

By E-Mail

**GOVERNMENT OF ASSAM
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS AND
HEAD OF FOREST FORCE, ASSAM
ARANYA BHAWAN, PANJABARI, GUWAHATI-37**

Email: adlpcfc.nodal@gmail.com

No. FG.27/FCA/Proposal/Lankaijuri Stone Mahal/Nagaon Divn.

Date: 30.12.2025

To,

The Special Chief Secretary (Forests) to the Government of Assam,
Environment, Forest and Climate Change Department, Dispur, Guwahati-6.

Sub: - Proposal for seeking prior approval of the Central Government under section 2 (1) (iii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 in favour of Md. Imdad Ali, Assam non-forestry use of 5.42 ha. of Reserved Forest land for operation of Lankaijuri Stone Mahal in Doboka Reserved Forest under Nagaon Division, Hojai District in the State of Assam (Online proposal No. FP/AS/QRY/155191/2022) - reg.

Ref: - Government of India letter dated 29.04.2025.

Sir,

Reference is invited to the subject and letter cited above. In this context, the undersigned is submitting herewith the information/documents as sought by the Government of India, MoEF & CC, New Delhi vide their letter dated 29.04.2025 as under-

Observation	Information Provided
No. (i)	The KML file of the safety zone has uploaded on Parivesh Portal by the User Agency on 11.11.2025 (copy enclosed).
No. (ii)	The DFO, Nagaon Division has intimated that the number of trees of the safety zone area is uploaded in Part-II on Parivesh Portal.
No. (iii)	The DFO, Nagaon Division has intimated that the proposed quarry area falls within the Kathiatoli Range, as per report submitted by the Range Officer, Kathiatoli Range vide letter dated 12.11.2025 (copy enclosed). It is also inform that the unmetalled road referenced in the observation is an existing forest road under the jurisdiction of the Nagaon South Division, Hojai. This road is not used by the local community and currently remains completely closed.
No. (iv)	The DFO, Nagaon Division has informed that the earlier approval granted for 0.9 hectare of forest land has been linked to various offences in the Kathiatoli Range involving illegal extraction and transportation of stone, sand, and gravel during the period from 2012 to 2025 under the AMMC Rules, 2013, vide letter dated 12.11.2025 (copy enclosed). The area is currently closed and is under observation by the department.

The Advisory Committee after detailed discussion and deliberation with the DIGF (Central), Regional Office, recommended that observation made in the agenda item pertaining to the Bheleguri Stone mining lease of M/s Md. Kamal Ahmed shall apply mutatis mutandis in the extant proposal also are as follows: -

Observation	Information Provided
No. (1)	The User Agency has submitted the Holistic view on proposed Lankaijuri Stone Mahal of area 5.42 hectare forest land in Doboka Reserved Forest under Nagaon Forest Division, Assam (copy enclosed).

Observation	Information Provided
No. (2)	In old final Forest Clearance approval of given site, the area allocated was 0.90 hectare. But in concerned Forest Clearance, there is neither mentioned of GPS nor of allowed production limit/capacity of minor mineral extraction. Therefore, as already reflected in DIG, Shillong letter dated 15.05.2024 is enclosed herewith, it is untraceable when excess area has been utilizes as much of the area has been reclaimed by nature. Further there is possibility of inundation by water force/land sliding, which cannot be verified now. However, various offences has been registered in Kathiatoli Range, area and in Nagaon District area for Stone/Sand Gravel in the period from 2012-2025 under AMMC Rule 2013, the details of vehicle seized, Govt. Royalty realized along with Fine/Monopoly charges is attached herewith. Though, these offences cannot be associated to any particular mahal area.
No. (3)	This particular observation related to production capacity has not been found in case of Lankaijuri mahal in the inspection report of Regional Office, Shillong. However, the User Agency has submitted an undertaking not to extract any minor mineral beyond diverted area for meeting the targeted production (copy enclosed).
No. (4)	The proposed Lankaijuri Stone Mahal is in 500 m distance between Modertoli Stone Mahal No. 2 & 4. Also as individual EC have already obtained for this mahal, after receiving In-Principle Approval; it is recommended that cluster mining approach for all of these mines shall be followed, where cluster EIA/EMP report shall be prepared as per MoEF & CC notification S.O. 141 (E) dated 15.01.2016.

It is requested that the aforementioned details may be communicated to the Government of India, MoEF&CC, New Delhi for further processing of the proposal.

Encl: As above.

Yours faithfully,



(Dr. C Muthukumaravel, IFS)
Chief Conservator of Forests &
Nodal Officer (FC Act), Assam

O/o the Principal Chief Conservator of Forests and
Head of Forest Force, Assam

Copy to:

1. The Chief Conservator of Forests, Northern Assam Circle, Tezpur.
2. The Divisional Forest Officers, Nagaon Division, Nagaon.



Chief Conservator of Forests &
Nodal Officer (FC Act), Assam
O/o the Principal Chief Conservator of Forests and
Head of Forest Force, Assam



GOVERNMENT OF ASSAM

DEPARTMENT OF ENVIRONMENT & FORESTS, ASSAM

OFFICE OF THE DIVISIONAL FOREST OFFICER: NAGAON DIVISION NAGAON

Phone & Fax No. 03672-233610

Email ID- dfonagaont@gmail.com.

Letter No. FNGT/A/74(Part-I)/Lankajuri Stone Mahal/2025/ 6907 - 30

Dated- 25/11/2025

To,

The Chief Conservator of Forests,
Northern Assam Circle, Tezpur.

Sub:

Proposal for seeking prior approval of the Central Government under section 2 (1) (ii) of the van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 in favour of Md. Imdad Ali, Assam non-forestry use of 5.42 ha. of Reserved Forest land for operation of Lankajuri Stone Mahal in Doboka Reserved Forest under Nagaon Division, Hojai District in the state of Assam (Online proposal No. FP/AS/QR/155191/2022)- regarding.

Ref:-

The CCF, Nodal Officer (F.C Act.), Assam letter No.FG.27/FCA/Proposal/
Lankajuri Stone Mahal/Nagaon Divn. dtd. 23/05/2025.

Sir,

With reference to the subject cited above, I have the honour to furnish herewith the information documents as quarry raised by the Government of India, MoEF & CC, Indira Paryavaran Bhawan, New Delhi regarding for clarification and lacking information/document are observed of Lankajuri Stone Mahal in Doboka Reserve Forest under Nagaon Division, Nagaon in favour of Md. Imdad Ali are as follows:

Sl. No.	Points	Compliance
1	The KML file of the proposed area depicting the safety zone area should be uploaded on PARIVESH by the State Government.	KML file of the safety zone has uploaded on Parivesh portal by the user agency vide letter dtd. 11/11/2025 (Copy enclosed herewith Annexure- I)
2	Discrepancies in the area of safety zone and number of trees as revealed in the inspection report shall be rectified and accordingly updated in the online proposal in PARIVESH.	Numbers of trees of the safety zone has uploaded in Part-II on Parivesh portal by the DFO, Nagaon Division.
3	Examination of Google Earth Satellite Imagery revealed an unmetalled road in the area proposed for diversion. The State Government may clarify whether the said road is being used by the local community for connectivity or otherwise and alternate means of connectivity, if required.	The proposed quarry area falls within the Kathiatoli Range; as per report submitted by the Range Officer, Kathiatoli, vide Letter No. KT/33(Stone Mahal)/2025 /2032 dated 12/11/2025 (copy enclosed herewith Annexure- II), The unmetalled road referenced in the observation is an existing forest road under the jurisdiction of the Hojai Division. This road is not used by the local community and currently remains completely closed
4	Violation of the conditions of earlier approval granted for 0.9 ha of forest land by utilizing excess area than the approved area has been reported by the Regional Office. Action taken by the State Government against the illegal mining as per extant Acts including the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 will be furnished by the State.	The Range officer has registered various offences in the Kathiatoli Range area for illegal extraction and transportation of stone, sand, and gravel during the period from 2012 to 2025 under the AMMC Rules, 2013 vide Letter No. KT/33(StoneMahal)/2025/2032 dated 12/11/2025 (copy enclosed herewith Annexure- II).

The Advisory Committee after detailed discussion and deliberation with the DIGF (Central), Regional Office, recommended that observations made in the agenda item pertaining to the Bheleuguri Stone mining lease of M/s Md. Kamal Ahmed shall apply mutatis mutandis in the extant proposal also are as follows:

Sl. No.	Points	Compliance
1	To have a holistic view of the area, details of total mines operating in the areas, closed, and new mining leases proposed by the State may be furnished along with the detail of area involved and status of approval, if any, obtained under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.	Holistic View on proposed Lankaijuri Stone Mahal of area 5.42 Ha Forest land in Doboka Reserved Forest under Nagaon Forest Division, Assam is enclosed Annexure-III herewith. This Holistic View has prepared by Ecorescue Enviro Consulting Services Pvt. Ltd., the User Agency has submitted to this office vide letter dtd. 01-11-2025.
2	The Regional Office in its inspection report has reported excess area worked out by the user agency in the already approved area. Detail of excess production, if any, realized from the approved area and remedial or penal action, including action under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, taken by the State Government may be informed to the Ministry.	In old final FC approval of given site, the area allocated was 0.90 ha. But in concerned Forest Clearance, there is neither mention of GPS nor of allowed production limit/capacity of minor mineral extraction. Therefore, as already reflected in DIG, RO, Shillong letter dtd. 15/05/2024 is enclosed Annexure-IV herewith, it is untraceable when excess area has been utilized as much of the area has been reclaimed by nature. Further there is possibility of inundation by water force/land sliding, which can not be verified now. However, various offences has been registered in Kathiatoli Range, area and in Nagaon District area for Stone/Sand Gravel in the period from 2012-2025 under AMMC Rule 2013, the details of vehicle seized, Govt. Royalty realized along with Fine/Monopoly charges is attached Annexure-V herewith. Though, these offences cannot be associated to any particular mahal area.
3	The State Government may furnish its comments on the observation of the Regional Office regarding production capacity of the mining lease which appears to be not attainable given the area proposed for diversion.	This particular observation related to production capacity has not been found in case of Langkaijuri mahal in the inspection report of Regional office, Shillong. However, the user agency has submitted an undertaking not to extract any minor mineral beyond diverted area for meeting the targeted production. (undertaking attached Annexure-VI herewith)
4	The State Government shall clarify whether the extant mining lease and other mining leases, proposed in the Doboka Reserved Forest, fulfills the criteria of cluster mining as per the relevant guidelines issued by the Ministry.	The proposed Lankaijuri stone mahal is in 500 m distance between Modertoli Stone Mahal No. 2 & 4. Also as individual EC have already obtained for this mahal, after receiving in-principle approval; it is recommended that cluster mining approach for all of these mines shall be followed, where cluster EIA/EMP report shall be prepared as per MoEF & CC notification S.O. 141 (E) dtd. 15-01-2016.

This is for favour of your kind information and necessary action.

Yours faithfully

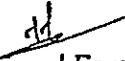
Enclosed: As stated above.


Divisional Forest Officer
Nagaon Division, Nagaon

428

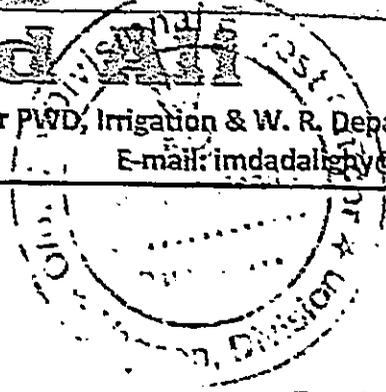
Copy for favour of his kind information and necessary action to:-

1. The Principal Chief Conservator of Forests and HoFF, Assam, Panjabari, Guwahati-37.
2. The Addl. Principal Chief Conservator of Forests (T), Upper Assam Zone, Jorhat-I.
3. The Chief Conservator of Forests, Nodal Officer (F.C Act.), Assam. O/o the Principal Chief Conservator of Forests & HoFF, Assam, Panjabari, Guwahati-37.


Divisional Forest Officer
Nagaon Division, Nagaon

Imdad Ali

Govt. Registered Class-1 (A) Contractor under PWD, Irrigation & W. R. Department
 Phone : 0361-2333262, Mob: 9435562929
 E-mail: imdadali@gmail.com



Animesh

To,

The Divisional Forest Officer,
 Nagaon Division, Nagaon

Dated. 11/11/2025

Sub:

Submission of KML files of 7.5 mtr. (Area 0.63 Ha.) as per direction of MoEF & CC for Proposed Lankajuri Stone Mahal under Nagaon Division (FC proposal No. FP/AS/QR/155191/2022).

Ref:

The Govt of India, MoEF & CC vide File No. 3ASC/148/2022-GHY
 dtd. 29/04/2025

Sir,

I have the honour to inform you that as per letter received from Govt of India, MoEF & CC vide File No. 3ASC/148/2022-GHY dtd. 29/04/2025, the KML file of the proposed area depicting the safety zone area should be uploaded on PARIVESH. So, I am hereby uploading on 06/11/2025 of the KML files of 7.5 mtr Safety Zone (Area 0.63 Ha.) Proposed Lankajuri Stone Mahal in parivesh portal.

This is for favour of your kind information and necessary action.

Yours faithfully

(Imdad Ali)

Mathura Nagar,
 Dispur, Guwahati-6


 GOVERNMENT OF ASSAM
 DEPARTMENT OF ENVIRONMENT & FOREST
 OFFICE OF THE FOREST RANGE OFFICER, KATHIATOLI FOREST RANGE
 KATHIATOLI, NAGAON, ASSAM

Letter No. KF 33 Stone Mahal 2025/2032

Dated: 12/11/2005

To

The Divisional Forest Officer
Nagaon Division, Nagaon (Assam)

Sub

Submission of point with site verification of 5.42 ha of forest land for operation of Lankajuri Stone Mahal in favour of Md. Imdad Ali under Doboka Reserved Forest

Sir,

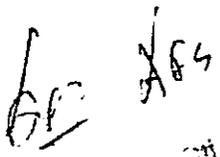
With reference to the subject cited above, I have the honour to submit the following information regarding the field verification of the proposed diversion of 5.42 ha of forest land under Doboka Reserved Forest for the operation of Lankajuri Stone Mahal in favour of Md. Imdad Ali:

1. The KML file of the proposed area depicting the safety zone area has been uploaded on PARIVESH by user agency.
2. No tree has been found inside or outside the safety-zone area, hence, there is no need for any rectification in the proposal.
3. The proposed quarry area falls within the Kathiatoli Range of the Nagaon Division; however, the unmetalled road referenced in the observation is an existing forest road under the jurisdiction of the Hojai Division. This road is not used by the local community and currently remains completely closed.
4. Regarding the reported excess area of 0.9 ha, as per office records, various offences have been registered under the Range jurisdiction for stone/sand gravel during the period 2012-2025 under the AMMC Rule, 2013. The area is presently closed and under observation by the department.

This is for favour of your kind information and necessary action.

Encl:

GPS Photographs of the verified site.
Copy Statement offence cases


 Range Forest Officer
 Kathiatoli Range, Kathiatoli
 Nagaon Division, Nagaon

Details of Offence Cases under Kathiatoli Range, Kathiatoli of Nagaoon Division

Sl. No.	For the Year	Name of Range	Type of materials (in m3)		Royalty collected from Stone			No. of Vehicles Seized	Royalty collected from Sand Gravel		No. of Vehicles Seized
			Stone		Royalty with penalty	Fine	Tax		Royalty with penalty	Fine	
1	2012-13		7		1820	1000	146	1	0	0	0
2	2013-14		20		9720	20000	1314	2	0	0	0
3	2014-15		144		88687	120000	7728	12			
4	2015-16		9551		4688	30000	622	3	36405	18001	531
5	2016-17		98371		53751	210000	4570	20	6862	10000	3051
6	2017-18	Kathiatoli Range.	45876		22300	122000	1955	10	42101	10000	303
7	2018-19	Kathiatoli	795		55671	155000	4067	11	12	120000	1654
8	2019-20		26		11960	90000	919	5	40000	40000	35
9	2021-22		835		62688	95000	4185	3	20000	20000	345
10	2022-23		2		2248	25000	169	1	0	0	0
11	2023-24		9881		111062	127000	8385	5	8	40000	423
12	2024-25		335		376540	155000	62493	4	10	0	648
TOTAL			949,608		801135	1150000	96553	77	125,368	62500	7612

CS

H
Divisional Forest Officer
Nagaoon Division, Nagaoon

Nagaoon Division, Nagaoon

422
187

- planted : :
- Area in ha. : :
- Year : :
- Expenditure : :
- (b) If compensatory plantation not made, the reasons for the lapse : :
- (c) Condition of plantation : :

Percentage of survival :
 Average height:
 Average girth:

9. Remarks: It should be mentioned that the plantations are identified as specifically related to the project :

Part III
 (Planting of dwarf trees in cases of transmission line)
NOT APPLICABLE

- 1. No. of trees planted : :
- 2. Species : :
- 3. Year of planting : :
- 4. Expenditure paid by : Rs. Paid
by
- 5. Present condition of plantation : :

Percentage of survival
 Average height
 Average girth

Part-IV
 (Reclamation of the area worked under mining/quarrying)

- 1. Mining/quarrying work completed:
 - Area in ha: 0.9 ha
 - Year : 2008-
- 2. Reclamation work done :
 - Items of work : No details available
 - Area in ha : :
 - Year : :
 - Expenditure : :
- 3. Present condition of the area worked/reclaimed : The approval was granted in 2008 and has since been worked as per the mining plan which is for 5 years or till the exhaustion of mineral whichever is earlier. There are no signs of reclamation on the ground. The area mined looks barren except for grass and shrubs.

PART-V

(Conditions stipulated by the Government of India other than mentioned above)

Sl. No.	Stipulations	Action taken.
1.	Legal status of the diverted forest land shall remain unchanged:	Complied with
2.	Additional amount of the NPV of the diverted forest land, if any, becoming due after revision of rates by Hon'ble Supreme Court of India during the validity period tenure of forest diversion, shall be charged by the State Government from the User Agency. The User Agency shall furnish an undertaking of this effect.	Not required.
3.	The State Govt. shall take all precautionary measures to ensure that the neighbouring forests are not adversely impacted due to stone collection during the lease period.	The area of approval is 0.90 ha however as per GE it appears that area is affected beyond that.
4.	User Agency shall demarcate the length & breadth of the diverted area with 6 feet RCC pillars with a Sign Board describing the diverted area on the approachable side.	NO demarcation pillars seen on ground
5.	User Agency shall not remove Stone Boulders Bajri etc. in a way to expose area to soil erosion and they shall also take all suitable measures to prevent probable erosion as well as land slip due to quarry operation or collection of stones.	The mined area is exposed and erosion in earlier years cannot be ruled out
6.	All the materials including stone, boulder bajri, removed from the mahal shall be for supply to NHAI and other Govt. projects only.	The project period is expired more than ten years ago
7.	No labour camps shall be set up at the sites or in the Reserve Forest nearby for the labour involved in the extraction works and user agency shall ensure that no illicit removal of forest produce takes place surrounding their quarry site.	Complied with
8.	No stone crusher shall be set up near National Highway or near quarry site without proper permission under relevant rules from competent authorities.	The project period is expired more than ten years ago
9.	There shall not be any tree felling and removal of natural forest beyond leased area.	The project period is expired more than ten years ago
10.	The user agency shall not make any fresh approach road over any part of forest land, but may use exiting forest roads after due permission of competent Officer of Forest Department.	Only one approach road is seen.

PART-VI

(Conditions informed by the State Government in addition to the Government of India's conditions and other steps taken to preserve forest, wildlife and prevent soil erosion, etc.)

NIL

PART-VII

1. Whether any committee has been formed for monitoring of the action :NO

421
AS/5
4

on the conditions stipulated

- 2. If no. give reasons. If yes, give details of the committee :Not required
- 3. Report of the Monitoring Committee, if any

PART-VIII

- 1. Abstract report of inspection of forest officers, if any : NIL
- 2. Remarks of the D.I.G.F in regard to progress of the action on the stipulated conditions : As given below
- 3. Effect of the project on forest and wildlife : The project has affected the forest and Wildlife being mining project.

Yes/No

General Observations:

With regards to compliance of condition to the approval of the ministry it disheartening to see that no demarcation of mining site has been done not only for this project but all mining project in general in the state. In the absence of demarcation of boundary the extension of mining beyond approved area is bound to happen wherein in the case of Lankajuri mine though the approved area is 0.9 ha the affected area is much much more as observed in the field and further analysed under Google earth/DSS. However it cannot be said if the illegal mining if any is done by the previous user agency or by others.

The project was approved in 2008 and has since been worked perhaps for five years as prescribed in the mining plan, therefore, the mine has been closed more than 10 years ago and the impact of mining in the forest has since been recovered to some extent by mother nature wherein some vegetation in form of shrub and seedling and pole size trees are visible on the ground. The worked/surrounding area has been degraded because of the mining.

W. I. Yatbon
.....15/3/24
(Signature)

Name and designation of Inspecting Officer :W. I. Yatbon
Deputy Inspector General of Forests (C)

Date of Inspection : 26.03.2024.

Date of submission of Report:

Details of Offence Cases under Kathiatoli Range, Kathiatoli of Nagaon Division

Sl. No.	For the Year	Name of Range	Type of materials (in m3)		Royalty collected from Stone			No. of Vehicles Seized	Type of materials (in m3)		Royalty collected from Sand & Gravel			No. of Vehicle Seized
			Stone		Royalty with penalty	Fine	Tax		Sand	Gravel	Royalty with penalty	Fine	Tax	
1	2012-13		7		1820	1000	146	1	0	0	0	0	0	
2	2013-14		20		9720	20000	1314	2	0	0	0	0	0	
3	2014-15		144		88687	120000	7728	12	36,405	3122	10000	531	1	
4	2015-16		9,551		4688	30000	622	3	6,862	18001	50000	3061	4	
5	2016-17		98,371		53751	210000	4570	20	42,101	2072	10000	363	1	
6	2017-18	Kathiatoli Range,	45,876		22300	122000	1955	10	12	16621	120000	1684	12	
7	2018-19	Kathiatoli	79,5		55671	155000	4067	11	12	1244	40000	357	3	
8	2019-20		26		11960	90000	919	5	10	4600	20000	345	1	
9	2021-22		83,5		62688	95000	4185	3	0	0	0	0	0	
10	2022-23		2		2248	25000	169	1	8	5600	40000	423	1	
11	2023-24		98,81		111062	127000	8385	5	10	11240	60000	848	2	
12	2024-25		335		376540	155000	62493	4	0	0	0	0	0	
TOTAL			949,608		801135	1150000	96553	77	125,368	62500	350000	7612	25	

Countersigned

[Signature]

Divisional Forest Officer
Nagaon Division, Nagaon

Range Forest Officer
Kathiatoli Range, Kathiatoli

[Signature]



सत्यमेव जयते

INDIA NON JUDICIAL

Government of Assam

e-Stamp

Certificate No.	: IN-AS97532134086761X
Certificate Issued Date	: 11-Nov-2025 04:02 PM
Account Reference	: CSCACC (GV)/ ascscceg07/ AS-HJAZA0326/ AS-HJ
Unique Doc. Reference	: SUBIN-ASASCSCSEG0779725555518079X
Purchased by	: Imdad Ali
Description of Document	: Article 4 Affidavit
Property Description	: Undertaking
Consideration Price (Rs.)	: 0 (Zero)
First Party	: Imdad Ali
Second Party	: Forest Department
Stamp Duty Paid By	: Imdad Ali
Stamp Duty Amount(Rs.)	: 100 (One Hundred only)



Please write or type below this line

Undertaking

I Md. Imdad Ali, hereby undertake that no extraction of minor minerals shall be carried out beyond the proposed Lankajuri Stone Mahal of area 5.42 Ha Forest land in Doboka Reserved Forest under Nagaon Forest Division, Assam, even if required to meet the targeted production.

0021536319

Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at www.stampcertificateregistry.com or using a Stamp Mobile App of State. Neither any discrepancy in the content of the Certificate and as available on the website / Mobile App renders it invalid.
2. The intent of checking the legitimacy is for the users of the certificate.
3. In case of any discrepancy, please inform the Competent Authority.



GOVERNMENT OF ASSAM

DEPARTMENT OF ENVIRONMENT & FORESTS, ASSAM

OFFICE OF THE DIVISIONAL FOREST OFFICER: NAGAON DIVISION NAGAON

Phone & Fax No. 03672-233610

Email ID- dfonagaont@gmail.com.

Letter No. FNGT/A/74(Part-I)/Lankajuri Stone Mahal/2025/ 6927-30

Dated- 25/11/2023

To,

The Chief Conservator of Forests,
Northern Assam Circle, Tezpur.

Sub:

Proposal for seeking prior approval of the Central Government under section 2 (1) (ii) of the van (Sanrakshan Evam Samvardhan) Adhinyam, 1980 in favour of Md. Imdad Ali, Assam non-forestry use of 5.42 ha. of Reserved Forest land for operation of Lankajuri Stone Mahal in Doboka Reserved Forest under Nagaon Division, Hojai District in the state of Assam (Online proposal No. FP/AS/QR/155191/2022)- regarding.

Ref:-

The CCF, Nodal Officer (F.C Act.), Assam letter No.FG.27/FCA/Proposal/
Lankajuri Stone Mahal/Nagaon Divn. dtd. 23/05/2025.

Sir,

With reference to the subject cited above, I have the honour to furnish herewith the information documents as quarry raised by the Government of India, MoEF & CC, Indira Paryavaran Bhawan, New Delhi regarding for clarification and lacking information/document are observed of Lankajuri Stone Mahal in Doboka Reserve Forest under Nagaon Division, Nagaon in favour of Md. Imdad Ali are as follows:

Sl. No.	Points	Compliance
1	The KML file of the proposed area depicting the safety zone area should be uploaded on PARIVESH by the State Government.	KML file of the safety zone has uploaded on Parivesh portal by the user agency vide letter dtd. 11/11/2025 (Copy enclosed herewith Annexure- I)
2	Discrepancies in the area of safety zone and number of trees as revealed in the inspection report shall be rectified and accordingly updated in the online proposal in PARIVESH.	Numbers of trees of the safety zone has uploaded in Part-II on Parivesh portal by the DFO, Nagaon Division.
3	Examination of Google Earth Satellite Imagery revealed an unmetalled road in the area proposed for diversion. The State Government may clarify whether the said road is being used by the local community for connectivity or otherwise and alternate means of connectivity, if required.	The proposed quarry area falls within the Kathiatoli Range; as per report submitted by the Range Officer, Kathiatoli, vide Letter No. KT/33(Stone Mahal)/2025 /2032 dated 12/11/2025 (copy enclosed herewith Annexure- II), The unmetalled road referenced in the observation is an existing forest road under the jurisdiction of the Hojai Division. This road is not used by the local community and currently remains completely closed
4	Violation of the conditions of earlier approval granted for 0.9 ha of forest land by utilizing excess area than the approved area has been reported by the Regional Office. Action taken by the State Government against the illegal mining as per extant Acts including the Van (Sanrakshan Evam Samvardhan) Adhinyam, 1980 will be furnished by the State.	The Range officer has registered various offences in the Kathiatoli Range area for illegal extraction and transportation of stone, sand, and gravel during the period from 2012 to 2025 under the AMMC Rules, 2013 vide Letter No. KT/33(StoneMahal)/2025/2032 dated 12/11/2025 (copy enclosed herewith Annexure- I).

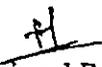
The Advisory Committee after detailed discussion and deliberation with the DIGF (Central), Regional Office, recommended that observations made in the agenda item pertaining to the Bheleuguri Stone mining lease of M/s Md. Kamal Ahmed shall apply mutatis mutandis in the extant proposal also are as follows:

Sl. No.	Points	Compliance
1	To have a holistic view of the area, details of total mines operating in the areas, closed, and new mining leases proposed by the State may be furnished along with the detail of area involved and status of approval, if any, obtained under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.	Holistic View on proposed Lankajuri Stone Mahal of area 5.42 Ha Forest land in Doboka Reserved Forest under Nagaon Forest Division, Assam is enclosed Annexure-III herewith. This Holistic View has prepared by Ecorescue Enviro Consulting Services Pvt. Ltd., the User Agency has submitted to this office vide letter dtd. 01-11-2025.
2	The Regional Office in its inspection report has reported excess area worked out by the user agency in the already approved area. Detail of excess production, if any, realized from the approved area and remedial or penal action, including action under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, taken by the State Government may be informed to the Ministry.	In old final FC approval of given site, the area allocated was 0.90 ha. But in concerned Forest Clearance, there is neither mention of GPS nor of allowed production limit/capacity of minor mineral extraction. Therefore, as already reflected in DIG, RO, Shillong letter dtd. 15/05/2024 is enclosed Annexure-IV herewith, it is untraceable when excess area has been utilized as much of the area has been reclaimed by nature. Further there is possibility of inundation by water force/land sliding, which can not be verified now. However, various offences has been registered in Kathiatoli Range, area and in Nagaon District area for Stone/Sand Gravel in the period from 2012-2025 under AMMC Rule 2013, the details of vehicle seized, Govt. Royalty realized along with Fine/Monopoly charges is attached Annexure-V herewith. Though, these offences cannot be associated to any particular mahal area.
3	The State Government may furnish its comments on the observation of the Regional Office regarding production capacity of the mining lease which appears to be not attainable given the area proposed for diversion.	This particular observation related to production capacity has not been found in case of Langkajuri mahal in the inspection report of Regional office, Shillong. However, the user agency has submitted an undertaking not to extract any minor mineral beyond diverted area for meeting the targeted production. (undertaking attached Annexure-VI herewith)
4	The State Government shall clarify whether the extant mining lease and other mining leases, proposed in the Doboka Reserved Forest, fulfills the criteria of cluster mining as per the relevant guidelines issued by the Ministry.	The proposed Lankajuri stone mahal is in 500 m distance between Modertoli Stone Mahal No. 2 & 4. Also as individual EC have already obtained for this mahal, after receiving in-principle approval; it is recommended that cluster mining approach for all of these mines shall be followed, where cluster EIA/EMP report shall be prepared as per MoEF & CC notification S.O. 141 (E) dtd. 15-01-2016.

This is for favour of your kind information and necessary action.

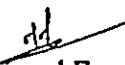
Yours faithfully

Enclosed: As stated above.


Divisional Forest Officer
Nagaon Division, Nagaon

Copy for favour of his kind information and necessary action to:-

1. The Principal Chief Conservator of Forests and HoFF, Assam, Panjabari, Guwahati-37.
2. The Addl. Principal Chief Conservator of Forests (T), Upper Assam Zone, Jorhat-1.
3. The Chief Conservator of Forests, Nodal Officer (F.C Act.), Assam. O/o the Principal Chief Conservator of Forests & HoFF, Assam, Panjabari, Guwahati-37.


Divisional Forest Officer
Nagaon Division, Nagaon

914

HOLISTIC STUDY ON MINING OF STONE FROM 5.0 Ha LANKAJURI STONE MAHAL



Ecorescue Enviro Consulting Services Private Limited

Abhishek Bora

Director

M. S. S.

Prepared by:

Ecorescue Enviro Consulting Services Pvt. Ltd

Office address: 2F/3, Beaufort Apartment

Basisthapur bylane-3, Guwahati, Dispur, Assam

9/13

Draft outline - Holistic Study on Mining Projects of Minor Minerals in Forest Area

1. **Introduction:**
2. **Study area**
3. **Methodology**

3.1 Preliminary Research and Scoping:

- **Literature Review:** Gather existing information on the quarry site, including geological surveys, environmental impact assessments (EIAs), previous research and regulatory documents.
- **Stakeholder Identification:** Identify all relevant stakeholders (e.g., local communities, environmental agencies, biodiversity committee, quarry operators, government bodies etc.) who may be impacted or have an interest in the quarry's operation.

3.2 Fieldwork and Data Collection:

- **Geological Survey:** Analysis of geology of the quarry, rock types, mineral deposits and structural characteristics and testing of rock samples for its quality and durability.
- **Environment Assessment:** Biodiversity survey (Flora, fauna, potential risk to endangered species etc.), Water quality, Air Quality, Noise and Vibration assessment etc.)
- **Social Impact Study:** Community Survey (How Quarry effects the livelihood, health & social environment of the locals), Employment generation (assessment of local job creation, wages, working conditions etc.)
- **Economy and market analysis:** Assessment of demands of stone extracted, current market trends, pricing and competition.

3.3 Stakeholder Consultation and Engagement

- **Public Consultation Meetings:** Community meetings to share preliminary findings with stakeholders, including local communities, environmental groups and regulatory agencies.
- **Feedback Collection:** Gathering of inputs from stakeholders on their concerns, observations, and recommendations for mitigating negative impacts or improving quarry operations.

3.4 Development of Mitigation and Sustainability Plans.

- **Environmental Mitigation Plan:** Development of strategies to minimize ecological damage, such as afforestation, habitat conservation, water resource management and air quality control.
- **Social Development Plan:** Proposing initiatives to improve the quarry's social impact, such as community benefit-sharing programs, health and safety improvements for workers, and local employment targets.

- 5/12
- **Rehabilitation and Restoration Plan:** Creation of long-term plan for land reclamation, including filling and reshaping the landscape, revegetation, and restoring biodiversity after quarry closure.
 - **Circular Economy Practices:** Recommendation of ways to recycle quarry waste or convert by-products into usable materials to reduce the quarry's environmental footprint.

4. Discussion

5. Conclusion and Recommendations

CONTENT

TITLE	PAGE NO.
1. INTRODUCTION	1
2. STUDY AREA OF THE PROPOSED PROJECT	6
3. METHODOLOGY	16
4. DISCUSSION	41
5. CONCLUSION & RECOMMENDATIONS	42

1.0 INTRODUCTION

Mining has become increasingly difficult for societal and environmental reasons all over the world. There is an increasing competition with other land uses, water and energy are scarce in many important mining regions. People are not ready to radically reduce the use of mineral-based products, but increasingly oppose mining. The industry faces major challenges to improve its performance and image.

The Sustainable Mining concept rather we can say a holistic approach to developed as a major tool to make the forerunner in sustainable mining. It promotes material, water, and energy efficiency to reduce the environmental footprint of mineral-based product life cycles. SM allows the recovery of all useful minerals and minimizes mining waste. SM aims to ensure the availability of mineral resources for future generations, which requires long-term investment in mineral exploration supported by geoscientific mapping, mineral systems research and the development of exploration techniques. An important goal of SM is to minimize adverse environmental and social impacts in all stages of the operations, and to maximize local benefits. SM helps to organize the operations in such a way that they are safe and meaningful to employees, and harmless for local residents and the environment. After mine closure, SM helps to restore the mining areas to make them safe and preferably to allow other types of land use. The broad-based participation of local residents and other stakeholders is crucial throughout the mining life cycle, from early exploration to mine closure.

Societies, governments, and investors should not tolerate unsustainable mining companies in the future. The mining industry has to solve increasing social, ecological and technical problems of the future by applying holistic concepts, such as the Sustainable Mining concept, if they hope to earn the social license to operate.

This chapter contains the general information of the proposed project such as the background of the project, the profile of the project proponent, name and contact address with e-mail, project consultants, the purpose of the project, brief description of the project, with its importance, applicable environmental regulations.

409

**Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli,
District-Hojai, State- Assam**

1.1 PREAMBLE:

The mining plan and progressive Mine closure plan has been prepared as per Rule 52(1) of the Assam Minor Mineral Concession Rules (AMMCR) 2013 for the proposed stone Quarry at Lankaijuri Stone Quarry of 2020-25. The forest department has awarded LOI for 5 (five) years, and the Mining Plan has been prepared in favour of Imdad Ali, for 5 (five) years, as recommended by the competent authority, the Directorate of Geology and Mining, Government of Assam. The location of the quarry site as has been recommended by the Department of Environment and Forest. Government of Assam.

It is a new mining lease that lies in toposheet of 83B/16 of zone 46. Mine lease was granted on 29.09.2021 vide Letter no. FNGT/ B/ Langkaijuri Stone Mahal/ 2021/ 4257-58 for a period of 5 years by the Office of the Divisional Forest Officer, Nagaon Forest Division, Hojai, Govt of Assam. Mine plan was prepared by registered RQP Dr. Abhijit Bora of Directorate of Geology and Mining, Govt. of Assam. The mining plan was approved by Directorate of Geology and Mining for the period of five (5) years for Mining of stone from Langkaijuri Stone Mahal of 2020-25

1.2 IDENTIFICATION OF THE PROJECT AND PROJECT PROPONENT:

1.2.1. Identification of the project:

The proposed project of 'Lankaijuri Stone Mahal' of 2022-29' is a mining project within Modetoli Gaon area under Nagaon Forest Division, District: Hojai, Assam. Imdad Ali had applied via tender for participating in E- Auction of Langkaijuri Stone Mahal of 2020-2025. A petrological study was done for assessment of mineral classification and the same has been enclosed as Annexure 1.

The block area comprises of 5.0 Ha. The E-Auction process was conducted in accordance with the tender documents and Imdad Ali was declared as preferred bidders. Then Office of the Divisional Forest Officer, Nagaon Division, Nagaon, Govt of Assam had issued the LOI vide letter No. FNGT/ B/ Langkaijuri Stone Mahal/ 2021/ 4257-58, dtd. 29.09.2021. Copy of LoI is enclosed as Annexure 2.

As per the LOI issued, the lessee had to submit approved mining plan under 52 (1) of Assam Minor Mineral Concession Rules 2013. Hence Imdad Ali had engaged RQP Abhijit Bora to

508

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli,
District-Hojai, State- Assam

prepare the mining Plan by following the guidelines prescribed Assam Minor Mineral Concession Rules 2013 and other allied statutes for preparation of quarry plan. The quarry plan was approved by Department of mining and Geology, Govt. of Assam for five years vide letter no. FNGT/ B/ Langkaijuri Stone Mahal/ 2021/ 4257-58, dtd. 29.09.2021.

The approved mining plan with progressive mine closure plan has been enclosed as Annexure 3. Further, the Environment Management Plan has been enclosed herewith as Annexure 4.

1.2.2. Identification of project proponent:

Imdad Ali with his office address at H.No.11, Purbanchal Path Mathura Nagar is identified as the project proponent. Imdad Ali intends to open a quarry of stone at forest land near Modertoli Gaon, P.O. Modertoli, P.S. Doboka, District: Hojai (Assam) under Kathiatoli Range of Nagaon Forest Division District: Nagaon, Assam, for production of stone to meet up the local demand of stones.

1.3 Brief description of the nature, size and location of the project:

The proposed project of 'Lankaijuri Stone Mahal' having an area of 5.0 Ha and situated near Modertoli area, District: Hojai (Assam) under Kathiatoli Range of Nagaon Forest Division District: Nagaon, Assam. The proposed method of mining is open cast semi mechanized mining.

The details of salient features of the proposed project are given in Table 1.1.

TABLE 1.1
SALIENT FEATURES OF THE PROPOSED STONE QUARY PROJECT

Sl. No.	Particulars	Descriptions
1.	Name of Project	Langkaijuri Stone Mahal
2.	Location	Near Modertoli Gaon, District: Hojai (Assam) under Kathiatoli Range of Nagaon Forest Division District: Nagaon, Assam

507

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli,
District-Hojai, State- Assam

3.	Name of Applicant	Imdad Ali
4.	Registered Address	H. No. 11, Purbanchal Path Mathura Nagar, Dispur, Guwahati-06, Assam
5	Project brief	<ul style="list-style-type: none"> • The proposed stone quarry mining project area is 5.0 Ha • The proposed production of the stone quarry is 40,000 Cu.M/year • The method of mining will be open cast semi mechanized mining. • Blasting is applicable for the proposed Stone quarry mining project.
6	Capacity of Proposed Production per annum	40,000 Cu. m per year (Average)
7	Drilling Blasting	Blast hole drilling will be carried out by compressed air operated drills and blasting by Gelatin and detonators to break the hard and compact stone
8	Method of Mining	Semi-mechanised opencast mining
9	Lease Period	7 Years (Approved mine plan for 5 years)
10	Lease Area	5.0 Hectares
11	Land Use Pattern of the Lease Area	The proposed area consists of degraded forest area, mainly covered with small tree shrubs and exposed rock outcrop.
12	Geological Reserve	<p>Area of proposed site = 5.0 Hectares; Mineable area=5.0 Hectares (40,900 Sq. M)</p> <p>Total mineable Reserve in Cu.M (approx.) = 25,00,000</p>
13	Project Cost	Rs. 1050 lakhs

Ecorescue Enviro Consulting Services Private Limited

Abhijit Bora

Director

5

[Signature]

2.0 STUDY AREA OF THE PROPOSED PROJECT

2.1 Project Location & Description of the Area:

Langkaijuri Stone Mahal in Doboka Reserve Forest under Nagaon Forest Division is about 1.5 km from NH 27 and is located at Modertoli Village under Doboka revenue Circle. The proposed site is located within the jurisdiction of Kathiatoli Range under Nagaon forest division.

The site is about 9.6 km away from Jamunamukh railway station. Nearest Highway is NH- 27 and nearest airport is LGBI Airport. Nearest police station is at Jamunamukh, about 12 km away.

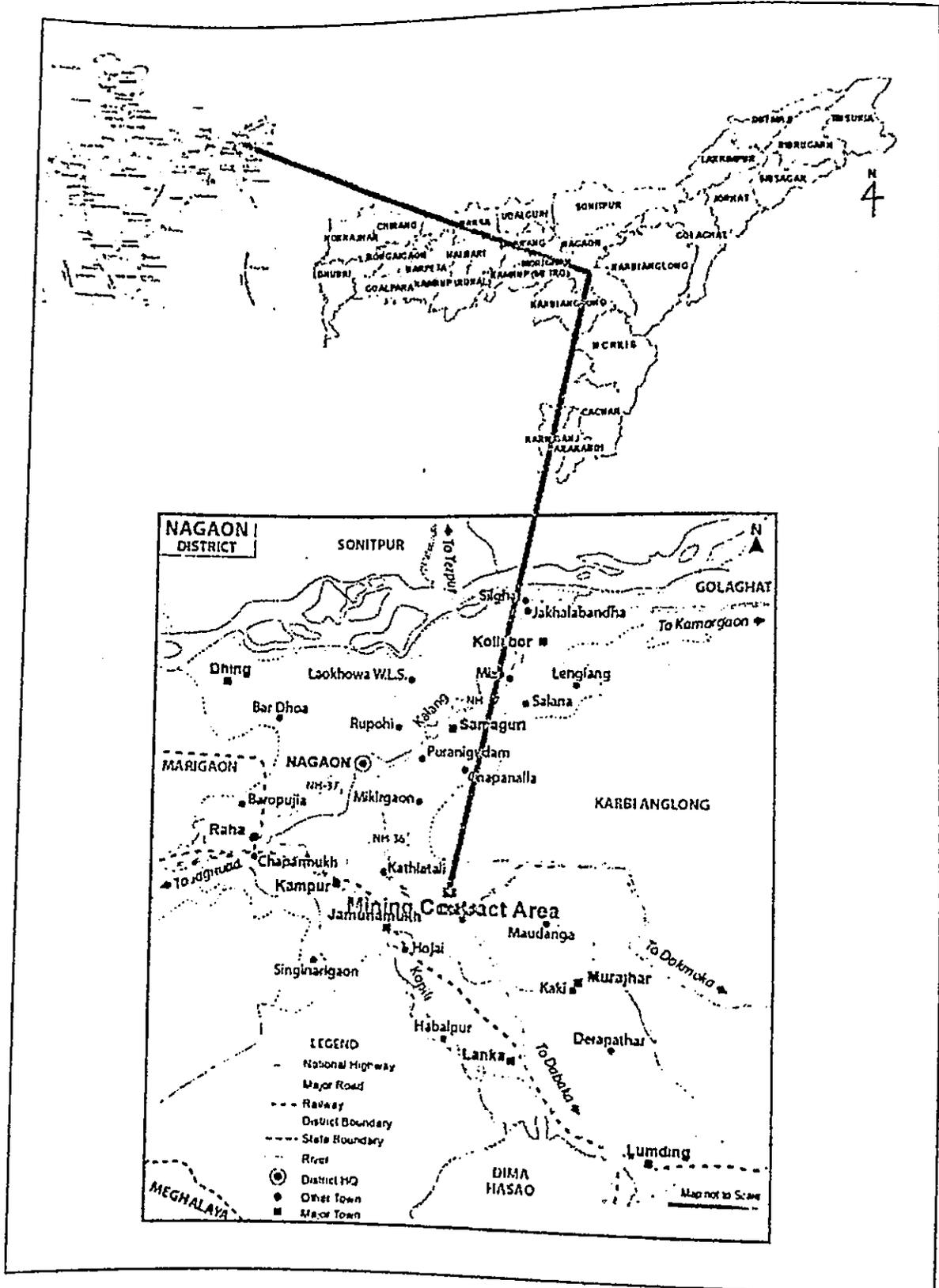
The Latitudes and Longitudes of the mining permit area is given below:

Table 2.1: Table showing the co-ordinates of the Mining Permit Area

Sl no.	Longitude	Latitude
M 1	92°49'33.89"E	26°09'2.73"N
M 2	92°49'30.04"E	26°08'58.75"N
M 3	92°49'35.10"E	26°08'51.99"N
M 4	92°49'39.67"E	26°08'56.19"N
M 5	92°49'38.07"E	26°09'0.65"N

The mining area falls under Survey Topo-sheet no. 83 B/16 of zone 46. The mining area is of 5.0 hectares and is a degraded forest area. The area is covered by small vegetation like grasses and shrubs. There is no growth of valuable big trees, only covered with small trees and exposed rock outcrop. The proposed site is not within any protected area under Archeological, Religious, Cultural heritage or Defense establishments.

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-Hojai, State- Assam



Map 2.1 Location Map of proposed project site

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli,
District-Hojai, State- Assam

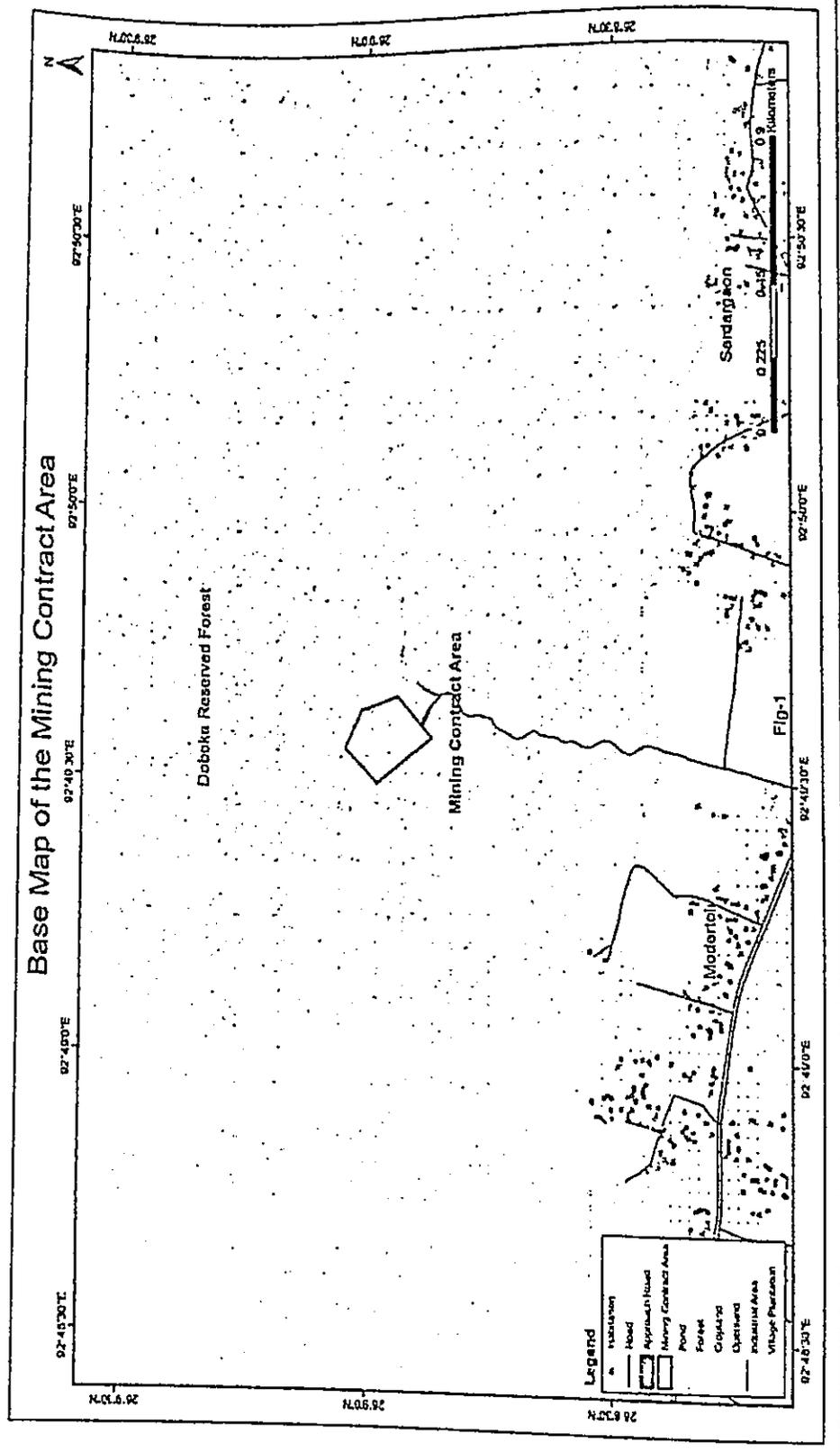
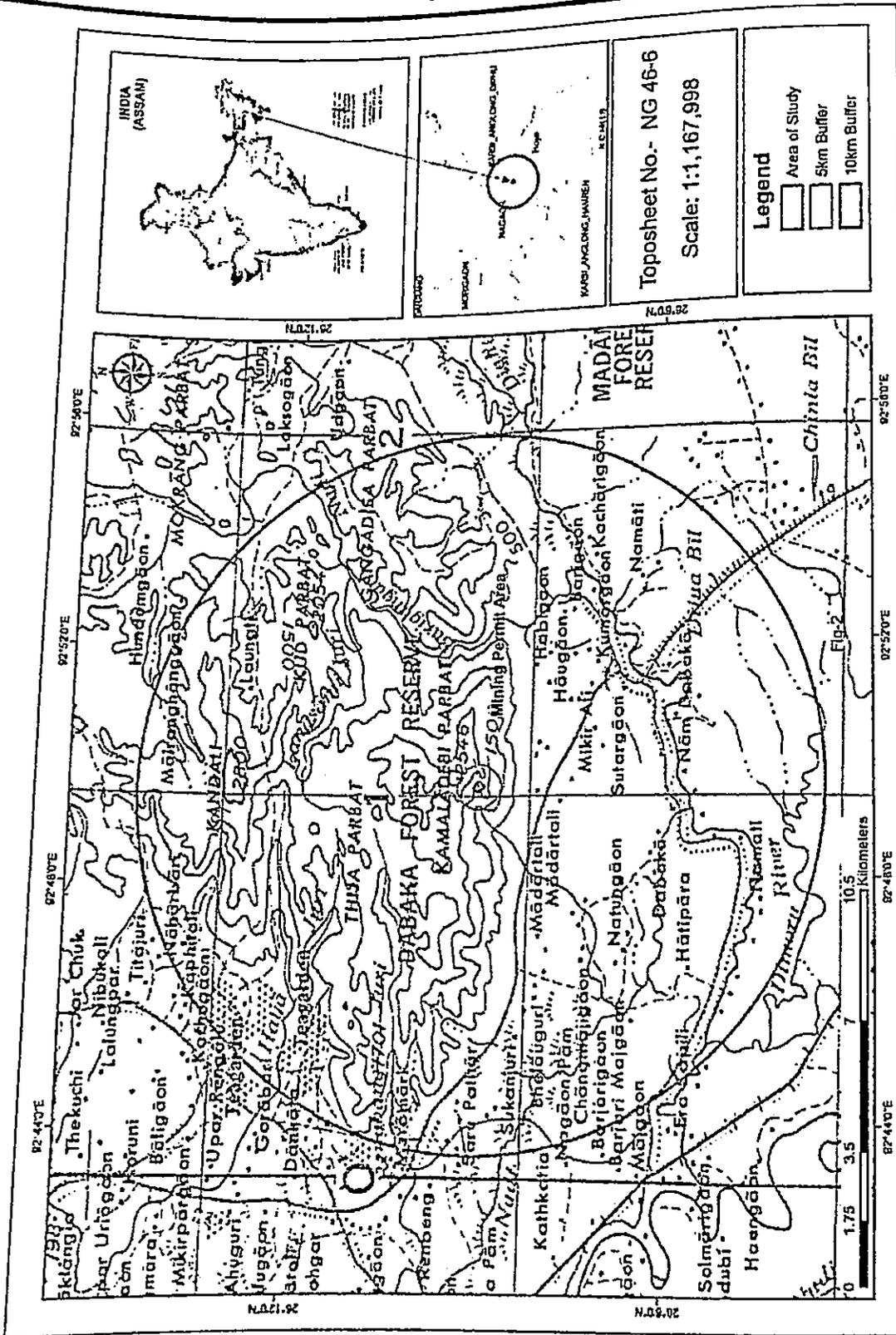


Fig 2.2: Basemap of the Proposed project site

509

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli,
District-Hojai, State- Assam



2.3: Topographic map showing 10km Radius of the study area

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli,
District-Hojai, State- Assam

TABLE 2.2
ENVIRONMENTAL SETTING OF THE PROPOSED STONE QUARRY PROJECT

Particulars	Details		
Name of Project	Langkaijuri Stone Mahal		
Location	Modertoli Gaon, District: Hojai (Assam) under Kathiatoli Range of Nagaon Forest Division District: Nagaon, Assam		
Co-Ordinates	The geographical location with respect to the pillar boundary is given below: Geographical Location: -		
	Lankaijuri Stone Mahal		
	Points	Latitude	Longitude
	1	26°09'2.73"N	92°49'33.89"E
	2	26°08'58.75"N	92°49'30.04"E
	3	26°08'51.99"N	92°49'35.10"E
	4	26°08'56.19"N	92°49'39.67"E
	5	26°09'0.65"N	92°49'38.07"E
	Approach Road		
	Points	Latitude	Longitude
	1	26° 8' 54.743" N	92° 49' 38.096" E
	2	26° 8' 54.836" N	92° 49' 38.197" E
	3	26° 8' 53.781" N	92° 49' 39.045" E
	4	26° 8' 53.854" N	92° 49' 39.166" E
	5	26° 8' 52.628" N	92° 49' 40.183" E
6	26° 8' 52.653" N	92° 49' 40.333" E	
7	26° 8' 51.115" N	92° 49' 39.715" E	
8	26° 8' 51.118" N	92° 49' 39.859" E	
9	26° 8' 48.762" N	92° 49' 39.138" E	
10	26° 8' 48.658" N	92° 49' 39.229" E	
11	26° 8' 47.194" N	92° 49' 37.437" E	
12	26° 8' 47.155" N	92° 49' 37.576" E	

901

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli,
District-Hojai, State- Assam

	13	26° 8' 45.692" N	92° 49' 37.418" E
	14	26° 8' 45.661" N	92° 49' 37.559" E
	15	26° 8' 44.763" N	92° 49' 37.102" E
	16	26° 8' 44.701" N	92° 49' 37.231" E
	17	26° 8' 43.540" N	92° 49' 35.924" E
	18	26° 8' 43.478" N	92° 49' 36.051" E
	19	26° 8' 42.622" N	92° 49' 35.503" E
	20	26° 8' 42.564" N	92° 49' 35.631" E
	21	26° 8' 40.479" N	92° 49' 35.123" E
	22	26° 8' 40.552" N	92° 49' 35.243" E
	23	26° 8' 39.203" N	92° 49' 35.753" E
	24	26° 8' 39.176" N	92° 49' 35.896" E
	25	26° 8' 38.359" N	92° 49' 35.353" E
	26	26° 8' 38.321" N	92° 49' 35.491" E
	27	26° 8' 36.615" N	92° 49' 34.998" E
	28	26° 8' 36.580" N	92° 49' 35.137" E
	29	26° 8' 35.481" N	92° 49' 34.596" E
	30	26° 8' 35.487" N	92° 49' 34.740" E
	31	26° 8' 33.643" N	92° 49' 34.279" E
	32	26° 8' 33.593" N	92° 49' 34.412" E
	33	26° 8' 32.461" N	92° 49' 34.000" E
	34	26° 8' 32.478" N	92° 49' 34.143" E
	35	26° 8' 31.187" N	92° 49' 34.644" E
	36	26° 8' 31.231" N	92° 49' 34.781" E
	37	26° 8' 29.660" N	92° 49' 34.324" E
	38	26° 8' 29.598" N	92° 49' 34.450" E
	39	26° 8' 27.491" N	92° 49' 33.204" E
	40	26° 8' 27.535" N	92° 49' 33.340" E
	41	26° 8' 25.432" N	92° 49' 34.224" E
	42	26° 8' 25.405" N	92° 49' 34.366" E
	43	26° 8' 24.119" N	92° 49' 33.801" E
	44	26° 8' 24.082" N	92° 49' 33.939" E
Average Annual Temperature	25.1°C		
Average rainfall	1750 mm		
Size of the Project	5.00 Ha		
Nearest Highway	NH -27		

**Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli,
District-Hojai, State- Assam**

Nearest railway station	Jamunamukh, Assam, about 5.61km in SW Direction.		
Nearest Airport	LGB Airport, Guwahati, Assam.		
Nearest waterbody	Name	Distance(km)	Direction
	Ahutoli Deojuri Waterfall	6	NW
Major waterbodies within 10km radius	Name	Distance(km)	Direction
	Kopili River	10.5	WSW
Densely populated or built-up area	Nearest Town: Doboka Town, Aerial Distance – 5.3 Km (approx.) ESE District Headquarters: Sankardev Nagar		
Archaeologically important places	None within 10 km radius		
Protected areas as per Wildlife Protection Act (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves)	No National Park or Wildlife Sanctuary within 10 km.		
Defense Installations	None within 10 km radius		
Seismicity	The study area lies in Seismic Zone V. However natural hazards due to earthquakes are not anticipated owing to the shallow mining depths. No structure is proposed at site. Adverse Environmental Impacts due to the proposed project is not expected.		
Important migration routes	None within 10 km radius		

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli,
District-Hojai, State- Assam

of birds	
Ramsar sites (Wetlands of International Importance)	None within 10 km radius
Unique or threatened ecosystems	None within 10 km radius
Important topographical features, including ridges, river valleys, shorelines, and riparian areas	None within 10 km radius
Man-grooves	None within 10 km radius
Physical Sensitive Receptors	None within 10 km radius
Notified Ground Water Zone by CGWA	None within 10 km radius

2.2 The Status of existing Stone Quarries in the area:

List of Quarries and their status Under Nagaon division and Nagaon South Division:

Sl No.	Name of Mining Contract Area	Name of RF/PRF (Division)	Area (Ha)	GoI Final Approval letter	Status of the Quarry
1.	Sivananda River bed Stone Mahal	Kholahat RF (Nagaon Division)	0.9	8-5(58-68)/99/RONE-AS/575 dated 26.09.2000	Closed
2.	Banappra-Derapani	Kholaha RF (Nagaon Division)	0.9	8-5(58-68)/99/RONE-AS/575 dated 26.09.2000	Closed
3.	Upper-Derapani	Kholaha RF (Nagaon Division)	0.9	8-5(58-68)/99/RONE-AS/575 dated 26.09.2000	Closed

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli,
District-Hojai, State- Assam

4.	Tapatjuri	Kondoli PRF (Nagaon Division)	0.9	8-5(58-68)/99/RONE- AS/575 dated 26.09.2000	Closed
5.	Kaphitoli	Kaphitoli RF (Nagaon Division)	0.9	8-5(58-68)/99/RONE- AS/575 dated 26.09.2000	Closed
6.	NatunBasti	Kafitoli RF (Nagaon Division)	0.9	8-5(58-68)/99/RONE- AS/575 dated 26.09.2000	Closed
7.	Hatikhuli	Bamuni RF (Nagaon Division)	0.9	8-5(58-68)/99/RONE- AS/575 dated 26.09.2000	Closed
8.	Beldenga	Doboka RF (Nagaon Division)	0.9	8-5(58-68)/99/RONE- AS/575 dated 26.09.2000	Closed
9.	Kebhangjuri	Doboka RF (Nagaon Division)	0.9	8-5(58-68)/99/RONE- AS/575 dated 26.09.2000	Closed
10.	Bheluguri	Doboka RF (Nagaon Division)	0.9	8-5(58-68)/99/RONE- AS/575 dated 26.09.2000	Closed
11.	Lankajuri Stone Mahal	Doboka RF (Nagaon Division)	0.9	3-ASB046/2007- SHI/2141-43 dated 30.09.2008	Closed
12.	Modertoli Stone Mahal No.3	Doboka RF (Nagaon South Division)	1.0	3-ASB016/2012- SHI/3881- 82 dated 25.03.2013	Closed
13.	Modertoli Stone Mahal No.2	Doboka RF (Nagaon South Division)	1.0	3-ASB027/2017-SHI3237- 38 dated 17.12.2018	Closed
14.	Modertoli Stone Mahal No.4	Doboka RF (Nagaon South Division)	1.0	3-ASB028/2017-SHI3235- 36 dated 17.12.2018	Closed
15.	Kafitoli Stone Mahal No.1 (River Bed)	Kafitoli RF (Nagaon Division)	1.0	3-ASB033/2017-SHI/3231- 32, dt. 14.12.2018	Closed
16.	Baghora Stone Mahal No.10	Tetelia Baghara RF (Nagaon Division)	1.0	3-ASB025/2017-SHI/3035- 36, dt. 03.12.2018	Closed
17.	Jagiroad Stone Mahal No.F(3)	Sonaikuchi RF (Nagaon Division)	1.0	3-ASB026/2017-SHI/2792- 93, dt. 22.01.2018	Closed

Ecorescue Enviro Consulting Services Private Limited

Abhinav Bora

Director

14

[Signature]

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli,
District-Hojai, State- Assam

The distance of quarries falling within the vicinity of proposed
Langkaijuri Stone Mahal:

Sl. No.	MahalArea	Bipin Stone Mahal	Bheleuguri Stone Mahal	Beldenga Stone Mahal	Langkaijuri Stone Mahal	Modertoli Stone Mahal No. 2	Modertoli Stone Mahal No. 3	Modertoli Stone Mahal No. 4
	Distance From	Distance To						
1	Bipin Stone Mahal	0	0.53	1.22	2.68	3.00	3.08	3.08
2	Bheleuguri Stone Mahal	0.53	0	0.41	1.90	2.23	2.32	2.32
3	Beldenga Stone Mahal	1.22	0.41	0	1.24	1.57	1.65	1.65
4	Langkaijuri Stone Mahal	2.68	1.90	1.24	0	0.09	0.18	0.18
5	Modertoli Stone Mahal No. 2	3.00	2.23	1.57	0.09	0	0	0
6	Modertoli Stone Mahal No. 3	3.08	2.32	1.65	0.18	0	0	0
7	Modertoli Stone Mahal No. 4	3.08	2.32	1.65	0.18	0	0	0

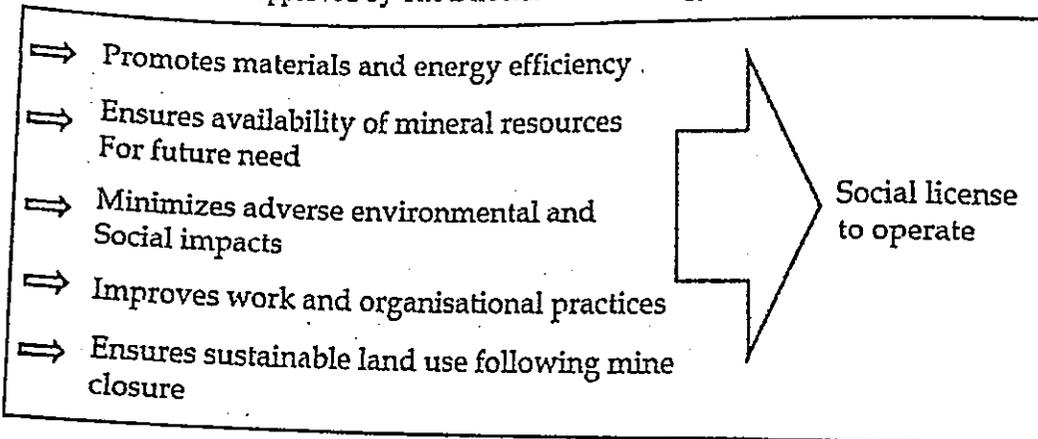
3.0 METHODOLOGY

Preliminary Research and Scoping:

Literature Review: Gather existing information on the quarry site, including geological surveys, previous research and regulatory documents.

LOI has been Issued from Office of the DFO Nagaon Forest Division - Nagaon Govt. of Assam-
Letter No.FNGT/ B/ Langkaijuri Stone Mahal/ 2021/ 4257-58, dtd. 29.09.2021.

Mine Plan has been approved by The Directorate of Geology & Mining, Assam



The Doboka Reserved Forest covers an area of approximately 12,251 Ha.

The district has also several stone quarries available for mining purpose. Section 2 of the Forest Conservation Act is about the restriction on the State Government for de- reservation of forests or use of forest for non-forest purpose.

Non-forest purpose means the breaking up or cleaning up of any forestland or portion thereof for cultivation of crops any purpose other than re-forestation.

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

Due to above, special provisional permission to be obtained from the Principal Chief Conservator of Forest and Head of Forest Force, Assam for non-forestry use of Langkaijuri Stone Mahal, covering area of 5.00 hectare under Nagaon Forest Division, Nagaon district.

Hojai district is also rich in flora and fauna. This report assesses the impact of such mining activity on the flora and fauna at the quarry site, being near to Modertoli village, P.S. Doboka, Dist. Hojai. This report also focuses on environmental consequences and mitigation measures. Moreover, our study penetrates into the intricate ecological dynamism of this region and evaluates the consequences of human intervention during the mining activities. We have thoroughly studied and analyzed the probable environmental changes which may affect the habitat and also identified strategies for sustainable coexistence between rich biodiversity and mining activities.

We have also identified possible hazards which may arise during mining activities and planned adequate mitigation measures.

Mined out stone boulders will be used mainly for construction of roads and Buildings.

Rock boulders will be processed in Stone Crusher unit to manufacture road metals and stone chips of different sizes to make it suitable for various road construction and other construction purposes.

Source of Data:

Apart from our primary source of data like GPS coordinates, Key Map, Geological Map etc., we followed Assam Minor Minerals Concession Rules, 2013 for authenticity of guidelines pertaining to Mining operation and several Environment Impact Assessment Reports related to mining activities.

Stakeholders Identification:

No habitats are present within 500 m from quarry site. As understood from conversations with local inhabitants, there will be no significant impact on Flora and Fauna of this region due to such mining activity and a successful coexistence will prevail between such activities and biodiversity of the region.

The proposed site is located within the jurisdiction of Kathiatoli Range of Nagaon forest division under Doboka Reserved Forest. As such, DFO of that region has a stake on it. Due to above, special provisional permission to be obtained from the Principal Chief Conservator of Forest and Head of

Handwritten vertical text on the left margin, possibly a list of names or initials.

394

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojal, State- Assam

Forest Force, Assam for non-forestry use of Langkajuri Stone Mahal, covering area of 5.00 hectare under Nagaon Forest Division of Nagaon district.

Quarry operators are liable for any adverse environmental impacts in the biodiversity and other factors. Proper mitigation measures including reclamation procedure is to be adapted.

Government authorities have a stake in collecting due revenue from the project

The applicant is suggested to approach the competent authority, Office of the Deputy Commissioner to take proper permission against use of explosives in proper way and also clearance from Pollution Control Board. Provision was made for a stockyard to store the stone boulders outside the quarry site.

The large rock boulders produced while quarrying, will be broken manually to a suitable size in the quarry itself and will be loaded manually to the trucks and dumpers for dispatch to the desired location

PRIMARY DATA COLLECTION

Geological Survey:

The detailed exploration of the mineral in this area has not been carried out. Therefore, the estimation of the Mineral Reserve has been made considering the deposit to be massive and continuous and taking into account DFO letter no. FNGT/B/Langkajuri Stone Mahal/ 2021/ 4257-58, dtd. 29.09.2021. The Mineable reserve calculated roughly up to the lowest level is approximately 25,00,000 Cu. M. out of which 2,00,000 Cu M of stones have been allowed for extraction within a period of five (5) years. This report is prepared in context of the essential details sought by MoEF&CC (FC div.) against the proposed forest diversion proposals.

The mining permit area is covered with little amount of vegetation and soil without any tree of significant importance. There is a topsoil cover (including overburden) with variable thickness varying up to 5 m over the whole area except in some places where there are exposed rock boulders. Since the deposit is very hard and compact, use of explosives with controlled blasting is suggested from economic point of view and to achieve the target production. For facilitating mining in this area and transportation of the quarry products, an unmetalled approach road to be built up to the quarry site which may be easily connecting the main road. There is a topsoil cover (including overburden) with variable thickness varying up to 5 m over the whole area except in some places where there are exposed rock boulders.

**Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam**

Such exposed rocks are weathered rocks and may be used only for the construction of the approach road and backfilling of the mined-out area for reclamation purposes.

3.1 Physiography:

The proposed Langkaijuri Stone Mahal is irregular shaped. As per the calculation of the area bounded by the given GPS coordinates, the total area available for mining is about 5.0Ha (Area measured within the given GPS). The general slope of the area is towards East-Southeast side. The topography of the area is undulating one. The altitude ranges from 283m at the bottom of the hill to 355m at the top. The proposed area is devoid of any valuable trees but covered with degraded mixed forest with grass, shrubs etc. with exposed rock section.

Drainage pattern of the area is mainly consisting of numerous small streams carrying mainly rain water during rainy seasons.

3.2 Regional Geology:

The Assam plateau lies along the continuation of the Archaicans of Bihar and comprises Garo, Khasi, Jayantia hills and to its north-east is the detached area of Mikir hills. Tertiary rocks are well developed in the northern-eastern and south-eastern part where they exhibit a more or less complete geological succession ranging from Paleocene to Lower - Pleistocene. The generalized geological succession of Assam is as follows:

Age		Group	Formation	Description of Lithounits
Quaternary	Recent		Khadar-newer alluvium	Clay, sand, silt etc.
Unconformity				
	Pleistocene		Bhanger-Older alluvium	Clay, coarsesand, gravel& boulder.
Unconformity				
Tertiary	Pleistocene	Dihing	Dihing	Pebblebed, sandyclay, clay, conglomerate and sandstone

392

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

	Mio- Pliocene		Dupitila (Surma Valley) & Namsang (Upper Assam)	Sandstone, mottled clay grid, conglomerate, bed
	Miocene	Tipam	Girujan	Mottled clay, sandy shale & sandstone
		Surma	Bokabil	Shale, Sandy shale, sandstone etc.
			Bhuban	Alteration of sandstone, sandy shale & conglomerate
Unconformity				
	Oligocene	Barail	Tikok-Parbat	Banded sandstone with thick coalseams
			Borgolai	Sandstone & shale with numerous thin coalseams, carbonaceous
			Nagaon	Thin bedded hard sandstone with shale
	Eocene	Disang		Dark grey shale & sandstone
		Jayantia	Kopili	Shale, sandstone etc.
			Sylhet	Sandstone, coal, clay & shale

Age	Group	Formation	Description of Lithounits
		sandstone	
		Sylhet Limestone	Fossiliferous limestone
Unconformity			
Mesozoic	Jurassic	Volcanic	Trap basaltic & dolerite rock
Unconformity			

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

Palaeozoic	Permian	Gondwana	Singimari	Buff coloured fine grained sandstone, shale, carbonaceous shale with coal & conglomerate etc.
Unconformity				
Palaeozoic	Precambrian	Shillong		Granite, pegmatite, alternating layers of clay, quartzite, phyllite, basalt conglomerate etc.
Unconformity				
Azoic	Archean	Gneissic		Granite, pegmatite, meta dolerite, amphibolite, biotite hornblende, gneiss, Calc granulite, pyroxenite etc.

3.3 General Geology of the area:

The proposed area lies within Doboka revenue circle of Hojai district. The geology of the Mining Concession area is predominantly a quartzitic deposit. The rocks are fine grained, with opaque minerals present as accessory minerals. The area proposed to be allotted to Imdad Ali lies within Hojai district. The geology of the Mining Permit area comprises of quartzite rock. Hill top is covered with thick soil cover with vegetation comprising trees, shrubs, grass etc

Ecorescue Enviro Consulting Services Private Limited

Abhijit Bora

Director

Imdad Ali

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

Surface Plan of the area is shown in Figure no. 3.1.

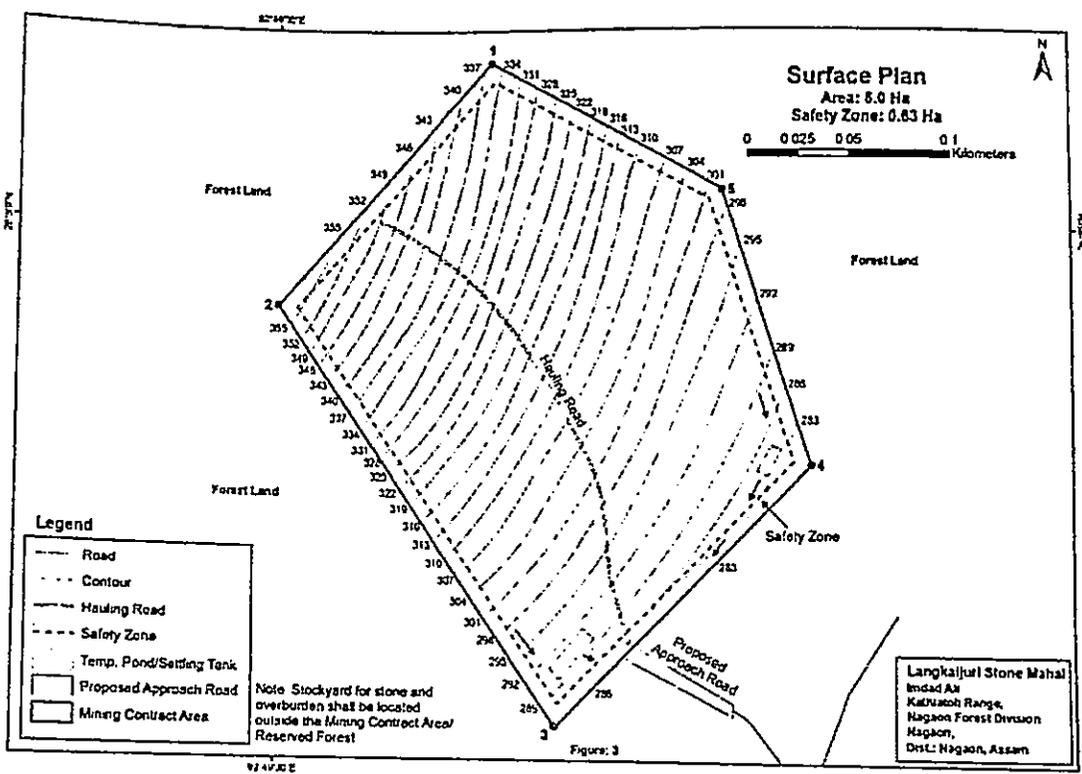


Figure3.1(A): Surface Plan

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

PETROGRAPHIC ANALYSIS REPORT

Sample No	->	151/S
Name	->	Sample submitted by Imdad Ali, H.No.11, Purbanchal path Mathura nagar, Dispur, Guwahat- 06.
Location	->	Lonkajuri stone mahal, Modertoli, Doboka, Hojai dist.
Megascopic Description	->	gray color, semi vitrous lustrue.

<u>Microscopic Description-</u>	
1. Grain size	Grain sizes are small.
2. Grain shape	Anhedral
3. Abundance of minerals	Abundance of quartz with opaque minerals.
4. Primary minerals.	Quartz.
5. Secondary minerals	No secondary mineral is seen.
6. Accessory minerals	Opaque minerals as assessorry minerals.
7. Texture	Grains are showing equigrannular texture.
8. Structural features (if any)	No structural feature could be seen.
9. Mutual relationship	Grains are showing interlocking mutual relationship.
10. Study of inclusions	No Inclusion is seen.
11. Name of rock	The sample is a composition of quartz and opaque minerals. From the mineralization it can be ascertained it is a metamorphic rock and the rock is quartzite with Impurities.
12. Uses	Fractures and joints could not be seen. The rock contains mostly quartz and opaque minerals. As the deposit is a small one, and quartzite with impurities, therefore, it has less industrial value. So, the rock can be used as ordinary stone.


 (Sri Barnalee Nath)
 Joint Director,
 In-Charge of Petrological Lab
 Directorate of Geology & Mining,
 Govt. of Assam.

3.4 Properties of the stone as per Approved Mine Plan:

The stone is hard, compact, light grey in colour with a semi vitreous lusture. It is fine grained, equigranular and exhibit interlocking texture. Fractures and joints are not seen. The sample is a composition of quartz and opaque minerals. It is a metamorphic rock and it is quartzite with impurities.

3.5 Physical Properties: The physical property of Stone quarry is described in Table 3.1.

Table3.1: Physical properties of Stone quarry

Propertics	feature
Specific Gravity	2.6g/cm ³
Bulk density	1.5 MT/m ³

3.5: Chemical Properties:

The mineral composition of the stone is defined below:

Primary minerals	Quartz
Accessory minerals	Opaque minerals

3.6 Environment Assessment:

Quarrying operations can adversely alter pre-existing ecosystems, and change hydrogeological and hydrological regimes. This adverse influence of stone and sand quarrying induces damage in property, depletion of ground water, loss of fertile topsoil, degradation of forests, deterioration in aquatic biodiversity and public health.

3.6.1 Biological Environment:

Study of biological environment is one of the most important aspects for Environmental Impact Assessment. In view of the need for conservation of environmental quality and biodiversity study, biological environment is one of the most important. The biological environment includes mainly

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

terrestrial ecosystem and aquatic ecosystem. The mining activities are one such external influence, which might affect the ecology of an area, if proper management measures are not taken.

Objective:

Hojai district is also rich in flora and fauna. This report assesses the impact of such mining activity on the flora and fauna at the quarry site, being near to Modertoli village, under Nagaon Forest Division.

This report also focusses on environmental consequences and mitigation measures. Moreover, our study penetrates into the intricate ecological dynamism of this region and evaluates the consequences of human intervention during the mining activities. We have thoroughly studied and analyzed the probable environmental changes which may affect the habitat and also identified strategies for sustainable coexistence between rich biodiversity and mining activities. We have also identified possible hazards which may arise during mining activities and planned adequate mitigation measures.

Mined out stone boulders will be used mainly for construction of roads and buildings while rock boulders will be processed in Stone Crusher unit to manufacture road metals and stone chips of different sizes to make it suitable for various road construction and other construction purposes.

3.6.1.1 Details of the Flora and Fauna in the study area (Doboka reserve forest area):

Flora:

Tropical dry Deciduous Forests: Although (*Tectona grandis*) dominates the landscape of Doboka reserve Forest some other species of flora can also be found which include:

- Agar (*Aquilaria crassna*)
- Bhumura (*Terminalia bellirica*)
- Gelina arborca (*Gomari*)
- Bombax malabaricum (*Shimlu*)
- Acgle marmelos (*Bel*)
- Azadirachta indica (*Ncem*)
- Terminalia belerica* (*Bahera*)

386

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

Anthceplaus cadamba (Kadam)

Elacocarpus floribusdus (Jalpai)

Syzygiumcumini (Jamun)

Ficus bengalensis (Bot)

Cinnamomuntamala (Tejpata)

Mangifera indica (Aam)

Melia azedarach (Ghora-neem)

Tamarandidus indica (Tetul)

Terminalia chebula (Hilikha)

Cassia fistula (Sonaru)

Ziziphushodgsonii (Bogori)

Spondiasmangifera (Amara)

Ficus religiosa (Ahot)

Grasslands, Shrubs and Climbers: In addition to dense forests, Doboka Reserve Forest has grasslands, shrubs and climbers that support unique flora. These include:

Mimosa pudica (Lajjaboti)

Datura metal (Dhatura)

Catharanthus roseus (Nayantara)

Elephantopusscaber (Hatikhoj)

Imperataarundinaceae (ooloo)

Sesamum indicum (Til)

Imperatearindinacea (Char Kher)

Dendrocakamuss spp (Pocha)

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

- Andropegonsqarrous (Birina)
- Phyllanthusniruri (Bhui amlokhi)
- Lantana camara (wild sage)
- Cassia tora (Medeluwa)
- Calotropisprocera (Aakanda)
- Hyptissuavecolens (Bonotulsi)
- Adhatodavasica (Bogabhahok)
- Clamaus tenuis (jati bet)
- Pinangagracilis (Geruga)
- Moghaniastrobilifera (Makhiloti)
- Zizyphus rugose (Barai)
- Vitex negundo (Pachatia)
- Asparagus racemosus (Satamul)
- Tinospora cordifolia (Guduchi)
- Thunbergia grandiflora (Kukua loti)
- Byttneriaaspera (Tikoniborua)
- Bauhinia variegata (Kanchan)

Fauna

Mammals

The forest of Doboka and other RFs under Kathiatoli range are home to a variety of mammals, such as:

- Elephas maximus (Asian Elephant)
- Pathera tigris (Tiger)

384

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

Leopard (*Panthera pardus*)

Macaca assamensis (Assamese macaque)

Macaca mulatta (Rhesus Monkey)

Ratufa indica (Large Indian squirrel)

Nycticebus bengalensis (Bengal slow loris)

Lepus nigricollis (Indian rabbit)

Herpestes edwardsii (Common Indian Mongoose)

Viverricula indica (Small Indian Civet)

Mus musculus (Common mouse)

Felis chaus (Jungle cat)

Hystrix leucura (Indian porcupine)

Birds

Numerous avian species can be attributed to the ecosystem of viz.,

Ardea intermedia (Intermediate egret)

Eudynamis scolopacea (Koel)

Turdoides caudatus (Common Blabber)

Gallus gallus (Red Junglefox)

Passer domesticus (Indian house sparrow)

Coturnix coturnix (Common or grey quail)

Milvus migrans (Common kite)

Halcyon smyrnensis (White throated Kingfisher)

Streptopelia chinensis (Indian Spotted Dove)

Actitis hypoleucos (Common Sandpiper)

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

- Coraciasbenhainensis (Indian Roller)
- Dicrurusparadiseus (Racket tailed Drongo)
- Dendrocittavagabunda (Indian tree pine)
- Corvusmacrorhynchos (Jungle crow)
- Corvus splendens (House crow)
- Dicrurusmacrocerus (Black Drongo)
- Cuculusmicropterus (Indian Cuckoo)
- Aerodotherestrictis (Common Mania)
- Meropsorientalis (Green Bee-eater)
- Heirococyxvarius (Common Hawk Cuckoo)
- Treronphoenicoptera (Common green pigeon)
- Pycnonotuscafer (Red vented Bulbul)
- Gracula religiosa (Common Hill Myna)
- Alcedoatthis (Common Kingfisher)
- Lonchurapunctulata (scaly-breasted Munia)
- Tylo Alba (Barn owl)
- Centropussinenses (Greater Coucal)
- Treonphoenicoptera (Yellow-footed Green pigeon)
- Vanellus Indica (Red wattled lapwing)

Reptiles and Amphibians: The diverse habitats support a wide range of reptiles and amphibians such as:

- Bufomelanostictus (Toad)
- Varanus bengalensis (Bengal Monitor)

Henidactylusfranatus (House Gecko)

Ptyasmucosas (Yellow rat snake)

Najakaouthia (Monocled Cobra)

Pareasmonticola (assam Snail eater)

Bungarusniger (Black Krait)

Varanusvaranus (Tree Lizard)

Calotesversicolor (Common Garden Lizard)

Rana tigrina (Common yellow frog)

Insects and vertebrates:

Danauschrysippus (Plain tiger)

Neptishylas (Common sailor)

Euremahecabe (Common Grass Yellow)

3.6.2: Water Environment:

Anticipated impacts and evaluation

Damage in the water body, depends on its assimilative capacity. The study indicates that assimilative capacity of the River water bodies still exists, but effective measures shall be taken to check water pollution. To find out the effect on ground water an extensive study has been conducted and from the study it can be safely concluded that there is no noticeable adverse effect on surrounding ground water resource due to mining. The mining activity does not require water. Mining of Building stone does not have any significant impact on the water quality and parameters as the mining does not intercept with the ground water level. In this project, it is not proposed to divert or truncate any stream. No proposal is envisaged for pumping of water from the river. There will not be any adverse impact on surface hydrology and ground water regime due to this project. The contractor will adhere to all guidelines and rules for proper and scientific method of mining during the period of extracting the stone. Thus, the project activities shall not have any adverse effect on the physical components of the environment and therefore may not have any effect on the recharge of ground waters or affect

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojal, State- Assam

the water quality.

3.6.3: Noise Environment:

Impact on environment:

Noise generated at the mine is due to semi-mechanized mining operations, drilling, blasting, mechanized loading and truck transportation activities. The noise generated by the mining activity dissipates within the mine. There is no major impact of the mining activity on the nearby villages. However, pronounced effect of above noise levels is felt only near the active working area. Noise at lower levels (sound pressure) is quite acceptable and does not have any bad effect on human beings, but when it is abnormally high- it incurs some maleficent effects. In this case the impact of noise on the nearby settlements is negligible as they are far located from the mine workings.

Mitigation measures: limit i.e. not exceeding 90 dB (A) at a distance of 2 m from the machine. All machines will be as per stipulated standards and will be used at their optimum capacity.

Trained Operators: Only trained operators will be allowed to operate machines during mining to reduce any chance of safety failures.

Vegetation: Plantation of trees along the barrier zone will be done to dampen the noise, if possible

Hearing Protection: All the miners will be provided with Personal Protective Equipment such as ear-muffs.

Phasing out: the old and worn-out trucks.

Off Site:

The off-site receptors are not significantly affected as they are located far away from the mine site. But some disturbances due to vehicle movement cannot be avoided. Plantation will be done along the barrier zone and roadsides etc. which will more or less dampen the off-site noise level.

3.6.4 Air Environment

Anticipated impacts and evaluation

There is no source of air pollution as no boiler, DG Set or furnace is there. Only source of air pollution is re-suspension dust from drilling, blasting, mechanized loading and the movement of dumpers/trucks to and from the mining site. Emission of fugitive dust is envisaged due to:

386

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

- i. Mining Activities includes excavation and lifting of minerals, drilling, blasting, mechanized loading etc.
- ii. Transportation of minerals will be done by road using trucks. Fugitive dust emission is expected from the transportation of trucks on the haul roads.

Mitigation measures

The mitigation measures like the following will be resorted:

- Water sprinkling will be done on the haul roads twice in a day. This will reduce dust emission further by 74%.
- Speed limits will be enforced to reduce airborne fugitive dust from vehicular traffic.
- Spillage from the trucks will be prevented by covering tarpaulin over the trucks.
- Deploying PUC certified vehicles to reduce their emissions.
- Proper tuning of vehicles to keep the gas emissions under check.
- Monitoring to ensure compliance with emission limits would be carried out during operation.
- Plantation activities will be done along the barrier zone and which will reduce the impact of dust in the nearby villages.

3.6.5 Solid Waste Generation and Management

No waste or top soil shall be generated during mining activities. All the quantities of Stone to be exploited shall be sending to crusher plant outside the area. Therefore, generation of waste shall be nil & no proposal has been envisaged for its separate dumping.

Impact on land use & reclamation of mined out areas

The area is likely to be degraded due to quarrying, pitting & roads. The impact on the landform or physiography will be limited to the modification of the slope. The impact during next five years is limited as benches will be formed on the already degrade land. Beside these benches, roads will also modify the physiography.

379

**Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojal, State- Assam**

3.7 Social Impact Study:

Community Survey:

There is no habitation within 1km of the mining area and as such, mining operation will not hinder the normal life of the people residing in that area. However, movement of heavy vehicles in the un-metalled road will generate dusts in the residing area and proper mitigation measures are to be adapted.

Details of mitigation measures have been described in Section 3.4.

Employment Generation:

Local villagers, especially local unemployed youth will get employment as labours in the quarry site. The mining permit is for five (5) years and workers will be paid as per existing rules and regulations for a sufficient period of time. Furthermore, many villagers will be employed during the construction of approach road, spraying of water in the dust laden road and adjacent plantations.

3.8 Economy and Analysis:

India possesses one significant quartzite deposits in the world. Total quartzite resources stand at 1.66 billion tones (as of 2015).

However, India does have substantial reserve of quartz and silica sand. Numerous shades of quartzite are found in India such as Himalayan White Quartzite, Alaskan white Quartzite, Golden quartzite, etc. India accounts 17% of global export shipments, with 6226 shipments. Quartzite is declared as a "Minor Mineral," under the MMDR Act, 1957 and therefore falls under the purview of the State Governments. The data on production of quartzite therefore, lacks precision as acquisition-delays makes it difficult to draw a conclusion. However, quartzite is the most sought-after among all building stones. Due to its strength, durability and local abundance, it was a popular choice for ancient Indian architecture. With the invention of modern tools of greater hardness and polishing ability, the use of quartzite has rather increased on account of its aesthetic value.

The modern motorized tools of diamond blade, CNC saw or sawjet, diamond polishing pads etc. have enabled the user to cut quartzite as per the specifications of the Building Sector. Presently, cut and polished quartzite slabs of length 120-130 inches and width of 55-56 inches are being used. In addition to this, gravestones and monuments of various shapes and sizes are

also in vogue.

Quartzite also finds its application in flooring and wall tiles, Counter tops, kitchen surfaces, Decorative features, headstones and tombs, garden furniture, such as, benches, fountains and many other articles which are used for landscaping and/or decorative purposes.

India's quartzite market is experiencing steady growth driven primarily by the construction and infrastructure sectors' demand for durable and aesthetically appealing materials. Key producing states are: Haryana, Bihar, Odisha, Maharashtra. Forecasted growth in quartzite aggregates is estimated to be 8% Compound Annual Growth rate to 2029.

3.9 Stakeholder Consultation and Engagement:

a) Public Consultation Meetings:

The mining permit area is within 5.0 hectares. According to MoEF&CC Notification 2006, for B2 projects within 5.0 hectares, EIA report is not required for such projects. As such, public hearings or public consultation meetings are not required.

3.10. Development of Mitigation and Sustainability Plans:

3.10 A.1. Environmental Mitigation Plans:

In order to minimize impacts of mining on different environmental parameters and to keep air and water quality within prescribed limits, a comprehensive environmental management plan has to be prepared. Any effort to control adverse impacts will be incomplete without appropriate control measures for reclamation of land affected due to mining and dumping. One of the balanced approaches for development of mineral resources is total utilization of all the products. It aims at making use of all the products generated during mining including overburden as well as pits and voids, so that no working is left out either as pollutants or as scars on earth surface. Usually, the environmental management plan is prepared for site development and for development stage, during operation phase and for post operation phase. Therefore, Management plan operation phase and post operation phase are discussed.

Impact on Environment:

The following impact will be observed on Environment:

1. The soil if located on the deposit will be disturbed.

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District- Hojai, State- Assam

2. The topography of the land will be disturbed by proposed excavation and dumping activities. Drainage patten i.e. Nalah etc may be disturbed by waste if dumped on the nalahs. Water resources may be disturbed if workings go beyond the water table.

1. Air quality will be disturbed by proposed mining activities like drilling, blasting, transportation etc.

2. Socio economic status of the habitants not affected by mining.

3. The health of the habitants may be affected by pollution of air and water.

Thus, the Environment Management is proposed in environmentally sustainable manner to protect the environment by proposed mining.

1. Although blasting operation was carried out in a controlled manner, it is advisable to fix a thick cover of a safety net over the blasting site in order to prevent the splitting out of rock fragments during blasting operations.

2. Blasting operations should be carried out in a phase manner in order to minimize the noise hazard. Better to provide an acoustic shield.

3. It is advisable to use ear-plug during blasting operations.

4. The worker carrying out drilling operation must wear eye-protector, proper hand- gloves to withstand vibratory effects and protective clothing.

5. Dust suppression system to be provided during loading and transport operations.

6. Adequate measure should be taken during transportation and storage of explosives.

Mitigation measures to nullify the impact on the Flora and Fauna:

a. Protected area: To establish and maintain protected area within the reserve forests may serve as a haven for wildlife. It is essential to have proper enforcement of no- entry zones during critical breeding seasons.

b. Wildlife corridor: In order to facilitate the movement of animals between fragmented habitats, it is necessary to design and protect wildlife corridors. Such corridors will reduce isolation effects and enhance genetic diversity.

376

Langkaijuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojai, State- Assam

- c. Research and education: It is very important to have continuous research on environmental impacts and biodiversity in the Hojai district. It will be of huge benefits if the local population, workers at site and policymakers are educated about the importance of conservation.
- d. Monitoring and Regulation: Continuous monitoring of mining activities is mandatory to ensure complete adherence to prescribed regulations. Violators must be penalized and corrective action should be enforced immediately.
- e. Plantation activities: Major plantation activities should be carried out in and around the project site, preferably with plant species which are amicable to local habitat.

3.10 A.2. BUDGET ALLOCATION FOR EMP IMPLEMENTATION

Annual budget for EMP is very essential for successful implementation of EMP. The fund allocated will not be diverted for any other purposes and the top management will be responsible for this. The budget will take into consideration the following capital and operating expenses:

1. Capital cost for installing pollution control systems.
2. Field cost for monitoring of parameters.
3. Cost of any defined outsourcing
4. Cost of chemicals, consumables and transport for data generation
5. Man power cost for environmental cell
6. Any other cost as per EC condition.

Table 3.4.1: EMP Budget

Langkajuri Stone Mahal (Stone Quarry Mining Project) located at Village: -Modertoli, District-
Hojal, State- Assam

SI. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (in Rs.)
1	Dust Suppression	--	90,500
2	Pollution Monitoring		1,30,000
	i) Air pollution	--	21,000
	ii) Water pollution	--	16,500
	iii) Soil Pollution	--	16,500
	iv) Noise Pollution	--	11000
3	Green belt development	4,10,000	71,500
4	Haul road maintenance	--	53000
5	*Corporate Environmental Responsibility	1,10,000	--
Total		5,20,000	4,10,000

3.10. B. Social Development Plan:

A social development plan for mining quarries typically involves creating strategies to mitigate the negative impacts on local communities and the environment while promoting sustainable development. Here are some key components:

1. **Community Engagement:** Involving local communities in the planning process to ensure their concerns and needs are addressed.
2. **Environmental Protection:** Implementing measures to minimize environmental degradation, such as land reclamation, water management, and pollution control.
3. **Economic Development:** Creating job opportunities and supporting local businesses to boost the local economy.
4. **Health and Safety:** Ensuring safe working conditions and providing health services to workers and nearby residents.
5. **Education and Training:** Offering training programs to enhance the skills of local workers and improve their employability.
6. **Infrastructure Development:** Building and improving infrastructure like roads, schools, and healthcare facilities to support the community.
7. **Monitoring and Evaluation:** Regularly assessing the impact of the quarrying

activities and making necessary adjustments.

Rehabilitation and Restoration Plan:

Proper reclamation plan is a strategic guideline prescribed for the restoration of disturbed land due to activities like mining, construction, oil or gas extraction etc. The objective is to bring back the land to a state that is equal or very close to its original state i.e. that existing before the disturbances were carried upon. The reclamation process is considered to be successful when it delivers a self-sustaining and diverse native plant community that will prevent erosion and support wildlife habitat.

The planning for mine reclamation activities should begin prior to mining operation is permitted or being completed. It is true that returning the landscape to its original status is not always possible, however, it is possible to create useful landscapes that meet a variety of goals ranging from the restoration of productive ecosystems. As and when the mining operation ends, the project proponent must restore the land to its approximate original contour (AOC) or leave the land graded and or a "higher and better" post- mining land use (PMLU) that has been approved as part of the original mining permit application.

Stages of Reclamation Plan

Reclamation Plan involves the following steps:

1. **Pre-construction:** To plan for reclamation critically well before the mining operation. It includes salvaging topsoil and preparing for interim reclamation measures.
2. **Interim Reclamation:** This will take place during operational phase, where efforts will be made to minimize environmental impacts and restore unused areas.
3. **Final Reclamation:** As soon as the mining operation ends, final reclamation will involve restoring the original landform along with revegetation with native species, controlling erosion and ensuring long-term ecosystem restoration.

In general, in open cut mines, rocky materials are used for backfilling the excavated portion. A layer of soil that was stored in the pre-mining period is placed on the rocky material. On top of this layer, a layer of topsoil is placed. The final step is the restoration of vegetation and long-term development program.

3.10 C.2 Benefits of Circular Economy in Stone Mining

1. Environmental Benefits:

- **Waste Reduction:** By reusing stone by-products and minimizing waste, the negative environmental impact, such as landfills and pollution, can be significantly reduced.
- **Reduced Carbon Footprint:** The recycling and reusing of stone materials can help reduce the carbon emissions associated with mining and transportation of raw stones
- **Conservation of Resources:** Circular economy practices reduce the need for new mining operations, preserving natural habitats and biodiversity.

2. Economic Benefits:

- **Cost Savings:** Reducing waste, reusing materials, and recycling stone by-products can lower operational costs for mining companies.
- **New Business Opportunities:** The circular economy model encourages the development of new business ventures focused on stone recycling, reprocessing, and product innovation.
- **Job Creation:** As the demand for recycled materials and sustainable practices grows, new industries, such as stone waste processing and repurposing, will create employment opportunities

3.Social Benefits:

- **Sustainable Communities:** By adopting circular practices, the stone mining industry can contribute to the well-being of surrounding communities by improving environmental health and fostering responsible resource management.
- **Stakeholder Engagement:** Circular economy principles often involve collaboration among stakeholders such as local communities, government bodies, and businesses, leading to more sustainable and equitable mining practices.

CHAPTER 4: DISCUSSION

Justification of locating the project in the forest land:

The main reasons behind above project can be summarized as follows:

1. Resource availability:

The proposed project area at Hill Stone Quarry inside Doboka Reserved Forest under Nagaon Forest Division contains rich deposit of high-quality quartzite stones qualifying for usage in various government, semi-government, and private development projects especially road and railway construction in Hojai and other nearby districts of Assam. Such stones are not available in non-forest and other forest areas of the district. The growing demand of good quality stone material necessitate expansion of mining activities into forested areas due to its non-availability outside the forest area. Moreover, the geological formations in the proposed forest area is unique and as such, attract mining operations. Needless to say that this project will create a lot of employment opportunities in this region.

2. Infrastructure Development:

The proposed mining at the stone quarry will meet the growing demand of various national / state priority infrastructure development and upgradation of approach road from highway NH-27 and nearest railway station Jamunamukh, and other required hauling roads.

Once the mining operation is over, the landscape of the quarrying area will get completely changed i.e. without any grass, shrubs and other trees. The physical, chemical and biological aspects of the environment will be restored, of course without any possible agricultural activities. Thus, the biodiversity of the region will be maintained.

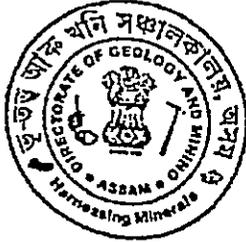
To name a few of the Improvement and upgradation projects to be met with such stones are:

- a) Doboka to Diphu road under Bharatmala
- b) Khetri to Umrangsu Road under Bharatmala
- c) Howraghat to Hamren Road under Assam Mala
- d) Halflong Tiniali to Dchangi under Assam Mala

37A

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

Once the mining operation is over, the landscape of the quarrying area will get completely changed and there will be no grass, shrubs and other trees. At this stage, it is desired to restore the physical, chemical and biological qualities of the environment without any possible agricultural activities. However, reclamation of this area with plantation of trees must be undertaken by the Mining Permit Holder. Although such activities are essential for economic growth, they need to be managed to safeguard the biodiversity of the region. A well-balanced approach is essential in order to integrate conservation and sustainable development, which is crucial for ensuring long-term survival of Flora and Fauna in this district. Continuous monitoring and implementation of best practices as per Environment Monitoring Plan should be carried out for protection of biodiversity of the region. There must be a balanced approach between environmental and economic development.



খনিজ সম্পদ
সংৰক্ষণ

GOVERNMENT OF ASSAM
DIRECTORATE OF GEOLOGY AND MINING
BHU-BIGYAN BHAWAN
DAKHINGAON, KAHILIPARA, GUWAHATI-19
Email: dgmassam@gmail.com
dgm.assam@gov.in

15/11/21

No. GM/MM/86-B (40)/ Pt.VIII/2676-SC

Dtd. Guwahati, the 11/11/2021.

From

- Sri Ananda Kumar Das, ACS,
Director,
Directorate of Geology & Mining, Assam,
Kahilipara, Guwahati-19.
- The Divisional Forest Officer,
Nagaon Division, Nagaon.
- Approval of Mining Plan alongwith progressive Mine Closure Plan
In respect of Langkaijuri Stone Mahal Mining Permit Area (area 5.0
hec.for Mahal)and 0.03 hec. for approach road) in Nagaon Dist. of
Assam State submitted under Rule 51 & 52 of Assam Minor Mineral
Concession Rules, 2013.

GPS Location for Mahal :

- 1) 26°09'2.73"N -92°49'33.89" E
- 2) 26°08'58.75"N -92°49'30.04" E
- 3) 26°08'51.99"N -92°49'35.10" E
- 4) 26°08'56.19"N -92°49'39.67" E
- 5) 26°09'0.65."N -92°49'38.07

For approach road :

- 1) 26°08'52.20"N -92°49'38.30" E
- 2) 26°08'53.28"N -92°49'36.61" E
- 3) 26°08'53.10"N -92°49'36.40" E
- 4) 26°08'52.40"N -92°49'38.31" E

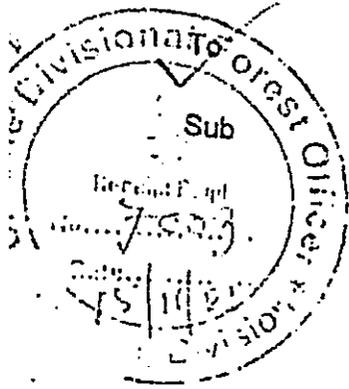
Ref

- Your letter No FNGT/B/Langkaijuri Stone Mahal/2021/4257-58
dtd. 29/9/2021

Sir,

In exercise of the power conferred under Rule 51 & 52 of Assam Minor Mineral Concession Rules, 2013, I hereby approved the aforesaid Mining Plan (including Progressive Mine Closure Plan) prepared by R.Q.P. Abhijit Bora. This approval is subjected to the following conditions :

- 1) The Mining Plan alongwith Progressive Mine Closure Plan is approved without prejudice to any other law applicable to the mine area from time to time whether made by the Central Government, State Government or any other authority and without prejudice to any order or direction from any court of competent jurisdiction.
- 2) The proposals shown on the plates and/or given in the document is based on the lease map/sketch submitted by the lessee and is applicable from the date of approval.
- 3) It is clarified that the approval of aforesaid Mining Plan along with Progressive Mine Closure Plan does not in any way imply the approval of the Government in terms of any other provision of Mines & Minerals (Development & Regulation) Act, 1957 or the Minerals (Other than Atomic & Hydro Carbon Energy Minerals) Concession Rules, 2016 and any other laws including Forest (Conservation) Act, 1980, Environment (Protection) Act, 1986 .or the rules made there under Mines Act, 1952 and Rule & Regulation made there under.
- 4) Directorate of Geology & Mining, Assam has not undertaken verification of the mining lease boundary on the ground and does not undertake any responsibility regarding correctness of the boundaries of the precise area as furnished by the lessee.



- 369
- 5) At any stage, if it is observed that the information furnished data incorporated in the documents are incorrect or misrepresent facts, the approval of the document shall be revoked with immediate effect.
 - 6) This approval is restricted in respect of the proposals contained therein within mining lease area and is applicable from the date of approval and maximum quantity for Stone recommended for extraction is 1,50,000 cubic metre (for the contract holder) and 50,000 cubic metre for (various development work) for five years to be used for construction work subject to all statutory compliance and clearances for the mining activities to be carried out within the mining leasehold.
 - 7) Adequate number of check dams and retaining walls shall to made & maintained in good conditions to prevent any anticipated detrimental impact on water regime.
 - 8) "Safety Berm" of adequate dimension shall be kept at all the places in the vicinity of statutory barrier, high bench/escarpment. It shall also be ensured that no excavation is to be made in the vicinity of any high side wall/ escarpment. Stability of benches, escarpments shall be closely monitored .It is the responsibility of the lessee to ensure the stability of all the escarpments/side/benches, Lessee shall take all necessary steps time to time so as to ensure the stability of ground, which includes but not limited to reduction of the high side wall to safe and stable condition within first year itself.
 - 9) Sufficient safety Berm shall be maintained with respect to public road/village road.
 - 10) In case of patta land, a certificate from Revenue Authority should be obtained that the mining area is a non agricultural land.
 - 11) Violation of the provision of the Mining Plan including Progressive Mine Closure Plan shall liable to cancel the Mining Plan.
 - 12) Environmental clearance must be obtained from the competent authority before execution.
 - 13) Divisional Forest Officer should confirm that the lease area does not fall in the National Park, Wild Life Sanctuary, Game Sanctuary, Bird Sanctuary etc including ecosensitive zone and does not affect the animals, birds and biodiversity in anyway.
 - 14) There is no provision of mechanized or semi mechanized mode of extraction in case of river sand mining.
 - 15) If necessary the permit/contract/lease holder may approach the competent authority for blasting permission.
 - 16) The Divisional Forest Officer should ensure that no additional quantity is to be extracted.

Encl: Approved Mining Plan alongwith Progressive Mine Closure Plan.

Yours faithfully,


Director,

Directorate of Geology & Mining, Assam.
Dtd. Guwahati, the Oct, 2021.

No. GM/MM/86-B (40)/Pt.VIII/

Copy to :- 1) The Deputy Commissioner, Nagaon

2) The Superintendent of Police, Nagaon

3) IMDAD Ali, H.No.11, Purbanchal Path, Mathura Nagar, Dispur, Ghy-6.

4) Office copy.

-for kind information and necessary action.

- for kind information and necessary action.


Director,
Directorate of Geology & Mining, Assam.

368

PL. No. 2 GFG-80
17/11/21

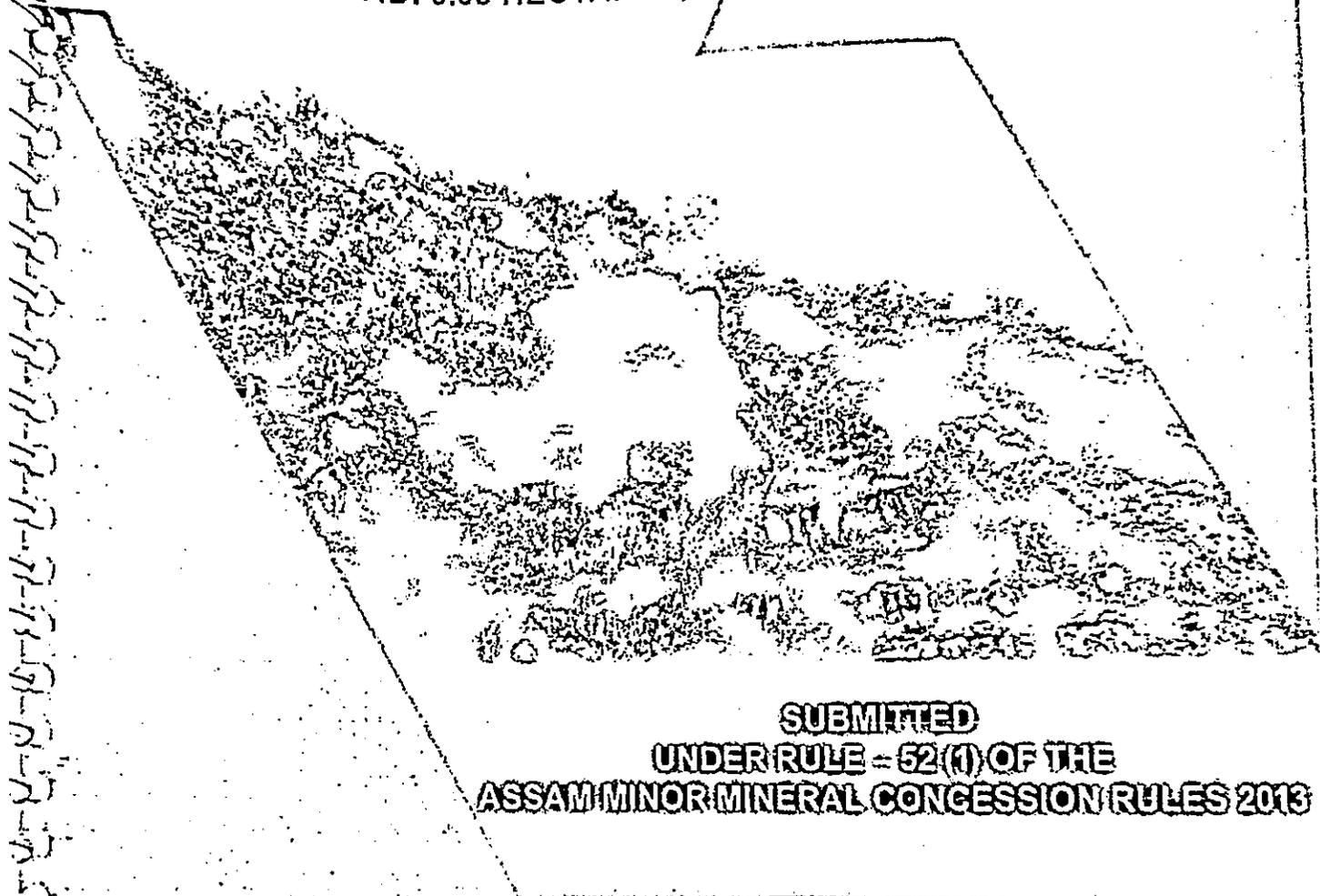
2337

MINING PLAN

LANGKAIJURI STONE MAHAL

DISTRICT: HOJAI, ASSAM

(MAHAL AREA : 5.0 HECTARES
APPROACH ROAD: 0.03 HECTARES)



**SUBMITTED
UNDER RULE - 52(I) OF THE
ASSAM MINOR MINERAL CONCESSION RULES 2013**

APPROVAL FROM
DIRECTORATE OF
GEOLOGY & MINING
ASSAM

Mining Plan is Approved

Mee
 Director of
 Directorate of Geology & Mining
 Govt. of Assam
 Dispur, Guwahati

BY:

IMDAD ALI
H. NO. 11, PURBANCHAL PATH,
MATHURA NAGAR,
DISPUR, GUWAHATI-06, ASSAM

Abhijit Bora
 Abhijit Bora, Ph.D.
 Regd. No. DGM/RQP/02/2014

8/11/2021

4
3
3
3
3
3

MINING PLAN

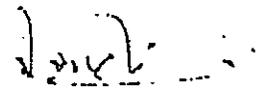
367
Imdad Ali

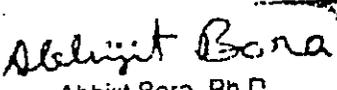
Imdad Ali
H. No. 11, Purbanchal Path, Mathura Nagar, Dispur, Guwahati-06, Assam Phone: 9435562929

Date: 15/10/21.....

DECLARATION BY THE APPLICANT

This Mining Plan is prepared under the provision of Rule 52(1) of the Assam Minor Mineral Concession Rules, 2013 in respect of the 'Langkaijuri Stone Mahal' measuring 5.0 Hectares for five years located near Modertoli Gaon, P.O. Modertoli & P.S. Doboka, District: Hojai (Assam) under Kathiatoli Range of Nagaon Forest Division, Nagaon District: Nagaon, Assam for extraction of stone in consultation with me. I understand its content and hereby agree to implement the extraction work of the stone in accordance with the prevailing provisions of law. If any other permission is needed, I shall approach the appropriate authority, before commencement of the extraction work.


(Imdad Ali)

-1-

Abhijit Bora, Ph.D
Regd No. DGM/RQP/17/2014

366
MINING PLAN

Imdad Ali

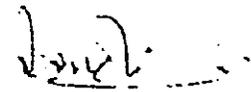
Imdad Ali
H. No. 11, Purbanchal Path, Mathura Nagar, Dispur, Guwahati-06, Assam Phone: 9435562929

Date: 15/10/21.....

CONSENT LETTER FROM THE APPLICANT

The Mining Plan in respect of the 'Langkaijuri Stone Mahal' measuring 5.0 Hectares, under Kathiatoli Range of Nagaon Forest Division, Nagaon District: Nagaon, Assam for extraction of stone for various constructional purposes within the State of Assam has been prepared by Dr. Abhijit Bora, resident of 2F/3, Beaufort Apartment, Basisthapur Bye Lane-3, P.O. Beltola, Guwahati- 781028, and a RQP with Registration No. DGM/RQP/02/2014 from Directorate of Geology and Mining, Govt. of Assam, Guwahati with validity up to 09-09-2024, on behalf of the undersigned.

I hereby undertake that the Mining Plan so prepared by the said RQP has been made with my knowledge and consent and shall be acceptable and binding on me in all respect.



((Imdad Ali))

Abhijit Bora
Abhijit Bora, Ph.D
Regd No. DGM/RQP/02/2014

385

CERTIFICATE

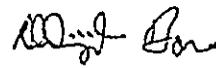
This is to certify that the Mining Plan in respect of the 'Langkaijuri Stone Mahal' Mining Contract for extraction of stone for various constructional purposes located near Modertoli Gaon, P.O. Modertoli & P.S. Doboka, District: Hojai (Assam) for extraction stone under Kathiatoli Range of Nagaon Forest Division, Nagaon District: Nagaon, Assam for mining of stone measuring 5.0 Hectares, has been prepared in favour of the applicant Imdad Ali, under the relevant provisions of the Assam Minor Mineral Concession Rules, 2013.

The Applicant/ Mining Contract Holder shall approach authorities concerned for any other permission, if required, during the process of the Mining Operation.

It is further certified that the information furnished in the Mining Plan is true and correct to the best of my knowledge.

Place: Guwahati

Date: 26/10/2021



Abhijit Bora, Ph.D.

Regd. No. DGM/RQP/02/2014
(ABHIJIT BORA)

Registration No. DGM/RQP/02/2014
Directorate of Geology and Mining
Govt. of Assam

Valid up to: 09-09-2024

Address: 2F/3, Beaufort Apartment,
Basisthapur Bye Lane-3,
P.O. Beltola, Guwahati- 781028

Contents

	Page No.
Introduction	1
General information	3
Particulars of the RQP preparing the mining plan	5
Section- A	
1. Location of the proposed permit area	6
2. Physiography and Drainage	7
3. Geology of the Allotted Area	
a. Regional Geology	7
b. General Geology of the area	9
4. The allotted land & the type of rock	10
5. Properties of the minerals and available reserve of stone and use	11
6. Climate and Rainfall	12
Section- B	
1. Mining	15
2. Production for the permit period up to 14.03.2017	16
3. Use of Explosives	16
4. Parameters considered for Mine Design and proposed method of Mining	17
5. Development and Production Plan	20
6. Disposal and End User of Mineral	25
7. Mine Drainage and Disposal of Waste	26
8. Extent of Mechanisation	27
9. Mining Equipment	27
10. Explosive and Blasting Parameters	28
11. Type of Explosives & Blasting Operation	29
12. Storage of Explosives	30
13. Site Services and List of Man Power	31

Abhijit Bora
Abhijit Bora, Ph D
Regd No. DGM/RQP/107127/14

MINING PLAN

Imdad Ali

Section- C

1. Environment Management Plan	32
2. Environmental Impact Assessment	34
3. Progressive Mine Closure Plan	36
Conclusion	38
Site Photographs	39
Google Image	40
Annexure 1	Photostat copy of Letter from DFO, Nagaon Forest Division
Annexure 2	Photostat copy of Schedule A
Annexure 3	Photostat copy of GPS Coordinates
Annexure 3	Photostat copy of LOI

Abhijit Bora
Abhijit Bora, Ph.D
Regd No. DGM/RQP/10210913

INTRODUCTION:

Imdad Ali, a resident of H. No. 11, Purbanchal Path, Mathura Nagar, Dispur, Guwahati-06, Assam propose to open a stone quarry near Modertoli Gaon, P.O. Modertoli & P.S. Doboka, District: Hojai (Assam) under Kathiatoli Range of Nagaon Forest Division, Nagaon District: Nagaon, Assam for production of stone to meet up the local demand of stones for Stone Crusher units as well as to supply to various government, semi-government and private agencies for civil construction purposes. There is a demand of stone products like road metals, stone chips of different sizes in Nagaon district and adjoining areas and this stone quarry will meet up the requirement of such stone products to some extent.

For collection of such material from Doboka Reserved Forest for a period of 5 (five) years, necessary permission from concerned authority has to be taken before commencement of the production. The Contract area is located near Modertoli-Gaon, P.O. Modertoli & P.S. Doboka, District: Hojai (Assam). This stone quarry to be opened by Imdad Ali will surely meet the requirement of the stone products to some extent. The proposed Mining Plan covers a scientific and systematic assessment of the deposit which indicates the details of conservation of the deposit and protection of environment in and around the quarrying area.

This is a mining Contract, proposed to award to Imdad Ali is for five years, as proposed by the competent authority, Department of Environment and Forest, Government of Assam. The location of the quarry site as has been recommended by the Department of Environment and Forest, Government of Assam to issue the Mining Contract is within the Doboka Reserved Forest, for collection of stone. The location of the quarry site is close to National Highway 27, which is about 1.5 KM away from the quarry site, connected by a motorable road. The proposed quarry site is free from human habitation within a radius of about 1.1 KM.

Abhijit Bora
Abhijit Bora, Ph.D.
Regd. No. DGM/RQP/02/2014

- 1 -

Mining Plan is Approved

M. A.
Directorate of Geology
Govt of Assam
Dispur, Assam

The proposed quarry site is under the jurisdiction of Kathiatoli Range of Nagaon Forest Division, Nagaon District, Nagaon, Assam. The area is of 5.0 Hectares with a safety zone of 0.63 Ha (7.5m strip all along the outer boundary of the Mining permit Area) and is a degraded forested area. The area is covered by small vegetations like grasses and shrubs. There is no growth of valuable big trees. The proposed site is not within any protected area under Archeological, Religious, Cultural heritage or Defense establishments. By opening a stone quarry as proposed, this area will be benefited by generation of employment opportunities to the local people as well as growth of economic activities.

Mining Plan is Approved

Mou

Senior Geologist
Directorate of Geology & Mining
Govt. of Assam
Kathiatoli Range

Abhijit Bora
Abhijit Bora, Ph D
Regd No. DGM/RQP/02/2013

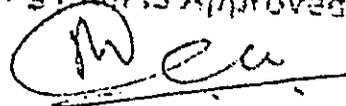
GENERAL INFORMATION:

- The Applicant:**
1. Name : Imdad Ali
2. Office Address : H. No. 11, Purbanchal Path
Mathura Nagar,
Dispur, Guwahati-06, Assam
3. Site Address : Langkaijuri Stone Mahal
Village: Modertoli Gaon
P.O. Modertoli,
P.S. Doboka
District: Hojai (Assam)
4. Status of Applicant : Proprietorial.
5. Mineral Occurring in the area and its use : Quartzite rock (with iron leaching) to be quarried and to be used as construction material as well as road metals.
6. Name of the Quarry : Langkaijuri Stone Mahal
7. Quantity recommended for extraction : 1,50,000 Cu M of stone for 5 years
(for the Mining Contract Holder)
50,000 Cu M of stone for 5 years
(for various developmental work)
8. Contract Period : 5 (five) years.
9. Forest Range & Division : Kathiatoli Range

Abhijit Bora
Abhijit Bora, Ph D.
Regd No DGM/RQP/02/2014

- 3 -

Mining Plan is Approved



Director of Geology
Assam
Dispur, Guwahati

359

Nagaon Forest Division,
Nagaon,
District: Nagaon, Assam

10. Survey of India Toposheet No. : 83 B/16

involved

11. Latitude/ Longitude

: Mahal Area: (Area: 5.0 Ha)

1. 26°09'2.73"N- 92°49'33.89"E
2. 26°08'58.75"N- 92°49'30.04"E
3. 26°08'51.99"N- 92°49'35.10"E
4. 26°08'56.19"N- 92°49'39.67"E
5. 26°09'0.65"N- 92°49'38.07"E

Approach Road Area: (Area: 0.03 Ha)

1. 26°08'52.20"N- 92°49'38.30"E
2. 26°08'53.28"N- 92°49'36.61"E
3. 26°08'53.10"N- 92°49'36.40"E
4. 26°08'52.40"N- 92°49'38.31"E

12. Nearest Railway Station

: Jamunamukh

13. Nearest Airport

: LGB Airport, Guwahati

14. Nearest Highway

: NH - 27

Mining Plan is Approved

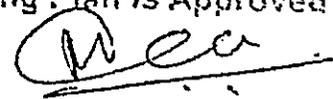
Senior Geologist
Directorate of Geology & Mining
Govt. of Assam
Kamohara Charai

Abhinav S Borah
Abhinav Borah Pn D
Regd No DCMRQP/02/2014

PARTICULARS OF THE RQP PREPARING THE MINING PLAN:

1. Name of the RQP : Dr. Abhijit Bora
2. Address : 2F/3, Beaufort Apartment
Basisthapur Bye lane-3
P.O. Beltola
Guwahati- 781028
3. Registration No. : DGM/RQP/02/2014
Directorate of Geology & Mining,
Govt. of Assam,
Kahilipara, Guwahati-19
4. Validity of Registration : Upto 09-09-2024
5. Contact Number : 9864043223
- 6 Email ID : abhijitbora06@gmail.com

Mining Plan is Approved

Senior Geologist
Directorate of Geology & Mining
Govt. of Assam
Kahilipara Ghy-19

Abhijit Bora
Abhijit Bora, Ph D.
Regd No. DGM/RQP/02/2014

357

LOCATION OF THE PROPOSED CONTRACT AREA:

The location of the proposed quarry site is close to National Highway 27 which is nearly 1.5 KM away. The road connected with National Highway 27 is a motorable road.

The proposed site falls under Doboka Reserved Forest under Kathiatoli Range of Nagaon Forest Division. The other details of the proposed Contract area are as follows:

1. Village : Modertoli Gaon
- P.O. : Modertoli,
- Police Station : Doboka
- District : Hojai
- State : Assam
2. Term of the Mining Contract : 5 (five) years
3. Total area : 5.00 Hectares
4. Ownership/ Occupancy : Divisional Forest Officer
Nagaon Forest Division
Nagaon
District: Nagaon
Assam
5. Land use pattern : The core zone located at Doboka Reserved Forest. Area is degraded forest mainly covered with grasses and scrubs with exposed rocks.

Mining Plan is Approved

Senior Geologist
Directorate of Geology & Mining
Govt. of Assam
Kamrupa Ghy-15

Abhijit Borah
Abhijit Borah, Ph D.
Regd No. DGM/RQP/102/2015

356

PHYSIOGRAPHY AND DRAINAGE:

The proposed Contract area allotted, Langkajuri Stone Mahal, is of more or less rectangular shaped. As per statement furnished by Divisional Forest Officer, Nagaon Forest Division, the total area available for mining is about 5.00 Hectares. The general slope of the area is towards north west as the area itself rises from the south eastern side. The topography of the area is undulating one. The altitude ranges from 56M at the bottom of the hill to 80M at the hilltop. The proposed area is free from any valuable tree and useful vegetation but covered with degraded forest with grass, scrubs etc. with exposed rocks.

Drainage pattern of the area is mainly controlled by number of small streams present in the area, finally falls in the nearest paddy field.

GEOLOGY OF THE ALLOTTED AREA:

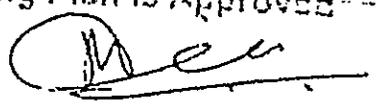
A. Regional Geology:

The Assam plateau lies along the continuation of the Archeans of Bihar and comprises Garo, Khasi, Jayantia hills and to its north-east is the detached area of Mikir hills. Tertiary rocks are well developed in the north-eastern and south-eastern part where they exhibit a more or less complete geological succession ranging from Paleocene to Lower-Pleistocene. The generalized geological succession of Assam is as follows:

Age		Group	Formation	Description of Litho units
Quaternary	Recent		Khadar-newer alluvium	Clay, sand, slit etc.
	Unconformity			
	Pleistocene		Bhanger- Older alluvium	Clay, coarse sand, gravel & boulder.
Unconformity				
Tertiary	Pliocene	Dihing	Dihing	Pebble bed, sandy clay.

Approved by
 A. J. B. B. B., P. D.
 Mining No. DGM/RQP/02/2013

Mining Plan is Approved



Stamp of the Mining Department, Assam

355

				clay, conglomerate and sand stone
	Mio-Pliocene		Dupitila (Surma Valley) & Namsang (Upper Assam)	Sandstone, mottled clay, grid, conglomerate bed
Unconformity				
	Miocene	Tipam	Girujan	Mottled clay, sandy shale & sandstone
			Tipam	Bluish gray to greenish sandstone, clay, shale, conglomerate etc.
		Surma	Bokabil	Shale, Sandy shale, sandstone etc.
			Bhuban	Alteration of sandstone, sandy shale & conglomerate.
Unconformity				
	Oligocene	Barail	Tikok Parbat	Banded sandstone with thick coal seams
			Bogolai	Sandstone & shale with numerous thin coal seams, carbonaceous shale, sandstone etc.
			Naogaon	Thin bedded hard sandstone with shale
	Eocene	Disang		Dark grey shale & sandstone
		Jayantia	Kopili	Shale, sandstone etc.
			Sylhet sandstone	Sandstone, coal, clay & shale
			Sylhet Limestone	Fossiliferous limestone
Unconformity				
Mesozoic	Jurassic		Volcanic	Trap, basaltic & doleritic rock
Unconformity				
Palaeozoic	Permian	Gondwana	Simgimari	Buff coloured fine grained sandstone, shale, carbonaceous shale with coal & conglomerate etc.,
Unconformity				
Proterozoic	Precambrian	Shillong		Granite, pegmatite, alternating beds of clay,

Mining Plan is Approved

(Signature)

Director General of Geology
Govt of Assam
Kohima, Gauhati

Approved by
A. Singh, B.Sc., Ph.D.
Magd No. DGM/RQP/02/2015

				quartzite, phyllite, basalt conglomerate etc.
Unconformity				
Azoic	Archean	Gneissic		Granite, pegmatite, metadolomite, amphibolite, biotite, hornblende, gneiss, calc granulite, pyroxenite etc.

(Regional geology is based on Miscellaneous Publication No.1 of Directorate of Geology and Mining, Government of Assam)

B. General Geology of the area:

The area proposed to be allotted to Imdad Ali lies within Nagaon district. The geology of the Mining Contract area is massive quartzitic body with impurities. It comprises light grey coloured hard fine-grained quartzite with high quantity of quartz. Joints and fractures are distinct in the Contract area which will be very much useful for mining. (Figure 2)

Mining Plan is Approved

(Signature)
 Senior Geologist
 Directorate of Geology
 Govt of Assam
 Manihara, Gauhati.

(Signature)
 Asst. Dir. Pn D
 D. No. DGM/DP/102/2013

THE ALLOTTED LAND AND THE TYPE OF ROCK:

The total area proposed for grant of Mining Contract to Imdad Ali for stone quarry is 5.00 Hectares. The area is demarcated by the Competent Authority of the Department of Environment and Forest falls within Doboka Reserved Forest under Nagaon Forest Division. (Figure1).

The geographic co-ordinates of the four corner points collected by GPS are:

- 1. 26°09'2.73"N- 92°49'33.89"E
- 2. 26°08'58.75"N- 92°49'30.04"E
- 3. 26°08'51.99"N- 92°49'35.10"E
- 4. 26°08'56.19"N- 92°49'39.67"E
- 5. 26°09'0.65"N- 92°49'38.07"E

The geology of the Mining Contract area is massive quartzitic body with impurities. It comprises light grey coloured hard fine-grained quartzite with high quantity of quartz.

Mining Plan is Approved

Director Geology
Directorate of Geology & Mining,
Govt. of Assam
Kamohara Ghy-19

Alsharif B...
Asst. Secy, Pn D
Regd No DGM/RQP/10/2011

PROPERTIES OF THE STONE:

The stone is hard, compact, light grey in colour and is fine grained.

The rock deposit is covered with thin layer of vegetation and soil. The rocks are well exposed in the area.

USE:

The minerals so available are suitable for use basically in construction works as well as road metals.

MINEABLE RESERVE OF THE MINERAL AT THE PROPOSED SITE:

The detailed exploration of the mineral in the area has not been carried out. Therefore, the estimation of the Mineable reserve has been made considering the deposit to be massive and continuous. As per the Letter No. FNGT/ B/ Langkaijuri Stone Mahal/ 2021/ 4257-58, dtd. 29.09.2021, of the Divisional Forest Officer of Nagaon Forest Division, Nagaon, the total Mining Contract period is for five years and the quantity of 2,00,000 Cu.M of stones have been allowed for extraction from this quarry site. The Contract Area is marked as 1, 2, 3 & 4 for mining of mineral as may seen in the Base Map (Fig.1). The Mineable reserve calculated roughly up to the lowest level is approximately 25,00,000 Cu.M.

Mining Plan is Approved

(Signature)

(Signature)
 Director, Bora, Ph U
 Regd No. DGM/RQP/02/2011

Director, Bora, Ph U
 Regd No. DGM/RQP/02/2011

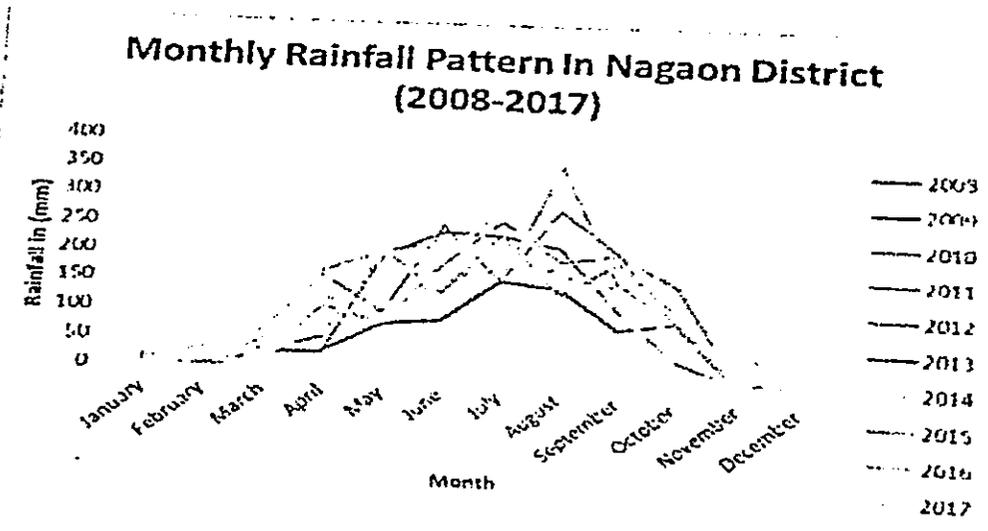
354

CLIMATE AND RAINFALL:

The climate is in general Monsoon type. But there are some differences from the other districts of Assam. Rainfall increases towards the east and the west of Assam from this district. The pattern of rainfall is such that the south is usually dry and the north is relatively rainier. Rainfall from south to north increases from 1000 mm per annum to 2000 mm per annum. The cold season is from December to February. Floods create havoc usually from June to October. The monsoon lasts from April to May. The post monsoon season lasts from October to November. The average rainfall is about 1750 mm.

Temperature in winter varies from a maximum of 24.8 ° Celcius to a minimum of 11.2 ° Celcius. In summer, temperature varies from a maximum of 32.9 ° Celcius to a minimum of 25.5 ° Celcius. The annual average maximum temperature is 30.4 ° Celcius and the minimum is 19.8 ° Celcius.

Highest Temperature	: 30.4°C
Lowest Temperature	: 19.8°C
Average Annual Relative Humidity	: 87%
Average Annual Rainfall	: 1750 mm

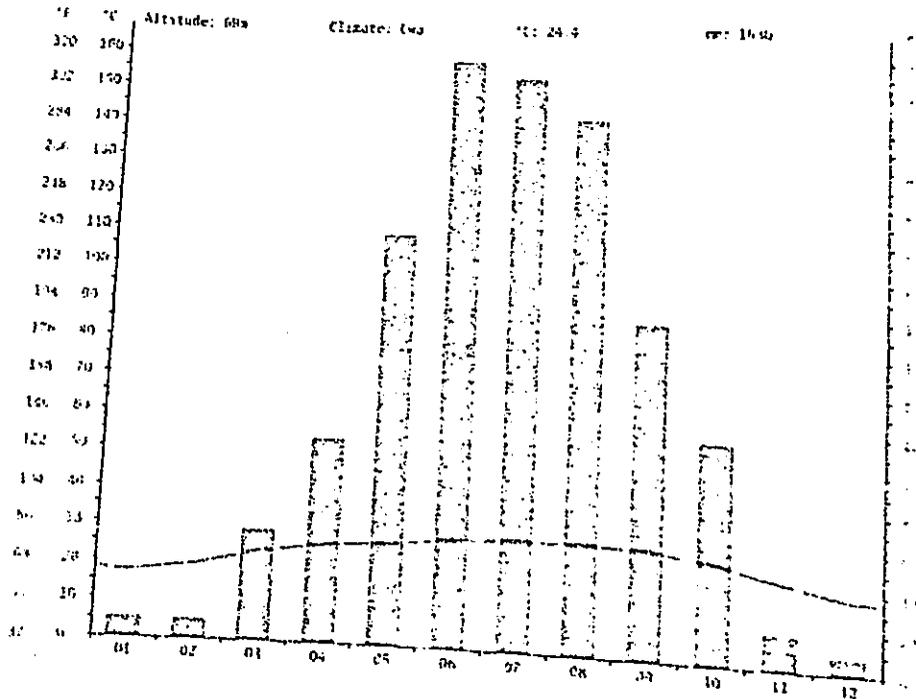


[Signature]
 M. P. S. to Ph.D.
 Regd No. DGM/RQP/02/201-1

Mining Plan is Approved
[Signature]
 M. P. S. to Ph.D.
 Regd No. DGM/RQP/02/201-1

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	17.4	19.5	23.2	25.6	29.7	28.2	28.9	28.9	28.4	26.1	22	12.5
Min Temperature (°C)	10.9	13.1	16.7	20.1	22.5	24.7	25.4	25.4	24.8	21.8	19.5	12.2
Max Temperature (°C)	23.9	25.9	29.7	31.1	30.9	31.8	32.4	32.4	32	30.4	27.6	24.8
Avg. Temperature (°F)	63.3	67.1	73.8	78.1	80.1	82.8	84.0	84.0	83.1	79.0	71.6	53.3
Min. Temperature (°F)	51.6	55.6	62.1	68.2	72.5	76.5	77.7	77.7	75.6	71.2	61.7	54.0
Max Temperature (°F)	75.0	78.6	85.5	88.0	87.6	89.2	90.3	90.3	89.6	86.7	81.7	76.6
Precipitation / Rainfall (mm)	10	10	57	107	219	317	308	286	176	114	19	8

Climate Table/ Historical Weather Data of Hojai District.



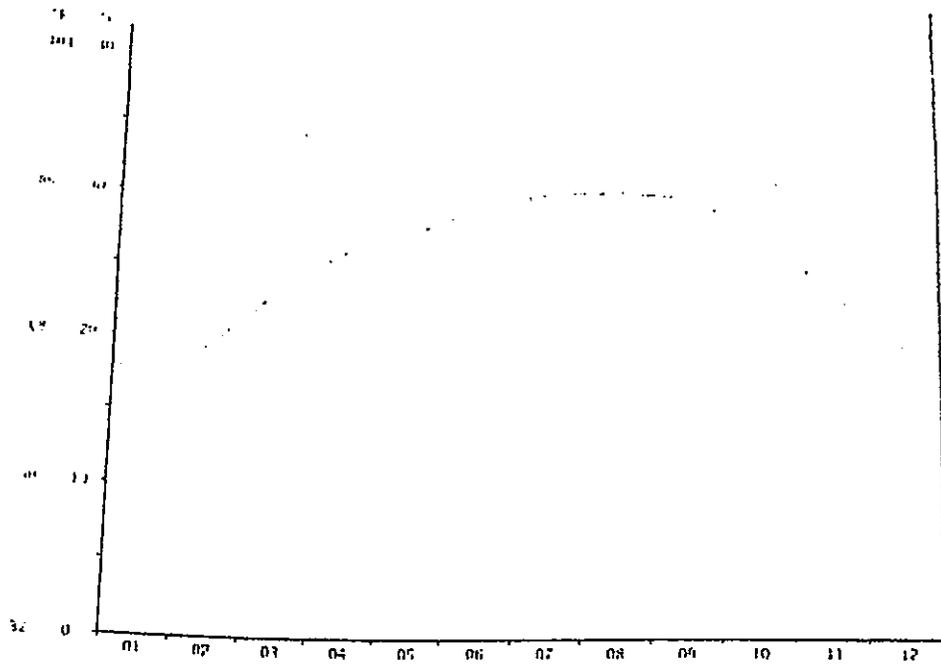
Climate Graph of Hojai District.

Atul Kumar Borah
 Atul Kumar Borah, Ph.D.
 Regd No. DGM/RQP/02/2014

Mapping Plan is Approved

M. C.

Director of Geographical Information
 Govt. of Assam
 Dispur, Assam



Temperature Graph of Hojai District.

Mining Plan is Approved

M. U.

Directorate of Geology
Govt. of Assam
Jorhat/Guwahati

Abhinav Barua

Asst. Geol., Ph.D.

Regd. No. DGM/RQP/02/201

MINING:

In order to ensure mineral conservation, systematic mining and protection of environment, the Assam Minor Mineral Concession Rules (AMMCR), 1994 has been replaced by AMMCR, 2013 and it has been made mandatory to prepare Mining Plan and progressive Mine Closure Plan for grant of any mineral concessions like "Mining Lease", "Mining Contract" or "Mining Permit" in respect of minor minerals for systematic and scientific development of all mines, quarries as well as river bed mining. The responsibility of preparation of "Mining Plan" in respect of any mine applied for mineral concession has been entrusted to technical experts known as "Recognised Qualified Person" (RQP) and this has been made mandatory for all mines and quarries.

In the present case, it is proposed to allow the Mining Contract holder to extract rock boulder is a Reserved Forest. The proposed area is steep towards north western direction and quarrying shall have to be carried out by making benches at suitable levels between the contours in the NE-SW direction as shown in the Figure. 3. As per the contour lines drawn in respect of the area, the hauling road to reach the possible top level of the proposed area shall be constructed from north eastern side of the deposit.

The area is covered with little amount of vegetation and soil, without any tree of significant importance. For facilitating mining in this area and for transportation of the quarry products, an unmetalled approach road already exist up to the quarry site connecting the main road.

There is a top soil cover with thickness varying from 0.75M to 0.5M over whole area except some places where there are exposed rock boulders. Such exposed rocks are weathered rocks and may be used only for the construction of the approach road and backfilling in the mined-out area for reclamation purposes.

!Mining Plan is Approved

Mee

Director
Geology
Assam
Dispur

348
[Signature]
RQP No DGM/RQP/102/2013

PARAMETERS CONSIDERED FOR MINE DESIGN AND PROPOSED METHOD OF MINING:

Sl.No	PARAMETERS	REMARKS
1.	Proposed method Mining	Opencast
2.	Mode of Mining	Manual
3.	Working days in a year	250 days
4.	Designed production per day	160 Cu.m
5.	Name of the mineral to be extracted	Quartzite
6.	Bulk density	1.5MT/Cu.m
7.	Specific Gravity	2.60
8.	No. of shift	1
9.	Overburden	2%
		Contains mixture of soil and weathered rocks

Considering the surface feature, contours, quantity of rocks to be extracted, the nature of the deposit and availability of infrastructure, it is suggested to adopt Opencast Mining method, with compressed air drilling, blasting of large boulders and manual/ mechanized loading.

The layout of the mine shall be as follows:

- A. The hauling road shall be constructed from the datum level at 283M contour towards south west as shown in the Figure 3 showing mining

[Signature]
 Acy, B. Sc., Ph. D.
 Regd. No. DGM/1907/2013

- 17 -

Mining Plan is Approved

[Signature]

Director of Geology
 Government of Karnataka
 Bangalore

operation. It is designed to keep minimum of forty-five numbers of benches (including re-mining benches) throughout the operation to maneuver all the works at a time without hampering the other works.

B. As shown in the figure, the layout of the faces shall be generally in the NE-SW direction along the contour levels as far as practicable. The bench height is to be maintained at 3M and width up to maximum of 8M.

YEARWISE MATERIALS TO BE HANDLED: – (in Cu.M)

Year	Proposed Extraction of Stone per year	Overburden removal per year	Total Material to be handled per year	Total material to be handled per day
1 st Year	40800	560	41360	165
2 nd Year	38100	330	38430	152
3 rd Year	40700	200	40900	164
4 th Year	39800	0	39800	159
5 th Year	40600	0	40600	162

Mining Plan is Approved

M. C. S.

Senior Geologist
Directorate of Geology & Mining,
Govt. of Assam,
Kohilipara, Ghy-10

Abhishek Barua

Adm. In-charge, P. N. D.

Regd No. DGM/RQP/02/2015

DRILLING:

Different parameters considered for drilling are as follows:

Parameters	Amount
Material to be extracted	2,00,000 Cu.M
No. of working days per year	250 days
Materials to be handled per day	152-165 Cu.M
No. shifts per day	1
Depth of holes	1.5M
Spacing of holes	2.0M – 2.5M
Burden of each hole	1.0M – 1.5M
Pattern of holes	Staggered
Inclination of holes	0
Yield per hole	3.0 Cu.M
No. of holes per day	10-12
Type of drill machine to be used	Handheld jack hammer Drill
Diameter of holes	25mm
No. of drill machine to be maintained	10 Nos. (Max.)

BLASTING:

Parameters	Quantity
Yield per hole	3 Cu.M
Powder factor	5.50 MT/Kg
Charge per hole	1.50 Kg
Explosive to be used	Gelatin & ANFO
Detonators	Electric
Delay detonators	25 ms

Atsujit S. S. S.
 Atsujit S. S. S.
 No. DGM/RQ/...

Mining Plan is Approved

(Signature)

Atsujit S. S. S.
 No. DGM/RQ/...

YEARWISE DEVELOPMENT AND PRODUCTION PLAN:

First Year: (Figure 4)

1. Construction of quarry haul road from the datum level at 283m to a maximum of RL at 349m level approximately.
2. Development of the first overburden and mineral bench B1 at 355m level following the surface contour.
3. The next Benches B2 at 352m level to B11 at 325m level shall be developed at the same time following the respective surface contour.
4. During this year the Bench No. B1 and B11 will be exhausted.
5. The height of all benches will be maintained at 3M and width of 8M.
6. To achieve the target of first year target, mining shall be continued up to Bench 11 (B11).
7. 2nd year operation shall be started from the Bench 12.

The synopsis of the parameters of the first-year operation will be as follows:

Parameter	Level (M)	Soil (Cu.M)	Stone (Cu.M)	Total (Cu.M)
Haul road	283-349	90		90
B1	355	30	1500	1530
B2	352	30	2100	2130
B3	349	40	2400	2440
B4	346	40	3000	3040
B5	343	40	3500	3540
B6	340	40	4100	4140
B7	337	50	4600	4650
B8	334	50	4800	4850
B9	331	50	4800	4850
B10	328	50	5000	5050
B11	325	50	5000	5050
Total		560	40800	41360

Alsharif B...
 Magd No. DGM/RQP/02/201

Mining Plan is Approved

W. A.

Director General
 Directorate of Geology
 Ministry of Planning
 Addis Ababa

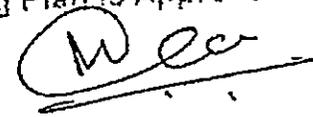
Second Year: (Figure 5)

1. 2nd year operation shall be started from the Bench 12 (B12) at 322 m level.
2. Subsequently, the Bench No. B13 to B18 will be developed at 319 M to 304m level following the surface contour.
3. During this year the Bench No. B12 to B18 will be exhausted.
4. To achieve the target of stipulated target, mining shall be continued up to Bench18 (B18).

The synopsis of the parameters of the second year operation will be as follows:

Parameter	Level(M)	Soil (Cu.M)	Stone (Cu.M)	Total (Cu.M)
B12	322	50	5000	5050
B13	319	50	5200	5250
B14	316	50	5300	5350
B15	313	50	5500	5550
B16	310	50	5500	5550
B17	307	40	5800	5840
B18	304	40	5800	5840
Total		330	38100	38430

Mining Plan is Approved



Senior Geologist
Directorate of Geology & Mining,
Govt of Assam
Kamrupa Ghy-19

Abhishek Barua
Asstt. Bore, Pn D.
Prog. No. DGM/RQP/02/2014

Third Year: (Figure 6)

1. 3rd year operation shall be started from the Bench 19 (B19) at 301 m level.
2. Subsequently, the Bench No. B20 to B40 will be developed at 298 m to 283m level following the surface contour.
3. The stipulated target could not be achieved within the benches mentioned above, remining from Bench 1 to Bench 20 shall have to be carried out to achieve the stipulated target. Remining of Bench 1 to Bench 20 shall be re-designated as Bench 26 (B26) to Bench 45 (B45).
3. During this year the Remining Bench No. B26 to B28 will be exhausted.
4. To achieve the target of stipulated target, mining shall be continued up to Remining Bench 28 (B28).

The synopsis of the parameters of the third-year operation will be as follows:

Parameter	Level(M)	Soil (Cu.M)	Stone (Cu.M)	Total (Cu.M)
B19	301	40	6000	6040
B20	298	40	6000	6040
B21	295	40	5800	5840
B22	292	20	5600	5620
B23	289	20	5000	5020
B24	286	20	4300	4320
B25	283	20	2000	2020
B26	} Re-mining Benches	355	0	1500
B27		352	0	2100
B28		349	0	2400
Total			200	40700

Abhinav Sharma
 ABINAV S. S. PH D
 Regd No. DGM/RQP/102009

Minning Plan is Approved

W ee

Director
 DGM/RQP/102009

346

MINING PLAN

Final A

Forth Year: (Figure 7)

1. 4th year operation shall be started from the Remining Bench 29 (B29) at 346 m level.
2. Subsequently, the Remining Bench No. B30 to B37 will be developed at 343 M to 322 M level following the surface contour.
3. During this year the Remining Bench No. B29 to B37 will be exhausted.
4. To achieve the target of stipulated target, mining shall be continued up to Remining Bench37 (B37).

The synopsis of the parameters of the fourth-year operation will be as follows:

Parameter	Level(M)	Soil (Cu.M)	Stone (Cu.M)	Total (Cu.M)
B29	346	0	3000	3000
B30	343	0	3500	3500
B31	340	0	4100	4100
B32	337	0	4600	4600
B33	334	0	4800	4800
B34	331	0	4800	4800
B35	328	0	5000	5000
B36	325	0	5000	5000
B37	322	0	5000	5000
Total		0	39800	39800

Mining Plan is Approved

Meer

Senior Geologist
Directorate of Geology
Govt. of Assam
Dispur, Assam

Alakshya Barua
Asst. Dir. Geol., Ph D
Regd No. DGM/RQP/102700

Fifth Year: (Figure 8)

1. 5th year operation shall be started from the Remining Bench 38 (B38) at 319 m level.
2. To achieve the stipulated target of 5th year, mining shall be continued up to a portion of the B45 at 298m level..
3. During this year the Remining Bench 38 to a portion of the B45 will be exhausted.

The synopsis of the parameters of the fifth-year operation will be as follows:

Parameter	Level(M)	Soil (Cu.M)	Stone (Cu.M)	Total (Cu.M)
B38	319	0	5200	5200
B39	316	0	5300	5300
B40	313	0	5500	5500
B41	310	0	5500	5500
B42	307	0	5800	5800
B43	304	0	5800	5800
B44	301	0	6000	6000
B45	298	0	1500	1500
Total		0	40600	40600

Mining Plan is Approved

M. Lee
 Senior Geologist
 Directorate of Geology & Mining,
 Govt. of Assam
 Kohilpara Ghy-19

Almijit Bora
 Almijit Bora, Ph.D.
 Regd No. DGM/RQP/02/2011

DISPOSAL OF MINERAL:

There will be a stockyard to stock the mineral (stone boulders) outside the quarry site/ Reserved Forest. The large rock boulders produced while quarrying will be broken manually to a suitable size in the quarry itself and will be loaded manually to the Trucks/Dumpers for dispatch to the desired locations.

END USE OF THE MINERAL:

The Mineral (Stone Boulders) to be quarried will be utilized mainly for construction of roads and buildings. The rock boulders extracted, are to be processed in a Stone Crusher unit to manufacture road metals and stone chips of different sizes to make it suitable for various road construction and other constructional purposes.

Mining Plan is Approved



Senior Geologist
Directorate of Geology & Mining
Govt. of Assam
Jorhat-781013

Alakant Bora
Ac: p/ Bora, Ph.D.
Regd No. DGM/RQP/02/2013

327

MINE DRAINAGE:

There are a few small streams which is controlling the drainage pattern of the area. The rain water and surface runoff from hilltop goes downwards to the flat land towards the southern side of the Contract area. Suitable garland drain will be constructed before rainy season. This drain will pass through a settling tank before water is discharged into natural drainage system. Workings shall be done from 355m RL to 283m RL, so this is not going to affect water table. The drain and the settling tank will arrest the silt and rock fragments produced due to mining activity in the quarry and allow uncontaminated water to take its own course leaving the debris in the drain/ settling tank. The drain and the setting tank shall be cleaned occasionally as and when required.

No water is likely to be encountered during mining and hence no pumping arrangement is made.

DISPOSAL OF WASTE:

The waste comprises mainly overburden, which are top soil and left out rock fragments which are not usable. The top soil and waste rock fragments etc. shall have to be preserved for reclamation purposes in future, which have been described in detail in "Progressive Mine Closure Plan".

Mining Plan is Approved

Director Geology
Department of Geology
Govt of Assam
Dispur, Assam

Atuljit Bora
Atuljit Bora, Ph D.
Regd No. DGM/RQP/02/201

EXTENT OF MECHANISATION:

As stated earlier this will be a manual quarry with compressed air drilling and blasting. Boulders will be loaded to the trucks/dumpers manually or mechanically and transport to the respective destination.

MINING EQUIPMENT:

SL. No.	Particulars	Specification	No.
1.	Drilling	Hand held Jack Hammer drill machine	10
2.	Compressor	400 CFM capacity	4

Mining Plan is Approved

(Signature)

Senior Geologist
Directorate of Geology & Mining
Govt. of Assam
Kohima City-78

Abhishek Barua
Adm. Secy, Ph I,
Regd No. DGM/RQP/02/20

EXPLOSIVES AND BLASTING PARAMETERS:

Primary blasting parameters:-

Sl. No	Particulars	Specification
1.	Type of explosives	High explosives
2.	Yield per hole	3 Cum
3.	Dia. of hole	25 mm
4.	Charging pattern	
	- Bottom charge	High explosives
	- Column charge	ANFO
5.	Minimum No. of holes to be blasted per day to achieve the daily target	8-10
6.	Manner of blasting	Electrical
7.	Sequence of blasting	Multi holes
8.	Charge per hole	1.50 Kg.
9.	Cartridge	0.50 Kg.
10.	ANFO	2.40 Kg.
11.	Detonators	Short delay -Electric

Mining Plan is Approved

Senior Lecturer
Directorate of Geology
Govt. of Assam
Jalpaiguri Gh-13

Abhinav Bora
Abhinav Bora, Ph D.
Regd No. DGM/RQP/02/20

TYPE OF EXPLOSIVES:

As available in the local market it is suggested to use 25 mm Slurry explosives (Class-II) in the proposed quarry. The available brands are Powergel, Superdyne, Dynex-90 etc.

In addition to above, ANFO (Ammonium Nitrate Fuel Oil Mixture) may be used to reduce the cost of explosive. It is prepared by mixing Prilled Ammonium Nitrate with HSD oil in the proportion of 94.5 : 05.5. The ratio of both the explosives will be as below:

Slurry explosive: ANFO = 37.5 : 62.5

BLASTING OPERATION:

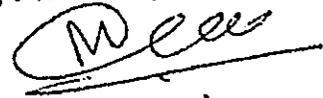
The blasting operation shall be undertaken by competent persons (blasters) as per Mining Rules & Regulations in force with maximum precautions to make the blasting operation safe.

Frequency of blasting can be optimized by use of delay detonators to reduce the noise and ground vibration within the threshold limit.

Blasting Pattern, stemming, charge per hole should be designed on the basis of field trials to control the flying rocks.

Adequate sirens, signals, posting of guards at strategic points before blasting shall have to be provided.

Mining Plan is Approved



Senior Geologist
Directorate of Geology, Assam
Govt. of Assam
Jalpaiguri City-14

Abhinav Barua

Agri. Engr, Ph.D.

Regd No DGM/RQP/02/2014

STORAGE OF EXPLOSIVES:

The nearest explosive dealer is located at Guwahati which is about 135 Km away from the proposed quarry site. It will be very difficult to procure explosives from Guwahati everyday for blasting purposes. On the other hand, Assam is a very sensitive area so far as extremist activities are concerned and there are very strict laws in force in connection with transportation and storage of explosives. It is therefore suggested to obtain help from the nearest Police Station (Jamunamukh) to procure explosives for 5 to 6 days and store in their custody in an Explosive Van. The explosives so stored in the Police Station may be used for blasting in the quarry as when required. Thereafter, another lot of explosives for the next period may be procured for blasting. This modality is preferable, because to obtain an explosive license for a magazine for storage of explosive and then to maintain the magazine security etc. will be very costly and unsafe.

Mining Plan is Approved

(Signature)

Director General
Directorate of Geology
Govt of Assam
Kohima City

(Signature)
Achim Dora, Ph D
D/G No DGM/RQP/02/00

OTHER SITE SERVICES:

Mining Contract Holder will keep all the basic amenities, office and other requirements as per Mining rules and regulations at the base camp near the proposed quarry area. The following facilities are to be provided for smooth running of the mine.

1. Rest shelter for the quarry workers.
2. First Aid room.
3. Site office and store.
4. Arrangement for drinking water and sanitation.
5. Portable Blasting Shelters at suitable points for use by the blaster.

LIST OF MAN POWER:

Sl. No.	Designation	Number
1.	Mine Manager	1
2.	Mining Supervisor	2
3.	Blaster	2
4.	Explosive Carrier	2
5.	Driller	7
6.	Office Staff	5
7.	Security Personal	12

Mining Plan is Approved

(Signature)

(Signature)
 Abhisht Bora, Pn L
 Regd No. DGM/RQP/02/20

ENVIRONMENT MANAGEMENT PLAN:

A) Base Line Information:

Sl. No.	Particulars	Description										
1.	Type of Land	Degraded Forest land, with grasses & shrubs.										
2.	Whether clearance under Environment (p) Act, 1986 Required?	Yes.										
3.	Existing land use pattern	Vacant land, unsuitable for cultivation or human habitation.										
4.	Present land occupation	<table border="0"> <tr> <td>Settlement</td> <td>0%</td> </tr> <tr> <td>Agriculture</td> <td>0%</td> </tr> <tr> <td>Grass</td> <td>70%</td> </tr> <tr> <td>Shrub</td> <td>29%</td> </tr> <tr> <td>Other tree</td> <td>1%</td> </tr> </table>	Settlement	0%	Agriculture	0%	Grass	70%	Shrub	29%	Other tree	1%
Settlement	0%											
Agriculture	0%											
Grass	70%											
Shrub	29%											
Other tree	1%											
5.	Area already degraded	100.00%										
6.	Flora and Fauna	Almost Nil										
7.	Water regime	There are few small streams running from top of the hills which are active during rainy season										
8.	Human settlement	There are no human settlement within a radius of about 1.1 KM of the proposed site.										
9.	Public building, place of worship, Monument and cremation ground	Nil										
10.	Does the area fall under											

Mining Plan is Approved

(Handwritten Signature)

(Handwritten Signature)
 Jyoti Sora, Ph D.
 Regd No. DGM/RQP/102/2019

(Faint Stamp)

329

ENVIRONMENTAL IMPACT ASSESSMENT:

As per an order of Hon'ble Supreme Court dated 27-02-12, it has been decided that all mining projects of minor minerals including their renewal, irrespective of the size of the Contract /contract/lease area would require prior environment clearance. Therefore, proposed Mining Contract Area also attracts prior environmental clearance.

The mining operation in the proposed quarry will have some impact on the environment. However, considering the nature and scale of operation the impact on physical environment from this quarrying operation in this area will be less. The broad outlines of probable impacts on environment from this quarrying operation in the area are detailed below:-

LAND AND AREA:

After the mining operation to be carried out in the proposed area measuring 5.0 (five) Hectare, the landscape of the quarrying area will be changed. Presently, the area is covered with grasses and some shrubs. After completion of mining operation there is no scope for agriculture activity in this area, but reclamation of this area with plantation of trees shall have to be undertaken by the Mining Contract Holder at his own cost under a "Mine Closure plan" as described.

AIR QUALITY:

The air quality will get affected in and around the area due to mining actives like blasting, movement of trucks etc. Since only manual mining will be carried out in the quarry, the impact on environment will be very less due to the mining activities. However, measures like water spraying and use of delay detonators needs to be applied to reduce the impact on the local environment.

Abhishek Sharma
Aunji bcrs, Ph.D.
Regd No. DGM/RQP/02/2011

Mining Plan is Approved

M Sharma
Director of Geology
G. I. Class
Mineral Resources

328

Mining Plan

WATER QUALITY:

In the rainy season, the water flows down the hill slope directly from south west to north east and goes downwards the nearby fields. All measures to arrest the silt and the rock fragments produced due to mining activity in the quarry including construction of settling tanks has already been suggested in the Mine Drainage chapter. Further it is suggested to analyze water samples at regular intervals to ascertain the quality of water.

NOISE AND VIBRATION:

The noise and vibration along with dust are generated due to the following activities while mining:-

- 1. Operation of mining equipment like drills, compressors etc.
- 2. Blasting.
- 3. Movements of transport vehicles.

It is suggested to take following measures to control it by:-

- 1. Periodic blasting using delay detonators.
- 2. Arrangement for spray of water in the dust generating areas to suppress the dust.
- 3. To use thick cover of safety net over the blasting site to prevent splitting out of rock fragments

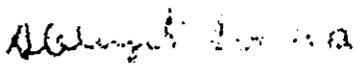
SOCIO ECONOMIC ENVIRONMENT:

The socio economic environment of the locality will improve with upliftment of the economic scenario due to the following reasons:

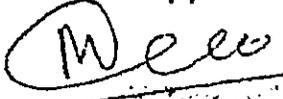
- 1. Generation of direct and indirect employment.
- 2. Development of infrastructure.
- 3. Growth of business and other economic activities.

PUBLIC BUILDINGS, MONUMENTS, CREMATION GROUND ETC.:

The proposed mining site is free from the above mentioned items.


 A.P. Singh
 Dy. Commr.
 Regd. No. DGWR/11/2009

Mining Plan is Approved


 Director of Geology
 Govt. of Assam
 Dispur, Assam

327

PROGRESSIVE MINE CLOSURE PLAN:

The "Assam Minor Mineral Concession Rules 2013" has made it compulsory to incorporate a "Progressive Mine Closure Plan" and a "Final Mine Closure Plan" in the Mining Plan vide Rule 52(5) (VIII) of the said Rule. But as per the rule, only the "Progressive Mine closure Plan" is to be incorporated in the Mining plan and accordingly the same has been included in this Mining Plan. The "Final Mine closure Plan" shall have to be submitted and obtain approval one year prior to the date of proposed closure of the mine.

MINE CLOSING OPERATIONS:

The proposed stone quarry located in a hilly area will have to be operated by 'Opencast method of Mining'. The details of all the workings of the mine for 5 years have been explained in details with extraction of the stone boulder with detailed Plans and sections.

Mine closure plan encompasses rehabilitation process as an ongoing programme designed to restore physical, chemical and biological quality disturbed by the mining activity to a level acceptable to all concerned. It must aim at leaving the area on completion in such a way that rehabilitation does not become a burden to the society after the mining operation is over.

Therefore, Progressive Mine Closure operation is a continuous series of activities starting from the day one of the initiation of the mining project. Here in this present case of stone quarrying, opencast mining shall be carried out with preparation of benches from top of the hilly terrain downwards to the datum level. As described in this mining plan earlier and considering the production schedule, 25 (twenty five) numbers of benches from B1 to B25 shall have be prepared along with re-mining benches from B26 to B45 while mining the stone boulders

Abhijit Borz, Ph D.
Abhijit Borz, Ph D.
Regd No. DGM/RQP/02/201

Mining Plan is Approved

M. C. C.
M. C. C.
In-charge of Geology
Dept. of Geology
Assam State Geology

326

within the Contract period (See plate of Mine closure Plan-Figure 4). So, from the starting of mining operations onwards while preparing the Bench 1 itself, the Mining Contract Holder shall have to be cautious enough and keep in mind about the activities to be carried out for reclamation of the mined out area.

This stone quarry has large quantity of overburden mainly as top soil and waste rocks. The top soil should be removed and stored separately, while the solid wastes should be stored in external dumps keeping the area to be backfilled free. These external dumps should be stored in benches, which come up during the mining operations. With the progress of the mine face and availability of space for backfilling, the waste rock dumps are first utilized to fill the void up to a planned level. The top soil stored separately should then be laid over it to sustain plan growth.

It may be seen in the plate of the Mine closure Plan that there are in total 45 (forty five) numbers of benches proposed to be created during the mining operation for 5 years. The benches have been marked from No. 1 to 45 in the plate accordingly. As per the process described above, the reclamation work in the Mine closure plan in respect of the mine may be programmed as below:-

5th Year: Backfilling of benches with solid waste and plantation with suitable kind of plants at bench after completion of mining operation.

Plantation with suitable kind of plants at last re-mining Bench 26 to Bench 45 along with the surrounding safety zone.

The above schedule of reclamation work may however be altered as per requirement and its suitability.

Abhinav Bera
Abhinav Bera, Ph.D.
Regd No. DGM/RQP/02/201

Mining Plan is Approved

M. Cee

Stamp: Director, Coal & Mines Administration, Government of India, New Delhi

325

CONCLUSION:

After detailed analysis of the baseline data available on the present environment scenario of the proposed area and its impact on the present area for production of stones, different controlling measures suggested against adverse impact, brings out the following facts:

1. The proposed area is a degraded forest land having soil cover with grass/shrubby vegetation and outcrop of rocks.
2. The area is not suitable for any agricultural activities.
3. There is no rare, endangered or unique species of flora and fauna found in this area as per record of the Forest Department.
4. There is no protected Archaeological heritage site, Historical monument, Defense establishment, Place of Worship, Cremation ground within 5 Km radius of the area.
5. There are least chances of contamination of the general air due to this mining operation.
6. There will not be any adverse impact on hydrography and water quality of the locality due to mining operation.
7. Adequate preventive measures have been suggested to combat the air and water pollution that may be caused due to the mining operation.
8. A detailed programme for reclamation of the area has been described in the "Progressive Mine Closer Plan" to combat the ecology of the area.
9. There will be significant upliftment of the socio economic scenario of the area due to establishment of this mining project.

Considering all the points mentioned above, and the fact that the materials produced through this mining project will be utilized for the development of infrastructure of the state, it is expected that the Mining Contract as applied for may be granted for the socio economic upliftment and development of this backward region.

Mining Plan is Approved

(Signature)

Director, Mines
 Ph.D.
 DGM/RQP/02/201

(Faint stamp)

329

MINING PLAN

Site Photographs

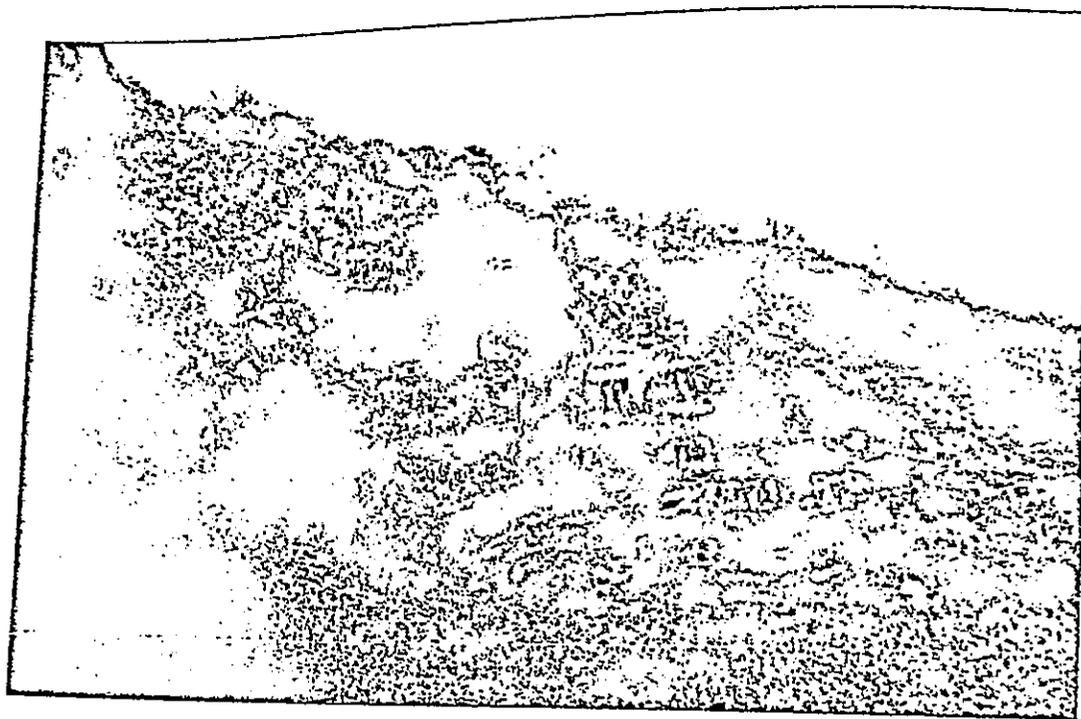


Plate: 1

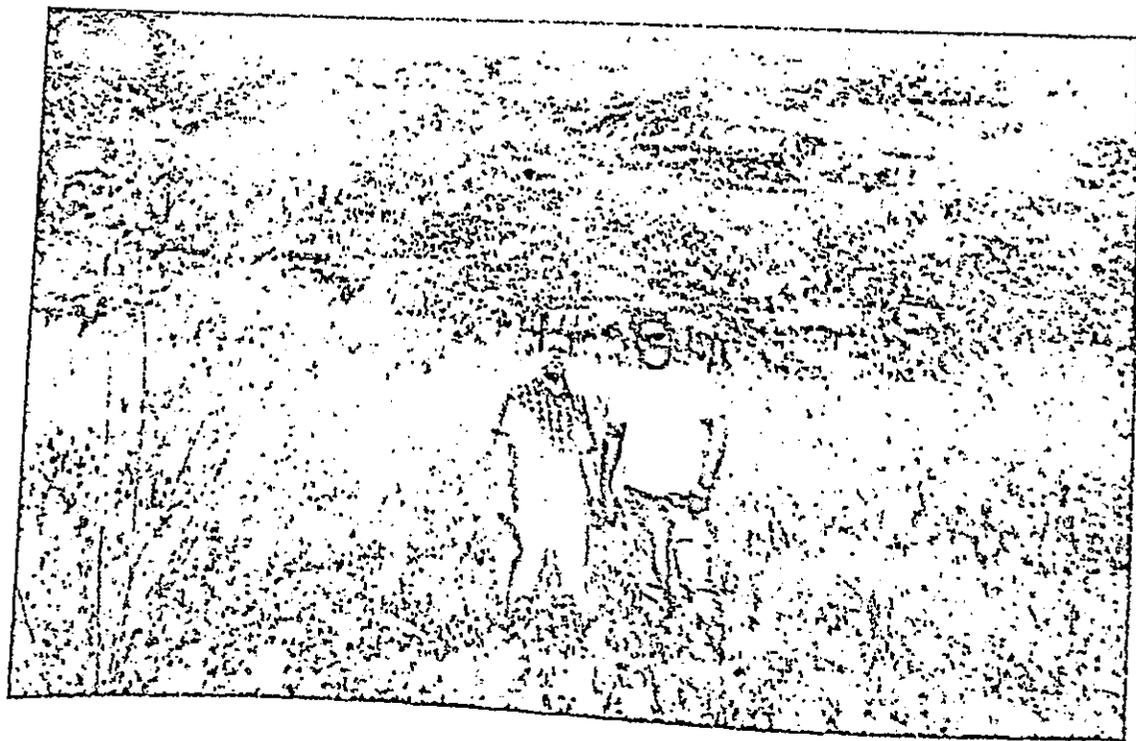


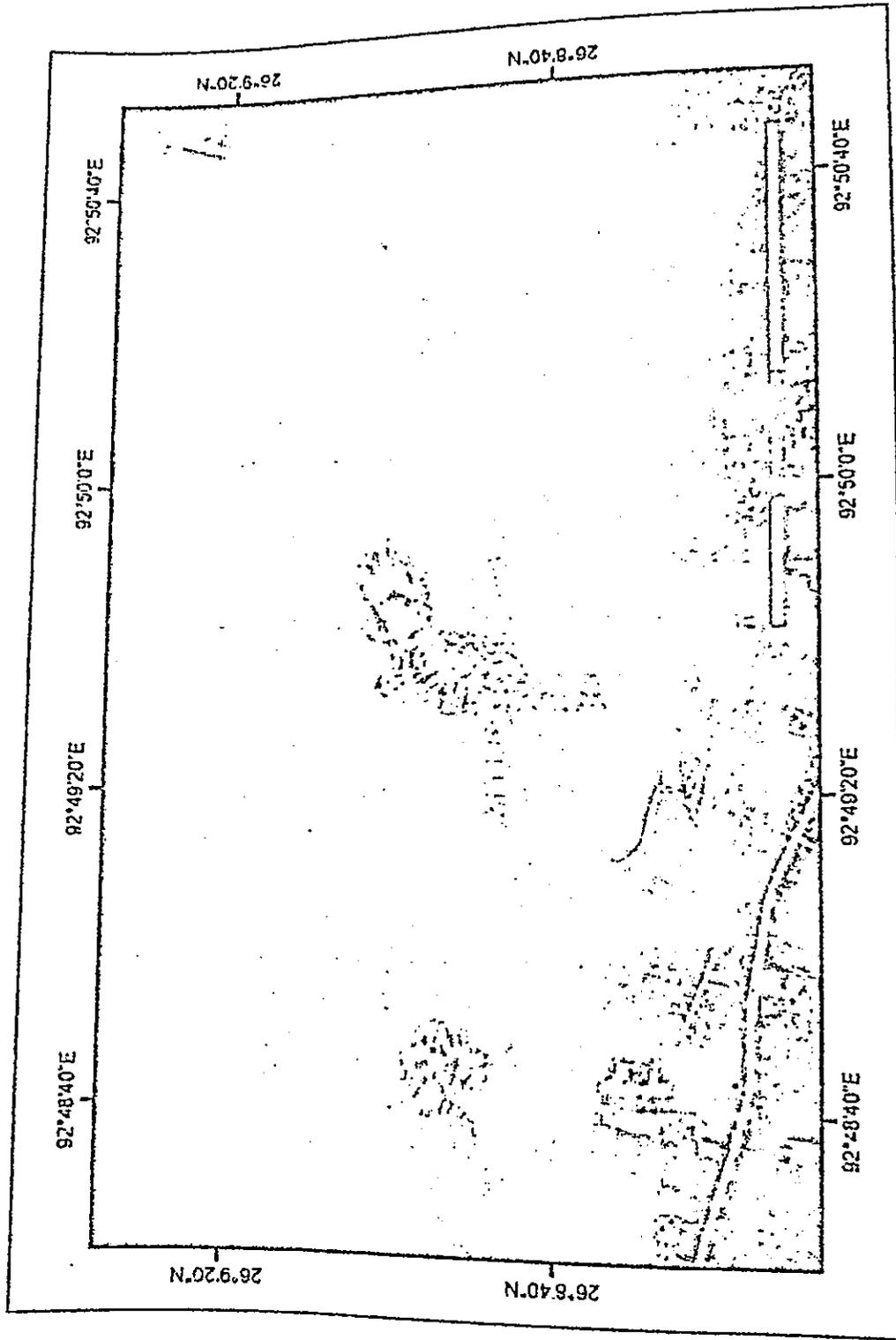
Plate: 2

Attesting Corro
Alfred Bora, Ph.D.
201100010001

Mining Plan is Approved

MA 2011

MINING PLAN



Google Earth image showing Mining Contract Area for stone.

Abhijit Bora
 Abhijit Bora, Ph D.
 Regd No. DGM/RQP/02/20

Mining Plan is Approved

(Signature)

Director, Geology & Mining
 Directorate of Geology & Mining
 Government of Assam

322
 10/10/2010

MINING PLAN

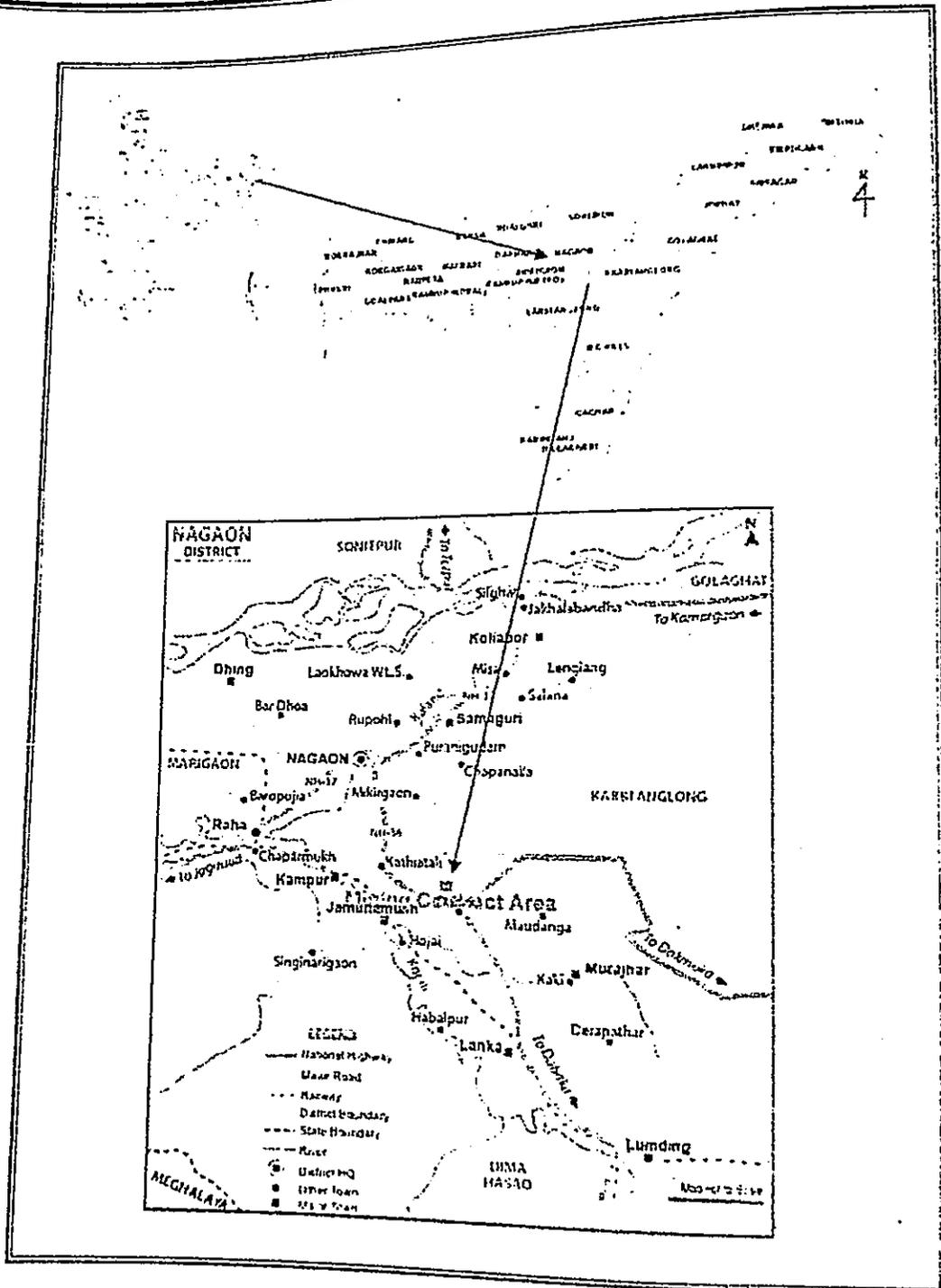


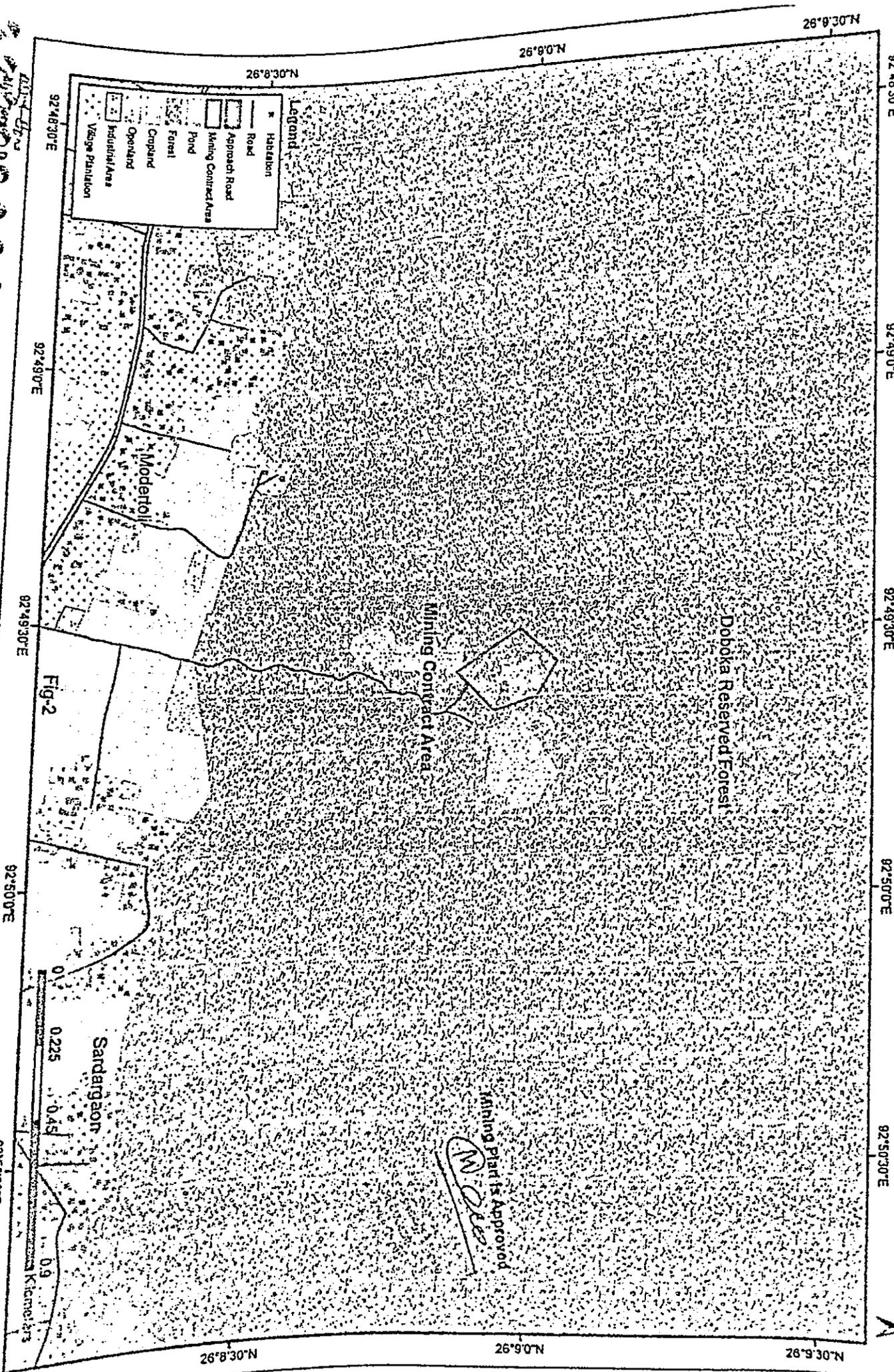
Fig. 1A: Location Map

Abinjit Bora
 Abinjit Bora, Ph.D.
 Regd No. DGM/RQP/02/201

Mining Plan is Approved

W. C.
 Director of Geology
 Govt. of Assam
 Dispur, Assam

Key Map of the Mining Contract Area and its Surrounding



Mining Plan is Approved
M. O. S.

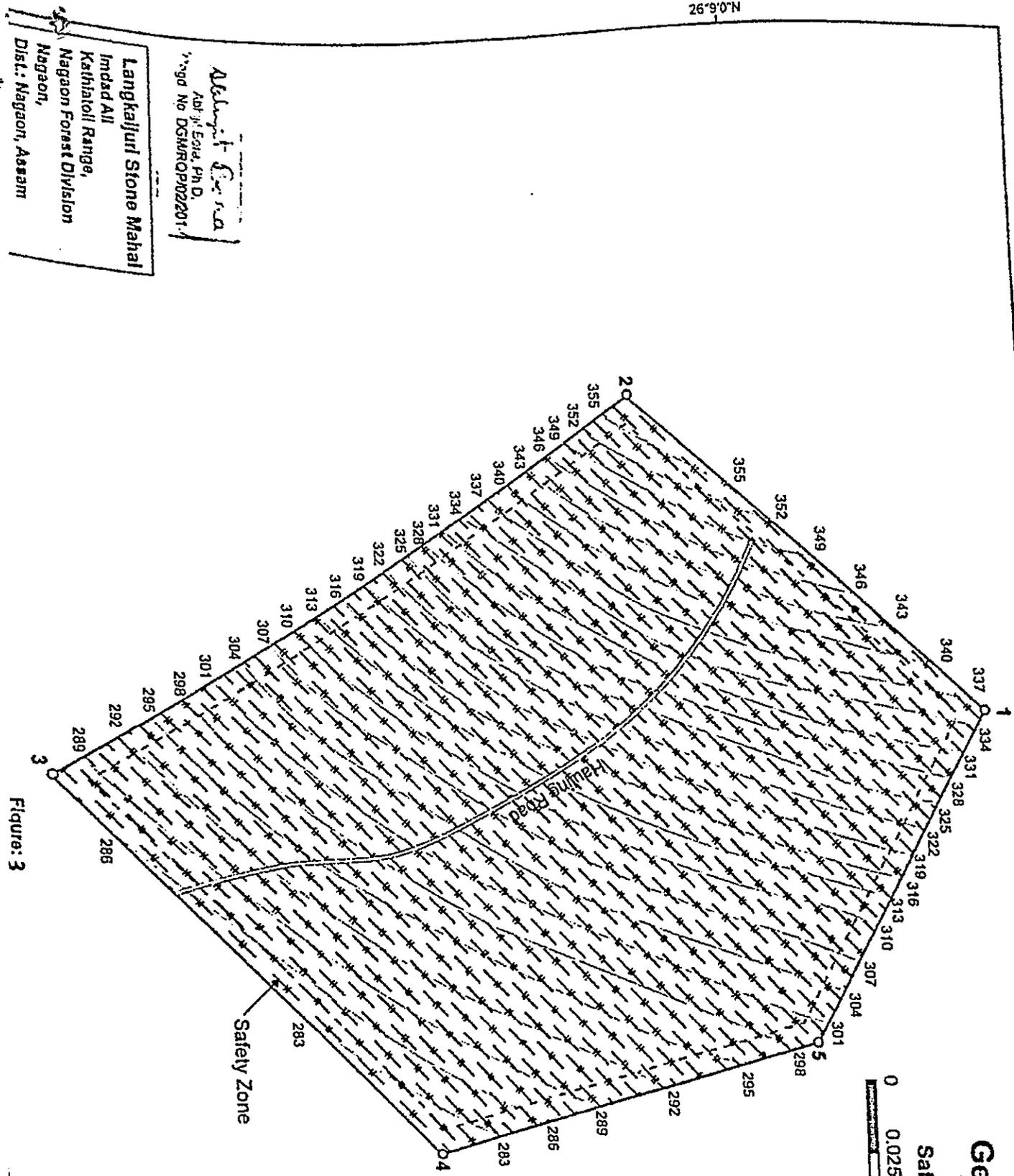
330

ADP
 1/1/2000

319

92°49'30"E

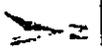
26°9'0"N



Geological Map

Area: 5.0 Ha

Safety Zone: 0.63 Ha



Mining Plan Is Approved

(Signature)

(Faint text)

(Signature)
 Asst. Dir. Geol., Ph.D.
 Regd. No. DGM/RP/022014

Langkajuri Stone Mahal
 Imdad Ali
 Kathaloli Range,
 Nagaon Forest Division
 Nagaon,
 Dist.: Nagaon, Assam

Legend

- Safety Zone
- Contour
- Quartzite

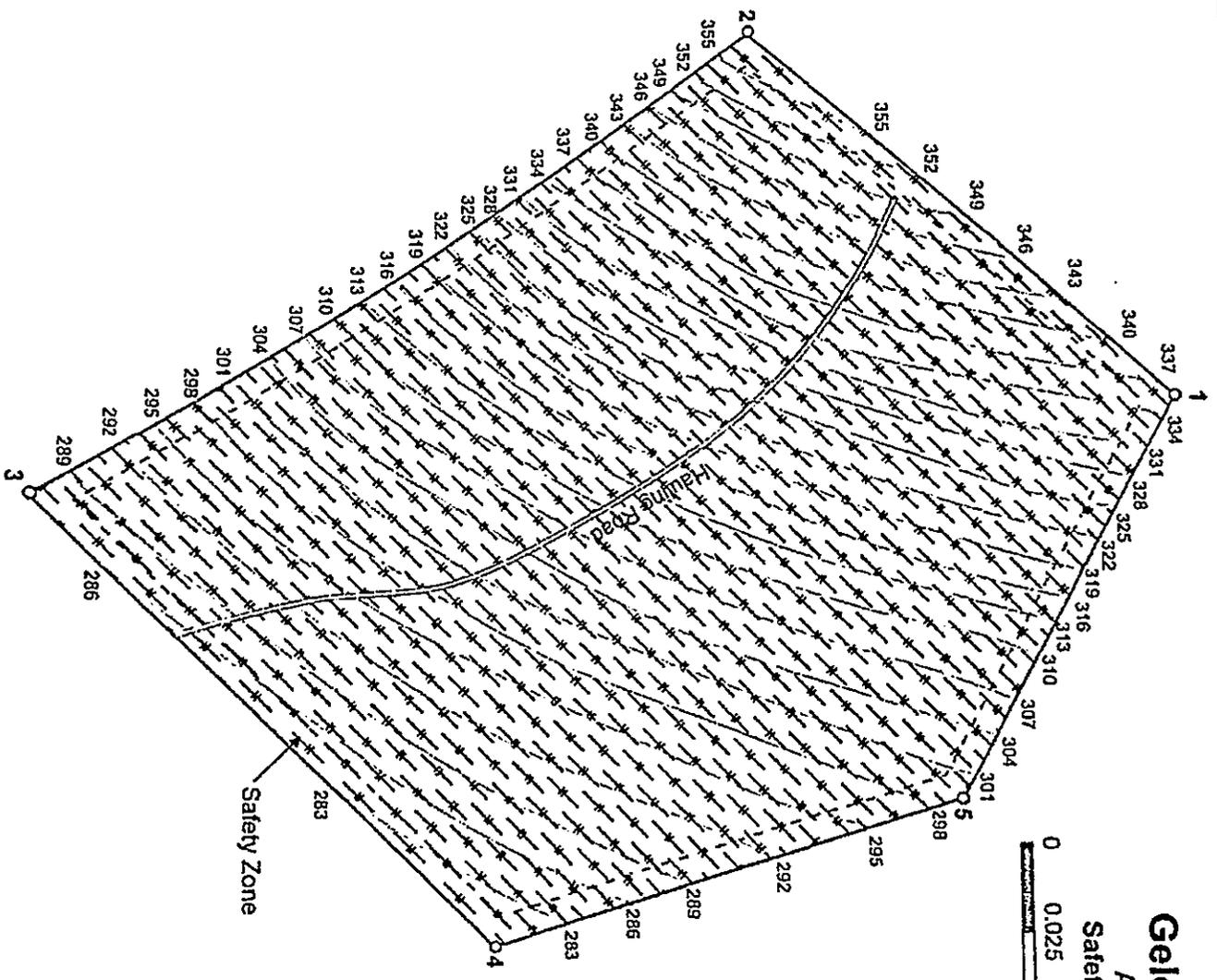
Figure: 3

82°49'30"E

N.0.6.92

Langkajuri Stone Mahal
 Imdad Ali
 Kathaloli Range,
 Nagaon Forest Division
 Nagaon,
 Dist.: Nagaon, Assam

Abdullah Gera
 Abt. J. Genl. Hd. D.
 Regd No. DGM/RQP/022014



Geological Map
 Area: 5.0 Ha
 Safety Zone: 0.63 Ha

0 0.025 0.05 0.1
 Kilometers



Mining Plan Is Approved
M. Gera

02/02/2014
 11:15 AM
 2014

Figure: 3

Legend
 Safety Zone
 Contour
 Quarry

N.0.6.92

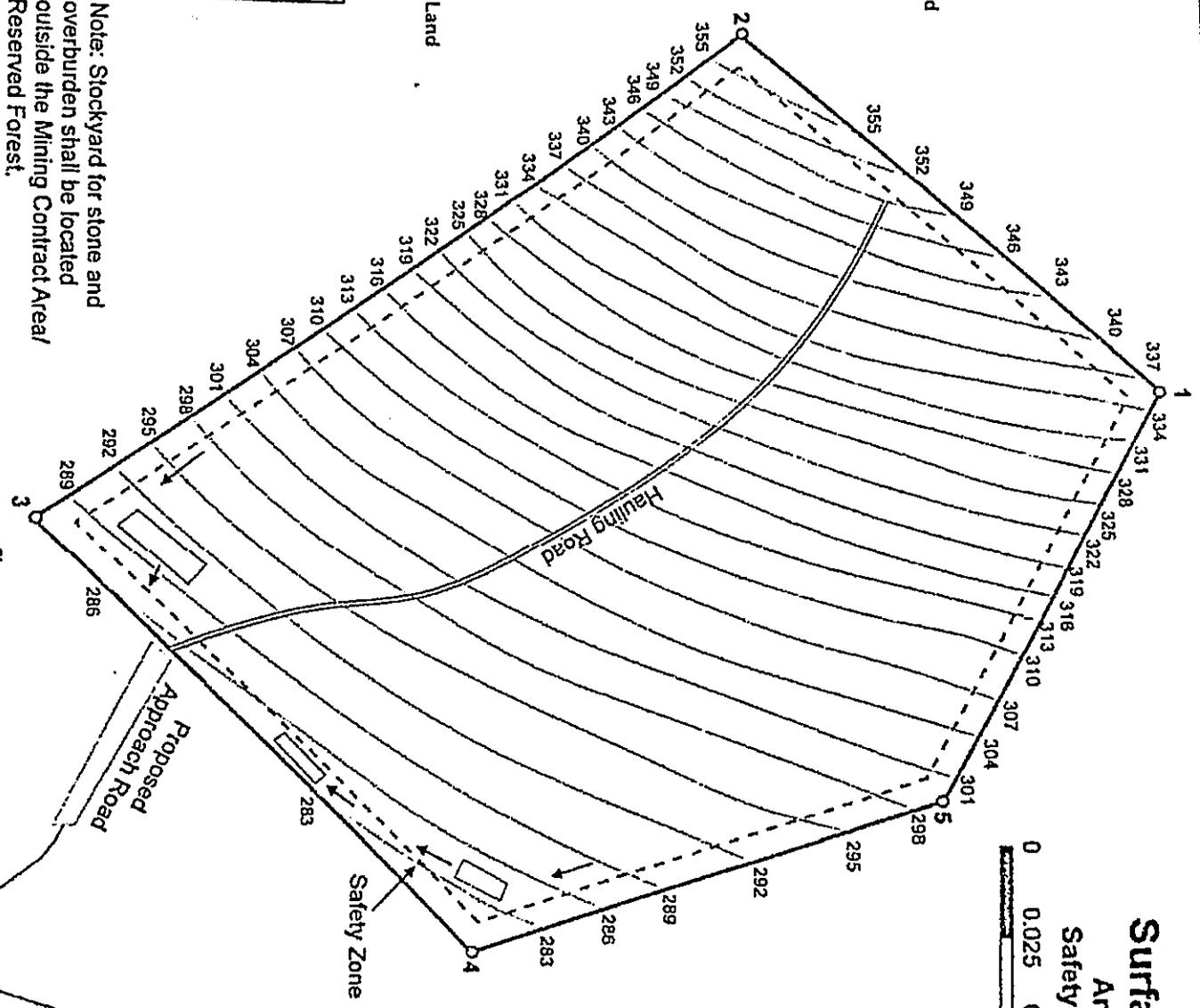
8/15

Legend

- Road
- Contour
- Hauling Road
- - - Safety Zone
- Temp. Pond/Settling Tank
- Proposed Approach Road
- Mining Contract Area

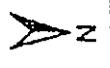
Atulajit Borah
 Appnt. Bora, Ph.D.
 Regd No. DGM/RPOP/202014

Note: Stockyard for stone and overburden shall be located outside the Mining Contract Area/ Reserved Forest.



Surface Plan

Area: 5.0 Ha
 Safety Zone: 0.63 Ha



Mining Plan is Approved

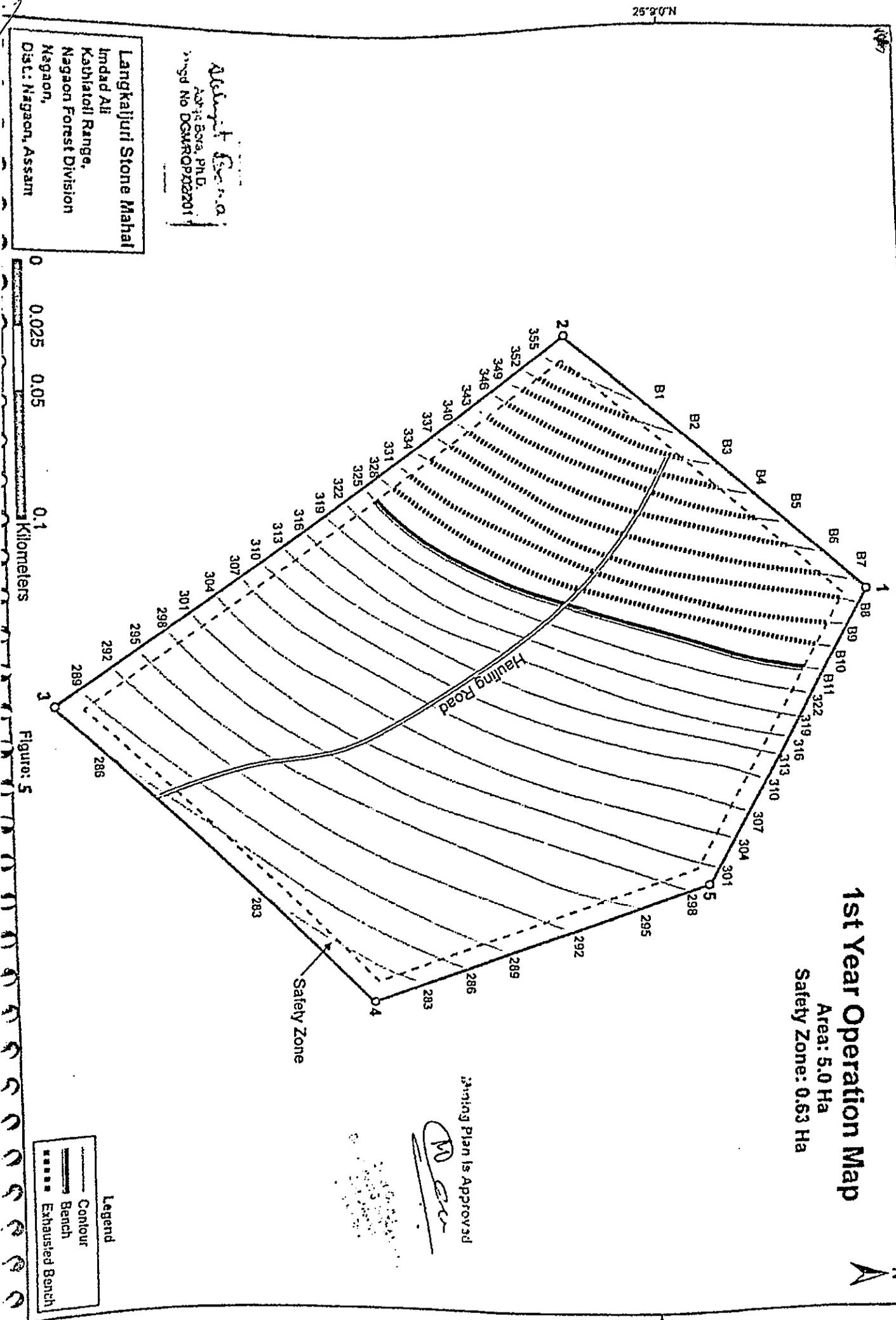
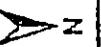
M. Borah

Langkaijuri Stone Mahal
 Imdad Ali
 Kathlatoli Range,
 Nagaon Forest Division
 Nagaon,
 Dist.: Nagaon, Assam

Figure-4

1st Year Operation Map

Area: 5.0 Ha
Safety Zone: 0.63 Ha



Planning Plan is Approved

(Signature)

Alimant Borra
Asst. Secy, P.H.D.
Assam Forest Dept.
Dated No. DCM/RO/122/2011

Langkajuri Stone Mahal
Imdad Ali
Kahlatoli Range,
Nagaon Forest Division
Nagaon,
Dist: Nagaon, Assam



Figure: 5

Legend

- Contour
- Bench
- Exhausted Bench

3/19

315

N.05.92

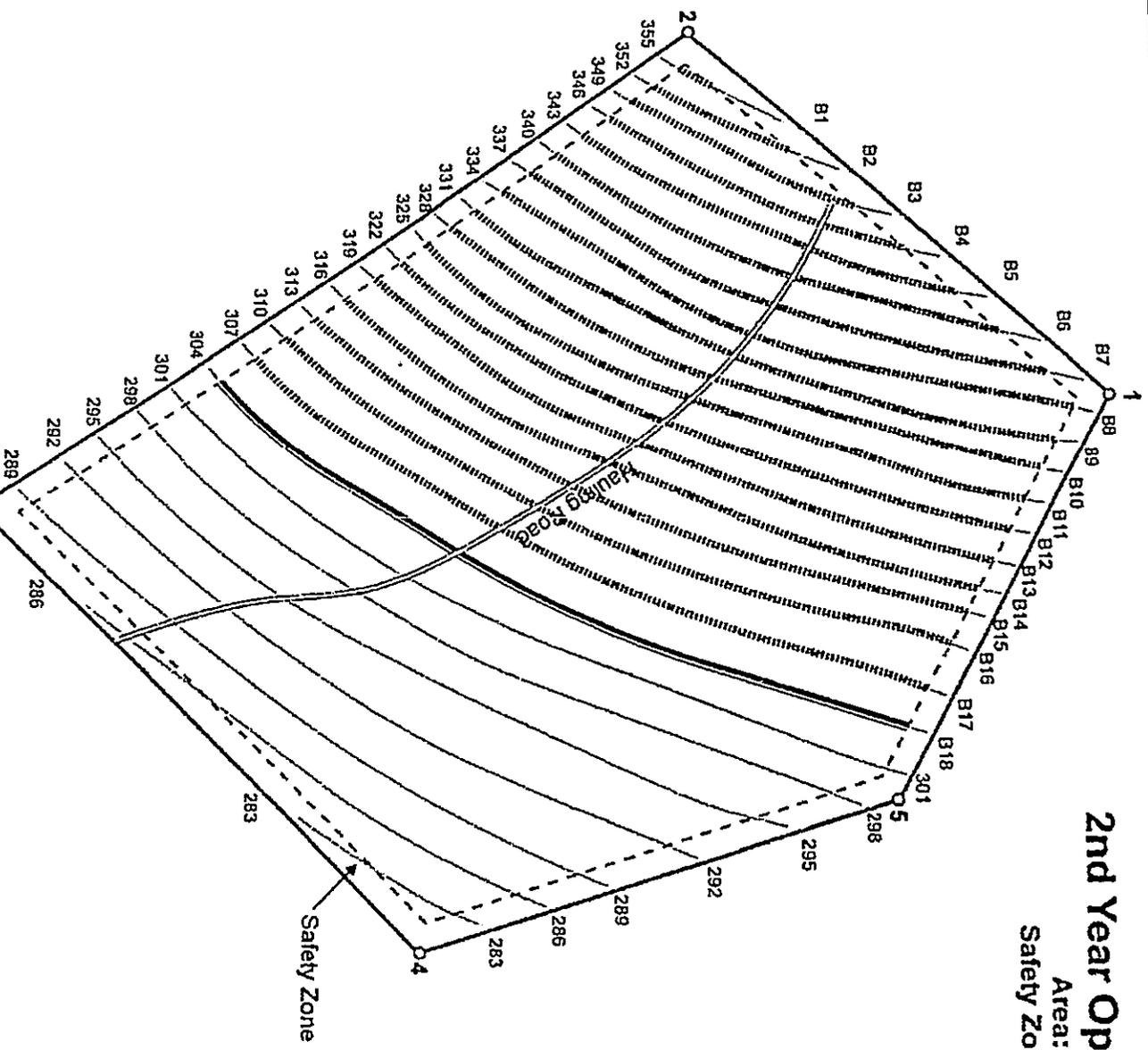
92°48'30"E

Langkajuri Stone Mahal
 Imdad Ali
 Kakhali Range,
 Nagaon Forest Division
 Nagaon,
 Dist.: Nagaon, Assam

Wangt Bora
 A.P. J. Bora, P.H.D.
 Regd. No. DGM/RDP/022014



Figure: 6



2nd Year Operation Map
 Area: 5.0 Ha
 Safety Zone: 0.63 Ha

Mining Plan Is Approved
(Signature)

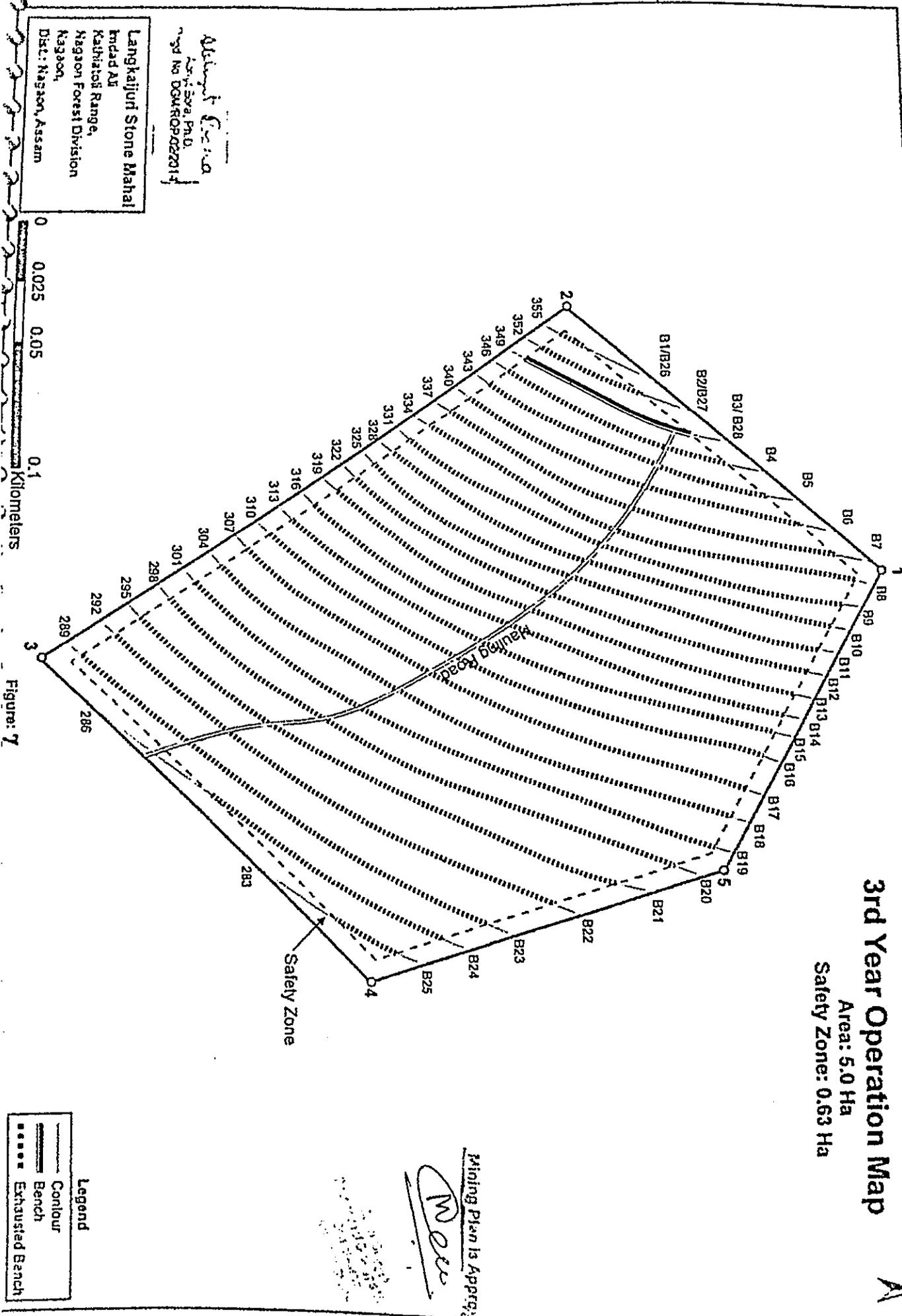
Legend
 ——— Contour
 - - - Bench
 ▨▨▨ Exhausted Bench

N.05.92



3rd Year Operation Map

Area: 5.0 Ha
Safety Zone: 0.63 Ha



M. Das
 Planting Plan Is Approved

Atul K. Das
 Asst. Secy, P.W.D.
 No. DGMR/OP/0222/14

Langkaijuri Stone Mahal
 Indrad AU
 Kakhato Range,
 Nagaon Forest Division
 Nagaon,
 Dist: Nagaon, Assam

Legend

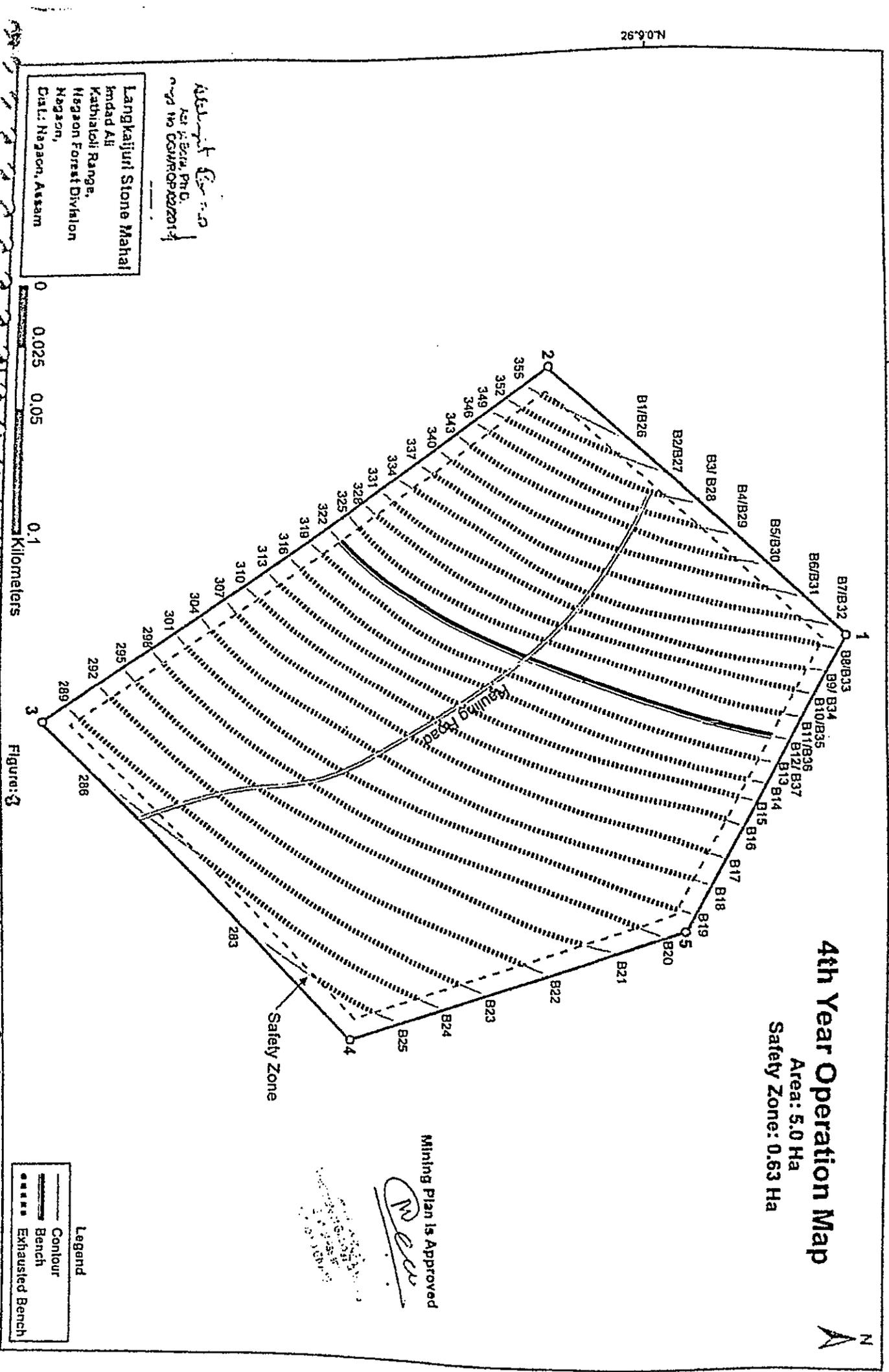
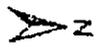
- Contour
- Bench
- Exhausted Bench

Figure: 7

5/3

4th Year Operation Map

Area: 5.0 Ha
Safety Zone: 0.63 Ha



Langkajuri Stone Mahal
 Indad Ali
 Kathalohi Range,
 Mgaon Forest Division
 Mgaon,
 Dist: Mgaon, Assam

Abhishek Barua
 Asst. Engr. P.H.C.
 No. 02/WFO/2014

0 0.025 0.05 0.1
 Kilometers

Figure: 3

Legend
 — Contour
 — Bench
 ■ Exhausted Bench

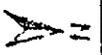
Mining Plan Is Approved

M. Barua
 M. Barua
 Asst. Engr. P.H.C.
 No. 02/WFO/2014

92°49'30"E

5th Year Operation Map

Area: 5.0 Ha
Safety Zone: 0.63 Ha



N. 0.6. 92

Atkinson & Co.
Surveyors
Assam, India
Regd. No. DGM/RDP/022014

Langkajuri Stone Mahal
Imdad Ali
Kathaloli Range,
Nagaon Forest Division
Nagaon,
Dist.: Nagaon, Assam

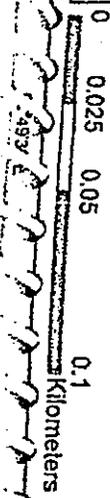
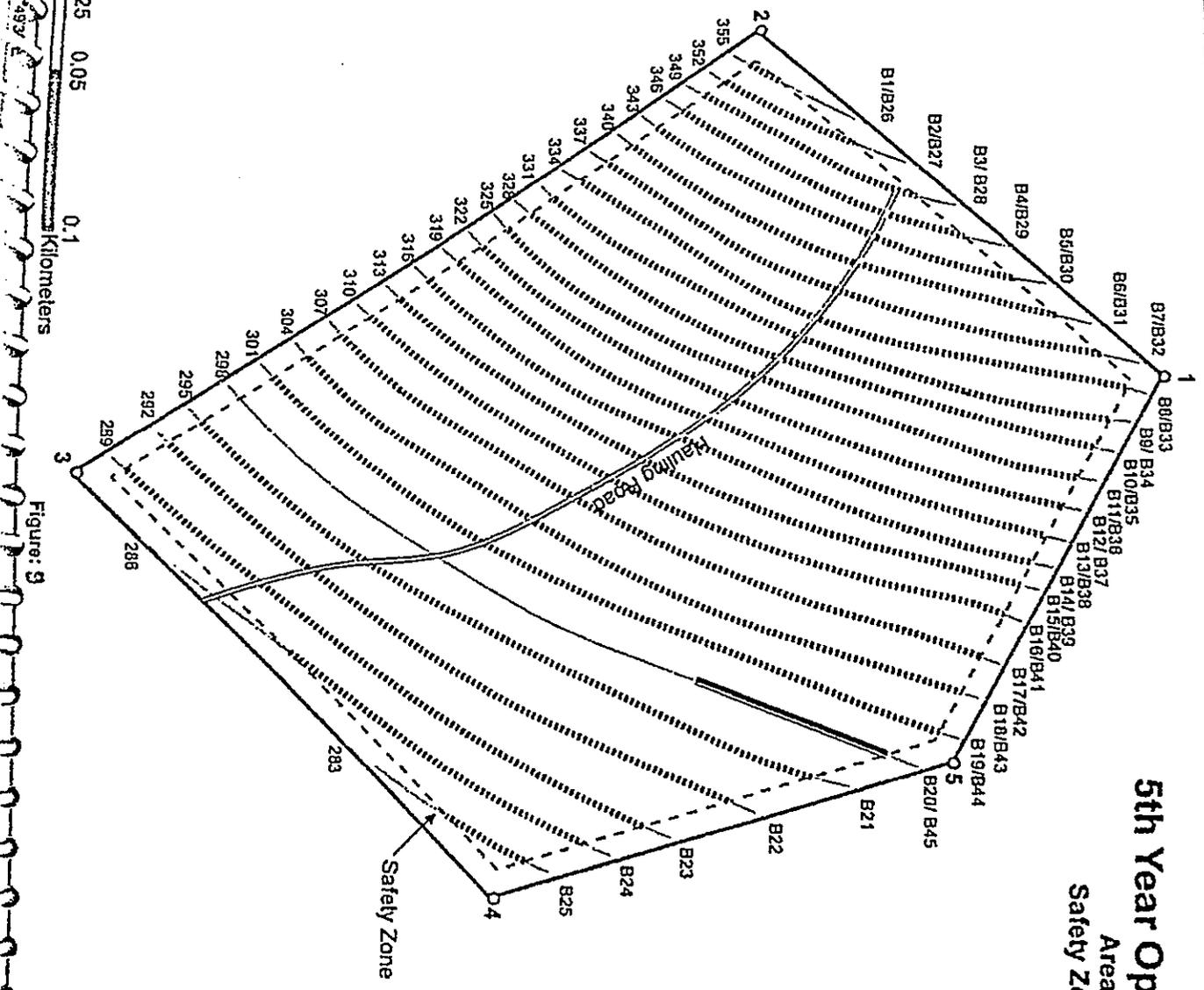
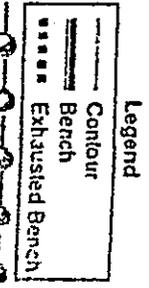


Figure: 9



Planning Plan is Approved
M. C. S.

Langkajuri Stone Mahal
Imdad Ali
Kathaloli Range
Nagaon Forest Division
Nagaon
Dist.: Nagaon, Assam

3/2

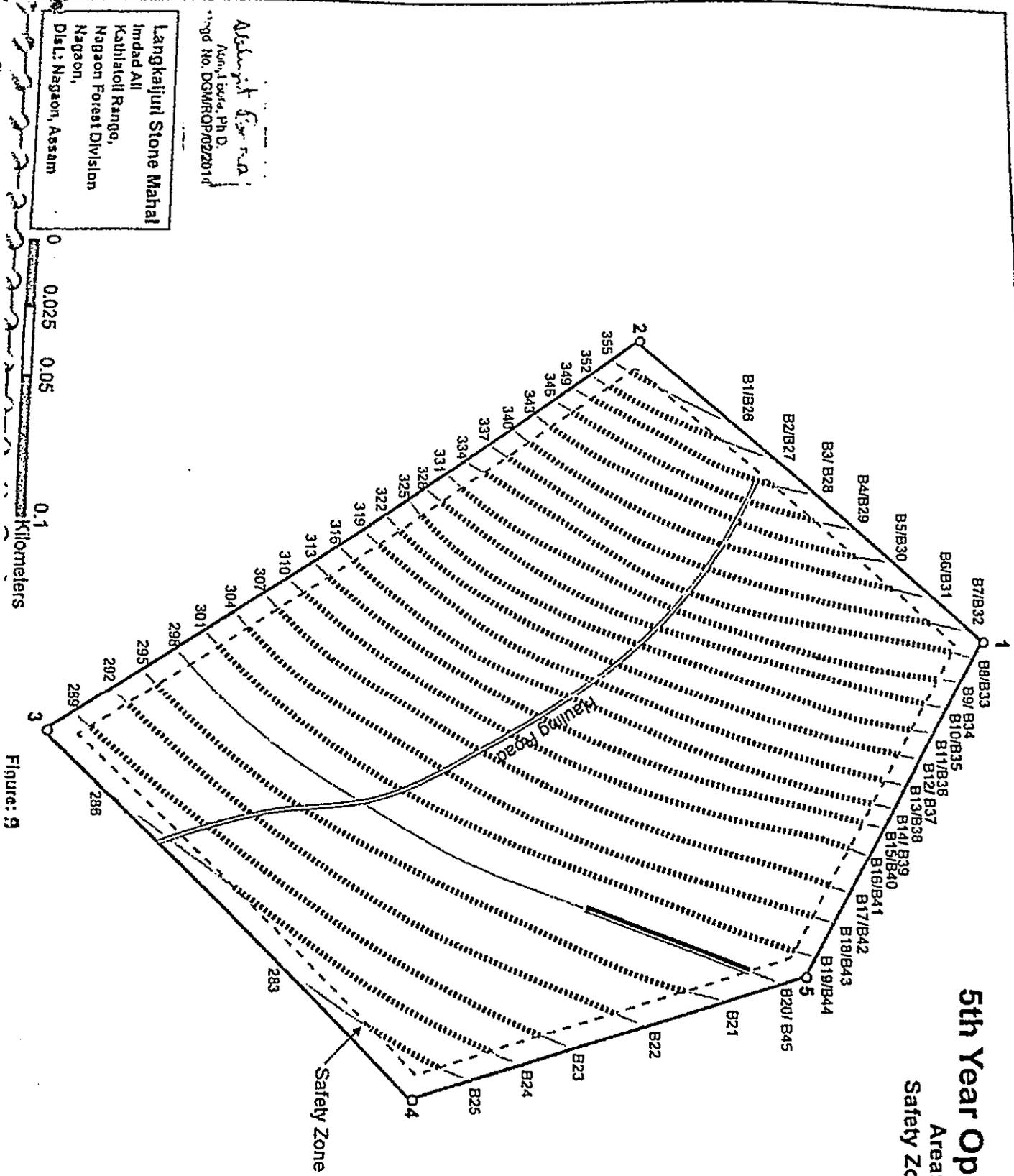
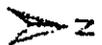
327

N.O. 3/92

92°49'30"E

5th Year Operation Map

Area: 5.0 Ha
Safety Zone: 0.63 Ha



Asst. Insp. Forest
 Asst. Insp. Forest, Ph D.
 Regd No. DGM/ROP/022014

Langkajuri Stone Mahal
 Imdad Ali
 Kalthlatoli Range,
 Nagaon Forest Division
 Nagaon,
 Dist: Nagaon, Assam

0 0.025 0.05 0.1
 Kilometers

Figure: 9

Mining Plan is Approved

M. C. P.
 Director, Assam
 Mining Department

Director, Assam
 Mining Department
 Dispur, Assam

Legend

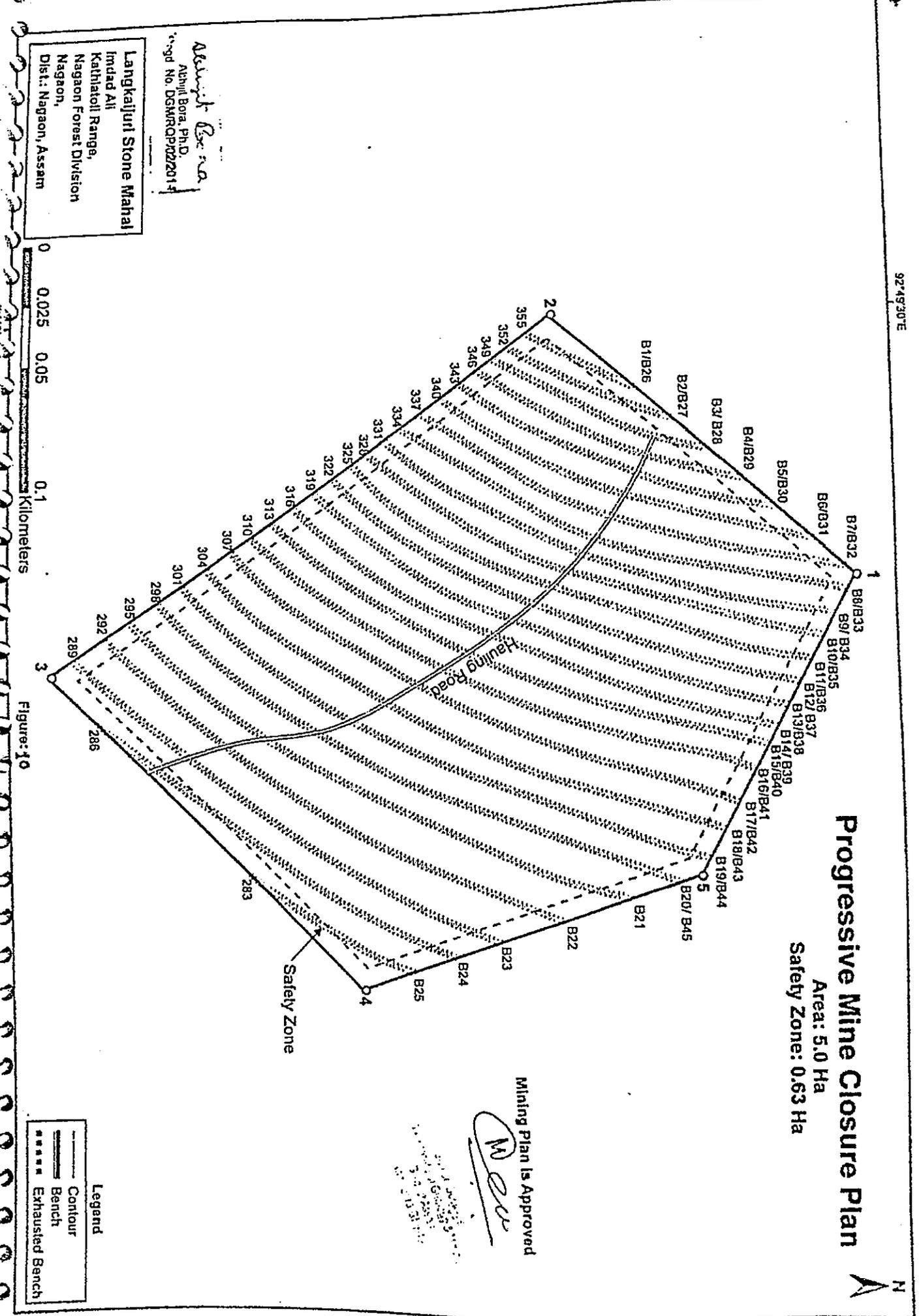
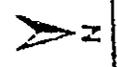
- Contour
- Bench
- Exhausted Bench

92°49'30"E

N.0.6.92

Progressive Mine Closure Plan

Area: 5.0 Ha
Safety Zone: 0.63 Ha



Mining Plan Is Approved

M. Bar

Director of Geology
Assam

Abhinav Barua

Abhinav Barua, Ph.D.
Regd No. DGM/RP/22/2014

Langkajuri Stone Mahal
Imdad Ali
Kathakali Range,
Nagaon Forest Division
Nagaon,
Dist.: Nagaon, Assam

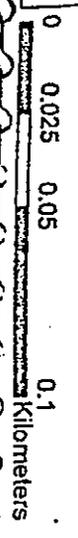


Figure: 10

Legend

- Contour
- Bench
- Exhausted Bench

N.0.6.92

309



GOVERNMENT OF ASSAM
DEPARTMENT OF ENVIRONMENT & FORESTS, ASSAM
OFFICE OF THE DIVISIONAL FOREST OFFICER: NAGAON DIVISION NAGAON
Phone & Fax No. 03672-233610 Email ID- dfonagaont@gmail.com.

Letter No. FNGT/B/Langkaijuri Stone Mahal/2021/ 4257-58 Dated- 29/09/2021

To:
 The Director,
 Directorate of Geology
 & Mining Assam,
 Kahilipara, Guwahati- 19.

Subject: According of Mining Plan etc. in respect of Langkaijuri Stone Mahal of Doboka R. F. for 5 (five) years.

Reference: The CCF & Nodal Officer, (F. C. Act), O/o the PCCF & HoFF, Assam's letter No. FG. 27/FCA/Proposal/ Lankaijuri Stone Mahal/Nagaon Divn., dated- 13/09/2021 & this Office letter No. FNGT/B/Langkaijuri Stone Mahal/2021/5001-02, dtd. 27/09/2021.

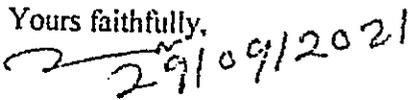
Sir,

With reference to the subject cited above, I have the honour to inform you that, the Chief Conservator of Forests & Nodal Officer, (F. C. Act), O/o the Principal Chief Conservator of Forests & Head of Forest Force, Assam has provisionally selected Imdad Ali (user agency) in respect of the Langkaijuri Stone Mahal of 2020-25 in Doboka Reserved Forest, Area- 5.04 Hect. vide his letter No. mentioned under reference of Mineral Concession to extract 1,50,000 m3 Stone for 5 (five) years.

Therefore, I would like to request you to accord necessary approval for Mining Plan/Pre-feasibility report, and Form 1 M, from your end against the said Stone Mahal for 1,50,000 m3 of Stone and 50,000 m3 of Stone for various development works.

In this regard, a copy of schedule "A" & a topo-sheet map No. 83 B/16 indicating the Langkaijuri Stone Mahal, are enclosed herewith for your kind information and necessary action.

Enclosed: As stated above.

Yours faithfully,

 (B. Deka, IFS)
 Divisional Forest Officer,
 Nagaon Division, Nagaon 
 Condt...2

Copy to:-

Sri Imdad Ali, S/o- Abdul Haque. House No. 11, Purbanchal Path. Mathura Nagar, Dispur, Guwahati- 781005 (Assam). for information and necessary action. He is requested to submit the approved Mining Plan/Pre-feasibility report and Form 1 M within (seven) days from the competent authority without fail.

(B. Deka, IFS)
Divisional Forest Officer,
Nagaon Division, Nagaon

Memo No. FNGT/A/Langkaijuri Stone Mahal/2021/ 2516-19
Copy forwarded for favour of kind information and necessary action to:-

Dated- 29/09/2021

1. The Principal Chief Conservator of Forests & Head of Forest Force, Assam, Panjabari, Guwahati- 37.
2. The Addl. Principal Chief Conservator of Forests (T), Upper Assam Zone, Jorhat.
3. The Chief Conservator of Forests & Nodal Officer, (F. C. Act), O/o the Principal Chief Conservator of Forests & Head of Forest Force, Assam, Panjabari, Guwahati- 37.
4. The Conservator of Forests, Northern Assam Circle, Tezpur, Assam.

(B. Deka, IFS)
Divisional Forest Officer,
Nagaon Division, Nagaon

**GEO-REFERENCE MAP SHOWING THE PROPOSED 5.04 HECT.
LANKAIJURI STONE MAHAL (STONE MAHAL AREA - 5 HECT. &
APPROACH ROAD AREA - 0.04 HECT AT DABOKA RF UNDER
KATHIATOLI RANGE, KATHIATOLI**

GPS POINTS LONGITUDE LATITUDE APPROACH ROAD AREA

- 1. 26° 8'52.20"N 92°49'38.30"E
- 2. 26° 8'53.28"N 92°49'36.61"E
- 3. 26° 8'53.10"N 92°49'36.40"E
- 4. 26° 8'52.40"N 92°49'38.31"E

N
 Asst. Commr. Forest
 Range Office
 Kathiatoli Range

GPS POINTS LONGITUDE LATITUDE STONE MAHAL AREA

- 1. 26° 9'2.73"N 92°49'33.89"E
- 2. 26° 8'58.75"N 92°49'30.04"E
- 3. 26° 8'51.99"N 92°49'35.10"E
- 4. 26° 8'56.19"N 92°49'39.67"E
- 5. 26° 9'0.65"N 92°49'38.07"E

Submitted



Forest Range Officer
Kathiatoli Range

Schedule A
"Information Memorandum"

1. Name of the Mineral Concession Area: LANGKAIJURI STONE MAHAL UNDER KATHIATOLI RANGE, KATHIATOLI OF 2020-25.
2. Status of Land: Reserve Forest
3. Grant of Mining Contract for collection of Stone in the mining area.
 - (a) Area and Estimated Reserves = 5.00 Ha with 1,50,000 cu.m Stone.
 - (b) Period of Lease/Contract = 5 years from date of possession.
 - (c) Reserve Price: Rs. 3,70,50,000.00 (Rs. Three Crores Seventy Lakhs Fifty Thousand only).
 - (d) Earnest Money
10% on reserve price. i.e.. Rs 37,05,000.00 (Rs. Thirty Seven Lakhs Five Thousand only). However, 50% of this amount if bidder is an individual and belongs to S.T/S.C/OBC. i.e.. Rs. 18,52,500.00 (Rupee Eighteen Lakhs Fifty Two Thousand Five Hundred only).
 - (e) G.P.S Coordinates of the corners of mine area: The boundary pillars shall be installed on site by the successful bidder at these and other intermediate locations, as per the directions of competent authority, before start of mining operation.

North- Boundary of Nagaon South Division
South- Dohoka R. F.
East- Doboka R. F.
West- Langkaijuri old Stone Mahal.

Tracks	Ha	SL. No.	LAT/LONG
Track 1	5.00 Ha.	1	N = 26°08'58.75" E = 092°49'30.04"
		2	N = 26°08'51.99" E = 092°49'35.10"
		3	N = 26°08'56.19" E = 092°49'39.67"
		4	N = 26°09'00.65" E = 092°49'38.07"
		5	N = 26°09'02.73" E = 092°49'33.89"
		6	N = 26°08'53.01" E = 092°49'36.61"
		7	N = 26°08'51.55" E = 092°49'39.51"
		8	N = 26°08'50.67" E = 092°49'39.50"
		9	N = 26°08'54.34" E = 092°49'37.90"

(f) Google Earth image of the Mineral Concession Area-



(g) Representative photograph of the mineral concession area-



309

(h) Applicable Clearances:

- No Objection Certificate from Deputy Commissioner in case of Mineral concession Area is Revenue land (non-forest land): Already obtained
- Mining Plan approved by the Director, Geology and Mining Department, Govt. of Assam. The preparation of Mining Plan is under process and the Mining plan shall be transferred to the Successful Bidder/Lessee on payment of required applicable charges (Rs.....).
- Environment Clearance and other clearances to be obtained from State Environment Impact Assessment Authority, Govt. of Assam as per and the instructions of the Ministry of Env. , Forests & Climate Change, Govt. of India issued vide S.O. 1533(E), dated 14.09.2006 and its subsequent amendments. The grant of Environmental Clearance is under process at DEIAA/SEIAA and the same shall be transferred to the Successful Bidder/Lessee on payment of required applicable fee (Rs.....).
- In case of Mineral concession Area is a Forest land, the Forest Clearance to be obtained under Forest Conservation Act, 1980 from the Ministry of Env. , Forests & Climate Change, Govt. of India shall be transferred to the Successful bidder on payment of Net Present Value-Rs..... Cost of Compensatory Afforestation -Rs....., Overhead cost-Rs..... etc.(Total Rs.....)

(i) Quota for Govt. permits: Excess of Mining Plan Quantity over the bid quantity in case of Contract and Permit. However, for lease, maximum quota for govt. works as specified by the competent authority.

Rajen
Choudhury
Digitally signed by
Rajen Choudhury
Date: 2020.06.10
22:31:28 +05'30'
DIVISIONAL FOREST OFFICER,
NAGAON DIVISION, NAGAON



GOVERNMENT OF ASSAM
DEPARTMENT OF ENVIRONMENT & FORESTS, ASSAM
OFFICE OF THE DIVISIONAL FOREST OFFICER: NAGAON DIVISION NAGAON

Phone & Fax No. 03672-233610

Email ID-

Letter No. FNGT/VL/2021/Stone Mahal/5001-02

Dated- 13/09/2021

To,

Sri Imdad Ali,
S/o- Abdul Haque,
House No. 11, Purbanchal Path,
Mathura Nagar, Dispur,
Guwahati- 781005.

Subject: Provisional letter of Intent (LoI) Granting Mining Permit to allow Minor Mineral in respect of the Mining Area- Langkaijuri Stone Mahal of 2020-25 under Dohoka R. F. of Kathiatoli Range, Kathiatoli.

Reference: The CCF & Nodal Officer (FC Act), Assam O/o the Principal Chief Conservator of Forests & Head of Forest Force, Assam vide letter No. FG. 27/FCA/Proposal/Lankaijuri Stone Mahal/Nagaon Divn. Dtd. 13/09/2021.

Subject to the appeal provision and other provisions of the Assam Minor Mineral concession Rules, 2013 and other applicable laws, and on approval received from the CCF & Nodal Officer (FC Act), Assam O/o the Principal Chief Conservator of Forests & Head of Forest Force, Assam, of your bid amount of Rs. 4,60,05,000/- (Rupees Four crores fifty sixty lakhs five thousand) only, for Mining of 1,50,000 m³ of Stone for a period of 5 (Five) years from "Langkaijuri Stone Mahal of 2020-25 under Dohoka R. F. of Kathiatoli Range, Kathiatoli of the Nagaon Forest Division is hereby accepted and you are requested to deposit the security amount within 15 (Fifteen) days from the date of issue of this provisional letter of Intent (LoI) and signing of Permit Agreement in FORM- MC- 1, as per provisions of AMMC Rule's 2013. An additional amount 10% on bid value has to be deposited towards "Mines- Minerals, Rehabilitation Dev. & Restoration Fund" & 10% District Mineral Foundation Trust (DMF), Nagaon on the actual royalty at the time of depositing the kist money. Failing to comply with the above directions within the stipulated period, the provisional letter of Intent (LoI) will be cancelled without assigning any reason.

Details of Deposit:-

(a) 25% of annual dead rent as security deposit on bid value	= Rs.	23,00,250/-
(b) An additional amount equal 1 month's dead rent on bid value	= Rs.	7,66,750/-
	Total	= Rs. 30,67,000/-

(Rupees Thirty lakhs sixty seven thousand) only and others relevant taxes.

Provisional Letter of Intent (LoI) issued to you, being the selected highest bidder and you are asked to prepare/submit the following documents.

1. Prepare Mining Plan by the Director Geology & Mining Department.
2. Apply online through MoEF & CC web portal parivesh.nic.in for forest land diversion proposal under the Forest (Conservation) Act, 1980.
3. Apply for Environmental Clearance.
4. Prepare Environmental Management Plan.

Contd...2

Further, on received of the above, the final settlement order will be issued in favour of you and then only your operation of Langkaijuri Stone Mahal will be started.

So, you are asked to submit as stated above within 60 (sixty) days from the issue of this letter.

(B. Deka, AFS)

Divisional Forest Officer,

Nagaon Division, Nagaon

Copy to:-

The Director, Directorate of Geology & Mining Assam, Kahilipara, Guwahati- 19 for favour of kind information and necessary action.

(B. Deka, AFS)

Divisional Forest Officer,

Nagaon Division, Nagaon

Memo No. FNGT/A/Langkaijuri Stone Mahal/2021/2479-82

Dated- 27/09/2021

Copy forwarded for favour of kind information and necessary action to:-

1. The Principal Chief Conservator of Forests & Head of Forest Force, Assam, Panjabari, Guwahati- 37.
2. The Chief Conservator of Forests & Nodal Officer (F. C. Act), Assam O/o the Principal Chief Conservator of Forests & Head of Forest Force, Assam, Panjabari, Guwahati- 37.
3. The Addl. Principal Chief Conservator of Forests (I), Upper Assam Zone, Jorhat.
5. The Conservator of Forests, Northern Assam Circle, Tezpur, Assam.

(B. Deka, AFS)

Divisional Forest Officer,

Nagaon Division, Nagaon



খনিজ সম্পদ
অন্বেষণ

30A

GOVERNMENT OF ASSAM
DIRECTORATE OF
GEOLOGY AND MINING
BHU-BIGYAN BHAWAN
DAKHINGAON, KAHILIPARA, GUWAHATI-19
Email: dgmassam@gmail.com
dgm.assam@gov.in

No. GM/MS /244/23 25

Dtd. Guwahati, the 11th October, 2021.

From :- Sri Ananda Kumar Das, ACS,

Director,

Directorate of Geology & Mining, Assam,

Kahilipara, Guwahati-19.

To :- Imdad Ali.

H. No.11, Purbanchal path, Mathura nagar.

Dispur, Guwahati-06.

Sub :- Regarding submission of petrological report.

Sir,

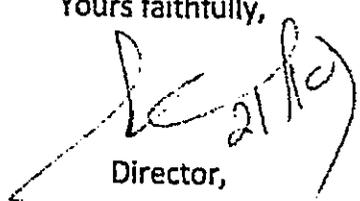
With reference to the subject cited above I am submitting herewith the petrological study report for the sample submitted by Sri Abhijit Bora, RQP on behalf of Imdad Ali, Purbanchal path, Mathura nagar, Dispur, Guwahati-06. The sample is from Lankajuri stone mahal, Modertoli area of Doboka, Hojai dist.

The petrological study report is prepared in the petrological laboratory.

This is for your information and necessary action.

Enclosure: As stated.

Yours faithfully,


Director,

Directorate of Geology & Mining,

Assam.

300

PETROGRAPHIC ANALYSIS REPORT

Sample No	:-	151/ S
Name	:-	Sample submitted by Imdad Ali, H.No.11, Purbanchal path Mathura nagar, Dispur, Guwahati- 06.
Location	:-	Lonkajuri stone mahal, Modertoll, Doboka, Hojai dist.
Megascopeic Description	:-	gray color, semi vitrous lustrue.

Microscopic Description-

1. Grain size	Grain sizes are small.
2. Grain shape	Anhedral
3. Abundance of minerals	Abundance of quartz with opaque minerals.
4. Primary minerals.	Quartz.
5. Secondary minerals	No secondary mineral is seen.
6. Accessory minerals	Opaque minerals as assessorry minerals.
7. Texture	Grains are showing equigrannular texture.
8. Structural features (if any)	No structural feature could be seen.
9. Mutual relationship	Grains are showing interlocking mutual relationship.
10. Study of inclusions	No inclusion is seen.
11. Name of rock	The sample is a composition of quartz and opaque minerals. From the mineralization it can be ascertained it is a metamorphic rock and the rock is quartzlite with impurities.
12. Uses	Fractures and joints could not be seen. The rock contains mostly quartz and opaque minerals. As the deposit is a small one, and quartzlite with impurities, therefore, it has less industrial value. So, the rock can be used as ordinary stone.

(Sri Barnalee Nath)
Joint Director,
In-Charge of Petrological Lab
Directorate of Geology & Mining,
Govt. of Assam.



CHALLAN
TR Form -5(a)



299

GRN AS000181891202122E		BARCODE		Date 04/10/2021-11:45:16	Form ID
Department Geology and Mining			Payer Details		
Type of Payment Non-ferrous Mining and Metallurgical Industries102		TAX ID (If Any)			
		PAN No.(If Applicable)			
Office Name DIRECTORATE OF GEOLOGY and MINING		Full Name		Imdad Ali	
Location Kamrup Metro		Flat/Block No.		H.No. 11 Purbanchal Path	
Year 2021-2022 One Time		Premises/Building			
Account Head Details		Amount In Rs.			
0853-00-102-7080-000 Petrological report		1000.00		Road/Street Mathura Nagar	
				Area/Locality Dispur Guwahati- 06	
				Town/City/District	
				PIN	
		Remarks (If Any)			
		Langkajuri Stone Mahal			
		Amount In		One Thousand Rupees Only	
Total		1,000.00		Words	
Payment Details STATE BANK OF INDIA			FOR USE IN RECEIVING BANK		
Cheque-DD Details			Bank CIN	Ref. No.	00030302021041094178 IK0BHVXBH7
Cheque/DD No.		Bank Date	RBI Date	04/10/2021 11:39:02	Not Verified with RBI
Name of Bank		Bank-Branch		STATE BANK OF INDIA	
Name of Branch		Scroll No. , Date		Not Verified with Scroll	

Department ID :

Mobile No. : 9435562929



CHALLAN
TR Form -5(a)



GRN AS000341691202122E	BARCODE	Date 28/10/2021-17:19:11	Form ID
Department Geology and Mining	Payer Details		
Type of Payment Non-ferrous Mining and Metallurgical Industries102	TAX ID (If Any)		
	PAN No.(If Applicable)		
Office Name DIRECTORATE OF GEOLOGY and MINING	Full Name	Imdad Ali	
Location Kamrup Metro			
Year 2021-2022 One Time	Flat/Block No.	H, No. 11 Purbanchal Path	
Account Head Details	Amount In Rs.	Premises/Building	
0853-00-102-7079-000 Approval of Mining Plan	5000.00	Road/Street	Mathura Nagar Dispur
		Area/Locality	Guwahati-06
		Town/City/District	
		PIN	
		Remarks (If Any)	
		Langkajuri Stone Mahal	
		Amount In	Five Thousand Rupees Only
Total	5,000.00	Words	
Payment Details STATE BANK OF INDIA	FOR USE IN RECEIVING BANK		
Cheque-DD Details	Bank CIN	Ref. No.	00030302021261052615 IK0SISMEB2
Cheque/DD No.	Bank Date	RBI Date	26/10/2021 17:20:16 Not Verified with RBI
Name of Bank	Bank-Branch		STATE BANK OF INDIA
Name of Branch	Scroll No. , Date		Not Verified with Scroll

Department ID :

Mobile No. : 9435562929



CHALLAN
TR Form -5(a)



2977

GRN	AS000341691202122E	BARCODE	[Barcode]				Date	26/10/2021-17:19:11	Form ID	
Department	Geology and Mining			Payer Details						
Type of Payment	Non-ferrous Mining and Metallurgical Industries102			TAX ID (If Any)						
				PAN No.(If Applicable)						
Office Name	DIRECTORATE OF GEOLOGY and MINING			Full Name	Imdad Ali					
Location	Kamrup Metro			Flat/Block No.	H. No. 11 Purbanchal Path					
Year	2021-2022 One Time			Premises/Building	Mathura Nagar Dispur					
Account Head Details			Amount In Rs.							
0853-00-102-7079-000	Approval of Mining Plan		5000.00	Road/Street	Guwahati-06					
				Area/Locality	Guwahati-06					
				Town/City/District						
				PIN						
				Remarks (If Any)	Langkaijuri Stone Mahal					
				Amount In	Five Thousand Rupees Only					
Total			5,000.00	Words						
Payment Details	STATE BANK OF INDIA			FOR USE IN RECEIVING BANK						
Cheque-DD Details				Bank CIN	Ref. No.	00030302021261052615	IKOBISMEB2			
Cheque/DD No.				Bank Date	RBI Date	26/10/2021 17:20:16	Not Verified with RBI			
Name of Bank				Bank-Branch	STATE BANK OF INDIA					
Name of Branch				Scroll No. , Date	Not Verified with Scroll					

Department ID :

Mobile No. : 9435562929

296
Proposed Langkajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



To Whomsoever It May Concern

It is hereby declared that this Environment Management Plan for "Proposed Langkajuri Stone Mahal' Project at Village- Modertoli, District- Hojai, Assam, Area-5.0 Ha, Approach Road- 0.42 Ha, Maximum Proposed Production-40,000 cu.m/yr. for Imdad Ali Has been prepared by Ecorescue Enviro Consuting Services Private Limited. Ecorescue Enviro Consuting Services Private Limited is a QCI/NABET Approved EIA consultancy firm with certificate No. NABET/EIA/25-28/IA 0166 dated June 10, 2025, valid up to May 23, 2028 (Certificate placed on next page).

Abhijit Bora

Ecorescue Enviro Consuting Services Private Limited

Ecorescue Enviro Consuting Services Private Limited

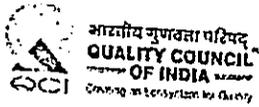
Abhijit Bora

Director

1

Imdad Ali

Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District-Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



National Accreditation Board for Education and Training

Certificate of Accreditation

Ecorescue Enviro Consulting Services Private Limited, Guwahati

2/3, Beaufort Apartment, Basisthapur, Bylan-3, Guwahati, Dispur, Assam-781028

The organization is accredited as Category-B under the QCI-NABET Scheme for Accreditation of EIA Consultant Organization, Version 3: for preparing EIA/LMP reports in the following Sectors-

S. No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1.	Mining of minerals - opencast mining only	1	1 (a) (i)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in IAAC minutes dated May 30, 2025, posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no QCI/NABET/ENV/ACC/25/3560 dated June 10, 2025. The accreditation needs to be renewed before the expiry date by Ecorescue Enviro Consulting Services Private Limited, Guwahati following due process of assessment

Valid up to
May 23, 2028

Issue Date
June 10, 2025



Certificate No.
NABET/EIA/25-28/IA 0166

Prof (Dr) Varinder S Kanwar
(CEO NABET)

For the updated list of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI NABET website

799
 Proposed Lankaijuri Stone Mahal Project,
 Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
 Maximum Proposed Production-40,000 cu.m/yr.
 Proponent: Imdad Ali



INTRODUCTION

The proposed project of Langkaijuri by Imdad Ali is located at Village- Modertoli District- Hojai, Assam over an area of 5.0 Ha.

The LOI has been granted to Imdad Ali, Vide Letter No. FNGT/ B/ Langkaijuri Stone Mahal/ 2021/4257-58, dtd. 29.09.2021 The proposed maximum production of Langkaijuri Stone Mahal Project is 40,000 cu.m/yr.

Salient Features of Proposed Project

Name of Proponent	Imdad Ali		
Full correspondence address of proponent and mobile No.	H. No. 11, Purbanchal Path, Mathura Nagar, Dispur, Guwahati-06, Assam		
Name of Project	Langkaijuri Stone Mahal Project		
Name of Village	Modertoli		
District	Hojai		
Name of Minor Mineral	Quartzite		
Sanctioned Lease Area (in Ha.)	5.0 Ha.		
Max & Min m within lease area	Max- 355 m and Min-283 m		
Pillar Coordinates (Verified by DMO)	Lankaijuri Stone Mahal		
	Points	Latitude	Longitude
	1	26°09'2.73"N	92°49'33.89"E
	2	26°08'58.75"N	92°49'30.04"E
	3	26°08'51.99"N	92°49'35.10"E
	4	26°08'56.19"N	92°49'39.67"E
	5	26°09'0.65"N	92°49'38.07"E
	Approach Road		
	Points	Latitude	Longitude
	1	26° 8' 54.743" N	92° 49' 38.096" E
	2	26° 8' 54.836" N	92° 49' 38.197" E
	3	26° 8' 53.781" N	92° 49' 39.045" E
	4	26° 8' 53.854" N	92° 49' 39.166" E
		26° 8' 52.628" N	92° 49' 40.183" E

293



Proposed Lankajuri Stone Mahal Project,
 Address: Village-Modertoli Goan, District-Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
 Maximum Proposed Production-40,000 cu.m/yr.
 Proponent: Imdad Ali

5	26° 8' 52.653" N	92° 49' 40.333" E
6	26° 8' 51.115" N	92° 49' 39.715" E
7	26° 8' 51.118" N	92° 49' 39.859" E
8	26° 8' 48.762" N	92° 49' 39.138" E
9	26° 8' 48.658" N	92° 49' 39.229" E
10	26° 8' 47.194" N	92° 49' 37.437" E
11	26° 8' 47.155" N	92° 49' 37.576" E
12	26° 8' 45.692" N	92° 49' 37.418" E
13	26° 8' 45.661" N	92° 49' 37.559" E
14	26° 8' 44.763" N	92° 49' 37.102" E
15	26° 8' 44.701" N	92° 49' 37.231" E
16	26° 8' 43.540" N	92° 49' 35.924" E
17	26° 8' 43.478" N	92° 49' 36.051" E
18	26° 8' 42.622" N	92° 49' 35.503" E
19	26° 8' 42.564" N	92° 49' 35.631" E
20	26° 8' 40.479" N	92° 49' 35.123" E
21	26° 8' 40.552" N	92° 49' 35.243" E
22	26° 8' 39.203" N	92° 49' 35.753" E
23	26° 8' 39.176" N	92° 49' 35.896" E
24	26° 8' 38.359" N	92° 49' 35.353" E
25	26° 8' 38.321" N	92° 49' 35.491" E
26	26° 8' 36.615" N	92° 49' 34.998" E
27	26° 8' 36.580" N	92° 49' 35.137" E
28	26° 8' 35.481" N	92° 49' 34.596" E
29	26° 8' 35.487" N	92° 49' 34.740" E
30	26° 8' 33.643" N	92° 49' 34.279" E
31	26° 8' 33.593" N	92° 49' 34.412" E
32	26° 8' 32.461" N	92° 49' 34.000" E
33	26° 8' 32.478" N	92° 49' 34.143" E
34	26° 8' 31.187" N	92° 49' 34.644" E
35	26° 8' 31.231" N	92° 49' 34.781" E
36	26° 8' 29.660" N	92° 49' 34.324" E
37	26° 8' 29.598" N	92° 49' 34.450" E
38	26° 8' 27.491" N	92° 49' 33.204" E
39	26° 8' 27.535" N	92° 49' 33.340" E
40	26° 8' 25.432" N	92° 49' 34.224" E
41	26° 8' 25.405" N	92° 49' 34.366" E
42	26° 8' 24.119" N	92° 49' 33.801" E
43	26° 8' 24.082" N	92° 49' 33.939" E
44	26° 8' 24.082" N	92° 49' 33.939" E

Total Proposed Production 2,00,000 cu.m/yr.

392
Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District-Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



Proposed Maximum Production/year	40000 cu.m/yr.	
Sanctioned Period of Mine lease	5 years	
Method of Mining	Open Cast Semi-Mechanized Method	
No. of working days	250 days	
No. of workers	28	
Type of Land	Government Land	
Water Requirement	PURPOSE	REQUIREMENT (KLD)
	Drinking	0.28
	Toilet	0.28
	Plantation	3.30
	Suppression of dust	4.20
	Total	8.06
Name of QCI Accredited Consultant with QCI No and period of validity.	Ecorescue Enviro Consulting Services Private Limited, certificate No. NABET/EIA/25-28/IA 0166 dated June 10, 2025, valid up to May 23, 2028	
Any litigation pending against the project or land in any court	No	
Length and breadth of Haul Road	Length: 1066 m, width: 6 m	
No. of Trees to be Planted	1650 plants	

Ecorescue Enviro Consulting Services Private Limited

Abhijit Bora

5

Director

Imdad Ali

29/7

Proposed Lankajuri Stone Mahal Project,
 Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
 Maximum Proposed Production-40,000 cu.m/yr.
 Proponent: Imdad Ali



Environment Sensitivity

Nearest Settlements	<ul style="list-style-type: none"> • Modertoli Mikir gaon Pt. (1.27 km in SSW Direction) • NH-27 (about 1.5 km in Southern direction)
Nearest Road	
Nearest Airport	LGBI airport, Ghy, Assam .
Nearest Railway Station	Jamunamukh, Assam, about 5.61km in SW Direction
Nearest National Park within 10 km	No National Park or Wildlife Sanctuary within 10 Km
Water body	<ul style="list-style-type: none"> • Ahutoli Deujuri Waterfall 6 Km in SSW Direction.
Nearest School/ college	<ul style="list-style-type: none"> • Nova National English School (1.65 km)
Reserve/ Protected Forest	Project lies in Forest Area.

Project Description and Maps

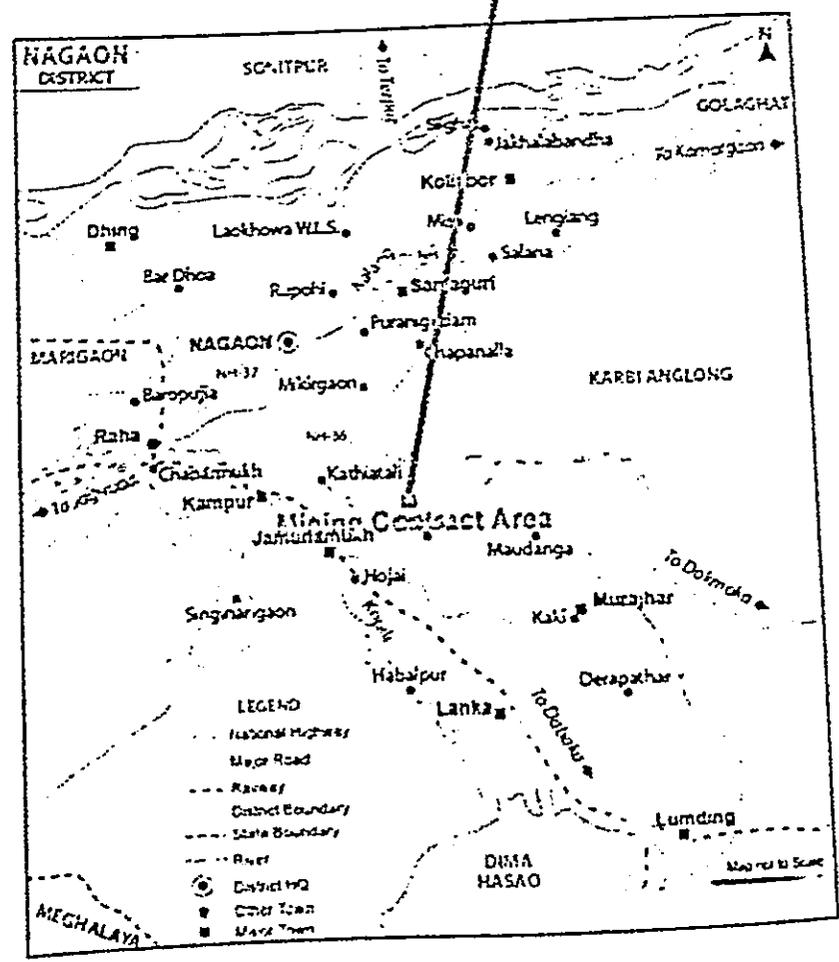
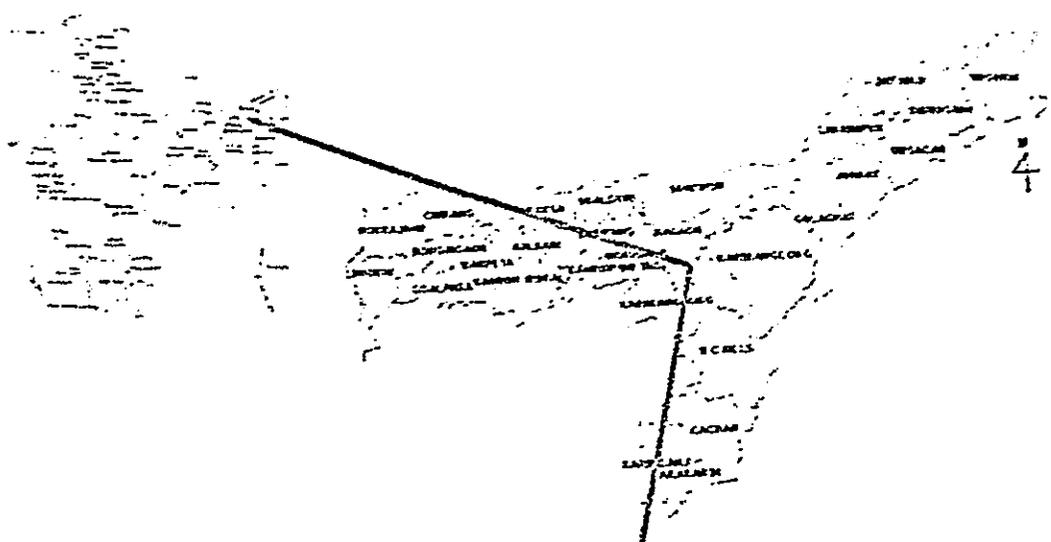
- Location

Village	District	State	Area in Ha.	Land	Toposheet No.
Modertoli	Hojai	Assam	5.0	Government Land	83B/16



Proposed Lankajuri Stone Mahal Project,
 Address: Village-Moderohi Gozn. District-Hojai. Area-5.0 Ha. Approach Road-0.42 Ha.
 Maximum Proposed Production-40,000 cum.yr.
 Proponent: Imdad Ali

Location Maps:



Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali

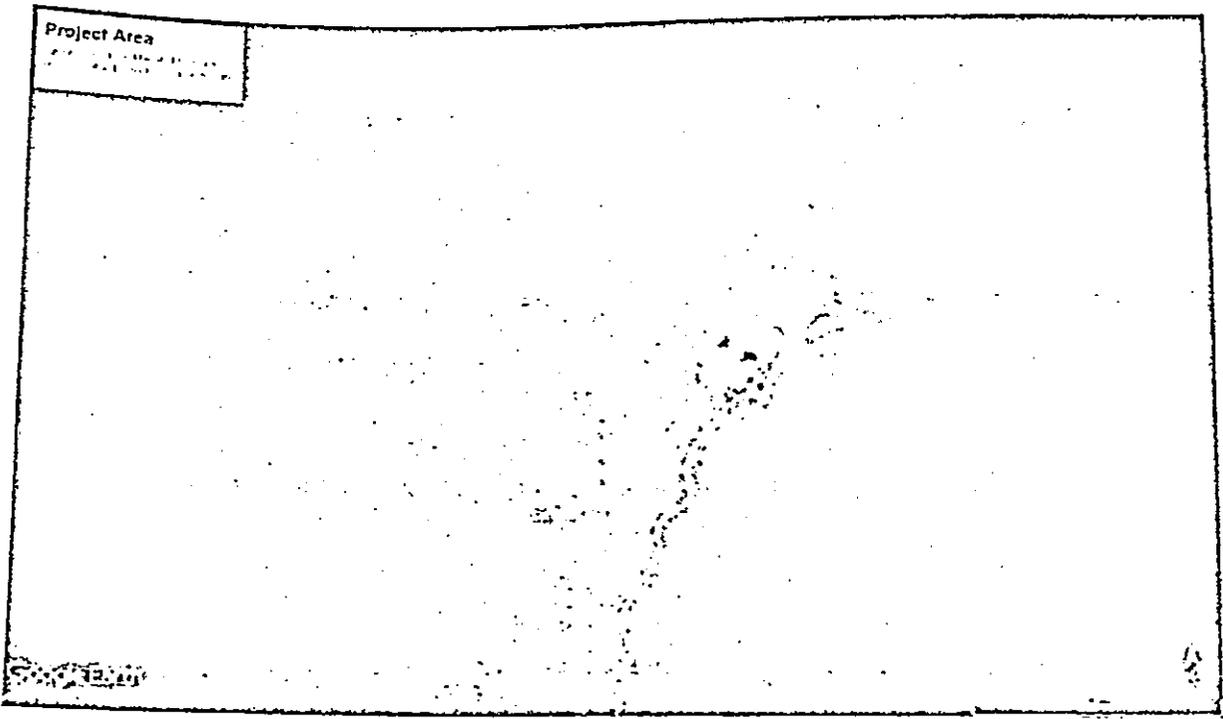


Fig 1: Google image showing Lease boundary of the proposed site



Fig.2 - Google map showing 500-meter radius from the periphery of the lease area.

288
Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road-0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali

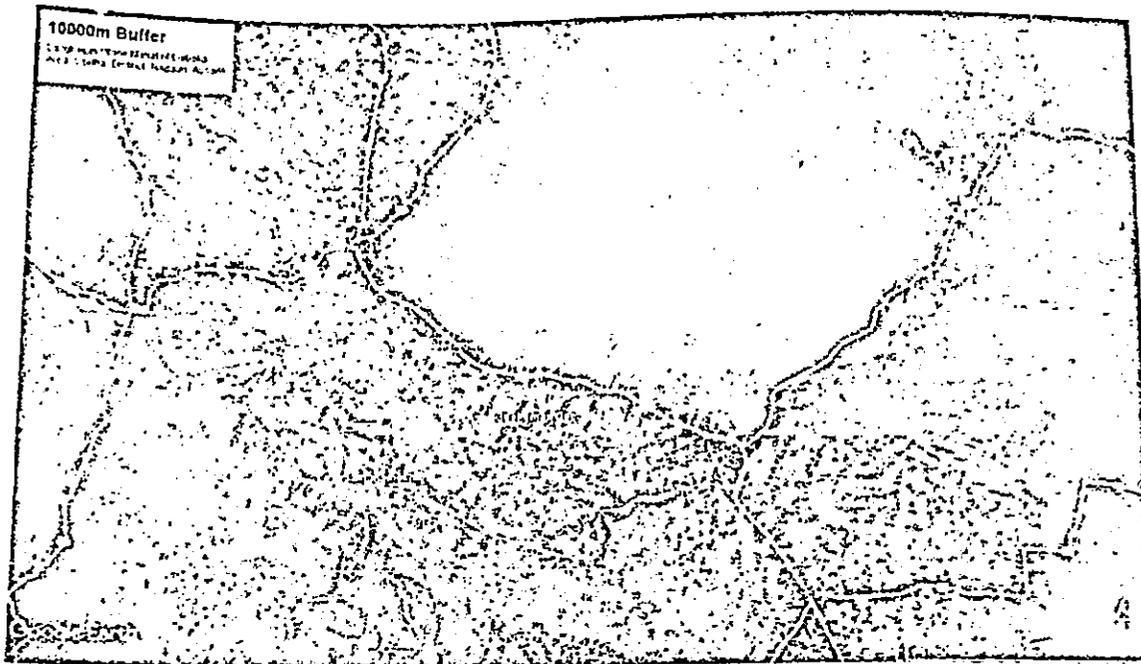


Fig.3 - Google map showing 10km radius from the periphery of the lease area

Type of project including interlinked and interdependent projects, if any

This is an independent mining project and there are no interlinked projects involved.

Details of alternate sites considered

Mineral is site specific as well as the lease has been allotted in the particular area. Hence no alternative site is examined for mining.

Size or magnitude of operation

The proposed mine has lease over an area of 5.0 ha with the Max. Production capacity of 40000 cu.m/yr. with lease period of for 5 Years. The mine will be worked on the day shift only. The average number of working days in the year would be 250.

Ecoresource Enviro Consulting Services Private Limited

Abhishek Bora

Director

Imdad Ali

287



Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali

PROPONENT DETAIL

Identification of project and project proponent

The project is proposed by Prop: Imdad Ali., for the mining of Stone over an area of 5.0 ha. The Max. Proposed production is 40,000 cu.m/yr.
The details of the project are given below:

Brief description of the nature of the project:

The proposed project has lease area of 5.0 ha and maximum production capacity is 40,000 cu.m/yr. of mineral. The expected life of the mine is 7 years. Extraction of Hill stone will be carried out by open cast Semi Mechanized method with adoption of drilling & blasting through bench formation, 45 benches which would be 3.0 m in height and maximum 8m wide for getting required maximum production of 40,000 cu.m/yr. Deep hole blasting will be done only for hard rock if encountered during mining operation. Water requirement for the proposed project is 8.06 KLD for domestic use, plantation and dust suppression, which will be taken from nearby village & water tankers.

Need for the project and its importance to the country and region:

Boulder stone is used for construction of buildings & making/dressing of roads Stone could be used for various construction works and road projects Stone extracted from the mine could also be

Name of the Lessee	Imdad Ali
Name & Address of POA Holder	Prop: Imdad Ali Address: House No.11, Purbanchal Path Mathura Nagar, Dispur, Guwahati-06, Assam.
Name of Mine	Lankajuri Stone Mahal
Mineral	Granite Gneiss

directly used as boulders of different sizes for River Anti-erosion, Dam construction embankment works etc.

Demand – supply Gap

The demand for Boulder stone is ever growing with the growth of the infrastructure sector in our country. The mineral is used in the construction activities like roads, buildings, bridges etc. The requirement for the mineral is always high in the nearby cities and towns. Therefore, there is always a good demand of the mineral in the

296

Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



domestic market

Domestic / Export Markets:

The demand in the domestic market is high for Boulder Stone Mineral is available in abundant quantity in area and can be extracted indigenously.

Export Possibility:

There is no proposal to export the mineral as the minerals extracted cater the indigenous demand and the development is a never ending process.

DOMESTIC/ EXPORT MARKETS

a) Domestic Market

There is always an ever increasing demand of these minerals in the domestic market. The finished product will be used for saleable purpose in the local market.

b) Export market

The proposed mining activity is for indigenous consumption only.

Employment Generation:

The total direct manpower requirement for the proposed mining operation will be around 31 Significant Indirect employments is also expected due to the associated activities. This project operation will provide livelihood to the poorest section of the society. Depending upon the General shifts working, following will be the proposed manpower.

Thus category-wise employments will be as below:

Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District-Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



S. No.	Category	Numbers
1.	Mine Manager	1
2.	Mining Supervisor	2
3.	Blaster	2
4.	Explosive carrier	2
5.	Driller	7
6.	Office Staff	5
7.	Security Personal	12
TOTAL		31

TOPOGRAPHY GEOLOGY & CLIMATE CONDITION: -

A) TOPOGRAPHY

The proposed Langkajuri Stone Mahal is irregular in shape. As per the calculation of the area bounded by the given GPS coordinates, the total area available for mining is about 5.0 Ha (Area measured within the given GPS). The general slop of the area is towards South-Southeast side. The topography of the area is undulating one. The altitude ranges from 282 M at the bottom of the hill to 355 M at the top. The proposed area is devoid of any valuable trees but covered with degraded mixed forest with grass, shrubs etc. with exposed rock section.

Drainage pattern of the area is mainly consisting of numerous small streams carrying mainly rain water during rainy seasons.

B) REGIONAL GEOLOGY

The Assam plateau lies along the continuation of the Archeans of Bihar and comprises Garo, Khasi, Jaintia hills and to its north-east is the detached area of Mikir hills. Tertiary rocks are well developed in the northern-eastern and south-eastern part where they exhibit a more or less complete geological succession ranging from Paleocene to Lower-Paleocene. The generalized geological succssion of Assam is as follows:

284
 Proposed Lankaijnri Stone Mahal Project,
 Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
 Maximum Proposed Production-40,000 cu.m/yr.
 Proponent: Imdad Ali



Age		Group	Formation	Description of Litho units
Quaternary	Recent			
			Khadar-newer alluvium	Clay, sand, silt etc.
Unconformity				
	Pleistocene		Bhanger-Older alluvium	Clay, coarse sand, gravel & boulder.
Unconformity				
Tertiary	Pleistocene	Dihing	Dihing	Pebble bed, sandy clay, clay, conglomerate and sand stone
	Mio-Pilocene		Dupitila (Surma Valley) & Namsang (Upper Assam)	Sandstone, mottled clay, grid, conglomerate bed
	Miocene	Tipam	Girujan	Mottled clay, sandy shale & sandstone
		Suma	Bokabil	Shale, Sandy shale, sandstone etc.
			Bhuban	Alteration of sandstone, sandy shale & conglomerate
Unconformity				
	Oligocene	Barail	Tikok Parbat	Banded sandstone with thick coal seams
			Borgolai	Sandstone & shale with numerous thin coal seams, carbonaceous shale, sandstone etc.
			Nagaon	Thin bedded hard sandstone with shale
	Eocene	Disang		Dark grey shale & sandstone
		Jayantia	Kopili	Shale, sandstone etc.
			Sylhet sandstone	Sandstone, coal, clay & shale
			Sylhet Limestone	Fossiliferous limestone
Unconformity				
Mesozoic	Jurassic		Volcanic	Trap, basaltic & dolomitic rock
Unconformity				
Palaeozoic	Permian	Gondwana	Singimari	Buff coloured fine grained sandstone, shale, carbonaceous



Proposed Lankajuri Stone Mahal Project,
 Address: Village-Modertoli Goan, District-Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
 Maximum Proposed Production-40,000 cu.m/yr.
 Proponent: Imdad Ali

				shale with coal & conglomerate etc.
Unconformity				
Proterozoic	Precambrian	Shillong		Granite, pegmatite, alternating beds of clay, quartzite, phyllite, basalt conglomerate etc.
Unconformity				
Azoic	Archean	Gneissic		Granite, pegmatite, metadolerite, amphibolite, biotite, hornblende, gneiss, calc granulite, pyroxenite etc.
Unconformity				
Azoic	Archean	Gneissic		Granite, pegmatite, metadolerite, amphibolite, biotite, hornblende, gneiss, calc granulite, pyroxenite etc.

C) GENERAL GEOLOGY OF THE AREA:

The area proposed lies within Doboka revenue circle of Nagon district. The geology of the Mining Concession area is predominantly a Quartzite deposit. The rocks are medium to fine grained with quartz as essential minerals with opaque minerals as accessory minerals,

The area proposed to be allotted to Imdad Ali lies within Hojai district. The geology of the Mining Permit area comprises of quartzite rock. Hill top is covered with thick soil cover with vegetation comprising trees, shrubs, grass etc.

Reserve & Method of Mining

Mineable Reserve of the mineral at the proposed site

The estimation of the Mineable reserve has been made considering the deposit to be massive and continuous, as per the Letter No. FNGT/ B/ Langkajuri Stone Mahal/ 2021/ 4257-58, dtd. 29.09.2021, of the Divisional Forest, Nagaon Forest Division, Nagaon the total Mining period 7 (seven) years is recommended to allow for extraction of stone from this quarry site. This mining plan is prepared for 5 (five) years.

282
Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



Reserve Estimation:

As per LOI issued by the Forest department, the total Ore volume of the proposed Lankajuri Stone Mahal area is estimated and recommended as 2,00,000 cu.m for five years. The Department of Forest, Govt. of Assam have recommended to extract an amount of 2,00,000 cu.m only in 5 (five) years, i.e. for extraction of the proposed quantity from this quarry site is @ 40,000 cu.m/yr approximately. The applicant has requested to design the quarry to extract optimum quantities of stone boulders possible, during the period of 5 (five) years. Considering the above and reserve of the mineral in the area, the mine is designed to produce 40,000 cu.m of stone boulders in average per annum along with some overburden.

Proposed Method of Mining

The method of mining proposed to be open cast semi-mechanized operation. The mining plan will consist of the following operations:

- i) Removal of morrum soil, weathered stone, wherever available and stack at the dumping site which can be any nearby low lying areas nearby.
- ii) Mining of Stone.
- iii) Removal of mined ROM (Run-of Mine) to surface yard for proper sizing, and stacking.

Opencast workings:

Each cycle of operation shall consist of removal of morrum soil, weathered stone wherever present, followed by extraction of the exposed stone subject to the following conditions being strictly complied with:

- Quarrying operations shall be conducted from top to bottom level.
- No person shall be engaged on work or allowed to travel close to high sides/benches, from which he may likely to fall from more than 1.8m height vertically down, unless he is provided with and used a safety belt or rope.
- A garland of 7.5m of barrier will be maintained.
- At surface drainage channels governing the water drainage of the area will be maintained by proper garland drains to collect the water at the periphery of excavation and discharge the same the same at natural outlets by passing the excavation.
- Wherever top morrum soil is excavated would be stacked properly for the use of

Proposed Lankajuri Stone Mahal Project,
 Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
 Maximum Proposed Production-40,000 cu.m/yr.
 Proponent: Imdad Ali



281

vegetation

Production target

The Schedule of year wise production of the stone boulders from first to fifth year is as below:

Year	Production (cu.m.)
1 st Year	40800
2 nd Year	38100
3 rd Year	40700
4 th Year	39800
5 th Year	40600

Year wise Development and Production Plan:

The work will be started in top portion of the applied area. The area is hilly and sloping.

1st year:

1. Construction of quarry haul road from the datum level at 283m to a maximum of RL at 349 m level approximately.
2. Development of the first overburden and mineral bench B1 at 355 m level following the surface contour.
3. The height of all benches will be maintained at 3M.
4. To achieve the 1st year target almost full portion of the B1 to B1 will be mined. The synopsis of the parameters of the first yea operation will be as follows:

Parameter	Level (M)	Soil (cu.m)	Stone (cu.m)	Total (cu.m)
Haul Road	283-349	90		90
B1	355	30	1500	1530
B2	352	30	2100	2130
B3	349	40	2400	2440
B4	346	40	3000	3040
B5	343	40	3500	3540
B6	340	40	4100	4140
B7	337	50	4600	4650
B8	334	50	4800	4850
B9	331	50	4800	4850
B10	328	50	5000	5050

280



Proposed Lankajuri Stone Mahal Project,
 Address: Village-Modertoli Gonn, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
 Maximum Proposed Production-40,000 cu.m/yr.
 Proponents: Inidad All

B11	325	50	5000	5050
Total		560	40800	41360

2nd year:

1. 2nd year operation shall be started from adjacent portion of Bench 12 (B12) at 322 m.
2. The next bench B13 at 319m level will be developed simultaneously following the respective surface contour.
3. The extraction of mineral can be done upto B18 at 304m level to achieve the second year target.

The synopsis of the parameters of the second year operation will be as follows:

Parameter	Level (M)	Soil (cu.m)	Stone (cu.m)	Total (cu.m)
B12	322	50	5000	5050
B13	319	50	5200	5250
B14	316	50	2300	5350
B15	313	50	5500	5550
B16	310	50	5500	5550
B17	307	40	5800	5840
B18	304	40	5800	5840
Total		330	38100	38430

3rd year:

1. 3rd year operation shall be started from adjacent portion of Bench 19 (B19) at 301m.
2. The next bench B20 at 298m level will be developed simultaneously following the respective surface contour.
3. The extraction of mineral can be done upto B25 at 283m level and bench B26 to B28 are to be re-mined at 355m to 349m level to achieve the third year target.

The synopsis of the parameters of the second year operation will be as follows:

Parameter	Level (M)	Soil (cu.m)	Stone (cu.m)	Total (cu.m)
B19	301	40	6000	6040
B20	298	40	6000	6040
B21	295	40	5800	5840
B22	292	20	5600	5620

Proposed Lankajur Stone Mahal Project,
 Address: Village-Modertol Gonn, District- Hojal, Area-5.0 Ha, Approach Road- 0.42 Ha,
 Maximum Proposed Production-10,000 cu.m/yr.
 Proponent: Tondal AH



B23	Re-mined benches	289	20	5000	5020	
B24		286	20	4300	4320	
B25		283	20	2000	2020	
B26		355	0	1500	1500	
B27		352	0	2100	2100	
B28		349	0	2400	2400	
Total				200	40700	40900

4th year:

1. 4th year operation shall be started from adjacent portion of Remining Bench 29 (B29) at 346 m.
2. Subsequently, the Remining Bench No. B30 to B37 will be developed at 343 m to 322 m level following the surface contour.
3. During this year the Remining Bench No. B29 to B37 will be exhausted.
4. To achieve the target of 4th year, mining shall be continued up to Remining Bench37 (B37).

The synopsis of the parameters of the fourth-year operation will be as follows:

Parameter		Level (M)	Soil (cu.m)	Stone (cu.m)	Total (cu.m)
B29	Re-mined benches	346	0	3000	3000
B30		343	0	3500	3500
B31		340	0	4100	4100
B32		337	0	4600	4600
B33		334	0	4800	4800
B34		331	0	5000	5000
B35		328	0	5000	5000
B36		325	0	5000	5000
B37		322	0	5000	5000
Total			0	39800	39800

5th year:

1. 5th year operation shall be started from adjacent portion of Remining Bench 38 (B38) at 319 m.
2. The next bench B39 at 316 m level will be developed simultaneously following the respective surface contour.



377

Proposed Lankajuri Stone Mineral Project,
 Address: Village-Modertoll Gonn, District- Dajal, Area-5.0 Ha, Approach Road- 0.42 Ha,
 Maximum Proposed Production-10,000 cum/yr.
 Proponent: Imtial AB

- noise and ground vibration within the threshold limit.
- Blasting Pattern, stemming, charge per hole should be designed on the basis of field trials to control the flying rocks.
- Adequate sirens, signals, posting of guards at strategic points before blasting shall have to be provided.

Types of explosives:

As available in the local market it is suggested to use 25mm Slurry explosive (Glass-II) in the proposed quarry. The available are Power gel, Superdyne, Dynes-90 etc.

In addition to above ANFO (Ammonium Nitrate Fuel Oil Mixture) may be used to reduce the cost of explosives. It is prepared by mixing Prilled Ammonium Nitrate with IISD oil in the proportion of 94.5:05.5. The ratio of both the explosives will be as below.

Slurry explosive ANFO = 37.5:62.5

Nowadays, ROC system for hazard free and safe blasting is also available in the market.

Storage of Explosive:

1. The required explosive in the quarry is very high. The nearest explosive dealer is located at Guwahati which is about 135 km away from the proposed quarry site. As such it will not be comfortable to procure explosives from Guwahati every day for blasting purpose. On the other hand, Assam is a very sensitive area so far as extremist activities are concerned and there are very strict laws in force in connection with transportation and storage of explosives. It is therefore suggested to obtain help from the nearest Police stations (Jamunamukh) to procure explosives 5 to 6 days prior to blasting and store it in their custody in an Explosive van. The explosives so stored in the Police Station may be used for blasting in the quarry as and when required. Thereafter, another lot of explosives for the next period may be procured for blasting. This modality is preferable, because to obtain an explosive license for a magazine for storage of explosives and then to maintain the magazine security etc. will be very costly and unsafe.
2. There is evidently another way for Blasting of the rocks in the quarry by out sourcing the blasting operation to the explosive dealer at Guwahati. The explosive dealer at Guwahati have their own technical team for blasting purposes and on awarding the job, they come to the quarry along with the explosive materials and complete the blasting work on payment

276



Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali

of necessary charges. This modality would be more preferable, as in this case the problem of storage of explosives near the site would not be there.

Raw Material Required :

No raw material will be required in the proposed project. The operation involves the excavation of Boulder Stone in its existing form and transported to the end users/ market.

Use of Mineral

The minerals Rock Boulder Stone are used:

- As raw material for civil construction.
- As raw material for construction of dams, embankment work etc.
- In roads making, paving, etc.

Mineral Beneficiation

No mineral beneficiation is involved for this mineral. The materials are excavated in different forms/ sizes ranging from boulder to aggregates, could be directly used for various constructional works.

TRANSPORTATION ROUTE:

The transportation of Boulder Stone will be carried out by the purchaser through their own transport. There are all weather an unmetalled road and then a metalled road right up to the mines to dispatch the material from mines to the market. The unmetalled road is having an aerial length of 100m which further connect to metal road.

Ecrescue Enviro Consulting Services Private Limited

Abhishek Bora

Director

Imdad Ali

Proposed Lankajuri Stone Mahal Project,
 Address: Village-Modertoli Goan, District-Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
 Maximum Proposed Production-40,000 cu.m/yr.
 Proponent: Imdad Ali



2.	For toilets	Manpower (31) 31*10L = 310 lpcd	0.31	Private tanker (Treated Water /groundWater after permission)
3.	Plantation	1650 trees *2L = 3300L	3.30	Private tanker (Treated Water /groundWater after permission)
4.	Dust Suppression	Length = 1066 m Width = 6 m Area = 1066*6 = 6396m ² 6396*2L = 12792 L	12.79	Private Tanker (Treated Water /ground Water after permission)
Total			16.71	-

Sewerage System

No sewerage system is required. Instead of that soak pit and mobile toilet will be installed.

Power Requirement:

The operation will be done only from sun rise to sun set hence there is no power requirement for the project at site.

Solid Waste Generation & its Disposal

Boulder Stone exits within the entire applied area. The soil is generated as waste which is removed from lease area is dump in dumping area and later use for plantation and road dressing.

Liquid Effluent

No liquid effluent will be generated from the proposed mining project.

LAND FORM, LAND USE AND LAND OWNERSHIP

Land use Pattern

The proposed quarry area consists of degraded forest area mainly covered with small trees, shrubs and exposed rock outcrop.

Amenities/Facilities & Proposed Infrastructure

Amenities/Facilities at Mine Site

- Temporary rest room shelter

Proposed Lankaijuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



- First-Aid Facilities Safe drinking water
- Facilities for sanitation-community toilets.
- Arrangements for safe and healthy working conditions.
- Provision of safety equipments like ear-muffs, gloves, etc.
- Conducting medical camps for workers and nearby villagers at regular interval.

Proposed Infrastructure

Industrial area- No industrial area is proposed.

Residential area- As the local people will be given employment; no residential area/ housing are proposed.

Population projection

The project will employ most of the workers from nearby villages except for supervisory staff. Thus there will no increase in population due to the project. However, few people from other area may migrate in this area for employment directly and indirectly for business opportunities.

Project Schedule & Cost Estimates.

The total cost of project would be around Rs. 1050 lacs. The project commence after EC granted.

PROJECT BENEFITS

The execution of the project, bring overall improvement in the locality, neighborhood and the State by bringing industry, roads, employment and hence improving living standard and economic growth.

Physical Benefits

The opening of the proposed project will enhance the following physical infrastructure facilities in the adjoining areas.

- Road Transport:** There will be improved road communication due to the proposed project and maintenance will also be done time to time.
- Market:** Generating useful economic resource for construction.

272

Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District-Hojal, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



Excavated mineral will provide a good market opportunity.

- c. **Enhancement of green cover:** As a part of reclamation plan, plantation will be carried along the river banks or along the road sides or near the civic amenities.
- d. **Creation of community assets (infrastructure)** like provision for drinking water, construction of school buildings, village roads/ linked roads, dispensary & health center, community center, market place etc. as a part of corporate social responsibility.

SOCIAL BENEFITS:

- a) **Increase in Employment Potential** due to the project activity. Employment opportunities will increase both directly as well indirectly.
- b) **Contribution to the Exchequer** as the saleable minerals will be given royalty. Since the quarries will be leased out to successful allots, mining operation in the state will get legalized and it will fetch income to the state exchequer.
- c) **Increased Health related activities:** Healthcare promotional activities will be undertaken. Pre-placement & and Periodic medical checkups will be done, which will lift the general health status of the residents of the area. Health camps, medical aids, family welfare programs, immunization camp sports will be arranged.

CORPORATE ENVIRONMENTAL RESPONSIBILITY (CER)

The following has been proposed considering the needs & demand of the people:

Budget for Corporate Environmental Responsibility (CER)

Sl. No.	Activity	Quantity	Capital Cost (in Rs.)
1	Provide drinking water facility in surrounding villages and schools by installing water tanks at govt. schools	water tank capacity of 10,000 L	1,50,000

271

Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojal, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



2	Distribution of Solar Lamps/ solar lights	35 solar lamp	16,00,000
3	Construction of Public Toilets	5 Toilets	2,50,000
4	Installation of Smart Classes in nearby village @Modertoli Village	5 Smart Class	50,000
TOTAL			20,50,000

270



Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali

ENVIRONMENT

MANAGEMENT

PLAN

Ecrescue Enviro Consulting Services Private Limited

Abhijit Bora

Director

Imdad Ali



196

INTRODUCTION:

To mitigate the adverse impact which may be caused due to the mining operations and overall scientific development of local habitat, environmental management plan (EMP) has been formulated and integrated with the mine planning. The EMP has therefore been made considering implementation and monitoring of environmental protection measures during and after mining operations.

The mitigation measures which reduce the impact have already been identified earlier in this report. To minimize the adverse impact, certain additional EMP is enumerated below for implementation.

Environmental Management Plan (EMP) is aimed at mitigating the possible adverse impact of a project and for ensuring to maintain the existing environmental quality. The EMP converses all aspects of planning & operation of the project, which are relevant to environment. It is essential to implement the EMP right from the planning stage and then continuing it throughout the operation stage. Therefore, the main objective of the EMP is to identify the project specific activities that would have to be considered for investigation of the significant adverse impacts and the mitigation measures required. The specific measures that shall be put to practice to minimize the impact on the environment are discussed below:

ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Proper environmental management plan is proposed for stone Mine project to mitigate the impact during the mining operation.

- No overburden or loose sediments will be kept in the vicinity of the working benches.
- The possibility of the project activity contributing to the pollution of watercourses of the region or to the ground water regime is so less that this does not significantly constitute an area of concern.
- Construction of well-compacted roads.
- Regular water spraying on haul roads and waste dumps by tankers.
- Provision of dust collectors for the drilling & crusher machines.
- Proper environmental management plan is proposed for stone Mine project to mitigate the impact during the mining operation.

258
Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



- No overburden or loose sediments will be kept in the vicinity of the working benches.
- The possibility of the project activity contributing to the pollution of watercourses of the region or to the ground water regime is so less that this does not significantly constitute an area of concern.
- Construction of well-compacted roads.
- Regular water spraying on haul roads and waste dumps by tankers.
- Provision of dust collectors for the drilling & crusher machines.
- Controlled blasting (if any required)
- Supply of personal protective equipment like dust masks, earplugs, helmets, safety boots etc. for the miners.
- Plantation of wide leaf trees, creepers, tall grasses around quarry sites, waste dumps, road and other surrounding barren zones.
- Proper and regular maintenance of vehicles, compressors and jack hammers.
- Provision of supplying earplugs for jackhammer drillers and crusher operators.
- Care should be taken that noise produced during vehicles movement for carrying building stone is within the permissible noise level.
- Carrying of blasting (if any) only during daytime (not during cloudy weather and when strong wind is blowing towards residential areas). Blasting will be carried out with limited explosives at a time so that the noise generation can be well maintained within the prescribed limits.
- Provision of Green Belt (thick foliage) along the lease boundary and road.
- Strict observance of the provisions of Acts, Rules and Regulations in respect of safety both by management and the workers.
- Proper planning and designing of work in order to reduce the risk of hazards.
- Specific instructions and supervisions of working where danger due to fall of side (overhanging, undercutting of bench, fall of objects from higher benches/places is apprehended).
- Training of work persons and the officials.
- Since the haul road will be of considerable length, due importance will be given in the construction of road. The width of road will be maintained more than thrice the width of the vehicle. A code of traffic rules will be implemented.



Proposed Lankajuri Stone Mahal Project,
 Address: Village-Modertoll Goan, District- Illojaj, Area-5.0 Ha, Approach Road- 0.42 Ha,
 Maximum Proposed Production-40,000 cu.m/yr.
 Proponent: Imdad Ali

- Since the haul road will be of considerable length, due importance will be given in the construction of road. The width of road will be maintained more than thrice the width of the vehicle. A code of traffic rules will be implemented.
- A code of practices for tipping in stock piles/dumping of overburden at dump yard and loading point will be implemented.
- In respect of contract work, safety code for contractors and workers will be implemented.
- They will be allowed to work under strict supervision of statutory person/officials only after they will impart training at vocational training centers. All personal protective equipment will be supplied to them.
- A code of practice for fighting fire will be implemented.
- Competent persons like fitters, mechanics will be imparted with special attention to project impact.
- Provision of pit safety committee meeting every month (20th day) to discuss the safety of the mines and the persons employed.
- Celebration of annual mines safety week and environmental week in order to develop safety awareness amongst employees.
- Pre joining medical checkup shall be done and regular health check-up in 6 monthly intervals is planned for the employees.
- Care will be taken that no cooking, or burning of woods will be allowed in the adjoining area.
- If some causality or injury to animal occurs, it should be informed to forest department and proper treatment should be given.
- Corridor movement of wild mammals (If exists) should be avoided.

SOLID WASTE GENERATION AND MANAGEMENT

No waste or top soil shall be generated during mining activities. All the quantities of Stone to be exploited shall be sending to crusher plant outside the area to crusher plant outside the area. Therefore, generation of waste shall be nil & no proposal has been envisaged for its separate dumping.



Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District-Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali

ii. Transportation of minerals will be done by road using trucks. Fugitive dust emission is expected from the transportation of trucks on the haul roads.

MITIGATION MEASURES:

The mitigation measures like the following will be resorted:

- Water sprinkling will be done on the haul roads twice in a day. This will reduce dust emission further by 74%.
- Speed limits will be enforced to reduce airborne fugitive dust from vehicular traffic.
- Spillage from the trucks will be prevented by covering tarpaulin over the trucks.
- Deploying PUC certified vehicles to reduce their emissions.
- Proper tuning of vehicles to keep the gas emissions under check.
- Monitoring to ensure compliance with emission limits would be carried out during operation.
- Plantation activities will be done along the barrier zone and which will reduce the impact of dust in the nearby villages.

NOISE ENVIRONMENT:

Impact on environment

Noise generated at the mine is due to semi-mechanized mining operations, drilling, blasting, mechanized loading and truck transportation activities. The noise generated by the mining activity dissipates within the mine. There is no major impact of the mining activity on the nearby villages. However, pronounced effect of above noise levels is felt only near the active working area.

Noise at lower levels (sound pressure) is quite acceptable and does not have any bad effect on human beings, but when it is abnormally high- it incurs some maleficent effects.

In this case the impact of noise on the nearby settlements is negligible as they are far located from the mine workings.

Mitigation measures:

- a) **On_site: Blasting:** only if required will be done by a licensed blaster.
- b) **Maintenance of Machinery:** Regular maintenance of machinery will keep the generated noise level below the minimum prescribed limit i.e. not exceeding 90 dB (A)



- at a distance of 2 m from the machine. All machines will be as per stipulated standards and will be used at their optimum capacity.
- c) **Trained Operators:** Only trained operators will be allowed to operate machines during mining to reduce any chance of safety failures.
 - d) **Vegetation:** Plantation of trees along the barrier zone will be done to dampen the noise, if possible
 - e) **Hearing Protection:** All the miners will be provided with Personal Protective Equipments such as ear-muffs.
 - f) **Phasing out:** the old and worn out trucks.

Off site:

The off-site receptors are not significantly affected as they are located far away from the mine site. But some disturbances due to vehicle movement cannot be avoided. Plantation will be done along the barrier zone and roadsides etc. which will more or less dampen the off-site noise level.

BIOLOGICAL ENVIRONMENT:

Impacts on biodiversity

Present data have been collected through direct inventory as well as various Government Departments such as forests, agriculture, fisheries, animal husbandry and various offices to establish the pre-project biological environmental conditions. There are no endangered species, wildlife sanctuary, wildlife corridors, faunal migratory routes or eco-sensitive area near the whole study area. For this, mine owner planted a good roadside plantation along both side of the mine road.

Impacts on agriculture:

The area around the mine lease area is all barren and no agriculture activity is going on at least 2- 3 km away from the mine site. Therefore no significant impact on the agriculture around the project site is expected.

Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoll Goan, District- Hojui, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



Impacts on aquatic ecology:

Mining activities may result in affecting the riverine ecology by polluting the river water. But in this case, Untrue River lies almost 4.24 km away from mine site and also nothing is being discharged into the river. However, indiscriminate fishing by laborers etc. may reduce fish stock availability for commercial and sport fishermen. Thus, it is recommended that adequate surveillance measures are implemented during project operation phase to ameliorate such impacts.

Mitigation measures:

There is a requirement to establish a stable ecosystem with both ecological and economic returns. Minimization of soil erosion and dust pollution enhances the aesthetic value of the core and the buffer zone. To achieve this, it is planned to increase the area of green cover of plantation and green belts activities. The basic objectives of plantations are as follows:

- Improvement of Soil quality,
- Quick vegetative cover to check soil erosion,
- Improvement in mining site stability,
- Conservation of biological diversity of plants, birds and animals,
- As dust receptor and dust filter, this is likely to be produced during mining.
- If birds are noticed crossing the core zone, they will not be disturbed at all;
- Labors will not be allowed to discards food, plastic etc., which can attract animals/birds near the core site;
- Only low polluting vehicles having PUC will be allowed for carrying mining materials.

ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION:

Environmental Management Plan serves no purpose if it is not implemented with true spirit. Some loopholes in the EMP can also be detected afterwards when it is implanted and monitored. Thus, an implementation and monitoring programme has to be prepared.

The major attributes of environment are not confined to the mining site alone. Implementation of proposed control measures and monitoring programme has an implication on the surrounding area as well as for the region. Therefore, mine management should strengthen the existing control measures as elaborated earlier in this

262
Proposed Lankaijuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



report and monitor the efficacy of the control measures implemented within the mining area relating to the following specific areas:

- a) Collection of air and water samples at strategic locations with frequency suggested and by analyzing thereof. If the parameters exceed the permissible tolerance limits, corrective regulation measure will be taken.
- b) Collection of soil samples at strategic locations once in every year and analysis thereof with regard to deleterious constituents, if any.
- c) The effectiveness of drainage system depends upon proper cleaning of all drains provided in the surrounding of mine area. Any blockage due to siltation or loose material will be checked at least once in a month.
- d) Measurement of water level fluctuations in the nearby ponds, dug wells and bore wells.
- e) Measurement of noise levels at mine site, stationary and mobile sources, and adjacent villages will be done in every quarter of the year.
- f) Plantation/afforestation as should be done as per program. Regular watering of plant and fencing to protect them from cattle/goats has to be provided. Post plantation, the area will be regularly monitored in every season for evaluation of success rate. For selection of plant species local people should also be involved.

Mine management will be in regular touch with local surrounding villages to update the various developmental schemes made by them. They will also consider any immediate requirement, which could be taken care of in near future.

Mine management will be in regular touch with State Pollution Control Board and Indian Bureau of Mines and send them annual progress report. Any new regulations considered by State/Central Pollution Control Board for the industry will be taken care of.

Ecorescue Enviro Consulting Services Private Limited

Abhijit Bora

Director

35

267

Proposed Lankajuri Stone Mahal Project,
Address: Village-Modertoli Goan, District- Hojai, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



ENVIRONMENT MANAGEMENT CELL (EMC)

To implement the EMP, a structured Environment Management Cell (EMC) which includes plant manager and representative of consultants interwoven with the existing management system is there. A comprehensive environmental monitoring program as laid down by State Pollution Control Board is followed.

All the above observations will be complied and documented by the EMC to serve the following purposes:

- Identification of any environmental problems that are occurring in the area.
- Initiating or providing solution to those problems through designed channels and verification of the implementation status.
- Controlling activities inside the project, until the environmental problem has been corrected.
- Suitably responding to emergency situations.

BUDGET ALLOCATION FOR EMP IMPLEMENTATION:

Annual budget for EMP is very essential for successful implementation of EMP. The fund allocated will not be diverted for any other purposes and the top management will be responsible for this. The budget will take into consideration the following capital and operating expenses:

1. Capital cost for installing pollution control systems.
2. Field cost for monitoring of parameters.
3. Cost of any defined outsourcing
4. Cost of chemicals, consumables and transport for data generation
5. Man power cost for environmental cell
6. Any other cost as per EC condition.

260

Proposed Lankajuri Stone Mahal Project,
Address: Village-Moder toll Goan, District- Hojal, Area-5.0 Ha, Approach Road- 0.42 Ha,
Maximum Proposed Production-40,000 cu.m/yr.
Proponent: Imdad Ali



Sl. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (in Rs.)
1	Dust Suppression	--	90,500
2	Pollution Monitoring		1,30,000
	i) Air pollution	--	21,000
	ii) Water pollution	--	16,500
	iii) Soil Pollution	--	16,500
	iv) Noise Pollution	--	11000
3	Green belt development	4,10,000	71,500
4	Haul road maintenance	--	53000
5	*Corporate Environmental Responsibility	1,10,000	--
Total		5,20,000	4,10,000

ANALYSIS OF PROPOSAL

The proposed mine will bring economic benefits to the state by the way of Royalty for mineral and to the local people by way of direct and secondary employment opportunities. The mining activities as proposed are the backbone of all construction and infrastructure projects as the raw material for construction is available only from such mining activities. The Boulder Stone extracted are in high demand at the local market for building, construction of dams, roads, paves, etc.

Achieving a huge infrastructure as being envisaged by Government of India particularly in road and housing sector requires basic building materials. Boulder Stone is one of construction/building material required for construction of dams, embankment work the purpose. The mining activities as proposed are the backbone of all construction and infrastructure projects as the raw material for construction is available only from such mining.

This project operation will provide livelihood to the poorest section of the society/economically backward population in the area. It provides employment to the people residing in vicinity directly or indirectly. The mine management will also help nearby villages by providing aid to school, conducting medical and social awareness camps, helping in formation of self-help groups, distributing solar lamps, blankets etc. As a part of corporate social responsibility. Thus the project will bring about socio-economic improvement of the area and will prove beneficial to the area.

Ecorescue Enviro Consulting Services Private Limited

Abhijit Bora

37

Director

Imdad Ali