

# TSODILO RESOURCES LIMITED

## Exploration Geological Model and Exploration Target for BK16

**FOR IMMEDIATE RELEASE**

**July 15, 2015**

**Note:** Images associated with this press release can be found at:

[http://www.tsodiloresources.com/i/maps/BK16\\_Figure1.jpg](http://www.tsodiloresources.com/i/maps/BK16_Figure1.jpg)

and

<http://www.tsodiloresources.com/i/pdf/BK16.pdf>

TORONTO, CANADA - Tsodilo Resources Limited (TSX-V: TSD) ("Tsodilo" or the "Company") is pleased to announce that it has updated and refined the company's internal geological model. This model will be an integral tool in our evaluation of the diamondiferous BK16 kimberlite pipe exploration target located within the Orapa Kimberlite Field (OKF) in Botswana. Botswana diamond mines have produced an average of 27 million carats annually in the last 10 years and Botswana is the world's largest producer of diamonds by value. In 2014, the OKF area produced 13.35 million carats.

### Disclosure

*Canadian National Instrument 43-101 - Standards of Disclosure for Mineral Projects, Form 43-101F1 and Companion Policy 43-101CP requires that the following disclosure be made: All references contained herein with respect to the potential quantity and grade derived by any method is at this stage of development conceptual in nature. At the present time, there has been insufficient exploration to define a mineral resource and it is uncertain if further exploration will result in the target being delineated as a mineral resource.*

*All references to historical information contained in this press release are derived from open file reports submitted by previous license holders with the Botswana Ministry of Minerals, Energy and Water Resources (MMEWR).*

### Summary

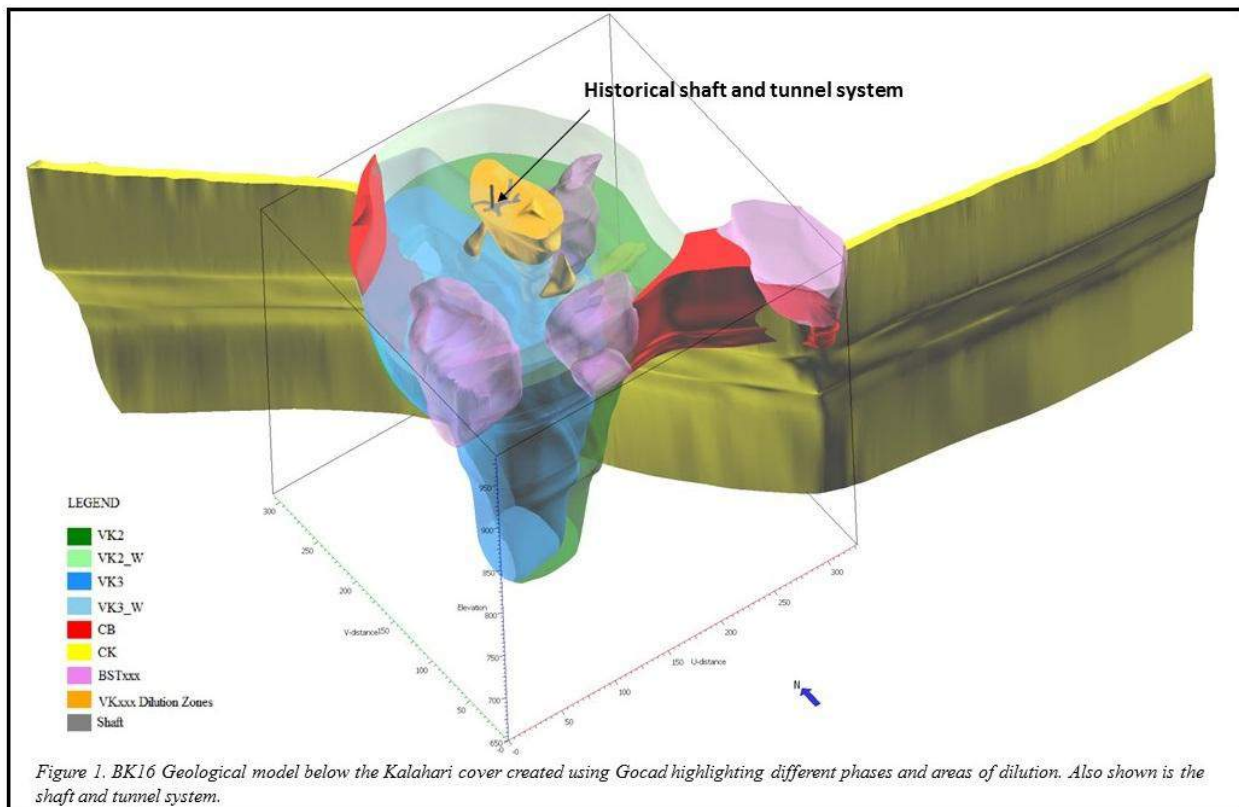
The drill core data from the BK16 kimberlite pipe recovered from 20 holes drilled in the 1<sup>st</sup> Q 2015, totaling 3,662.2 meters was incorporated into a three-dimensional (3D) geological model using Gocad software. This geological model, including BK16's different phases and areas of dilution, is presented in Figure 1 and accompanied 3-D PDF slide. This recent Gocad model greatly refines the initial geological model created from geophysical magnetic and gravity surveys as well as historical data quoted in the company's press release of December 15, 2014. From this refined model along with a retrospective study of the historical bulk sampling data that includes relative positions of these samples in relation to the zones defined by the geological model, Tsodilo has been able to establish the following:

- ◇ There are 5 key geological zones that represent kimberlite phases
  1. CB - Contact Breccia
  2. VK2 - Volcaniclastic Kimberlite 2
  3. VK3 - Volcaniclastic Kimberlite 3
  4. VKxxx - Volcaniclastic Kimberlite with very high proportions of country rock xenoliths (high dilution)
  5. CK - Coherent Kimberlite dyke
- ◇ VK2 and VK3 are the most significant volumetrically.
- ◇ The area of the pipe measures 5.9 hectares (ha) at surface, which is a substantial increase from previous estimates of 3.5 ha. A similar increase in surface size was found during exploration of AK06 (Karowe Mine), which increased from 3.3 ha determined in the early 1970s to 9.5 ha when modern exploration

techniques were applied in 2003 (Karowe Diamond Mine, NI 43-101 Independent Technical Report (Amended), February 4, 2014, available at www.sedar.com).

- ◇ The recent Geological model produced using Tsodilo’s in-house Gocad software has been used to define the following Exploration Target\*: 13 to 14.5 million tonnes for the VK2 and VK3 phases both limited to 250 meter depth, and based on previous grade estimates between 13 to 19 carats per hundred tonnes (cpht). The value of the BK16 diamonds is not yet established.
- ◇ The historical shaft and limited tunnel system (see explanation below) was located entirely inside a central zone of high dilution VKxxx (historically referred to as a basalt breccia). This historical shaft system was low grade < 2cpht (historical shaft bulk sampling grades and methodology expanded on below) due to the dilution by large amounts of basalt country rock xenoliths. The volume of this diluted zone is however of limited extent, and the volume of this VKxxx zone is not taken, therefore, into the computation of the tonnages for the VK2 and VK3 Exploration Targets. In the AK06 kimberlite (Karowe Mine), three 20 foot deep pits were excavated in 1973, which gave a combined grade of 3.5 cpht, An initial 100 tonne sample taken by de Beers in 2003 substantially increased this grade after drilling through the basalt breccia. More than half of the 44 percussion boreholes drilled in the original prospecting of AK06 intersected basalt. Many of these holes are now known to have drilled only into the basalt breccia that covers parts of the pipe (Karowe Diamond Mine, NI 43-101 Independent Technical Report (Amended), February 4, 2014, available at www.sedar.com).

*\* The VK2 and VK3 exploration target tonnage was estimated by taking volumes of VK2 and VK3 defined from the BK16 Gocad geological model created using Tsodilo drill holes and historical drill hole data to a depth below surface of 250m, and by then applying the observed kimberlite density range of 2.22 to 2.47 g/cm<sup>3</sup>. The grade ranges are taken from historical bulk sampling holes by the Auridiam Botswana (Pty.) Ltd. and Montgomery Corporate Holdings Ltd. joint venture (herein referred to as the “Auridiam JV”). The holes chosen represent bulk sample holes that were drilled into the VK2 and VK3 kimberlite phases (retrospectively determined), for more details see the section on historical bulk sampling below. This grade data reported in 1999 and 2000 was not verified by an independent qualified person at the time and does not meet the current criteria of a mineral resource and is mentioned for reference purposes only.*



## Geological Model Creation

The core was studied in detail making use of a binocular microscope and petrographic studies to understand the nature of the kimberlite and its minerals to help differentiate and map the different kimberlite phases. Detailed measurements of the density and dilution by country rock fragments of the different kimberlite phases were conducted. Along with an understanding of the kimberlite phases, these measurements were used to define areas of high and low dilution within the BK16 kimberlite, critical in the total evaluation of a kimberlite body. This study showed that the BK16 kimberlite pipe is in fact made up of multiple overlapping and geologically distinct eruptive phases that coalesce as the main kimberlite body, as commonly found for kimberlites. The different phases and areas of dilution are presented in Figure 1 and associated 3-D PDF slide. The following kimberlite phases have been defined:

- ◇ **CB** (Contact Breccia 1<sup>st</sup> phase). This phase (previously referred to as VK1 in the companies press release dated 6<sup>th</sup> May 2015) is a dilution zone rich in sandstone and basalt xenoliths and is present as isolated thin patches at the pipe contact in the north-west and the south-east sections or portions of the pipe. This is thought to represent the embryonic phase of the kimberlite emplacement.
- ◇ **VK2** (Volcaniclastic Kimberlite 2<sup>nd</sup> phase). When fresh, this is an almost black kimberlite with pale green to white altered olivine macrocrysts (typically 3 mm but can be up to 10 mm), and which makes up the dominant part of the eastern side of the pipe. It is believed that VK2 was emplaced following the initial CB phase.
- ◇ **VK3** (Volcaniclastic Kimberlite 3<sup>rd</sup> phase). This phase makes up the central to western side of the main pipe and is grey in color when fresh, with common but relatively small (<10cm) basalt xenolith that are totally altered to a grey color. Large olivine macrocrysts that are typically 5mm in size with maximum sizes of up to 10 mm. This phase intrudes the previous phases.
- ◇ **VKxxx** (Volcaniclastic Kimberlite with high concentration of mainly basalt xenolith). This high dilution zone occurs inside the main two phases VK2 and VK3. Basalt xenoliths up to 8 m in size have been measured and are believed to represent the previously described, overlying basalt breccia zones. These generally occur to the upper zone of the isolated parts of the pipe. Similar phases have been described in all of the Orapa pipes.
- ◇ **CK** (Coherent Kimberlite). This phase is intersected in the south-east of the main pipe has high angled contacts with the country rock. It is interpreted to be early stage kimberlite dyke for both the main pipe and the small satellite kimberlite.

Phases VK2 and VK3 volumetrically make up most of the modelled kimberlite pipe and are therefore economically most important. A central plug of VKxxx of very high kimberlite dilution has been defined, see Figure 1.

## Historical Bulk Sampling Programs

### *Bulk Sampling Shaft*

Importantly the central dilution VKxxx zone mentioned above is also the area into which De Beers sunk its preliminary bulk sampling shaft to a depth of 36 meters between 1976 and 1980. Whilst the exact dates are unknown, according to Auridiam (2<sup>nd</sup> Relinquishment report 1999) the results of this work of State Grant 14/72 were described by De Beers in their Final Report to the Botswana Government. It was quoted that the grade of the bulk sample taken from this shaft by De Beers was about 1.4 cpht, which is low, but understandable due to its location in the high dilution zone. The total tonnages taken by De Beers were not provided nor any details on the test work undertaken. The De Beers grade is historical and it was not verified by an independent qualified person and clearly does not meet the criteria of a mineral resource.

In 2000, the Auridiam JV expanded the De Beers shaft by limited horizontal tunnels in 4 directions at a depth of 30 meters. The Auridiam JV recognized the zone of high basalt xenolith concentration in the kimberlite, which was referred to as basalt breccia. Some 1,115 tonnes of this bulk sample was processed through a rotary pan plant from which 79 diamonds were recovered, with a total weight of 19.57 carats. The grades were described as “pedestrian” and were reported at 1.76 cpht. The grades mentioned here are historical and this grade data was not verified by an independent qualified person at the time and does not meet the current criteria of a mineral resource.

### ***Bulk Sampling Drill Holes***

Prior to the above in 1999, the Auridiam JV collected two moderately small bulk samples, from outside the VKxxx high dilution zone using 12.25 inch Reverse Circulation (RC) drill holes, which returned far higher grades than the shaft samples. Auridiam JV drill hole E2 in the VK2 kimberlite phase returned a grade of 19.2 cpht, and drill hole W4 located in the VK3 kimberlite phase gave a grade of 13.7 cpht. These two drill hole grades are historical and only represent the grade of small bulk samples by the Auridiam JV. Some 12.8 tonnes of kimberlite were treated using a rotary pan plant from hole E2, and from which 9 diamonds were recovered with a weight of 2.46 carats; and 9.7 tonnes of kimberlite were treated from hole W4 where 6 diamonds were recovered with a weight of 1.33 carats. This reported grade data was not verified by an independent qualified person at the time and does not meet the current criteria of a mineral resource.

The mini-bulk samples taken by the Kenrod Engineering Service and SouthernEra joint venture between 2005 and 2007 gave mini-bulk sample composite sample grades of between 0 and 21 cpht for sample composites of 1.75 tonnes to 2.502 tonnes. The average grade of the data was 5.7 cpht, from a sample mass of 12.4 tonnes, where 5 diamonds were recovered with a weight of 1.42 cpht. This data was reviewed by the Company for location information. However, direct comparison between the grade and kimberlite phases was not possible because samples were combined without specifying the kimberlite phases from which the samples were derived.

### **Current Program**

Tsodilo's new geological model will now be used for the next phase in the evaluation of BK16 which comprises a 24-inch Large Diameter Drill program to define the diamond grades of the different kimberlite phases. It is planned to extract some 2,000 tons from the 24-inch boreholes. This material will then be treated by Tsodilo's recently purchased Mobile DMS plant located at Letlhakane.

The economic kimberlites in the OKF are all relatively low grade in portions of the upper sections of the pipe due to the dilution of the basalt components. The grade however does increase in these economic pipes as "clean" kimberlite is intersected as is verified by historical data from BK16.

***About Tsodilo Resources Limited:*** *Tsodilo Resources Limited is an international diamond and metals exploration company engaged in the search for economic diamond and metal deposits at its Newdico (Pty) Limited ("Newdico") and Gcwihaba Resources (Pty) Limited ("Gcwihaba") projects in northwest Botswana. The Company has a 98% stake in Newdico (851 km<sup>2</sup> under Precious Stone - diamond licenses). The Gcwihaba project area: 494 km<sup>2</sup> under Precious Stone - diamond licenses; 11,158 km<sup>2</sup> Metal (base, precious, platinum group, and rare earth) licenses; and, 6,925 km<sup>2</sup> under Radioactive Minerals licenses is 100% held by the Company. The Company has a 75% stake in Bosoto (Pty) Ltd. Tsodilo manages the exploration of the Newdico, Gcwihaba and Bosoto license areas. Overall supervision of the Company's exploration program is the responsibility of Dr. Mike de Wit, President and COO of the Company and a "qualified person" as such term is defined in National Instrument 43-101. Dr. de Wit has reviewed the information contained herein and approved the contents of this Press Release.*

*The Company has offices in Toronto, Canada and Gaborone and Maun, Botswana. Please visit the Company's website, [www.TsodiloResources.com](http://www.TsodiloResources.com), for additional information and background on our projects.*

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*This press release contains forward-looking statements. All statements, other than statements of historical fact, that address activities, events or developments that the Company believes, expects or anticipates will or may occur in the future (including, without limitation, statements relating to the development of the Company's projects) are forward-looking statements. These forward-looking statements reflect the current expectations or beliefs of the Company*

*based on information currently available to the Company. Forward-looking statements are subject to a number of risks and uncertainties that may cause the actual results of the Company to differ materially from those discussed in the forward-looking statements, and even if such actual results are realized or substantially realized, there can be no assurance that they will have the expected consequences to, or effects on the Company. Factors that could cause actual results or events to differ materially from current expectations include, among other things, changes in equity markets, political developments in Botswana and surrounding countries, changes to regulations affecting the Company's activities, uncertainties relating to the availability and costs of financing needed in the future, the uncertainties involved in interpreting exploration results and the other risks involved in the mineral exploration business. Any forward-looking statement speaks only as of the date on which it is made and, except as may be required by applicable securities laws, the Company disclaims any intent or obligation to update any forward-looking statement, whether as a result of new information, future events or results or otherwise. Although the Company believes that the assumptions inherent in the forward-looking statements are reasonable, forward-looking statements are not guarantees of future performance and accordingly undue reliance should not be put on such statements due to the inherent uncertainty therein.*

*The TSX Venture Exchange has not reviewed and does not accept responsibility for the adequacy or accuracy of this news release. This news release may contain assumptions, estimates, and other forward-looking statements regarding future events. Such forward-looking statements involve inherent risks and uncertainties and are subject to factors, many of which are beyond the Company's control, which may cause actual results or performance to differ materially from those currently anticipated in such statements.*

**FOR FURTHER INFORMATION PLEASE CONTACT:**

James M. Bruchs     Chairman and Chief Executive Officer  
Dr. Mike de Wit     President and Chief Operating Officer  
Head Office         Telephone +1 416 572 2033  
Website              <http://www.TsodiloResources.com>

JBruchs@TsodiloResources.com  
MdeWit@TsodiloResources.com  
Facsimile + 1 416 987 4369