

PRELIMINARY ASSESSMENT OF IRON ORE RESOURCES AVAILABLE AT KWBOJO AREA OF TANGA PROVINCE TANZANIA

1. Introduction:

This report presents a preliminary assessment of Iron ore present at Licences PL11860/2022, and Technical support to Local in PML012262EZ, PML0786TNG by M/s. Dharti Mineral co. Ltd at Tanzania. The assessment is based on Iron orebodies identified by Geophysical surveys.

2. Location:

The Kwabojo Iron ore project areas are approximately 25 to 27 Km north east of Kabuku, Handeni, Tanga (figure 1).

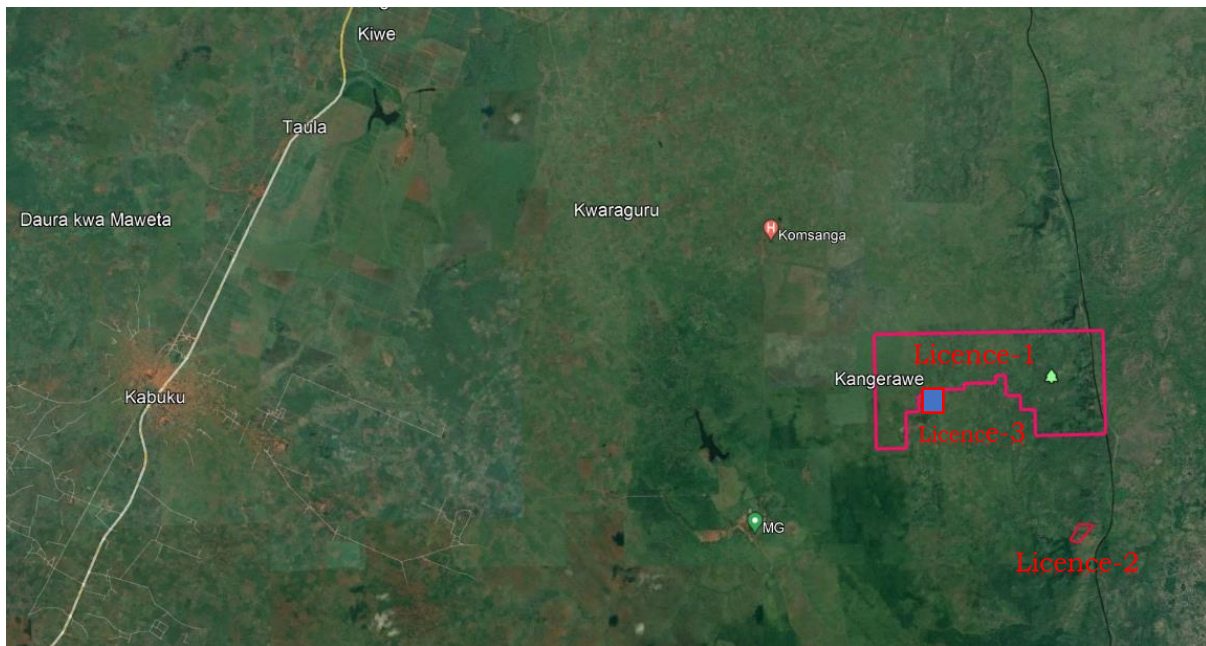


FIG-1

3. The geology of the Area:

The underlying geology is mixed sequence of high-grade metamorphic rocks intruded by several granites. Migmatite-granite, Meta-sediment complex are common throughout the area. The iron ore is emplaced as a late-stage intrusive rock related to the emplacement of nearby granites. The iron ore deposit is structurally controlled by shear zone and is hosted in the Migmatite-granite-meta sedimentary complex. Shearing along the eastern part of the area, created room for iron ore deposition. Ore is mainly of Magnetite and at places some Haematite is also present.

4. Airborne geophysical survey:

A report on regional Airborne geophysical survey is available and it shows that the present licenses are in the potential high magnetic field. In Fig-2 below, the areas showing pink colour with values more than 0.16 nT/m. are identified as potential Iron ore bodies.

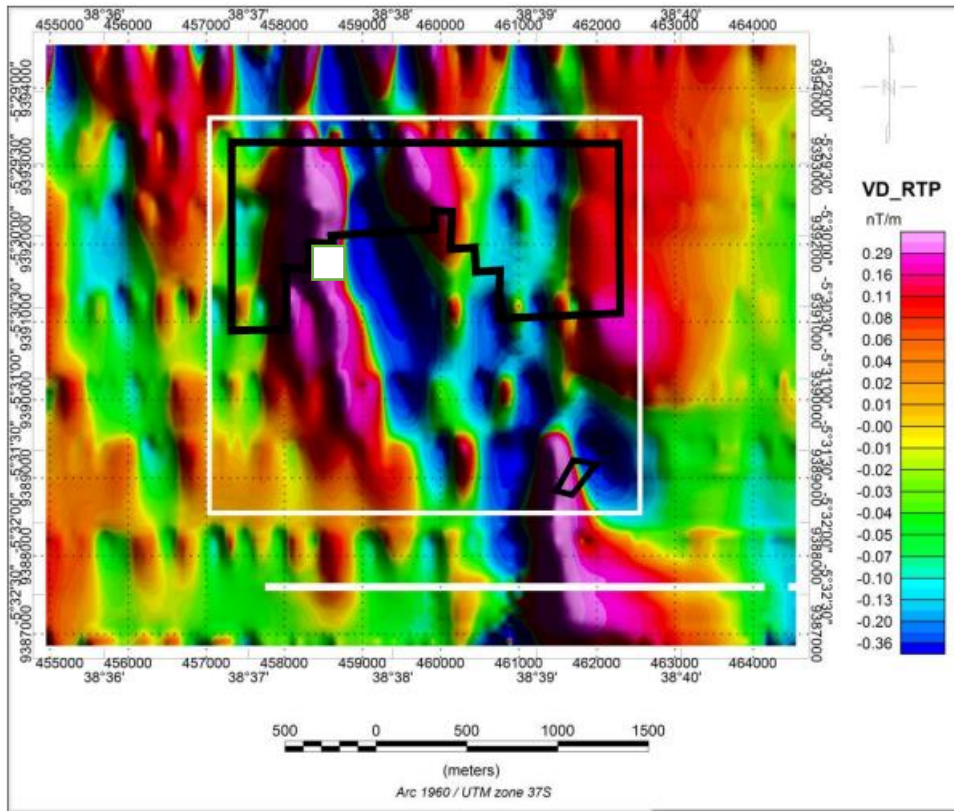


FIG-2

The map in Fig-3 below shows these ore-bodies with respect to two licences.

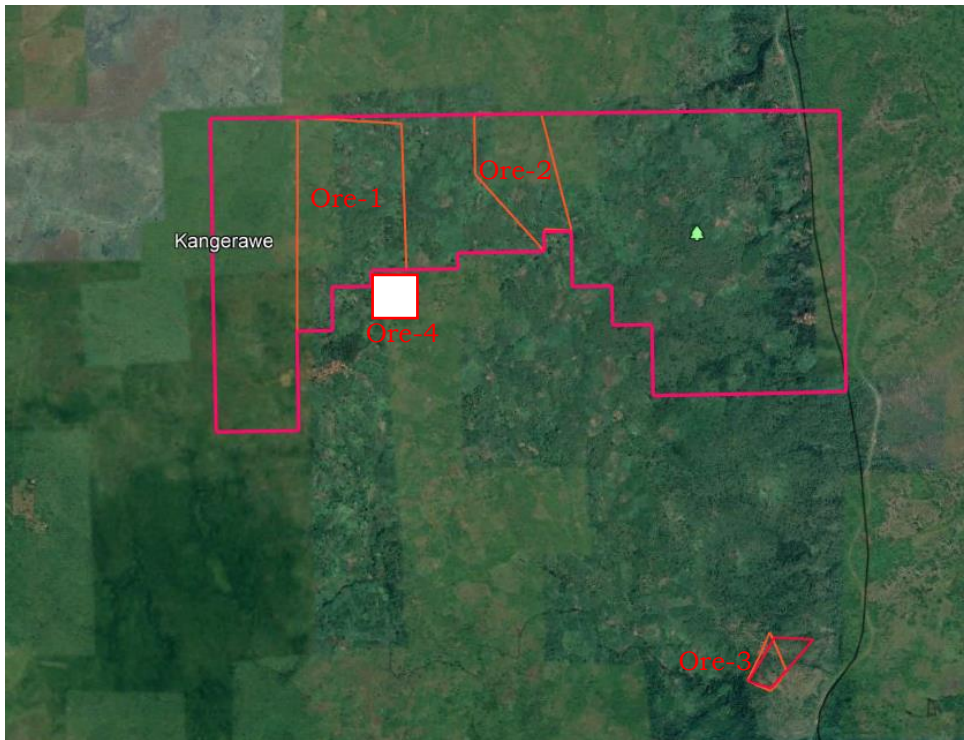


FIG-3

5. Evaluation of ore Potential:

At present the data available is only Geophysical anomalies and field observations. The anomalies have to be tested by drilling to prove the ore reserves for mining. However, the geology shows that the Iron ore bodies are actually solid tabular bodies with deep seated origin because they are the result of volcanic activity.

For present preliminary assessment the three geophysical anomalies are considered. The depth persistence of these orebodies is taken as 50m below the lowest exposed level on ground. Using the position of the orebodies on ground, actual area of each orebody and its depth extension 100m below surface, 3-D models are constructed using software. The dimensions of ore bodies along with in-situ resources are given in Table-1 below.

Orebody	License No. /area	Surface Area	Depth	Volume	Tonnage	Say
		M2	m/RL	M3	t	Million t
Ore-1	PL11860/2022 (2115 Acre)	1167203	100/180	93371104	326798864	327
Ore-2		503060	100/130	46368649	162290273	162
Ore-3	PML0122262EZ	59540	100/130	4461869	15616542	16
Ore-4	PML0786TNG	84102	60/180	21482109	75187383	75
TOTAL		1813905		165683731	579893062	580

TABLE-1 IN-SITU IRON ORE RESOURCES

- Note: 1. As the terrain is undulating, there are high contours and low contours on the surface. 50m depth is considered from lowest contour. Hence the considered RLs are also mentioned in the table.
2. The bulk Density to convert volume to tonnage is taken as 3.5.
3. The stripping ratio varies from 0.35 to 2.5 as the benches move downwards.

Figures 4, 5, 6 and 7 show the perspective ore shapes of each orebody:

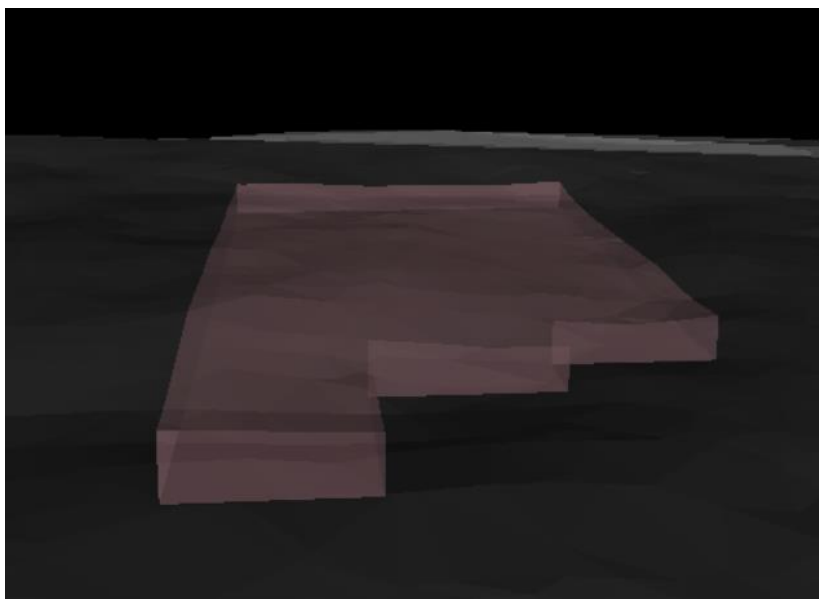


FIG-4, OREBODY -1

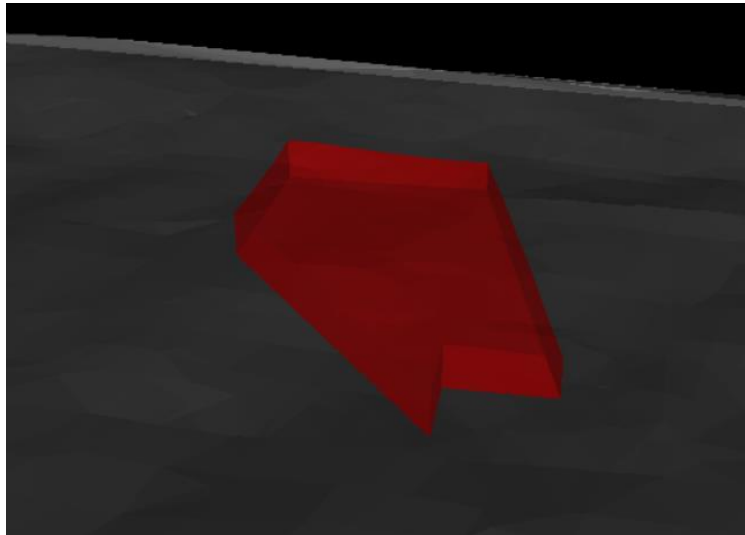


FIG-5, OREBODY-2

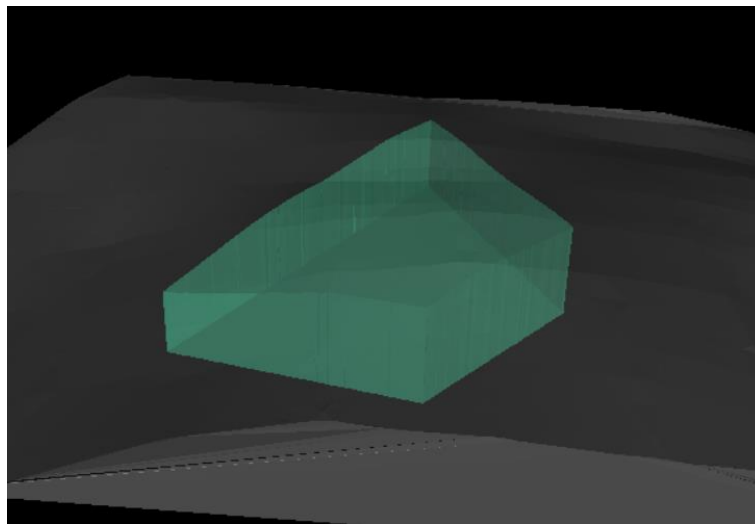


FIG-6, OREBODY-3

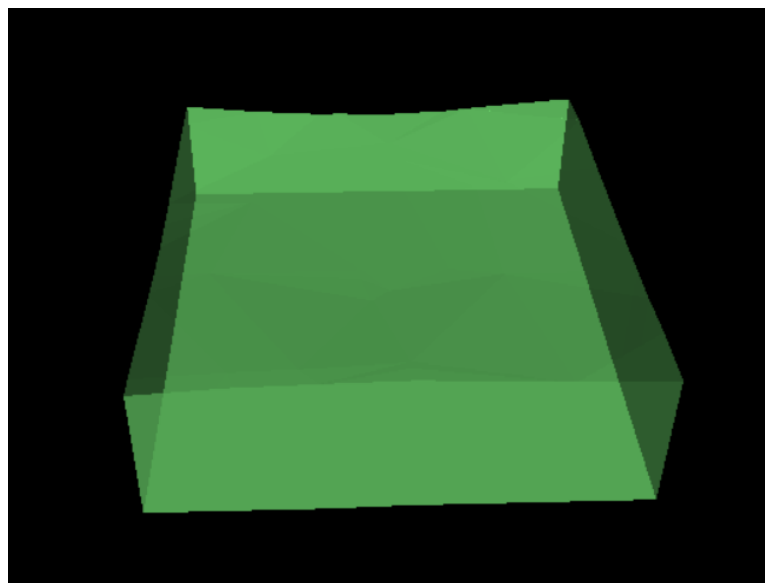


FIG-7, OREBODY-4

6. Mineable Resources:

The proposed mining method is open cast and the bench configurations are as below:

Bench Height=8m, Bench Width(berm)= 8m, Face angle= 70°

With the above, when we construct benches up to 50m below surface, lot of in-situ ore will be left outside the pit. We cannot mine the entire ore body as there is a lease restriction on ground. The mineable resources computed using 3-D models of open pits come to;

Orebody -1 = 247 million Tonnes
 Orebody- 2 = 156 million Tonnes
 Orebody- 3 = 12 million Tonnes
 Orebody-4 = 68 million Tonnes
TOTAL = 483 million Tonnes

7. Chemical Analysis and Fe Grade:

A total number of 30 samples from the area are analysed by XRF method for various elements in SADCAS lab of Tanzania. Average Total Fe comes to about 72%. The results are tabulated below in Table-2

Sample Nos.	Date	NO	Fe	Si	Al	LE	Mg	Ti	P	Cr	V	Ca	Sr	Mn	Cl	S	Zn
DHR-1	09.01.23	10.000	70.160	9.950	7.740	6.530	2.250	1.360	0.592	0.554	0.345	0.000	0.000	0.000	0.000	0.000	0.000
DHR-2	09.01.23	6.000	37.780	5.490	11.440	28.470	0.000	4.070	6.770	0.000	1.910	1.380	1.240	0.000	0.000	0.000	0.000
DHR-3	09.01.23	5.000	36.480	6.010	10.510	30.290	0.000	3.980	7.160	0.000	1.950	1.270	1.360	0.000	0.000	0.000	0.000
DHR-4	09.01.23	4.000	24.200	5.430	10.110	40.570	0.000	4.580	6.450	0.000	2.830	2.450	1.550	0.000	0.000	0.000	0.000
DHR-5	09.01.23	11.000	68.790	9.080	9.730	8.620	1.170	0.784	0.801	0.470	0.307	0.000	0.000	0.000	0.000	0.000	0.000
DHR-6	09.01.23	12.000	74.560	10.350	9.820	0.000	1.710	1.370	0.823	0.579	0.407	0.000	0.000	0.158	0.000	0.000	0.000
DHR-7	09.01.23	13.000	80.050	5.200	8.170	0.914	2.390	1.210	0.820	0.426	0.000	0.000	0.000	0.000	0.398	0.000	0.000
DHR-8	09.01.23	17.000	83.330	4.970	5.510	0.000	0.000	2.420	2.020	0.000	0.463	0.715	0.146	0.139	0.000	0.000	0.000
DHR-9	10.01.23	11.000	76.560	1.280	1.560	15.730	2.110	1.290	0.358	0.000	0.182	0.000	0.000	0.000	0.000	0.628	0.000
DHR-10	10.01.23	14.000	85.700	1.840	2.150	6.070	2.420	0.703	0.310	0.000	0.194	0.000	0.000	0.000	0.440	0.000	0.000
DHR-11	15.01.23	7.000	66.430	0.788	0.840	24.650	2.850	1.690	0.000	0.000	0.583	0.000	0.000	0.000	1.320	0.314	0.000
DHR-12	15.01.23	9.000	63.860	0.897	1.160	28.060	1.270	1.820	0.000	0.000	0.662	0.000	0.000	0.000	1.320	0.378	0.000
DHR-13	15.01.23	13.000	78.020	1.050	1.430	12.500	1.970	2.600	0.351	0.000	0.733	0.000	0.000	0.000	0.000	0.676	0.000
DHR-14	15.01.23	14.000	80.320	1.590	2.500	6.550	2.840	2.560	0.000	0.000	0.769	0.000	0.000	0.000	0.964	0.997	0.000
DHR-15	15.01.23	16.000	74.310	1.300	4.010	8.470	1.470	5.430	2.290	0.000	0.000	0.723	0.000	0.000	0.582	0.000	0.000
DHR-16	15.01.23	17.000	77.220	1.160	3.450	7.720	0.000	5.650	2.070	0.000	0.491	0.862	0.000	0.000	0.670	0.000	0.000
DHR-17	15.01.23	27.000	82.030	2.950	3.150	5.200	2.030	1.590	0.592	0.000	0.000	0.000	0.000	0.000	1.440	0.000	0.303
DHR-18	10.01.23	9.000	83.540	0.716	0.877	9.820	2.150	2.120	0.000	0.000	0.227	0.162	0.000	0.000	0.000	0.163	0.000
DHR-19	15.01.23	18.000	76.940	0.888	1.960	12.700	0.000	4.550	1.280	0.000	0.429	0.618	0.220	0.000	0.000	0.000	0.000
DHR-20	15.01.23	23.000	82.220	1.930	2.030	6.780	2.490	1.910	0.631	0.000	0.000	0.430	0.000	0.000	0.945	0.000	0.000
DHR-21	15.01.23	22.000	85.760	1.430	1.680	4.820	2.120	1.800	0.431	0.000	0.000	0.278	0.000	0.000	1.250	0.000	0.000
DHR-22	15.01.23	24.000	80.070	1.780	1.870	11.350	0.000	2.380	0.567	0.000	0.200	0.361	0.000	0.000	1.070	0.000	0.000
DHR-23	15.01.23	25.000	82.930	2.660	3.450	6.570	0.000	1.310	0.610	0.000	0.273	0.000	0.000	0.000	1.480	0.000	0.328
DHR-24	15.01.23	26.000	83.280	2.550	3.280	4.760	1.860	1.360	0.574	0.000	0.000	0.000	0.000	0.000	1.100	0.000	0.574
DHR-25	15.01.23	28.000	82.590	2.170	2.760	5.570	2.640	1.420	0.536	0.000	0.000	0.000	0.000	0.000	1.260	0.000	0.498
DHR-26	15.01.23	29.000	81.860	2.380	2.650	6.600	2.280	1.370	0.507	0.000	0.255	0.000	0.000	0.000	1.560	0.000	0.000
DHR-27	15.01.23	30.000	83.530	2.790	2.860	4.160	2.560	1.330	0.542	0.000	0.000	0.000	0.000	0.000	1.380	0.000	0.310
DHR-28	15.01.23	32.000	64.350	8.780	4.710	16.420	0.000	1.210	2.230	0.000	0.377	0.895	0.375	0.000	0.000	0.000	0.000
DHR-29	09.01.23	9.000	52.860	11.840	9.540	22.830	0.000	0.780	0.700	0.827	0.225	0.000	0.000	0.209	0.000	0.000	0.000
DHR-30	09.01.23	18.000	64.600	5.320	6.190	8.720	1.880	6.630	3.390	0.000	0.771	1.610	0.000	0.000	0.000	0.000	0.000

TABLE-2 CHEMICAL ANALYSES

Figures 8,9,10 and 11 show perspective bench developments for each orebody:

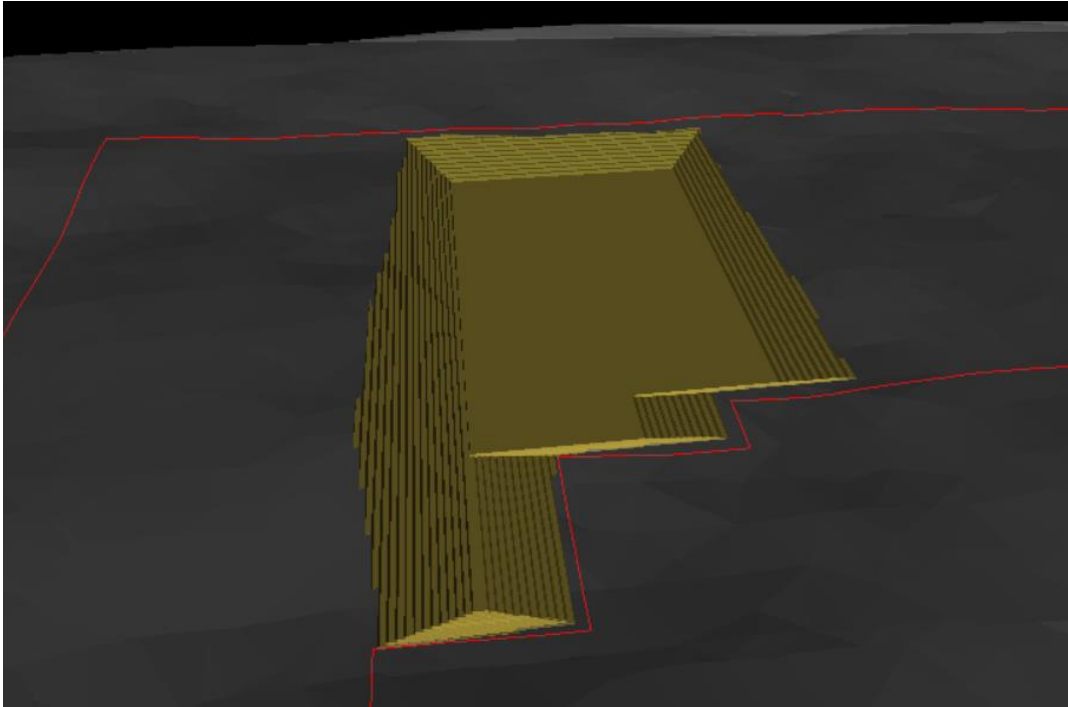


FIG-8, ORE-1 BENCHES

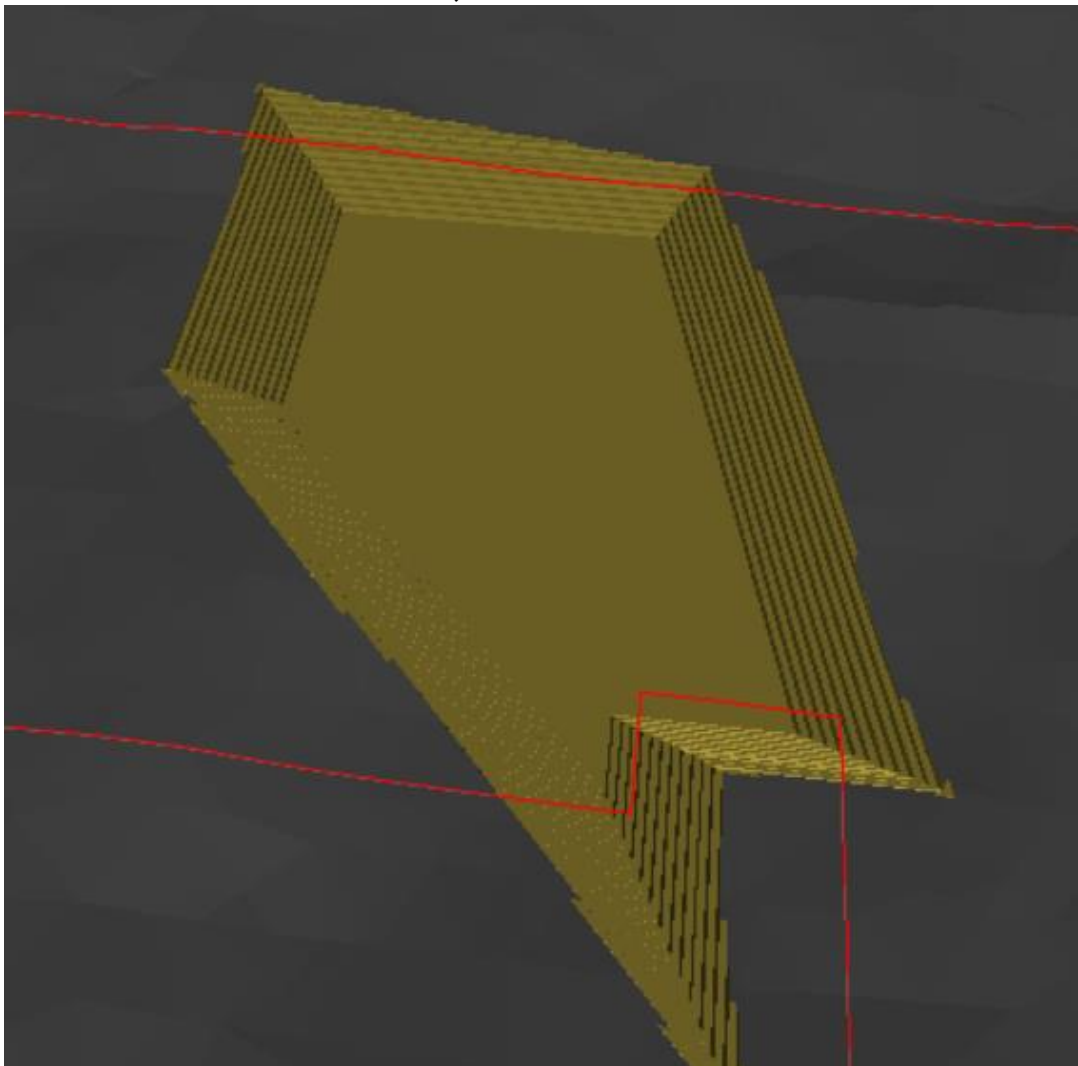


FIG-9, ORE-2 BENCHES

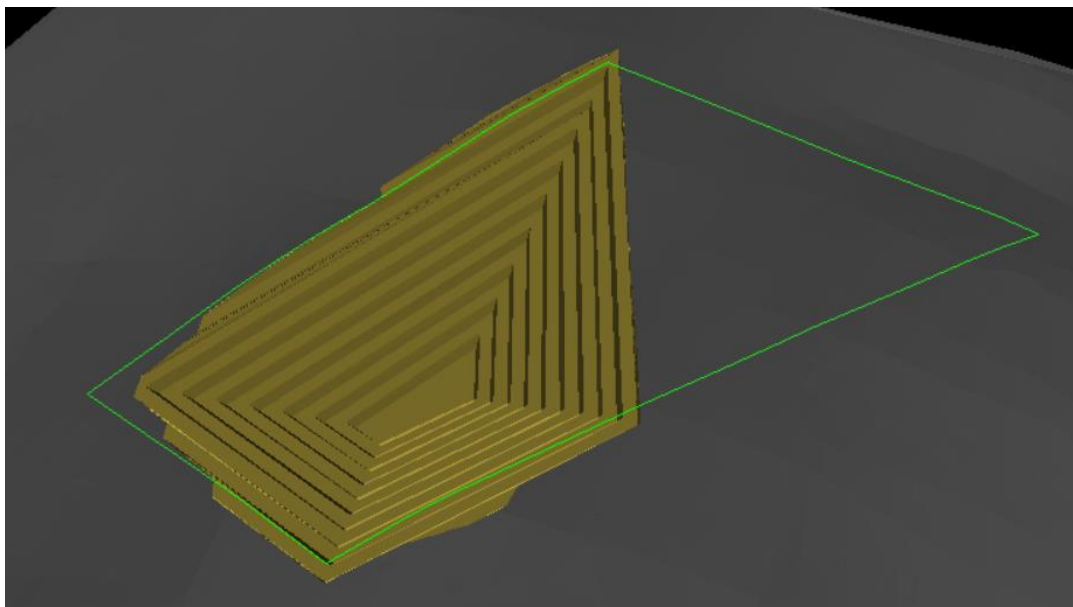


FIG-10, ORE-3 BENCHES

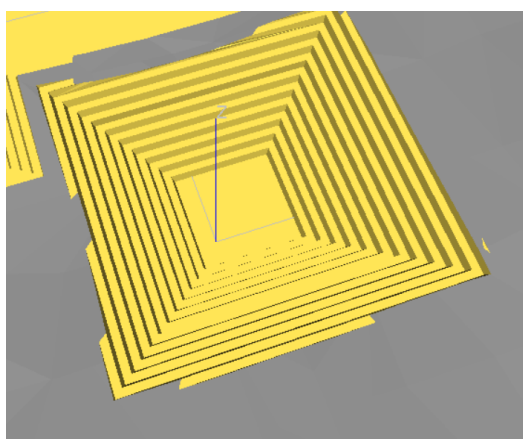


FIG-11, ORE-4 BENCHES

8. Exploration by Drilling:

To know the depth persistence and grade behaviour of ore bodies grid pattern drilling is proposed to convert the resources into proved reserves. Orebodies-1 and -2 are very big, so there 200m grid is proposed. In Orebody -3 100m grid is proposed.

For orebody-1 the depth to reach below ground is taken as 180 mRL, whereas for ore 2 and 3 a depth of 130mRL is proposed. Details of proposed boreholes are in Tables 3,4,5 and 6.

PROPOSED BOREHOLES FOR OREBODY-1					
Sl No.	Borehole No.	Location(WGS 84)		Collar RL(m)	Length of the Hole(m)
		Easting	Northing		
1	DI-1-PBH-1	458208	9392953	250	70
2	DI-1-PBH-2	458408	9392953	245	65
3	DI-1-PBH-3	458608	9392953	241	61
4	DI-1-PBH-4	458808	9392953	236	56
5	DI-1-PBH-5	458208	9392753	256	76
6	DI-1-PBH-6	458408	9392753	246	66
7	DI-1-PBH-7	458608	9392753	249	69
8	DI-1-PBH-8	458808	9392753	241	61
9	DI-1-PBH-9	458208	9392553	263	83
10	DI-1-PBH-10	458408	9392553	259	79
11	DI-1-PBH-11	458608	9392553	256	76
12	DI-1-PBH-12	458808	9392553	239	59
13	DI-1-PBH-13	458208	9392353	275	95
14	DI-1-PBH-14	458408	9392353	272	92
15	DI-1-PBH-15	458608	9392353	257	77
16	DI-1-PBH-16	458808	9392353	239	59
17	DI-1-PBH-17	458208	9392153	283	103
18	DI-1-PBH-18	458408	9392153	281	101
19	DI-1-PBH-19	458608	9392153	261	81
20	DI-1-PBH-20	458808	9392153	243	63
21	DI-1-PBH-21	458208	9391953	292	112
22	DI-1-PBH-22	458408	9391953	285	105
23	DI-1-PBH-23	458608	9391953	264	84
24	DI-1-PBH-24	458808	9391953	246	66
25	DI-1-PBH-25	458208	9391753	292	112
26	DI-1-PBH-26	458408	9391753	273	93
27	DI-1-PBH-27	458608	9391753	254	74
28	DI-1-PBH-28	458208	9391553	274	94
TOTAL DRILLING(m)					2232

TABLE-3, OREBODY-1

PROPOSED BOREHOLES FOR OREBODY-2					
Sl No.	Borehole No.	Location(WGS 84)		Collar RL(m)	Length of the Hole(m)
		Easting	Northing		
1	DI-2-PBH-1	459600	9392904	225	95
2	DI-2-PBH-2	459800	9392904	211	81
3	DI-2-PBH-3	460000	9392904	208	78
4	DI-2-PBH-4	459600	9392704	225	95
5	DI-2-PBH-5	459800	9392704	212	82
6	DI-2-PBH-6	460000	9392704	213	83
7	DI-2-PBH-7	459600	9392504	236	106
8	DI-2-PBH-8	459800	9392504	227	97
9	DI-2-PBH-9	460000	9392504	223	93
10	DI-2-PBH-10	460085	9392400	223	93
11	DI-2-PBH-11	459800	9392304	242	112
12	DI-2-PBH-12	460000	9392304	224	94
13	DI-2-PBH-13	460105	9392201	221	91
14	DI-2-PBH-14	460000	9392104	223	93
TOTAL DRILLING(m)					1293

TABLE-4, OREBODY-2

PROPOSED BOREHOLES FOR OREBODY-3					
Sl No.	Borehole No.	Location(WGS 84)		Collar RL(m)	Length of the Hole(m)
		Easting	Northing		
1	DI-3-PBH-1	461653	9388543	196	66
2	DI-3-PBH-2	461753	9388543	211	81
3	DI-3-PBH-3	461653	9388643	200	70
4	DI-3-PBH-4	461753	9388643	210	80
5	DI-3-PBH-5	461853	9388643	207	77
6	DI-3-PBH-6	461753	9388743	203	73
7	DI-3-PBH-7	461780	9388843	206	76
TOTAL DRILLING(m)					523

TABLE-5, OREBODY-3

PROPOSED BOREHOLES FOR OREBODY-4					
Sl No.	Borehole No.	Location(WGS 84)		Collar RL(m)	Length of the Hole(m)
		Easting	Northing		
1	DI-4-PBH-1	458722	9391765	250	70
2	DI-4-PBH-2	458822	9391765	249	69
3	DI-4-PBH-3	458922	9391765	257	77
4	DI-4-PBH-4	458722	9391665	252	72
5	DI-4-PBH-5	458822	9391665	254	74
6	DI-4-PBH-6	458922	9391665	259	79
7	DI-4-PBH-7	458722	9391565	261	81
8	DI-4-PBH-8	458822	9391565	262	82
9	DI-4-PBH-9	458922	9391565	262	82
TOTAL DRILLING(m)					686

TABLE-6, OREBODY-4

The perspective drawings showing boreholes layout is given in figures 12 to 15below:

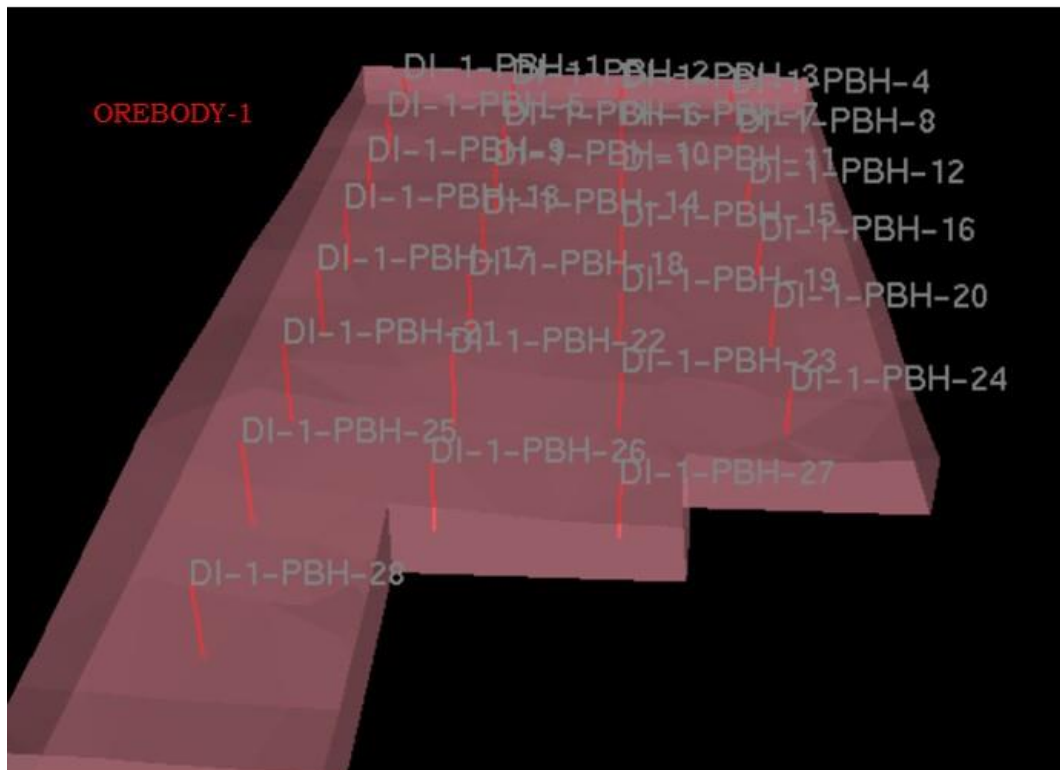


FIG-12, ORE-1

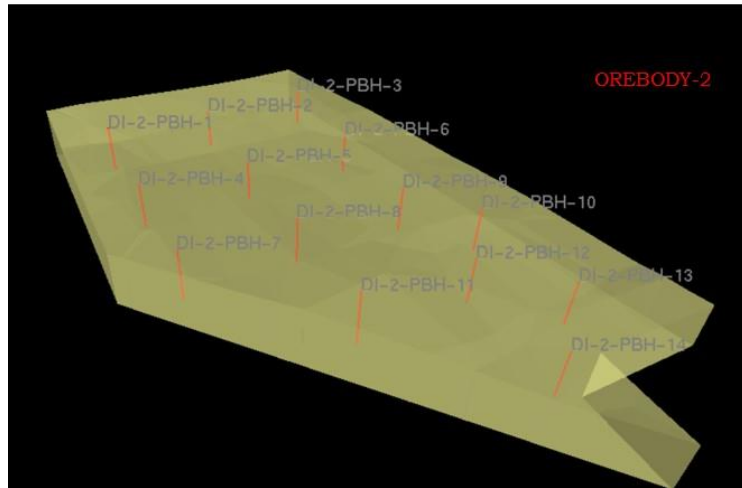


FIG-13, ORE-2

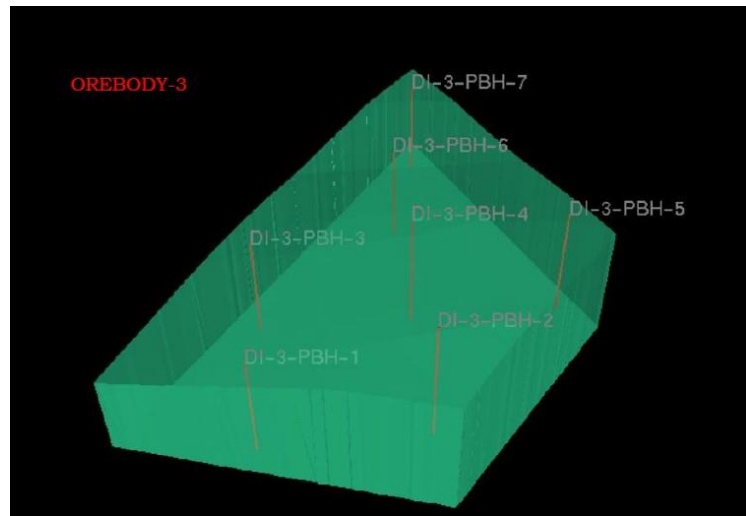


FIG-14, ORE-3

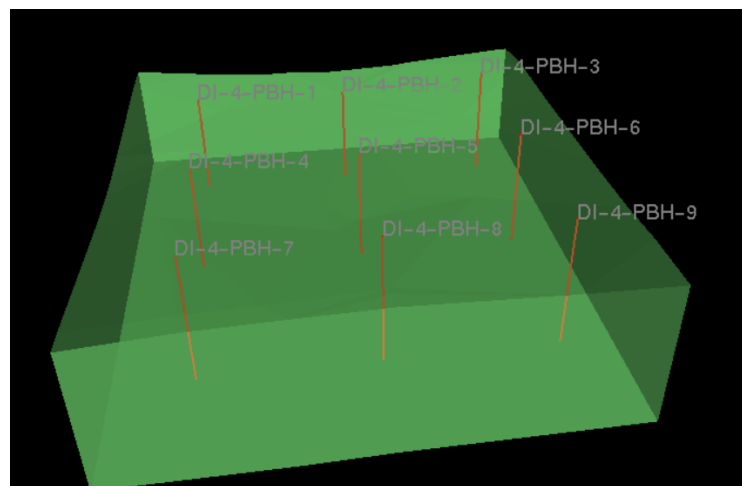


FIG-15, ORE-4

Report By:

M P Deshpande, ..
Geological Consultant

10.06.2023

Current working on Project since last 6 month

1. Import machinery
2. Plant establishment
3. Camp set up
4. Trial production
5. Road development







THE UNITED REPUBLIC OF TANZANIA

022411585

Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: 202111585

This is to certify that

DHARTI MINERALS COMPANY LIMITED

of address P.O.BOX 21934

DAR-ES-SALAAM

has been granted a Certificate of Incentives to invest in a new investment project known as

MINERAL PROCESSING

Which is located at **QDS130/2 MBOGO AREA, MUHEZA DISTRICT, QDS 147/1 & 147/2 BONDO, QDS 148/1 KWAMSANGAZI AND QDS 149/1 KWABOJO**

HANDENI-TANGA

Further particulars required by Section 17 of the Tanzania Investment Act are set out overleaf

Executive Director

**Tanzania Investment Centre
P.O.Box 938 , Dar-es-salaam**


Dated: **3 November, 2021**



This Certificate is issued in accordance with the provision of Section 17 of the Tanzania Investment Act, 1997 and subject to the conditions prescribed under item 14 and 15 hereafter:-

Shareholders	Nationality	Shareholding (%)
<i>Ankur Bhanubhai Kathiriya</i>	<i>India</i>	<i>50</i>
<i>Pravinkumar Godhani</i>	<i>India</i>	<i>50</i>
Proposed Activities: <i>To establish and operate project for mineral processing</i>		
Sector	Manufacturing	Sub Sector Mineral processing
Investment Cost	Foreign (M\$) 0.52	Local (M\$) 0 Total (M\$) 0.52
Project Financing	Equity (M\$) 0.002	Loan (M\$) 0.516 Total (M\$) 0.52
Source, terms and conditions of loan		
Assets to be Invested	Foreign (M\$)	Local (M\$) Total (M\$)
Capital items:	0.52	0 0.52
Technology Agreement	None	
Date of TIC Registration	3 November, 2021	
Implementation period	3 November, 2021	- 2 November, 2024
Operative date	2 November, 2024	
Investment Incentive Grade : As defined in part III Section 19(1), (2) and Section 20 of the Tanzania Investment Act, 1997		
(i) Applicable Import Duty	EAC Customs Management Act. 2004 and VAT Act. 2014	
(ii) Applicable with-holding Tax	As per Income Tax Act. 2004 (as amended)	
(iii) Eligibility of Capital Allowances	As per Income Tax Act. 2004 (as amended)	
Protection of Investment , Arbitration and Transfer of Foreign Currency as defined in part III Section 21, 22 and 23 of the Act.		
Conditions attached to this Certificate of Incentives		
(i)	Date of Commencement of investment has to be notified to the Centre	
(ii)	Certificate not to be transferred , assigned or amended	
(iii)	Failure to commence implementation within two years invalidates Certificate	
(iv)	Failure to operate investment must be notified to the Centre	
(v)	Changes in shareholding, project activities and level of invested capital must be notified to the Centre	
Additional conditions attached to Certificate		
None		

Signed



Executive Director

