Stack – 1 (Power Plant)
Emission due to	: Burning of Coal
Material of construction of stack	: Concreate
Shape of stack	: Circular
Whether stack is provided with permanent platform/ ladder	: Yes
Height of the stack from ground level (in meter)	: 70
Height of the sampling point from ground level (in meter)	: 22
Diameter of the stack at sampling point (in meter)	: 1.485
Fuel used & Consumption	: Coal & 480 MT/Day
Production Capacity	: 10 MW x 2
Stack connected to	: Pollution Control System (ESP)

B. DETAIL OF STACK EMISSION SAMPLING AND TEST REPORT

Parameters (Units)	**Results**	**Test Method**
Ambient air temperature (^{0}C)	24	IS 11255 (Part 3): 2008 RA 2013
Stack gas temperature, (^{0}C)	112	IS 11255 (Part 3): 2008 RA 2013
Barometric Pressure, (mm of Hg)	762	-
Stack gas velocity, (m/sec)	11.86	IS 11255 (Part 3): 2008 RA 2013
Volumetric flow rate (in Nm^3/hr),	57,272	IS 11255 (Part 3): 2008 RA 2013
Emission rate (in kg/hr)	2.405	IS 11255 (Part 3): 2008 RA 2013
Conc. of Carbon dioxide, (% v/v by Orsat method)	<0.2	IS 13270; 1992 RA 2019
Conc. of Carbon monoxide, (% v/v by Orsat method)	6.2	IS 13270; 1992 RA 2019
Conc. of Sulphur Dioxides, mg/Nm^3	242	IS: 11255 (Part 2) 1985 RA 2019
Conc. of Oxides of Nitrogen, mg/Nm^3	68	IS: 11255 (Part 7) 2005 RA 2017
Conc. of Particulate Matter, mg/Nm^3	42	IS: 11255 (Part 1) 1985 RA 2019

Remarks: Dust concentration was found 42 mg/Nm^3 against prescribed limit of 50 mg/Nm^3.

Note:
1. The results relate only to the items sampled and tested.
2. Test report shall not be reproduced except in full without written approval of the laboratory.

Approved

Dr. Niraj Kumar Singh
(Authorized Signatory)

-- End of Report --

TEST REPORT

Issued to: **M/s Divine Super Speciality Hospital Pvt. Ltd.** **Plot No- 1098, Sub Plot No- 1098/A** **Dist-Ranchi (Jharkhand)**		**Job Registration ID**	G/JRN/240214/CH-01
		Sample receiving date	14-02-2024
		Date of Issue	17-02-2024
		Type of Industries	Hospital
		Sample Description	Effluent Water
		Sampling Date	14-02-2024
Sample Code	G/240214/EW-01	Sampling Location	STP Outlet
Sample Quantity	2000ml	Sample collected by	Vishwajit & Team
Sample pkg. condition	Sealed in PP Bottle	Sampling Protocol	IS :3025 (Part 1)
Test Start Date	14-02-2024	Test Completion Date	17-02-2024
ULR Number	T C 1 1 0 6	7 2 4 0 0	0 0 0 0 0 3 F

RESULT

Sl. No.	Parameter	Test Method	Unit	Result	Permissible limit
1	Total Suspended Solid (TSS)	IS:3025 Part-17:2022 (Total Suspended Solid Dried at 103- 105 °C)	mg/l	10.0	100,max[m]
2	Chemical Oxygen Demand (COD)	IS:3025 Part-58:2023 (Open Refluxe Method)	mg/l	160.0	250 ,max[m]
3	pH	IS:3025 Part-11:2022 (Electrometric Method)	--	7.6	5.5-9.0
4	Temperature	IS:3025 Part-09:2023 (Laboratory & field Method)	°C	21.0	--

Remarks: - All the results are found within prescribed limits.

Note: - On the basis of the tested parameters, sample complies with the requirement of Effluent water according to CPCB (The Environment Protection Rules, 1986, Schedule – VI)

1. Results relate only to the items sampled and tested.
2. The report shall not be reproduced except in full without approval of the laboratory.
3. Any dispute is subject to Ranchi Jurisdiction Only.
4. Sample will be discarded after 15 days from the issue date of the test report.

Approved

17/2/24	17/02/24
Chameli Soren	Kumari Soni Mehta
Tested by	Issued by (Authorized Signatory)

GEMS PROJECTS PVT. LTD. GEMS Environmental Laboratory Division

Authorized Signatory

Gems Project Pvt. Ltd.

(Environmental Laboratory Division)

End of Test report

Registered Office: 1236/2 Lajpat Nagar, Near Lala Lajpat Laboratory Address: Vill-Katarpa, Piska Nagri, Jharkhand-835303
Rai School, Pundag, Argora, Ranchi, Jharkhand-834004 Contact: +91-9508707378, +91-7903208990
Contact:+91-9431115961, +91-9934307900 E-mail: gemslab17@gmail.com

TEST REPORT

Issued to: **M/s Divine Super Speciality Hospital Pvt. Ltd.** **Plot No- 1098, Sub Plot No- 1098/A** **Dist-Ranchi (Jharkhand)**		**Job Registration ID**	G/JRN/240214/CH-01
		ULR Number	----------
		Date of Issue	17-02-2024
		Type of Industries	Hospital
		Sample Description	Effluent Water
Sample Code	G/240214/EW-01	Sampling Date	14-02-2024
Sample Quantity	2000ml	Sampling Location	STP Outlet
Sample receiving date	14-02-2024	Sample collected by	Vishwajit & Team
Sample pkg. condition	Sealed in PP Bottle	Sampling Protocol	IS :3025 (Part 1)
Test Start Date	14-02-2024	Test Completion Date	17-02-2024

RESULT

Sl. No.	Parameter	Test Method	Unit	Result	Permissible limit
1	Biochemical Oxygen Demand (BOD)	IS:3025 Part-44:1993,RA-2021	mg/l	22.0	30, max^{m}
2	Oil & Grease	IS:3025 Part-39:2021	mg/l	0.2	10.0

Remarks: - All the results are found within prescribed limits.

Note: - On the basis of the tested parameters, sample complies with the requirement of Effluent water according to CPCB (The Environment Protection Rules, 1986, Schedule – VI)

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2. The report shall not be reproduced except in full without approval of the laboratory.
3. Any dispute is subject to Ranchi Jurisdiction Only.
4. Sample will be discarded after 15 days from the issue date of the test report.

Approved

Chameli 17/2/24	Kushi Mehta 17/02/24
Chameli Soren	Kumari Soni Mehta
Tested by	Issued by (Authorized Signatory)

GEMS PROJECTS PVT. LTD. GEMS Environmental Laboratory Division

Authorized Signatory
Gems Project Pvt. Ltd.
(Environmental Laboratory Division)

*** End of Test report ***

Registered Office: 1236/2 Lajpat Nagar, Near Lala Lajpat Rai School, Pundag, Argora, Ranchi, Jharkhand-834004 Contact:+91-9431115961, +91-9934307900

Laboratory Address: Harhi Road, Vil-Katarpa, Piska Nagri, Jharkhand-835303 Contact: +91-9508707378, +91-7903208990 E-mail: gemslab17@gmail.com

SCIENTIFIC RESEARCH LABORATORY

Analytical & Environmental Engineering Laboratory
An ISO 9001:2015 (QMS) & OHSMS 45001:2018 Certified Organization
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Tele No.: 0651- 4057244, Mobile: 9470130700, E-mail: srlranchilab@gmail.com

TEST REPORT

Test Report No.	: SRL/GSD/AUG-AAQ/2023/01	Report Issue Date	: 05.08.2023
Application No.	: *16903113*	Application Date	: 28.07.2023

Customer's Name & Address	**Sample Details**	
M/s Ganeshpur Stone Deposit. (M/s R. N. Construction) At. Plot No. 399, 403 & 404, Khata No. 13, 23 & 28, Mauza: Ganeshpur, P.S.: Ormanjhi, District: Ranchi, Jharkhand.	Type of Sample	: Ambient Air
	Date of Sampling	: 30.07.2023 to 31.07.2023
	Sample Receipt Date	: 31.07.2023
	Analysis Date	: 01.08.2023 to 02.08.2023
	Sample Collected by	: SRL Team

Weather Condition: Cloudy (Rain)	Ambient Temperature (^{0}C) : 27	Relative Humidity (%) : 84
Atmospheric Pressure (mmHg): 752	Wind Speed (km/hr.) : 6.2	Wind Direction : NW

TEST RESULTS

Sl. No.	Parameters	Unit	Results	Standards Value*	Test Method
1. Sampling Location: Eastern Side of Mine Lease Area					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	64.00	100	IS: 5182 (Part- 23) 2006
II.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	06.00	80	IS: 5182 (Part- 2) 2001
III.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	18.00	80	IS: 5182 (Part- 6) 2006
2. Sampling Location: Western Side of Mine Lease Area					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	67.00	100	IS: 5182 (Part- 23) 2006
II.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	08.00	80	IS: 5182 (Part- 2) 2001
III.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	19.00	80	IS: 5182 (Part- 6) 2006
3. Sampling Location: Northern Side of Mine Lease Area					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	62.00	100	IS: 5182 (Part- 23) 2006
II.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	07.20	80	IS: 5182 (Part- 2) 2001
III.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	17.00	80	IS: 5182 (Part- 6) 2006

*National Ambient Air Quality Standards (NAAQS).

Note:
1. The results relate only to the items sampled and tested.
2. Test report shall not be reproduced except in full without written approval of the laboratory.

Niraj

(Dr. Niraj Kumar Singh)
Authorized Signatory

Approved

-- End of the Report –

SCIENTIFIC RESEARCH LABORATORY

Analytical & Environmental Engineering Laboratory
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Accredited by Jharkhand State Pollution Control Board
C- 144, Aman Green City, Road No. 04, Pundag, Ranchi- 834 004, Jharkhand
Tele No.: 0651- 4057244, Mobile: 9470130700, E-mail: srlranchilab@gmail.com

TEST REPORT

Test Report No.	: SRL/GSD/AUG-N/2023/01	Report Issue Date	: 05.08.2023
Application No.	: *16903113*	Application Date	: 28.07.2023

Customer's Name & Address	**Sample Details**	
M/s Ganeshpur Stone Deposit. (M/s R. N. Construction) At. Plot No. 399, 403 & 404, Khata No. 13, 23 & 28, Mauza: Ganeshpur, P.S.: Ormanjhi, District: Ranchi, Jharkhand.	Type of Sample	: Ambient Noise
	Date of Sampling	: 30.07.2023 & 31.07.2023
	Sample Receipt Date	: 31.07.2023
	Analysis Date	: 01.08.2023
	Sample Collected by	: SRL Team

Weather Condition: Cloudy (Rain)	Ambient Temperature (^{0}C) : 27	Relative Humidity (%) : 84
Atmospheric Pressure (mmHg): 752	Wind Speed (km/hr.) : 6.2	Wind Direction : NW

AMBIENT NOISE MONITORING DATA

Sl. No.	Monitoring Location	Date of Monitoring	Sound Pressure Level, dB(A)	
			Day Time (06.00-22.00 hr.)	Night Time (22.00-06.00 hr.)
1.	Eastern Side of Mine Lease Area	30.07.2023 & 31.07.2023	58.6	38.4
2.	Western Side of Mine Lease Area	30.07.2023 & 31.07.2023	61.5	39.0
3.	Northern Side of Mine Lease Area	30.07.2023 & 31.07.2023	57.3	37.7

Norms: National Ambient Air Quality Standards (NAAQS) in respect of Noise as per CPCB, New Delhi, Industrial Area: Day Time 75 dB(A) Leq and Night Time 70 dB(A) Leq

OSHA Norms in work place for 8 hr. exposure: 90 dB (A)

Note:
1. The results relate only to the items sampled and tested.
2. Test report shall not be reproduced except in full without written approval of the laboratory.

Niraj

(Dr. Niraj Kumar Singh)
Authorized Signatory

-- End of the Report –

Approved

SHIVA ENVIRO LAB AND RESEARCH CENTRE, RANCHI

Recognized by Jharkhand State Pollution Control Board,
ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified

TEST REPORT			
Test Report	**SELRC/2023/0112**	**Report Release Date:**	20-07-2023
Job ID:	Application no: - 16692938	**Job ID Date:**	04-07-2023

CUSTOMER DETAILS		**SAMPLE DETAILS**	
Customer Name:	M/s Harshraj Mining LLP Stone Crusher,	**Sample Description**	**Ambient Air Quality**
		URL No.	.....
		Sampling Date	13-07-2023 to 14-07-2023
		Sample Received Date	14-07-2023
Address:	Village – Gunja, Ranchi	**Sampling Procedure**	IS 5182
		Type of Industry	Stone Crusher
		Industry Status	Non-Operational
		Period of Analysis	14-07-2023 to 18-07-2023
		Sample Collected By	P N Singh and Team
METEOROLOGICAL CONDITION			
Ambient Temperature (°C): 30	**Relative Humidity (%):** 62	**Weather Condition:** Clear	

Parameters				**Sulphur Dioxide (SO_2)**	**Nitrogen Dioxide (NO_2)**	**SPM (Suspended Particulate Matter)**
Test Protocol				**IS 5182 (Part-2)**	**IS 5182 (Part-6)**	**IS 5182 (Part-4)**
Sample ID: SELRC/2023/AAQ/0584	**Time**		**Limit**	**80 µg/m³**	**80 µg/m³**	**600 µg/m³**
Sampling Location 1: - Near Main Gate East-Side 23°51'63.97" N/ 85°41'86.36" E	04:10 PM	08:10 PM		05.25	19.31	415.25
	08:15 PM	12:15 AM		10.50	21.34	
	12:20 AM	04:20 AM		14.71	24.90	398.20
	04:25 AM	08:25 AM		16.81	25.91	
	08:30 AM	12:30 PM		19.96	27.94	475.53
	12:35 PM	04:35 PM		13.65	22.86	
			Average	**13.48**	**23.71**	**429.66**
Sample ID: SELRC/2023/AAQ/0585						
Sampling Location 2: - Near Labour room North-West Corner 23°51'64.36" N/ 85°41'80.56" E	04:20 PM	08:20 PM		09.45	19.82	425.50
	08:25 PM	12:25 AM		10.50	20.32	
	12:30 AM	04:30 AM		13.65	22.86	372.60
	04:35 AM	08:35 AM		16.81	23.37	
	08:40 AM	12:40 PM		18.91	25.40	465.78
	12:45 PM	04:45 PM		12.60	21.34	
			Average	**13.65**	**22.19**	**421.29**

Approved

Parameters				Sulphur Dioxide (SO_2)	Nitrogen Dioxide (NO_2)	SPM (Suspended Particulate Matter)
Test Protocol				IS 5182 (Part-2)	IS 5182 (Part-6)	IS 5182 (Part-4)
Sample ID: SELRC/2023/AAQ/0586	Time		Limit	80 µg/m³	80 µg/m³	600 µg/m³
Sampling Location 3: - Approx 10m South-West Corner of Crusher 23°51'58.46" N/ 85°41'79.66" E	04:30 PM	08:30 PM		09.45	21.34	420.63
	08:35 PM	12:35 AM		12.60	20.83	
	12:40 AM	04:40 AM		13.65	22.86	406.30
	04:45 AM	08:45 AM		14.71	24.40	
	08:50 AM	12:50 PM		21.01	26.93	496.53
	12:55 PM	04:55 PM		16.81	23.88	
			Average	**14.71**	**23.37**	**441.15**

End of Report

Remarks:	All parameters were found within the prescribed limit.
Abbreviation used	µg/m³- Microgram per meter cube, IS - Indian Standard
Note	The document stated as Test Report is issued by the Laboratory under General Terms and Conditions, only on Laboratory letterhead in the approved format.
	The Results stated in the Test Report are based on the findings of the Laboratory done at the time of monitoring and analysis only.
	The report in full or in part, shall not be used for publishing, or advertising for any legal evidence unless prior permission is obtained from the management of the
	The collected samples shall be destroyed after 30 days from the date of issue of the certificate.
	Any type of complaint regarding the Reports shall be made within 15 days from the issue date of the Test Report. Thereafter no complaints will be accepted.
	The liability of the Laboratory is limited to the allotted job only.
	All disputes are subject to Ranchi Jurisdiction.

20/7/2023
Verified By
(N.B Kachhap)
Technical Manager

20/07/2023
Issued By
(R. N. Kashyap)
Laboratory Head

SHIVA ENVIRO LAB AND RESEARCH CENTRE ★ RANCHI

Approved

SHIVA ENVIRO LAB AND RESEARCH CENTRE, RANCHI

Recognized by Jharkhand State Pollution Control Board.
ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified

TEST REPORT			
Test Report No.:	**SELRC/2023/0112**	**Report Release Date: -**	20-07-2023
Job ID:	Application No: - 16692938	**Job ID Date: -**	04-07-2023

CUSTOMER DETAILS		**SAMPLE DETAILS**	
Customer Name	M/s Harshraj Mining LLP Stone Crusher,	**Sample Description**	**Ambient Noise Level Monitoring**
		URL No.	.....
		Sampling Date	13-07-2023 to 14-07-2023
		Sample Received Date	14-07-2023
Address: -	Village – Gunja, Ranchi	**Sampling Procedure**	IS :9989: 1981 RA: 2020
		Type of Industry	Stone Crusher
		Industry Status	Non-Operational
		Sample Collected By	P N Singh and Team

METEOROLOGICAL CONDITION		
Ambient Temperature (°C): 30	**Relative Humidity (%):** 62	**Weather Condition:** Clear

Sample ID: SELRC/2023/SLM/0587	**Unit**	**Test Method**	**Result**		**Permissible limit**
			Day Time dB(A)	**Night Time dB(A)**	
Sampling Location 1: - Near Main Gate East-Side 23°51'65.36" N/ 85°41'81.56" E	dB(A)	IS 9989:1981:2020	**68.11**	**53.80**	**75 dB(A) Day Time & 70 dB(A) Night Time**
Sample ID: SELRC/2023/SLM/0588					
Sampling Location 2: - Near Labour room North-West Corner 23°51'64.97" N/ 85°41'85.36" E	dB(A)	IS 9989:1981:2020	**62.40**	**50.17**	
Sample ID: SELRC/2023/SLM/0589					
Sampling Location 3: - Approx 10m South-West Corner of Crusher 23°51'59.46" N/ 85°41'79.86" E	dB(A)	IS 9989:1981:2020	**70.62**	**56.60**	

Approved
Jharkhand, Ranchi

*****End of Report*****

Remarks:	**Noise Level were found within the permissible limit.**
Abbreviation used	dB – Decibel.
Note: -	Day Time - From 6:00 AM to 10:00 PM Night Time - From 10:00 PM to 6:00 AM.
	The document stated as Test Report is issued by the Laboratory under General Terms and Conditions only on Laboratory letterhead in the approved format.
	The Results stated in the Test Report are based on the findings of the Laboratory done at the time of monitoring only.
	The report in full or in part, shall not be used for publishing, or advertising for any legal evidence unless prior permission is obtained from the management of the Laboratory. The time schedule mentioned in Test Report is in 24–hour format.
	All disputes are subject to Ranchi Jurisdiction.

20/7/2023
Verified By
(N. B. Kachhap)
Technical Manager

20/07/2023
Issued By
(R. N. Kashyap)
Laboratory Head

SHIVA ENVIRO LAB AND RESEARCH CENTRE ★ RANCHI

Approved

SCIENTIFIC RESEARCH LABORATORY

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Analytical & Environmental Engineering Laboratory
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Tele No.: 0651- 4057244, Mobile: 94701 30700, E-mail: nirajksingh2003@yahoo.co.in

TEST REPORT

Test Report No.	: SRL/SVBPL/OCT-AAQ/23-01	Report Issue Date	: 16.10.2023
Application No.	: *17356273*	Application Date	: 26.09.2023

Customer's Name & Address	**Sample Details**	
M/s Saa Vishnu Bakers (P) Limited, At.: Hazam, P.S.: Tupudana, District: Ranchi, Jharkhand.	Type of Sample	: Ambient Air
	Date of Sampling	: 10.10.2023 to 11.10.2023
	Sample Receipt Date	: 11.10.2023
	Analysis Date	: 11.10.2023 to 14.10.2023
	Sample Collected by	: SRL Team

Weather Condition: Clear	Ambient Temperature (^{0}C) : 29	Relative Humidity (%) : 56
Atmospheric Pressure (mmHg): 760	Wind Speed (km/hr.) : 5.0	Wind Direction : NNW

TEST RESULTS

Sl. No.	Parameters	Unit	Results	Standards Value*	Test Method
1. Sampling Location: Near Main Gate (Beside Guard Room)					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	74.00	100	IS: 5182 (Part- 23) 2006
II.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	07.60	80	IS: 5182 (Part- 2) 2001
III.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	19.00	80	IS: 5182 (Part- 6) 2006
2. Sampling Location: Near Maintenance Workshop Room					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	71.00	100	IS: 5182 (Part- 23) 2006
II.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.80	80	IS: 5182 (Part- 2) 2001
III.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	20.00	80	IS: 5182 (Part- 6) 2006
3. Sampling Location: Near Utility Area					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	72.00	100	IS: 5182 (Part- 23) 2006
II.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.60	80	IS: 5182 (Part- 2) 2001
III.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	19.00	80	IS: 5182 (Part- 6) 2006

*National Ambient Air Quality Standards (NAAQS).

Note:
1. The results relate only to the items sampled and tested.
2. Test report shall not be reproduced except in full without written approval of the laboratory.

Niraj

(Dr. Niraj Kumar Singh)
Authorized Signatory

Approved

-- End of the Report –

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Analytical & Environmental Engineering Laboratory
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TEST REPORT

Test Report No.	: SRL/SVBPL/OCT-N/23-02	Report Issue Date	: 16.10.2023
Application No.	: *17356273*	Application Date	: 26.09.2023

Customer's Name & Address	**Sample Details**	
M/s Saa Vishnu Bakers (P) Limited, At.: Hazam, P.S.: Tupudana, District: Ranchi, Jharkhand.	Type of Sample	: Ambient Noise
	Date of Sampling	: 10.10.2023 to 11.10.2023
	Sample Receipt Date	: 11.10.2023
	Analysis Date	: 12.10.2023
	Sample Collected by	: SRL Team

AMBIENT NOISE MONITORING DATA

Sl. No.	**Monitoring Location**	**Date of Monitoring**	**Sound Pressure Level, dB(A)**	
			Day Time (06.00-22.00 hr.)	**Night Time** (22.00-06.00 hr.)
1.	Near Main Gate (Beside Guard Room)	10.10.2023 to 11.10.2023	59.6	47.8
2.	Near Maintenance Workshop Room	10.10.2023 to 11.10.2023	66.3	54.2
3.	Near Utility Area	10.10.2023 to 11.10.2023	63.5	52.9

Norms: National Ambient Air Quality Standards (NAAQS) in respect of Noise as per CPCB, New Delhi, Industrial Area: Day Time 75 dB(A) Leq and Night Time 70 dB(A) Leq

OSHA Norms in work place for 8 hr. exposure: 90 dB (A)

Note:
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2. Test report shall not be reproduced except in full without written approval of the laboratory.

(Dr. Niraj Kumar Singh)
Authorized Signatory

-- End of the Report --

Approved

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TEST REPORT

Issued to:	Test Report No.	: SRL/SVBPL/OCT-EFF/23-03
M/s Saa Vishnu Bakers (P) Limited, At.: Hazam, P.S.: Tupudana, District: Ranchi, Jharkhand. *(Application No.: 17356273 dt. 26.09.2023)*	Report Issue Date	: 16.10.2023
	Sample Receipt Date	: 11.10.2023
	Analysis Date	: 11.10.2023 to 14.10.2023
	Lab. Sample No.	: SVBPL/EW-01

Type of Sample	: Effluent	Sample Quantity	: 1 Litre
Weather Condition	: Clear	Sample Condition	: Refrigerated
Date of Sampling	: 11.10.2023	Sampling Method	: APHA 23rd Edition, 1060B
Location of Sample	: ETP Outlet	Sample Collected by	: SRL Team

TEST RESULTS

Sl. No.	Parameters	Results	Regulatory Standard			Test Method
			Inland Surface Water Body	Public Sewer	On Land Irrigation	
1.	pH	5.8	5.5 – 9.0	5.5 – 9.0	5.5 – 9.0	APHA 23rd Edn. 4500H+ B
2.	Total Suspended Solids, mg/l	42	100	600	200	APHA 23rd Edn. 2540 D
3.	Total Dissolved Solids, mg/l	236	-	-	-	APHA 23rd Edn. 2540 C
4.	BOD (3 days at 27 ^{0}C), mg/l	24	30	350	100	IS: 3025 (Part 44) 1993
5.	COD (as O_2), mg/l	70	250	-	-	IS: 3025 (Part 58) 2006
6.	Oil & Grease, mg/l	<5	10	20	10	IS: 3025 (Part 39) 1991

Note:

1. The results relate only to the items sampled and tested.
2. Test report shall not be reproduced except in full, without written approval of the laboratory.
3. Sample shall be discarded after 15 days from the date of issue of the test reports.

Niraj.

(Dr. Niraj Kumar Singh)
(Authorized Signatory)

-- End of the Report –

Approved

SCIENTIFIC RESEARCH LABORATORY

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Analytical & Environmental Engineering Laboratory
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Tele No.: 0651- 4057244, Mobile: 94701 30700, E-mail: nirajksingh2003@yahoo.co.in

TEST REPORT

Test Report No.	: SRL/SBBE/JULY-AAQ/23-01	Report Issue Date	: 17.07.2023
Application No.	: *16725498*	Application Date	: 06.07.2023

Customer's Name & Address	**Sample Details**	
M/s Silica Bottling & Blending Enterprises, At. & P.O.: Kamre, P.S.: Ratu, District: Ranchi, Jharkhand.	Type of Sample	: Ambient Air
	Date of Sampling	: 10.07.2023 to 11.07.2023
	Sample Receipt Date	: 11.07.2023
	Analysis Date	: 12.07.2023 to 15.07.2023
	Sample Collected by	: SRL Team

Weather Condition: Cloudy	Ambient Temperature (^{0}C) : 32	Relative Humidity (%) : 62
Atmospheric Pressure (mmHg): 750	Wind Speed (km/hr.) : 12.0	Wind Direction : WNW

TEST RESULTS

Sl. No.	Parameters	Unit	Results	Standards Value*	Test Method
1. Sampling Location: Near Main Entry Gate					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	74.00	100	IS: 5182 (Part- 23) 2006
II.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	08.60	80	IS: 5182 (Part- 2) 2001
III.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	24.00	80	IS: 5182 (Part- 6) 2006
2. Sampling Location: Near South – East Boundary					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	67.00	100	IS: 5182 (Part- 23) 2006
II.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	06.50	80	IS: 5182 (Part- 2) 2001
III.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	21.00	80	IS: 5182 (Part- 6) 2006
3. Sampling Location: Near North – West Boundary					
I.	Respirable Particulate Matter (PM_{10})	$\mu g/m^3$	73.00	100	IS: 5182 (Part- 23) 2006
II.	Sulphur Dioxide (SO_2)	$\mu g/m^3$	08.00	80	IS: 5182 (Part- 2) 2001
III.	Nitrogen Dioxide (NO_2)	$\mu g/m^3$	23.00	80	IS: 5182 (Part- 6) 2006

*National Ambient Air Quality Standards (NAAQS).

Note:
1. The results relate only to the items sampled and tested.
2. Test report shall not be reproduced except in full without written approval of the laboratory.

Niraj

(Dr. Niraj Kumar Singh)
Authorized Signatory

Approved

– End of the Report –

SCIENTIFIC RESEARCH LABORATORY

An ISO 9001:2015 (QMS) & OHSMS 45001:2018 Certified Organization
Accredited by Jharkhand State Pollution Control Board
Analytical & Environmental Engineering Laboratory
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Tele No.: 0651- 4057244, Mobile: 94701 30700, E-mail: nirajksingh2003@yahoo.co.in

TEST REPORT

Test Report No.	: SRL/SBBE/JULY-N/23-02	Report Issue Date	: 17.07.2023
Application No.	: *16725498*	Application Date	: 06.07.2023

Customer's Name & Address	**Sample Details**	
M/s Silica Bottling & Blending Enterprises, At. & P.O.: Kamre, P.S.: Ratu, District: Ranchi, Jharkhand.	Type of Sample	: Ambient Noise
	Date of Sampling	: 10.07.2023 to 11.07.2023
	Sample Receipt Date	: 11.07.2023
	Analysis Date	: 12.07.2023
	Sample Collected by	: SRL Team

Weather Condition: Cloudy	Ambient Temperature (^{0}C) : 32	Relative Humidity (%) : 62
Atmospheric Pressure (mmHg): 750	Wind Speed (km/hr.) : 12.0	Wind Direction : WNW

AMBIENT NOISE MONITORING DATA

Sl. No.	**Monitoring Location**	**Date of Monitoring**	**Sound Pressure Level, dB(A)**	
			Day Time (06.00-22.00 hr.)	**Night Time** (22.00-06.00 hr.)
1.	Near Main Entry Gate	10.07.2023 to 11.07.2023	56.8	45.3
2.	Near South – East Boundary	10.07.2023 to 11.07.2023	52.5	42.7
3.	Near North – West Boundary	10.07.2023 to 11.07.2023	55.6	44.2

Norms: National Ambient Air Quality Standards (NAAQS) in respect of Noise as per CPCB, New Delhi, Industrial Area: Day Time 75 dB(A) Leq and Night Time 70 dB(A) Leq

OSHA Norms in work place for 8 hr. exposure: 90 dB (A)

Note:
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2. Test report shall not be reproduced except in full without written approval of the laboratory.

Niraj.

(Dr. Niraj Kumar Singh)
Authorized Signatory

-- End of the Report --

Approved

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TEST REPORT

Customer's Name & Address:	Test Report No.	: SRL/SBBE/JULY-EFF/23-03
M/s Silica Bottling & Blending Enterprises,	Report Issue Date	: 17.07.2023
At. & P.O.: Kamre, P.S.: Ratu,	Sample Receipt Date	: 11.07.2023
District: Ranchi, Jharkhand.	Analysis Date	: 12.07.2023 to 15.07.2023
Application No.: *16725498 dt. 06.07.2023*	Lab. Sample No.	: SRL/EW-01

Type of Sample	: Effluent Water	Sample Quantity	: 1 Litre
Weather Condition	: Cloudy	Sample Condition	: Refrigerated
Date of Sampling	: 11.07.2023	Sampling Method	: APHA 23rd Edition, 1060B
Location of Sample	: ETP Outlet	Sample Collected by	: SRL

TEST RESULTS

Sl. No.	Parameters	Results	Regulatory Standard			Test Method
			Inland Surface Water Body	Public Sewer	On Land Irrigation	
1.	pH	8.2	5.5 – 9.0	5.5 – 9.0	5.5 – 9.0	APHA 23rd Edn. 4500H+ B
2.	Total Suspended Solids, mg/l	26	100	600	200	APHA 23rd Edn. 2540 D
3.	Total Dissolved Solids, mg/l	432	-	-	-	APHA 23rd Edn. 4500 O C
4.	Total Solids, mg/l	458	-	-	-	APHA 23rd Edn. 2540 B
5.	COD (as O_2), mg/l	84	250	-	-	IS: 3025 (Part 58) 2006
6.	BOD (3 days at 27 ^{0}C), mg/l	26	30	350	100	IS: 3025 (Part 44) 2012
7.	Oil & Grease, mg/l	<5	10	20	10	IS: 3025 (Part 39) 1991

Note:
1. The results relate only to the items sampled and tested.
2. Test report shall not be reproduced except in full, without written approval of the laboratory.
3. Sample shall be discarded after 15 days from the date of issue of the test reports.

Niraj

Dr. Niraj Kumar Singh
(Authorized Signatory)

-- End of the Report --

Approved

PART-1

CHAPTER II

FLORA AND FAUNA

CHAPTER II A- Forest Flora:–

The constant biotic pressure and local edaphic factors have been responsible in the composition of growing stock in the forest of this division. A large number of tree species are found in the forests of this division. The important trees along with the details are decribed subsequently.

1.2A.1 Trees

The forest is indeed a most beautiful, precious & vital feature of the earth surface, sprawling across varied geographical terrains that composed of precipitous ridges, placid foothills, ravines, dales and plains ramified by a myriad of rills and rivulets, and forming safe and pleasant abode for the wildlife and of course playing a most vital role for keeping this planet earth blue.

The most conspicuous and mystifying element in this complex heterogeneous bio-system is the plant community comprised of a multitude of plants of varied ages, sizes, shapes and characters. As elsewhere in the Ranch Forest Division, the natural forests of this tract form a rich reservoir of biological diversity, endowed with prosperous fertile vegetation, rich in number of species and their density, due to the heterogeneous environmental conditions in the tract. Almost all the plant species common to this part of South Chotanagpur are represented in this tract too.

All units of this forest division comprise of natural forests of almost all the types met within the tract, reed belts, manmade plantations etc. As such, it will be better and proper to enumerate the tree species met with and to discuss the floristic composition while dealing with the forest types in detail.

1.2 A.2 General Description of Growing Stock

2. A2.l General : The vegetation type present in a particular locality is the product of the locality factors operating there. The climatic factors such as the variations in

temperature, the amount of precipitation and its distribution, moisture condition during the growing season, and the edaphic features such as the nature and type of soil, its depth, fertility, chemical nature, moisture retaining capacity, etc influence and determine the type of vegetation and its growth and development.

The geographical features such as the altitude, aspect, and slope cause differences in the climatic and edaphic factors and give rise to varied types of vegetation. The presence or absence of biotic interferences will also help or retard the progress of the vegetation greatly. In other words physiognomy, species diversity, floristic composition and stratification, biomass production and phenology of the stand are ruled by the locality factors. The existence of different types of forests in this tract is the result of the influence exerted by the varied locality factors existing in various locales within the tract.

2. A.2.2 Forest Type : This Forest Division is blessed with vast expanse of natural forests. It is estimated that the extent of the natural forests will be about 47702.6 ha, comprising of tropical & deciduous type of forests. This forest is the resultant reconciliation of the floristic inheritance of the locality with the habitat. A forest type can be defined as a unit of vegetation that possesses broad characteristics in physiognomy and structure, sufficiently pronounced to permit its differentiation from other such units. Usually, a forest type will be described with reference to its geographical location, climatic and edaphic features, composition and condition. For ascertaining the type of forest, the vegetation present at the time, being only is considered without taking into account the influence of physiographic, edaphic and biotic factors upon it.

2. A,22 Forest Type : According to Harry. G. Champion and S. K. Seth the main forest types met within this tract are:

1. Northern Tropical Moist Deciduous Forest. -- 3B/C, (B2a)

2. Northern tropical dry deciduous forest -- b/c2

The following distinct types of forests are noticeable in different parts of this division.

1. Sal Forests.

2. Miscellaneous Forests.

3. Scrub with Lantana.

SAL FORESTS : **Sal is the climax species in Ranchi Forest division.**

In some patches of narrow valley the crop tends to be moist. This forest is found in the eastern, southern, central and northern zones but they have suffered badly from over-exploitation. Due to repeated cutting the crop is severely destroyed and has reached to sapling and rooted waste stage. In the central zone the topography is plain and the forests have reduced in several places to patches of few acres by the intense pressure of population and cultivation. Commonly the crop consists of Sal saplings. The quality of Sal is IV of seedling origin and 'C' of coppice origin.

The associates of Sal are Terminalia tomentosa, Diospyros melanoxylon. Buchanania latifolia, Anogeissues latifolia, Adina cordifolia, Butea frondosa, Albizzia spp. Lannea grandis, Boswelia serrata. Aegle marmelos, Ougenia dalbergoides. Legerstromia parviflora, Emblica Officenalis, Terminalia Chebula, Terminalia belerica Schleichera trijuga etc.

The common shrubs are — Flemingia chhapar, Croton indigofera, Wedlandia excerta, Woodfordia floribunda. Symploces racemosa and antidysentrica etc. Amongst the climbers the following are prominent: - Bauhinia vahlli, Centilag adraspetana, Mullatia auriculata, Combretum decandrurn, Spatholobus roxburghii Acacia pinnata etc. The devastation of forests has been heavy and some of the hill groups either bare or having only few poles over a bed of lantana and

other thorny species.

MISCELLANEOUS FORESTS

There is a great impact of geology on the distribution of the miscellaneous forests. Mostly dry deciduous miscellaneous species are found in quartzite and Gondawana formation alongwith Sal. The relative compositions of crop are found according to aspect, biotic factors and topography. Miscellaneous forests occur in all the zones. Somewhere it is confined to a small patch; else where it forms a continuous belt. In the eastern and southern zones i.e Tamar thana the forests are driest in the division and miscellaneous species are prominent. In upper storey are Terminalia tomentosa, Anogeissus latifolia, Terminalia belerica, Terminalia chebula, Adina cordifolia, Lannea grandis, Madhuca latifolia, Butea frondosa, Diospyros melanoxylon, Hymenodictyon excelsum, Cassia fistula, Bursera serrata, Lagerstromia parviflora, Emblica officinalis, Schleichdra trijuga, Sterculia urens, Albizzia Spp., Buchnania latifolia, Aegle marmelos etc.

In the under story the spcies found are : Holahhrina antidysentrica, Croton oblongifolius, Nycranthes arbortrists, Gardenia Spp. Zizyphus Spp. Acacia pinnata. Invasion of Lantana is almost menacing in the plains. The commonest climbers are Bauhinia vahlii, Milletia auriculata and Combretum decandrum etc.

THORNY SCRUB WITH LANTANA

This is the deciduous scrub forest falling under group 2S/2 of Champion-Seth's classification. In miscellaneous forest, a distinct category of thorny scrub on bare hills can be recognized. In the Central zone of Ranchi Forest Division due to intensive pressure of population and cultivation, consequently hills are either bare or are seriously invaded by thick growth of thorny scrub , mostly by lantana. The eastern and Southern Zones have also suffered considerably from over felling as well as from shifting cultivation in the past. In Sonahatu thana nothing but bare hills occur.

1.2 A.3 Floristic Composition:

The tree species present in the tract belong to several families. The prominent families are listed below:

- Dipterocarpaceae
- Ebenaceae .ie. Fabaceae
- Anacardiaceae
- Flacourtiaceae

- Lythraceae
- Mimosaceae
- Rubiaceae
- Sapindaceae, ie. Tiliaceae
- Arecaceae
- Bombacaceae .ie. Buthidae
- Combretaceae
- Moraceae
- Meliaceae
- Guttiferae
- Euphorbiaceae

There are several other families are also present in the tract. The important species found in these forests are given below.

Top Canopy : Shorea robusta, Terminalia tomentosa, Terminalia arjuna, Buchanania latifolia, Butea monosperma, Lagerostroemia parviflora, Pongamia glabra, Lannea grandis, Ficus religiosa, Syzygium cumini, Azadirachta indica, Acacia catechu, Artocarpus integrifolia, Boswellia serrata, Bombax ceiba, etc

Middle Canopy : This tier consists of the younger members of the top canopy and other species like Diospyros melanoxylon, Carisa spinarum, Croton oblongifolius, Cleistanthus collinus, etc.

Lower Canopy : It comprises the pole crop of the species found in the upper canopies and other shade-tolerant or shade-loving species, calamus. Phoenix species are also seen. In certain localities holarrhena antidysenterica & lantana are found growing gregariously.

Ground Vegetation : The forest floor is patchy covered by growth of many shade-loving species, specific to this type of tract. They include many medicinal plants widely used in the indigenous system of treatments like Asparagus racemosa, Carisa, spinarum, Mimosa Pudica, Hemidesmus indicus, Curcuma aromatica, Ocimum sanctum, Croton oblongifolius, Urginea indica, Cynodon dactylon, ferns, orchids, aroids and mosses.

Climbers : The climbers commonly found are Acacia pinnata, Bauhinia vahlii, Butea parviflora, Casytha spp, Cryptolepsis Buchanani, Smilax prolifera, Smilax zeylanica, Pogonia spp, Pueraria tuberose, Vitis repanda, Ichnocarpus etc .

1.2 A.4 : Regenerations Status

In the forests of this tract, the natural regeneration appears to be a complex process. Most of the species do not exhibit the same type of liking to all the localities within the forest. They favour certain type of areas to regenerate profusely. The dominant species regererate under their own shade. At the dawn of the favarable season, the natural regeneration of the important species can be found to be prolific. Along the banks of the streams, nalas, river and valley where the conditions are more favourable, the rate of regeneration of species accelerates.

However, their establishment is seldom achieved due to the drought conditions caused by the lata breaks in monsoon, suppression by fast growing ground vegetation and damage caused by squirrels etc, grazing pressure and human interference. Generally speaking, the natural regeneration in these tracts can be termed as unsatisfactory. The details of regeneration are given in Annexure VI & VII

2 A. 2.6 Dominant & Interesting Plant Species of the tract:

1. SAL

Botanical Name: - Shorea robusta

Family: - Dipterocarpaceae

Local Name: - Sal, Sakhua, Saray, Sarjom

General Description: It is a large gregarious deciduous tree attaining a height up to 36-40 m (in favorable condition) with rounded crown and shining foliage. The mature leaves are somewhat coriaceous, and ovate-oblong. In its natural habitat, the absolute

maximum shade temperature varies from about 34°C at high elevation to about 47°C in the hottest part of Chota Nagpur, and the absolute minimum varies from under -1°C to about 7°C while the normal rainfall varies from 100 to 450 cm. The well- drained moist deep sandy loam with good subsoil drainage is the most favorable soil for the growth of sal. Important features are:

i. Sal is a light demander, good coppicer, wind firm, does not produce

root-suckers and withstands frost, better than many of its associates.

ii. Sal is one of the most fire resistant of all species of its regions.

iii. The sap wood is small, pale coloured, heartwood brown, hard, cross grained, very strong and durable, seasoning slowly.

iv. Sal is also known as a timber tree. While its wood is used for building construction of all kinds, railway sleepers, wagons, cogins and a large number of other purposes.

v. Sal seeds are used for oil extraction which is used in chocolate manufacturing & other fashionable items.

NTFP Value : **-** Sal Leaves are used for making 'Pattal plates' which is used in marriage ceremony, parties and in other functional activities. Its leaves are also used for making "Dona" which is generally used in small hotels. The market rate of pattal plate is Rs-30/- per 1000 Pcs.. Many people derives their livelihoods by selling pattal plates &dona.

2. Asan

Botanical Name: - Terminalia tomentosa

Family: - Combretaceae

Local Name: - Asan, Asana

General Description: - It is commonly called Laurel. Terminalia tomentosa is a large, deciduous tree with a long clean bole, spreading branches and heavy crown, attaining a height up to 30-36 m. It has a very thick dark coloured bark, cracked deeply, resembling very much the back of a crocodile. The tree attains its largest dimensions on deep, rich alluvial soil. In its natural habitat, the absolute maximum shade

temperature varies from 35°C to 48°C and the absolute minimum from 0°C to 18°C and the rainfall ranges from 130 cm to 250 cm.

Important feature:

i. Laurel (Asan) is a light demander, drought tender, frost resistant, good coppicer and tolerant of water logging.

ii. It is fairly tolerant to damage by fire and is readily browsed by animals especially by deers.

iii. The timber of Laurel is used for building and construction works for making furniture, electric casing, rough carpentry, railway wagon, floor boards and doors.

iv. It is also used for agricultural implements and for veneers and plywood.

Medicinal Value: - Asana is astringent, antiseptic, bactericidal, demulcent, and detergent.

NTFP Value: - It is used as a host tree for Silkworm in this tract.

3. Piyar

Botanical Name: - Buchnania latifolia

Family: - Anacardiaceae

Local Name: - Piyar, Achar, Chironji

General Description: - It is moderate sized tree almost evergreen, with a straight trunk; bark dark grey or black reddish inside, regularly divided into small rectangular plates, somewhat resembling crocodile hide. In its natural habitat the absolute maximum shade temperature varies from 41°C to 46°C, the absolute minimum from -1°C to 13°C, and the normal rainfall from 75 cm to 213 cm.

Important feature:

i. The tree is a moderate light demander, very sensitive to frost and somewhat sensitive to drought.

ii. It produces root suckers and coppice shoots.

Medicinal Value: - Fever, burns, dysuria, cholera, phithisis, and asthma.

NTFP Value: It has some economic importance for the gum and edible fruits, which it yields.

4. Mahua

Botanical Name: - Madhuca latifolia

Family: - Sapotaceae

Local Name: - Mahua, modhcam, moha

General Description: - It is a large deciduous tree distributed in most parts of the mainland of India. The young parts are pubescent, bark grey or blackish, with shallow wrinkles and vertical cracks.

Medicinal Value: - Used in coughs, colds, bronchitis, snake-bite, Piles.

NTFP Value: - Its flowers are eaten raw or cooked or made into sweetmeats. Its flowers are also fermented to produce the alcoholic drink mahuwa, a country liquor. Tribals of Santhal Paraganas (Jharkhand) and other tribals consider the tree and the mahuwa drink as part of their cultural heritage. The fruit is eaten and gives thick oil when pressed which is used for burning chirags and is also used to adulterate Ghee, the oil cake is used to polish fish.

Special Remark: - Fresh juice of mahua is alterative and sprit distilled from the flowers is a powerful diffusible stimulant and an astringent. Mahua cake is insecticidal and pesticidal; used with Shikakai for hair wash.

5. *Sidha*

Botanical Name: - Lagerstromia parviflora

Family: - Lythraceae

Local Name: - Sidha

General Description: **-** It is a large deciduous tree. Bark is light grey to reddish, thin, smooth, ex-foliating in narrow longitudinal flakes, light brown inside. The tree is a light demander, fairly frost-hardy, it coppices and pollards vigorously.

Important feature:

i. Its wood is very hard and durable.

ii. It is also used for building, agricultural implements, carts, boats, shafts, axe handle etc.

6. Bhelwa

Botanical Name: - Semicarpus anacardium

Family: - Anacardiaceae

Local Name: - Bhelwa

General Discription : - It is commonly called marking nut tree. It is a moderate sized deciduous tree with rough dark brown bark yielding an acrid juice. The tree has large ovate leaves and typical fruits consisting of an oblique drupe, black when ripe, situated on fleshy orange coloured receptacle. The black pericarp contains a corrosive juice used as marking ink.

Important feature:

i. The tree is a moderate shade bearer, a good coppicer and the seedlings are rather sensitive to frost.

Medicinal Value: - Used in acute rheumatism, asthma, neuralgia, piles, dysentery, fevers, loss of appetite, urinary discharges, epilepsy and psoriasis.

7. Kend

Botanical Name: - Diospyros melanoxylon

Family: - Ebenaceae

Local Name: - Kend, Kendu, Chirchiri

Description: - It is a small to moderate-sized, occasionally large tree, with leaves opposite, sub-opposite, or alternate, coriaceous and varying much in size and form. Bark grayish black, exfoliating in regular rectangular scales.The wood is hard, reddish brown, with irregular black heartwood, sometimes streaked with purple or brown. It is common also in Sal forest, often replacing the Sal where the ground becomes too poor to support the latter. In its natural habitat the absolute maximum shade temperature varies from 41°C to 48°C, the absolute minimum from -1°C to 13°C and the normal rainfall from 50 cm to 150 cm.

Important feature:

i. It is dry and drought resistant.

ii. The wood is used for building, shafts, shoulder- poles and other purposes and is carved into walking sticks, picture-frames and fancy articles.

Medicinal Value: - Use in intermittent fever, dysentery and diarrhea.

NTFP Value:- Its leaves used in making of "Biddi" a country alternative of cigarettes.

8. Dhautha

Botanical Name: - Anogeissus latifolia

Family: - Combretaceae

Local Name: - Dhau, Dhautha

General Description: - It is a moderate sized to large deciduous tree with a somewhat feathery rounded crown and drooping branch lets. The bark is thin smooth, greenish or grayish white, exfoliating in irregular thin rounded scales which leaves have shallow depressions; the outer layer contains chlorophyll. The bark sheds rapidly. In its natural habitat, the absolute

maximum shade temperature varies from 39°C to 48°C, the absolute minimum from -1°C to 16°C and the normal from 62 cm to 225 cm.

Important feature:

i. The wood is hard, very strong and tough and is used for cart axle, axe handles, agricultural implements, poles and rafters, boat building and other purposes.

ii. The leaves are rich in tannin and are collected for the purposes; the bark is also used for tanning and yields a gum much used in calico-printing.

9. **Salai**

Botanical Name: - Boswellia serrata

Family: - Burseraceae

Local Name: - Salai

General Description: - It is moderate-sized to large deciduous gregarious tree; attaining a height up to 9 to 15 m with light spreading crown, somewhat drooping branches and compound imparipinnate leaves, bark greenish grey to yellow or reddish, fairly thick, smooth, exfoliating in thin papery flakes, resinous inside. In its natural habitat the absolute maximum shade temperature varies from 43°C to 49°C. the absolute minimum from -1°C to 7°C and the normal rainfall from 50 cm to 125cm.

Important feature:

i. Its wood is moderately hard, whitish, resinous, with small brown heartwood, used for rough planking, packing boxes etc.

ii. Its wood is also used in manufacturing the 'Match sticks'.

iii. A fragrant gum resin exudes from wounds in the bark and is used as incense and in medicine.

Medicinal Value: - Useful in diarrhea, dysentery, piles, rheumatism, nervous and skin diseases.

10. Karam

Botanical Name: - Adina cordifolia

Family: - Rubiaceae

Local Name: - Karam

General Description: - It is commonly called Haldu and is a large deciduous tree with a large dark green crown, erect trunk and horizontal branches, attaining a height up to 40 m. In its natural habitat, the absolute maximum shade temperature varies from 38°C to 50°C and the absolute minimum from 3°C to 15°C. The rainfall ranges from 90 to 400 cm.

Important feature:

i. It is a strong light demander, fairly resistant to fire, drought and frost and coppices readily.

ii. Its timber is used for furniture, building, agricultural implements, railways carriages etc.

11. Amaltas

Botanical Name: - Cassia fistula

Family: - Caesalpiniaceae

Local Name: - Amaltas, Banderlori

General Description

It is commonly called laburnum. It is a moderate-sized deciduous tree with a rather open crown.The bark in younger tree is smooth, light grey, reddish brown inside, in older trees reddish brown exfoliating in hard scales. This is one of the most beautiful of Indian flowering trees. Its flowers are yellow in colour and persist for long. In its natural habitat the absolute maximum shade temperature varies from 38°C to 49°C, the absolute minimum from -4°C to 18°C and the normal rainfall from 50 cm to 300 cm or more.

Important feature:

i. The wood is hard and durable used for house-post, carts and agricultural equipments.

ii. The pulp of the pods is a strong purgative while the bark is much in demand for tanning.

iii. It coppices vigorously and produces root-suckers freely.

Medicinal Value: - Useful in skin diseases, tuberculoses glands and syphilis. It also cures burning sensation.

12. **Putri**

Botanical Name: - Croton oblongifolius

Family: - Euphorbiaceae

Local Name: - Putri

General Description: It is a small to middle sized deciduous tree. Leaves are oblong-lanceolate and subacute. The flowers are pale yellowish green, solitary or fascicled in the axile of minute bracts on long, erect, often fascicled receme. Capsules are sublongobose, little depressed, slightly three lobed, less than 1.3 cms across. It is found in temperate climate.

Medicinal Value: - Useful in diarhhoea, dysentery, liver diseases, headache, fever, icterus, scabies, spleen trouble, madness, epilepsy, ulcer, cholera, pleurisy.

NTFP Value: - Putri is a host tree for lac.

13. **Koraiya**

Botanical Name: - Holarrhina antidysenterica

Family: - Apocynaceae

Local Name: - Koraiya, Kurchi

General Description: - It is a small deciduous tree with greyish brown, scaly bark. It is a useful accessory species in clothing the ground and acting as a nurse to more valuable species. The tree is important for reclaiming waste lands. The tree favours a slight amount of shade but develops best in full light. It coppices well and shoot up readily after severe damage by fire. It produces root- suckers in abundance.

NTFT Uses : Its wood was mainly used in making toys in previous days.

Medicinal Value: - Useful in diarhhoea, dysentery, snake-bite, heart diseases, asthma, skin diseases, leprosy, dyspepsia, ulcers, sores, toothache.

14.Aam

Botanical Name: - Mangifera indica

Family: - Anacardiaceae

Local Name: - Aam

General Description: - Iti is a large evergreen tree with rough bark in old tree and snooth in younger plants. It flowers in spring season and are recemose. It has round crown. The margin of the leaves are wavy. Its fruits ripens in June-July month.

Uses : Its timber is used for furniture and house building use. Its fruits are liked much for taste value .

Medicinal Value: - Useful in throat troubles, burns, dysuria, cholera, phthisis, bronchitis, asthma, ulcers, and blood diseases. Its tender leaves are used to treat diabetes also.

NTFP Value: - A common tree all over India cultivated for its delicious fruits. Its timber is used for house construction, furniture etc.

15. Jamun

Botanical Name: - **Syzygium cumini**

Family: - **Myrtaceae**

Local Name: - **Jamun**

General Description: - A tall evergreen tree found in moist ground, waste lands, along river banks, nala banks and valleys. There are three varties according to the size of the fruit. It has a fairly wide distribution and the wood is particularly useful for underwater conditions.

Medicinal Value: - Useful in asthma, diarrhea, diabetes, cough, dysentery, and Diabetes.

NTFP Value: - A common tree all over India known for its delicious & medicated fruits.

16. **Rohan**

Botanical Name: - Soyamida febrifuga

Family: - Meliaceae

Local Name: - Rohan

General Description : It is a large deceduous tree having tough bark exfoliating in plates or scales. The leaves are compound crowded at the end of the branch. Leaf-lets are 3-4 cms elliptic or oblong and entire. The flowers are greenish white which borne in large cluster. Fruits are woody capsule. The wood is hard and used in various purposes.

Medicinal Value: - Useful in Malaria, dysentery, general debility, intermittent fevers, diarrhoea. It is applied to rheumatic swelling and used as a gargle in stomatitis.

17. **Palas**

Botanical Name: - Butea monosperma,

Family: - Fabaceae

Local Name: - Palas, Dhak

General Description : It is a medium sized tree often to large sized. It is a deciduous tree of temperate climate. It has no timber value rather famous for its red beautiful flowers blooming in the month of Feb-March. It is also named as Flame of Forest.

Medicinal Value: - Useful in sprue, piles, ulcers, tumors, dropsy, worms, eye diseases, puerperal women, colic, bleeding piles.

NTFP Value: - Palas is a host tree for lac. Its flower is used to make colour.

18. Kaj

Botanical Name: - Bridelia retusa

Family: - Euphorbiaceae

Local Name: - Kaj

General Description: - It is a moderate- sized or large deciduous tree with variable coriaceous leaves with straight parallel lateral veins. Bark is grey to dark brown, longitudanally cracked. Young trees often have the stems covered with strong spines.

Important feature:

i. Wood is grey to olive- brown, durable, used for house-post, carts, cart-shafts and agricultural implements.

ii. The bark is used for tanning and the leaves for cattle fodder.

Medicinal Value: - Useful in preventing pregnancy, rheumatism, earache, snake bite etc.

19. **Semal**

Botanical Name: - **Bombax ceiba**

Family: - **Bombacaceae**

Local Name: - **Semal**

General Description: - It is commonly called Silk Cotton Tree, Cotton Wood, Red Cotton Tree and Semal. It is lofty deciduous trees attaining a height up to 40 m.The mature stems are invariably buttressed. The branches are whorled, spreading horizontally. The bark is a ashy to silver grey, smooth up to middle age, becoming rough with irregular vertical cracks in older trees, young stems and branches are covered with sharp, straight, stout prickles. In its natural habitat, excluding hilly locations, the absolute maximum shade temperature varies from 38°C to 50°C, the absolute minimum from 3°C to 18°C.

Important feature:

i. Semal timber is used in the match industry, in the manufacture of plywood and packing cases and in construction works.

ii. The floss from semal seeds yields the silk cotton or Indian Kapok of commerce.

iii. It is also used in the manufacture of life belts and other life saving appliances.

iv. The bark exudes a gum which has medicinal value.

v. The inner bark of Semal yields a good fibre suitable for cordage.

Medicinal Value: - Useful in toothache, carries, sores in mouth, pain in leg, fever, enlarged spleen, rheumatism, cholera, dysentery.

NTFP Value:

i. Oil is also obatained from Semal seeds.

ii. The leaves are also used as fodder.

iii. The floss from semal seeds yields the silk cotton or Indian Kapok of commerce.

20. **Paisar**

Botanical Name: - **Pterocarpus marsupium**

Family: - **Fabaceae**

Local Name: - **Paisar, Bijasal**

General Description: - It is commonly called kino tree, Gum Kino tree or Bijasal. Bijasal is a tall deciduous tree attaining a height of 30-35 m with spreading branches, forming a large rounded crown. Bark rough, thick, dark grey, longitudinally fissured with the outer softer corky layer exfoliating in small pieces of irregular shape and size, inner bark reddish-brown, fibrous. In its natural habitat, the absolute maximum shade temperature varies from 35°C to 48°C and the absolute minimum from 0°C to 18°C. The normal rainfall requirement varies from 76- 190 cm.

Important feature:

I. Its bark is the source of an important gum, the Kino which has Medicinal value.

ii. It is a moderate light demander and good coppice.

Medicinal Value: - Useful in Diabetes, diseases of blood, eruptions on body, leucoderma, urinary discharges, leprosy etc.

NTFP Value: - The leaves are used as a fodder for cattle.

21. **Bel**

Botanical Name: - Aegle marmelos

Family: - Rutaceae

Local Name: - Bel

General Description: - It is commonly known as bel godden apple, stone apple or wood apple. It is a dediduous tree which attains 6.0 m to 10.0 m in hight and 0.9 m to 1.2 m in girth with straight, sharp, axillavy and trifoliate

Medicinal Value: - Useful in Colitis, colic, dysentery, diarrhea, flatulence, fever, vomiting, thirst, stomach pain, constipation, diarrhea, dysentery, cholera, night fever, puerperal fever, breast pain, snake bite etc.

NTFP Value: - Its fruit marketed at very high rate for its medicinal value.

22. Bahera

Botanical Name: - Terminalia belerica,

Family: - Combretaceae

Local Name: - Bahera

General Description: - It is a large deciduous tree attaining a height up to 37 m often buttressed at the base. The species is found in deciduous forests throughout the greater part of India. It is common associate of Sal. In its natural habitat the absolute maximum shade temperature varies from36°C to 46°C, the absolute minimum from -1°C to 16°C and the normal rainfall from 102 cm to 305 cm.

Medicinal Value: - Useful in piles, dropsy, diarrhea, headache, leprosy, dyspepsia, coughs, hoarseness, eye diseases, vomiting, thirst, bronchitis, corneal ulcers.

23. Raipan

Botanical Name: - Ehretia laevis,

Family: - Boraginaceae

Local Name: - Raipan

General Description: - It is a moderate sized deciduous tree with an irregularly-shaped stem and smooth light grey to whitish bark, yellow and soft inside. This tree occurs throughout the greater part of India in deciduous forest, extending into dry regions. It is very common in Sal forest. It is somewhat frost tender, resistant, good coppice and produced root common drought suckers.

24. Khair

Botanical Name: - Acacia catechu,

Family: - Mimosaceae,

Local Name: - Khair

General Description: - It is commonly called the cutch tree or Khair. Khair is a small or medium sized deciduous tree attaining a height of 12-15 m with light feathery crown. The branches armed with paired and recurved spines. Bark is thick, dark grey or geryish brown, rough exfoliating in long narrow strips, brown and red inside.

Medicinal Value: - Useful in melancholia, conjunctivitis, haemoptysis and skin diseases. Various plant parts are used in sore mouth, pain in chest, asthma, colicky pain, cancer, gravel, dysentery, bronchitis, consumption and strangulation of intestine. The juice of bark along with asafetida is used in haemoptysis. Mixture of flower tops cumins, is given gonorrhoea. Katha from heartwood is astringent, cooling and digestive and is used in relaxed conditions of throat, mouth, gums and for cough and diarrhoea.

NTFP Value: - Khair wood is used for the production of cutch and Katha.

Special Remark: - The timber has a variety of uses..e.g. house construction , agricultural implement etc.

25. Bargad

Botanical Name: - Ficus bengalensis,

Family: - Moraceae,

Local Name: - Bargad

General Description: - A very large tree with many aerial roots known as prop roots. It is evergreen tree with oblong leaves. The leaves are used as a fodder also.

Medicinal Value: - Bargad is widely used in the treatment of skin diseases. Plant is used in ophthalmia and other eye troubles, mouth sores, fever madness, atrophy, emaciation or cathexy, cholera and rinderpest. Paste of root applied on scalp to grow hair long and used for menorrhagia. It cures erysipelas, burning sensation and vaginal disorders. Root fibers are used in gonorrhea. Leaves are applied on swelling and inflamed parts for relief. Bark is astringent, cooling and alleviates vitiated kapha and pitta. An infusion of bark cures dysentery, nervous disorders, diarrhoea, leucorrhoea, menorrhagia, and reduces blood sugar in diabetes.The milky juice is beneficial as local application in toothache, sores and ulcers, for rheumatism and lumbago and for soles of feet when cracked. Infusion of young buds is used in diarrhea and dysentery and young tips of roots for obstinate vomiting. The juice mixed with sesam oil is applied to burns. Latex used in genital disorders. The seeds are cooling and tonic. The powder of seeds is progenitive

26. Imli

Botanical Name: - Tamarindus indica,

Family: - Caesalpinaceae,

Local Name: - Imli

General Description: - Moderate - sized to large, evergreen tree. It has compound leaves.

Medicinal Value: - Leaves of Imli reduces inflammatory swellings and are applied externally for inflammation of ulcers. Flowers are applied externally on eyes. Bark is astringent and tonic; heals ulcers. Fruit, acts as refrigerant from the acids. They contain digestive, carminative, slightly laxative, antiscorbutic and antibilios; useful in diseases caused by deranged bile. An asinfusion of pulp forms very grateful drink in febrile diseases. Pulp as well as a poultice of leaves is recommended for external application to inflammatory swellings to relieve pain. The ash of shells of fruit is used in menorrhagia and gonorrhoea.

NTFP Value: - Fruit of Imli used in many Indian dishes as an ingridents.

27. Pipal

Botanical Name: - Ficus religiosa,

Family: - Moraceae,

Local Name: - Pipal

General Description: - A very large tree. It is very sacred tree for "Hindus." It is deceduous and found in temperate climate. In very old tree butresses are found.

Medicinal Value: - The various parts of tree is used in otitis media. suppurativa, mouth sores, atrophy, emaciation or cachexy, rheumatism, small pox, carbuncle rinderpeast, mucus in urine, apermatorrhoea, gravel, cholera, etc. Leaves with other ingredients is an aborticide. Leaves and young shoots are purgative. Bark is astringent and is found efficacious in gonorrhoea. Pulverised bark is applied externally on unhealthy ulcers or wounds to promote granulation. Infusion of bark is given internally in scabies, ulcers and skin disease; decoction given in gonorrhoea. It is aphrodisiac and good for lumbago. Fruit is mild laxative and digestive. Seeds are cooling, laxative and alternative. Powder of seeds taken for three days during menses which sterilizes woman for long time.

Special feature : This plant give oxygen in night also by performing special type of photosynthesis specially when it is in epiphytic stage.

28. Neem

Botanical Name: - Azadirachta indica,

Family: - Meliaceae,

Local Name: - Neem

General Description: - It is a large, deviduous tree survives in places having any type of climatic factor in India.. I*t is* wild in forest of Maharashtra, often planted all over India. It has compound leaves. It flowers in the month of Feb-March. Its fruit ripens in the month of July-August. It bark is smooth in young plants and rough in old trees.

Medicinal Value: - Neem is used in ayurvedic medicine for leprosy and skin diseases, fever and purification of blood. Leave are applied as poultice to boils. Decoction of leaves is

antiseptic, used in ulcers and eczema. Bark, root bark and young fruit are bitter tonic, alternative, astringent, anthelmintic and antiperiodic. Gum is demulcent, tonic in catarrh infections. Dry flower are tonic and stomachic. Seed oil is stimulant, antiseptic, alternative, and useful in rheumatism and skin diseases. Bark, gum, leaf and seed are used in snake bite and scorpion sting. Flowers and berries are purgative, emollient and anthelmintic. Alcoholic extract of bark is anticancer, antiviral and spasmogenic.

29. Chakundi

Botanical Name: - Cassia siamea

Family: - Caesalpiniaceae

Local Name: - Chakundi

General Description: - It is moderate sized evergreen tree with a dense crown, probably indigenous to Burma and southern most part of Tamil Nadu and largely planted in Jharkhand for ornamental purpose. The yellow flowers, in large pyramidal terminal panicles, appear mainly in the hot season but the flowering period is comparatively long and flowers may often be found at various season. The pods ripen toward the end of the hot season in varying peiods; they hang in clusters and give the tree a somewhat untidy appearance. The tree grows fairly rapidly and is easy to cultivate; it grows well on moist soil provided drainage is good.

30. Kusum

Botanical Name: - Schleichera oleosa,

Family: - Sapindaceae

Local Name: - Kusum

General Description: - A large to medium sized deciduous tree, common in dry forest in India.

Medicinal Value: - Bark of Kusum is astringent. It is used to cure kapha. Rubbed up with oil, it is used as a cure for itch, leprosy, skin diseases, inflammation, ulcers. Oil is efficacious in alopecia, also used for acne, itch and for massage in rheumatism. Unripe fruit is used for vaata. Powder of seeds is applied to ulcers of animals and removing maggots.

NTFP Value: - It is used as Host plant for famous "Kusumi lac". Its timber is very hard and used for making " Kolhu" vase for extracting oil of musterd and othe oil containing seeds.

31. **Dhaw**

Botanical Name: - Anogeissus pendula

Family: - Combretaceae

Local Name: - Dhaw

General Description: - It is a small tree, with a short usually crooked bole. This species has a decidedly limited distribution. It extends from the Aravalli hills in Rajputana to Bundelkhand and from the kishangarh state and the Jhansi, Hamirpur and Banda districts of U.P. on the north to the Panchmahals In the south. The tree requires a fair amount of shade, is frost hardy, coppices and pollards well and produces root suckers freely. The bole yields little or no timber but poles cut from the branches are in demand for building and others purposes. The leaves contain tannin. In the dry region in which it occurs, this is an important tree, not only as a source of timber and fuel but also clothing dry tracts.

32. .**Ghorkaranj**

Botanical Name: - Ailanthus excelsa

Family: - Simaroubaceae

Local Name: - Ghorkaranj

General Description : It is a large deeceduous tree attainig 18-20 mtrs in height. It has straight trunck with 60-80 cms dia. Bark is slightly brown and smooth but in large tree it is rough. Leaves are alternate, compound, 30-60 cms long and leaf-lets 8-14 cms long.

Medicinal Value: - Leaves of Ghorkaranj are especially useful in asthma, bronchitis, dyspepsia and in the treatment of weakness after child birth. Paste of leaves is applied as

poultice in ery sipelas, bitter tonic, and febrifuge, expectorant and antispasmodic; used for dyspeptic complaints and as astringent in diarrhea and dysentery and given in chronic bronchitis and asthma. Bark is used as tonic especially in debility after child birth.

33. Gamhar

Botanical Name: - Gmelina arborea

Family: - Verbenaceae

Local Name: - Gamhar

General Description: - It is a moderate to large -sized deciduous tree with numerous spreading branches, which form an irregular crown. It occurs scattered in deciduous forest throughout the greater part of Indian sub-continent and the Andaman up to an altitude of 1500 m. It is found in all the state but is nowhere common. In its natural habitat the absolute minimum from 1°C to 16°C and the normal rainfall From 75 cm to 450 cm or more. It reaches its largest dimensions in the mixed forests of moist regions, as in the eastern sub- Himalayan tract, Assam and elsewhere. It shows a preference for moist fertile valleys. The tree is a light demander, moderately frost-hardy, and does not stand excessive drought. It coppices very well, saplings are readily browsed by deer and other cattle. Leaves are fodder for cattle.

Medicinal Value: -Gamhar root an important dashamula. It is astringent, bitter tonic, stomachic, digestive, cardio tonic, laxative, galactagogue, pulmonary and nervine tonic. It improves memory, overcomes giddiness and is useful in burning sensation, fever, thirst, emaciation, heart diseases, nervous disorders and piles. Pulverized root is applied locally for gout. The drupes are sweetish and bitter and are used as an astringent of refrigerant decoctions for fevers and bilious affections. The tender leaves are demulecent. A paste of the leaves is applied to the head for the relief of headache in fevers. The leaf juice is used as a wash for foul ulcers. Flowers are given in blood diseases. Fruit are bitter, cooling, tonic and overcome thirst, pitta, vatarakta and useful in pleural and lung diseases.

Special Remark: - Gamhar yields timber used for construction work, planking furniture, cabinet work, penelling, carriage, box, boat building agricultural implements, musical instrument, etc. The wood is used in plywood manufacture also.

4. Awala

Botanical Name: - Emblica officinalis

Local Name: - Awala, Amla

General Description: - It is a moderate sized deciduous tree with feathery light green comppond leaves and small narrow linear leaf-lets.. The bark is smooth, grey, exfoliating in irregular rounded scales. The tree occurs in mixed deciduous forest throughout the greater part of India, ascending the Himalaya to 1350 m. It is not found in the arid region. It is a light demander. It is sensitive to both frost and drought. The tree yields wood, red in color, hard, apt to split, durable under water, used for agricultural implements, well construction, and inferior building and furniture. The bark leaves and fruits are used for tanning and the tree is important as a yielder of tannin. Fruit are edible and have medicinal value.

Medicinal Value: - Various plant parts of awala are used in toothache, sores, fever, anaemia, epilepsy, pimples, tubercular fistula, rinder pest, gonorrhoea and convulsion. Root and bark are astringent. Fresh roots act as a remedy for jaundice. Leaves are cerebral and gastrointestinal tonic, cardio-tonic, aphrodisiac, and antipyretic, antidiabetic. Leaf extract is antibacterial. Decoction of leaves is useful for ulcers in mouth. Infusion of leaves mixed with fenugreek seeds is useful in chronic dysentery. Flowers are cooling, refrigerant and aperients. Fruit is acrid, cooling, refrigerant, diuretic, and laxative, is a pronounced expectorant and has anticancerous properties. Fresh fruit is mild purgative, diuretic, improving liver function. Raw fruit is aperients. Dried fruit is cooling, and anti-haemorrhagic, useful in haemorrhage, diarrhea and dysentery. It is especially good for abundant growth of hair. It has been found to be effective in the treatment of peptic ulcer and scurvy. Fruit juice and its sediment and residue are antitoxidant due to gallic acid, carminative and stomachic. Fruit juice with lemon juice and sugar is taken for arresting bacillary dysentery. Juice with turmeric powder and honey used to cure diabetes insipidus. Fruit preparations are used in indurations of liver, in collyrium and in warts of eyes. It is an ingradient of famous Ayurvedic meedicine " Triphala "

35. Sisam

Botanical Name: - Dalbergia sissoo

Family: - Fabaceae

Local Name: - Sisam

General Description: - It is commonly called sissoo. It is a medium-sized to large, gregarious, deciduous tree with grey bark, attaining a height up to 30 m. It occurs throughout the sub-Himalayan tract and outer Himalayan valleys from Indus to Assam, usually up to 900 m but sometime up to 1500 m elevation. It has been extensively planted along roads and canals, especially in Punjab and Uttar Pradesh and in many other parts of the country. It grows well on mostly on sand or gravel along the bank of rivers or on islands, very often gregariously. The rainfall in its zone ranges from 75 cm to 450 cm.

Special Remark: - The tree yields timber valued for construction and general utility purposes e.g. in building construction, boat building, musical instruments, in the manufacture of sport equipment. Sisam wood is classed as an excellent fuel. Sisam leaves are used as fodder.

36. BAMBOO

Family :- Poaceae

Botanical Name: Dendrocalamus strictus

Family - Poaceae

General Description : Bamboo is a group of perennial evergreens in the true grass tribe Bambuseae. Giant bamboos are the largest members of the grass family. In bamboo, the internodal regions of the stem are hollow and the vascular bundles in the cross section are scattered throughout the stem instead of in a cylindrical arrangement. The dicotyledonous woody xylem is also absent. The absence of secondary growth wood causes the stems of monocots, even of palms and large bamboos, to be columnar rather than tapering. Bamboos are some of the fastest growing plants in the world, due to a unique rhizome-dependent system. Bamboos are of notable economic and cultural significance in South Asia, South East Asia and East Asia, being used for building materials, as a food source, and as a versatile raw product.

Chapter IIA

FOREST FAUNA

2.B.1 Introduction :-

The term 'wild life' with respect to a tract will denote the entire animal community therein, covering all forms of life. The natural fauna in a locality is characterized by the habitat conditions that were created and influenced by the Vegetation types met with in that locality. Some part of this tract are geographically shows the presence of different regional, climatic and edaphic climaxes and offers a wide range of habitat types which favours wild life but due to heavy biotic pressure, illegal felling, drought condition and some cultural activity they are influenced negatively. The important wild animals found in the area are the following.

2B1.1A MAMALS :

Indian Hare (Lepus nigricollis)

These are small mammals found in every parts of the India. It has long ears, which can be more than 10 cm (4 in) long, are probably an adaptation for detecting predators. They have large, powerful hind legs. The two front paws have 5 toes, the extra called the dew claw. The hind feet have 4 toes. They are plantigrade animals while at rest; however, they move around on their toes while running, assuming a more digitigrade form. The fur is most commonly long and soft, with coloured such as shades of brown, gray, and buff. The tail is a little plume of brownish fur. They are herbivores that feed by grazing on grass, forbs, and leafy weeds. In consequence, their diet contains large amounts of cellulose, which is hard to digest.

Indian Elephant (Elephas maximus)

This large terrestrial herbivore represents the order proboscides in the Asian continent. Apart from its great size, the most striking feature of the animal is the proboscis or trunk, which is the elongated nose and upper lip, used for seizing food, taking up water for drinking and bathing, blowing dust over body, testing air for danger etc. This trunk ends in a small 'lip', which helps the animal to pick up even small objects. In males, the incisors of the upper jaw grow out to form tusks, used in defence and combat, for levering up small trees, for digging grip etc. The tusks of females scarcely protrude and they are often described as tusk-less. The tusk-less males are called makanas usually healthy and large in build. Though six molar teeth will be present in each half of upper and lower jaws, only two teeth are used at a time. The two molars move forward continuously and in the process they will wear out and drop and the next pair in succession takes up the function. Longevity of this animal is really controlled

by its teeth-wear. When the last pair drops, mastication becomes impossible and the animal suffers. Eyes are small and sight is poor, but the senses of smell and hearing are acute. The animal requires about 250 to 320 Kgs of food in a day and always in the lookout for the same. They roam usually in herds, but lone individuals that are often aggressive and dangerous, can also be seen. They are diurnal in habit. Male elephants, both wild and tamed, occasionally exhibit peculiar periodical paroxysms of excitement. Then the elephant is said to be in 'musth'. A musth elephant will be arrogant and aggressive. As this tract lies in eastern part of Rajmahal hills area, elephants from the adjoining divisions migrate in to this area, especially during the Kahrif season.

SLOTH BEAR (Melursus ursinus)

The Sloth bear locally known as Bhalu, is nocturnal & omnivorous animal. Adult sloth bears weigh 100 kg (220 lbs) on average, though weight can range variously from 55 kg (121 lbs) to 190 kg (400 lbs). They are 60–90 cm (2–3 ft) high at the shoulder, and have a body length of 1.4–1.9 m (4.6–6.3 ft). Females are smaller than males and have more fur between the shoulders. Attacks by bhalu are reported some from deep forests villages. The number does not seem very large. Adult sloth bears may travel in pairs, with the males being gentle with cubs. They may fight for food. They walk in a slow, shambling motion with their feet being set down in a noisy, flapping motion. They are capable of galloping faster than running humans. Although they appear slow and clumsy, but are excellent climbers. They climb to feed and rest though not to escape enemies as they prefer to stand their ground. They are capable of climbing on smooth surfaces and hang upside down like sloths.They are good swimmers, and primarily enter water to play.

HYAENA (Hyaena hyaena)

The hyaena locally known as Lakkar Baggha, has dog like built with massive head and forebody but weak hind quarters. The hyaena generally keeps to open country. It is nocturnal in habit, scavenger by profession and emits foul smells. It usually feeds on carrion and occasionally preys on sheep, goats, calves, and stray dogs. It is commonly found in forests of the whole Ranch division.

Neelgai or Blue Bull (Boselaphus tragocamelus)

It is the largest Asian antelope. Nilgai have thin legs and a robust body that slopes down from the shoulder. They show marked sexual dimorphism, with only the males having horns. Adult males have a grey to bluish-grey coat, with white spots on the cheeks and white colouring on the edges of the lips. They also have a white throat bib and a narrow white stripe along the underside of the body that widens at the rear. The tips of the long tufted tail and of the ears are black. They also possess a tubular shaped "pennant" of long, coarse, hair on the mid section of the throat. The males have two black conical horns, arising close together just behind the eyes. The horns are project upwards, but are slightly curved forward; they measure between 15 and 24 centimetres (5.9 and 9.4 in) in a fully grown adult. Although the horns are usually smooth, in some older males they may develop ring-shaped ridges near the base. In contrast, females and young are tawny brown in colour, although with similar markings to the male; they have no horns and only a very small "pennant". Both sexes have an erectile manon on the back of the neck, terminating in a bristly "hog-tuft" just above the shoulders. Nilgai are diurnal, and tend to form single sex herds outside of the breeding season. They can be found in large numbers on the banks of the streams.

Wild Boar (Sus scrofa)

These animals are found everywhere in this tract. In the past they were present in large number but due to preying activity they are at their eve. They often raid the agricultural crops raised by the residents and damage them. They also cause damage to nurseries and younger plantations by digging up in search for tubers. These formidable animals will turn with ferocity on any one disturbing them. They are omnivorous by nature and consume anything that comes their way.

Leopard (Panthera pardus)

This carnivore with a fulvous coat marked with black spots arranged in rosettes in tawny — yellow background can thrive in almost all habitats. Usually, except in breeding season they are solitary animals. The animal is a good swimmer, good climber and a powerful leaper. Its wariness, keen senses and ability to hide make it almost impossible to track it down easily. They prefer rocky slopes with abundant bushes for cover. Being more tolerant to high temperature, they frequently hunt during day time. They hunt any animal that can be overpowered, like Sambar, wild boars and other small games. Its habits bring it in to far more contact with man than the tiger.

Wild Cat (Felis chaus)

This common wild cat of India resembles the house cat in many respects, but has a distinctive appearance with the heavy build, long legs and comparatively small tail. Fur is also richer than the domesticated tabby. Usually it is a solitary animal and pairing is observed only during the breeding season. They reside in wooded areas with a safe retreat among rocks. It hunts on small mammals, birds, reptiles etc, mainly during night using stealth. Being very swift and exceedingly strong for its size, it can bring down games larger than itself. Raids on poultry by this cat are often reported from this tract.

Indian Wild Dog - Dhole (Cuon alpinus)

It is similar to a domestic dog, but shorter in limbs and muzzle. These red coated animals prefer forest areas with ample food, shade and water. They are social animals going about in packs. These powerfully built animals have great stamina and they go on tracking the prey with the acute sense of smell, scouring forests and meadows for miles around, during daytime. Their persistence in running down the prey is remarkable. They may even force a tiger to give up its kill by their strong will and group work. In this tract these animals are sighted in some part, hunting in small packs.

Indian Fox — common Fox (Vulpes bengalensis)

They resemble the domestic dogs, but the tail is with more tufts of hairs. They are found near to human habitation. The howling of the animal at dusk is perhaps more familiar to most of the people than the animal. They live in burrows dug by them. The burrow will be with very many openings. They sleep in the burrows by day and will come out at dusk to seek their food. They hunt on small games, reptiles, insects, crabs etc, and also feed on carrions. Poultry raids by these animals are quite common in this area.

Indian Jackal (Canis aureus)

These animals are a little larger than the common fox. Its nearest wild relative is the wolf, but the jackal is smaller in build and meaner in aspect. They live in any environment. In this tract they reside in the open forests in the vicinity of the populated part. They are found in pairs or in small packs. Solitary animals can also be seen. They come out in dusk, hunt and retire at dawn. They hunt small animals which they can overpower. They usually look for carrion, especially the remnants of the kills of larger carnivores. They also raid the poultry, try to lift lambs etc.

Indian Grey Mongoose- common mongoose (Herpestes edwardsi)

They are uniformly grey or rufous in colour. They are usually found in pairs or small family groups. They prefer areas with thick undergrowth and shun dense forest areas. They are diurnal in habit and feed on rats, mice, lizards, birds, insects, snakes, eggs and fruits. They live in holes dug by them.

Indian Giant Squirrel (Ratufa indica)

This species is endemic to India. They can be found only in forests. They often stay at the tops of lofty trees and seldom come to the ground. They usually move from tree tops to tree tops by remarkably giant leaps. They are very active and agile animals. This beautiful squirrel has a long bushy tail. The black fur coat has characteristic reddish brown stripes and marks. They are shy animals that stay motionless when intruders are sighted and so not easy to discover. They live alone or in pairs in a globular nest made of twigs and leaves. The nests will be constructed among the slender branches where the heavier predators cannot reach and hunt them. A single animal may build several nests on different trees to be used as sleeping quarters, nurseries etc. They feed on fruits, shoots and insects.

Indian Palm Squirrel (Funambulus palmarum)

This is the common squirrel found in the homesteads. The three white stripes on the dorsal side of the black coat and the profusely bushy tail are the salient features of this animal. They feed on fruits, nuts, tubers, young shoots, buds and other vegetative materials. They have the habit of storing the food materials for using at the time of adverse conditions.

Black-naped Hare (Lepus nigricollis)

This hare has got a black patch on the back of its neck and hence the name. It is also called as the Indian hare. They are often sighted in open areas with thickets of bushes. Though they are usually nocturnal, they seek food during day time too. It relies on grass, leaves and succulent herbaceous materials. They cause damage to seedlings by nipping off the apical portion.

Large Bandicoot Rat (Bandicota indica)

These rodents are found in areas near to human habitation. Their large size helps to distinguish them from other rats. They prefer the outskirts of human dwellings such as the gardens, stables, etc. They make extensive burrows and do much damage. They feed on household refuse, grains, vegetables, etc.

Lesser Bandicoot Rat (Bandicota bengalensis)

It is also called as the Indian Mole Rat. It is a smaller bandicoot with a dark greyish coat. It is found in almost all places - in forests, pasture lands, gardens and even in waste lands. It dug up burrows with special chambers to store food grains for periods of famine. It multiplies like any thing. It is the most destructive rat that causes considerable damage to crops and stored food grains.

Common Yellow Bat (Scotophilous heathi)

The yellowish brown colour of the dorsal parts and the canary yellow colour of the under parts of the body is the distinctive feature of this bat. They roost in small colonies in crevices, roofs and holes in ceilings. They appear in the evenings and flies round in company. They feed on insects as well as fruits.

Painted Bat (Kerivoula picta)

This small bat with yellow 'wings' painted with black stripes and spots are sighted frequently in the populated part of this tract. As its colour perfectly matches with the dry leaves among which it roosts during day singly or in pairs, it is not easy to spot them.

BARKING DEER (Muntiacus muntjak)

Barking deer are shy and elusive. They are also known by the name of Kakad deer or the Barking deer in India. Indian Barking deer counts amongst the ten sub species of the Barking deer in the world. Its horns rarely exceed 13 cms. Its favourite haunts are thick forests. Their height in India is somewhere between 50 cm to 75 cm. Their average life span is 20 to 30 years and they weigh around 20 to 30 kg. They can be easily distinguished from the other deer. The deer have two raised dark ridges on their forehead, which extend to the end of their antlers. One of the unique features of Kakad deer is that they have both, a pair of antlers as well as overgrown canines (tushes). They make use of the tushes mainly as weapons in a fight. The Barking deer are mostly seen inhabiting dense forests of India. Even while grazing, they will rarely move into open grasslands and usually remain near the edge of dense forests. However, one can frequently find the Muntjac deer of India at salt licks. Apart from the Kalesar forest of Haryana, they are found in almost all the dense jungles of the Indian subcontinent.

2.B.1.2 - BIRDS

Many birds are common to Jharkhand and Ranchi Forest Division. In this tract there are no perennial water bodies and as a result the aquatic birds can be sighted very rarely.

The other birds commonly found in this area are listed below.

Sl. No.	English Name	Latin Name
1.	Babbler, Common	Turdoides caudatus
2.	Barbet,Crimson-breasted or Coppersmith	Megalaima haemacephala
3.	Bird, Black	Turdus merula
4.	Bird, Tailor	Orthotomus sutorius
5.	Bittern, Chestnut	Ixobrychus cinnamomeus
6.	Bulbul, Red-vented	Pycnonotus cafer

7.	Crow, House	Corvus splendens
8.	Crow, Jungle	Corvus macrorhynchos
9.	Curlew	Numenius arquata
10.	Dove, Little Brown	Streptopelia senegalensis
11.	Duck, Pintail	Anas acuta
12.	Eagle, Crested Hawk	Spizaetus cirrhatus
13.	Eagle, Crested Serpent	Spilornis cheela
14.	Eagle, Short-toed	Circaetus gallicus
15.	Eagle, Tawny	Aquila rapax
16.	Fowl, Red Jungle	Gallus gallus
17.	Heron, Grey	Ardea cinerea
18.	Hoopoe	Upupaepops
19.	Hornbill, Common Grey	Tockus birostris
20.	Hornbill, Malabar Pied	Authracoceros coronatus
21.	Ibis, Black	Pseudibis papillosa
22.	Kingfisher, White- breasted	Halcyon smyrnensis
23.	Kite, Brahminy	Haliastur Indus
24.	Koel	Eudynamys scolopacea
25.	Lapwing, Redwattled	Vanellus indicus
26.	Lapwing, Yellow-wattled	Vanellus malabaricus
27.	Lark, Red-winged Bush	Mirafra erythroptera
28.	Lark, Refous-tailed Finch	Ammomanes phoenicurus
29.	Lorikeet	Loriculus vernalis
30.	Minivet, Scarlet	Pericrocotus flammeus
31.	Munia, Black-headed	Lonchura Malacca

32.	Munia, Green	Estrilda Formosa
33.	Munia, Red or Waxbill	Estrilda amandava
34.	Munia, Spotted	Lonchura punctulata
35.	Munia, White-backed	Lonchura striata
36.	M unia, White-throated	Lonchura malabarica
37.	Myna, Bank	Acridotheres ginginianus
38.	Myna, Grey-headed	Sturnus malabaricus
39.	Myna, Indian	Acridotheres tristis
40.	Myna, Jungle	Acridotheres fuscus
41.	Myna, Pied	Sturnus contra
42.	Myna,Brahminy or Black- headed	Sturnus pagodarum
43.	Nightjar, Common Indian	Caprimulgus asiaticus
44.	Nuthatch, Chestnut- bellied	Sitta castanea
45.	Oriole, Black-headed	Oriolus xanthornus
46.	Oriole, Golden	Oriolus oriolus
47.	Owl, Barn or Screech	Tyto alba
48.	Owl, Brown Fish	Bubo zeylonensis
49.	Parakeet, Alexandrine or Large Indian	Psittacula eupatria
50.	Parakeet, Blossom- headed	Psittacula cya nocephala
51.	Pigeon, Common	Treron phoenicoptera
52.	Pipit, Indian	Anthus novaeseelandiae
53.	Pitta, Indian	Pitta brachyuran
54.	Plover, Little Ringed	Charadrius dubius

55.	Redshank	Tringatotanus
56.	Robin, Indian	Saxicoloides fulicata
57.	Robin, Magpie	Copsychus saularis
58.	Roller or Blue Jay	Coracias benghalensis
59.	Sandgrouse, Common	Pterocles exustus
60.	Sandgrouse, Painted	Pterocles indicus
61.	Shrike, Large Cuckoo	Coracina novaehollandiae
62.	Shrike, Rufous-backed	Lanius schach
63.	Skylark, Indian Small	Alauda guagula
64.	Sparrow, House	Passer domesticus
65.	Sparrow, Yellow-Throated	Petronia xanthocollis
66.	Spurfowl, Red	Galloperdix spadicea
67.	Stilt, Blackwinged	Himantopus himantopus
68.	Stint, Little	Calidris minutes
69.	Stork, White	Ciconia ciconia
70.	Stork Whit-necked	Ciconia episcopus
71.	Strok Black neck	Ephippiorhynch us asiaticus
72.	Sunbird purple	Nectarinia asiatica
73.	Sunbird ,Purple-rumped	Nectarinia zeylonica
74.	Swallor,Redrumped or Striated	Hirundo
75.	Swallow,common	Hirundo rustica
76.	Swallow,Wire-tailed	Hirundo smithii
77.	Swift,crested tree	Hemiprocne longipennis
78.	Swift,House	Apus affinis
79.	Swift,Palm	Cypsiurus parvus

80.	Teal,Common	Anas crecca
81.	Tern,IndianWhiskered	Chlidonias hybrid
82.	Tern,River	Sterna aurantia
83.	Tit,Grey	Parus major
84.	Vulture,WhitScavenger or pharaoh's chicken	Neophron percnopterus
85.	Vulture,White-backed or Bengal	Gyps bengalensis
86.	Wagtail,Grey	Motacilla caspica
87.	Wagtail,Large Pied	Motacilla maderaspatensis
88.	Wagtail,White	Motacilla alba
89.	Wagtail,Yellow	Motacilla flava
90.	Wagtail,Yellow-headed	Motacilla citreola
91.	Warbler,Ashy Wren	Prinia socialis
92.	Warbler,Indian Wren	Prinia subflava
93.	Warbler,Streaked Fantail	Cisticola juncidis
94.	Waterhen,White-breasted	Ama urornis phoenicurus
95.	Weaver Bird,Baya	Ploceus philippinus
96.	Weaver Bird,Black-breasted	Ploceus benghalensis

2B.1.3. - REPTILES.

This tract posses variety of lizards and snakes. Both poisonous and non-poisonous snakes are seen in the forests. The important species found in this tract are listed below.

Monitor Lizard (Varanus monitor)

This is the largest lizard found in the drier plains of this tract. The animal is much sought after by the tribes for its meat and skin, as it is believed that the blood and meat have medicinal properties. The tribal people use their pet dogs to chase this animal and catch it. Due to these indiscriminate killings, the species is becoming rare and rarer in this area. If this trend is not checked, it is certain that the species will become extinct in this tract in the very near future.

Chameleon (Chamelion calcarata)

This arboreal lizard is an interesting species. They are cryptically coloured and it cannot be recognised easily when they stay among the foliage. Its ability to change the colour in accordance with the surrounding is remarkable. The large protruding eyes can be revolved and used to watch the surrounding without actually turning the head. Though it is very clumsy in its movements, it stealth the prey and shoots it's long sticky tongue to catch the prey. This animal thrives mainly on insects.

King Cobra (Ophiophagus Hannah)

It is the most dreadful poisonous snake, as it attacks the intruders without any provocation. They are found in dense forests at higher altitudes as they prefer to avoid human interferences. It may attain a length of about six mtrs. The hood is not wide as in cobra. It feeds on other snakes and rodents. It makes nest with the dried bamboo leaves and twigs. The eggs are laid in the lower compartment. Even the young ones coming out of the eggs are capable of killing large animals with the poison they possess. The poison is neuro—toxic and death is imminent.

Cobra (Naja naja)

This is the most common poisonous snake found in this tract. It is characterised by the bicellate mark on the dorsal part of the hood that will be clearly visible when the hood is expanded with the intention to strike. The neck region comprises long ribs and it helps the snake to dilate the neck portion and expand the hood. The male members are heavier in build and possess longer tails and larger hoods. It feeds on rodents, frogs, birds etc. The poison is neuro-toxic and the death is due to respiratory failure.

Python (Python molurus)

It is the largest snake found in this tract. It is a non-poisonous snake, nonethe less dangerous as it coils round its victim and kills by strangulation. When disturbed it hisses loudly. Usually they prefer moist areas. It is a good swimmer as well as climber. It seems to be very lethargic, but when it sights a prey, turns very active. It may sometimes coil round on the branches of trees waiting the prey passing beneath. When the prey reaches just below, it may fall on it and coils round to constrict and kill it. It feeds on small animals, birds, frogs etc.

Viper (Vipera ruselli)

It is another common poisonous snake found in the area. It is dark brown in colour with elliptical patches that run in three rows. The head is distinctively triangular in shape. They inhabit rocky and bushy areas, where the colour of its skin merges with the surroundings. Usually it remains coiled with the head at the centre of the coil. When provoked, it will raise its head, the body will be swelled rhythmically and hiss loudly and continuously. It hurls itself at the victim and the big fangs are pressed. They feed on small animals, birds, lizards etc.

Krait (Bangarus caeruleus)

This poisonous snake is steel blue in colour with white bands around the body. These white bands are not distinct in anterior region. This snake is nocturnal in habit and feeds on other snakes, birds, rodents, lizards etc. The venom is neuro-toxic in action. The victim feels sleepy and dies.

Rat Snake (Ptyas mucosus)

It is a common non-poisonous snake that is considered as the true friend of farmers as it helps them by preying upon and destroying the rats and mice. It is very agile and a good climber. When cornered, it will bite viciously. It will emit a foul smell on touch or even secrete a bad smelling black liquid from the anal glands.

Common Blind Snake (Typhiops braminus)

It is a primitive snake, resembling a large earthworm, with a shining chocolate hue. They are found in rotting vegetation and also in cool damp places. The head is not distinct and the eyes are more or less concealed by imbricate scales. They burrow easily in soft soil. They feed on larvae, worms and soft insects.

Common Green whip-snake (Dryophis nasutus)

It is a slender snake, almost green in colour. The dorsal part is full of black and white oblique lines, which are well defined in the anterior region. The head is elongated with a pointed tip. The eyes are well-defined with horizontal pupil and bright golden iris. It can be found in the foliage of small trees and bushes. It remains suspended with its tail and the head is held free to catch preys. It has the habit of swaying the head slowly and trying to take aim at shining objects or victims. It strikes viciously. Its diet consists of insects, lizards, small birds etc

Checkered Keel back (Natrix piscator)

It is an aquatic non-poisonous snake, found frequently in the stagnant water in ditches in the rivers and streams. It seldom comes out of water. When cornered it strikes viciously. Its diet includes frogs, small fishes, worms, insects etc.

Water Snake (Enhydris enhydris)

This is another aquatic snake that seldom leaves the water. It is non-poisonous and harmless. It feeds on frogs, worms etc.

Tree Snake (Dendrphis species)

This non-poisonous snake is sighted rarely among the foliages of small trees and bushes.

Wolf Snake (Oligodon venustus)

The colour of this harmless non-poisonous snake is grey with brownish tinge. It resembles the krait in appearance. But here the brown bands of anterior region will be clear and distinct. They are found in open areas with bushy thickets. It comes out in the evenings seeking food. It feeds on small rodents, lizards, insects etc.

Tortoises (Testudo travancorica)

These armoured animals are found in damp places near to the perennial streams of the upper reaches of this tract. Indeed they are few in number at present as they were sought for meat by the tribals staying within the forests.

2B. 1.4. -AMPHIBIANS.

Amphibians are represented by frogs and toads in this tract. The common frogs belonging to the genera Rana are found in the water holes and damp places. The common frogs found here are the following.

- Rana hexadactyla
- Rana tigrina
- Rana semipalmata
- Rana malabarica

- Rana aurentiaca.

Toads belonging to the genera Bufo are common in this tract. The prominent toads that can be met with in this tract are the following.

- Bufo melanostichtus
- Bufo parietallis
- Bufo microtympanum.

2B.1.5. - FISHES

This tract is not very good abode for the Piscean fauna. During the monsoon period when the water flow is steady, fishes are seen in water bodies.

The prominent fish species found growing in the streams & water bodies of the tract are given below:

Siluriformers	**Cypriniformes**
Ompok bimaculatus (Bloch.)	Labeo rohita (Ham.)
Wallago attu (Bl.& Schn.)	Labeo calbasu (ham.)
Mystus bleekeri (Day)	Labeo bata (Ham.)
Mystus tengara (Ham.)	Catla catla (Ham.)
Mystus vittatus (Bloch.)	Cirrhnus mrigala (Ham.)
Bagarius bagarius (Ham.)	Puntius ticto (Ham.)
Ailia colia (Ham.)	P.sarana sarana (Ham.)
Clupisoma garua (Ham.)	Osteobrama cotio cotio (Ham.)
Heteropneustes fossilis (Bloch.)	Synbranchiformes
Clarius batrachus (Linn.)	Monopterus cuchia (Ham.)
Siluriformes	Mastacembelus pancalus (Ham.)
Ompok bimaculatus (Bloch.)	Mastacembelus armatus (Lac.)

Wallago attu (Bl.& Schn.)	Macrognathus aual (Schn)
Mystus bleekeri (Day)	Labeo rohita (Ham.)
Mystus tengara (Ham.)	Labeo calbasu (ham.)
Mystus vittatus (Bloch.)	Perciformes
Bagarius bagarius (Ham.)	Channa punctatus (Bloch.)
Ailia colia (Ham.)	Channa orientalis (Sch.)
Clupisoma garua (Ham.)	Channa striata (Bloch.)
Heteropneustes fossilis (Bloch.)	
Clarius batrachus (Linn.)	
Osteog lossiformes	**Cyprinodontiformes**
Notopterus notopterus (Pallas.)	Gambusia affinis (Baird & Gira rd)
Chitala chitala (Ham.)	Mugliformes
Clupeiformes	Rhinomugil corsula (Ham.)
Gudusia chapra (Ham.)	Cyprinodontiformes

2B.2. - INJURIES TO WHICH THE FAUNA IS LIABLE

The chief agencies causing injuries to the fauna are the man, epidemics and atmospheric influences. The fauna has suffered at the hand of men, both directly and indirectly since time immemorial. The direct injuries to the fauna are caused by human activities of hunting, poaching, snaring, capturing and poisoning. With the development of motorable roads, increase in fire-arm licenses, extension of cultivation upto the edge of forests the open nature of the country and due to the army camps poaching has been on an increase. Chasing sambhar and other deer species by dogs and then killing by lathi blows when the animal is at bay is another example. In this Division certain species like tiger, panther, sambhar, cheetal, hog dear, kotra, jungle fowls and red spur fowl have already become quite rare and unless stringent measures are adopted against the poachers or law breakers and existing resources tightened up, the wild life is likely to suffer further decline to extinct.

Among the indirect injuries caused by man is disforestation which reduces the area of habitat of the fauna and also their food supply, overgrazing and heavy incidence of fires in the forests for both of which man is responsible are the other factors responsible for causing a decline in the fauna. Extensive overgrazing results into exhaustion of natural food and cover for the herbivores. Fires also destroy the natural food supply, including the insects, the eggs and the forest areas.

2B.2.1. - INTRODUCTION.

In past, this tract is offered good abode and shelter to many forms of wild life. At that time the richness and variety of the fauna of this tract was really admirable. The major threat factors faced by the wild life population in this tract are discussed below.

2B.2.2.- HABITAT FRAGMENTATION AND ALIENATION.

In the past extensive forest tracts were clear felled for various purposes. In this tract also the natural forests were cleared to be regenerated with valuable species and the evergreen stretches were worked under selection felling system. All these resulted in the increased human interferences and indeed it adversely affected the well being of the wildlife. In this stretch of forests, few settlements within the tract cause disturbance to the harmonious life in their habitat.

2B.2.3. -CARRYING CAPACITY.

When the existing forest vegetation is clear felled for raising plantations of required species, the environmental and ecological factors of the locality will be altered drastically. Food, water and shelter are the most important requirements of the fauna to thrive successfully. The carrying capacity of a habitat is determined by considering the abundance or inadequacy of these components. If the domestic cattle intrude, the available food is to be shared and it brings out competition between the wild fauna and domestic cattle. In the absence of palatable vegetation, the population of herbivores will dwindle and it will adversely affect the existence of carnivores too. Likewise, water is an important requirement that determines the existence of life.

It is the same case with shelter. Shelter is essential for the wild animals to rest in the hot hours of the day and to hide from the predators. In the absence sufficient shelter the fauna may retreat to other safer areas. In addition to these, the changes in the environmental factors such as temperature, humidity, precipitation etc also influences the animal life in a particular territory. All these are interlinked factors that directly influence the animal community.

2.4. - EPIDEMICS

Due to the existence of human settlements, the wild fauna is forced to share their domain with the domestic cattle. They will be grazing together in the same area. As the domestic cattle and wild herbivores are prone for almost similar diseases, the chances of mutual transmission increases. If once an epidemic breaks out in a territory, it may wipe out the whole population of the affected species. It is very difficult to treat the wild fauna against any disease.

2B.,2.5. - FIRE.

Fire will annihilate many small forms of wild life directly. Small invertebrates, snakes, ground roosting birds; rodents residing in burrows etc will get killed. The fire also causes deterioration of the soil, destruction of vegetation and depletion of the habitat. If the fire sweeps the area regularly without any check, it will ultimately pave way for the dwindling of wild life population, due to scarcity of food.

2B.2.6. - PREDATION.

The life forms in a habitat are interlinked in many ways. They will interact with each other and also with the environment. They also have to depend directly or indirectly on the members of the community. This interdependence and interaction are essential to maintain the balance in nature. The herbivores are the primary consumers in this ecosystem and their success depends on the availability of sufficient food materials in the area. If the populations of the herbivores increase without any check due to the absence of predators, it will tell upon the

carrying capacity of the area. The food scarcity due to over population may ultimately lead to the total destruction of the herbivores. Similarly, if the number of the predators in an area is more, there will be excessive predation which will wipe out the prey base and result in the extermination of the carnivores also. So, it is evident that the wildlife community should maintain a balance that will help to keep equilibrium in nature unaltered.

2B.2.7. - HUMAN ACTIVITIES.

Men indulge in illegal activities like poaching and trade of wild life articles. Wild animals are often hunted for their meat or other animal products like skin, tusk, musk and certain body parts, etc. Capturing of live animals for the purpose of trade is another factor that causes dwindling of the population of certain species. Snaring and poisoning the wild animals in an effort to protect the crops is another human activity that causes destruction of wild life. The public has to be enlightened in this regard so as to ensure the protection of wildlife. Dependence of local tribals on many of are smaller animals for food is a serious issue.

2B2.8.– HUMAN-WILDLIFE CONFLICT.

crop raids by wild life often occurs in this tract. Wild Boar and nilgai are the main culprit in these cases. Instances of crop raids and human kills by wild elephants are reported. The villagers often kill or harm wild animals to prevent their crop field. This one is a serious issue.

2B.3.- FAUNA MANAGEMENT

At present this tract is not considered as an area where wildlife management activities are to be carried out with much significance or as a corridor to be developed more to facilitate the movement of wild animals. No activities are carried out till this date exclusively to manage the wild fauna of this tract. During the peak summer days the streams criss crossing this tract will become dry, the grasses and other edible plants in the open areas will perish and there will be the threat of annual wild fires. Owing to these, the animals will be congregating around certain spots where water and food materials will be available in diminutive quantity. In such condition, it is imperative to chalk out some simple measures to provide essential facilities to the wild life at various ideal spots within this tract.

For securing water throughout the year, small check dams can be constructed across the streams at sites. Small ponds can be dug in areas where the water table is high and de-silting of the existing water holes can be attempted to provide water to the wild animals. Salt licks can also be established near these spots. Other facilities relished by certain animals, such as

wallowing pits, can also be prepared. While afforesting the denuded forest areas by planting local species, care should be taken to include some species that will provide fodder to herbivores, fruits and shelter to arboreal animals and birds. Live and let live is to be the policy to be adopted and for this, there must be avid insight and sincere efforts to incorporate some measures in the regular forestry operations to provide some facilities to the wild fauna, which is the integral part of the ecosystem.

POTENTIAL ZONE IN THE DISTRICT

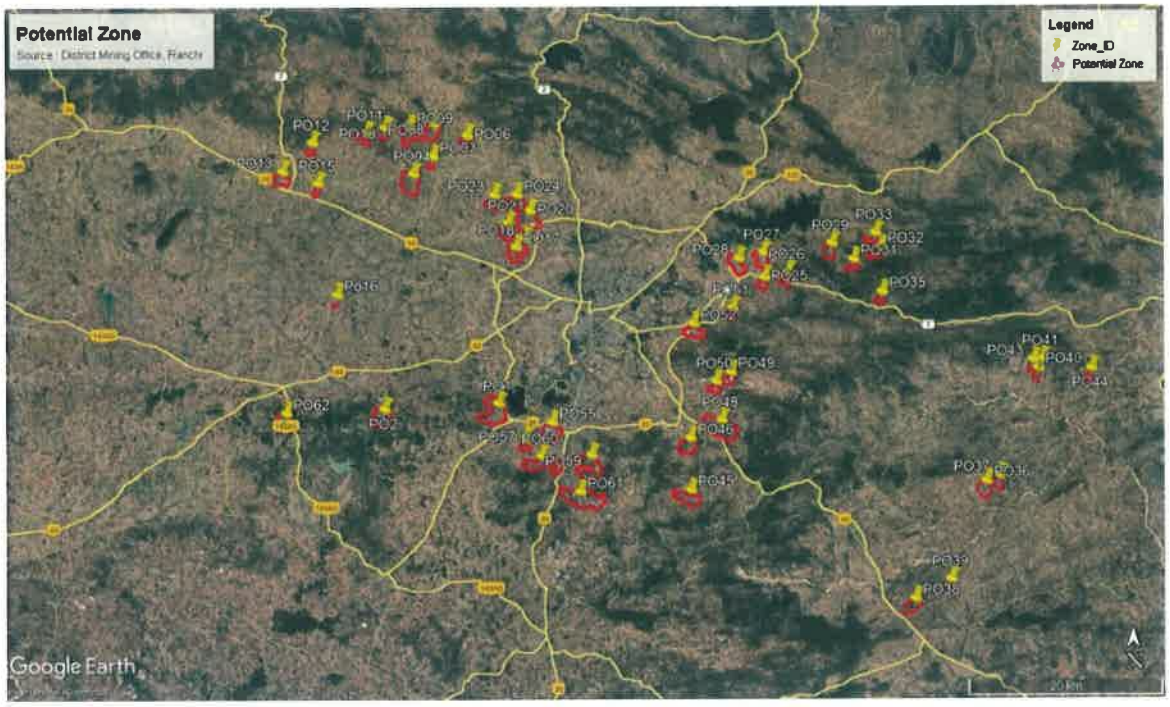
Potential Resource Area for stone mining in the district have been identified and marked on a map.

This identification has been done on basis of:

1. Existence of closed mines
2. Existence of running mines
3. Site visit to sites for which LOI have been issued by the District Mining Office
4. Applications have been filed by prospective proponents on raiyat land
5. Area identified by district Geology Dept.

These resource areas have been surveyed and limiting co-ordinated have been determined. All such zones are listed in DSR.

These zones indicate areas where resource is available. However, while issuing LoI for mining, it must be ensured by the authority that mining area for which LoI is being issued must be complied to all statutory siting criteria prescribed by competent state/central Govt. agency.



Approved

Sl No	Zone	Block	Village	Bounding coordinates	
1	P-1	Namkum	Sithia	85° 13' 26.0210" E	23° 17' 37.7591" N
		Nagri	Singhpur	85° 14' 02.4012" E	23° 17' 37.7591" N
			Chete	85° 14' 25.0530" E	23° 16' 22.5174" N
			Bandratoli	85° 14' 06.2909" E	23° 16' 05.9122" N
			Sembo	85° 13' 29.4531" E	23° 16' 01.9184" N
			Baridih	85° 12' 50.2857" E	23° 16' 14.5683" N
				85° 13' 10.4622" E	23° 17' 14.0043" N
2	P-2	Itki	Harmu	85° 06' 44.3345" E	23° 16' 57.2067" N
			Lawagain	85° 07' 22.8583" E	23° 16' 58.1781" N
			Chinaro	85° 07' 41.4678" E	23° 16' 09.1352" N
			Puriyo	85° 07' 23.0108" E	23° 15' 51.4785" N
			Lupunga	85° 06' 41.9783" E	23° 15' 53.0200" N
			Khambha	85° 06' 30.3854" E	23° 16' 23.1479" N
3	P-3	Burmu	Gurgain	85° 09' 49.9820" E	23° 30' 23.5162" N
				85° 10' 02.8352" E	23° 30' 22.9834" N
				85° 10' 15.3815" E	23° 30' 10.5502" N
				85° 10' 07.7074" E	23° 30' 06.1400" N
				85° 09' 54.3159" E	23° 30' 06.2338" N
				85° 09' 43.0478" E	23° 30' 18.3383" N
4	P-4	Burmu	Arra (Arara)	85° 08' 27.4055" E	23° 29' 57.5080" N
			Gurgain	85° 09' 16.8534" E	23° 29' 57.6011" N
		Mandar	Sewadih	85° 09' 15.7445" E	23° 29' 20.7106" N
			Chund	85° 09' 11.4304" E	23° 28' 40.0864" N
			Jaher	85° 08' 56.0821" E	23° 28' 37.5524" N
				85° 08' 30.7687" E	23° 28' 48.3750" N
				85° 08' 09.7303" E	23° 29' 14.6224" N
				85° 08' 16.8928" E	23° 29' 50.7510" N
5	P-6	Burmu	Basri	85° 11' 52.0565" E	23° 31' 50.0557" N
			Baraudi	85° 12' 09.4000" E	23° 31' 51.3222" N
			Hisri	85° 12' 23.0916" E	23° 31' 30.0268" N
				85° 12' 14.4715" E	23° 31' 10.9753" N
				85° 12' 08.0187" E	23° 31' 05.4453" N
				85° 11' 59.8841" E	23° 31' 02.7714" N
				85° 11' 51.8527" E	23° 31' 07.4467" N
				85° 11' 45.1385" E	23° 31' 22.3789" N
				85° 11' 46.0706" E	23° 31' 47.5228" N
6	P-8	Burmu	Ginjothakurgaon	85° 09' 51.5725" E	23° 32' 37.7575" N
			Kulwe	85° 10' 13.7144" E	23° 32' 39.1574" N
			Nauj	85° 10' 31.5778" E	23° 32' 31.5893" N
				85° 10' 34.3942" E	23° 32' 12.1483" N
				85° 10' 15.0740" E	23° 31' 40.5064" N
				85° 09' 56.6770" E	23° 31' 36.2161" N

				85° 09' 43.8324" E	23° 31' 45.1002" N
				85° 09' 40.2883" E	23° 32' 17.2052" N
7	P-9	Burmu	Dandiya	85° 08' 13.6505" E	23° 32' 21.2946" N
			Nauj	85° 09' 08.2904" E	23° 32' 16.2290" N
				85° 09' 08.4858" E	23° 32' 00.8568" N
				85° 09' 24.8096" E	23° 31' 52.1945" N
				85° 09' 27.6292" E	23° 31' 40.0645" N
				85° 08' 33.2963" E	23° 31' 19.9406" N
				85° 08' 23.4734" E	23° 31' 20.2221" N
				85° 08' 19.6364" E	23° 31' 26.4141" N
				85° 08' 11.8869" E	23° 32' 07.5433" N
8	P-10	Burmu	Murwa	85° 06' 58.7509" E	23° 31' 53.0108" N
				85° 07' 06.8855" E	23° 31' 55.2623" N
				85° 07' 17.1800" E	23° 31' 55.3400" N
				85° 07' 19.9316" E	23° 31' 51.8851" N
				85° 07' 22.5408" E	23° 31' 47.9449" N
				85° 07' 21.4664" E	23° 31' 46.2563" N
				85° 07' 13.7590" E	23° 31' 44.0590" N
				85° 07' 00.4393" E	23° 31' 44.4269" N
				85° 06' 57.3696" E	23° 31' 45.6934" N
9	P-11	Burmu	Hatnal	85° 05' 27.4287" E	23° 32' 00.7503" N
			Bangaon	85° 05' 39.5538" E	23° 32' 00.4689" N
		Chanho	Lepsar	85° 05' 49.9907" E	23° 31' 47.8042" N
			Harr	85° 06' 17.9245" E	23° 31' 35.9835" N
				85° 06' 20.6872" E	23° 31' 30.9174" N
				85° 06' 17.7711" E	23° 31' 26.5549" N
				85° 06' 06.4133" E	23° 31' 25.4290" N
				85° 05' 31.5727" E	23° 31' 45.4119" N
				85° 05' 23.8986" E	23° 31' 52.1665" N
10	P-12	Chanho	Chaliyo	85° 02' 30.1178" E	23° 31' 04.9000" N
				85° 02' 41.4995" E	23° 31' 08.2396" N
				85° 02' 52.7802" E	23° 31' 08.0689" N
				85° 03' 01.6585" E	23° 31' 06.1666" N
				85° 02' 58.8958" E	23° 30' 54.7670" N
				85° 02' 45.1440" E	23° 30' 50.7715" N
				85° 02' 36.3302" E	23° 30' 54.9840" N
11	P-13	Chanho	Tangar	85° 00' 28.0943" E	23° 29' 36.7254" N
			Rai (Rola)	85° 00' 38.8777" E	23° 29' 43.1755" N
			Kataiya	85° 00' 59.6397" E	23° 29' 43.6193" N
				85° 01' 29.5937" E	23° 29' 34.0630" N
				85° 01' 33.6824" E	23° 29' 22.7708" N
				85° 01' 32.5573" E	23° 29' 17.0085" N
				85° 01' 29.5688" E	23° 29' 12.3701" N
				85° 01' 24.5039" E	23° 29' 10.0474" N
				85° 00' 40.5040" E	23° 29' 08.4203" N
				85° 00' 32.8557" E	23° 29' 20.4492" N
12	P-15	Chanho	Karkat		

			Sonchipi	85° 03' 02.8011" E	23° 29' 00.5249" N
			Chancho	85° 03' 23.0069" E	23° 28' 58.7109" N
				85° 03' 20.2768" E	23° 28' 52.3546" N
				85° 03' 14.9356" E	23° 28' 44.4224" N
				85° 03' 03.2700" E	23° 28' 32.0386" N
				85° 02' 55.9029" E	23° 28' 34.5726" N
				85° 02' 57.5144" E	23° 28' 47.6648" N
13	P-16	Mandar	Tangarbasuli	85° 04' 05.8354" E	23° 22' 39.0966" N
			Laiyo	85° 04' 11.0209" E	23° 22' 41.2337" N
				85° 04' 23.2952" E	23° 22' 42.2822" N
				85° 04' 25.2677" E	23° 22' 39.5893" N
				85° 04' 25.5296" E	23° 22' 37.5176" N
				85° 04' 18.0066" E	23° 22' 32.2043" N
				85° 04' 08.4811" E	23° 22' 31.3741" N
				85° 04' 05.9912" E	23° 22' 32.6321" N
14	P-17	Kanke	Tandar	85° 14' 45.8761" E	23° 25' 52.3409" N
			Manatu	85° 14' 57.6624" E	23° 25' 39.8059" N
				85° 15' 20.6992" E	23° 25' 05.8860" N
				85° 15' 17.7527" E	23° 25' 00.4783" N
				85° 15' 07.7882" E	23° 24' 56.7270" N
				85° 14' 55.2516" E	23° 24' 56.5454" N
				85° 14' 36.5928" E	23° 25' 24.7513" N
				85° 14' 37.0365" E	23° 25' 44.4754" N
15	P-18	Kanke	Manatu	85° 15' 05.4306" E	23° 25' 58.7312" N
				85° 15' 21.5028" E	23° 25' 57.5023" N
				85° 15' 39.4191" E	23° 25' 48.6695" N
				85° 15' 44.0039" E	23° 25' 39.0686" N
				85° 15' 38.9144" E	23° 25' 19.8967" N
				85° 15' 34.0111" E	23° 25' 18.8255" N
				85° 15' 14.0025" E	23° 25' 36.3649" N
				85° 15' 08.2152" E	23° 25' 41.9165" N
16	P-20	Kanke	Sanga	85° 15' 39.1823" E	23° 27' 45.3867" N
			Chamguru	85° 15' 50.9685" E	23° 27' 50.0554" N
			Khatanga	85° 16' 34.6314" E	23° 26' 58.9429" N
			Gagi	85° 16' 27.1310" E	23° 26' 48.8672" N
			Sukurhutu	85° 15' 46.4148" E	23° 26' 40.5115" N
			Cheri	85° 15' 15.0295" E	23° 26' 41.7850" N
				85° 15' 07.5736" E	23° 26' 52.7992" N
				85° 15' 11.3238" E	23° 27' 44.4038" N
17	P-21	Kanke	Manatu	85° 14' 15.5414" E	23° 26' 54.1310" N
		Ratu	Pheta	85° 14' 26.8574" E	23° 26' 54.7652" N
			Hurhuri	85° 14' 46.1440" E	23° 26' 49.8502" N
				85° 14' 51.2759" E	23° 26' 20.1574" N
				85° 14' 51.2335" E	23° 26' 10.2826" N
				85° 14' 46.6797" E	23° 26' 06.3502" N
				85° 14' 23.1072" E	23° 26' 10.7741" N
				85° 14' 05.6956" E	23° 26' 28.7151" N

				85° 13' 59.4802" E	23° 26' 39.6446" N
				85° 14' 03.8205" E	23° 26' 49.1129" N
18	P-23	Kanke	Sanga	85° 13' 14.5324" E	23° 28' 16.5925" N
		Ratu	Tarup	85° 13' 50.1592" E	23° 28' 16.3468" N
			Usamatu	85° 13' 59.5693" E	23° 27' 59.7604" N
				85° 14' 01.9454" E	23° 27' 51.2840" N
				85° 13' 59.5346" E	23° 27' 47.3525" N
				85° 13' 46.9108" E	23° 27' 50.8097" N
				85° 13' 11.4516" E	23° 28' 05.2476" N
19	P-24	Kanke	Sanga	85° 14' 35.4292" E	23° 28' 25.6835" N
			Sirango	85° 15' 19.0920" E	23° 28' 28.8776" N
			Chamguru	85° 15' 34.3606" E	23° 28' 20.7695" N
				85° 15' 32.2176" E	23° 27' 58.4098" N
				85° 15' 26.9928" E	23° 27' 55.6711" N
				85° 14' 58.8617" E	23° 27' 52.0212" N
				85° 14' 33.3855" E	23° 27' 52.4992" N
				85° 14' 27.3995" E	23° 28' 00.1612" N
20	P-25	Anghara	Lupung	85° 29' 34.1331" E	23° 23' 50.4179" N
			Berwari	85° 29' 47.7945" E	23° 23' 48.6970" N
				85° 30' 03.5988" E	23° 23' 44.7635" N
				85° 30' 07.7674" E	23° 23' 29.3872" N
				85° 30' 01.1880" E	23° 23' 21.8992" N
				85° 29' 51.8126" E	23° 23' 18.4572" N
				85° 29' 40.2504" E	23° 23' 24.7279" N
				85° 29' 32.2580" E	23° 23' 35.6671" N
21	P-26	Anghara	Anghara	85° 31' 04.8691" E	23° 24' 09.0998" N
				85° 31' 21.5622" E	23° 24' 01.9188" N
				85° 31' 29.5851" E	23° 23' 53.3681" N
				85° 31' 29.3172" E	23° 23' 36.8963" N
				85° 31' 24.4956" E	23° 23' 32.2251" N
				85° 31' 18.3006" E	23° 23' 32.6035" N
				85° 30' 55.2978" E	23° 23' 41.3216" N
				85° 30' 51.8154" E	23° 23' 46.4844" N
22	P-27	Anghara	Chaldag	85° 29' 26.9940" E	23° 25' 25.2746" N
			Petrol	85° 30' 10.2956" E	23° 25' 20.6341" N
			Harhe	85° 30' 14.0458" E	23° 24' 36.3885" N
			Janum	85° 30' 06.5206" E	23° 24' 21.0101" N
			Narayan soso	85° 29' 53.4198" E	23° 24' 26.3098" N
			Sirka	85° 29' 35.9474" E	23° 24' 37.4076" N
			Chaldag soso	85° 29' 28.2400" E	23° 24' 44.0089" N
			Simaliya	85° 29' 16.7957" E	23° 25' 11.9949" N
				85° 29' 19.9360" E	23° 25' 20.8799" N
23	P-28	Anghara	Berwari	85° 27' 54.2176" E	23° 25' 21.8631" N
			Chaldag		

			Salhan	85° 28' 24.3504" E	23° 25' 00.0030" N
			Turup	85° 28' 55.0241" E	23° 24' 36.1427" N
			Hesal	85° 28' 43.9552" E	23° 24' 18.0074" N
				85° 28' 33.5945" E	23° 24' 11.5600" N
				85° 28' 18.0580" E	23° 24' 12.0517" N
				85° 27' 48.9171" E	23° 24' 51.6210" N
				85° 27' 49.1228" E	23° 25' 13.8533" N
24	P-29	Anghara	Buki	85° 33' 40.3057" E	23° 25' 58.2396" N
			Bisa	85° 33' 49.9490" E	23° 25' 57.5023" N
				85° 34' 05.9236" E	23° 25' 39.1680" N
				85° 34' 10.3071" E	23° 25' 30.7117" N
				85° 34' 09.2357" E	23° 25' 04.9028" N
				85° 33' 59.5923" E	23° 25' 01.2157" N
				85° 33' 43.8439" E	23° 25' 05.3956" N
				85° 33' 33.3411" E	23° 25' 10.8021" N
				85° 33' 30.9302" E	23° 25' 33.1696" N
				85° 33' 33.0732" E	23° 25' 40.2975" N
25	P-31	Anghara	Bisa	85° 35' 22.4191" E	23° 24' 43.8255" N
			Beti(Benti)	85° 35' 36.5717" E	23° 24' 37.6081" N
				85° 35' 41.1151" E	23° 24' 33.4387" N
				85° 35' 41.1151" E	23° 24' 29.2597" N
				85° 35' 11.3815" E	23° 24' 21.8849" N
				85° 34' 55.5772" E	23° 24' 20.6558" N
				85° 34' 47.6692" E	23° 24' 24.8556" N
				85° 34' 51.8777" E	23° 24' 33.0470" N
26	P-32	Anghara	Beti(Benti)	85° 36' 09.5093" E	23° 25' 14.9807" N
			Obar	85° 36' 31.3575" E	23° 25' 18.0508" N
				85° 36' 46.2422" E	23° 25' 22.3182" N
				85° 36' 56.4466" E	23° 25' 20.9251" N
				85° 37' 01.7440" E	23° 25' 17.6845" N
				85° 37' 00.1236" E	23° 25' 13.2499" N
				85° 36' 47.5468" E	23° 25' 03.4280" N
				85° 36' 08.4378" E	23° 25' 04.9028" N
				85° 36' 06.2949" E	23° 25' 10.8021" N
27	P-33	Anghara	Nawagarh	85° 36' 02.6492" E	23° 26' 13.7701" N
			Rangamati	85° 36' 40.7341" E	23° 26' 05.8265" N
				85° 36' 47.7821" E	23° 26' 04.2401" N
				85° 36' 51.5649" E	23° 26' 01.9263" N
				85° 36' 52.3685" E	23° 25' 56.7649" N
				85° 36' 47.3852" E	23° 25' 53.1552" N
				85° 36' 38.0825" E	23° 25' 53.3420" N
				85° 36' 15.7573" E	23° 25' 55.8258" N
				85° 36' 06.8306" E	23° 25' 57.9938" N
				85° 35' 56.3837" E	23° 26' 02.4178" N
				85° 35' 54.3078" E	23° 26' 03.4468" N
				85° 35' 51.4953" E	23° 26' 08.0556" N
				85° 35' 55.8047" E	23° 26' 12.7799" N

28	P-35	Anghara	Jonha	85° 36' 40.8577" E	23° 22' 53.5304" N
			Dahua	85° 36' 54.8292" E	23° 22' 51.8680" N
			Dokad	85° 37' 03.7439" E	23° 22' 48.7913" N
			Lepsar	85° 37' 10.0479" E	23° 22' 43.7281" N
				85° 37' 10.5585" E	23° 22' 37.7885" N
				85° 37' 07.4878" E	23° 22' 33.0907" N
				85° 36' 55.3151" E	23° 22' 33.1552" N
				85° 36' 44.9645" E	23° 22' 35.3478" N
				85° 36' 33.7689" E	23° 22' 41.1900" N
				85° 36' 34.1481" E	23° 22' 50.7649" N
29	P-36	Sonahatu	Saread	85° 43' 13.3707" E	23° 12' 38.6203" N
			Rangadih	85° 43' 27.4470" E	23° 12' 24.1111" N
			Sonahatu	85° 43' 31.0778" E	23° 12' 10.1777" N
				85° 43' 27.9535" E	23° 11' 59.2467" N
				85° 43' 24.5964" E	23° 11' 51.7532" N
				85° 43' 16.9034" E	23° 11' 46.8475" N
				85° 42' 59.8823" E	23° 11' 50.3456" N
				85° 42' 39.1373" E	23° 12' 15.6963" N
				85° 42' 39.6731" E	23° 12' 23.0823" N
				85° 42' 49.0485" E	23° 12' 38.8386" N
30	P-37	Sonahatu	Saelband	85° 43' 51.1729" E	23° 12' 49.3035" N
			Dirsir	85° 44' 01.9325" E	23° 12' 44.0143" N
			Birgamdih	85° 44' 10.5496" E	23° 12' 34.9684" N
			Saead	85° 44' 14.7583" E	23° 12' 24.0895" N
				85° 44' 15.5705" E	23° 12' 15.2039" N
				85° 44' 13.4358" E	23° 12' 10.7894" N
				85° 44' 05.9272" E	23° 12' 12.0033" N
				85° 43' 45.9110" E	23° 12' 23.1351" N
				85° 43' 28.7708" E	23° 12' 39.7406" N
				85° 43' 31.6399" E	23° 12' 46.4704" N
				85° 43' 41.5510" E	23° 12' 49.4246" N
31	P-38	Burmu	Sumandih	85° 38' 50.4930" E	23° 06' 22.6001" N
		Tamar	Janumpiri	85° 38' 57.3137" E	23° 06' 19.5461" N
			Burudih	85° 39' 15.9482" E	23° 06' 01.7792" N
			Murpa	85° 39' 19.5016" E	23° 05' 51.9012" N
			Dubai	85° 38' 40.2140" E	23° 05' 23.6469" N
				85° 38' 25.3920" E	23° 05' 22.1684" N
				85° 38' 20.0345" E	23° 05' 25.2896" N
				85° 38' 25.2133" E	23° 05' 42.8665" N
				85° 38' 25.7490" E	23° 06' 00.5250" N
32	P-39	Tamar	Peraidih	85° 40' 55.2999" E	23° 07' 00.3490" N
				85° 40' 59.9661" E	23° 06' 59.7847" N
				85° 41' 20.3011" E	23° 06' 57.3561" N
				85° 41' 21.8091" E	23° 06' 55.2392" N
				85° 41' 18.9717" E	23° 06' 52.7001" N
				85° 41' 01.9356" E	23° 06' 43.2373" N
				85° 40' 46.8074" E	23° 06' 42.0996" N

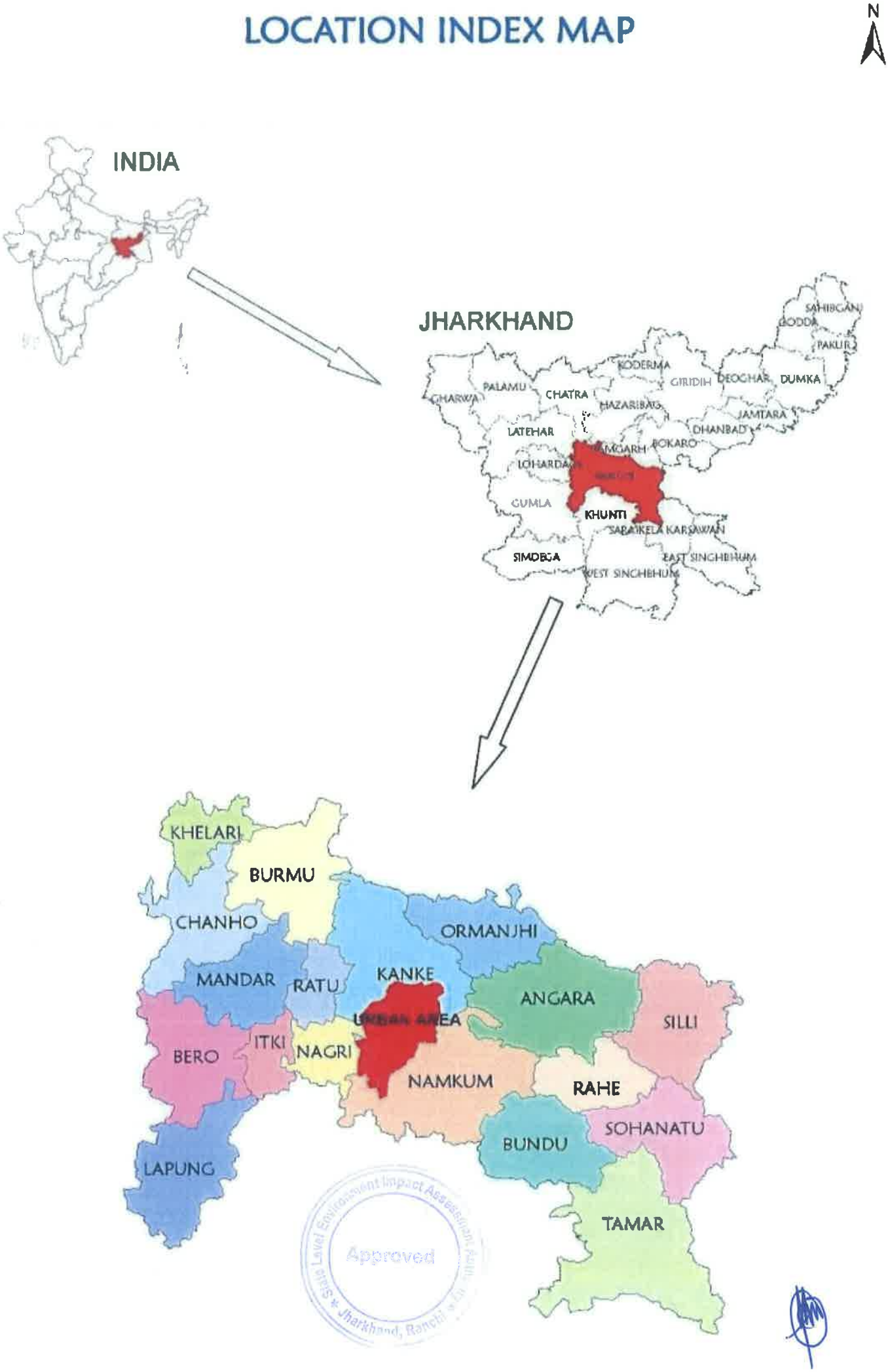
				85° 40' 50.0611" E	23° 06' 53.7578" N
				85° 40' 52.7135" E	23° 06' 57.5506" N
33	P-40	Silli	Nawadih	85° 46' 23.3451" E	23° 18' 43.9269" N
			Aral	85° 46' 33.1088" E	23° 18' 38.5227" N
			Barachangru	85° 46' 28.4657" E	23° 18' 17.3658" N
				85° 46' 21.5011" E	23° 18' 09.9853" N
				85° 46' 13.9499" E	23° 18' 10.1466" N
				85° 46' 05.0793" E	23° 18' 22.5148" N
				85° 46' 03.8217" E	23° 18' 32.2905" N
				85° 46' 05.9646" E	23° 18' 42.7867" N
34	P-41	Silli	Aral	85° 46' 18.7921" E	23° 19' 11.0631" N
			Barachangru	85° 46' 26.2361" E	23° 19' 06.2939" N
				85° 46' 38.1090" E	23° 18' 55.2507" N
				85° 46' 39.6925" E	23° 18' 49.5957" N
				85° 46' 38.2876" E	23° 18' 45.5748" N
				85° 46' 25.9656" E	23° 18' 53.6107" N
				85° 46' 13.4650" E	23° 19' 02.3025" N
				85° 46' 14.1793" E	23° 19' 07.0584" N
35	P-43	Silli	Aral	85° 45' 58.2768" E	23° 19' 10.2857" N
			Nawadih	85° 46' 04.3574" E	23° 19' 07.0584" N
				85° 46' 05.9449" E	23° 19' 01.0651" N
				85° 46' 06.0772" E	23° 18' 56.3338" N
				85° 46' 01.4812" E	23° 18' 45.5319" N
				85° 45' 59.0000" E	23° 18' 44.0988" N
				85° 45' 45.7851" E	23° 18' 47.7068" N
				85° 45' 45.9637" E	23° 18' 52.2987" N
				85° 45' 49.7138" E	23° 19' 06.7304" N
				85° 45' 52.9283" E	23° 19' 09.5182" N
36	P-44	Silli	Banthajam	85° 49' 25.3864" E	23° 18' 41.7686" N
				85° 49' 35.0297" E	23° 18' 40.0192" N
				85° 49' 47.6494" E	23° 18' 23.9467" N
				85° 49' 48.4828" E	23° 18' 13.5594" N
				85° 49' 34.7681" E	23° 18' 09.7589" N
				85° 49' 27.2231" E	23° 18' 11.3663" N
				85° 49' 16.4574" E	23° 18' 15.7462" N
				85° 49' 13.6001" E	23° 18' 24.9307" N
				85° 49' 17.9195" E	23° 18' 33.3287" N
37	P-45	Namkum	Ulatu	85° 24' 21.1386" E	23° 12' 16.1061" N
			Bandua	85° 24' 50.3383" E	23° 12' 14.2348" N
				85° 25' 46.3919" E	23° 12' 02.3577" N
				85° 26' 01.6605" E	23° 11' 56.0793" N
				85° 25' 58.0443" E	23° 11' 30.9652" N
				85° 25' 43.9527" E	23° 11' 25.1705" N
				85° 25' 29.9179" E	23° 11' 26.1638" N
				85° 24' 59.3807" E	23° 11' 40.9371" N
				85° 24' 36.5410" E	23° 11' 53.2436" N

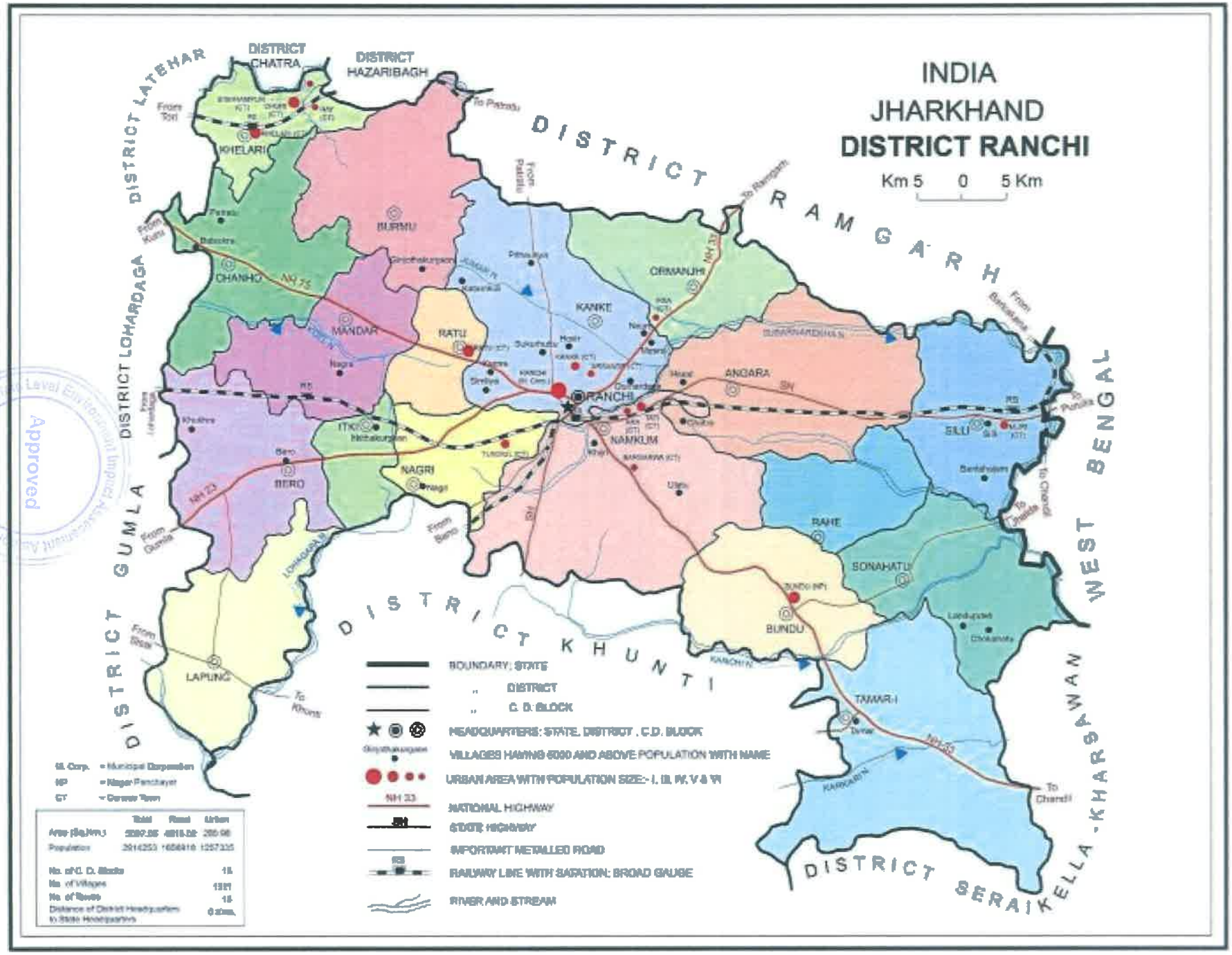
				85° 24' 26.1139" E	23° 12' 02.6507" N
38	P-46	Namkum	Sarwal	85° 24' 55.8984" E	23° 15' 04.3937" N
			Ulidih	85° 25' 27.0000" E	23° 15' 04.0033" N
			Hahap	85° 25' 49.2046" E	23° 14' 59.4714" N
			Saparom	85° 25' 49.4721" E	23° 14' 40.2965" N
				85° 25' 45.1865" E	23° 14' 31.9055" N
				85° 25' 32.7555" E	23° 14' 24.6792" N
				85° 25' 19.7431" E	23° 14' 21.3228" N
				85° 25' 03.0037" E	23° 14' 20.1616" N
				85° 24' 47.5944" E	23° 14' 28.7058" N
				85° 24' 45.5320" E	23° 14' 41.4972" N
39	P-48	Namkum	Jamchuan	85° 26' 26.7733" E	23° 16' 31.2181" N
			Ulatu	85° 27' 03.5428" E	23° 16' 14.5005" N
			Jareya	85° 27' 40.5675" E	23° 16' 05.9188" N
			Rampur	85° 28' 08.7374" E	23° 15' 52.5199" N
				85° 28' 20.8860" E	23° 15' 40.2789" N
				85° 28' 06.0192" E	23° 15' 06.6857" N
				85° 27' 42.8886" E	23° 15' 03.3880" N
				85° 26' 49.0134" E	23° 15' 21.2710" N
				85° 26' 18.3354" E	23° 15' 49.8766" N
				85° 26' 13.1120" E	23° 16' 13.8699" N
40	P-49	Namkum	Ulatu	85° 27' 51.6034" E	23° 18' 41.1534" N
			Lali	85° 28' 04.6757" E	23° 18' 38.8767" N
				85° 28' 09.9093" E	23° 18' 34.5895" N
				85° 28' 11.2055" E	23° 18' 29.0461" N
				85° 28' 10.2046" E	23° 18' 23.1224" N
				85° 28' 03.4186" E	23° 18' 13.5005" N
				85° 27' 59.0136" E	23° 18' 10.9856" N
				85° 27' 32.8821" E	23° 18' 08.5705" N
				85° 27' 24.4882" E	23° 18' 10.5483" N
				85° 27' 20.0749" E	23° 18' 16.3682" N
				85° 27' 23.4167" E	23° 18' 26.2932" N
41	P-50	Namkum	Ulatu	85° 26' 41.7480" E	23° 18' 04.2064" N
				85° 27' 07.4635" E	23° 18' 02.4022" N
				85° 27' 17.4640" E	23° 17' 49.9369" N
				85° 27' 15.4899" E	23° 17' 44.5208" N
				85° 27' 07.4635" E	23° 17' 41.7359" N
				85° 26' 50.9768" E	23° 17' 42.7363" N
				85° 26' 32.6734" E	23° 17' 48.1226" N
				85° 26' 29.3616" E	23° 17' 56.0575" N
42	P-51	Namkum	Silwai	85° 27' 43.9185" E	23° 22' 06.8464" N
		Anghra	Chatra	85° 27' 55.6482" E	23° 22' 04.2674" N
				85° 28' 11.0000" E	23° 21' 58.0012" N
				85° 28' 16.0743" E	23° 21' 52.2389" N
				85° 28' 15.5418" E	23° 21' 44.7432" N
				85° 28' 01.6125" E	23° 21' 42.2841" N

				85° 27' 52.3264" E	23° 21' 39.8250" N
				85° 27' 45.4407" E	23° 21' 45.7201" N
				85° 27' 38.6276" E	23° 21' 56.6467" N
43	P-52	Namkum	Mahilong	85° 25' 28.7979" E	23° 21' 18.0237" N
				85° 25' 43.9990" E	23° 21' 17.8258" N
				85° 26' 21.9512" E	23° 21' 03.7139" N
				85° 26' 24.6816" E	23° 20' 59.8992" N
				85° 26' 23.7242" E	23° 20' 55.1710" N
				85° 26' 21.6990" E	23° 20' 51.1487" N
				85° 26' 14.0808" E	23° 20' 43.6246" N
				85° 25' 18.9874" E	23° 20' 50.0968" N
				85° 25' 11.5829" E	23° 20' 53.8875" N
				85° 25' 03.8444" E	23° 21' 02.1946" N
				85° 25' 00.9871" E	23° 21' 09.6271" N
44	P-55	Kanke	Ranchi (M corp)	85° 16' 45.3575" E	23° 15' 57.9763" N
		Namkum	Jojosiring	85° 17' 45.0324" E	23° 15' 44.3113" N
			Huthundu	85° 17' 42.5323" E	23° 15' 24.7874" N
			Dungri	85° 17' 35.4236" E	23° 15' 18.8935" N
				85° 17' 16.9953" E	23° 15' 11.4976" N
				85° 16' 57.1729" E	23° 15' 13.4665" N
				85° 16' 35.5647" E	23° 15' 29.0532" N
				85° 16' 39.4935" E	23° 15' 52.1862" N
45	P-57	Namkum	Jamgain	85° 15' 20.0897" E	23° 14' 53.3092" N
			Sohdag	85° 15' 50.7412" E	23° 14' 46.7218" N
			Ghuthiya	85° 15' 53.7770" E	23° 14' 39.3381" N
			Upardahu	85° 15' 53.5848" E	23° 14' 33.6276" N
				85° 15' 27.3472" E	23° 14' 34.2514" N
				85° 15' 16.8110" E	23° 14' 34.9078" N
				85° 15' 09.1679" E	23° 14' 42.2571" N
				85° 15' 11.4536" E	23° 14' 49.1831" N
46	P-59	Namkum	Burmu	85° 18' 31.0558" E	23° 14' 06.5815" N
			Saheda	85° 19' 03.2002" E	23° 14' 19.3808" N
			Siri	85° 19' 47.3094" E	23° 14' 00.4858" N
			Barguttu	85° 20' 07.2211" E	23° 13' 35.0741" N
			Kiski	85° 20' 07.6803" E	23° 13' 21.8164" N
			Sorha (Sotha)	85° 19' 58.0315" E	23° 13' 05.0059" N
			Hoenjan	85° 19' 13.6471" E	23° 12' 45.7164" N
			Hardag	85° 19' 04.2892" E	23° 12' 47.7011" N
			Hajam	85° 18' 25.4305" E	23° 13' 50.4588" N
47	P-61	Namkum	Dundu	85° 19' 04.1396" E	23° 12' 32.9506" N
			Hardag	85° 19' 20.2769" E	23° 12' 34.4533" N
			Barguttu	85° 20' 13.0473" E	23° 12' 09.3412" N
			Saheda	85° 20' 18.0035" E	23° 11' 40.8780" N
			Hajam	85° 19' 51.6177" E	23° 11' 16.1581" N
			Nichitpur – Raydih	85° 18' 56.3661" E	23° 11' 21.9733" N

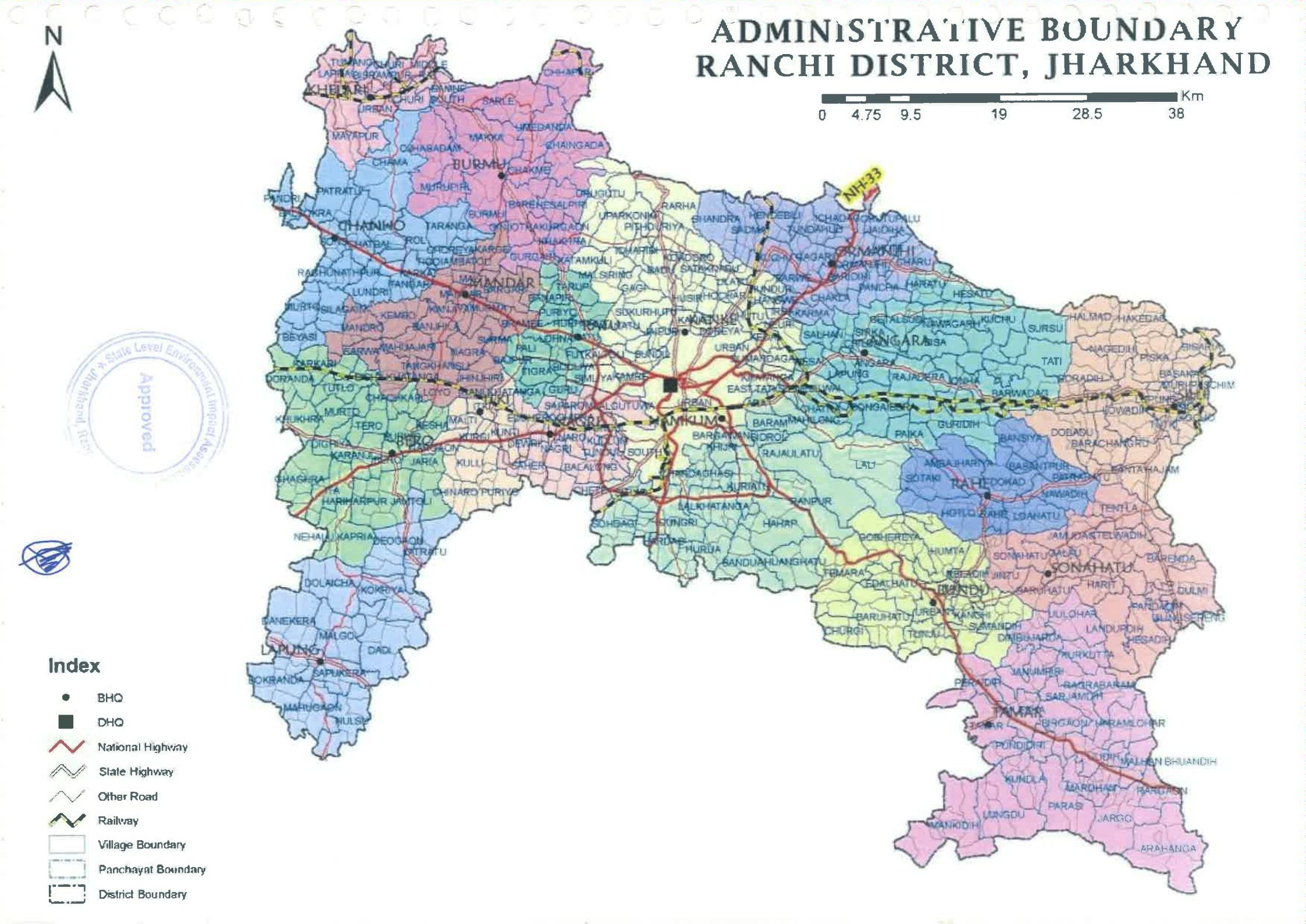
			Dundigarha	85° 18' 09.9921" E	23° 11' 38.2324" N
				85° 17' 35.9110" E	23° 12' 19.3492" N
				85° 17' 39.0220" E	23° 12' 31.0066" N
				85° 18' 44.1145" E	23° 12' 17.9582" N
48	P-60	Namkum	Sohdag	85° 15' 36.1367" E	23° 14' 03.9970" N
			Hethdahu	85° 16' 33.4608" E	23° 14' 02.5201" N
			Chand	85° 17' 28.7044" E	23° 14' 02.7701" N
			Jorar (Todar)	85° 17' 35.5047" E	23° 13' 56.8707" N
			Chitir	85° 17' 44.1785" E	23° 13' 31.7509" N
			Darjitorar	85° 17' 29.5371" E	23° 13' 15.0350" N
			Dundu	85° 17' 07.6674" E	23° 13' 13.5549" N
			Huringdag	85° 16' 02.9237" E	23° 13' 27.8123" N
				85° 15' 21.9053" E	23° 13' 40.7744" N
49	P-62	Bero	Harihanji	85° 00' 47.2079" E	23° 16' 35.2910" N
			Hariharpur Jamtoli	85° 01' 22.8346" E	23° 16' 40.4584" N
				85° 01' 33.5494" E	23° 15' 54.1959" N
				85° 01' 29.2635" E	23° 15' 44.3523" N
				85° 00' 42.6797" E	23° 15' 47.1145" N
				85° 00' 39.7075" E	23° 16' 09.4532" N
				85° 00' 43.1898" E	23° 16' 27.6629" N

LOCATION INDEX MAP

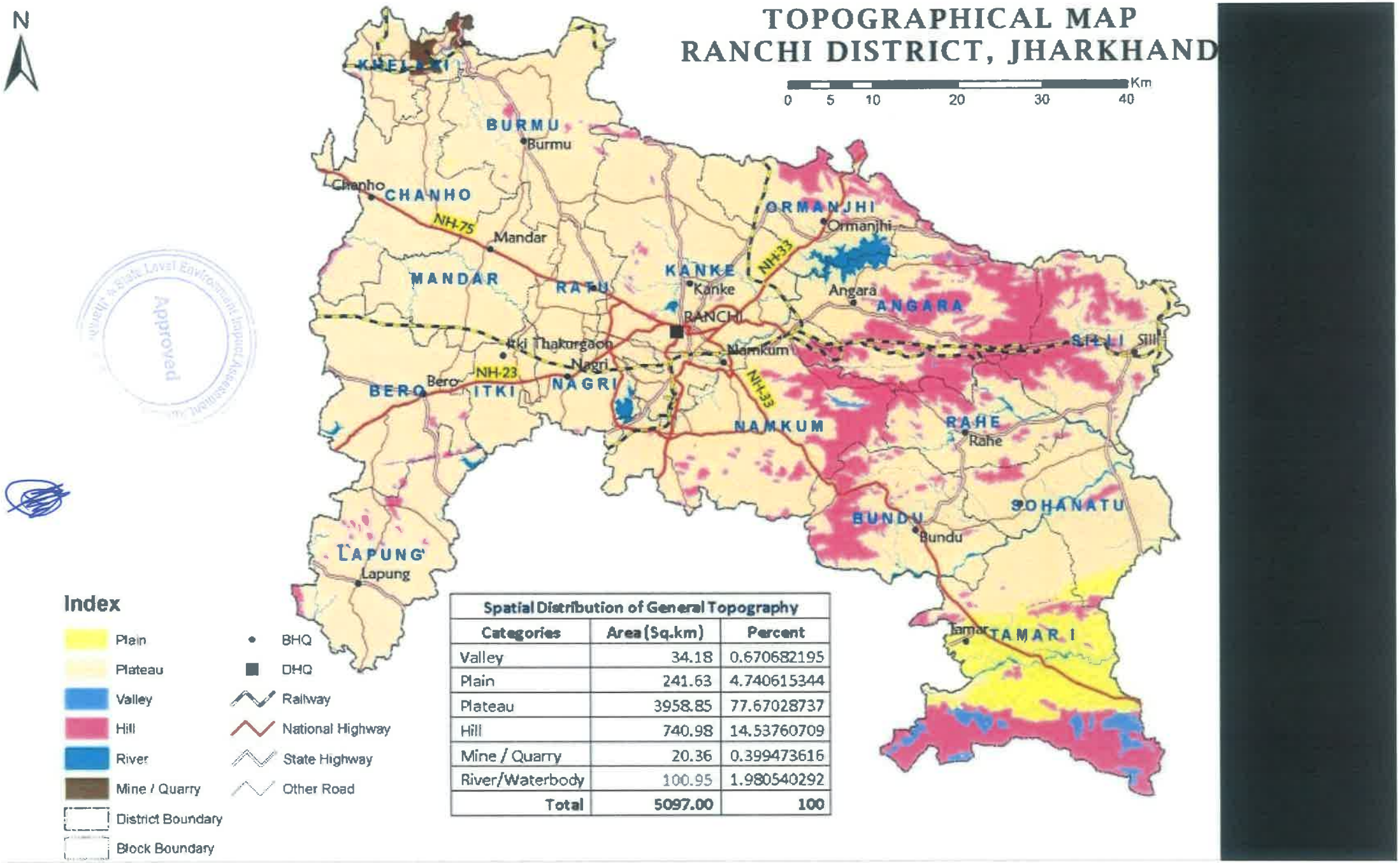



INDIA
JHARKHAND
DISTRICT RANCHI
Km 5 0 5 Km
DISTRICT CHATRA
DISTRICT HAZARIBAGH
DISTRICT LATEHAR
DISTRICT LOHARDAGA
DISTRICT GUMLA
DISTRICT KHUNTI
DISTRICT RAMGARH
DISTRICT SERAIKELLA-KHARSAWAN
WEST BENGAL
KHELARI
BURMU
CHANHO
MANDAR
RATU
KANKE
ORMANJHI
RANCHI
ANGARA
NAMKUM
ITKI
NAGRI
BERO
LAPUNG
RAHE
SONAHATU
BUNDU
SILLI
TAMARI
BOUNDARY: STATE
DISTRICT
C. D. BLOCK
HEADQUARTERS: STATE, DISTRICT, C.D. BLOCK
VILLAGES HAVING 5000 AND ABOVE POPULATION WITH NAME
URBAN AREA WITH POPULATION SIZE:- I, II, IV, V & VI
NATIONAL HIGHWAY
STATE HIGHWAY
IMPORTANT METALLED ROAD
RAILWAY LINE WITH STATION: BROAD GAUGE
RIVER AND STREAM
M. Corp. = Municipal Corporation
NP = Nagar Panchayat
CT = Census Town
Total Rural Urban
Area (Sq.Km.) 5097.00 4816.02 280.98
Population 2914253 1656918 1257335
No. of C. D. Blocks 15
No. of Villages 1321
No. of Towns 15
Distance of District Headquarters to State Headquarters 0 Kms.

ADMINISTRATIVE BOUNDARY
RANCHI DISTRICT, JHARKHAND



TOPOGRAPHICAL MAP
RANCHI DISTRICT, JHARKHAND



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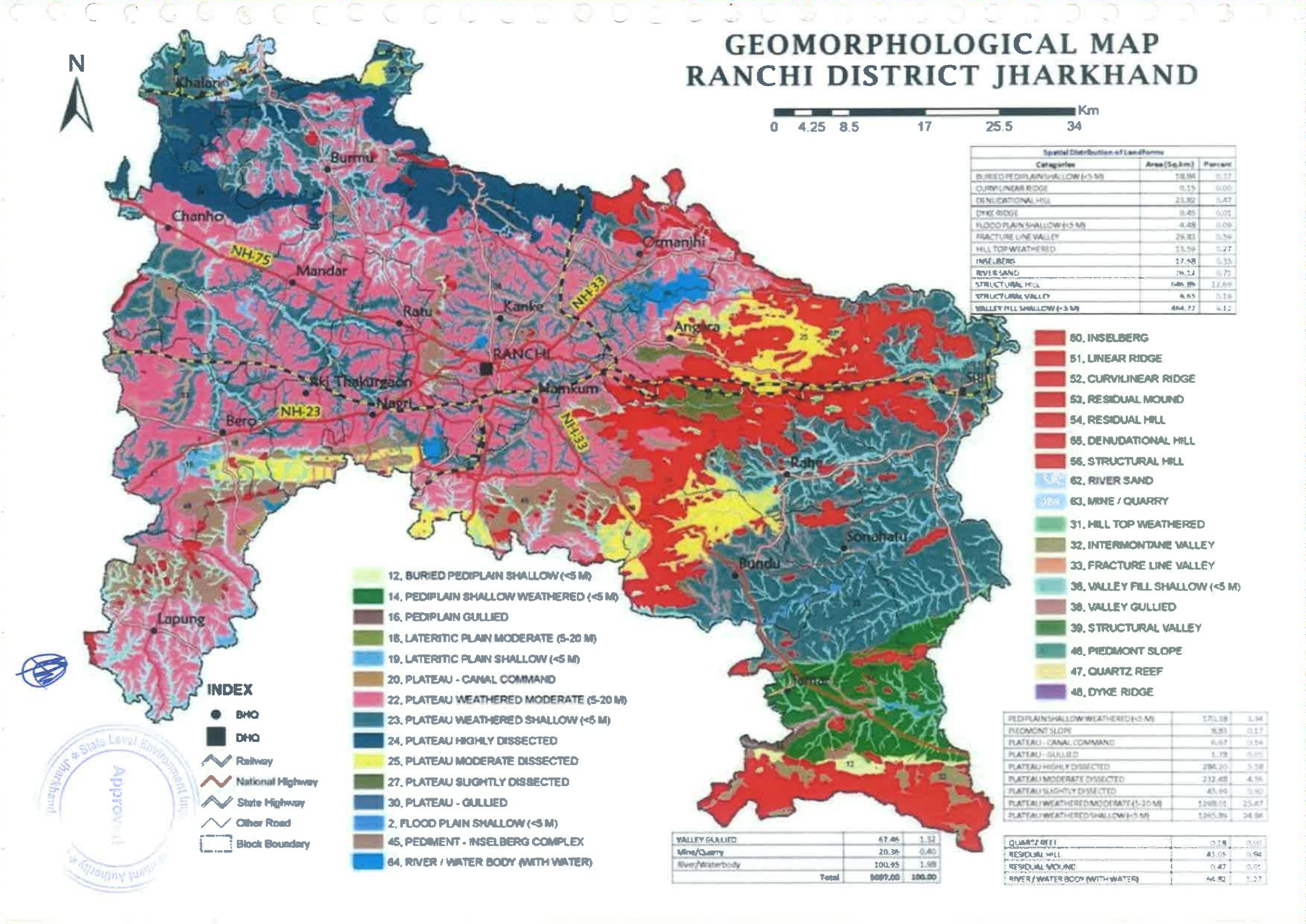
Index

- Plain
- Plateau
- Valley
- Hill
- River
- Mine / Quarry
- District Boundary
- Block Boundary
- BHQ
- DHQ
- Railway
- National Highway
- State Highway
- Other Road

Spatial Distribution of General Topography		
Categories	**Area (Sq.km)**	**Percent**
Valley	34.18	0.670682195
Plain	241.63	4.740615344
Plateau	3958.85	77.67028737
Hill	740.98	14.53760709
Mine / Quarry	20.36	0.399473616
River/Waterbody	100.95	1.980540292
Total	**5097.00**	**100**



Spatial Distribution of Landforms

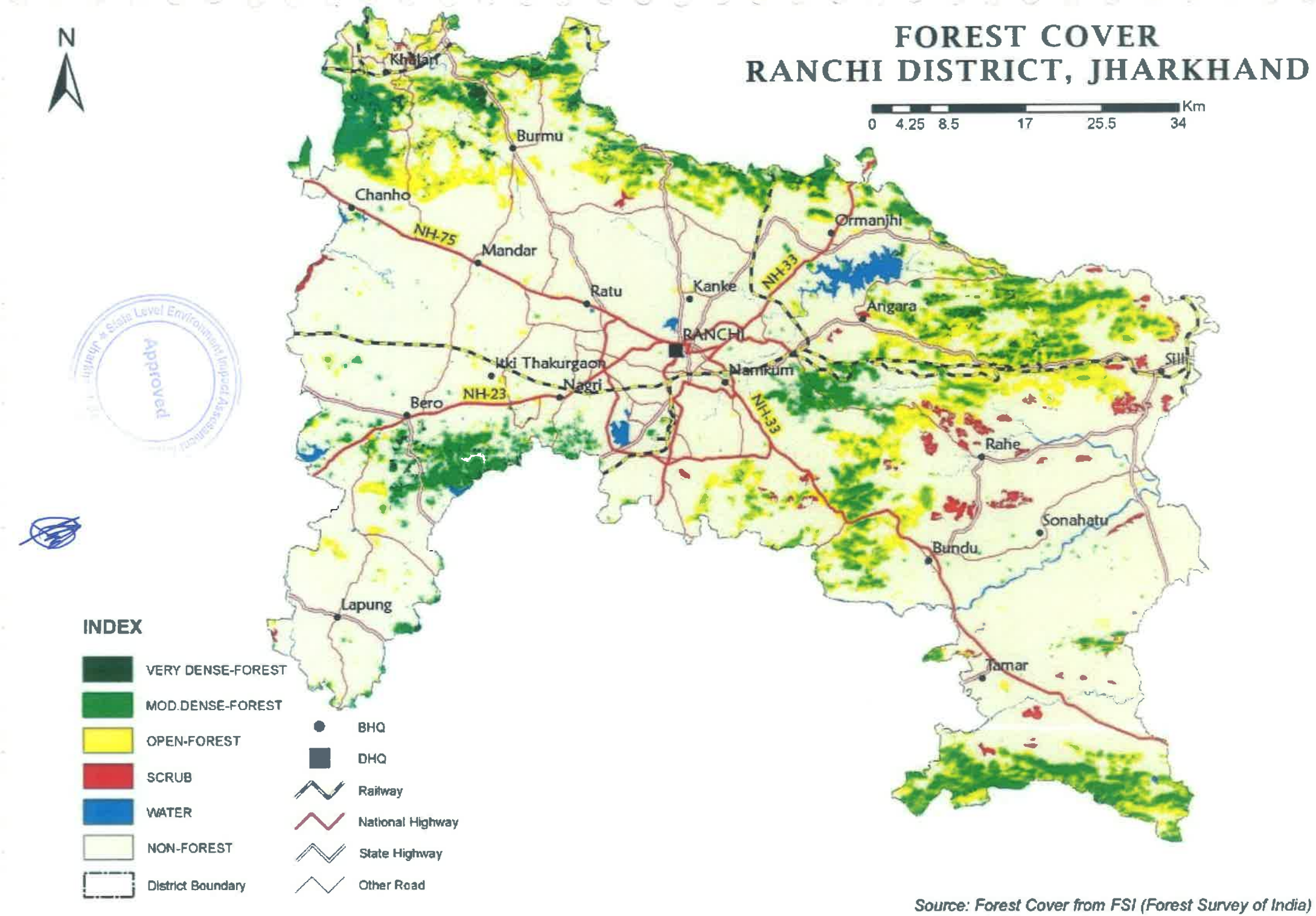
Categories	Area (Sq.km)	Percent
BURIED PEDIPLAIN SHALLOW (<5 M)	18.94	0.17
CURVILINEAR RIDGE	0.15	0.00
DENUDATIONAL HILL	23.92	0.47
DYKE RIDGE	0.45	0.01
FLOOD PLAIN SHALLOW (<5 M)	4.48	0.09
FRACTURE LINE VALLEY	29.83	0.56
HILL TOP WEATHERED	13.59	0.27
INSELBERG	17.68	0.35
RIVER SAND	36.74	0.72
STRUCTURAL HILL	686.89	12.69
STRUCTURAL VALLEY	6.63	0.16
VALLEY FILL SHALLOW (<5 M)	644.17	6.12

VALLEY GULLIED	67.86	1.32
Mine/Quarry	20.38	0.40
River/Waterbody	100.93	1.98
Total	5097.00	100.00

PEDIPLAIN SHALLOW WEATHERED (<5 M)	170.38	1.34
PIEDMONT SLOPE	9.93	0.17
PLATEAU - CANAL COMMAND	6.67	0.14
PLATEAU - GULLIED	1.38	0.01
PLATEAU HIGHLY DISSECTED	284.20	5.58
PLATEAU MODERATE DISSECTED	232.48	4.56
PLATEAU SLIGHTLY DISSECTED	45.66	0.90
PLATEAU WEATHERED MODERATE (5-20 M)	1298.51	25.47
PLATEAU WEATHERED SHALLOW (<5 M)	1265.86	24.86

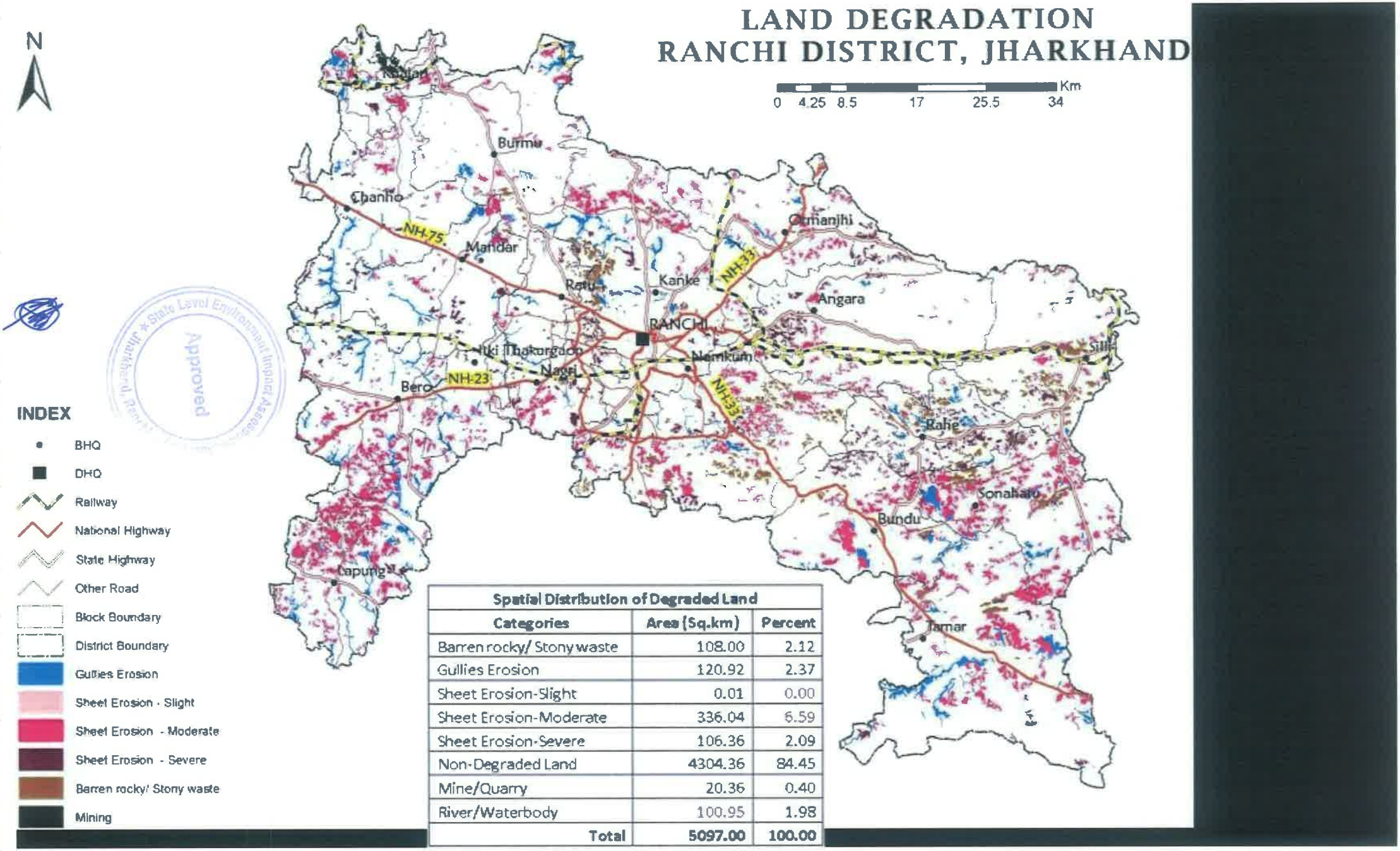
QUARTZ REEF	0.18	0.00
RESIDUAL HILL	83.05	0.94
RESIDUAL MOUND	0.47	0.01
RIVER / WATER BODY (WITH WATER)	66.92	1.27

FOREST COVER
RANCHI DISTRICT, JHARKHAND



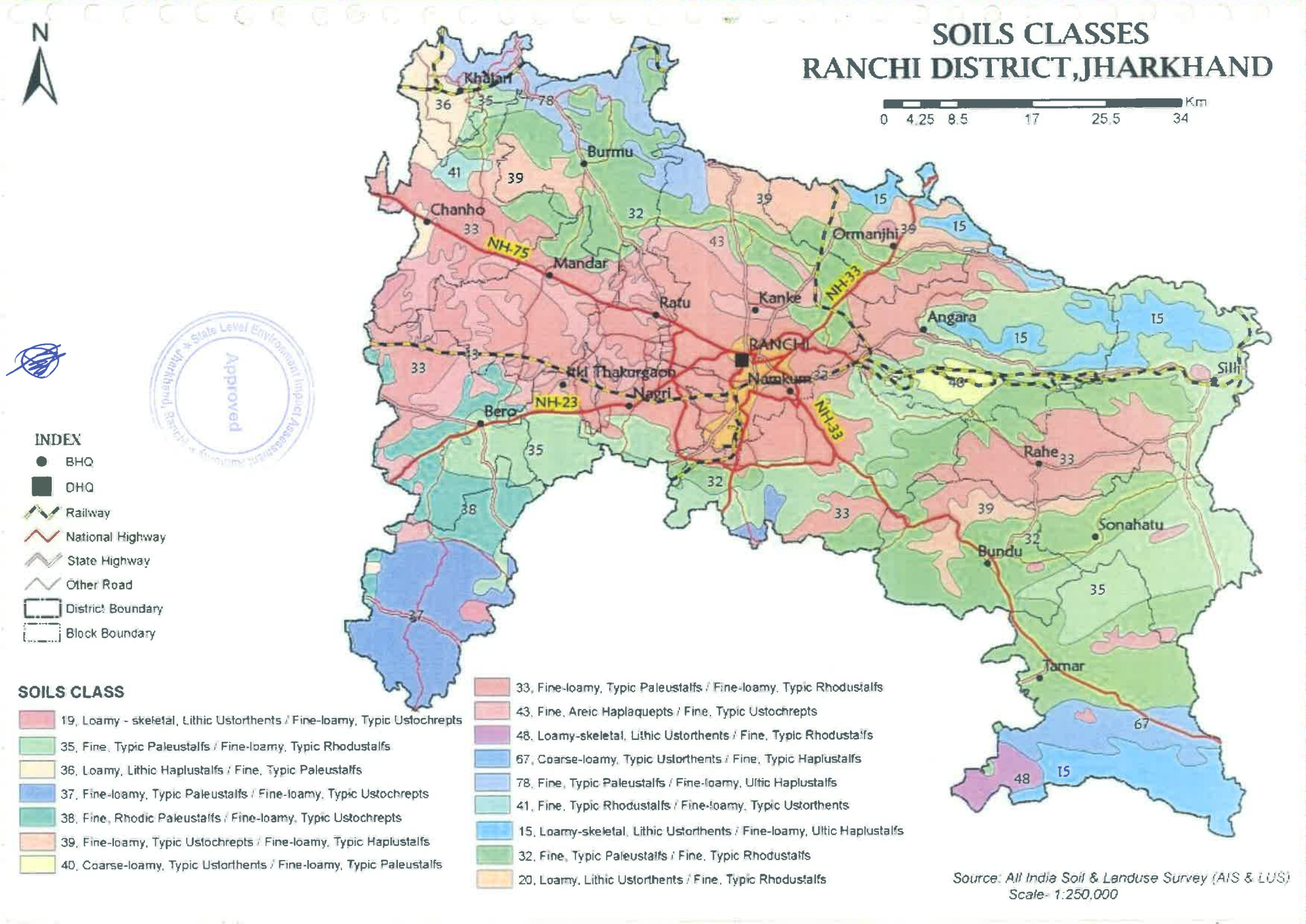
Source: Forest Cover from FSI (Forest Survey of India)

LAND DEGRADATION
RANCHI DISTRICT, JHARKHAND



Spatial Distribution of Degraded Land		
Categories	**Area (Sq.km)**	**Percent**
Barren rocky/ Stony waste	108.00	2.12
Gullies Erosion	120.92	2.37
Sheet Erosion-Slight	0.01	0.00
Sheet Erosion-Moderate	336.04	6.59
Sheet Erosion-Severe	106.36	2.09
Non-Degraded Land	4304.36	84.45
Mine/Quarry	20.36	0.40
River/Waterbody	100.95	1.98
Total	**5097.00**	**100.00**

SOILS CLASSES
RANCHI DISTRICT, JHARKHAND



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- BHQ
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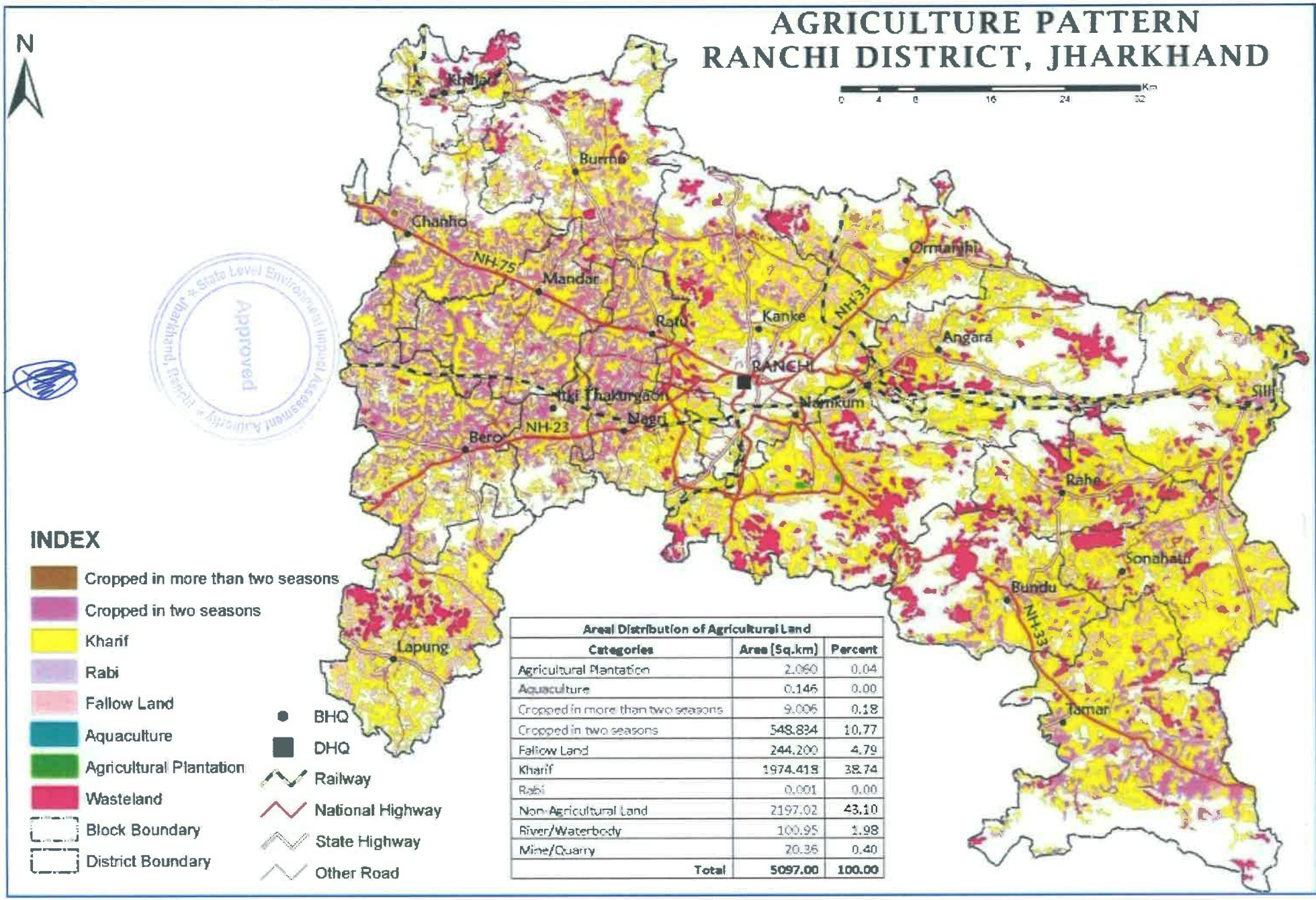
- Block Boundary

SOILS CLASS

- 19, Loamy - skeletal, Lithic Ustorthents / Fine-loamy, Typic Ustochrepts
- 35, Fine, Typic Paleustalfs / Fine-loamy, Typic Rhodustalfs
- 36, Loamy, Lithic Haplustalfs / Fine, Typic Paleustalfs
- 37, Fine-loamy, Typic Paleustalfs / Fine-loamy, Typic Ustochrepts
- 38, Fine, Rhodic Paleustalfs / Fine-loamy, Typic Ustochrepts
- 39, Fine-loamy, Typic Ustochrepts / Fine-loamy, Typic Haplustalfs
- 40, Coarse-loamy, Typic Ustorthents / Fine-loamy, Typic Paleustalfs
- 33, Fine-loamy, Typic Paleustalfs / Fine-loamy, Typic Rhodustalfs
- 43, Fine, Areic Haplaquepts / Fine, Typic Ustochrepts
- 48, Loamy-skeletal, Lithic Ustorthents / Fine, Typic Rhodustalfs
- 67, Coarse-loamy, Typic Ustorthents / Fine, Typic Haplustalfs
- 78, Fine, Typic Paleustalfs / Fine-loamy, Ultic Haplustalfs
- 41, Fine, Typic Rhodustalfs / Fine-loamy, Typic Ustorthents
- 15, Loamy-skeletal, Lithic Ustorthents / Fine-loamy, Ultic Haplustalfs
- 32, Fine, Typic Paleustalfs / Fine, Typic Rhodustalfs
- 20, Loamy, Lithic Ustorthents / Fine, Typic Rhodustalfs

Source: All India Soil & Landuse Survey (AIS & LUS)
Scale- 1:250,000

AGRICULTURE PATTERN
RANCHI DISTRICT, JHARKHAND



Areal Distribution of Agricultural Land		
Categories	**Area (Sq.km)**	**Percent**
Agricultural Plantation	2.060	0.04
Aquaculture	0.145	0.00
Cropped in more than two seasons	9.006	0.18
Cropped in two seasons	548.834	10.77
Fallow Land	244.200	4.79
Kharif	1974.418	38.74
Rabi	0.001	0.00
Non-Agricultural Land	2197.02	43.10
River/Waterbody	100.95	1.98
Mine/Quarry	20.36	0.40
Total	**5097.00**	**100.00**

GROUNDWATER PROSPECTS MAP
RANCHI DISTRICT, JHARKHAND

N

0 4.25 8.5 17 25.5 34 Km

Spatial Distribution of Ground Water Prospect Zones		
Categories	Area (Sq.km)	Percent
100-200 LPM, DEPTH < 30 M	44.57	0.87
100-200 LPM, DEPTH 30-80 M	871.57	17.10
10-50 LPM, DEPTH < 30 M	34.36	0.67
10-50 LPM, DEPTH > 80 M	246.39	4.83
10-50 LPM, DEPTH 30-80 M	405.09	7.95
200-400 LPM, DEPTH 30-80 M	68.68	1.35
200-400 LPM, DEPTH < 30 M	4.48	0.09
50-100 LPM, DEPTH < 30 M	659.94	12.95
50-100 LPM, DEPTH 30-80 M	1621.60	31.81
Limited Prospects	997.30	19.57
Run-Off Zone	21.67	0.43
Mine/Quarry	20.36	0.40
River/Waterbody	100.95	1.98
Total	5097.00	100.00

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State Level Environment Impact Assessment Authority, Uttarakhand, Dehradun

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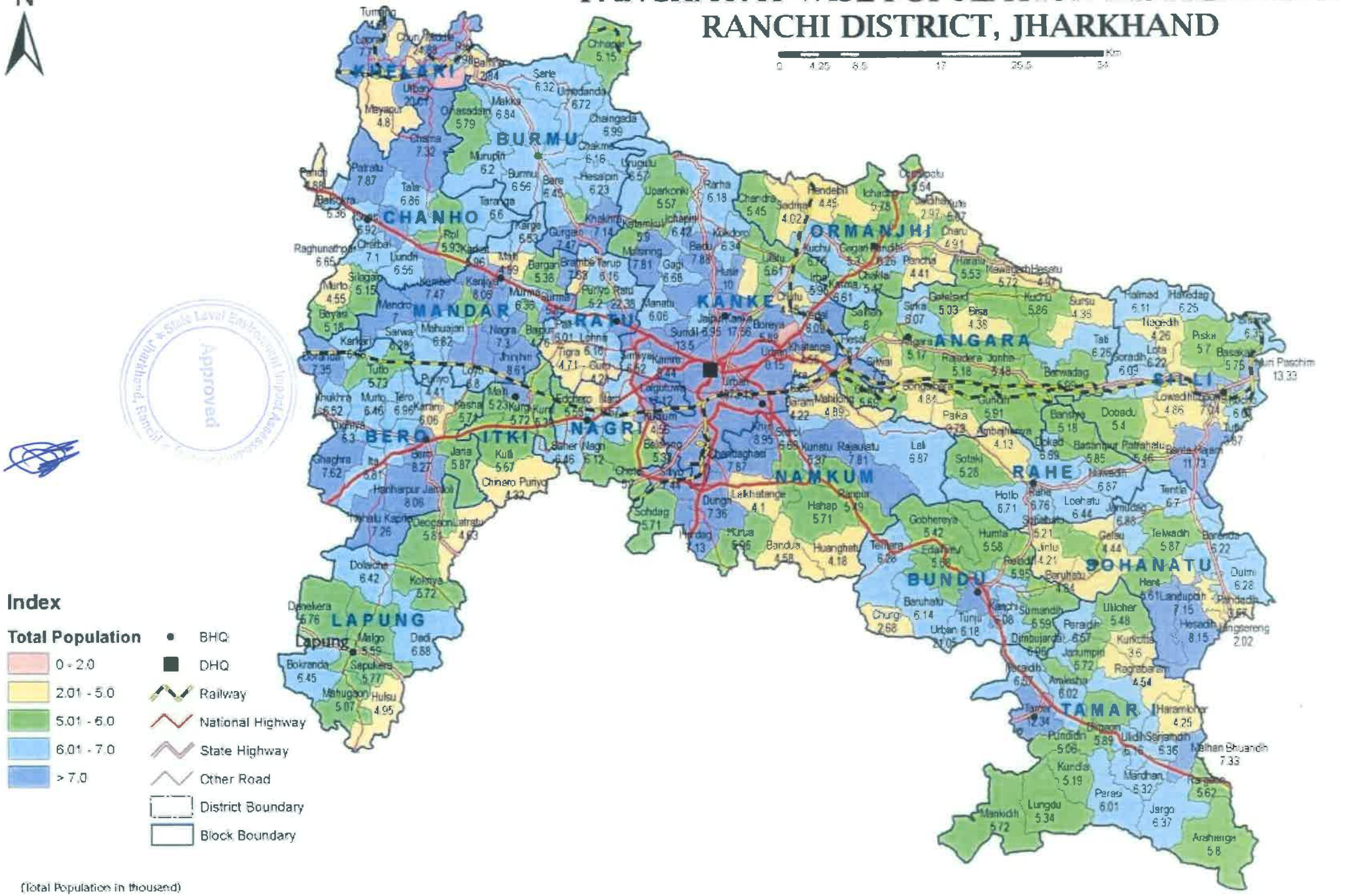
YIELD, SUGGESTED DEPTH RANGE OF WELL

- 200-400 LPM, < 30 METERS
- 200-400 LPM, 30 - 80 METERS
- 100-200 LPM, < 30 METERS
- 100-200 LPM, 30 - 80 METERS
- 50-100 LPM, < 30 METERS
- 50-100 LPM, 30 - 80 METERS
- 10-50 LPM, < 30 METERS
- 10-50 LPM, 30 - 80 METERS
- 10-50 LPM, > 80 METERS
- LIMITED PROSPECTS, ≥580 METERS
- RUN-OFF ZONE
- MINE/QUARRY
- River/Waterbody

- FRACTURE/LINEAMENT
- BLOCK BOUNDARY
- DISTRICT BOUNDARY
- STATE BOUNDARY

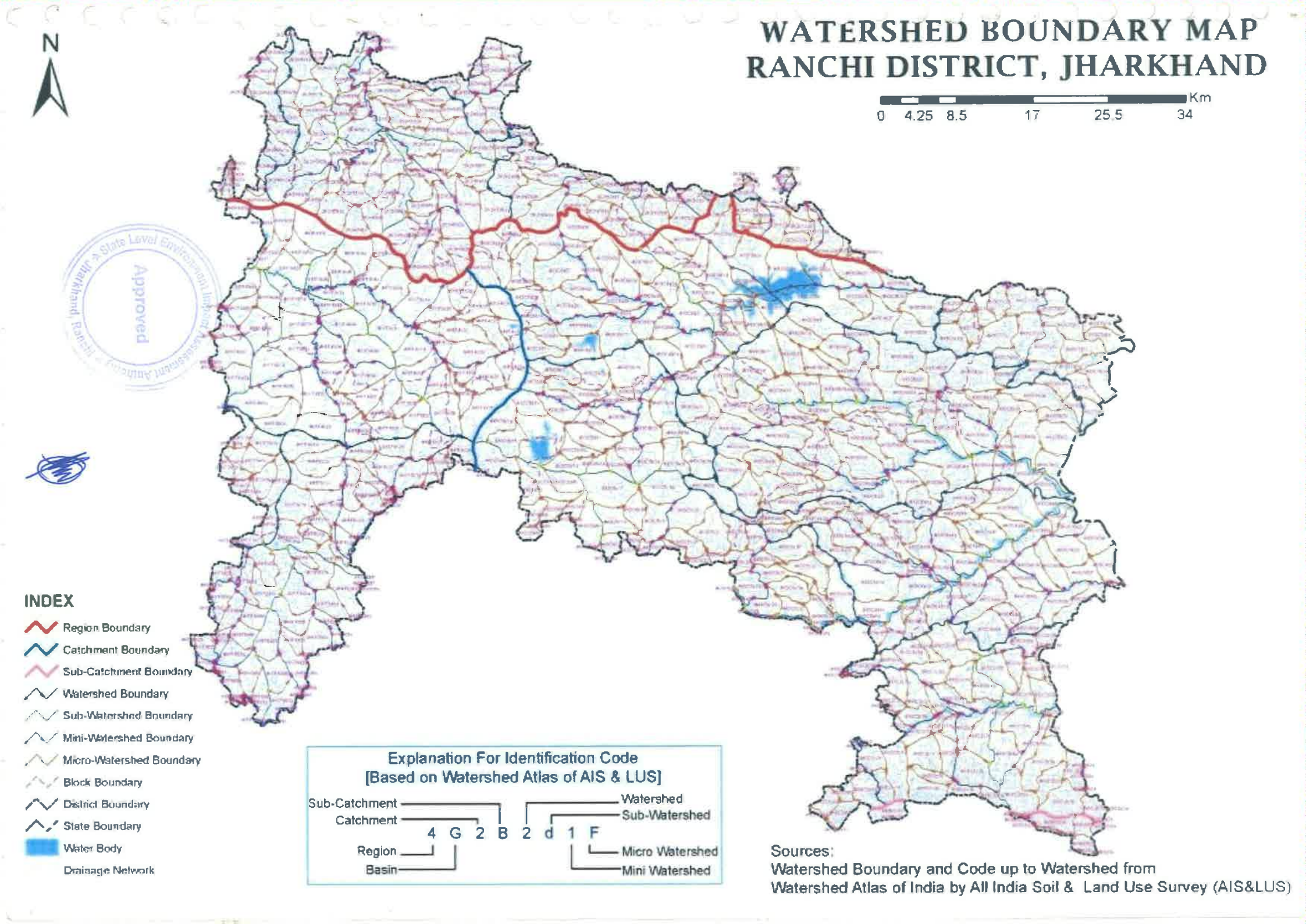
Sources:
Ground Water Prospect data from Rajiv Gandhi National Drinking Water Mission Project

PANCHAYAT-WISE POPULATION DISTRIBUTION
RANCHI DISTRICT, JHARKHAND



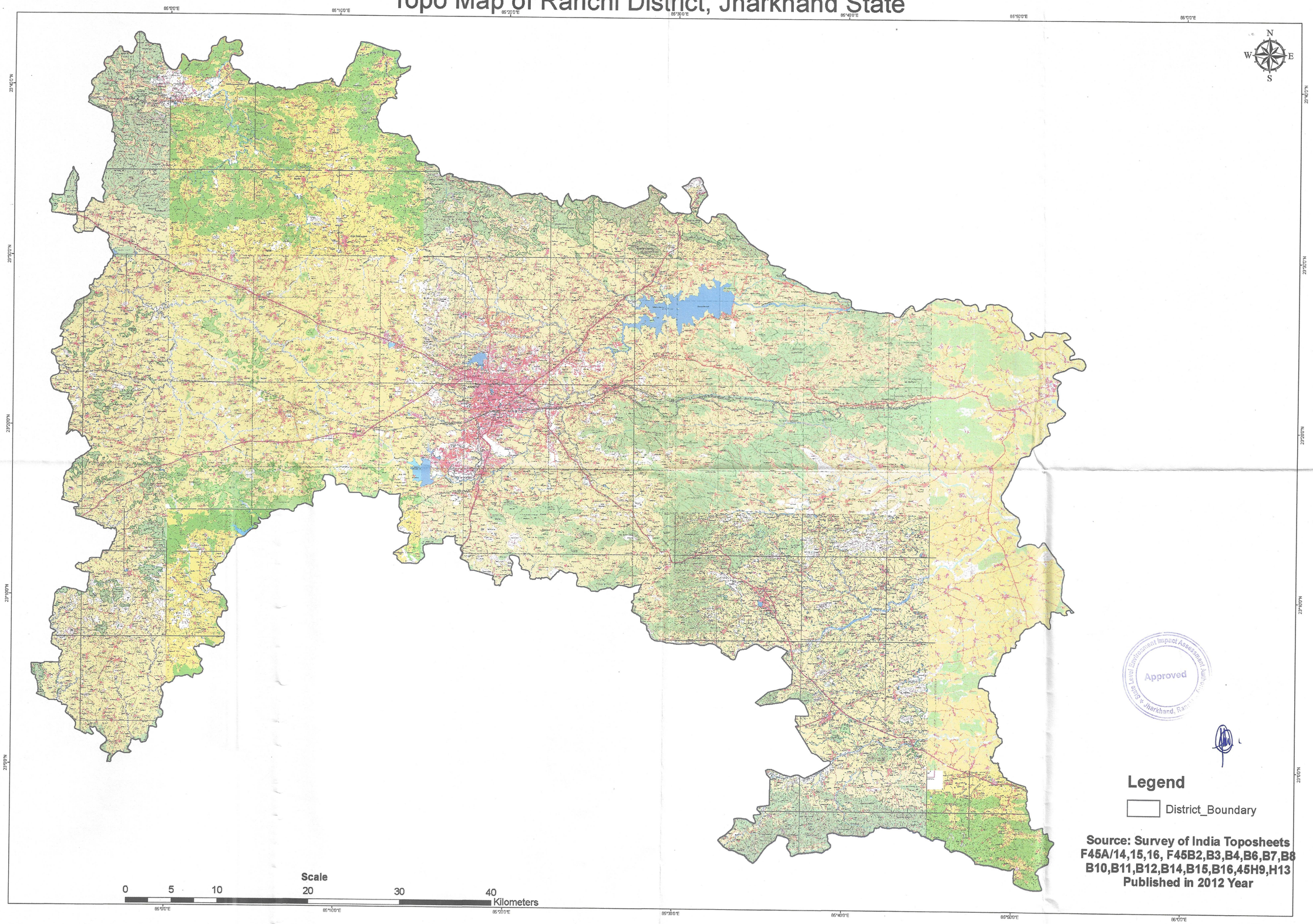
Source: Census Handbook 2011

WATERSHED BOUNDARY MAP
RANCHI DISTRICT, JHARKHAND



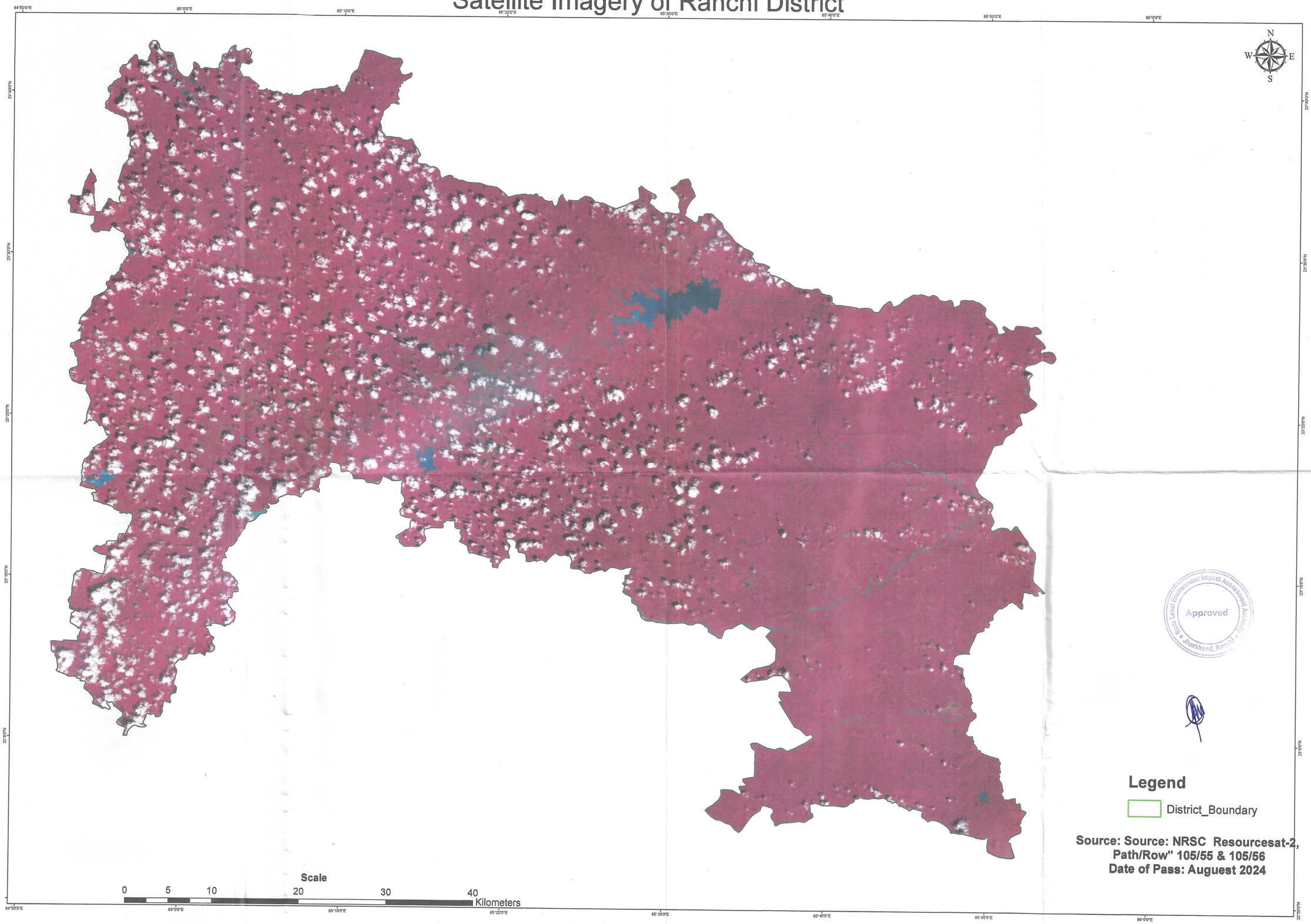
Sources:
Watershed Boundary and Code up to Watershed from
Watershed Atlas of India by All India Soil & Land Use Survey (AIS&LUS)

Topo Map of Ranchi District, Jharkhand State



Sl No	Description	Area_Ha	
1	Major Build up	17428	3.441066
2	Single Crop	142300	28.09638
3	Industrial Land	556	0.109779
4	Double / tripple	10287	2.031113
5	Current fallow	183064	36.14501
6	Deciduous forest	91090	17.98524
7	Scrub/Deg. forest	1328	0.262207
8	Littoral swamp	889	0.175528
9	Barren rocky	1299	0.256481
10	Scrubland	44634	8.812745
11	Water bodies	4896	0.966689
12	River	8700	1.717769
	Total Area_Ha	506471	100

Satellite Imagery of Ranchi District



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State Level Environment Impact Assessment Authority
Jharkhand, Ranchi

Legend

District_Boundary

Source: Source: NRSC Resourcesat-2, Path/Row" 105/55 & 105/56
Date of Pass: Auguest 2024

LAND USE LAND COVER MAP OF RANCHI DISTRICT