

KAR-30



**bhpbilliton**

BHP Mineral India Pvt Ltd  
7th Floor Fortune Towers,  
Chandrasekharpur,  
Bhubaneswar, 751023, India  
Tel +91 674 3987000  
Fax +91 674 3987070  
www.bhpbilliton.com

28<sup>th</sup> March 2006

To,

1. The Director Mines and Geology  
Government of Karnataka  
No 49, Khanij Bhawan  
D.Devaraja Aras Road  
Bangalore

2. The Asst. Director  
Department of Mines and Geology  
Tumkur (Karnataka)

3. The Controller General, Attn.: Superintending Mineral Economist (Statistics)  
Indian Bureau of Mines,  
Indira Bhawan, Civil Lines  
NAGPUR - 440 001

4. The Controller of Mines (South)  
Indian Bureau of Mines,  
29 Industrial Suburb  
II nd stage, Tumkur Road  
Yashwantpuram  
Bangalore- 560022

5. The Regional Controller of Mines  
Indian Bureau of Mines,  
Kendriya Sadan  
Ist Floor, Sultan Bazar  
Koli, Hyderabad

**Sub: FINAL REPORT OF RECONNAISSANCE OPERATIONS CARRIED OUT DURING  
PERIOD May 18, 2004 and March 1, 2006**  
(Under Rule 3E of MCDR, 1988)

**Ref: Reconnaissance permit for an area of 1942 sq km in the Tumkur district of  
Karnataka  
Order No. CI.101:MMM.2002 dated 01/03/04**

Dear Sir,

Please find enclosed herewith the Full and Final Report of Reconnaissance Operations during the period May 18, 2004 and March 1, 2006 over the above Reconnaissance Permit required Under Rule 3E of MCDR, 1988

As you are aware that prospecting agencies are working in a competitive environment, we request that the contents of the report be kept **confidential under Rule 7(viii) of MCR, 1960.**

Yours faithfully,

Signature :

Name in full: Bhupendra Dashora  
Position: Project Geologist

A member of the BHP Billiton group  
which is headquartered in Australia  
Place : New Delhi

## FINAL REPORT OF RECONNAISSANCE WORK DONE

(See Rule 3E of MCDR, 1988)

### A. INTRODUCTION -

This report summarises the reconnaissance work carried out during a period between May 18 2004 and March 1 2006 on the BHPMIL IV permit.

During the reporting period, regional traverses were made over the entire RP area in order to define the most suitable methods for the effective exploration over the permit area. On completion of these traverses it was determined that a regional heavy mineral drainage sampling programme would be the most effective first pass exploration screening tool and accordingly a sampling program was designed.

In preparation for this program regional and local topographic sheets have been acquired covering the permit area, and preferred heavy mineral sample site locations identified. On-ground assessment indicated that several of the major drainages were flowing till January 05 and as a consequence the sampling program was undertaken in the months of March and April 2005 and some follow up desktop work March and Nov -Dec 2005.

During the period, a total of 19 heavy mineral samples were taken throughout the RP area. A further 10 samples were planned; however the sand-choked nature of the drainages in the RP precluded the development of effective trap sites and despite extensive search for same, no sample was possible.

✓ Heavy mineral processing and observation has only recovered 4 possibly kimberlitic sourced grains with some doubts as to the provenance of these grains. Further assessment of these grains indicated that the grains are coming from the depth above kimberlite stability field and are non kimberlitic.

✓ Hence the decision is made to relinquish to tenement.

## **B. AREA OF RECONNAISSANCE -**

A total contiguous area of 1942 sq km in the Tumkur district of Karnataka has been licensed to BHP Minerals India Pvt Ltd. for reconnaissance of gold, diamonds and associated minerals specified in Part C of the schedule of Mines and Minerals in the Kolar district of Karnataka.

The details of the RP area are shown on the attached location map (Fig. 1).

## **C. GEOLOGY OF THE AREA -**

The area falls within Dharwar Craton of South India, part of Closepet Granite lies in the middle part of RP. The eastern part of the RP lies over major shear zone. The northern boundary of the craton is marked by the Godavari graben as well as deccan traps and the southern margin is marked as a gradational transition to the granulite rocks of southern India.

Lithologically the area consists of Archaean gneisses, greenstone schist belts (comprising metavolcanic and meta sedimentary rocks) and granites. Proterozoic sedimentary basins occur to the southeast of the RP area, in particular the well known Cuddapah basin. The schist belts are intruded by younger potassic granites and also by suites of peninsular gneiss. The area is intruded by a number of doleritic and lamprophyric dykes, with the dolerites generally exhibiting low potassic content. The other late igneous activity in the eastern Dharwar craton is marked by the intrusion of Kimberlite and lamproite bodies in central Andhra Pradesh. The aim of the reconnaissance sampling of this tenement is to ascertain whether similar intrusive bodies occur within this portion of Karnataka.

## **D. PROSPECTING WORK DONE –**

### Traverse Geological Mapping

Prior to undertaking regional stream sampling the entire RP area was traversed by geological staff to assess both the veracity of existing quadrangle geological mapping and the potential to adequately assess the kimberlite bearing potential of the property by Heavy Mineral drainage sampling. Both were found to be adequate and a sampling program of 29 heavy mineral samples was designed to properly screen the area for diamond exploration.

In the field traverses it also verified that geomorphologically the area is flat, with a certain amount of black clayey soil cover. Within the permit area many of the larger drainages have been dammed which has commonly resulted in intermittent areas of standing and then running water and as a consequence a number of secondary drainages could only be partially sampled. In addition most of the minor drainages have been modified or have had their flow completely restricted by farming activity. These activities have resulted in an increase in the fine sediment load in all smaller streams, and hence sampling of the smaller drainages was deferred in this initial stage of the exploration program.

Out of the planned 29 samples only 19 samples could be collected (See Table -1 and Figure 2) in the field because of the sand-choked nature of the drainages in the RP precluded the development of effective trap sites and despite extensive search for same, no sample was possible.

During the reporting period exploration activities were carried in two phases. In the first phase suitable heavy mineral trap sites were identified within major and secondary drainages and in the second phase a total of 19 samples were collected from catchments of between of 30-60 km<sup>2</sup> each to screen the entire RP area (Figure 2).

The samples were typically taken from rock bars, boulders in thalweg and point bars. Poor trap site locations were avoided, however where this (poor site) was unavoidable a sample was swept from the thalweg or the accumulation of coarsest

material down to the base of the streambed, usually under 5-10cm of gravel cover. Between 30-80 kg of dry-sieved material was collected from each stream sample sites. All the samples were sieved to -1.1 mm size and sent to Diatech Laboratories Perth Australia for heavy mineral analysis.

Most of the sampling work was done in the year 2005 and the final interpretation of the data and field checks for few samples done in late 2005 and early 2006.

The detailed data interpretation by experts and the field check for 4 positive suspect samples revealed that the area does not contain any kimberlite body nor significant gold mineralisation. Based on this fact the area has been relinquished.

*Following is the Summary of all results. (For Details See Table 2, 3, 4)*

<b><u>Sample Number</u></b>	<b><u>Assessment</u></b>
<b>905</b>	Negative
<b>906</b>	Negative
<b>907</b>	Unresolved/(Negative confirmed later on)
<b>908</b>	Negative
<b>909</b>	Unresolved/(Negative confirmed later on)
<b>910</b>	Negative
<b>911</b>	Negative
<b>912</b>	Negative
<b>913</b>	Unresolved/(Negative confirmed later on)
<b>1001</b>	Negative
<b>1002</b>	Negative
<b>1003</b>	Negative
<b>1004</b>	Negative
<b>1005</b>	Negative
<b>1006</b>	Negative

<b>1007</b>	Negative
<b>1008</b>	Negative
<b>1009</b>	Unresolved/(Negative confirmed later on)
<b>1010</b>	Negative

All the data generated from the tenement is attached with report as Table 1, 2 , 3 and 4.

**E. PERSONS ENGAGED FOR THE WORK -**

For the geological fieldwork currently two teams, each consisting of a geologist/geophysicist and a driver will be engaged. Field assistants, depending on the requirement for each team, will be hired locally.

\*\*\*\*