



## Diamonds

Equatorial Guinea has been known to be a diamond prospecting country since the 1980s, when the first kimberlite indicator minerals (KIM'S) were discovered. However, the country remains unexplored and the potential for the discovery of diamondiferous kimberlites is high.

### GEOLOGICAL BACKGROUND

- The basement of Monts de Cristal represents a typical archaic cratonic terrain. It is part of the Congo Craton, which is known to host diamondiferous intrusions.
- Exploration work carried out by the BRGM in the 1980s recovered a zinc-enriched chromium plume from a drain in the Nsork area.
- Despite the encouraging geological environment, the area remains unexplored for diamonds. The area alone has 23 alluvial heavy mineral samples analysed by KIM since BRGM's initial discovery. Only 3 of the 23 samples contained KIM.



**Diamond**

### DIAMONDS IN MITZIC

- The Mitzic area of Gabon borders Equatorial Guinea to the Northwest. It is known to host deeply seated intrusives, including metakimberlites and diamondiferous lamproites.
- The intrusives occur in a Northwest trend that appears to continue Southeast of Rio Muni, where KIM'S has been recovered by companies BRGM (1984), Equator Diamonds Ltd. (2002), and De Beers (1988-2006).
- BRGM and Equator Diamonds recovered chromium spinels enriched with Zn, chromite and chromium diopside.
- The Mitzic intrusions are among the oldest known diamondiferous intrusions in the world, dated back to 2,800 Ma, during the Archaic period. They take the form of dikes, blows and, less frequently, pipes trending Northwest.
- The intrusions are metamorphosed and are very rich in talc, with altered mica, chlorite and tremolite relics, lacking pyrope and ilmenite. The intrusives exhibit a "crushed" texture and have been deformed by post-emplacement tectonic events.



**Lamproite - Kimberlite**