Annexure-I

SITE INSPECTION REPORT INRESPECT OF STOPING NOTICE OFSR26 **S-1 block in Strike Reef** of Hutti Gold Mine GOLD MINE (ML.NO. 2671)

1. Introduction:

M/s Hutti Gold Mines Company Ltd. has submitted application for the stopingi.r.o. their Huttiunderground Gold mine, over an area of 528.35 Ha (Non-Forest Patta Land), in HuttiVillage, Lingasugur -Tq, Raichur District, Karnataka state with requesting to permit stopeof **S-1 block** (Strike Reef) in EE34Nregion in between 26th&24th level by sub-level method with post filling, under rule 30(2) of MCDR,2017 on 6thFeb2018. The mine was inspected by S/ShriArun Kumar, DCOM andPrashant S. Hegde, SMG on 24/02/2018. S/Shri M. Shantha Kumar, Mines Manager, Dr T.K. Abdul Rahim, Manager (Exploration), Dr S.N. Solankar, Dy. Manager (Exploration), ShriGhosh, Mining Engineer and other mine officers were present during the inspection. The scrutiny comments are prepared based on the inspection of the mine and the document submitted by the Company.

2. Location & Approach:

The area falls in Survey of India Toposheet No.56 D/12 , between latitudesN16° 10´ 28.2" to N 16° 12´ 26" and the longitudesE 76° 38´26.7" to &E 76° 39´ 59.3". The mine is located adjacent to Hutti- Village, Tq-Lingasugur and Dist-Raichur of Karnataka state. The nearest railway station is Raichur about80 km, which is on the Chennai-Mumbai Broad Gauge line of South Central Railway. All weather road passes through which connects Hutti with Raichur. National Highway No-150A, is about 10kms west of the area. Nearest Airport is at Hyderabad about 240Kms, can be approached via road & Rail.

3. Lease particulars:

The mining operation in the area started during year 1880 and recent renewal of ML (No-2671) on 26/03/2012 for a period of 20 yearsw.e.f. 19/12/2008 with validity upto18/12/2028. The stoping production reported from 12nos of blocks during year 2017-18.

4. Compliance of earlier Notices:

The quarterly report of stoping and development upto (Dec-2017) was received and enclosed in the application. The clarifications and justifications were sought regarding

the operations in nos of stope blocks and present new stope applications before completion of earlier stope blocks.

5. **Geology, structure& Control**:-

5.1)TheHutti-Maski schist belt is a NNW-SSE trending horse shoe shaped curvilinear belt, grouped under the unclassified (eastern) greenstone belts, probably equivalent to Dharwar Super Group. It extends over a strike length of 70km, occupying an area of 670sq.km this belt is predominantlymade up of metabasaltic/ meta andesitic suite of volcanic (>80%) with the subordinate acidvolcanic (15%) and minor amount of metasediments (about 5%) represented by lower amphibolite facies metamorphism. The schist belt on all sides is surrounded by gneisses and granitoids.

The Hutti deposit is located at the north western periphery of the Hutti greenstone belt. All the auriferous lodes occur within the metavolcanics dominantly composed of massive, fine to medium grained, pillowed meta basalt and subordinate widths of Acid volcanic bands of rhyolitic composition, which occur intermittently as concordant bodies.The gold quartz-sulphidemineralisation is localised mostly within the chlorite-biotite-carbonate schist that occur as tabular zones within the meta basalts, and atthe contacts of meta basalts with the acid volcanic rocks.

Nine significant well defined parallel to sub-parallel tabular auriferous reefs viz.Main, Prospect, Oakley's, Middle,Zone-I, Village, Strike (Hanging wall),Strike (Foot-wall) and New Eastreefs.The general strike of the mineralised zones is N 20^0 W dipping towards west at about 60^0 to 70^0.

These reefs are localised along narrow zones of highly sheared chlorite-biotite-carbonate schist. The prominent dolerite dykes trending east-northeast cut across all the rock formations and postdate deformation, metamorphism and gold-quartz mineralisation.The effects of shearing are well represented in all the parallel lodes of Hutti mines. Intensive deformation such as mylonite banding in the quartz veins, brecciation, associated with schistosity furnish good testimony for shearing. The lodes of the Hutti deposit are generally gold-quartz-sulphides type and the lode consists largely of altered wall-rock with quartz and carbonate in the form of veins, veinlets, stringers and impregnated with sulphide minerals, native gold and minor amount of scheelite.The sulphide minerals includes arsenopyrite, pyrrhotite, pyrite, little sphalerite andchalcopyrite.

5.2)Structure of Hutti Greenstone Belt:-- The Hutti greenstone belt shows evidences of three distinct phases of folding and deformation (DF1, DF2 &DF3) which are associated with the development of planar and linear structural fabric. Development of shear zones of ductile to brittle regimes along the axial traces of major F1 folds is one of the most prominent structural features in the Hutti greenstone belt and forms the loci for localization of primary gold-quartzmineralization. These shear zones occur mostly within the meta basalts and along the contacts ofmeta basalts and acid volcanic rocks. The 2nd phase of folding and deformation (DF2), represented by major and minor folds, has refolded or cross-folded the 1st fold axial traces and the associated shear zones. The 3rd phase of folding & deformation is seen in the schistose rocks and in thelodes of Hutti deposit as broad warps. Oakley's fault is the only major fault in the Hutti mines and is quite persistent along its strike and dip throughout the mines area. The fault zone is about 0.5 m. wide and trends WNW - ESE with dip varying from 45^0 towards north near surface and gradually steepening to vertical in deeper levels. A number of minor cross-faults of a steeply dipping conjugate set also occur which displaced the lode zones and are predominantly left lateral faults.

5.3)Exploration: Investigation for gold in the selected block of the schist belt was carried out bydifferent officers of GSI from time to time starting from year 1967-68.The Summary of cumulative exploration carried in the area is as follows.

Name of agency	Surface Drilling	Underground drilling
GSI	53 BHs with 7070 total meterage	-------
M/s HGML	104 Nos BHs with 9022 total meterage	57 nos of BHs with 6080 total meterage

Underground development activities:-Underground mechanized mine developed upto26th levels, having mainly 3 shafts.

(1) Mallappa vertical Shaft (933.7 m depth)
(2) Central vertical Shaft (871.86 m depth)
(3) Village inclined shaft (552.9 m)

Further, sinking of new circular shaft and decline are under progress.

5.4)During recent inspection dated 9th to 10th Nov. 2018, the violation of rules 19, 26(2), 30 and 45 MCDR 2017 were pointed and correspondence under progress.

5.5)As per the last approved modified review and updation of mining plan dated 14/2/2017, about 8.99million tonnes of proved ore (111) with average grade of Au 5.37gms/tonne assessed in Hutti Mine.

5.6. Adequate underground developmentactivities have already been carried out up to 26th level. The delineation of ore body in the S-1block wasalready made with the help of developmentand further development in the proposed stoping is not required. Accordingly, the proposals of stopingof S-1 block (Strike Reef) in EE 34 region in between 26th&24th level by sub-level method with post fillingwas made in present review and updation mining plan and is under process. The present economic cut-off grade of ore is 2gm/tonne of Gold.

6.Mining & Development: ---

6.1)Status of proposed stope:--The proposed stope block lies between 26th level to 24th level in EE34 N (SR 26 S1 Block) region. North side, south side, top and bottom of this block is a virgin area.

6.2)Status of STOPE PREPARATION:---- The details of stope preparation made as follows.

a) Two sub-levels i.e., 26th top sub-level (TSL) and 24th drill level already developed and one 26th bottom sub-level proposed to be developed between 26th and 26th top sub-level from Rise EE35 to the entire length of the stope block.
b) The existing Rise EE33 at the north end of the block between 26th level to 24th level proposed to be used as Slot rise.
c) The existing Rise EE35 outside the stope block at South end between 26th level and 24th level proposed to be serving as Service Rise.

6.3) Statusof proposedstopeExtraction level:--The existing bottom level i.e. 26th level proposed to be used as extraction level.

A haulage drive of 4.00 m. x 3.00 m. developed in the hanging wall at 16.00 m. away from the ore body contact. Draw cross cuts of 4.00 m. x 3.00 m. proposed to be developed at 10.00 m. interval from haulage drive to ore drive for the proposed stope block, as shown in Drg.No. 29/371.

6.4)Proposed of Blasting pattern:---57mm dia downward holes proposed to be drilled from 26th bottom sub-level to 26th level from 26th top sub-level to 26th bottom sub-level, 24th drill level to 26th top sub-level and 24th level to 24th drill level. The holes proposed to be drilled with a ring burden of 1.50m. and toe spacing of 1.80m. covering the stope width to the entire length of the stope block.

The Proposed BLASTING pattern as follows:-

a) Blasting of holes drilled from 26th bottom sub-level to 26th level proposed to be commenced from slot rise provided at North end of the block.
b) The blasting of drilled holes from 26th top sub-level to 26th bottom sub-level, 24th drill level to 26th top sub-level and 24th level to 24th drill level proposed to becommencing simultaneously. A lead and lag of minimum 6.00m. proposed to be maintained between the levels and sub-levels. This sequence of blasting operation proposed to be maintained for the entire stoping block.
c) Suitable slurry explosives proposed to be used for blasting operations.
d) The maximum charge of 220 kgs. of explosives per delay proposed to be maintained throughout the stoping operation.
e) All the blast holes proposed to be blasted either in full or in vertical lifts of 6.00 to 8.00 m.
f) Blasting proposed to be carried out at the end of the shift after withdrawing all the men from the underground workings

6.5)ProposedWITHDRAWAL OF ORE:--The broken ore proposed to be transported by Electrical/Diesel operated LHD and proposed to be dumped into Mallappa Shaft ore bin rise at 26th level.

6.6)Proper safety measures are being made in Haulage drive and draw cross cuts and ventilation arrangement.

The proposals submitted are to stope out this blocks by sub-level method with post filling as per NIRM report. Further, the lessee had applied for DGMS permission.

7.Conclusions & Recommendations: Based on field observations, recommendationsin NIRM report), and proposals in present review and updation of Mining plan , the present stoping permission may be granted subjected to compliance of scrutiny comments. The Scrutiny commentsprepared separately, in addition to this site inspection report, which needs to be attended by the lessee /company with corrections in the plan and sections to the satisfactory level. Further, all pending development proposals should be completed before commencement of stoping operations.

This office may be informed once the stoping operations are commenced and the progress in regard to development &stopingmay be informed quarterly.

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