BEFORE THE NATIONAL GREEN TRIBUNAL,

PRINCIPAL BENCH, NEW DELHI.

OA NO.01 OF 2022

IN THE MATTER OF:

In re: News item published in the Indian Express Newspaper dated 02.01.2022 titled "Four Killed in Haryana Mine Landslide"

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FILED BY

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BEFORE THE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

Original Application No. 01/2022

IN THE MATTER OF:

In re: News item published in The Indian Express Newspaper dated 02.01.2022 titled "Four killed in Haryana mine landslide"

AFFIDAVIT

I, Wazir Singh Kuhar, S/o Sh. Lachman Singh, aged about 62 years, R/o House No.54, Urban Estate-II, Hisar, Haryana presently at New Delhi, do hereby solemnly affirm and state as under:-

1. That I am one of the partners in Goverdhan Mines & Minerals as such I am conversant with the facts and circumstances of the case as such I am competent to swear this affidavit.
2. That this Hon'ble Tribunal had suo-moto taken cognizance of newspaper report published in Indian Express dated 01.01.2022 wherein it was reported that 4 persons had died in Dadam Mines due to unscientific mining and this Hon'ble Tribunal vide order dated 03.01.2022 in O.A. No.01/2022 was pleased to constitute eight-member joint Committee comprising of nominees of MoEF&CC, CPCB, (Regional Office, Chandigarh), Nationai Disaster Management Authority, GoI, Director General of Mines Safety, GoI, PCCF (HoFF), Haryana, SEIAA, Haryana, State PCB and District Magistrate, Bhiwani. The CPCB and State PCB were to act as nodal agency for coordination and compliance. The Committee was to ascertain the extent of violations, extent of damage to the environment and to the human lives, extent of compensation paid and payable, safety precautions taken and required to be taken, steps to prevent recurrence of such happenings in future by the PP and the statutory regulators.

NOTARY
K. BANDANA
Delhi
Regd. No. [illegible]
Date of Expiry
26.02.202[illegible]

3. That the Committee appointed by this Hon'ble Tribunal has submitted Report on 25.03.2022.
4. That the Deponent by way of present affidavit is filing point wise reply to the Report submitted by Committee appointed by this Hon'ble Tribunal and the safety measures taken by the Deponent. A copy of the reply along with Annexures is annexed as ANNEXURE – R-1.

DEPONENT

VERIFICATION:-

Verified at Delhi on this 14 MAY 2022 May,2022 that the contents of this affidavit are true and correct to the best of my knowledge based on the records kept and maintained in the usual course and legal pleas contained therein are based upon information received and believed to be correct.

DEPONENT

NOTARY K. DANDANA Delhi Regd. No. 4776 Date of Expiry 25.02.2025 GOVT. OF INDIA

14 MAY 2022

ATTESTED

NOTARY PUBLIC, DELHI
GOVT. OF INDIA

3

M/s. Govardhan Mines & Minerals

Site: Dadam Mine, Dadam (Tosham)
Regd. Office: Near Hsar Naka, Khanak (Tosham)
Email ID: govardhanminesminerals@gmail.com Contact: 9992100001

To,

Ref:-HSPCB/BHI/2022/10 Dated: 01.04.2022

Sub:- Reply/ Justification of Report of Joint Committees, in compliance of Hon'ble National Green Tribunal, order dated 03.01.2022 in OA No. 01 of 2022 as the Indian Express Newspaper dated 02.01.2022 titled " Four killed in Haryana Mine Landslide.

Sir,

In context of the overall conclusion drawn by the joint committee considering the facts and circumstances, we are submitting herewith the point wise justification & reply as under:-

1.1	**The salient features of the report of DFO, Bhiwani**
	Confirms no violation in forest area, fall of pillar 31 from edge boundary of mining lease area & Aravalli Plantation area, No illegal mining has been done at the site of accident in the forest land, A very small portion of forest area has fallen in form of rock boulder. Further we hereby submit that the rock block has fallen due to geological disturbance occurred due to the presence of high degree of jointing & open joints filled with soft material(clay /silt/sand).The weathering condition in upper part of slop allowed the gravitational movement of inverted loose wedge upon saturation. **Thus, we would request you that the act of nature should not be levied on M/S Goverdhan Mines & Minerals.** **However, we are ready to execute all necessary steps & abide instructions of concerned departments to keep environmental balance and avoid environmental damage.**
1.2	**Salient features of the report of DGMS Ghaziabad**
	We hereby convey you that we have already submitted all relevant documents of department including report of ***DGMS dated 31.12.2020 Annexure:-1*** on basis of inspection dated 28.12.2020, clarifying the bench wise development in different pits of mine. A. Photographs of benches, Further justification for bench height has also been given referring the circular 71/1973 of DGMS, & Chapter –XI of MMR 1961. Enclosed as **Annexure No:-2** But committee have not considered our submissions and blamed violation coating the report of DGMS dated 2.03.2022. It is pertinent to mention here that since Nov 2021 to Dec 2021 mine was completely non-operational for about 2 months (i.e just before the fatal accident occurred due to geological disturbance) due to pollution raise in NCR region. **Precisely in report dated 31.12.2020 everything was up to mark in specific pit & other area whereas in report submitted after accident i.e of 2.03.2022 everything**

	is categorized as violation. Practical aspects & factual submissions needs to be considered to conclude unbiased decision.	
1.3	**Violation recorded by Regional Officer, HSPCB, Bhiwani**	
S.No.	**Deficiencies**	**Compliance**
1.	Unit has not approved the mines safety plan from the competent authority before the start of mining thus violating the point no: 06 of EC conditions.	Mine Safety Plan is part of self regulatory regime as per circular No.3/2019. It requires no approval from any authority. MSP was submitted to Director of Mines Safety on dated 22.12.2020 & revise submission via mail dated 30.03.2022 ***Annexure-***.3. A copy of 2019 circular of Mine Safety and confirmation of Director Mine Safety dated 13.4.2022 is enclosed as ***Annexure- 4*** for kind reference.
2.	Unit has not submitted the comprehensive study of slope stabilization of mine benches thus violating the point no.29 of EC condition.	As desired, CIMFR was requested to conduct comprehensive Slope study. Its report has already been submitted to Pollution department, Bhiwani. Copy is enclosed as ***Annexure-5.***
3.	Mining is not done as per approved mining plan as it is proposed to mine the deposit by adopting formation of benches from top to bottom with ultimate pit slope of 70^0.The height of the benches will be of 10 meter whereas width of the benches will also be maintained as 10 meters.The slope of 70^0 not found maintained mining pit no: 18, 22,23,25,27,31,37,38.	Mining operation are carried out by us as per Mining Plan by forming benches maintaining the proper slope of 70^0 as far as possible as per existing ground conditions. Pertinently we have received the lease after the termination of existing lease holder who have already mined the area of about 34Ha. Moreover, Further the instructions of DGMS on 25.01.2022 to carry out mining by top down procedure is being fully complied in pit no. 22,23,25,27 & 31. However, there are high wall in both eastern & western side of pit no. 37 & 38 where

<table>
<tr><td></td><td></td><td>these can not be practically complied and hence we have stopped mining operation in said pit under intimation to mining deptt & have also submitted intent to surrender said area to joint Committee. Further, part of pit 18 is also non operation as per the order imposed by DGMS.
Refer the report of DGMS dated 31.12.2020. Annexure-1</td></tr>
<tr><td>4.</td><td>Unit has not maintained the 33% green area out of total lease area of total 48.87 hectare in the lease area.</td><td>Total plantation to be done in 5 year plan period is 16.1271ha. Out of which 9.2018ha plantation is done till date having 21258 plants.Total plantation is required to be carried out in statutory barrier is about 3.91 ha. out of which 1.78ha. is developed as green and remaining 2.13ha. in statutory barrier & 4.7953ha outside lease area shall be developed in remaining 2 year as per Mining Plan.
Revise Phase wise proposal is as:-
<table>
<tr><th>Phases (may2022-2024)</th><th>Area</th><th>No.of Saplings (+/-)</th></tr>
<tr><td>Ist</td><td>1.73</td><td>2000</td></tr>
<tr><td>IInd</td><td>1.73</td><td>2000</td></tr>
<tr><td>IIIrd</td><td>1.73</td><td>2000</td></tr>
<tr><td>IVth</td><td>1.73</td><td>2000</td></tr>
<tr><td>Total</td><td>6.9253</td><td>8000</td></tr>
</table>
Thus we have not violated any mandate of Mining Plan. So, we should not be alleged for the matter which is not a violation.</td></tr>
</table>

		Plantation record is Enclosed herewith as *Annexure-6* **Further, As already submitted that before starting mining by us, Sunder marketing has carried out mining and there was no green belt or barrier of 7.5 m. Yet we have started the same and we assure that within time, the green belt shall be developed fully.**
5.	Plantation is not carried out in the statutory barrier of 7.5 meter width within the lease area as per approved mining plan but unit has provided the green belt only in patches outside the lease area in private land.	Refer ***Annexure-6***. Plantation is not done only in area where previous mine lease holder carried out mining and thus rendering area unfit for plantation.
2	**Extent of Compensation Paid & Payable.**	
(i)	**Compensation For Deceased & injured person**	
	The payment of the compensation has been confirmed by Deputy Commisioner, Bhiwani vide letter No. 2400 dated 9.03.2022.*(Refer page 4 of Final report of joint committee in OA.no.01/2022)* ***Annexure-7***	
(ii)	**Compensation due to illegal mining.**	
	As per the report provided by DMG, Bhiwani to joint committee, total area of 7.5 m barrier to be maintained along the mining lease boundary is 3.91 ha., out of which encroached area is 0.37ha and the quantity of illegal mined material has been assessed as 64,167M.T. In this context we would like to submit that the encroached area observed i.e 0.37ha is a part of already excavated area as at the time of inception we have got approx. 34ha. already excavated area. **Copy of the page of mining Plan enclosed as Annexure:-8** As far as plantation in said area is concerned we would do our best to develop the area i.e 0.37 ha. as green belt immediately.	

	As already submitted that before starting mining by us, Sunder marketing has carried out mining and there was no green belt or barrier of 7.5 m. Yet we have started the same and we assure that within time, the green belt shall be developed fully. **Thus this matter needs to be reviewed to conclude the fair & unbiased decision.**
(iii)	**Compensation due to Environmental Damage.**
	a. The cost of damage due to falling of 2688cum rock from the Aravali Plantation area:- Forest department sought the valuation of 2688cum stone from HSIIDC which they have calculated Rs. 21,16,024/- In this context we would like to submit that as per the slope stability study conducted by CIMFR has concluded the fact that Orientation of naturally occurring joints with reference to the slope face, natural weathering of the basal & release joint planes and progressive dilation of joints upon saturation of infilled soft (clay silt/sand) materials are the major reasons for the movement of such big wedge failure. Report of CIMFR is enclosed herewith as **Annexure:-9** Thus, we would request you that the act of nature should not be levied on M/S Goverdhan Mines & Minerals. Instead the material accounted by forest department i.e **2688cum** should be dispatched to forest department to compensate the loss or the material may be auctioned to private persons to balance the loss occurred to environment due to natural calamity. **b.** As per the report provided by DMG, Bhiwani to joint committee, total area of 7.5 m barrier to be maintained along the mining lease boundary is 3.91 ha., out of which encroached area is 0.37ha. Further out of 3.91ha., 1.78ha. is developed as green. In this context we would like to submit that the encroached area observed i.e 0.37ha is a part of already excavated area as at the time of inception we have got approx. 34ha. already excavated area. **Copy of the page of mining Plan enclosed as Annexure:-8.** As far as plantation in said area is concerned we would do our best to develop the area i.e 0.37 ha. as green belt immediately. Total plantation to be done in 5 year plan period is 16.1271ha. Out of which 9.2018ha plantation is done till date having 21258 plants.Total plantation is required to be carried out in statutory barrier is about 3.91 ha. out of which

	1.78ha. is developed as green and remaining 2.13ha. (in statutory barrier) & 4.7953ha (outside lease area) shall be developed in remaining 2 year as per Mining Plan. Thus we have not violated any mandate of Mining Plan. So, we should not be alleged for the matter which is not a violation. Plantation record is Enclosed herewith as ***Annexure-6.*** **Precisely we would also submit that we have to develop 7.5 m barrier is green belt in first five years. As already submitted that before starting mining by us, Sunder marketing has carried out mining and there was no green belt or barrier of 7.5 m. Yet we have started the same and we assure that within time, the green belt shall be developed fully. Additional we have planted thousands of plants by taking land on lease as well as purchasing. These lands are adjacent to lease area and plantations have been fully developed there. The primary objective of the same is to control dust pollution by this barrier. The plantations made by us completely covers a major portion of boundary of lease area. Photo of same have already been submitted in concerned department. By considering the area of lease in which plantation is made as well outside area a sufficient barrier has been created. When additionally plantation in lease boundary will made then it will also enhance green belt area.**
3.	**Safety Precautions Taken & Required to be taken.**
	We admit to follow all safety precautions recommended to be followed at mining site.
4.	**Conclusion**
I	**Overall project proponent has not followed scientific mining, not maintained safety zone and green belt of 7.5meter of width along with the lease boundary within the lease area and also not followed precautionary measures & safety norms.**
	Mining operation are carried out scientifically by us as per Mining Plan by forming benches maintaining the proper slope of 70^0 as far as possible as per existing ground conditions. Pertinently we have received the lease after the termination of existing lease holder who have already mined the area of about 34Ha. The **Director General of Mines safety, Ghaziabad conducted inspection of Dadam Mines on 28-12-2020** (Refer **Annexure No:-1).** This inspection was conducted on the letter of Mining Officer Bhiwani in which he raised issue of Unscientific mining by

	leaseholder. The Report of the DGMS covers all the aspects in this matter. While doing mining we take care of formation of benches. Moreover, Further the instructions of DGMS on 25.01.2022 to carry out mining by top down procedure is being fully complied in pit no. 22,23,25,27 & 31. However, there are high wall in both eastern & western side of pit no. 37 & 38 where these cannot be practically complied and hence we have stopped mining operation in said pit under intimation to mining deptt & have also submitted intent to surrender said area to joint Committee. Further, part of pit 18 is also non operation as per the order imposed by DGMS.
II	**Committee has observed that the compensation which was required to be paid to deceased injured person has been appropriately paid by the Project proponent.**
	The payment of the compensation has been confirmed by Deputy Commisioner, Bhiwani vide letter No. 2400 dated 9.03.2022.*(Refer page 4 of Final report of joint committee in OA.no.01/2022)* Refer ***Annexure-7***
III	**Committee has also observed the encroached area (illegally mined area) in 7.5m barrier is 0.37 Hectare and quantity of illegally material in this area assessed as 64,167 MT. The cost of the estimated illegally mine material could be assessed by concerned department. The cost of the falling of 2688 cubic meter rock has been estimated as Rs.21,16,024/-**
	The encroached area (illegally mined area) in 7.5m barrier observed i.e 0.37ha is a part of already excavated area as at the time of inception we have got approx. 34ha. already excavated area. So, the quantity of illegal material in this area assessed as 64,167MT should not be levied on M/S Goverdhan Mines & Minerals. As asked the exact quantity of illegal material & its responsibility holder should be clearly verified and submitted by department before drawing final conclusion. Further **The cost of damage due to falling of 2688cum rock from the Aravali Plantation area is concerned.** In this context we would like to submit that as per the slope stability study conducted by CIMFR has concluded the fact that Orientation of naturally occurring joints with reference to the slope face, natural weathering of the basal & release joint planes and progressive dilation of joints upon saturation of infilled soft (clay silt/sand) materials are the major reasons for the movement of such big wedge failure. Report of CIMFR is enclosed herewith as refer **Annexure:-9**

	Thus, we would request you that the act of nature should not be levied on M/S Goverdhan Mines & Minerals. Instead the material accounted by forest department i.e **2688cum** should be dispatched to forest department to compensate the loss or the material may be auctioned to private persons to balance the loss occurred to environment due to natural calamity.
IV	**Project Proponent has carried out plantation in 1.78 Hectare area against the total plantation to be done in 7.5m barrier in area of 3.91Hectare.**
	Total plantation to be done in 5 year plan period is 16.1271ha. Out of which 9.2018ha plantation is done till date having 21258 plants. Total plantation is required to be carried out in statutory barrier is about 3.91 ha. out of which 1.78ha. is developed as green and remaining 2.13ha. (in statutory barrier) & 4.7953ha (outside lease area) shall be developed in remaining 2 year as per Mining Plan. Thus we have not violated any mandate of Mining Plan.So, we should not be alleged for the matter which is not a violation.
V	**Safety precautions need to be followed as suggested in this report.**
	We admit to follow all safety precautions recommended to be followed at mining site.
5.	**Recommendation**
	As per the recommendation made in point (iv) by the committee that P.P has grossly violated the approved mining plan and the conditions of EC and CTE/CTO. In this context we would like to submit that after the visit of joint committee dated 4.02.2022 (in compliance of the Hon'ble NGT order dated 03.01.2022 in O.A NO.01/2022) no document/information has been sought by Project Proponent. Neither any hearing has been done thereafter. And unanimously (25% of the net profit) the violation has been alleged without verification of facts and levied a sum of 7.5 Crores on Project proponent. At the same para in point no i,ii,iii committee has asked state govt. to assess the cost of restoration of damage caused to Aravalli plantation, illegally mined material. So, here we would like to request that we should be provided clear verified calculation to establish the accuracy of charges levied on us so that we can have a clear view either the allegation are liable on us or on previous lease holder. As recommended that pit no 37 & 38 fall under accidental area and may be prohibited for further mining. We agree for the same and already submitted surrender of said area as no rectification is possible in said area as per DGMS order. Further we are ready adhere all the precautionary measures required and suggested.

	The mining pits which are prohibited are duly fenced to avoid further occurrence of such incidents in future.

Annexure-26

ANNEXURE-1/1
A-26
P-150

12

Dy.(Gzb.)/DDG (NZ) to see/record please

Date of last inspection: 24/06/2020

Note for file

Name of Mine : Dadam Stone Mine,
Name of Owner : M/s Goverdhan Mines & Minerals
(Shri Wazir Singh Quhar-Norminated Owner)
Name of Manager : Shri Sanjay Kumar Sinha, FCC
Name of I. Officer : A K Das, Dy. DMS
Date of Inspection : 28.12.2020

1562
31/12/2020

1.0 **Back Ground Information:** Vide letter no. Bhiwani/ Khanan/1109 dated 24.11.2020 (RO Diary No. 1430 dated 09.12.2020), Mining Officer, Mines & Geology Department, Bhiwani, has informed this Directorate that Sri Rakesh Dalal has filed OA No. 132/2020 in the matter of Rakesh Dalal Vs. State of Haryana in the honourable court of National Green Tribunal, in which he has pointed about unscientific way of mining in Dadam Stone mine, whose hearing has been fixed in the hourable NGT court on 05.01.2021. Mining officer, requested this Directorate to inspect the mine and submit the report.

An email, dated 21 Dec, 2020 sent vide email id mobwn120@gmail.com to dg@dgms.gov.in was received in this Directorate from RO on the same matter. (RO diary no. 1514 dated 22.12.2020).

As directed, I called at the mine on dated 28.12.2020, to enquire into the matter. While in the area, Mining officer, Bhiwani, was requested to be present at the time of inspection and enquiry. Due to his engagement at Charkhi Dadri falling under his jurisdiction, he could not accompany me at the time of inspection and enquiry.

2.0 **Location & Ownership** : The mine was located in village Dadam in Tehsil –Tosham, District Bhiwani, of state Haryana on the way to Tosham Bhiwani. It is about 200Km from Ghaziabad. The mining lease containing an area of 48.87 hectare in khasra no 132 min was granted in favor of Ms Goverdhan Mines & Minerals, House no. 51, Urban Estate-2,Hisar(Haryana) by Govt. of Haryana. Sri Wazir Singh Kuhar is the Norminated Owner of this mine.

3.0 **Supervision, Production & Employment:** The mine was placed under the overall management, control, supervision and direction of Shri Sanjay Kumar Sinha, holder of first class mine manager of certificate of competency (R). To assist the manager three(03) Assistant manager; Four (04) mine foreman; nine(09) mining mate and two mining engineer(B.Tech) and one Diploma in mining have been appointed for day to day supervision and operation of the mine. The mine was reportedly producing about 36000T-37000T of stone per day, employing an average daily manpower of about 97 (contractors and departmental) persons per day.

4.0 **Mining operation:** The mine was worked by opencast mining method by deployment of shovel-dumper combination with deep hole drilling & blasting. The Permission under Regulation 106(2)(b) of the Metalliferous Mines Regulation, 1961 to deploy HEMM with system of deep hole drilling and blasting have been granted vide this Directorate's letter No. 3449 dated 29.11.2019 Blasted stones are loaded into buyers truck by excavator and dispatched. Big boulders generated during the blasting are broken by secondary blasting. It was reported that mining operations within the lease hold area were outsourced. About 25-30 numbers of pits have been dug in the leasehold area. The manpower and machinery required for mining operations in these pits were being deployed by the contractors. Whereas statutory persons supervising the day to day mining operations were appointed by mine owner apart from contractors statutory personnel. The machinery like excavator and drill machines were engaged by contractors. Drilling blasting and loading operations were carried out by contractors. The minerals were despatched in buyers truck/dumper. The water tanker used for water spraying and wetting on benches and haul roads were also outsourced. Three numbers of fogger machines to settle the dust generated during mining operations provided. Three numbers of transportable water tanker with built in arrangement on the trailer 1 no (whirling jet type) f. The mine was being worked in three shift eight hourly shift

i.e. (8.00Am to 4.00 Pm & 4.00Pm to 12.00 & 12.00 midnight - 8.00am with 1/2 hour rest interval in between the shifts).

5.0 **Inspection:** After study of plans and section of the mine, went to mine, S/Sri Sanjay Kumar Sinha, Mine Manager and other officials accompanied me during the inspection.

6.0 **Observation:**

(i) There were 25-30 numbers of pits dug within the lease hold area. The pit name was locally numbered for identification and convenience. The size of these pits was about 80-200m x 100m-200m.

(ii) The size of pit no. 36 was about 80mx60mx18m. The height of benches were 5-9m and width was about 5-7m. A haul road leading to benches was provided. The Aravali forest land was located on the western part of the excavation. Men and machinery were deployed by contractor. The size of pit no. 35 was about 60-65m(L)x40-45m(W)x8m-9m(D). The height of bench was about 8-9m. Adjoining to this pit, forest land of Aravali was located on western side. The size of pit no. 31 was about 100-110m(L)x80-90m(W)x 16-18m(D). The height of bench was about 8-10m. Adining to this pit, forest land of Aravali was located on southern side. Loading of stone was being carried on in these pits.

(iii) The size of pit no. 22 was about 200mx200mx20m(D). The height of benches were about 9-10m. Drilling of holes were being carried on the bottom bench. The drill machine was provided with wet drilling arrangement(Photograph enclosed). Management informed that the drill machines are provided with wet drilling arrangement. Some of the drill machines whose wet drilling mechanism was out of order were under repair.

(iv) There were three portable foggers machines installed near the pit where loading operation was being carried on to settle the dust being generated during loading. It was informed that these foggers are moved to different pits where loading operations are carried on. Two to three dedicated tractor mounted water wanker was available for supplying water to these fogger machine.

(v) Three water tankers with water spraying arrangement on the top(whirling type) were provided for wetting the haul roads and benches(photograph enclosed). Water spraying was being done on the haul roads and benches.

(vi) The danger zone was demarcated by means of red flag(photograph) enclosed). The lease boundary was fenced by barbed wire. During inspection it was observed that all staffs and work persons were wearing safety gadgets like helmet and shoes.

(vii) An order under section 22(3) of the Mines Act,1952 was imposed in pit no. 12, vide this Directorate's letter no. 2169 dated 28.06.2019. No work was being carried out at in this pit. Men and machinery were not found deployed in this pit.

(viii) The records of attendance in form D were kept maintained. The employment register in Form_B was kept maintained (copy enclosed).

(ix) The deep hole drilling and blasting was carried out under the personnel supervision of assistant manager and foreman. The blasting time was reported to be between 1-4pm. A signage of blasting time was displayed on board at several places(photograph enclosed). Transport of explosive in license van for blasting in the mine was done by the explosive supplier that was in agreement with the owner of mine. The records of explosive used and return in RE-13 were being maintained by the explosive supplier (copy enclosed) and firings of shot were done by statutory persons appointed by the owner of mine.

(x) An efficient means of signalling by siren within the radius of 300m from the place of firing was provided and in use (photograph enclosed).

(xi) High mast tower consisting of clusters of bulb was found installed on the haul roads around the quarry of the mine(photograph enclosed) for lighting arrangement to work beyond day light hours.

(xii) There were crushers not belonging to owner of mine within the danger zone in north eastern and north western side. However, the crusher were located outside the danger zone from active working face. The fly rocks generated during the blasting was towards free face. It was informed by the management that the adjoining land to the lease were acquired by the lessee on rental basis. No signs of fly rocks were seen near the adjoining field to the lease.

CONCLUSION:

i) It is to be noted that, Mining lease for Dadam Stone Mine, Khasra No. 132, Ms Goverdhan Mines & Minerals was granted by department of Mines & Geology, Government of Haryana. Consent to operate, consent to establish and environment clearance was granted by the state authority. Simplified Mining Scheme for working the mine in a scientific way by method of opencast mining has been approved by department of Mines & Geology, Haryana

ii) Inspection of Dadam Stones Mines, Ms Goverdhan mines & Minerals was carried out in accordance with the Mines Act, 1952.

iii) Under constitution of India, Safety welfare and health of workers employed in the mines is regulated by the Mines Act, 1952 and subordinate legislations framed under it. This Directorate, a subordinate office under Ministry of Labour & Employment, Government of India administers and oversees the compliance of the provisions of the Mines Act, 1952 & the Rules, Regulations and by-laws framed there under. Besides, this Directorate grants permission under certain regulations for specific mining operations like Deployment of Heavy Earth Moving Machinery & Controlled Blasting.

iv) Inspections are carried out in accordance with Mines Act, 1952 to oversee compliance.

v) Scientific study is not carried out by this Directorate. However, Department of Mines & Geology may engage recognized scientific organisation or institutions to carry out scientific study of the mine.

vi) This inspection was carried out solely on the request of mining officer, Bhiwani without prejudice to any other law in place.

vii) Mining officer, Bhiwani may be addressed. Letter is put up

5/11/2020

A K Das
Dy. Director of Mines Safety
Ghaziabad Region, Ghaziabad

ANNEXURE- 1/2
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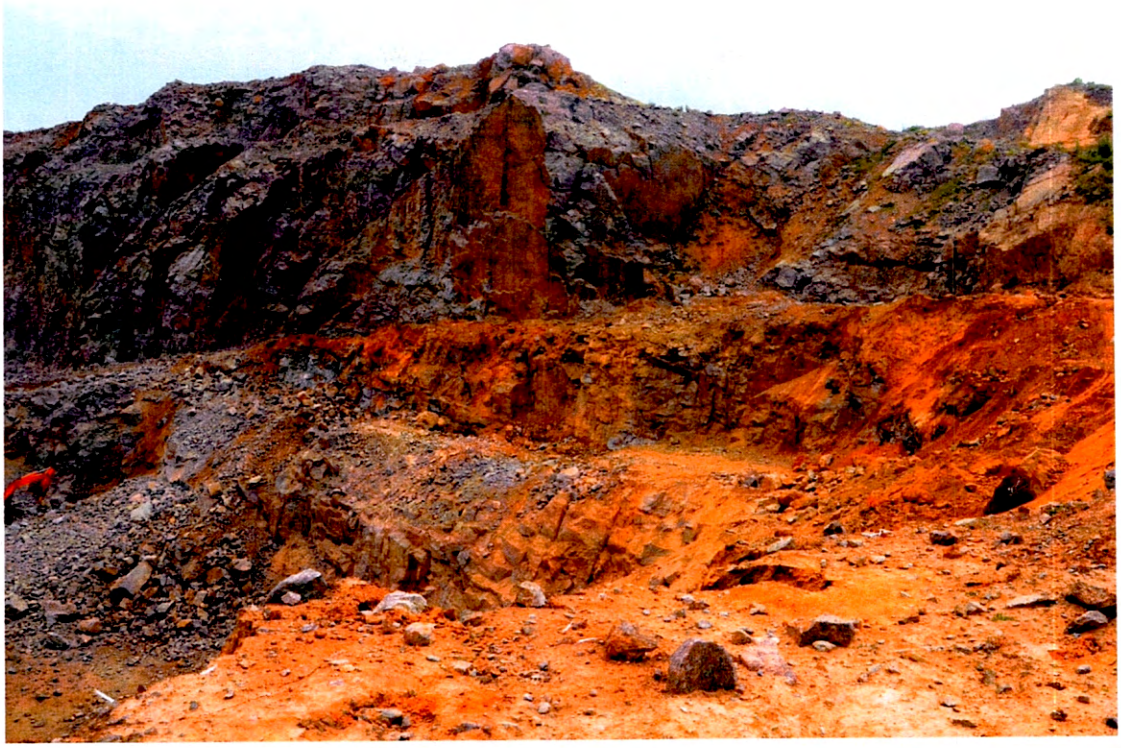

Inclined holes also produce less back-break. In vertical holes this most troublesome feature frequently occurs in heterogenous deposits or where weak sections of rock are present in the immediate vicinity of the column of explosives, such back-breaks can introduce dangerous conditions especially on deep vertical faces. In addition to loose rock which may be left, overhangs occur not infrequently and as is well known, both conditions may be extremely difficult, if not impossible to rectify without resorting to drilling and firing further holes behind the offending area.

It is particularly in the sphere of safety that inclined holes bring the greatest ... advantage, because a face of reasonable height inclined at, say, 25-30°, does not present anything like the hazards that obtain at a vertical face and if unsatisfactory conditions are left after a blast—a possibility with any system using explosives— they can be dealt with easily and safety. The benefits to safety which have been described to establish the case for inclined drilling in deposits to which the system is suited, and the marked improvement achieved at many quarries using this method give reason to believe that its wider adoption is to be expected. It is not the solution ? to all hard rock problems nor is any specific system likely to be put off all current methods; inclined drilling undoubtedly contained fewest inherent weaknesses. (Ref. Quarry Manager's Journal Vol. 47, No. 4, May 1963).

(Cir. 71/1963)

2. Height and width of benches in hard and compact ground—It is recommended that generally the height of a bench in hard and compact ground should not exceed 7.5 metres and the sides of the bench should be sloped at an angle of not more than 60° from the horizontal. The width of the benches should also be not less than the height.

Provided, however, that where there are any practical difficulties in complying with these recommendations, benches in variation of the above mentioned dimensions may be permitted to be made on application subject to such conditions as may be specified in the interest of safety of workpersons on the merits of each case individually. In this connection it may be indicated that no such application would be normally entertained where the benches are worked manually.

(Cir. 42/1965)

3. Conditions for use of heavy machinery/deep hole blasting—Provisions of Regulation 106(2) (b) of the Metalliferous Mines Regulations, 1961 lay down that if in any mine or part thereof it is proposed to work by a system of deep hole blasting and/or with the help of heavy machinery in such a manner as would not permit compliance with the requirements of sub-regulation (1) of the aforesaid regulation, the owner, agent or manager is required to give notice in writing to the D.G.M.S. and the J.D.M.S. Such work can be commenced and carried out only in accordance with the conditions specified by the D.G.M.S.

The conditions subject to which the use of heavy machinery and the adoption of deep-hole technique is permitted by this office have been standardised. A copy of such conditions is given at Appendix for guidance. This may be useful while planning the operations.

(Cir. 36/1972)

APPENDIX

Conditions for adopting a system of deep-hope blasting and/or working opencast mines with the help of heavy machinery for digging, excavation and removal of ore etc. under Reg. 106(2)(b) of MMR 1961

I. GENERAL

1. (1) Except where otherwise provided for in this conditional permission, all provisions of the Metalliferous Mines Regulations, 1961 shall be strictly complied with.

(2) This conditional permission is Subject to amendment or withdrawal at any time.

II. OPENCAST WORKING

Height and Width of Benches

2. (a) The height of the benches in overburden ore body or other rock formation shall not be more than the digging height of the machine used for digging, excavation or removal.
Provided that in case of uniformly soft rocks the Regional Inspector may permit the extension of the height upto 3 metres above the digging height of the machine.

(b) The width of any bench shall not be less than

(i) the width of the widest machine plying on the bench plus two meters,

or (ii) if dumpers ply on the bench three times the width of the dumper,

or (iii) the height of the bench, whichever is more.

Provided that the Chief Inspector may, subject to such conditions as he may specify therein, permit the width of any bench to be less than its height.

(c) When persons are employed within 5 m of the working face, adequate precautions shall be taken to ensure their safety by dressing the sides of the bench.

Roads for Trucks and Dumpers etc.

3.1 All roads for trucks, dumpers or other mobile machinery shall be maintained in good condition.

3.2 Where practicable, all roads from the opencast workings shall be arranged to provide one way traffic. Where this is not practicable, no road shall be of a width less than three times the width of the largest vehicle plying on that road unless, definite turnouts and waiting points are designated.

3.3 All corners and bends in roads shall be made in such a way that the operations and drivers of vehicles have clear view for a distance of not less than 30 metres, along the road.

Where it is not possible to ensure a visibility for a distance of 30 metres there shall be provided two roads for the up and down traffic.

3.4 Except with the express permission of Chief Inspector in writing and subject to such conditions as he may specify therein, no road shall have a gradient steeper than 1 in 16 at any place.

Provided that in case of Ramps over small stretches a gradient upto 1 in 10 may be permitted.

3.5 Where any road exists above the level of the surrounding area, it shall be provided with strong parapet walls or embankments not less than 1 metre in height to prevent any vehicle from getting off the road.

Supervision

4. During every production shift the opencast workings shall be placed under the charge of an assistant manager and during maintenance shift the workings shall be placed under the charge of foreman, who shall be responsible to see that all the regulations and the orders made there under are strictly complied with.

(6) No locomotive or wagon shall be moved when the natural light is insufficient, unless the approaching end is distinguished by a suitable light or is accompanied by a person carrying a lamp.

(7) No person, other than the competent person referred to in-sub-regulation (2), shall pass immediately in front of wagons moving under bins or screens, nor between moving wagons and the under-structure of the bins or screens.

(8) No person shall be upon the buffer of a locomotive or wagon in motion unless there is a secure hard-hold, or stand thereon unless there is also a secure footplace. No person shall pass over the coupling between any two wagons while the wagons are moving.

(9) No person shall cross a line of rails by crawling or passing underneath a train or wagon, nor shall a person sit or sleep underneath a wagon.

(10) Wherever railway wagons are specially placed so as to afford a thoroughfare, such thoroughfare shall be not less than five metres in width.

(11) No material shall be placed or dumped within 1.2 metres from either side of a track of rails.

105. Fencings and gates – (1) Where any haulage road or tramline passes over a public road, suitable gates shall be provided to prevent danger to public from a moving tubs, sets or trains of tubs or locomotive. Every such gate shall be fitted with a danger signal, and when the natural light is insufficient, also with warning lamps.

(2) Where occupied buildings are situated within 15 metres of any haulage road or tramline, a substantial fence shall be provided and maintained between such buildings and the haulage road or tramline.

CHAPTER-XI : Mine Workings

106. Opencast workings – In opencast workings, the following precautions shall be observed, namely: -

(1) In alluvial soil, morum gravel, clay, debris or other similar ground -

(a)(i) the sides shall be sloped at an angle of safety not exceeding 45 degrees from the horizontal or such other angle as the Regional Inspector may permit by an order in writing and subject to such conditions as he may specify therein; or

(ii) the sides shall be kept benched and the height of any bench shall not exc eed 1.5 metres and the breadth thereof shall not be less than the height:

Provided that the Regional Inspector may, by an order in writing and subject to such conditions as he may specify therein, exempt from the operation of this clause any working in the case of which special difficulties exist, which in his opinion make compliance with the provisions thereof not reasonably practicable; and

(b) where any pillar is left 'in situ' for the purpose of measurement, its height shall not exceed 2.5 metres; and where the height of such pillar exceeds 1.25 metres, the base of the pillar shall not be less than 1.6 metres in diameter.

(2) (a) Where 'float' or other similar deposit is worked by manual means on a sloping face, the face shall be benched and the sides shall be sloped at an angle of not more than 60 degrees from the horizontal. The height of any bench shall not exceed six metres and the breadth thereof shall not be less than the height:

Provided that where the ore-body consists of comparatively hard and compact rock, the Regional Inspector may, by an order in writing an subject to such conditions as he may specify therein, permit the height of the bench to be increased up to 7.5 metres while its width is not less than six metres :

Provided further that in case of a mine or part where special difficulties exist, the Chief Inspector may, by an order in writing an subject to such conditions as he may specify therein, relax the provisions of this sub-regulation.

(b) Where in any mine or part it is proposed to work by a system of deep-hole blasting and/or with the help of heavy machinery for its digging, excavation and removal in such manner as would not permit of compliance with the requirement of sub-regulation (1) the owner, agent or manager shall, not less than 60 days before starting such work, give notice in writing of the method of working to the Chief Inspector and the Regional Inspector; and no such work shall be commenced o carried out except in accordance with such conditions as the Chief Inspector may specify by an order in writing. Every such notice shall be in duplicate, and shall give the details of the method of working including the precautions that are proposed to be taken against the anger from falls of sides and material.

(3) In an excavation in any hard and compact ground or in prospecting trenches or pits, the sides shall be adequately benched, slopped or secured so as to prevent danger from fall of sides.

(4) No tree, loose stone or debris shall unless otherwise permitted in writing by the Chief Inspector be allowed to remain within a distance of three metres from the edge or side of the excavation.

(5) No person shall undercut any face or side or cause or permit such undercutting as to cause any overhanging.

107 Underground workings. – In every mine worked by a system of workings below ground, the following provisions shall have effect, namely –

(1) Unless otherwise permitted by the Regional Inspector by an order in writing and subject to such condition as he may specify therein, the height of every main drive shall b not less than 1.8 metres.
(2) The dimensions of pillars or blocks formed in any vein, load, reef or mineral bed or deposit shall be such as to ensure stability of the workings during the development and stoping stages ad between such stages.

1[(3) No extraction or splitting or reduction of pillars or blocks of minerals shall be commenced, conducted or carried out except with the prior permission in writing of the Chief Inspector and in accordance with such conditions as he may specify therein. An application for such permission shall be accompanied by an up-to-date plan of the area where the pillars or blocks of mineral are proposed to be extracted or reduced, showing the proposed extent of extraction or reduction, the manner in which such extraction or reduction is proposed to be carried out, the thickness and other characteristics of the mineral deposit, the rate and direction of general dip and of the pitch of the vein, the nature of hangwall, and footwall, the stoping width, the depth of the workings, and such other particulars as the Chief Inspector may require. A copy of the application and the plan shall simultaneously be sent to the Regional Inspector.

(3-A) The operations of extraction, splitting and reduction of pillars or blocks of mineral shall be commenced, conducted or carried out in such a manner as to prevent, as far as possible, the extension of a collapse in the stoped-out area over-riding the pillars or blocks of minerals that have not been extracted].

(4) Nothing in sub-regulation (3) shall prevent the spilitting or reduction of any pillar or block of mineral bed or deposit where, in the opinion of the manager such work is necessary for haulage, ventilation, drainage or any other purpose necessary for the proper working of the mine, if 14 days' previous notice in writing of the intention to commence such work has been given to the Regional Inspector. Every such notice shall be accompanied by an offset plan showing details of the operation. If in the opinion of the

ANNEXURE-4

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भारतसरकार / Government of India
श्रमएवंरोजगारमंत्रालय / Ministry of Labour & Employment
खानसुरक्षामहानिदेशालय/Directorate General of Mines Safety

No.

DGMS Technical Circular No. 03 of 2019

To

The Owner/Agent/Manager of Coal and Metalliferous Mines.

Subject: Guidelines for implementation of Safety Management Plan in mines.

1.0 The 9th Conference on Safety in Mines in the year 2000 laid the foundation for self-regulation in mines by promoting risk assessment to formulating and implementing Safety Management Plans (SMP). Since then, there has been a consistent thrust from this Directorate for this purpose by way of issuing several advisory DGMS circulars. However, post the recently notified Coal Mines Regulations, 2017 and the Oil Mines Regulation, 2017, the subject matter of SMP has been accorded a statutory berth with the onus to formulate and implement the same having been vested with the Owner, Agent and Manager. A similar provision has been proposed in the Metalliferous Mines Regulations, 1961 which is under amendment.

2.0 SMP is in two distinct parts namely, the formulation and the implementation. Consequent upon the notification of DGMS (Tech) S&T Circular No.5 of 2016, the formulation part of SMP in most large mines in both public and private sectors did witness a positive transformation under the active guidance from this Directorate, from a conceptual state to a document form with principal hazards getting identified along with their mitigating control plans in place.

3.0 However, the experience till date has revealed that all the formulated SMPs have thus far remained only on paper without any auditable documentation on mitigation of the identified principal hazards. Therefore, a technical workshop was organized by this Directorate on the 26th and 27th of November, 2019 at Ranchi to review the progress made and to strategizing implementation of SMP on an auditable mode. The deliberations of the workshop broadly revealed the following status report and shortcomings plaguing the mining companies in this regard.

a) By and large, mines have adopted risk assessments as their preferred vehicle for incorporating consultation in developing and reviewing safety management systems.

b) In a few cases only, the ownership of the SMP document at the level of Nominated Owner of the mine(s) was explicitly visible. In many cases, the involvement of the senior and corporate management was left to be assumed.

c) In some mines, risk assessment was merely as a statutory compliance action without much sensitivity being attached to seriously mitigating the principal hazards.

d) Initial teething troubles on team composition, number of meetings held, involvement of experts, etc., appear to have been reasonably settled. However, qualitatively, the constituted mine level teams appear unfavorably tilted against the contractual component wherever deployed.

e) Invariably in all cases, the devised control plans and procedures were vague, without assigning specific responsibility by name and designation and very often with unrealistic time lines for mitigation.

f) Risk ranking of hazards were often downgraded, without carrying out an objective assessment of existing controls.

g) The terms 'audit' and 'review' in relation to SMP were loosely and arbitrarily being used without detailing the methodology thereof on an auditable scale. Infact, in some mines, review was stated to be on a fixed time interval irrespective and unmindful of the fact that mitigation time as mentioned in the control plans was much more than the review interval as was envisaged.

h) In most cases, the facilitation extended by the corporate management of the mining companies towards enhancement of the techniques of perceiving danger, drawing appropriate control measures, sequential proceduring of measures to be adopted, apportioning responsibilities and realistic timelines for executing procedures, etc., was far from satisfactory.

i) There was practically no visible sign of any training accorded to the mine level personnel to imbibe the vital ethics of scientifically managing an organization to bringing about the required cultural transformation for SMP to cement its due place in the corporate management policy.

j) **Unfortunately, all the efforts till date appeared to have been made to merely formulating SMP and NOT implementing the same on an auditable scale. Not a single mine appeared to have completed even one full cycle of SMP from formulation to implementation on an auditable scale.**

k) Despite the above, the quality of preparing SMP appeared to be upward looking meaning thereby that by repeated cycles of SMP with deployment of latest techniques could further sharpen the skills of the teams engaged on hazard identification.

l) **Therefore, the entire exercise of preparation and implementation of SMP in mines still is left with huge scopes of improvement.**

4.0 In view of the above findings and to accelerating the introduction of the doctrine of self-regulation in mines through SMP, it would be prudent to continue the process in the right earnest, encompassing the following measures.

4.1 **Formulation of SMP**:

a) Corporate management of mines shall initiate immediate necessary steps to enhancing and fine tuning the techniques of perceiving danger, drawing appropriate control measures with framing of sequential proceduring of measures to be adopted, apportioning responsibilities and realistic time lines for executing procedures, etc.

b) Corporate management of mines shall hold structured training programmes on regular basis to sensitize the stakeholders (workmen/supervisors/managers) about their role in formulation and management of SMP.

c) For now, the categorization and/or ranking of risks for hazard identification may be done by using any of the two methods as explained in DGMS (Tech) (S&T) Circular No. 05, dated 2nd April 2016and DGMS (Tech) Circular (MAMID)/01 dated 10th March 2014. However, this is an area into which, the corporate managements could invest adequate resources to engaging appropriate agencies on a continuous scale for bettering various techniques of hazard identification on a scientifically justified basis.

4.2 **Implementation of SMP on an auditable mode**: For breaking the current static status of non-implementation of SMP on an auditable scale in mines, the following pre-requisites are to be carefully evaluated.

4.2.1 That, the formulated SMP is on an acceptable scale with various principal hazards having been identified by proper stake holding group(s) from the mine and with the assistance of experts in the field wherever necessary.

4.2.2 That, for each identified principal hazard, there are one or more mechanisms involved in the control plan, which are well detailed in respect of the control(s) and procedure(s).

4.2.3 That, for each procedure or a set of procedures, the name(s) and designation(s) of persons made responsible for execution of the procedure(s) on a unique or shared basis as the case may be, shall be clearly indicated (herein referred to as the 'person responsible').

4.2.4 That, for every procedure detailed as above, the envisaged time of completion shall **NOT** be shown in **DAYS BUT** only as a **CLEAR DATE**.

4.2.5 That, for the formulated SMP document, a unique number shall be allocated and mentioned at the top of each page for all future reference purposes. The formulated SMP document shall be suitably numbered on each page and also properly indexed item-wise. Care shall be taken to having an appropriate protocol for document numbering and indexing purposes.

4.2.6 That, the formulated SMP document so prepared shall be approved/accepted/vetted in writing at the level of the Nominated Owner of the mine.

4.2.7 That, the approved/accepted/vetted SMP document by the Nominated Owner in writing shall be suitably bound and a copy of the same shall be made out to every stake holder including 'persons responsible' in the control plans.

4.3 **Initial steps of implementation**: For the purpose of implementation, the time-line shall be deemed to commence from the date of approval/acceptance of the SMP document in writing by the Nominated Owner.

4.4 **Major steps of implementation of the approved/accepted/agreed SMP**:

4.4.1 For every **procedure in the control plan**, a **chronological order of mitigative actions** taken shall be created in a document form hereinafter referred to as the '**Workplan**'.

4.4.2 The created workplan is essentially a textual document containing one or more pages of various directions, instructions, etc., in writing as may be made at various levels of management hierarchy during the course of proceeding towards the logical conclusion of the completion of the procedure(s).

4.4.3 Every workplan shall be captioned on top of the cover page with a unique reference number. Below the captioned number, the particular procedure of the approved/ accepted/agreed SMP document for which this workplan is being made along with the page number and the indexed item number as shown thereat, shall be clearly mentioned as the subject of the workplan.

4.4.4 Below the subject, details of the 'person responsible' and the target date as contained in the approved/accepted/ agreed SMP document shall be mentioned.

4.4.5 After this, the 'person responsible' shall initiate in writing, the chronological steps as may be required of him to accomplishing the procedure, by referring the workplan to appropriate levels in the management hierarchy for decisions, sanctions, approvals, etc. From this point onwards, the workplan may take a journey through various levels of the management hierarchy in accordance with the notings contained thereat. At no point in time can anyone

participating in the journey of the workplan take any plea of missing the caption as mentioned above with a clear time line. **Therefore, all such involved levels in the journey are morally and officially bonded to the outcome of the procedure in respect of the time involved at individual levels and the delivery made.**

4.4.6 The final outcome of the workplan shall be the statement of completion of the procedure by the 'person responsible', **presented in writing to the authority which can accept the outcome as such or order appropriate modifications, etc., in writing.**

4.4.7 After completion of the procedure as acknowledged by the accepting authority in writing in the workplan, a mention to this effect shall be made in the control plan of the approved/accepted/agreed SMP clearly indicating the date of completion and the reference number of the workplan.

4.4.8 The workplan so made shall be **preserved for audit/examination**, at a later date.

4.4.9 Likewise, **similar sets of workplans** shall be **prepared in respect of all other procedures in the control plan of** approved/accepted/agreed SMP **for each identified principal hazard and appropriate entries to this effect as mentioned at para 4.4.7 are** made in the approved/accepted/agreed SMP document.

4.4.10 **After all workplans as above** are completed for all the identified principal hazards and appropriate entries made in the approved/accepted/agreed SMP document, the **first cycle of the journey of SMP may be considered as ready for audit**.

4.4.11 Complete internal audit of the SMP shall then be **taken-up initially by the ISO of the company** by constituting a team appropriately for the purpose. **The scope of the audit shall include both formulation and implementation of SMP, along with examination of all supporting documents, workplans, etc.** After satisfactory internal audit, any external audit may also be conducted as may be deemed fit by the management.

4.4.12 **If not accepted by the audit team**, various queries as may be raised by the audit team shall have to be addressed accordingly within a justified time frame as may be fixed by the audit team, to enabling re-audit.

4.4.13 On satisfactory completion of audit, **the SMP may be classified as having completed one complete cycle.** The audit team shall accordingly certify in writing, affixing signatures with date of the audit team members.

4.4.14 The management shall then commence review of the SMP in the second cycle in which, the earlier identified hazards are generally not expected to get repeated.

4.4.15 All such audited and certified SMP shall be **carefully preserved for future references, scrutiny, etc.**

5.0 **<u>Outcome of each cycle of SMP</u>**: After each cycle, the following vital information will be available for critical review and further process refinement in the subsequent cycles.

5.1 Mismatch, if any, on the assessment of time for completion of various procedures at the time of formulation of control plans, with the actual time taken.

5.2 Areas of any generic procedures as may have been decided while formulating SMP, to be appropriately improved with finer detailing.

5.3 Apportioning of responsibilities to appropriate person(s) for easier and effective completion of the allocated procedure(s) in the control plan of the SMP.

5.4 Adequate scope of better understanding of the intricacies of various mining processes, thereby, enhancing managerial/supervisory/functioning skills amongst various stake holders.

6.0 **Conclusions:**

6.1 With repeated cycles of SMP accomplished in serious earnest, various mining systems/ processes/work procedures will automatically get refined to better both process safety and efficiency while also proactively empowering all stake holders.

6.2 **However, the true essence of SMP will be realized only by appropriately digitizing the entire SMP implementation methodology as mentioned above, leading to radical transformation and irreversible betterment of the safety status and various mining systems/processes/work procedures in place in mines.**

7.0 Therefore, all Owners, Agents and Mangers of coal and metalliferous mines are requested to

a) use the aforementioned guidelines to ensure that SMP is carried out meaningfully at the mines for overall enhancement of safety in mines,

b) take steps to removing various shortcomings as mentioned above and to qualitatively improving the required skills for SMP formulation,

c) introduce appropriate digital/IT mechanisms for SMP implementation,

d) submit a return as per the enclosed format, on the 1st day after each quarter of calendar year in respect of the progress made into mitigating the identified principal hazards, to the respective Regional Inspector of Mines, and

e) monitor the progress made in implementation of SMP in mines on a measureable scale in appropriate internal forums including the meetings of the Board of Directors of the company.

23/12/15

(R. Subramanian)
Director General of Mines Safety(Off.)

Encl: As above.

STATUS REPORT ON PROGRESS MADE INTO MITIGATION OF ALL THE IDENTIFIED PRINCIPAL HAZARDS.

1.0 Name of the Mine:

2.0 Name of the Owner:

3.0 Name of the Agent:

4.0 Name of the Manager:

5.0 Status report for the quarter ending on : (date)

No.	List of Principal Hazard identified.	Mitigation date as per formulated SMP.	Details of auditable work plans made for mitigation.	Actual date of completion as per workplan.	Remarks, if any.
1.					
2.					
3.					
4.					

(Signature with date of the Manager) (Signature with date of the Agent)

(Signature with date of the Owner)

ANNEXURE-1/5
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M/s. Govardhan Mines & Minerals

Site : Dadam Mine, Dadam (Tosham)
Regd. Office : Near Hisar Naka, Khanak (Tosham)
Email ID: govardhanminesminerals@gmail.com Contact : 9992100001

To,

The Director of Mines and Safety,
Ghaziabad Region
CGO Complex, Hapur Road, Ghaziabad (UP)

Sub : **Approval for Safety Management Plan**

Sir,

We are enclosing herewith a copy of Safety Management Plan in respect of Dadam Stone Mines Village Dadam (Tosham), Bhiwani. The said mine is owned by us i.e. M/s Govardhan Mines and Minerals village Dadam.

Kindly accord necessary approval of the Mines Safety Plan.

Date : 22 Dec 2020

For Govardhan Mines & Minerals
Near Hisar Naka, Khanak (Tosham)

22/12/2020

ANNEXURE-R1/6

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Gmail

sanjay sinha <sanjay7.sinha@gmail.com>

Regarding Approval of Safety Management Plan

1 message

sanjay sinha <sanjay7.sinha@gmail.com> Wed, Mar 30, 2022 at 12:42 PM
To: First NameAnil Das <anil_kumar.mnd70@yahoo.in>, meenaramawatar@gmail.com
Cc: nz.dgms@gmail.com, satish_2306@rediffmail.com

Respected Sir,
After a discussion with you, I am again sending you the revised copy of the Safety Management Plan as per your guidance. So, Please approve this.
Thankyou

Please Find Attachment below.

SMP MGE dated 23.3.2022 word file.pdf
3261K

ANNEXURE-R1/7

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Speed Post

Telephone 0120 2711587
(office)

website www.dgms.gov.in
email gzbregion.dgms@gmail.com

आज़ादी का अमृत महोत्सव

भारत सरकार / Government of India
श्रम एवं रोजगार मंत्रालय Ministry of Labour & Employment
खान सुरक्षा महानिदेशालय / Directorate General of Mines Safety
गाजियाबाद क्षेत्र, गाजियाबाद / Ghaziabad Region, Ghaziabad

कमरा संख्या- 101 • 102, प्रथम तल, बी. ब्लॉक, सी.जी.ओ. कॉम्प्लेक्स-II, इन्दिरा पुरम, गाजियाबाद- 201002

संख्या:डीएमएम/एस एम पी डाडम /365 दिनांक 13/ 6 /2022

प्रेषक:
खान सुरक्षा निदेशक,
गाजियाबाद क्षेत्र, गाजियाबाद

सेवा में,
श्री संजय कुमार सिन्हा, खान प्रबन्धक
डाडम स्टोन खान, खसरा नंबर 132,
मैसर्स गोवर्धन माइन्स एंड मिनरल्स, हाउस नंबर 51, अरबन एस्टेट-II
हिसार, जिला- हिसार (हरियाणा) 125001

विषय:- Safety Management Plan of Dadam Stone Mine of M/s Goverdhan Mines & Minerals- Regarding

महोदय,

In reference to above subject, your letter no. nil, dated 30.03.2022 enclosing there with a copy of Safety Management Plan of Dadam Stone Mine, M/s Goverdhan Mines & Minerals (Nominated Owner-Sri Wazir Singh Kuhar) received in this Directorate on dated 12.04.2022.

In this regard your attention is drawn to DGMS (Tech) Circular Nos. (DGMS(Tech)(S&T)13/2002,02 /2011,DGMS(Tech) 05/2016) & 3 of 2019) Whereby it is required to formulate, implement and periodically review/audit, safety management plan of mine as per the guidelines mentioned in the above circulars, by Owner, Agent and manager of the mine.

भवदीय
13/06/2022
खान सुरक्षा निदेशक
गाजियाबाद क्षेत्र, गाजियाबाद

Annexure-P-1/8
3D

CENTRAL INSTITUTE OF MINING & FUEL RESEARCH
(Council of Scientific & Industrial Research)
Roorkee Research Centre, Uttarakhand – 247 667

Report on

Study on Stability Status of Slopes in Dadam Stone Mine of M/s Govardhan Mines & Minerals, Hisar, Haryana

1. INTRODUCTION

This report is intended to present preliminary geological field analyses and observations at Dadam Stone Mine of M/s Govardhan Mines and Mineral in Hisar District of Haryana where stone mining is being carried out having a mine lease area of 48.87 Ha with the project capacity of 15307992 TPA. In consideration of safe mining operations, M/s Govardhan Mines and Minerals had requested CSIR-Central Institute of Mining and Fuel Research (CIMFR) Regional Research Centre Roorkee (UK) vide letter NO. DSM/2021 22/001 dated 08.03.2022 to investigate the stability status of mine slopes to ascertain the critical slopes so that a safe working environment can be ensured during ongoing mining operations.

In the view of above, a team of scientist, technical officer and project staff of CSIR-Central Institute of Mining and Fuel Research visited the mine site from 12th March to 16th March 2022 for the collection of geological-geotechnical field data required for stability study at Dadam Stone Mine near Tosham Tehsil (Haryana).

During mine visit, geological and geotechnical data related to various rock and joint parameters such as slope & joint orientations, Joint Volumetric Count (Jv), Joint Compressive Strength (JCS), Joint Roughness Coefficient (JRC), persistence, spacing, aperture, infilling, weathering and groundwater conditions were recorded. Additionally, Dadam Mines management invited a team of Geosystem Survey Software Pvt. Ltd. for LiDAR (Light Detection and Ranging) survey of critical mine slopes and working pits areas. The acquired point cloud data of prevailing joints and 3D geometrical configuration of existing pits were also communicated with the CIMFR team. This report contains the

preliminary observations of the field investigation. Further, one site visit may require finalizing the report as per objectives.

2. OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

a) Geological investigation of rock masses to predict slope conditions
b) Kinematic analysis to predict the multi-oriented joints-controlled failures
c) Rock mass characterization
d) Stability analysis of mine slopes through numerical methods
e) Assessment of stability status of mines slopes.

3. GEOLOGY OF STUDY SITE

Dadam Mine is located near Dadam village, Tehsil -Tosham, District Bihawni of Haryana state. It is one of the isolated inselbergs including Khanak, Tosham, Riwasa, Dulheri, Nigana, Dharan, Kharkhari and Sohan. The area is covered by older alluvial deposits of Quaternary age and Aeolian sands marked by Aravalli hill exposures. Older alluvium occurs extensively in the area consisting of inter-bedded, lenticular, inter-fingering deposits of gravel sand, soil, clay, and Kanker mixed in various proportions. Dadam hill is a part of the Tosham Ring Complex (TRC) which is the remanent of the outer ring of a fallen chamber of an extinct volcano dated around 732 million years ago equivalent to the Lower Vindhyan Group. The geological province of TRC is an oval-shaped ring dyke on the fringes of a collapsed caldera from Khanak to Nigana Khurd on its NW- SE axis and Dadam to Tosham on its E-W axis. Except for the Tosham hills, all other exposures of the TRC are intrusive rocks including Dadam hill. TRC is a part of the Malani Igneous Suite which is the largest felsic igneous province situated in the NW part of India. The lithological units at Dadam resemble the second stage of discordant pluton of alkali and alkali feldspar granite. The granite at Dadam is hard, homogeneous and non-foliated. It is characterised by pink to grey coloured medium-grained rocks consisting of quartz, feldspar and biotite as major minerals with porphyritic texture. These granites are the host of minor minerals for the production of masonry stone.

4. LITERATURE & DGMS RECOMMENDATIONS ON MINE SLOPE STABILITY

In a working opencast or stone mine, the stability of slopes is dictated by the presence of discontinuity planes, faults, joints and bedding planes and associated rock mass parameters. The mutual orientation of joint and mine slope exhibits different modes of failure as follows:

a) **Plane failure-** It occurs when a geological discontinuity such as major fault plane bedding Plane, minor faults strike Parallel to the slope face at a flatter angle than high wall bench as shown in (Fig. 1). The weight of the sliding mass is calculated from the geometry of the slope and the failure plane. A tension crack running parallel to the crest of the slope can also be included in the calculation.

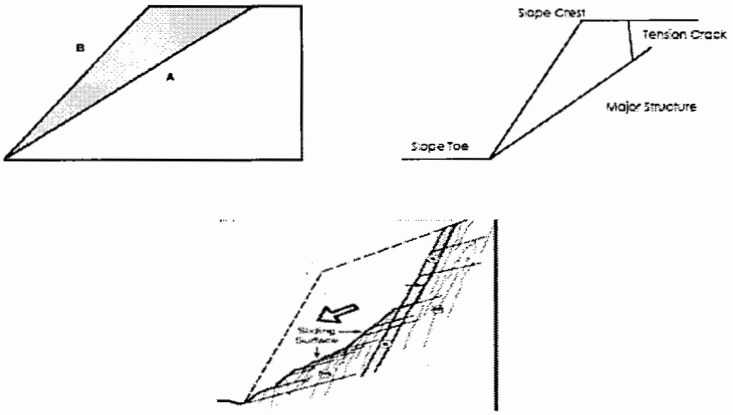


Figure 1: Planar failure

b) **Wedge failure -** when two discontinuities strike obliquely across the slope face and their line of intersection daylights in the slope face, the wedge of rock resting on these discontinuities will slide down the line of intersection. The circulation of the factor of safety is more complicated than that for plane failure since the base areas of both failure planes as well as the normal forces on these planes must be considered for stability calculation (Fig. 2).

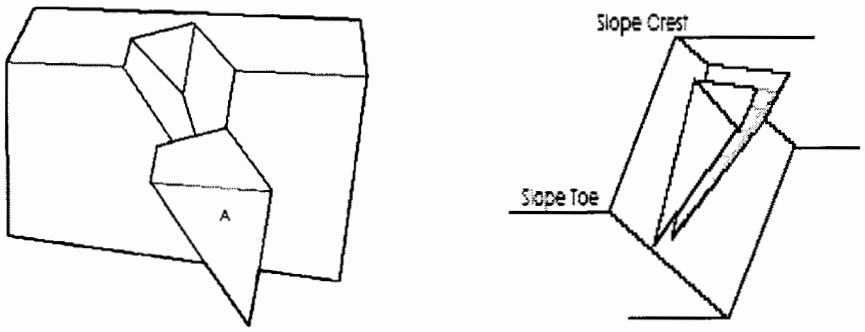


Figure 2: Wedge failure

c) **Toppling Failure:** A topple is recognized as the forward rotation out of a slope of a mass of soil or rock around a point or axis below the center of gravity of the displaced mass (Fig. 3a). Toppling is sometimes driven by gravity exerted by the weight of material upslope from the displaced mass. Sometimes toppling is due to water or ice in cracks in the mass. Topples can consist of rock, debris (coarse material), or earth materials (fine-grained material). Topples can be complex and associated with planar and wedge failures.

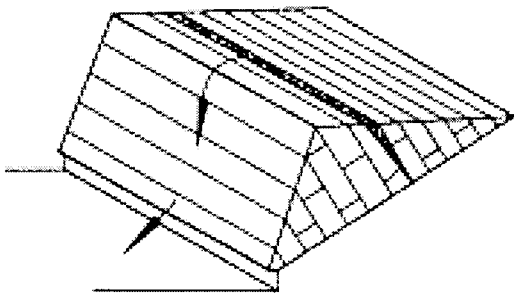


Figure 3a: Toppling failure

d) **Circular failure -** when the material is very weak, as in a soil slope, or when the rock mass is heavy jointed or broken, as, in a waste rock dump, the failure will be defined by a single discontinuity surface but will tend to follow a circular failure path. Such type of failure is very common in the case of soil strata in the high-wall or the waste rock dump backfilled or dumped outside the quarry (Fig. 3b).

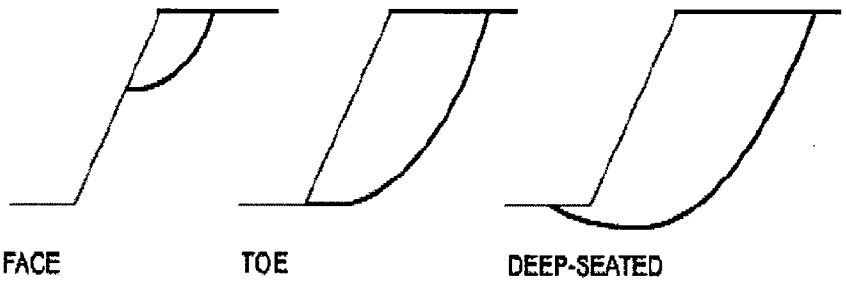


Figure 3b: Circular failure

Directorate General of Mines Safety (DGMS) also published the guidelines vide DGMS (Tech.) (S&T) Circular No. 02 Dhanbad, Dated 06.07.2010 for Design, Control and Monitoring of Pit and Dump Slopes in Opencast Mines.

The DGMS recommended the following as per the above circular. It is essential to take the following steps for safe slope design:

(i) Designing the mine and pit as well as the dump, slope scientifically taking into consideration of geotechnical parameters of rock and the dumps including hydrogeological and weather conditions to ensure a stable pit and dump slope profile not only during mining but also thereafter; and

(ii) Deploy Slope Stability Radar (SSR) with an integrated visual imaging system or any similar such technology giving real-time monitoring of displacements of strata or dumps well in advance of any failure and providing mine management sufficient time to safely withdraw men and machinery from such prone areas. Such systems would not only increase safety but also the productivity and efficiency of opencast operations. Given the seriousness of the implications of ground movements in open-pit excavations, all mining companies having open-pit excavations are urged to immediately initiate a time-bound concrete action plan on the above matters.

5. FIELD INVESTIGATION

5.1 Geological and Geotechnical field survey

Based on the collected joint and rock mass parameters using various field-based methods (Fig. 4 & 5), the pit wise observations are presented in this section. Point cloud data acquired from the LiDAR survey has been used to decipher the 3D geometrical configuration of critical pits (Fig. 6). Kinematic analysis using Dips v6.0 software is used to plot the joints data on stereographic projection. Later on, the collected field data was used to determine the rock mass classification systems such as RMR and Q slope for the critical mine slopes. During the field study, it was observed that the rock masses of the mine slopes have moderate to high weathering particularly the crown of the slopes.

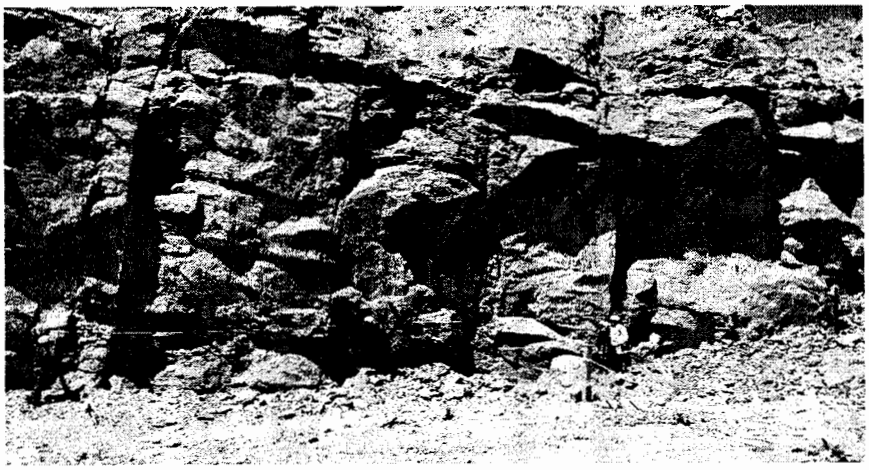


Figure 4: On-field Scan-Line Survey for Joint

Figure 5: On-field estimation of Friction Angle (Φ_b) & Roughness

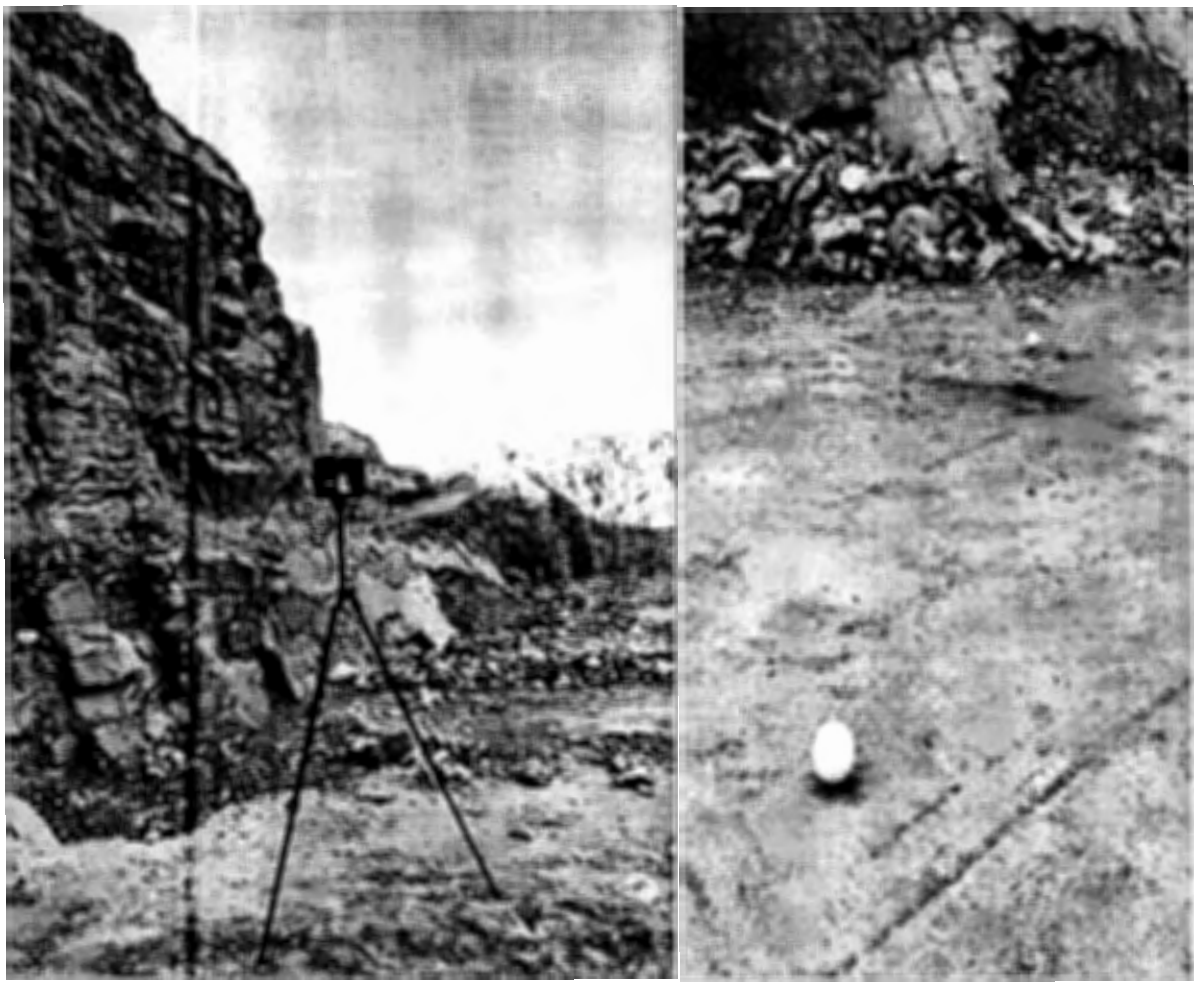


Figure 6: LiDAR (Light Detection and Ranging) survey of mine slopes

Barton Comb, Burton Compass, a geological hammer, Schmidt hammer and measuring tape were used for data collection and recording. Pit wise distribution of slopes mentioned as East wall and West Wall incorporated in the field study.

6. PIT WISE GEOTECHNICAL REPORT ON SLOPE FAILURE

6.1 Pit No. 37 & 38

Its boundary is located adjacent to the Revenue Forest area (Aravalli hills) in both the Eastern and Western margins. Both these areas are under the jurisdiction of the State Forest Department. A failure accident had happened in this pit which is observed to be geologically controlled due to unfavourable joint orientations and saturation of the joint infilling materials upon saturation. Rock mass of the concerned slope appears very blocky and competent, however, the kinematically unfavourable orientation of joints may lead to the discontinuities-controlled wedges and toppling of varying dimensions. The flow trails of infilled joint material (clay and silts) were quite observed on the remnant vertical and day-lighted oblique jointed wall which signifies the water inflow within the open joints (Fig. 7) that created a slip surface and sudden decrease in shear strength along the basal joint plane.

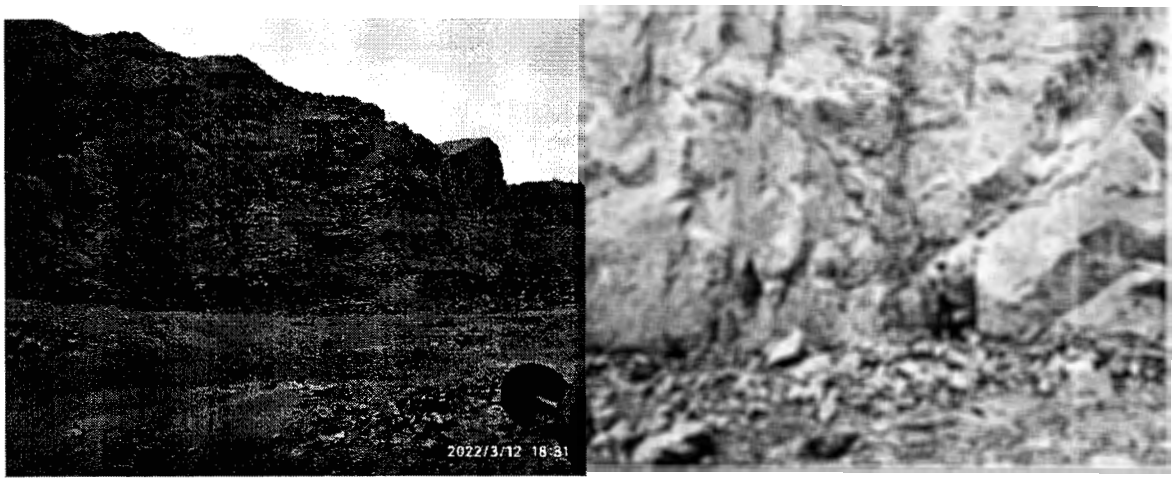


Figure 7: Lithology and Shear Zone in Pit No. 37 & 38

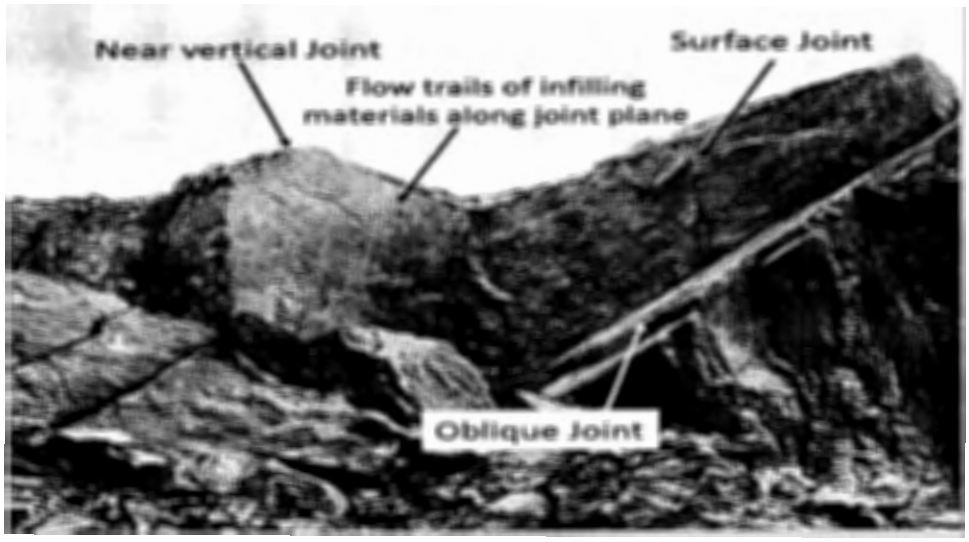


Figure 8(a): Joint Orientation and observed Staining in Pit No. 37 & 38

Figure 8(b): Probable dimension of the dislodged wedge

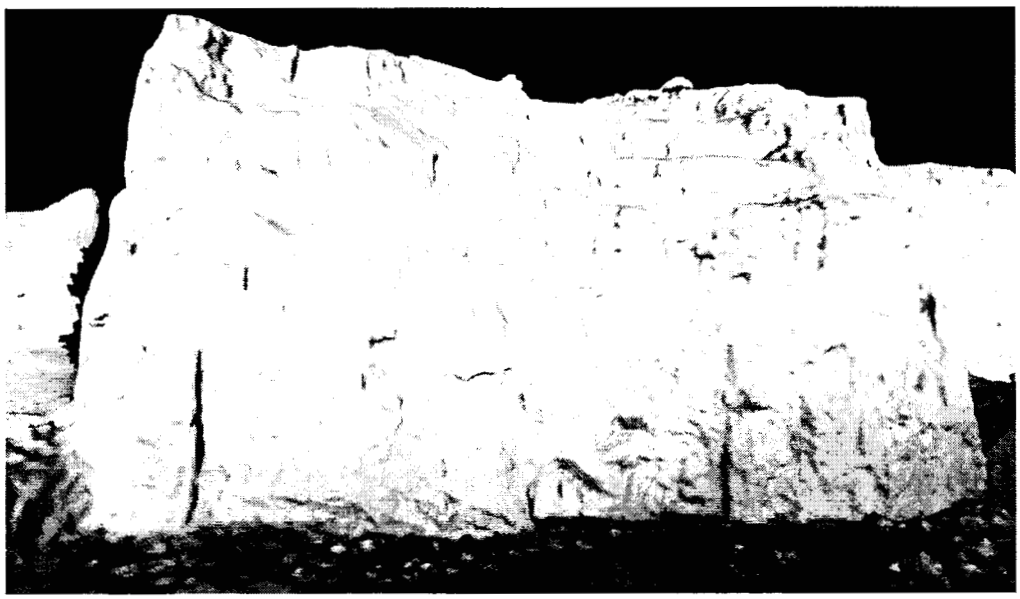


Figure 9: Three-dimensional profile of Pits No. 37 & 38 of the East (upper) & West wall (lower)

The exiting slope section consists of three sets of major joints with random ones (Fig. 8 a). The exposed joints are quite persistent (> 22 to 55 m) with wide to very wide spacing (8-10 m) that instigate the occurrence of very large to extremely large in-situ blocks potential for failure (Fig. 8b). The three-dimension profile of the pits scanned by Lidar is shown in Fig. 9.

Table 1. RMR parameters range and the average rating for existing rock masses at the West wall of Pit No. 37 & 38

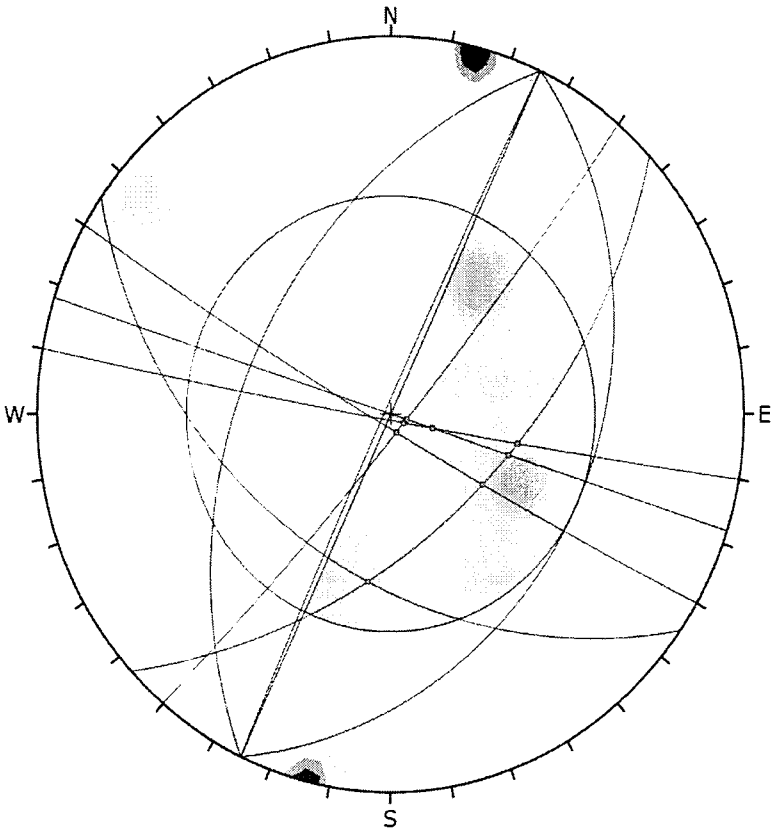
Locations		Parameters									Final rating RMR_{basic}
		UCS (MPa)	RQD (%)	Spacing (mm)	Joint condition					Ground water condition	
					Persistence (m)	Aperture (mm)	Roughness	Infilling	Weathering		
Pit No. 37 & 38	Range	146-171	72-80	60-200	>20	1-17	Planar undulating to rough	Soft < 5 mm	Mod. Weathered	Completely dry	
	Rating	12	13	8	0	0	3	2	3	15	56

Table 2. RMR parameters range and the average rating for existing rock masses at the East wall of Pit No. 37 & 38

Locations		Parameters									Final rating RMR_{basic}
		UCS (MPa)	RQD (%)	Spacing (mm)	Joint condition					Ground water condition	
					Persistence (m)	Aperture (mm)	Roughness	Infilling	Weathering		
Pit No. 37 & 38	Range	50-100	50-75	60-200	>20	>5	Planar undulating to rough	Soft < 5 mm	Mod. Weathered	Completely dry	
	Rating	7	13	8	0	0	3	2	3	15	51

The visual inspection suggests that mine slopes are the potential for geologically controlled block failures that also include intermittent rockfall of varied scales due to overhanging blocks. Kinematic analysis of the failed slope suggests a high potential for large wedge type

failure released from the near-vertical joint and gravitation sliding on the obliquely laid day-lighted joints (Fig. 10a-d).



Symbol	Feature
▫	Critical Intersection

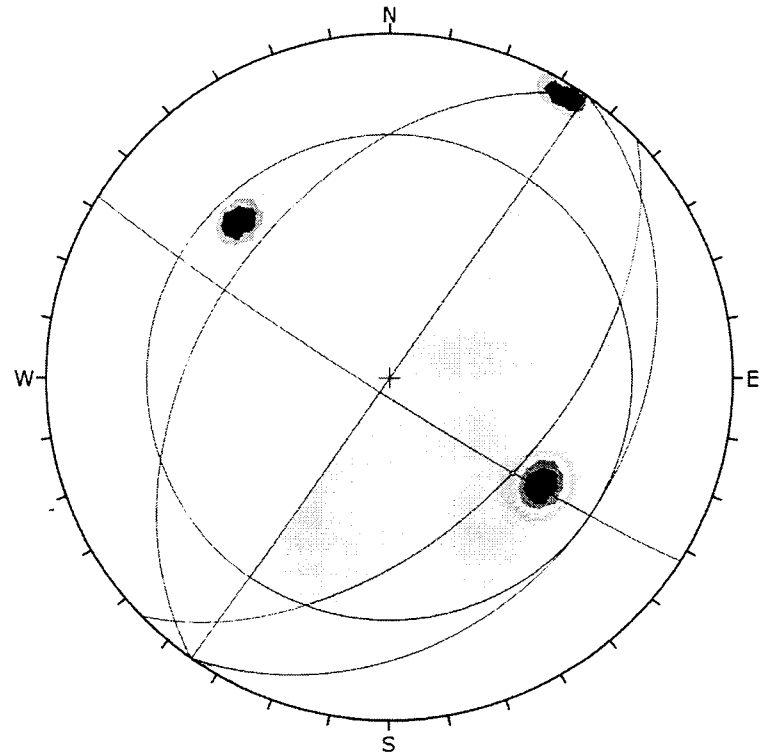
Color	Density Concentrations
	0.00 - 2.40
	2.40 - 4.80
	4.80 - 7.20
	7.20 - 9.60
	9.60 - 12.00
	12.00 - 14.40
	14.40 - 16.80
	16.80 - 19.20
	19.20 - 21.60
	21.60 - 24.00

Maximum Density	23.24%
Contour Data	Pole Vectors
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Wedge Sliding		
Slope Dip	90		
Slope Dip Direction	115		
Friction Angle	30°		
	Critical	Total	%
Wedge Sliding	8	28	28.57%

Plot Mode	Pole Vectors
Vector Count	8 (8 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	28
Hemisphere	Lower
Projection	Equal Angle

Figure 10a: Potential wedges from collected joint data



Symbol	Feature
▫	Critical Intersection

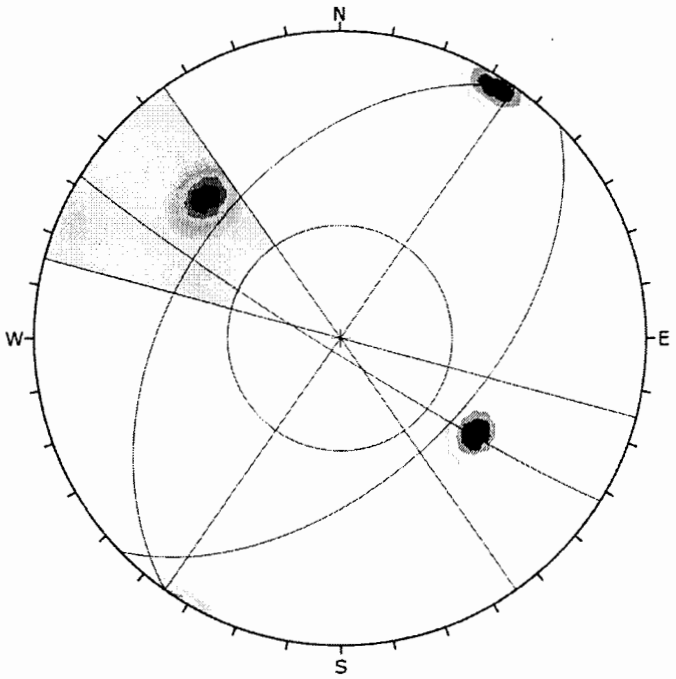
Color	Density Concentrations
	0.00 - 3.40
	3.40 - 6.80
	6.80 - 10.20
	10.20 - 13.60
	13.60 - 17.00
	17.00 - 20.40
	20.40 - 23.80
	23.80 - 27.20
	27.20 - 30.60
	30.60 - 34.00

Maximum Density	33.20%
Contour Data	Pole Vectors
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Wedge Sliding		
Slope Dip	90		
Slope Dip Direction	125		
Friction Angle	30°		
	Critical	Total	%
Wedge Sliding	1	3	33.33%

Plot Mode	Pole Vectors
Vector Count	3 (3 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	3
Hemisphere	Lower
Projection	Equal Area

Figure 10b: Potential wedges from mean joint data



Color	Density Concentrations
	0.00 - 3.40
	3.40 - 6.80
	6.80 - 10.20
	10.20 - 13.60
	13.60 - 17.00
	17.00 - 20.40
	20.40 - 23.80
	23.80 - 27.20
	27.20 - 30.60
	30.60 - 34.00

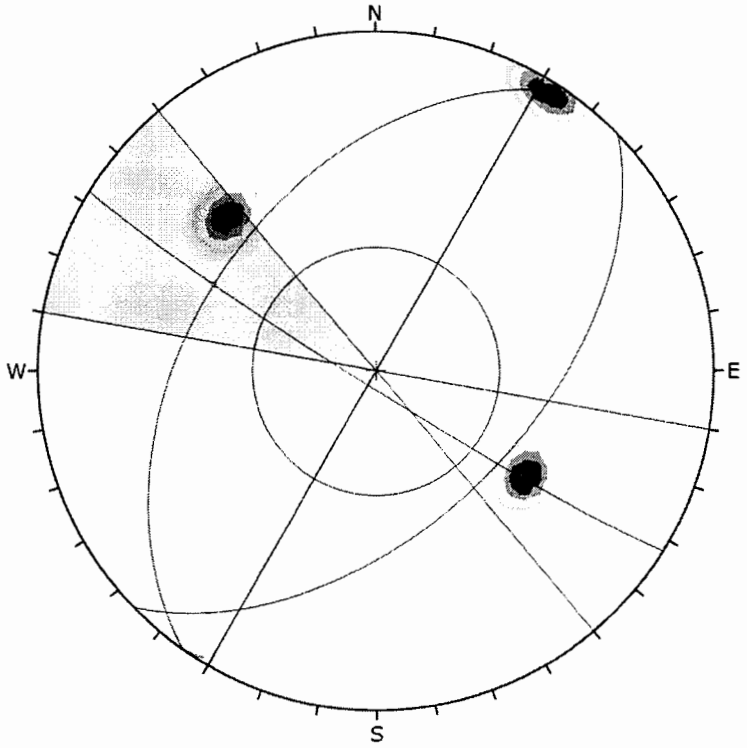
Maximum Density	33.20%
Contour Data	Pole Vectors
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Planar Sliding
Slope Dip	90
Slope Dip Direction	125
Friction Angle	30°
Lateral Limits	20°

	Critical	Total	%
Planar Sliding (All)	1	3	33.33%

Plot Mode	Pole Vectors
Vector Count	3 (3 Entries)
Hemisphere	Lower
Projection	Equal Area

Figure 10c: Potential planar failure from mean joint data



Symbol	Feature
▫	Critical Intersection

Color	Density Concentrations
	0.00 - 3.40
	3.40 - 6.80
	6.80 - 10.20
	10.20 - 13.60
	13.60 - 17.00
	17.00 - 20.40
	20.40 - 23.80
	23.80 - 27.20
	27.20 - 30.60
	30.60 - 34.00

Maximum Density	33.20%
Contour Data	Pole Vectors
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Direct Toppling
Slope Dip	90
Slope Dip Direction	120
Friction Angle	30°
Lateral Limits	20°

	Critical	Total	%
Direct Toppling (Intersection)	1	3	33.33%
Oblique Toppling (Intersection)	0	3	0.00%
Base Plane (All)	1	3	33.33%

Plot Mode	Pole Vectors
Vector Count	3 (3 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	3
Hemisphere	Lower
Projection	Equal Area

Figure 10d: Potential toppling from mean joint data

6.2 Pit No. 47

Similarly, Pit No. 47 is investigated and geological data is recorded for analysis. The height of the east wall is approx. 40 m and the height of the west wall is approximately 20 m with

nearly vertical in condition on both sides. Overhanging blocks are prone to failure. The presence of dyke intrusion is also observed in the granitic rock mass of Pit No 47 which is weakening the overall stratigraphy of the area. Multiple blocks due to multiple joint sets may be the possible reasons for slope failure if any disturbance is encountered as shown in Fig. 11. RMR parameters and the average rating for existing rock mass are as below table. RMR_{basic} for the west and east wall is 62 and 53 respectively (Table 4 & 5) but due to multiple joints and dyke intrusions in the west wall failure chances are high in the nearly vertical slopes.

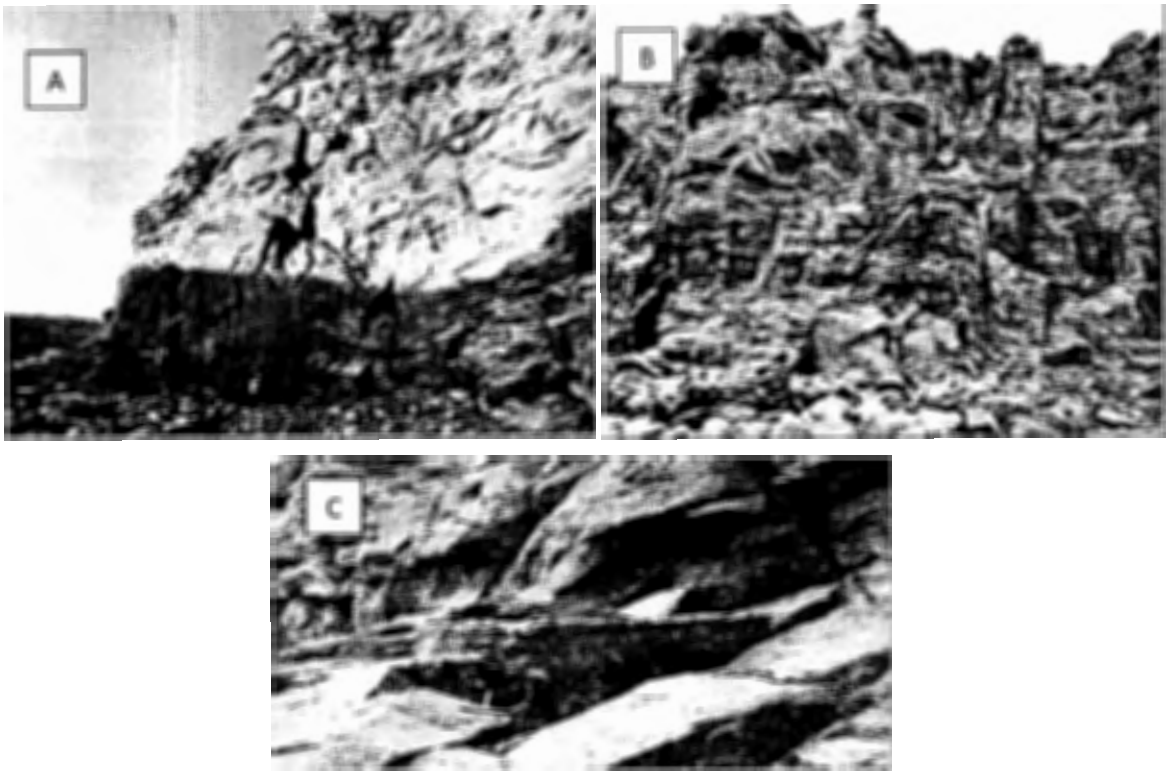
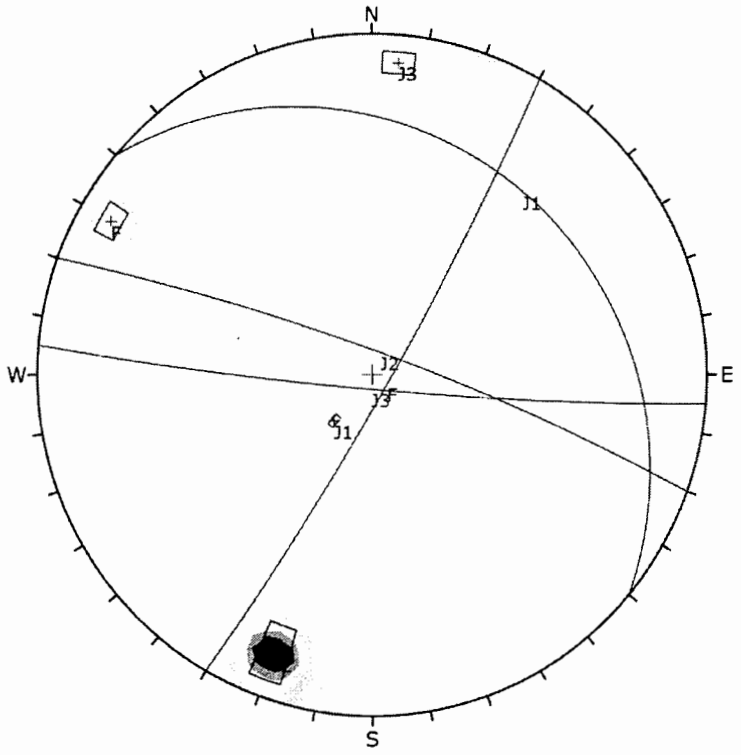


Figure 11: East wall (A) West wall (B) & Observed dyke in west wall (C) in Pit No 47

Table 4. RMR parameters range and average rating for existing rock masses at the West wall of Pit No. 47

Locations		Parameters									Final rating RMR_{basic}
		UCS (MPa)	RQD (%)	Spacing (mm)	Joint condition					Ground water condition	
					Persistence (m)	Aperture (mm)	Roughness	Infilling	Weathering		
Pit No. 47	Range	100-250	75-90	60-200	>20	>5	Planar undulating to rough	Soft < 5 mm	Mod. Weathered	Completely dry	
	Rating	12	17	10	0	0	3	2	3	15	62

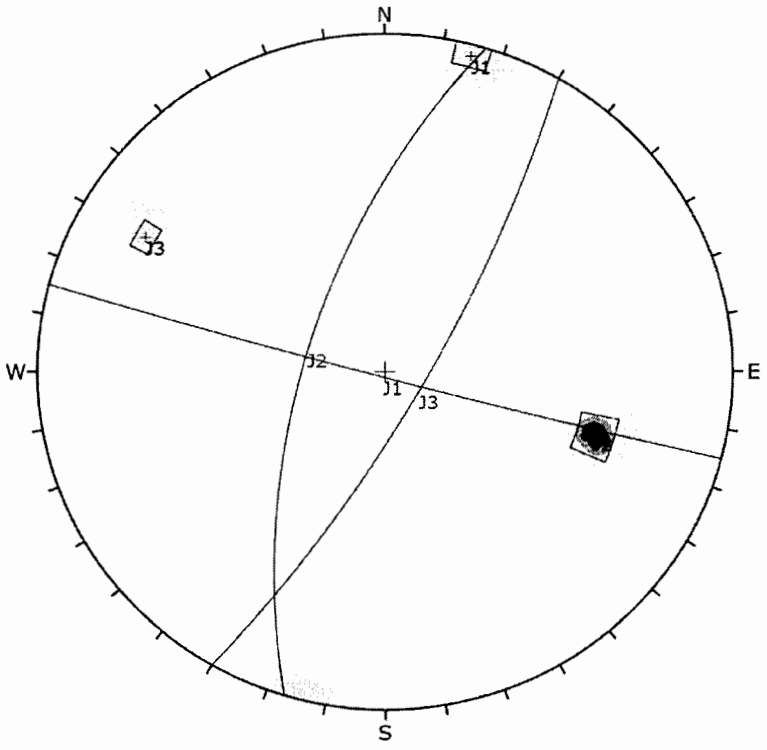


Color	Density Concentrations
	0.00 - 4.80
	4.80 - 9.60
	9.60 - 14.40
	14.40 - 19.20
	19.20 - 24.00
	24.00 - 28.80
	28.80 - 33.60
	33.60 - 38.40
	38.40 - 43.20
	43.20 - 48.00

Contour Data	Pole Vectors
Maximum Density	47.34%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	6 (6 Entries)
Hemisphere	Lower
Projection	Equal Angle

Figure 12: Joint data for West wall of Pit 47



Color	Density Concentrations
	0.00 - 4.80
	4.80 - 9.60
	9.60 - 14.40
	14.40 - 19.20
	19.20 - 24.00
	24.00 - 28.80
	28.80 - 33.60
	33.60 - 38.40
	38.40 - 43.20
	43.20 - 48.00

Contour Data	Pole Vectors
Maximum Density	47.61%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	4 (4 Entries)
Hemisphere	Lower
Projection	Equal Angle

Figure 13: Joint data for the East wall of Pit No. 47

Table 5. RMR parameters range and average rating for existing rock masses at the East wall of Pit No. 47

Locations		Parameters									Final rating RMR_{basic}
		UCS (MPa)	RQD (%)	Spacing (mm)	Joint condition					Ground water condition	
					Persistence (m)	Aperture (mm)	Roughness	Infilling	Weathering		
Pit no. 47	Range	100-250	50-75	< 60	>20	>5	Planar undulating to rough	Soft < 5 mm	Mod. Weathered	Completely dry	
	Rating	12	13	5	0	0	3	2	3	15	53

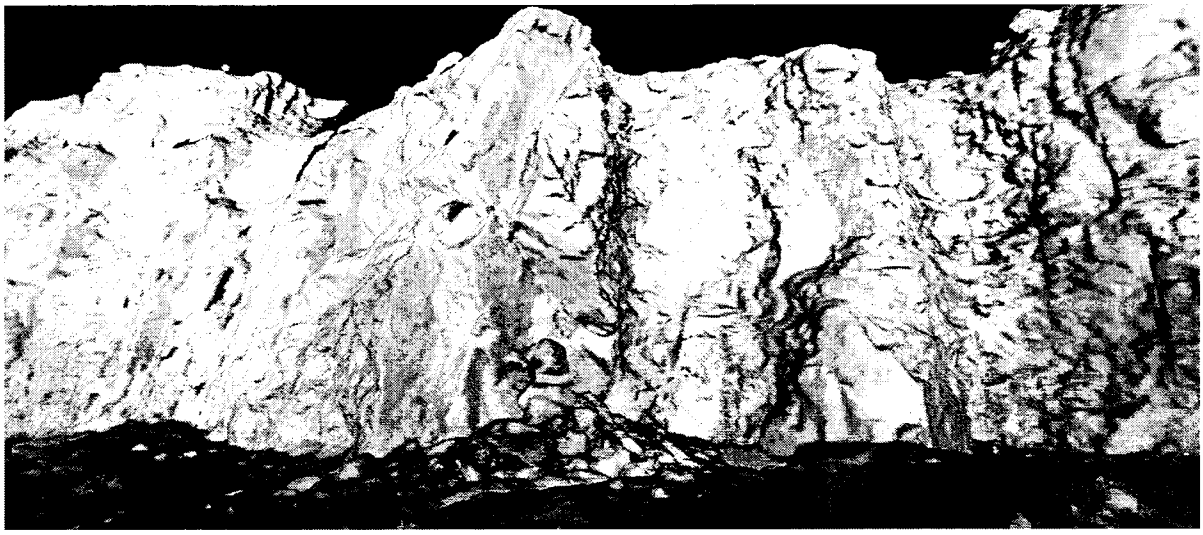


Figure 14: Three-dimensional view of Pit No. 47 East Wall

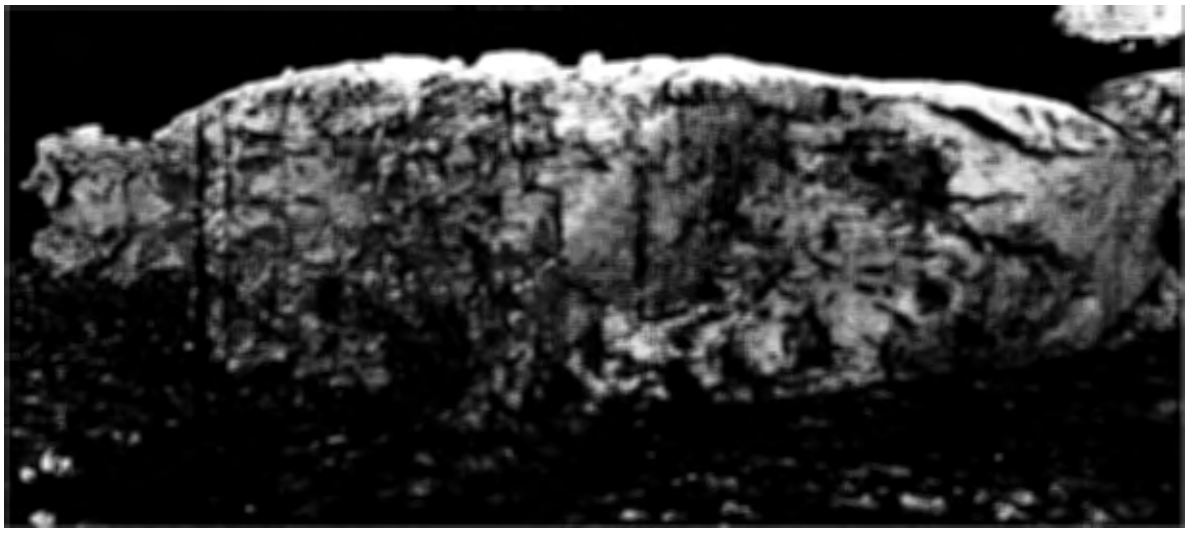


Figure 14: Three-dimensional view of Pit No. 47 West Wall

6.3 Pit No. 3

The west wall of the Pit No 3 is varying from 15 m to 20 m high with loose blocky masses overhanging on the slope and prone to failure (Fig. 15) and a 3D view of the slope has been shown in (Fig. 14). The weathering condition in the upper part of the slope is quite high and blocks are loosened up with wide-open joints. Thus, the adverse orientation of joints concerning the slope face, high weathering coupled with slope inclination allow the blocks to move from the slope face. The observed RMR_{basic} for the slope is 48 (Table 6).

Figure 15: West wall in Pit No. 3

Table 6. RMR parameters range and the average rating for existing rock masses at the West wall of Pit No. 3

Locations		Parameters									Final rating RMR_{basic}
		UCS (MPa)	RQD (%)	Spacing (mm)	Joint condition					Ground water condition	
					Persistence (m)	Aperture (mm)	Roughness	Infilling	Weathering		
Pit no. 3	Range	25-50	50-75	200-600	>20	>5	Planar undulating to rough	Soft < 5 mm	Highly Weathered	Completely dry	
	Rating	4	13	10	0	0	3	2	1	15	48

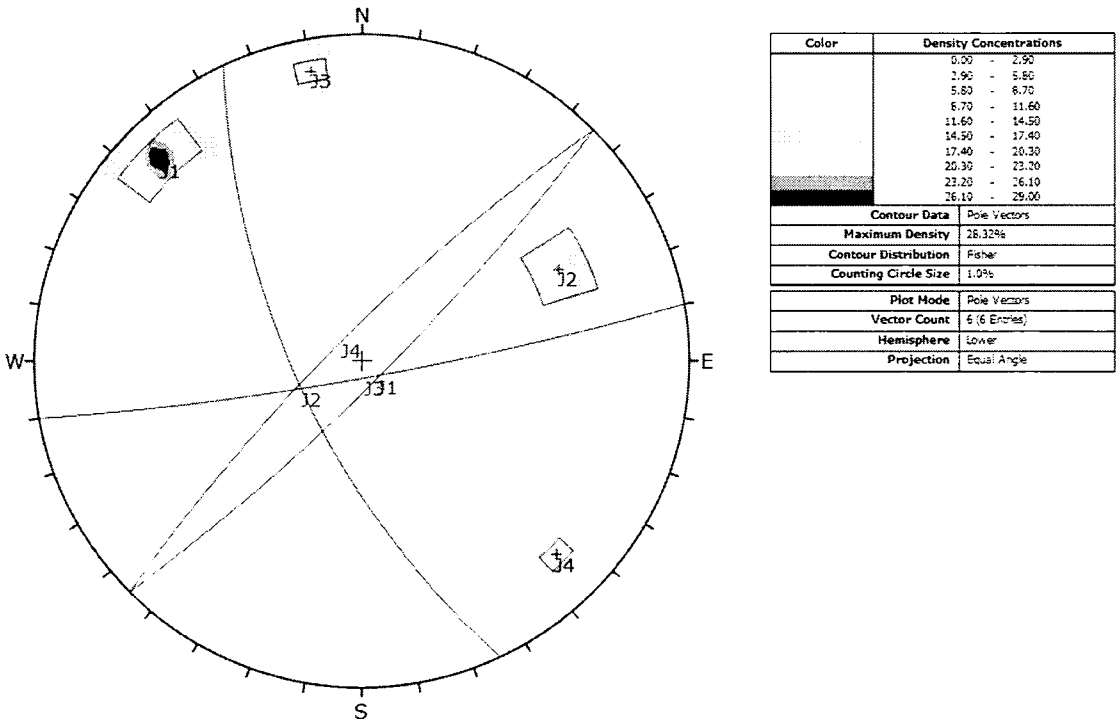


Figure 16: Joint data for Pit No. 3

6.4 Pit No. 7, 8, 9 & 14

Rock mass in Pits No. 7, 8, 9 & 14 is as shown in (Fig. 17). The west wall of the pit area is nearly vertical and the height of the same varies from 60 m to 80 m. The highly jointed and fractured rock mass is prone to fail. The east wall of pits 7, 8, 9 & 14 is observed to be fractured. The major joints are highly persistent and vertical to sub-vertically oriented into the slope which suggests toppling and wedges are likely.

Figure 17: Field photograph of Pit No. 7, 8, & 9

The three-dimensional view of the slope image by the LIDAR survey is shown in Fig. 18 and the pit slopes and poles in the stereo net are plotted for the different pits (Fig. 19). Geological and geotechnical investigations of Pit No. 7, 8 & 9 are summarized in Table 7.

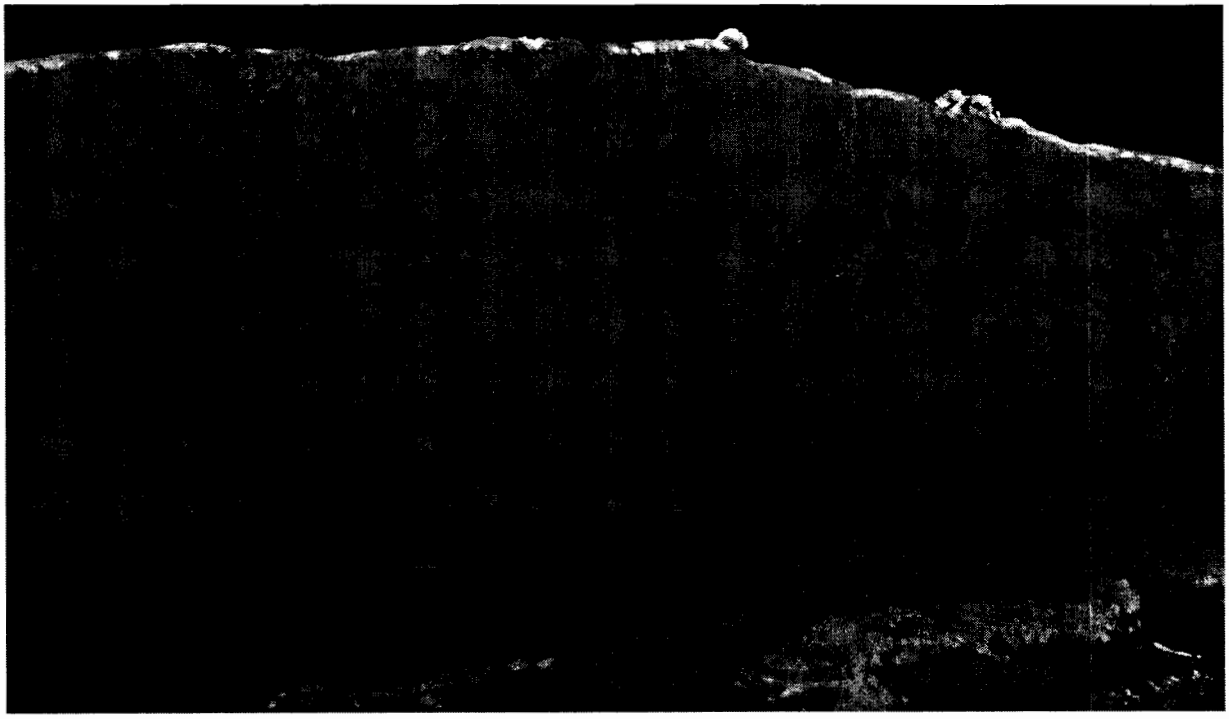


Figure 18: Three-dimensional view of Pit No. 7, 8, & 9

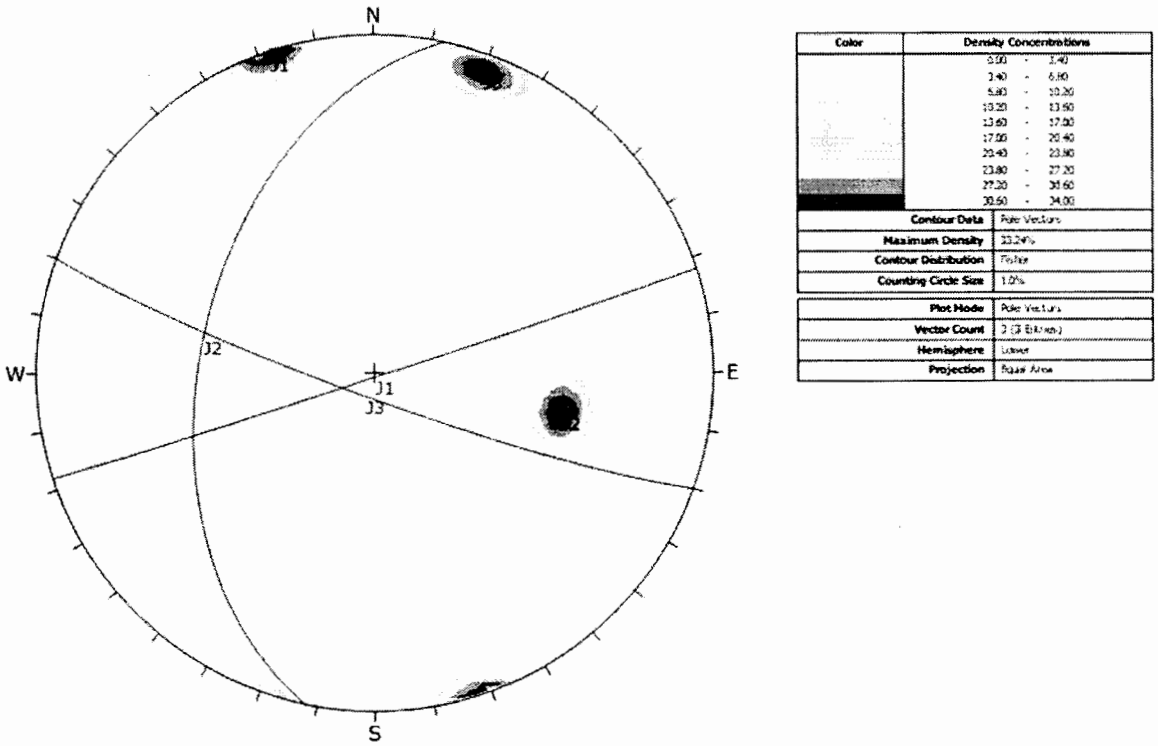


Figure 19: Joint data for Pit No. 7, 8, & 9

Table 7. RMR parameters range and average rating for existing rock masses at the West wall of Pit No. 7, 8 & 9

Locations		Parameters									Final rating RMR_{basic}
		UCS (MPa)	RQD (%)	Spacing (mm)	Joint condition					Ground water condition	
					Persistence (m)	Aperture (mm)	Roughness	Infillin g	Weatherin g		
Pit no. 7, 8 & 9	Range	100-250	75-90	200-600	>20	1-5	Planar undulating to rough	Soft < 5 mm	Moderatel y Weathered	Completel y dry	
	Rating	12	17	10	0	1	3	2	1	15	63

Table 8. RMR parameters range and the average rating for existing rock masses at the East wall of Pit No. 7, 8 & 9

Locations		Parameters									Final rating RMR_{basic}
		UCS (MPa)	RQD (%)	Spacing (mm)	Joint condition					Ground water condition	
					Persistence (m)	Aperture (mm)	Roughness	Infillin g	Weatherin g		
Pit no. 7, 8, & 9	Range	100-250	50-75	200-600	>20	>5	Planar undulating to rough	Soft < 5 mm	Moderatel y Weathered	Completel y dry	
	Rating	12	13	10	0	0	3	2	3	15	58

6.5 Pit No 22, 23, 25, 27 & 52

Pit No. 22 & 23 are the working pit located close to the mine boundary near Pillars No. 9 & 10. Whereas Pit No. 25, 27 & 52 are adjacent to it. The slope inclination of the lowermost benches is varying from 85° to 90° with a bench height of 12 m. The middle and uppermost benches have slopes varying from 76° to 88° with heights varying from 11 to 15 m. All these benches are facing towards N195°. The sand/silt overburden is lying throughout the outer boundary of Pit No. 22, 23. The three-dimensional pit geometry of working benches was acquired from LIDAR data is shown in Fig. 21. It is depicting the heights of existing pits which are under the development stage to keep the bench height around 8m to 12 m. The same can be observed from the field photograph shown in Fig. 22. The rock masses encountered in 22, 23, 25, 27 & 52 are jointed and competent depicting the good rock mass quality. Joints controlled intermittent block

failures are observed to be feasible at some sections of the pit which can be dealt with pit geometry alteration.

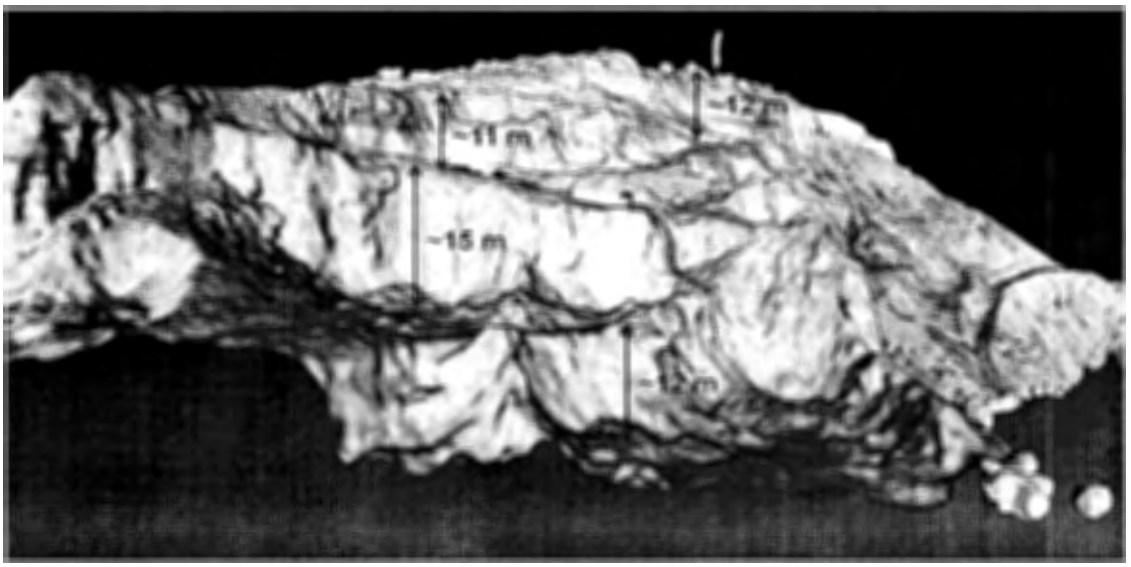


Figure 21: Three-dimensional pit geometry of working benches of Pit No. 22 & 23

Figure 22: Field photograph of Pits No. 22 & 23

6.6 Pit No 12, 13 & 24

These are working pits where sequential excavation of benches are being carried out from hill top. All the benches are height of 10 meter approximately with varying slope of 70 to 80 degrees. During the site visit CSIR-CIMFR firing sequence and blast pattern were modified as per the rock mass classification in view of maintaining the stability of pit benches. The figure no 23 and 24 presented below showing the field conditions of pits.

Figure 23: Field photograph of Pits No. 12, 13 & 24

Figure 24: Field photograph after blasting in Pits No. 12, 13

7. OBSERVATIONS ON THE FIELD INVESTIGATIONS

The report presented here is a record of preliminary observations of geological and geotechnical fieldwork carried out in Dadam Stone Mine from 12th to16th March 2022 by the CSIR-CIMFR Team. The detailed rock mass characterization and stability analysis of mine slopes as well as working pits are in progress and will be communicated in form of the final report. However, one more round of field visit will be conducted before the final recommendation on the stability status of slopes, particularly for working pits. The main observations based on the preliminary study are as follows:

1. The mine consists of rock mass of granite porphyry which appears blocky and competent intersected by mutually oriented persistence joints. The rock mass is observed to be susceptible to weathering by environmental factors such as water and diurnal temperature variation. Field observations suggest high to moderate weathering of rock masses that leads to strength degradation of exposed surface joints.
2. The mine slopes are characterized by 3 to 4 major joint sets with random ones whose persistence, in most cases, is greater than 20 m signifying the effect of joint control on mine slope stability.
3. The Joint Volumetric Counts of mine slopes suggest a low to moderate degree of jointing with good RQD rock classes. These joints are unfavourably orientated making slopes likely to joint controlled rock failures in form of wedges, planar and toppling. The infilling soft materials (clayey silt/sand) with a thickness of less than 5 mm within the open joints degrade the rock mass quality. The progressive joint opening makes overhang blocks susceptible to dislodging. The stereographic and kinematic analysis suggest structural inhomogeneity due to the random occurrence of fractures with the vulnerability of wedges (prevalent rock failure type).
4. The RMR of the investigated mine slopes is ranged from 48 to 63. It suggests good to fair rock mass quality with dominancy of the fair class of rock mass in most of the cases.
5. The stone mining is being carried out by developing various pits within the allotted mine lease area. However, at several pits, the boundary of the allotted lease area is located adjacent to the Revenue Forest area (Aravalli hill) on both the flanks forming steep slopes which are vulnerable to joint controlled gravitational sliding of unfavourably residing over hanged blocks.

6. The working pit area is under development with bench heights varying from 11 m to 15 m. Based on the preliminary observations of rock masses in Pit No. 22 & 23, the pit height should be kept at 8 m to 10 m with the individual pit angle of 78° and ultimate slope angle around 60° empirically. The final pit design i.e. individual and overall (ultimate) pit geometry will be put forward after completing the numerical stability analyses.
7. Moreover, the lease area in form of thin strips (40 to 70 m) restricts the development of workable pit benches. Developing benches along boundary slopes in such thin space is not feasible in terms of maintaining the aspect ratio for the individual as well as ultimate mine slopes. Therefore, integration of mine planning during lease allotment can be crucial to minimize the instability problems in open-cast mining operations.

(Dr. A. K. Singh)
Scientist
CSIR-CIMFR Roorkee

Annexure-R-119

52

DADAM STONE MINES (GM&M) PLANTATION FEBRUARY 2019 - SEPTEMBER 2021

No.	Duration	Date	Bill No.	Name of Narsery	Purchase plant no.	Types of plant	Location	Total Amount	Survive plant
Feb 2019 - Apri 2019									
1	feb	0	0	Nil	0	Nil	Near pit no. 25	0.00	0
2	March	21.03.2019	307	Huseen Narsery	2500	Sisam,jamun,amrud	Near pit no. 25	20,000.00	2400
3	April	0	0	Nil	0	Nil	Nil	0.00	0
Total					2500			20000.00	2400
Apri 2019 - sept. 2019									
1	April	0	0	Nil	0	Nil	nil	0.00	0
2	May	0	0	Nil	0	Nil	nil	0.00	0
3	June	0	0	Nil	0	Nil	nil	0.00	0
4	July	02.07.2019	183	Shankar Narsery	90	Mango,limon(Nibu)	Near pit 27	7200.00	50
5	July	03.07.2020	184	Shankar Narsery	120	Amrud,Jamun,Rikjora	Near pit 28	7000.00	90
6	July	04.07.2019	185	Shankar Narsery	140	Tirverdi,tulsi,belpathar, mousami	Near pit no 18	7100.00	120
7	Augest	06.08.2019	019	Shankar Narsery	100	sahsut,Nibu	Near pit 27	7000.00	90
8	Augest	13.08.2019	024	Shankar Narsery	41	tirverdi,mousami	back side	7050.00	20
9	Augest	14.08.2019	026	Shankar Narsery	100	Amla,papaya	back side	7000.00	40
Total					591			42350.00	210
Oct. 2019 - March 2020									
1	Oct	0	0	Nil	0	Nil	nil	0.00	0
2	Nov	0	0	Nil	0	Nil	nil	0.00	0
3	Dec	0	0	Nil	0	Nil	nil	0.00	0
4	jan	0	0	Nil	0	Nil	nil	0.00	0
5	Feb	0	0	Nil	0	Nil	nil	0.00	0
6	March	0	0	Nil	0	Nil	nil	0.00	0
Total					0			0.00	0
April 2020 - Sept. 2020									
1	may	19.05.2020	318	Khan Narsery	190	Jamun,Bard,Neem,Beeri ,Trivardi	near pit no. 37/38	28700.00	160

Annexure-R-119

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2	June	20.06.2020	323	Khan Narsery	240	Beeri,Trivardi,Bard,Jamun,Pipal	near pit no. 31/52	32700.00	200
3	July	0	0	Nil	0	Nil	nil	0.00	0
4	Augest	14.08.2020	325	Khan Narsery	355	Neem,ghekard,paprdi,ber	back side	33350.00	350
5	Augest	20.08.2020		Varishi Nursary	10000	Pahari Plants	back side	120000.00	8000
6	Augest	21.08.2020	7638	Biwani Forest Divison (T) Biwani	100	Tulsi,Krsiya,	near pit no. 25 - 27	1500.00	80
7	Sept.	04.09.2020	7696	Biwani Forest Divison (T) Biwani	250	Kachnar,Kikar,Kesiya,Pahari Plant,Bakan,Jamun	near lal bulding	3750.00	230
8	Sept.	06.09.2020	7641	Biwani Forest Divison (T) Biwani	600	Kachnar,Shisam,Keshiya,Anar	near lal bulding	9000.00	580
9	Sept.	12.09.2020	7640	Biwani Forest Divison (T) Biwani	180	Samrechiya,sahjaga,bakarnd, shirs,pilkhardra,Neem,gulmor	near pit no. 27/38	14400.00	150
10	Sept.	27.09.2020	338	Khan Narsery	356	bard,pipal,,neem,jamun,sisam,aam.beri,trivani	near pit no. 27/38	47460.00	250
Total					12271			290860.00	10000
Oct. 2020 - March 2021									
1	Oct.	24.10.2020	344	Khan Narsery	500	em,pipal,bard,paprdi,bakean		54000.00	425
2	Nov.	0	0	Nil	0	Nil	nil	0.00	0
3	Dec.	07.12.2020	625	Hari Om Narsery	272	hahtul,baken,jamun,Amru	near lal bulding	13160.00	250
4	Jan.	05.01.2021	351	Khan Narsery	110	Gulab,kala faikash,hara faifas,founisham,refisyam,saikash,nebu	back side	34100.00	100
5	Feb.	0	0	Nil	0	Nil	nil	0.00	0
6	March	0	0	Nil	0	Nil	nil	0.00	0
Total					882			101260.00	775
April 2021 - Sept. 2021									
1	April	0	0	Nil	0	Nil	nil	0.00	0
2	May	0	0	Nil	0	Nil	near lal bulding	0.00	0
3	June	08.06.2021	380	Khan Narsery	80	Bakean	near lal bulding	10000.00	50
4	June	15.06.2021	383	Khan Narsery	30	Bard	near pit no. 01 blu	9000.00	10

5	June	23.06.2021	384	Khan Narsery	40	Pahari Plants	Near pit 27	6000.00	20
6	July	20.07.2021	55	Evergreen Nursery	800	papardi	back side	65000	770
7	July	23.07.2021	352	Om Narsery	56	bakean, pahari plant	near pit no. 18	112000.00	50
Total					1006			202000.00	900

55
Annexure – 15(c)

Detail of Plantation Area, Goverdhan Mines & Minerals

1	Just near Puran Weight Bridge	2.00 Acres
2.	In front of Puran pit South side from path Puran weight Bridge to mines	1.00 Acres
3	Plantation in Strips near weight Bridge Puran	
	(i) One side 30 m length 14m width =30x14 =	0.11 Acres
	(ii) Other side 8 m width 90 m length = 8x90 =	0.16 Acres
	(iii) To Jai Bajrangbali 120 m length 4 m width Single layer Single layer = 120 x 4 =	0.10 Acres
	(iv) 190 m length 18 m width =	0.76 Acres
4	Plantation along Baganwala Road from Mihir weight Bridge to Bore well = 340 m x 10 m	0.76 Acres
5	Plantation in strips along Rasta from Sharma weight Bridge to Jai Bajrangbali weight Bridge	
	(i) Plot near Barjrang Bali weight Bridge = 24 x 50 =	0.27 Acres
	(ii) From Bajrang bali weight Bridge to hanuman Mandir = 7m width x 380 m length =	0.60 Acres
	(iii) Pit No 27 to Pit No. 35-36 along Rasta= 300m length x 7m	0.48 Acres
	(iv) From Pit No. 35-36 to Sharma Weight Bridge = 310 m length x 3 m width=	0.23 Acres
	(v) Plantation in plot in front of hanuman Mandir towards Baganwala Road Near Shhcaka weight Bridge=	1.00 Acres
6	All weight Bridge Campus which is non susceptible of measurement L.S	1.00 Acres
	Total Area	**8.47 Acres**

3.427 ha

To

New Plantation

1	Near Baba Mungipa Weight Bridge toward North side	1.30 Acres
2	In between Pit No. 18-21 to Pit No. 1 East side (For Simple way near and around LAL BUILDING	4.50 Acres
	Total Area	**5.80 Acres**
	Grand Total	**14.27 Acres**

5.7748 Ha

Total - 9.2018 Ha

No. of Plants Planted - 21258

Annexure - 15 56

M/s GOVARDHAN Mines & Minerals
Regd Office 51, U E... HISAR

NURSARY EXP
Ledger Account

1-Apr-2018 to 6-Aug-2021

Date	Particulars	Vch Type	Vch No.	Debit	Credit
27-3-2019	To **Huseen Nursary** *bill no 307*	Journal	191	20,000.00	
	By **Closing Balance**				20,000.00
1-4-2019	To **Opening Balance**			20,000.00	
2-7-2019	To **Cash** *bill no 183 sanker narsery meham road bhiwani*	Payment		**20,000.00**	20,000.00
3-7-2019	To **Cash** *bill no 184 sanker narsery*	Payment	959	**20,000.00** 7,200.00	**20,000.00**
4-7-2019	To **Cash** *bill no 185 sanker narsery*	Payment	977	7,000.00	
6-8-2019	To **SANKER NURSERY** *BILL NO 019*	Journal	993	7,100.00	
13-8-2019	To **SANKER NURSERY** *BILL NO 024*	Journal	474	7,000.00	
14-8-2019	To **SANKER NURSERY** *BILL NO 026*	Journal	489	7,050.00	
	By **Closing Balance**		493	7,000.00	
1-4-2020	To **Opening Balance**			62,350.00	
14-8-2020	To **KHAN NURSERY VPO GEGWA HISAR** *BILL NO 325*	Journal		**62,350.00** **62,350.00**	**62,350.00** **62,350.00**
2020	To **VARSHI NURSARY** *BILL NO*	Journal	518	33,350.00	
21-8-2020	To **Cash** *TRESS FROM FOREST BHIWANI*	Payment	537	1,20,000.00	
4-9-2020	To **Cash** *BHIWANI FOREST BILL NO 7696 TREE*	Payment	997	1,500.00	
6-9-2020	To **Cash** *bill no 7641 bhiwani forest division tree 600*	Payment	1136	3,750.00	
12-9-2020	To **Cash** *bill no 7640 bhiwani forest tree 180 nog*	Payment	1152	9,000.00	
13-9-2020	To **Cash** *bill no 7640 bhiwani forest division 180 tree*	Payment	1231	9,500.00	
26-9-2020	To **PUNIA BEEJ BHANDAR** *BILL NO 186 VICTOR 1LTR*	Journal	1232	4,900.00	
	Carried Over		784	4,025.40	
				2,48,375.40	

continued ...

/s GOVARDHAN Mines & Minerals
URSARY EXP Ledger Account 1-Apr-2018 to 6-Aug-2021

Date	Particulars	Vch Type	Vch No	Debit	Credit
	Brought Forward			2,48,375.40	
27-9-2020	To **KHAN NURSERY VPO GEGWA HISAR** *BILL NO 338 TREE 356*	Journal	788	47,460.00	
24-10-2020	To **KHAN NURSERY VPO GEGWA HISAR** *BILL NO 344*	Journal	981	54,000.00	
7-12-2020	To **Hari Om Nursery** *bill no 625 tree 272 nos*	Journal	1377	13,160.00	
	By **Closing Balance**			3,62,995.40	
					3,62,995.40
				3,62,995.40	**3,62,995.40**
1-4-2021	To **Opening Balance**			**3,62,995.40**	
8-6-2021	To **KHAN NURSERY VPO GEGWA HISAR** *BILL NO 380 BEKEN 125*	Journal	528	10,000.00	
15-6-2021	To **KHAN NURSERY VPO GEGWA HISAR** *BILL NO 383 BERD-30*	Journal	550	9,000.00	
23-6-2021	To **KHAN NURSERY VPO GEGWA HISAR** *NEM-40*	Journal	564	6,000.00	
20-7-2021	To **EVERGREEN NURSARY** *BILL NO 55 BAKEN 500+ PAPRDI 300*	Journal	758	65,000.00	
	By **Closing Balance**			4,52,995.40	
					4,52,995.40
				4,52,995.40	**4,52,995.40**

Plantation Record, Govardhan Mines & Minerals					
Sr No.	Date of Bill	No of Plant Purchase	No. of Plants Planted	No. of Plants Survive	No. of Plants Not Survive
1	21.02.2019	2500	2500	2400	100
2	07.02.2019	90	90	80	10
3	07.03.2019	120	120	100	20
4	07.04.2019	140	140	130	10
5	08.06.2019	100	100	90	10
6	13.08.2019	41	41	25	16
7	14.08.2019	100	100	50	50
8	19.05.2020	190	190	130	60
9	20.06.2020	200	200	150	50
10	14.08.2020	355	355	300	55
11	21.08.2020	100	100	50	50
12	22.08.2020	10000	10000	7555	2445
13	09.04.2020	250	250	225	25
14	09.06.2020	600	600	400	200
15	09.12.2020	180	180	160	20
16	27.09.2020	350	350	340	10
17	24.10.2020	500	500	352	148
18	12.07.2020	262	262	212	50
19	01.05.2021	110	110	90	20
20	06.08.2021	80	80	40	40
21	15.06.2021	30	30	20	10
22	23.06.2021	40	40	30	10
23	20.07.2021	800	800	700	100
24	23.07.2021	4000	4000	4000	0
25	06.07.2021	120	120	120	0
	Total	**21258**	**21258**	**17749**	**3509**

Evergreen Nursery

Indoor, Outdoor, timber plants, Seasonal flowers
and all kind of Nursery Requesties - 9634255619
VILL: KATLA MARODGARH, CHILKANA ROAD, SAHARANPUR (U.P.)
evergreennursery9@gmail.com

M/s आईटम = नाम = दुकान का
गोवर्धन माइंड एंड मिरलाज

S. No 55
Dated 2.a.7.2021

S.No.	Description	Qty	Rate	Amount Rs.	P.
1	एकेशिया	500	100	50000 --	
2	पापड़ी	300	50	15000 --	
			Total	6500000 --	

माइनस

All Disputes are subject to Saharanpur Jurisdiction only
E.&.O.E.

EVERGREEN NURSERY
जयपुर अग्रवाल

For EVERGREEN NURSERY
Authorised Sig.
PROP.

ग्राम गगवा, राजगढ़ रोड, गिलायस पट्रोल पम्प के सामने

i. 384 दिनांक 23/6/21

श्री ग्राहक गोविंदन माईण्ड इण्ड मिनरल्स

संख्या	विवरण	रेट	रकम रु.	पै.
40	नीम	150	6000	
		कुल जोड़	6000	

भूल चूक लेनी देनी ।

Jabbar
हस्ताक्षर

61

प्रो. जब्बार

7367863852
7206384438

खान नर्सरी

हमारे यहाँ पर गमले और पौधे बाजार से सस्ते रेटों पर मिलते हैं ।

[redacted]

नं. 383

दिनांक 15/6/21

नाम ग्राहक गोल्डन मार्बल्स इण्डस्ट्रियलाज

संख्या	विवरण	रेट	रकम ₹ प.
20	63	300	9000
		कुल जोड़	9000

भूल चूक लेनी देनी ।

Jabbar
हस्ताक्षर

ग्राम गगवा, राजगढ़ रोड, रिलायंस पट्रोल पम्प के सामन

सं. 380 दिनांक 8/6/21

नाम ग्राहक गोविंदन प्राईवेट लिमिटेड

संख्या	विवरण	रेट	रकम रु.	रकम पै.
80	बर्फीन	125	10000	
		कुल जोड़	10000	

भूल चूक लेनी देनी

Jabbar
हस्ताक्षर

दी. जलालाबाद

7367663662
7206384436

खान नर्सरी

हमारी यहाँ पर गमले और पौधे बाजार से सस्ते रेटों पर मिलते हैं।

साथ मंगला, बाजवा रोड, दिव्यांग पेट्रोल पम्प के सामने

नं. 351 दिनांक 05/01/2021

नाम ग्राहक गोविन्दन माईक एण्ड मिरवाज

संख्या	विवरण	रेट	रकम रु.	पै.
20	गुलाब	80	1600	
22	कालना फाईकश	300	9600	
22	एरा फाईकश	250	5500	
10	फोनिसयाम	450	4500	
15	रेफिसपाम	350	5250	
4	साईकश	1200	4800	
1	निम्बू	150	150	
4	एरीकेरिया	300	1200	
1	लण्डनप्लैनिस	750	750	
1	पेंसिलसाईन	150	750	
		कुल जोड़	34100	

भूल चूक लेनी देनी।

हस्ताक्षर

Jabbar

Lic. No.157

64

M. 86077-73333, 94679-67667
94166-48525, 94679-67656

हरि ओम नर्सरी

हमारे यहां पर किसान सर्वेवा, अमलतास के विशेष पौधे उपलब्ध हैं।
व हर प्रकार के फल-फूल, सब्जियों, सजावट के पौधे तैयार मिलते हैं।

Sr. No. 620 Date 7/12/24

Name [illegible]

S. N.	PARTICULARS	Qty.	Rate	Amount
	[illegible]	12	55	660
	[illegible]	10	40	400
	[illegible]	20	30	600
	[illegible]	130	50	6500
	[illegible]	100	50	5000
			Total	1316

E & O.E.

Signature

नं. 344 दिनांक 24/10/2020.

नाम ग्राहक मोक्षित भाई एंड ब्रदर्स मिनलाल

संख्या	विवरण	रेट	रकम रु.	पै.
100	नीम	100	10000	
100	पीपल	160	16000	
100	बड़	160	16000	
100	पापड़ी	50	5000	
100	बबूल	70	7000	
		कुल जोड़	54000	

भूल चूक लेनी देनी ।

हस्ताक्षर dabb

ग्राम गगवा, राजगढ़ रोड, रिलायंस पट्रोल पम्प के सामने

338

i. दिनांक 27/9/20

ाम ग्राहक गोविन्द गार्डन VUS 1 को रेलवे

संख्या	विवरण	रेट	रकम रु.	पै.
50	बड़	160	8000	
50	पीपल	160	8000	
50	नीम	100	5000	
50	जामुन	80	4000	
50	शीशम	30	1500	
50	आम	150	7500	
40	बेरी	150	6000	
16	तिवनी (Alv)		6460	
	Oil = 46460 ~ Fare 1000 ~ 47460			
		कुल जोड़	46460	

ल चूक लेनी देनी ।

हस्ताक्षर

Jabbar

M/s. A.T.S Trading Company

Opp. Central Bank, Siwani Road Tosham
Teh. :- Tosham, Distt. Bhiwani (Haryana) . Pin Code :- 127040
mail : atstradingtosham@gmail.com
ile: 01253 - 258111/ 09991725111
GST No. 06BUPPK4896Q1ZF

Authorised Dealer
Jain Irrigation Systems Ltd.
Small Ionas, Big Revolutions.

Deals In :- PVC Pipes, Casting Pipes, Plumb Pipes, HDPE Pipes, PVC FITTING, Sprinkler,Drip Irrigation, Land Scap Irrigation, Micro Sprinkler, Foggers.

To, M/s Govardhan Mines & Minerals
Village :- Near hisar naka , Khanak Dadam Mine , Block- Tosham
DISTT. :- Bhiwani (HARYANA)

DEBIT — ORIGINAL

TAX INVOICE

Driver Name	Kuldeep
Vehicle No.	HR61C 2124
Invoice/Bill No.	Invoice Date :
0190	22.09.2020

GST No. : 06AARFG6820111Z7
Mode : Supply

Sr. No	Particulars	HSN Code	Quantity	Unit	Rate	Amount
1	Control Valve 75 mm (PVC)	8424		No.	600.00	0.00
2	Flush Valve 63 mm	8424	2	No.	75.00	150.00
3	Lateral Valve 32 mm (PVC/PP)	8424	16	No.	170.00	2720.00
4	LLDPE Plain Laterals 32 mm diameter, 2.5Kg/cm2	8424	1330	Mtr.	30.50	40565.00
5	Mini sprinkler / Nozzle with complete Assembly .5 inch inlet	8424	107	No	220.00	23540.00
6	PVC PIPE 63 MM; Class 2 ; 4KG/CM2	8424	714	Mtr.	60.00	42840.00
7	PVC PIPE 32 MM; Class 2 ; 4KG/CM2	8424	24	Mtr.	30.00	720.00
8	Riser / Stake 8inm	8424		No.	52.00	0.00
9	Screen/Disc. Filter with Inlet & outlet Fittings 25 M3/hr	8434		No.	1900.00	0.00
10	Screen/Disc. Filter with Inlet & outlet Fittings 30 M3/hr	8434		No.	2200.00	0.00
11	Bend/Elbow 75 mm	8424		No.	53.00	0.00
12	Bend/Elbow 63 mm	8424	3	No.	40.00	120.00
13	Bend/Elbow(PVC/PP) 32 mm	8424	4	No.	40.00	160.00
14	End Cap 32 mm (PVC/PP)	8424	16	No.	29.00	464.00
15	End Cap 63 mm (PVC)	8424		No.	16.00	0.00
16	Joint Coupler 32 mm (PVC/PP)	8424	13	No.	48.00	624.00
17	Male / Female Threaded Adaptor 75 mm	8424		No.	40.00	0.00
18	Male / Female Threaded Adaptor 90 mm	8424		No.	49.00	0.00
19	Male / Female Threaded Adaptor (PVC/PP) 32 mm	8434	20	No.	8.10	162.00
20	Solvent	8424	1	Ltr.	352.00	352.00
21	Tee 90mm	8424		No.	70.00	0.00
22	Tee 75mm	8424		No.	55.00	0.00
23	Tee 63mm	8424	1	No.	80.00	80.00
24	Tee 32mm (PVC / PP)	8424		No.	54.00	0.00
25	Service Saddle (PVC) 63 mm	8424	16	No.	45.00	720.00

MIS Component Amount	113217.00
Amount of Fitting & Accessories	2500.00
Fitting - Secondary Transportation / Other Expenditure	1500.00
Net Amount	117217.00
CGST @ 6%	7033.02
SGST @ 6%	7033.02
Round Off	131283.04
Grand Total	131283

Bank Detail:-
Bank : Punjab National Bank
Branch : Tosham
A/c No. : 6505902100000607
IFSC Code : PUNB0650500

Words :- Rupees One Lakh ThirtyOne Thousand Two Hundred EightyThree Paise Four Only

Terms

For A.T.S Trading Company
Prop.
Authorised Signatory

68

BHIWANI FOREST DIVISION (T) BH..WANI

7641 **Receipt of Plants for the Year 2011-12** (13)

R. No.________ Date 6,9,20

Name & Address गौरव मार्डन स्कूल

Sr. No.	Size of P. Bags	Species	No. of Plants	Rate	Amount
1	15x22	At	250	15	
2	15x22	कचनार	100	15	
3	15x22	शीशम	100	15	
4	15x22	कीकर	100	15	
5	15x22	अनार	50	15	
			600	Total	9000/-

Signature of Nursery Incharge

69

BHIWANI FOREST DIVISION (T) BHIWANI

Receipt of Plants for the Year 2011-12

(14)

R. No. 764 Date 12.9.2011

Name & Address गोरधन s/o मांगेराम 515म 9588835185

Sr. No.	Size of P. Bags	Species	No. of Plants	Rate	Amount
1	30×45	सजरे चीपा	20	80	
2	30×45	सहजणा	20	80	
3	30×45	कुल्लाण	18	80	
4	30×45	शीशम	10	80	
5	30×45	फलाहण	10	80	
6	30×45	नीम	80	Total 80	14400/-
2	30×45	बुलायटे	92	80	

Total - 180

Signature of Nursery Incha

Bill No. 25

76

BHIWANI FOREST DIVISION (T) BHIWANI

7696 **Receipt of Plants for the Year 2011-12**

R. No.__________ Date 4-9-2020

Name & Address डोरवान .(S(3न)

Sr. No.	Size of P. Bags	Species	No. of Plants	Rate	Amount
		20 कचनार		15	
		50) कीकर (Tor		15	
		190) [illegible]		15	
		20) पहाड़ी पीपल		15	
		30) बकान		15	
		10) पापड़ी	3750	Total-3750	

250

Signature of Nursery Incharge

71

Purchase plant no.	Types of plant	location	Total Amount
			0.00
	Nil	Near plt no. 25	20,000.00
	[illegible] Jamun,amrud	Near plt no. 25	0.00

VARSHI NURSARY

[illegible]

[illegible]

Date	Plants	Qty	Rate	Amount
22 06 2020	[illegible]	[illegible]	12.00 per plant FOR	[illegible]
Total Rs One Lac [illegible] only				[illegible]

[illegible]

Signature 20/6/20

प्रो. जब्बार

7357863652
7206384436

खान नर्सरी (10)

हमारे यहाँ पर गमले और पौधे बाजार से सस्ते रेटों पर मिलते हैं।

ग्राम गंगवा, राजगढ़ रोड, रिलायंस पेट्रोल पम्प के सामने

नं. 325 दिनांक 14/08/2020

नाम ग्राहक ...

संख्या	विवरण	रेट	रकम रु. पै.
80	नीम	100	8000
80	बेरून	70	5600
95	पापड़ी	50	4750
100	बेरी	150	15000
		कुल जोड़	33350/

...

हस्ताक्षर

BHIWANI FOREST DIVISION (T) BHIWANI (11)

7637 **Receipt of Plants for the Year 2011-12**

R. No. ____ Date 21/8/20

Name & Address ...

Sr. No.	Size of P. Bags	Species	No. of Plants	Rate	Amount
			90	15	
			10	15	
			10	15	
			100 KG		1500
				Total	

Signature of Nursery Incharge

7357883682
7206384436

खान नर्सरी

हमारे यहाँ पर गमले और पौधे बाजार से सस्ते रेटों पर मिलते हैं ।

ग्राम संगवा, राजमार्ग 58, शिवांग पेट्रोल पम्प के सामने

नं. 323

दिनांक 20/6/20

नाम ग्राहक Govardhan nursery & milk Dairy Kharla

संख्या	विवरण	रेट	रकम ₹. पै.
50	~~बेरी~~	150	~~7500~~
10	त्रिवेणी	600	6000
50	बड़	160	8000
40	जामुन	80	3200
50	पीपल	160	8000
		कुल जोड़	32700

धन्यवाद

प्रो. जयवीर

7357883682
7206384436

खान नर्सरी

हमारे यहाँ पर गमले और पौधे बाजार से सस्ते रेटों पर मिलते हैं ।

ग्राम संगवा, राजमार्ग 58, शिवांग पेट्रोल पम्प के सामने

नं. 318

दिनांक 19/05/20

नाम ग्राहक गोवर्धन माइस स्टड फार्मरलैंड

संख्या	विवरण	रेट	रकम ₹. पै.
40	जामुन	80	3200
50	बड़	160	8000
40	नीम	100	4000
50	बेरी	150	7500
10	त्रिवेणी	600	6000
		कुल जोड़	28700

धन्यवाद

74

चन्द्रमोहन पुत्र फतेसिंह

।।श्री गणेशाय नमः।।

मो.9813735649

शंकर नर्सरी

नजदीक चाल भवन पब्लिक स्कूल,महम रोड़,भिवानी।

हमारे यहाँ पर फूल व फूलों के पौधे,छायादार वृक्ष,सब्जी की पौध,सीमेन्ट नारवल,पिप्स व मिट्टी के गमले हर समय तैयार मिलते है।

026

नोट- आर्डर देने पर कलकत्ती व सतैक्शन नं 1 व गोवा कारपेट घास तैयार मिलती है।

14/8/2019

नाम खरीदार M/s Gautham Mines & Minerals, Madam C.Khanak

संख्या	विवरण	दर	रकम
50	मॉवला K	90	4500/-
50	पम्पा	50	2500/-
		जोड़	7000/-

Paid
Ch. no. 02592
dt. 14/8/19

* बिका हुआ माल वापिस नहीं होगा।
* भूल-चूक लेनी देनी।

चन्द्रमोहन

हस्ता

of Nursery	Purchase plant no.	Types of plant	Location	Total Amou
....	0	Nil	Near pit no. 25	20,000
....	.....	Sisam,jamun,amrud	Near pit no. 25	.....

9L0B9M

प्रमोहन पुत्र फतेसिंह

।।श्री गणेशाय नमः।।

मो.9813735641

शंकर नर्सरी

नजदीक बाल भवन पब्लिक स्कूल,महरम रोड़,भिवानी।

हमारे यहाँ पर फूल व फूलों के पौधे,छायादार वृक्ष,सब्जी की पौध,सीमेन्ट मारबल,चिप्स व मिट्टी के गमले हर समय तैयार मिलते हैं।

नोट- आर्डर देने पर कलकत्ती व सलैक्शन नं 1 व गोवा कारपेट घास तैयार मिलती है।

13/8/10

024

नाम खरीदार M/S. Gursahai Mines & Minerals, Dadam C.K.hana

संख्या	विवरण	दर	रकम
25	तीरवैणी बड़ी	250	5250/
20	मौसमी	90	1800/
		जोड़	7050/

76

LDB9M

।।श्री गणेशाय नमः।।

बोहम पुत्र फतेसिंह

मो.9813735649

शंकर नर्सरी

सजदीक बाल भवन पब्लिक स्कूल, महेश रोड, भिवानी।

हमारे यहाँ पर फूल व फूलों के पौधे, छायादार वृक्ष, सब्जी की पौध, सीमेन्ट गारबल, पिप्स व मिट्टी के गमले हर समय तैयार मिलते है।

019

नोट- आर्डर देने पर कलकत्ती व सलेक्शन नं 1 व गोवा कारपेट घास तैयार मिलती है। 6/8/2019

नाम खरीदार M/S Govardhan miners & minerals Dadam (khanak)

संख्या	विवरण	दर	रकम
50	फेन्सी	90	4500/-
50	ग्रहस्त	50	2500/-
		जोड़	7000

71

[illegible] कोड- [illegible]

प्रो. [illegible] पुत्र [illegible]

।।श्री गणेशाय नमः।।

(५)

मो. [illegible]

शंकर नर्सरी

नजदीक [illegible] पब्लिक स्कूल, [illegible] रोड, [illegible]

हमारे यहाँ पर फूल व फूलों के पौधे, [illegible] वृक्ष, [illegible] की पौध, [illegible] मारबल, सिप्स व मिट्टी के गमले हर समय तैयार मिलते हैं।

185

नोट- आर्डर देने पर [illegible] व [illegible] में 1 व [illegible] तैयार मिलती है।

4/7/2019

नाम खरीदार M/S Govardhan Mines & Minerals, Dadam Kham

संख्या	विवरण	दर	रकम
10	तीरवैणी	250	2500/-
50	तुलसी	20	1000/-
50	बेलपत्थर	30	1500/-
30	मौरश्री	70	2100/-
		जोड़	7100

[illegible signature]

78

।।श्री गणेशाय नमः।।

चन्द्रमोहन पुत्र फतेसिंह

मो.9813735649

शंकर नर्सरी

नजदीक वाल भवन पब्लिक स्कूल, महम रोड, भिवानी।

हमारे यहाँ पर फूल व फूलों के पौधे, छायादार वृक्ष, सब्जी की पौध, सीमेन्ट मारबली, चिप्स व मिट्टी के गमले हर समय तैयार मिलते हैं।

184

नोट– आर्डर देने पर कलकती व सलैक्शन नं 1 व गोवा कारपेट घास तैयार मिलती है।

3/7/2019

नाम खरीदार M/S Goverdhan Mines & Minerals, Dadam (Khe

संख्या	विवरण	दर	रकम
50	अमरूद	80	4000/-
50	जामुन	40	2000/-
20	खिरनी	50	1000/-
		जोड़	7000/-

* बिका हुआ माल वापिस नहीं होगा।
* भूल-चूक लेनी देनी।

Checked 8/9

चन्द्रमोहन

हस्ताक्षर

79

यूनिक कोड- [illegible]

।।श्री गणेशाय नमः।।

प्रो. चन्द्रमोहन पुत्र फतेसिंह

मो.9813736649

शंकर नर्सरी

नजदीक बाल भवन पब्लिक स्कूल, महम रोड़, भिवानी।

हमारे यहाँ पर फूल व फूलों के पौधे, छायादार वृक्ष, सब्जी की पौध, सीमेन्ट मारबल, चिप्स व मिट्टी के गमले हर समय तैयार मिलते हैं।

183 | नोट- आर्डर देने पर कलकत्ती व खलेकाव मं 1 व मोवा कारपेट घास तैयार मिलती है। | 2/7/2019

नाम खरीदार M/S Goverdhan Mines & Minerals, Dadam (Khanak)

संख्या	विवरण	दर	रकम
50	आम अम्रपाली	80	4000/-
40	निंबू K (40)	80	3200/-
		जोड़	7200/-

- बिका हुआ माल वापिस नहीं होगा।
- भूल-चूक लेनी देनी।

checked

चन्द्रमोहन

हस्ताक्षर

[illegible]

(थिलकाना रोड, साईफन, जिला सहारनपुर- 247001 (यू.पी.))

[illegible]

दिनांक [illegible]

[illegible] पता [illegible]

विवरण	संख्या	दर	रकम रु०	पै०
[illegible]	500	10	5000	
[illegible]	1000	5	5000	
[illegible]	1000	10	10000	
			20000	
	योग		20000	

देनी [illegible]

हस्ताक्षर

SAI NURSERY

ALL KINDS OF PLANTS & GRASS

Horticultural Adviser, Landscape Consultant & Land Scapers

Near Community Centre, Sector-14 Hisar-125001

No. 352 Date 25.[illegible]

Name M/s Govardhan [illegible] Mandir

Sr. No.	Particulars	QTY	RATE	Amount Rs.
	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]

E. & O. E.

[illegible signature]

Annexure-R-1/10

92

प्रेषक

गोवर्धन माईन्स एण्ड मिनरल्स कम्पनी,
नजदीक पुलिस नाका, खानक,
तोशाम – 127040 (भिवानी)।

सेवा मे,

Director,
Mines & Geology Department,
Plot No. 9, 2nd Floor,
IT Park, Sector 22,
Punchkula-134112

विषय: डाडम पहाड में प्राकृतिक आपदा के कारण मृतकों व घायलों को मुआवजा देने के बारे में।

महोदय जी,

सेवा मे निवेदन यह है कि डाडम स्टोन माईन में पीट न. 38 के एडजसेंट अरावली है। उस अरावली एरिया से पत्थर सलाईड करने के कारण दिनांक 01 जनवरी 2022 को दुर्घटना हो गई थी। उस दुर्घटना मे मृतकों व घायलों को क्षतिपूर्ति के लिए फर्म अपनी स्वेच्छा से मुआवजा प्रदान किया है। और बाकि लोगों को भी उनके बैंक अकाउट खुलते ही जल्द दे दिया जाएगा जिनका विवरण इस प्रकार है –

क्रमांक	नाम मृतक	मुआवजा राशि	विवरण
1	तुफान शर्मा पुत्र बलराज शर्मा, निवासी गाव हथनपुर, जिला कटिहार (बिहार)	15,70,000/–	मुआवजा प्रदान कर दिया गया है। इत्कनामा व रसीद संलग्न है।
2	दिनेश दत्त उर्फ टोनी पुत्र केवल कृष्ण, निवासी गांव कोई, जिला होशियारपुर (पंजाब)	10,00,000/–	मुआवजा प्रदान कर दिया गया है। एग्रीमेन्ट कम रसीद चैक सहीत संलग्न है।
3	बिन्द्र पुत्र उदय सिंह, निवासी गांव बागनवाला, तोशाम (भिवानी)	15,00,000/–	उत्तराधिकारी द्वारा पुलिस को ब्यान दे दिया है कि यह एक प्राकृतिक आपदा के कारण हादसा था। जिसकी प्रति संलग्न है। मुआवजा राशि मृतक के परिजन को बैंक खाता खुलते ही जल्द दे दी जाएगी।
4	सजय पुत्र बलराम, निवासी गाव मौरखी (जीन्द)	15,00,000/–	उत्तराधिकारी द्वारा पुलिस को ब्यान दे दिया है कि यह एक प्राकृतिक आपदा के कारण हादसा था। जिसमें क्रमाक 3 पर बिन्द्र व सजय आपस में रिशतेदार थे। जिसकी प्रति संलग्न है। मुआवजा राशि मृतक के परिजन को बैंक खाता खुलते ही जल्द दे दी जाएगी।
5	[illegible] पुत्र [illegible] निवासी गाव [illegible] (गुजरात)	15,00,000/–	उत्तराधिकारी के ब्यान लिये जा चुके है व जल्द लिखित मे दर्ज करवाएगा जिनकी तीन बच्चे थे और उत्तराधिकारी ने इन तीनो बच्चों के नाम 5 लाख रूपये प्रत्येक बच्चे के नाम बैंक अकाउन्ट खुलते ही एफडी कर दी जाएगी।

क्रमांक	नाम घायल	मुआवजा राशि	विवरण
1	गुंजन कुमार सिंह पुत्र हरी सिंह निवासी गांव महूगाई, जिला चतरा (झाडखण्ड)	2,00,000/–	घायल द्वारा पुलिस को ब्यान दे दिया है कि यह एक प्राकृतिक आपदा के कारण पैर मे चोट लग गई थी। फर्म जिसका ईलाज करवा रही है और जल्द ही अस्पताल से छुट्टी मिल जाएगी। पुलिस मे दिए गए ब्यान की प्रति सलग्न है।
2	अमीत कुमार पुत्र सुदेश्वर सिंह निवासी गांव संडा, जिला चतरा (झाडखण्ड)	2,00,000/–	घायल द्वारा पुलिस को ब्यान दे दिया है कि यह एक प्राकृतिक आपदा के कारण पैर मे चोट लग गई थी। फर्म जिसका ईलाज करवा रही है और जल्द ही अस्पताल से छुट्टी मिल जाएगी। पुलिस में दिए गए ब्यान की प्रति सलग्न है।
3	अंगद उर्फ अनन्त पुत्र शिव गुलाम राम निवासी आरए एचएयू, राहुआ जिला साहरसा (बिहार)	2,00,000/–	माईनर चोट लगी थी जिसका उपचार करवा तुरन्त अस्पताल से छुट्टी प्रदान कर दी गई थी। पुलिस के ब्यान की प्रति आपको जल्द भेज दी जाएगी।

धन्यवाद।

दिनांक 05.01.2022

गोवर्धन माईन्स एण्ड मिनरल्स कम्पनी,

श्री मान् जी,

निवेदन है कि मैं सतीश कुमार S/o उदय
सिंह गांव कामनवाला का रहने वाला हूँ। हम दो भाई हैं।
मेरा छोटा भाई किन्दर S/o उदय सिंह गांव कामनवाला
जो जड़म में कम्पौण्डर पर काम करता था जो कि
दिनांक 01-01-2008 को हमें सूचना मिली कि
वहाँ मेरा भाई काम करता था। वहाँ अचानक आसमानी
पैरा से पत्थर आ गया और मेरे भाई किन्दर व हमारा
रिश्तेदार सतपाल व अन्य व्यक्ति मशीन छाई करके
के एक खेत जो घटनास्थल से 50-60 फुट दूरी पर थे
जो हमने सूचना पर आकर देखा तो मेरे भाई की
इस हादसे के कारण मलबे में दबने से मौत
हो चुकी थी यह हादसा अचानक से आसमानी पड़ने
से पत्थर खिसकने के कारण मलबे के दबने से हुआ है
इसमें किसी का कोई कसूर नहीं है यह एक प्राकृतिक
हादसा था। हम किसी के खिलाफ कोई कानूनी
कार्यवाही नहीं करना चाहते हैं। ब्यान सुन लिया
व पढ़ लिया है ठीक है। ब्यान के साथ अपने
रिश्तेदार व अन्य परिजन को पहचानते रहे हैं।

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एग्रीमेन्ट कम रसीद

मैं मिथुन शर्मा पुत्र श्री बलराम शर्मा गाँव हथनपुर तहसील मानसा जिला कटिहार का निवासी हूँ और अपने हल्फ से ब्यान/घोषणा करता हूँ दिनांक 01 जनवरी 2022 को डाडम माईनिंग एरिया में कुमकुम माईन्स (पीट 38) में कार्य करते हुए फोरेस्ट एरिया की चट्टान खिसकने के कारण प्राकृतिक आपदा आ गई थी। उस समय मेरे भाई सुधान शर्मा की उस चट्टान के नीचे आने से मृत्यु हो गई थी। जोकि हमारे और फर्म के लिए काफी एक दुखद प्राकृतिक आपदा थी।

आज दिनांक 03 जनवरी 2022 को मेरा और फर्म का आपसी समझौता हो गया है। जिसमें फर्म ने 10,000/रूपये नकद दिनांक 03 जनवरी 2022 मुआवजा राशि प्रान्त सरकार हजारी प्राप्त कर ली है। हम इस मुआवजा/सहायता राशि से सन्तुष्ट हैं और इसके बाद हमारा और फर्म का कोई लेना देना व गिला-शिकवा नहीं है। आगे मैं ब्यान करता हूँ कि इसके बाद मैं कोई पुलिस केस व कानूनी कार्यवाही कोर्ट कचैहरी में नहीं करूंगा। हम इस फैसले से पूर्ण तरह सन्तुष्ट हूँ। और हमारा कम्पनी पर किसी प्रकार कोई दबाव नहीं है बल्कि कम्पनी खुशी से बिना दबाव के ये क्षतिपूर्ति हमे दे रही है।

रसीदी टिकट

गवाह गोपी
7350218400
गोपी s/o हिरबल शर्मी
गाँव हथनपुर कटिहार

मुआवजा राशि प्राप्त कर्ता
नाम मिथुन शर्मा
पुत्र [illegible] दिनांक 3.1.2022
मोबाईल न. 8696708904

सेवा में

थाना प्रभारी
थाना [illegible]

श्रीमान जी

निवेदन है कि मैं अमित कुमार सिंह S/o श्री सुरेन्द्र सिंह, ग्राम संडा, थाना लोकमा, जिला पतरा झारखण्ड, उम्र - 36 वर्ष का रहने वाला हूँ। मैं पंजाब स्टोन क्रैशर मालिक का डम्फर चलाता हूँ। करीब 5 साल से इसके पास डम्फर चला रहा हूँ। मैं दिनांक - 01/01/2022 को सुबह 8:30 बजे मैं गाड़ी नं० HR55L9403 लेकर अलखनी पहाड़ में पत्थर लेने के लिए बोरिंग [illegible] की खान के अन्दर गया मैंने गाड़ी पोजीशन पर [illegible] करने के लिए [illegible] गाड़ी लगाई और मैं गाड़ी में ही बैठा था फिर अचानक करीब 9 बजे खान पश्चिम तरफ से अलखनी पहाड़ी से एक दम काफी बड़े-बड़े पत्थर आकर [illegible] पर काम कर रही मशीनें व डम्परों पर गिर गई। मेरे डम्फर के ऊपर भी काफी पत्थर गिरे हुए थे काफी धुआं उठ रहा था और वहां पर पत्थर गिरने के बाद मुझे कोई दिखाई नहीं दिया। मैं डम्फर के कैबिन से अपने आप बाहर निकला उस समय मेरे शरीर पर अंदरूनी चोट लगी हुई थी पर दर्द कम था। ये पत्थर अचानक अपने आप गिरने के कारण हुआ है। इसमें किसी का कोई कसूर नहीं है और ना ही खान मालिक के द्वारा [illegible] मशीन नहीं की जा रही थी और इस हादसे का कोई [illegible] किया कि गई। अलखनी पहाड़ से अचानक पत्थर अपने आप गिरने के कारण यह हादसा हुआ है। फिर मैंने खान मालिक को कहा कि मुझे चोट लगी हुई है तो उसने मुझे गाड़ी में बिठा कर अस्पताल में दाखिल करवा दिया। मैंने किसी के खिलाफ कोई कार्रवाई नहीं करवानी।

अमित

अमित कुमार सिंह
S/o श्री सुरेन्द्र सिंह
[illegible]
[illegible]

8

S 662628

हरियाणा HARYANA

हल्फनामा

मैं मिथून पुत्र. श्री बलराम शर्मा निवासी गांव हथनपुर पोस्ट आफिस मानमन जिला कटिहार (बिहार) का हूँ और अपने हल्फ से ब्यान करता हूँ कि:–

1. यह कि मैं उपरोक्त पते का रहने वाला हूँ।
2. यह कि मैं गांव हथनपुर का रहने वाला हूँ मैनें दिनांक 02.01.2022 को अपने भाई तूफान पुत्र श्री बलराम शर्मा निवासी गांव हथनपुर पोस्ट आफिस मानमन जिला बटिहार (बिहार) मृत्यु के बारे में एक दरखास्त थाना तोशाम में दी थी।
3. यह कि मैनें यह दरखास्त मैनें किसी के बहकावे में आकर दी थी मेरे भाई तूफान की मृत्यु डाडम पहाड़ में पिट नं0 37/38 में काम करते समय अचानक अरावली पहाड़ का पत्थर से बड़ी चट्टान खिसकने के कारण हुई है। यह कि इस बात की मैनें पूरी तसल्ली मौका पर जाकर कर ली है।
4. यह कि क्योकि मैं भी यही डाडम पहाड़ में काम करता हूँ इस मृत्यु में किसी का कोई कसूर व दोष नही है। यह कि मैं व मेरा परिवार तथा मेरे तूफान भाई का परिवार किसी के खिलाफ कोई भी कानूनी कार्यवाही नही करवाना चाहता है।
5. यह कि मेरे द्वारा तोशाम थाने मे दी गई दरखास्त को रद्द किया जाए। यह कि मैनें यह ब्यान अपने मर्जी से दिया है किसी के धमकावे में नही दिया है मैनें स्वंय दिया है। यह कि मैनें स्वंय पढ़ व सुन लिया है।

मिथुन शर्मा

6. यह कि उपरोक्त व्यान सही व दुरूस्त है।

शपथकार

तसदीक

उपरोक्त लिखित व्यान मेरे इलम व यकीन के अनुसार सही व दुरूस्त है और इसमें कोई भी शब्द छुपाकर नहीं रखा गया है।

दिनांक :

स्थान :

शपथकार

हरियाणा HARYANA

S 662627

हल्फनामा

हम **मिथुन पुत्र श्री बलराम शर्मा निवासी** गांव हथनपुर पोस्ट आफिस **मानमन जिला कटिहार** (बिहार) व **गनेश शर्मा पुत्र श्री गंगाराम शर्मा** निवासी **गांव** हथनपुर पोस्ट **आफिस मानमन जिला कटिहार (बिहार)** के है और अपने हल्फ से ब्यान करते है कि:–

1. यह कि हम उपरोक्त पते के रहने वाले है।
2. यह कि हमारा भाई तूफान पुत्र श्री बलराम शर्मा निवासी गांव हथनपुर पोस्ट आफिस मानमन जिला कटिहार (बिहार) की मृत्यु डाडम में अरावली पहाड़ का बड़ा पत्थर खिसकने से मृत्यु हुई थी।
3. यह कि मेरा भाई तूफान काफी गरीब परिवार से संबंध रखता है। यह कि इसलिए हमने गोवर्धन माईस एण्ड मिलरज डाडम खानक जिला भिवानी से आर्थिक सहायतां मांगने की प्रार्थना की जिस पर गोवर्धन माईस ने परिवार की मदद के लिए भविष्य में पालन पोषण करने हेतू 15,00,000/– रूपये (पन्द्रह लाख रूपये) व लाश को घर पहुँचाने के लिए हमे नगद राशि दे दी है।
4. यह कि यह राशि मेरे चचेरे भाई गनेश के सामने मैने गिनकर प्राप्त कर लिए है व अब हम गोवर्धन माईस व किसी के भी खिलाफ कोई भी कानूनी कार्यवाही नही चाहते क्योकि यह हादसा इतफाक से हुआ है। यह कि इसमें किसी का कोई कसूंर नही है।
5. यह कि उपरोक्त ब्यान सही व दुरूस्त है।

मिथुन
गनेश शर्मा शपथकार

तसदीक

उपरोक्त लिखित ब्यान हमारे इलम व यकीन के अनुसार सही व दुरूस्त है और इसमें कोई भी शब्द छुपाकर नहीं रखा गया है।

दिनांक :

स्थान :

मिथुन
शपथकार

गनेश शर्मा

मैंने समझ लिया है।

6. [illegible] दुरूस्त है।

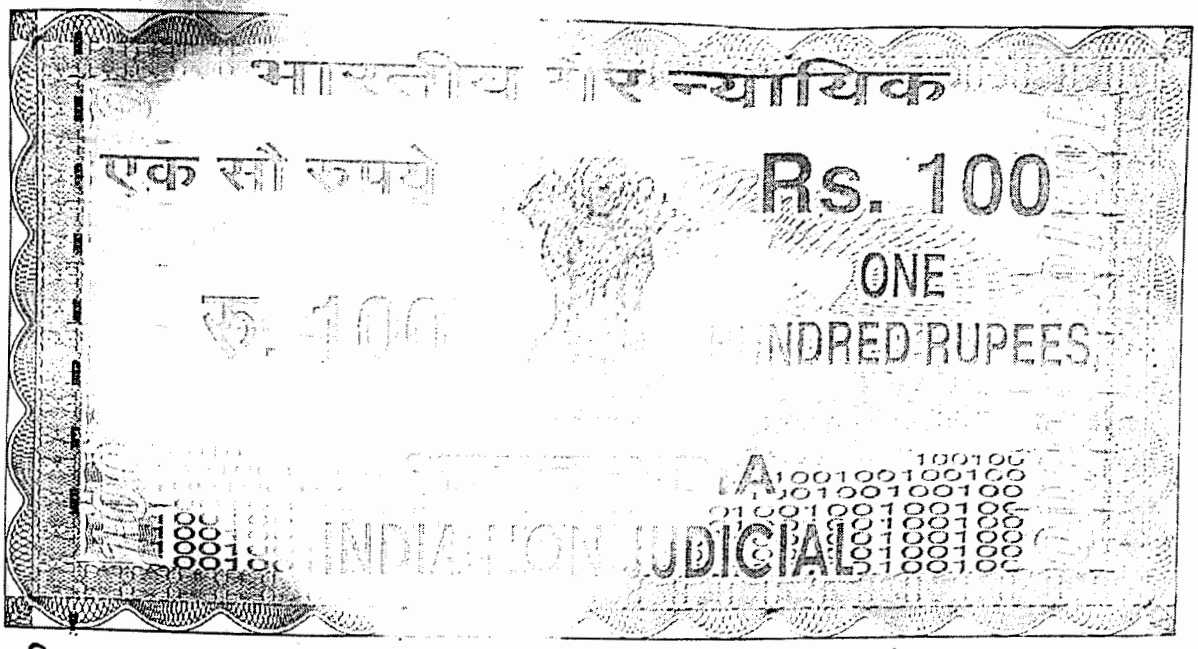
शपथकार

[illegible] व्यान मेरे इलम व यकीन के अनुसार सही व दुरूस्त है और इसमें कोई भी [illegible] नहीं रखा गया है।

दि.

स्थ.

शपथकार



हरियाणा HARYANA S 662624

हल्फनामा

मैं गनेश शर्मा पुत्र श्री गंगाराम शर्मा निवासी गांव हथनपुर पोस्ट आफिस मानमन जिला कटिहार (बिहार) का हूँ और अपने हल्फ से ब्यान करता हूँ कि:–

1. यह कि मैं उपरोक्त पते का रहने वाला हूँ।
2. यह कि मैं गांव हथनपुर का रहने वाला हूँ मेरे चचेरे भाई मिथून ने दिनांक 02.01.2022 को जो दरखास्त तोशाम थाना में दी थी अपने भाई तूफान पुत्र श्री बलराम शर्मा निवासी गांव हथनपुर पोस्ट आफिस मानमन जिला बटिहार (विहार) मृत्यु के बारे में एक दरखास्त थाना तोशाम में दी थी।
3. यह कि यह दरखास्त मेरे चचेरे भाई ने किसी के बहकावे में आकर दी थी मेरे भाई तूफान की मृत्यु डाडम पहाड़ में पिट नं0 37/38 में काम करते समय अचानक अरावली पहाड़ का पत्थर से बड़ी चट्टान खिसकने के कारण हुई है। यह कि इस बात की मैनें पूरी तसल्ली मौका पर जाकर कर ली है।
4. यह कि क्योकि मैं भी डाडम पहाड़ में काम करता हूँ इस मृत्यु में किसी का कोई कसूर व दोष नही है। यह कि मैं व मेरा परिवार तथा मेरे तूफान भाई का परिवार किसी के खिलाफ कोई भी कानूनी कार्यवाही नही करवाना चाहता है।
5. यह कि मेरे द्वारा तोशाम थाने मे दी गई दरखास्त को रद्द किया जाए। यह कि मैनें यह ब्यान अपने मर्जी से दिया है किसी के धमकावे में नही दिया है मैनें स्वंय दिया है। यह कि

गणेश शर्मा

सेवा में

SHO साहब

थाना [illegible]

श्रीमान जी,

[illegible] है कि मैं [illegible] कुमार सिंह S/O श्री [illegible] सिंह, [illegible] थाना [illegible], जिला [illegible] झारखण्ड, उम्र -२२ वर्ष का रहने वाला हूँ। मैं 5-6 महीने से लगातार [illegible] पहाड़ में पोकलेन आपरेटर हूँ और मैं दिनांक -/०१/२०२२ को सुबह 8 बजे अपनी ड्यूटी पर [illegible] पहाड़ में आया था और मैं मशीन चला रहा था समय करीब 8.30/9 बजे सुबह एक दम से आवाज आई तो मैंने देखा कि मेरे पश्चिम की तरफ अरावली पहाड़ से काफी सारे पत्थर / ~~[illegible]~~ शिला [illegible] पीट नं० 37/38 में [illegible] खड़े थे। मशीने [illegible] पत्थर [illegible] एक ब्रेकर पत्थर तोड़ रहा था। अरावली की तरफ से आया हुआ अचानक पत्थर मशीनों व [illegible] के ऊपर गिर गया। जिसमें से मैं जिस मशीन पर काम कर रहा था, उस पर भी पत्थर पड़े जिस से मुझे [illegible] व [illegible] हाथ में चोट लगी व मेरे [illegible] व छाती में भी काफी चोटें हैं। मैं चोट लगने के बाद मैं काफी चिल्लाया उस समय वहाँ पर काफी धूल उठी हुई थी जिससे काफी अंधेरा था। मैं कुछ देर बाद [illegible] मुझे [illegible] आया तब मैं [illegible] [illegible] हादसा अचानक [illegible] से पत्थर / शिला [illegible] हुआ है। [illegible] व [illegible] व कंप्रेसर व [illegible] को [illegible] हादसे में [illegible] की नुकसान हुआ है [illegible] सभी [illegible] ही [illegible] है। इस हादसे में किसी का कोई कसूर नहीं है मैं यह [illegible] अचानक पत्थर गिरना अपनी आँखों से देखा है। मैंने यह [illegible] [illegible] से [illegible] सिंह से लिखवाई है।

[illegible] कुमार सिंह
S/o [illegible] सिंह, [illegible]
[illegible]

एग्रीमेन्ट कम रसीद

मैं गणेश तुफान पुत्र श्री केवल कृष्ण गॉव व डाकखाना कोई तहसील जिला होशियारपुर (पंजाब) का निवासी हूँ और अपने हल्फ से ब्यान/घोषणा करता हूँ दिनांक 01 जनवरी 2022 को डाडम माईनिंग एरिया में कुमकुम माईन्स (पीट 38) में कार्य करते हुए फोरेस्ट एरिया की चट्टान खिसकने के कारण प्राकृतिक आपदा आ गई थी। उस समय मेरे भाई टोनी की उस चट्टान के नीचे आने से मृत्यु हो गई थी। जोकि हमारे और फर्म के लिए काफी एक दुखद प्राकृतिक आपदा थी।

आज दिनांक 2 जनवरी 2022 को मेरा और फर्म का आपसी समझौता हो गया है, जिसमें फर्म ने हमें कुल 10 लाख रूपये के चैक दिए है। ये चैक न. 030889 दिनांक 02 जनवरी 2022 रूपये 5 लाख मेरे नाम (गणेश तुफान) से व रूपये 5 लाख चैक न. 030890 दिनांक 02 जनवरी 2022 मेरी पत्नी के नाम से (जसवीन्द्र कौर) मुआवजा राशि के रूप मे प्रदान कर दिये है। हम इस मुआवजा/सहायता राशि से सन्तुष्ट हैं और इसके बाद हमारा और फर्म का कोई लेना देना व गिला-शिकवा नही है। आगे मैं ब्यान करता हूँ कि इसके बाद मैं कोई पुलिस केस व कानूनी कार्यवाही कोर्ट कचैहरी में नहीं करूंगा। हम इस फैसले से पूर्ण तरह सन्तुष्ट हूँ, और हमारा कम्पनी पर किसी प्रकार का कोई दबाव नहीं है बल्कि कम्पनी खुशी से बिना दबाव के ये क्षतिपूर्ति हमे दे रही है।

Ganesh Tuffan
रर

मुआवजा राशि प्राप्त कर्ता

नाम Ganesh Tuffan

पुत्र [illegible] दिनांक 01 Jan 22

मोबाईल न. 7814965822

गवाह

Pardip Singh 9306537643

[illegible] 9812007436

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Annexure- R-1/1.1
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CHAPTER- 13

ENVIRONMENT MANAGEMENT PLAN

13.1 BASE LINE INFORMATION

(i) EXISTING LAND USE PATTERN

The existing land use of the area is plain area with hilly area.

The existing land use due to mining carried out by the previous lessee is as follows: -

S. No.	Particular	Area in Hectare
1.	Area Excavated due to Mining	34.6672
2.	Dump of Ore/Waste/Overburden	-
3.	Infrastructure : Roads, Building, Electric line etc.,	1.5863
4.	Backfilled Area	-
5.	Area under Plantation(Aravalli Hill)	-
6.	Undisturbed Area	12.6165
	Total area	**48.87**

(ii) WATER REGIME

Natural water courses do not exist in the allotted area.

(a) Surface Water

There is no surface water body in the allotted area and hence there will be no effect on surface water due to mining activities.

(b) Ground Water

The water table in the area is 78 m below from surface. The proposed excavation will be up to 150mrl above the ground water level.

(iii) FLORA & FAUNA

Few local bushes can be seen in the area. Moreover there is no demarcated/protected forest close to the allotted area. The protected wildlife animal in & around the allotted area is also not present.

(iv) CLIMATIC CONDITION

Climate of Bhiwani district varies from sub- tropical, semi- arid to hot. It is mainly dry with very hot summers (up to a high of 47°c) and very cold winters (even less than 1 °c)

ANNEXURE-R-1/10
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CENTRAL INSTITUTE OF MINING & FUEL RESEARCH
(Council of Scientific & Industrial Research)
Roorkee Research Centre, Uttarakhand – 247 667

Technical Note on
Slope Failure in Pit no. 37 & 38 of Dadam Stone Mine, Bhiwani, Haryana

Background

This technical note contains the geological and geotechnical observations on fatal slope failure that had taken place on 01/01/2022 at Dadam Stone Mines of M/s Govardhan Mines and Minerals, Dadam where stone mining is being carried out in Bhiwani District of Haryana State. In light of unfortunate failure accident, M/s Govardhan Mines and Minerals had requested CSIR-Central Institute of Mining and Fuel Research (CIMFR) Regional Research Centre Roorkee (UK) vide letter NO. DSM/2021 22/001 dated 08.03.2022 to investigate the stability conditions of mine slopes to identify the critical area so that a safe working environment can be ensured during ongoing mining operations.

Site Investigation

In this connection, a team of the scientist and technical staffs of CSIR- CIMFR visited the mine site during 12/03/2022 to 16/03/2022 to Dadam Stone Mines, Bhiwani, Haryana of M/s Govardhan Mines and Minerals for carrying out a scientific study on the assessment of stability status of mines slopes and investigated the rock mass and stability conditions of the existing slopes.

During mine slope investigation, geological & geotechnical data related to various rock and joint parameters such as slope & joint orientations, Joint Volumetric Count (Jv), Joint Compressive Strength (JCS), Joint Roughness Coefficient (JRC), persistence, spacing, aperture, infilling, weathering and groundwater conditions were collected using window sampling method. Additionally, LiDAR (Light Detection and Ranging) survey of mine slopes and working pits were also conducted to acquire the point cloud data of prevailing discontinuities and 3D geometrical configuration of existing pits (Figure 1).

The slope failure accident had happened in the slope section of Pit no. 37 & 38 whose boundary is located adjacent to the Revenue Forest area (Aravalli hill) in both the Eastern and Western margins.

Both these areas are under the jurisdiction of the State Forest Department. A preliminary enquiry report on this fatal failure had been submitted to the Director-General of Mine Safety, North Zone, Ghaziabad by M/s Govardhan Mines and Minerals dated 17/01/2022 concerning likely reasons for the slope failure and associated losses.

Figure 1. The mesh file generated from LiDAR point cloud data of Pit no. 37 & 38 showing multi-oriented joints and location of fatal slope failure and mine lease boundaries

Geological and Geotechnical Data: Analysis & Observations

At the instant, the rock mass of the concerned slope appears very blocky and competent. However, the kinematically unfavourable orientation of natural joints may lead the slope mass vulnerable to the joints controlled failures of varying dimensions. During site investigation, the flow imprints of infilled joint materials (clay and silts) was quite visible on the remnant vertical and day-lighted oblique joint walls (Figure 2). This signifies the water inflow within the open joints that washed out the soft infillings materials and might create slip surface along the oblique joint resulting in massive wedge failure due to sudden decrease in shear strength along the basal joint plane. The surface joint acted as a release plane for such a huge size (28×12×8 m) wedge failure.

The exiting slope section consists of three sets of major joints with random ones (Figures 2 & 3). The exposed joints are quite persistent (> 22 to 55 m) with wide to very wide spacing (8-10 m) that

instigates the occurrence of very large to extremely large in-situ blocks potential for failure (Figure 2 & 3).

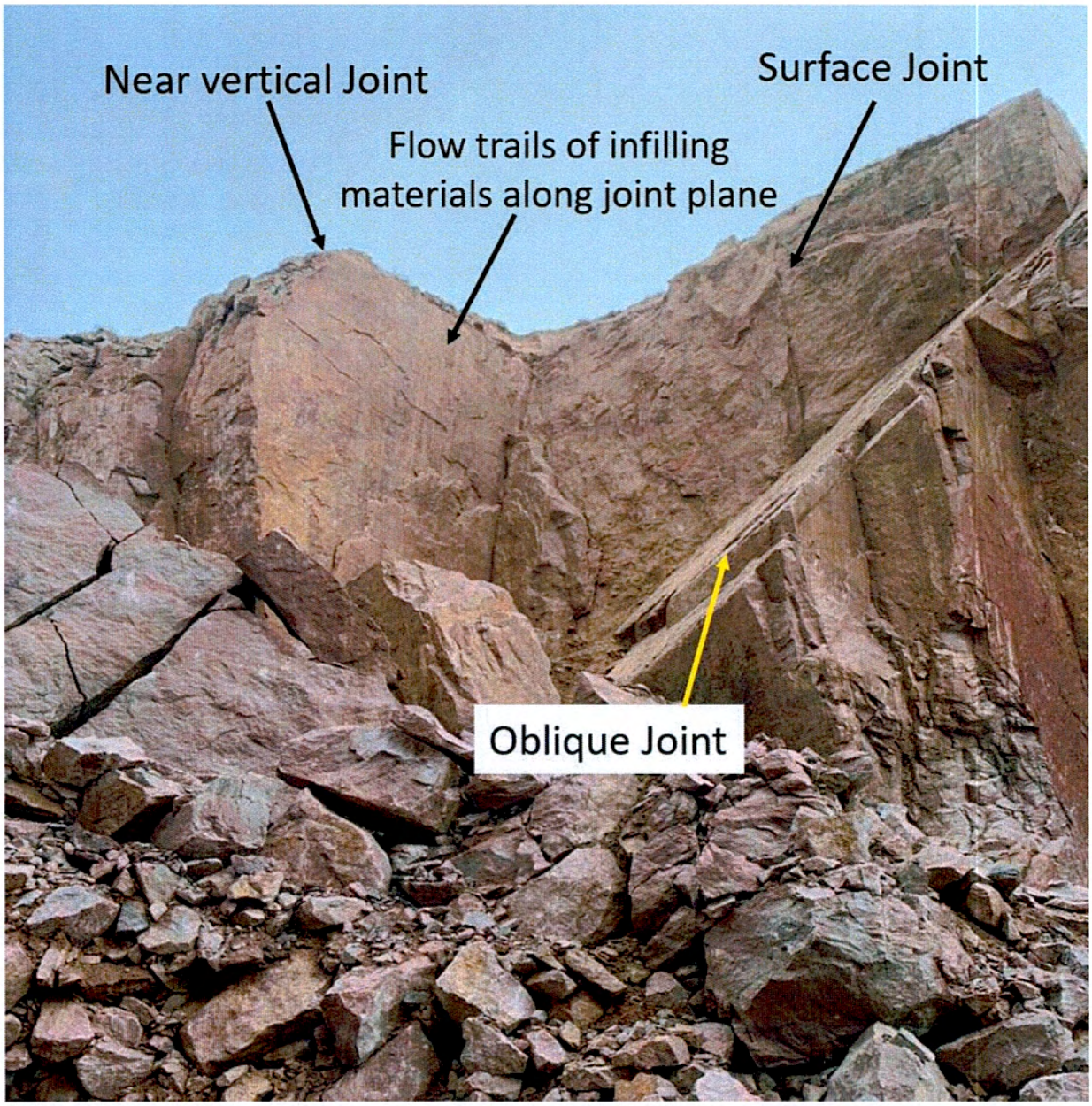


Figure 2. Post failure field photo showing included joint in the failure and water flow trails of infilling joint materials

From the geotechnical study, it is found that the Rock Quality Designation (RQD) of the rock mass along the western wall of the Pit no. 37 & 38 is around 70-80% depicting fair to good rock mass quality. The observed Rock Mass Rating (RMR) also falls in Class 2 (RMR ranging from 56 to 71)

i.e. fair to good quality rocks with prominent joint sets traversing the structure with the persistence of more than 20 m (Table 1).

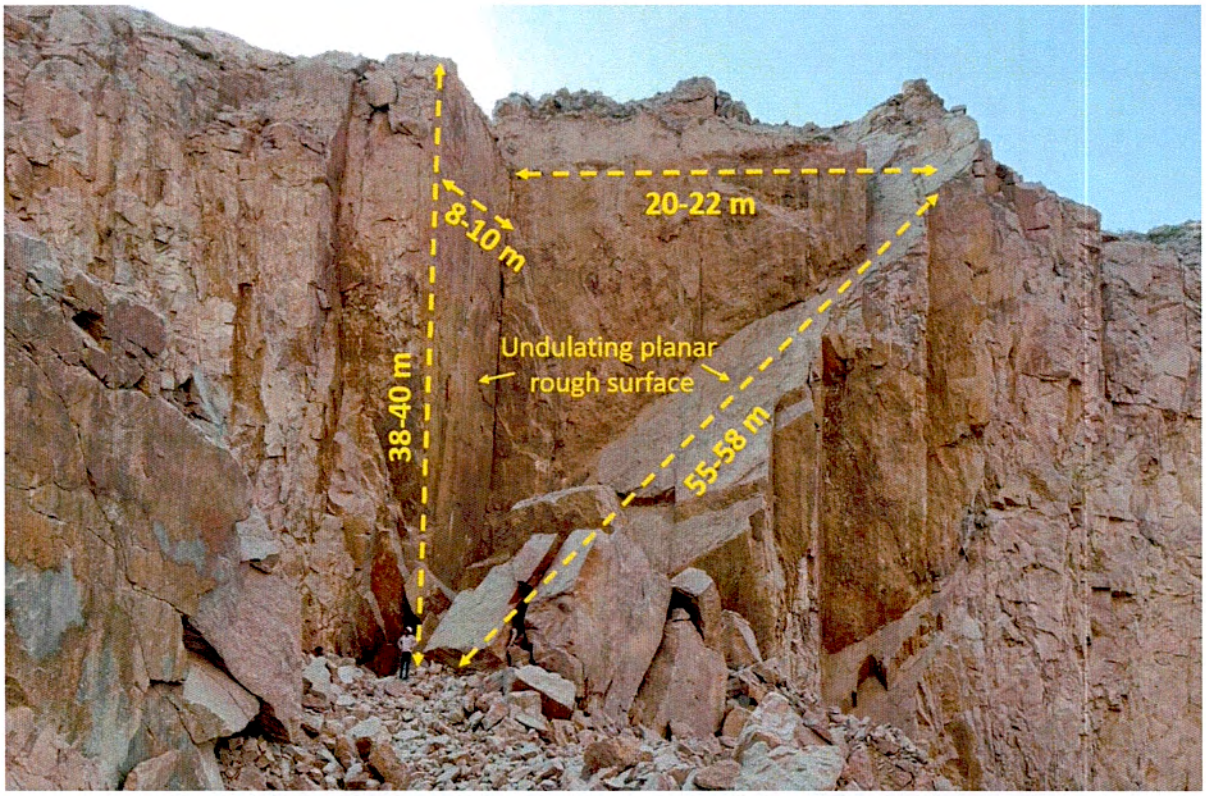
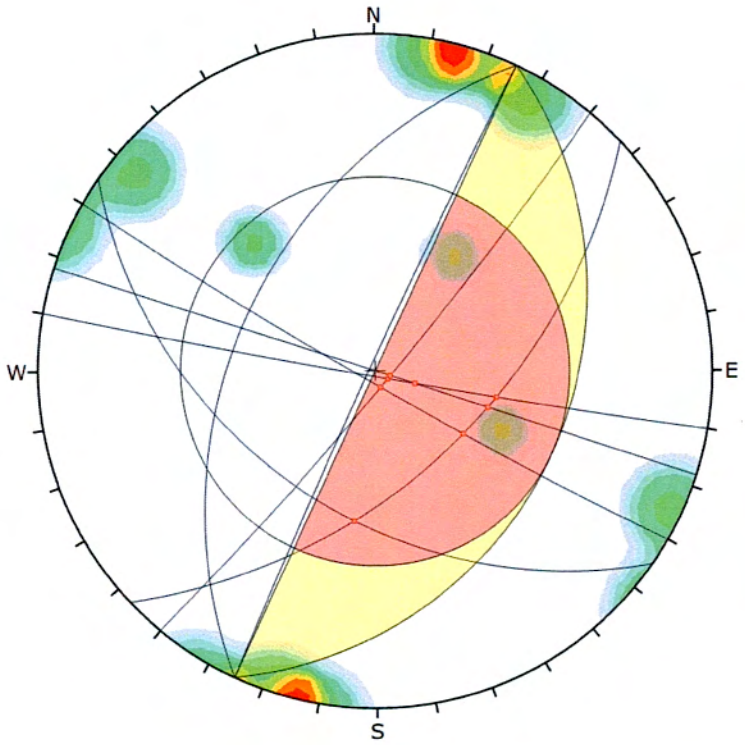


Figure 3. Probable dimension of the dislodged wedge

These mutual joints are orientated unfavourably leading to the formation of various unstable blocks that cause rock failures mainly wedges and toppling types. The stability condition degrades drastically as joints dilate due to progressive weathering (due to geo-environmental agents such as water, temperature variation etc.). The visual inspection suggests that pit slope are potential for geologically controlled block failures due to overhanging blocks.

Kinematic analysis of the failed slope suggests a high potential for large wedge type failure released from the near-vertical joint and gravitation sliding on the obliquely laid day-lighted joints (Figure 4a-d). Considering the back-calculated Slope Mass Rating using the continuous function (CSMR), the kinematically potential wedge falls CLASS IV & V (CSMR ranging from 16 to 27) which suggests completely unstable to unstable stability conditions. As per the SMR classification (Romana 1985), very large to large wedge or big planar failure is likely in that scenario (Figure 4a, b) that exactly had happened resulted dislodgment of extremely large wedge.



Symbol	Feature
▫	Critical Intersection

Color	Density Concentrations
	0.00 - 2.40
	2.40 - 4.80
	4.80 - 7.20
	7.20 - 9.60
	9.60 - 12.00
	12.00 - 14.40
	14.40 - 16.80
	16.80 - 19.20
	19.20 - 21.60
	21.60 - 24.00

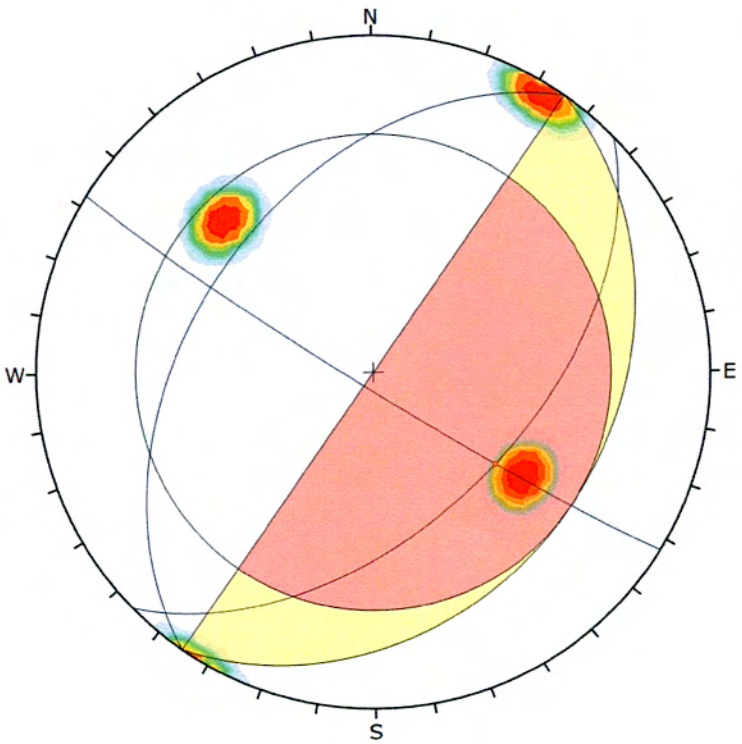
Maximum Density	23.24%
Contour Data	Pole Vectors
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Wedge Sliding
Slope Dip	90
Slope Dip Direction	115
Friction Angle	30°

	Critical	Total	%
Wedge Sliding	8	28	28.57%

Plot Mode	Pole Vectors
Vector Count	8 (8 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	28
Hemisphere	Lower
Projection	Equal Angle

Figure 4a. Potential wedges from collected joint data



Symbol	Feature
▫	Critical Intersection

Color	Density Concentrations
	0.00 - 3.40
	3.40 - 6.80
	6.80 - 10.20
	10.20 - 13.60
	13.60 - 17.00
	17.00 - 20.40
	20.40 - 23.80
	23.80 - 27.20
	27.20 - 30.60
	30.60 - 34.00

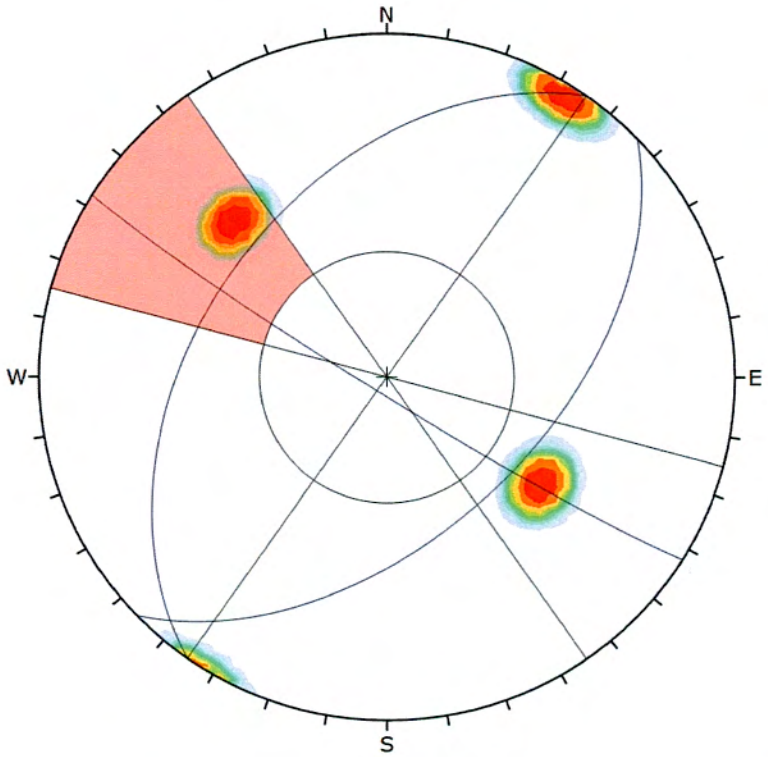
Maximum Density	33.20%
Contour Data	Pole Vectors
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Wedge Sliding
Slope Dip	90
Slope Dip Direction	125
Friction Angle	30°

	Critical	Total	%
Wedge Sliding	1	3	33.33%

Plot Mode	Pole Vectors
Vector Count	3 (3 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	3
Hemisphere	Lower
Projection	Equal Area

Figure 4b. Potential wedges from mean joint data



Color	Density Concentrations
	0.00 - 3.40
	3.40 - 6.80
	6.80 - 10.20
	10.20 - 13.60
	13.60 - 17.00
	17.00 - 20.40
	20.40 - 23.80
	23.80 - 27.20
	27.20 - 30.60
	30.60 - 34.00

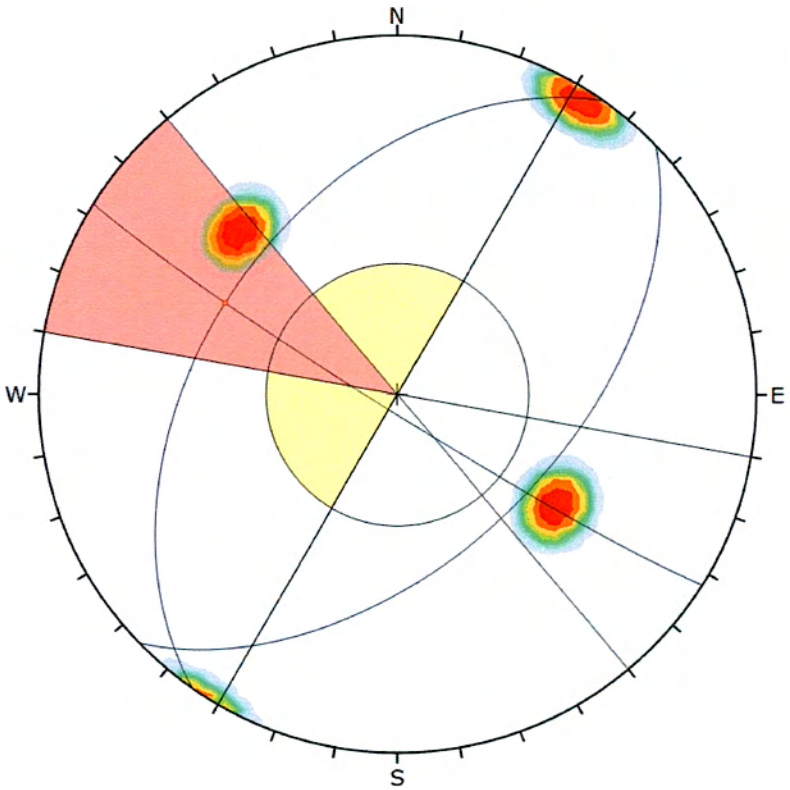
Maximum Density	33.20%
Contour Data	Pole Vectors
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Planar Sliding
Slope Dip	90
Slope Dip Direction	125
Friction Angle	30°
Lateral Limits	20°

	Critical	Total	%
Planar Sliding (All)	1	3	33.33%

Plot Mode	Pole Vectors
Vector Count	3 (3 Entries)
Hemisphere	Lower
Projection	Equal Area

Figure 4c. Potential planar failure from mean joint data



Symbol	Feature
▫	Critical Intersection

Color	Density Concentrations
	0.00 - 3.40
	3.40 - 6.80
	6.80 - 10.20
	10.20 - 13.60
	13.60 - 17.00
	17.00 - 20.40
	20.40 - 23.80
	23.80 - 27.20
	27.20 - 30.60
	30.60 - 34.00

Maximum Density	33.20%
Contour Data	Pole Vectors
Contour Distribution	Fisher
Counting Circle Size	1.0%

Kinematic Analysis	Direct Toppling
Slope Dip	90
Slope Dip Direction	120
Friction Angle	30°
Lateral Limits	20°

	Critical	Total	%
Direct Toppling (Intersection)	1	3	33.33%
Oblique Toppling (Intersection)	0	3	0.00%
Base Plane (All)	1	3	33.33%

Plot Mode	Pole Vectors
Vector Count	3 (3 Entries)
Intersection Mode	Grid Data Planes
Intersections Count	3
Hemisphere	Lower
Projection	Equal Area

Figure 4d. Potential toppling failure from mean joint data

Table 1. RMR parameters range and average rating for rock masses at Pit no. 37 & 38

Locations		Parameters									Final rating RMR_{basic}
		UCS (MPa)	RQD (%)	Spacing (cm)	Joint condition					Ground water condition	
					Persistence (m)	Aperture (mm)	Roughness	Infilling	Weathering		
Pit no. 37 & 38	Range	146-171	72-80	60-200	>20	1-17	Planar undulating to rough	Soft < 5 mm	Mod. Weathered	Completely dry	
	Ratin	12	13	8	0	0	3	2	3	15	56

Conclusions

As the natural slope height on the western side is about 38 to 40 m, the Q-slope system (values ranging from 0.6 to 2.1) based on empirical rating suggests that the slope angle is creating a natural unfavourable stability condition. The natural slope activity is also on the higher side due to presence of inherently high degree of jointing, presence of over-hanged blocks, open joints filled with soft materials (clayey silt/sand). The weathering condition in the upper part of the slope and clay as well as silt coating in the open joints allowed the gravitational movement of inverted loose wedge upon saturation condition due to water. The role of clay presents in joints is the key factor for these types of failure as clay swelling adversely decreases the shear strength of the rock masses in presence of water.

Thus considering the geological and geotechnical aspects; adverse orientation of naturally occurring joints with reference to the slope face, natural weathering of the basal and release joint planes and progressive dilation of joints upon saturation of infilled soft (clayey silt/sand) materials are the reasons for the movement of such big wedge failure.

(Dr Ashok Kumar Singh)
Scientist
CSIR-CIMFR
Regional Research Centre, Roorkee

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IN THE COURT OF NATIONAL Green Tribunal

~~Suit/Appeal~~ OA No. 01/2022 JURISDICTION OF 201

In re:-

News item Published in Indian Express Newspaper dated 2.01.2022 Plaintiff(s) or Petitioner(s)

Appellant(s) Complainant(s)

VERSUS

.....Defendant (s)/ Respondent(s) / Accused Know all to whom these Present shall come that I/we Nazir Singh Kuhar - Convenor Mines & Minerals

The above named Respondent

.....do hereby appoint

SUNITA SHARMA

(herein after called the advocate/s) to be my / our Advocate in the above – noted case authorize him:-

To act, appear and plead in the above-noted case in this court or in any other court in which the same may be tried or heard and also in the appellate court including High Court subject to payment of fees separately for each court by me/us.

To sign file, verify and present pleadings, appeals cross-objection or petitions for executions review, revision, withdrawal, compromise or other petitions or affidavits or other documents as may be deemed necessary or proper for the prosecution of the said case in all its stages subjects to payment of fees for each stage.

To file and take back documents, to admit and/or deny the documents of opposite party.

To withdraw or compromise the said case or submit to arbitration any differences of disputes that may arise touching or in any manner relating to the said case.

To take execution proceedings on paying separate fee.

To deposit, draw and receive money, cheques, cash and grant receipts hereof and to do all other acts and things which may be necessary to be done for the progress and in the course of the prosecution on the said case.

To appoint and instruct any other Legal Practitioner authorizing him to exercise the power and authority hereby conferred upon the Advocate whenever he may think fit to do so and to sign the power of attorney on our behalf.

And I/we undersigned to hereby agree to ratify and confirm all acts done by the Advocate or his substitute in the matter as my/our own acts, as if done by me/us to all intents and purpose.

And I/we undertake that I/We or my/our duly authorized agent would appear in court on all hearings and will inform the Advocate for appearance when the case is called.

And I/We undersigned do hereby agree not to hold the advocate or his substitute responsible for the result of the said case. The adjournment costs whenever ordered by the court shall be of the Advocate which he shall receive and retain for himself.

And I/we undersigned do hereby agree that in the event of the whole or part of the fee agreed by me/us to be paid to the advocate remaining unpaid he shall be entitled to withdraw from the prosecution of the said case until the same is paid up. The fee settle is only for the above case and above Court. I/We hereby agree that once the fee is paid, I /We will not be entitled for the refund of the same in any case whatsoever and if the case prolongs for more than 3 years the original fee shall be paid again by me/us.

IN WITNESS WHERE OF I/We do hereunto set my/our hand to these presents the contents of which have been understood by me/us on this .....Day of.....201 Accepted subject to the terms of the fees.

Advocate Client Client

(SUNITA SHARMA) Ch. No 202 C.K. Daptary Block, Tilak Lane Supreme Court 110001

I Identify the Signature/Thumb Impression of Below Mentioned Person,

Signed in My Presence. The Client.

Accepted identified & certified