SOUTH AFRICA’S ALLUVIAL DIAMOND DEPOSITS

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SADPO WORKSHOP – 22 MAR 2017

A UNIQUE, BUT UNDER-DEVELOPED, UNDER-THREAT BUSINESS OPPORTUNITY
www.globaldiamonds.co.za
Alluvial Diamond Deposits of South Africa

Unrivalled Diamond Deposits

01 These diamond deposits are **unrivalled** anywhere else in the world.

02 We are **not developing** / exploiting these deposits optimally.

03 Consequently RSA and its provinces (particularly Northern Cape and North West) are **not benefitting** from job creation, taxes and royalties.

04 Unless we work together to find a sensible, practical solution, we **ALL lose**.
Alluvial Diamond Mining Industry statistics

Sources: JM Farrell, MSc, 2012 (UFS) | SADPO, JW Bristow
Distribution of Alluvial Diamond Deposits

Southern Africa
Origin of Alluvial Diamond Deposits

River milling + attritioning upgrades value of alluvial diamonds

Alluvial Terrace Deposits

Eroding Kimberlites

Uplift Erosion

Deposition

Longshore drift weather / wind

Atlantic Ocean

Raised Beaches

Drowned Beaches

Cullinan 1200
Venetia 600 million years
Jwaneng 240
Kimberley 84

Origin of Alluvial Diamond Deposits

River milling + attritioning upgrades value of alluvial diamonds
RSA Alluvial Deposits
Overview of Characteristics and Returns

**Extensive:**
mostly associated with the Vaal and Orange Rivers, and ancient feeders to these two unique drainages

**Ultra-low Grade:**
Today 1 carat per 100 tonnes is a high grade (1 part per 100 million)

- Requires very detailed practical geology to delineate and mine successfully
- Large shallow open cast mining

**Benign on the environment**

**Capital requirements are relatively small relative to other commodities ie. coal, gold and platinum**

This should be a growth sector for existing and new entrants if sensibly enabled, managed and supported.
Middle Orange River Alluvial Gemstones

Source: Manhatten Diamonds

The "Pink Star"
59.6-Carat Pink Star Diamond Sells For World Record $83 Million (Sotheby's November 2013)

The "Orange"
14.82-Carat Orange Diamond Sells For A World Record $35.5 Million (Christie’s November 2013)
## Average Diamond Prices per Carat

**Typical Alluvial Diamond Deposits 2017**

<table>
<thead>
<tr>
<th>Location</th>
<th>Average Price (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Krone (Limpopo Province)</td>
<td>~US$125</td>
</tr>
<tr>
<td>Venterdorp</td>
<td>~US$650</td>
</tr>
<tr>
<td>North West Province</td>
<td>~US$700</td>
</tr>
<tr>
<td>Riet River (Schutsekama)</td>
<td>~US$2 200</td>
</tr>
<tr>
<td>MOR (Hopetown – Douglas)</td>
<td>~US$2 500</td>
</tr>
<tr>
<td>MOR (Douglas – Prieska)</td>
<td>~US$2 200</td>
</tr>
<tr>
<td>LOR (Baken)</td>
<td>~US$1 500</td>
</tr>
<tr>
<td>World Diamond Average</td>
<td>~US$92</td>
</tr>
</tbody>
</table>
Mentoring
Challenges with Alluvial Diamond Mining

01 Alluvial diamonds are **challenging** minerals to mine.

02 Very **limited** modern and **reliable** published information on Alluvial Diamond Deposits – very low grade, great price variability.

03 Most small to medium scale Alluvial Diamond mines are **private** family businesses.

04 Very few new entrants into the industry – no one to **mentor**?
Securing Mineral Rights
Prerequisites and Qualifiers

- Require rapid turn-around of Prospecting/Mining permit applications
- Prospecting Permits for alluvial diamonds should go to alluvial miners – not to people with no experience
- Small – Medium scale Alluvial Miners do not have a stand-alone prospecting division – we need to mine ASAP
- Small miners have to multi-task and manage all aspects of their businesses alone
- Require reliable modern geological information
- Large portions of most alluvial diamond deposits are uneconomic to mine
- Junior miners, including small diamond miners, require separate dispensation to large scale miners
- The more lawyers, experts, inspections, Section-54’s, and ‘down-time’, the less the cash flow, the quicker the industry shrinks, and scarce employment opportunities are lost

QUALIFIERS

- We are committed to proper work, labour, H+S and environmental practices.
- We acknowledge that there have been ‘bad apples’ in the business, and probably still are.
- The aim of SADPO is to create a culture among its members which achieves best practices across all facets of our alluvial mining businesses.
Legislation Challenges
South Africa Alluvial Diamond Mining

- Lack of Policy consistency
- RSA is a ‘no-go’ for mining investors (see latest Fraser Institute Report)
- Mining right applications – slow processing + awards, fronting, middle-men, ‘use or lose’ should apply
- B-BBEE requirements – expensive, many supposed partners want ‘cash-out’, but provide no ‘value add’
- Social and labour requirements / responsibilities
- Health and Safety requirements
- Environmental requirements
- Water use licenses

Consume time and money – impacts cash flow negatively
RSA ranked 74 out of 104 global mining jurisdictions

“On policy perception alone, ignoring geology, SA now ranks as the third-least attractive mining jurisdiction in Africa, followed by Zimbabwe and South Sudan. This is obviously concerning,”

“There is a grave risk to ownership with the government’s track record on passing and then modifying laws to achieve policy goals. The environment in SA is not predictable,”

Yet RSA is considered to have +2.5 Trillion Dollars of untapped mineral resources in the ground, and was once considered the world’s premier mining country – so what went wrong?
Other Challenges

South Africa Alluvial Diamond Mining

- Section-54 stoppages
- Lack of capacity in State Departments
- Lack of capacity and resources in the Provincial and Municipal Departments
  - Poor roads, medical facilities, housing, transport and services in general
  - Different expectations between DMR and Municipal authorities – particularly in SLP requirements
- Lack of education and training at all levels
- Spill-over effects of alcoholism, absenteeism, HIV/AIDS, and other community social challenges
Other Challenges

...Continued

- Unsustainable expectations (‘get rich quick’ proves unsuccessful)
- Lack of skilled and experienced black entrepreneurs
- Fronting, on-selling on MR’s
- Lack of access to funds for new entrepreneurs
- Lack of modern information, geological and other
Proposed MPRDA Amendments ??

March 2017 reports ...

01 “Small diamond mining permits (~1.5ha) can only be awarded to applicants with 50%+1 black shareholding?”

02 Where are the skills, experience, funding, geological information and support to sustain these entrepreneurs?

03 The industry has been active for ~150 years – “rich” ground is mined out, hence require larger capital intensive operations

04 Sadly these unsustainable ventures often become outlets for illicit goods

05 What is the plan for the illegal miners on the Kimberley “Floors”?
Solutions
for Positive Outcomes

- Strong, honest 2-way communication
- Transparency and trust – from ALL parties
- Partnerships and flexible solutions
- Access to funding
- Regular, short workshops – share ideas, address issues openly, find solutions
- Training and mentorship programmes to build capacity
- Political and Policy consistency
- Long term plan for our industry
THANK YOU
QUESTIONS?

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