

STOPING INSPECTION REPORT
INDIAN BUREAU OF MINES
Bangalore Regional Office

Annexure-I

Mine Code No. 27KAR 16001

- (i) **Report Prepared by** : Shri. Sandeep Kumar Singh & Shri K. Srinivas
- (ii) **Designation** : Assistant Controller of Mines & Junior Mining Geologist
IBM, Bangalore
- (iii) **ML.No** : 2671
- (iv) **Accompanying Mine Official** : (1) Sri Arunava Ghosh
(2) Dr. Sanjeeva Kumar Solankar
(3) Sri Prashant
(4) Sri Abhijith M Suryavanshi
- (v) **Designation** : (1) Dy General Manager (Mining) & Mines Manager
(2) I/c Manager (Exploration) & Geologist
(3) Dy Manager (Survey) & Chief Surveyor
(4) Dy Manager (Mining) & Mining Engineer
- (vi) **Date of Inspection** : 29/09/2022
- (vii) **Date of submission of the application by lessee** : Application from lessee vide letter no 15/MIN/SO/2022-23/IBM dated 07.09.2022, received in the office on 08.09.2022.

PART – I General Information

1. a) **Name of the mine** : Hutti Gold Mine
- b) **Category of the mine** : A-Mechanized U/G mine
- c) **Address of the mine**
- State** : Karnataka
- District** : Raichur
- Village** : Hutti
- Pin** : 584115
- Fax** :
- E-mail** : rohgm1@gmail.com, ghosh.arunava@ka.gov.in,
tn.ravikumar@ka.gov.in
- d) **Name of Police Station** : Hutti
- e) **Lease area in Hectare** : 528.35 Ha
- (i) Forest** : -
- (ii) Non-forest** : Non-Forest
2. a) **Period of Lease** : 20 years (19/12/2008 to 18/12/2028)
- b) **Date of expiry** : 18/12/2028
3. a) **Mineral worked** : Gold, Scheelite and Associated Minerals
- b) **Main mineral** : Gold
- c) **Associated minerals** : Silver
- d) **Captive /non-captive use** : Captive
4. a) **Date of approval of mining plan with reference No.** : No.279/356/92/BNG /070, dt.: 02/09/2022
Modification to the Approved Mining Plan
- b) **Special conditions stipulated in approval letter** : Nil
5. **Name and address of Lessee and Agent (including Fax/E-mail, if any)**

- a) **Lessee** : Sri. PrabhulingaKavalikatti
The Managing Director
The Hutti Gold Mines Co. Ltd.
Address:3rd Floor, KHB shopping Complex,
National Games Village, Koramangla, Bangalore
Phone:08537-275022
Email: p.kavalikatti@ka.gov.in
Date of Appointment :01/03/2021
- b) **Agent** : Sri. Ravikumar
Address: The Hutti Gold Mines Co. Ltd.
Hutti-584115, Taluk.: Lingasugur, Dist.: Raichur,
Karnataka
Phone:9449615014
Email:dgmengg03@gmail.com,
tn.ravikumar@ka.gov.in
Date of Appointment :01/06/2021
- c) **Status of lessee (Private/ PSU/Joint sector)** : PSU
- d) **Mining Engineer/Geologist under Rule 55 of MCDR, 2016 with date of appointment whether full-time or part time and qualifications.** : Mining Engineer
Sri. AbhijithSuryavanshi
Full time
Date of Appointment :06/08/2020

Geologist
Dr. Sanjeeva Kumar Solankar
Full time
Date of Appointment :08/07/2019

PART- II: TECHNICAL DETAILS

1. Details of Section/Stoppe applied for permission:

Sl.No.	Name of applied block.	Stope ID	Level		Region	Proposed period as per approved MAMP dated 02/09/2022
			Top Level	Bottom Level		
1	SR 26 S1 Extension block	STRIKE REEF	24 L	26 L	DE 34	2022-23 (Aug-22 to Mar-23)

	Co-ordinates		Stope Dimension (LxWxH)
	Latitude (From, to) UTM/Local	Longitude (From, to) UTM/Local	(30 x 11.6 x 58)
Top level- 24 L	1791625,1791600	676638, 676656	
Bottom Level- 26L	1791606, 1791582	676612, 676630	

Table 1: The details of the proposed stopes

2. **Level and stope wise completed and pending development:** The status of the development has been examined during the mine inspection on 29/09/2022. The updated development as on 30/06/2022 as reported by the Lessee is as below.

Sl. No.	Block	Reef	Level	Development Required (mts)			Development Completed (mts)			Devel. %
				Drive	X-cuts	Total	Drive	X-cuts	Total	Compl.
1	S-1 (Extension)	Strike Reef (Hang Wall)	24 L	45	22	67	45	22	67	100%
2			24 DL	35	18	53	35	18	53	100%
3			26 TSL	73	23	96	73	23	96	100%
4			26 BSL	32	26	58	32	26	58	100%
5			26 L	32.5	19	51.5	32.5	19	51.5	100%
6			26 L Draw Level (Off-Lode)	52	54	106	44	17	61	57.50%
7			Total	269.5	162	431.5	261.5	125	386.5	89.60%

Table2: Proposed stope development status

3. Extent of Development in the mine: Details of UG development in Zone-I Reef is as follows:

Access	Dimension
Mallappa Shaft	6.1m x2.17 m
Central Shaft	3.76 m x 1.83 m
Village Shaft	3.51 m x 2.13 m
Circular Shaft	6 m diameter

Levels	Strike Reef(F/W)	Strike Reef(H/W)	Village Reef	Zone-I Reef	Middle Reef	Oakley's Reef	Prospect Reef	Total
1st	-	85.00	88.00	-	-	107.00	-	280.00
2nd	-	233.00	-	145.00	95.00	343.00	-	816.00
3rd	191.00	405.00	575.00	1,004.50	260.00	1,371.70	19.70	3,826.90
4th	180.00	305.00	256.00	923.00	202.00	1,064.00	-	2,930.00
5th	205.00	265.00	300.00	1,248.70	310.00	1,566.00	90.50	3,985.20
6th	211.00	335.00	272.00	633.00	210.00	1,202.00	-	2,863.00
7th	238.00	395.00	434.00	1,191.80	807.00	1,287.00	16.50	4,369.30
8th	283.00	315.00	370.00	631.00	540.00	1,215.00	-	3,354.00
9th	355.00	425.00	353.00	680.00	487.00	870.00	-	3,170.00
10th	418.00	492.00	260.00	833.00	1,097.80	1,113.80	-	4,214.60
11th	620.00	480.00	189.00	788.00	-	-	-	2,077.00
12th	671.00	530.00	158.00	736.00	-	-	-	2,095.00
13th Int	-	17.30	-	190.00	575.00	948.00	-	1,730.30
13th	713.00	525.00	164.00	1,018.00	720.00	953.00	-	4,093.00
14th	588.00	480.00	96.00	1,138.00	630.00	968.00	-	3,900.00
15th	513.00	875.00	122.00	1,134.30	973.70	1,060.00	-	4,678.00
16th	160.00	845.00	27.00	736.50	910.50	887.00	-	3,566.00
17th	-	800.00	-	734.00	742.40	760.00	-	3,036.40
18th	-	670.00	-	844.20	950.00	775.00	-	3,239.20
19th	-	700.00	-	764.00	779.70	680.00	-	2,923.70
20th	-	670.00	-	851.30	878.90	997.00	-	3,397.20
21st	-	650.00	-	733.00	750.00	576.00	-	2,709.00
22nd	-	620.00	86.00	687.00	935.00	795.00	-	3,123.00
23rd	-	470.00	-	595.00	720.00	288.00	-	2,073.00
24th	-	802.30	-	795.00	1,190.10	1,019.00	-	3,806.40
25th	-	-	-	633.50	-	227.80	-	861.30
26th	-	850.00	118.00	837.50	1,398.00	415.10	-	3,618.60
27th	-	233.60	-	155.00	93.00	18.00	-	499.60
28th	-	494.80	-	31.00	35.00	-	-	560.80
Total	5,346.00	13,968.00	3,868.00	20,691.30	16,290.10	21,506.40	126.70	81,796.50

Table3: Extent of development in mine

4. Stope worked out during last 5 years:

<i>Permission Letter</i>	<i>Stopes already worked out</i>	<i>No. of Stopes</i>	<i>Top level RL</i>	<i>Bottom Level RL</i>	<i>Quantity Proposed (Tonnes)</i>	<i>Quantity recovered (Tonnes)</i>
No. KNT/RCH/G-1-SZ/253, Dated 15.6.2018	OR 17 L – 19 L BE 43-44(8P Block)	1	545.61	609.61	88,115	32,060
No.KNT/RCH/G-I SZ Dated 11.11.1998	ZI 16 L – 20 L AW27 - BE31	1	471.50	637.50	1,17,065	1,60,285
No.M5/RCH/G-1-SZ Dated 09.06.2003	SR 21 L – 22 L FE34 - BE36	1	679.09	716.60	1,04,544	1,07,277
No.KNT/RCH/G-1-SZ Dated 14.07.1993	MR 19 L – 22 L DE45-EE46 (M-3)	1	609.07	718.50	1,15,435	43,818

Table 4: Details of stope workout during last five years

5. Reserve position of stopes in operation: Balance reserves in stopes under operation for which permission is granted as on 30/6/2022 as reported by the Lessee during inspection are.

Level	Name of the Reef	Stope ID	Permission letter and date	Quantity Proposed (T)	Quantity Recovered(T)	Balance Reserves(T)
15L - 17L	Middle Reef	M7-3	No.MS/RCH/G-I-SZ, Dated 18.09.2003	66,689	1,07,313	Nil
8L - 11L	Strike Reef Foot Wall	B2	No.KNT/RCH/G-I-SZ/250, Dated 15.06.2018	58,802	1,40,392	Nil
24L - 26L	Strike Reef	S1	No.KNT/RCH/G-I-SZ/256, Dated 15.06.2018	1,16,188	2,16,582	Nil
9L - 13 Inter L	Oakley's Reef	ORT	No.KNT/RCH/G-I-SZ/259, Dated 15.06.2018	1,00,169	1,27,878	Nil
17L - 19L	Middle Reef	MR (FW)	No.KNT/RCH/G-1-SZ/171 Dated 06.09.2019	7,51,475	3,17,127	4,34,348
24L - 26L	Middle Reef	N-1 Sub Block A	No KNT/RCH/G-1-SZ/218 Dated 20.10.2021	3,52,301	24,204	3,28,097
24L - 26L	Oakley's Reef	S1	No. KNT/RCH/G-I-SZ/221 Dated 20.10.2021	2,72,924	896	2,72,046

Table 5: Details of stope under operation

6. Reserve position of applied stopes: In-situ tonnage is geological resources; Mineable tonnage is tons including planned dilution.

Sl. No.	Reef	Stope Name	Level	In-situ Tonnage	Minable Tonnage	Grade (g/t)
1	Strike Reef	S-1 Block (Extension)	24 L - 26 L	57,115	51,768	14.8

Note: Mineable tonnage 51,768 tonnes, inclusive of 79% recovery factor & 15% dilution factor

Table 6: Reserve position in applied/proposed stopes.

7. Balance Reserves: Position of Reserve and Resource as on 01/04/2022 is as follows:

A. Total Mineral Reserves & Resources			
	UNFC	Million Tonnes	Grade (g/t)
Proved Mineral Reserve	111	15.58	4.38
Probable Mineral Reserve	121&122	3.36	3.90
Feasibility Mineral Resource	211	2.98	3.64
Pre-feasibility Mineral Resource	221	0	0
Measured Mineral Resource	331	0	0
Indicated Mineral Resource	332	1.49	3.26
Inferred Mineral Resource	333	2.24	2.73
Reconnaissance Mineral Resource	334	0	0

Table 7: Reserve & Resource position of the mine as on 1.04.2022

8. Manner of Extraction of SR24L - 26L DE 34 'S-1' Block (Extension)

Reference Plans and Sections:

SEQUENCE OF OPERATION

8.1. STOPE PREPARATION: [Drg. No. MP/SPA/2022/5/S-1 BLOCK EXT_SR/A-Plate-1]

- A. 24th Drill Level, 26th Top Sub Level, 26 Bottom Sub Level has been developed between 24th level and 26th level.
- B. One service raise from 24th Level to 26th level has been developed at the southern side at FE 35 region of the proposed block S-1 extension.

8.2. EXTRACTION LEVEL: [Drg. No. MP/SPA/2022/5/S-1 BLOCK EXT_SR/A-Plate-1]

The bottom level of the proposed Block i.e., 26th level shall be used as extraction level. A hang wall haulage drive of 4.00 m.(H) x 4.00 m. (W) is developed in the waste rock for S-1 Block, same will be extended for S-1 Block extension and draw cross cuts of 15.7m to 20.9m length are developed with dimensions of 3.00 m. (H) x 4.00m. (W) at an interval of 9.3 m to 23.4 m.

8.3. DRILLING OF BLAST HOLES: [Drg. No. MP/SPA/2022/5/S-1 BLOCK EXT_SR/A-Plate-1]

57 mm dia downward & upward holes with burden of 1.5m and toe spacing of 1.8 m shall be drilled from 24th Drill level(24D/L) & 26th Top Sub Level and 24th Drill level & 24th Level covering pillar of 15m & 4m height respectively. 57mm dia downward holes shall be drilled from 26 Top Sub Level(26TSL) to 26 Bottom Sub Level covering pillar of 11.5m. 57mm downward holes shall be drilled from 26 Bottom Sub Level(26BSL) to 26 Level(26L) covering pillar of 18.5m.

8.4. BLASTING [Drg. No. MP/SPA/2022/5/S-1 BLOCK EXT_SR/A-Plate-1]

- a. Blasting of holes drilled from 26 BSL to 26 L, 26 TSL to 26 BSL, 24 D/L to 26 TSL & 24 D/L above 4m will be commenced from southern end of the stope S-1 block and will progress towards south maintaining lead and lag of 6m, as shown in Part L.V in drawing no. MP/SPA/2022/5/S-1 BLOCK EXT_SR/A-Plate-1.
- b. The 6m pillar below 24 Level shall be retained as Crown Pillar between 24L & 24D/L

- c. This sequence of blasting operation shall be maintained for the entire stoping block.
- d. Emulsion explosives of 40 mm will be used for blasting operations.

Sequence of Blasting: [Drg No. MP/SPA/2022/5/S-1 BLOCK EXT_SR/A-Plate-1]

- (1) Blasting of Drill holes of **Slice-1** between 26 BSL and 26 L shall be commenced from 26 BSL against the open stope S-1 Block, followed by Slice-2.
- (2) Blasting of Drill holes of Slice-3 between 26 TSL & 26 BSL shall be commenced from 26 TSL against the open stope S-1 Block followed by Slice-4 & Slice-5 from 26 BSL & 26 TSL respectively.
- (3) Blasting of Drill holes of Slice-6 between 24 D/L & 26 TSL and 24 D/L & 4m upward holes, shall be commenced from 24 D/L against open stope S-1 Block.
- (4) This will be followed by blasting of Drill holes of Slice-7 & 10 from 26 BSL, Slice- 8, 11 & 13 from 26 TSL and Slice-9, 12, 14 & 15 from 24 D/L.
- (5) A crown pillar of 6m is retained below 24 L, between 24 L & 24 D/L.
This will mark **completion of blasting** in SR 26 S-1 Extension block of strike reef between 24th level to 26th level.

8.5. WITHDRAWAL & TRANSPORTATION OF ORE [Drg No. MP/SPA/2022/5/S-1 BLOCK EXT_SR/A-Plate-1]

The broken ore shall be drawn from the stope by Diesel Operated LHD at draw cross cuts of 4m(W)x3m(H) & hauled in Hang wall haulage Drive of 4m(W)x4m(H), dumped into Diesel operated LPDT to haul in Main Haulage Cross Cut of 5m(W)x5m(H) and will be dumped into shaft bin or coarse ore bin at 26th Level and hoisted by New Winder/ Old Winder of Mallappa Shaft/ New Circular Shaft to surface.

PROPOSED RATE OF PRODUCTION FROM STOPE (as per Modified Approved Mine Plan)

BLOCK ID	MONTH	TONNAGE	TOTAL
S-1 BLOCK (Extension)	OCT'22	7,500	45,000
	NOV'22	7,500	
	DEC'22	7,500	
	JAN'23	7,500	
	FEB'23	7,500	
	MAR'23	7,500	

Table 8: Proposed Rate of production from stope

ESTIMATED TONNAGE & GRADE TO BE RECOVERED FROM 'S-1' BLOCK EXTENSION

SL NO	Name of Sub-Block	Insitu Ore Reserve			Irrecoverable Reserve			Recoverable ore			Dilution @ 15 %			Extraction from the Block		
		Tonnes (MT)	Grade (g/t)	Gold (g)	Tonnes (MT)	Grade (g/t)	Gold (g)	Tonnes (MT)	Grade (g/t)	Gold (g)	Tonnes (MT)	Grade (g/t)	Gold (g)	Tonnes (MT)	Grade (g/t)	Gold (g)
1	S-1 BLOCK (Extension)	57,115	16.98	969813	12,099	16.83	203640	45,016	17.0	766173	6,752	0.00	0.00	51,768	14.80	766173

Table 9: Estimated tonnage and grade from proposed block

8.6. SUPPORT OF WORKINGS: [Drg. No. MP/SPA/2022/5/S-1 BLOCK EXTENSION_SR/J-Plate-10]

The following measures have been implemented for support of workings,

- 1) All drives and cross cuts developed inside the ore body of 3m(H) X 3m(W) size in the proposed block are supported with 20mm diameter tor steel rock bolts of 1.50m length at 1.4m spacing.

- 2) All drives and cross cuts of 4m(H) X 4m(W) & 3m(H) X 4m(W) size respectively, developed in waste rock outside the ore body are supported with 20mm diameter tor steel rock bolts of 1.50 m length at 1.5m spacing.

8.7. SAFETY MEASURES: [Drg. No. MP/SPA/2022/5/S-1 BLOCK_EXT_SR/M-Plate-10]

As per recommendation of NIRM, Report No GC-1503 dated 01.11.2021, the following safety measures will be implemented.

- 1) Effect of Mining of the proposed block would be monitored by installing Stress Cells in the RIB Pillars adjacent to the block and in the crown pillar.
- 2) Convergence would be monitored by installing Tape Extensometers and Convergence Recorders in the Haulage Drives and in the Draw Cross Cuts in the proposed stoping block as shown in the drawing

8.8. VENTILATION:[Drg. No. MP/SPA/2022/5/S-1 BLOCK_EXT_SR/D-Plate-4]

The stope will be ventilated with fresh intake air of minimum quantity of 540 Cu.m/min from Circular Shaft & Mallappa Shaft through the connecting drives and cross cuts at 26th Level and the return air would go up through the raises to the SR winze No.3 Air Shaft shown in Drawing

SR Winze No.3 Fan Details:

Make: ABB 1600-800-12 VP Axial Flow Fan

Capacity: 2214 Cu.m/min

Water Gauge: 103 mm

8.9. STOWING:


After completion of extraction of the proposed block, the stope void shall be backfilled by hydraulic stowing with classified mill tailings and waste rock, in order to ensure stable working conditions in future stope blocks adjacent to the proposed block.

9. **Compliance of Rule 30 under MCDR, 2017:** - has been complied with as Stopping application has been applied in prescribed Form –F under rule 30(2) of MCDR, 2017 by Hutti Underground Gold Mine of M/s The Hutti Gold Mines Company limited.
10. **Comments on the scrutiny of stoping notice:** The stoping notice has been examined in light of the field visit on 29/09/2022 and discussion held with mine officials. The scrutiny comments were communicated to the Lessee vide Letter no KNT/RCH/G-1/BNG-Vol-XIV dated 06/10/22. The Lessee has incorporated corrections and the final copy is submitted vide Lessee letter no. 71/HGML/Stope/2022/390 dated 14.10.2022.
 - a) Application of stoping was submitted for Strike Reef between 24th level to 26th level, SR 26 S-1 Extension block DE-34 region between grids as mentioned in Table 1.
 - b) As per Modifications to the approved Mining Plan approved on 02/09/2022, above mentioned stope in Table-1 is proposed to stope out in the year 2022-23 (Aug-22 to March-23) as mentioned below in Table 11. The proposed stope details have been furnished in the table 1. The proposed rate of production & estimated tonnage and grade has been furnished in Table 8 & 9.
 - c) Adequate development has been carried out for the proposed stope w.r.t the off-lode, on-lode & primary development by the Lessee as mentioned above in Table 2 & below in Table-10.
 - d) Accordingly, the proposed stope is recommended for permission as adequate development has been carried out in this stope.

Sl. No.	Block	Reef	Level	Development Required (mts)			Development Completed (mts)			Devel. %
				Drive	X-cuts	Total	Drive	X-cuts	Total	Compl.
1	S-1 (Extension)	Strike Reef (Hang Wall)	24 L	45	22	67	45	22	67	100%
2			24 DL	35	18	53	35	18	53	100%
3			26 TSL	73	23	96	73	23	96	100%
4			26 BSL	32	26	58	32	26	58	100%
5			26 L	32.5	19	51.5	32.5	19	51.5	100%
6			26 L Draw Level (Off-Lode)	52	54	106	44	17	61	57.50%
7			Total	269.5	162	431.5	261.5	125	386.5	89.60%

Table 10 showing status of development of stope recommended for permission

4.2.6: Stope wise Production (Annexure 25)



Level (mRL)	Stope ID	Estimated Reserve Stope (t)	Proposed ROM production from Stope (t)	Planned Recovery (%)	Planned Dilution (%)	Grade Range (g/t)	Location (Latitude, Longitude)
SRF 8L - 11L KE 37 (240.76m - 338.05m)	B2 BLOCK	58,802	20,000	85	15	2.0	1791604, 676902 1791553, 676934 1791580, 676880 1791538, 676901
SR 24L - 26L DE 34 (779.2m - 839.4m)	S1 BLOCK	1,16,188	7,800	85	15	10.00	1791670, 676598 1791625, 676638 1791657, 676578 1791606, 676612
SR 24L - 26L DE 34 (779.2m - 839.4m) Extension	S1 BLOCK (Extension)	57,115	45,000	86	15	14.8	1791625, 676638 1791600, 676656 1791606, 676612 1791582, 676630
ZI 15 L - 16 INT DE 34 (476 m - 495m)	S4 BLOCK	60,251	45,000	88	15	2.80	1791633, 676556 1791552, 676595 1791631, 676553 1791549, 676590
MR (F/W) 17L - 19L GE 47 (544.84m - 608.83m)	A BLOCK	1,57,914	26,000	85	15	3.00	1791023, 676733 1790963, 676733 1790962, 676698 1791022, 676689
OR 9L - 13 INT GE 47 (286.23m - 354.9m)	OR1 BLOCK	43,707	30,000	85	15	3.20	1791040, 676737 1790970, 676776 1791013, 676707 1790950, 676746
OR 9L - 13 INT GE 49 (286.23m - 354.9m)	OR2 BLOCK	56,462		85	15	2.00	1790964, 676780 1790996, 676812 1790941, 676748 1790875, 676777
ZI 24L - 26L BE 34 (780.4m - 840m)	S1 BLOCK	1,15,512	58,000	85	15	2.80	1791594, 676465 1791532, 676497 1791586, 676449 1791523, 676479
OR 24L - 26L CW 37 (780.6m - 837.6m)	S1 BLOCK	2,72,942	60,000	88	15	2.50	1791471, 676293 1791385, 676307 1791465, 676276 1791372, 676283
MR 24L - 26L CE 44 (778.5m - 835.5m)	N1 BLOCK (Sub Block A)	3,52,301	60,000	88	15	2.00	1791159, 676528 1791115, 676563 1791136, 676504 1791097, 676531
SR 15L - 17L JE 37-40 (472m - 542m)	P-7 BLOCK	41,151	10,000	85	15	3.00	1791406, 676893 1791359, 676916 1791391, 676862 1791346, 676890
Total			3,61,800				

Table 11: Proposed period as per approved MMP dated 02/09/2022 for recommended stope

11. **Recommendation:** Based on field observations, compliance of scrutiny comments submitted by the Lessee, recommendations in NIRM report and proposals in present modifications to the approved mining plan, the present stoping permission for Strike reef 24th level to 26th level in DE 34 region, SR 26 S-1 Extension Block may be granted.

K. Srinivas
Junior Mining Geologist

Sandeep Kumar Singh
Assistant Controller of Mines