

379 km² KIBARA MINERAL EXPLORATION REPORT AND SUMMARY

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This analysis evaluates the project scale, gold occurrences, assay results, licenses and coordinates, high-potential targets, sampling methodologies, trenching, BLEG, BGC, auger sampling, and IP geophysics.

⚠️ Key Findings Confirmed by the Report:

- **Proven Mineralization:** Presence of localized gold mineralization.
- **High-Grade Assays:** Exceptional individual gold (Au) and copper (Cu) grades.
- **Priority Targets:** High-potential exploration targets ready for drill testing.

1. Project Footprint and Scale

- **6 Granted Prospecting Licences (PLs) and 5 Licence Applications.**
- **Total Land Package:** Approximately 375.91 km².
- **Exploration Context:** While the footprint is extensive, a large licence area does not guarantee widespread economic mineralization. Ore deposits typically occupy small, localized zones within broader property boundaries.

2. Location and Geological Setting

- **Location:** Bunda District, Mara Region, Tanzania (Lake Victoria Goldfields).
- **Regional Geology:** Musoma–Mara Greenstone Belt.
- **Lithology:** Nyanzian/Archaean mafic volcanics, greenstone sequences, granitic intrusions, felsic/intermediate volcanics, and quartz veining.
- **Significance:** This geological environment is highly favorable for orogenic gold and intrusion-related copper-gold systems in Tanzania.

3. Geochemical Extent vs. Mineralized Strike

- **Nyakona Hill Strike:** Initial trenching defined continuous mineralization along a ~160 m strike length.
- **Geochemical Footprint:** Subsequent soil and auger geochemistry delineated a broad Au-Cu anomalous zone measuring approximately 1,800 m (North–South) × 1,000 m (East–West). The anomaly remains open to the east due to transported lacustrine cover near Lake Victoria.
- **Technical Interpretation:** This footprint represents an open geochemical target area requiring systematic drill testing, rather than a continuous 1.8 km × 1 km orebody.

4. Target Evaluation: Nyakona Hill (Primary Target)

- **Licence:** PL 2308/2003 (Principal Project Target).

- **Key Indicators:** Surface gold/copper mineralization, quartz veining, malachite, gossanous zones, soil anomalies, and mineralized trenches.

Grab Sample Assays (Nyakona Hill):

Sample ID	Au (g/t)	Cu (%)
J-6733	3.33	18.15%
J-6734	2.20	7.70%
J-6735	1.33	1.25%
J-6737	2.80	17.15%
J-6740	3.44	6.61%
J-6741	3.27	5.70%

- **Technical Takeaway:** Confirms a polymetallic Gold–Copper (Au–Cu) mineralized system associated with brecciated quartz veins and malachite. Note that grab samples are inherently selective and cannot be used to estimate average resource grades.

5. Trenching Performance & Data Nuances

- **Work Executed:** ~410 m across 16 trenches; 52 samples collected from 11 trenches and assayed via Fire Assay at Humac Laboratories, Mwanza.
- **Gold Highlights:** 20 samples recorded ≥ 1.22 g/t Au, peaking at **14.80 g/t Au** (Trench KB132TR02).
- **Base/Precious Metals:** 17 samples returned >1% Cu (peaking at 27.4% Cu in primary trench logs and up to 29.15% Cu in summary conclusions), with silver reaching 87 g/t Ag.
- **Data Verification:** Discrepancies between narrative summaries and original assay certificates/Table 9.4 require formal QA/QC audit prior to resource modeling or valuation.

6. Target Evaluation: Namhula (Secondary Target)

- **Licence:** PL 2785/2004.
- **Setting:** Historic artisanal workings hosted in mafic volcanic rocks with mapped quartz veins.
- **Sampling:** 17 grab samples collected from muck piles, pits, and quartz veins. 5 samples yielded >1.0 g/t Au, peaking at **18.75 g/t Au** (Sample J-6713).
- **Technical Assessment:** High-grade gold presence supported by historical mining and IP chargeability anomalies. Deposit continuity remains unverified, justifying the recommended fence-line RAB/RC drilling program.

7. Exploration Methodologies Breakdown

- **BLEG Sampling:** Identified initial anomalies on PL 2308 (128 samples, peak 27 ppb Au), leading to follow-up termite mound (49 ppb Au) and rock grab (6.67 g/t Au) discoveries at Nyakona. Regional BLEG false positives were noted over Kavirondian sediments.

- **Soil & Auger Programs:** 100\text{ m} \times 100\text{ m} follow-up grids yielded up to 230\text{ ppb Au} and 2,760\text{ ppm Cu}, confirming an open NE-trending anomaly. A 420-sample combined program (2008) reinforced the 1,800\text{ m} \times 1,000\text{ m} target envelope.
- **Biogeochemistry (BGC):** Evaluated 4,462 regional samples. Returned low response over several licences (<3\text{ ppb Au} peak), illustrating that deep cover/regolith masked surface geochemical signatures over known mineralized structures.
- **Induced Polarization (IP):** Detected a key chargeability anomaly at Namhula where surface BGC failed, successfully highlighting subsurface sulfide/alteration targets for drilling.

8. Secondary Licences Evaluation

- **PL 2931/2004 (Kurwirwi):** Greenstone host; BGC anomalies were unconfirmed by follow-up mapping, augering, and rock sampling. *Potential: Low-Medium.*
- **PL 3146/2005:** Weak BGC response; isolated 221\text{ ppb Au} anomaly tied to lacustrine cover rather than bedrock. *Potential: Low.*
- **PL 3314/2005:** Scattered BGC anomalies failed auger follow-up verification. *Potential: Low.*

9. QA/QC & Data Integrity

- **Program Execution:** Standard insertion of field/lab duplicates, blanks, and certified reference materials (V13/V14 standards).
- **Conclusion:** Data collection meets general industry standards. However, lower duplicate insertion rates (<1:20) in select BGC phases require consideration during data validation.

10. Summary of Key Assay Results

Gold (Au) Highlights:

- Namhula Artisanal Workings: **18.75 g/t Au**
- Nyakona Trenching: **14.80 g/t Au**
- Nyakona Follow-up Grab: **6.67 g/t Au**
- Nyakona Selected Grabs: **1.26 g/t Au to 3.44 g/t Au**

Copper (Cu) Highlights:

- Nyakona Report Max (Summary/Trench): **27.4% to 29.15% Cu**
- Nyakona Selected Grabs: **0.46% to 18.15% Cu**

11. Target Ranking & Proposed Work Program

Target Ranking:

1. **Nyakona Hill (Rank 1):** Primary drill-ready target. High-grade Au-Cu, outcropping gossan/malachite, validated trench intersections, broad anomalous footprint.
2. **Namhula Workings (Rank 2):** High-grade Au target. Historic artisanal production, 18.75\text{ g/t Au} grab assays, coincident IP chargeability anomaly.
3. **Kurwirwi / Secondary Licences (Ranks 3–5):** Low exploration priority based on unverified surface geochemistry.

Proposed Exploration Program & Budget:

- **Phase Ia:** Geological mapping and focused trenching.
- **Phase Ib:** 4,100\text{ m} RAB drilling.
- **Phase II:** 4,500\text{ m} RC drilling.

Final Technical Summary

The Kibara Project represents an early-stage, high-risk/high-reward gold-copper exploration asset within a proven greenstone belt. Surface sampling and trenching demonstrate significant high-grade mineralization at **Nyakona Hill** and **Namhula**, fully justifying the recommended RAB/RC drill testing program to establish subsurface continuity and potential economic scale.