



सत्यमेव जयते

## राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण, झारखण्ड

State Level Environment Impact Assessment Authority, Jharkhand

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पत्रांक:- 286

दिनांक:- 16/10/2024

प्रेषक:

सदस्य सचिव,  
राज्य स्तरीय पर्यावरण समाघात, निर्धारण  
प्राधिकरण (SEIAA), झारखण्ड।

सेवा में,

उपायुक्त,  
जिला : चतरा,  
झारखण्ड।

विषय : चतरा जिला का पत्थर खनिज से संबंधित DSR के अनुमोदन के संबंध में।

प्रसंग : आपका कार्यालय का पत्रांक-980 / खनन, दि0-05.09.2024।

महाशय,

उपर्युक्त विषयक आपके कार्यालय के प्रासंगिक पत्र दिनांक 05.09.2024 द्वारा चतरा जिला का पत्थर खनिज से संबंधित DSR की एक प्रति अनुमोदन हेतु दिनांक 26.09.2024 को SEIAA कार्यालय में समर्पित किया गया।

तदनुसार SEAC, झारखण्ड की 117वीं बैठक दिनांक 27.09.2024 से दिनांक 01.10.2024 में संबंधित DSR का आकलन किया गया तथा निम्नवत बिन्दुओं पर आपकी सहमति प्राप्त करते हुए DSR अनुमोदन हेतु SEIAA को अनुशंसा भेजा गया :

1. The final DSR had been placed in the public domain for 21 days from the 02.12.2023. As per the Sub Divisional Committee no comments / observations were obtained.
2. The DSR has been prepared as per the format provided in the notification no SO 3611 (E), dated-25.07.2018 issued by MoEF & CC Govt. of India. The DSR submitted has been **prepared** by the Sub-Divisional Committee for final approval. All the aspects of the notification dated 25.07.2018 are incorporated in the DSR and found to be satisfactory

तदालोक में SEIAA, झारखण्ड की 117वीं बैठक दिनांक 15.10.2024 एवं दिनांक 16.10.2024 में विचार किया गया तथा सामुहिक निर्णयोंपरांत चतरा जिला का पत्थर खनिज से संबंधित DSR का अनुमोदन किया गया।



# DISTRICT SURVEY REPORT

OF

**MINOR MINERAL-STONE/EARTH WORK**

[OTHER THAN SAND MINING OR RIVER-BED MINING]

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**CHATRA DISTRICT OF JHARKHAND STATE**

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As per the Gazette Notification No. - S.O. - 3611 (E), 25<sup>th</sup> July 2018  
by Ministry of Environment Forest & Climate Change, Govt. of India

Prepared by:

**SUB-DIVISIONAL COMMITTEE  
CHATRA DISTRICT, JHARKHAND**





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झारखण्ड सरकार  
खान एवं भूतत्व विभाग

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दिनांक 08.07.2024 को पूर्वाह्न 11:00 बजे उपायुक्त के निदेशानुसार अपर समाहर्ता, चतरा की अध्यक्षता में सम्पन्न बालू छोड़कर अन्य लघु खनिज पत्थर एवं मिट्टी का जिला सर्वेक्षण रिपोर्ट (DSR) तैयार करने हेतु अनुमण्डल स्तरीय समिति की बैठक की कार्यवाही :-

उपस्थिति :- उपस्थिति पंजी के अनुसार।

सर्वप्रथम उपस्थित सभी पदाधिकारियों का स्वागत करते हुए बैठक की कार्यवाही प्रारंभ की गई।

- (2) बैठक में उपस्थित जिला खनन पदाधिकारी, चतरा द्वारा बताया गया कि विगत बैठक दिनांक 06.02.2024 की कार्यवाही में अनुमण्डल पदाधिकारी, सिमरिया द्वारा Draft DSR की Index Sl. No.- 27 "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)" में T.B और सिलिकोसिस बीमारी का रिपोर्ट का सत्यापन नहीं रहने एवं Index Sl. No.- 28 "Plantation and Green Belt development in respect of leases already granted in the District" में पौधारोपण से संबंधित आवश्यक प्रविष्टियाँ नहीं रहने के संदर्भ में आपत्ति व्यक्त की गई थी। इस पर अपर समाहर्ता, चतरा द्वारा उक्त का अनुपालन हेतु निदेशित किया गया था।
- (3) जिला खनन पदाधिकारी, चतरा द्वारा समिति को सूचित किया गया कि आपत्ति बिन्दुओं का अनुपालन हेतु कार्यालय पत्रांक 269/खनन, चतरा दिनांक 12.03.2024 एवं पत्रांक 270/खनन, चतरा दिनांक 12.03.2024 द्वारा वांछित प्रतिवेदन कार्यालय को उपलब्ध कराने हेतु संबंधित को पत्र लिखा गया है। कार्यालय पत्रांक 269/खनन, चतरा दिनांक 12.03.2024 के आलोक में असैनिक शल्य चिकित्सक-सह- मुख्य चिकित्सा पदाधिकारी, चतरा कार्यालय ज्ञापांक 846 दिनांक 22.06.2024 द्वारा विगत पाँच वर्षों में चतरा जिले के टी0बी0 मरीजों की संख्या उपलब्ध करायी गई है। कार्यालय पत्रांक 270 दिनांक 12.03.2024 के अनुपालन में जिलान्तर्गत स्वीकृत लघु खनिज पत्थर के खनन पट्टेधारियों द्वारा पौधारोपण से संबंधित फोटोग्राफ कार्यालय को उपलब्ध करा दिया गया है। उपरोक्त सूचनाओं/फोटोग्राफ को Draft DSR में संकलित/अद्यतन कर लिया गया है।
- (4) अनुमण्डल पदाधिकारी, सिमरिया के निदेशानुसार जिलान्तर्गत स्वीकृत लघु खनिज पत्थर खनन पट्टा क्षेत्रों को Google Earth पर .Kml file के रूप में प्रदर्शित कर दिया गया तथा Jharkhand Geo Portal के मानचित्र पर चिन्हित किया गया।

08/07/24

Alex



- (5) जिला खनन पदाधिकारी, चतरा द्वारा संशोधित Draft DSR की Hard एवं Soft कॉपी सभी सदस्यों को अध्ययन हेतु उपलब्ध कराया गया। समिति द्वारा Draft DSR का अध्ययन करते हुए विचार-विमर्श की गई।
- (6) अध्ययनोपरांत, समिति द्वारा Draft DSR पर हस्ताक्षर करते हुये इसे अनुमोदित किया गया तथा सर्वसम्मति से सदस्य सचिव, SEIAA, Jharkhand Ranchi को अग्रोत्तर कार्रवाई हेतु अग्रसारित करने का निर्णय लिया गया।

अन्त में धन्यवाद के साथ बैठक की कार्यवाही समाप्त की गई।

श्री मनीष कुमार, निम्नवर्गीय लिपिक, चतरा उ० वन प्रमण्डल।  
 श्री अनिल कुमार, वन क्षेत्र पदा०, वन्यप्राणी प्रक्षेत्र, चतरा।  
 श्री सुर्यभूषण कुमार, वन क्षेत्र पदा० चतरा द० वन प्रमण्डल।  
 श्री अजीत कुमार, वन क्षेत्र पदा० चतरा उ० प्रमण्डल।  
 क्षेत्रिय पदा० झारखण्ड राज्य प्र० नि० बोर्ड, हजारिबाग।

कार्यपालक अभियन्ता, लघु सिंचाई प्रमण्डल, चतरा।  
 सहायक निदेशक, भूतत्व, हजारिबाग  
 जि० खनन पदा०, चतरा।  
 अनुमण्डल पदाधिकारी, चतरा  
 अनुमण्डल पदाधिकारी, सिमरिया

अपर सिमाहर्ता,  
चतरा।

ज्ञापांक 857 / खनन, चतरा दिनांक 08/07/24  
प्रतिलिपि :-

1. उपायुक्त, चतरा को सादर सुचनार्थ प्रेषित।
2. निदेशक खान झारखण्ड राँची को सादर सुचनार्थ प्रेषित।
3. अनुमण्डल स्तरीय समिति के सभी सदस्यों को सुचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।




अपर सिमाहर्ता,  
चतरा।


DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND




Recommended by Sub-Divisional Committee and Deputy Commissioner, Chatra

  
District Mining Officer  
Chatra


  
Assistant Director, Geology  
Chatra Hazaribagh

  
कार्यपालक अधिकारी  
लघु सिचाई प्रमण्डल, चतरा  
Regional Officer  
JSPCB, Hazaribagh

  
D.F.O. South Division  
Chatra

  
D.F.O. Wild Life  
Hazaribagh

  
Sub-Divisional Officer  
Chatra

  
Sub-Divisional Officer  
Simaria

  
Additional Collector  
Chatra

  
Deputy Commissioner  
Chatra

  
Member  
State Level Environment Impact  
Assessment Authority, Jharkhand

Approved by,

  
Chairman  
State Level Environment Impact  
Assessment Authority, Jharkhand

SEIAA, Jharkhand

  
Member Secretary  
State Level Environment  
Impact Assessment Authority  
Jharkhand



## PREFACE

The need for District Survey Report (DSR) have been necessitated by Ministry of Environment, Forest and Climate Change (MoEF& CC) vide their Notification No. - 125 (Extraordinary, Part II Section 3, Sub-section ii), S.O. - 141 (E), dated 15<sup>th</sup> January 2016. The notification was addressed to bring certain amendments with respect to the EIA notification 2006 and in order to have a better control over the legislation, District level committees have been introduced in the system. As a part of this notification, preparation of District Survey Report has been emphasized. Subsequently, MoEF & CC has published Notification No.-3611(E), dated 25<sup>th</sup> July 2018 regarding inclusion of the format of District Survey Report (DSR) for "Minor minerals other than Sand Mining or River-bed Mining". This DSR has been prepared in conformity with the Notification No. -S.O. -141(E), S.O. -3611(E) and other Sand mining guidelines published by MoEF& CC time to time as well as the requirement specified in Jharkhand Minor Mineral Concession Rules.

The main purpose of DSR is to identify the mineral potential areas to develop the mining activities along with relevant current geological data of the district where mining can be allowed; and also, to distinguish the areas where mining will not be allowed due to proximity to infrastructural structures and installations. The District Survey Report shall guide for systematic and scientific utilization of natural resources, so that present and future generation may be benefitted at large.

Chatra district spreading over an area of 3706 km<sup>2</sup> lies between Latitudes 23°38'34"N to 24°27'48" N and Longitude 84°26'50"E to 85°23'41" E with its district headquarter at Chatra. The State Jharkhand came into existence on 15<sup>th</sup> November 2000 as a 28<sup>th</sup> State of India after being bifurcated from Bihar State, the Chatra district is one of the 24 district of Jharkhand. The climate is generally dry with average rainfall 830.8 mm. The temperature varies between 20°C to 42.2°C. However, due to global warming, the temperature goes high up to 44°C. The district of Chatra is a part of North Chhotanagpur Plateau. This area is full of several plateaus, mountains and valleys, most part of district area full of forest and Stone.

Chatra is the administrative headquarter of Chatra district. It is located at a distance of 152 km from Ranchi, State capital of Jharkhand. The district is divided into 12 blocks, namely i) Hunterganj ii) Pratappur iii) Kunda iv) Lawalaung v) Chatra vi) Itkhori vii) Gidhaur viii) Pathalgora, ix) Simaria, x) Tandwa xi) Kanhachatti and xii) Mayurhund. The district comprises of 154 numbers of panchayats and 1474 nos. of villages. The district is bounded in the north by Gaya district of Bihar State, in the west by Palamu district, in the south by Latehar, Ranchi and Hazaribag district, in the east by Koderma and Hazaribagh district. The forest portion comprises of 4 territorial divisions (North, South Chatra, Koderma, Hazaribagh West) one afforestation division and 2 State trading divisions.

The chief roads emanating from Chatra town are NH-99 and NH-100 passes from the town. Chatra is approachable from Koderma Railway station via Barhi, Chauparan, Itkhori distant at about 100 km. Chatra is approachable from Ranchi via Chandwa in Balumath in Latehar district. The Railway connectivity will pass through the Chatra district when Koderma-Ranchi via Hazaribag Railway line is completed and it will touch three major villages of the district namely Majhgain, Bandgaon and Ratarua. At present, Chatra is not connected by airway.

The occurrence of Minor minerals in the district have been established by Department of Mines and Geology, Government of Jharkhand and others in previous instances. It requires further systematic and scientific approach to quantify the resource along with their grade assessment. Coal, Sand, Graphite and Stone are main minerals of Chatra district. The Coal is available in Keradari and Tandwa Block area. The CCL is engaged in mining of Coal in the district. This report also recommends to undertake detail exploration program to assess the Minormineral Occurrences in the district and should have a proper development and production plan for the specified minerals so as to satisfy the demand and supply gap of Minor minerals in the district.





## 1. INTRODUCTION

The District Survey Report of Chatra District has been prepared as per the guidelines of Ministry of Environment, Forest & Climate Change (MoEF & CC), Government of India vide Notification S.O. - 1533(E) dated 14<sup>th</sup> Sept. 2006 and subsequent MoEF & CC Notification S.O. - 141(E) dated 15<sup>th</sup> Jan 2016. This report shall guide systematic and scientific utilization of natural resources, so that present and future generation may be benefitted at large. Further, MoEF & CC published a notification S.O.-3611(E), dated 25<sup>th</sup> July, 2018 and recommended the format for District Survey Report for Minor minerals other than Sand Mining or River-bed Mining.

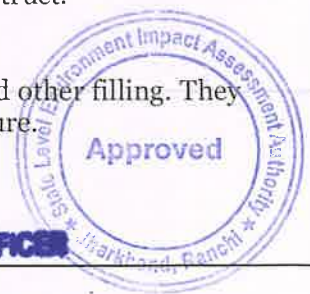
The Objectives of the District Survey Report are as following:

1. Identification and Quantification of mineral resource and its optimal utilization.
2. To regulate the Minor mineral's mining in the Country, identification of site-specific end-use consumers and reduction in demand & supply gaps.
3. Use of information technology (IT) & latest scientific method of mining for surveillance of the Minor mineral's mining at each step.
4. District Survey Report shall enable Environmental Clearance for cluster of Minor minerals. It shall assist concerned Department during post Environmental Clearance Monitoring.
5. To control the instance of illegal mining.
6. To maintain the livelihood of near by village's peoples.
7. To keep accumulated data records viz. Details of Mineral Resource, Potential area, Lease, Approved Mining Plan, Co-ordinates of a District at one place.
8. To maintain the records of Royalty/Revenue generation.
9. A concise guideline can be framed considering the point discussed in the DSR for Minor mineral's mining in the district.

The District Survey report (DSR) is comprised of secondary data published and endorsed by various Departments and websites about Geology of the area, Mineral resources, Climate, Topography, Landforms, Forest, Rivers, Soil, Agriculture, Road, Transportation, Irrigation etc. Data on lease and mining activities in the district, revenue etc. are collected from concerned District Mining Office.

Details of Minerals/Earth work in Chatra District:

- 1) **Coal:** Coal is a sedimentary deposit that is easily combustible and mostly made of carbon. Coal is a black or brownish-black substance that contains more than 50% by weight and more than 70% by volume of carbonaceous material (including inherent moisture).  
**Grade:** None Coking.  
**Coal Type:** Anthracite coal  
**Uses:** Power & Steel Sector.
- 2) **Feldspar:** Feldspar is the name given to a group of naturally occurring aluminosilicate minerals containing varying amounts of potassium, sodium, calcium, and/or lithium. The feldspar group of minerals is by far the most abundant group of minerals in the Earth's crust, making up about 50% of all rocks.  
**Grade:** Refractory.  
**Uses:** Refractory, Glass, Abrasive & Ceramic industry.
- 3) **Quartz:** The most common mineral we have is quartz. Oxygen and silicon, the two most plentiful chemical elements on Earth, are combined to form quartz. Tetrahedrons, or three-sided pyramids, are formed when silicon and oxygen atoms come together. Crystals are created by stacking these. Even a tiny crystal requires billions of tetrahedrons to construct.  
**Grade:** Refractory & Ceramic.  
**Uses:** Refractory, Glass, Watch & Ceramic industry.
- 4) **Ordinary Earth:** Ordinary Earth are a type of building material, Roads and other filling. They are generally used to construct walls, pavements and other types of architecture.





- 5) **Soil:** The soils occurring in different landforms have been characterised during soil resource mapping of the state on 1:250,000 scale (Halder et al. 1996) and three soil orders namely Entisols, Inceptisols and Alfisols were observed in Jamtara district.
- 6) **Granite:** Granite is a coarse-grained intrusive igneous rock composed mostly of quartz, alkali feldspar, and plagioclase. It forms from magma with a high content of silica and alkali metal oxides that slowly cools and solidifies underground

### 1.1 Statutory Framework:

The below table has mentioned the requirement of District Survey Report and its year wise modification;

Table 1.1: Requirement of District Survey Report & its year wise modification

Year	Particulars
1994	The Ministry of Environment, Forest & Climate Change (MoEF & CC) published Environmental Impact Assessment Notification 1994 which is only Applicable for the Major minerals having mining lease area more than 5 Ha.
2006	In order to cover the Minor minerals also into the preview of EIA, the MoEF & CC issued EIA Notification S.O. - 1533 (E), dated 14 <sup>th</sup> September 2006, made mandatory to obtain Environmental Clearance for both Major & Minor Minerals having mining lease area more than 5 Ha.
2012	Further, Hon'ble Supreme Court wide order dated 27 <sup>th</sup> February 2012 in I.A.No. - 12-13 of 2011 in Special Leave Petition (C) No. - 19628-19629 of 2009, in the matter of Deepak Kumar etc. Vs. State of Haryana and Others etc., ordered that "leases of minor minerals including their renewal for an area of less than five hectares be granted by the States/Union Territories only after getting environmental clearance from MoEF & CC"; and Hon'ble National Green Tribunal, order dated 13 <sup>th</sup> January, 2015 in the matter regarding Sand mining has directed for making a policy on Environmental Clearance for Mining leases in cluster for Minor minerals.
2016	The MoEF & CC in compliance of above Hon'ble Supreme Court's and NGT's order has prepared "Sustainable Sand Mining Guidelines (SSMG), 2016" in consultation with State Governments, detailing the provisions on Environmental Clearance (EC) for cluster, creation of District Environment Impact Assessment Authority, preparation of District Survey Report and for proper monitoring of Minor mineral there by issued notification dated 15.01.2016 for making certain amendments in the EIA Notification, 2006, and made mandatory to obtain EC for all Minor minerals. Provisions have been made for the preparation of District Survey Report (DSR) of River-bed Material and other Minor minerals.
2018	MoEF & CC published a notification S.O. - 3611(E) Dated 25 <sup>th</sup> July 2018 and recommended the format for District Survey Report for Minor minerals other than Sand mining or River-bed mining. The notification stated about the objective of DSR, i.e. "identification of the mineral potential areas to develop the mining activities along with relevant current geological data of the District where mining can be allowed; and also to distinguish the areas where mining will not be allowed due to proximity to infrastructural structure sand installations."



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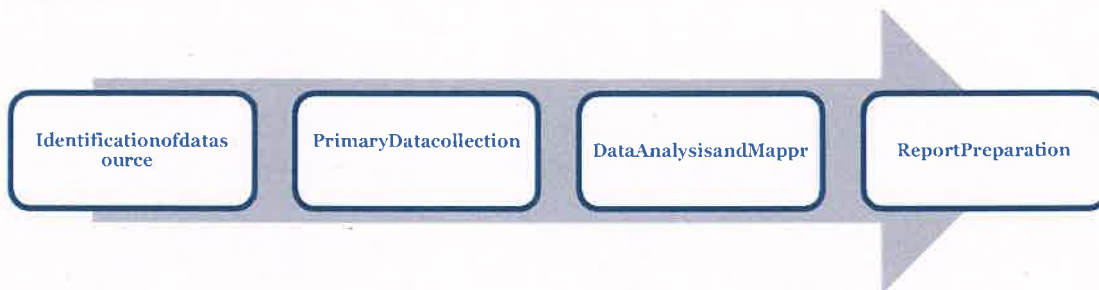
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➤ The Ministry of Environment Forest & Climate Change formulated the format of District Survey Report for Minor minerals other than Sand Mining or River-bed Mining which focuses on the management of Minor mineral's mining in the country. But in the recent past, it has been observed that apart from management and systematic mining practices there is an urgent need to have a guideline for effective enforcement of regulatory provision and their monitoring. Section 23 C of MMDR 1957 empowered the State Government to make rules for preventing illegal mining, transportation and storage of minerals but in the recent past, it has been observed that there was large number of illegal mining cases in the Country and in some cases, many of the officers lost their lives while executing their duties for curbing illegal mining incidence. The illegal land uncontrolled illegal mining leads to loss of revenue to the State and degradation of the environment.

## 1.2 Methodology of DSR Preparation:

The data related to district profile, geology, mineralization, mining activity are sketchy and disjointed. There are multiple data sources, which are in the public domain, as well as in Government website. To prepare District Survey Report, need to collate all the available databases on these regards. A comprehensive and a meaningful interpretable database created, which would be necessary to demonstrate the district overview. Workflow for the DSR job is as follows.



**Data source Identification:** District Survey Report has been prepared based on the primary data base collected from different sources. The data sources which are used in DSR are mostly based on Government published data or the published report in reputed journal. District profile has been prepared based on the District Census 2011. The last census of Chatra was done in 2011 and next census of 2021 has been postponed or cancelled but Census of India can do projection of future Chatra upto 2023. Potential mineral resources have been described based on GSI or any other Govt. agencies work done. Mining lease details and the revenue generated from Minor minerals has been prepared based on available data from District Mining Office of the district. Satellite image has been used for map preparation related to physiography and land utilization pattern of the district.



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**Data Analysis and Map preparation:** Data set which are captured during the report preparation, are gone through detail analysis work. District Survey Report involves the analytical implication of captured dataset to prepare relevant maps. Methodology adopted for preparation of relevant maps is explained below.

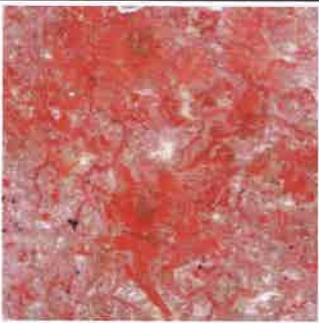

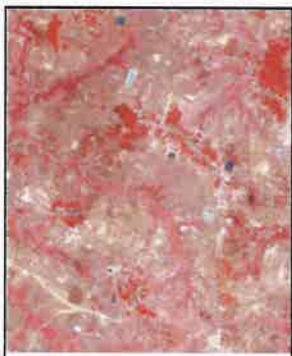
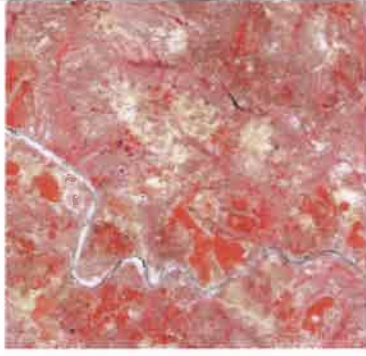
**Land Use and Land Cover Map:**

Land Use and Land Cover classification is a complex process and requires consideration of many factors. The major steps of image classification may include determination of a suitable classification system via Visual Image Interpretation, selection of training samples, Satellite image (FCC-FalseColorComposition) pre-processing, selection of suitable classification approaches, post-classification processing, and accuracy assessment.

Here, LISS-III Satellite Imagery has been taken for Supervised Classification as supervised classification can be much more accurate than unsupervised classification, but depends heavily on the training sites, the skill of the individual processing the image, and the spectral distinctness of the classes in broader scale.

According to the Visual Image Interpretation (Tone, Texture, Colour etc.) training set of the pixel has been taken.

Table 1.2: Pictorial Descriptions of Physiographic Classification

	
<b>Agricultural Land</b> - Based on their Geometrical shape, Red and Pink colortone, Agricultural Land has been identified.	<b>Vegetation Covered Area</b> - Based on their continuous Red colortone, Vegetation Covered Area has been identified.
	
<b>Agricultural Fallow Land</b> –Based on their Geometrical shape, Light and dark Cyan with light Pink colortone, Agricultural Fallow Land has been identified.	<b>Bad Land Topography</b> –Light Yellowish mixed with cyan color has been identified as Bad Land Topography.



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<p><b>Settlement</b> – Area with Cyan color including geometrical shape has been recognized as Settlement Area.</p>	<p><b>WaterBodies</b>–Dark Blue color has been classified as WaterBodies.</p>

### Geomorphological Map:

The major steps of preparing Geomorphological Map are identifying features like – Alluvial Fan, Alluvial Plain, Hilly region etc. from Satellite imagery (FCC-False Color Composition) via Visual Image Interpretation and then digitization has been taken into the consideration to prepare map including all the Geomorphological features according to their location.

### Physiographical Map:

The major step of preparing Physiographical Map is generating contour at a specific interval to show the elevation of the area using CARTOSATDEM.

### Block Map:

- Raw Data collected from **National Informatics Centre (NIC Website)** during March 2022 and October 2022.
- Data has been geo-referenced using GIS software.
- Digitization of Block boundary, District Boundary, State Boundary, International Boundary, and District Headquarter, sub–district Headquarter, Places, Road, Railway, River, Nala etc.
- Road name, River name, Railway name has been filled in attributetable of the Layers
- Final layout has been prepared by giving scale, legend, north arrow, etc.

### Transportation Map:

- Raw Data collected from **National Informatics Centre (NIC Website)** during March 2022 and October 2022.
- Data has been geo-referenced using GIS software.
- Digitization of Block boundary, District Boundary, State Boundary, International Boundary, and District Headquarter, sub–district Headquarter, Places, Road, Railway, River, Nala etc.
- Road name, River name, Railway name has been filled in attributetable of the Layers.
- Final layout has been prepared by giving scale, legend, north arrow, etc.

### Drainage Map:

- Raw Data collected from **National Informatics Centre (NIC Website)** during March 2022 and October 2022.
- Data has been geo-referenced using GIS software.
- Block boundary, District Boundary, State Boundary, International Boundary & District Headquarter, sub–district Headquarter, Places, Road, Railway, River, Nala etc.
- Road name, River name, Railway name has been filled in attributetable of the Layers.
- Final layout has been prepared by giving scale, legend, north arrow, etc.



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Earthquake Map:

- Raw data collected from **Ministry of Earth Science.**
- Data has been geo-referenced using GIS software.
- Digitization of Earth quake zone and superimposed it over Block Boundary.
- Zone name has been filled in attributetable of the Layers.
- Final layout has been prepared by giving scale, legend, north arrow, etc.

Soil Map:

- Raw data collected from **National Bureau of Soil Survey and Land Use Planning.**
- Data has been geo-referenced using GIS software.
- Digitization of Soil classification zone and superimposed it over District Boundary.
- Soil classification has been filled in attributetable of the Layers.
- Final layout has been prepared by giving scale, legend, north arrow, etc.

Wildlife Sanctuary and National Park Location Map:

- Raw data collected from **ENVIS Centre on Wildlife & Protected Areas** during August 2022.
- Data has been geo-referenced using GIS software.
- Digitization of Wildlife Sanctuary & National Park and superimposed it over Block Boundary.
- Wildlife Sanctuary & National Park name has been filled in attributetable of the Layers.
- Final layout has been prepared by giving scale, legend, north arrow, etc.

**Primary Data Collection:** The field data collection is an integral part of DSR preparation. This report has been prepared with the holistic approach and data provided by District Mining Office. The DSR with all updated data has been prepared.

**Report Preparation:** District Survey Report has been prepared to fulfil the purpose of identification of mining area for Minor mineral and their impact on environment. Report provides details of the mineral potential zones. Assessing mining prospect with respect to Minor minerals, List of Letter of Intent (LoI) incorporated in this report. Report also provides the socio-environmental study for establishing mines of minor minerals in the district.





## 2. OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

### 2.1 Overview of Mining Activity:

Chatra is one of the major mining districts in the State, with five big Coal Mines. These mines are spread across 6,150 Ha. of land area and concentrated in Tandwa block. All these are open-cast projects (OCP) and are operated by the public sector undertaking (PSU) Central Coal fields Limited (CCL). The combined production from these five mines in 2017-18 was more than 31.5 MT, about 26 per cent of the State's total production.

Table 2.1: Location of Coal mines and production in Chatra district, 2017-18

Name of the Mine	Production (MT)	Company	Location
Piparwar OCP	9.48	CCL	Tandwa
Ashoka OCP	10.82	CCL	Tandwa
Purnadih OCP	2.58	CCL	Tandwa
Magadh OCP	2.21	CCL	Tandwa
Amrapali OCP	6.50	CCL	Tandwa
<b>TOTAL</b>	<b>31.57</b>		

(Source: District Mining Department, Chatra, 2018)

Evidently, given the concentration of mines in Tandwa block, the district has categorized it as 100 percent directly-affected. Simaria, which shares the boundary with Tandwa has also been regarded as fully affected citing proximity of the mining area as well as heavy mineral transportation. Apart from these, three more blocks – Pathalgora, Chatra and Hunterganj have been considered as mining-affected in varied degrees. Hunterganj, Chatra and Pathalgora have Minor mineral mines particularly Stone. Coal, Sand, Graphite and Stones are main minerals of Chatra district.

Table 2.2: Mining-affected Blocks and Panchayats in Chatra district

Block/Municipality Name	Total Nos. of Panchayats	Nos. of affected Panchayats
Tandwa	19	19
Simariya	17	17
Chatra	16	09
Pathalgora	05	04
Hunterganj	28	13

(Source: District Mining Department, Chatra, 2018)

- Expired Stone Mines Leases (Granite Gneiss) that are present in Chatra District are 19.
- Existing Working Stone Mines (Granite Gneiss) that are present in Chatra District are 14.
- Existing Non-Working Stone Mines (Granite Gneiss) that are present in Chatra District are 8.
- Existing Brick Earth Mines are present in Chatra District are 30.



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**DISTRICT SURVEY REPORT OF MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING FOR  
CHATRA DISTRICT OF JHARKHAND**

**2.2 Details of Expired Mining Leases in the District:**

DETAILS OF EXPIRED MINING LEASES OF MINOR MINERAL STONE IN CHATRA DISTRICT						
Sl. No.	Name of the Mineral	Name of the Lessee	Address of the Lessee	Area of the Mining Lease (Ha)	Location of the Mining Lease	Period of Mining Lease
			<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1	Stone	Baba Stone Works Proprietor: Shri Jitendra Kr. Singh	At - Gola Bazar Sherkhati Bihar	0.40	Mouza-Mayapurkalan ThanaNo. -21 Khata No. - 33 PlotNo.-32(P)	30.03.2006 29.03.2016
2	Stone	Shri Muneshwar Singh	At-Bhojpur P.O.-Bihya P.S.-Hunterganj Dist.-Chatra	0.40	Mouza-Kansdwar Thana No. - 110 KhataNo.-16 PlotNo.-76	20.01.2011 19.01.2021
3	Stone	Shri Sudhir Kr. Singh	At-Role P.O.+P.S.-Simariya Dist.-Chatra	0.40	Mouza - Sikri ThanaNo. -163 KhataNo. -01 PlotNo.-128(P)	08.02.2006 07.02.2016
4	Stone	Shri Pramanand Singh	At-Kutti P.O.+P.S.-Simariya Dist.-Chatra	0.40	Mouza - Sikri ThanaNo. -163 KhataNo. -01 PlotNo.-128(P)	08.02.2006 07.02.2016
5	Stone	Shri Ramji Singh	At-Simariya P.O.+P.S.-Simariya Dist.-Chatra	0.52	Mouza-Soharkala Thana No. - 144 KhataNo.-81 PlotNo.-656	04.07.2002 03.07.2012
6	Stone	Shri Vivek Kumar	At-Tudag P.O.-Tapez, P.S. - Chatra Dist.-Chatra	0.41	Mouza - Tudag ThanaNo. -178 KhataNo. -01 PlotNo.-272 ,273	12.01.2000 11.01.2010
7	Stone	Shri Arvind Kumar Singh	At-Sohad P.O.-Hunterganj P.S.-Hunterganj	0.12	Mouza-Sonbigha Thana No. - 179 KhataNo. -09 PlotNo.-346(P)	29.07.2002 28.07.2012





**DISTRICT SURVEY REPORT OF MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING FOR CHATRA DISTRICT OF JHARKHAND**

8	Stone	Chatra Stone Works Partner: Shri Ravibhushan Gupta	At-Chatra Chowk Dist.-Chatra	0.40	Mouza - Mishrol Thana No. - 271 KhataNo. -42,28 PlotNo.-131,132	22.09.1996	21.09.2006
9	Stone	Shri Pradip Kumar Agarwal	At-Marwari Mohalla Dist.-Chatra	0.18	Mouza - Kullu ThanaNo. -180 Khata No. - 08 PlotNo.-189	08.11.1996	07.11.2006
10	Stone	Shri Arun Kumar Singh	At-Nagar P.O.+P.S.-Hunterganj Dist.-Chatra	0.67	Mouza-NawadihPanari KhataNo. -57 Plot No. - 365/1134,584/1146	21.09.2012	20.09.2022
11	Stone	Shri Sukhdev Yadav	At-Honhe P.S. + P.O. - Tandwa Dist.-Chatra	0.20	Mouza-Honhe ThanaNo. -50 Khata No. - 32 PlotNo.-319(P)	30.06.2009	29.06.2019
12	Stone	Baba Stone Works Partner: Shri Ganesh Yadav	At-Mairag P.S.-Pratappur Dist.-Chatra	0.25	Mouza-Mairagkhurd ThanaNo. -215 KhataNo. -25 PlotNo.-548	12.08.2006	11.08.2016
13	Stone	Shri Alok Kumar Singh	At-Panchwa Mohalla Dist.-Chatra	1.05	Mouza-Chataniya ThanaNo. -270 Khata No. -13 PlotNo.-112	12.01.2000	11.01.2005
14	Stone	M/s Jai Shankar Stone Industries	At-Khutikewal Khurd P.O.+P.S.-Hunterganj Dist.-Chatra	0.61	Mouza - Chakla Thana No. - 117 KhataNo. -02,72 PlotNo.-13(P),14(P) and 15(P)	11.02.2006	10.02.2016
15	Stone	M/s Asuthosh Stone Works Pvt Ltd Dir-Sri Arun Kumar Singh	Vill- Nagar, Po+ ps- Hunterganj District-Chatra	4.05	Mouza- Dalkoma Khata No. 31, 34 Plot No. 221, 223 Thana- Hunterganj	26.06.2014	25.06.2024



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DISTRICT SURVEY REPORT OF MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING  
FOR CHATRA DISTRICT OF JHARKHAND

Stone	Sri Arun Kumar Singh	Vill- Nagar, Po+ ps- Hunterganj District- Chatra	1.69	Mouza- Khata Plot No. 67 & 69 Thana- Hunterganj	26.06.2014	25.06.2024
16	M/s Somvanshi Construction Partner- Sri Shashi Singh S/O- Late - Krishna Singh	Vill- Kurketa, Po- Ps- Vasistnagar, Dist- Chatra	1.71	Mouza- Kurketa Khata No. 29, 31, 33 Plot No. 127, 125, 128, 925 Thana- Vashisthnagar	26.06.2014	25.06.2024
17	M/s Somvanshi Construction Partner- Sri Shashi Singh S/O- Late - Krishna Singh	Vill- Kurketa, Po- Ps- Vasistnagar, Dist- Chatra	1.58	Mouza- Kurketa Khata No.15, 31, & 40 Plot No. 863, 864, 867, 832, 859 & 138 Thana- Vashisthnagar	26.06.2014	25.06.2024
18	M/s Somvanshi Construction Partner- Sri Shashi Singh S/O- Late - Krishna Singh	Vill- Kurketa, Po- Ps- Vasistnagar, Dist- Chatra	2.36	Mouza- Kurketa Khata No.1, 15, 30, 09, 12, 50 Plot No.- 807, 808, 810, 811, 819, 820, 821, 817, 829, 834, 813, 828, 809, 812, 830 & 806 Thana- Vashisthnagar	26.06.2014	25.06.2024
19	M/s Somvanshi Construction Partner- Sri Shashi Singh S/O- Late - Krishna Singh	Vill- Kurketa, Po- Ps- Vasistnagar, Dist- Chatra				



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### **3. GENERAL PROFILE OF THE DISTRICT**

#### **3.1 General Information:**

Chatra is one of the 24 districts of the Indian State of Jharkhand. It was formed on 29.05.1991. Chatra district has two Sub-divisions and 12 Circles/Blocks, 154 Panchayats and 1474 revenue villages. There is one Municipal Council in Chatra which is in Chatra District Headquarter.

Chatra district was a sub-division of Hazaribag district and was created as districts vide Notification No. - 128 dated 29-05-1991, Personnel and Administrative Reforms Deptt., Govt. of Bihar. There are 15 Police Stations in Chatra District. Chatra is passing through a very serious phase of 'extremists' violence' by the banned naxal outfit called the M.C.C. (Maoist Communist Centre). However, in the recent past the Chatra Police have been quite successful in stemming the red tide of the naxal wave. The Chatra Police has made a number of important arrests of naxalite personnel as well as seized a number of arms and ammunition along with lethal explosive materials and devices. The success of the Chatra Police against the naxal outfits has to a large extent led to the limiting of naxal violence.

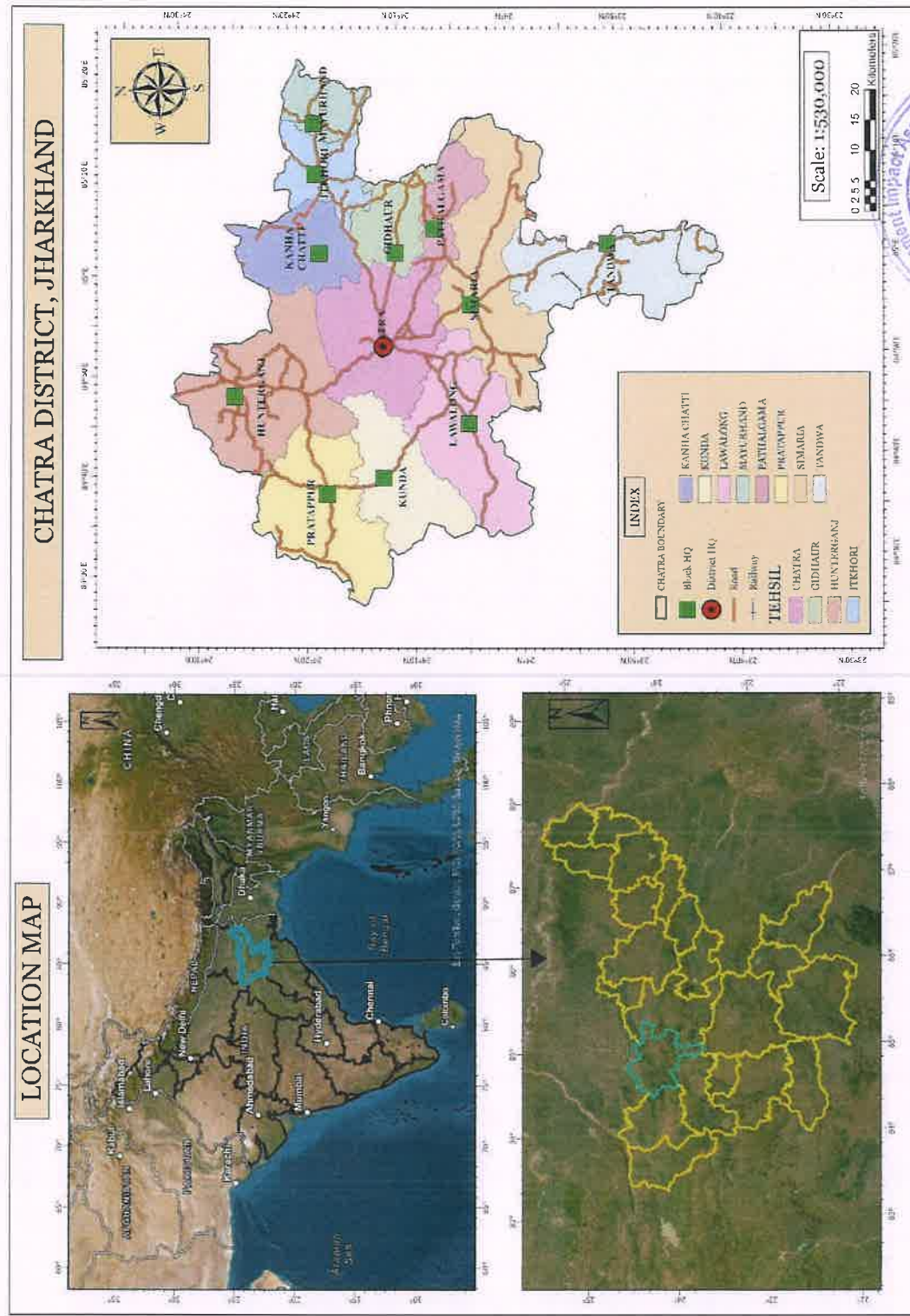
A full-fledged judgship has started functioning from 16<sup>th</sup> of June 2001. Under District and Session Judge, assisted by Additional District Judge, Chief Judicial Magistrate, Judicial Magistrates and Munsiff Magistrate. The Districtal so has a functioning District Consumer Forum. The forest portion comprises of 4 territorial divisions (North, South Chatra, Koderma, Hazaribagh West) one afforestation division and 2 State trading divisions. The forest of Chatra is full of variety of medicinal plants, Kendu leaves, Bamboo, Sal, Teak, other timber species and a wide range of carnivorous & herbivorous wild animals. The district has one Wildlife Sanctuary also known as the Lawalong Wildlife Sanctuary, which hosts even tigers. The Sanctuary was established vide Govt. of Bihar Notification No.-49/48/333-F, dated 15/07/1978. 82 villages are located within the Sanctuary area of which 21 villages are in the core area and 61 villages are situated in the buffer zone. The area of the Sanctuary is 26, 886.23 Ha. In the Sanctuary, the principal animals that are found are Tigers, Leopards, Bear, Neelgai, Sambhar, Peacock, Wild Boar and Deer, together with variety of snakes and birds.



**DISTRICT MINING OFFICER  
CHATRA**



DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BEDMINING" FOR CHATRA DISTRICT OF JHARKHAND



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Fig.3-1: Location Map of Chatra District

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### 3.2 Topography & Terrain:

The Latitude and Longitude of district is 23.40 - 24.40 and 85.260 - 85.320 respectively. The average altitude of Chatra I 184m-825m from the Mean Sea Level. The physiographic characteristics of the district are rich. It has waterfalls, hills, and land with avalanches. Chatra is surrounded by green forest.

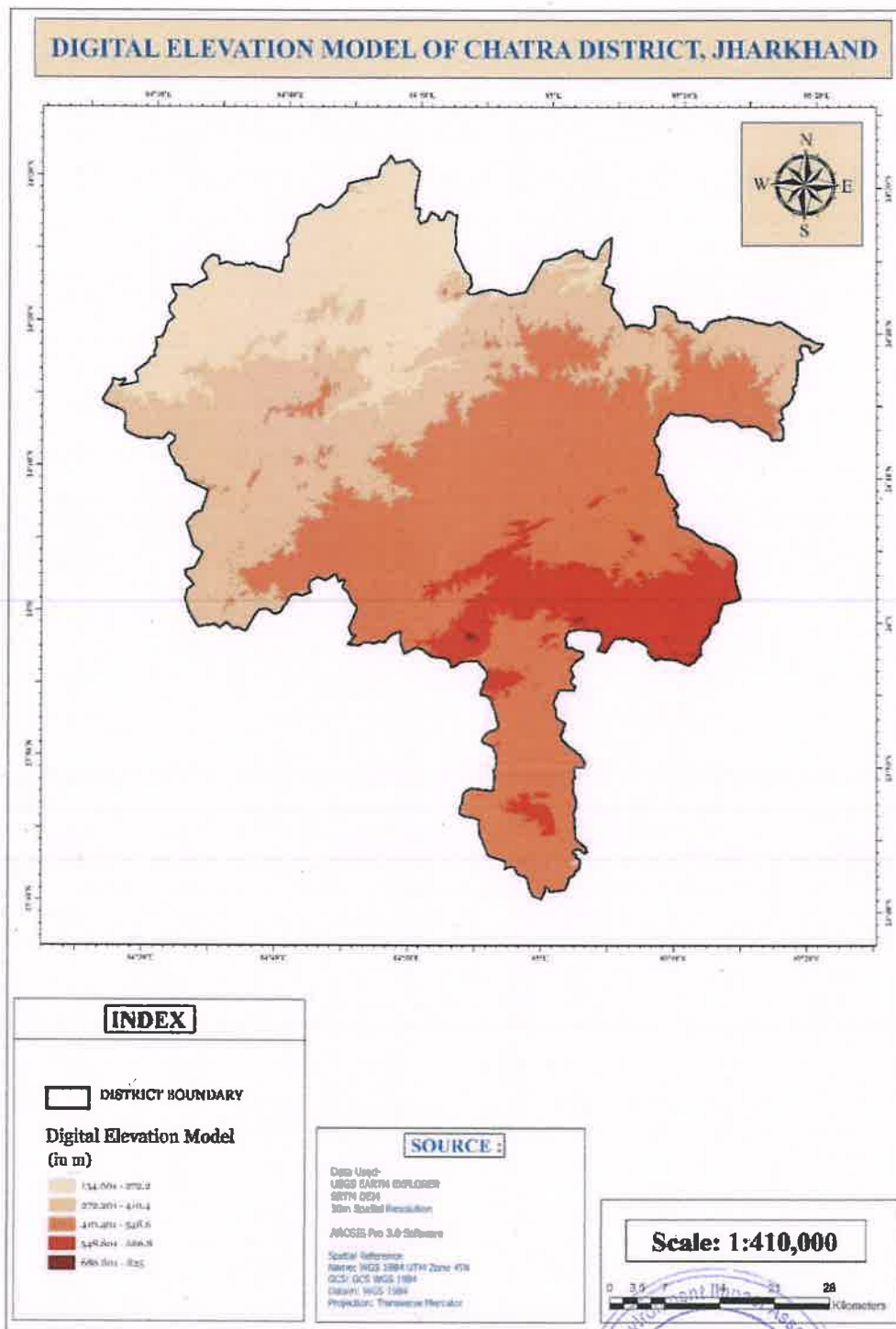


Fig 3.2:- Digital Elevation of Chatra District



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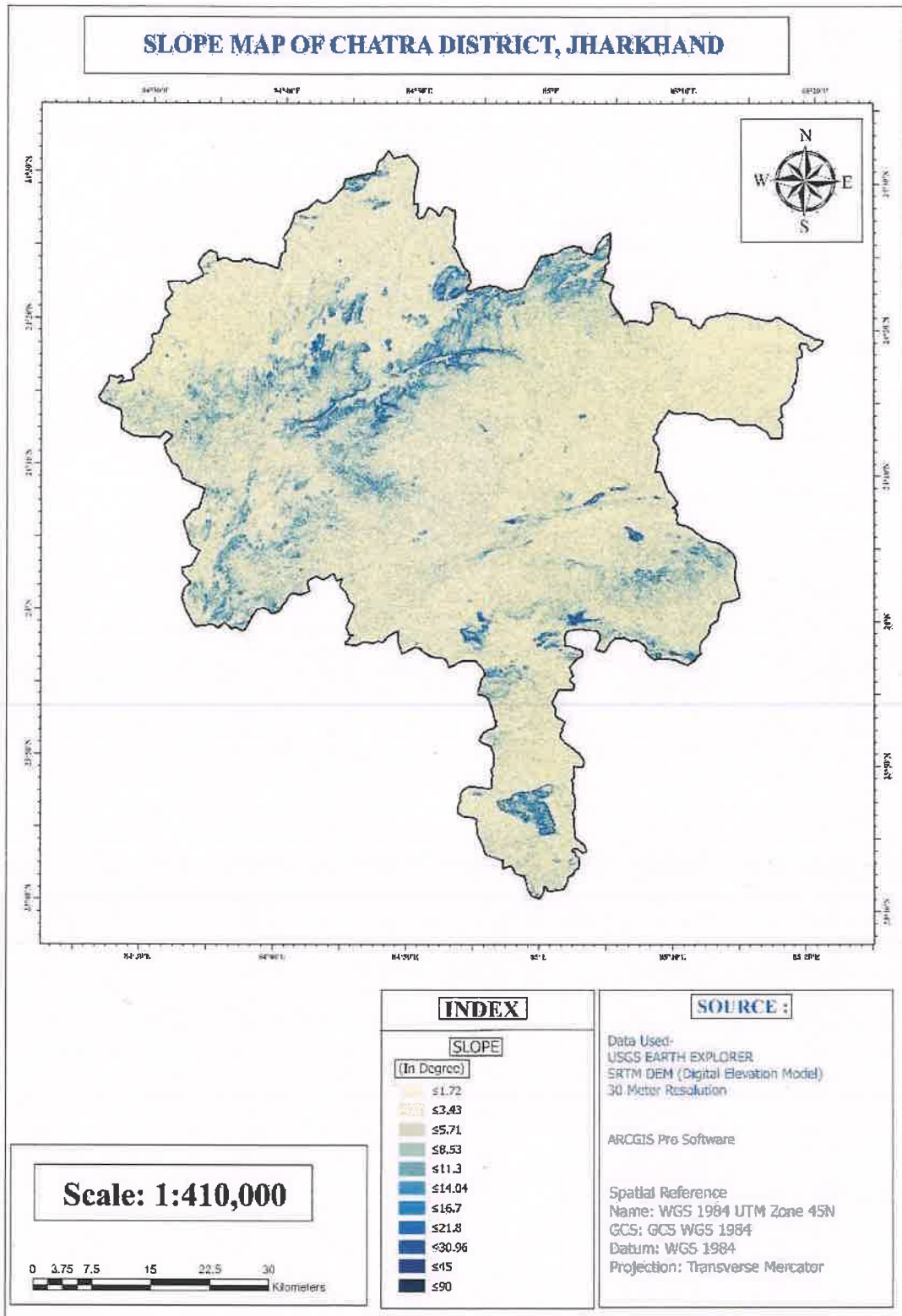


Figure 3.3: Elevation Map of Chatra District



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### 3.3 Demography:

As per Census of India 2011, the population of Chatra district is about 10 Lakhs of which about 51 % is male and 48 per cent female. The overall population density is 281 per km<sup>2</sup>, as compared to India's population density of 328 (Census 2011), indicating sparse population distribution. A decennial growth nearly 29% has been observed for the district's population in 2011 as compared to 2001.

The demographic distribution also reveals that the district is predominantly rural with nearly 95 % of people living in rural areas. This also is applicable for the district's mining-affected blocks. There is also significant proportion of Scheduled Caste (SC) people, which is about 32.6 % of the total population. Tandwa also has about 16% Scheduled Tribes (ST) population.

An official Census 2011, detail of Chatra, a district of Jharkhand has been released by Directorate of Census Operations in Jharkhand. Enumeration of key persons was also done by census officials in Chatra District of Jharkhand.

In 2011, Chatra had population of 1,042,886 of which male and female were 533,935 and 508,951 respectively. In 2001 census, Chatra had a population of 791,434 of which males were 404,067 and remaining 387,367 were females. Chatra District population constituted 3.16 percent of total Maharashtra population. In 2001 census, this figure for Chatra District was at 2.94 percent of Maharashtra population.

There was change of 31.77 % in the population compared to population as per 2001. In the previous census of India 2001, Chatra District recorded increase of 29.51 % to its population compared to 1991. The last census of Chatra was done in 2011 and next census of 2021 has been postponed or cancelled. But census of India can do the projection of future Chatra 2023 Population on the basis likely Population Growth Rate.



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Table 3.1:- Population Distribution of Chatra as per the census 2011

The Population distribution as per the census 2011								
Block Name	Total Population	No. of Gram Panchayats	No. of Revenue Villages	Total Literates (%)	Male Literates (%)	Female Literates (%)	SC (%)	ST (%)
Mayurhand	58925	10	116	53.18	58.15	41.85	26.21	0.35
Lawalong	50553	8	103	38.67	61.38	38.62	57.21	5.32
Itkhor	74929	12	161	55.75	58.11	41.89	23.86	0.45
Kanhachatti	63012	10	117	51.72	59.45	40.55	32.22	3.2
Pathalgada	31530	5	30	55.68	58.24	41.76	25.14	10.03
Hunterganj	187590	28	270	44.13	60.52	39.48	37.28	0.33
Pratappur	120221	18	176	42.55	61.29	38.71	36.29	1.12
Simaria	107871	17	100	52.15	58.38	41.62	30.12	8.12
Tandwa	126319	19	96	53.9	59.95	40.05	22.7	15.19
Kunda	30018	5	78	34.62	64.45	35.55	63.56	3.84
Gidhaur	40919	6	38	55.35	58.4	41.6	24.03	1.72
Chatra	101014	16	189	44.43	60.52	39.48	37.97	3.74
Nagar Parsad Chatra	49985	22 wards	-	67.51	57.1	42.9	13.2	0.88
<b>Total</b>	<b>1042886</b>	<b>154</b>	<b>1474</b>	<b>60.18</b>	<b>69.92</b>	<b>49.92</b>	<b>32.65</b>	<b>4.37</b>

Source: - DMFT Chatra.nic.in



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Table 3.2:-Projected Population of Chatra

Year	Projected Population	
2011	1042886	10.43Lakhs
2021	1325000	13.25Lakhs
2022	1355000	13.55Lakhs
2023	1381000	13.81Lakhs
2024	1404000	14.04Lakhs
2025	1424000	14.24Lakhs
2026	1441000	14.41 Lakhs
2027	1456000	14.56Lakhs
2028	1468000	14.68Lakhs
2029	1479000	14.79Lakhs
2030	1488000	14.88Lakhs
2031	1496000	14.96Lakhs

#### Chatra Literacy Rate:

Average literacy rate of Chatra in 2011 were 60.18 compared to 60.18 of 2001. If things are looked out at genderwise, male and female literacy were 69.92 and 49.92 respectively. For 2001 census, same figures stood at 55.64 and 30.24 in Chatra District. Total literate in Chatra district were 510,061 of which male and female were 303,902 and 206,159 respectively.

#### Chatra Sex Ratio:

With regard to Sex Ratio in Chatra, it stood at 953 per 1000 male compared to 2001 census figure of 959. The average national sex ratio in India is 940 as per latest reports of Census 2011 Directorate. In 2011 census, child sex ratio is 967 girls per 1000 boys compared to figure of 975 girls per 1000 boys of 2001 census data.

(Source - <https://www.census2011.co.in/census/district/94-chatra.>)

### 3.4 Connectivity in Chatra District:

#### Road Network:

The district is well served by a network of good roads and has been called the motorist's paradise. The chief roads emanating from Chatra town are NH-99 and NH-100 passes from the town. Other important roads connecting the town are:

- Chatra-Hunterganj-Dobhi Road
- Chatra-Itkhori-Chauparan Road
- Chatra-Bagra-Balumath-Ranchi Road
- Chatra-Simaria-Hazaribag Road
- Chatra-Tandwa-Piparwar Road
- Chatra-Itkhori-Hazaribag Road

#### Rail Network:

The boundaries of Chatra district is on Gaya District of Bihar. Chatra is at Gosaindih about 40 km from Chatra. Chatra is approachable from Koderma Railway station via Barhi, Chauparan, Itkhori distantat about 100 km. Chatra is approachable from Ranchi via Chandwa in Balumathin Latehar district. The Railway connectivity will pass through the Chatra district when Koderma-Ranchi via Hazaribag Railway line is completed and it will touch three major villages of the district namely Majhgain, Bandgaonand Ratarua.

#### Air Network:

At present, Chatra is not connected by airway. The site selection for aerodrome is presently under process. Nearest aerodrome is Gaya (International Airport), and Ranchi.



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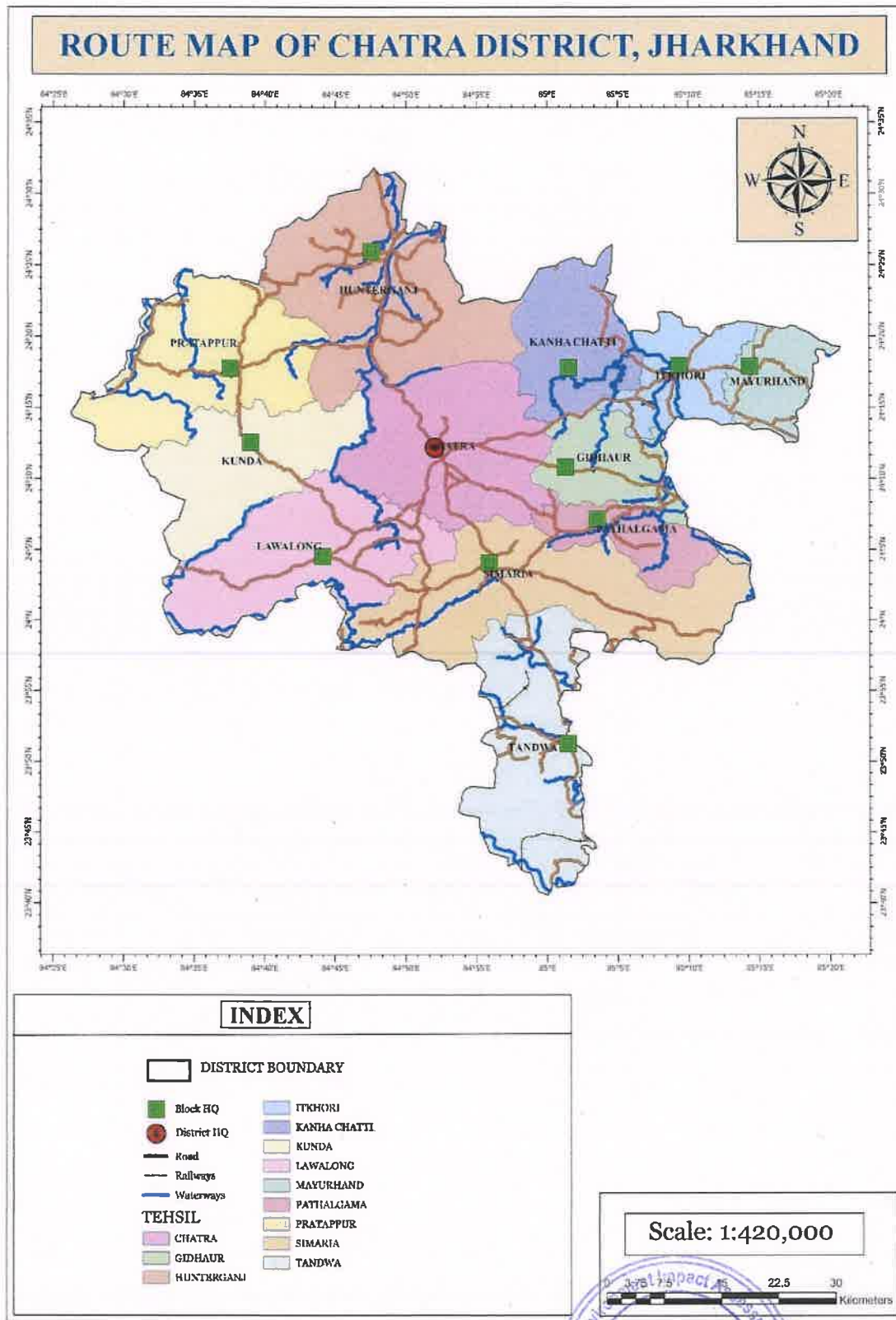


Figure 3.4: Route Map of Chatra District



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### 3.5 Tourist Places in Chatra District:

The district of Chatra, gateway of Jharkhand has a number of picnic spots and fountains, waterfalls and flora and fauna.

- Bhadrakali Temple-It is 35 km on the east of Chatra and 16 km west of Chauparan connected with Grand Trunk Road. Along with the temple situated on the bank of River Mahanad(Mahane) surrounded by hill and forest, there is a water reservoir.



- Maa Kauleshwari Temple – Maa Kauleshwari Mandir is situated near Hunterganj block in Kedlikalan village. It is approx. 10 km from Hunterganj and the temple is situated on the hill which has 650 feet height. A Budha temple is also situated on Kauleshwari hill and every year thousands of visitor are coming to visit the temples and natural environment of this area also.



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- Kunda Cave - The ruins of old Kunda palace are still found at a distance of about three-four miles from the present Kunda Village. The place might have been created either towards the end of 17<sup>th</sup> or beginning of the 18<sup>th</sup> century AD.



- Tamasin waterfall - Word Tamasin is a sandhi of 'tam+asin' which means 'darkness prevails'. This area has mixed forest having high trees making the area dark even in the day light. Tamasin has a waterfall.



- Maludah Waterfall - It is another beautiful water fall at the distance of about 8 kms. on the west of Chatra. up to 5 kms. it is motorable and the rest 3 kms. is to be travelled on foot. The water falls from the height of about 50 ft. without touching the sides of the hillocks. It has been cut in semi-circle with steep walls. It is lovely to look at & soothing.



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- Bario Waterfall - It is also another important beauty spot of Chatra situated on the North at the distance of 12 kms. of which 10 kms. can be covered by vehicle and the rest two kms. is a foot track. The road is Katcha. It looks nice to see the water fall from such a height. It appears as if the spring is dashing against the rocky walls fomenting white rays. One feels as if he is enjoying shower bath under the sun. Nights are lull with magical effect.



### 3.6 Flora & Fauna:

The forest of Chatra is full of variety of medicinal plants, Kendu leaves, Bamboo, Sal, Teak, other timber species and a wide range of carnivorous & herbivorous wild animals. The district has one wild life sanctuary also known as the Lawa long Wildlife Sanctuary, which hosts even tigers. In the Sanctuary the principal animals that are found are Tigers, Leopards, Bear, Nilgai, Sambhar, Peacock, Wild Boar and Deer, together with variety of snakes and birds.



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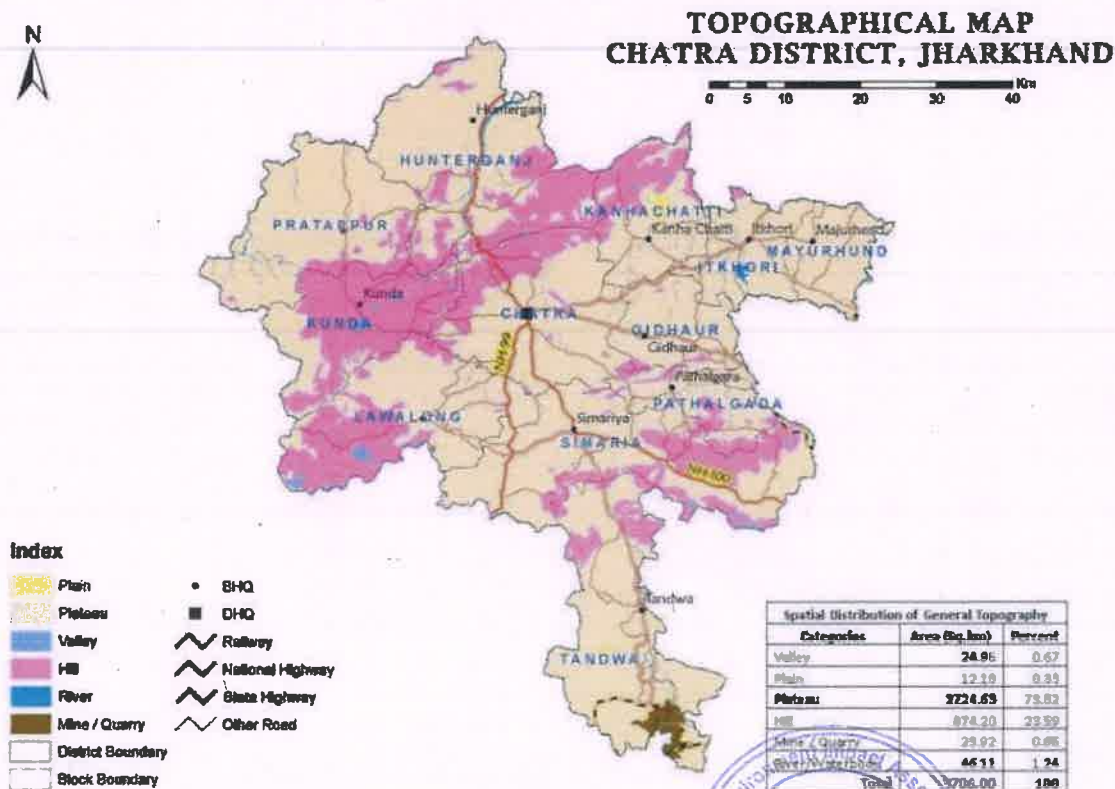


### 3.7 General Landforms:

Physiographically, the Chatra district forms part of the Chhotanagpur plateau. It is a region of plateau residual hills and intermountain valleys. Very gentle to gentle landscape occupy about 43.6% of the total area. They are met with in Hussainganj, Partappur, Jorikalan & Itkhori spreadover SoI Toposheets 72D/11, 14,16; 73A/13, 14; 72H/3.7 and 73E/1,2. The next dominant slope group is moderate to strongly undulating, covering 34.2% area, spreadover 72D/11,15;73A/13,14;73E/2 and 72H/7 around Lawaganj and in Amanat valley. Hilly areas are however, scattered around south of Partappur, Jorikalan and Itkhori on SoI Toposheets 72D/12; 73A/9 and 72H/3 and occupy about 11.5% of the total area. The altitudinal range found is from 166 m amsl to highest 796m amsl.

The predominant physical feature over major part of the district is the rolling topography dotted with isolated inselbergs except in the Boarijore and Sundarpahari blocks. A substantial part of Boarijore and Sundarpahari block is under forest cover. The altitude of the land surface increases from west to the east. The major hills are confined to the eastern part of the district comprising the Gandeshwari Pahar (238.41m AMSL) and KesgariPahar (268.29m AMSL) while in the western part of the district isolated hills are in the form of the inselbergs and other small hillocks. The soil is mostly acidic, reddish yellow, light textured and highly permeable with poor water holding capacity.

The southern part of the district is underlain by Granite gneiss of Achaean age forming the basement. These occur as large batholiths and are intruded by basic rocks. The district falls in the rain shadow zone of the Santhal Pargana plateau. The average annual precipitation is 1250 mm and the average number of rainy days is 59. Even this meager precipitation is erratic which coupled with long interspell forces the district to suffer from drought.



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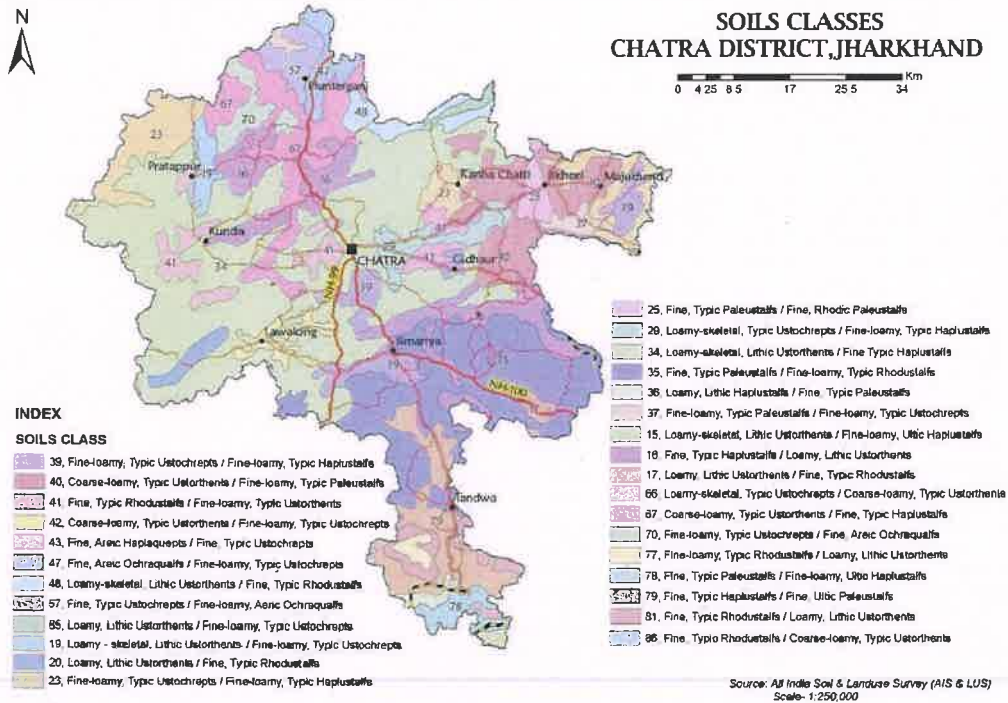
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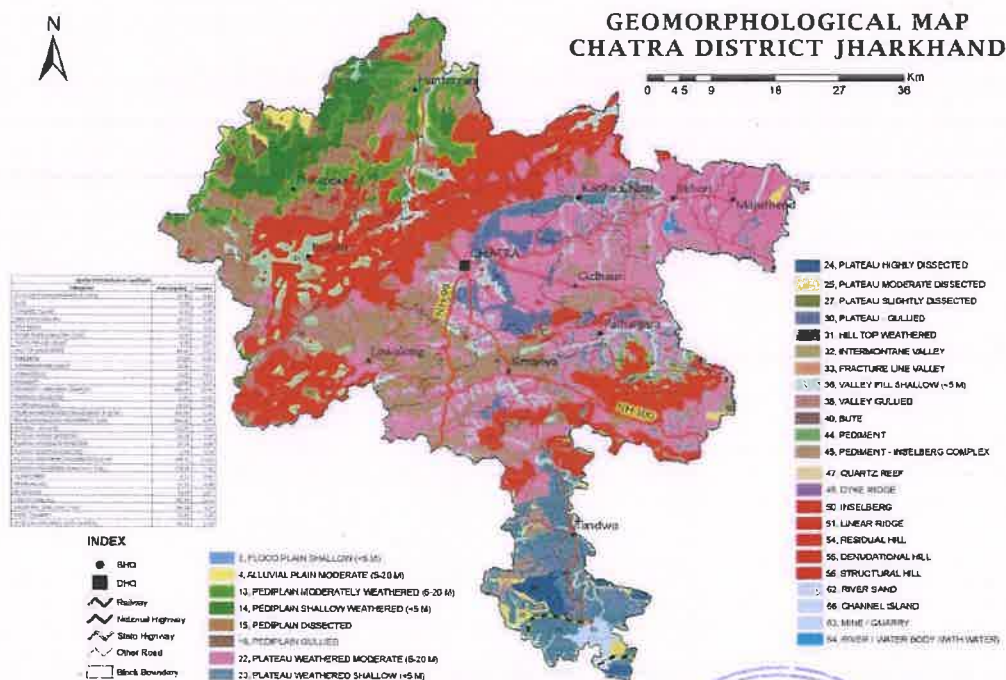


### 3.8 Soil:

The Soils occurring in different land form shаве been characterized during Soil resource mapping of the State and three Soil orders namely Entisols, Inceptisols and Alfisols were observed in Chatra district. Alfisols were the dominant Soils covering 52.2 % of TGA followed by Entisols (33.9 %)and Inceptisols (13.0)



### 3.9 Geomorphology:



(Source: Jharkhand Space Application Centre)



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## 4. GEOLOGY & MINERAL WEALTH OF THE DISTRICT

### 4.1 Geology:

The southern part of the district is underlain by Granite-gneiss of Achaean age forming the basement. These occur as large batholiths and are intruded by basic rocks. In the central and northern part of the district the rocks of Barakar formation consisting of Feldspathic Sandstones, Shales and Coal seams overlying the metamorphic are exposed. In the western and northern part of the district alluvial cover of moderate thickness caps the Archaean crystallines and the Gondwana sedimentaries. The denuded surface of this ancient landmass reveals that the region has been subject to a series of tectonic movements, resulting in folding, faulting, crumpling, crushing and tilting of different formation from time to time. "The structural frame of the area however, appears to have been laid down by the Archaean movements which folded the Dharwarian sediments Physical Environments and caused the batholithic intrusions into the folded Dharwarians" by Singh (1976). The Satpura strike in the Archaean rocks trends E.N.E. - W.S.W.

The Pre-Cambrian rocks vary widely in their resistance to weathering and erosion. Rocks like Quartzites, Epidiorite, Gabbro, Dolerite, Gneisses are more resistant to weathering and erosion than Shales, Schists, Clays and Phyllites, with the result that the former group of rocks account for most of the bold topographical forms in the area. The Archaean fold mountains, composed of less resistant rocks, have been reduced to a peneplain on more than one occasion, but in the current cycle the resistant residual hillocks.

The Vindhya provide an almost table-like flatness to the plateau surface above the scarps. This has been possible due to the occurrence of thick masses of resistant sandstone strata. Streams descending the steep scarp from gorge-like valleys; their descent is often through rapids and waterfalls, which indicate recent uplift of the area.

The Barahagi represents a shallow elongated basin (E.S.E.-W.N.W.) and includes a prominent sub-basin comprising the basal deposits in middle Barwadih, Basni lease hold area in the south-east. This basin is composed of the Talchir and Barakar beds only. The rock beds show gentle several oblique and strike faults with small throws within the basin. Towards the close of the cretaceous, the study-area experienced lava eruptions like the other parts of the Chhotanagpur highlands. The area forms part of the Chhotanagpur plateau. A broad spectrum of Archaean to Quaternary formations comprising crystalline, sedimentary and metamorphic rocks occur in the area. The unclassified Metamorphic Gneissic Complex and Proterozoic intrusive rocks suffered strong folding deformation and medium grade metamorphism. The Gondwana rocks are not folded or metamorphosed. Most of the faults and shear zone the gneisses, metamorphic and Gondwanas are mainly E-W, NW-SE and NE-SW trending. The crystallines are foliated, lineated and jointed. The foliation is moderate to steeply dipping with varied trend, the most dominant one being E-W. Bedding preserved in Gondwanais Horizontal to low dipping. The unconsolidated Quaternary sediments along with the weathered rock. Alluvial tracts, fractured crystalline and Gondwana Sandstone form the main repository of ground water. Important deposits of Coal, Fireclay, Muscovite Mica, Talc, Vermiculite and Dimension Stone occur in the district. Vermiculite deposits also occur in Chatra district. Dimension Stone available in the district are Black Granite (Dolerite/Amphibole) and multicolored Granite(GraniteGneiss/Migmatite).

The district is underlain by diverse geological formations with complex tectonic framework. The geological formation have been grouped under three main categories:

- i. The gneissic complex in the southern and the central part.
- ii. The Rajmahal traps in the eastern and south-eastern part.
- iii. Gondwanas overlain by thin mantle of alluvial cover in the northern and central part.



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The generalized Stratigraphic Succession of the area, established by GSI is as follows:

Lithology	Geological Unit	Supergroup	Age	Nature & Characteristics
Alluvium			Quaternary	Soft, unconsolidated, flat gentle slope
Red Sand stone & Red Clay Mahadeva Formation		Gondwana Supergroup	Triassic to Jurassic	Layered, Hard to Soft, Gentle slope with rolling topography
Sand stone & Shale	Panchet Formation			
Sand stone & Shale with Coal	Raniganj Formation		Permian	
Sand stone & Shale	Barren Measure Formation			
Sand stone & Shale with Coal Seams	Barakar Formation			
Sandstone Formation	Karharbari		Carboniferous	
Boulder-bed, Sandstone, Shale	Talchir Formation			
Dolerite			Proterozoic	Hard, Massive, Steepslope
Amphibolite, Hornblende Scist, Epidiorite, Talc-Chlorite Schist				Moderately hard, weakly Foliated, Moderate to Steep slope
Quartz/Pegmatite vein, Fault Breccia				Hard, Massive, Steep slope
Intrusive Granite				Hard, Massive, Foliated, Moderate to Steep slope
Biotite granite Migmatite, Augen Porphyroblastic Gneiss, Hornblende Granite Gneiss	Gneiss, Chhotanagpur Gneissic Complex		Archaean (Proterozoic)	Hard, Foliated, Moderate to Steep slope
Epidiorite, Amphibolite, Hornblende Schist/Gneiss	Unclassified Metamorphics		Archaean to Proterozoic	Moderately hard, weakly Foliated, Moderate slope
Quartzite				Layered hard, Moderate to Steep slope
Feldspathic/ Quartz Schist	Micaceous			Moderately hard, Foliated, Moderate slope
Crystalline Limestone & Calc-Silicate rock				Layered, moderately hard, Moderate slope
Phyllite, Mica Schist				Soft, Foliated, Gentleslope

*(Source-Geological Survey of India)*

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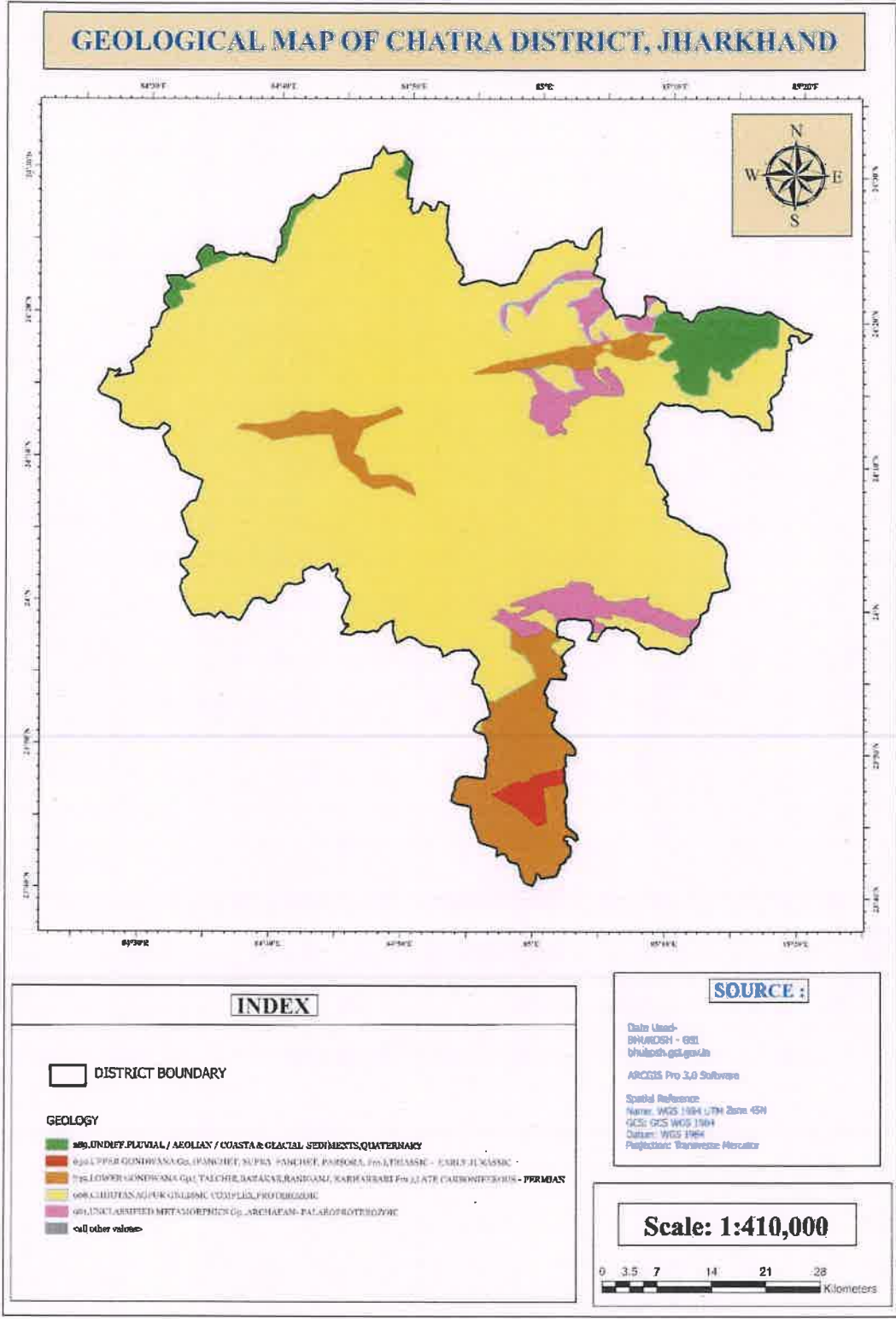


Fig.4.1: Geological Map of Chatra District

(Source: BHUKOSH-GSI)



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4.2 Overview of Mineral Resources:

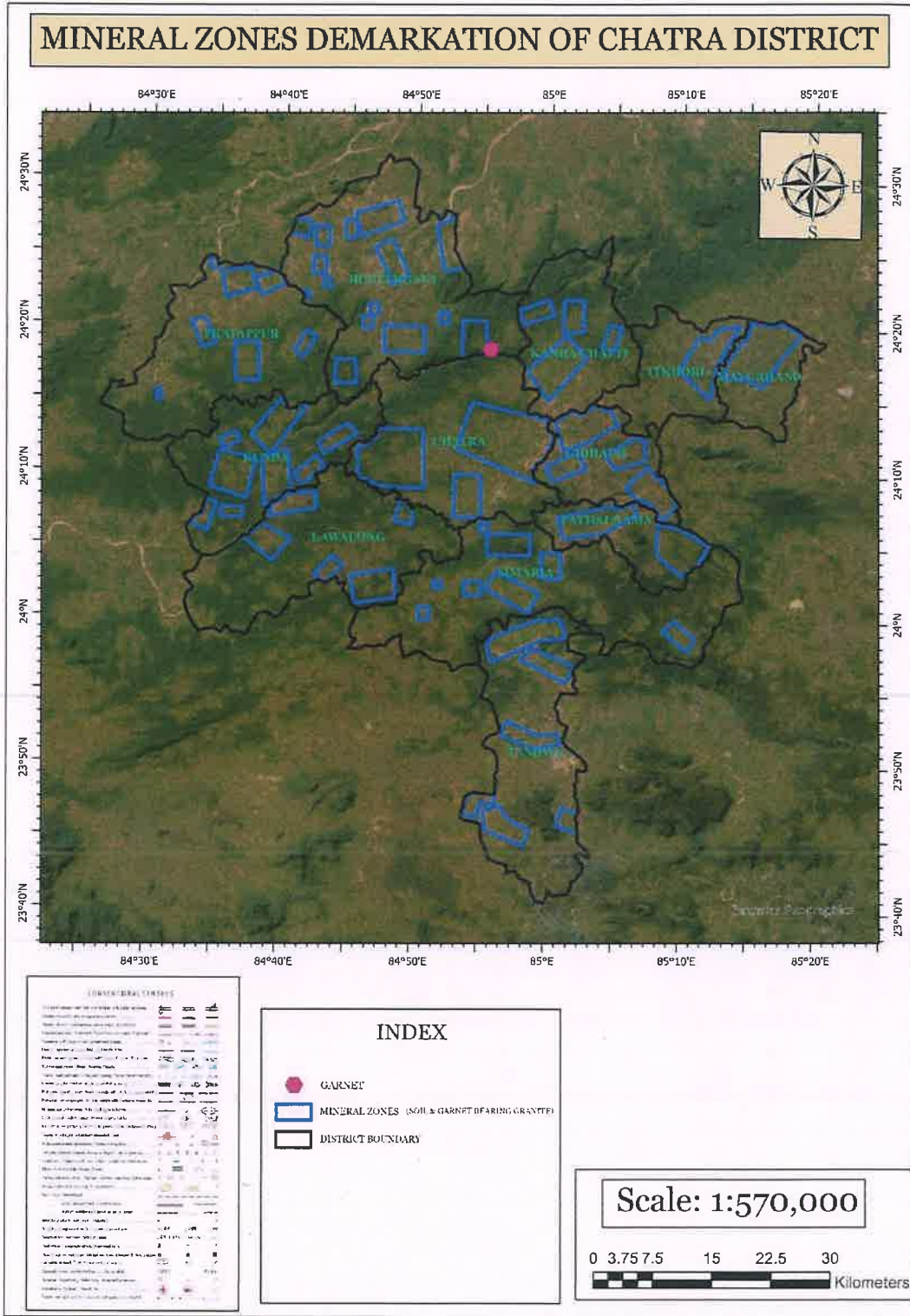


Fig.4.2: Mineral Map of Chatra District



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## 5. DRAINAGE SYSTEM & IRRIGATION PATTERN

### 5.1 Drainage System:

The main rivers of the district are Barki, Chako, Damodar, and Garhi. Also, the general slope of the district is from north to south. The general drainage trend is from southeast to northwest structural features especially the leaves and joints make a deep impression. Also, over drainage and control the drainage pattern of the district. It has also some natural borders like Kushaninadi in north west, Leriyanadi on the north east, Barakar river on the north east, Mohini nala in the east, Baraki nadi, Garhinadi and Damodar river on the extreme south east Domuhanadi, Amanat river and Chakonadi on the south west and Dolki, Amjharwa, Morhar on the northwestern borders.

Lilajan is the main river passing through the district. Besides, Jam and Lilajan in northern, Mohana and Balbu in north east; Amanant and its tributaries in south west; Chakonadi in the uppersouth westparts; Barki nadi meeting Damodar River drains the district.

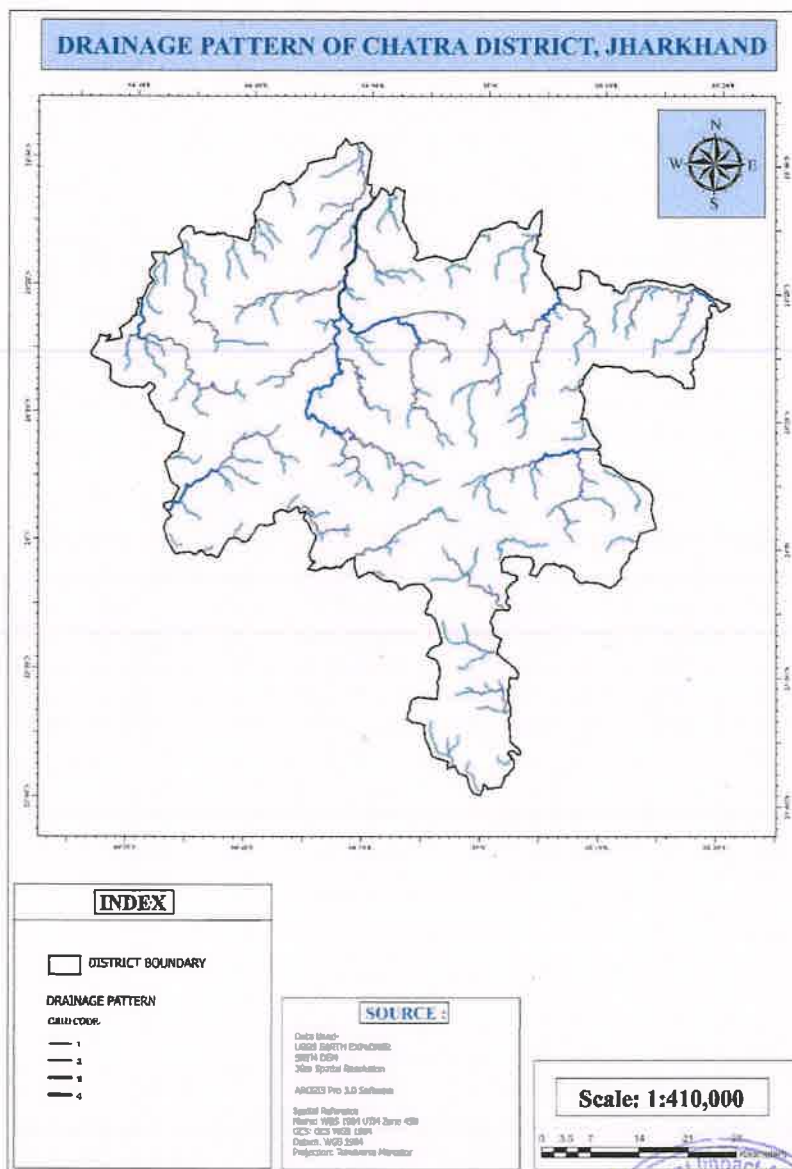


Figure 5.1: Elevation Map of Chatra District



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Table 5.1: Drainage System with description of main Rivers in Chatra District

Sl. No.	Name of the River	Area drained (in Km <sup>2</sup> )	%Area drained in the District
1	Alha Nadi	0.52	0.014
2	Amanat River	4.71	0.127
3	Amjhar Nadi	9.40	0.253
4	Amjharwa Nala	2.41	0.065
5	Barakar River	2.94	0.079
6	Barki River	2.47	0.066
7	Basane River	1.57	0.042
8	Chako River	2.13	0.057
9	Chakora Nadi	0.69	0.018
10	Damodor River	19.47	0.523
11	Dhab River	1.82	0.049
12	Dohi River	1.43	0.039
13	Domuhan River	0.51	0.014
14	Dulki Nadi	2.41	0.065
15	Gahri River	1.48	0.040
16	Garhi Nadi	3.65	0.098
17	Ghari River	0.36	0.010
18	Golai Nadi	9.40	0.253
19	Hatbar River	0.35	0.010
20	Jam River	1.67	0.045
21	Kadra River	0.68	0.018
22	Lilajan River	9.40	0.253
23	Majhesawadah Nala	0.15	0.004
24	Mohana River	4.32	0.116
25	Mohani River	1.38	0.037
26	Morhar River	2.41	0.065

Table 5.2: Salient features of important Rivers & Stream of Chatra District

Sl. No.	Name of the River/Stream	Total Length in the District (In Km)	Place of Origin	Altitude at Origin (in [m] AMSL)
1	Alha Nadi	7.86	-	-
2	Amanat River	49.29	Murbe	560
3	Amjhar Nadi	9.42	Tikadhar	380
4	Amjharwa Nala	3.91	-	-
5	Barakar River	19.21	Padma	600
6	Barki River	23.23	Marangi	562
7	Basane River	26.31	Kendua	472
8	Chako River	21.39	-	-
9	Chakora Nadi	9.14	-	-
10	Damodor River	14.96	-	-
11	Dhab River	24.30	Simaria	560
12	Dohi River	21.06	Dari	400
13	Domuhan River	7.87	Dalkoma	260
14	Dulki Nadi	0.75	Chakla	220
15	Gahri River	24.01	-	-
16	Garhi Nadi	24.77	Tilra	629
17	Ghari River	3.68	Pipra	324



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18	Golai Nadi	8.48	Kurkheta	434
19	Hatbar River	7.32	Sildag	400
20	Jam River	32.85	Ghaghra Tandtola	460
21	Kadra River	10.99	Tarhi Mahua	-
22	Lilajan River	75.18	Simaria	-
23	Majhesawadah Nala	2.79	-	-
24	Mohana River	26.05	Piri	640
25	Mohani River	25.53	-	-
26	Morhar River	19.30	-	-

(Source: DSR[Sand] –Chatra,2023)

## 5.2 Irrigation Pattern:

The district has considerable flat land, which provide suitable site for agricultural use. The hilly areas are mostly under forest with patches of cultivation on scarp areas. Major rivers flowing in the district are Yamuna, Barki, Chako, Damodar and Garhi. Major crops grown in the district are rice, wheat and pulses. Only 12.21 percent area of agricultural use are net irrigated and major source of irrigations are well and tubewells.

IRRIGATION BY DIFFERENT SOURCES (Areas and Number of Structures)	Nos.	Area (Ha)
Dugwell	17015	9364
Tube wells /Bore wells	184	537
Tanks / Ponds	100	587
Canals	2	2
Other Sources	69.50	Bhaurna Bandh, Triveni Weir Scheme and Dania Weir Scheme,



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## 6. LAND UTILIZATION PATTERN OF THE DISTRICT

### 6.1 Forest:

Based on the interpretation of IRS Resource sat-2 LISS III satellite data of the period Nov 2017 to Jan 2018, the Forest Cover in the State is 23,721.14 km<sup>2</sup> which is 29.76% of the State's geographical area. In terms of forest canopy density classes, the State has 2,601.05 km<sup>2</sup> under Very Dense Forest (VDF), 9,688.91 km<sup>2</sup> under Moderately Dense Forest (MDF) and 11,431.18 km<sup>2</sup> under Open Forest (OF). Forest Cover in the State has increased by 58.41 km<sup>2</sup> as compared to the previous assessment reported in ISFR 2017. Out of total geographical area of Chatra district becomes 3718 km<sup>2</sup>, forest area covers nearly 1782.09 km<sup>2</sup>. The tribal economy revolves around using forest products, by products and minor products. Kendu leaves, Bamboo and its manufactured products, Mahua, fruits, leaves lac etc. play a role in the economic activity of the people. People also hunt animals for food and 'Janishikar' festival is related to this hunting habit.

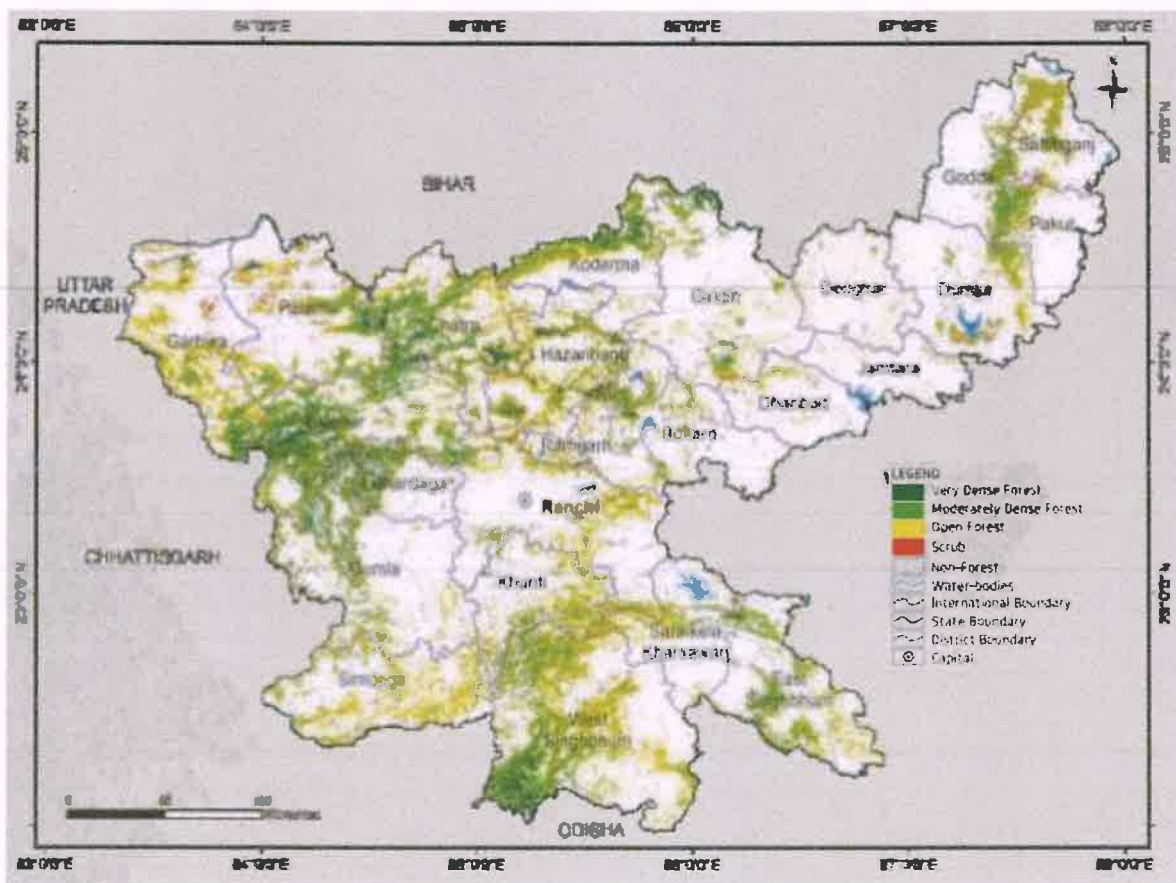


Fig.6.1: Forest Cover Map of Jharkhand  
(Source: India State of Forest Report, 2021)



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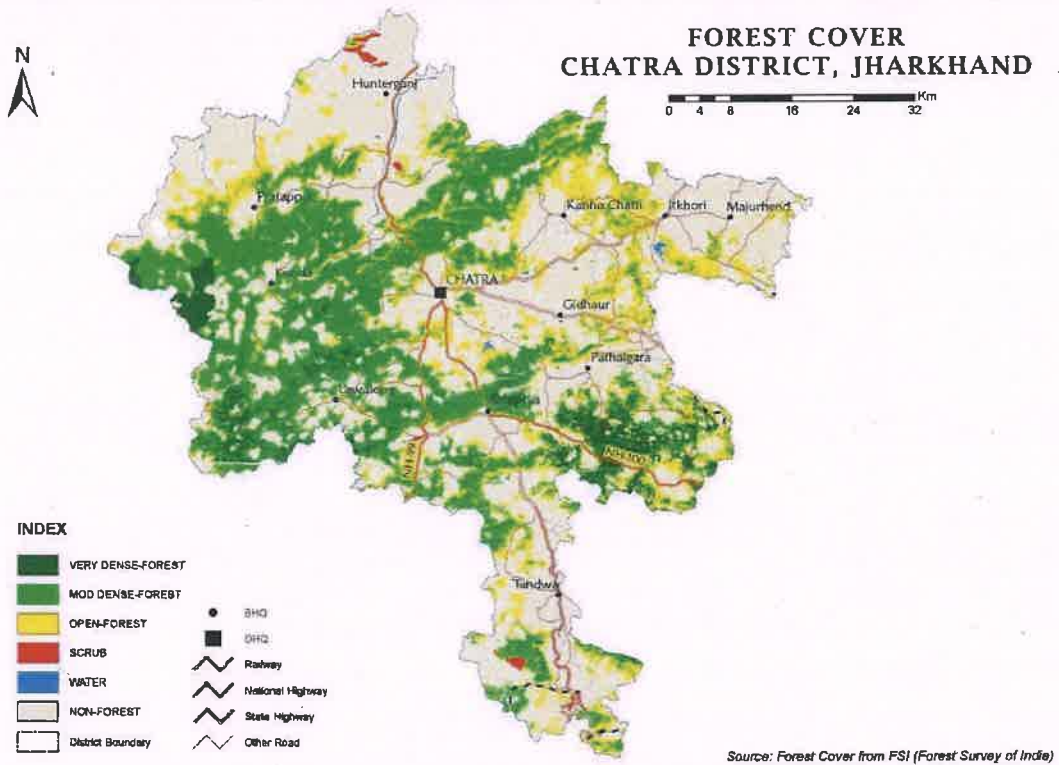


Fig.6.2: Forest Cover Map of Chatra, Jharkhand

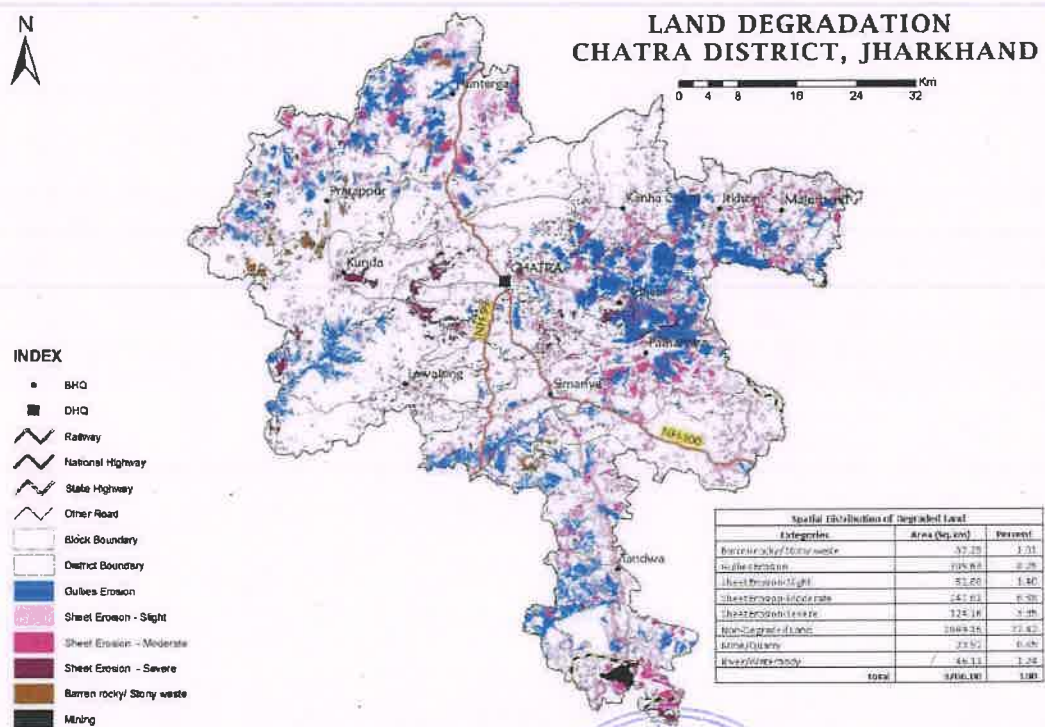


Fig.6.3: Land Degradation Map of Chatra, Jharkhand



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Table 6.1: Districtwise Forest Cover Area in Jharkhand (Area in Km<sup>2</sup>)

District	Geo-geographical Area (GA)	2021 Assessment				% of GA	Change wrt 2019 assessment	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total			
Bokaro	2,883	60.99	231.94	283.07	576.00	19.98	2.45	37.95
<b>Chatra</b>	<b>3,718</b>	<b>244.28</b>	<b>871.73</b>	<b>666.08</b>	<b>1,782.09</b>	<b>47.93</b>	<b>4.74</b>	<b>23.57</b>
Deoghar	2,477	0.00	14.30	191.50	205.80	8.31	2.09	14.04
Dhanbad	2,040	0.00	44.00	174.18	218.18	10.70	4.67	16.05
Dumka	3,761	0.00	259.40	318.23	577.63	15.36	0.32	44.55
East Singhbhum	3,562	54.81	591.69	434.19	1,080.69	30.34	1.31	20.91
Garhwa	4,093	125.14	415.60	890.98	1,431.72	34.98	40.13	44.32
Giridih	4,962	77.16	338.56	490.19	905.91	18.26	4.67	28.92
Godda	2,266	12.81	271.88	138.66	423.35	18.68	0.00	14.27
Gumla	5,360	304.69	585.81	552.65	1,443.15	26.92	0.89	8.25
Hazaribagh	3,555	230.11	348.54	784.54	1,363.19	38.35	10.42	15.99
Jamtara	1,811	0.00	20.84	95.18	106.02	5.85	5.38	5.32
Khunti	2,535	72.97	344.59	496.18	913.74	36.04	8.25	3.11
Koderma	2,540	80.80	494.43	447.82	1,023.05	40.28	-0.42	6.37
Latehar	4,291	480.36	1,308.93	613.75	2,403.04	56.00	-3.30	9.30
Lohardaga	1,502	174.03	218.40	111.99	504.42	33.58	-0.20	7.66
Pakur	1,811	2.96	172.40	111.64	287.00	15.85	-0.13	20.06
Palamu	4,393	62.82	512.73	640.18	1,215.73	27.67	14.95	84.23
Ramgarh	1,341	30.96	109.32	190.98	331.26	24.70	2.26	14.49
Ranchi	5,097	62.89	363.91	741.98	1,168.78	22.93	4.29	27.98
Sahibganj	2,063	17.74	258.73	297.48	573.95	27.82	1.60	47.53
Saraikela-Kharsawan	2,657	22.03	213.84	338.73	574.60	21.63	0.56	21.87
Simdega	3,774	21.97	343.54	877.89	1,243.40	32.95	2.48	20.28
West Singhbhum	7,224	461.53	1,353.80	1,553.11	3,368.44	46.53	2.32	47.18
<b>Grand Total</b>	<b>79,716</b>	<b>2,601.05</b>	<b>9,688.91</b>	<b>11,431.18</b>	<b>23,721.14</b>	<b>29.76</b>	<b>109.73</b>	<b>584.20</b>

(Source: India State of Forest Report 2021-Jharkhand)

6.2 Land Use Land Cover:

(Area in m<sup>2</sup>)

Year	Geographical Area	Forest Area	Area under Non-agriculture use	Barren & Uncultivable Land	Permanent Pastures & other Grazing Land	Land under misc. treegroves not included in Net Sown area	Cultivable Wasteland	Fallow Land other than Current fallow	Current Fallow	Net Area Sown
1	2	3	4	5	6	7	8	9	10	11
2020-21	394290	221117	-	16800	-	-	139300	33800	-	88700





**a) Forest detail of the area**

The forest of Chatra is full of variety of medicinal plants, Kendu leaves, Bamboo, Sal, Teak, other timber species and a wide range of carnivorous & herbivorous wild animals. The district has one wild life sanctuary also known as the Lawalong Wildlife Sanctuary, which hosts even tigers. The area of the sanctuary is 26,886.23 hectares. In the sanctuary the principal animals that are found are Tigers, Leopards, Bear, Nilgai, Sambhar, Peacock, Wild Boar and Deer, together with variety of snakes and birds.

**b) Agriculture & Irrigation**

The district has considerable flat land, which provide suitable site for agricultural use. The hilly areas are mostly under forest with patches of cultivation on scarp areas. Major crops grown in the district are rice, wheat and pulses. Only 12.21 percent area of agricultural use are net irrigated and major source of irrigations are well and tubewells.

**c) Mining**

The mineral resources of Chatra district playing massive role in industrial, social and economic development of the district. Available mineral resources in the district:

- Sand
- Stone
- Coal

Sand mining activities are playing a significant role industrial, social and economic development of the district. The sand mining carried out throughout the district mainly in stretch of Mohana Barki, Chako, Damodar and Garhi, Lilanjan, Falgu. etc. Evidently, given the concentration of mines in Tandwa block, the district has categorized it as 100 percent directly-affected. Simaria, which shares the boundary with Tandwa has also been regarded as fully affected citing proximity of the mining area as well as heavy mineral transportation. A part from these, three more blocks – Pathalgora, Chatra and Hunterganj have been considered as mining-affected in varied degrees. Hunterganj, Chatra and Pathalgora have Minor mineral mines particularly Stone. Coal, Sand, Graphite and Stones are main minerals of Chatra district.



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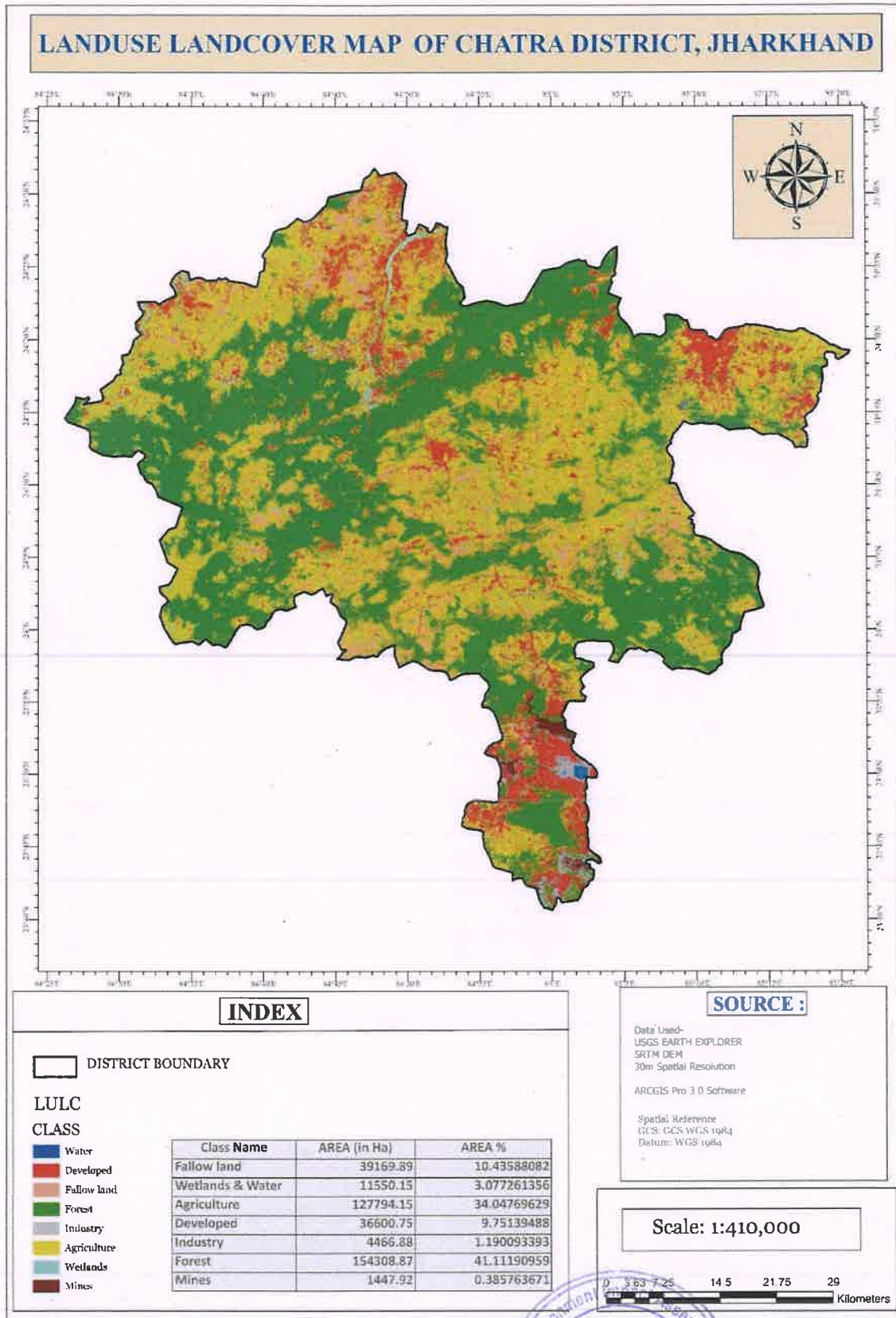


Figure6.4: LULC Map of Chatra District



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## 7. SURFACE WATER & GROUND WATER SCENARIO OF THE DISTRICT

### 7.1 Hydrogeology:

The southern part of the district is underlain by Granite-gneiss of Achaean age forming the basement. These occur as large batholiths and are intruded by basic rocks. In the central and northern part of the district the rocks of Barakar formation consisting of feldspathic sandstones, shales and coal seams overlying the metamorphic are exposed. In the western and northern part of the district alluvial cover of moderate thickness, caps the Archaean crystallines and the Gondwana sedimentaries.

The district is underlain by diverse geological formations with complex tectonic framework. The geological formations have been grouped under three main categories: -

- a) The gneissic complex in the southern and the central part
- b) The Rajmahal traps in the eastern and southeastern part
- c) Gondwanas overlain by thin mantle of alluvial cover in the northern and central part.

Ground water occurs mostly under phreatic condition in all the lithological units within the shallow aquifers and locally under semiconfined and confined condition in deeper aquifers. Hydrogeological Map is shown.

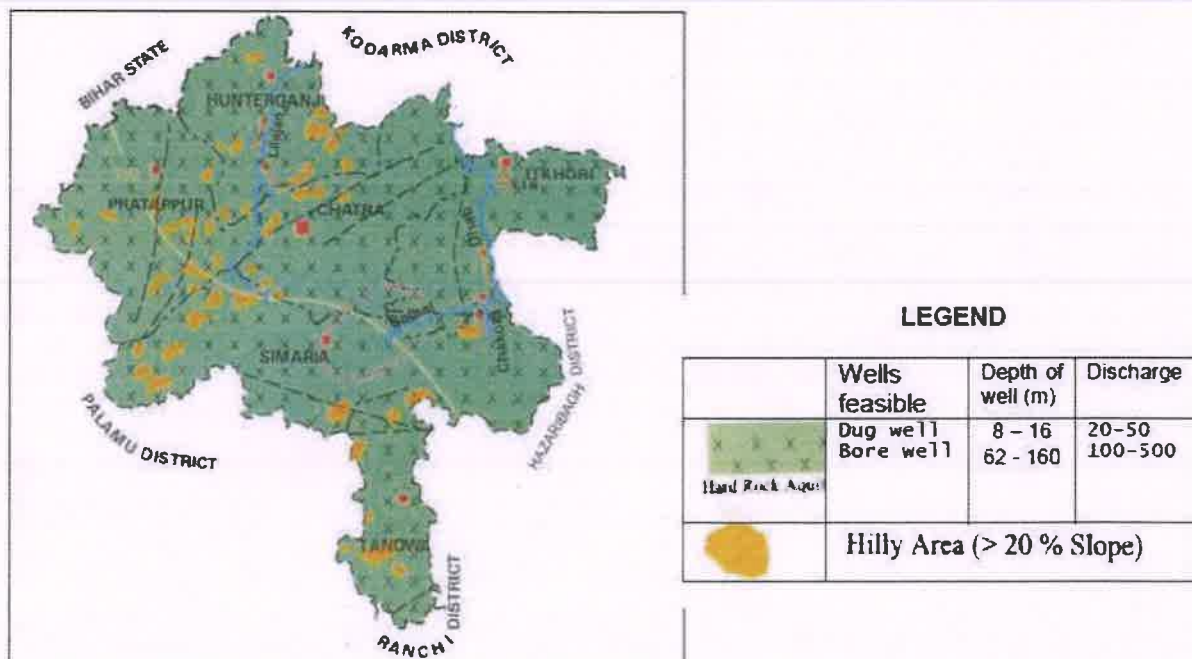


Fig7.1: Hydrogeological Map of Chatra, Jharkhand



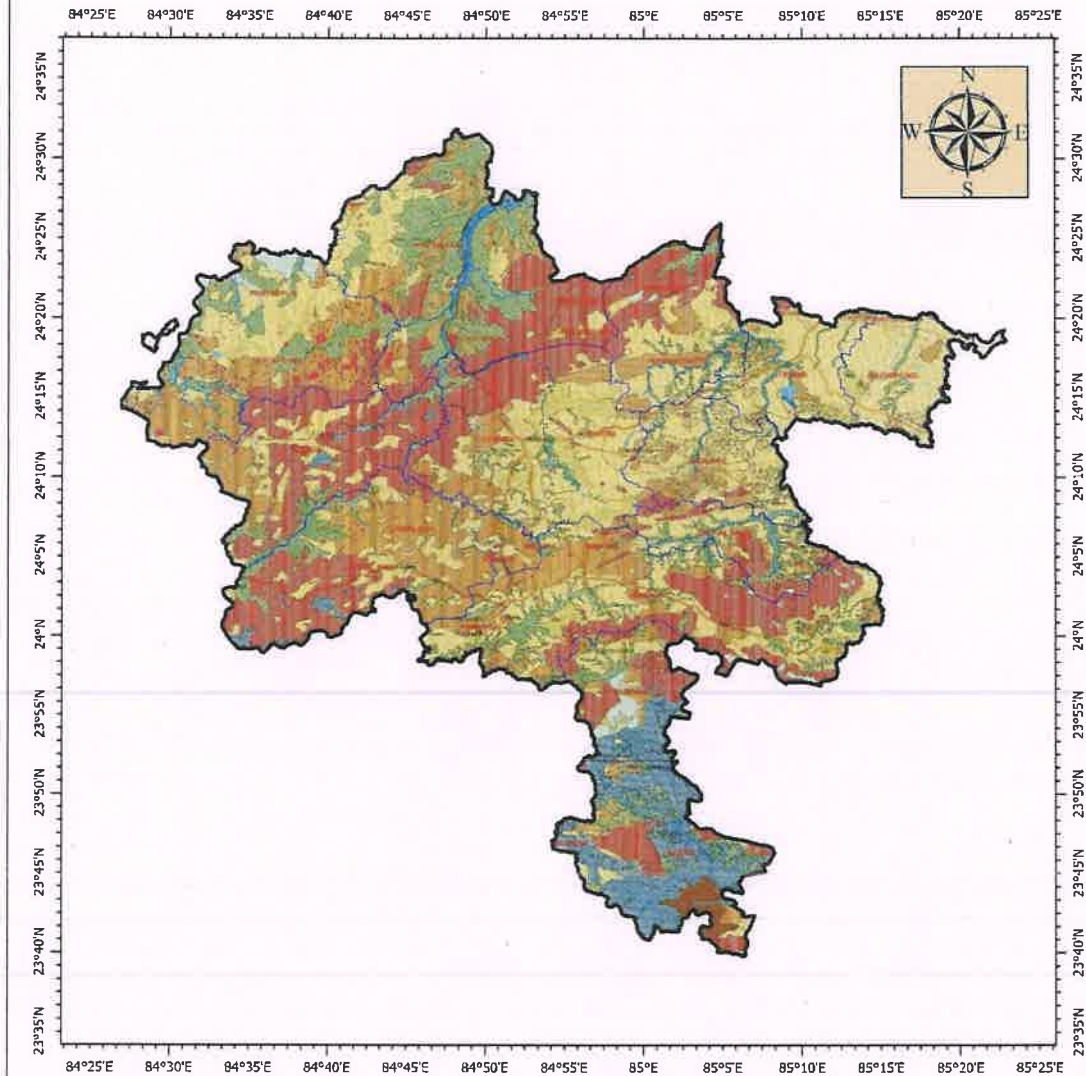
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BEDMINING" FOR CHATRA DISTRICT OF JHARKHAND



GROUND WATER PROSPECT MAP OF CHATRA DISTRICT



INDEX	
	LIMITED PROSPECTS
	MINING AREAS
	RIVER / WATER BODY
	RUN OFF ZONE
	YIELD 10-50 LPM, DEPTH 30-30 M
	YIELD 10-50 LPM, DEPTH > 80 M
	YIELD 100-200 LPM, DEPTH 30-80 M
	YIELD 200-400 LPM, DEPTH 30-80 M
	YIELD 200-400 LPM, DEPTH > 80 M
	YIELD 50-100 LPM, DEPTH 30-80 M
	YIELD 50-100 LPM, DEPTH > 80 M

**SOURCE :**  
 Jharkhand Geo Portal - Jharkhand GOV  
[gis.jharkhand.gov.in](http://gis.jharkhand.gov.in)  
 Spatial Reference  
 GCS: GCS WGS 1984  
 Datum: WGS 1984

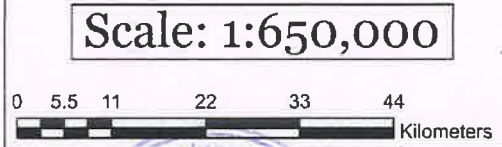


Fig 7.2 Groundwater Depth Map of Chatra



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## 7.2 Depth to Water level

During May 2012, the depth to water levels in HNS wells tapping shallow aquifer ranged from 30 to 80m bgl. Depth to ground water levels during the post monsoon (November 2012) varied between 30 and 80 m bgl. Categorization of depth to water level of pre-monsoon period (May 2012) for HNS in Jamtara district is presented below in table below: -

### Ground Water In Aquifer-I (Weathered Granite-Gneiss/Weathered Basalt):

Ground water occurs under phreatic/ unconfined to semi-confined conditions in Aquifer-I which is represented by weathered granite and Weathered Shale/Sandstone. Ground water occurs in unconfined state in shallow Aquifer-I tapped by alluvium, laterites, weathered granite and weathered Shale and Sandstone (Upto 30 m depth) , however in some cases depth varies from more than 30m.

### Ground Water in Aquifer-II (Fractured Granite-Gneiss/Fractured Basalt/Sandstone):

Ground water occurs under Semi-confined to confined condition in Aquifer-II represented by Fractured/Jointed granite-gneiss, Fractured Shale and Sandstones upto the of 200 mtr depth. Generally, extent of Aquifer-II in Precambrian formation ranges from 30-120m. Granites and Gneisses are the most predominant rock types among all other rocks falling under the consolidated unit.

### Potential Fractures in Aquifer-II:

Total 20 Number of boreholes has been constructed by CGWB in the district under groundwater exploration programme upto maximum depth of 200 m. The borehole data reveals that, in general potential fractures are encountered between 30- 120 m. Some times dry fractures have also been encountered. Shows the Potential Fracture encountered during Ground Water Exploration in Chatra district.

### Potential Fractures encountered during ground water Exploration in Chatra district, Jharkhand:

S. No.	Location	Block	Depth Drilled (m)	Major Lithology Encountered	Depth of casing (m)	Potential Fracture Zone encountered (m bgl)	Discharge (lpm)
1.	Kanhachatti	Kanhachatti	183.84	Granite gneiss	27.85	59-60,88.7-88.9, 93-93.2, 95-96, 173-173.5	450
2.	IAHRANGA	Tandwa	157	Granite gneiss	17.8	34-35.2	420
3.	Simaria	Simaria	161	Granite gneiss	38.8	83.5-83.9, 94.8-95.2, 98.6-98.8	240

Approved

(Source: CGWB Chatra)



### 7.3 Ground Water Quality:

Ground water in the phreatic aquifers in Chatra district slightly alkaline in nature, which is also colourless, odourless. The specific electrical conductance of ground water in phreatic zone during May 2011 was in the range of 655 -2408  $\mu\text{S}/\text{cm}$  at 25°C. The suitability of ground water for drinking purpose has been evaluated on the basis of pH, Total hardness (T.H), Ca, Cl, F and  $\text{NO}_3$ . The chemical concentration of these constituents is presented below in table-4. Isoconductance Map is produces in Figure-9.4

Table-7.1 The chemical concentration of samples (May 2022) of Chatra district

Block	Location	E.C. micro Siemens/cm at 25° C	pH	$\text{CO}_3$ mg/l	$\text{HCO}_3$ mg/l	Cl mg/l	Ca mg/l	Mg mg/l	TH as $\text{CaCO}_3$ mg/l	Na mg/l	K mg/l
SIMARIA	Tutikawa	690	7.57	ND	110.7	70.9	48	30.37	245	32.48	4.88
CHATRA	Chatra	1440	7.41	ND	446	147	62	49	355	127	30
ITKHORI	Itkhori	657	7.56	ND	344.4	17.72	38	27.94	210	38.9	5.07
SIMARIA	Simaria	249	7.4	ND	110.7	17.72	26	7.29	95	14.59	1.86
SIMARIA	Bagra	1399	7.41	ND	110.7	215.52	76	57.1	425	81.94	17.02



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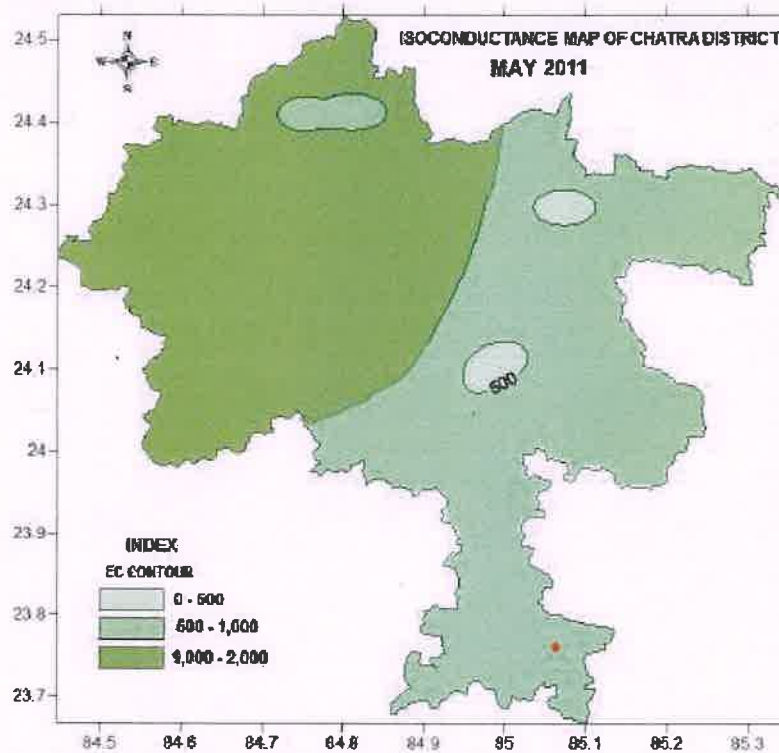


Fig:7.3: Isoconductance Map of Chatra district

**7.4 Status of Ground Water Development:**

In the rural areas the entire water supply is dependent on ground water. Ground water development is mainly carried out in the district through dug wells and Handpumps. In general, dug wells are of 2m diameter and the depth ranges between 8 to 15 m depending on the thickness of the weathered zone, tapping the shallow aquifer in the weathered zone and uppermost slice of the basement. Large number of dug wells used for drinking water is under private ownership for which there is no reliable data. Over the years Mark II/ Mark III hand pumps are being drilled in large numbers for ground water development. These handpumps have the following two major advantages

i) Less susceptible to contamination from surface sources and  
 ii) tap fractures between 20-60m depth which have been found to be less affected by seasonal water level fluctuation and thus have lesser chances of failure even during extreme summer. In rural areas of Chatra district, the number of hand pumps drilled by PHED is 12311 of which 9342 are under working condition. There are 574 dug wells constructed by Government departments that are under regular use.

iii) In the urban areas ground water plays a supplementary role in water supply, the major supply being made through dams, reservoirs or weirs across rivers or streams. No authentic data is available on the number of ground water structure scattering the urban water supply.

As per the latest ground water resource estimation carried out adopting GEC97 methodology, the overall stage of ground water development in Chatra district has been found to be 41% indicating enough scope for future development.



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Fig:7.4: Categorization of blocks of Chatra district

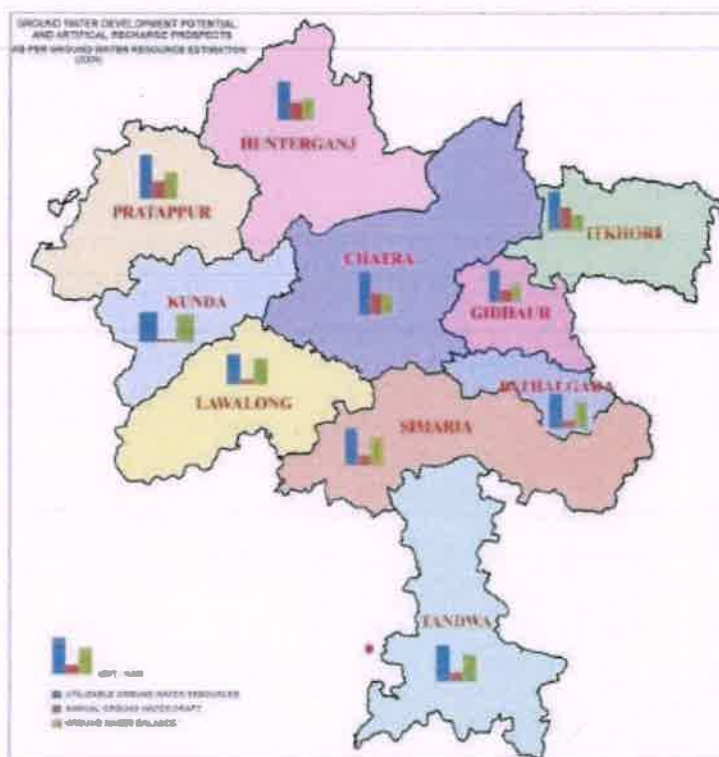


Fig:7.5: Ground water development potential of Chatra district



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Table – 7.2: Dynamic Ground Water Resource of Chatra district as on 31st March 2022 as per GEC97(ham)

Block	Annual Replenishable Ground Water Resource				Total	Natural Discharge during non-monsoon season	Net Annual Ground Water Availability	Annual Ground Water Draft			Projected Demand for Domestic and Industrial uses up to 2025	Ground Water Availability for future irrigation	Stage of Ground Water Development (%)
	Monsoon Season		Non-monsoon					Irrigation	Domestic and Industrial uses	Total			
	Recharge from rainfall	Recharge from other sources	Recharge from rainfall	Recharge from other sources									
Chatra	3122.90	50.15	533.33	416.97	4123.36	412.34	3711.03	1611.936	251.20	1863.13	419.68	1679.41	50.21
Gidhaur	965.53	1.91	164.89	92.90	1225.24	122.52	1102.71	356.35	52.04	408.39	88.27	658.09	37.04
Hunterganj	2929.53	71.47	500.31	336.25	3837.56	383.76	3453.80	1300.02	241.79	1541.81	410.11	1743.67	44.64
Itkhori	1741.89	69.97	297.48	287.97	2397.31	239.73	2157.58	1126.13	177.82	1303.95	301.61	729.85	60.44
Kunda	1481.27	3.13	252.97	32.34	1769.72	176.97	1592.75	104.40	38.05	142.45	64.54	1423.81	8.94
Lawalauung	2253.28	4.33	384.82	94.58	2737.01	273.70	2463.31	343.82	65.44	409.26	110.99	2008.50	16.61
Pathalgora	826.63	1.46	141.17	45.37	1014.63	101.46	913.17	169.82	43.31	213.13	73.45	669.89	23.34
Pratappur	2070.57	4.24	353.61	208.18	2636.61	263.66	2372.95	798.94	149.66	948.60	253.85	1320.16	39.98
Simaira	3274.53	5.63	535.29	226.36	4041.82	202.09	3839.73	860.56	143.13	1003.69	242.77	2736.41	26.14
Tandwa	2997.56	4.13	323.62	180.95	3506.26	350.63	3155.63	690.90	136.92	827.81	232.23	2232.50	26.23
Total	21663.69	216.44	3487.51	1921.88	27289.52	2526.86	24762.66	7362.88	1299.35	8662.23	2197.49	15202.29	34.98

### Recommendations:

As the district suffers from water scarcity, it is recommended to take artificial recharge at suitable locales. On the basis of the hydrogeological criteria such as post monsoon water level below 7 mbgl indicating availability of sufficient space in the unsaturated zone to retain additional water and availability of surplus surface runoff, 250 kms<sup>2</sup> area in Chatra district has been demarcated as suitable for artificial recharge. Through this 41.25 m cm water can be recharged.

In the hard rock areas, pin pointing suitable sites for borewells is always a challenge. Considering the anisotropy in distribution of fractures at deeper level, suitable sites may be selected using remote sensing techniques in association with geophysical and hydro-geological investigations. For deriving optimal benefit from aquifers in areas under fissured formation, the dug wells should be designed to penetrate the weathered zone as well as top part (1-2m) of the under lying bed rock, so as to get the full benefit, from the total thickness of the shallow aquifer. For hand pumps and shallow tubewells the casing provided against the weathered zone should be slotted at the bottom so that the well can extract shallow ground water also. In urban areas use of shallow aquifers should be encouraged.

The surface run off in urban areas and its peripheral parts should be harnessed to augment the ground water resource through appropriate recharge techniques. For urban areas roof top rainwater harvesting and artificial recharge is most suitable. Location and design of the structures should be guided by findings from hydrogeological and geophysical surveys. Sites for artificial recharge should be taken up at places where sufficient thickness of weathered zone as well as fracture/fracture zones are available. The depth of the recharge well should be governed by the depth of occurrence of the fractures.



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## 8. RAINFALL AND CLIMATE OF THE DISTRICT

### 8.1 Rainfall & Humidity:

The district falls in the rain shadow zone of the Santhal Pargana plateau. The average annual precipitation is 830.8 mm and the average number of rainy days is 59. Even this meager precipitation is erratic which coupled with long interspell forces the district to suffer from drought.

Table 8.1: Average Monthly Rainfall in the Chatra district

Rainfall Pattern in Chatra													
(Source: Department of Agriculture)													
Month	January	February	March	April	May	June	July	August	September	October	November	December	Overall
Normal Rainfall (mm)	22.0	18.7	14.7	8.0	28.1	167.1	308.2	310.8	210.8	73.5	8.2	3.9	1174.0
Average Rainfall (mm)	2.6	10.5	3.4	7.1	25.9	177.9	256.2	260.9	158.7	41.3	4.4	0.3	949.2
No. of rainfall days	1	2	0	1	3	7	15	17	8	4	1	0	59

Source:- (CGWB Chatra)

### 8.2 Climatic Condition:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Nov	Oct	Dec	Year
Record high °C (°F)	38.5 (101.3)	38.5 (101.3)	38.5 (101.3)	38.5 (101.3)	38.5 (101.3)	38.5 (101.3)	38.5 (101.3)	38.5 (101.3)	38.5 (101.3)	38.5 (101.3)	38.5 (101.3)	38.5 (101.3)	38.5 (101.3)
Average high °C (°F)	33.57 (92.4)	28.64 (83.5)	31.7 (89.0)	35.52 (95.9)	38.25 (100.8)	36.24 (97.2)	31.6 (88.8)	30.57 (87.0)	29.77 (85.5)	28.19 (82.7)	26.59 (79.8)	21.88 (71.3)	30.2 (86.3)
Daily mean °C (°F)	18.91 (66.0)	22.98 (73.3)	28.46 (83.2)	33.34 (92.0)	35.92 (96.6)	33.5 (92.3)	29.44 (84.9)	28.43 (83.1)	27.48 (81.4)	25.61 (78.1)	23.38 (74.0)	19.4 (66.9)	27.24 (81.0)
Average low °C (°F)	12.86 (55.1)	16.2 (61.1)	21.0 (69.8)	25.12 (77.2)	27.4 (81.3)	26.97 (80.5)	24.86 (76.7)	24.1 (75.3)	23.08 (73.5)	20.69 (69.2)	17.76 (63.9)	13.7 (56.6)	21.14 (70.0)
Record low °C (°F)	9.0 (48.2)	11.0 (51.8)	13.0 (55.4)	18.0 (64.4)	20.0 (68.0)	21.0 (69.8)	21.0 (69.8)	22.0 (71.6)	16.0 (60.8)	17.0 (62.6)	14.0 (57.2)	8.0 (46.4)	8.0 (46.4)
Average precipitation mm (inches)	10.2 (0.4)	10.2 (0.4)	10.2 (0.4)	10.2 (0.4)	10.2 (0.4)	10.2 (0.4)	10.2 (0.4)	10.2 (0.4)	10.2 (0.4)	10.2 (0.4)	10.2 (0.4)	10.2 (0.4)	10.2 (0.4)
Average precipitation days (≥ 1.0 mm)	0.73	1.55	1.45	1.36	1.64	4.73	7.64	7.91	6.73	3.18	0.27	0.73	3.16
Average relative humidity (%)	50.48	44.95	32.09	30.77	32.44	52.67	74.45	81.25	81.51	70.96	55.61	51.4	54.88
Mean monthly sunshine hours	8.37	8.37	10.57	12.81	13.12	12.43	11.37	10.85	10.13	10.19	9.22	6.4	10.48

The driest month is December, with 8 mm/0.3 inch of rain. With an average of 318 mm/12.5 inches, the most precipitation falls in July. May is the warmest month of the year. The temperature in May averages 32.0°C/89.5°F. January has the lowest average temperature of the year. It is 15.7°C/60.3°F.

(Source: Indian Meteorological Department)



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**9. DETAILS OF EXISTING MINING LEASES OF MINOR MINERAL (STONE) 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	Period of Mining Lease (Start/End)	Period of Mining Lease (Start/End)	Date of mining operation commencement	Status (Working/ Non-working/ Temp. Working for dispatch)	Captive/ Non-Captive	Obtained Environmental Clearance (Yes/No), If Yes Letter No. with date of grant of EC	Location of the Mining Lease (Coordinates)	Method of Mining (Opencast/Underground)
1	Stone	Max Koulshwari Stone Works Partner- Sri Parmendra Singh	Vill- Suresh Colony Hazaribag	111 dt 28.07.2015	2.31	03.08.2015	02.08.2025	1st	01.11.2016	Working	Non-Captive	600 dt 28.11.2014	24°22'53.84"N 84°53'14.84"E 24°22'57.01"N 84°53'15.40"E 24°22'58.33"N 84°53'16.99"E 24°22'58.04"N 84°53'18.50"E 24°22'57.74"N 84°53'23.43"E 24°22'55.86"N 84°53'22.05"E 24°22'54.03"N 84°53'19.17"E 24°22'53.28"E 84°53'17.08"E	Opencast
2	Stone	M. San Shankar Stone Industries Propr- Sri Navas Kumar	S/O- Late- Sivanrakant Singh Vill- Khutikewalkhand Po- Pse- Hunterganj, Dist- Chattra	187 dt 23.09.2015	3.64	13.11.2015	12.11.2025	1st	02.06.2016	Working	Non-Captive	1300 dt 17.05.2015	24°21'47.81"N 84°44'22.46"E 24°21'48.22"N 84°44'21.23"E 24°21'49.12"N 84°44'21.49"E 24°21'49.30"N 84°44'21.16"E 24°21'50.52"N 84°44'21.80"E 24°21'50.79"N 84°44'21.24"E 24°21'51.40"N 84°44'21.29"E 24°21'51.22"N 84°44'20.46"E 24°21'52.22"N 84°44'18.53"E 24°21'53.07"N 84°44'19.62"E 24°21'54.49"N 84°44'19.11"E 24°21'54.93"N 84°44'19.87"E 24°21'54.47"N 84°44'20.90"E 24°21'55.80"N 84°44'17.11"E 24°21'57.55"N 84°44'17.00"E 24°21'57.45"N 84°44'19.29"E 24°21'58.68"N 84°44'19.36"E 24°21'58.40"N 84°44'21.35"E 24°21'58.08"N 84°44'23.96"E 24°21'57.67"N 84°44'24.11"E 24°21'56.89"N 84°44'23.93"E 24°21'56.78"N 84°44'24.44"E 24°21'57.52"N 84°44'24.52"E 24°21'57.68"N 84°44'25.51"E	Opencast



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3	Stone	Sri Sitarami Balau S/o- Late- Thiloki Prasad Melhi	vill- Nawabganj Jhali Tower FlanN no- 6C, Po- Hazaribag Ps- Sackar Dist- Hazaribag	116 dt 26.02.2016 Lease transfer vide 657 dt 10.10.2020	0.96	22.09.2015	21.09.2025	ist				Non-Working	Non-Captive	After Lease Transfer, the Revised EC Not submitted	24°21'50.16"N 84°44'18.52"E 24°21'48.86"N 84°44'20.27"E 24°21'47.85"N 84°44'17.04"E 24°21'47.25"N 84°44'15.87"E 24°21'46.55"N 84°44'15.88"E	Opencast	
4	Stone	M/s Gaupati Stone Works Partner- SriPrenechand Singh	Vill-Pindrakala, Po- Kubba Ps-Hunterganj, Dist- Chatra	742 dt 28.06.2016	2.62	21.09.2016	20.09.2026	ist				Non-Working	Non-Captive	1094 dt 08.07.2015	24°18'49.1"N to 24°18'56.3"N	84°54'34.3"E, to 84°54'39.9"E	Opencast
5	Stone	Sri Mahendra Kumar Ujala S/O- Sri Girdhari Saw	Vill- Mirpur, Ps-Vajlo Ps- Hunterganj, Dist- Chatra	741 dt 28.06.2016 Lease transfer vide letter No. 359 dt 16.04.2019	1.00	30.08.2016	29.08.2026	ist	15.11.2020	Working	Working	Non-Captive	141 dt 08.06.2022	24°19'04.72"N 84°52'59.30"E 24°19'05.50"N 84°52'59.37"E 24°19'08.03"N 84°53'00.22"E 24°19'10.14"N 84°53'00.84"E 24°19'11.77"N 84°53'01.04"E 24°19'11.30"N 84°53'01.01"E 24°19'10.73"N 84°53'02.10"E 24°19'09.50"N 84°53'02.81"E 24°19'08.86"N 84°53'02.85"E 24°19'07.56"N 84°53'01.15"E 24°19'07.70"N 84°53'02.07"E 24°19'07.46"N 84°53'02.60"E 24°19'05.91"N 84°53'01.76"E 24°19'05.51"N 84°53'00.86"E 24°19'04.87"N 84°53'00.26"E	Opencast		
6	Stone	M/s Chatniya Mines Propr- Sri Uday Kumar Sharma S/O- Late- Umakant Sharma	Vill- Hosil, Po- Pindra Ps- Yasistanagar, Dist- Chatra	1367 dt 19.10.2019	2.83	24.10.2019	23.10.2029	ist	01.07.2020	Working	Working	Non-Captive	559 dt 09.10.2019	24°19'33.02"N 84°15'33.07"E 24°19'33.76"N 84°15'39.24"E 24°19'31.81"N 84°15'39.38"E 24°19'31.19"N 84°15'40.86"E 24°19'28.61"N 84°15'39.83"E 24°19'28.80"N 84°15'34.20"E 24°19'29.78"N 84°15'34.11"E 24°19'30.10"N 84°15'34.18"E 24°19'30.20"N 84°15'34.68"E 24°19'31.71"N 84°15'34.40"E 24°19'32.14"N 84°15'33.78"E	Opencast		
7	Stone	Sri Sanjay Kumar Singh S/O- Sri Shambhunath Singh Vill+ Po- Bagra, Ps- Simariya 2. Sri Ashish Kumar S/O- Sri Shyamkishore Singh	Vill+ Po- Bagra, Ps- Simariya Dist- Chatra	1188 dt 23.09.2015	1.21	13.11.2015	12.11.2025	ist	25.06.2017	Working	Working	Non-Captive	1203 dt 07.08.2015	Between N24°04'20.8" to N24°04'25.0" N	Between E85°00'09.3" to E85°00'12.9"	Opencast	



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DISTRICT SURVEY REPORT OF MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVERS-BED MINING FOR CHATRA DISTRICT OF BIHAR (INDIA)

8	Stone	M/s Man Bhagwati Stone Works Propo- Sri Anant Kumar Sahay S.O- Sri Srikant Kumar Sahay	Vill- Po- Detho Ps- Simariya, Dist- Chatra	19/1 dt 26.09.2015	1.94	13.11.2015	12.11.2025	ist	-	02.07.2016	Working	Non- Captive	12/25 dt 17.08.2015	24°05'48.0" N 84°53'3.02"E 24°05'49.3" N 84°53'3.36"E 24°05'49.5" N 84°53'2.00"E	Open cast
9	Stone	M/s An Mata Di Stone Works partner- Sri Sudhanu Kumar Singh	Vill- Roj, Po- Simariya, Dist- Chatra	20/6 dt 05.02.2016	1.62	10.05.2016	09.05.2026	ist	-	05.10.2016	Working	Non- Captive	05/1 dt 30.09.2015	24°04'20.5" N 85°00'04.8"E TO 24°04'45.1" N 85°00'09.3"E	Open cast
10	Stone	M/s Raja Enterprises Partner-1 Sri Sanjay Kumar S.O- Sri Bhumeswar Ram	Vill- Dandua, Po- Amaria, Ps- Simariya, Dist- Chatra	06/8 dt 01.01.2016	0.53	10.05.2016	09.05.2026	ist	-	-	Non- Working	Non- Captive	21/3 dt 15.12.2015	24°01'53.39" N 85°02'13.22"E 24°01'55.24" N 85°02'13.29"E 24°01'56.43" N 85°02'13.36"E 24°01'56.44" N 85°02'14.59"E 24°01'56.45" N 85°02'15.81"E 24°01'55.22" N 85°02'15.70"E 24°01'54.00" N 85°02'15.70"E	Open cast
11	Stone	M/s Jan Shiv Construction Partner-1 BK Tiwari S.O- Sri Narayan Tiwari	Vill- Dongraida, Po- ps- Rajpur Dist- Chatra	08/1 dt 13.02.2015	1.03	02.03.2015	01.03.2025	ist	-	01.02.2016	Working	Non- Captive	5/8 dt 20.11.2014	24°12'32.5" N 84°56'09.6"E 24°12'33.1" N 84°56'08.9"E 24°12'33.8" N 84°56'08.8"E 24°12'30.3" N 84°56'09.4"E 24°12'36.1" N 84°56'09.9"E 24°12'34.5" N 84°56'09.5"E 24°12'35.5" N 84°56'10.9"E 24°12'34.2" N 84°56'11.2"E 24°12'33.2" N 84°56'10.4"E	Open cast
12	Stone	M/s Maa Suruchi Stone Works Prop- Srikateharu Singh S.O- Late- Bajrath Singh	Vill- Sonbigha, Ps- Taped Ps- Sadar, Dist- Chatra	05/6 dt 17.10.2019	1.45	19.10.2019	18.10.2029	ist	-	06.01.2020	Working	Non- Captive	5/10 dt 09.10.2019	24°12'26.79" N 84°55'51.62"E 24°12'28.47" N 84°55'52.44"E 24°12'28.86" N 84°55'54.31"E 24°12'28.40" N 84°55'56.05"E 24°12'26.66" N 84°55'52.92"E 24°12'26.49" N 84°55'58.31"E 24°12'28.48" N 84°55'57.95"E 24°12'24.26" N 84°55'56.20"E 24°12'25.63" N 84°55'54.73"E 24°12'26.61" N 84°55'53.14"E	Open cast
13	Stone	M/s APN Developers and Stone Pvt Ltd Dir- Sri Anant Kumar Sahay S.O- Sri Srikant Kumar Sahay	Vill- Awasal Mohallah Po- Chatra, Ps- Sadar, Dist- Chatra	06/1 dt 23.08.2021	0.70	03.09.2021	02.09.2031	ist	-	01.12.2021	Working	Non- Captive	18 dt 05.07.2021	24°12'35.758" N 84°56'3.222"E 24°12'38.718" N 84°56'5.113"E 24°12'37.872" N 84°56'4.891"E 24°12'36.976" N 84°56'6.128"E 24°12'35.694" N 84°56'5.046"E 24°12'36.422" N 84°56'3.349"E 24°12'36.822" N 84°56'3.158"E 24°12'37.547" N 84°56'3.187"E 24°12'37.959" N 84°56'2.380"E	Open cast
14	Stone	M/s Rashree Construction Propo- Sri Shri Parmeshwar Singh S.O- Sri Bhanu saw	Vill- Po- Gangpur Ps- Chahour, Dist- Chatra	12/8 dt 21.12.2022	1.14	17.01.2023	16.01.2033	ist	-	27.03.2023	Working	Non- Captive	159 dt 18.06.2022	24°11'20.03" N 85°07'45.26"E 24°11'20.70" N 85°07'45.31"E 24°11'20.75" N 85°07'47.84"E 24°11'22.96" N 85°07'48.57"E 24°11'22.89" N 85°07'49.54"E 24°11'21.93" N 85°07'49.39"E 24°11'21.53" N 85°07'50.48"E 24°11'18.10" N 85°07'49.62"E 24°11'18.08" N 85°07'46.95"E 24°11'16.30" N 85°07'46.07"E	Open cast

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**DISTRICT SURVEY REPORT OF MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER BED MINING FOR CHATRA DISTRICT OF JHARKHAND.**

15	Stone	M/s A & P Stone Works Part- Sri Anon Kumar Singh	Vill- Nagar, PO- PS- Huntermangij Chatra	289 dt 16 03 2023	1.58	15 04 2023	14 04 2023	1st	09 09 2023	Working	Non- Captive	377 dt 31 01 2023	N 24° 19' 10.90" N E 84° 48' 16.82" E N 24° 19' 06.87" N E 84° 48' 16.03" E N 24° 19' 07.34" N E 84° 48' 13.84" E N 24° 19' 07.77" N E 84° 48' 11.91" E N 24° 19' 09.51" N E 84° 48' 11.92" E N 24° 19' 11.61" N E 84° 48' 12.25" E N 24° 19' 11.01" N E 84° 48' 14.78" E	Operational
16	Stone	M/s Jai Shankar Stone Mines Part- Sri Kameshwar Singh	Vill- Balun, PO- PS- Huntermangij Dist- Chatra	279 dt 08 03 2023	2.82	10 05 2023	09 05 2023	1st	-	Working	Non- Captive	157 dt 18 06 2022	24° 23' 32.27" N E 84° 44' 44.30" E 24° 23' 35.40" N E 84° 44' 43.77" E 24° 23' 39.41" N E 84° 44' 43.96" E 24° 23' 39.47" N E 84° 44' 51.86" E 24° 23' 33.26" N E 84° 44' 45.41" E	Operational
17	Stone	M/s Mad Tara Stone Works Part- Sri Mukesh Kumar	Vill- Hafha, PO- PS- Chatra Dist- Chatra	290 dt 16 03 2023	1.21	13 04 2023	12 04 2023	1st	-	Working	Non- Captive	379 dt 31 01 2023	24° 23' 33.66" N E 84° 44' 55.49" E 24° 23' 33.65" N E 84° 44' 55.30" E 24° 23' 33.87" N E 84° 44' 55.18" E 24° 23' 34.02" N E 84° 44' 54.28" E 24° 23' 34.86" N E 84° 44' 53.17" E 24° 23' 34.75" N E 84° 44' 52.99" E 24° 23' 35.11" N E 84° 44' 52.79" E 24° 23' 36.27" N E 84° 44' 52.89" E 24° 23' 36.57" N E 84° 44' 52.75" E 24° 23' 38.69" N E 84° 44' 53.02" E 24° 23' 38.47" N E 84° 44' 55.72" E 24° 23' 38.45" N E 84° 44' 55.68" E 24° 23' 38.11" N E 84° 44' 55.80" E 24° 23' 37.72" N E 84° 44' 55.78" E 24° 23' 37.09" N E 84° 44' 55.56" E 24° 23' 37.11" N E 84° 44' 54.88" E 24° 23' 36.84" N E 84° 44' 54.76" E 24° 23' 36.66" N E 84° 44' 55.94" E 24° 23' 36.22" N E 84° 44' 55.90" E 24° 23' 36.12" N E 84° 44' 56.08" E 24° 23' 34.99" N E 84° 44' 55.97" E	Operational
18	Stone	M/s MSU Enterprises Part- Sri Mukesh Kumar	Vill- Hafha, PO- PS- Chatra District- Chatra	287 dt 16 03 2023	1.72	15 04 2023	14 04 2023	1st	21 08 2023	Working	Non- Captive	366 dt 01 02 2023	24° 19' 12.00" N E 84° 48' 15.03" E 24° 19' 12.35" N E 84° 48' 12.31" E 24° 19' 15.58" N E 84° 48' 13.24" E 24° 19' 17.63" N E 84° 48' 13.74" E 24° 19' 18.10" N E 84° 48' 14.92" E 24° 19' 17.87" N E 84° 48' 17.17" E 24° 19' 14.76" N E 84° 48' 16.35" E 24° 19' 13.31" N E 84° 48' 15.88" E 24° 19' 13.07" N E 84° 48' 14.85" E	Operational



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Publicity, Village, Chatra  
**CHATRA**





DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



**जिला खनन कार्यालय, चतरा।**

स्थायी चिमनी ईट भट्टों अनुज्ञप्ति हेतु प्राप्त आवेदन पत्रों/धारित भट्टा स्थल की सूची-

क्र० सं०	स्थायी ईट भट्टा मालिक का नाम एवं पता	स्थायी चिमनी ईट भट्टा स्थल का मौजा एवं थाना	अभ्युक्ति
1	2	3	
1.	मेसर्स सुषमा ब्रिक्स प्रो०-प्रकाश साव पिता- श्री परमेश्वर साव ग्रा०+पो०-गांगपुर थाना गिद्धौर, चतरा	मौजा-द्वारी खाता संख्या- 108 एवं 150 प्लॉट सं०-606, 746, 747 रकबा- 2.50 एकड़ थाना-गिद्धौर	
2.	मे० RIC Bricks श्री ईश्वरी महतो पिता-श्री छट्टू महतो ग्रा०-सोकी थाना- इटखोरी जिला-चतरा	थाना- मयुरहण्ड मौजा सोकी खाता संख्या - 18 , 13 एवं 22 प्लॉट संख्या - 6447, 6443, 6220, 6234, 6267, 6268, 6271, 6274, 6276, 6277, 6278, 6280, 6450, 6452, 6232, 6233, 6266, 6270, 6273, 6275, 6279, 6281, 6444, 6448, 6451, 6221, 6249 एवं 6257 कुल रकबा- 3.81 एकड़	
3	मे० MSC Bricks श्री ओम प्रकाश गुप्ता पिता -स्व० कन्हैया लाल गुप्ता पुराना पेट्रोल पम्प में रोड चतरा	मौजा-पुन्दरी खाता संख्या- 17, 09, 07, 02, 23, 01 प्लॉट सं० - 108, 111, 120, 128, 112, 126, 129 रकबा- 2.51 एकड़। थाना-चतरा सदर	
4	श्री कृष्णा सिंह, पिता- श्री राजकुमार सिंह, ग्रा०- खापलवानी, राजपूर 2. श्री जितेन्द्र सिंह, पिता- श्री केदार सिंह, ग्रा०-सिमराडीह, कान्हाचट्टी, 3. श्री चून्नु लाल, पिता- स्व० अर्जून लाल, ग्रा०+था०-राजपूर, जिला-चतरा।	मौजा-खापलवानी रकबा- 2.50 एकड़	
5	श्री केवल यादव, पिता-श्री रउदी यादव, ग्राम-सैयपूर, पो०- नावाडीह, हंटरगंज, जिला-चतरा।	मौजा- सैयंपूर खाता संख्या 01 प्लॉट संख्या - 169 रकबा- 1.72 एकड़, थाना- हंटरगंज	
6	ज्योति ब्रिक्स, प्रो०-श्री अरविन्द सिंह, पिता-श्री अभय सिंह, ग्राम-भागेवार, पो०-नावाडीह, थाना- हंटरगंज जिला-चतरा	मौजा-भागेवार थाना नं०- 26 खाता संख्या- 02, 32/50 प्लॉट संख्या- 21P, 34 रकबा- 1.66 एकड़ थाना-हंटरगंज	



*(Signature)*

DISTRICT MINING OFFICER  
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



7	श्री मनोज महतो पिता-स्व० जागो महतो ग्रा०-सोकी, पो०-अमझर थाना-मयुरहण्ड, जिला-चतरा।	मौजा-सोकी थाना-मयुरहण्ड	
8	मकसूद आलम पिता -अमीरउद्दीन अन्सारी ग्रा०+पो०+था०-ईटखोरी	मौज-नगवां प्लॉट सं०-40/1, एवं 40/2 रकबा-01.25 ए० थाना- ईटखोरी	
9	श्री संदीप प्रसाद पिता- स्व० सीताराम प्रसाद ग्रा०+पो०-कुम्बा, थाना-हंटरगंज जिला-चतरा	मौजा-सुल्तानाटांड थाना-हंटरगंज	
10	श्री जितेन्द्र कुमार साव पिता-श्री भूवनेश्वर साव ग्रा०-बुण्डू, पो०-बुण्डू, थाना- पिपरवार जिला-चतरा।	मौजा-जिमनातरी थाना- पिपरवार	
11.	श्री धनेश्वर गंजू ग्रा०-तलसवार, पो०-बडकागांव जिला-हजारीबाग।	मौजा- सिदालू थाना-पिपरवार	
12	मे० B.Y.S.T पार्ट०-श्री तिलेश्वर साव, पिता-श्री महावीर साव, ग्रा०-गाडीलौंग, पो०+था०-टण्डवा जिला-चतरा।	मौजा-मासीलौंग प्लॉट सं०-01 अंश खाता सं०-01 रकबा-5.47 एकड़, थाना-टण्डवा	
13	श्री परमेश्वर गंजू पिता-स्व० वैदा गंजू ग्रा०-देम्बुआ, पो०-बहेरा, थाना- पिपरवार जिला- चतरा।	मौजा- डेम्बुआ खाता संख्या - 07 प्लॉट संख्या - 02 , 139, 140, 141, एवं 171 थाना- पिपरवार	
14	श्री धनराज भोक्ता पिता- स्व० मंगल गंजू ग्रा०-कुटकी बेती, पो०-बहेरा, पिपरवार जिला- चतरा।	मौजा- बेती खाता संख्या - 98 प्लॉट संख्या - 1117 रकबा-2.02 एकड़ थाना- पिपरवार	
15	श्री प्रेम कुमार पाण्डेय पिता- श्री चिन्तामणि पाण्डेय ग्रा०-राहम, पो०-राहम, थाना- टण्डवा जिला-चतरा।	मौजा- टण्डवा, थाना नंबर- 62 खाता संख्या - 418 प्लॉट संख्या - 2869(अंष) रकबा-2.00 एकड़	



*(Signature)*

DISTRICT MINING OFFICER  
CHATRA

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



16	श्री प्रभात सिंह, पिता-स्व० रामजनम सिंह, ग्राम- रानिक, पो०-बेला, थाना-चौपारण , जिला-हजारीबाग	मौजा-खैरा, प्लॉट संख्या - 24 , 25, 4,6 खाता संख्या 02 रकबा- 3.25 एकड	
17	श्री विनोद प्रसाद, पिता-श्री नारायण प्रसाद, ग्राम-बघौता, पो०-बिकोपूर थाना-प्रतापपूर, जिला-चतरा।	मौजा-करमडीह थाना-प्रतापपूर	
18	मे० जे०पी०एस० ब्रिक्स, पो०-श्री अमित कुमार जायसवाल, पिता-श्री शंभू प्रसाद जायसवाल, ग्राम-अवल मुहल्ला, चतरा।	मौजा-गेरवां, थाना-सदर	
19	मेसर्स दुर्गाधर सागर ब्रिक्स, पार्ट०-श्री अशोक कुमार पिता-श्री रघुवीर प्रसाद, ग्राम-कसमार, पो०-प्रतापपूर श्री राजीव प्रसाद, पिता-स्व० सुरेन्द्र प्रसाद, ग्राम-दानापूर, पो०-अनंतपूर श्री गौतम प्रसाद अम्बष्ट, पिता-श्री नन्दकुमार प्रसाद, ग्राम+पो०-अनंतपूर, थाना-प्रतापपूर जिला- चतरा।	मौजा-धंकरपूर थाना-प्रतापपूर	
20	मो० सरफराज मियाँ	मौजा-चटनियाँ थाना-सदर	
21	श्री अम्बिका यादव	मौजा-खीरगड्डा थाना-सदर	
22	मो० असद उल्लाह पिता- मो० सनाउलल्लाह, ग्राम- लाईन मुहल्ला, चतरा।	मौजा- भरही, थाना नं० - 46 खाता संख्या- 41 प्लॉट संख्या- 09 रकबा - 2.00 एकड	



*(Signature)*

DISTRICT MINING OFFICER  
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



23	मो० तुफैल अहमद, पिता- रफीक अहमद, नौरतन पुर, थाना- प्रतापपुर जिला- चतरा।	मौजा- नरोतमपूर, थाना नं०- 39 खाता संख्या - 02 प्लॉट संख्या - 97 रकबा - 2.69 एकड	
24	मेसर्स वीणा इन्टरप्राइजेज, प्रो०- भोला यादव, ग्राम- बडगाँव, टण्डवा जिला- चतरा।	मौजा- उतालु उर्फ सिमराटॉड थाना नं०- 67 खाता संख्या - 13 प्लॉट संख्या - 399, 401, 402 रकबा - 1.96 एकड थाना- टण्डवा।	
25	मो० मोजिबुर रहमान, पिता- स्व० हाजी अब्दुल समद, ग्राम- लाईन मुहल्ला, चतरा।	मौजा- गेरी, थाना नं० - 209 खाता संख्या 04 प्लॉट संख्या 856 रकबा - 5.50 एकड थाना-सदर	
26	मे० अंगद ब्रिक्स, प्रो०- श्री निरंजन कुमार, ग्राम- हफुआ, पो०+था०-सदर जिला- चतरा	मौजा- सीमा थाना नं० - 252 खाता संख्या 30 प्लॉट संख्या 978 (अंश) एवं 989 (अंश) रकबा - 2.00 एकड थाना-सदर	
27	अषोक उरॉव पिता- चरख उरॉव ग्राम- राहम असनातरी, टण्डवा जिला- चतरा	मौजा- दुन्दुआ, थाना नंबर- 57 खाता संख्या- 25 प्लॉट संख्या- 251, 255, 256 रकबा - 1.92 एकड थाना- टण्डवा।	
28	उर्मिला देवी पति- सुबोध कुमार ग्राम- बडगाँव, पोस्ट- डहू नवादा, टण्डवा जिला- चतरा	मौजा- उतालु उर्फ सिमराटॉड थाना नं०- 67 खाता संख्या - 21 प्लॉट संख्या - 362 रकबा - 2.62 एकड थाना- टण्डवा।	



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DISTRICT MINING OFFICER  
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



29	श्रवण कुमार मेहता, पिता- मथुरा मेहता, ग्राम- डेबादेरी, पोस्ट- मंघनिया, थाना- ईटखोरी, जिला- चतरा।	मौजा- पकरिया थाना नं०- 239 खाता संख्या - 06, 08, 01 प्लॉट संख्या - 80, 92, 152, 57, 52, 54, 53 रकबा - 2.15 एकड थाना- मयूरहण्ड।	
30	श्री दिनेष कुमार सिंह चन्द्रवंशी ग्राम-पाण्डेयपुरा, थाना- हंटरगंज, जिला- चतरा।	अंचल- प्रतापपुर, थाना- प्रतापपुर, मौजा- संकरपुर, थाना संख्या- 29, खाता संख्या - 03 प्लॉट संख्या- 93 & 95 कुल रकबा- 2.02 एकड	



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CHATRA

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND

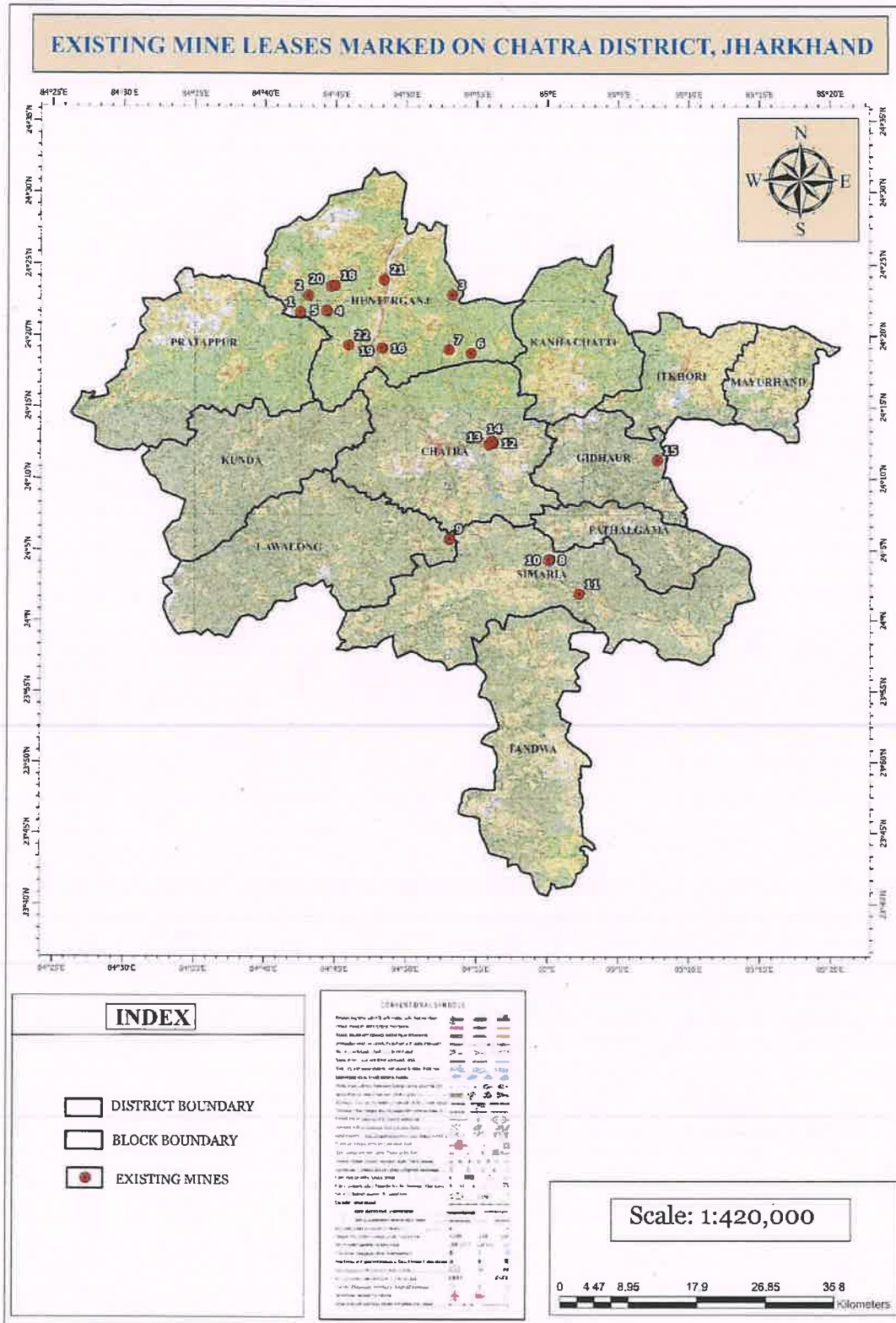


Fig.9.1: Existing mining leases of minor mineral (Stone) of Chatra District



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**10. DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST FIVE YEARS**

Sl.No	Financial Year	Royalty (in INR Lakhs)
1	2021-22	55313.74
2	2022-23	74017.44
3	2023-24	70866.24



  
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**11. DETAILS OF PRODUCTION OF MINOR MINERAL (STONE) IN LAST FIVE YEARS**

Sl.No.	Year	Production(inft <sup>3</sup> )
1	2021-22	9376940
2	2022-23	10312950
3	2023-24	18338275



  
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CHATRA**



## 12. MINERAL MAP OF THE DISTRICT

### 12.1 Mineral Wealth

Sand, Stone & Coal are main mineral products of Chatra district. Sand is the basic raw material for its utilization in any development activity throughout the world. Sand is primarily produced from mining operations on the surface of the earth, near the river beds and the sand quarrying below the surface of earth. In the earlier time the mud houses/buildings were constructed with the use of mud. However, with the passage of time, new technique of development activities was started. As such the demand of Minor Mineral started on an increasing trend. In order to meet the requirement of raw material for construction, the extraction of Sand carried out manually/semi mechanized process from the River-beds. The production of aggregate area is a function of the availability of natural resources, the size of population, the economy of the area and various developmental and infrastructural works being undertaken in the area like road construction, hydroelectric projects etc. Further, being a low-value, high-volume mineral commodity, the prices are dramatically affected by transportation distances. If the distance increases, the transportation cost may increase much more than the cost of the aggregates.

Coal, Sand, Graphite and Stones are main minerals of Chatra district. The Coal is available in Keradari and Tandwa Block area. The CCL is engaged in mining of Coal in the district. This report also recommends to undertake detail exploration program to assess the Minor mineral occurrences in the district and should have a proper development and production plan for the specified minerals so as to satisfy the demand and supply gap of Minor minerals in the district.

(Source--DSR[Sand] of Chatra District -2023)



  
DISTRICT MINING OFFICER  
CHATRA





### 13. LIST OF LETTER OF INTENT HOLDERS IN THE DISTRICT

DETAILS OF LETTER OF INTENT HOLDERS IN THE DISTRICT										
Sl. No.	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 (Ha)	Validity of Lol	Use (Captive / Non-Captive)	Address of the Mining Lease	Location of the Mining Lease (Coordinates)		
1	2	3	4	5	6	7	8	9	10	
								Latitude	Longitude	
1	Stone	Maa Bhawani Stone Works	Al- Simriya Dist- Chatra	185 dt 17.02.2024	1.25	-	Non-Captive	Mouja- Dumrikalan Khata No.- 81 Plot No. - 106 (P), 109 Thana- Hunterganj	24°12'39.118"N 24°12'38.410"N 24°12'37.825"N 24°12'36.810"N 24°12'36.642"N 24°12'36.317"N 24°12'35.377"N 24°12'35.370"N 24°12'34.952"N 24°12'34.482"N 24°12'34.128"N 24°12'33.944"N 24°12'33.967"N 24°12'33.643"N 24°12'33.282"N 24°12'33.118"N 24°12'33.043"N 24°12'32.893"N 24°12'32.716"N 24°12'32.851"N 24°12'32.947"N 24°12'33.087"N 24°12'33.413"N 24°12'33.674"N 24°12'34.240"N 24°12'34.382"N 24°12'34.512"N	84°56'01.353"E 84°56'02.564"E 84°56'02.251"E 84°56'01.837"E 84°56'02.324"E 84°56'02.251"E 84°56'02.020"E 84°56'01.836"E 84°56'02.952"E 84°56.02.705"E 84°56'02.989"E 84°56'02.881"E 84°56'02.213"E 84°56'02.255"E 84°56'02.128"E 84°56'01.903"E 84°56'01.701"E 84°56'01.496"E 84°56'01.361"E 84°56'00.850"E 84°56'00.468"E 84°56'00.393"E 84°56'00.428"E 84°56'00.159"E 84°56'00.509"E 84°56'00.325"E 84°56.00'310"E
2	Stone	Mahavir Infra Enterprises	Al- Mishrol PO / Tapez Dist- Chatra	709 dt 01.07.2023	1.11	NA	Non Captive	Mouja- Chatniya Khata No. - 1, 2, 3, 4 & 6 Plot No. - 19, 21, 18(P), 20, 28, 26, 30 & 24 Thana - Chatrasadar		



*(Signature)*

**DISTRICT MINING OFFICER  
CHATRA**



**DECLARATION REGARDING THE VERIFICATION OF THE MINES UNDER THE SMALL MINE REGULATION ACT, 1987**

3	Stone	Satya Stone Mines	Al- Gerua, PO Hunterganj, Chatra	254 dt 11.03.2024	1.83	NA	Non Captive	Mouja- Gerua Khata No.- 31, 01 Plot No. - 378P and 379(P) Thana - Hunterganj	84°44'45.296"E 84°44'44.069"E 84°44'44.199"E 84°44'44.299"E 84°44'44.412"E 84°44'44.471"E 84°44'44.459"E 84°44'44.638"E 84°44'44.766"E 84°44'44.846"E 84°44'44.912"E 84°44'44.946"E 84°44'45.095"E 84°44'45.439"E 84°44'45.646"E 84°44'45.739"E 84°44'45.746"E 84°44'45.995"E 84°44'46.035"E 84°44'46.095"E 84°44'46.704"E 84°44'46.843"E 84°44'47.033"E 84°44'47.447"E 84°44'47.544"E 84°44'47.628"E
4	Stone	M/s Kauleshwari Enterprises	Add- Sombigna Kothi Nagwa Chatra	1374 dt 08.12.2024	1.80	N/A	Non Captive	Mouja- Karmali Thana No.- 147 Khata No. - 07 & 08 Plot No. - 48, 50, 51, 43, 47 Thana - Jori	84°48'23.399"E 84°48'23.400"E 84°48'23.502"E 84°48'23.440"E 84°48'23.371"E 84°48'23.318"E 84°48'23.348"E 84°48'23.315"E 84°48'23.262"E 84°48'23.228"E 84°48'23.417"E 84°48'23.906"E 84°48'23.891"E 84°48'23.243"E 84°48'23.309"E 84°48'23.325"E 84°48'23.377"E 84°48'23.671"E 84°48'23.731"E





DEPARTMENT OF MINES AND GEOTECHNICAL ENGINEERING, JHARKHAND  
CHATRA DISTRICT OFFICE OF MINING

5	Stone	Maa Bhawani Stone Works	Al- Simriya Dist- Chatra	777 dt 12.07.2024	1.54	N/A	Non-Captive	Mouja- Hiring, Khata No.- 56, 31, 01, 82, 53, 61, 94, 66, 25 & 65 Plot No.- 29, 32, 33, 36, 38, 39, 40, 42, 53, 218, 52, 54, 43, 55, 45 & 46 Thana- Hunterganj	
6	Stone	Jai Mata Di Stone Works	Al- Krole Dist- Chatra	882 dt 14.08.2024	1.61	N/A	Non-Captive	Mouja- Sikari Khata No. 77, 16, 07 Plot No. - 172(P), 173, 174(P), 176(P), 228 Thana- Simriya	
7	Stone	Sri Ashutosh Kumar Singh	Al- Nagar, Hunterganj Dist- Chatra	793 dt 22.07.24	1.17	N/A	Non-Captive	Mouja- Karmahi Thana No. 149 Khata No. 02 Plot No. - 5(P) Thana - Vashishthnagar	
8		CDS Mining	Al- Awall Mohalla Chatra	879 dt 14.08.24	0.65	N/A	Non Captive	Mouja- Karmahi Thana No. 149 Khata No. 07 Plot No. - 10 Thana - Vashishthnagar	

Approved  
District Mining Officer  
Chatra



**PROPOSED SOURCE REPORT OF MINING ENTERPRISE FOR THE SAJJA MINE IN THE REVERENDS RIVER BASIN MINING FOR  
CHHATA DISTRICT OF JHARKHAND**

9	Mahavir Infra Enterprises	Dangradih, Rajpur Dist- Chatra	881 dt 14.08.24	138	N/A	Non Captive	Monja- Chatniya Thana No.- 270 Khata No. - 4, 5, 6 Plot No. - 34, 75, 76 Thana - Chatra sadar	24°12'29.633"N 84°36'01.771"E
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**DISTRICT MINING OFFICER  
GHATRA**



#### **14. TOTAL MINERAL RESERVE AVAILABLE IN THE DISTRICT**

The southern part of the district is underlain by Granite-gneiss of Achaean age forming the basement. These occur as large batholiths and are intruded by basic rocks. In the central and northern part of the district the rocks of Barakar formation consisting of Feldspathic Sandstones, Shales and Coal seams overlying the metamorphics are exposed. In the western and northern part of the district alluvial cover of moderate thickness caps the Archaeocrystallines and the Gondwanase dimentaries.

The Pre-Cambrian rocks vary widely in their resistance to weathering and erosion. Rocks like Quartzites, Epiodiorite, Gabbro, Dolerite, Gneisses are more resistant to weathering and erosion than Shales, Schists, Clays and Phyllites, with the result that the former group of rocks account for most of the bold topographical forms in the area. Important deposits of Coal, Fireclay, Muscovite Mica, Talc, Vermiculite and Dimension Stone occur in the district. Vermiculite deposits also occur in Chatra district. Dimension Stone available in the district are Black Granite (Dolerite/Amphibole) and multicolored Granite (GraniteGneiss/Migmatite).

At present, based on existing running mining leases of Stone and available Mining Plans (29 registered mining leases), mining operations is being carrying out to produce a total 25728758.41 Tonnes of of Stone in the Chatra district. The Letter of Intent (LoI) have been issued to 4 Nos. of applicant for Stone mining in the district however, there are 36 Nos. of potential Stone deposit have been identified in Chatra district.



DISTRICT MINING OFFICER  
CHATRA



**MINING RESERVE IN EXISTING MINING LEASES OF MINOR MINERAL 'STONE'**

Sl. No.	Name of the Lessee	Address & Contact No. of Lessee	Area of Mining Lease (Acres)	Area of Mining Lease (H a.)	Address of the Mining Lease	Mineable Reserve (in Tonnes)
1	M/s Jai Shankar Stone Works Prop- Sri Kamleshwar S/o-Sri Nawrang Singh	Vill+Po- Baituri Ps- Hunterganj, Dist- Chatra	1.76	0.71	Mouza- Dalkoma Khata No. 31, 34 Plot No. 191, 193(P) Thana- Hunterganj	109710.00
2	M/s Maa Gayatri Stone Works Prop- Sri Kamlesh Prajapati	Vill-Auru, Po-Auru Ps- Hunterganj, Dist- Chatra	4.31	1.74	Mouza- Dundu Khata No. 15 Plot No. 185 Thana- Hunterganj	785452
3	Maa Kouleshwari Stone Works Partner- Sri Parmanand Singh	Vill- Suresh Colony Hazaribag	5.72	2.32	Mouza- Luta Khata No.- 1, 3, 4, 6, 9 Plot No.-48(P), 47, 74(P), 88(P), 92, 93(P) Thana- Hunterganj	1344560
4	M/s Jai Shankar Stone Works Prop- Sri Niwas Kumar	S/O- Late- Shyamkant Singh Vill-Khutikewalkhurd Po+Ps- Hunterganj, Dist- Chatra	9.00	3.64	Mouza- Akta Khata No. 1,2,3, 4,5, 6, 7, 9, 12 & 27 Plot No.- 82(P), 83, 84, 85, 86, 90, 92, 96, 97, 98, 100, 101, 103, 104, 105, 106, 107, 108, 109, 110, 113, 117, 118, 119, 120, 121, 122, 124, 131, 132, 133 & 134 Thana- Hunterganj	1404383
5	Sri Silaram S/o- Late- Triloki Prasad Mehta	vill- Nawabganj Jhil Tower FlatN no- 6C, Po- Hazaribag Ps- Sadar Dist- Hazaribag	2.38	0.96	Mouza- Akta Khata No. 22 Plot No. 39 Thana- Hunterganj	104969



**DISTRICT MINING OFFICER  
CHATRA**



**PROPOSED REVENUE REGULATION FOR MINING ACTIVITIES IN THE THANA SAHAY  
VILLAGE OF BILGALE-POLE-SIMIRIYA DISTRICT OF CHATRA**

6	M/s Partner- Gampali Sri/Premchand Singh	Stone Works	Vill-Pindrakala, Ps-Hunterganj, Dist-Chatra	Kubba	6.48	<b>2.62</b>	Mouza- Kurkhetla Khata Plot No.- Thana-Vashisthnagar	2738576
7	Sri S/O- Sri Mahendra Sri Giridhari Saw	Kumar Ujala	Vill- Ps- Hunterganj, Dist- Chatra	Ps-Jajilo	2.48	<b>1.00</b>	Mouza- Rajguru Khata No.04, 86, 88, 89, 90 Plot No.- 573, 576, 577, 578, 587, 588, 589, 590, 595, 596 Thana-Vashisthnagar	97205-51
8	M/s Prop- S/O- Late- Urmakant Sharma	Chalniya Uday Kumar Sharma	Vill- Ps- Vasistanagar, Dist- Chatra	Pindra	7.00	<b>2.83</b>	Mouza- Chatniya Khata Plot Thana-Vashisthnagar	1458814-90
9	Sri S/O- Vill+ 2. Sri S/O- Sri Shyamkishore Singh	Sanjay Sri Shambhunath Po- Bagra, Ps- Ashish Kumar	Vill+ Po- Dist- Chatra	Ps- Simariya	3.00	<b>1.21</b>	Mouza- Sikri Khata Plot Thana-Simriya	1390611
10	M/s Prop- S/O- Sri Srikant Kumar Sahay	Maa Sri Amit Kumar Sahay	Vill+Po- Ps- Simariya, Dist- Chatra	Delho	4.80	<b>1.94</b>	Mouza- Ambatand Khata Plot Thana-Simriya	423392
11	M/s partner- Sri Mala Di Sudhir Kumar Singh	Stone Works	Vill- Rol, Po-Simariya, Dist- Chatra	Dist- Chatra	4.00	<b>1.62</b>	Mouza- Sikri Khata Plot Thana-Simriya	550644-00
12	M/s Partner-1. S/O- Sri Bhuneshwar Ram	Riya Sri Sanjay Kumar	Vill- Dundua, Po- Aarnattu, Ps- Simariya, Dist- Chatra	Ps- Chatra	1.30	<b>0.53</b>	Mouza- Basariya Khata Plot Thana-Simriya	388948



*(Signature)*

**DISTRICT MINING OFFICER  
CHATRA**



**DISPERSED SUBSIDY REPORT FOR MINOR MINING OPERATIONS AND  
MISCELLANEOUS ACTIVITIES UNDER THE CHATRA DISTRICT OFFICE, CHATRA**

13	M/s Partner-I. S/O- Sri Narayan Tiwari	Jai Shiv B.K Tiwari	Construction Works	Vill- Dangradith, Dist- Chatra	Po+ps- Rajpur	2.54	1.03	Mouza- Khata Plot Thana-Sadar	(Chatniya No. 112, 113)	741204
14	M/s Prop- S/O- Late- Bajjnath Singh	Maa Suruchi Sri Kalicharan Singh	Works	Vill- Sombigha, Dist- Chatra	Ps- Tapej	3.58	1.45	Mouza- Khata Plot Thana-Sadar	Mishra No. 26, 12, 33, 01 Plot No.- 214(P), 245, 243, 250(P)	274763.00
15	M/s Dir- S/O- Sri Srikant Kumar Sahay	APN Developers and Stone Pvt Ltd. Sri Amit Kumar Sahay	Construction Works	Vill- Awwal Po- Chatra, Dist- Chatra	Mohallah Dist- Chatra	1.72	0.70	Mouza- Khata Plot Thana-Sadar	(Chatniya No. 11 No.-39)	163705
16	M/s Prop- S/O- Sri Bhandu saw	Rajshree Sri Shri Parmeshwar saw	Construction Works	Vill+Po- Ps- Gidhour, Dist- Chatra	Gangpur	2.82	1.14	Mouza- Khata Plot Thana-Gidhor	Ichak No. 8, 12, 19, 36, 40, 44, 47, Plot No.- 664, 665, 666, 667, 668(p), 669, 670(p), 679(p), 680, 681, 682, 683, 684, 713(p) & 837	202934
17	M/s Part- Sri Arun kumar Singh	A & P Stone	Works	Vill- Hunterganj, Dist- Chatra	PO+PS- Nagar, Hunterganj, Dist- Chatra	3.90	1.58	Mouza- Khata Plot Thana- Vashisthnagar	Karmahi No.-02 13	1692706
18	M/s Part- Sri Kameshwar Singh	Jai Shankar Stone	Mines	Vill- Baturi, Dist- Chatra	PO+PS- Hunterganj	6.96	2.82	Mouza-Rano Khata Plot Thana- Hunterganj	No.- 17, 8/4, 10, 11 Plot No.- 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 & 35	1070862
19	M/s Part- Sri Mukesh Kumar	Maa Tara Stone	Works	Vill- Hafua, Dist- Chatra	PO+PS- Chatra	3.00	1.21	Mouza-Rano Khata Plot Thana- Hunterganj	No.- 2, 3, 4, 07, 08, 10, 11 Plot No.- 93, 94, 95, 96, 97, 98, 99, 100, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130 & 131	1147068



OFFICER  
CHATRA



**DISTRICT LEVEL ENVIRONMENTAL IMPACT ASSESSMENT FOR OPEN CAST MINE AND UNDERGROUND MINE  
MINING FOR PYRETHROID MINING IN CHATRA DISTRICT OF JHARKHAND**

No.	M/s	MSU	Enterprises	Vill- District- Chatra	PO+PS- Chatra	4-26	1-72	Mouza-Khata Plot Thana- Vashisthnagar	Karmahi No.-07 12	2080661
20	M/s Part- Sri Mukesh Kumar	MSU		Vill- Hatua, District- Chatra	PO+PS- Chatra	4-26	1-72	Mouza-Rano Khata No.- 1/7, 8/4, 10, 11 Plot No.-03(P), 04(P), 06(P), 07(P), 08, 09, 10, 12,13,14, 14/296,170, 171(P),172, 173, 174, 175, 176,177, 178, 180, 181, 182, 183, 184, 185, 186, 187, 194(P), 196, 197& Thana- Huntergani		364930
21	M/s Pro- Sri Rajesh Kumar Singh	Jai Shankar	Stone	Vill- Huntergani Dist- Chatra	Jhagartari, PO+PS- Huntergani	5-00	2-02	Mouja-Khata No.- 06,08,21,31,33,42,29,11,07,32,13, 09,14, 39 & Plot No. - 609, 615, 612, 614, 610, 621, 611, 613, 622, 606, 629, 617, 605, 627, 630, 602, 196, 193, 194 & Thana- Huntergani		199728
22	M/s Anjani Stone Works			AI- Pindra, Gaya Bihar	PO- Choraghat, Dobhi	4-93	2-00			



*(Signature)*

**DISTRICT MINING OFFICER  
CHATRA**

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



LETTER OF INTENT (LoI HOLDERS): MINE ABLE RESERVE AS PER APPROVED MINING PLAN

Sl. No.	Name of the Lessee	Address & Contact No. of Lessee	Area of Mining Lease (Acres)	Area of Mining Lease (Ha.)	Address of the Mining Lease	Mineable Reserve (in m <sup>3</sup> )
1	2	3	4	5	6	7
1	M/s Anjani Stone Works	At-Pindra P.O.-Ghoraghat Dobhi Gaya (Bihar)	4.93	2.00	Mouza-Dumrikalan Khata No.-06,08, 21,31, 33, 42,29,11, 07,32,13,09, 14,39 &36 Plot No.-609,615, 612,614,610,621, 611,613,622,606, 629,617,605,627, 630,602,196,193, 194 & 616 Thana-Hunterganj	199728
2	M/s Chataniya Mines	At-Hafua P.O.-Sadar Dist.-Chatra	7.37	2.98	Mouza-Hosil Khata No.-03&29 Plot No.-11,13(P)& 19(P) Thana-Hunterganj	264279
3	M/s Maa Kouleshwari Mining	At-Bihari P.O.-Kedlikalan P.S.-Hunterganj Dist.-Chatra	5.47	2.21	Mouza-Kendu Khata No.-68 Plot No.-422(P), 423,424,425(P), 428(P) Thana-Simariya	232304
4	M/s Mahavir Infra Enterprises	At-Mishrol P.O.-Tapez Dist.-Chatra	2.74	1.11	Mouza-Chataniya Khata No.-1,2,3, 4 &6 Plot No.-19,21, 18(P),20,28,26,30 &24 Thana-Chatra Sadar	Mining Plan not Submitted yet



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DISTRICT MINING OFFICER  
CHATRA

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



IDENTIFIED POTENTIAL DEPOSITS [STONE]

जिला खननकार्यालय, चतरामेंलघु खनिजपत्थर खननपट्टा की स्वीकृतिहेतुप्राप्तआवेदनपत्रों के अनुसारआवेदित क्षेत्रों की विवरणी :-

Sl. No.	Name of the Mineral	Area of Mining Lease to be allotted (Ha)	Address of the Mining Lease	Location of the Mining Lease (Coordinates)
1	Stone	1.72	Mouja-PS- Thana Manjhgawa Khata No. 02, 04, 05 & 08 Plot No.- 36P, 38P, 39, 40, 41 & 42	Hunterganj
2	Stone	1.07	Mouja-PS- Thana Chatniya Khata No.- 01, 04, 05 & 11 Plot No.- 47, 59, 60, 68, 59, 67, & 51	24°12'37"N 84°56'08"E
3	Stone	1.44	Mouja-PS- Thana Baghakola Khata No.- 27 Plot No.-32, 33, 34, 35, 36, 37 & 38	Pratappur 24°23'01"N 84°38'35"E
4	Stone	1.60	Mouja-PS- Thana Genjna Khata No.- 194 Plot No.- 419 (P), 420(P), 426(P)	Hunterganj 24°24'14"N 84°42'28"E
5	Stone	0.81	Mouja-PS- Thana Ghatdhari Khata No.-09 & 12 Plot No.- 132(P), 133(P), 160(P)	Hunterganj 24°16'59"N 84°44'29"E
6	Stone	1.07	Mouja-PS- Thana Chatniya Khata No.- 01, 04, 05, 06 & 11 Plot No.- 47, 53, 60, 68, 59, 56, & 67	Chatra
7	Stone	0.66	Mouja-PS- Thana Karmahi Khata No.- 149 Plot No.- 10	Vashishthanganj 24°16'59"N 84°44'29"E



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8	Stone	0.84	Mouja- PS- Thana Khata No.- 01, 04, 05, 06, 11 Plot No.- 53, 60, 61, 68, 59, 56, 67	Chatra Chatra 270	
9	Stone	0.65	Mouja- PS- Thana Khata No.- 02, 03, 06, 07 Plot No.- 73, 74, 75, 79, 81, 87	Sonbigha Chatra 179	24°12'41"N 84°55'07"E
10	Stone	1.68	Mouja- PS- Thana Khata No.- 01 & Plot No.- 148, 149, 150, 151, 155, 52, 53, 54	Dari Kunda 261 25	
11	Stone	1.23	Mouja- PS- Thana Khata No.- 01, 02, 03, 04, 06 Plot No.- 19, 21, 18, 20, 28, 26, 30, 24	Chatniya chatra 270	24°08'09"N 84°53'58"E
12	Stone	1.70	Mouja- PS- Thana Khata No.- 01, 26, 29 Plot No.- 59, 174, 67, 185, 184, 148, 177,	BalniyaKhajuriya Hunterganj 198 29	24°22'07"N 84°41'31"E
13	Stone	0.48	Mouja- PS- Thana Khata No.- 04 Plot No.- 117, 118	Bhogtadih Hunterganj 172 19	24°21'13"N 84°46'40"E
14	Stone	1.05	Mouja- PS- Thana Khata Plot No.- 06	Nartama chatra No.-206 03	24°11'31"N 84°49'23"E
15	Stone	0.81	Mouja- PS- Thana Khata Plot No.- 145, 149	Shikarpur Hunterganj No.-04 230	
16	Stone	1.04	Mouja- PS- Thana Khata Plot No.- 76(P)	Lodhea Pratappur 01 10	24°24'39"N 84°35'08"E
17	Stone	1.45	Mouja- PS- Thana Khata No.- 01, 04 Plot No.- 148, 132, 128, 127, 108, 109, 104, 105, 106	Dari Kunda 261 04	



**DISTRICT MINING OFFICER  
CHATRA**

18	Stone	1.83	Mouja- PS- Thana Khata Plot No.- 378 (P) 379(P)	Gerua Hunterganj No.- 31 & 01	24°26'43"N 84°40'50"E
19	Stone	1.32	Mouja- PS-Chatra Thana Khata Plot No.- 32, 34, 76, 75, 188, 189	Chatniya&Mishrol No.- 270 & 01, 38	24°12'30"N 84°56'02"E
20	Stone	1.92	Mouja- PS-Hunterganj Thana Khata Plot No.- 41, 39, 59	Dandai No.- 166 & 01, 17	24°20'15"N 84°46'16"E
21	Stone	1.80	Mouja- PS- Thana Khata Plot No.- 48, 50, 51, 43, 47	Karmahi Vashishthangar No.- 149 & 08	
22	Stone	1.17	Mouja- PS- Thana Khata Plot No.- 05	Karmahi Vashishthangar No.- 149 No.- 02	24°19'15"N 84°48'27"E
23	Stone	2.23	Mouja- PS- Thana Khata Plot No.- 282, 283, 291	Raksi chatra No.- 285 & 06, 24,	24°12'08"N 84°56'42"E
24	Stone	2.69	Mouja- PS- Thana Khata Plot No.- 702, 704, 705, 706, 707, 708, 709	Jorikalan Vashishthangar No.- 150 No.- 50	24°19'20"N 84°47'53"E
25	Stone	0.93	Mouja- PS- Thana Khata Plot No.- 341, 338, 337, 336, 335, 334, 333, 331	Dundu Hunterganj No.- 187 No.- 19	24°23'03"N 84°43'08"E
26	Stone	2.23	Mouja- PS-Hunterganj Thana Khata Plot No.- 39, 41, 43, 44, 59	Dandai No.- 166 & 01, 06, 17	24°20'16"N 84°46'13"E
27	Stone	1.71	Mouja- PS-Vashisthnagar Thana Khata Plot No.- 92, 89/284, 90	Demdem No.- 300 No.- 17	24°19'20"N 84°49'47"E



**DISTRICT MINING OFFICER**  
CHATRA

28	Stone	1.83	Mouja- PS-Hunterganj Thana Khata No.- 31 & Plot No.- 378 & 379	Gerua No.-08 01	24°26'44"N 84°44'49"E
29	Stone	2.01	Mouja- PS-Pratappur Thana Khata No.-02, 25, Plot No.- 94, 95, 96, 97	Karudih No.- 61 01, 10	24°17'39"N 84°37'10"E
30	Stone	2.78	Mouja- PS-Hunterganj Thana Khata No.-77, 72, Plot No.- 07, 22, 24, 08, 12, 13, 16, 19, 21, 09, 14, 15, 23	Hiring No.- ..... 74	24°25'06"N 84°47'39"E
31	Stone	1.93	Mouja- PS-Vashishtnagar Thana Khata No.- 17 & Plot No.- 39, 41, 59	Dandai No.- ..... 01	24°20'14"N 84°46'12"E
32	Stone	1.62	Mouja- PS-Simriya Thana Khata No.- 77, 16, Plot No.- 172, 173, 174, 176, 228	Sikari No.- 161 07	24°04'10"N 84°59'59"E
33	Stone	1.38	Mouja- PS-Chatra Thana Khata No.-4, 5, Plot No.- 34, 75, 76	Chatniya No.- 270 6	
34	Stone	1.54	Mouja- PS-Hunterganj Thana Khata No.-56, 31, 01, 82, 53, 61, 94, 66, 25 & 65 Plot No.- 29, 32, 33, 36, 38, 39, 40, 42, 53, 218, 52, 54, 43, 55, 55, 45 & 46	Hiring No.- 60	24°25'05"N 84°47'53"E
35	Stone	1.17	Mouja- PS-Hunterganj Thana Khata Plot No.- 691	Hiring No.- 60 No.-01	24°25'13"N 84°47'40"E
36	Stone	1.26	Mouja- PS-Hunterganj Thana Khata Plot No.-106(P) & 109	Dumrikalan No.- 75 No.- 81	24°23'55"N 84°48'11"E



**DISTRICT MINING OFFICER**  
**CHATRA**

37	Stone	1.56	Mouja- PS- Thana Khata No.- 14, 55, 01, 94 Plot No.- 416, 418, 420, 415(P), 417, 419, 424, 423, 414(P)	Ichakkhurd Simriya No. 159	24°19'20"N 84°47'53"E
38	Stone	0.66	Mouja- PS- Thana Khata Plot No.- 10	Karmahi Vashishthangar No.- 149 No.- 07	24°05'21"N 84°57'41"E
39	Stone	1.21	Mouja- PS-Hunterganj Thana Khata No.- 01, 13, 21, 48 Plot No.- 642, 640, 644(P), 641, 643, 632, 631(P)	Dumrikalan No.- 75	24°19'09"N 84°49'37"E
40	Stone	2.86	Mouja- PS-Hunterganj Thana Khata No.- Plot No.- 08(P), 11(P)	Auru No.-52 72, 103	24°26'13"N 84°42'43"E
41	Stone	1.68	Mouja- PS-Sadar Thana Khata No.- 01, 02, 23, 07, 12 Plot No.- 192(P), 188(P), 174(P), 175, 184, 185, 186, 191	Mishrol No.-271	24°20'15"N 84°46'17"E
42	Stone	2.02	Mouja- PS-Hunterganj Thana Khata Plot No.- 50(P)	Kadwa No.-331 07	24°25'06"N 84°47'39"E
43	Stone	2.23	Mouja- PS-Hunterganj Thana Khata Plot No.- 06/50	Kadwa No.-331 07	24°18'57"N 84°54'19"E
44	Stone	1.11	Mouja- Khata No. - 1, 2, 3, 4 & 6 Plot No. - 19, 21, 18(P), 20, 28, 26, 30 & 24 Thana - Chatrasadar	Chatniya	24°19'12"N 84°48'22"E



  
DISTRICT MINING OFFICER  
CHATRA

**DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND**



**MINEABLE RESERVE IN IDENTIFIED POTENTIAL DEPOSITS OF MINOR MINERAL 'STONE'**

शिला खननकार्यालय, नरारमैलपु खमिजपत्थर खननपट्टा की स्वीकृतिहेतुप्राप्तआवेदनपत्रों के अनुसंधानवेदित शीलों की विवरणी :-

Sl. No.	Area of Mining Lease (Acres)	Area of Mining Lease (Ha.)	Address of the Mining Lease	Mineable Reserve (in m <sup>3</sup> )
1	4.24	1.72	Mouja- Manjhgawa PS- Hunterganj Thana no.- 309 Khata No. 02, 04, 05 & 08 Plot No.- 36P, 38P, 39, 40, 41 & 42	
2	2.65	1.07	Mouja- Chatniya PS- Chatra Thana No.- 270 Khata No.- 01, 04, 05 & 11 Plot No.- 47, 59, 60, 68, 59, 67, & 51	
3	3.56	1.44	Mouja- Baghakola PS- Pratappur Thana No.- 27 Khata No.- 01 Plot No.-32, 33, 34, 35, 36, 37 & 38	
4	3.96	1.60	Mouja- Genjna PS- Hunterganj Thana No.- 194 Khata No.- 121 Plot No.- 419 (P), 420(P), 426(P)	
5	2.00	0.81	Mouja- Ghatdhari PS- Hunterganj Thana No.- 275 Khata No.-09 & 12 Plot No.- 132(P), 133(P), 160(P)	
6	2.65	1.07	Mouja- Chatniya PS- Chatra Thana No.- 270 Khata No.- 01, 04, 05, 06 & 11 Plot No.- 47, 53, 60, 68, 59, 56, & 67	
7	1.62	0.66	Mouja- Karmahi PS- Vashishthangar Thana No.- 149 Khata No.- 07 Plot No.- 10	
8	2.07	0.84	Mouja- Chatra PS- Chatra Thana No.- 270 Khata No.- 01, 04, 05, 06, 11 Plot No.- 53, 60, 61, 68, 59, 56, 67	
9	1.61	0.65	Mouja- Sonbigha PS- Chatra Thana No.- 179 Khata No.- 02, 03, 06, 07, Plot No.- 73, 74, 75, 79, 81, 87	
10	4.16	1.68	Mouja- Dari PS- Kunda Thana No.- 261 Khata No.- 01 & 25 Plot No.- 148, 149, 150, 151, 155, 52, 53, 54	



**DISTRICT MINING OFFICER  
CHATRA**

11	3.04	1.23	Mouja-Chatniya PS- chatra Thana No.- 270 Khata No.- 01, 02, 03, 04,06 Plot No.- 19, 21, 18,20,28,26, 30, 24
12	4.20	1.70	Mouja- BalniyaKhajuriya PS- Hunterganj Thana No.- 198 Khata No.- 01, 26, 29 Plot No.- 59, 174, 67, 185, 184, 148, 177,
13	1.19	0.48	Mouja- Bhogtadih PS- Hunterganj Thana No.- 172 Khata No.- 04 , 19 Plot No.- 117, 118
14	2.59	1.05	Mouja- Nartama PS- chatra Thana No.-206 Khata No.- 03 Plot No.- 06
15	2.00	0.81	Mouja- Shikarpur PS- Hunterganj Thana No.- 230 Khata No.-04 Plot No.- 145 , 149
16	2.58	1.04	Mouja- Lodhea PS- Pratappur Thana No.- 01 Khata No.- 10 Plot No.- 76(P)
17	3.59	1.45	Mouja- Dari PS- Kunda Thana No.- 261 Khata No.- 01, 04 Plot No.- 148, 132, 128, 127, 108, 109, 104, 105, 106
18	4.52	1.83	Mouja- Gerua PS- Hunterganj Thana No.- 08 Khata No.- 31 & 01 Plot No.- 378 (P) 379(P)
19	3.32	1.34	Mouja- Chatniya&Mishrol PS-Chatra Thana No.- 270 & 271 Khata No.- 04, 05, 06 , 01, 38 Plot No.- 32, 34, 76, 75, 188, 189
20	4.75	1.92	Mouja- Dandai PS-Hunterganj Thana No.- 166 Khata No.- 01, 17 Plot No.- 41, 39, 59
21	4.46	1.81	Mouja- Karmahi PS- Vashishthangar Thana No.- 149 Khata No.- 07 & 08 Plot No.- 48, 50, 51, 43, 47
22	2.89	1.17	Mouja- Karmahi PS- Vashishthangar Thana No.- 149 Khata No.- 02 Plot No.- 05
23	5.50	2.23	Mouja- Raksi PS- chatra Thana No.- 285 Khata No.- 06, 24, Plot No.- 282, 283, 291
24	6.65	2.69	Mouja- Jorikalan PS- Vashishthangar Thana No.- 150 Khata No.- 50 Plot No.- 702, 704, 705, 706, 707, 708, 709



DISTRICT MINING OFFICER

25	2.30	0.93	Mouja-PS-Hunterganj Thana No.- Khata No.- Plot No.- 341, 338, 337, 336, 335, 334, 333, 331	Dundu Hunterganj 187 19
26	5.52	2.23	Mouja-PS-Hunterganj Thana No.- Khata No.- 01, 06, 17 Plot No.- 39, 41, 43, 44, 59	Dandai 166 17
27	4.22	1.71	Mouja-PS-Vashisthnagar Thana No.- Khata No.- Plot No.- 92, 89/284, 90	Demdem 300 17
28	4.52	1.83	Mouja-PS-Hunterganj Thana No.- Khata No.- 31 & 01 Plot No.- 378 & 379	Gerua No.-08 & 01
29	4.96	2.01	Mouja-PS-Pratappur Thana No.- Khata No.-02, 25, 01, 10 Plot No.- 94, 95, 96, 97	Karudih 61 10
30	6.86	2.78	Mouja-PS-Hunterganj Thana No.- Khata No.-77, 72, 74 Plot No.- 07, 22, 24, 08, 12, 13, 16, 19, 21, 09, 14, 15, 23	Hiring ..... 74
31	4.76	1.93	Mouja-PS-Vashishtnagar Thana No.- Khata No.- 17 & 01 Plot No.- 39, 41, 59	Dandai ..... 01
32	4.00	1.62	Mouja-PS-Simriya Thana No.- Khata No.- 77, 16, 07 Plot No.- 172, 173, 174, 176, 228	Sikari 161 07
33	3.41	1.38	Mouja-PS-Chatra Thana No.- Khata No.-4, 5, 6 Plot No.- 34, 75, 76	Chatniya 270 6
34	3.81	1.54	Mouja-PS-Hunterganj Thana No.- Khata No.-56, 31, 01, 82, 53, 61, 94, 66, 25 & 65 Plot No.- 29, 32, 33, 36, 38, 39, 40, 42, 53, 218, 52, 54, 43, 55, 55, 45 & 46	Hiring 60 65
35	2.90	1.17	Mouja-PS-Hunterganj Thana No.- Khata No.- Plot No.- 691	Hiring 60 No.-01
36	3.11	1.26	Mouja-PS-Hunterganj Thana No.- Khata No.- Plot No.-106(P) & 109	Dumrikalan 75 81
37	2.82	1.14	Mouja-PS-Vashishthanagar Thana No.- Khata No.- Plot No. - 702(P), 704, 705, 706, 707, 708, & 709(P)	Jori Kalan 150 50



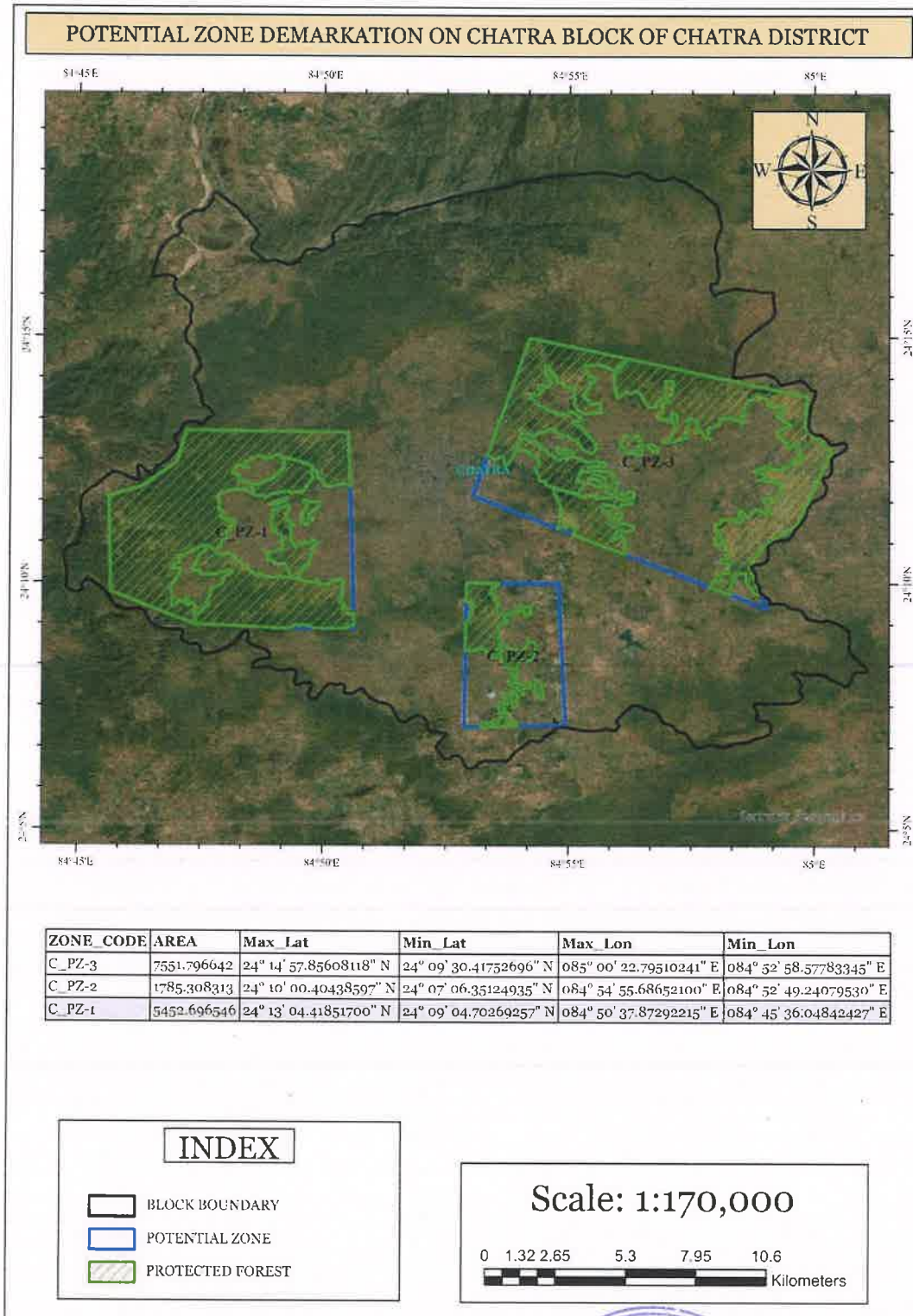
38	3.85	1.56	Mouja-Ichakkhurd PS-Simriya Thana No.- 159 Khata No.- 14, 55, 01, 94 Plot No. -416, 418, 420, 415(P), 417, 419, 424, 423, 414(P)
39	3.41	1.38	Mouja-Demdem PS-Hunterganj Thana No.- 300 Khata No.- 28 Plot No. - 149
40	4.46	1.81	Mouja-Karmahi PS-Vashishtanagar Thana No.- 149 Khata No.- 07 & 08 Plot No. - 48, 50, 51, 43, 47
41	4.75	1.92	Mouja-Dandai PS-Hunterganj Thana No.- 166 Khata No.- 01, 17 Plot No.- 39(P), 41, 59
42	5.30	2.15	Mouja-Hiring PS-Hunterganj Thana No.- 60 Khata No.- 77, 72, & 74 Plot No.- 7(P), 24(P), 22, 8(P), 12, 13, 16, 19, 21, 9, 14, 15 & 23
43	3.05	1.23	Mouja-Kurkheta PS-Vashisthnagar Thana No.- 314 Khata No.- 36, 40, 41 Plot No.- 133, 134, 135(P), 137(P), 138(P), 139(P), 140(P)
44	1.62	0.66	Mouja-Karmahi PS-Vashishthangar Thana No.- 149 Khata No.- 07 Plot No.- 10
45	2.98	1.21	Mouja-Dumrikalan PS-Hunterganj Thana No.- 75 Khata No.- 01, 13, 21, 48 Plot No.-642, 640, 644(P), 641, 643, 632, 631(P)
46	7.07	2.86	Mouja-Auru PS-Hunterganj Thana No.-52 Khata No.- 72, 103 Plot No.- 08(P), 11(P)
47	4.16	1.68	Mouja-Mishrol PS-Sadar Thana No.-271 Khata No.- 01, 02, 23, 07, 12 Plot No.- 192(P), 188(P), 174(P), 175, 184, 185, 186, 191
48	5.00	2.02	Mouja-Kadwa PS-Hunterganj Thana No.-331 Khata No.- 07 Plot No.- 50(P)
49	5.50	2.23	Mouja-Kadwa PS-Hunterganj Thana No.-331 Khata No.- 07 Plot No.- 06/50
50	2.74	1.11	Mouja-Chatniya Khata No. - 1, 2, 3, 4 & 6 Plot No. - 19, 21, 18(P), 20, 28, 26, 30 & 24 Thana - Chatrasadar



**DISTRICT MINING OFFICER  
CHATRA**



## BLOCK WISE IDENTIFIED POTENTIAL ZONES

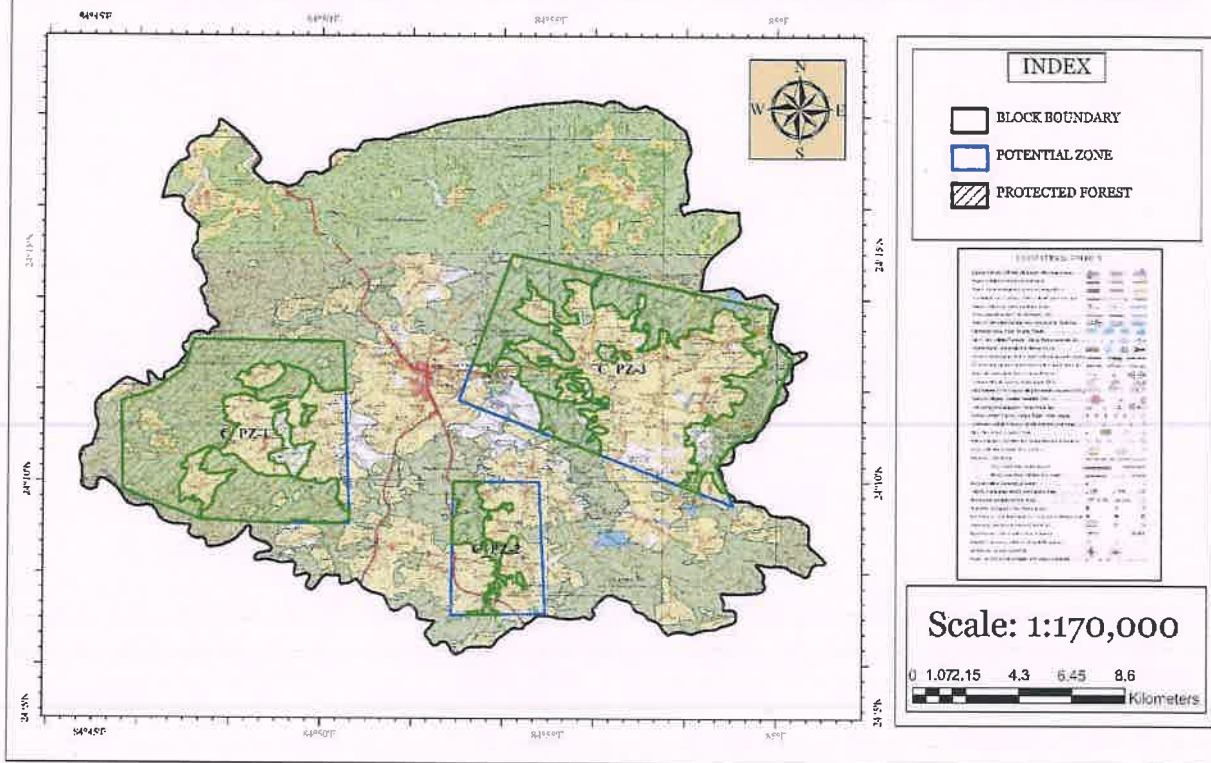


**DISTRICT MINING OFFICER  
CHATRA**

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON CHATRA BLOCK OF CHATRA DISTRICT



*[Signature]*  
**DISTRICT MINING OFFICER  
 CHATRA**

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



CHATRA			
C_PZ-1	C_PZ-2	C_PZ-3	
LARKUA	RAMPUR	AHURI	MAYAPUR
AMAUNA	GARWADIH	RAMNA	LEM
SURAJ	TIKULIA	DEWARIA	KAMAT
KARGU	SEMARIA	MARDANPUR	BHOJEA
PATER	DONRA	RUD KALAN	SATAU
KHUTER	NAUAKHAP	SANGHRA	KAMTA KHURD
LUTU	SONPUR	RUD KHURD	PACHMOH
NAWADA	JALUBIGHA	CHATRA	PACHMAHALA
NARTAMA	LARE	TUNRAG	GANGAGIT
BARAINI	SUSTRA	TAPEJ	MADHWAKHAP
NAWADIH	CHATANIA	ASNI KHURD	TALIA LOAGARA
GERI	PABO	ASNI KALAN	DARIATU
SIJUA	CHANGER	HALMGARA KALAN	LOAGARA
TILALA	BHADE	KARMATANR	RAMTUNDA
KADLE	TIKAR	CHAUR	JAINPUR
SIRAM	PUNDRI	HOLAMGARA KHURD	NAWADIH
SARED	CHAINPUR	ARA	JANGI
GHURNADIH	BELHAR	SONBIGHA	DEORIA
KARMA	KALTILKAR	MISRAUL	LACHHANPUR
KATHAUTIA	RANGWARA	CHATNIA	PANREPURA
SARED	NAWADIH	KULLU	GANDHARIA
AMBADIH	HANSBO	KALAYAN KHAP	SARAIA
PARBAT OR BARAHMANA	SIWAN	RAKSI	MANATU
KORCHA	DAMDOIA	KHARIB	UNTA
GULHUTU		SESANG	BHAIPUR

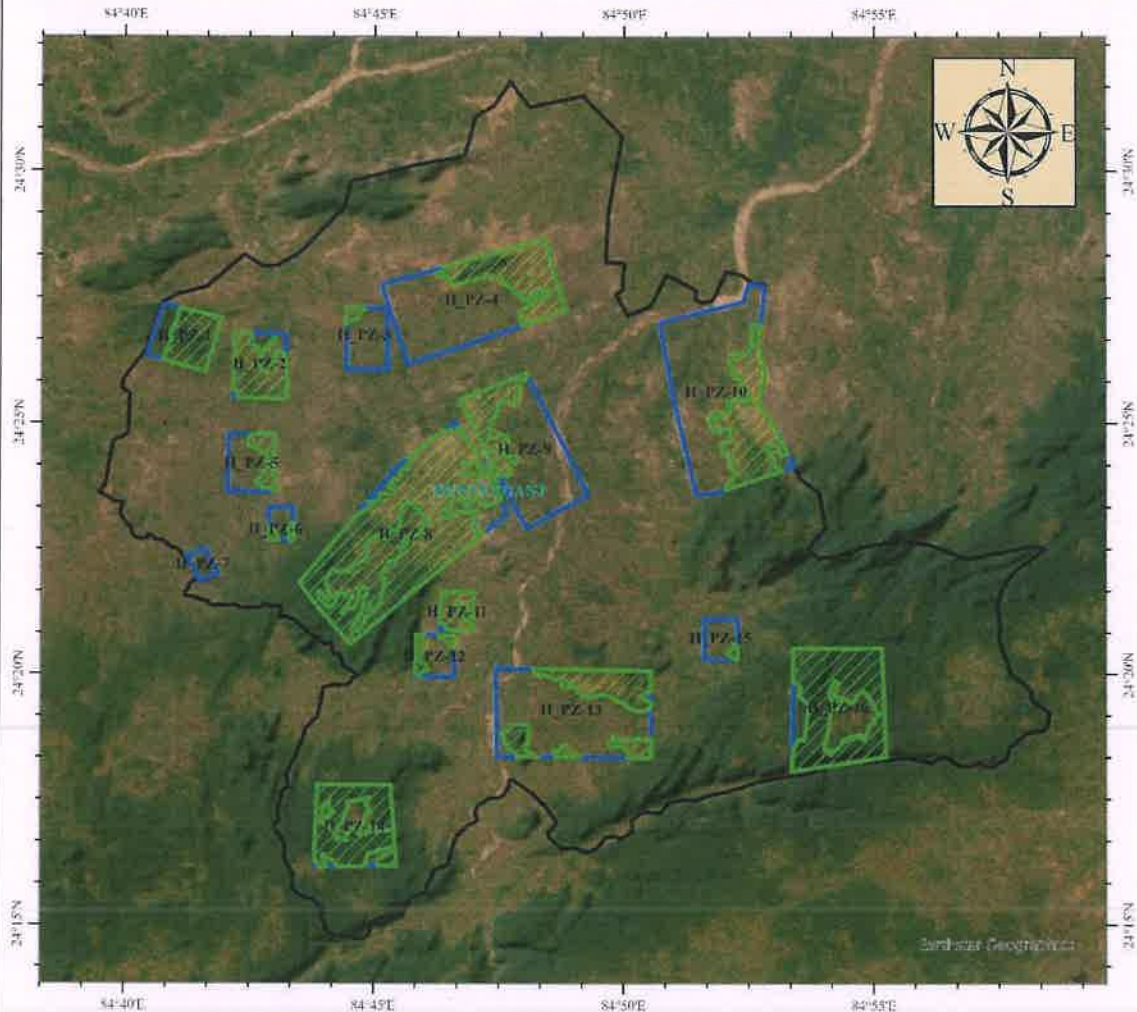


DISTRICT MINING OFFICER  
CHATRA

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND

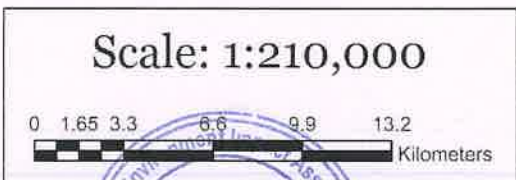


POTENTIAL ZONE DEMARKATION ON HUNTERGANJ BLOCK OF CHATRA DISTRICT



ZONE_CODE	AREA	Max_Lat	Min_Lat	Max_Lon	Min_Lon
H_PZ-1	513.570259	24° 27' 17.2284870" N	24° 26' 19.8866025" N	084° 45' 15.0582514" E	084° 44' 24.5082402" E
H_PZ-11	1661.244265	24° 20' 07.04180790" N	24° 18' 16.68762030" N	084° 50' 30.7104444" E	084° 47' 25.1932546" E
H_PZ-12	197.715648	24° 20' 47.88251240" N	24° 19' 36.2932970" N	084° 40' 36.0293575" E	084° 35' 48.7034577" E
H_PZ-7	68.180393	24° 20' 09.84020308" N	24° 19' 51.9890905" N	084° 41' 51.43602545" E	084° 41' 13.03712429" E
H_PZ-11	532.365212	24° 24' 27.22162148" N	24° 21' 38.41541748" N	084° 43' 00.07324839" E	084° 42' 02.0030077" E
H_PZ-11	155.170087	24° 21' 38.97336090" N	24° 20' 52.3177195" N	084° 47' 00.45126820" E	084° 46' 18.15204851" E
H_PZ-2	414.10829	24° 26' 27.598860048" N	24° 25' 09.47571412" N	084° 43' 14.37768074" E	084° 42' 09.91841557" E
H_PZ-13	174.668505	24° 21' 08.5056210" N	24° 20' 17.00478745" N	084° 52' 36.84102785" E	084° 51' 34.78862074" E
H_PZ-6	99.016502	24° 23' 10.12162088" N	24° 22' 35.62681658" N	084° 41' 22.8417604" E	084° 41' 53.22282046" E
H_PZ-10	433.041077	24° 20' 21.12510371" N	24° 18' 05.17031850" N	084° 55' 25.02338468" E	084° 53' 18.94770454" E
H_PZ-14	790.288317	24° 17' 46.00571378" N	24° 16' 10.2882355" N	084° 45' 27.46446034" E	084° 43' 46.76084500" E
H_PZ-9	1237.963281	24° 25' 58.01073290" N	24° 20' 55.79743024" N	084° 40' 16.97901502" E	084° 40' 41.57838802" E
H_PZ-1	410.591753	24° 21' 21.36089072" N	24° 20' 01.80496250" N	084° 41' 57.73833334" E	084° 40' 24.8077617" E
H_PZ-4	1041.044275	24° 20' 36.44310005" N	24° 20' 13.20243525" N	084° 48' 40.78327070" E	084° 45' 07.27723267" E
H_PZ-10	2092.582969	24° 27' 45.03072463" N	24° 25' 36.44055746" N	084° 53' 24.01244970" E	084° 50' 41.39294375" E
H_PZ-8	2616.592205	24° 24' 28.70444885" N	24° 20' 38.50902264" N	084° 47' 41.39270786" E	084° 44' 28.31932300" E

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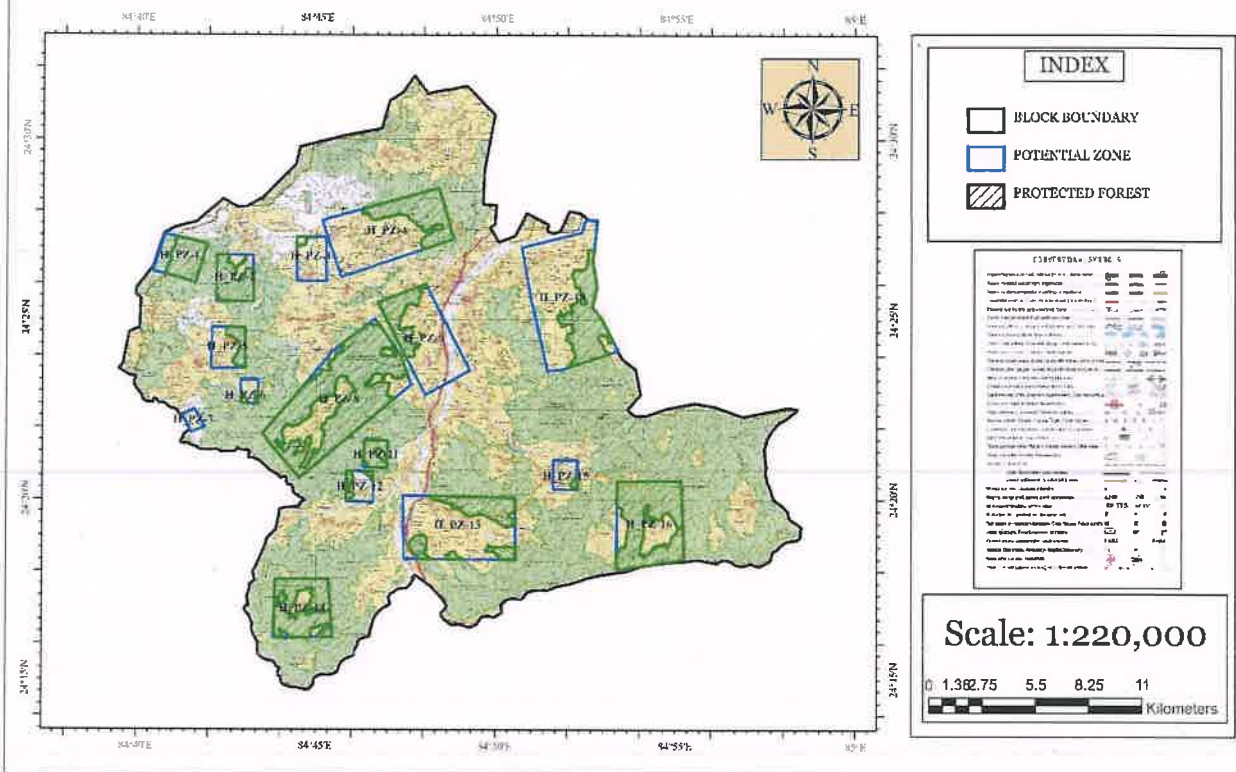


*[Signature]*  
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**CHATRA**

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON HUNTERGANJ BLOCK OF CHATRA DISTRICT



*[Signature]*  
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



HUNTERGANJ

SAGASOTE	PANDEPUR KHURD	JHIKATIA	DHARDHARA	CHANDAR KALI
LENJWA	GENJNA	SIKATIYA	BEHARA	DEMDEM
KHARANTI	KHARANTI	GORWALI	DONGARI	DHOBEY
JAUWADOHAR	DUNDU	DEWARIA	PONDRI KHURD	BIHIYA SARHACHIA
KARMAHI	KAIRIA	KANAUDI	SUGI	DHANGIRI
SAGASOTE	BALANIA KHEJURIA	BELA	KARIDI OR MADA	PACHMAHLA
EKAUNA	ARJUN KHURD	DUMRI KALAN	PANDRI KALAN	KANCHANPUR
GERUA	CHAKLA	DUMRI KHURD	BEDAULI	GOSAIDIH OR BASARIATARI
KUSMAHI	KODLAIYA	GOPALPUR	EKTARA	KEWLA
BARHIBIGHA	BISHUNPUR	KASHIKEWAL	KUBA	KARMAHI
AUNRU	GORWALI	SOKHA	BHOGTADIH	PAHARPUR
BHARARI	POSTIA	KOBNA	KARMA	NIJRA
BARHIBIGHA	BELA	BHONDAL	KANGURUWA	JORI KALAN
AUNRU	JORAKARAM	GODABAR	LICHRI	GOBINDPUR
DHEBO	KANAUDI	HIRING	DANDAI	LOHSINGNA OR SONDIHA
DAHA	KASHIKEWAL	LUTA	KENDUA	BARA
BELA	BELA	HATWARIA	KOLHUA	KON
BHOJPUR	RANO	KASDABAR	GIDHATARI	TETARIA
BAGHMANDWA	AKTA	GAIGHAT	GHATDHARI	JORI KHURD
JABRA	SIRKA	KOLWA	SAJNI	TISARJORI
BANKA	PIPRA	GIDHAUR	KORAMO	SALAIYA
SONBARSA	KHUTERA	NAIN CHAK	SALOT	PAHASBAR
PEKHA	DEWARIA	TILHET	PANDARKOLA	AMBAR
PURNANAGAR	KADWA	JALDIHA	KURKHETA	RAJGURU
BHUINADIH	DANTAR	AMBADOHAR	KUSMAHA	MANSACHAK

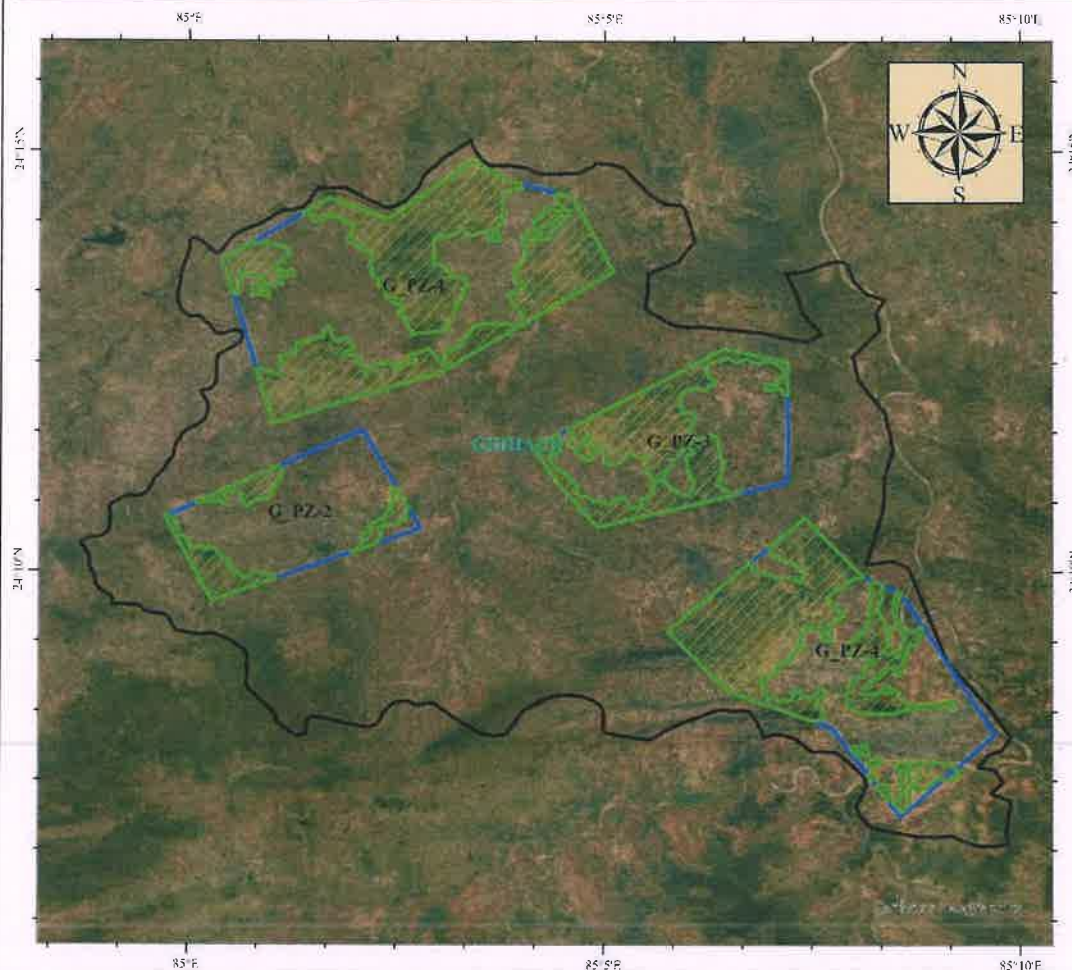


  
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON GIDHAUR BLOCK OF CHATRA DISTRICT



ZONE_CODE	AREA	Max_Lat	Min_Lat	Max_Lon	Min_Lon
G_PZ-2	1016.579802	24° 11' 39.79198501" N	24° 09' 40.80923751" N	085° 02' 47.81725737" E	084° 59' 42.32000918" E
G_PZ-1	2622.027566	24° 14' 51.21271504" N	24° 11' 49.22058095" N	085° 05' 07.96922795" E	085° 00' 23.46129002" E
G_PZ-4	2005.305877	24° 10' 38.04737308" N	24° 07' 04.77191627" N	085° 09' 42.15758045" E	085° 05' 44.35621730" E
G_PZ-3	1290.181066	24° 12' 38.38998518" N	24° 10' 33.96649093" N	085° 07' 13.56309107" E	085° 04' 07.58931539" E

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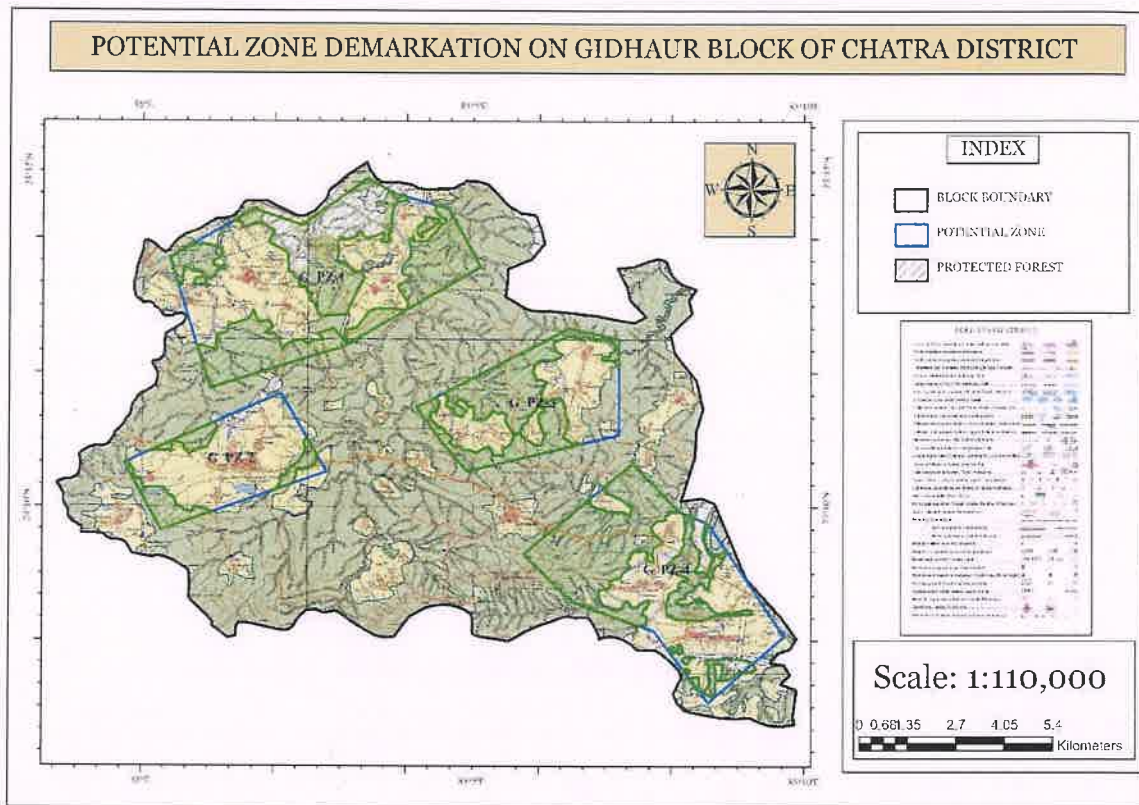
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POTENTIAL ZONE DEMARKATION ON GIDHAUR BLOCK OF CHATRA DISTRICT



<b>GIDHAUR</b>	
RUPIN	ICHAK
NAYAKHAP	GARKE
AMIN	PINDARKOM
KURKUTA	JAMUA
PEKSA	LOHRI
SINDUARI KALAN	BARIATU
DARHUA	DUARI
SINDUARIKHURD	BAIN
MAJHGAON	CHIRAIYA
BARISAKHI	TALAIYA ALIAS TILLETANR
SALGA	BISNAPUR
KENDUA	GANGPUR
BARIA	GIDHAUR
KIRKIRA	KATGHARA



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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND






POTENTIAL ZONE DEMARCATION ON ITKHORI BLOCK OF CHATRA DISTRICT



ZONE_CODE	AREA	Max_Lat	Min_Lat	Max_Lon	Min_Lon
I_PZ 1	2978.937177	24° 20' 19.73904693" N	24° 15' 24.95867585" N	085° 14' 21.32848198" E	085° 09' 35.69678319" E

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Scale: 1:130,000

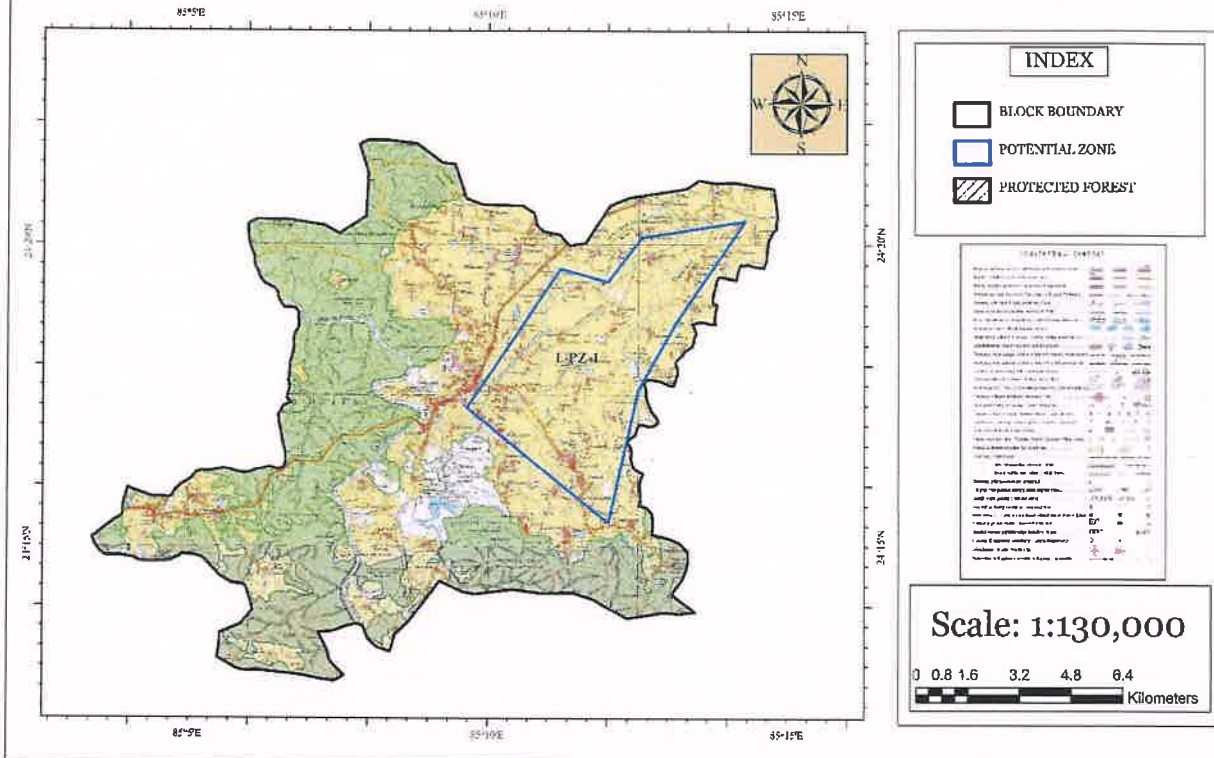


  
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON ITKHORI BLOCK OF CHATRA DISTRICT



ITKHORI			
ASARHIA	RAKSI	KONIWAN	KANJIA
ITKHORI	RAKSA	SORAHKURWA	DHARAMPUR
DHANKHERI	PIPRAHI	DUNDI	NAWADA
KALEANPUR	DHUNA	KARMA KALAN	BANRUWAHI
ROMI	SONASEMAR	BAKCHO	DARIAPUR
PAROKA KHURD	MOGLA	TETAR CHAK	JAGANBIGHA
PAROKA KALAN ALIAS KUARDIH	MOLAKPUR	PHATIK	KHAURA KHURD
BARAI CHAK	KHAURA KALAN	PAKARIA	KEMO
PATHARIYA	SANRHA	LORAM	SEMRAHI
ANUP CHAK	NAZIRGANJ	RAJPUR	LITA
KHARAUNDHA	BIHARI	RAJWAR	MANI CHAK
BONGA	BALGUDAR	KURJUN	KANTAH CHAK
NAWADIH	NAWADIH	GANDHARAB CHAK	SIRMATPUR
KARNI	KOENRA	DHARPUR	
JAGDISPUR	BHAGWANPUR	THAWAI	NARCHAKALAN
KANAUDI	MALAKDIHA	SAHIBARA	DAMBHADIH
MARWA	DHANRAS	HURBIA	MAJHAULIA
PIPRA	AMBATARI	CHORKARI	NARCHA KHURD
BAMANDIHA	MANDAIN	BANAJANG	RAJA NARCHA



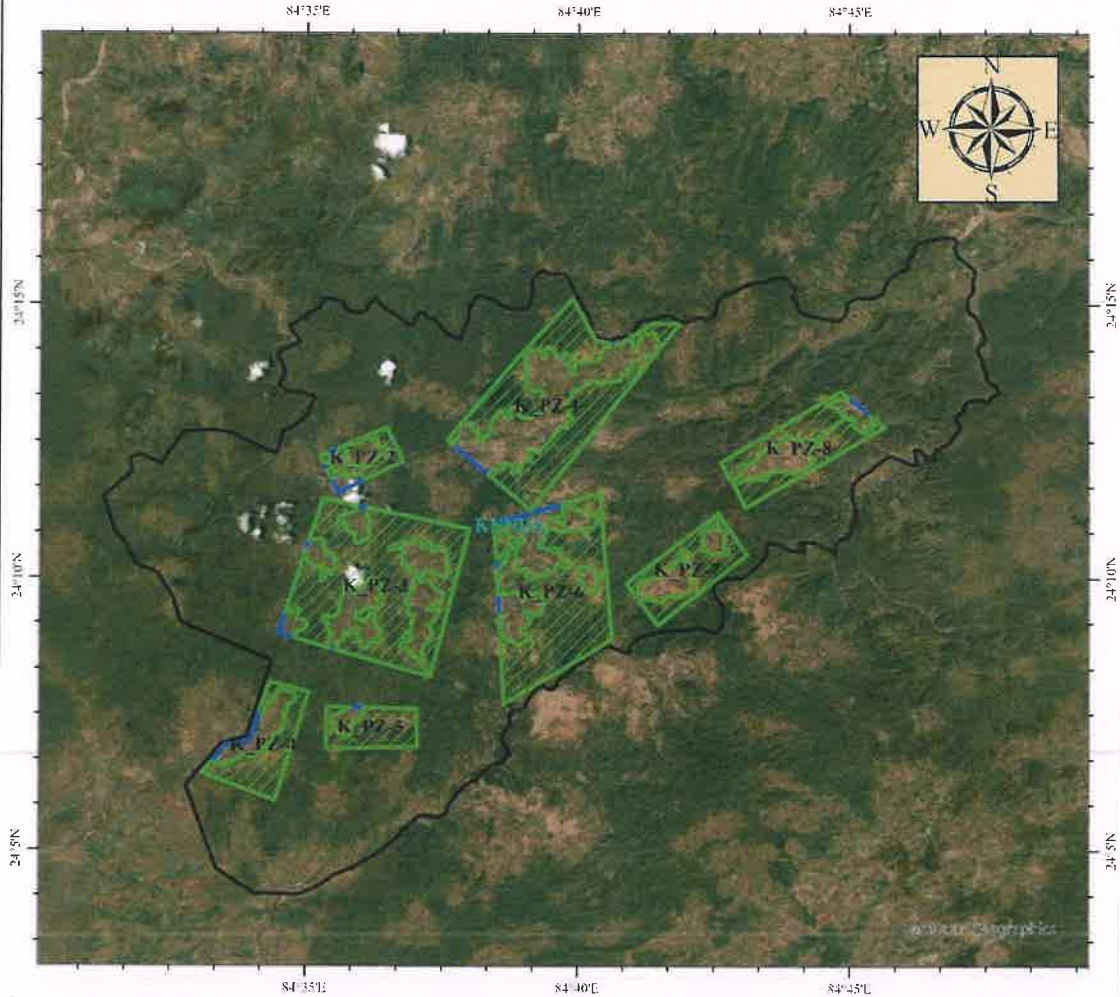
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON KUNDA BLOCK OF CHATRA DISTRICT



ZONE CODE	AREA	Max Lat	Min Lat	Max Lon	Min Lon
K_PZ-1	2134.650591	24° 15' 04.68915636" N	24° 11' 17.36085520" N	084° 41' 54.59709577" E	084° 37' 32.38973235" E
K_PZ-8	822.319543	24° 13' 23.09660960" N	24° 11' 20.25916307" N	084° 45' 39.91183331" E	084° 42' 36.19925930" E
K_PZ-6	1894.362031	24° 11' 31.62756236" N	24° 07' 43.78399752" N	084° 40' 38.56633589" E	084° 38' 26.55853605" E
K_PZ-5	386.137727	24° 07' 37.93414507" N	24° 06' 52.69092720" N	084° 37' 02.97756727" E	084° 35' 21.53518309" E
K_PZ-4	604.114603	24° 08' 03.70936588" N	24° 05' 55.24586217" N	084° 35' 05.18444888" E	084° 33' 04.06441544" E
K_PZ-2	296.745052	24° 12' 44.13745932" N	24° 11' 34.55257794" N	084° 36' 46.89372385" E	084° 35' 14.72456539" E
K_PZ-7	621.141042	24° 11' 10.20408627" N	24° 09' 09.68751063" N	084° 43' 07.41754910" E	084° 40' 51.94221280" E
K_PZ-3	2385.561518	24° 11' 26.36022893" N	24° 08' 12.35866117" N	084° 38' 02.68017188" E	084° 34' 26.21797724" E

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Scale: 1:190,000



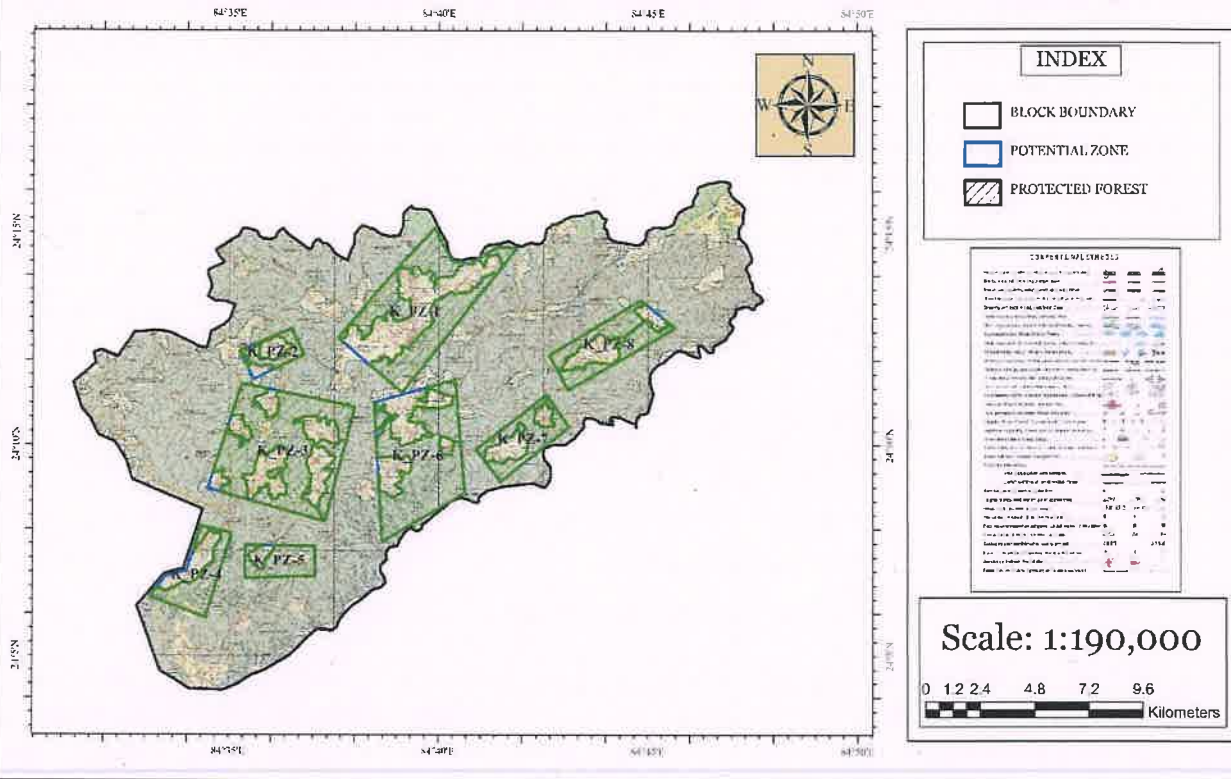
*[Signature]*

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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON KUNDA BLOCK OF CHATRA DISTRICT



KUNDA		
BANASAS	KHARANTI	BISHUNPUR
MAJHIPARA	RAHARIA	BAJRAHI
BARWA	MONYA	LAWALONG
KUNDA	BARIATU	BODHADIH
TARADOHAR	POTAMDOHAR	AMAUNA
MARAIYA	BAGHAUTA	BESRA
KUSUMHA	PINJNI	KASILAUNG
ICHATU	MEGHRANIA	BANASAS
MOHANPUR	KHAPIA	BARWA
DOKWA	MADARPUR	HISATU
MEDWADIH	BANASAS	NAWADIH
SHAHPUR	SIKIDAG	BHURHA
KAMAL	BHAUROODIH	KAMAL
SIKIDAG	LUKUIA	JABRA
LUPUGARAH	BABUDIH	DANRU
LOTWA	BUTKUIA	RATNAG
DURGI	GARO	KORHANS
KUTIL	PINJA	BANDIADIH
KUTIL	BHURHA	
JOBEYA	CHAYA	

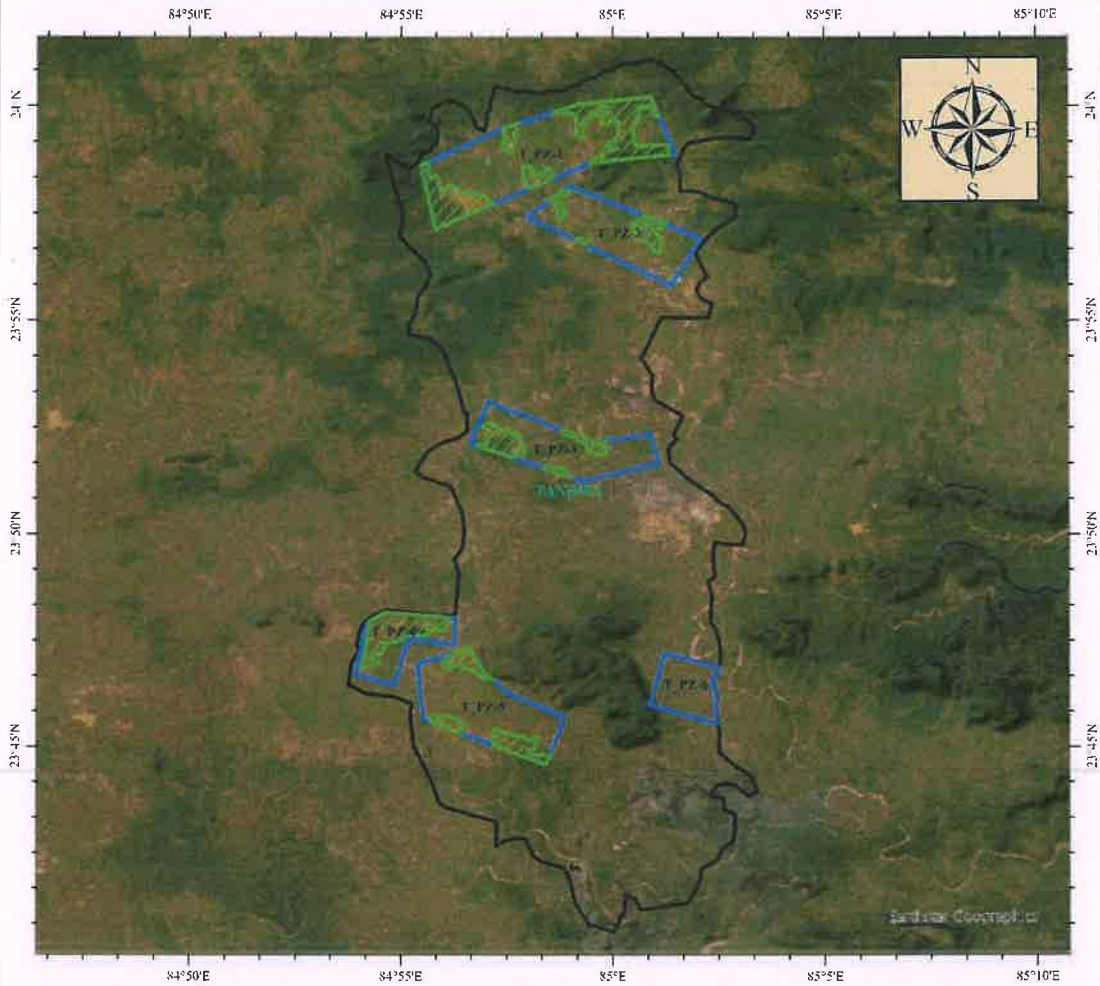


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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON TANDWA BLOCK OF CHATRA DISTRICT



ZONE_CODE	AREA	Max_Lat	Min_Lat	Max_Lon	Min_Lon
T_PZ-6	569.862694	23° 47' 11.46241509" N	23° 45' 32.83832294" N	085° 02' 30.06417578" E	085° 00' 51.05258595" E
T_PZ-4	688.492975	23° 48' 09.22007381" N	23° 46' 28.34326508" N	084° 56' 17.29265091" E	084° 53' 52.85605656" E
T_PZ-5	1544.010935	23° 47' 18.96798943" N	23° 44' 35.00958438" N	084° 58' 52.28368149" E	084° 55' 22.00399490" E
T_PZ-3	1255.500053	23° 53' 05.87599926" N	23° 51' 15.92280138" N	085° 01' 05.21723776" E	084° 56' 36.44426880" E
T_PZ-1	2660.23501	24° 00' 08.78436716" N	23° 57' 13.1121196" N	085° 01' 29.94073480" E	084° 55' 26.69408497" E
T_PZ-2	1305.230793	23° 58' 07.64814873" N	23° 55' 50.38027418" N	085° 02' 06.42009062" E	084° 57' 57.76596288" E

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Scale: 1:240,000

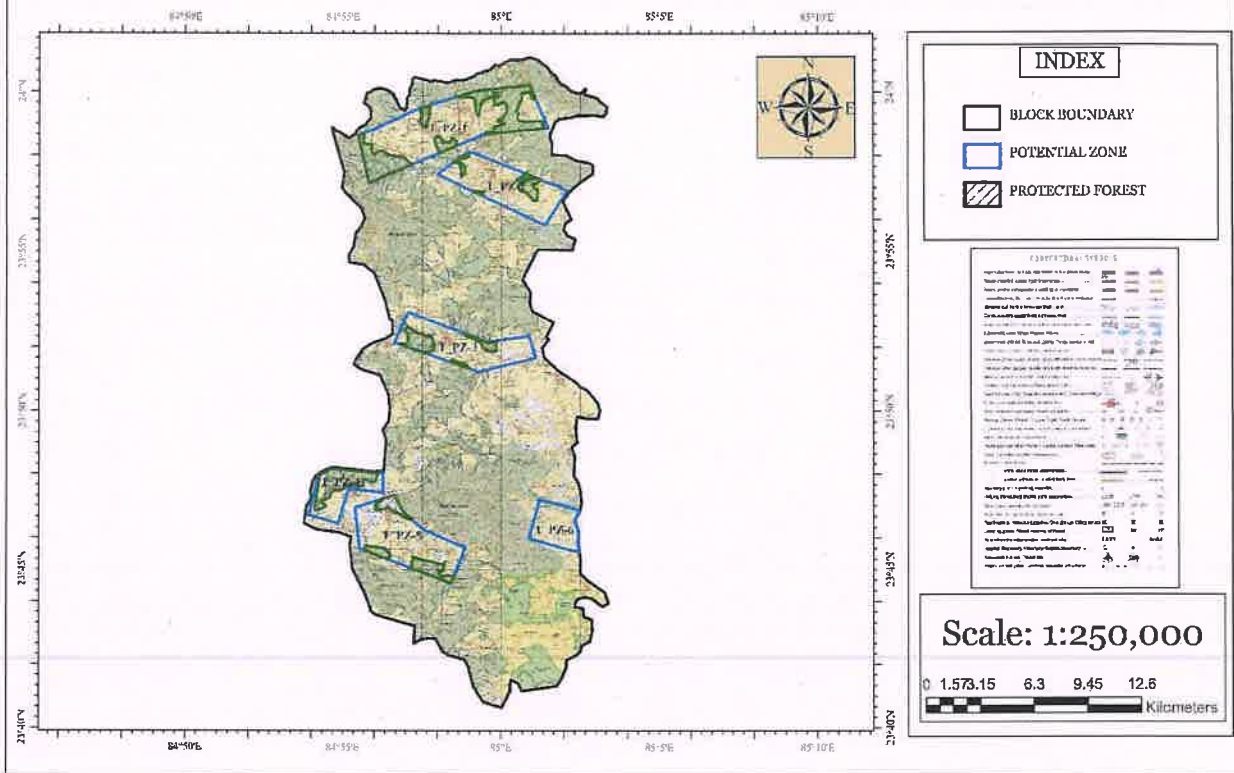


  
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON TANDWA BLOCK OF CHATRA DISTRICT



**TANDWA**

DARI	BRINDA	SARADHU	BANPUR
BADBIGHA	KABRA	GARILAUNG	BALI
TESAR CHEPA	KATAHI MISRAUL	KAMTA	CHIRTAUNGA
PADUMPUR	SIRSAI	KURLONGA	ULATU OR SEMRATANR
RAL	URDA	BARKUTI	BARGAON
LEMHOA	KODHAMDIRI	KOED	DAHU
GOBINDPUR	NAWADIH OR TELIADIH	HECHABALIA	SIDPA
BUKRU	KHADHAI	KUMARANG KHURD	KALYANPUR
DARIDAG	MISROL	KUMARANG KALAN	CHORA
SIDHPA	TEKTHA	DAHU	MANDAR
HESATU	PHULWARIA	SIDPA	
BIRBIR	GIDDI		
DHANGARA	BUKRU		
KHARIKA	KHARIKA		

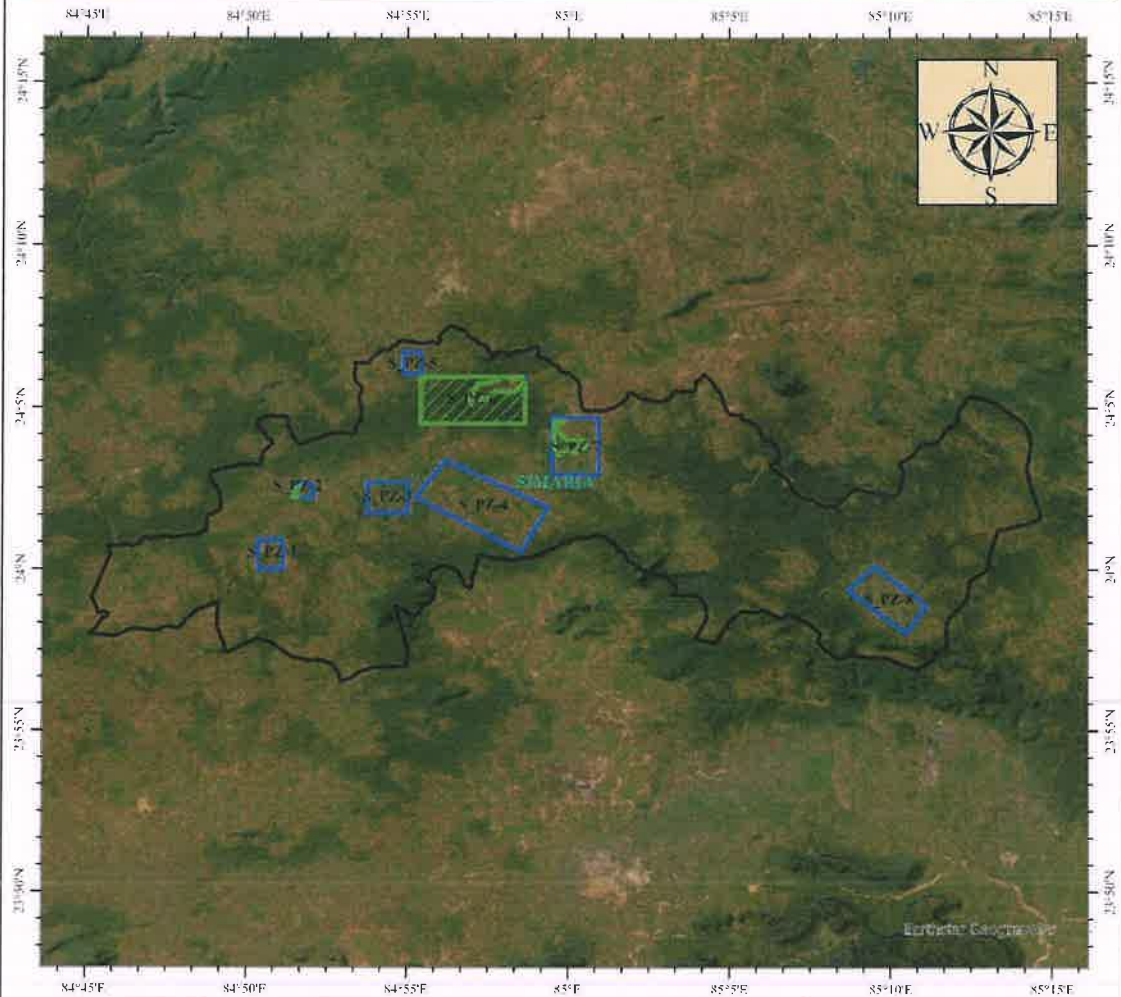


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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND






POTENTIAL ZONE DEMARKATION ON SIMARIA BLOCK OF CHATRA DISTRICT



ZONE_CODE	AREA	Max_Lat	Min_Lat	Max_Lon	Min_Lon
S_PZ-6	1458.684975	24° 05' 57.05166482" N	24° 04' 31.02225925" N	084° 58' 39.78964890" E	084° 55' 23.71725507" E
S_PZ-7	789.657929	24° 04' 42.09493467" N	24° 02' 56.20096998" N	085° 00' 56.93618118" E	084° 59' 28.90012188" E
S_PZ-5	117.931017	24° 06' 43.30748562" N	24° 06' 03.19304311" N	084° 55' 26.65240712" E	084° 54' 51.35881279" E
S_PZ-3	371.674389	24° 02' 41.66012102" N	24° 01' 44.99366038" N	084° 55' 01.09073962" E	084° 53' 44.60765747" E
S_PZ-2	83.79177	24° 02' 37.99322261" N	24° 02' 11.30272893" N	084° 52' 03.92291747" E	084° 51' 25.14281729" E
S_PZ-1	221.405521	24° 00' 54.61121596" N	24° 00' 00.59638624" N	084° 51' 08.69267656" E	084° 50' 19.16569229" E
S_PZ-4	173.500832	24° 03' 21.94525401" N	24° 00' 33.73851706" N	084° 59' 23.45939568" E	084° 55' 13.34358611" E
S_PZ-8	720.667485	24° 00' 05.19527936" N	23° 58' 02.52191852" N	085° 11' 08.16651310" E	085° 08' 39.74731107" E

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Scale: 1:320,000



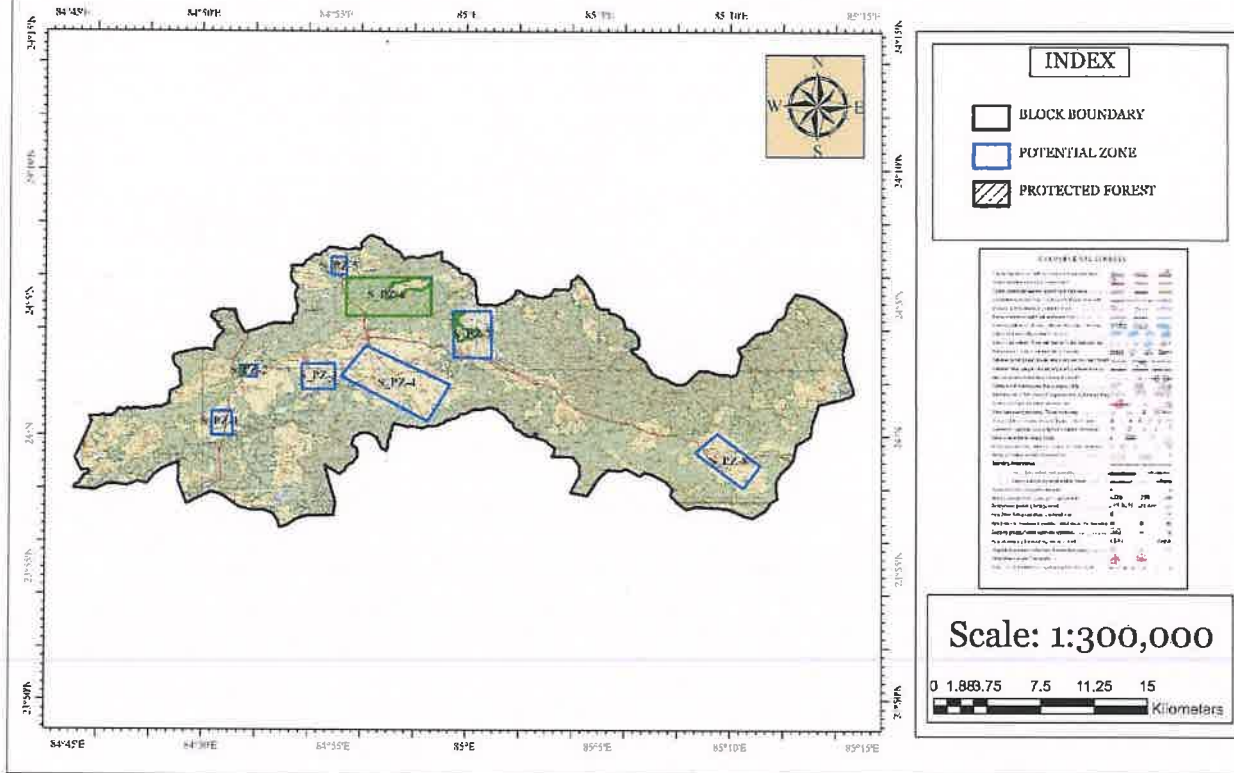
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DISTRICT SURVEY REPORT OF "MINOR MINERAL, (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON SIMARIA BLOCK OF CHATRA DISTRICT



SIMARIA		
KUTI RANGANIA	SABONA	KURUM
HANKAR KHAP	SIMARIA KALAN	SILA
JABRA	SIMARIA KHURD	BONGADAG
BAGRA	BANHE	BIRHU
KALJIRUA OR LUTIDIH	SOHA ALIAS KEOTA	ID
BELGARA	SARMA	ICHAK
ARA ATU	PAGAR	AMGAWAN
ICHAK KALAN	KHAPIA	TALSA
PASERI	BAKCHOMA	BANJI
BARA	SOHAR KALAN	KADLE
KODW	MURUE	SIKRI
KORI	KATIA	SIURIA
DILHO	EDLA	ICHAK KHURD
CHALKI	PATNA	BANHE
ROL	DARI	KORI
LIPDA	PUNDRA	CHALKI
BANA SANDI	BANA SANDI	CHANDRAM
LOBGA	KUTI	ICHAK KHURD

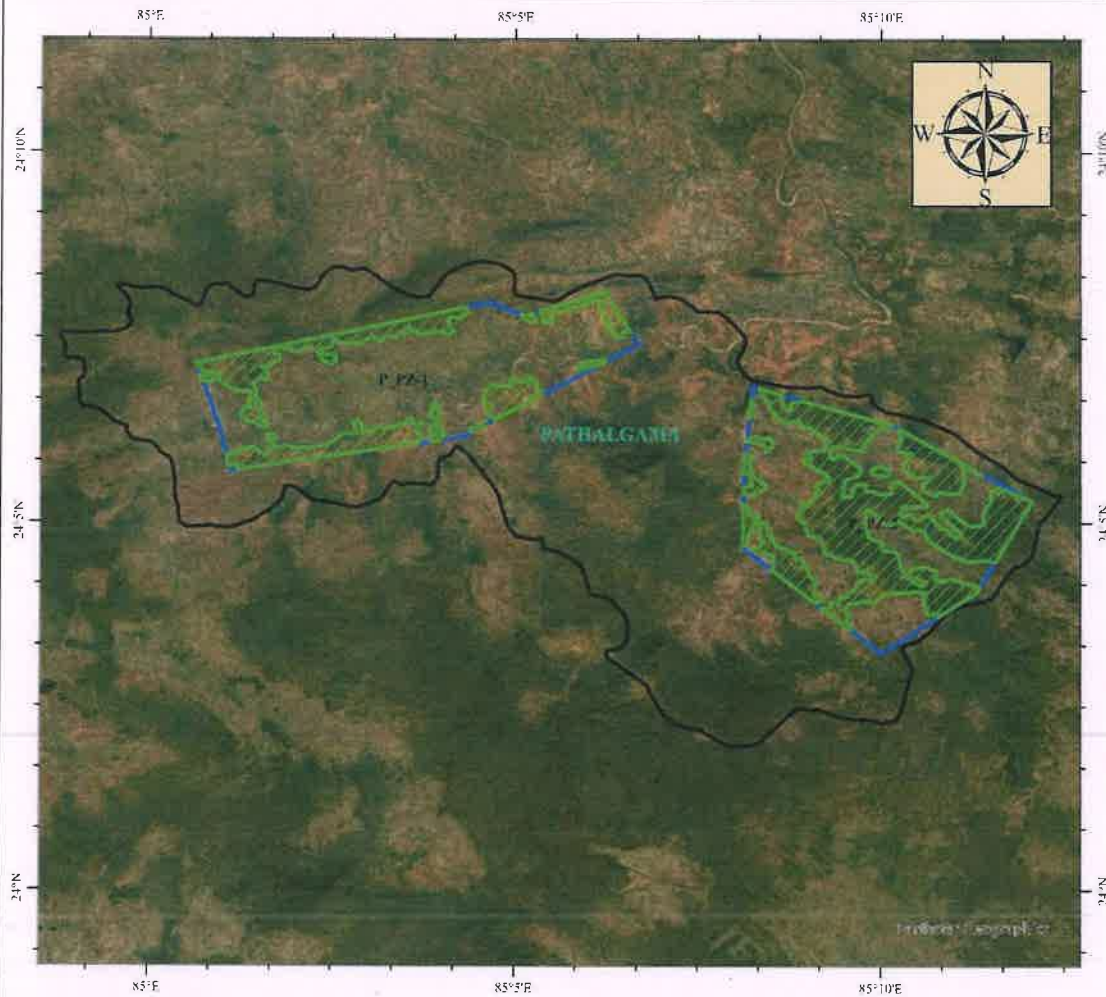


*[Signature]*  
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**CHATRA**

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON PATHALGAMA BLOCK OF CHATRA DISTRICT



ZONE_CODE	AREA	Max_Lat	Min_Lat	Max_Lon	Min_Lon
P_PZ-1	2565.89295	24° 08' 03.26270355" N	24° 05' 46.28409991" N	085° 06' 42.39904865" E	085° 00' 38.11322839" E
P_PZ-2	2729.311696	24° 06' 50.47080505" N	24° 03' 14.96534351" N	085° 12' 05.38807765" E	085° 08' 04.74803711" E

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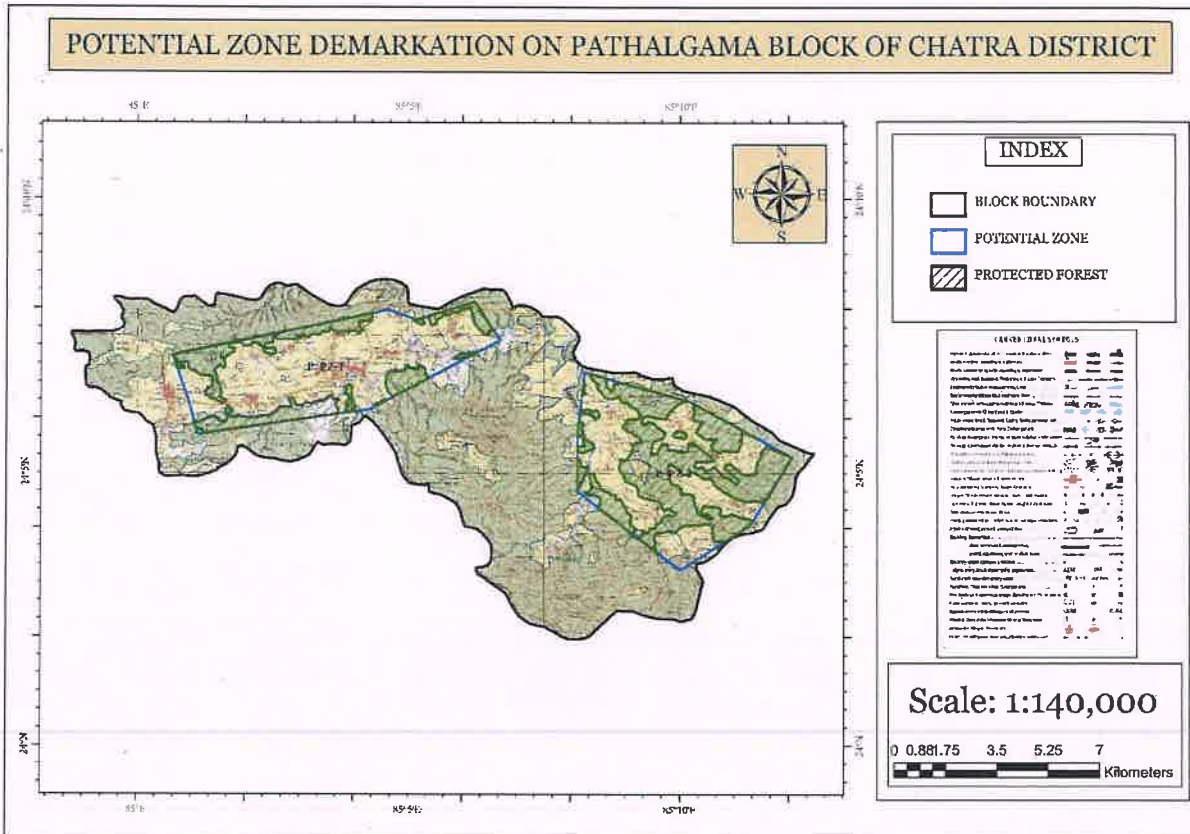
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0 1.1 2.2 4.4 6.6 8.8  
Kilometers



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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



PATHALGAMA	
NONGAON	MERAL
TETARIA	JORI
GOPIPUR	RATURWA
BANDARCHUAN	JEHRA
LEMOIA	CHITUA
SINGHANI	SEMRATARI ALIAS DHURUA
PATHALGARA	SAEL
ANGARA KHURD	BAHERA
BANWARA	KHAIRA
BARWADIH ALIAS NIMEKHAP	KUBA
DUMI	CHONTHA
BELHAR	BAJOBAR
ANGARA KALAN	NAWADIH DAMOL

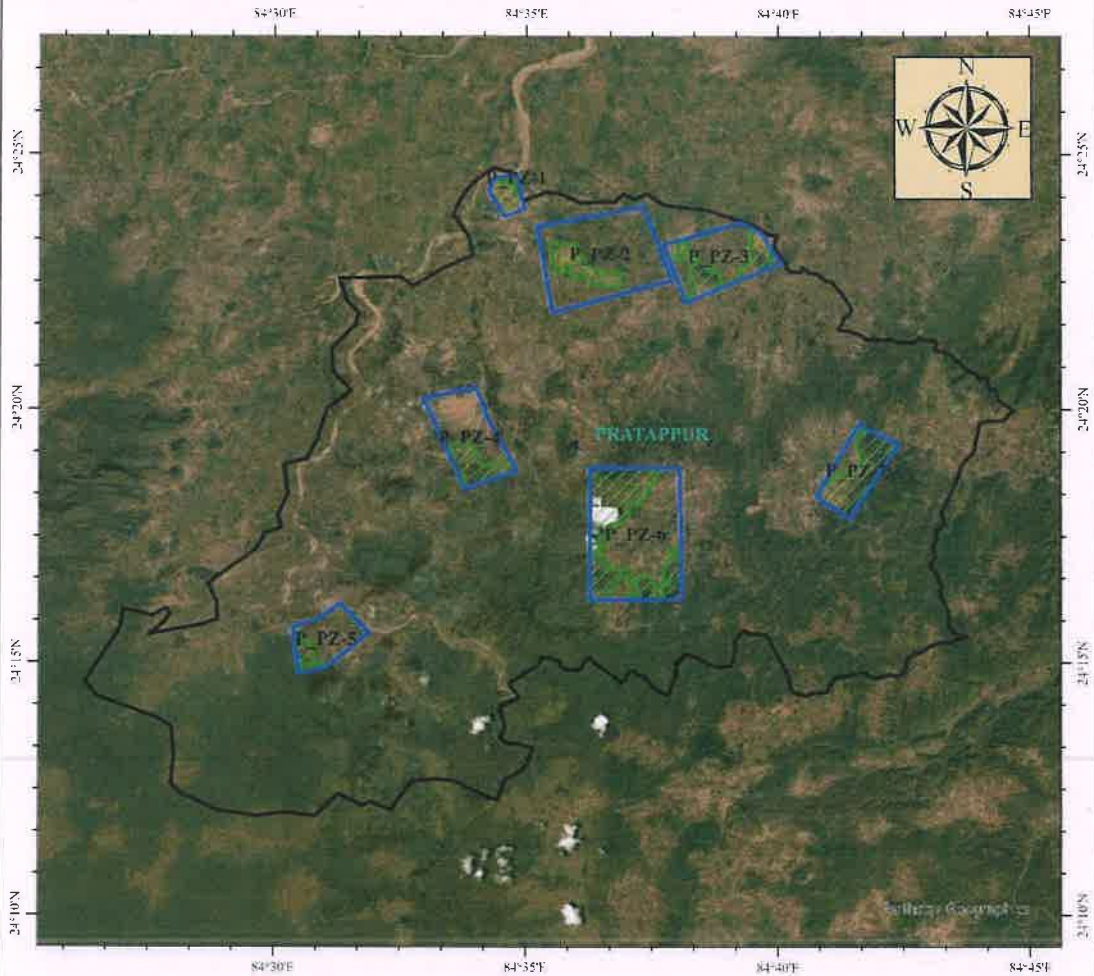


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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARCATION ON PRATAPPUR BLOCK OF CHATRA DISTRICT



ZONE CODE	AREA	Max_Lat	Min_Lat	Max_Lon	Min_Lon
P_PZ-1	120.9194	24° 24' 36.97158453" N	24° 23' 47.29639806" N	084° 34' 56.69972939" E	084° 34' 14.62105627" E
P_PZ-3	653.983252	24° 23' 38.81341569" N	24° 22' 07.93721582" N	084° 40' 03.83649278" E	084° 37' 42.56401724" E
P_PZ-6	1465.226978	24° 18' 51.09838275" N	24° 16' 15.78119806" N	084° 38' 05.08049309" E	084° 36' 12.73388089" E
P_PZ-2	1161.778028	24° 23' 57.26519593" N	24° 21' 56.47158077" N	084° 37' 52.86816699" E	084° 35' 11.67100114" E
P_PZ-7	448.42388	24° 19' 41.71060323" N	24° 17' 52.80897525" N	084° 42' 25.21529797" E	084° 40' 42.90202779" E
P_PZ-4	608.237318	24° 20' 24.85026381" N	24° 18' 28.39175535" N	084° 34' 49.48001464" E	084° 32' 56.91392981" E
P_PZ-5	374.514226	24° 16' 09.50641926" N	24° 14' 48.48145402" N	084° 31' 53.79690821" E	084° 30' 21.33832312" E

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- BLOCK BOUNDARY
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Scale: 1:200,000

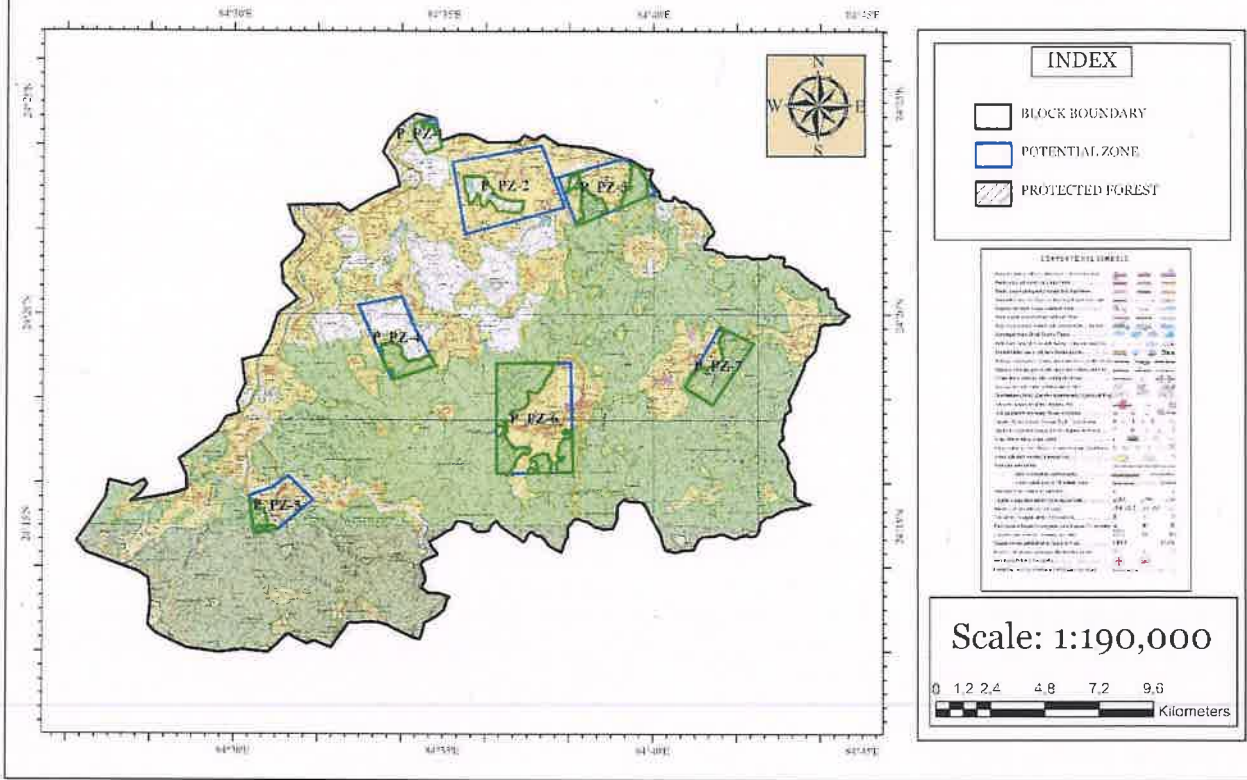


*[Signature]*  
 DISTRICT MINING OFFICER  
 CHATRA

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON PRATAPPUR BLOCK OF CHATRA DISTRICT



PRATAPPUR		
KASHIBAR	DHARAMPUR	BIRMATKUM
LODHEA	GHUJI	BADHAR
KARAMDIH	BANDOHRI	NANAI KALAN
JAIPUR	CHANDRI GOBINDPUR	KARARUA
NAIKBIGHA	KULUBOR	NIMAKATU
PATHRA	CHANDRI KALAN	BIRBIR
GOBEA	SALEMPUR	GOME
MONYA	PACHMO	SIBPUR
GAJWA	BAGHAKOLA	RABDA
DURGAHI BISHUNPUR	SHANKARPUR	PIPREHAT
KALIANPUR	MOHANPUR	SONBARSA
DUMRI	MANGRA BAIJNATHPUR	BABHNE
GIDHA	BHAUNRAJ	KARUDIH
MAHKAMPUR	JHANTI	KUSIARA
JOGIDIH	BASHUTTA	SIDKI
MAHUGAIN	HUMAJAN	ANJNU
GHUJI	KEWALIA	GURIA
SIKNI	NARAINPUR	MAHUGAIN
JOTDIH	A PART OF IMAMGANJ C.D. BLOCK IN DISTT. GAYA	BHUGARH
TANRWA	BARURA	BANDATAR
MAIRAG KHURD	JHARA	TELIACHAK
MAIRAG KALAN	NAWADIH	NAUABAR
LONHRI	KATAUN	PARTAPPUR
JOGIARA		



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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND






POTENTIAL ZONE DEMARCATION ON MAYURHAND BLOCK OF CHATRA DISTRICT



ZONE_CODE	AREA	Max_Lat	Min_Lat	Max_Lon	Min_Lon
M_PZ-1	4419.930889	24° 20' 34.04555534" N	24° 16' 12.72454070" N	085° 18' 54.88554810" E	085° 12' 47.07901399" E

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Scale: 1:110,000

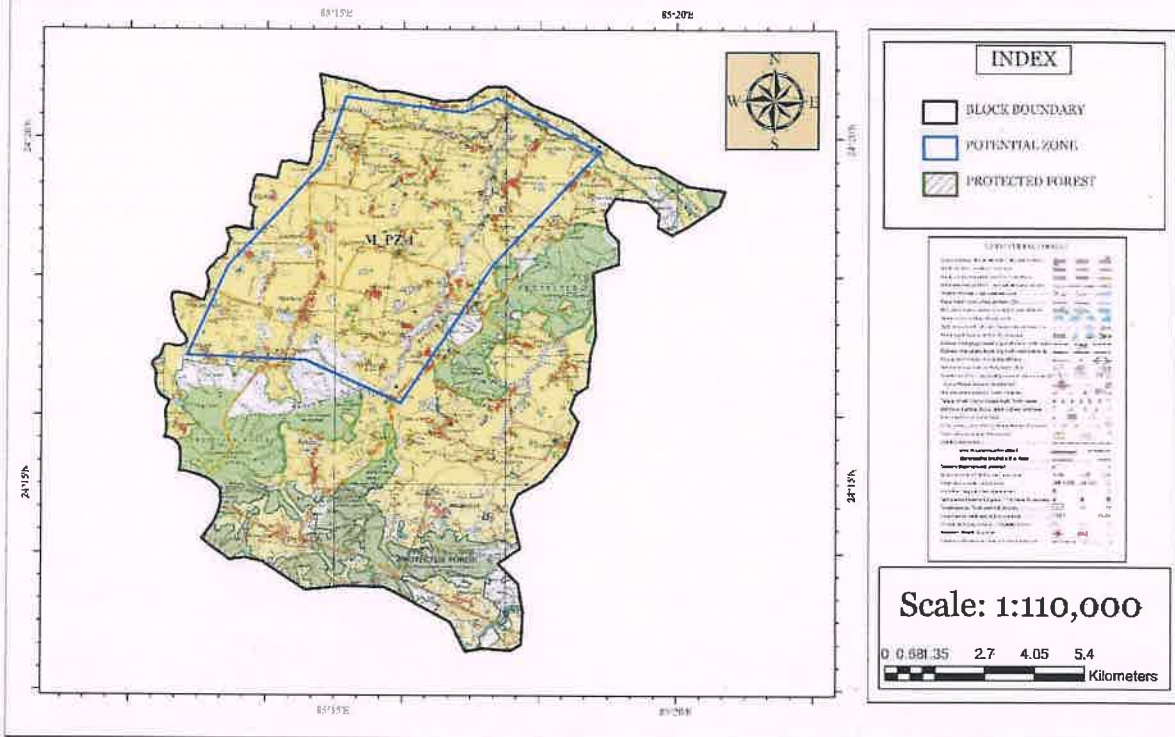


  
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON MAYURHAND BLOCK OF CHATRA DISTRICT



**MAYURHAND**

CHANDI ALIAS PANDI	NARCHAHI	BELKHORI
EKTARA	KADGAWAN KALAN	SIDUWARI
CHAURIA	GADA	DIGHI
BANHA	JAMUNIA	MAKHROL
CHORHA	DUBI	DHANARHI
MAHUARI	KADGAWAN KHURD	DHANGAWAN
HUSIA	SEWAI KALAN	BAND GAMHARIA
MAJURHAND	SEWAI KHURD	KUMHARI
SINGHRAWAN	ALAGDIHA	DEOSAR
PIPRA	PAKARIA	MAJHILA
HARAHI	BANSDIH	BALIA
KENDUAHI ALIAS BABHANDIH	NIMA	JHARDAG
PARWARIA UTTARWARI	URSI	PATHRA
PARWARIA DAKHINWARI	PARASI	PHULANG
BELA	BARAKAR	KANCHANPUR
SIMARIA	GOREA	MAHUGAIN
GAMHARIA	SALE	KANAUDICHOHA
PARSAWAN	KHAIRA	NAWADA
UPRAUNDA	BENGWA	MANHE
		SADAFAR

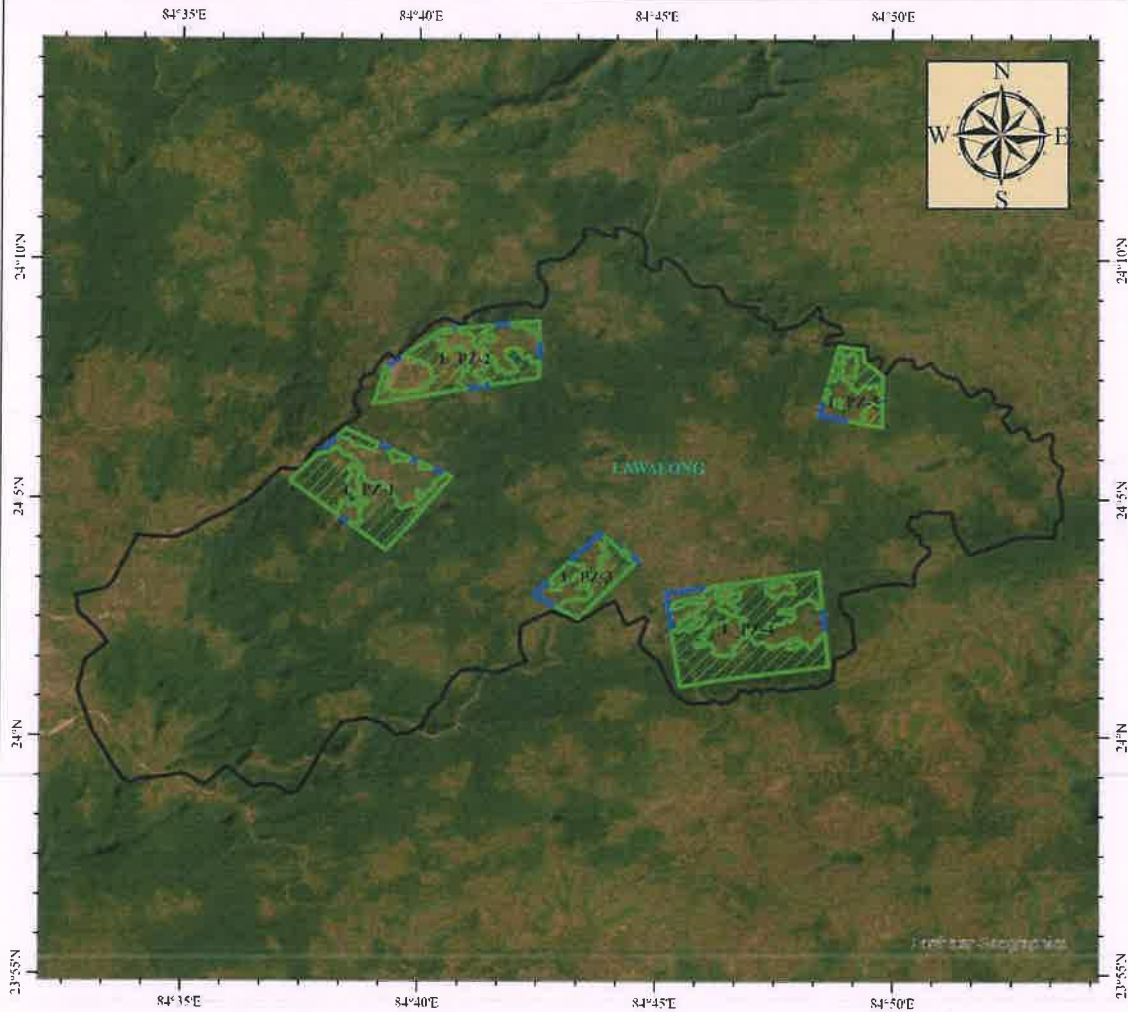


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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON LAWALONG BLOCK OF CHATRA DISTRICT



ZONE_CODE	AREA	Max_Lat	Min_Lat	Max_Lon	Min_Lon
L_PZ-1	1371.024436	24° 06' 27.03049639" N	24° 03' 57.11443403" N	084° 40' 42.79904678" E	084° 37' 14.85686996" E
L_PZ-2	1206.006646	24° 08' 39.42815511" N	24° 07' 02.78558084" N	084° 42' 33.72376770" E	084° 38' 59.96574078" E
L_PZ-4	1990.39025	24° 03' 26.36216366" N	24° 01' 06.08934091" N	084° 48' 38.80317555" E	084° 45' 12.68378454" E
L_PZ-5	499.07649	24° 08' 11.83652739" N	24° 06' 31.06633678" N	084° 49' 47.91139877" E	084° 48' 24.82629498" E
L_PZ-3	567.484577	24° 04' 16.09505812" N	24° 02' 31.11102012" N	084° 44' 39.51800202" E	084° 42' 24.14261502" E

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**Scale: 1:220,000**

0 1.73 3.45 6.9 10.35 13.8  
Kilometers

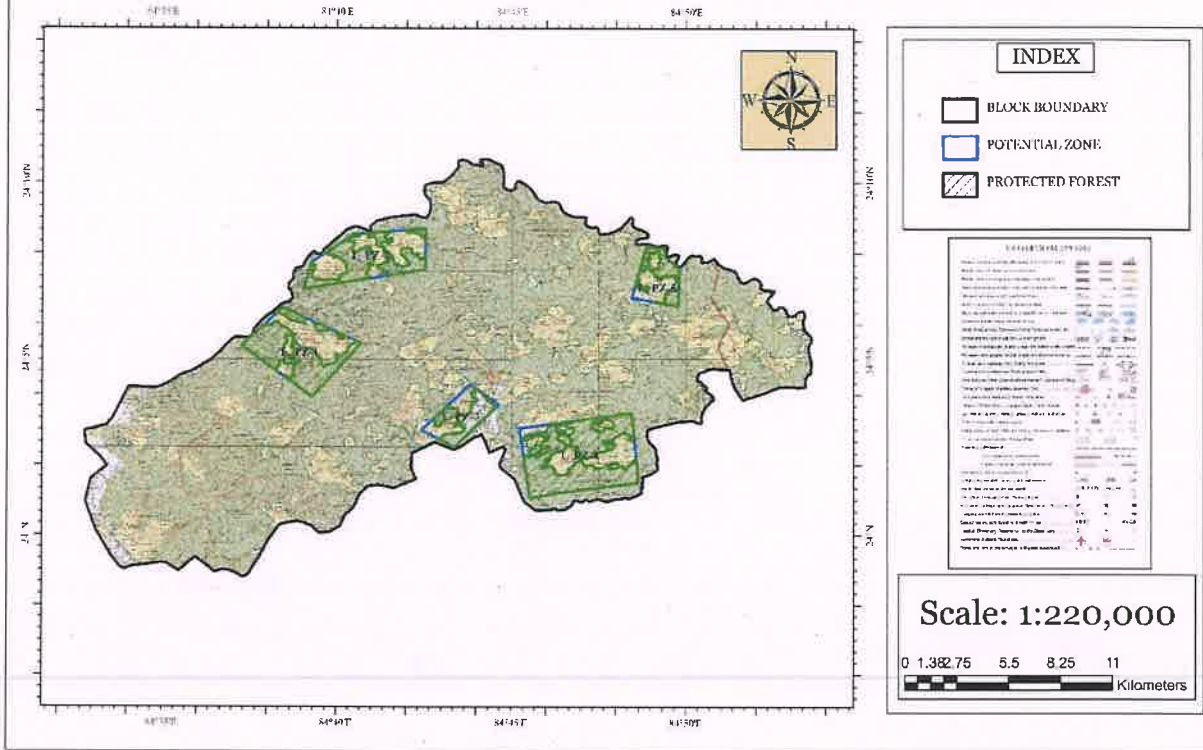


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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARKATION ON LAWALONG BLOCK OF CHATRA DISTRICT



LAWALONG

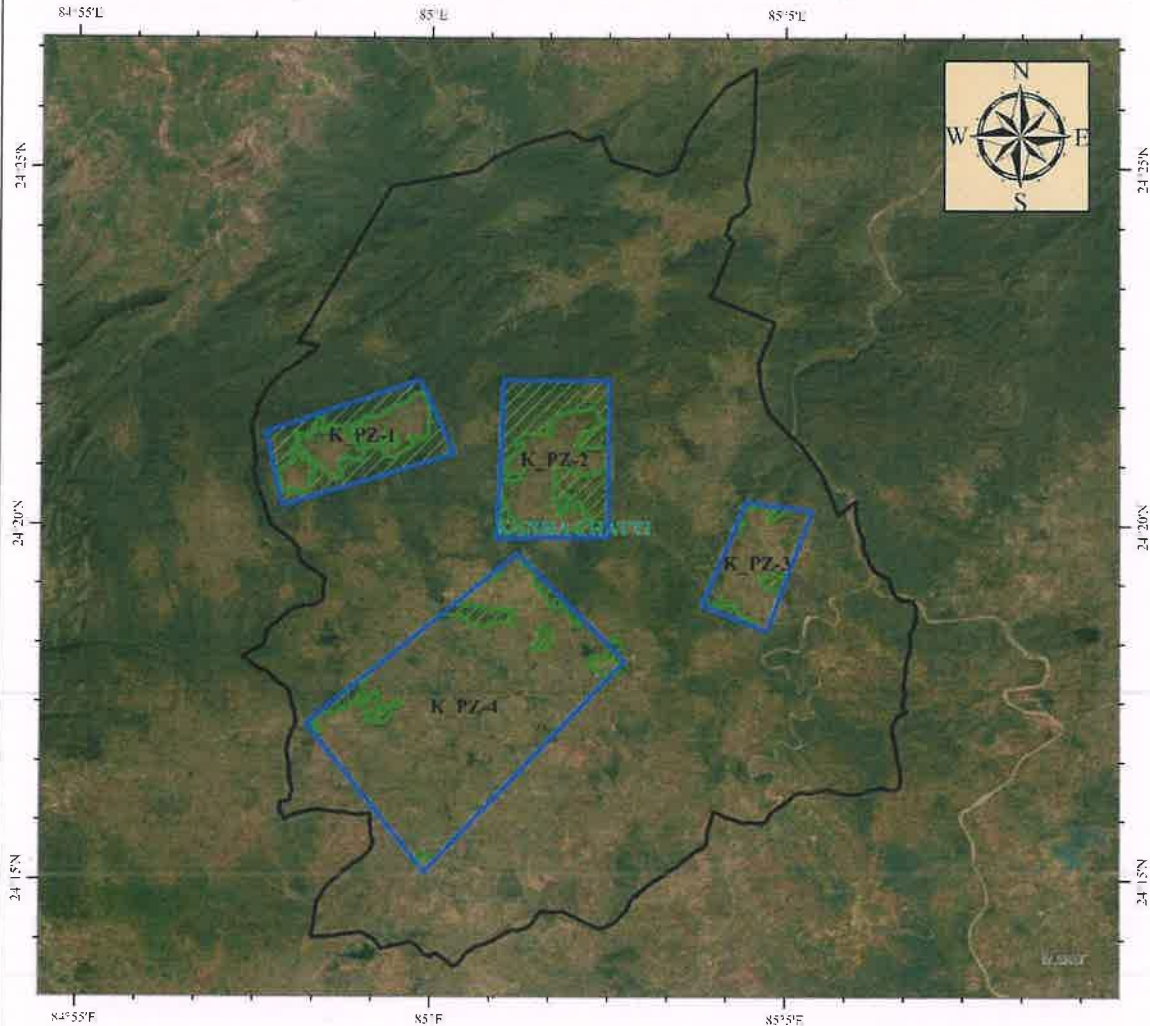
TIGDA	SIKNI
DAGDIRIA OR BURHI	HUTRU
NAWADIH	LOWALANG
NARAINPUR	HERUM
SILDAG	KONCHI
BHUSAR	KALYANPUR
LEMODIH	BAHAGARA
MARWA	SONS
SERKA	ORI
SAMHE	JOJBARI
BANWAR	POTAM
BISHUNPUR	RATNAG
AKONA	SARHACHIA
BARWADIH	



DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



POTENTIAL ZONE DEMARCATION ON KANHA CHATTI BLOCK OF CHATRA DISTRICT



ZONE_CODE	AREA	Max_Lat	Min_Lat	Max_Lon	Min_Lon
K_PZ-1	824.765446	24° 22' 00.75268614" N	24° 20' 18.23657647" N	085° 00' 19.77945822" E	084° 57' 38.95701485" E
K_PZ-2	1048.428626	24° 22' 01.82889444" N	24° 19' 50.42631943" N	085° 02' 32.40964161" E	085° 00' 53.26649408" E
K_PZ-4	2960.856679	24° 19' 33.42282291" N	24° 15' 09.10644863" N	085° 02' 46.14223040" E	084° 58' 11.86522323" E
K_PZ-3	499.952346	24° 20' 19.04481911" N	24° 18' 31.36307199" N	085° 05' 23.67032764" E	085° 03' 47.76841108" E

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Scale: 1:150,000

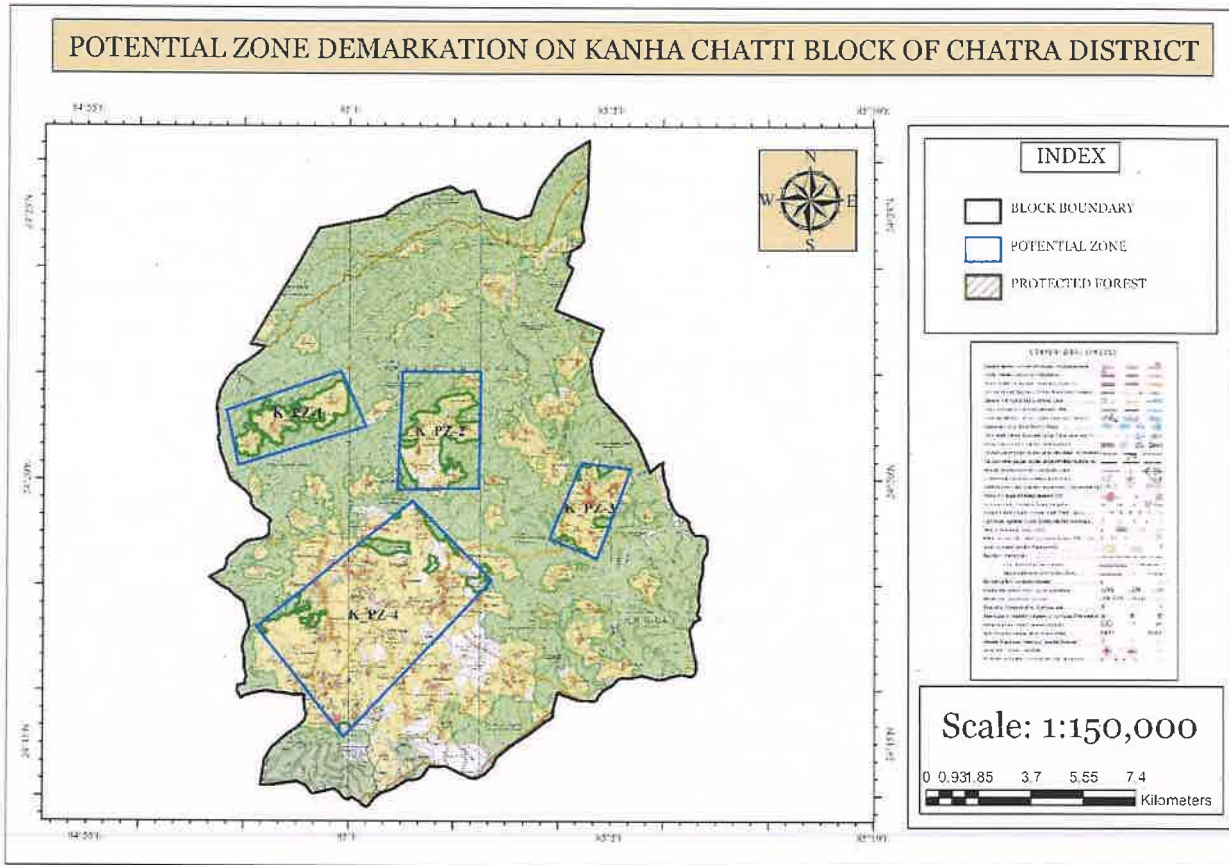


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**DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND**

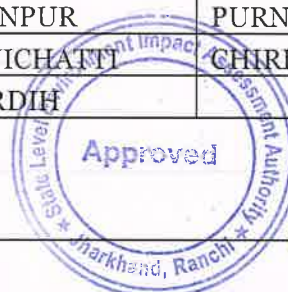


**POTENTIAL ZONE DEMARKATION ON KANHA CHATTI BLOCK OF CHATRA DISTRICT**



**KANHA CHATTI**

RAMKHETA	CHARU	HESAPARAM	RAJPUR
KOTAP	BIREKHAP	TATRA	DANGRADIH
DUMARIA	BAGCHUMA	BEDAULI	PANDEDIH
HEMRALUTA	MAJHUALI KHURD	DUMRI	KHAPLAWANI
BHANG KURKUTTA	MAJHUALI KALAN	JORI	SAEL
MANGARA	BARABAGI	HOLAMGARA	KAPSA
LUTUDAG	KUSMADIH	CHARITRA	BURHIGARA
BENGO KHURD	MAYAPUR	BOKHRA	SARGAON
BENGOKALAN	KEWAL KHASH	BARAHPUR	KANHA KALAN
RAMKHETA	KUDOR	KARWANI	KALEA NAWADIH
PIPRA	PACHMAHLA	KADE	BHATAHA
DOKA	KUDRI	KAINRI NAGAR	SENDURIA NAWADIH
KARMA	SISI	DHAMDHAMWA	KOLHAID
BHADUA	TALIA NAWADIH	BARWADIH	NAUDIHA
CHILHIA	KARNI	LARIEA	POLPOL
ARMEDAG	PILTAUL KALAN	PARANPUR	PURNI HASAG
KANDRI	KANHA KHURD	PURNICHATTI	GHIRIDIRI
TULBUL	PANDAKHAP	MISIRDIH	



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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



<b>Blockwise Geological reserve available in Chatra</b>				
Blocks	Ha.	Sq. m.	Avg. Depth (m)	Vol in CUM
CHATRA	14790	147900000	30	4437000000
GIDHAUR	6934	69340000	33	2288220000
HUNTERGANJ	13569	135690000	35	4749150000
ITKHORI	2979	29790000	36	1072440000
KANHA CHATTI	5334	53340000	31	1653540000
KUNDA	9145	91450000	34	3109300000
LAWALONG	5634	56340000	33	1859220000
PATHALGAMA	5295	52950000	35	1853250000
MAYURHAND	4420	44200000	30	1326000000
PRATAPPUR	4833	48330000	33	1594890000
SIMARIA	5477	54770000	39	2136030000
TANDWA	8023	80230000	37	2968510000
<b>TOTAL</b>	<b>86433</b>	<b>864330000</b>		<b>29047550000</b>



  
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



**Blockwise Potential Villages for Earth Work:**

CHATRA							
AHURI	JALED	KADLE	GULHUTU	SUSTRA	DOHURI	KHARIB	PARBAT OR BARAHMANA
SEL	CHETMA	SIRAM	GIRWAN	CHATANIA	MARDANPUR	CHERIKHAP	MAHAPUR OR BAULIA
DARHA	SANGHRI	SARED	PARADIH	ARUDANA	RUD KALAN	SESANG	KAMTA KHURD
BARIO	LARKUA	GHURNADIH	BANASAM	SATAU	SANGHRA	MAYAPUR	HALMGARA KALAN
LUTUA	CHAUDHARIA	KARMA	GORHAI	PABO	RUD KHURD	LEM	PACHMAHALA
TAROB	BAMHNE	KATHAUTIA	KASIADIH	CHANGER	ATARIA	GHUTRUJ	HOLAMGARA KHURD
ABUKATU	PAKARIA	SARED	PHARENDIH	BHADE	CHATRA	NAWADIH	MADHWAKHAP
HASOT	MOHANADIH	AMBADIH	KAMAT	TIKAR	TUNRAG	HANSBO	TALIA LOAGARA
GERI	RAMNA	JAIPUR	BASARIA	PUNDRI	TAPEJ	SIWAN	DARIATU
KARHIMA	AMAUNA	KOLADIH	KHAP	CHAINPUR	ASNI KHURD	KANRLAGA	AMDIHA
BACHDAG	SURAJ	BHOJEA	MADANKHAP	BELHAR	ASNI KALAN	DAMDOJA	LOAGARA
SEHADA	KARGU	KORCHA	RAMPUR	LIPDA	PACHMOH	TURI	RAMTUNDA
GAMHARTARI	PATER	SAJNA	BELA	DEWARIA	KARMATANR	DAHURI	JAINPUR
RAJGURUA	KHUTER	BHANG	HAPHUA	KALTIKAR	CHAUR	GORRA	NAWADIH
RAHARBAR	MAEL OR SAEL	BARHGAON	KASIADIH	OBRA	GANGAGIT	LATBED	JANGI
KATHAUN	LUTU	PHARENDA	GARWADIH	RANGWARA	ARA	KANAUDI	DEORIA
BANSARAM	NAWADA	MANATU	TIKULIA	KARI	SONBIGHA	GORRA	DHARAMPUR
SERPUR	NARTAMA	BARA	SEMARIA	DEWARIA	MISRAUL	SINGHPUR	LACHHANPUR
SENDUARI	BARAINI	SALAJA	DONRA	ARA	CHATNIA	JAPUT	PANREPURA
KUBA	NAWADIH	SINDUARI	NAUAKHAP	MAKTAMA	KULLU	ASARHIA	GANDHARIA
DUDHAURI	GERI	BADHAR	SONPUR	CHARUA-KACHA	KALAYAN KHAP	LUPUNGA	SARAIA
CHETMA	SIJUA	BHAGMANIA	JALUBIGHA	EKAUNA	SANGHRI	MARAMDIRI	MANATU
SIKID	TILAJA	MALIA	LARE	KACHA	RAKSI	KAMAT	UNTA
BHAIPUR							



*(Handwritten Signature)*

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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OJHARKHAND



GIDHAUR		
DUARI	BARIATU	PEKSA
BAIN	TALAIYA ALIAS TILATANR	SALGA
CHIRAIYA	BISNAPUR	KENDUA
ICHAK	GANGPUR	BARIA
HUMADHAKI	PAHARA	KHALARI
GARKE	KIRKIRA	BALURI BAKSI
PINDARKOM	GIDHAUR	ROHMAR
JAMUA	KATGHARA	SINDURVE
LOHRI	SINDUARI KALAN	MARANGI
RUPIN	DARHUA	LABANI
NAYAKHAP	SINDUARIKHURD	
AMIN	MAJHGAON	
KURKUTA	BARISAKHI	

KUNDA		
TITHIBHARGAON	SOHARLOT	ICHAK
MARGARHA	MAJHIPARA	KAKNATU
GENDRA	BARWA	CHILOI
DURGI	PINJA	TATEJ
KUTIL	DANRU	BELGARA
JOBEYA	SINDURI	HISATU
BARIATU	HARUL	NAWADIH
POTAMDOHAR	KUNDA	BHURHA
BAGHAUTA	TARADOHAR	CHAYA
PINJNI	JAGARNATHPUR	SIDKI
MEGHRANIA	LEWAR	KAMAL
KHAPIA	SARJAMATU	NAWADIH
MADARPUR	BANDA	RAJPAR
BISHUNPUR	MARAIYA	KORHANS
BAJRAHI	KAKAHIA	KORHANS
LAWALONG	KUSUMHA	BANDIADIH
BODHADIH	ICHATU	GARO
AMAUNA	MOHANPUR	KHUSIHALA
BESRA	DOKWA	SAKHUAAHI
KASILAUNG	MEDWADIH	BALHI
BANASAS	SHAHPUR	PHULWARIA
SARAIADIH	NAWADIH	KAMAT
SIKIDAG	SALGI	KUJRAM
BHAUROODIH	DARI	LUPUGARAH
LUKUIA	RATNAG	LOFWA
BABUDIH	DOKWA	PACHAMBA
BUTKUIA		



*(Signature)*

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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



HUNTERGANJ				
SONEPURBIGHA	BHITIYAH	NARAINATARI	DUMRI KALAN	GOSAIDIH OR BASARIATARI
KARMA	JHIKATIA	DHANGIRI	BANDU	LOHSINGNA OR SONDIHA
KARANI	SIKATIYA	PACHMAHLA	BARA	LOHSINGNA KHURD
PANDEPUR KHURD	KEDLI KALAN	KANCHANPUR	KON	DUMRI KHURD
GENJNA	BIHARI	PEKHA	TETARIA	JORAKARAM
DHOLIA	SAHOTRA	KEWLA	GOBARDIH	KANAUDI
SALAIYA	SURHUD	KARMAHI	LICHRI	GOPALPUR
KHARANTI	KORAMO	PAHARPUR	DANDAI	KASHIKEWAL
BALURI	SALOT	KURSEL	BASARIA	DATMI
BARA	LOLWA	KEWAL	KENDUA	DATAM
JAUWADOHAR	LERHHO	KOLHUA	KATHAUN	BELA
KARMAHI	BANIABANDH	MANA MATH	BHOGTADIH	RANO
SAGASOTE	KADWA	GIDHATARI	KARMA	CHAUKHARA
LENJWA	PURNANAGAR	GHATDHARI	KOLWA	BARAPUR
EKAUNA	EDLA	SARDAM	KANGURUWA	AKTA
GERUA	KASIADIH	BEDAULI	BONRA	SIRKA
KUSMAHI	MAJHGAWAN	HOSLI	ARJUN KHURD	PIPRA
PHULWARIA	ERABONGA	CHATANIA	CHAKLA	PALI
BHARARI	MANSACHAK	MAJHGAWAN	KODLAIYA	DUNDU
BARHIBIGHA	KUSMAHA	KUTIYA	BISHUNPUR	NONIA
AUNRU	JUTHA	SALDAHA	GORWALI	PACHMO
SATGHARWA	CHANDAR KALI	NIJRA	ARJUN KALAN	BALANIA KHEJURIA
DHEBO	DEMDEM	JORI KALAN	TULSIPUR	GARKEDLI
DAHA	DHOBEY	GOBINDPUR	DEWARIA	NAWADIH
BELA	POSTIA	BELA	KANAUDI	KHUTIKEWAL KHURD



  
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



HUNTERGANJ

NIRANJAN CHAK	DEWANBAR	NAUNIA CHUAN	PANDRI KALAN	BHUINADIH	PAINI KALAN
BARIARCHAK	LARSAR	NAWADIH	KADALGORI	BELWADIH	PAINI KHURD
BHOJPUR	PANTI	KOLUAPAHAR	KHAWAHAR	KHARAUNA	PARMA CHAK
BAGHMANDWA	KEDLI KHURD	LUTA	BEDAULI	AMBADOHAR	CHHECHHI MANJHAR
SOBHI CHAK	GOKHNA	HATWARIA	EKTARA	GAUSPUR	PALHA PACHAMBA
SHOHAD	BAILGARA	KASDABAR	KUBA	NAWADIH PANARI	KHUTI KEWAL KALAN
JABRA	BEHERI	GAIGHAT	KHUTERA	NAWADIH	CHHOTKA MAYAPUR
BANKA	PATWA	KOLWA	DEWARIA	JEJLO	CHHOTKI KHAJURIA
SONBARSA	BANKI	GIDHAUR	KEWLA	MADANPUR	BURHIGARA
GHARRIPAT SUGIA	KOBRI	KALYANPUR	NAGAR	SARDAM	BENGWATARI
GARA	SOKHA	KAREA	DANTAR	RAKSI	KENRIMOH
UARAILI	CHAKLAPUR	DHAMNI	KAIRIA	PHULWARIA	PANDARKOLA
PINRI	SAHI	SATGHARWA	DALKOMA	KANCHAN	PAHASBAR
GOSAINDIH	TETARIA	PARTAPPUR	BISRAMPUR	BAKAIN	PANDEPUR KALAN
BISHUNPUR	PARSIA	NAIN CHAK	CHOUKHARA	KURID	RAJGURU
KULLU	GHANGHRI	TILHET	KARAILIBAR	BAKHARDIH	KURKHETA
SERPUR	KATAIA	SILWAR	MONGWADAHA	PACHATARI	GUE
DHAULA CHAK	BANIADIH	DHARDHARA	JORI KHURD	PINDRA	JALDIHA
AMIN	TARWAGANA	BEHARA	TISARJORI	AUNRWA	BHAGEBAR OR REWAIA
AMBAR	KANDABAR	PINRRI KALAN	SALAIYA	TANKU	BIHIYA SARHACHIA
MIRPUR	MAJHGAWAN	BHIKNAHU	DAHA	SAJNI	
GANGTA	MURAR	DONGARI	KOBNA	BANDATANR	
BARKI KHAJURIA	CHITUA	PONDRI KHURD	BHONDAL	GORRE	
BARKA MAYAPUR	RAHARBAR	SUGI	GODABAR	KETARIBAR	
SAIPUR	BAIJNATHPUR	KARIDI OR MADA	HIRING	JHAGARTARI	



  
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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



ITKHORI					
LOHARGARA	BISNAPUR	KANAUDI	KARMA KALAN	BALIA	SURATPUR
ASARHIA	SERAD	MARWA	SINGHNAULI	JHAKRA	MANI CHAK
PACHMO	MADHOPUR	JUGUDIH	BAKCHO	SONASEMAR	KANTAH CHAK
BAGMUNDI	NAGWA	PIPRA	TETAR CHAK	MOGLA	SIRMATPUR
KENDUA	PIRTHIPUR	BAMANDIHA	PHATIK	MOLAKPUR	KURJUN
SAHARJAM	ITKHORI	THAWAI	PAKARIA	KHAURA KALAN	GANDHARAB CHAK
SIRIA	GORIATANR	SAHIBARA	LORAM	SANRHA	DANOUT
BELHARI	BHADULI	HURBIA	GOSI	KARMA KHURD	JORIDIH ALIAS SOMPURA
JASPUR	ITKHORI	CHORKARI	RAJPUR	NAZIRGANJ	PARSAUNI
MURUMDAG	DHANKHERI	BANAJANG	RAJWAR	BIHARI	GOSAINDIH
RAJBAR	PARSAUNI	KONIWAN	RAKSI	BARGAON	BANA CHAK
KEALA	KALEANPUR	SORAHKURWA	RAKSA	BALGUDAR	MAJHGAWAN
SALWE	ROMI	DUNDI	PIPRAHI	NAWADIH	KHAROUNI
SALWE	PAROKA KHURD	KANJIA	DHUNA	KOENRA	KANAUDI
SURHETA	LITA	DHARAMPUR	DHARPUR	BHAGWANPUR	PAKARIA KHURD
MAYAPUR	BELA	NAWADA	KATUA	JAKHANR	PAKARIA KALAN
CHAKARWAR	BARAI CHAK	BANRUWAHI	BELGARA	BHERWA	BIDHICHAK ALIAS MURAR CHAK
PITIJ	BARA	DARIAPUR	JABER	MALAKDIHA	MIRZA CHAK
PILIJ	PATHARIYA	JAGANBIGHA	PARWANI	DHANRAS	RAJADAHARBHANGA
HURNALI	ANUP CHAK	KHAURA KHURD	KONI	AMBATARI	BAIDDAHARBHANGA
GULI	KHARAUNDHA	KEMO	LOHRA	MANDAIN	KUMHARI
BHURKUNDA	BELA	SEMRAHI	SONPURA	NARCHAKALAN	BANTHU
TONATANR	BONGA	RAJA KENDUA	TURKI	DAMBADIH	PUNAU
HALMATA	NAWADIH	BAHERA CHAK	SILAR	MAJHAULIA	PANCHMO
LEMODIH	KARNI	KENDUA	IRKI	NARCHA KHURD	PANDEY KHAP
MAHUDA	JAGDISPUR	PIPRA	SONIA	RAJA NARCHA	HARDIA
				ITKHORI CHATTI	PAROKA KALAN ALIAS KUARDIH



  
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**KANHA CHATTI**

ARUGARA	PANDAKHAP	DANGRAIDIH	MANGARA	KENDUASAHOR
RAJACHAK	DHEBRO	PANDEDIH	KASLADIH	KURAG
DULHA	HESAPARAM	KHAPLAWANI	LUTUDAG	BANDA
CHARU	TATRA	SAEL	KARMAUNI	DARIDAG
BIREKHAP	BEDAULI	KAPSA	BHADUA	BINDHANI
SIMARIA	DUMRI	BURHIGARA	BAIDBIGHA	MADGARA
BAGCHUMA	JORI	SARGAON	CHILHIA	HARHAD
MAJHUALI KHURD	HOLAMGARA	KANHA KALAN	ARMEDAG	HAUAG
MAJHUALI KALAN	CHARITRA	KALEA NAWADIH	BAMHANA	BARWADIH
BARABAGI	BOKHRA	BHATAHA	MADARPUR	KHIRGARA
KUSMADIH	BARAHPUR	KANDRI	SARAIA	DEBRA
MAYAPUR	KARWANI	NAIKI HASAG	MAJHAULIA	HEMRALUTA
KEWAL KHASH	KADE	CHORAT	DESWARIA	POLPOL
KUDOR	KAINRI NAGAR	KATHAUTIA	JASPUR	PURNI HASAG
PACHMAHLA	BAJRA	CHIKOR	BENGO KHURD	CHIRIDIRI
KUDRI	REHEDAG	BARWAR	TEMKA	SENDURIA NAWADIH
KOIRIA NAWADIH	SUTRI	PIPRA	BENGOKALAN	TERWARITANR ALIAS JHABARGARH
SISI	GERI	DOKA	RAMKHETA	PATHEL
TALIA NAWADIH	TULBUL	KARMA	KOTAP	ITWANI
KARNI	DHAMDHAMWA	ROSNA	DUMARIA	RAJPUR
PILTAUL KALAN	BARWADIH	BHAGWANPUR	BIRLUTUDAG	KANHA KHURD
BAKOIA	LARIEA	CHHEOTA	SIKID	
JAMRIBAKASPURA	PARANPUR	KOLHAID	AMKUDAR	
PAKRI	PURNICHATTI	BHANG KURKUTTA	GARIA	
CHAINPUR	MISIRDIH	NAUDIHA	BANIABANDH	



  
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LAWALONG			
RIMI	LORGA	DARHA	BAHERADIH
JHARDAG	SULMA	BAKSI	BANWAR
BISRAMPUR OR RAMPUR	SIKNI	JIRAUN	BISHUNPUR
MATTI MAJHDIHA OR MAJHDIH	HUTRU	AMINIA	HARHAD
NAUDIHA	LOWALANG	MASURIA	BANDARU
GARHE	JALMA	AMBATANR	AKONA
CHANO	TEONA	LOTWA	CHUKRU
KOTARI	HAHE	TILRA	KOLKOLE KALAN
RECHAG	KADHE	BHAGNADIH	RAKHED
NOSODAG	LUTU	JOGIADIH	LAMTA
CHARU	SOHAWAN	BHANDIA	DAGDIRIA OR BURHI
PASAGAM	BANDU	THAKURDIH	NAWADIH
HOSIR	HERUM	CHANDANPUR	NARAINPUR
BULBUL	KONCHI	ANGARA	SILDAG
HARDIPUR	KALYANPUR	RATNAG	BHANGIA
JORDAG	BAHAGARA	SARHACHIA	KANTI OR MANDHANIA
KATEA MACHA MAHUA	SONS	BARWADIH	PARAMATU
MALGO	ORI	TUNGUN	MALI
SEHADA	JOJBARI	KHANGARA	KARMA
TIGDA	ICHA AHAR	LUTUA SINGHPUR	CHATAR
BARWADIH	POTAM	MADANDIH	SHIVRAJPUR
MANATU OR TIKULIA	CHANDADIH	HURDAG	ATAMPUR
JOBHI	BANCHATRA	CHANI	MUNGADIH
DUNHO	KATIA	BARHED	KOLKOLE KHURD
LARE	ARA-ATU	BHUSAR	SAMHE
SERKA	MARWA		LEMODIH



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MAYURHAND				
MAJHGAWAN	ARNJHAR	MAHUARI	MAJHAULI KHURD	SALE
MAHESA	CHANDI ALIAS PANDI	PURAINI	BHIKHARI CHAK	KHAIRA
SALAIATANR	EKTARA	SARGAON	MAJHAULI KALAN	BENGWA
TILRA	MAYAPUR	KARMA	BAMHANDIH	BALIA
SABALPUR	SONPURA KALAN	HUSIA	KUMHARI	JHARDAG
MANDHANIA	DORHI	MAJURHAND	DEOSAR	PATHRA
UNHABITED VILLAGE	MADHANIA	SINGHRAWAN	NARCHAHI	PHULANG
UNHABITED VILLAGE	CHHAGARIA	PIPRA	KADGAWAN KALAN	KANCHANPUR
DHEWADAURI	CHHAGARIA	HARAHI	DHIBAR	MAHUGAIN
SOKI	PIPRA	GANESHPUR	GADA	KANAUDICHOTHA
GURWADIH	MATHURI CHAK	KENDUAHI ALIAS BABHANDIH	JAMUNIA	PARTAPPUR
CHERI	CHAURIA	PARWARIA UTTARWARI	DUBI	NAWADA
BHARCHANDA	MAHUGAIN	PARWARIA DAKHINWARI	PARANPUR	MANHE
DUHAI	CHONTHA	BELA	KADGAWAN KHURD	TILAITANR
SUHAI	BARADIH	SIMARIA	SEWAI KALAN	DHARAMPUR
CHHOTU CHAK	BELA	GAMHARIA	SEWAI KHURD	PETADIRI
BIRBHAN CHAK	MAJHAULI	PARSAWAN	ALAGDIHA	SADAFAR
PACHGHARA	CHHAGARIA	UPRAUNDA	PAKARIA	KOILI
SURAJPURA	KUNDRI	BELKHORI	JINDAPUR	MAJHILA
SONPURA KHURD	LARAHI	SIDUWARI	BANSDIH	NAUDIHA
AMBATARI	SEWAL	DIGHI	NIMA	KANTI
MAUNA	PAPRO	MAKHROL	URSI	BANHA
MANHARI	VARKARA	DHANARHI	PARASI	CHORHA
BARAKAR				DHANGAWAN
GOREA				BAND GAMHARIA



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PRATAPPUR

HINDIA KALAN	HESATU	JHANTI	BAJRAHI	MAD KUMA	GAJWA	SANGRAMPUR KHURD
HINDIA KHURD	BHANDAR	MARKA	JOLAHBIGHA	JAMUA	PANTI	MATH ANANTPUR
DUMARWAR	BIRMATKUM	LAUNGTARI	KESWA	SASGARA	KEWALIA	CHATTI ANANTPUR
BADHAR	ASKAL	JOORI	GHORIGHAT	BANSI	LIPTA	A PART OF IMAMGANJ C.D. BLOCK IN DISTT. GAYA
TEGAM	KANDWATARI	RABDA	MATHURAPUR	KARARUA	BILASPUR	CHANDRI GOBINDPUR
GURTURI	BAGHMUNDA	HUMRA	JOLAH TETARIA	NIMAKATU	NANAI KHURD	SANGRAMPUR KALAN
RAHARIA CHARKA KHURD	BANDOHRI	DONIDAG	NAROTAMPUR	BIRBIR	MAJHGAWAN	CHANDRI KALAN
GORE	CHAPKA	KAURA	BHUSIA	JOJOKHAP	BARWA KUCHWA	DURGAHI BISHUNPUR
JAMUA	BADHAR	OR	KARAMDIH	SHIKARPUR	PACHMO	MANGRA BAIJNATHPUR
GHUJI	CHAINPUR	RAJPUR	KASHIBAR	BAMI	DAUNAPUR	BAGHAKOLA
BANDOHRI	NANAI KALAN	TUMIA	JAIPUR	KUNDI	KALIANPUR	BHARATHPUR
KATHAUTIA	SATBAHINI	RABDA	BICHKILLA	BARHE	DUMRI	SIKNI
JIRABAR	ADAURIA	BASHUTTA	NAIKBIGHA	LODHEA	GIDHA	JOTDIH
DUNDU	KESHA	HUMAJAN	PATHRA	GOBEA	MAHKAMPUR	SHANKARPUR
SENDURIA	DHARDHARI	KEWALIA	DHARAMPUR	BODHNA BISHUNPUR	JOGIDIH	TANRWA
KULUBOR	BHAUNRAJ	BHARHI	DULIBIGHA	MONYA	MAHUGAIN	MOHANPUR
NARAINPUR	GOME	KARIHARA	MAIRAG KALAN	RAMPUR	KASMAR	SIDKI
UGARMACHA	BARATPUR	HARA	MURIA	LIPTA	BALWADOHAR	ANJNU
GHORDAUR	LUTUA	HARHAD	MALHAN	PHAGUA	SIBPUR	GURIA
LEWARIA	GARA	MAIRAG KHURD	BHALUAHI	NARAINPUR	RABDA	MAHUGAIN
KOLMALHAN	SALKHUA	KUBA	LONHRI	SALEMPUR	PIPREHAT	BHUGARH
KARMAHI	JHARA	SIJUA	LIDIK	BARURA	SONBARSA	BANDATAR
AHIRPURWA	NAWADIH	BHAGIA	BARA	GARGORIA	BABHNE	TELIACHAK
MANJURAH	KATAUN	GENREY	KUKURMAN	CHARKA KALAN	KARUDIH	NAUABAR
NEBHI	GERUA	GANGPUR	JOGIARA	ANGARAH	KUSIARA	EGHRA
						PARTAPPUR



  
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TANDWA			
HOSIR	HENJDA	SERANGDAG	LEMHOA
TARWAN	KUTKI	POKLA OR KASIDIH	GOBINDPUR
KARO	KORILARA	HONHI	BUKRU
BAHERA	BANHE	NAUDIHA	DARIDAG
KANAUDA	BARGAON	SOPARAM	SIDHPA
RAJDHAR	DAHU	SHIVPUR	HESATU
KALYANPUR	SIDPA	KISHUNPUR	BIRBIR
CHORA	GONDA	MADHWAPUR	PIPARWAR ALIAS MANGARDAHAL
ULRATHI	SARADHU	GHAGHRA	BACHRA
MANDAR	RAHAM	BRINDA	HAPHUA
LARANGA	DUNDUA	KABRA	NAWADIH OR TELIADIH
RAL	NAIPARAM	KATAHI MISRAUL	KARMATANR
BANPUR	TANDWA	SIRSAI	DHANGARA
BALI	GARILAUNG	URDA	KHARIKA
KHANDHAR	KAMTA	KODHAMDIRI	BONGAGARHA
CHIRTAUNGA	MASILAUNG	KICHTO	BADBIGHA
SARAIYA	DEVALGARA	KHADHAI	TESAR CHEPA
THATHANGI	KUNDI	MISROL	PADUMPUR
SIDALU	KURLONGA	TEKTHA	ULATU OR SEMRATANR
BIJAIN	BARKUTI	PHULWARIA	CHIRUA OR SAMIDIH
BENTI	KOED	DARI	BINGLAL
URSU	HECHABALIA	GIDDI	KUTKI KHURD ALIAS THENA
TORHAD	KUMARANG KHURD	JHULUNDIA	
LUKAIA	KUMARANG KALAN	DEMBUA	



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## 15. QUALITY/GRADE OF MINERAL AVAILABLE IN THE DISTRICT

### **Rocks and Minerals found in Chatra District: -**

#### ➤ **SANDSTONE&SHALE:**

**Sandstone** is a clastic sedimentary rock composed mainly of sand-sized (0.0625 to 2 mm) mineral particles or rock fragments. It is clastic in origin (as opposed to either organic, like chalk and Coal or chemical like Gypsum and Jasper). They are formed from cemented grains that may either be fragments of a pre-existing rock or be mono-mineralic crystals. The cements binding these grains together are typically Calcite, Clays, and Silica. Grain sizes in Sand are defined (in geology) within the range of 0.0625 mm to 2 mm (0.002–0.079 inches). Clays and sediments with smaller grain sizes not visible with the naked eye, including Silt stones and Shales are typically called argillaceous sediments; rocks with larger grain sizes, including Breccias and Conglomerates are termed rudaceous sediments.

#### **Mineralogy:**

The chemical compounds like Silicon dioxide or Silica, Calcium carbonate, and Iron dioxide act as natural cementing agents to hold together the sand in the form of a rock that we know by the name of sandstone. Chemically, Sandstone is an absolutely impervious and mono-mineralic rock that is primarily composed of Quartz.

**Shale** is a fine-grained, clastic sedimentary rock composed of mud that is a mix of flakes of clay minerals and tiny fragments (silt-sized particles) of other minerals, especially quartz and calcite. Shale is characterized by breaks along thin laminae or parallel layering or bedding less than one centimeter in thickness, called fissility. It is the most common sedimentary rock.

#### **Geographical Location of Sandstone and Shale in Chatra District:**

In Chatra district Sandstone and Shale are found in Tandwa (24° 0'N: 85° 0'E), Kunda (24°15'N:84°35'E), Kanha Chatti(24°20'N:85°0'E), Itkhor, Chatrablocks.

#### ➤ **DOLERITE:**

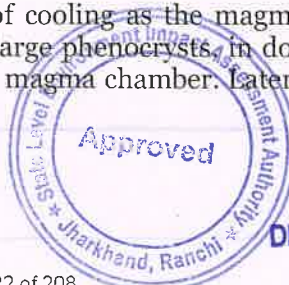
**Dolerite** is a dark igneous rock intermediate in grain size between Basalt and Gabbro. Consisting of Plagioclase Feldspar and Pyroxene, it is a widespread intrusive rock, quarried for crushed and monumental Stone (known as "black granite").

#### **Formation of Dolerite:**

Dolerite cools under basaltic volcanoes, like those at mid-ocean ridges. It cools moderately quickly when magma moves up into fractures and weak zones below a volcano. There, it forms dykes (tabular igneous rock bodies that cut across pre-existing rock layers or bodies) or sills (tabular igneous rock bodies that form parallel to pre-existing rock layers). The moderate cooling rate allows small visible crystals to form in the rock.

#### **Crystal sizes in Dolerite:**

Dolerite has some large crystals, making it a kind of rock known as porphyry. The different crystal sizes are the result of different rates of cooling as the magma cooled slowly deep in a magma chamber. Later the magma with the large phenocrysts, in dolerite are feldspar crystals that grew as the magma cooled slowly deep in magma chamber. Later the magma with the large phenocrysts



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Moved upward quickly, causing more rapid cooling of the rest of the magma and the formation of the small crystals that make up the rest of the rock.

### **Geographical Location of Dolerite in Chatra District-**

In Chatra district Dolerite are found in Pratappur, Kunda, Lawalaung, Chatra, Pathalgora, Kanhachatti blocks.

### **➤ BIOTITE GRANITE GNEISS:**

**Biotite Granite Gneiss** is a rock consisting of an orthogneiss or paragneiss having the composition of a granite. Gneiss is an old German word meaning bright or sparkling. It is a highgrade metamorphic rock, meaning that it has been subjected to higher temperatures and pressures than Schist. It is formed by the metamorphosis of Granite or sedimentary rock. Gneiss displays distinct foliation, representing alternating layers composed of different minerals. However, unlike Slate and Schist, Gneiss does not preferentially break along planes of foliation because less than 50% of the minerals formed during the metamorphism are aligned in thin layers. Because of the coarseness of the foliation, the layers are oftensub-parallel, i.e. they donot have a constant thickness, and discontinuous.

### **Mineralogy:**

Quartz + Plagioclase + Microcline + Biotite + Muscovite + Hornblende; Apatite and Zircon are accessory minerals. Grain size -medium to coarse grained; can see crystals with the naked eye. Hardness-hard. The Granite Gneiss full of mafic enclaves at places. The Gneiss composed of Quartz, Microcline, Plagioclase ( $An_{20}-An_{44}$ ), Biotite, Hornblende and other accessory minerals, but lacks in Muscovite. Felsic minerals such as Feldspar (Orthoclase, Plagioclase) and Quartz generally form the light coloured bands; mafic minerals such as Biotite, Pyroxene (Augite) and Amphibole (Hornblende) generally form the dark coloured bands.

### **Geological Age-Proterozoic**

**Texture**-foliated, foliation on a scale of cm or more.

**Colour** - variable - generally alternating lighter and darker sub-parallel discontinuous bands garnet porphyroblasts common.

### **Occurrence:**

The Biotite Granite Gneiss Complex is a composite mass consisting mainly of Granite Gneiss, Migmatites and massive Granite with enclaves of para and orthometamorphics, dykes of Dolerite and innumerable veins of Pegmatite; Aplite and Quartz. Because of repeated folding, high grade regional metamorphism and profuse granitic activities, the elucidation of the stratigraphic succession in the area poses a great problem.

### **Geographical Location of Biotite Granite Gneiss in Chatra District:**

In Chatra District Biotite Granite Gneiss are found in Pratappur, Shaligram Narayanpur, Kanhachatti, Itkhori, Gidhaur, Pathalgora, Simaria, Lawalaung, Kunda, Chatra blocks.

### **➤ MIGMATITE:**

The magmatic rocks are exposed in several parts, both as an 'in situ' migmatites and as an injection migmatites. There are innumerable enclaves of Mica-Schist and Hornblende-Schist of varying size in the granitic rocks. Biotite rich schlierens show considerable amount of contortion and flowage. Thin leucocratic, granites are commonly seen to form 'lit-per-lit' veins in the enclaves. Sometimes, the leucocratic Granite and the metamorphic country rocks are



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Intermingled in layer in fine scale so that the resulting rock is a banded gneiss or a banded Augen Gneiss. The minerals in the Schlierens or Melanosocnes are recrystallised and show schistose structure with marked variation in the proportion of mafics. The leucosomes generally show crude hypidiomorphic texture with subhedral laths of microcline, and plagioclase (albite-orthoclase), anhedral grains of quartz and some thin flakes of biotite with minor amounts of apatite, sphene, epidote and opaque ores. Perthites (microcline- micro perthite) and myrmekites are quite common. Potash feldspar rimmed with albite and occurring within potashfeld spars is also noted. Some potash feldspar plates show sieve structure with quartz inclusions. Muscovite is generally absent but whenever present, is seen gradually being replaced by orthoclase from the borders and along the cleavage planes.

### Geographical Location of Granitic Rocks in Chatra District

In Chata District Migmatite are found in Pratappur, Gidhaur, Hunterganj block.

#### ➤ AMPHIBOLITE:

Amphibolite is a grouping of rocks composed mainly of Amphibole and Plagioclase Feldspars, with little or no Quartz. It is typically dark-colored and heavy, with a weakly foliated or schistose (flaky) structure. The small flakes of black and white in the rock often give it a salt-and-pepper appearance.

Amphibolites need not be derived from metamorphosed mafic rocks. Because metamorphism creates minerals entirely based upon the chemistry of the protolith, certain 'dirty marls' and volcanic sediments may actually metamorphose to an Amphibolite assemblage. Deposits containing Dolomite and Siderite also readily yield Amphibolites (Tremolite-schists, Grunerite-schists, and others) especially where there has been a certain amount of contact metamorphism by adjacent granitic masses. Metamorphosed basalts create ortho-amphibolite and other chemically appropriate lithologies create para-amphibolites.

Tremolite, while it is a metamorphic amphibole, is derived most usually from highly metamorphosed ultramafic rocks, and thus tremolite-talc schists are not generally considered as 'amphibolites'. A holocrystalline plutonic igneous rock composed primarily of hornblende amphibole is called a hornblendite, which is usually a crystal cumulate rock. Igneous rocks with >90% amphiboles, which have a feldspar groundmass, may be a lamprophyre.

### Geographical Location of Amphibolite in Chatra District:

In Chatra district Amphibolite is found in Simaria, Lawalaung Block.

#### ➤ AUGENGNEISS:

**Augen (from German "eyes")** are large, lenticular eye-shaped mineral grains or mineral aggregates visible in some foliated metamorphic rocks. In cross section they have the shape of an eye. Feldspar, Quartz, and Garnet are common minerals which form Augen. Augen form in rocks which have undergone metamorphism and shearing. The core of the augen is a porphyroblast or porphyroclast of a hard, resilient mineral such as garnet. The augen grows by crystallisation of a mantle of new mineral around the porphyroblast. The mantle is formed contiguous with the foliation which is imparted upon the rock, and forms a blanket which tapers off from either side of the porphyroblast within the strain shadows. During shearing, the porphyroblast may rotate, to form a characteristic augen texture of asymmetric shearing. In this case, the position of the tails is unequal across the foliation, with some augen showing clear drag folding of the mantle into the strain shadow. This derives a form of shear direction information. A metamorphic rock which is clotted with Augen is often called an **Augen Gneiss**.



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### Geographical Location of Augen Gneiss in Chatra District

In Chatra district Augen Gneisses well foliated with Augen of Feldspar is found in Lawalaung block.

#### ➤ QUARTZITE:

**Quartzite (from German: Quarzit)** is a hard, non-foliated metamorphic rock which was originally pure Quartz Sand stone. Sandstone is converted into Quartzite through heating and pressure usually related to tectonic compression within orogenic belts. Pure Quartzite is usually white to grey, though Quartzites often occur in various shades of pink and red due to varying amounts of Iron oxide ( $Fe_2O_3$ ). Other colors, such as yellow, green, blue and orange, are due to other minerals. When Sandstone is cemented to Quartzite, the individual Quartz grains recrystallize along with the former cementing material to form an interlocking mosaic of Quartz crystals. Most or all of the original texture and sedimentary structures of the Sandstone are erased by the metamorphism. The grainy, sandpaper-like surface becomes glassy in appearance. Minor amounts of former cementing materials, iron oxide, silica, carbonate and clay, often migrate during recrystallization and metamorphosis. This causes streaks and lenses to form within the quartzite.

Orthoquartzite is a very pure Quartz Sandstone composed of usually well-rounded Quartz grains cemented by silica. Orthoquartzite is often 99%  $SiO_2$  with only very minor amounts of iron oxide and trace resistant minerals such as zircon, rutile and magnetite. Although few fossils are normally present, the original texture and sedimentary structures are preserved. The term is also traditionally used for Quartz-cemented Quartzarenites, and both usages are found in the literature. The typical distinction between the two (since each is a gradation into the other) is a metamorphic Quartzite is so highly cemented, diagenetically altered, and metamorphosed so that it will fracture and break across grain boundaries, not around them. Quartzite is very resistant to chemical weathering and often forms ridges and resistant hilltops. The nearly pure silica content of the rock provides little for soil; therefore, the Quartzite ridges are often bare or covered only with a very thin layer of soil and (if any) little vegetation.

### Geographical Location of Quartzite:

In Chatra district Quartzite is found Tandwa block.

#### ➤ FIRE CLAY

**Fire Clay** or refractory clays of sedimentary origin are commonly found in Coal field areas underlying the Coal seams. The United States Environmental Protection Agency defines Fire Clay very generally as a "mineral aggregate composed of hydrous silicates of aluminium ( $Al_2O_3 \cdot 2SiO_2 \cdot 2H_2O$ ) with or without free Silica." They are used in Coalfields areas underlying the Coal seams. They are used in all kinds of refractory products, viz. Firebricks, fireclay mortar and foundry materials. In Jharkhand, Fire clay occurs as beds associated with Coal seams within the Barakar and Raniganj Formations of the Gondwana Supergroup. These Clays are found in the most of the Coalfields.

#### Origin:

Alteration of Pelitic Rocks.

#### Geological Formation:

Gondwana.

#### Rock Type:

Fireclay is Sedimentary Rock. A range of refractory clay having fusion points higher than  $1,600^\circ C$  comprising mostly Kaolinite Group of minerals, qtz and mica.



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**Occurrence:**

As beds associated with coal-seams in the Gondwana rocks.

**Geographical Location of Fire Clay:**

In Chatra district Fire Clay deposits are found in Tandwa Block.

➤ **PHYLLITE & MICA SCHIST:**

**Phyllite** is a type of foliated metamorphic rock created from slate that is further metamorphosed so that very fine grained white mica achieves a preferred orientation. It is primarily composed of Quartz, Sericite Mica, and Chlorite.

Phyllite has fine-grained Mica flakes in a preferred orientation, where as Slate has extremely fine clay flakes that achieve a preferred orientation, and Schist has large flakes in a preferred orientation. Among foliated metamorphic rocks, it represents a gradation in the degree of metamorphism between Slate and Schist.

The minute crystals of graphite, sericite, or chlorite, or the translucent fine-grained white mica impart a silky, sometimes golden sheen to the surfaces of cleavage, called "phyllitic cluster".

The word comes from the Greek phyllon, meaning "leaf".

The protolith for Phyllite is shale or pelite, or slate, which in turn came from a shale protolith. Its constituent platy minerals are larger than those in slate but are not visible with the naked eye. Phyllites are said to have a texture called "phyllitic sheen," and are usually classified as having formed through low-grade metamorphic conditions through regional metamorphism metamorphic facies.

Phyllite has good fissility (a tendency to split into sheets). Phyllites are usually black to gray or light greenish gray in color. The foliation is commonly crinkled or wavy in appearance.

**Mica-Schist**, in petrology, a rock composed essentially of Mica and Quartz, and having a thin parallel-banded or foliated structure, with lamellae rich in Mica alternating with others which are principally Quartz. They split readily along the micaceous films, and have smooth or slightly uneven surfaces covered with lustrous plates of Muscovite or Biotite; the Quartzose lamellae are often visible only when the specimens are looked at edgewise. Mica-Schists are very common in regions of Archean rocks accompanying gneisses, crystalline Limestones and other Schists. In some cases, Mica composes nearly the whole of the rock, in others Quartz preponderates so that they approach Quartz-Schists and Quartzites. Mica-Schists are in nearly all cases sedimentary rocks which have been recrystallized and have obtained a schistose structure during the process. This can be proved by their chemical composition, which is very much the same as that of Clays, Shales and Slates. The Mica scales have their cleavages and their flat sides parallel; the Quartz occurs in rounded, elliptical or irregular grains, with usually a small admixture of Feldspar (Albite, Oligoclase, Orthoclase); Apatite and Iron oxides are rarely absent from these rocks.

**Geographical Location of Phyllite:**

In Chatra District Phyllite deposits are found in Simaria, Gidhaur, Kana Chatti, Itkhori, Kunda, Pratappur, Shailagram Ram Narayanpur blocks.

➤ **COAL:**

**Geographical Location of Coal in Chatra District:**

In Chatra district it is found in Tandwa (Piparwar area), Simaria, Bagra blocks.



**DISTRICT MINING OFFICER  
CHATRA**



Coal is a combustible black or brownish-black sedimentary rock usually occurring in rock strata in layers or veins called Coal beds or Coal seams. The harder forms, such as anthracite Coal, can be regarded as metamorphic rock because of later exposure to elevated temperature and pressure. Coal is composed primarily of carbon, along with variable quantities of other elements, chiefly hydrogen, sulfur, oxygen, and nitrogen. Coal is a fossil fuel that forms when dead plant matter is converted into peat, which in turn is converted into lignite, then Sub-Bituminous Coal, after that Bituminous Coal, and lastly Anthracite. This involves biological and geological processes. The geological processes take place over millions of years.

Throughout human history, Coal has been used as an energy resource, primarily burned for the production of electricity and heat, and is also used for industrial purposes, such as refining metals. Coal is the largest source of energy for the generation of electricity worldwide, as well as one of the largest worldwide anthropogenic sources of carbon dioxide releases. The extraction of Coal, its use in energy production and its byproducts are all associated with environmental and health effects including climate change.

### Formation:

At various times in the geologic past, the Earth had dense forests in low-lying wet land areas. Due to natural processes such as flooding, these forests were buried underneath soil. As more and more soil deposited over them, they were compressed. The temperature also rose as they sank deeper and deeper. As the process continued the plant matter was protected from bio degradation and oxidation, usually by mud or acidic water. This trapped the carbon in immense peat bogs that were eventually covered and deeply buried by sediments. Under high pressure and high temperature, dead vegetation was slowly converted to Coal. As Coal contains mainly carbon, the conversion of dead vegetation into Coal is called carbonization.

The wide, shallow seas of the Carboniferous Period provided ideal conditions for coal formation, although Coal is known from most geological periods. The exception is the Coal gap in the Permian-Triassic extinction event, where coal is rare. Coal is known from Precambrian strata, which predate land plants—this Coal is presumed to have originated from residues of algae.

### Ranks:

As geological processes apply pressure to dead biotic material overtime, under suitable conditions, its metamorphic grade increases successively into:

- Peat, considered to be a precursor of Coal, which has industrial importance as a fuel in some regions. In its dehydrated form, peat is a highly effective absorbent for fuel and oil spills on land and water, and also used as a conditioner for soil to make it able to retain and slowly release water.
- Lignite, or brown Coal, the lowest rank of Coal, used almost exclusively as fuel for electric power generation.
- Jet, a compact form of Lignite, sometimes polished; used as an ornamental stone since the Upper Palaeolithic.
- Sub-bituminous Coal, whose properties range between those of Lignite and those of Bituminous Coal (It is used primarily as fuel for steam-electric power generation and is also an important source of light aromatic hydrocarbons for the chemical synthesis industry).
- Bituminous Coal, a dense sedimentary rock, usually black, but sometimes dark brown, often with well-defined bands of bright and dull material (It is used primarily as fuel in steam-electric power generation, with substantial quantities used for heat and power applications in manufacturing and to make Coke.)
- Steam Coal, a grade between Bituminous Coal and Anthracite (It was once widely used as a fuel for steam locomotives).



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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



- Anthracite, the highest rank of Coal (It is a harder, glossy black coal used primarily for residential and commercial space heating; it may be divided further into metamorphically altered Bituminous Coal and "petrified oil", as from the deposits in Pennsylvania.)
- Graphite (It is one of the more difficult coals to ignite and not commonly used as fuel; it is most used in pencils, or powdered for lubrication).



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## 16. USE OF MINERAL

Stones form one of the most important building materials in civil engineering. Stones are derived from rocks, which form the earth's crust and have no definite shape or chemical combination but are mixtures of two or more minerals. The mineral is a substance which is formed by the natural inorganic process and possesses a definite chemical combination and molecular structure. They are strong, durable and descent in appearance.

Stone is an essential and more permanent building material in construction than other natural building materials. Based on the type, stones can be used in buildings for flooring, roofing, masonry paving roads and also as aggregates for concrete.

Most of the prehistoric monuments are built with natural stones as they remain stable with time. Before the advent of concrete stones were highly preferred for heavy engineering works like bridge piers, harbor walls, sea side walls and for facing works.

Stones for construction purposes are obtained by quarrying from solid massive rocks. The stone used for masonry construction should be hard, durable, tough and should be free from weathered soft patches of material, cracks and other defects that are responsible for the reduction of strength and durability.

Based on Geology, stones or rocks are classified into three types:

- Igneous Rocks—Basalt, Trap, Andesite, Rhyolite, Diorite, Granite.
- Sedimentary Rocks—Limestone, Dolomite and Sandstone.
- Metamorphic Rocks— Gneiss, Quartzite, Marble, Slate

### **Types of Building Stones:**

Some of the common building stones which are used for different purposes in India are as follows

#### **Granite Gneiss, Augen Gneiss & Migmatite:**

##### **Uses of Granitic rocks:**

- **Building Stone:**- Granitic rocks have been extensively used as a dimension stone and as flooring tiles in public and commercial buildings and monuments.
- **Sub base and base material in road and highway construction:** - Crushed stone has the most basic use of Granite. Crushed Granite is used as a sub base and base material in road and highway construction. It is used as crushed stone media in sewage system drain fields and as a base material for foundations and construction slabs. Crushed Granite in attractive colours is used as a landscape stone and in planters. It also makes great railroad ballast, and in larger size it makes good riprap.
- **Engineering:**-Engineers have traditionally used polished Granite surface plates to establish a plane of reference, since they are relatively impervious and inflexible. Sand blasted concrete with a heavy aggregate content has an appearance similar to rough Granite, and is often used as a substitute when use of real Granite is impractical. Granite block is usually processed into slabs, which can be cut and shaped by a cutting center. Granite tables are used extensively as bases for optical instruments because of Granite's rigidity, high dimensional stability, and excellent vibration characteristics.

**Granite Paving Stone:** - Granite paving stones or "pavers" can make a colourful and interesting way of paving a driveway or patio. The beauty of natural stone combined with expert craftsmanship and design can produce a unique and lasting result. In the past, Granite blocks were often used to pave city streets.



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CHATRA**



### Granite

It is a deep seated igneous rock, which is hard, durable and available in various colours. It has a high value of crushing strength and is capable of bearing high weathering.



Granite is used for bridge components, retaining walls, stone columns, road metal, ballast for railways, foundation, stone work and for coarse aggregates in concrete. These stones can also be cut into slabs and polished to be used as floor slab sand stone facing slabs.

### Sandstone

This stone is another form of sedimentary rock formed by the action of mechanical sediments. It has a sandy structure which is low in strength and easy to dress.



They are used for ornamental works, paving and as road metal.

### Gneiss

It can be recognized by its elongated platy minerals usually mixed with mica and used in the same way as granite.



### Marble

It is a metamorphic rock which can be easily cut and carved into different shapes.



It is used for ornamental purposes, stone facing slabs, flooring, facing works etc.



*[Handwritten signature]*



### **Slate**

It is a metamorphic rock which can be split easily and available in black colour.



It is used for damp-proofing flooring and roofing.

### **Conglomerate:**

#### **Uses:**

When the matrix is soft, Conglomerate may be crushed for use as a fill material in the construction and transportation industries.

Hard Conglomerate may be cut and polished to make dimensions tone for interesting-looking wall sand floors.

### **Quartzite**

It is a metamorphic rock which is hard, brittle, crystalline and durable.



#### **Uses:**

- Because of its hardness and angular shape, crushed Quartzite is often used as railway ballast.
- Quartzite is a decorative stone and may be used to cover walls, as roofing tiles, as flooring, and stair steps.
- Its use for counter tops in kitchens is expanding rapidly. It is harder and more resistant to strains than Granite.
- Crushed Quartzite is some times used in road construction.
- High purity Quartzite is used to produce ferrosilicon, industrial Silica Sand, Silicon and Silicon carbide.



  
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### Laterite

It is decomposed from igneous rocks; occur in soft and hard varieties. It contains a high percentage of iron oxide and can be easily cut into blocks.



The soft variety is used for walls after curing while the hard blocks are used for paving the pathways.

### Coal:



Different types of coal have different uses.

- Steam Coal-also known as thermal Coal- is mainly used in power generation.
- Coking Coal-also known as metallurgical Coal-is mainly used in steel production.
- Coal seams of Chatra are suitable for Thermal Power Generation.

### Uses of Building Stones:

The stones used for various types of works areas follows:

- Fine-grained granite and gneiss stones are used for heavy engineering works such as building bridge piers, break waters, monuments etc.
- Granite Quartzite and compact Sand stones are used for masonry works in industrial areas as exposed to smoke and fumes.
- Marble, Granite and Sand stones are used for facing work of buildings.
- Limestone and Sandstone are used for general building works.
- Fine-grained Granite, Marble and soft Sand stones are used for carving and ornamental works.
- Compact Lime stone and Sandstones are used for fire-resistant masonry.
- Granite, Quartzite stones are used in foundations of building in place with high ground water level.
- Marble, Slate, Sandstone and Granite stones are used for floor pavings.



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## **17. DEMAND AND SUPPLY OF THE MINOR MINERAL IN LAST THREE YEARS**

In the present scenario, the Stone boulders & chips have good market in all regions of the country for construction of buildings, roads, bridges, railway line and other constructional purposes. Assuch there are huge infrastructural activities such as road, building, railways are coming up by Govt. of India & PSUs under "Make in India" programme. The production of stone boulders & chips are the main raw minerals for the above activities and considering the last three years' actual production of Chatra with respect to the requirement of the State has a huge gap. It is proposed to start the Stone production from larger areas to at least double the production of the district which will enhance the revenue of the district and also support the livelihood of the local people.

The mining project will also bring economic benefits to the state by the ways of royalty of Stone as well as benefit to the lessee. It will help in general of employment in rural areas in JharkhandState where tribal people are starving due to unemployment. A single mining project shall be providing employment to approximately 10 to 20 people to the poorest section of the society and benefitting more than 50 to 60 people in directly. Further, infrastructure development will help in development of nation. Socio-economic condition of the area will be improved as mining activitywill create additional employment for the local habitants for raising their socio-economic status. Significant contribution will be made by lessee towards societal development of the surrounding area in the form of CSR fund.

There is a huge demand of Stone chips for domestic and infrastructure sector. Only a few Stone mines have environmental clearance for extraction of Stone. There is limited supply of Stone and there is huge gap. There are no statistical data, regarding demand and supply of minerals inChatra district. Due to construction of roads and public buildings for development works in thedistrict a large number of stone chips & boulders are required. This will meet only by grantingnewleases inthedistrict.



**DISTRICT MINING OFFICER  
CHATRA**

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



**एन टी पी सी लिमिटेड**  
**NTPC Limited**  
(A Part of Public Enterprises)  
 नई कारगपुरा / North Karanpura

PIN NO.: AALFR2097R  
 GST NO.: 10AALFR2097R1ZM (BIHAR)  
 20AALFR2097R1ZM (JHARKHAND)

Mob :- 9771400158



**M/S RAJA CONSTRUCTION**  
 Government Civil Contractor  
 Taj Colony, Panchayati Akhara, Gaya - 823001 (Bihar)

Ref. No. 19/2024-CLVI/0011

Date 11-07-2024

Ref No. NK/2024/CLVI/Other/1516

Date: 19.07.2024

To,  
 District Mining Officer,  
 Distt- Chatra, Jharkhand

Sub: Reg. Tentative consumption of stone in c/c construction work at NKSTPP, NTPC Tandwa

Yours letter ref. 770/Khanan, Chatra dtd 11.07.2024

Dear Sir,  
 This has reference to your letter ref No 770/Khanan, Chatradtd. 11.07.2024 regarding tentative consumption of stone.

Tentative consumption of stone at NTPC Tandwa in current FY 24-25 and upcoming next four financial year are as under.

Sl. No	Stone type	Qty ( Cum )
1	Stone Chips 10 & 20mm	58000cum
2	Stone Metal, 63mm	28500cum
3	Stone Boulder	43900cum

Yours Truly

*(N D Pande)*  
 AGM(CCD)  
 NKSTPP NTPC Tandwa  
 Chatra, Jharkhand

To  
 The Mining officer  
 Department of Mining  
 Chatra Jharkhand-825401

Subject - Regarding Consumption of Aggregate (40mm,20mm,10mm)

So,

Herewith I am Submitting a detail of consumption of aggregate in project - Shyampur -turburtha New BG Rail Road (PKG IV & PKG VII) there are several structural unit that I have to do i.e. Minor bridges ,RUBs ,Wing Wall ,Retaining wall,Platform,Station Building etc.

Detail of Aggregate in cubic meter

S/L NO	AGGREGATE SIZE	QTY ( cum )
1	40MM	10111
2	20MM	29096
3	10MM	23116

The quantity which was detail above, some part of this were consumed from date of LDA of Respective PKG IV and PKG VII and the Balance remaining quantity will consume in next two years.

**M/s Raja Construction**  
*Surya Jais*  
 Partner

नई कारगपुरा सुपर थर्मल पावर प्रोजेक्ट (3x660 मेगावाट) काय - रेंडवा, बिहार : चतरा, झारखण्ड - 825321  
 North Karanpura Super Thermal Power Project (3x600 MW) Village Tandwa Distt Chatra, Jharkhand - 825321  
 नई कारगपुरा कारखाना : एन टी पी सी लिमिटेड, 7 इंस्टीट्यूशनल एरिया, लोधी रोड, नई दिल्ली - 110003  
 Registered Office NTPC Bhanwan, Scope Complex, 7 Institutional Area, Lodi Road, New Delhi - 110003  
 पंजीकरण L40101DL1975GO007988 | CIN L40101DL1975GO007566  
 www.ntpc.co.in



*(Signature)*  
**DISTRICT MINING OFFICER**  
**CHATRA**



## Tracks & Towers INFRA TECH (P) LTD

AN ISO 9001 : 2015  
Certified Company



JAS-ANZ



CIN : U45200TG2007PTC055302

Plot No.: 206, Phase III, Rd. No.: 76, Jubilee Hills, Hyderabad - 500033

Ph.: 040-2359551, 23559552, Fax : 040-23559553, email : tracksntowers@gmail.com www.tracksandtowers.com

Date:10.07.2024

To,  
**The District Mining Officer,  
Chatra, Jharkhand**

**Subject:** Information of approx. quantities of minor minerals required in our Varanasi to Kolkata 6 lane NHA1 Bharatmala Project package 8.

Respected sir,

Please find the below approx. required quantities (Stone chips and stone dust) for our NHA1 Varanasi to Kolkata 6 lane NHA1 Bharatmala Project (Package 8).

1. GSB/WMM (stone chips and stone dust mixed 60:40): 4,56,376 cum
2. 10 mm and 20 mm metal (stone chips): 2,23,231 cum

Thanks and regards



For Tracks and Towers Infratech Pvt. Ltd.

*Rishi Singh*  
(Project Manager)



*[Signature]*  
**DISTRICT MINING OFFICER  
CHATRA**

**Project Office :** Near to Latehar LC Gate, Railway Station Compound, Latehar R.S.- 829207 (Jharkhand)



CIN U42101JH2023PTC020500

## BHOLA SINGH EXPRESSWAY PRIVATE LIMITED

Builders for Building the Nation

Ref BSR/DMO/NHM/RK/5/2024

Date : 11.01.2024

To,  
The DMO  
Chatra, Jharkhand

Subject : Boulder Consumption Report

Dear Sir,

We are started the project name of Construction of 6 Lane greenfield Varanasi – Ranchi - Kolkata Highway from Chatra to Junction with NH-100 in Deoria village from KM 222.000 to KM 253.000 under Bharatmala Pariyojana in the state of Jharkhand on Hibrid Annuitue Mode (Package 9)

Sir, 3 Years working period Boulder consumption quantity tentatively 2.5 Lac ton.

*Biplab Kumar*  
Yours Faithfully  
Biplab Kumar  
Engineer

Head Office : 702.7th Floor, Panchwati Plaza, Kutcheri Road, Ranchi -834001  
Corporate Office : 308 & 309, 3rd Floor, Suncity Shopping Archade, Sector-54, Gurgaon - 122 002 (Haryana)  
Phone No : +91-124-2577400, 4063811 • Fax : +91-1244063811 • Email : tender@ritscci.com



*[Signature]*  
DISTRICT MINING OFFICER  
CHATRA



## 18. MINING LEASES MARKED ON THE MAP OF THE DISTRICT

As per record of Chatra district Mining Office, Nos. of Stone mining leases are registered and are in operation at current. The location of mining leases is given in Figure 20.1 & Table 20.1  
Figure:20.1: Location of Mining Lease in the Map of Chatra district.

- Attached as **Annexure -II**

Table 18.1: Location of Existing Mining Lease in the Chatra district

20.1: LOCATION OF EXISTING MINING LEASES OF MINOR MINERAL 'STONE' IN THE DISTRICT						
Sl. No.	Name of the Lessee	Address & Contact No. of Lessee	Area of Mining Lease (Ha)	Address of the Mining Lease	Location of the Mining Lease (Coordinates)	
					Latitude	Longitude
1	2	3	4	5	6	7
1	M/s Jai Shankar Stone Works Prop- Sri Kameshwar Singh S/o-Sri Nawrang Singh	Vill+Po- Baluri Ps- Hunterganj, Dist- Chatra	0.71	Mouza- Dalkoma Khata No. 31, 34 Plot No. 191, 193(P) Thana- Hunterganj	24°21'43.12"N 24°21'43.01"N 24°21'42.54"N 24°21'42.78"N 24°21'41.24"N 24°21'40.33"N 24°21'42.02"N	84°42'28.73"E 84°42'29.85"E 84°42'29.80"E 84°42'31.68"E 84°42'32.17"E 84°42'26.87"E 84°42'27.63"E
2	M/s Maa Gayatri Stone Works Prop- Sri Kamlesh Prajapati	Vill-Auru, Po-Auru Gerua Ps-Hunterganj, Dist- Chatra	1.74	Mouza- Dundu Khata No. 15 Plot No.185 Thana- Hunterganj	24°22'51.88"N 24°22'51.73"N 24°22'52.79"N 24°22'53.49"N 24°22'53.65"N 24°22'55.24"N 24°22'55.61"N 24°22'56.79"N 24°22'57.36"N 24°22'56.59"N 24°22'54.67"N 24°22'53.40"N	84°43'02.48"E 84°43'00.08"E 84°42'59.33"E 84°42'59.68"E 84°42'59.08"E 84°42'58.08"E 84°42'59.23"E 84°42'59.33"E 84°42'59.55"E 84°43'03.17"E 84°43'03.14"E 84°43'02.54"E
3	Maa Kouleshwari Stone Works Partner- Sri Parmanand Singh	Vill- Suresh Colony Hazaribag	2.31	Mouza- Luta Khata No.- 1, 3, 4, 6, 9 Plot No.-48(P), 47, 49, 74(P),88(P), 92, 93(P) Thana- Hunterganj	24°22'53.84"N 24°22'57.01"N 24°22'58.33"N 24°22'58.04"N 24°22'57.74"N 24°22'55.86"N 24°22'54.03"N 24°22'53.28"N	84°53'14.84"E 84°53'15.46"E 84°53'16.99"E 84°53'18.56"E 84°53'23.13"E 84°53'22.05"E 84°53'19.17"E 84°53'17.08"E
4	M/s Jai Shankar Stone Indurties Prop- Sri Niwas Kumar	S/O- Late- Shyarnakant Singh Vill-Khutikewalkhurd Po+Ps- Hunterganj, Dist- Chatra	3.64	Mouza- Akta Khata No. 1,2,3, 4,5, 6, 7, 9, 12 & 27 Plot No.- 82(P), 83, 84, 85, 86, 90, 92, 96, 97, 98, 100, 101, 103, 104, 105, 106, 107, 108, 109, 110 113, 117, 118, 119, 120, 121, 122, 124, 131, 132, 133 & 134 Thana- Hunterganj	24°21'47.81"N 24°21'48.22"N 24°21'49.12"N 24°21'49.30"N 24°21'50.52"N 24°21'50.79"N 24°21'51.46"N 24°21'51.22"N 24°21'52.22"N 24°21'53.07"N 24°21'54.07"N 24°21'54.49"N 24°21'54.93"N 24°21'55.47"N 24°21'55.80"N 24°21'57.55"N 24°21'57.45"N 24°21'58.68"N 24°21'58.46"N 24°21'58.08"N 24°21'57.67"N 24°21'56.89"N 24°21'56.78"N 24°21'57.52"N 24°21'57.68"N	84°44'22.46"E 84°44'21.23"E 84°44'21.49"E 84°44'21.16"E 84°44'21.80"E 84°44'21.24"E 84°44'21.29"E 84°44'20.46"E 84°44'18.53"E 84°44'19.62"E 84°44'19.11"E 84°44'19.87"E 84°44'20.90"E 84°44'20.73"E 84°44'17.11"E 84°44'17.00"E 84°44'19.29"E 84°44'19.36"E 84°44'21.35"E 84°44'23.96"E 84°44'24.11"E 84°44'23.93"E 84°44'24.44"E 84°44'24.52"E 84°44'25.51"E
					24°21'56.84"N 24°21'56.29"N 24°21'54.49"N	84°44'25.47"E 84°44'24.99"E 84°44'25.01"E

						24°21'53.04"N 24°21'51.74"N 24°21'50.61"N 24°21'49.73"N 24°21'49.26"N 24°21'48.39"N 24°21'48.01"N	84°44'24.89"E 84°44'24.55"E 84°44'24.02"E 84°44'23.45"E 84°44'23.73"E 84°44'23.68"E 84°44'22.94"E
5	Sri Sitaram Babu S/o-Late-Triloki Prasad Mehta	vill- Nawabganj Jhil Tower FlatN no-6C , Po- Hazaribag Ps- Sadar Dist- Hazaribag	0.96	Mouza- Akta Khata No. 22 Plot No. 39 Thana- Hunterganj		24°21'50.16"N 24°21'48.86"N 24°21'47.43"N 24°21'47.29"N 24°21'47.55"N 24°21'48.57"N	84°44'18.52"E 84°44'20.57"E 84°44'20.02"E 84°44'17.94"E 84°44'15.87"E 84°44'15.88"E
6	M/s Ganpati Stone Works Partner-SriPremchand Singh	Vill-Pindrakala, Po-Kubba Ps-Hunterganj, Dist-Chatra	2.62	Mouza- Kurkheta Khata No. 01, 29 Plot No.- 673, 678, 679 Thana-Vashisthnagar		24°18'49.1" N 24°18'56.3" N	84°54'34.3" E 84°54'39.9" E
7	Sri Mahendra Kumar Ujala S/O- Sri Girdhari Saw	Vill- Mirpur, Ps-Jajlo Ps- Hunterganj, Dist-Chatra	1.00	Mouza- Rajguru Khata No.04, 86, 88, 89, 90 Plot No.- 573, 576, 577, 578, 587, 588, 589, 590, 595, 596 Thana-Vashisthnagar		24°19'04.72" N 24°19'05.59" N 24°19'08.03" N 24°19'10.14" N 24°19'11.77" N 24°19'11.50" N 24°19'11.36" N 24°19'10.73" N 24°19'09.50" N 24°19'08.89" N 24°19'07.56" N 24°19'07.70" N 24°19'07.46" N 24°19'05.91" N 24°19'05.51" N 24°19'04.87" N	84°52'59.30"E 84°52'59.37"E 84°53'00.22"E 84°53'00.83"E 84°53'01.04"E 84°53'01.61"E 84°53'02.40"E 84°53'02.81"E 84°53'02.85"E 84°53'02.34"E 84°53'01.15"E 84°53'02.07"E 84°53'02.60"E 84°53'01.76"E 84°53'00.86"E 84°53'00.26"E
8	M/s Chatniya Mines Prop- Sri Uday Kumar Sharma S/O- Late-Umakant Sharma	Vill- Hosil, Po- Pindra Ps- Vasistanagar, Dist-Chatra	2.83	Mouza- Chatniya Khata No.- 01 Plot No.-33(P) Thana-Vashisthnagar		24°19'33.62"N 24°19'33.76"N 24°19'31.81"N 24°19'31.19"N 24°19'28.64"N 24°19'28.82"N 24°19'29.79"N 24°19'30.16"N 24°19'30.20"N 24°19'31.71"N 24°19'32.14"N	84°45'33.97"E 84°45'39.24"E 84°45'39.38"E 84°45'40.86"E 84°45'39.83"E 84°45'34.29"E 84°45'34.11"E 84°45'33.48"E 84°45'32.68"E 84°45'32.40"E 84°45'33.78"E
9	Sri Sanjay Kumar Singh S/O- Sri Shambhunath Singh Vill+ Po- Bagra, Ps- Simariya Dist- Chatra	Vill+ Po- Bagra, Ps-Simariya Dist- Chatra	1.21	Mouza- Sikri Khata No. 01, 128(P) Plot No.- Thana-Simriya		Between N24°04'20.8" to N24°04'25.0" N	Between E85°00'09.3" to E85°00'12.9"
10	M/s Maa Bhagwati Stone Works Prop- Sri Amit Kumar Sahay S/O- Sri Srikant Kumar Sahay	Vill+Po- Delho Ps- Simariya, Dist-Chatra	1.94	Mouza- Ambatand Khata No. 01, 114(P) Plot No.- Thana-Simriya		24°05'48.0" N 24°05'49.3" N 24°05'49.5" N 24°05'49.10" N	84°53'3.02"E 84°53'3.30"E 84°53'2.03"E 84°53'2.00"E
11	M/s Jai Mata Di Stone Works partner- Sri Sudhir Kumar Singh	Vill- Rol, Po-Simariya, Dist- Chatra	1.62	Mouza- Sikri Khata No. 01, 128(P) Plot No.- Thana-Simriya		24°04'20.5" N 24°04'25.1" N	85°00'04.8"E 85°00'09.3"E
12	M/s Riya Enterprises Partner-1. Sri Sanjay Kumar S/O- Sri Bhuneshwar Ram	Vill- Dundua, Po- Aaraatu, Ps- Simariya, Dist- Chatra	0.52	Mouza- Basariya Khata No. 23, 233(P) Plot No.- Thana-Simriya		24°01'53.99" N 24°01'55.21" N 24°01'56.43" N 24°01'56.44" N 24°01'56.45" N 24°01'55.22" N 24°01'54.00" N	85°02'13.22"E 85°02'13.29"E 85°02'13.36"E 85°02'14.59"E 85°02'15.81"E 85°02'15.76"E 85°02'15.70"E
13	M/s Jai Shiv Construction Partner-1. B.K Tiwari S/O- Sri Narayan Tiwari	Vill- Dangradih, Po+ps- Rajpur Dist- Chatra	1.03	Mouza- Chatniya Khata No. 12, 113, 112 Plot No.- Thana-Sadar		24°12'32.5" N 24°12'33.1" N 24°12'33.8" N 24°12'36.3" N 24°12'36.1" N 24°12'34.5" N 24°12'35.5" N 24°12'34.2" N	84°56'09.6"E 84°56'08.9"E 84°56'08.3"E 84°56'09.4"E 84°56'09.9"E 84°56'09.5"E 84°56'10.9"E 84°56'11.2"E

					24°12'33.2"N	84°56'10.4"E		
14	M/s Maa Suruchi Stone Works Prop- Sri Kalicharan Singh S/O- Late- Baijnath Singh	Vill- Sonbigaha, Ps- Tapej Ps- Sadar, Dist- Chatra	1.45	Mouza- Mishrol Khata No. 26, 12, 33, 01 Plot No.- 214(P), 245, 243, 250(P) Thana-Sadar		24°12'26.79" N 24°12'28.47" N 24°12'28.89" N 24°12'28.40" N 24°12'26.66" N 24°12'26.49" N 24°12'23.48" N 24°12'24.26" N 24°12'25.63" N 24°12'26.61" N	84°55'51.62"E 84°55'52.44"E 84°55'54.31"E 84°55'56.05"E 84°55'55.92"E 84°55'58.31"E 84°55'57.95"E 84°55'56.20"E 84°55'54.73"E 84°55'53.14"E	
15	M/s APN Developers and Stone Pvt Ltd Dir- Sri Amit Kumar Sahay S/O- Sri Srikant Kumar Sahay	Vill- Awwal Mohallah Po- Chatra,Ps- Sadar, Dist- Chatra	0.70	Mouza- Chatniya Khata No. 11 Plot No.-39 Thana-Sadar		24°12'39.758" N 24°12'38.718" N 24°12'37.872" N 24°12'36.976" N 24°12'35.694" N 24°12'36.427" N 24°12'36.823" N 24°12'37.547" N 24°12'37.959" N	84°56'3.222"E 84°56'5.113"E 84°56'4.831"E 84°56'6.128"E 84°56'5.646"E 84°56'3.349"E 84°56'3.158"E 84°56'3.187"E 84°56'2.380"E	
16	M/s Rajshree Construction Prop- Sri Shri Parmeshwar saw S/o- Sri Bhandu saw	Vill+Po- Gangpur Ps- Gidhour, Dist- Chatra	1.14	Mouza- Ichak Khata No. 8, 12, 19, 36, 40, 44, 47, 65 Plot No.- 664, 665, 666, 667, 668(p), 669, 670(p), 679(p), 680, 681, 682, 683, 684, 713(p) & 837 Thana-Gidhor		24°11'20.03" N 24°11'20.76" N 24°11'20.75" N 24°11'22.96" N 24°11'22.89" N 24°11'21.93" N 24°11'21.53" N 24°11'18.19" N 24°11'18.08" N 24°11'19.36" N	85°7'45.26"E 85°7'45.31"E 85°7'47.84"E 85°7'48.57"E 85°7'49.54"E 85°7'49.39"E 85°7'50.48"E 85°7'49.62"E 85°7'46.95"E 85°7'46.67"E	
17	M/s A & P Stone Works Part- Sri Arun kumar Singh	Vill- Nagar, PO+PS- HunterganjChatra	1.58	Mouza- Karmahi Khata No.-02 Plot No.- 13 Thana- Vashisthnagar		24°19'10.90" N 24°19'09.08" N 24°19'06.87" N 24°19'07.34" N 24°19'07.77" N 24°19'09.51" N 24°19'11.61" N 24°19'11.01" N	84°48'16.80" E 84°48'16.82" E 84°48'16.03" E 84°48'13.84" E 84°48'11.91" E 84°48'11.92" E 84°48'12.25" E 84°48'14.78" E	
18	M/s Jai Shankar Stone Mines Part- Sri Kameshwar Singh	Vill- Baluri, PO+PS- Hunterganj Dist- Chatra	2.82	Mouza-Rano Khata No.- 1/7, 8/4, 10, 11 Plot No.- 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 & 35 Thana- Hunterganj		24°23'32.27"N 24°23'35.40"N 24°23'39.41"N 24°23'39.47"N 24°23'33.29"N	84°44'44.30"E 84°44'43.77"E 84°44'43.36"E 84°44'51.86"E 84°44'45.41"E	
19	M/s Maa Tara Stone Works Part- Sri Mukesh Kumar	Vill- Hafua, PO+PS- Chatra Dist- Chatra	1.21	Mouza-Rano Khata No.- 2, 3, 4, 07, 08, 10, 11 Plot No.- 93, 94, 95, 96, 97, 98, 99, 100, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130 & 131 Thana- Hunterganj		24°23'33.66"N 24°23'33.65"N 24°23'33.87"N 24°23'34.02"N 24°23'34.86"N 24°23'34.75"N 24°23'35.11"N 24°23'36.27"N 24°23'36.57"N 24°23'38.69"N 24°23'38.47"N 24°23'38.15"N 24°23'38.11"N 24°23'37.72"N 24°23'37.09"N 24°23'37.11"N 24°23'36.84"N 24°23'36.66"N 24°23'36.22"N 24°23'36.12"N 24°23'34.99"N	84°44'55.49"E 84°44'55.30"E 84°44'55.18"E 84°44'54.28"E 84°44'53.17"E 84°44'52.99"E 84°44'52.79"E 84°44'52.89"E 84°44'52.75"E 84°44'53.02"E 84°44'55.72"E 84°44'55.68"E 84°44'55.80"E 84°44'55.78"E 84°44'55.56"E 84°44'54.88"E 84°44'54.76"E 84°44'55.94"E 84°44'55.90"E 84°44'56.08"E 84°44'55.97"E	
20	M/s MSU Enterprises Part- Sri Mukesh Kumar	Vill- Hafua, PO+PS- Chatra District- Chatra	1.72	Mouza- Karmahi Khata No.-07 Plot No.- 12 Thana- Vashisthnagar		24°19'12.00" N 24°19'12.35" N 24°19'15.58" N 24°19'17.63" N 24°19'18.10" N 24°19'17.87" N 24°19'14.76" N 24°19'13.31" N 24°19'13.07" N	84°48'15.03" E 84°48'12.31" E 84°48'13.24" E 84°48'13.74" E 84°48'14.92" E 84°48'17.17" E 84°48'16.35" E 84°48'15.88" E 84°48'14.85" E	
21	M/s Jai Shankar Stone Pro- Sri Rajesh Kumar Singh	Vill- Jhagartari, PO+PS- Hunterganj Dist- Chatra	2.02	Mouza-Rano Khata No.- 1/7, 8/4, 10, 11 Plot No.-03(P), 04(P), 06(P), 07(P), 08, 09, 10, 12,13,14, 14/296, 170, 171(P), 172, 173, 174, 175, 176,177, 178, 180, 181, 182, 183, 184, 185, 186, 187, 194(P), 196, 197& 198 Thana- Hunterganj		24°23'30.46"N 24°23'33.44"N 24°23'32.78"N 24°23'35.30"N 24°23'32.99"N 24°23'36.15"N 24°23'36.36"N 24°23'33.33"N 24°23'33.34"N 24°23'32.35"N 24°23'31.92"N 24°23'31.96"N 24°23'30.72"N 24°23'30.88"N 24°23'30.32"N	84°44'38.62"E 84°44'38.87"E 84°44'40.82"E 84°44'40.83"E 84°44'38.91"E 84°44'38.67"E 84°44'43.40"E 84°44'43.99"E 84°44'43.40"E 84°44'43.44"E 84°44'42.48"E 84°44'40.95"E 84°44'40.52"E 84°44'39.65"E 84°44'39.62"E	



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22	Channiya Mines Part- Sri Mukesh Kumar	At- Sadar, Chatra	Hafua	2.98	Mouja- Thana No. - 03, Khata No. 11, 13(P), 19(P)	Hosil 160 29	24°19'23.89"N 24°19'23.79"N 24°19'24.12"N 24°19'24.64"N 24°19'26.93"N 24°19'27.27"N 24°19'27.57"N 24°19'28.63"N 24°19'28.06"N 24°19'28.65"N 24°19'28.48"N 24°19'28.59"N 24°19'28.58"N 24°19'29.79"N 24°19'30.92"N 24°19'30.57"N 24°19'31.51"N 24°19'32.24"N 24°19'32.26"N 24°19'31.65"N 24°19'30.87"N 24°19'30.51"N 24°19'29.40"N 24°19'28.01"N 24°19'27.28"N 24°19'27.24"N 24°19'27.04"N 24°19'26.97"N 24°19'26.90"N 24°19'26.54"N 24°19'25.97"N 24°19'25.92"N 24°19'26.63"N 24°19'26.56"N 24°19'25.26"N	84°45'54.16"E 84°45'49.80"E 84°45'49.72"E 84°45'49.90"E 84°45'49.69"E 84°45'48.55"E 84°45'48.08"E 84°45'47.78"E 84°45'49.65"E 84°45'50.21"E 84°45'50.59"E 84°45'50.70"E 84°45'51.71"E 84°45'51.99"E 84°45'52.92"E 84°45'54.29"E 84°45'54.22"E 84°45'54.67"E 84°45'57.05"E 84°45'56.56"E 84°45'56.38"E 84°45'55.62"E 84°45'55.80"E 84°45'58.68"E 84°45'55.84"E 84°45'56.18"E 84°45'56.22"E 84°45'54.48"E 84°45'54.18"E 84°45'52.77"E 84°45'52.82"E 84°45'53.87"E 84°45'53.69"E 84°45'54.15"E 84°45'54.35"E
23	Anjani Stone Works	At- Dumrikalan	Hunterganj	1.99	Mouja- Khata No.- 06,08,21,31,33,42,29,11,07,32,13,09,14, 39 & 36 Plot No. - 609, 615, 612, 614, 610, 621, 611, 613, 622, 606, 629, 617, 605, 627, 630, 602, 196, 193, 194 & 616 Thana- Hunterganj	Dumrikalan	24°23'58.09"N 24°23'58.32"N 24°23'59.31"N 24°23'59.52"N 24°24'00.42"N 24°24'00.35"N 24°24'00.79"N 24°24'01.05"N 24°24'01.85"N 24°24'02.10"N 24°24'02.89"N 24°24'03.27"N 24°24'05.04"N 24°24'05.34"N 24°24'05.31"N 24°24'05.81"N 24°24'06.13"N 24°24'05.68"N 24°24'05.36"N 24°24'04.52"N 24°24'03.63"N 24°24'03.58"N 24°24'02.50"N 24°24'02.31"N 24°24'01.70"N 24°24'01.62"N 24°24'00.74"N	84°48'22.88"E 84°48'21.99"E 84°48'22.06"E 84°48'21.23"E 84°48'21.29"E 84°48'22.20"E 84°48'21.41"E 84°48'21.59"E 84°48'21.79"E 84°48'20.77"E 84°48'20.93"E 84°48'20.15"E 84°48'20.62"E 84°48'20.90"E 84°48'22.25"E 84°48'22.34"E 84°48'23.65"E 84°48'25.00"E 84°48'25.30"E 84°48'25.26"E 84°48'25.18"E 84°48'25.39"E 84°48'25.29"E 84°48'24.43"E 84°48'24.48"E 84°48'23.51"E 84°48'23.51"E



*[Handwritten Signature]*

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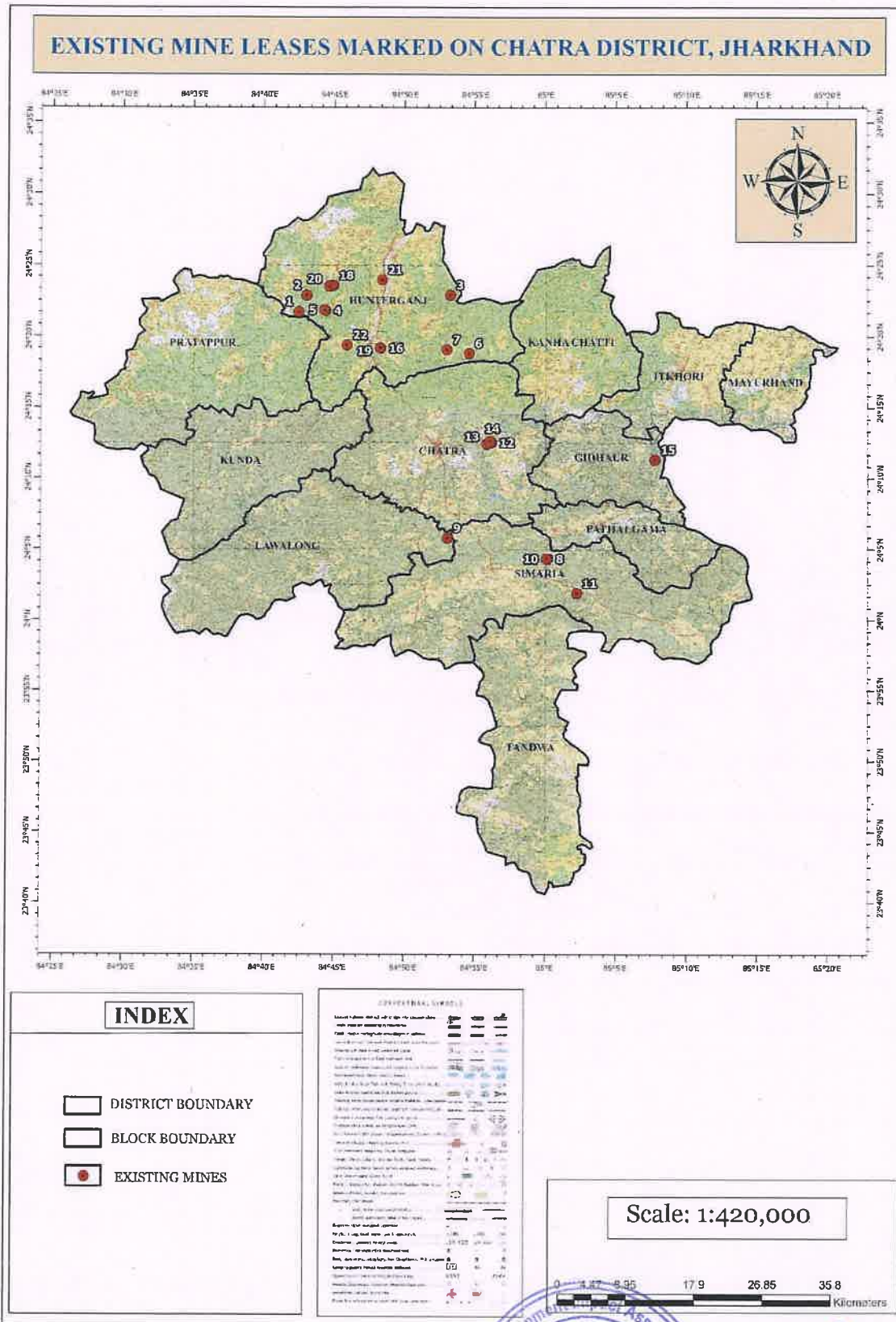


Fig 18.1:-Existing mining leases of Chatra District



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## 19. DETAILS OF THE AREA OF WHERE THERE IS A CLUSTER OF MINING LEASES

A total 6 Nos. of Cluster have been formed in district as per point 6 of Appendix XI: S.O.-141 (E) of MoEF & CC, dated 15/01/2016. However, it is proposed to consider the cluster of mining lease while planning for new lease area in coming years.

### DETAILS OF CLUSTER IN THE DISTRICT

Sl. No.	Name of the Mineral	Name of the Lessee	Address & Contact No. of Lessee	Area of Mining Lease (Ha)	Address of the Mining Lease	Location of the Mining Lease (Coordinates)		
1	2	3	4	5	6	Latitude	Longitude	
<b>CLUSTER IN MOUZA-AKTA</b>								
1	Stone	M/s Jai Shankar Stone Industries Proprietor: Shri Niwas Kumar S/o Late Shyam Kant Singh	Village - Khutikewal Khurd, P.O. + P.S. - Hunterganj Dist. - Chatra	3.64	Mouza - Akta Khata No. - 1, 2, 3, 4, 5, 6, 7, 9, 12 & 27 Plot No. - 82(P), 83, 84, 85, 86, 90, 92, 96, 97, 98, 100, 101, 103, 104, 105, 106, 107, 108, 109, 110, 113, 117, 118, 119, 120, 121, 122, 124, 131, 132, 133 & 134 Thana - Hunterganj	24°21'47.81"N 24°21'48.22"N 24°21'49.12"N 24°21'49.30"N 24°21'50.52"N 24°21'50.79"N 24°21'51.46"N 24°21'51.22"N 24°21'52.22"N 24°21'53.07"N 24°21'54.07"N 24°21'54.49"N 24°21'54.93"N 24°21'55.47"N 24°21'55.80"N 24°21'57.55"N 24°21'57.45"N 24°21'58.68"N 24°21'58.46"N 24°21'58.08"N 24°21'57.67"N 24°21'56.89"N 24°21'56.78"N 24°21'57.52"N 24°21'57.68"N 24°21'56.84"N 24°21'56.29"N 24°21'54.49"N 24°21'53.04"N 24°21'51.74"N 24°21'50.61"N 24°21'49.73"N 24°21'49.26"N 24°21'48.39"N 24°21'48.01"N	84°44'22.46"E 84°44'21.23"E 84°44'21.49"E 84°44'21.16"E 84°44'21.80"E 84°44'21.24"E 84°44'21.29"E 84°44'20.46"E 84°44'18.53"E 84°44'19.62"E 84°44'19.11"E 84°44'19.87"E 84°44'20.90"E 84°44'20.73"E 84°44'17.11"E 84°44'17.00"E 84°44'19.29"E 84°44'19.36"E 84°44'21.35"E 84°44'23.96"E 84°44'24.11"E 84°44'23.93"E 84°44'24.44"E 84°44'24.52"E 84°44'25.51"E 84°44'25.47"E 84°44'24.99"E 84°44'25.01"E 84°44'24.89"E 84°44'24.55"E 84°44'24.02"E 84°44'23.45"E 84°44'23.73"E 84°44'23.68"E 84°44'22.94"E	
2	Stone	Shri Sitaram Babu S/o Late Triloki Prasad Mehta	Village - Nawabganj Jhil Tower Flat No. - 6C P.O. - Hazaribag P.S. - Sadar Dist. - Hazaribag	0.96	Mouza Akta Khata No. -22 Plot No. - 39 Thana - Hunterganj	24°21'50.16"N 24°21'48.86"N 24°21'47.43"N 24°21'47.29"N 24°21'47.55"N 24°21'48.57"N	84°44'18.52"E 84°44'20.57"E 84°44'20.02"E 84°44'17.94"E 84°44'15.87"E 84°44'15.88"E	
<b>CLUSTER IN MOUZA-KURKHETA</b>								
3	Stone	M/s Somvanshi Construction Partner: Shri Shashi Singh S/o Late Krishna Singh	Village - Kurkheta P.O. - Dantar P.S. - Vashishthnagar Dist. - Chatra	1.79	Mouza - Kurkheta Khata No. - 29, 31, 33 Plot No. - 127, 125, 128, 925 Thana - Vashishthnagar	24°18'55.42"N 24°18'55.14"N 24°18'53.80"N 24°18'50.55"N 24°18'50.48"N 24°18'49.70"N 24°18'46.42"N 24°18'44.45"N 24°18'44.07"N 24°18'45.65"N 24°18'45.82"N 24°18'46.07"N 24°18'47.20"N 24°18'48.47"N 24°18'49.88"N 24°18'51.56"N 24°18'51.97"N 24°18'53.54"N	84°54'17.76"E 84°54'20.25"E 84°54'19.44"E 84°54'18.82"E 84°54'17.99"E 84°54'18.78"E 84°54'17.90"E 84°54'17.03"E 84°54'14.47"E 84°54'14.58"E 84°54'16.50"E 84°54'17.01"E 84°54'16.04"E 84°54'17.05"E 84°54'17.20"E 84°54'17.19"E 84°54'18.25"E 84°54'18.86"E	



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4	Stone	M/sSomvanshiConstruction Partner: ShriShashiSingh S/oLateKrishnaSingh	Village-Kurketa P.O.-Dantar P.S.- VashishthnagarDist.- Chatra	1.58	Mouza KurkhetaKhataNo. 15.31,35,& 40 PlotNo.-863,864, 867,832,859&138 Thana-Vashishthnagar	24°19'00.75"N 24°19'00.28"N 24°19'00.83"N 24°19'01.00"N 24°18'59.72"N 24°18'59.17"N 24°19'01.12"N 24°19'01.08"N 24°19'00.19"N 24°18'59.57"N 24°18'57.75"N 24°18'57.77"N 24°18'58.65"N 24°19'00.68"N 24°18'56.63"N 24°18'52.79"N 24°18'53.22"N 24°18'50.74"N 24°18'51.69"N 24°18'56.65"N 24°18'56.98"N 24°18'59.59"N 24°18'59.85"N	84°54'17.20"E 84°54'19.40"E 84°54'19.34"E 84°54'20.16"E 84°54'20.23"E 84°54'20.86"E 84°54'21.28"E 84°54'21.85"E 84°54'22.58"E 84°54'23.71"E 84°54'23.61"E 84°54'23.04"E 84°54'22.41"E 84°54'21.78"E 84°54'22.06"E 84°54'22.81"E 84°54'22.22"E 84°54'22.03"E 84°54'20.94"E 84°54'21.51"E 84°54'20.78"E 84°54'19.55"E 84°54'17.29"E
5	Stone	M/sSomvanshiConstruction Partner: ShriShashiSingh S/oLateKrishnaSingh	Village-Kurketa P.O.-Dantar P.S.- VashishthnagarDist.- Chatra	2.36	Mouza KurkhetaKhataNo.- 1,15,30, 09,12,50 PlotNo.-807,808, 810,811,819,820,821, 817,829,834,813,828, 809,812,830&806 Thana-Vashishthnagar	24°18'58.59"N 24°18'58.60"N 24°18'59.53"N 24°18'01.85"N 24°19'01.86"N 24°19'01.14"N 24°19'02.29"N 24°19'03.34"N 24°19'00.76"N 24°18'59.94"N	84°54'28.67"E 84°54'25.49"E 84°54'22.64"E 84°54'22.62"E 84°54'25.78"E 84°54'27.75"E 84°54'27.56"E 84°54'31.03"E 84°54'31.64"E 84°54'29.61"E
6	Stone	M/sGanpatiStoneWorksP artner: ShriPremchandSingh	Village-Pindrakala P.O.-Kubba P.S. HuntermgnjDist.- Chatra	2.62	Mouza KurkhetaKhataNo -01,29 PlotNo.-673,678,679 Thana-Vashishthnagar	24°18'49.1"N to24°18'5 6.3"N	84°54'34.3"E to84°54'39.9 "E
<b>CLUSTER IN MOUZA-CHATANIYA</b>							
6	Stone	M/sChataniyaMines Proprietor: ShriUdayKumarSharma S/oLateUmakantSharma	Village-Hosil P.O.-Pindra P.S.-Vasistanagar Dist.-Chatra	2.83	Mouza ChataniyaKhataN o.-01PlotNo. 33(P) Thana-Vashishthnagar	24°19'33.62"N 24°19'33.76"N 24°19'31.81"N 24°19'31.19"N 24°19'28.64"N 24°19'28.82"N 24°19'29.79"N 24°19'30.16"N 24°19'30.20"N 24°19'31.71"N 24°19'32.14"N	84°45'33.97"E 84°45'39.24"E 84°45'39.38"E 84°45'40.86"E 84°45'39.83"E 84°45'34.29"E 84°45'34.11"E 84°45'33.48"E 84°45'32.68"E 84°45'32.40"E 84°45'33.78"E
7	Stone	M/sJaiShivConstructionP artner: ShriB.K.Tiwari S/oShriNarayanTiwari	Village-Dangradih P.O.+P.S.- RajpurDist.-Chatra	1.03	Mouza ChataniyaKhataN o.-12PlotNo.- 112,113 Thana-Sadar	24°12'32.50"N 24°12'33.10"N 24°12'33.80"N 24°12'36.30"N 24°12'36.10"N 24°12'34.50"N 24°12'35.50"N 24°12'34.20"N 24°12'33.20"N	84°56'09.60"E 84°56'08.90"E 84°56'08.30"E 84°56'09.40"E 84°56'09.90"E 84°56'09.50"E 84°56'10.90"E 84°56'11.20"E 84°56'10.40"E
8	Stone	M/sAPNDevelopersandStoneP vt.Ltd. Director: ShriAmitKumarSahay S/oShriShrikantKumarSahay	Village-AwwalMohallah P.O.-Chatra P.S. SadarDist.- Chatra	0.70	Mouza ChataniyaKhata No. - 11 Plot No. 39Thana- Sadar	24°12'39.758"N 24°12'38.718"N 24°12'37.872"N 24°12'36.976"N 24°12'35.694"N 24°12'36.427"N 24°12'36.823"N 24°12'37.547"N 24°12'37.959"N	84°56'3.222"E 84°56'5.113"E 84°56'4.831"E 84°56'6.128"E 84°56'5.646"E 84°56'3.349"E 84°56'3.158"E 84°56'3.187"E 84°56'2.380"E
<b>CLUSTER IN MOUZA-KARMAHI</b>							
9	Stone	M/sA&PStoneWorksPa rtner: ShriArunkumarSingh	Village-Nagar P.O.+P.S.- HuntermgnjDist.- Chatra	1.58	Mouza KarmahiKhata No.-02PlotNo. 13 Thana-Vashishthnagar	N24°19'10.90" N24°19'09.08" N24°19'06.87" N24°19'07.34" N24°19'07.77" N24°19'09.51" N24°19'11.61" N24°19'11.01"	E84°48'16.80" E84°48'16.82" E84°48'16.03" E84°48'13.84" E84°48'11.91" E84°48'11.92" E84°48'12.25" E84°48'14.78"



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10	Stone	M/sMSUEnterprises Partner: ShriMukeshKumar	Village-Hafua P.O.+P.S.-Chatra Dist.-Chatra	1.72	Mouza KarmahiKhata No. - 07Plot No. - 12 Thana-Vashisthnagar	24°19'12.00"N 24°19'12.35"N 24°19'15.58"N 24°19'17.63"N 24°19'18.10"N	84°48'15.03"E 84°48'12.31"E 84°48'13.24"E 84°48'13.74"E 84°48'14.92"E
						24°19'17.87"N 24°19'14.76"N 24°19'13.31"N 24°19'13.07"N	84°48'17.17"E 84°48'16.35"E 84°48'15.88"E 84°48'14.85"E
<b>CLUSTER IN MOUZA-RANO</b>							
11	Stone	M/sJaiShankarStoneMinesP artner: ShriKameshwarSingh	Village-Baluri P.O.+P.S.-Hunterganj Dist.-Chatra	2.82	Mouza-Rano KhataNo.- 1/7,8/4,10,11 PlotNo.-25,26,27, 28,29,30,31,32,33, 34&35 Thana-Hunterganj	24°23'32.27"N 24°23'35.40"N 24°23'39.41"N 24°23'39.47"N 24°23'33.29"N	84°44'44.30"E 84°44'43.77"E 84°44'43.36"E 84°44'51.86"E 84°44'45.41"E
12	Stone	M/sMaaTaraStoneWorksP artner: ShriMukeshKumar	Village-Hafua P.O.+P.S.- ChatraDist.-Chatra	1.21	Mouza-Rano KhataNo.-2,3,4,07, 08,10,11 PlotNo.-93,94,95, 96,97,98,99,100,120, 121,122,123,124,125, 126,127,128,129,130 &131 Thana-Hunterganj	24°23'33.66"N 24°23'33.65"N 24°23'33.87"N 24°23'34.02"N 24°23'34.86"N 24°23'34.75"N 24°23'35.11"N 24°23'36.27"N 24°23'36.57"N 24°23'38.69"N 24°23'38.47"N 24°23'38.15"N 24°23'38.11"N 24°23'37.72"N 24°23'37.09"N 24°23'37.11"N 24°23'36.84"N 24°23'36.66"N 24°23'36.22"N 24°23'36.12"N 24°23'34.99"N	84°44'55.49"E 84°44'55.30"E 84°44'55.18"E 84°44'54.28"E 84°44'53.17"E 84°44'52.99"E 84°44'52.79"E 84°44'52.89"E 84°44'52.75"E 84°44'53.02"E 84°44'55.72"E 84°44'55.68"E 84°44'55.80"E 84°44'55.78"E 84°44'55.56"E 84°44'54.88"E 84°44'54.76"E 84°44'55.94"E 84°44'55.90"E 84°44'56.08"E 84°44'55.97"E
13	Stone	M/sJaiShankarStoneP roprietor: ShriRajeshKumarSingh	Village-Jhagartari P.O.+P.S.- HunterganjDist.- Chatra	2.02	Mouza-Rano KhataNo.- 1/7,8/4,10,11 PlotNo.-03(P),04(P), 06(P),07(P),08,09, 10,12,13,14,14/296, 170,171(P),172,173, 174,175,176,177,178, 180,181,182, 183,184, 185,186,187,194(P), 196,197&198 Thana-Hunterganj	24°23'30.46"N 24°23'33.44"N 24°23'32.78"N 24°23'35.30"N 24°23'32.99"N 24°23'36.15"N 24°23'36.36"N 24°23'33.33"N 24°23'33.34"N 24°23'32.35"N 24°23'31.92"N 24°23'31.96"N 24°23'30.72"N 24°23'30.88"N 24°23'30.32"N	84°44'38.62"E 84°44'38.87"E 84°44'40.82"E 84°44'40.83"E 84°44'38.91"E 84°44'38.67"E 84°44'43.40"E 84°44'43.99"E 84°44'43.40"E 84°44'43.44"E 84°44'42.48"E 84°44'40.95"E 84°44'40.52"E 84°44'39.65"E 84°44'39.62"E
<b>CLUSTER IN MOUZA-DALKOMA</b>							
14	Stone	M/sAsuthoshStoneWorksPvt.Lt d. Director: ShriArunKumarSingh	Village-Nagar P.O.+P.S.- HunterganjDistrict- Chatra	4.05	Mouza DalkomaKhataNo -31,34 PlotNo.-221,223 Thana-Hunterganj	Between N24°21'45.8"to N24°21'53.8"	Between E84°42'33.0" toE84°42'44.3 "
15	Stone	M/sJaiShankarStoneWorksP roprietor: Shri Kameshwar SinghS/oShriNawrangS ingh	Village+P.O. -Baluri P.S.- HunterganjDist.- Chatra	0.71	Mouza DalkomaKhata No. - 31, 34PlotNo.- 191,193(P) Thana-Hunterganj	24°21'43.12"N 24°21'43.01"N 24°21'42.54"N 24°21'42.78"N 24°21'41.24"N 24°21'40.33"N 24°21'42.02"N	84°42'28.73"E 84°42'29.85"E 84°42'29.80"E 84°42'31.68"E 84°42'32.17"E 84°42'26.87"E 84°42'27.63"E



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## 20. DETAILS OF ECO-SENSITIVE AREA

Lawalong Wildlife Sanctuary lies between 23°56' to 24°13' North latitudes and 84°31' to 84°50' East longitudes in Chatra District of Jharkhand. The Sanctuary was notified under section 18 of Wildlife (Protection) Act, 1972 by Bihar Government vide its Notification no. S.O. 49/78/33-F, dated the 15<sup>th</sup> July, 1978. It extends over an area of 211.03 kilometers<sup>2</sup> of Reserved Forests.

Lawalong Wildlife Sanctuary is located in the Deccan Plateau Province of Chhotanagpur Plateau (SD) Bio-geographic Zone. The area is the habitat of leopards, wolves, cheetals, wild boars, slothbears, jackals, porcupines, hyaenas, hares, pangoline, etc. Movement of elephants from Palamu and Chatra are observed through this Sanctuary. The important bird species spotted frequently in the Sanctuary are serpent eagle, paradise fly-catcher, kingfisher, bee-eater, swift, different types of babbler, blackdrongo, woodpecker, lapwing, peafowl, pondheron, egret, etc. The forests of the Sanctuary also act as corridor connecting between forests of Palamu, Lawalong and Hazaribag for movement of elephant.

Lawalong Wildlife Sanctuary lies in the catchments of Amanat, Chako and Nilanjan River systems. Important perennial and seasonal nalas are Dudhmatia nala, Mangardaha nala, Sukni nala, Sonahi nala etc. The forests of this protected area intercept rainfall and help recharge groundwater aquifers and also protect rivers and streams against silting by minimizing soil erosion. The protected area is home to diverse types of forests, viz., 5B/C1 - Northern Tropical Dry Peninsular Sal Forest, 5B/C2 Northern Tropical Dry Mixed Deciduous Forest, 5/DS Dry Deciduous Scrub Forest, (5/E2) Boswellia Forest and Dry Bamboo brakes as per Champion and Seth's classification. The forests of this Sanctuary are an excellent habitat for significant populations of 11 species of mammals, more than 35 species of birds and 19 species of reptiles.

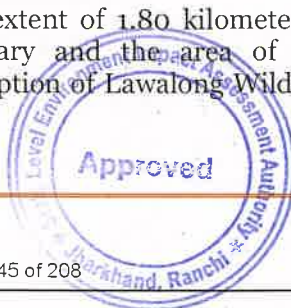
The most important threats to this protected area emanate from the increasing population, low educational levels, poverty and commercial activities detrimental to the conservation of wildlife and other natural resources. Unregulated activities, such as mining, quarrying, etc. not only have a direct adverse impact on the ecology but also cause degradation of neighbouring forests, and thus the wild life habitats. The presence of rocks like Quartzite, Feldspar, Granite, Schist, etc. adds to the pressure of mining.

It is necessary to conserve and protect the area, the extent and boundaries of Lawalong Wildlife Sanctuary which are specified in paragraph 1 as Eco-Sensitive Zone from ecological, environmental and biodiversity point of view and to prohibit industries or class of industries and their operations and processes in the said Eco-Sensitive Zone.

In exercise of the powers conferred by sub-section (1) and clauses (v) and (xiv) of sub-section (2) and sub-section (3) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) (hereafter in this notification referred to as the Environment Act) read with sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby notifies an area to an extent varying from 1.80 kilometers to 5 kilometers around the boundary of Lawalong Wildlife Sanctuary, in Chatra district in the State of Jharkhand as the Eco-sensitive Zone (hereafter in this notification referred to as the Eco-sensitive Zone) details of which are as under, namely:-

### 1. **Extent and boundaries of Eco-Sensitive Zone. –**

(1) The Eco-Sensitive Zone shall be to an extent of 1.80 kilometers to 5 kilometers around the boundary of Lawalong Wildlife Sanctuary and the area of the Eco-Sensitive Zone is 570.19 (kilometres)<sup>2</sup>. (2) The boundary description of Lawalong Wildlife Sanctuary and its Eco-Sensitive Zone is appended in Annexure.



  
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- (3) The maps of the Lawalong Wildlife Sanctuary demarcating Eco-Sensitive Zone along with boundary details and latitudes and longitudes are appended as Annexures.
- (4) Lists of geo-coordinates of the boundary of Lawalong Wildlife Sanctuary and Eco-Sensitive Zone are given in Table A and Table B.
- (5) The list of villages falling in the Eco-Sensitive Zone along with their geo co-ordinates at prominent points is appended as Table A and Table B.

## 2. Zonal Master Plan for Eco-Sensitive Zone:

- (1) The State Government shall, for the purposes of the Eco-Sensitive Zone prepare a Zonal Master Plan within a period of two years from the date of publication of this notification in the Official Gazette, in consultation with local people and adhering to the stipulations given in this notification for approval of the competent authority of State.
- (2) The Zonal Master Plan for the Eco-Sensitive Zone shall be prepared by the State Government in such manner as is specified in this notification and also in consonance with the relevant Central and State laws and the guidelines issued by the Central Government, if any.
- (3) The Zonal Master Plan shall be prepared in consultation with the following Departments of the State Government, for integrating the ecological and environmental considerations into the said plan: -
- (i) Environment;
  - (ii) Forest and Wildlife;
  - (iii) Agriculture;
  - (iv) Revenue;
  - (v) Urban Development;
  - (vi) Tourism;
  - (vii) Rural Development;
  - (viii) Irrigation and Flood Control;
  - (ix) Municipal;
  - (x) Jharkhand State Pollution Control Board;
  - (xi) Panchayati Raj; and
  - (xii) Public Works Department.
- (4) The Zonal Master Plan shall not impose any restriction on the approved existing land use, infrastructure and activities, unless so specified in this notification and the Zonal Master Plan shall factor in improvement of all infrastructure and activities to be more efficient and eco-friendly.
- (5) The Zonal Master Plan shall provide for restoration of denuded areas, conservation of existing waterbodies, management of catchment areas, water shed management, ground water management, soil and moisture conservation, needs of local community and such other aspects of the ecology and environment that need attention.
- (6) The Zonal Master Plan shall demarcate all the existing worshipping places, villages and urban settlements, types and kinds of forests, agricultural areas, fertile lands, green area, such as, parks and like places, horticultural areas, orchards, lakes and other waterbodies with supporting maps giving details of existing and proposed land use features.
- (7) The Zonal Master Plan shall regulate development in Eco-Sensitive Zone and adhere to prohibited and regulated activities listed in the Table and also ensure and promote eco-friendly development for security of local communities' livelihood.
- (8) The Zonal Master Plan shall be co-terminus with the Regional Development Plan.



  
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(g) The Zonal Master Plan so approved shall be the reference document for the Monitoring Committee for carrying out its functions of monitoring in accordance with the provisions of this notification.

**3. Measures to be taken by the State Government:**

The State Government shall take the following measures for giving effect to the provisions of this notification, namely:-

**(1) Land use:**

(a) Forests, horticulture areas, agricultural areas, parks and open spaces are marked for recreational purposes in the Eco-Sensitive Zone shall not be used or converted into areas for commercial or residential or industrial activities:

Provided that the conversion of agricultural and other lands, for the purpose other than that specified at part(a) above, within the Eco-Sensitive Zone may be permitted on the recommendation of the Monitoring Committee, and with the prior approval of the competent authority under Regional Town Planning Act and other rules and regulations of Central Government or State Government as applicable and *vide* provisions of this Notification, to meet the residential needs of the local residents and for activities such as:-

- (i) Widening and strengthening of existing roads and construction of new roads.
- (ii) Construction and renovation of infrastructure and civic amenities;
- (iii) Small scale industries not causing pollution;
- (iv) Cottage industries including village industries; convenience stores and local amenities supporting eco-tourism including homestay; and
- (v) Promoted activities given under paragraph 4:

Provided further that no use of tribal land shall be permitted for commercial and industrial development activities without the prior approval of the competent authority under Regional Town Planning Act and other rules and regulations of the State Government and without compliance of the provisions of article 244 of the Constitution or the law for the time being in force, including the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007):

Provided also that any error appearing in the land records within the Eco-Sensitive Zone shall be corrected by the State Government, after obtaining the views of Monitoring Committee, once in each case and the correction of said error shall be intimated to the Central Government in the Ministry of Environment, Forest and Climate Change: Provided also that the correction of error shall not include change of land use in any case except as provided under this subparagraph. (b) Efforts shall be made to reforest the unused or unproductive agricultural areas with afforestation and habitat restoration activities.

**(2) Natural water bodies:**

The catchment areas of all natural springs shall be identified and plans for their conservation and rejuvenation shall be incorporated in the Zonal Master Plan and the guideline shall be drawn up by the State Government in such a manner as to prohibit development activities at or near these areas which are detrimental to such areas.

**(3) Tourism or Eco-tourism:**

- (a) All new eco-tourism activities or expansion of existing tourism activities within the Eco-Sensitive Zone shall be as per the Tourism Master Plan for the Eco-Sensitive Zone.
- (b) The Eco-Tourism Master Plan shall be prepared by the State Department of Tourism in consultation with State Departments of Environment and Forests.
- (c) The Tourism Master Plan shall form a component of the Zonal Master Plan.
- (d) The Tourism Master Plan shall be drawn based on the study of carrying capacity of the Eco-Sensitive Zone.



  
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(e) The activities of eco-tourism shall be regulated as under, namely: -

(i) New construction of hotels and resorts shall not be allowed within one kilometre from the boundary of the protected area or upto the extent of the Eco-sensitive Zone whichever is nearer: Provided that beyond the distance of one kilometre from the boundary of the protected area till the extent of the Eco-sensitive Zone, the establishment of new hotels and resorts shall be allowed only in pre-defined and designated areas for eco-tourism facilities as per Tourism Master Plan;

(ii) all new tourism activities or expansion of existing tourism activities within the Eco-sensitive Zones shall be in accordance with the guidelines issued by the Central Government in the Ministry of Environment, Forest and Climate Change and the eco-tourism guidelines issued by National Tiger Conservation Authority (as amended from time to time) with emphasis on eco-tourism, eco-education and eco-development; (iii) until the Zonal Master Plan is approved, development for tourism and expansion of existing tourism activities shall be permitted by the concerned regulatory authorities based on the actual site specific scrutiny and recommendation of the Monitoring Committee and no new hotel or resort or commercial establishment construction shall be permitted within Eco-sensitive Zone area.

**(4) Natural heritage:**

All sites of valuable natural heritage in the Eco-Sensitive Zone, such as the genepool reserve areas, rock formations, waterfalls, springs, gorges, groves, caves, points, walks, rides, cliffs, etc. shall be identified and a heritage conservation plan shall be drawn up for their preservation and conservation as part of the Zonal Master Plan.

**(5) Man-made heritage sites:**

Buildings, structures, artefacts, areas and precincts of historical, architectural, aesthetic, and cultural significance shall be identified in the Eco-Sensitive Zone and heritage conservation plan for their conservation shall be prepared as part of the Zonal Master Plan.

**(6) Noise pollution: –**

Prevention and control of noise pollution in the Eco-Sensitive Zone shall be complied in accordance with the provisions of the noise Pollution (Regulation and Control) Rules, 2000 under the Environment Act.

**(7) Air pollution:**

Prevention and control of air pollution in the Eco-Sensitive Zone shall be compiled in accordance with the provisions of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) and the rules made there under.

**(8) Discharge of effluents:**

Discharge of treated effluent in Eco-Sensitive Zone shall be in accordance with the provisions of the General Standards for Discharge of Environmental Pollutants covered under the Environment Act and the rules made there under or standards stipulated by State Government whichever is more stringent.

**(9) Solid wastes:**

Disposal and Management of solid wastes shall be as under: -

(a) the solid waste disposal and management in the Eco-Sensitive Zone shall be carried out in accordance with the Solid Waste Management Rules, 2016, published by the Government of India in the Ministry of Environment, Forest and Climate Change *vide* notification number S.O. 1357(E), dated the 8<sup>th</sup> April, 2016; the inorganic material may be disposed in an environmental acceptable manner at site identified outside the Eco-Sensitive Zone;

(b) safe and Environmentally Sound Management (ESM) of Solid wastes in conformity with the existing rules and regulations using identified technologies may be allowed within Eco-Sensitive Zone.

**(10) Bio-Medical Waste:**

Bio Medical Waste Management shall be as under: -



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(a) the Bio-Medical Waste disposal in the Eco-Sensitive Zone shall be carried out in accordance with the Bio-Medical Waste Management, Rules, 2016 published by the Government of India in the Ministry of Environment, Forest and Climate Change *vide* notification number G.S.R.343(E), dated the 28<sup>th</sup> March, 2016;

(b) safe and Environmentally Sound Management of Bio-Medical Wastes in conformity with the existing rules and regulations using identified technologies may be allowed within the Eco-Sensitive Zone.

**(11) Plastic waste management:**

The plastic waste management in the Eco-Sensitive Zone shall be carried out as per the provisions of the Plastic Waste Management Rules, 2016, published by the Government of India in the Ministry of Environment, Forest and Climate Change *vide* notification number G.S.R.340(E), dated the 18<sup>th</sup> March, 2016, as amended from time to time.

**(12) Construction and demolition waste management:**

The construction and demolition waste management in the Eco-Sensitive Zone shall be carried out as per the provisions of the Construction and Demolition Waste Management Rules, 2016 published by the Government of India in the Ministry of Environment, Forest and Climate Change *vide* notification number G.S.R. 317(E), dated the 29<sup>th</sup> March, 2016, as amended from time to time.

**(13) E-waste:**

The e - waste management in the Eco-Sensitive Zone shall be carried out as per the provisions of the E-Waste Management Rules, 2016, published by the Government of India in the Ministry of Environment, Forest and Climate Change, as amended from time to time.

**(14) Vehicular traffic:**

The vehicular movement of traffic shall be regulated in a habitat friendly manner and specific provisions in this regard shall be incorporated in the Zonal Master Plan and till such time as the Zonal Masterplan is prepared and approved by the Competent Authority in the State Government, the Monitoring Committee shall monitor compliance of vehicular movement under the relevant Acts and the rules and regulations made there under.

**(15) Vehicular pollution:**

Prevention and control of vehicular pollution shall be in compliance with applicable laws and efforts shall be made for use of cleaner fuels.

**(16) Industrial units:**

(i) On or after the publication of this notification in the Official Gazette, no new polluting industries shall be permitted to be set up within the Eco-Sensitive Zone. (ii) Only non-polluting industries shall be allowed within Eco-Sensitive Zone as per the classification of Industries in the guide lines issued by the Central Pollution Control Board in February, 2016, unless specified in this notification, and in addition, the non-polluting cottage industries shall be promoted.

**(17) Protection of hillslopes:**

The protection of hillslopes shall be as under: -

(a) The Zonal Master Plan shall indicate areas on hill slopes where no construction shall be permitted; (b) construction shall not be permitted on existing steep hill slopes or slopes with a high degree of erosion.

**4. List of activities prohibited or to be regulated within Eco-Sensitive Zone:**

All activities in the Ecosensitive Zone shall be governed by the provisions of the Environment Act and the rules made thereunder including the Coastal Regulation Zone, 2011 and the Environmental Impact Assessment Notification, 2006 and other applicable laws including the Forest (Conservation) Act, 1980 (69 of 1980), the Indian Forest Act, 1927 (16 of 1927), the Wildlife



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(Protection) Act, 1972 (53 of 1972), and amendments made there to and be regulated in the manner specified in the Table below, namely: -

S.No. (1)	Activity (2)	Description (3)
<b>A. Prohibited Activities</b>		
1.	Commercial mining, quarrying and crushing units. Stone	(a) All new and existing mining (minor and major minerals), stone quarrying and crushing units are prohibited with immediate effect except for meeting the domestic needs of bona fide local residents including digging of earth for construction or repair of houses and for manufacture of country tiles or bricks for housing and for personal consumption;  (b) The mining operations shall be carried out in accordance with the order of the Hon'ble Supreme Court dated the 4 <sup>th</sup> August, 2006 in the matter of T.N. Godavarman Thirumulpad Vs. UOI in W.P.(C) No.202 of 1995 and dated the 21 <sup>st</sup> April, 2014 in the matter of Goa Foundation Vs. UOI in W.P.(C) No.435 of 2012.
2.	Setting of industries causing pollution (Water, Air, Soil, Noise, etc.).	New industries and expansion of existing polluting industries in the Eco-Sensitive Zone shall not be permitted:  Provided that non-polluting industries shall be allowed within Eco-Sensitive Zone as per classification of Industries in the guidelines issued by the Central Pollution Control Board in February, 2016, unless so specified in this notification and in addition the non-polluting cottage Industries shall be promoted.
3.	Establishment of major hydro-electric project.	Prohibited (except as otherwise provided) as per the applicable laws.
4.	Use or production or processing of any hazardous substances.	Prohibited (except as otherwise provided) per the applicable laws.
5.	Discharge of untreated effluents in natural water bodies or land area.	Prohibited (except as otherwise provided) per the applicable laws.
6.	Setting up of new saw mills.	New or expansion of existing saw mills shall not be permitted within the Eco-sensitive Zone.
7.	Setting up of brick kilns.	Prohibited (except as otherwise provided) per the applicable laws.
<b>B. Regulated Activities</b>		
8.	Commercial establishment of hotels and resorts.	No new commercial hotels and resorts shall be permitted within one kilometer of the



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		Boundary of the protected area or up to the extent of Eco-Sensitive Zone, which ever is nearer, except for small temporary structures for eco-tourism activities: Provided that, beyond one kilometer from the boundary of the protected area or up to the extent of Eco-sensitive Zone which ever is nearer, all new tourist activities or expansion of existing activities shall be in conformity with the Tourism Master Plan and guidelines As applicable.
9.	Construction activities.	(a) New commercial construction of any kind shall not be permitted within one kilometer from the boundary of the protected area or up to extent of the Eco-Sensitive Zone, which ever is nearer: Provided that, local people shall be permitted to under take construction in their land for their use including the activities mentioned in sub-paragraph (1) of paragraph 3 as per building bye-laws to meet the residential needs of the local residents. Provided further that the construction activity related to small scale industries not causing pollution shall be regulated and kept at the minimum, with the prior permission from the competent authority as per applicable rules and regulations, if any. (b) Beyond one kilometer it shall be regulated as per the Zonal Master Plan.
10.	Small scale non-polluting industries.	Non-polluting industries as per classification of industries issued by the Central Pollution Control Board in February, 2016 and non-hazardous, small-scale and service industry, agriculture, floriculture, horticulture or agro-based industry producing products from indigenous materials from the Eco-Sensitive Zone shall be permitted by the Competent Authority.
11.	Felling of trees.	(a) There shall be no felling of trees in the forest or Government or revenue or private lands with out prior permission of the Competent Authority in the State Government. (b) The felling of trees shall be regulated in accordance with the provisions of the concerned Central or State Act and the rules made there under.
12.	Collection of Forest produce or Non-Timber Forest produce.	Regulated as per the applicable laws.




  
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13.	Erection of electrical and communication towers and laying of Cables and other infrastructures.	Regulated under applicable laws (under ground cabling may be promoted).
14.	Infrastructure including civic amenities.	Taking measures of mitigation as per and applicable laws, rules and regulations available guidelines.
15.	Widening and strengthening of Existing road sand construction of new roads.	Taking measures of mitigation as per and Applicable laws, rules and regulation and available guidelines.
16.	Undertaking other activities related to tourism like flying over the Eco-sensitive Zone area by hotair balloon, helicopter, drones, Microlites, etc.	Regulated as per the applicable laws.
17.	Protection of hillslopes and riverbanks.	Regulated as per the applicable laws.
18.	Movement of vehicular traffic at night.	Regulated as per the applicable laws.
19.	On going agriculture and horticulture practices by local communities along with dairies, dairyfarming, aquaculture and fisheries.	Permitted as per the applicable laws for use of locals.
20.	Establishment of large-scale commercial live stock and poultry farms by firms, corporate and companies.	Regulated (except as otherwise provided) as per applicable laws except for meeting local needs.
21.	Discharge of treated waste water or effluents in natural water bodies or land area.	The discharge of treated wastewater or effluents shall be avoided to enter into the water bodies and efforts shall be made for recycle and reuse of treated waste water. Otherwise the discharge of treated waste Water or effluent shall be regulated as per the applicable laws.
22.	Commercial extraction of surface and groundwater.	Regulated as per the applicable laws.
23.	Open Well, Bore Well etc. for agriculture or other usage.	Regulated and the activity should be strictly monitored by the appropriate authority.
24.	Solid waste management.	Regulated as per the applicable laws.
25.	Introduction of exotic species.	Regulated as per the applicable laws.
26.	Eco-tourism.	Regulated as per the applicable laws.
27.	Use of polythene bags.	Regulated as per the applicable laws.
28.	Commercial sign boards and hoardings.	Regulated as per the applicable laws.
<b>C. Promoted Activities</b>		
29.	Rain water harvesting.	Shall be actively promoted.
30.	Organic farming.	Shall be actively promoted.
31.	Adoption of green technology for all activities.	Shall be actively promoted.
32.	Cottage industries including village artisans, etc.	Shall be actively promoted.
33.	Use of renewable energy and fuels.	Bio-gas, solarlight etc. shall be actively promoted.



  
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34.	Agro-Forestry.	Shall be actively promoted.
35.	Plantation of Horticulture and Herbals.	Shall be actively promoted.
36.	Use of eco-friendly transport.	Shall be actively promoted.
37.	Skill Development.	Shall be actively promoted.
38.	Restoration of degraded land /forests /habitat.	Shall be actively promoted.
39.	Environmental awareness.	Shall be actively promoted.

**5. Monitoring Committee for Monitoring the Eco-Sensitive Zone Notification:**

For effective monitoring of the provisions of this notification under sub-section (3) of section 3 of the Environment (Protection) Act, 1986, the Central Government hereby constitutes a Monitoring Committee, comprising of the following, namely:

Sl.No.	Constituent of the Monitoring Committee	Designation
1	The Commissioner, North Chhotanagpur Division, Hazaribag	Chairman, ex officio;
2	Representative of State Pollution Control Board	Member;
3	A representative of non-governmental organization working in the field of wildlife conservation to be nominated by the State Government	Member;
4	A representative nominated by the Forest and Environment Department of Jharkhand	Member;
5	An expert in Biodiversity nominated by the State Government	Member;
6	An expert in Ecology and environment to be nominated by The State Government	Member;
7	Representative of State Pollution Control Board	Member;
8	Concerned territorial Divisional Forest Officer	Member;
9	The Divisional Forest Officer, Incharge of Lawalong Wildlife Sanctuary	Member-Secretary.

**6. Terms of reference:**

- (1) The Monitoring Committee shall monitor the compliance of the provisions of this notification.
- (2) The tenure of the Monitoring committee shall be for three years or till the re-constitution of the new Committee by the State Government and subsequently the Monitoring Committee shall be constituted by the State Government.
- (3) The activities that are covered in the Schedule to the notification of the Government of India in the erstwhile Ministry of Environment and Forests number S.O. 1533 (E), dated the 14<sup>th</sup> September, 2006, and are falling in the Eco-Sensitive Zone, except for the prohibited activities as specified in the Table under paragraph 4 there of, shall be scrutinized by the Monitoring Committee based on the actual site-specific conditions and referred to the Central Government in the Ministry of Environment, Forest and Climate Change for prior environmental clearances under the provisions of the said notification.
- (4) The activities that are not covered in the Schedule to the notification of the Government of India in the erstwhile Ministry of Environment and Forests number S.O. 1533 (E), dated the 14<sup>th</sup> September, 2006 and are falling in the Eco-Sensitive Zone, except for the prohibited activities as specified in the Table under paragraph 4 there of, shall be scrutinized by the Monitoring Committee based on the actual site-specific conditions and referred to the concerned regulatory authorities.



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(5) The Member-Secretary of the Monitoring Committee or the concerned Deputy Commissioner(s) shall be competent to file complaints under section 19 of the Environment Act, against any person who contravenes the provisions of this notification.

(6) The Monitoring Committee may invite representatives or experts from concerned Departments, representatives from industry associations or concerned stakeholders to assist in its deliberations depending on the requirements on issue to issue basis.

(7) The Monitoring Committee shall submit the annual action taken report of its activities as on the 31st March of every year by the 30th June of that year to the Chief Wildlife Warden in the State as per proforma appended at **Annexure V**.

(8) The Central Government in the Ministry of Environment, Forest and Climate Change may give such directions, as it deems fit, to the Monitoring Committee for effective discharge of its functions.

7. The Central Government and State Government may specify additional measures, if any, for giving effect to provisions of this notification.

8. The provisions of this notification shall be subject to the orders, if any passed or to be passed by the Hon'ble Supreme Court of India or the High Court or the National Green Tribunal.

#### **BOUNDARY DESCRIPTION OF ECOSENSITIVE ZONE OF LAWALONG WILDLIFE SANCTUARY IN THE STATE JHARKHAND**

Boundary is marked in clockwise direction begin from the North Side, followed by East, South and West and in each side of the direction is also taken in clockwise direction. Revenue village name is in Italic.

**North:** -North and Northern-West part of *Potamdohar*, Northern-West part of *Meghrania* and *Khapia*, Northern part of *Madarpur*, *Kasilaung*, *Besra*, *Amauna*, *Barwa (Barma)* *Kamal*, *Danru*, *Bandiadih* and *Korhans* And Northern-East part of *Lutu* Revenue Villages.

**East:** -Eastern part of *Nawadih*, *Kadle*, *Bandaru*, *Rejhdih (Akona)*, *Barwadih*, *Angara (Kandra)*, *Chandanpur*, *Shivrajpur*, *Banchatra*, *Chandadih*, *Ichaharand* *Gothai* and Southern and Eastern part of *Haphua* and *Tundag* Revenue Villages.

**South:** - Southern part of *Kurumdari*, *Balubhang*, *Sirisamadhand* *Chatuhaus*, South and Southern-East part of *Khairatanrand* Southern part of *Katang*, *Herhanjand* *Ichak* Revenue Villages.

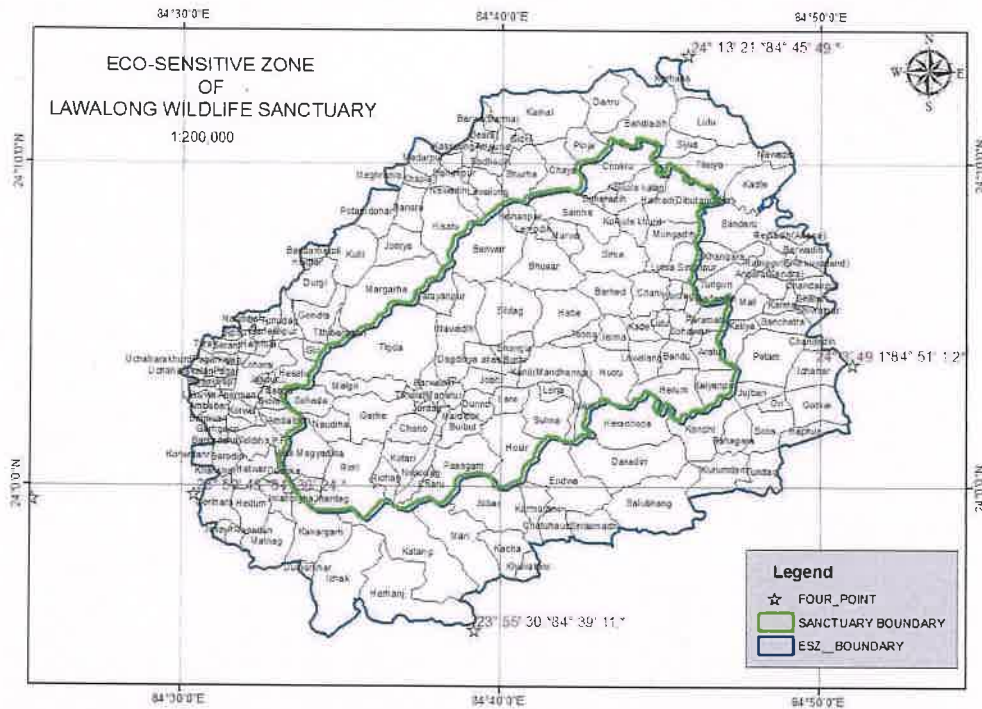
**West:** - Western part of *Dumarkhar*, Southern-West part of *Mutnag*, Western part of *Ranadah* then after it crosses the Panki river and enter into Western part of *Jaspur*, *Gorihara*, *Khankhar*, *Barodiri*, *Korwatanr*, *Barkadaha*, *Garhgaon*, *Ambabar*, *Lukuwa*, *Biharikhap*, and *Pagarkalan*, Western and Northern-West part of *Pagar*, *tilra*, *Seram*, *Bidra*, *Nawdiha*, *Tunudag*, *Durgi*, *Hindidi* and *Bandarhatoli* Revenue Villages.



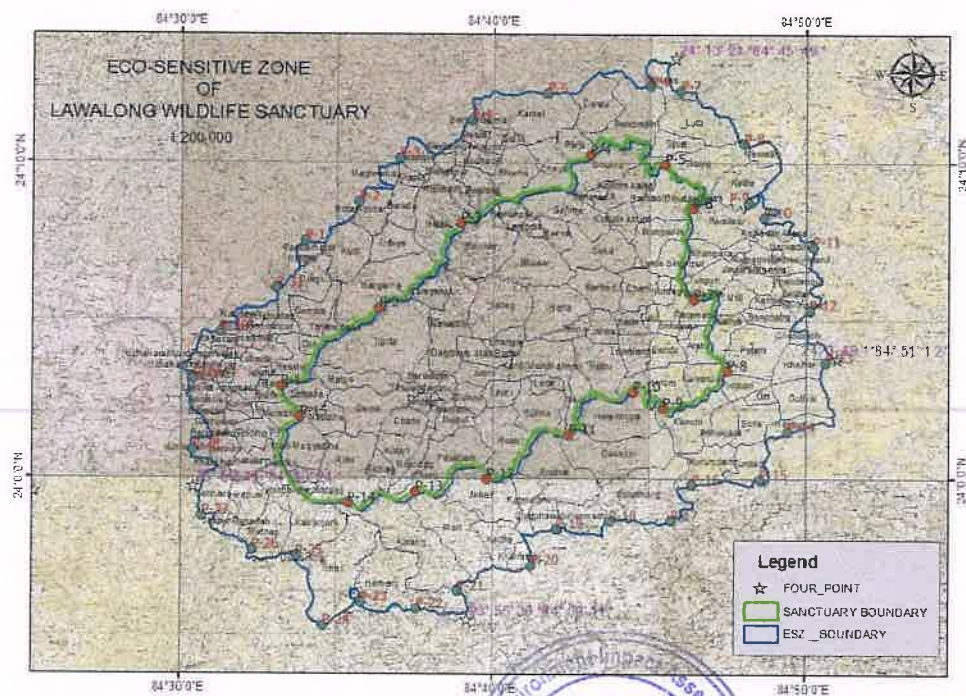
  
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**MAP OF LAWALONG WILDLIFE SANCTUARY AND ITS ECO-SENSITIVE ZONE ALONG WITH LATITUDE AND LONGITUDE OF PROMINENT LOCATIONS**



**MAP OF ECO-SENSITIVE ZONE OF LAWALONG WILDLIFE SANCTUARY ALONG WITH LATITUDE AND LONGITUDE OF PROMINENT LOCATIONS ON SURVEY OF INDIA(SOI) TOPOSHEET**



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**TABLE A: GEO-COORDINATES OF PROMINENT LOCATIONS OF LAWALONG WILDLIFE SANCTUARY:**

Points	Latitude(E)	Longitude(N)
P-1	84°33'12"	24°2'53"
P-2	84°36'20"	24°5'22"
P-3	84°38'57"	24°8'5"
P-4	84°43'5"	24°10'15"
P-5	84°45'29"	24°9'58"
P-6	84°46'21"	24°8'33"
P-7	84°46'24"	24°5'40"
P-8	84°47'29"	24°3'24"
P-9	84°45'26"	24°2'13"
P-10	84°44'28"	24°2'44"
P-11	84°42'25"	24°1'22"
P-12	84°39'48"	23°59'58"
P-13	84°37'31"	23°59'33"
P-14	84°35'21"	23°59'11"
P-15	84°33'49"	23°1'55"

**TABLE B: GEO-COORDINATES OF PROMINENT LOCATIONS OF ECO-SENSITIVE ZONE:**

Points	Latitude(E)	Longitude(N)
P-1	84°33'58"	24°07'30"
P-2	84°35'41"	24°8'45"
P-3	84°36'58"	24°10'09"
P-4	84°39'17"	24°11'23"
P-5	84°41'42"	24°12'13"
P-6	84°44'59"	24°12'27"
P-7	84°45'58"	24°12'18"
P-8	84°47'60"	24°10'37"
P-9	84°48'10"	24°08'44"
P-10	84°48'38"	24°08'16"
P-11	84°50'13"	24°07'20"
P-12	84°50'07"	23°05'19"
P-13	84°50'38"	23°03'40"
P-14	84°39'26"	23°01'27"
P-15	84°48'32"	23°59'57"
P-16	84°46'22"	23°59'47"
P-17	84°45'41"	23°58'38"
P-18	84°43'43"	23°58'37"
P-19	84°42'01"	23°58'22"
P-20	84°41'14"	23°57'13"
P-21	84°38'52"	23°56'23"
P-22	84°37'33"	23°55'49"
P-23	84°35'46"	23°56'02"
P-24	84°34'34"	23°55'17"
P-25	84°33'41"	23°57'30"
P-26	84°32'16"	23°57'42"
P-27	84°30'40"	23°58'45"



*(Signature)*

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P-28	84°30'22"	23°00'52"
P-29	84°30'23"	23°03'07"
P-30	84°31'15"	23°04'36"
P-31	84°33'02"	23°05'60"

**A. LIST OF VILLAGES COMING UNDER ECO-SENSITIVE ZONE OF LAVALONG WILDLIFE SANCTUARY ALONG WITH GEO-COORDINATES**

Sl. No	Name of Village	Admm. Block	House Hold	GPSCo-Ordinates	Town/Village code as per Census of India, 2011
1	Nawadih	Chatra	245	24.1716N,84.8107E	348566
2	Lutua	Chatra	0	24.1884N,84.7748E	348675
3	Sijua	Chatra	22	24.1767N,84.7622E	348721
4	Tilaia	Chatra	89	24.1662N,84.7775E	348722
5	Kadle	Chatra	73	24.1561N,84.7998E	348723
6	Korhans	Kunda	121	24.1978N,84.7213E	348535
7	Danru	Kunda	94	24.1978N,84.7213E	348533
8	Barwaalias Barma	Kunda	83	24.1893N,84.6597E	348522
9	Bandiadih	Kunda	146	24.1929N,84.7401E	348534
10	Kamal	Kunda	74	24.1927N,84.6859E	348517
11	Amauna	Kunda	97	24.1781N,84.6676E	348519
12	Kasilaung	Kunda	67	24.1723N,84.6478E	348524
13	Bodhadih	Kunda	195	24.1677N,84.6606 E	348520
14	Bishunpur	Kunda	7	24.1673N,84.6403 E	348525
15	Khapia	Kunda	56	24.1588N,84.6222E	348498
16	Besra	Kunda	142	24.1807N,84.6563E	348521
17	Pinja	Kunda	62	24.1759N,84.7101E	348532
18	Sidki	Kunda	5	24.1789N,84.6763E	348518
19	Chaya	Kunda	83	24.1631N,84.6963 E	348531
20	Madarpur	Kunda	93	24.1691N,84.6259E	348497
21	Bhurha	Kunda	95	24.1615N,84.6773E	348530
22	Nawadih	Kunda	88	24.1519N,84.6445E	348511
23	Meghrania	Kunda	14	24.1600N,84.6109 E	348499
24	Bajrahi	Kunda	15	24.1613N,84.6469 E	348526
25	Lawalong	Kunda	67	24.1516N,84.6592E	348529
26	Bariatu	Kunda	69	24.1431N,84.6182E	348500
27	Hisatu	Kunda	43	24.1355N,84.6364 E	348527
28	Potamdohar	Kunda	60	24.1411N,84.6023E	348502
29	Jobeya	Kunda	53	24.1233N,84.6131 E	348501
30	Kutil	Kunda	111	24.1195N,84.5887E	348504
31	Margarha	Kunda	147	24.1002N,84.6070E	348508
32	Durgi	Kunda	34	24.1039N,84.5692E	348505
33	Gendra	Kunda	124	24.0874N,84.5713E	348506
34	Tithibhargaon	Kunda	113	24.0788N,84.5815E	348507
35	Bandaru	Lawalong	112	24.1356N,84.7911E	348613
36	Rejadih alias Akona	Lawalong	5	24.1311N,84.8194E	348614
37	Khangara	Lawalong	37	24.1189N,84.7825E	348612
38	Ratnag alias Bhurkuatanr	Lawalong	147	24.1145N,84.8142E	348617



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39	Tungun	Lawalong	107	24.1059N,84.7830E	348618
40	AngaraaliasKandra	Lawalong	44	24.1051N,84.8058E	348619
41	Karma	Lawalong	167	24.0954N,84.8134E	348623
42	Banchatra	Lawalong	29	24.0856N,84.8148E	348622
43	Chandanpur	Lawalong	1	24.1042N,84.8295 E	348625
44	Mali	Lawalong	45	24.0953 N,84.7951 E	348620
45	Shivrajpur	Lawalong	202	24.0919N,84.8319E	348626
46	Chatar	Lawalong	8	24.0961N,84.8268E	348624
47	Chandadih	Lawalong	0	24.0749N,84.8294E	348633
48	IchaAhar	Lawalong	41	24.0616N,84.8302E	348635
49	Katia	Lawalong	216	24.0774N,84.7897E	348621
50	Potam	Lawalong	211	24.0678N,84.8064E	348634
51	Ori	Lawalong	29	24.0434N,84.8097 E	348640
52	Jojbari	Lawalong	76	24.0492N,84.7994 E	348636
53	Konchi	Lawalong	215	24.0297N,84.7725 E	348638
54	Sons	Lawalong	67	24.0306N,84.8056 E	348639
55	Bahagara	Lawalong	52	24.0280N,84.7889E	348637
56	Sarhachia	Lawalong	30	24.1180N,84.8170E	348616
57	Barwadih	Lawalong	77	24.1223N,84.8240 E	348615
58	Gothai	Simaria	178	24.0427N,84.8312E	349308
59	Haphua	Simaria	168	24.0287N,84.8280E	349309
60	Tundag	Simaria	234	24.0077N,84.8035E	349307
61	Kurumdari	Simaria	103	24.0070N,84.7813E	349301
62	Endwa	Bariatu	100	24.0030N,84.7014E	367427
63	Harauhopa	Bariatu	210	24.0323N,84.7345E	367428
64	Dakadiri	Bariatu	84	24.0130N,84.7335E	367429
65	BaluBhang	Bariatu	392	24.9916N,84.7484E	367430
66	Jaubar	Bariatu	73	24.9907N,84.6622E	367424
67	Karmatanr	Bariatu	14	24.9882N,84.6846 E	367425
68	Sirismadh	Bariatu	71	24.9794N,84.7146 E	367426
69	Mari	Herhanj	110	24.9720N,84.6460 E	367493
70	Katang	Herhanj	110	24.9653N,84.6237E	367480
71	Chatuhaus	Herhanj	9	24.9795N,84.6951E	367494
72	Ichak	Herhanj	103	24.9512N,84.5848E	367481
73	Kacha	Herhanj	53	24.9672N,84.6700E	367492
74	Khairatanr	Herhanj	47	24.9580N,84.6814E	367489
75	Herhanj	Herhanj	320	24.9434N,84.6179E	367482
76	Tunudag	Panki	94	24.0847N,84.5549 E	366412
77	Ganeshpur	Panki	120	24.0831N,84.5453E	366410
78	Naudiha	Panki	355	24.0855N,84.5339E	366406
79	Baherwatanr	Panki	58	24.0845N,84.5363 E	366407
80	Birtia	Panki	5	24.0810N,84.5369 E	366409
81	Bidra	Panki	127	24.0782N,84.5265 E	366382
82	Pardohar	Panki	21	24.0782N,84.5364 E	366405
83	Sirma	Panki	137	24.0717N,84.5227E	366402
84	Pipratntr	Panki	48	24.0708N,84.5422E	366411
85	Baniadih	Panki	24	24.0825N,84.5411E	366408
86	Harkhuwa	Panki	150	24.0727N,84.5340E	366404
87	Tilra	Panki	0	24.0726N,84.5134E	366401
88	Hesatu	Panki	141	24.0612N,84.5602E	366414



*(Signature)*

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89	Giri	Panki	36	24.0697N,84.5694E	366413
90	Loharsi	Panki	649	24.0581N,84.5396E	366419
91	PagarKalan	Panki	0	24.0632N,84.5152E	366397
92	Gudipahari	Panki	26	24.0661N,84.5312E	366403
93	Udih	Panki	108	24.0647N,84.5267E	366399
94	UchahraKhurd	Panki	87	24.0615N,84.5088E	366396
95	Tilamba	Panki	10	24.0550N,84.5417E	366418
96	Pachamba	Panki	65	24.0664N,84.5210 E	366400
97	UchahraKalan	Panki	26	24.0574N,84.5055 E	366395
98	JaspurAliasCheribar	Panki	22	24.0544N,84.5461E	366371
99	BihariKhap	Panki	66	24.0536N,84.5155E	366394
100	Sarjamatu	Panki	169	24.0521N,84.5236E	366393
101	Titlangi	Panki	300	24.0482N,84.5510 E	366415
102	Gareriadih	Panki	0	24.0507N,84.5184E	366392
103	Bidra	Panki	105	24.0437N,84.5463 E	366416
104	Lukuwa	Panki	159	24.0423N,84.5090E	366390
105	Aparmanri	Panki	193	24.0432N,84.5359E	366420
106	Kelwa	Panki	280	24.0380N,84.5314E	366423
107	Garhganw	Panki	196	24.0281N,85.1880 E	366425
108	Karma	Panki	9	24.0494N,84.5075E	366389
109	Ambabar	Panki	286	24.0404N,84.5175 E	366391
110	Ambalori	Panki	24	24.0330N,84.5537E	366421
111	Teldiha	Panki	0	24.0342N, 84.5402E	366422
112	Balmuwan	Panki	207	24.0315N,84.5290E	366424
113	Barkadaha	Panki	22	24.0242N,84.5268E	366426
114	Barodiri	Panki	217	24.0143N,84.5231E	366427
115	Korwatanr	Panki	11	24.0152N,84.5111E	366340
116	Hatwar	Panki	268	24.0080N,84.5379E	366429
117	Duwarika	Panki	193	24.0020N,84.5526E	366376
118	Khankhar	Panki	10	24.0030N,84.5242E	366428
119	Gorihara	Panki	108	24.9905N,84.5191 E	366370
120	Ranadah	Panki	2	24.9732N,84.5281E	366372
121	JolahBigha	Panki	124	24.9930N,84.5503E	366375
122	Herum	Panki	134	24.9880N,84.5366 E	366373
123	Kakargarh	Panki	280	24.9755N,84.5701E	366377
124	Matnag	Panki	63	24.9703N,84.5467 E	366374
125	Jaspur	Panki	118	24.9763N,84.5211E	366417
126	DumarKhar	Panki	0	24.9561N,84.5661E	366378

**B. LIST OF ENCLAVE VILLAGES ALONG WITH GEO-COORDINATES**

Sl. No.	Name of Village	Admm.Block	House Hold	GPSCo-Ordinates	Town/Village code as per Census of India,2011
1	2	3	4	5	6
1	Chukru	Lawalong	217	24.1654N,84.7272E	348547
2	KolkoleKalan	Lawalong	293	24.1534N,84.7371E	348549
3	Harhad	Lawalong	70	24.1479N,84.7600 E	348550
4	Bishunpur	Lawalong	54	24.1392N,84.6764E	348554
5	Samhe	Lawalong	71	24.1411N,84.7059E	348553
6	KolkoleKhurd	Lawalong	23	24.1365N,84.7359E	348552



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DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



7	Banwar	Lawalong	161	24.1219N,84.6599E	348559
8	Mungadih	Lawalong	3	24.1270N,84.7538E	348551
9	Sirka	Lawalong	54	24.1201N,84.7229E	348557
10	Bhusar	Lawalong	124	24.1133N,84.6887E	348558
11	Narainpur	Lawalong	32	24.0988N,84.6347E	348567
12	Barhed	Lawalong	77	24.1008N,84.7226E	348607
13	Chani	Lawalong	100	24.1002N, 84.7433E	348608
14	Nawadih	Lawalong	245	24.0807N,84.6439E	348566
15	Sildag	Lawalong	286	24.0903N,84.6691E	348560
16	Hahey	Lawalong	112	24.0892N,84.6988E	348561
17	Paramatu	Lawalong	178	24.0863N,84.7755E	348601
18	Sohawan	Lawalong	47	24.0837N,84.7602E	348602
19	Tikda	Lawalong	178	24.0713N,84.6081E	348568
20	Jalma	Lawalong	66	24.0793N,84.7251E	348606
21	Ara-Atu	Lawalong	80	24.0701N,84.7762E	348599
22	Bandu	Lawalong	256	24.0671N,84.7582E	348600
23	Hutru	Lawalong	242	24.0588N,84.7237E	348596
24	DagderiaAliasBurhi	Lawalong	1	24.0657N,84.6594E	348565
25	KantiAliasMandhanian	Lawalong	335	24.0588N,84.6951E	348563
26	Barwadih	Lawalong	46	24.0530N,84.6308E	348569
27	Kalyanpur	Lawalong	120	24.0525N,84.7788E	348598
28	Herum	Lawalong	392	24.0485N,84.7558E	348597
29	Malgo	Lawalong	72	24.0517N,84.5931E	348575
30	TikuliaAliasManatu	Lawalong	118	24.0497N,84.6943E	348588
31	Lorja	Lawalong	20	24.0367N,84.6908E	348594
32	Sulma	Lawalong	110	24.0438N,84.5673E	348593
33	Saheda	Lawalong	160	24.0422N,84.6545E	348576
34	Dunho	Lawalong	36	24.0078N, 84.6425E	348591
35	Pasagam	Lawalong	106	24.0367N,84.5996E	348586
36	Garhey	Lawalong	103	24.0397N,84.6291E	348574
37	Jordag	Lawalong	18	24.0302N,84.6446 E	348571
38	Bulbul	Lawalong	28	24.0343N,84.6353 E	348587
39	Hardipur	Lawalong	7	24.0310N,84.5779 E	348572
40	Naudiha	Lawalong	11	24.0197N,84.6723E	348577
41	Hosir	Lawalong	173	24.0290N,84.6200E	348592
42	Chano	Lawalong	19	24.0671N,84.5650 E	348573
43	MatliMajhdihaAlias Majhdih	Lawalong	129	24.0159N,84.5659E	348578
44	Nasodag	Lawalong	3	24.0064N,84.6237E	348584
45	Kutari	Lawalong	46	24.0137N,84.6162E	348582
46	Remi	Lawalong	205	24.0029N,84.5893E	348581
47	Charu	Lawalong	1	24.0063N,84.6297 E	348585
48	BisrampurAlias Rampur	Lawalong	130	24.0009N,84.5662E	348579
49	Jhardag	Lawalong	64	24.9945N,84.5676E	348580
50	Baheradih	Lawalong	6	24.1496N,84.7199 E	348548
51	Lemodih	Lawalong	31	24.1324N,84.6876E	348555
52	Manarwa	Lawalong	101	24.1293N,84.7001E	348556
53	Lutu/Lutuwa	Lawalong	44	24.1158N,84.7615E	348603
54	Madandih	Lawalong	137	24.1097N,84.7659 E	348610
55	Hurdag	Lawalong	14	24.0987N,84.7576E	348609
56	Kadhe	Lawalong	43	24.0825N,84.7399E	348605
57	Teuna	Lawalong	45	24.0785N,84.7083E	348562
58	Bhangia	Lawalong	1	24.0717N,84.6737E	348564
59	Lawalong	Lawalong	413	24.0669N,84.7423 E	348604



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60	Jobhi	Lawalong	49	24.0549N,84.6598 E	348589
61	KateaMachaMahua	Lawalong	0	24.0470N, 84.6228E	348570
62	Sikni	Lawalong	135	24.0408N,84.7112E	348595
63	Larey	Lawalong	6	24.0449N,84.6709E	348590
64	Rechag	Lawalong	3	24.0037N,84.6069E	348583



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## 21. IMPACT ON THE ENVIRONMENT DUE TO MINING

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

AMBIENT AIR QUALITY	
IMPACT	MITIGATION MEASURES
<p>Typical impact on Air Quality due to mining activities are;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Dust Generation due to                             <ul style="list-style-type: none"> <li>✓ Site Preparation</li> <li>✓ Drilling</li> <li>✓ Blasting</li> <li>✓ Crushing</li> <li>✓ Transportation on haul road or unpaved road</li> </ul> </li> <li><input type="checkbox"/> Emission of Noxious Gases                             <ul style="list-style-type: none"> <li>✓ Operation of mining equipment</li> <li>✓ Blasting</li> <li>✓ Transportation</li> </ul> </li> </ul>	<p>To mitigate the impact some suggestive measures are;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Dust Generation                             <ul style="list-style-type: none"> <li>✓ Adopt a wet drilling system this will minimize dust generation during drilling process .</li> <li>✓ Practice controlled blasting to minimize generation of dust.</li> <li>✓ Regular water sprinkling on haul road.</li> <li>✓ Install wet dust suppression system in crushing and screening plant.</li> <li>✓ Regular water sprinkling on unpaved roads.</li> <li>✓ Dust generation from road also depends on speed of transport vehicles. There should be speed restriction of 20 KMPH on unpaved road</li> </ul> </li> <li><input type="checkbox"/> Emission of Noxious Gases                             <ul style="list-style-type: none"> <li>✓ Use of optimal quantity of explosive in blasting.</li> <li>✓ To ensure that transportation vehicles have "Pollution Under Control Certificate".</li> <li>✓ Regular repair and maintenance of mining equipment &amp; transportation vehicle.</li> <li>✓ Proper repair and maintenance of road.</li> </ul> </li> <li>❖ Raise Green Belt in safety zone.</li> <li>❖ Avenue plantation along a both sides of Link Road</li> </ul>



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WATER QUALITY	
IMPACT	MITIGATION MEASURES
<p>Typical impact on Water Quality due to mining activities are;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Run-off of sediments due to                             <ul style="list-style-type: none"> <li>✓ Site Preparation</li> <li>✓ Dumping of OB</li> <li>✓ Crushing</li> <li>✓ Drilling</li> </ul> </li> <li><input type="checkbox"/> Contamination of oil or chemical in water (surface &amp; ground water) due to                             <ul style="list-style-type: none"> <li>✓ Dumping of OB</li> <li>✓ Drilling</li> <li>✓ Blasting</li> <li>✓ Spills due to transportation</li> </ul> </li> </ul>	<p>To mitigate the impact some suggestive measures are;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Run-off                             <ul style="list-style-type: none"> <li>✓ Provide garland drains around quarry to intercept surface run-off from high elevation to quarry and divert it to collection cum desilting pond.</li> <li>✓ 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</li> </ul> </li> <li><input type="checkbox"/> Water Contamination                             <ul style="list-style-type: none"> <li>✓ Water pump out from quarry will need to be diverted to storage cum desilting pond for treatment.</li> <li>✓ Proposed effluent treatment plant (ETP).</li> <li>✓ Regular repair &amp; maintenance of equipment &amp; vehicles.</li> <li>✓ Movement of heavy vehicles may be restricted to lease area and road so that leaking oil &amp; grease may not contaminate water quality.</li> </ul> </li> <li><input type="checkbox"/> PROMOTE ZERO LIQUID DISCHARGE (ZLD).</li> </ul>



  
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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.	<p>To mitigate the impact some suggestive measures are;</p> <ul style="list-style-type: none"> <li>✓ Mining operation to be confined to day shift only</li> <li>✓ At machineries to be repaired and maintained regularly.</li> <li>✓ Raise Green Belt in safety zone.</li> <li>✓ Avenue plantation along a both sides of Link Road</li> <li>✓ Regular repair and maintenance of mining equipment &amp; transportation vehicle.</li> <li>✓ Proper repair and maintenance of road.</li> <li>✓ Speed restriction of 20 KMPH on unpaved road.</li> <li>✓ Acoustic Barrier along the periphery of mining lease at critical points.</li> </ul>

SOIL QUALITY	
IMPACT	MITIGATION MEASURES
<p>Mining Activities are likely to impact on soil quality as;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Loss of topsoil</li> <li><input type="checkbox"/> Productivity of Soil</li> <li><input type="checkbox"/> Contamination of oil or chemical in Soil</li> </ul>	<p>To mitigate the impact some suggestive measures are;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Loss of topsoil                             <ul style="list-style-type: none"> <li>✓ Topsoil are to be removed &amp; 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 &amp; development of greenbelt.</li> </ul> </li> <li><input type="checkbox"/> Productivity of Soil                             <ul style="list-style-type: none"> <li>✓ Movement of heavy mining machineries on agriculture land and productive land should be restricted.</li> </ul> </li> <li><input type="checkbox"/> Contamination of oil or chemical in Soil                             <ul style="list-style-type: none"> <li>✓ Movement of heavy vehicles may be restricted to lease area and road so that leaking oil &amp; grease may not contaminate soil quality.</li> </ul> </li> </ul>



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BIO-DIVERSITY	
IMPACT	MITIGATION MEASURES
<p>Mining Activities are likely to impact on Bio-Diversity of the region as;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Habitat Destruction</li> <li><input type="checkbox"/> Ecosystem Disruption</li> <li><input type="checkbox"/> Damaging</li> </ul>	<p>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 &amp; its operation such mitigation measures are given below;</p> <ul style="list-style-type: none"> <li>✓ Mine site are selected considering siting criteria prescribed by Government (JSEIAA / JSPCB / MOEF &amp; CC).</li> <li>✓ Avoid site which have tree cover.</li> <li>✓ Avoid site through which drainage channels passes through.</li> <li>✓ <b>Ecological Assessment:</b> Conduct a thorough ecological survey to identify species and habitats present.</li> <li>✓ <b>Buffer Zones:</b> Establish buffer zones around sensitive habitats to minimize disturbance.</li> <li>✓ <b>Minimize Habitat Destruction:</b> Plan site layout to avoid key habitats and minimize vegetation clearing.</li> <li>✓ <b>Translocation:</b> Consider translocating significant flora and fauna to safe areas.</li> <li>✓ <b>Restoration Plans:</b> Develop a habitat restoration plan for post-mining activities.</li> <li>✓ <b>Wildlife Corridors:</b> 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.</li> </ul>



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### ENVIRONMENTAL IMPACTS:

Population growth, economic development and environmental degradation are interlinked with each other. Similarly, mining activities have considerable impacts on environment. The most important environmental problems from the mining activities are mercury pollution, cyanide pollution, direct dumping of tailing and affluent into river. These environmental problems from mining activities are the global phenomena. In the study area, stone mining activities have very adverse impact on the environment. It does not only degrade the land and forest areas but also, it affects the air, water and health qualities. Faunal and floral depletion, due to mining activities, is also enormous. Environmental impacts due to mining activities was manifested as water pollution, land degradation, loss of biodiversity, air pollution, increase in health related problems, occupational noise pollution, vibrations, land subsidence and landslides.

### LAND DEGRADATION:

Land degradation is one of the significant impacts arising out of mining and quarrying activity which is mainly in the form of alternation of land structure due to excavation, stacking of top soil and loss of land due to dumping of mine waste and overburden soil. Stone and sand quarrying causes damage to property, depletion of ground water, loss of fertile top soil, degradation of forest land, adverse effect on the biodiversity and public health. The impacts include soil, water, air, vegetation, landscape and the effects can be of different entity, depending on several factors. A number of effects on the environment must be considered, such as noise and vibration, dust traffic, and so on. In the area involved in the quarry the vegetation coverage and the soil are replaced by wide holes surrounded by some big accumulations of waste materials. In this way a sort of accelerated erosion can start whose consequences are not only the quick degradation of the landscape, but also the introduction in the natural cycle of harmful substances causing pollution to the surface waters and to the aquifer.

### FOREST DEPLETION AND LOSS OF BIODIVERSITY:

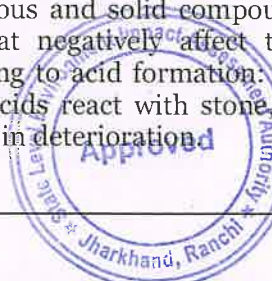
Mining and quarrying, either open cast or underground, destroys landscape and forest ecosystems. The waste materials that remain after the extraction of usable ores are dumped on the surrounding land, thus causing loss of top soil, nutrients and supportive micro flora and vegetation. Decrease in biodiversity – floral and faunal is also prominent as many species are endangered or on the verge of extinction.

One of the biggest negative impacts of quarrying on the environment is the damage to biodiversity. Biodiversity essentially refers to the range of living species, including fish, insects, invertebrates, reptiles, birds, mammals, plants, fungi and even micro-organisms. Biodiversity conservation is important as all species are interlinked, even if this is not immediately visible or even known, and our survival depends on this fine balance that exists within nature. Quarrying carries the potential of destroying habitats and the species they support. Even if the habitats are not directly removed by excavation, they can be indirectly affected and damaged by environmental impacts – such as changes to ground water or surface water that causes some habitats to dry out or others to become flooded.

### AIR AND NOISE POLLUTION:

Air pollution, due to dust from the mines, is a common environmental problem in mines and quarries especially open cast operations. The villages located in the vicinity of mines are suffering from air

pollution. Many people are suffering from asthmatic and lungs problems. Since the industrial revolution, air pollution has had a deep impact on human health, ecosystems, and stone materials. It is primarily caused by anthropic activities, particularly combustion processes involving fossil fuels and wood, which release various inorganic and organic gaseous and solid compounds into the air. It is widely acknowledged that the primary compounds that negatively affect the integrity of stone materials are the oxides that can react with water, leading to acid formation: carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>2</sub>), and sulfur oxides (SO<sub>2</sub>). These acids react with stone, especially carbonate-based materials such as marbles and limestones, resulting in deterioration.





Ground vibration and noise occur as a result of blasting. Blasting is the loading of explosives into drilled holes using detonating technique to achieve the desired fragmentation of the rock. Noise can

interfere with human wellbeing such as hearing, sleep and speech and can cause stress-related diseases such as hypertension. The blasting of rocks in the study area has also caused some buildings to crack.

#### **SURFACE AND GROUND WATER POLLUTION:**

Water pollution is a major concern in mining operations, where ore is being processed in slurry form to enrich the low quality ore. Water is used in a lot of phases of the mining activity such as cutting, washing, separating out of stone and mud, transporter dust controlling system. This naturally involves water pollution due to the transport of suspended solid particles, involving both surface and ground waters. Concerning the surface waters, the impact is mainly caused by the introduction inside the drainage net of the waste products coming from the stone production the increasing the water turbidity and compromise the water net, moreover, the vegetation reduction due to the removal of the ground coverage provokes the increasing in the speed of surface slide.

#### **SOIL CONTAMINATION:**

Soil contamination around the quarrying site is mainly caused by oil spills by trucks and machinery used to extract sand. Thus, stone and sand quarrying also causes serious disturbance to soil, severe soil erosion, and loss of topsoil and removal of top cover. Soil in that area might get compacted because of the transportation of machines and materials.

#### **IMPACT ON ECOLOGY AND AGRICULTURE:**

Physiological disorders are largely the results of unfavorable environment with a negative impact on plant growth even though they are not infectious. Physiological or non-pathogenic disorders of crop plants are mainly caused by changing environmental conditions such as temperature, moisture, unbalanced soil nutrients, inadequate or excess of certain soil minerals, extremes of soil pH and poor drainage.

#### **FLORA AND FAUNA:**

Stone mining, like many other forms of resource extraction, can have significant impacts on flora and fauna. Here's a summary of some of the main effects:

##### **1. Habitat Destruction**

- **Flora:** Mining activities often require clearing large areas of vegetation. This loss of habitat can lead to a decline in plant species diversity and disrupt ecological processes. Important plant species may be completely eradicated, affecting the stability of the local ecosystem.
- **Fauna:** The destruction of habitats can lead to displacement of wildlife. Animals that rely on specific plants or habitats for food, shelter, or breeding may struggle to survive if their environment is altered or destroyed.

##### **2. Soil and Water Pollution**

**Flora:** Mining operations can lead to soil erosion and the contamination of soil with heavy metals and chemicals used in the mining process. Polluted soil can affect plant growth and may lead to the



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- death of sensitive plant species.
- **Fauna:** Polluted water sources can harm aquatic life, including fish and amphibians. Contaminants can enter the food chain, affecting not only aquatic species but also terrestrial animals that rely on these water sources.
- **3. Altered Ecosystems**
- **Flora:** The introduction of mining operations can change the structure of local ecosystems. For example, changes in soil composition and drainage patterns can affect which plant species are able to thrive in the area.
- **Fauna:** Changes in the ecosystem can affect animal populations. Predators and prey relationships may be disrupted, and invasive species may take hold, further altering the balance of the ecosystem.
- **4. Noise and Dust Pollution**
- **Flora:** Increased dust from mining operations can cover plant leaves, reducing photosynthesis and potentially leading to plant stress or death.
- **Fauna:** Noise pollution can disturb wildlife, leading to changes in behavior, stress, and sometimes abandonment of the area. Birds and other animals that rely on sound for communication may be particularly affected.
- **5. Fragmentation of Habitat**
- **Flora:** Mining can create fragmented habitats, which can isolate plant populations and reduce genetic diversity. Small, isolated populations may be more vulnerable to extinction.
- **Fauna:** Fragmentation can lead to smaller, disconnected patches of habitat. This can make it difficult for animals to find mates, food, or migrate, leading to reduced populations and increased risk of extinction.
- **6. Climate Effects**
- **Flora:** Mining activities can contribute to climate change through the release of greenhouse gases. Changes in climate can alter growing conditions for plants and lead to shifts in vegetation zones.
- **Fauna:** Climate change can affect animal migration patterns, breeding cycles, and food availability. Species that cannot adapt quickly enough may face extinction.
- **Mitigation Measures**  
To reduce these impacts, mining operations can implement various mitigation strategies, such as:
- **Rehabilitation and Reclamation:** Restoring mined areas to their original state or creating new habitats.
- **Environmental Impact Assessments (EIAs):** Conducting thorough assessments before starting mining projects to understand and plan for potential impacts.
- **Best Practices:** Using techniques to minimize dust, manage waste, and reduce pollution.



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## **22. REMEDIAL MEASURES TO MITIGATE THE IMPACT OF MINING ON THE ENVIRONMENT**

### **22.1 Remedial Measures for other than Sand Mining:**

#### **▪ Remedial Measures for Air Pollution:**

- All machineries and transport vehicles will be properly maintained and pollution check will be done once in a year to keep the emissions from machineries and vehicle under control.
- Water sprinkling will be done on haul road to control emission of dust while transporting minerals and waste. Provision for waterspray by tankers on 'kaccha' road shall be done.
- Water sprinkling at loading area.
- Tree plantation along the haul roads & approach road will be done. Plantation along the mine boundary shall be done with tree density of 2000 trees per Hectare as per the norms of MoEF & CC, to control dust & noise.
- Use of personal protective equipment like dustmask.
- Ambient air pollution monitoring will be carried out.

#### **▪ Remedial Measures for Water Pollution:**

- Mining is proposed to plan above the ground water table. Therefore, pumping of ground water from mine pit does not arise in this mine. The rain water during rainy season is proposed to settle in a pit and shall be used for dust suppression and plantation. Excess water, if any shall be discharged in natural stream after settling of suspended particles in the pit.  
Pump having required capacity will be installed to lift accumulated drain water from working pit and pumped to the settling tank.
- Garland drain shall be made around the Waste dump and the rain water shall be collected in a garland drain and allowed to settle in a small pit for settling suspended particles before allowing discharge to natural drainage system.
- For domestic waste water Septic Tank with Soak Pit shall be provided, discharge from Soak Pit, if any shall be used for plantation.

#### **▪ Remedial Measures for Noise Pollution:**

- Diesel powered machineries, which is major source of noise in open cast mining shall be properly maintained. Attention shall be paid towards rigorous maintenance of the silencer of the diesel engines.
- Protective devices shall be provided for use of persons employed in the vicinity of high noise areas.
- With the adoption of controlled blasting techniques, the ground vibrations will be minimized.
- Plantation around the lease boundary will cut the noise levels.

#### **▪ Remedial Measures for Land Environment:**

Some of the measures followed to minimize the impacts areas follows:

- The mining activities will be restricted within the lease area only.
- The waste material will be utilized for the construction of road and also will be used by the local people for construction work.
- The surface run off from the lease area will be retained within the lease and used for plantation, dust suppression and block cutting. So, there will be no soil erosion from the lease area and its surrounding due to mining activity.
- The dump will have an inward slope with catch drains at the inward side of the terrace and the catch drain of the individual terrace will be connected to the garland drain outside the periphery of the dump. Retaining wall and garland drain will be constructed around the



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Dumps and the surface run off water pass through the garland drain and finally settled in a settling pit before released outside.

- Retaining wall and garland drains for the proposed waste dump will be constructed to arrest wash offs from the dump.
- Maintenance/repair of vehicles and machineries will not be inside the mining area. However, steel trays will be used for any emergency repair and sudden leakage of oil.

▪ **Remedial Measures for Waste Management:**

The solid waste shall be dumped systematically with proper repose angle and stabilization as follows:

- Gradation of dump shall be done automatically as coarser materials go to the bottom and fine rather to sand therefore drain of rainwater flow freely to the bottom without endangering the stability of dump.
- Stabilization of dump with top soil and tree plantation shall make the dump more stable on long. Dump should be terraced for every 5 m height and stabilized
- 1m height parapet shall be constructed for dumps more than 6m height along the toe top revent and control wash out from dumps entering into natural system through rainwater
- Garland drainage around dump shall prevent under wash of dump by hydrostatic pressure to be developed by surface water and control wash outs and collapse.

▪ **Remedial Measures for Flora and Fauna:**

Extensive plantation comprising of pollutant resistant trees will be undertaken, which will serve not only as pollution sink but also as a noise barrier. It is proposed to include azadirachta Indica, and ficus Religiosa in the plantation program as they serve as sinks for gaseous emissions.

The impact on the fauna due to the mining activity will be insignificant. The progressive plantation over a period of time will reduce the impact, if any, on the fauna.



  
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## **23. RECLAMATION OF MINED-OUT AREA**

### **23.1 Reclamation of Mined out area (best practice already implemented in the district, requirement as per rule sand regulation, proposed reclamation plan);**

#### **Reclamation of mined-out area:**

##### **Importance**

It is necessary to reclaim the land affected by mining due to following reasons:

- To put the land into productive use like agriculture, forestry or recreational purposes.
- To check soil erosion from dump leading to destruction of water sheds and siltation of river.
- Accumulation of huge quantity of water in worked out pits may pose threat to life and property.
- To combat adverse visual impact.

This requires wastage planning i.e. premining planning and postmining land use and monitoring. First stage considers all necessary measures to be taken for making second stage effective. This requires Environmental Impact Assessment (EIA) to be prepared. This should clearly bring out the likely impact of mining on environment, both biotic and abiotic and the likely extent of degradation, which may occur to the environment in the absence of any abatement measures. And to prepare this statement baseline information is required which includes geology/geomorphology, climate, hydrology/hydrogeology, hydrogeochemistry and soil. Generation of information may also be required on quality of water, air and noise level, topography, land use pattern, demography of the area etc.

##### **Components**

For successful reclamation following points are to be considered

- Listing inventory of premining condition.
- Monitoring flexibility of mining programme in the light of efficient land reclamation.
- Evaluation of the postmining requirements of the region and to decide on the needs and desire of the affected ground.
- To make reclamation planning suitable to techno-economical and socio political environment.
- To assess the physio-chemical characteristics of overburden.
- Extra cost of preservation, re-handling, spreading and levelling of subsoil and top soil.
- Knowledge of hydrogeological/geomorphological conditions. Aesthetic and/or historic value of land.



  
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## **24. RISK ASSESSMENT & DISASTER MANAGEMENT PLAN**

The area is hilly area. No possibility to flooding the area. Since the pits are developed on the hard compact and medium grain rocks hence, there are no possibilities of slope failure. The Risk Assessment & Risk Management Plan will be prepared for safety of man & machinery deployed in the mining activities as per Mining Act, Rules, and Regulations & DGMS circulars.

Mining activity because of the very nature of the operation, complexity of the systems, procedures and methods always involves some amount of hazards. Hazard identification and risk analysis is carried for identification of undesirable events that can lead to a hazard, the analysis of hazard mechanism by which this undesirable event could occur and usually the estimation of extent, magnitude and likelihood of harmful effects. The activities which can cause high risk related to face stability and the person blasting the shots. It was observed that on a working face of the mine, there were large cracks and unsupported rocks were present, which can lead to a serious hazard and injure workers engaged in loading operation and machineries because of rock falls or slides. This type of condition turns out because improper dressing of the bench and improper supervision. To avoid the hazards due to fall of rocks the face must be examined, made suitable for working and the remedial measures must be taken to make it safe if there is any doubt that a collapse could take place. Working of the face should be in the direction taking into account the geology of the area such that face and quarry side remain stable. Another major risk identified in mines is due to the firing of explosive by an unqualified person. In the mines there is problem of fly rocks and the village is located close to the mine and so it is rated high as it can affect many people.

Explosives by nature have the potential for the most serious and catastrophic accident. Planning of round of shots, holes correctly drilled, direction logged, weight of explosive suitable for good fragmentation are the few of the steps necessary to ensure its safe use and if the shots are not properly designed can result in misfires, early ignition and flying rocks. No person is allowed to use explosives without being properly trained in its handling.

In the mine a large number of heavy vehicles were in operation and the roads were not proper for haulage purpose. The haulage roads were not even and were not wide enough for the crossing purpose and hence the chances of hazards are very high. The main hazards arising from the use of large earth moving vehicles are incompetent drivers, brake failure, lack of all-around visibility from the driver position, vehicle movements particularly reversing, roll over, and maintenance. Those most at risk are the driver and pedestrians likely to be struck by the vehicle, and drivers of smaller vehicles, which cannot be seen from the cabs of large vehicles. Edge protection is always necessary to prevent inadvertent movement over the edge of roadway or a bench. Seatbelt will protect driver in case of roll. Good maintenance and regular testing are necessary to reduce the possibility of brake failure. Access to the vehicles should always be restricted to those people necessary for the working hand. The use of personal protective equipment and proper arrangement to check if the person is wearing a personal protective equipment or not is essential. The personal protective equipment includes helmet, non-skid safety boots, safety glasses, earmuffs etc.



  
DISTRICT MINING OFFICER  
CHATRA



#### 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 minimize its effects.

#### 24.2 Categorization of Risks

Risk associated with mining projects may be, broadly, categorized 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 described, below in brief.

##### 24.3.1 Natural

#### Risk in mining project may arise due to natural phenomena

- a) Flooding of opencast / underground working due to heavy rains ingress of water from nearby water body i.e. river, reservoir etc.
- b) Earthquake: - Earthquake in the area may cause damage to life & property.
- c) Land slide: - There might be Land slide in external dump or high wall of opencast mine.

##### 24.3.2 Mechanical

Operation of mine involves use of a number of Heavy earth moving Machines including Drills, Backhoe, Shovel, dumper etc. Operation of these equipment's may cause accident leading to loss of life or equipment's similarly material including raw material, waste material & product are to be transported by road using dumper, tipper. Unregulated transportation may Lead to road accident.

##### 24.3.3 Electrical

Project operation required operation of electrical equipment. They operated on high voltage & use cables. Use of electrical equipment may cause fire or electrocution.

##### 24.3.4 Fire

Operation of mine required use of electrical power & diesel oil use of electrical power & oil may cause Fire.

##### 24.3.5 Blasting

Operation of mine needs blasting using explosives. Unattended & unplanned blasting may cause accident.

##### 24.3.6 Risk Due to 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.

##### 24.3.7 Offsite Risks

Mining and allied activities may also cause offsite risk. They are briefed below.

##### 24.3.8 Road Accident

Mining operation & allied activities need Transportation of raw material & furnished product on public road. Movement of heavy vehicles may cause road accident.



  
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**24.3.9 Ground Vibration**

Ill planned blasting may cause ground vibration outside the lease area that may affect stability of structures located in close vicinity.

**24.3.10 Blasting**

Ill planned blasting may produce fly rocks that may cause injury to people/animal in vicinity of lease area.

**24.3.11 Environmental Pollution**

Project activities may generate environmental pollution that may attest health of people living in vicinity of lease area.

**24.3.12 Risk and Disaster Management**

Kipping 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.

**24.3.13 Flooding**

The drainage plan of the mine has to be prepared consideration 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.

**24.3.14 Earthquake**

If the mine is in zone iii & above of impact of earthquake must be integrated with planning & design of the project.



  
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CHATRA



#### 24.3.15 Land Slide

To prevent land slide in the mine following measures need to be taken nature of rock corresponding to

- i. Proper slope to be provided to advancing bench of the mine.
- ii. Proper slope ( $45^{\circ}$  -  $50^{\circ}$ ) to be provided for terminal slope to the quarry.
- iii. 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.

#### 24.3.16 Mechanical

- i. Regular training to equipment operator.
- ii. Regular repair & maintenance of equipment.

#### 24.3.17 Electrical

- Electrical system need to be designed following relevant prevailing rules as per Act.
- Regular maintenance and upkeep of cables, switches etc.

#### 24.3.18 Road Accident

- Proper lay out of internal roads within the lease area.
- Ensure speed limits within lease area.

#### 24.3.19 Vibration and Blasting

- Proper design of Blasting pattern to ensure ground vibration within limit.
- Use of optimal quantity of explosives.
- Hooter should be used to inform & warn workman before blasting in done.

#### 24.3.20 Environmental Pollution

- All workmen to be provided with ear mutt & mask.
- Pollution control measures to minimize environmental pollution.
- Regular health check-up of workman as per DGMS Rules.
- Trucks with Pollution under control certificate to be allowed.

#### 24.3.21 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 hospital, police station, local administration should be readily available.



  
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**24.4 Risk & their Probability:**

RISK IDENTIFIED	PROBABILITY
<b>Fire</b> in diesel stored for operation of equipments.	<b>LOW</b> As proponents procure diesel on daily basis in absence of proper storage.
In most of places electrical power is not available.	
<b>Blasting</b> for mining of stone. On an average a Stone mine would produce 250 T/Day in small Stone mines. This will use approx. 35 Kgs of explosives. This produces ground vibration and fly rock. Vibration may affect stability of structure & fly rock may injure people.	<b>LOW</b> Since mines are located 500m away from habitated area problem of ground vibration & fly rock are of low risk.
<b>Road Accident</b> This may be due to movement of vehicles on road carrying minerals.	<b>LOW</b> 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.
<b>Electrocution</b> In case of mines which operated on electrical power. Power cables are used. There is risk of electrocution.	<b>LOW</b>
<b>Environmental Pollution</b> Due to; ✓Blasting ✓Drilling ✓Handling ✓Transporting	<b>MEDIUM</b> 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	<b>LOW</b> As district fall in Zone II which is low risk zone.
Flood	<b>LOW</b> ✓All identified potential areas are away from river. ✓Proper arrangement for dewatering of quarry during the monsoon period.
Slope Failure	<b>LOW</b> 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.
<b>LOW</b>	<b>MEDIUM</b>
0% to 30%	30% to 60%
	<b>HIGH</b>
	60% to 100%



**DISTRICT MINING OFFICER  
CHATRA**



The required personal protective equipment should be provided and used in a manner that protects the individual from injury. Few minor injuries which can be prevented are slip, trip, or fall hazards; hazards due to rockfalls and collapse of unstable rocks, atmosphere containing toxic or combustible gases; protects from chemical or hazardous material etc.

A disaster management plan should be prepared for taking care of for any disaster. Other risks which are included in this category are noise, as it occurs and it can lead to permanent disability. There are problems related to road traffic in and out issues; inappropriate exposure of moving machines; mechanical failure and because of large number of moving trucks and dumpers there is large quantity of dust present in roadways which affects the operators and can lead to accidents causing injury. They are in acceptable range because of precautions measures taken but no step is taken it can cause hazard. Hence, the steps should be taken to reduce the hazards such as for dust suppression system should be installed.

Disaster in the mines like fires, explosions, entrapments, and inundations can occur any time, so emergency preparedness is a must. The Disaster Management Plan and risk assessment in the mines will include all sorts of above mentioned emergency and the extent that this plan will be implemented will depend on the nature and scope of the emergency. The basic purpose of Disaster management plan and risk assessment to ensure that mine rescue and recovery activities are conducted safely for rescuer and survivors. According to MMR1961 a standard operating procedure should be drawn for involvement different category of staff and officers. The SOP should be updated periodically to reduce the chaos and response to the emergency should be quick and smooth.

The responsible person should be familiar with his responsibility during the mock drills. One or two stand by should be there to replace the person in Emergency situation. Rescue operations should not include the survivors for any assistance. First Information of Disaster/Emergency should go to the attendance clerk on duty. Duties of attendance Clerk (Emergency Siren) the attendance clerk or other designated person should on getting information of major accident, sound a horn or a siren immediately declaring a state of emergency at the mine and then to contact the manager and on his advice to call key personnel using the information listed in the Emergency Organization Chart. It is important that all telephone calls are recorded in a telephone log book. Duties of Other Officials should be displayed and handed over to all concerned. Copy the same should be kept at Manager's Office for ready reference. Establishment of Control Room at Unit Level, Area Level and Company Level is essential. Control Room should keep the contact information about-

- Company Manager
- Company Owner/Administrative Officer
- District Administration
- Govt. Hospitals in near by localities
- Private Nursing Homes of localities



DISTRICT MINING OFFICER  
CHATRA



## **25. DETAILS OF THE OCCUPATIONAL HEALTH ISSUES IN THE DISTRICT**

### **25.1 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);**

#### **Occupational Health Hazard and Remedial Measures**

The persons employed in the mines are exposed to a number of hazards at work which adversely affect their health. Some of the important ones are dust, noise, heat, humidity, vibration etc. In recent times, there has been increasing awareness among mining industry and the workers about occupational diseases such as Coal Worker's Pneumoconiosis, Silicosis, Manganese Poisoning, Hearing Impairment etc. caused by exposure to health hazards at work. Almost all occupational diseases are known to cause permanent disablement and the re-ineffectiveness of treatment. However, most of the occupational diseases can be prevented by adopting proper occupational health measures and engineering control on airborne dust at workplace. Following diseases have been notified as the diseases connected with mining operations for the purpose of sub-section (1) of Section 25 of the Mines Act, 1952:

S.R.O.1306 dated the 21<sup>st</sup> July, 1952

1. Silicosis
2. Pneumoconiosis

S.R.O.2521 dated the 26<sup>th</sup> June, 1986

Cancer of lung or the stomach or the pleura and peritoneum (i.e. mesothelioma)

25 S.O.399(E) dated 21<sup>st</sup> February, 2011

1. Noise Induced Hearing Loss
2. Contact Dermatitis caused by direct contact with chemical.
3. Pathological manifestations due to or a dioradio active substances

#### **System of Detection of Occupational Diseases in Mines**

In order to detect occupational diseases, the industry is required to conduct medical examination and health surveillance of workers as per the provisions of Mines Act. The present efforts of mines management are concentrated on detection of silicosis, Pneumoconiosis and other notified diseases. Very little attention is paid to other occupational diseases. The essential features of health surveillance programme required to be carried out in mines are:

- (a) Initial Medical Examination of persons to be employed in mines.
- (b) Periodic Medical Examination once every five years. General physical examination, chest radiographs, lung function tests and audiometric.
- (c) Classification of chest radiographs of workers as per ILO Classification.
- (d) Medical examination within one year of superannuation.
- (e) Evaluation of all cases of suspected pneumoconiosis by Pneumoconiosis Medical Board.
- (f) Maintenance of medical records till the person is in service and 10 years thereafter. The cases of Silicosis detected during health surveillance programme are referred to Pneumoconiosis Medical Board of the mining companies for evaluation and certification. If certified, the case is notified to the enforcement authority and evaluated for disability and payment of compensation. Many cases of silicosis and other pneumoconiosis go undetected and a large number of cases of silicosis are misdiagnosed due to lack of training of medical professionals.



**DISTRICT MINING OFFICER  
CHATRA**

**DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND**



Civil Surgeon-Cum-Chief Medical Officer, Chatra vide his letter no- 846 dated- 22.06.2024 has provided No of Tuberculosis cases reported in last five years, which is as follows: -

Sr. No	Year	No. of Cases
1	2019	1036
2	2020	630
3	2021	836
4	2022	1110
5	2023	13352

There are no cases of Silicosis has been reported in Chatra District due to Stone Mining Activity.



**DISTRICT MINING OFFICER  
CHATRA**



कार्यालय जिला यक्ष्मा नियंत्रण समिति, चतरा  
सदर अस्पताल कैम्पस, चतरा



पत्रांक 94

दिनांक 03/04/24

प्रेषक,  
जिला यक्ष्मा पदाधिकारी,  
चतरा।

सेवा में,  
असैनिक शल्य चिकित्सक-सह  
मुख्य चिकित्सा पदाधिकारी, चतरा।

विषय: विगत पाँच वर्षों में चतरा जिले के टी0बी0 मरीजों की संख्या उपलब्ध कराने के संबंध में।

प्रसंग: जिला खनन कार्यालय, चतरा के पत्रांक 270, दिनांक 12.03.2024

महाशय,  
उपर्युक्त प्रासंगिक पत्र के संबंध में कहना है कि यक्ष्मा उन्मूलन कार्यक्रम के तहत चतरा जिले में विगत पाँच वर्षों में टी0बी0 से ग्रसित मरीजों की संख्या निम्नवत् हैं :-

1. वर्ष 2019	- 1036
2. वर्ष 2020	- 630
3. वर्ष 2021	- 836
4. वर्ष 2022	- 1110
5. वर्ष 2023	- 1352

भवदीय को सादर सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

Mc  
Bm  
03/04/24

विश्वासभाजन

जिला यक्ष्मा पदाधिकारी  
चतरा।

ज्ञापांक 846

दिनांक 22/06/24

प्रतिलिपि:-

जिला खनन पदाधिकारी, चतरा को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

असैनिक शल्य चिकित्सक-सह-  
मुख्य चिकित्सा पदाधिकारी, चतरा।



DISTRICT MINING OFFICER  
CHATRA



## **26. PLANTATION AND GREEN BELT DEVELOPMENT**

### **26.1 Plantation and Green Belt Development in respect of leases already granted in the District;**

Green belt along lease boundary and both sides of transportation road shall be developed in almost all the existing leases in the district. Maximum numbers of plants shall be planted in each year around the lease boundary and both sides of transportation road as mentioned in mining plan. Some mine owner also planted a large number of plants outside the lease area to develop green belt in the district. Neem, Sheesham, Aam, Sal, Arjun, Teak, Mahua, Ashoka, Jamun, Pipal, Banyan etc. are some important plants commonly planted in mine site of Chatra district.

It is proposed to have a detailed record of plantation to be kept by the respective owner/agent/manager of the mine every year, which has been planted in the safety zone area and transport rout, which is statutorily required. As per the norms of the forest department, the plantation has to be carried out at the rate of 2500 local plants per hectare and along the roadside, at an interval of 2 meters in the zig-zag manner in both sides.

**Some of the Photographs of Plantation, already done by the lessee/mine owners are attached herewith.**



**Jai Mata Di Stone Works  
Prop: Sudhir Kumar Singh. Mouza- Sikri Area- 4.00 Acre.**

**DISTRICT MINING OFFICER  
CHATRA**





**Jai Mata Di Stone Works**  
**Prop: Sudhir Kumar Singh. Mouza- Sikri Area- 4.00 Acre**



  
**DISTRICT MINING OFFICER**  
**CHATRA**

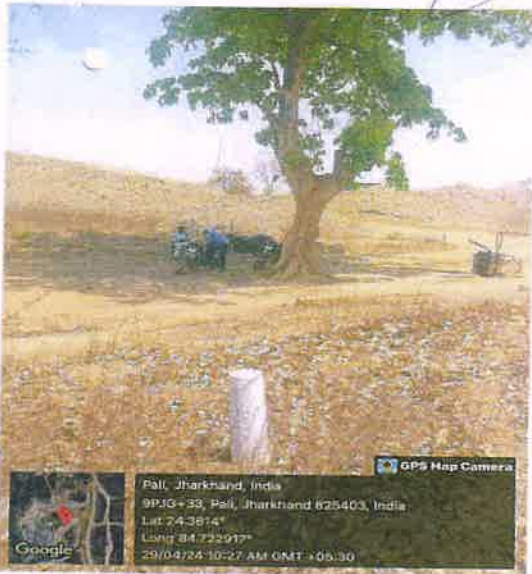


M/s Jai Shiv Construction Part: Braj Kishore Tiwari Area: 2.54 Acre



  
DISTRICT MINING OFFICER  
CHATRA

196



GPS Map Camera

Pali, Jharkhand, India  
 9PJG+33, Pali, Jharkhand 825403, India  
 Lat 24.3814°  
 Long 84.722917°  
 29/04/24 10:27 AM GMT +05:30

197



GPS Map Camera

Pali, Jharkhand, India  
 9PJG+33, Pali, Jharkhand 825403, India  
 Lat 24.381012°  
 Long 84.722202°  
 29/04/24 10:39 AM GMT +05:30

194



GPS Map Camera

Chatra, Jharkhand, India  
 Unnamed Road, Jharkhand 825403, India  
 Lat 24.380476°  
 Long 84.722062°  
 29/04/24 10:33 AM GMT +05:30

Pali

195



GPS Map Camera

Chatra, Jharkhand, India  
 Unnamed Road, Jharkhand 825403, India  
 Lat 24.380429°  
 Long 84.721999°  
 29/04/24 10:35 AM GMT +05:30



*[Signature]*  
 DISTRICT MINING OFFICER  
 CHATRA



Pali



Pali

**Shri Arun Kumar Siingh, Mouza- Pali Area- 4.10 Acre**



  
**DISTRICT MINING OFFICER  
CHATRA**



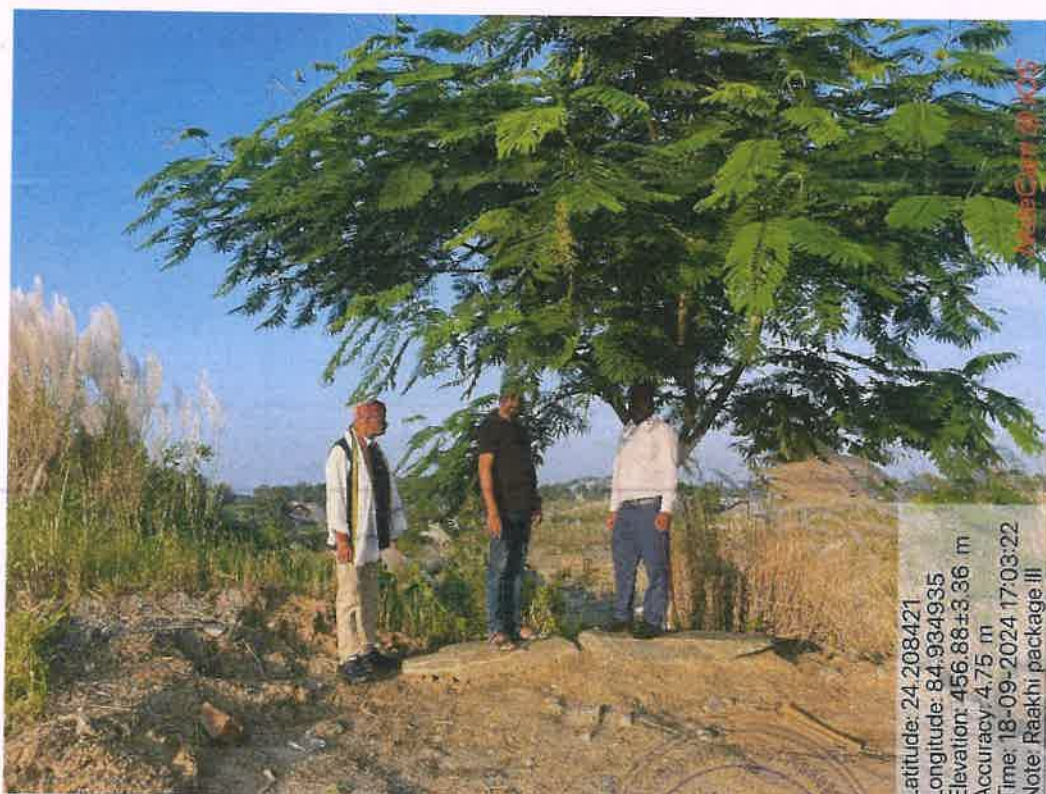
**M/s Ashutosh Stone Works Pvt. Ltd. Mouza- Dalkoma Area- 10 Acre.**



*Joy*  
**DISTRICT MINING OFFICER  
CHATRA**



Latitude: 24.210638  
 Longitude: 84.935672  
 Elevation: 452.81±3.47 m  
 Accuracy: 4.66 m  
 Time: 18-09-2024 17:18:46  
 Note: Raakhi package III



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 Longitude: 84.934935  
 Elevation: 456.88±3.36 m  
 Accuracy: 4.75 m  
 Time: 18-09-2024 17:03:22  
 Note: Raakhi package III

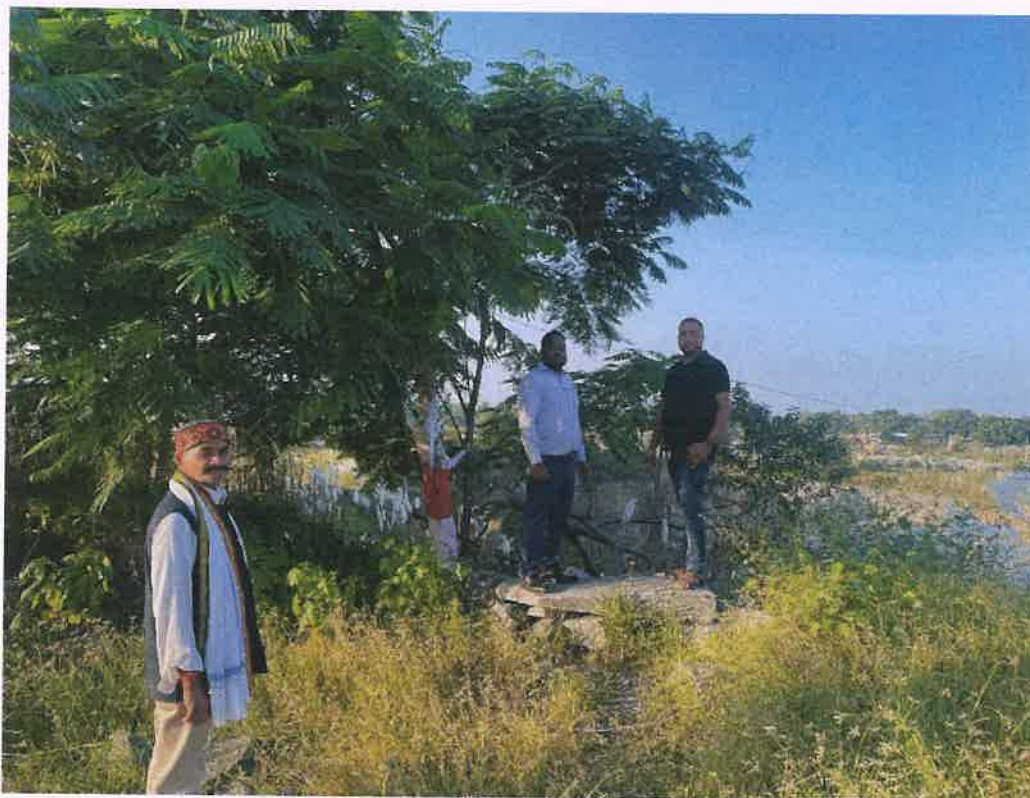
Approved  
 State Level Environment Authority  
 Jharkhand, Ranchi

  
 DISTRICT MINING OFFICER  
 CHATRA



*[Handwritten Signature]*

**DISTRICT MINING OFFICER  
 CHATRA**



  
DISTRICT MINING OFFICER  
CHATRA



Latitude: 24.320292  
 Longitude: 84.883103  
 Elevation: 360.17±3.36 m  
 Accuracy: 4.75 m  
 Time: 19-09-2024 11:51:35  
 Note: Raakhi package III



Latitude: 24.363704  
 Longitude: 84.738833  
 Elevation: 232.41±3.37 m  
 Accuracy: 4.74 m  
 Time: 19-09-2024 14:05:07  
 Note: Raakhi package III



*[Signature]*  
 DISTRICT MINING OFFICER  
 CHATRA



  
 DISTRICT MINING OFFICER  
 CHATRA



Latitude: 24.323201  
 Longitude: 84.760710  
 Elevation: 215.27±3.33 m  
 Accuracy: 4.77 m  
 Time: 20-09-2024 12:59:54  
 Note: Raakhi package III



Latitude: 24.189200  
 Longitude: 85.130215  
 Elevation: 435.34±3.47 m  
 Accuracy: 4.66 m  
 Time: 20-09-2024 17:07:35  
 Note: Raakhi package Varman

Approved  
 State Level Environmental Impact Assessment Authority  
 Jharkhand, Ranchi

  
 DISTRICT MINING OFFICER  
 CHATRA



Approved

Jharkhand Mining Regulatory Authority  
 Jharkhand, Ranchi

  
**DISTRICT MINING OFFICER**  
**CHATRA**

APN NO - 10010001

**M/S MAA TARA STONE WORKS**

Village - Murangari, Chitra Sharhanda Pin code - 827403

Ref No: \_\_\_\_\_ Date: 25/01/24

To,  
The District Mining Officer, Chitra  
District Office, Ranchi

**Subject - U/SR Approval for Minor Minerals**

Respected Sir,

I have been granted mining lease for mineral stone in Murangari-Chitra Sharhanda in Chitra, Jharkhand. I have not started production in the above area. I will do placement according to the approved mine plan during production period.

This letter is hereby submitted to your office for documentary record.

Thanking you

**M/S MAA TARA STONE WORKS**  
Maha Kumar

**APN DEVELOPERS AND STONE PRIVATE LIMITED**

(CORPORATE IDENTIFICATION NUMBER U45103JH2017PTG010004)

Ref No: \_\_\_\_\_ Date: 24/02/2024

To  
The District Mining Officer  
Chitra

SUB - U/SR Approval for Minor Minerals

Respected Sir,

As per above subject, placement work of 25 plants has been done in my mining lease area at Murangari, PO - Chitra, Dist - Chitra, Jharkhand.

This letter is hereby submitted to your office for documentary record.

Thanking You

Yours Faithfully

**APN DEVELOPERS AND STONE PRIVATE LIMITED**  
Anand Kumar Singh

24/02/2024

Registered Office: Jagan Mohan, Town Hall, Chitra, Jharkhand Pin Code - 827403  
Phone: 9836122833 Email: apndevelopersandstoneprivate@gmail.com

**M/S JAI MATA DI STONE WORKS**

Sole, Jamnia, Chitra Sharhanda

Ref No: \_\_\_\_\_ Date: \_\_\_\_\_

To  
The District Mining Officer, Chitra  
Dist - Chitra, Jharkhand.

**Subject - U/SR Approval for Minor Minerals**

Respected Sir,

As per above subject, placement work of 20 plants has been done in my mining lease area at Jai Mata, PO - Jamnia, Dist - Chitra, Jharkhand. According to the approval of mining plan, placement has to be done. I will do placement according to approval of mining plan in next 90 months.

This letter is hereby submitted to your office for documentary record.

Yours Faithfully

**M/S JAI MATA DI STONE WORKS**  
Sudhakar Kumar

Office Address: Tardua Road, Jamnia, 827307  
Mob: 9771717428, 9836274346

**M/S BHAGWATI STONE WORKS**

ALL TYPE OF STONE PRODUCTS

Office Add - Anand Mohan's Court Road, Chitra, Jharkhand 827403

Ref No: \_\_\_\_\_ Date: 24/02/2024

To  
The District Mining Officer  
Chitra

SUB - U/SR Approval for Minor Minerals

Respected Sir,

As per above subject, placement work of 201 plants has been done in my mining lease area at Anand Mohan, PO - Shivnagar, PS - Lawalung, Dist - Chitra, Jharkhand.

This letter is hereby submitted to your office for documentary record.

Thanking You

Yours Faithfully

**M/S BHAGWATI STONE WORKS**  
Anand Kumar Singh

24/02/2024



**DISTRICT MINING OFFICER  
CHATRA**

M/S JAI SHIV CONSTRUCTION

Mob No. 9971247900  
Email: jaishivconstruction@gmail.com  
Add: Vill-Deogradha, PO- Kolbalya, PS- Rajpur, Chatra, Jharkhand-825401  
District: West Jharkhand, India

---

Ref No: \_\_\_\_\_ Date: 25/9/24

To  
The District Mining Officer, Chatra  
Dist-Chatra, Jharkhand.

**Subject: - DSR Approval for Minor Minerals**

Respected Sir,  
As per above subject, plantation work of 325 plants has been done in my mining lease area at Vill-Chataniya, PO-Tapes, PS-Chatra Dist-Chatra, Jharkhand. According to the approved mining Plan plantation had to be done. I will do plantation according to approved mining plan in next 06 months.  
This letter is hereby submitted to your office for documentary record.

Yours faithfully  
Sanjay Kumar Singh  
Jai Shiv Construction

**M/S SIKRI STONE DEPOSIT**

ADD - SIKRI, SIMARIYA, CHATRA, JHARKHAND (825103)  
CONTACT NO- (7991163101), E-Mail- sanjaykmore12@gmail.com  
ID - 0308337101 (SANJAY KUMAR SINGH AND ASHISH KUMAR)

---

DATE: 25/9/24 To,  
The District Mining Officer,  
Chatra (Jharkhand)

**Sub :- DSR Approval for Minor Minerals.**

Respected Sir,  
As per above subject plantation work of 275 plants has been done in my mining lease area at Vill- Sikri, Khata No. 01, Plot No. 128(P), Area 3.00 acre in PD+ PS- Simariya, District- Chatra (Jharkhand). According to the approved mining Plan plantation had to be done. I will do Plantation according to approved Mining Plan in next 06 Months  
This letter is hereby submitted to your good office for documentary record.

Thanking you.

Your Faithfully  
Sanjay Kumar Singh  
M/s Sanjay Kumar Singh  
Vill- Sikri, PO+ PS- Simariya  
District- Chatra (Jharkhand)

M/S CHATNIYA MINES

Village - Hasul, Pnora, Washet Nagar Jor Chatra Jharkhand - 825401  
E-mail ID: chatniyamines@gmail.com

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Ref No: 25/9/24

To,  
The District Mining Officer, Chatra  
Dist - chatra, Jharkhand

**Subject: - DSR Approval For Minor Minerals**

Respected Sir,  
As Per Above Subject, Plantation Works Of plants Has Been Done in my mining lease area at Hasul-Chatra, Pn - Washetnagar Jor Chatra. According to the approved mining plan 400 trees have to be planted. I will do plantation according to the approved mine plan in next 6 months.  
This letter is hereby submitted to your office for documentary record.

Thanking you,  
CHATNIYA MINES  
Nikhil Kumar  
Partner  
Your faithfully

M/S CHATNIYA MINES

Village - Hasul, Pnora, Washet Nagar Jor Chatra Jharkhand - 825401  
E-mail ID: chatniyamines@gmail.com

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Ref No: 25/9/24

To,  
The District Mining Officer, Chatra  
District: Chatra, Jharkhand

**Subject: - DSR Approval For Minor Minerals**

Respected Sir,  
I have been granted mining lease for mineral stone in Hasul-Chatra, Pn Washetnagar in Chatra district. I have not started production in the above mine. I will do plantation 450 trees according to the approved mine plan during production period.  
This letter is hereby submitted to your office for documentary record.

Thanking you,  
CHATNIYA MINES  
Nikhil Kumar  
Your faithfully



DISTRICT MINING OFFICER  
CHATRA

**M/S JAI SHANKAR STONE MINES**  
 Mouja-Rano Hunterganj, Chatra, Jharkhand -825403  
 MOBILE NO: 9836232982/9836232983, 9836232984 - 9836232985

DATE: 24/04/24

To: The District Mining Officer, Chatra

**Sub :- DSR Approval for Minor Minerals.**

Respected Sir,  
 I have been granted mining lease for mineral stone in Mouja/Rano Hunterganj in Chatra district. I have not started production in the approved period. I will do plantation 250 trees according to the approved mining plan during production period.  
 This letter is hereby submitted to your office for documentary record.

Thanking you  
 Yours faithfully  
 M/s Jai Shankar Stone Mines  
 Mouja-Rano Hunterganj, Chatra, Jharkhand -825403

**M/S ANJANI STONE WORKS**

Village :- Karmah, Chatra Jharkhand, Pin Code 825403

25/04/24

To: The District Mining Officer, Chatra

**Subject :- DSR Approval for Minor Minerals**

Respected Sir,  
 I have been granted mining lease for mineral stone in Mouja/Rano Hunterganj in Chatra district. I have not started production in the approved period. I will do plantation 250 trees according to the approved mining plan during production period.  
 This letter is hereby submitted to your office for documentary record.

Thanking you  
 Yours faithfully  
 M/s Anjani Stone Works  
 Village :- Karmah, Chatra Jharkhand, Pin Code 825403

To: The District Mining Officer, Chatra (Jharkhand)

**Sub :- DSR Approval for Minor Minerals.**

Respected Sir,  
 As per above subject plantation work of 200 plants has been done in my mining lease area at Vill- Mishraji, PO- PS- Chatra District-Chatra (Jharkhand).

This letter is hereby submitted to your good office for documentary record.

Thanking you,  
 Your Faithfully  
 M/s Maa Suruchi Stone Works

M/s Maa Suruchi Stone Works (0308337302)  
 Vill- Mishraji, PO- PS- Chatra District- Chatra (Jharkhand)

**M/A & P Stone Works**

Date - 26.09.2024

To: The District Mining Officer, Chatra (Jharkhand)

**Sub :- DSR Approval for Minor Minerals.**

Respected Sir,  
 As per above subject plantation work of 250 plants has been done in my mining lease area at Vill- Karmah, Khata No. 02, Plot No. 13(P), Area 3.90 acre in PO- PS- Vashisthnagar, District-Chatra (Jharkhand). According to the approved mining Plan plantation had to be done. I will do Plantation according to approved Mining Plan in next 06 Months.

This letter is hereby submitted to your good office for documentary record.

Thanking you,  
 Your Faithfully  
 M/s A & P Stone Works

Vill- Karmah, District- Chatra (Jharkhand)



**DISTRICT MINING OFFICER  
 CHATRA**

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BEDMINING" FOR CHATRA DISTRICT OF JHARKHAND



**AKTA STONE DEPOSIT**

Stone, Bolder, Balast Manufacturer & Suppliers  
 ADDRESS-AKTA, PO & PS- HUNTERGANJ DIST-CHATRA, JHARKHAND  
 CONTACT NO:- 06201777796

Ref. No. \_\_\_\_\_ Date: 26/09/2024

To  
 The District Mining Officer, Dumka  
 Dist:- Chatra Jharkhand

Ref.No.-  
**Subject:- DSR Approval for Minor Minerals**  
 Respected Sir,

As per above subject, plantation work of 200 plants has been done in my mining lease area at vill-Akta, PS- Hunterganj, PO- Hunterganj, Dist- Chatra, Jharkhand.

This is letter is hereby submitted to your office for documentary record.  
 Thanking you.

AKTA STONE DEPOSIT  
  
 Proprietor  
 Yours faithfully

Office Address:- Newdiganj, Dist-Tower, Jharkhand-825301  
 Mobile No:- 06201777796

GST No.-20ABRPM7391Q1ZE

Mob.-9110069903, 8210713870, 8969367976

**MAA KULESHWARI MINING**

Add:- Bihari, Kedli Katan, Hunterganj, Chatra (Jharkhand)-825403  
 Email Id- maakuleshwari-mining@gmail.com

Ref. No. \_\_\_\_\_ Date: 26/09/2024

सेवा में,  
 श्रीमान् जिला खनन पराधिकारी,  
 धरम।

**Sub :- DSR Approval for Minor Minerals.**  
 महाशय,

निवेदन पूर्वक कहना है कि मैं पतरा जिलाखनन-अंचल-सिमरिया, थाना-सिमरिया, मौजा-केंदु, थाना संख्या-110, खाता संख्या-68 के प्लॉट संख्या-422(P), 423, 424, 425(P) & 428(P) कुल रकबा-5.47 एकड़ भूमि पर दिनांक 09.08.2024 से पीठ वर्षों के लिए जंग खनिज-पत्थर खनन पट्टा धारण करता हूँ। यह कि उक्त खनन पट्टा क्षेत्र पर अभी खनन कार्य प्रारंभ नहीं हुआ है।

मैं खनन पट्टा क्षेत्र में अनुमोदित खनन योजना के अनुसार तीव्ररोपण करते हुए खनन कार्य प्रारंभ करता हूँ।  
 तानंद सुकर्ण प्रेषित।

आपका विश्वासी,

अशोक कुमार यादव  
 धरम-बिहारी, पो-कदलीकत,  
 हटरगंज, जिला-धरम।

**M/S MAA KAULESHWARI STONE WORKS**

Factory Address:-  
 Road - 1, Dist. P.S. & District  
 Hunterganj, Dist. Jharkhand

Permanent Address:-  
 Village - Bihari, P.S. Hunterganj, Dist.  
 Chatra, Jharkhand

Ref.No. \_\_\_\_\_ Date: 26/09/2024

To  
 The District Mining Officer, Chatra  
 Dist -Chatra, Jharkhand  
 Subject:- DSR Approval for Minor Minerals  
 Respected Sir,  
 As per above subject, plantation work of 228 plants has been done in my mining lease area at VS- Lala Puv-Pu Hunterganj Dist- Chatra, Jharkhand. According to the approved mining plan plantation had to be done. I will do plantation according approved mining plan in next 06 months.  
 This letter hereby submitted to your office for documentary Record.

Yours faithfully  
  
 Maa Kuleshwari Stone Works  
 Maa Kuleshwari Stone Works  
 Patur



DISTRICT MINING OFFICER

**DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BEDMINING" FOR CHATRA DISTRICT OF JHARKHAND**



Sl. No.	Stone mines	Address of Mines	Status of Mines	Area of Mines (Ha.)	Total Plantation as per Guidelines	No of plantation at site	Remarks
1	Maa Kouleshwari Mining	"Mouja- Kendu Khata No. - 68 Plot No. - 422(P), 423, 424, 425(P), 428(P) Thana - Simriya"	Non-Working	2.21	1167	0	Production not Started
2	Maa Kouleshwari Stone Works Partner- Sri Parmanand Singh	Mouza- Luta Khata No.- 1, 3, 4, 6, 9 Plot No.-48(P), 47, 49, 74(P),88(P), 92, 93(P) Thana- Hunterganj	Working	2.31	1220	228	
3	M/s Jai Shankar Stone Indurties Prop- Sri Niwas Kumar	Mouza- Akta Khata No. 1,2,3, 4,5, 6, 7, 9, 12 & 27 Plot No.- 82(P), 83, 84, 85, 86, 90, 92, 96, 97, 98, 100, 101, 103, 104, 105, 106, 107, 108, ,109, 110 113, 117, 118, 119, 120, 121, 122, ,124, 131, 132, 133 & 134 Thana- Hunterganj	Working	3.64	1922	200	
4	Sri Sitaram Babu S/o- Late- Triloki Prasad Mehta	Mouza- Akta Khata No. 22 Plot No. 39 Thana- Hunterganj	Non-Working	0.96	507	200	
5	M/s Ganpati Stone Works Partner- Sri Premchand Singh	Mouza- Kurkheta Khata No. 01, 29 Plot No.- 673, 678, 679 Thana-Vashisthnagar	Non-Working	2.62	1384	0	Production not Started
6	Sri Mahendra Kumar Ujala S/O- Sri Girdhari Saw	Mouza- Rajguru Khata No.04, 86, 88, 89, 90 Plot No.- 573, 576, 577, 578, 587, 588, 589, 590, 595, 596 Thana-Vashisthnagar	Working	1.00	528	200	
7	M/s Chatniya Mines Prop- Sri Uday Kumar Sharma S/O- Late- Umakant Sharma	Mouza- Chatniya Khata No.- 01 Plot No.-33(P) Thana-Vashisthnagar	Working	2.83	1495	250	
8	Sri Sanjay Kumar Singh S/O- Sri Shambhunath Singh Vill+ Po- Bagra. Ps-Simariya 2. Sri Ashish Kumar S/o- Sri Shyamkishore Singh	Mouza- Sikri Khata No. 01, Plot No.- 128(P) Thana-Simriya	Working	1.21	639	275	



**DISTRICT MINING OFFICER  
CHATRA**

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BEDMINING" FOR CHATRA DISTRICT OF JHARKHAND



9	M/s Maa Bhagwati Stone Works Prop- Sri Amit Kumar Sahay S/O- Sri Srikant Kumar Sahay	Mouza- Ambatand Khata No. 01, Plot No.- 114(P) Thana-Simriya	Working	1.94	1025	201	
10	M/s Jai Mata Di Stone Works partner- Sri Sudhir Kumar Singh	Mouza- Sikri Khata No. 01, Plot No.- 128(P) Thana-Simriya	Working	1.62	856	350	
11	M/s Riya Enterprises Partner-I. Sri Sanjay Kumar S/O- Sri Bhuneshwar Ram	Mouza- Basariya Khata No. 23 Plot No.- 233(P) Thana-Simriya	Non-Working	0.53	280	0	Mining lease has been cancelled
12	M/s Jai Shiv Construction Partner-I. B.K Tiwari S/O- Sri Narayan Tiwari	Mouza- Chatniya Khata No. 12 Plot No.- 112, 113 Thana-Sadar	Working	1.03	544	325	
13	M/s Maa Suruchi Stone Works Prop- Sri Kalicharan Singh S/O- Late- Baijnath Singh	Mouza- Mishrol Khata No. 26, 12, 33, 01 Plot No.- 214(P), 245, 243, 250(P) Thana-Sadar	Working	1.45	766	200	
14	M/s APN Developers and Stone Pvt Ltd Dir- Sri Amit Kumar Sahay S/O- Sri Srikant Kumar Sahay	Mouza- Chatniya Khata No. 11 Plot No.-39 Thana-Sadar	Working	0.70	370	205	
15	M/s Rajshree Construction Prop- Sri Shri Parmeshwar saw S/o- Sri Bhandu saw	Mouza- Ichak Khata No. 8, 12, 19, 36, 40, 44, 47, 65 Plot No.- 664, 665, 666, 667, 668(p), 669, 670(p), 679(p), 680, 681, 682, 683, 684, 713(p) & 837 Thana-Gidhor	Working	1.14	602	220	
16	M/s A & P Stone Works Part- Sri Arun kumar Singh	Mouza- Karmahi Khata No.-02 Plot No.- 13 Thana- Vashisthnagar	Working	1.58	835	250	
17	M/s Jai Shankar Stone Mines Part- Sri Kameshwar Singh	Mouza-Rano Khata No.- 1/7, 8/4, 10, 11 Plot No.- 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 & 35 Thana- Hunterganj	Working	2.82	1489	0	Production not Started
18	M/s Maa Tara Stone Works Part- Sri Mukesh Kumar	Mouza-Rano Khata No.- 2, 3, 4, 07, 08, 10, 11 Plot No.- 93, 94, 95, 96, 97, 98, 99, 100, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130 & 131 Thana- Hunterganj	Working	1.21	638	0	Production not Started
19	M/s MSU Enterprises Part- Sri Mukesh Kumar	Mouza- Karmahi Khata No.-07 Plot No.- 12 Thana- Vashisthnagar	Working	1.72	909	250	



DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BEDMINING" FOR CHATRA DISTRICT OF JHARKHAND



20	M/s Jai Shankar Stone Pro- Sri Rajesh Kumar Singh	Mouza-Rano Khata No.- 1/7, 8/4, 10, 11 Plot No.-03(P), 04(P), 06(P), 07(P), 08, 09, 10, 12,13,14, 14/296, 170, 171(P), 172, 173, 174, 175, 176,177, 178, 180, 181, 182, 183, 184, 185, 186, 187, 194(P), 196, 197& 198 Thana- Hunterganj	Working	2.02	1067	0	Production not Started
21	M/S Anjani Stone Works	Mouja- Dumrikalan Khata No.- 06,08,21,31,33,42,29,11,07,32,13,09,14, 39 & 36 Plot No. - 609, 615, 612, 614, 610, 621, 611, 613, 622, 606, 629, 617, 605, 627, 630, 602, 196, 193, 194 & 616 Thana- Hunterganj	Non-Working	2.00	1056	0	Production not Started
22	Channiya Mines Part- Sri Mukesh Kumar	Mouja- Hosil Thana No. - 160 Khata No. 03, 29 Plot No. 11, 13(P), 19(P)	Non-Working	2.98	1573	0	Production not Started

The Deputy Comissioner through 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..



  
DISTRICT MINING OFFICER  
CHATRA



## 27. ADDITIONAL INFORMATION

Sl.No.	Name of the Mineral	Area of Mining Lease to be allotted (Ha)	Address of the Mining Lease
1	2	3	4
1	Stone	1.72	Mouza-Manjhgawa P.S. - HunterganjThanaNo. - 309 KhataNo.-02, 04,05 &08 PlotNo.-36P, 38P,39, 40, 41 &42
2	Stone	1.07	Mouza-Chataniya P.S. - ChatraThanaNo.-270 KhataNo.-01, 04,05 &11 PlotNo.-47,59, 60, 68,59, 67, &51
3	Stone	1.44	Mouza-Baghakola P.S. - PratappurThana No. - 27KhataNo.-01 Plot No.-32,33,34,35,36, 37 &38
4	Stone	1.60	Mouza-Genjna P.S. - HunterganjThana No. - 194KhataNo.-121 PlotNo.-419(P),420(P),426(P)
5	Stone	0.81	Mouza-Ghatdhari P.S. - HunterganjThana No. - 275KhataNo.-09 &12 PlotNo. -132(P),133(P),160(P)
6	Stone	1.07	Mouza-Chataniya P.S. - ChatraThanaNo.-270 KhataNo.-01,04, 05,06 &11 PlotNo.-47,53, 60,68,59, 56, &67
7	Stone	0.66	Mouza-Karmahi P.S. - VashishthangarThana No. - 149KhataNo.-07 Plot No.-10
8	Stone	0.84	Mouza-Chatra P.S. - ChatraThanaNo.-270 KhataNo. -01,04,05,06, 11 PlotNo. -53,60, 61,68, 59,56, 67
9	Stone	0.65	Mouza-Sonbigha P.S. - ChatraThanaNo.-179 KhataNo.-02,03,06,07, PlotNo.-73,74,75,79,81,84



**DISTRICT MINING OFFICER  
CHATRA**

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



10	Stone	1.68	Mouza -Dari P.S. - KundaThanaNo.-261 KhataNo. -01&25 PlotNo.-148,149,150,151,155,52,53,54
11	Stone	1.23	Mouza-Chataniya P.S. - chatraThanaNo.-270 KhataNo. -01,02, 03,04,06 PlotNo. -19,21,18,20,28,26,30,24
12	Stone	1.70	Mouza-BalniyaKhajuriya P.S. - HunterganjThana No. - 198KhataNo. - 01,26,29 PlotNo. -59,174,67,185,184,148,177
13	Stone	0.48	Mouza-Bhogtadih P.S. - HunterganjThana No. - 172KhataNo.-04 , 19 PlotNo. -117,118
14	Stone	1.05	Mouza-Nartama P.S. - ChatraThana No. -206KhataNo.- 03 PlotNo. -06
15	Stone	0.81	Mouza-Shikarpur P.S. - HunterganjThana No. - 230KhataNo.-04 PlotNo.-145,149
16	Stone	1.04	Mouza-Lodhea P.S. - PratappurThana No. - 01Khata No. - 10PlotNo. -76(P)
17	Stone	1.45	Mouza -Dari P.S. - KundaThana No. - 261KhataNo. -01,04 PlotNo. -148,132,128,127,108, 109,104, 105,106
18	Stone	1.82	Mouza-Gerua P.S. - HunterganjThana No. - 08KhataNo. - 31&01 PlotNo.-378(P)379(P)
19	Stone	1.34	Mouza-Chataniya&Mishrol P.S.-Chatra ThanaNo. -270&271 KhataNo. -04,05, 06 ,01, 38 PlotNo.-32,34,76, 75,188,189

Approved

DISTRICT MINING OFFICER  
CHATRA

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BEDMINING" FOR CHATRA DISTRICT OF JHARKHAND



20	Stone	1.92	Mouza-Dandai P.S. HunterganjThana No. - 166KhataNo.-01, 17 PlotNo.-41, 39,59
21	Stone	1.80	Mouza-Karmahi P.S. VashishthangarThana No. - 149KhataNo.-07&08 PlotNo. -48,50, 51,43,47
22	Stone	1.17	Mouza-Karmahi P.S. VashishthangarThana No. - 149KhataNo. -02 PlotNo. -05
23	Stone	2.23	Mouza-Raksi P.S.-chatraThana No. - 285KhataNo.-06, 24, PlotNo. -282,283,291
24	Stone	2.69	Mouza-Jorikalan P.S. VashishthangarThana No. - 150KhataNo. -50 PlotNo.-702,704,705,706,707,708,709
25	Stone	0.93	Mouza-Dundu P.S. HunterganjThana No. - 187KhataNo.-19 PlotNo. -341,338, 337,336,335,334, 333, 331
26	Stone	2.23	Mouza-Dandai P.S. -HunterganjThana No. - 166KhataNo.-01,06, 17 PlotNo.-39,41, 43, 44,59
27	Stone	1.71	Mouza -Demdem P.S. VashisthnagarThana No. - 300KhataNo.-17 PlotNo. -92,89/284,90
28	Stone	1.82	Mouza-Gerua P.S. -HunterganjThana No. -08Khata No. - 31 & 01PlotNo.-378&379
29	Stone	2.01	Mouza-Karudih P.S. PratappurThanaNo. -61 KhataNo. -02,25,01,10 PlotNo.-94, 95, 96,97



*(Handwritten Signature)*

DISTRICT MINING OFFICER  
CHATRA

DISTRICT SURVEY REPORT OF "MINOR MINERAL (STONE) OTHER THAN SAND MINING OR RIVER-BED MINING" FOR CHATRA DISTRICT OF JHARKHAND



30	Stone	2.78	Mouza-Hiring P.S. - Hunterganj Thana No.-..... Khata No.-77, 72, 74 PlotNo. -07,22,24,08,12,13,16,19,21, 09,14,15,23
31	Stone	1.93	Mouza-Dandai P.S. - VashishtnagarThan aNo. - Khata No.-17 &01 Plot No.-39,41, 59
32	Stone	1.62	Mouza-Sikari P.S.-SimariyaThana No. - 161 Khata No.- 77,16, 07 PlotNo. -172,173,174,176,228
33	Stone	1.38	Mouza-Chataniya P.S. - ChatraThana No. - 270 Khata No.- 4,5,6 Plot No.-34, 75,76
34	Stone	1.54	Mouza-Hiring P.S. - HunterganjThan aNo. -60 Khata No.-56,31,01,82,53,61,94,66,25 &65 Plot No.-29, 32,33,36,38, 39, 40, 42,53, 218,52,54,43,55,55, 45&46
35	Stone	1.17	Mouza-Hiring P.S. - HunterganjThan a No. - 60Khata No. - 01 Plot No.-691
36	Stone	1.26	Mouza-Dumrikalan P.S. - HunterganjThan a No. - 75 Khata No.-81 PlotNo. -106(P) &109

A qualified surveyor accompanied by a Geologist visited the area and conducted survey and reconnaissance exploration of the area. The areas were contoured by Total Station survey instrument coupled with GPS. Since, these are the deposits of igneous rock; there should be nodoubt on its continuation to a greater depth. These potential Stone deposits are identified on thebasis of geological studies and are subjected to obtain clearances from concerned departments. The aforementioned area described may cover Forest land, Jungle-jhari, Raiyati and differenttypes of Government land. It must be verified by concerned departments. Moreover, any other area which may be found feasible for Stone mining shall be incorporated in the DSR prospectively as per Jharkhand Minor Mineral Concession Rule 2004 and Jharkhand Minor Mineral (Auction) Rule,2017.



*(Signature)*

DISTRICT MINING OFFICER  
CHATRA



### References:

- District Mining Office–Chatra
- District Forest Office–Chatra
- CGWB Report of Chatra
- Geology of Bihar and Jharkhand by T.M. Mahadevan
- National Institute of Disaster Management Report
- Resource/Mineral Map of Chatra District from Geological Survey of India
- Geological Map of Chatra District from Geological Survey of India
- Report of Central Ground Water Board, Ministry of Water Resources – State Unit Office, Ranchi, September 2013.
- D.S.R. of Stone (2018) –Chatra
- D.S.R. of Sand (2023)–Chatra
- JSAC, Deptt. of Mines & Geology, Govt. of Jharkhand
- <http://www.jharkhandminerals.gov.in>
- District Statistical Hand Book CHATRA
- Indicative-plan-district-mineral-foundation-chatra
- <https://www.hidustantimes.com>
- Indicative-plan-district-mineral-foundation-chatra
- District Statistical Office, Chatra
- <https://en.wikipedia.org/wiki/Chatra>
- [https://sameti.org/Soil\\_Inventory/Chatra\\_Soil\\_Analysis.pdf](https://sameti.org/Soil_Inventory/Chatra_Soil_Analysis.pdf)
- National Informatics Centre



*[Handwritten Signature]*

**DISTRICT MINING OFFICER  
CHATRA**

# MAA KULESHWARI MINING

Add:- Bihari, Kedli Kalan, Hunterganj, Chatra (Jharkhand)-825403

Email Id- maakuleshwarimining@gmail.com

Ref. No. .... 26/9/24

Date..26.09.2024....

सेवा में,

श्रीमान् जिला खनन पदाधिकारी,  
चतरा।**Sub :- DSR Apporval for Minor Minerals.**

महाशय,

निवेदन पूर्वक कहना है कि मै चतरा जिलान्तर्गत अँचल-सिमरिया, थाना- सिमरिया, मौजा- केन्दु, थाना संख्या- 110, खाता संख्या - 68 के प्लॉट संख्या- 422(P), 423, 424, 425(P) & 428(P) कुल रकबा- 5.47 एकड़ भूमि पर दिनांक 09.08.2024 से पाँच वर्षों के लिए लघु खनिज पत्थर खनन पट्टा धारण करता हूँ। यह कि उक्त खनन पट्टा क्षेत्र पर अभी खनन कार्य प्रारंभ नहीं हुआ है।

मैं खनन पट्टा क्षेत्र में अनुमोदित खनन योजना के अनुसार पौधारोपण करते हुए खनन कार्य प्रारंभ करूंगा।

सादर सूचनार्थ प्रेषित।



Ashok Kr Yadav

आपका विश्वासी,

अशोक कुमार यादव  
ग्राम-बिहारी, पो0-केदलीकलां,  
हंटरगंज, जिला-चतरा।

# AKTA STONE DEPOSIT

Stone, Bolder, Balast Mnufacurer & Suppliers

ADDRESS -AKTA, PO & PS - HUNTERGANJ DIST-CHATRA, JHARKHAND

CONTACT NO:- 06201777796

Ref. No. ....

Date:- 26/09/2024

To

The District Mining Officer, Dumka

Dist:- Chatra Jharkhand

Ref.No.-

**Subject:- DSR Apporval for Minor Minerals**

Respected Sir,

As per above subject, plantation work of 200 plants has been done in my mining lease area at vill-Akta ,PS- Hunterganj , PO- Hunterganj, Dist- Chatra, Jharkhand.

This is letter is hereby submitted to your office for documentary record.

Thanking you.



AKTA STONE DEPOSIT

Sitaram Babu

Proprietor

Yours faithfully

# AKTA STONE DEPOSIT

Stone, Bolder, Balast Manufacturer & Suppliers

ADDRESS - AKTA, PO & PS - HUNTERGANJ DIST-CHATRA, JHARKHAND

CONTACT NO:- 06201777796

Ref. No. ....

Date:- 26/09/2024

To  
The District Mining Officer, Dumka  
Dist:- Chatra Jharkhand

Ref.No.-

**Subject:- DSR Apporval for Minor Minerals**

Respected Sir,

As per above subject, plantation work of 200 plants has been done in my mining lease area at vill-Akta ,PS- Hunterganj , PO- Hunterganj, Dist- Chatra, Jharkhand.

This is letter is hereby submitted to your office for documentary record.

Thanking you.



AKTA STONE DEPOSIT

*Sitaram Babu*  
Proprietor  
Yours faithfully



# M/S JAI MATA DI STONE WORKS

SIKRI, SIMARIA,  
CHATRA 825103 (JH)

Email:- [msjaimatadistoneworks@gmail.com](mailto:msjaimatadistoneworks@gmail.com)

26/9/24

To  
The District Mining Officer, Chatra  
Dist.-Chatra, Jharkhand.

Subject :- DSR Approval for Minor Minerals

Respected Sir,

As per above subject, plantation work of 350 plants has been done in my mining lease area at Vill- Sikri, PO-Simaria, PS- Simaria , Dist.- Chatra, Jharkhand. According to the approved mining Plan plantation had to be done. I will do plantation according to approved mining plan in next 06 months.

This letter is hereby submitted to your office for documentary Record.

Your Faithfully

Sikri Stone Deposit



Mob No:- 9471567900

# M/S JAI SHIV CONSTRUCTION

Email :- Brajkishortiwari1@gmail.com

Add:- Vill-Dangradih,PO- Kolhaiya,PS- Rajpur,Chatra,Jharkhand-825401

Partner-Braj Kishor Tiwary

Ref No:- .....

Date :- 25/9/24

25/9/24

To  
The District Mining Officer, Chatra  
Distt-Chatra, Jharkhand.

Subject :- DSR Approval for Minor Minerals

Respected Sir,

As per above subject, plantation work of 325 plants has been done in my mining lease area at Vill-Chataniya, PO-Tapez, PS-Chatra, Distt-Chatra, Jharkhand. According to the approved mining Plan plantation had to be done. I will do plantation according to approved mining plan in next 06 months.

This letter is hereby submitted to your office for documentary Record.



Yours faithfully  
*Braj Kishor Tiwary*  
Jai Shiv Construction

# ***M/S SIKRI STONE DEPOSIT***

**ADD – SIKRI, SIMARIYA, CHATRA, JHARKHAND (825103)**  
**CONTACT NO- (7991163101), E-Mail- sanjaybmore12@gmail.com**  
**ID – 0308337101(SANJAY KUMAR SINGH AND ASHISH KUMAR)**

DATE: 25/9/24 To,

25/9/24

The District Mining Officer,  
Chatra (Jharkhand)

**Sub :- DSR Apporval for Minor Minerals.**

Respected Sir,

As per above subject plantation work of 275 plants has been done in my mining lease area at Vill- Sikri, Khata No. 01, Plot No. 128(P), Area 3.00 acre in PO+ PS- Simriya, District- Chatra (Jharkhand). According to the approved mining Plan plantation had to be done. I will do Plantation according to approved Mining Plan in next 06 Months

This letter is hereby submitted to your good office for documentary record.

Thanking you.

Your Faithfully

Sanjay K. Singh,

M/s Sanjay Kumar Singh  
Vill- Sikri, PO+ PS- Simriya  
District- Chatra (Jharkhand)



**M/S CHATNIYA MINES**

Village :- Hosil, Pindra, Washist Nagar Jori Chatra Jharkhand , 825401

E-mail ID : mschataniyamines@gmail.com

Ref. No

Date 25/09/24

To,  
The District Mining Officer , Chatra  
Dist :- chatra , Jharkhand

**Subject :- DSR Approval For Minor Minerals**

Respected Sir ,

As Per Above Subject, Plantation Works Of plants Has Been Done in my mining lease area at mouza – chatniya , ps - washistnagar Jori chatra. According to the approved mining plan 400 tress have to be Planted .I will do plantation according to the approved mine plan in next Six month.

This letter is hereby submitted to your office for documentary record

Thanking you.



Your faithfully

**M/S CHATNIYA MINES**

Village :- Hosil, Pindra, Washist Nagar Jori Chatra Jharkhand , 825401

E-mail ID : mschataniyamines@gmail.com

Ref. No. 

Date 25/09/24.

To,  
The District Mining Officer , Chatra  
District:- Charta , Jharkhand

**Subject :- DSR Approval For Minor Minerals**

Respected Sir ,

I have been granted mining lease for mineral stone in mouza-hosil Ps-washistnagar in Charta district. I have not started production in the above mine. I will do plantation 250 trees According to the approved mine plan during production period.

This letter is hereby submitted to your office for documentary record.

Thanking you

**CHATNIYA MINES***Mukesh Kumar*

Partner

Your faithfully

**M S U ENTERPRISES**

Village :- Karmali , Jori Chatra Jharkhand ,Pin Code 825401

Ref. No.

25/9/24

Date 25/09/24.

To,  
The District Mining Officer , Chatra  
Dist :- chatra , Jharkhand

**Subject :- DSR Approval For Minor Minerals**

Respected Sir ,

As Per Above Subject, Plantation Works Of plants Has Been Done in my mining lease area at mouza –karmahi, ps - washistnagar Jori chatra. According to the approved mining plan 250 tress have to be Planted. I will do plantation according to the approved mine plan in next Six month.

This letter is hereby submitted to your office for documentary record

Thanking you.

**MSU ENTERPRISES**

Mukul Kumar

**Partner**

Your faithfully

# M/S ANJANI STONE WORKS

Village :- Dumari , Chatra Jharkhand , Pin Code 825106

25/9/24

Ref. No.....

Date 25/09/24.

To,

The District Mining Officer , Chatra

District:- Charta , Jharkhand

**Subject :- DSR Approval For Minor Minerals**

Respected Sir ,

I have been granted mining lease for mineral stone in mouza - dumri Ps-hunterganj in Charta district. I have not started production in the above mine. I will do plantation 200 trees According to the approved mine plan during production period.

This letter is hereby submitted to your office for documentary record.

Thanking you



संजीव कुमार सिंह

Your faithfully

# M/S JAI SHANKAR STONE

Mouja:-Rano Hunterganj, Chatra, Jharkhand -825403

MAIL ID :- [rajeshrano123@gmail.com](mailto:rajeshrano123@gmail.com) CONTACT NO :- 9798123281

REF NO :-

DATE:-24/09/24

सेवा में,

श्रीमान् जिला खनन पदाधिकारी, चतरा।

**Sub :- DSR Apporval for Minor Minerals.**

महाशय,

निवेदन पूर्वक कहना है कि मैं चतरा जिलान्तर्गत हंटरगंज थाना के मौजा- रनों के खाता संख्या - 10, 11, 1/7, 8/4, प्लॉट संख्या-03(P), 04(P), 06(P), 07(P), 08, 09, 10, 12, 13, 14, 14/296, 170, 171(P), 172, 173, 174, 175, 176, 177, 178, 180, 181, 182, 183, 184, 185, 186, 187, 194(P), 196, 197 एवं 198, के 5.00 एकड भूमि पर दिनांक 13.04.2023 से दस वर्षों के लिए लघु खनिज पत्थर खनन पट्टा धारण करता हूँ। यह कि उक्त खनन पट्टा क्षेत्र पर अभी खनन कार्य प्रारंभ नहीं हुआ है।

मैं खनन पट्टा क्षेत्र में अनुमोदित खनन योजना के अनुसार पौधारोपण करते हुए खनन कार्य प्रारंभ करूंगा।

सादर सूचनार्थ प्रेषित।



विश्वास भाजत्र

M/s Jayshankar Stone

राजेश कुमार सिंह  
Proprietor

# M/S JAI SHANKAR STONE MINES

Mouja:-Rano Hunterganj, Chatra, Jharkhand -825403

MAIL ID :- [jayshankarrano@gmail.com](mailto:jayshankarrano@gmail.com) CONTACT NO :- 9798123281

REF NO :-

DATE:-

24/09/24

सेवा में,

श्रीमान् जिला खनन पदाधिकारी, चतरा।

**Sub :- DSR Apporval for Minor Minerals.**

महाशय,

निवेदन पूर्वक कहना है कि मैं चतरा जिलान्तर्गत हंटरगंज थाना के मौजा- रनों के खाता संख्या - 1/7, 8/4, 10, 11 प्लॉट संख्या- 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 & 35 के 6.96 एकड़ भूमि पर दिनांक 10.05.2023 से दस वर्षों के लिए लघु खनिज पत्थर खनन पट्टा धारण करता हूँ। यह कि उक्त खनन पट्टा क्षेत्र पर अभी खनन कार्य प्रारंभ नहीं हुआ है।

मैं खनन पट्टा क्षेत्र में अनुमोदित खनन योजना के अनुसार पौधारोपण करते हुए खनन कार्य प्रारंभ करूंगा।

सादर सूचनार्थ प्रेषित।

श्रीमान् का विश्वादी

मेसर्स जयशंकर स्टोन माइन्स

पार्टनर

मेसर्स जयशंकर स्टोन माइन्स

पार्टनर



# M/S MAA TARA STONE WORKS

Village :- Hunterganj Chatra Jharkhand , Pin code 825403

25/9/24

Ref. No.....

Date 25/09/24.

To,  
The District Mining Officer , Chatra  
District:- Charta , Jharkhand

**Subject :- DSR Approval For Minor Minerals**

Respected Sir ,

I have been granted mining lease for mineral stone in mouza-hunterganj Ps-hunterganj in Charta district. I have not started production in the above mine. I will do plantation 225 trees According to the approved mine plan during production period.

This letter is hereby submitted to your office for documentary record.

Thanking you

M/S MAA TARA STONE WORKS

Mukesh Kumar

Your faithfully Patnar





Mob No:- 9939711221

# M/S BHAGWATI STONE WORKS

ALL TYPE OF STONE PRODUCTS

Email :- asahay81@gmail.com

Office Add:-Awall Mohalla Court Road ,Chatra,Jharkhand-825401

24/9/24

Ref No:- .....

Date :- 24/09/2024

To

The District Mining Officer

Chatra

SUB :- DSR Approval for Minor Minerals

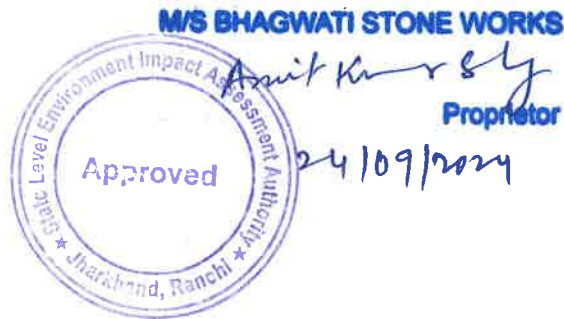
Respected Sir,

As per above subject , plantation work of 201 plants has been done in my mining lease area at Mauja :- Ambatand ,PO - Shivrajpur, PS – Lawalong , Dist – Chatra, Jharkhand.

This Letter is hereby submitted to your office for documentary record .

Thanking You

Yours Faithfully





Mob No:-9113480016

# MAHENDRA KUMAR UJALA

Pro. Rajguru stone Mines

ALL TYPE OF STONE PRODUCTS

Office Add:- Mirpur,jejlo,hunterganj,chatra,Jharkhand,825401

Ref No:- .....

*24/09/2024*

Date :- *24/09/2024*

To

The District Mining Officer

Chatra

SUB :- DSR Approval for Minor Minerals

Respected Sir,

As per above subject , plantation work of 200 plants has been done in my mining lease area at Mauja :- Rajguru ,PO – Kurkheta , PS – Jori , Dist – Chatra, Jharkhand.

This Letter is hereby submitted to your office for documentary record .

Thanking You



Yours Faithfully

*M.K. Ujala*

*24/09/2024*

To,

The District Mining Officer,  
Chatra (Jharkhand)

**Sub :- DSR Apporval for Minor Minerals.**

Respected Sir,

As per above subject plantation work of 200 plants has been done in my mining lease area at Vill- Mishrol, PO+ PS- Chatra District- Chatra (Jharkhand).

This letter is hereby submitted to your good office for documentary record.

Thanking you.

Your Faithfully

*(Signature)*

M/s Maa Suruchi Stone Works (0308337302)  
Vill- Mishrol, PO+ PS- Chatra  
District- Chatra (Jharkhand)





# Ms Rajshree Construction

Ref No:.....

Date: 24/9/24

TO  
The District mining officer chatra  
Dist -: chatra Jharkhand

Ref. No –

**Subject -: DSR Approval for minor minerals**

Respected sir,

As per above subject, plantation work of 220 Plants has been  
Done in my mining lease area at Vill -: Ichak Po -: Gangpur PS -:Gidhour  
Dist. -: Chatra Jharkhand

This letter is hereby submitted to your office for documentary record

Thanking You,

Yours faithfully



- ☎ 9035076850
- ☎ 9939603400
- ✉ msrajshreeconstruction@gmail.com
- 🌐 www.rajshreeconstruction.co.in
- 📍 AT Ichak Po Gangpur Ps Gidhour Dist Chatra Jharkhand 825408

# ईचाक स्टोन माईस वृक्षारोपन फोटोग्राफ

मेर्सस राजश्री कंस्ट्रक्शन प्रो० प्रमेश्वर साव मौजा ईचाक थाना गिद्धौर जिला चतरा झारखण्ड



Ichak, Jharkhand, India  
Unnamed Road, Ichak, Jharkhand 825408, India  
Lat 24.189268°  
Long 85.130969°  
25/09/24 11:47 AM GMT +05:30

GPS Map Camera



Ichak, Jharkhand, India  
Unnamed Road, Ichak, Jharkhand 825408, India  
Lat 24.189285°  
Long 85.131005°  
25/09/24 11:48 AM GMT +05:30

GPS Map Camera



Ichak, Jharkhand, India  
Unnamed Road, Ichak, Jharkhand 825408, India  
Lat 24.18927°  
Long 85.130974°  
25/09/24 11:48 AM GMT +05:30

GPS Map Camera



Ichak, Jharkhand, India  
Unnamed Road, Ichak, Jharkhand 825408, India  
Lat 24.189312°  
Long 85.131015°  
25/09/24 11:49 AM GMT +05:30

GPS Map Camera



# APN DEVELOPERS AND STONE PRIVATE LIMITED

(CORPORATE IDENTIFICATION NUMBER : U45309JH2017PTC010804)

Ref. No.....

24/09/24

Date 24/09/2024.....

To

The District Mining Officer

Chatra

SUB :- DSR Approval for Minor Minerals

Respected Sir,

As per above subject , plantation work of 205 plants has been done in my mining lease area at Mauja :- chataniya ,PO - Tapej, PS - Chatra , Dist – Chatra, Jharkhand.

This Letter is hereby submitted to your office for documentary record .

Thanking You

Yours Faithfully

For APN Developers & Stone Pvt. Ltd.

*Amit Kumar Singh*

Director



# ईचाक स्टोन माईस वृक्षारोपन फोटोग्राफ

मेर्सस राजश्री कंस्ट्रक्शन प्रो० प्रमेश्वर साव मौजा ईचाक थाना गिद्धौर जिला चतरा झारखण्ड

