



EXPLORATIONS UNLIMITED

Exploration Results, Exploration Targets and Mineralisation

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SAMREC Code

- ▶ International codes originally for the specific purpose of reporting of Resources and Reserves only
 - ▶ JORC 1994: Australasian Code for reporting of Mineral Resources and Ore Reserves
 - ▶ SAMREC 2000: South African Code for reporting of Mineral Resources and Mineral Reserves
 - ▶ Scope was limited to *Listed* company documents

- ▶ Second revisions included “Exploration Results” in the title
 - ▶ JORC 2004: Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves
 - ▶ SAMREC 2007: South African Code for the reporting of Exploration Results, Mineral Resources and Mineral Reserves
 - ▶ Scope was still for Public Reporting by Listed Companies

- ▶ Common practice for a company to comment on and discuss Exploration Results in terms of size and type.

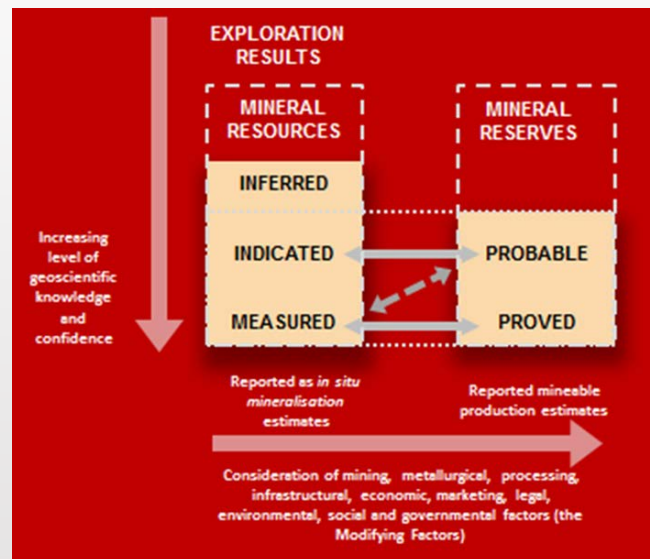




- Much Expanded section on Exploration Results
 - Clauses 20-22 on reporting of Exploration Results and referenced in each section in Table 1
- Far more Private companies are looking for investment in projects than ever before.
- Scope has expanded to all documents which might find their way into the public domain
 - Impacts Listed and Private companies/operators

SAMREC Code

2016





SAMREC Code Exploration Results

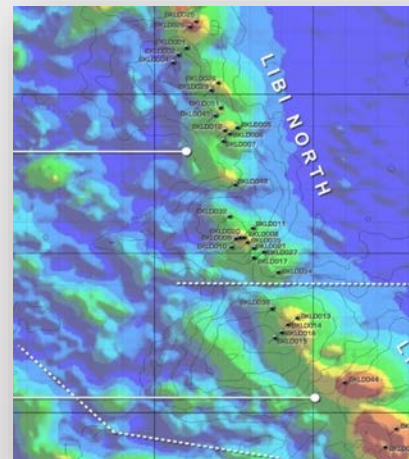
- ▶ **Exploration Results include data and information generated by exploration programmes that may be of use to investors but which do not form part of a declaration of Mineral Resources or Mineral Reserves.**
 - ▶ Must not be presented in a way that implies the discovery of potentially economic mineralisation.
 - ▶ Emphasis is on balanced reporting; allow reader to draw conclusions
 - ▶ Must include relevant data and information relating to the mineral property - both positive and negative.





SAMREC Code Exploration Results

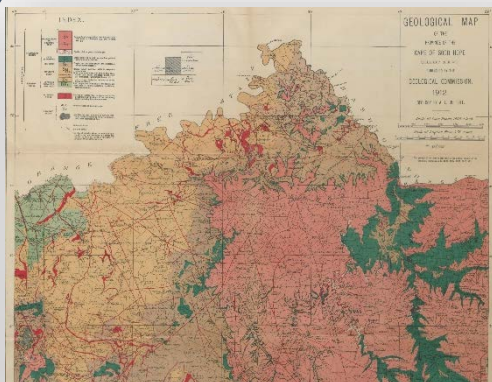
- ▶ **Exploration Results include data and information generated by exploration programmes that may be of use to investors but which do not form part of a declaration of Mineral Resources or Mineral Reserves.**
 - ▶ Exploration data and information may include survey, geological, geophysical, geochemical, sampling, drilling, trenching, analytical testing, assaying, mineralogical, metallurgical and other information, where available.





SAMREC Code Exploration Results

- ▶ **Exploration Results include data and information generated by exploration programmes that may be of use to investors but which do not form part of a declaration of Mineral Resources or Mineral Reserves.**
- ▶ ***Historical data and information*** may also be included if, in the considered opinion of the Competent Person, such is relevant and reliable, giving reasons for such conclusions.



- ▶ The data and information may be derived from ***adjacent or nearby properties*** if the Competent Person can demonstrate relevance and provide justification of continuity for such an association. At least ***some physical evidence of assumed continuity*** must be presented





Exploration Results

Exploration Target

- ▶ An **‘Exploration Target’** is a *concept of mineralisation* with respect to type, quantity and quality, which would be of interest to an exploration or mining company.
- ▶ *An Exploration Target need not represent any discovered mineralisation, nor does it imply reasonable prospects for eventual economic extraction (RPEEE).*
 - ▶ Model must be geologically realistic
 - ▶ Clearly describe the rationale for target selection, including the geological model on which it is based, as well as justification for any statements of conceptual quantity and quality.
 - ▶ The intended exploration work programme to explore for the target must be included, detailing the extent of the proposed exploration activities, the planned timeframe and the anticipated costs.
 - ▶ Public Reporting of an Exploration Target shall not be done unless supported by an exploration programme.





Concession – Exploration Target (Conceptual)

- Terraces, River flats, Present river channel
- Target areas/volumes (satellite imagery, artisanal workings)
- Artisanal activity
- Regional/artisanal diamond grades and values





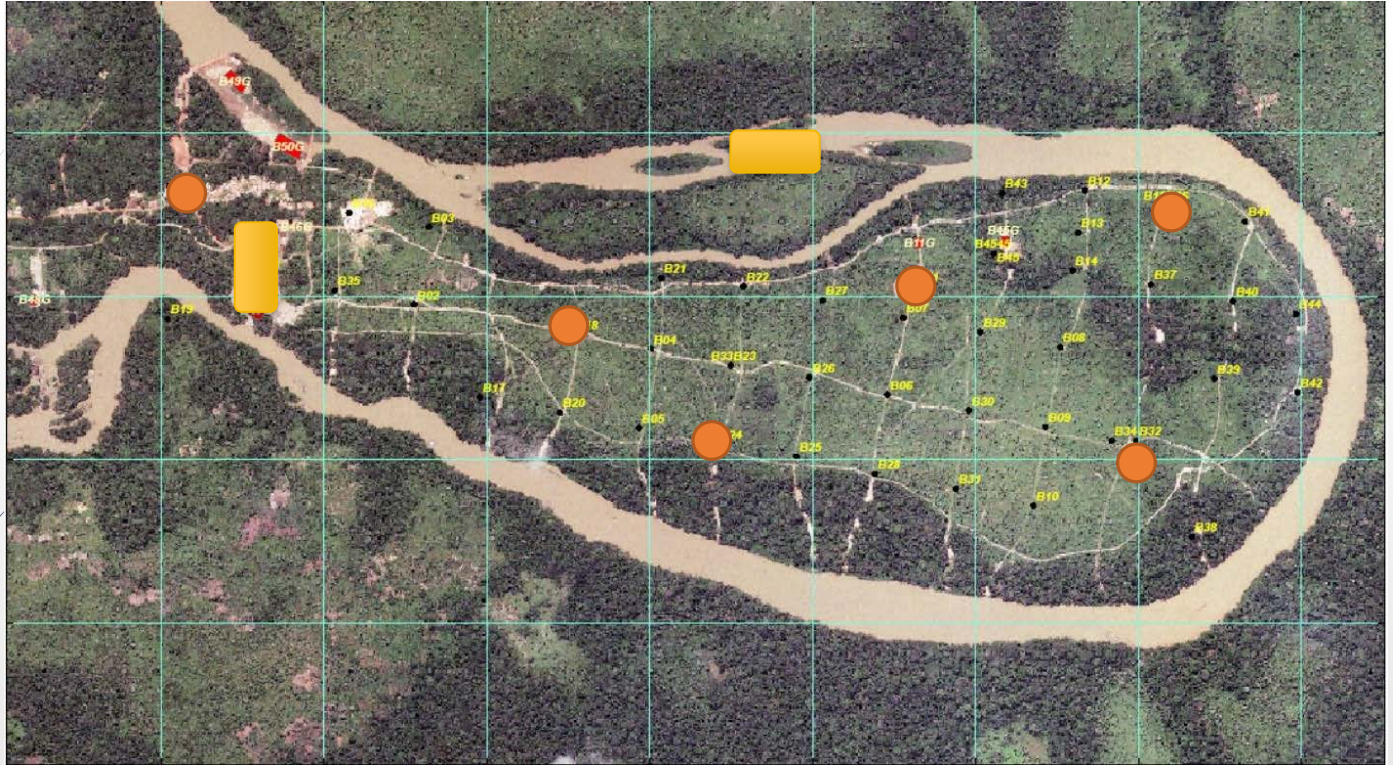
Exploration Results Mineralisation

- ▶ **‘Mineralisation’** as used in the Code, is defined as a concentration (or occurrence) of material of possible economic interest, in or on the earth’s crust, for which quantity and quality cannot be estimated with sufficient confidence to be defined as a Mineral Resource.

- ▶ Whereas Exploration Targets might be more conceptual, Mineralisation has identified a specific target based on actual prospecting results ,
 - ▶ Insufficient data or insufficient confidence for it to be called a Resource
 - ▶ No RPEEE have been demonstrated

- ▶ Mineralisation can only be reported under Exploration Results.
 - ▶ Subset of Exploration Target
 - ▶ The data and information relating to it must be sufficient to allow a considered and balanced judgement of its significance.
 - ▶ Must not be misrepresented as a Mineral Resource

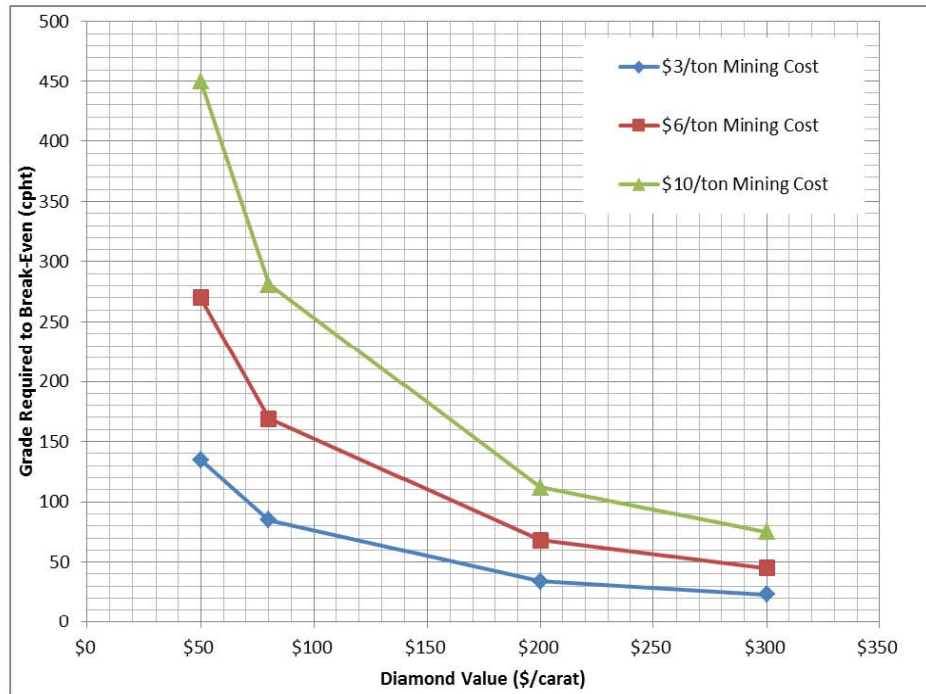




Concession – Exploration Target (Mineralisation)

- Preliminary drill/sample data
- Insufficient technical data to define a Mineral Resource





Concession – Exploration Target (Mineralisation)

- Preliminary drill/sample data
- Insufficient technical data to define a Mineral Resource
- RPEEE not yet demonstrated



SAMREC Code Exploration Target / Mineralisation

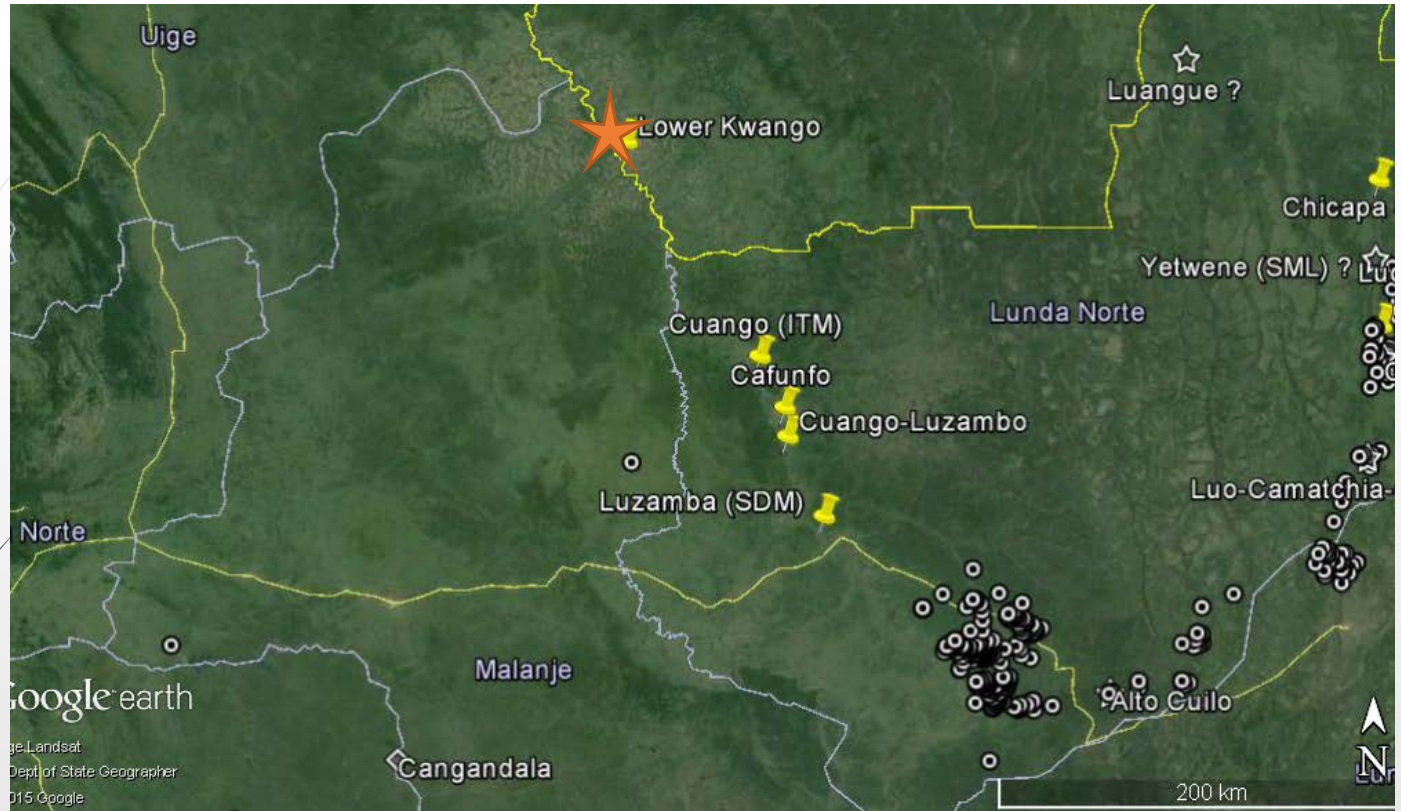
- ▶ May not be included in:
 - ▶ Mineral Resource statement / tabulation
 - ▶ Technical Study or converted to Reserves
- ▶ Sample quantity or quality must not be reported as a '*headline statement*' in a Public Report
- ▶ Any statements of quantity/quality must reflect lack of reliable data
 - ▶ Order of magnitude / Appropriate rounding
 - ▶ Appropriate descriptive terms (approximate, in the order of, etc.)
 - ▶ Ranges (no statistical relevance)
 - ▶ Require standardised, obligatory cautionary statements in a proximate location (same/next paragraph, not footnote or generalised comment)
- ▶ Need to state both quantity and quality estimates – not quote one without the other



CASE STUDIES

- Midamines Project (DRC)
- Toubabouko Project (Ivory Coast)





Midamines Project

- Kwango River in DRC
- Regional grade/value information
- Local artisanal activity



Midamines Project

- ▶ **First Public Report (CPR)** identified an early stage (conceptual) Exploration Target:
 - ▶ Approximately 8-10Mm³ of gravel in the present river and 35-40km² of abandoned river channel, floodplain and terrace deposits
 - ▶ Target grades for the Kwango River are 0.8-1.5ct/m³
 - ▶ Average sales values of USD90-140/ct

- ▶ Limited reconnaissance prospecting programme
 - ▶ Wide-spaced drilling
 - ▶ Bulk-sampling pits on floodplains and terraces
 - ▶ Small dredge on the river
 - ▶ Sold 400ct for USD120/ct

- ▶ **Second Public Report (News Release)**
 - ▶ Mineralisation of some 8.5-9.5m³ in the present river and approximately 36-38Mm³ in the floodplain/terrace environment
 - ▶ Sample grades of 0.8-1ct/m³
 - ▶ Average sales value of around USD90-140/ct, with a 400ct sample selling for USD120/ct
 - ▶ Not have headline: *“47.5 Mm³ of diamondiferous gravel identified on the Midamines Concession*





Toubabouko Dykes (Cote d'Ivoire)



Toubabouko Project

- ▶ 14 kimberlite/lamproite dykes known from Séguéla district since mid 1960's
- ▶ Significant drilling during 1993-1995 estimated dyke volumes
 - ▶ Both core (and logs) and exact locations of holes were lost during 1999-2011 civil war
- ▶ No verifiable grade/value data
 - ▶ Historical records indicate 0.15-0.3ct/m³ (unknown carats, unknown volumes)
 - ▶ Values
 - ▶ Reuter's report in 2014 mentions USD83/ct in a report on prevailing diamond embargo
 - ▶ Current (2015) sales dockets from small-scale artisans to local diamond buyers indicate prices of USD50-200/ct
- ▶ Detailed ground geophysical survey (magnetics) during 1974
 - ▶ Seven geophysical targets
 - ▶ No drilling to confirm kimberlite
- ▶ Mineralisation of some 300,000-400,000m³ of kimberlite to a depth of 60m at sample grades of 0.15 - 0.3ct/m³ and USD50-200/ct
- ▶ Exploration Targets (conceptual) with a combined volume in excess of 500 000m³, where regional grades and values are in the range of 0.15 - 0.3ct/m³ and USD50-200/ct.



Exploration Target



EXPLORATION PHASE	ACTIVITY	CLASSIFICATION
<p>Phase I (Desk-top study)</p> <p>Conceptual targets</p>	<ul style="list-style-type: none"> ○ Review of historical data ○ Regional grades, values ○ Satellite data, geophysical anomalies ○ Target volumes/area 	<p style="text-align: center;">Exploration Target</p> <ul style="list-style-type: none"> ○ Insufficient data/confidence to estimate a Resource ○ Present volume, area, tonnage, grade and value as ranges and approximations ○ Cannot be included in Mineral Resource Statements or Tabulations ○ Cannot include in technical studies or economic assessments
<p>Phase II (Reconnaissance)</p> <p>Identified Mineralisation</p>	<ul style="list-style-type: none"> ○ Reconnaissance drilling/pitting ○ Reconnaissance sampling (grade & value data) ○ Kimberlitic Indicator Mineral (“KIM”) mineral chemistry ○ Soil geochemistry 	

Exploration Target

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<p>Phase II (Reconnaissance)</p> <p>Identified Mineralisation</p>	<ul style="list-style-type: none"> Reconnaissance drilling/pitting Reconnaissance sampling (grade & value data) Kimberlitic Indicator Mineral (“KIM”) mineral chemistry Soil geochemistry 	
<p>Phase III (Resource Estimation)</p>	<ul style="list-style-type: none"> Systematic drilling/pitting (volume) Sampling / Bulk-sampling (grade, value) Demonstration of reasonable prospects for economic extraction 	<p>Mineral Resource</p>

THANK YOU

