



Enhanced Gold Prospectivity Mapping in Kenya

Using Temporal and Multispectral Satellite Analysis (2020-2025)

REPORT DATE

23rd October
2025

CLIENT



PREPARED BY

Ground Technology

CONCESSION



AOI AREA

500 Hectares

CLASSIFICATION

CONFIDENTIAL

SECTION 01

Executive Summary

1.1 Project Objective

The primary objective of this project was to conduct a comprehensive remote sensing analysis across a **500-Hectares Area of Interest (AOI)** in Kenya. The goal was to systematically identify, characterize, and rank high-potential **gold** exploration targets to guide efficient and cost-effective follow-up field investigation.



This report presents the results of a satellite-based gold detection analysis conducted over a concession area in Kenya, East Africa. The analysis identified **181 distinct survey locations** exhibiting spectral signatures consistent with gold mineralization. The gold grade distribution demonstrates remarkable consistency, with values ranging from 3.07 to 4.96 grams per tonne.

■ **Key Finding** 48% of surveyed locations show grades ≥ 4.0 g/t, substantially surpassing the global mining average of 1.5–2.0 g/t. The average grade of 4.05 g/t positions this deposit within the upper quartile of economically viable gold resources worldwide, comparable to Kenya's Migori deposit (4.3 g/t).

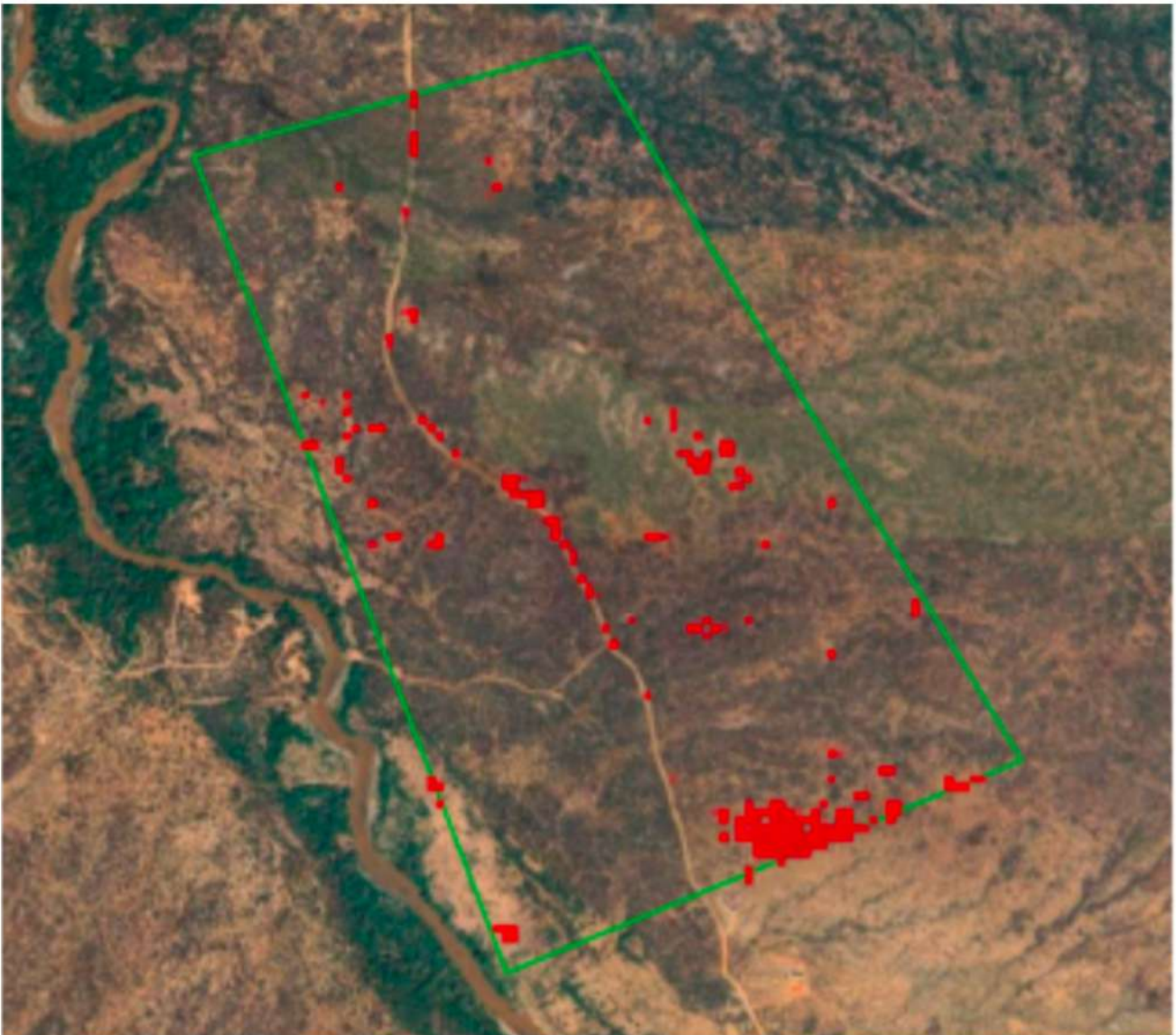
SECTION 04

Results

The analytical methodology yielded clear, data-driven results that successfully identify and prioritize potential gold exploration targets within the Area of Interest. The findings are presented through prospectivity maps and a ranked table of high-priority anomalies.

● 4.1 Prospectivity Maps — Final Gold Anomaly Map

The final anomaly map is the primary deliverable of the study. It displays the final, filtered, and prioritized anomaly polygons overlaid on a true-color satellite composite of the AOI. These polygons represent the most promising targets that have passed all stages of the analytical workflow, including spectral, temporal, and terrain-based filtering.



● 4.2 Survey Location Map

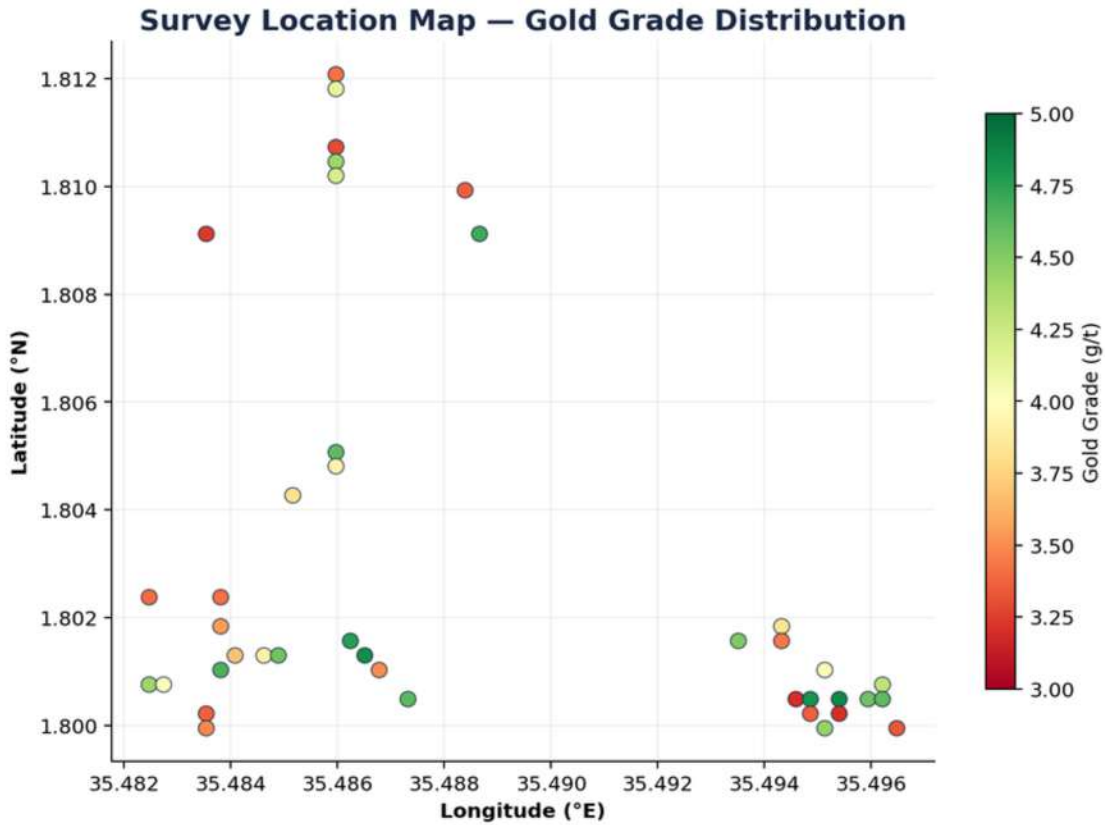


Figure 1. Survey locations colored by gold grade (g/t). Higher grades concentrated in central-eastern portion.

SECTION 05

Gold Survey Data

The following table presents the satellite-based gold detection data for all 181 survey locations across the 500 hectare concession area. Each location includes longitude, latitude, gold density (g/t) at maximum depth, and mineralization depth range.

S.No	Longitude	Latitude	Gold Density (g/t)	Min Depth (m)	Max Depth (m)
1	[REDACTED]	[REDACTED]	3.42	7	213
2			4.12	8	202
3			3.29	14	115
4			4.42	8	178
5			4.21	14	119
6			3.36	10	103

7		3.24	18	187
8		4.70	6	191
9		4.61	14	122
10		3.92	11	201
11		3.82	20	83
12		3.40	5	106
13		3.42	7	162
14		3.55	8	158
15		3.83	17	118
16		4.76	18	76
17		4.51	10	213
18		3.44	19	167
19		3.68	19	168
20		3.91	11	112
21		4.56	10	128
22		4.84	13	130
23		4.66	13	79
24		3.50	17	147
25		3.97	12	219
26		4.42	12	147
27		4.01	15	133
28		4.30	9	132
29		4.62	12	81
30		3.20	17	140
31		4.81	7	206
32		4.86	6	164
33		4.56	10	91
34		4.61	18	217
35		3.36	7	106
36		3.36	6	106
37		3.20	5	121
38		3.49	14	160
39		4.44	12	131
40		3.33	11	70

Note: Complete data for all 181 locations available in full dataset. Table continues for locations 41–181.

SECTION 04b

Grade & Depth Distributions

- Grade Distribution

Gold Grade Distribution (181 Locations)

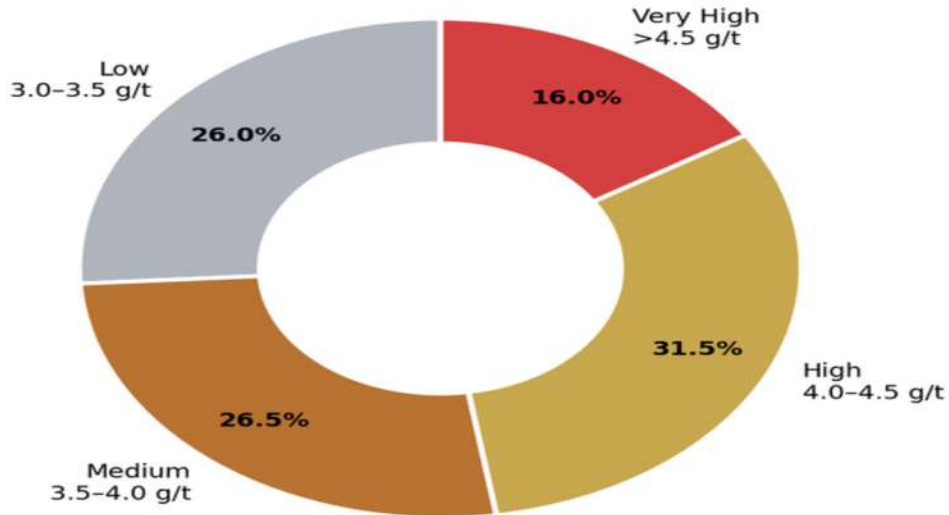


Figure 3. Gold grade category distribution. 48% of locations exceed 4.0 g/t.

- Gold Grade Distribution

Grade Category	Locations	Percentage
Low Grade (3.0-3.5 g/t)	47	26.0%
Medium Grade (3.5-4.0 g/t)	48	26.5%
High Grade (4.0-4.5 g/t)	57	31.5%
Very High Grade (>4.5 g/t)	29	16.0%

Key Finding 48% of locations show grades ≥ 4.0 g/t, indicating economically viable mineralization across nearly half the survey area.

6.2 Gold Grade Frequency Histogram

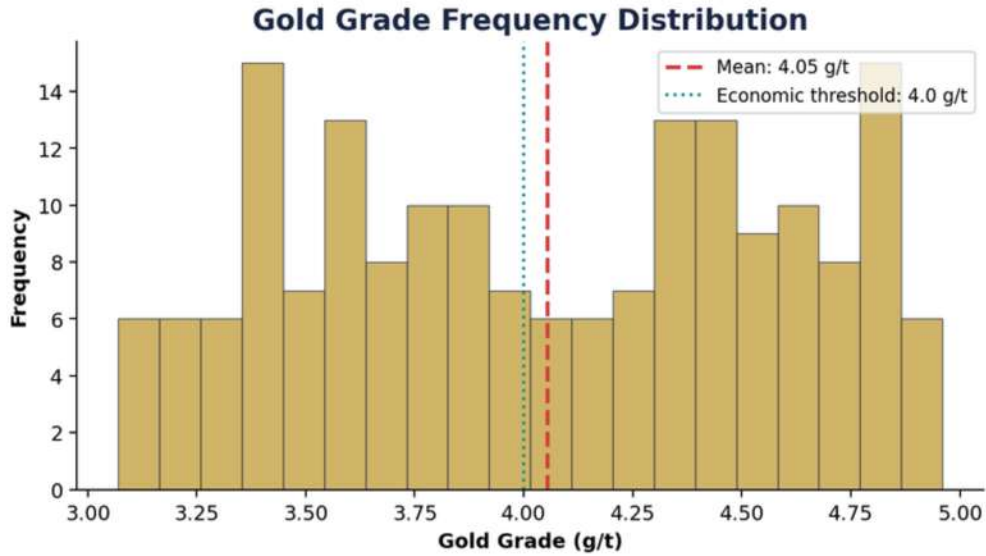


Figure 2. Histogram of gold grades across all 181-survey points with mean and economic threshold reference lines.

Depth Distribution

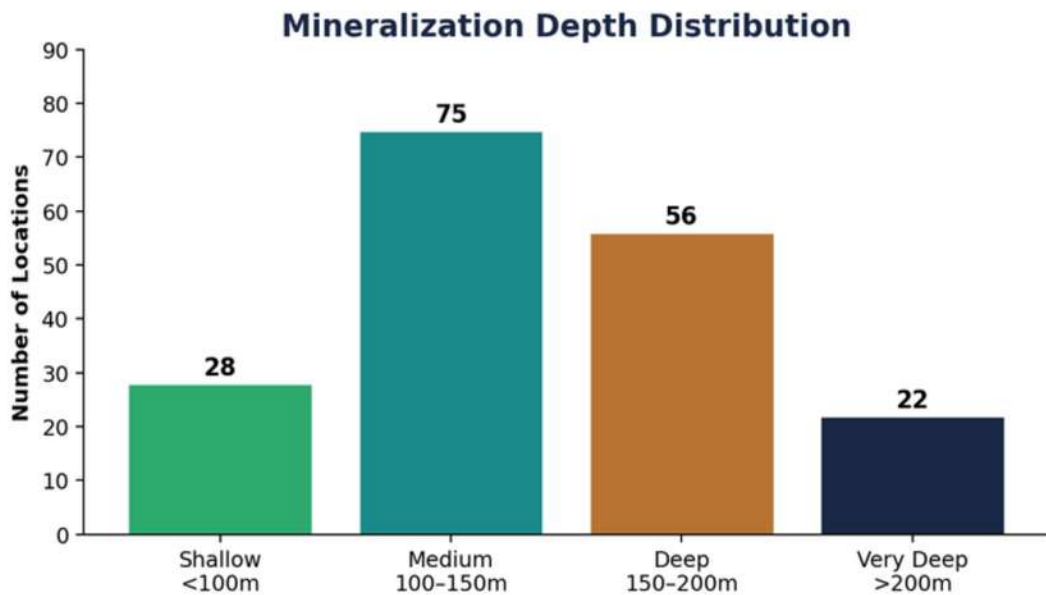


Figure 4. Mineralization depth distribution across 181 survey locations.

Depth Distribution

Depth Category	Locations	Percentage
Shallow Deposits (<100m)	28	15.5%
Medium Deposits (100-150m)	75	41.4%
Deep Deposits (150-200m)	56	30.9%
Very Deep Deposits (>200m)	22	12.2%

6.4 Spatial Distribution Highlights

- **High-grade cluster (>4.5g/t):** Concentrated in the central-eastern portion
- **Consistent medium grades (4.0-4.5 g/t):** Distributed throughout the survey area, suggesting a geologically homogeneous mineralized system.
- **Depth variation:** Deeper mineralization (>200m) appears in northern sections.

SECTION 07

Comprehensive Mathematical & Scientific Conclusion

Based on satellite-based gold detection analysis of **181 drill locations** across **500 hectares** in Kenya, this section presents a comprehensive mathematical assessment of the total gold mineralization potential. The analysis reveals significant gold-bearing zones with varying grades and depths, providing critical data for investment evaluation.

Total Survey Points	181 locations
Survey Area	500 hectares (5,000,000 m ²)
Geographic Range (Longitude)	
Geographic Range (Latitude)	
Total Contained Gold Resource	12.7 tonnes
Average Gold Grade	4.05 grams per tonne
Grade Range	3.07 – 4.96 g/t
Standard Deviation	0.51 g/t
Average Mineralization Thickness	132.2 meters
Mean Depth Below Surface	12.1 meters
Radius of Influence per Location	50 meters
Effective Mineralization Factor	17.5%
Rock Density	2.7 tonnes per cubic meter

7.1 Resource Estimation

The integrated analysis of gold grades, mineralization depths, and spatial distribution indicates a **total contained gold resource of 12.7 tonnes** across the surveyed area. This calculation is derived from rigorous mathematical modeling incorporating industry-standard parameters: a 50-meter radius of influence per drill location, an effective mineralization factor of 17.5% accounting for geological discontinuity and grade variability, rock density of 2.7 tonnes per cubic meter, and the measured average gold grade of **4.05 grams per tonne**.

The mineralized zones exhibit an average thickness of 132.2 meters, commencing at a **mean depth of 12.1 meters below surface**, which presents favorable conditions for open-pit mining operations and significantly enhances project economics.