REGISTERED

No. Udyog-Bhu(Khani-4)Laghu-9/2015 -13775
Government of Himachal Pradesh
Department of Industries
"Geological Wing"
Dated; Shimla- 171001, 31/31 2018

To

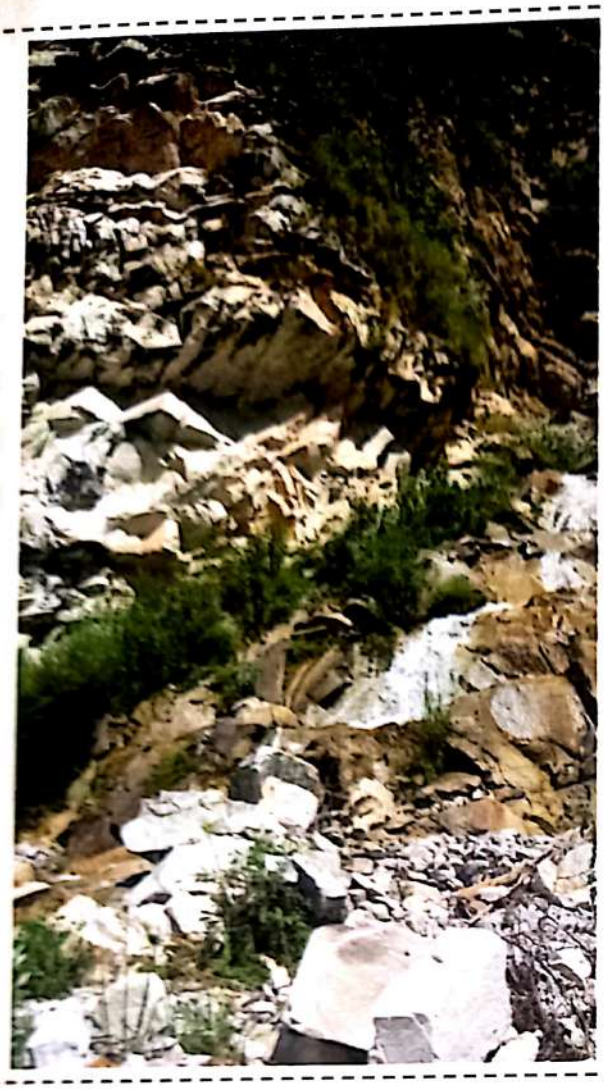
Smt. Kanegtu Devi,
Prop:- Bushahar Laghu Udyog,
Village & P. O. Jhakri,
Tehsil Rampur, Distt. Shimla, H. P.

Subject:- **Approval of Mining Plan of area applied for grant of mining lease for extraction of Stone from Khasra No. 13/1 measuring 01-46-12 Hect. (Govt. land, Hill slope) falling in Mauza Pashada of Tehsil Rampur, Distt. Shimla, H. P. for which letter of intent has been issued on 26.8.2017.**

Dear Sir,

In exercise of powers conferred by Rule 36 of Himachal Pradesh Minor Mineral (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules 2015, I hereby approve the above said Mining Plan for the purpose of obtaining Environment Clearance of the area applied for grant of mining lease for which the letter of intent has been issued on 26.8.2017. The mining plan is approved for a period of five years from the date of execution of mining lease deed. This approval is subject to the following conditions:--

1. That the Mining Plan is approved without prejudice to any other laws applicable to the mine/area from time to time whether made by the Central/State govt. or any other authority.
2. That this approval of the Mining Plan does not in any way imply the approval of Govt. in terms of any other provisions of the H. P. Minor Minerals (Concession) Revised Rules, 1971 now repealed as Himachal Pradesh Minor Mineral (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules 2015 or any other laws including Forest (Conservation) Act, 1980, Environment Protection Act, 1986 and the rules made there under and other relevant statutes, orders and guidelines as may be applicable to lease area from time to time.
3. That the Mining Plan is approved without prejudice to any orders or directions from any Court of competent jurisdiction.
4. That in case State Geologist, Geologist, any other inspecting officer/official of Geological Wing Department of Industries, after field inspection notices that proposals made and workings shown in the mining lease by the RQP need certain corrections/ amendments due to change in conditions either natural or man made, the inspecting officer can recommend necessary amendments in the Mining Plan at any point of time in the interest of environment and mineral conservation.
5. That the lease holder shall procure Environment clearance from the competent authority as per Environmental Impact Assessment notification, 2006 and amendements/notifications issued time to time in this regard.
6. That the approval of proposed mining operations is restricted to the mining lease area only.



MINING PLAN OF MINING LEASE AREA FOR EXTRACTION OF STONE (MINOR MINERALS)

FALLING IN: MAUZA-PASHADA (Area-1-46-12 Hect.) TEHSIL RAMPUR DISTRICT: SHIMLA STATE: HIMACHAL PRADESH

Owner:
Smt. Kanegtu Devi
Prop: M/s Bhushehar Laghu Udhyog
Village and P.O. Jhakri, Tehsil Rampur
District Shimla, Himachal Pradesh

RQP:
J. L. Sud
RQP No. H.P./R.Q.P./02/2/2016
Geologist (Retd.) Set No. 19, Type IV,
Govt. Officers Colony, Kasumpti, Shimla 171009

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Table of Contents

Part-II

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Enclosures:

Pocket ---------- Topographical Map: Plate-1, Mine Planning: Plate-3-7, Mine Closure Map = 2, working sections: Plate- and Slice Plan: 8, Location Map: -9, Buffer Map-10

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भूविज्ञान शाखा,
उद्योग विभाग शिमला
Geological wing
Deptt. of Industries
Shimla

APPROVED

With Condition
शर्तों के साथ अनुमोदित
Vide Letter No. Udyog-Bhu(Khani-4)Laghu-9/2015-13775
Dated- 31/3/18

State Geologist,
Himachal Pradesh

INTRODUCTION

Smt. Kanegtu Devi Prop: Bhushahar Laghu Udyog, Village and Post Office Jhakri, Tehsil Rampur, District Shimla, Himachal Pradesh has been applied for a mining lease for extraction of stone over an area situated in mauza and mohal Pashada, Tehsil Rampur, District Shimla falling in khasra number 13/1 measuring 01-46-12 hectares. The stone extracted from this quarry would be used in already established stone crusher unit in the name and style of 'Bhushahar Laghu Udyog'.

The lessee in compliance to the conditions of 'Letter of Intent' issued in the favor of her vide letter no. Udyog Bhu (Kahni-4) Laghu-9/2015-5890 on dated 26/08/2017 approached the undersigned having R.Q.P. No. H.P./R.Q.P./02/2/2016 for preparation of the Mining Plan. The plan has been prepared in accordance with the various provisions of the Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules 2015 and other guidelines issued from time to time.

The mining lease area is a compact block and located in revenue estates of Racholi Panchyat, tehsil Rampur, district Shimla, Himachal Pradesh. On the request of the said lessee to prepare the Mining Plan, the mapping of the mining lease area was carried out on 1:1000 scale with 2-meters contour intervals, encompassing Topographical, Lithological and other features. The Mining Plan includes the systematic and scientific exploitation of mineral from within the lease area encompassing a phased programme for afforestation and point of public utility.

The party has been granted mining lease for a total area of 01-46-12 hectares, however, after leaving a safe zone of 7.5 meters only 00-91-24 hectare surface area left for mining activities and further topographical constraints restricts the minable area only to 00-73-75 hectare as shown in the ultimate pit.

1. General

1.1. Name and address of the applicant

Name of the applicant

Smt. Kanegtu Devi

Address of the applicant

Prop: Bhushahar Laghu Udyog, Village and Post Office Jhakri, Tehsil Rampur, District Shimla, Himachal Pradesh

1.2. Status of the Applicant

Private individual.

1.3. Minerals which applicant intends to mine

The Applicant intends to mine stone from the lease area. The extracted stone shall be used for manufacturing of angular grit in the already established stone crusher unit in the name and style 'M/s Bhushahar Laghu Udhyog'.

1.4. Period for which mining lease/ contract to be granted

Will be decided at time of grant orders

1.5. Name and address of the Registered Qualified Person (herein after referred to as ('RQP') preparing Mining Plan

J L Sud, Geologist (Retd.) Set No. 19, Type IV, Govt. Officers Colony, Kasumpti, Shimla 171009

Registration No. of RQP

H.P./R.Q.P./02/2/2016

1.6. Name of prospecting Agency

The area has been discovered by the applicant and further investigated by the R.Q.P. as he has a vast experience in mineral exploration. The site cum contour plan of the area is prepared with contour interval of 2 meters at a representative scale of 1:1000.

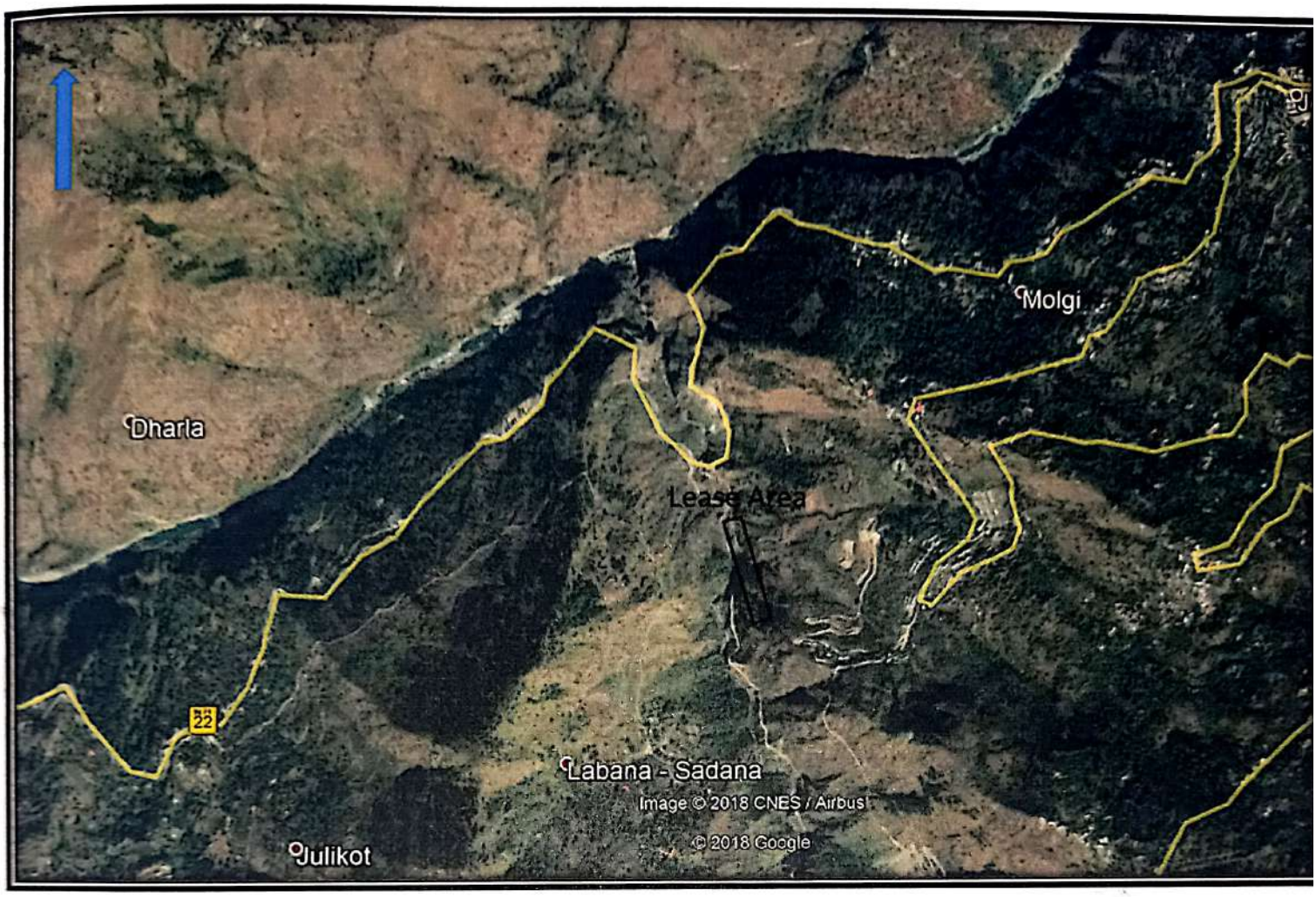
2. Location and approach of the area

2.1. Topo sheet No. **53 E/11**

Location Map (Map No.-1)

Site-cum-contour plan (Plate No.2)

Latitude	**31°28'28.79"N to 31°28'22.02"N**
Longitude	**77°41'11.72"E to 77°41'19.33"E**



Map: 1 Location map of Lease Area (Source Google Earth)

2.2. Location detail of the Area

The mine is located in the revenue estates of Panchyat Racholi in tehsil Rampur Bushehar, district Shimla, Himachal Pradesh and is about 6.5 Kms from Rampur, District Shimla. The applied for lease area lies between the latitudinal parallel falling in the survey of India Topo Sheet No. 53-E/11. The lease area is located on the structurally dissected hills of metamorphosed rocks.

2.2.a. Detail of Area, Revenue Record

Revenue Record

Kh.No.	Area (Hects.)	Owner (Govt./Pvt.)	Kism	Mauza	Panchayat
13/1	01-46-12	H.P. Govt.	D.P.F.	D.P.F. Pashada	Racholi
Total	**01-46-12**	**H.P. Govt.**	**D.P.F.**	**D.P.F. Pashada**	**Racholi**

Total **01-46-12 Hectares**

Area Details

Mauza/Mohal	Pashada
Patwar Circle	Racholi
Tehsil	Rampur Bushehar
District	Shimla
2.3. S.D.O. (Civil)	Rampur
D.F.O.	Rampur
Assistant Engineer I.P.H.	Rampur
Assistant Engineer P.W.D.	Rampur
Environment Engineer	Rampur
Mining Officer	Shimla

2.4. Distance of lease area from important places

Places	Distance (KM)
Shimla	136 Kms
Solan	183 Kms
Rampur	6.5 Kms
Kalka	227 Kms
Chandigarh	252 Kms

2.5. Approach of the Area

The applied for mining lease area is approachable by Rampur Jeori Road nearly 6.5 Km from Rampur.

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Infrastructure facilities are as detailed below

Nearest Railway station	Shimla Railway Station
Police Station	Rampur
Post Office	Rampur
Medical Facilities	Rampur (Khaneri)
Education Facility	Most of the nearby villages have primary schools and for higher education nearby city Rampur is approached.
Mode of transportation	Mineral will be transported by tippers/ trucks.

3. Physiographical aspect of the area

3.1. General

The Shimla district of Himachal Pradesh Lies between the latitudes and longitudes 30° 45' to 31° 44' North and 77° 00' to 78° 19' East, having its head quaters situated at Shimla. It is surrounded by Mandi and Kullu in the North, Kinnaur in the East, Uttarakhand in the South-East, Solan to the South-West and Sirmaur in the South. The elevation of the district ranges from 300 mt. (984ft) to 6000 mt. (19,685ft). the district has number of peaks such as Jakhu in Shimla Town, Siah near Chail, Churdhar near tehsil Chopal, Chansil in Rohroo tehsil, Hatto in Kumarsain tehsil and Shali in Sunni Tehsil. Mostly the terrain is rough. The prevalence of interlocking spurs, narrow and steep sided valleys with high peaks and thick forest of Deodar and Kail through the district are the general topographical features of the district. The Shoghi-Taradevi-Shimla- Narkanda Ridge forms a water devide between the Indus and Ganges River system. The Sutlej, Pabbar, Tongs and Giri are the principle rivers of the the district. The important glaciers of the districtare mainly confined to Pandra Bis area.

3.2. Altitude, General Terrain Description, with map and Contours Encompassing the Mine area

The applied for mining lease area lies on highly dissected structural hill about 665 meters away from the left bank of Sutluj River in the Forest land known as D.P.F (Dense Protected Forest). The area is a compact block of stone strata composed mainly of quartizite. The map of the mining lease area on 1:1000 scale with 2-meter

contour intervals is shown in plate No 2. The highest point of the lease area is 1398 meters above MSL and lowest point is 1226 meters above MSL.

3.3. & 3.4. Climate and Rainfall of the Area

The climate in Shimla district is predominantly cool during winters, and moderately warm during summer. Temperatures typical range from 4 degrees to 31 degrees centigrade over the course of year. The average temperature during summer is 19 degrees and 28 degrees centigrade, and in winter 1 degree and 10 degrees centigrade. Monthly precipitation varies from 15ml. in November to 434ml. in August. It is typically around 45ml. per month during winter and spring, 175ml. in June. The average total precipitation is 1575ml. which is less than other hill stations. Snowfall in this region, has taken place in the month of December. But it has been happening in January or early February every year for the last fifteen years.

Rainfall varies significantly with altitude of the area. The catchment area receives rainfall due to western disturbances that pass over the north -western part of the country during winter months. Rainfall in valleys is also received during the winter month. Rainy season generally starts from mid-July and extends up to mid-September.

During winter, the rains are scarce and extend in between 15th December to 15th February with snow fall (Occasional).

To have an idea about morphogenetic zone on the basis of rainfall it will not be ideal to classify it on the basis of the annual rainfall, because most of the precipitation of the year is received in the rainy season, hence, the precipitation of the monsoon season is deciding precipitation for fluvial denudation, bank erosion and other factors. Following graph shows the rainfall during the years 2012, 2013, 2014 and 2015

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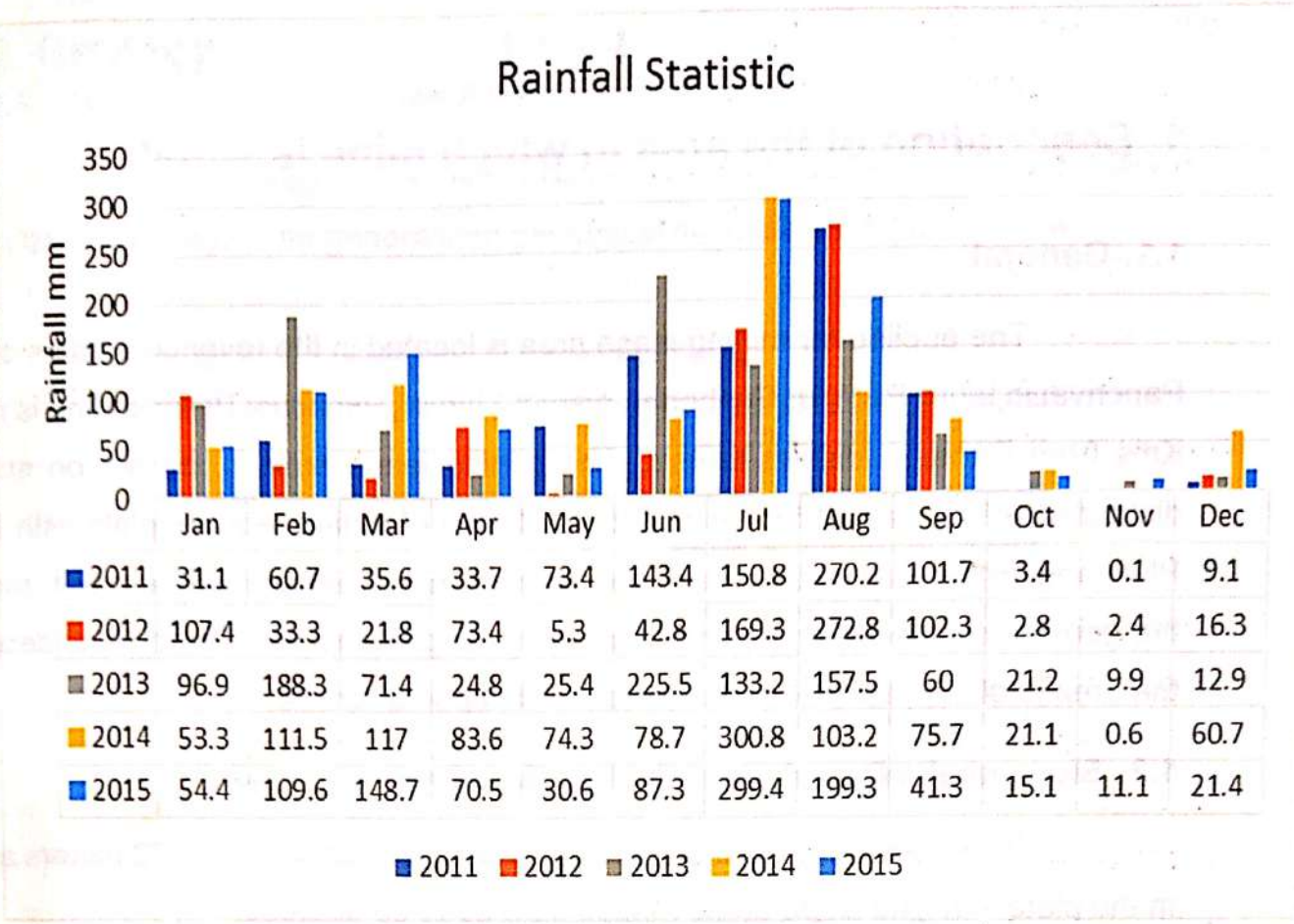

3.5. Any other Important Feature of the Area

The mining lease area is located on structurally dissected hill, up raised by the result of collision of Indian tectonic plate with Eurasian Plate and further neo-tectonic movements and consequential alluvial erosion, throughout the geological time, along the rivulets surrounding the hillock.

3.6. Description of the Area in which the lease is situated

The applied for mining lease area encompasses a physical area of **01-46-12 Hectare** away from the metalled road in the Forest land as shown in the map no. 1. The area is occupied by quartzite rock mass of Manikaran Formation of Rampur Group.

Part-I

1. Description of the area in which mine is situated

1.1. General

The applied for mining lease area is located in the revenue estates of Racholi Panchyat in tehsil Rampur Bushehar, district Shimla, Himachal Pradesh and is about 6.5 Kms from Rampur, district Shimla. The mining lease area is located on structurally dissected hill, up raised by the result of collision of Indian tectonic plate with Eurasian Plate and further neo-tectonic movements and consequential alluvial erosion, throughout the geological time, along the rivulets surrounding the hillock. The mineral deposited in the area is of Manikaran Formation called Rampur Quartzite.

1.2. Slope angle: Description of ridges & valleys

The area is slightly undulated and having an elevation of 172 meters as shown in the plate – 1. The slope angle ranges from 25 to 35 degrees.

1.3. Type of drainage in the area, if any

There is no perennial water drainage on the ground. Since the surface is undulated, only seasonal Nallas (rivulets) developed in the area.

1.4. Susceptibility of area to land slide, if any

Since the area proposed for mining will be reclaimed as forest land after plantation in very systematic and scientific manner as proposed, the stochasticity of landslide will be reduced to minimum which can be prevented by temporary barricades around the susceptible points or check dams as shown in the plate no. 2. and as explained in disaster management section of this document.

1.5. Springs in the area if any

No natural spring exists in the applied for mining lease area.

1.6. Any other details

NA

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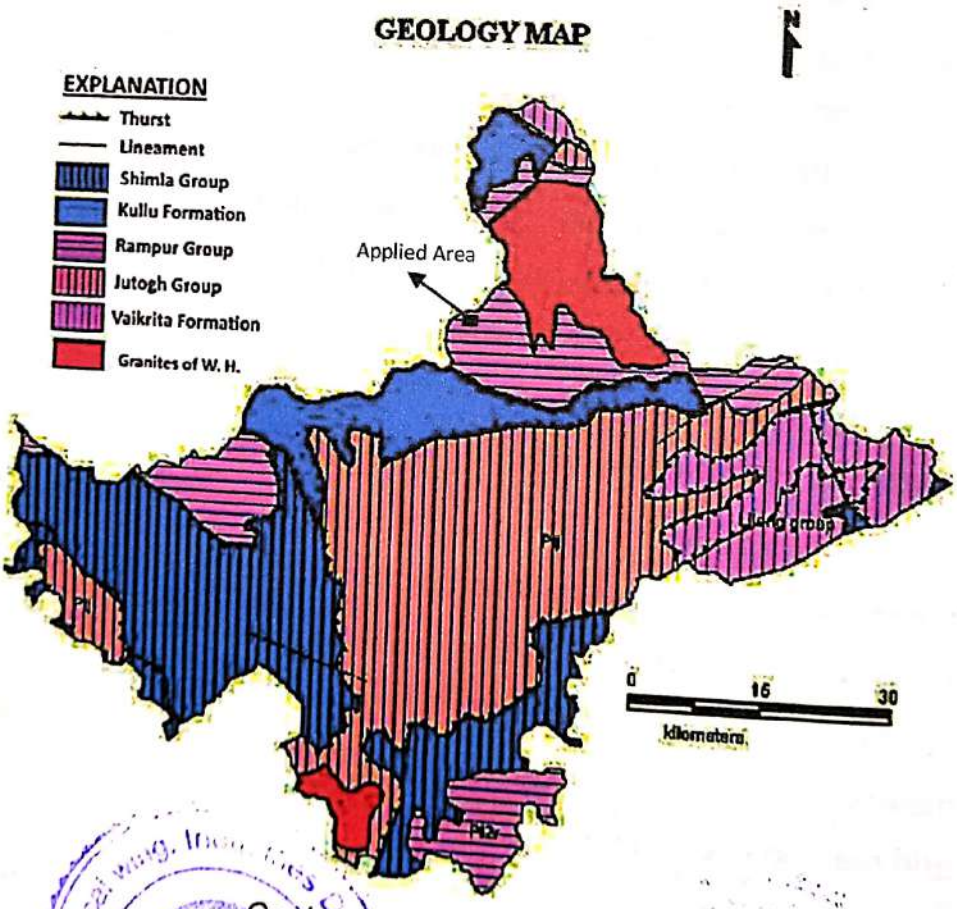
2. Geology

2.1. Regional Geology of the Area

The geology of the district ranges from pre-Cambrian to quaternary period in geological age. The generalized geological succession is given below: -

Era	*Period*	*Formation*	*Lithology*
Quaternary	Recent	Alluvium	Sand with pebble and clay, medium to coarse grained sand with pebble of sandstone and lenses of clay
Proterozoic	Neoproterozoic	Simla group	Siltstone, greywacke, sandstone, quartzite, conglomerate, Shale, slate, Phyllite, dolomite and meta-volcanics
		Kulu group	Schist, quartzite, banded gneiss, carbonaceous slate, limestone etc.
		Rampur group	Phyllite, schist, quartzite, dolomite, and basic flows
		Jutogh	Shale, phyllite, schist, staurolite quartzite, dolomite, Limestone, and amphibolite
	Mesoproterozoic	Vaikrita Group	Biotite schist with kyanite, gneiss and migmatites
	Palaeoproterozoic	Granite of Himalayas	Granites



Geology of Shimla District

2.2. Local Geology of the Area

The local geology of the area occupies the Rampur Group. The said group presents an association of metabasalts and metasediments dominated by clastics. It tectonically transgresses over the younger Larji Group of platformal type carbonate rocks along a major thrust. The Rampur group is divisible in three formations vis. Bhallan Formation, Banjar Formation and Manikaran Formation.

a) *Bhallan formation*

This Formation mainly composed of slates, greenish phyllites schists with interbeds of white flaggy quartzarenite.

b) *Banjar Formation*

This Formation mainly occupies matabasalts as green phyllites and interbeds of white massive quartzite and grey phyllites.

c) *Manikaran Formation*

It is top most unit of Rampur Group comprising dominantly of quartz arenites. It is very conspicuous litho-stratigraphic unit with grey and white massive quartzarenite having a great areal extent from Parvati Valley in the north to Rampur in the south and beyond a narrow zone towards Karcham in the east. The quartzarenite being a thick resistant rock type forms high ridges and peaks along escarpments and constitutes prominent topographical features in the eastern part of larji-Rampur window zone. The area is prominently marked with the out crop of grey and white quartzarenite.

2.3. Detail of Prospecting Work under taken in the Mining Area

The applied for mining lease area is surveyed by the RQP and a map encompassing the geology and elevation under a representative scale of 1:1000 is prepared for calculating the reserves by using the grid and cross-section method. Two numbers of cross- sections along A-A' and B-B' at an interval of 32 meters are formulated for calculating the reserves. To cross check the calculations grid method is also used.

2.4. Nature of the rocks and their Attitude

The deposit of the area belongs to quartzite of Manikaran Formation. The quartzite is off white and quite hard in nature. The rock show brown strains after weathering. The area with gentle slope angle is occupied with residual soil which is formed due to weathering of upper mantle of host rock. The following sequences have been observed in the area.

- Top Soil (very thin cover of residual soil)
- Quartzite (Massive and off white)

The description of formation found in the area are as under

Quartzite

This type of formation covers the major part of the hill in the area. It is greyish and off white and hard in nature.

STRUCTURE

The rocks exposed in the area show the presence of umber of discontinuities in the form of joints and fracture. The following sets of joints noticed in the area

Dip	Strike
1. Verticle	N 20 ° E – S 20° W.
2. Bedding Joints	

Attitude of Rocks

The following attitude of rocks have been observed

Strike	Dip
1. N 35° W- S35°E	35° due N55°E
2. N 30° W- S 30° E	35- due N60° E

ORIGIN AND CONTROL OF MINERALISATION

Quartzite is formed by metamorphism of sandstone under pressure and temperature.

EXPLORATION & METHOD OF RESERVE ESTIMATION

The entire lease area is prominently marked by the deposit of quartzite and geological method is used to explore the reserve in the area.

3. Reserves

3.1. Estimation of Geological Reserve

For estimating the reserve, the following Parameters are considered:

1. The reserves are calculated on the basis of established width, thickness and strike length/influence of the mineralized formation in the area where good outcrops are available such area are put under proved category.
2. The entire reserves of mineral within the area applied for lease are put under proved category up to 94 m i.e. 1324 m to 1230 m aMSL. Further, a depth of 10 meter is taken for calculation of possible reserves.
3. The average bulk density of mineral is considered 2.5 which is further multiplied by volume to arrive at the tonnage.
4. The percentagewise distribution of mineral is given below

Mineral	Percentage
Quartzite	**98**
Top soil	**2**

5. The Section wise reserves of mineral are summarized here below as: -

Cross Sectional Line	Cross-Sectional Area (Sqm)	Influence Length (M)	Average Bulk Density	Proved Reserves (MT)	possible Reserves (MT)
A-A'	3636	32	2.5	290880	338080
B-B'	7297	32	2.5	583760	643760
Total Reserves				**874640**	**981840**

Therefore, the total proved geological reserves are 874640 MT up to a datum level of 1316 meters above mean sea level. The cross-sectional area here calculated includes all types of major and minor formations encountered.

3.2. Constraining Considerations of Mining

The applied for mining lease area is bounded by the protected forest land, hence, a horizontal distance of 7.5 meters from the periphery of lease area has been left as no mining zone/safe zone. Further, only 00-73-75 Hectares area is considered for mining purpose because of topographical constraints.

3.3. Estimated Mineable Reserves of the Area

Bench wise mineable reserves of the mining area shown below in the table

MRL of Bench (M)	Surface Area (Sqm)	Total Reserves (MT)	Rock (MT)	Mine Waste (MT)	Top Soil (MT)
1390	196	1470	1397	44	29
1386	361	2708	2572	81	54
1382	558	4464	4241	134	89
1378	785	6869	6525	206	137
1374	875	7656	7273	230	153
1370	757	7192	6832	216	144
1366	836	7942	7545	238	159
1362	856	8346	7929	250	167
1358	913	8902	8457	267	178
1354	950	9263	8799	278	185
1350	935	9116	8660	273	182
1346	885	8629	8197	259	173
1342	880	8580	8151	257	172
1338	977	9526	9049	286	191
1334	977	9526	9049	286	191
1330	907	8843	8401	265	177
1326	780	7605	7225	228	152
1322	635	6191	5882	186	124
1318	412	4017	3816	121	80
Total		**136843**	**130001**	**4105**	**2737**

Therefore, total mineable reserves of the area are 136843 MT including the mine waste and top soil that would also be used for plantation purpose. *The mine planning has only proposed up to 1318 meters above mean sea level because of topographical constraints which encompasses an area of 00-73-75 hectares.*

3.4. Conceptual Scheme of Mine and Life of Mine

Four-meters height and six-meters width of benches have been conceptualized in the plates 3-7 for the mining work on the ground. The mineral will be used for manufacturing of angular grit in already established stone crusher unit in the name and style 'M/s Bhushahar Laghu Udyog" then sold in the open market.

The life of mine so calculated cannot be more than 5 years or depends upon the demand of mineral for the established stone crusher unit and market.

4. Mine Development and Plan of Progressive Mine

4.1. Brief Description

The allotted area is compact block of mineral. The area has not been worked in the past as shown in the maps. It is proposed to undertake systematic and scientific mining for excavation of available stone during the lease period. The highest level in the proposed area is 1398 m aMSL and the lowest is 1226 m aMSL.

It is proposed to adopt semi-mechanical mining method for exploitation of the mineral. Shovel, rock hammer and scrappers shall also be required to dislodge the mineral. The mining method involves collection of mineral with JCB and haulage with dumpers to the crushing site.

4.2. Mine Development

Following parameters are considered

1. The bench height and width is taken 4 m X 6 m.
2. The working will be semi-mechanical with JCBs and rock hammers.
3. Loading of the mineral will be done directly to the tippers along the hill slope by loading chute.
4. The average specific gravity of the mineral calculated is 2.5 as a tonnage factor.
5. Plantation will be done in the area as shown in the plate -2.
6. In order to prevent outward encroachment of area a safe zone of 7.5 meters has been left.
7. The mine working of five years as shown in the maps in the center of lease area is thoroughly calculated and no further benching is proposed in that area.

4.3. Year-Wise Production

4.3.1. Working of First Year

- Development of Benches at RL 1390, 1386, 1382, 1378, 1374 and 1378 m aMSL;
    - 28840 MT of stone will be excavated by the development of these benches.
    - 1518 MT of mine waste and top soil will be generated by developing these benches and this material will be dumped in the sites as shown

in map-2.

- Plantation will be done in the areas as shown in plate no. 2.
- Total minable surface area available in these benches is 3532 sq.m.

The bench wise production is shown below in the table and graph:

MRL of Bench (M)	Surface Area (Sqm)	Total Reserves (MT)	Rock (MT)	Mine Waste (MT)	Top Soil (MT)
1390	196	1470	1397	44	29
1386	361	2708	2572	81	54
1382	558	4464	4241	134	89
1378	785	6869	6525	206	137
1374	875	7656	7273	230	153
1370	757	7192	6832	216	144
Total	**3532**	**30358**	**28840**	**911**	**607**

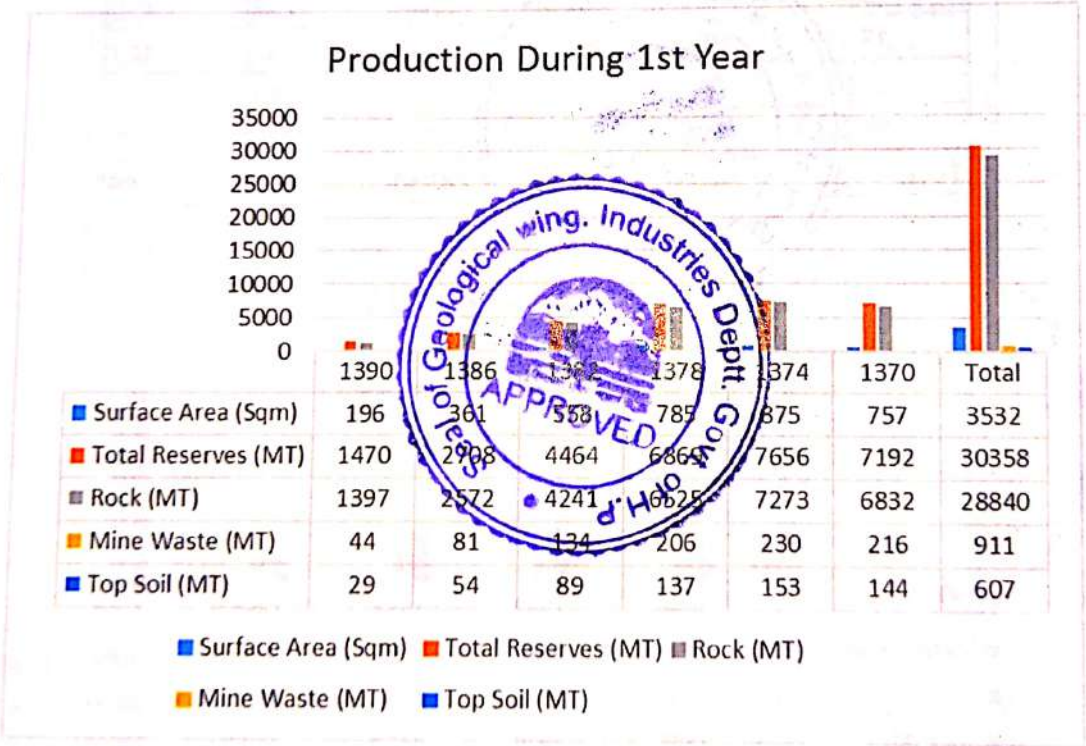


Figure 1 Production during first year

4.3.2. Working of Second year

- Development of Benches at RL 1366, 1362, 1358 and half 1354 m aMSL;
  - 29821 MT of stone will be excavated from the development of this bench.

- 1491 MT of mine waste and top soil will be generated by developing this bench which will be dumped in the appropriate sites as shown in plate 2.
- Plantation will be done in the areas as shown in plate no. 2.
- Total minable area available from these benches is 3080 sq.m.

The bench wise production during the 2nd year is shown in the following table and graph:

MRL of Bench (M)	Surface Area (Sqm)	Total Reserves (MT)	Rock (MT)	Mine Waste (MT)	Top Soil (MT)
1366	836	7942	7545	238	159
1362	856	8346	7929	250	167
1358	913	8902	8457	267	178
1354	475	4631	4400	139	93
Total	**3080**	**29821**	**28330**	**895**	**596**

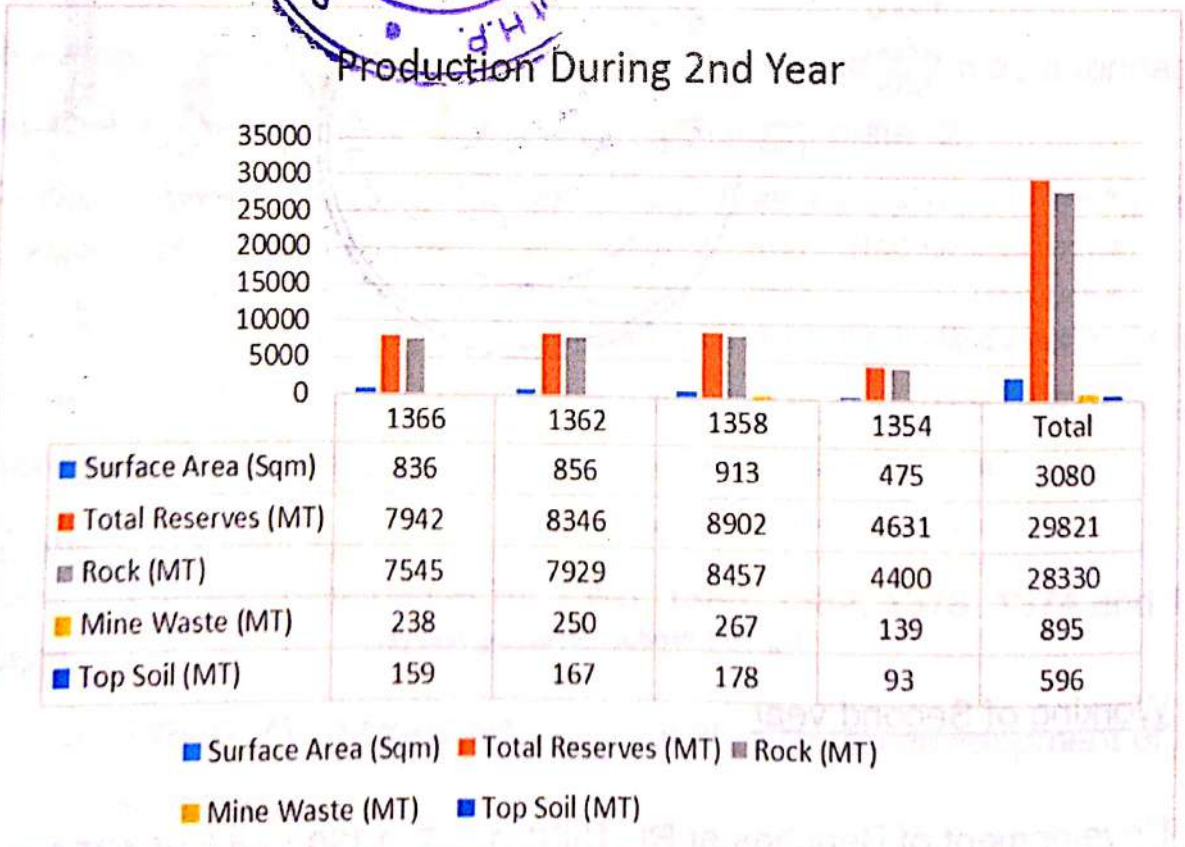


Figure 3 Production during Second year

4.3.3. Working of Third Year

- Development of Benches at RL 1354 (Balance), 1350 and 1346 m aMSL;
  - 21257 MT of stone will be excavated from the development of these benches.
  - 1119 MT of mine waste and top soil will be generated by developing these benches which will be dumped in the appropriate sites as shown in plate 2.
  - Plantation will be done in the areas as shown in plate no. 2.
  - Total minable area available from these benches is 2295 sq.m.

The bench wise production during the 3rd year is shown in the following table and graph:

MRL of Bench (M)	Surface Area (Sqm)	Total Reserves (MT)	Rock (MT)	Mine Waste (MT)	Top Soil (MT)
1354	475	4631	4400	139	93
1350	935	9116	8660	273	182
1346	885	8629	8197	259	173
Total	**2295**	**22376**	**21257**	**671**	**448**

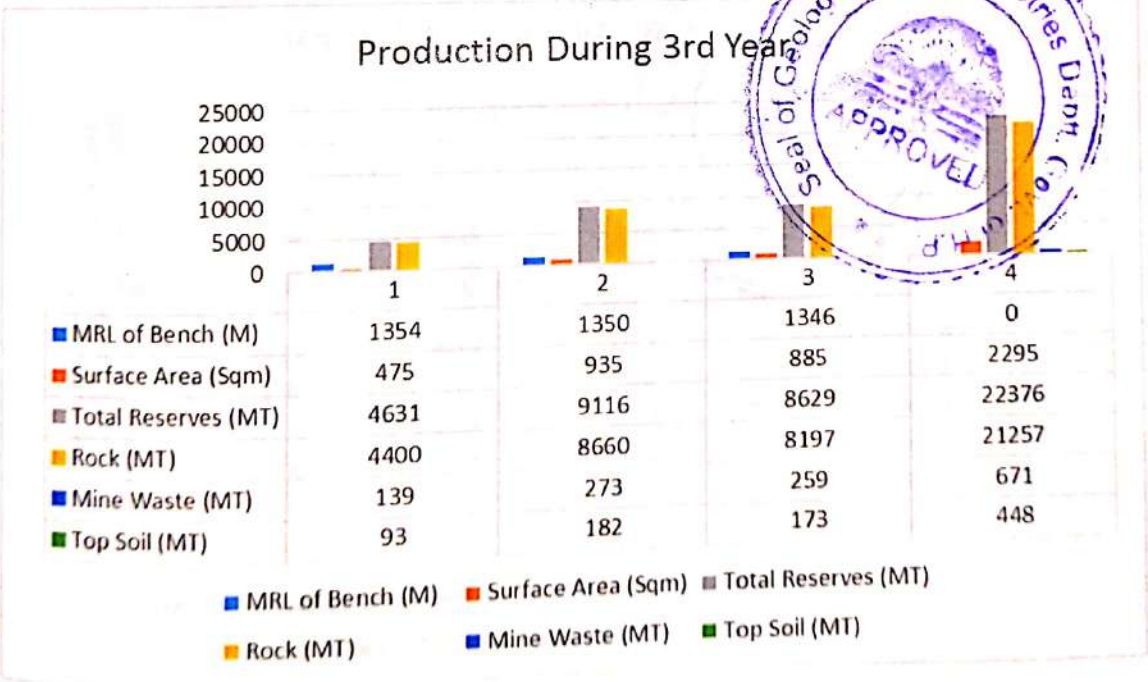


Figure 3 Production during Third year

4.3.4. Working of Fourth Year

- Development of Benches at RL 1342, 1338 and 1334 m aMSL;
  - 26257 MT of stone will be excavated from the development of these benches.
  - 1382 MT of mine waste and top soil will be generated by developing these benches which will be dumped in the appropriate sites as shown in plate 2.
  - Plantation will be done in the areas as shown in plate no. 2.
  - Total minable area available from these benches is 2834 sq.m.

The bench wise production during the 4th year is shown in the following table and graph:

MRL of Bench (M)	Surface Area (Sqm)	Total Reserves (MT)	Rock (MT)	Mine Waste (MT)	Top Soil (MT)
1342	880	8580	8151	257	172
1338	977	9526	9049	286	191
1334	977	9526	9049	286	191
Total	2834	27632	26250	829	553

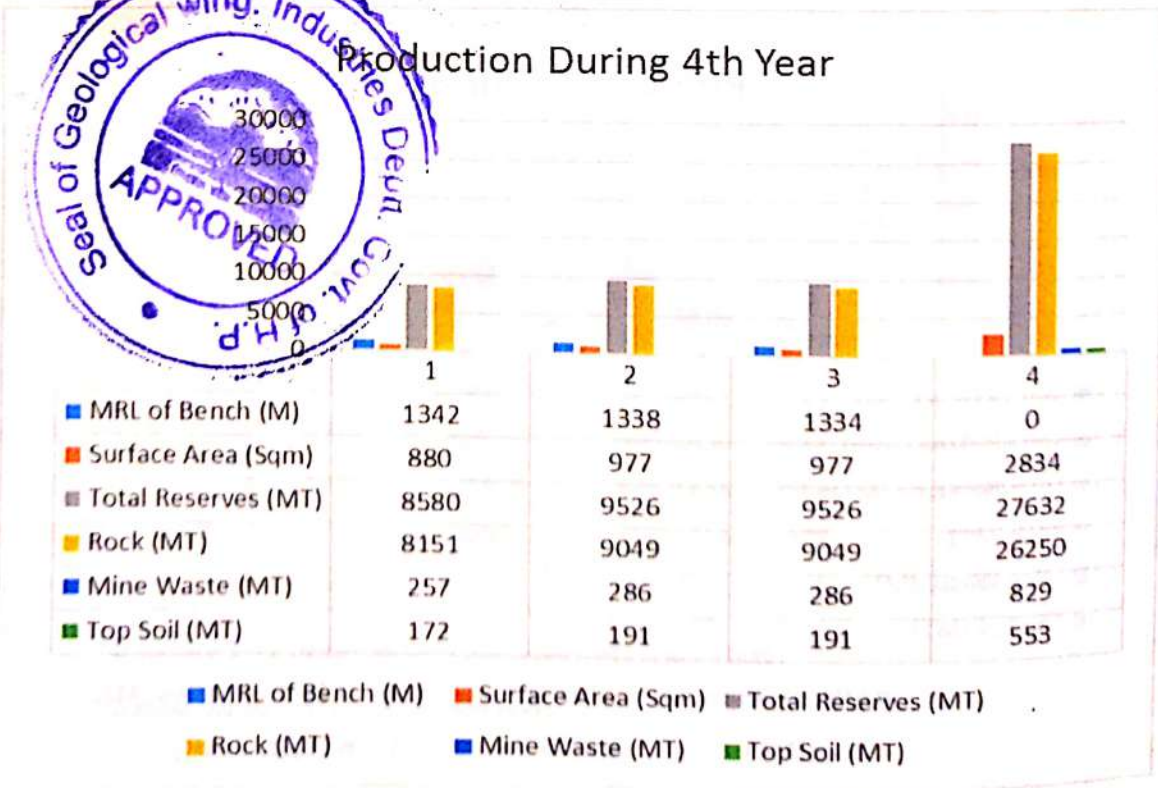


Figure 3 Production during Fourth year

4.3.5. Working of Fifth Year

- Development of Benches at RL 1328 (Balance), 1322 and 1316 m aMSL;
  - 38898 MT of stone will be excavated from the development of these benches.
  - 2047 MT of mine waste and top soil will be generated by developing these benches which will be dumped in the appropriate sites as shown in plate 2.
  - Plantation will be done in the areas as shown in plate no. 2.
  - Total minable area available from these benches is 3033 sq.m.

The bench wise production during the 5th year is shown in the following table and graph:

MRL of Bench (M)	Surface Area (Sqm)	Total Reserves (MT)	Rock (MT)	Mine Waste (MT)	Top Soil (MT)
1330	907	8843	8401	265	177
1326	780	7605	7225	228	152
1322	635	6191	5882	186	124
1318	412	4017	3816	121	80
Total	**2734**	**26657**	**25324**	**800**	**533**

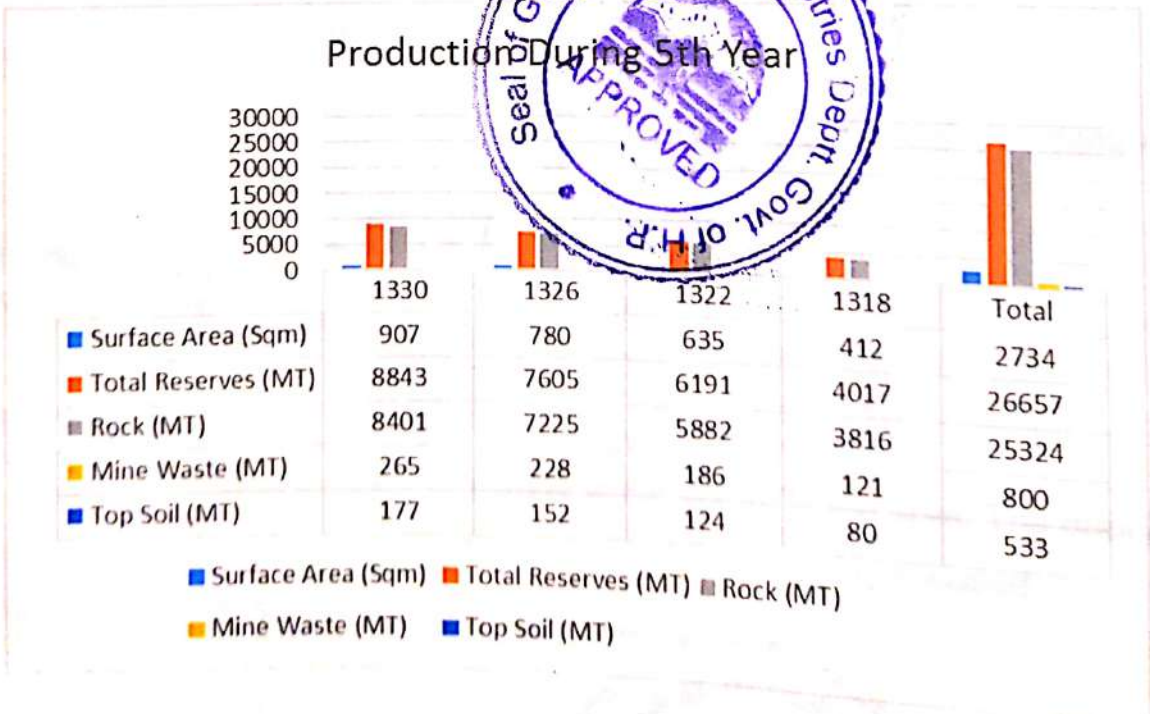


Figure 3 Production during Fourth year

4.3.6. Five-year Production

During the five years of working in the mine as proposed 130000 MT of stone will be exploited excluding the 4105 Mt of mine waste and 2737 MT of top soil. The mine waste and top soil will be dumped in the appropriate sites at shown in the plate no. 2.

Year	Total Reserves (MT)	Rock (MT)	Mine Waste (MT)	Top Soil (MT)
1st Year	30358	28840	911	607
2nd Year	22376	21257	671	448
3rd Year	29821	28330	895	596
4th Year	27632	26250	829	553
5th Year	26657	25324	800	533
Total	**136843**	**130001**	**4105**	**2737**

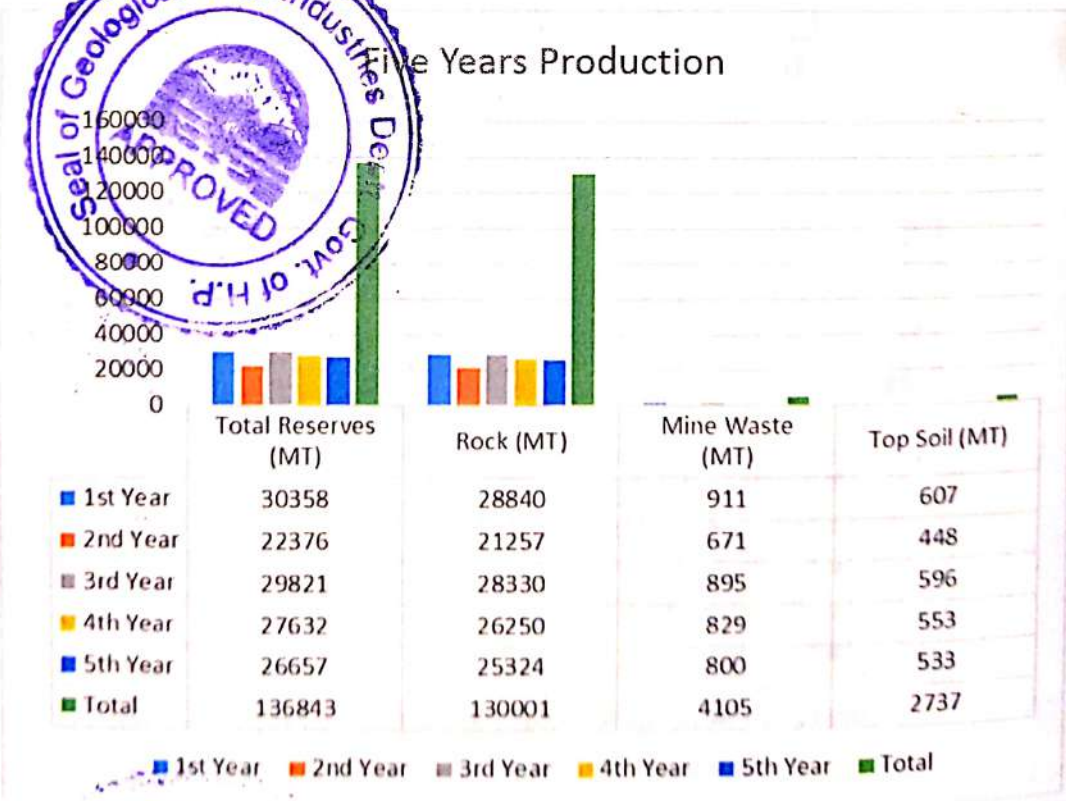


Figure 3 Five Years Production

1.1. Proposed Rate of Production and Life of Mine

The proposed rate of production is 26000 MT (average) per year or as explained in the point 4.3. The loading of the mineral will be done directly to the tipper along the hill slope by the loading chutes. Taking into consideration, 300 working days in the mine, 86 MT stone will be produced per day for which 9-10 tippers would be used to carry the mineral to the filling site.

At this rate of production, the proposed area can serve mineral only for 5 years or the life of mine depends upon the demand of mineral in the market.

1.2. Balance material available after five years

NA

1.3. Mode of Working

Mode of working will be semi-mechanical as well as manual using hand Shovel, Trowel, scrapping tools, pruning, digging tools and rock hammers. No explosive would be used for exploitation of mineral in the mine. Safety tools to the laborers would be provided.

1.4. Extent of Mechanization Used

Hand Shovel, crow bar, rock breaker, trowel, scraping tools, pruning and digging tools would be used along with JCB.

1.5. Blasting

No blasting is required.

1.6. Mine Drainage

There is no natural spring or natural water sprout in the area. The drainage is required only for rain water, for that a garland drainage is proposed.

1.7. Waste Management

The year wise detail of mine waste is as follows: -

Year	Mine Waste (MT)	Top Soil (MT)
1st Year	911	607
2nd Year	671	448
3rd Year	895	596
4th Year	829	553
5th Year	800	533
Total	4105	2737

The total of 6842 MT of mine waste will be generated during the five year of mine work. This mine waste along with top soil will be used to establish green belt in the lease area in order to reclaim the land as forest land.

1.8. End use of Mineral

The mineral will be used for making angular grit of various sizes in the already established stone crusher unit in the name and style 'M/S Bhushahar Laghu Udyog' and after making the angular grit the mineral will be sold in the open market.

1.9. Detail of Road Transportation Density

The lease is located in the revenue estates of Racholi Panchyat, tehsil Rampur Bushehar, district Shimla, Himachal Pradesh and the crusher site is at the khasra number nearby (about 25 meters) to lease area. The highway from the lease area i.e. 107 meters away and is in good condition enough to bear the additional truck/transport created by operation in the mine. As per proposed rate of production i.e. 26000 MT (average) per year or as explained in the point 4.3. The loading of the mineral will be done directly to the tipper along the hill slope by the loading chutes. Taking into consideration, 300 working days in the mine, 86 MT stone will be produced per day for which 9-10 tippers would be used to carry the mineral to the filling site.

Part-II

Environment Management

1. Base Line Data

1.1. Detail of Population Distribution

Area covered under mining plan is uninhabited. The nearest village habitation (in Khaneri) is located 2000 meters away from the area under reference. The population of the nearby villages is as detailed below:

Village Name	No. of Houses	Total Population	Total Males	Total Females
D.P. F. Phanoti	48	196	106	90
Khaneri	543	1892	995	897
Racholi	426	1414	765	649
Kandi	29	129	71	58
Jakhari	56	236	122	114
Khaneri	543	1892	995	897

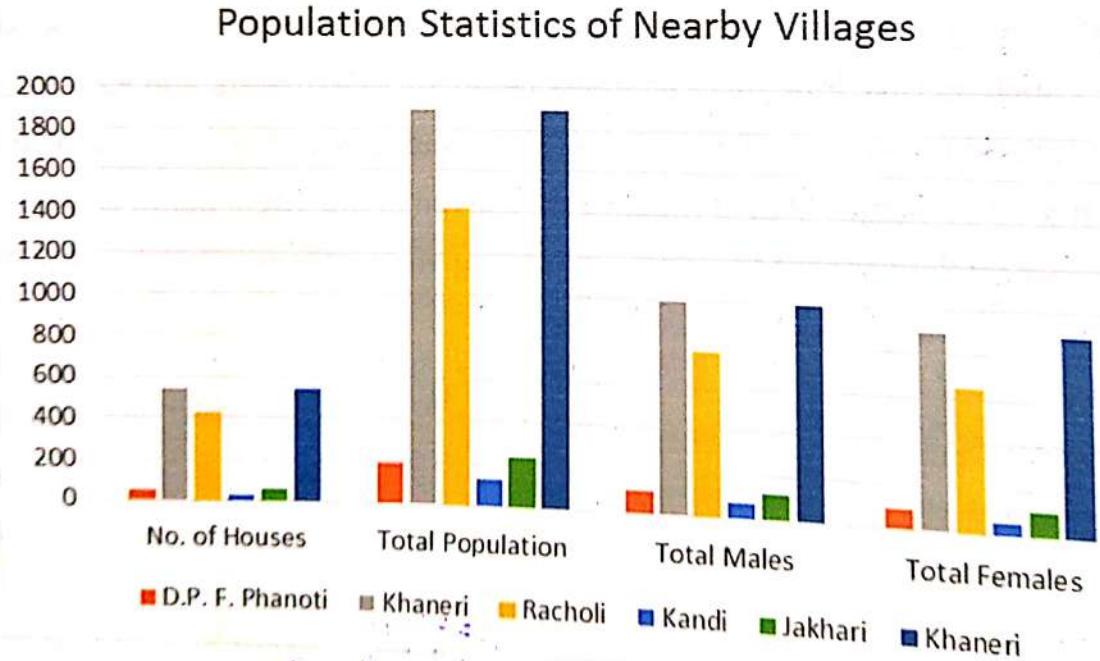


Figure 8 Population distribution in the Area

1.2. Socio-Economy of Villages/Population

The people of shimla mainly earn their livelihood through agriculture and horticulture. Literacy rate for the district is more than 80 percent. While the literacy rate for males is 87.72 per cent, it is 70.68 per cent for females. Figures for literacy rate are much higher as compared to state literacy rates. High literacy rates, especially for women, affect the status of health and utilization of health services. Generally, the local people are based on agriculture, horticulture income and cattle raring. There is, hardly any job opportunities, when there is no agriculture and horticulture work. The people are poor and always in search of work at village level. People do not want to go for search of work at a distance place as their basic agriculture work shall suffer.

1.3. Land Use Details with 5 KM Radius Map

Shimla district is spread over deep, small valleys and high elevations and cultivation is possible only in small terraces of holdings in high hills or in the terraces of streams or rivulets. However, in deep valleys though very few in numbers, the cultivation is spread over in a vast area. Sloppy areas of high altitude are most suitable for horticulture purposes especially for growing of delicious varieties of apples and other stone fruits such as almonds, walnut, apricots etc. most of the land is either under shrubs, forest or with other trees such as Chil, Pine trees up to the height of 1500 meters and Kail, Deodar, rai, Ban, Rhododendron etc. on high altitude. The land use pattern of adjoining area of Rampur studied by Sanjay Vidyut Nigam Ltd. is given in the Table below and it is evident from this table that majority of the land in the study area is forest. The classified land use pattern of the adjoining area is shown below: -

Sr. No.	Class	% age of total Area
1	Water	0.68
2	Barren	19.14
3	Agriculture	12.73
4	Degraded Vegetation	12.98

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5	Medium vegetation	5.47
6	Dense vegetation	14.10
7	Scrubs	17.42
8	River Bed	0.30
9	Settlement	6.30
10	Miscellaneous	10.89
	Total	100

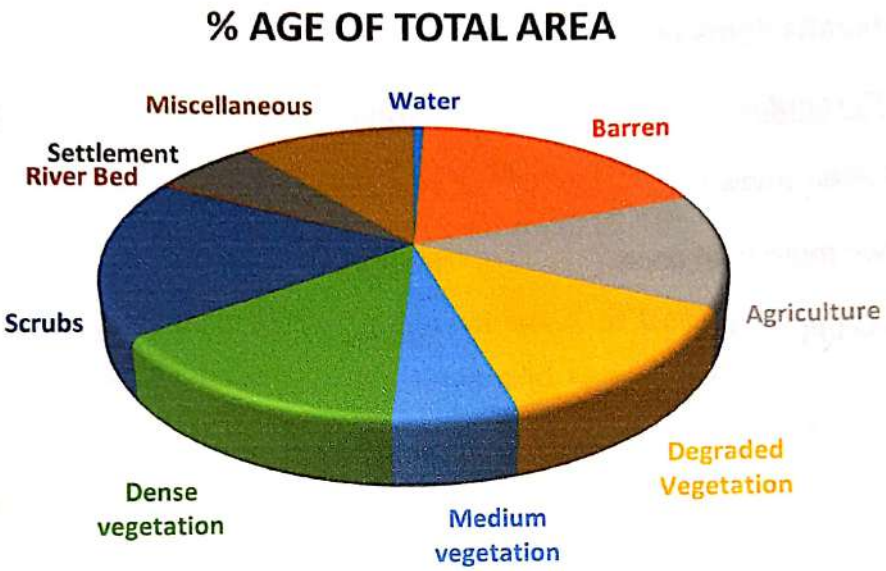

Figure 10 Land use and Land Cover (5 KM Radius)

1.4. Agriculture

Shimla district is a totally hilly district of Himachal Pradesh. This district became part of Himachal Pradesh on 1st November, 1966 after the reorganization of Punjab state. It came into its present form on 1st September, 1972 when district Mahasu and Shimla were reorganized. The head quarter of this district is at Shimla which once used to be the summer capital of Britishers. As per population census of 2011, the total population of this hilly district is 8,14,010. The people of this district are honest and peace loving.

Agriculture and horticulture are the prime economic activities of this district. Most of the area under agriculture in the district is rain fed. The productivity for most of the agriculture crops is low because of the small size of land holdings and uneven landscape.

However, during the last few years, poly houses are being set up in the rural areas growing vegetables and flowers which have increased the economic condition of the inhabitants of this district to some extent. Horticulture and off-season vegetables has proved to be a major source of cash crop in the district. The district has given a pride place to the state of Himachal Pradesh in the production of apples as a result of which the state is known as the Apple State of India. Tourism industry has also developed substantially in the district because of the topography and scenic beauty it contains. Places like Shimla, Kufri, Narkanda, Naldehra, Fagu, Tatapani etc. attract a large number of tourists to this district creating huge market for developing hotels, restaurants, cyber café, handicrafts items etc. in the district.

Particular	***Unit***	***Statistic***
Net Area Shown	Hectares	65944
Area Shown more than once	Hectares	20524
Total Cropped Area	Hectares	86568

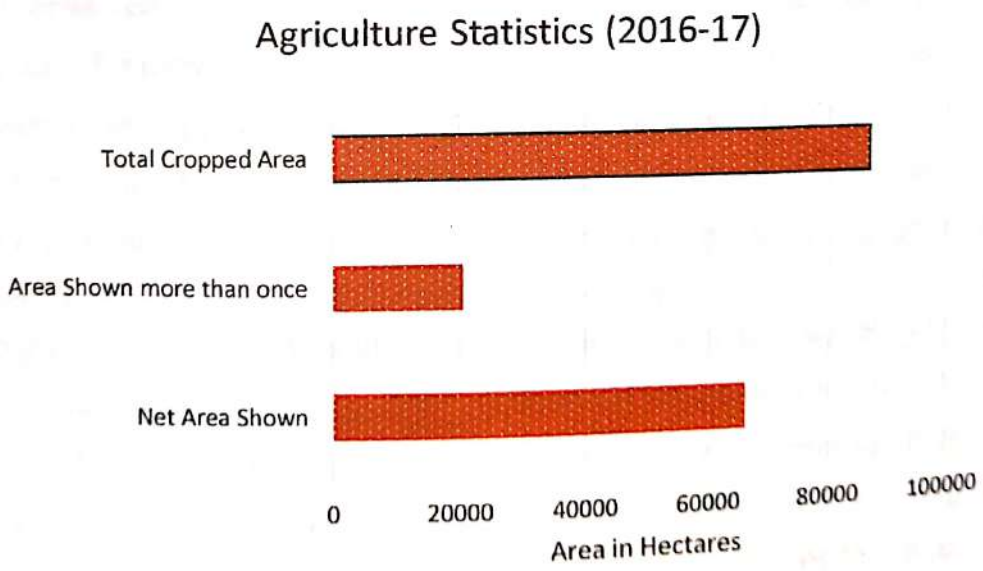

Figure 11 Agriculture Statistics

1.5. Horticulture

Horticulture plays an important role in the economic life and prosperity of the people of Shimla. During the last three decades, Shimla has made tremendous progress in the field of Horticulture. Greater emphasis is being laid on this sector because the geographical features and climatic conditions prevailing in the district are ideally suited for fruit farming.

Among all the fruits grown in Shimla, apples are most widely grown and represent commercially the most important fruit crop. The cultivated apple area is 38781 hectares. The annual apple production usually lies between 482388 metric tons (2015-16).

Apart from apples other varieties of fruits grown in Shimla are plum, peach, apricot, pomegranates and kiwi as well as nuts, especially almonds. These fruit plantations cover an area of 6817 hectares and the annual production is approximately 8839 metric tons.

The following table shows the plantation area of different fruits in Shimla district as well as their harvesting season.

Fruit	Area (ha)	Season
Apple (Standard)	38781	Jul - Oct
Plum	614	Jul - Oct
Straberry	1	Jun
Pears	329	Jul - Aug
Apricot	731	Jun - Jul
Kiwi	16	Jul
Almonds	1483	Jul - Aug
Pear	1616	Jun to Au

1.6. Animal Husbandry

Economy of the district is predominantly agrarian but the role of Animal Husbandry is equally important as the farmers have to keep the cattle for the purpose of ploughing manure for maintaining fertility of the fields and to meet the daily need of milk of their family. Livestock rearing forms the backbone of the agriculturists of this

Major population of the District depends wholly on Agriculture, horticulture and animal husbandry. The Department Animal husbandry is putting their best efforts to improve the potential of livestock and poultry in the district through treatment, management feeding and artificial insemination, and distribution of improved breeds. To provide the farmers with the veterinary facilities the department has established following veterinary centers:

- Animal Husbandry :-

State Level veterinary Hospital	01
Sub- Division veterinary Hopitals	05
veterinary Hospital	40
veterinary Dispensaries	253
veterinary Disp.(Mukhiya Mantri Arogya PAshudhan Yozna)	99
Poultry Farm	01

To improve the existing breeds of cattle particularly buffaloes 40 veterinary institutions provide artificial insemination services. Scarcity of fodder in the District is the main hindrance of the farmers for rearing the animals. To solve this problem the farmer has been educated to utilize the edges of their fields for fodder to increase the production of fodder oats, maize, and barseem seeds have been distributed free of cost to the respective seasons.

As per the livestock Census Himachal Pradesh during 2012 the live stock is given below:

Table Showing livestock in in district Shimla

- Cattle Population (As per cattle census :-

Cows	307187
Buffaloes	16292
Yak	9
Mithun	3
Sheep	98376
Goats	90223
Horses & ponies	2050
Mules	3963
Camels	0
Donkeys	904
Pigs	544
Total Livestock	527551

Figure 2 Cattle Statistics in the district

1.7. Fishery

The fish production in Shimla district is as follows:

District	Inland Fish (MT)	Total Production (MT)	Value for Fish Produced (Rs. In Lakhs)
Shimla	238.71	238.71	182.72

Following species of Fish are mainly found in Shimla district

- Trout (Salmonids)
- Singhara
- Mahseer
- Malhee
- Soal

The Trout farm Dhambari in Rohru tehsil of Shimla district with capacity of 5 tons is one of the farm which supply the trout to the main city.

1.8. Flora and Fauna of the Area

Because of its complex geography and its great variations in altitude, Shimla is home to an enormous range of species, which span the subtropical to the alpine. The common trees in the Shimla hills belong to the conifer species (deodar, pine, spruce, fir). Several species of medicinal plants like Hath Panja (*Dactylorhiza hatageria*) and Brahma Kamal (*Saussurea obvallata*) grow luxuriously in the valley. The valley is known for the presence of the majestic Snow-leopard, the Himalayan brown bear and the Himalayan Tahr. The Western Tragopan (the state bird of Himachal Pradesh) and the Monal pheasant are the prominent bird's species found in the region.

The **Chail Santuary, Chuddhar Santuary and Majathal Santuary** are the repository of the great biodiversity of the region.

Species/ Botanical Name	Common Name	Elevation Range (m)
Abies spectabilis (D.Don.) Mirbel	Himalayan high-altitude fir	3,000-4,000
Abies pindrow Royle	Silver fir/ Tosh	2,500-3,200
Acer acuminatum Wall. ex D.Don.	Maple	2,500-3,200
Acer caesium Wall. ex Brandis	Maple	2,200-3,000
Aesculus indica Kk. f. & Th.	Horse chestnut/ Khnor	1,800-3,000
Alnus nepalensis D. Don.	Alder	1,500-2,000
Betula utilis D. Don.	Birch/ Bhoj patra	3,000-4,000
Buxus wallichiana Baillon	Boxwood/ Shamshad	2,500-3,000
Cedrus deodara G. Don.	Deodar/ Cedar	2,000-3,000
Cornus capitata Wall.	Dogwood	1,800-2,800
Corylus jacquemontii Decne.	Hazelnut/ Bhuti badam	2,500-3,200
Cupressus torulosa D.Don.	Pencil cedar	1,800-3,000
Ilex dipyrena Wall.	Holly/ Kaluchha	2,000-2,800

Shrubs

Species	Altitude (m)
Aconitum heterophyllum Wall. ex Royle	3,300-4,200
Atropa acuminata Royle	1,500-3,000
Dactylorhiza hatageria (D. Don.) Soo	2,800-4,000
Jurinea macrocephala (DC.) Benth.	3,000-4,300
Meconopsis aculeata Royle	3000-4,300
Picrorhiza kurroa Royle ex Benth.	3,200-4,200
Saussurea gossipiphora D.Don	3,800-4,500
Angelica glauca Edgew.	2,000-2,800
Arnebia benthami (Wall. ex G. Don) I. M. Johnston	3,300-4,000

Arnebia euchroma (Royle) Johnston	3,500-4,400
Berberis aristata DC.	1,200-1,500
Betula utilis D.Don.	3,300-4,000
Dioscorea deltoidea Wall.	2,000-3,000
Fritillaria roylei Hook.	2,800-4,000
Malaxis muscifera Lind.	2,000-3,000
Nardostachys grandiflora DC.	3,600-4,300
Paris polyphylla Smith	2,000-3,000
Podophyllum hexandrum Royle	2,400-4,000
Polygonatum cirrhifolium Royle	1,500-3,000
Polygonatum multiflorum (L.) All	2,500-3,500
Polygonatum verticillatum (L.) All.	1,500-3,300
Saussurea obvallata (DC.) Edgew.	3,600-4,500
Taxus wallichiana Zucc.	2,100-3,300
Zanthoxylum armatum DC.	1,200-1,800
Aconitum violaceum Jacq. ex Stapf	3,300-4,200
Ephedra gerardiana Wall. ex Stapf.	3,300-4,500
Hypericum perforatum L.	2,000-3,000
Juniperus communis L.	2,800-4,000
Rheum australe D. Don	3,000-4,200
Rheum webbianum Royle	3,000-4,000
Roscoea alpine Royle	2,400-3,500
Roscoea procera Wall. ex Bak.	2,000-3,000
Selinum connifolium	2,500-3,500
Selinum vaginatum Clarke	2,500-3,500
Skimmia laureola Sieb. & Zucc.	2,200-3,200
Symplocos paniculata (Thumb.) Miq.	1,500-2,500

- **Fauna**

Common Name	Scientific Name
Asiatic Black Bear	*Ursus thibetanus*
Blue Sheep	*Pseudois nayaur*
Common Leopard	*Panthera pardus*
Himalayan Brown Bear	*Ursus arctos*
Himalayan Ghoral	*Naemorhedus goral*
Himalayan Musk Deer	*Moschus chrysogaster*
Himalayan Tahr	*Hemitragus jemlahicus*
Red Fox	*Vulpes vulpes*
Serow	*Nemorhaedus sumtraensis*
Snow Leopard	*Uncia uncia*

- **Birds**

Little Forktail, Tirthan Valley

Crested Kingfisher, Tirthan Valley (2,700 m)

Blue Whistling Thrush, Sainj 2,000 m

Western Tragopan Male

Monal Male

Koklash Pheasant (Male)

White-crested Kaleej

- **Insects**

Blue Pansy, Junonia oenone

The Paris Peacock, Papilio paris

1.9. Climate

As described in point number 3.3.

2. Environment Management Plan

2.1. Impact on Air

Since no blasting is introduced for the mining purpose in the area, there would not be any suspended particles of mineral to cause air pollution. However, small number of SPs would be there which can be minimized by sprinkling water.

2.2. Impact on water

- **Surface and Ground water**

There is no perennial drainage system in the mining area and while planning due care for drainage has been given. No significant effect on surface water regime is expected. The water table in this area occurs at 100-150 m below general surface. Hence there will be no effect on the hydrology of the area as the working will not reach the water table. However, there may be some effects on the seasonal nallas, which drain the precipitated water flowing from the area.

Further, it is proposed to make necessary arrangements for developing rainwater harvesting of the mine water during rainy season. It is proposed to develop necessary bores and pits for this purpose. Thus, rain water harvesting will ameliorate the ground water of the area.

- **Water Quality**

There are no water courses in the area except land undulations. The precipitated water also flows along the depressions formed in between the outcrop of host bed.

- **Impact on Noise Level**

Since no blasting is introduced for the mining purpose in the area, there would not be any noise pollution.

2.3. Waste Disposal Arrangements

The year wise detail of mine waste is as follows: -

Year	Mine Waste (MT)	Top Soil (MT)
1st Year	1196	798
2nd Year	1235	823
3rd Year	1257	838
4th Year	1253	835
5th Year	1228	819
Total	6169	4113

The total of 6169 MT of mine waste will be generated during the five years of mine work. This mine waste along with top soil will be used to establish green belt in the lease area in order to reclaim the land as forest land.

2.4. Scio-economic Benefits

- **DEMOGRAPHIC STRUCTURE**

  The demographic detail of nearby villages is given below

Village Name	No. of Houses	Total Population	Total Males	Total Females
D.P. F. Phanoti	48	196	106	90
Khaneri	543	1892	995	897
Racholi	426	1414	765	649
Kandi	29	129	71	58
Jakhari	56	236	122	114
Khaneri	543	1892	995	897

Due to mining activities, significant changes are expected in the daily life of the inhabitants as mining activities will open new avenues of employment generation for local people. The favorable changes are expected in the terms of more employment

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opportunities, better Infrastructure facilities like power linkage, medical facilities, water supply etc.

The project will provide job opportunity for 10-12 persons including 4-5 persons engaged in transport.

2.5. Transportation of Mineral

As per proposed rate of production i.e. 26000 MT (average) per year or as explained in the point 4.3. The loading of the mineral will be done directly to the tipper along the hill slope by the loading chutes. Taking into consideration, 300 working days in the mine, 86 MT stone will be produced per day for which 9-10 tippers would be used to carry the mineral to the filling site.

PART-III

1. PROGRESSIVE MINE CLOSURE PLAN/ RECLAMATION PLAN

1.1. Mine Waste Disposal

a) Year wise generation of mine waste

The year wise detail of mine waste is as follows: -

Year	Mine Waste (MT)	Top Soil (MT)
1st Year	911	607
2nd Year	671	448
3rd Year	895	596
4th Year	829	553
5th Year	800	533
Total	4105	2737

b) Year wise disposal of mine waste

The total of 4105 MT of mine waste will be generated during the five year of mine work. This mine waste along with top soil 2737 MT will be used to establish green belt in the lease area in order to reclaim the land as forest land.

c) Cost of Mine Waste Disposal

The material shall be brought to the dump site as proposed in plate 2, manually and it shall add little addition to the mining cost around Rs. 20/- per tonne of waste. The total waste production in 5 years is 10282 Metric tons. The total cost of dumping shall be around Rs 205640 in 5 years.

d) Top Soil Arrangement

The year wise detail of mine waste is as follows: -

Year	Top Soil (MT)
1st Year	607
2nd Year	448
3rd Year	596
4th Year	553
5th Year	533
Total	2737

The top soil admixed with mine waste will be used for the plantation. This will add additional mine cost of 20 rs per ton.

1.2. Preventive Retaining Structures

Since the area proposed for mining will be reclaimed into forest land (after plantation) in very systematic and scientific manner as proposed, the stochasticity of landslide will be reduced to minimum which can be prevented by temporary barricades around the susceptible points during mining work or by the check dams as shown in plate no.2.

1.2. Plantation Work

The afforestation programme is the most important programme to improve the environment and ecological balance of the area. Grasses and bushes which have fibrous roots are at the first instance grown which give the binding property to the soil. After growing grasses and bushes, other tree species in consultation with the experts will be raised, based on the characteristics of soil, topography and climatic conditions. The year wise area proposed for plantation is as under: -

Sr No	Year	Area in Sq Mts.	No Of Plants
1	1st Year	400	40
2	2nd year	400	40
3	3rd year	400	40
4	4th Year	400	40
5	5th Year	400	40
	Total	2000	200

a) **Year Wise Area to be covered under forestation**

400 Sqm (1st Year) + **400 Sqm** (2nd year) + **400 Sqm** (3rd year) + **400 Sqm** (4th Year)+ **400 Sqm** (5th Year)= **2000 Sqm**

b) **Year wise No. of Trees to be Planted**

40 (1st Year) + **40** (2nd year) + **40** (3rd year) + **40** (4th Year)+ **40** (5th Year)= **200 Plants**

c) **Year wise Cost of Plantation**

The total cost of plantation and its protection by engaging a part time Gardner shall cost 24,000 rs. per year and in five years, the expenditure shall amount to Rs 1, 20,000.

d) **Year Wise survival rate**

The estimated survival rate proposed to be achieved shall be 80%

2. **Strategy for protection of point of public utility etc.** - There is no point of public utility or of interest which need to be protected while under taking mining operations.
3. **Man power development:** - Around 15-20 unskilled people shall be employed to carry on the mining and associated activities and preference shall be given to employ 100% local people.
4. **Use of Mineral:** - The mineral will be used for making angular grit in the already established stone crusher unit in the name and style Mrs. Kanegtu Devi proprietor M/S Bushahr Laghu Udyog.
5. **Any Other relevant information: - NA**

Disaster Management and Risk Assessment:

This should deal with action plan for high risk accidents like landslides, subsidence, flood, inundation in underground mines, fire, seismic activities, tailing dam failures etc. and emergency plan proposed for quick evacuation, ameliorative measures to be taken etc. The capability of lessee to meet such eventualities and the assistance to be required from the local authorities should be described.

The mechanized mining activities in the hilly area may involve any high-risk accident due to side falls/collapse, flying stones due to blasting etc.

The complete mining operation will be carried out under the Management and control of experienced and qualified Miners.

All the provisions of Mines Act 1952, MMR 1961, and other laws applicable to mine will strictly be complied with.

Seal of Geological wing. Industries Deptt. Govt. of H.P. APPROVED

- During heavy rainfall the mining activities will be suspended, the working will be for 300 days for a year excluding the rainy season and local and national holidays.

- All persons in supervisory capacity will be provided with proper communication facilities. Competent persons will be provided FIRST AID kits which they will always carry.

- During benching and soil dump the angle of repose will be maintained to prevent any land slide hazard in the area.

View of Lease Area

Seal of Geological wing, Industries Deptt. Govt. of H.P. APPROVED

Certificate

Certified that the provisions of the Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules, 2015, Metalliferous Mines Regulation 1961 and other guidelines issued from time to time in this regard have been complied for the preparation of Mining Plan including Progressive Mine Closure Plan of mine of stone over an area situated in mauza Pashada, Tehsil Rampur, District Shimla falling in khasra number 13/1 measuring an area of 01-46-12 hectares.

While preparing the Mining Plan including Progressive Mine Closure plan all statutory rules, regulation, orders made by competent authorities of the State or Central Government or orders passed by Courts have been taken into consideration. The information provided and the data furnished in this Mining Plan is correct to the best of my knowledge.

J L Sud, Geologist (Retd.) Set No. 19
Type IV, Govt. Officers Colony
Kasumpti, Shimla 17100

Dy. Geological wing. Industries Deptt. Govt. of H.P.
APPROVED

Declaration

This is to declare that the Mining Plan including Progressive Mine Closure Plan of mine of stone over an area situated in mauza Pashada, Tehsil Rampur, District Shimla falling in khasra number 13/1 measuring an area of 01-46-12 hectares have been prepared with my consent and approval and that we/I shall abide by all commitment thereunder. "The Mining Plan and 'Progressive Mine Closure Plan' complies all statutory rules, regulations, orders made by competent authorities of State or Central Government or orders passed by courts have been taken into consideration and wherever specific permission is required, shall be obtained.

We undertake to implement all the measures proposed in this Mining Plan and Progressive Mine Closure Plan' in a time bound manner. We have deposited a sum of Rs..... with the competent authority of the State Government in form of Fixed Deposit Receipt as financial assurance of the same.

In case of default on my/our part, the approval of Mining Plan may be withdrawn and the aforesaid sum assured may be forfeited.

Applicant

Date:

कनेगतु देवी

Smt. Kanegtu Devi
Prop: Bushahar Laghu Udhyog,
Village and Post Office Jhakri,
Tehsil Rampur, District Shimla,
Himachal Pradesh

Geological wing, Industries Deptt. Govt. of H.P.
APPROVED

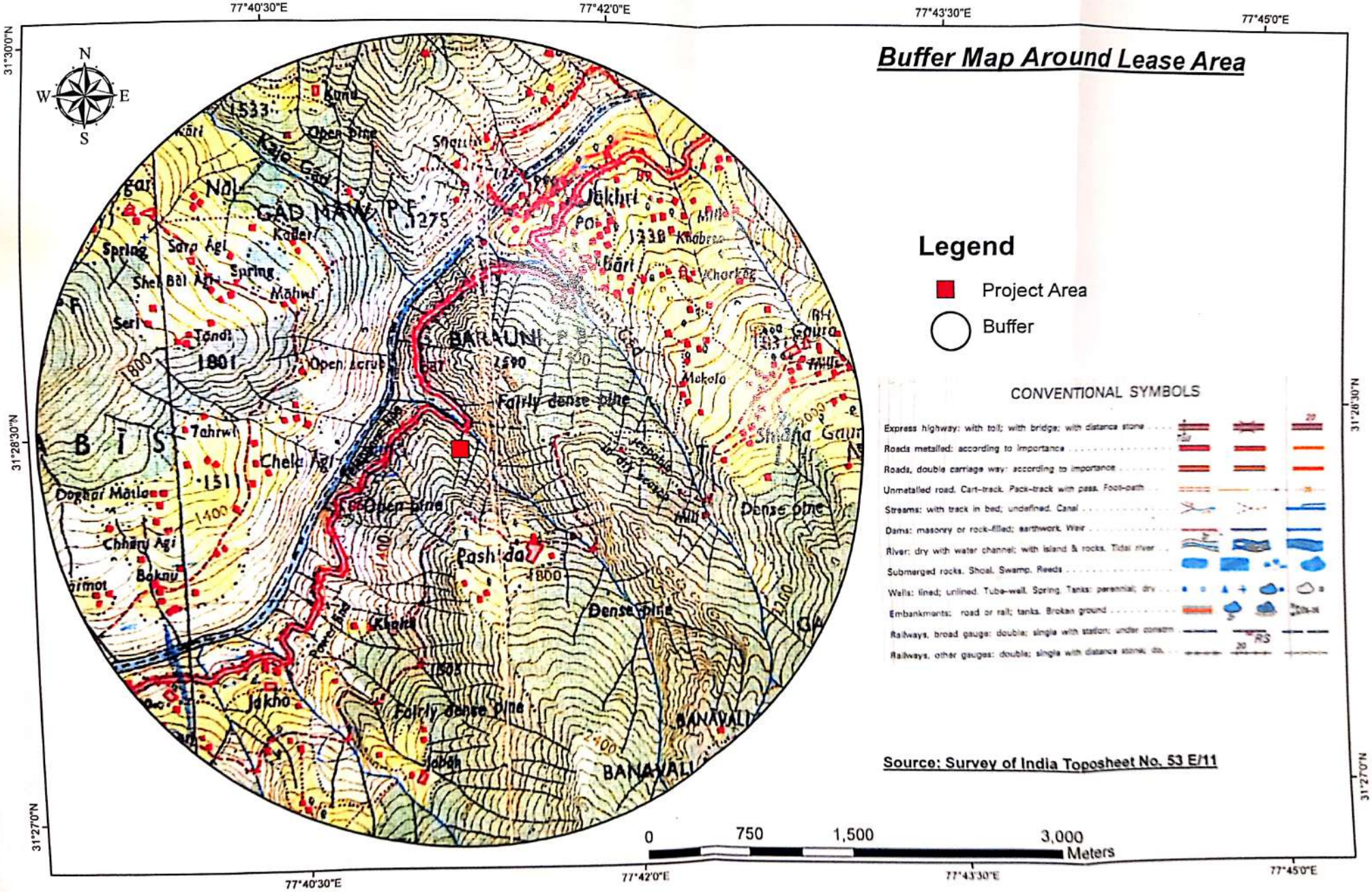
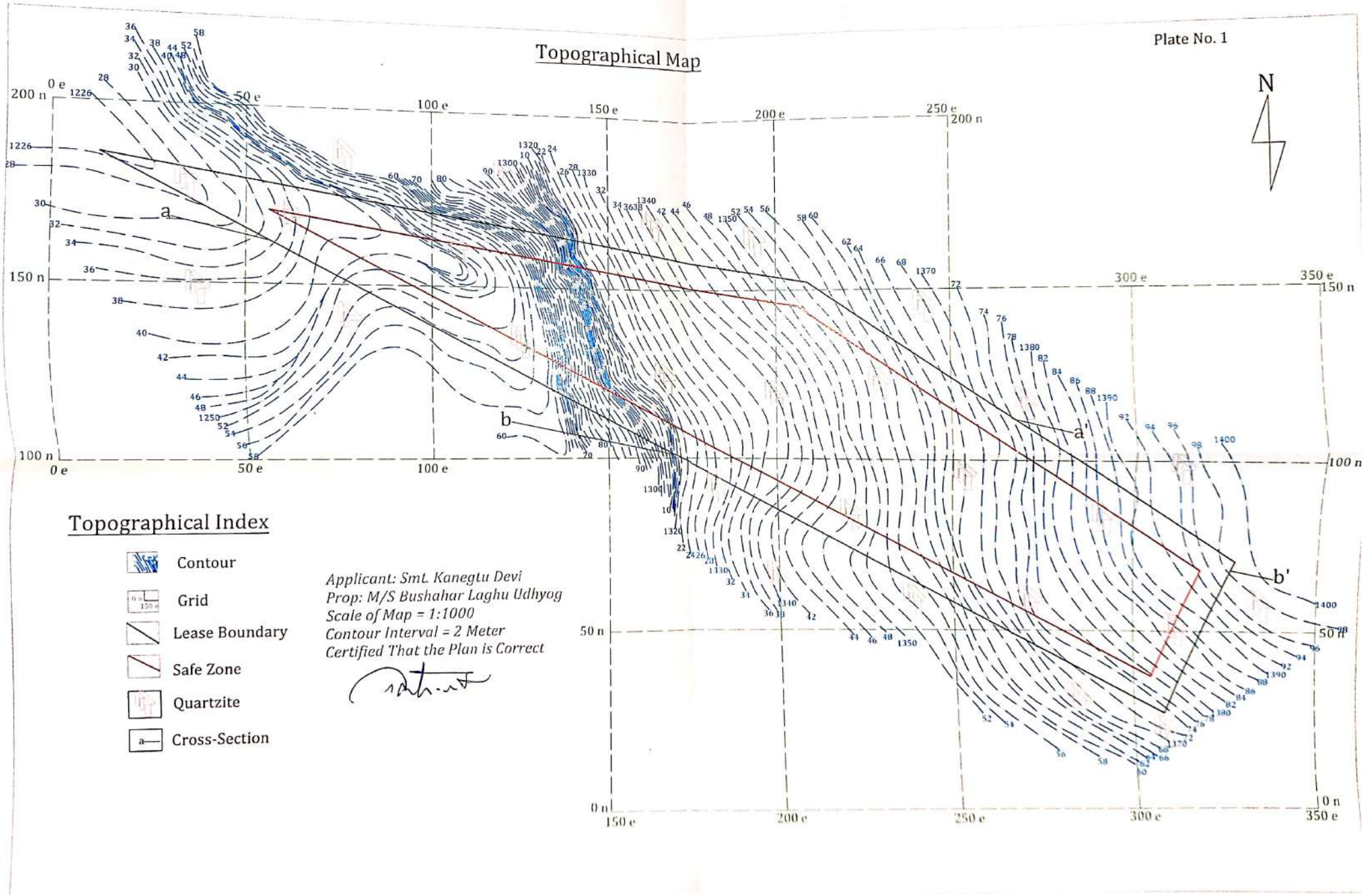


Plate No. 1

Topographical Map



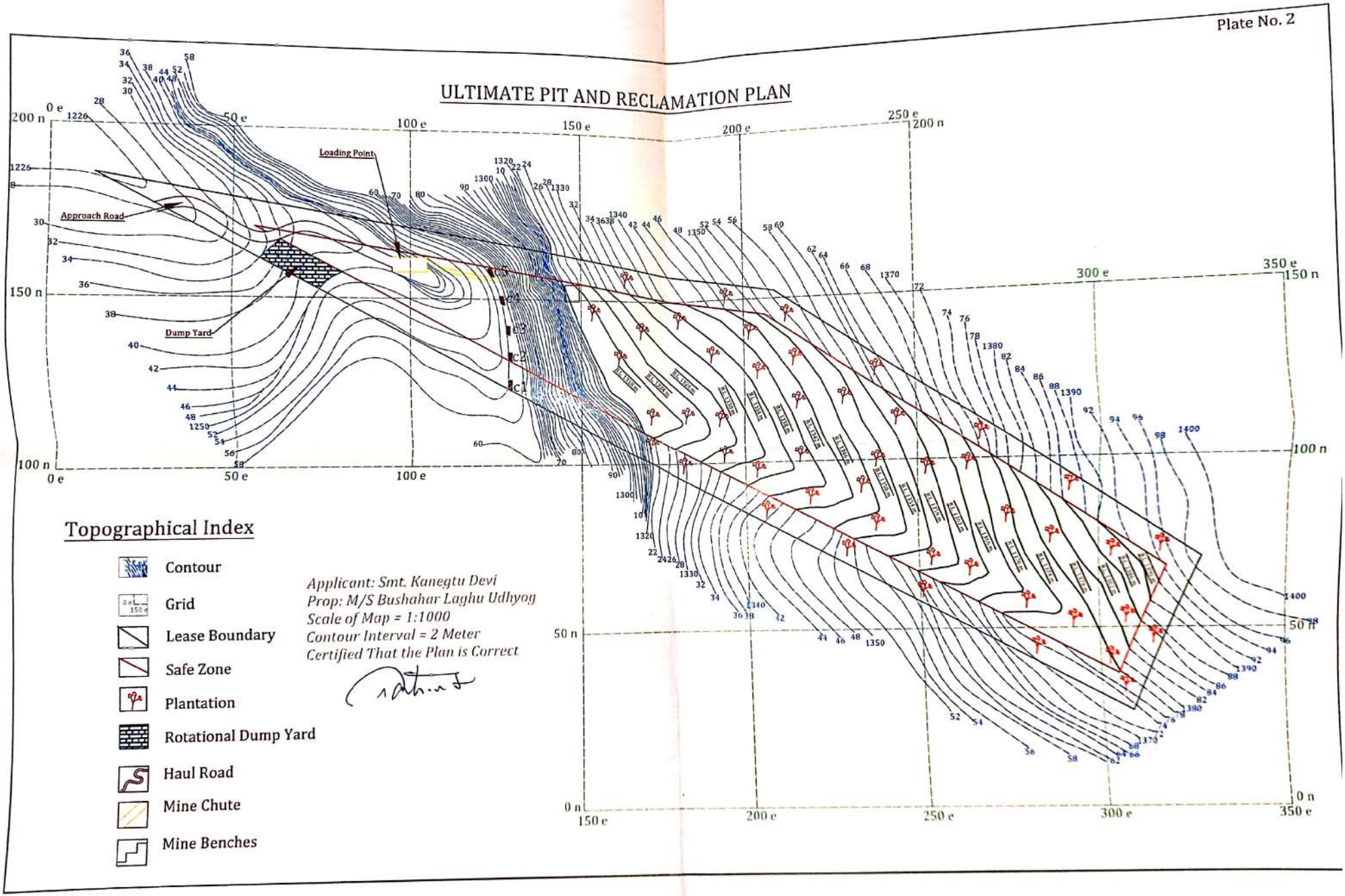
Topographical Index

- Contour
- Grid
- Lease Boundary
- Safe Zone
- Quartzite
- Cross-Section

Applicant: Smt. Kanegtu Devi
Prop: M/S Bushahar Laghu Udhyog
Scale of Map = 1:1000
Contour Interval = 2 Meter
Certified That the Plan is Correct

Plate No. 2

ULTIMATE PIT AND RECLAMATION PLAN



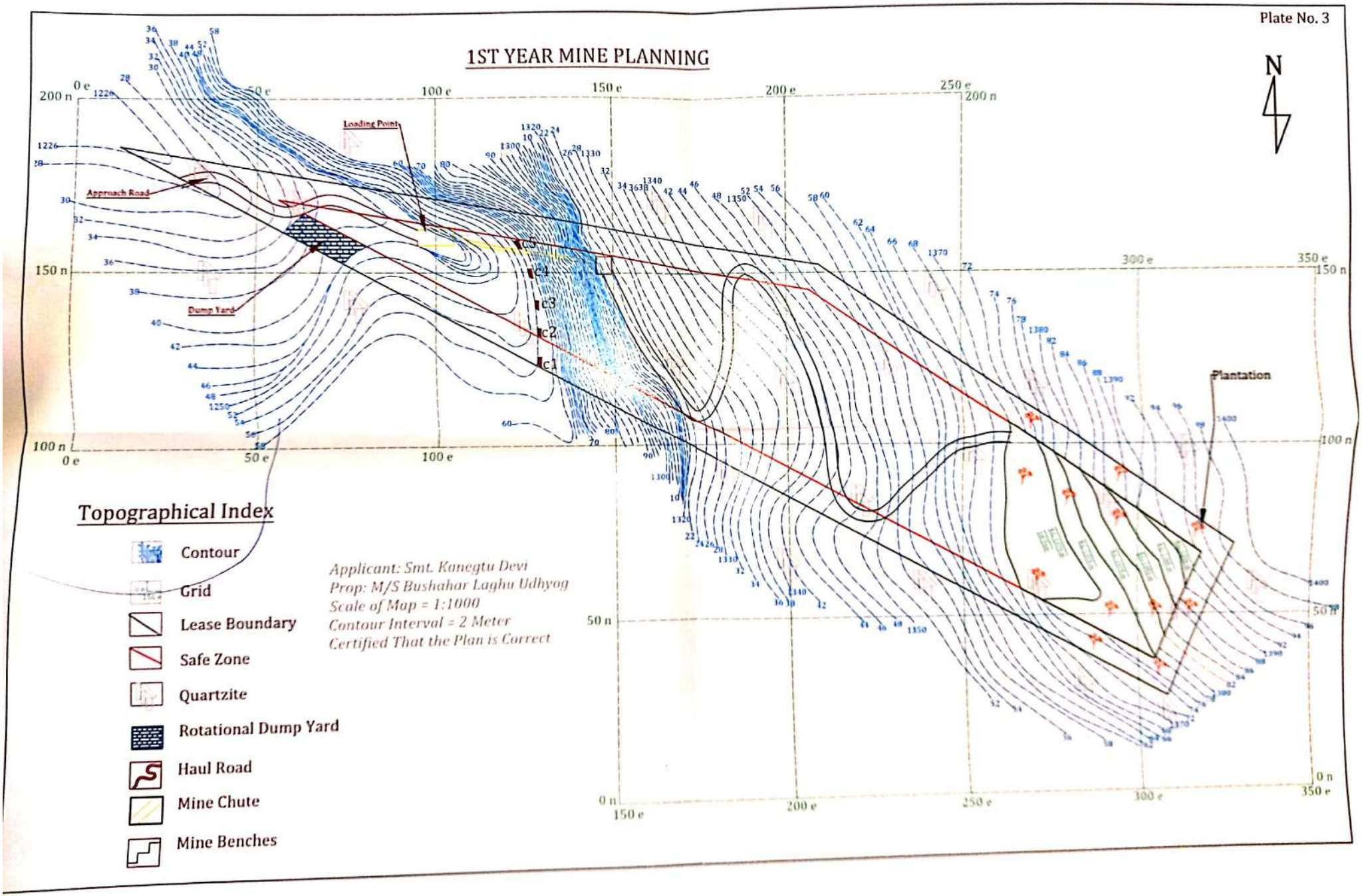
Topographical Index

- Contour
- Grid
- Lease Boundary
- Safe Zone
- Plantation
- Rotational Dump Yard
- Haul Road
- Mine Chute
- Mine Benches

Applicant: Smt. Kanegtu Devi
Prop: M/S Bushahar Laghu Udhyog
Scale of Map = 1:1000
Contour Interval = 2 Meter
Certified That the Plan is Correct

Plate No. 3

1ST YEAR MINE PLANNING



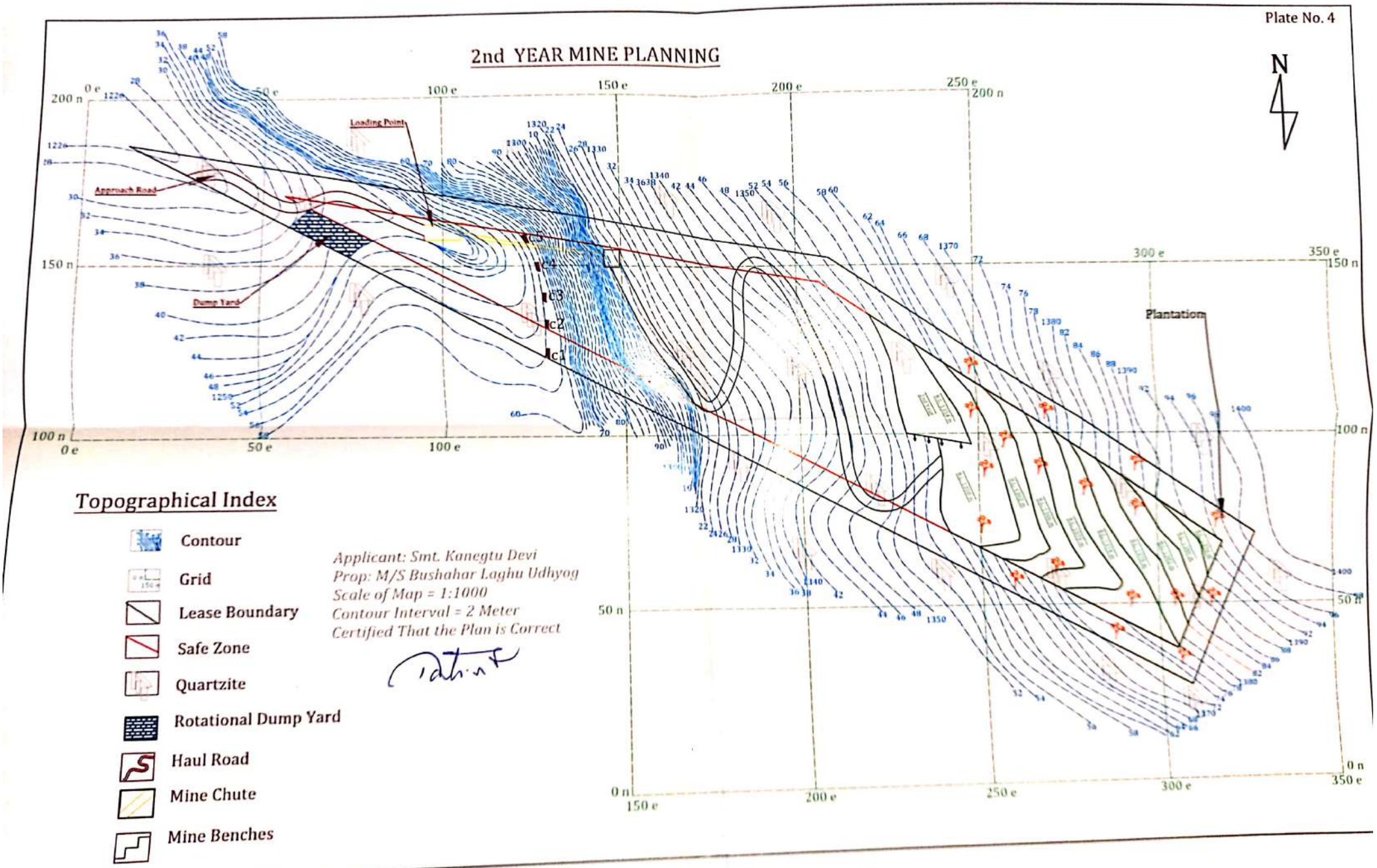
Topographical Index

- Contour
- Grid
- Lease Boundary
- Safe Zone
- Quartzite
- Rotational Dump Yard
- Haul Road
- Mine Chute
- Mine Benches

Applicant: Smt. Kanegtu Devi
Prop: M/S Bushahar Laghu Udhyog
Scale of Map = 1:1000
Contour Interval = 2 Meter
Certified That the Plan is Correct

Plate No. 4

2nd YEAR MINE PLANNING



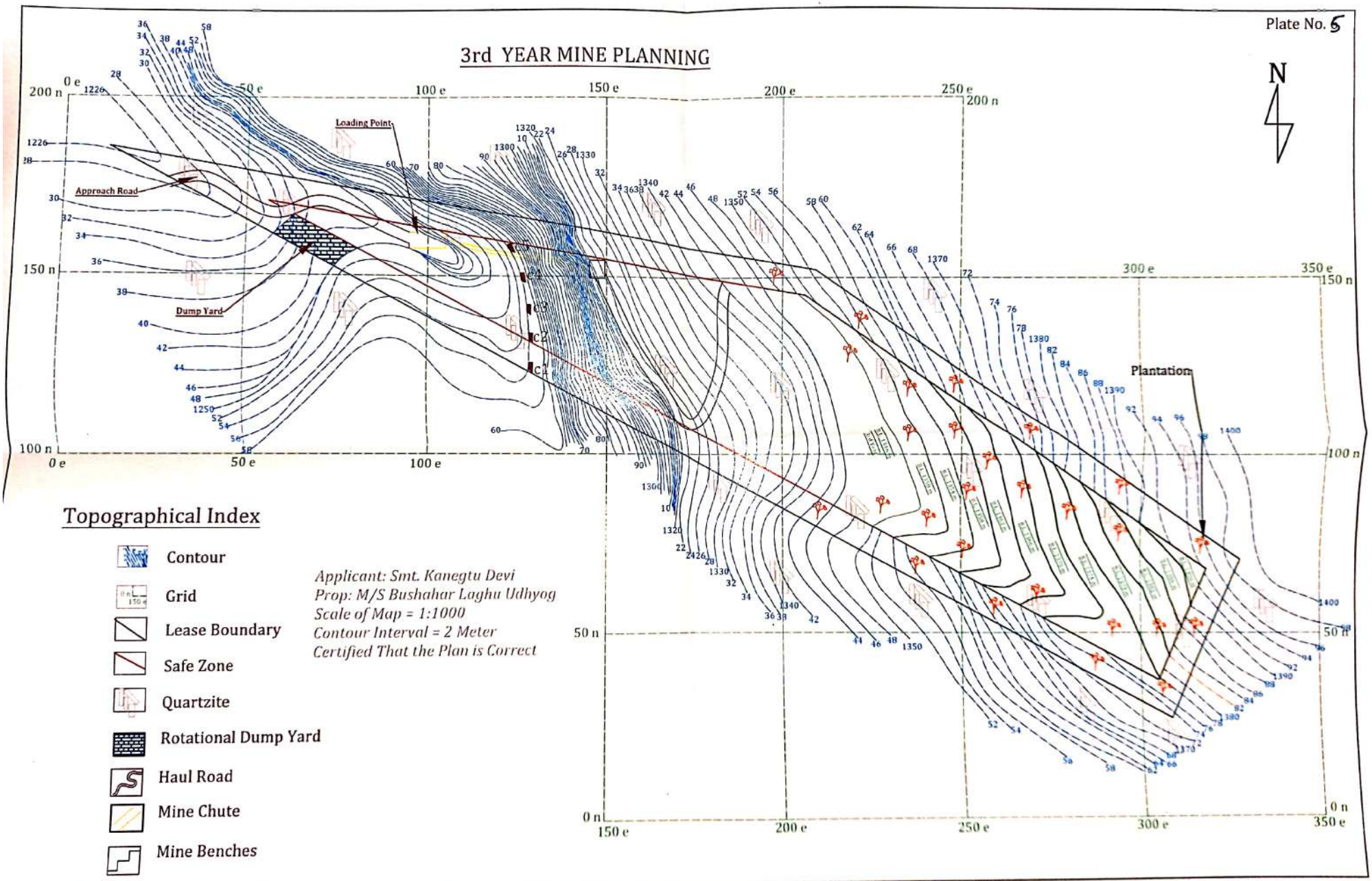
Topographical Index

- Contour
- Grid
- Lease Boundary
- Safe Zone
- Quartzite
- Rotational Dump Yard
- Haul Road
- Mine Chute
- Mine Benches

Applicant: Smt. Kanegtu Devi
Prop: M/S Bushahar Laghu Udhyog
Scale of Map = 1:1000
Contour Interval = 2 Meter
Certified That the Plan is Correct

Plate No. 5

3rd YEAR MINE PLANNING



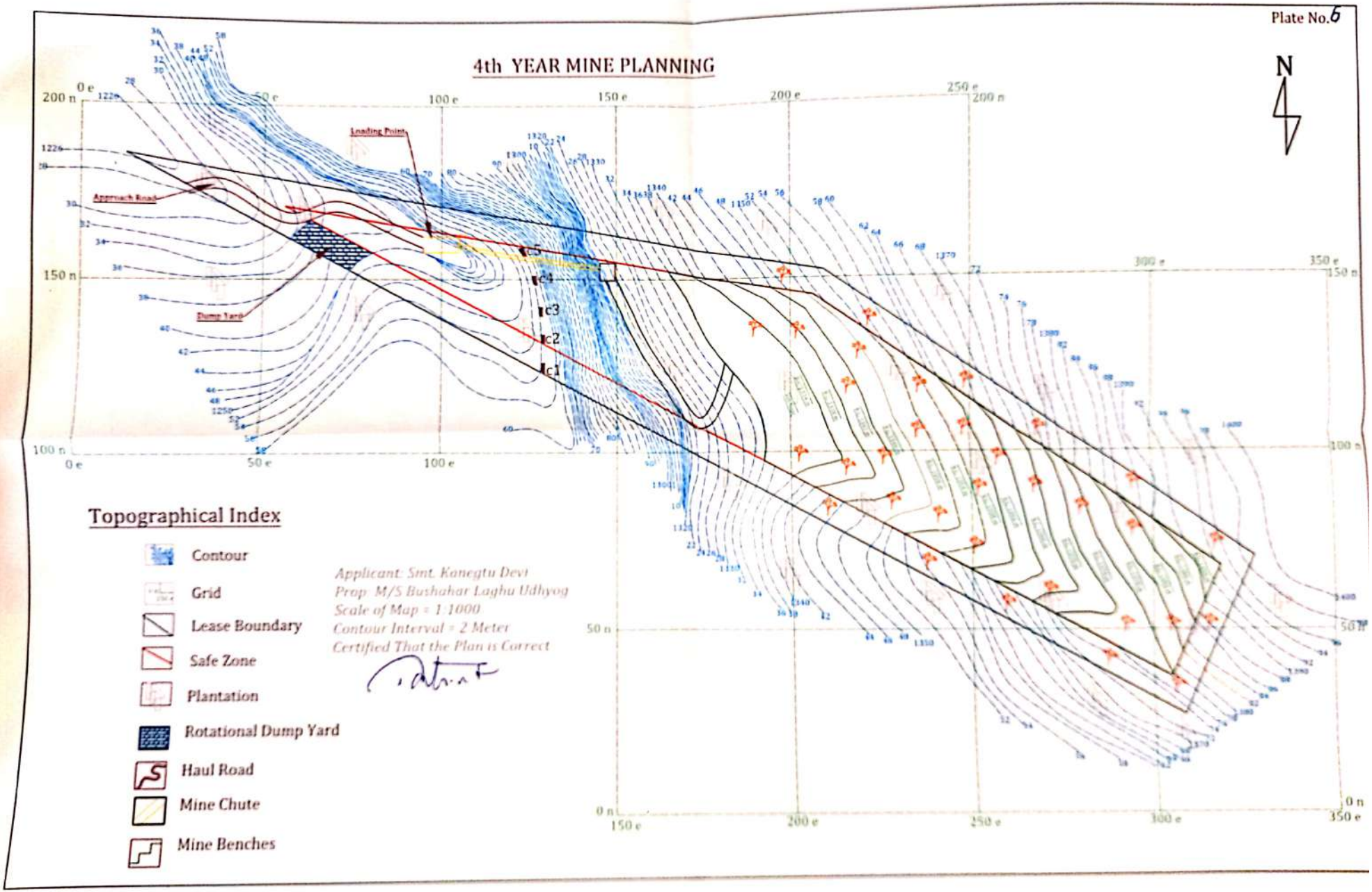
Topographical Index

- Contour
- Grid
- Lease Boundary
- Safe Zone
- Quartzite
- Rotational Dump Yard
- Haul Road
- Mine Chute
- Mine Benches

Applicant: Smt. Kanegtu Devi
Prop: M/S Bushahar Laghu Udhyog
Scale of Map = 1:1000
Contour Interval = 2 Meter
Certified That the Plan is Correct

Plate No. 6

4th YEAR MINE PLANNING



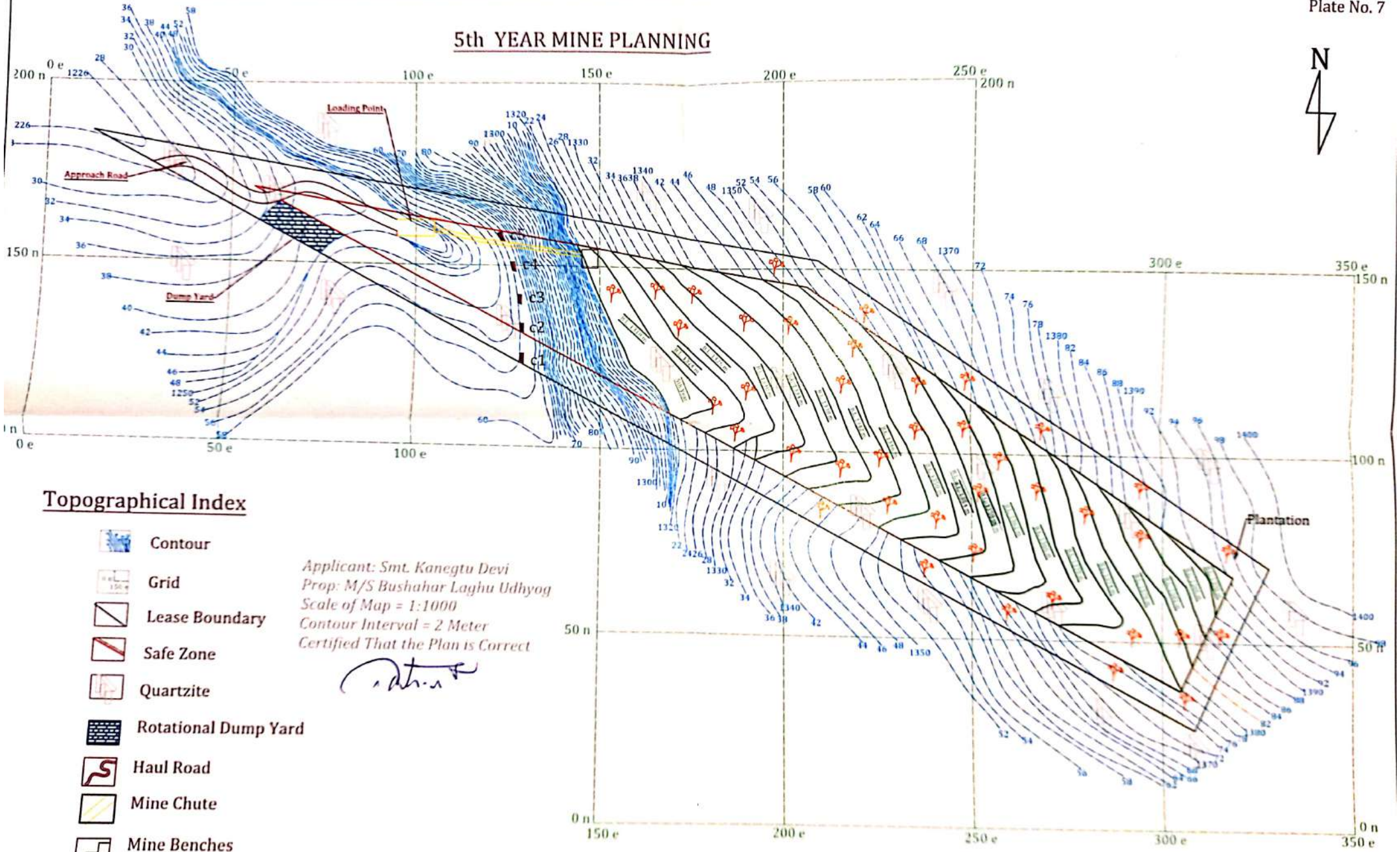
Topographical Index

- Contour
- Grid
- Lease Boundary
- Safe Zone
- Plantation
- Rotational Dump Yard
- Haul Road
- Mine Chute
- Mine Benches

Applicant: Smt. Kanegtu Devi
Prop: M/S Bushahar Laghu Udhyog
Scale of Map = 1:1000
Contour Interval = 2 Meter
Certified That the Plan is Correct

Plate No. 7

5th YEAR MINE PLANNING



Topographical Index

- Contour
- Grid
- Lease Boundary
- Safe Zone
- Quartzite
- Rotational Dump Yard
- Haul Road
- Mine Chute
- Mine Benches

Applicant: Smt. Kanegtu Devi
Prop: M/S Bushahar Laghu Udhyog
Scale of Map = 1:1000
Contour Interval = 2 Meter
Certified That the Plan is Correct

Slice Plan from 1390 M to 1318 M Benches

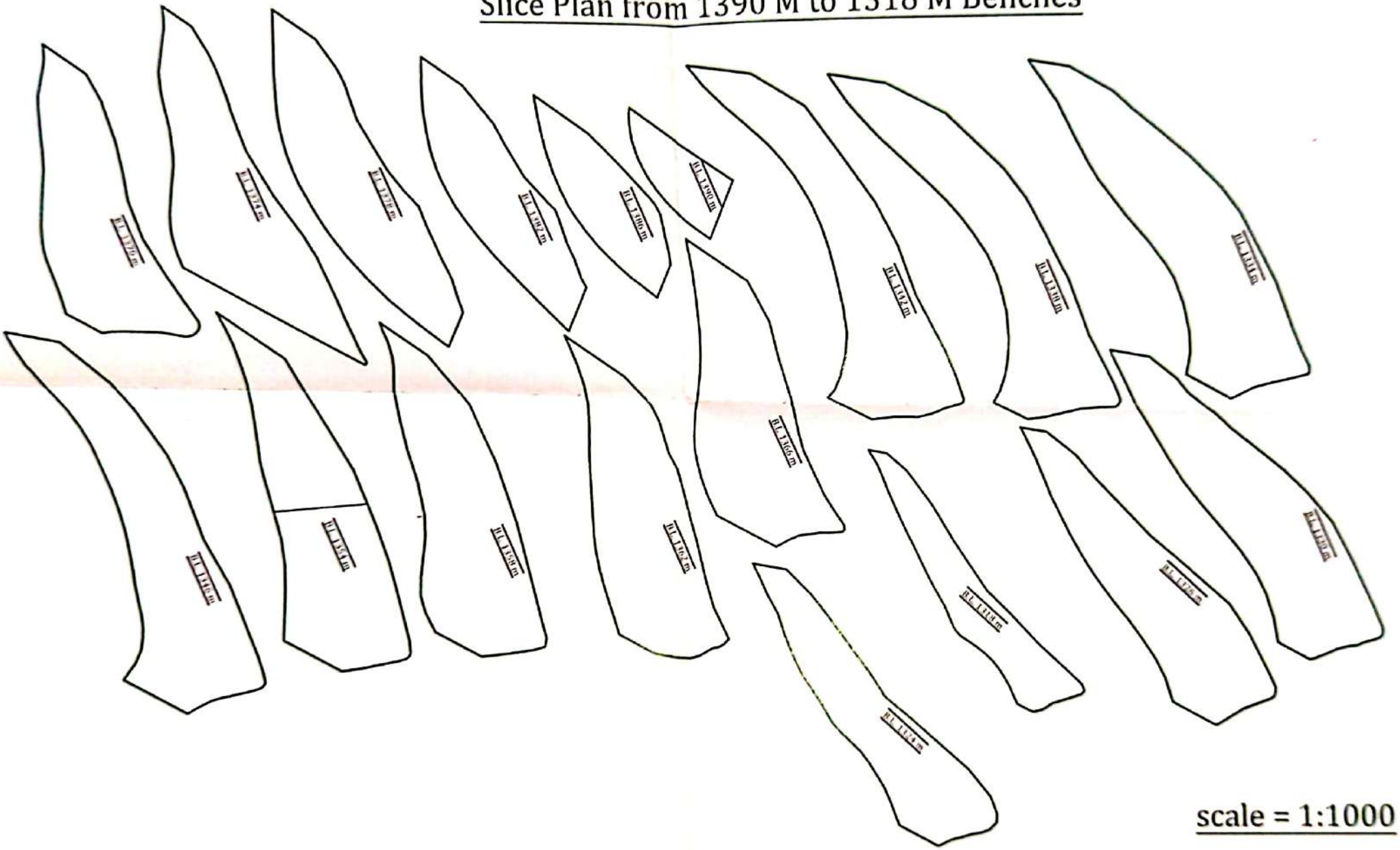


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Plate No. 9

Location Map of Lease Area