# Update on Ganajur Feasibility Studies / infrastructure facilities and other developments

Bangalore, India December 6, 2016

Deccan Gold Mines Limited - "DGML" (BSE Scrip Code: 512068) is pleased to provide updates on:

- Significant progress achieved in metallurgical test work programme. Excellent results from AMTEL indicating gold recovery in excess of 85% on the 3 variability samples of the Ganajur gold ore.
- Appointment of CPC Engineering, Perth, Australia based engineering firm for undertaking Engineering Design for the processing plant at Ganajur
- progress of the ongoing Feasibility Studies (FS) being undertaken by Snowden Mining Industry Consultants, Australia (Snowden) on Ganajur Gold Project of its subsidiary Deccan Exploration Services Private Limited (DESPL).
- other infrastructure facilities for Ganajur Gold Project
- other developments

### (1) PROCESS AND METALLURGY

While the test work programme is 85% complete, further refinement on gold recovery optimization, settling tests, cyanide destruction test work and gold deportment tests remain to be completed. Based on the test results, an optimum flow sheet consisting of the following circuits - three stage crushing, single stage ball milling, flotation with ultrafine grinding (UFG) of the concentrates, carbon in pulp cyanidation of the flotation concentrates, elution, cyanide destruction and tailing disposal is being considered.

We had sent 3 variability samples representing different parts of the Ganajur ore to AMTEL, a highly reputed laboratory in Canada for gold deportment analysis. The diagnostic Gold deportment analysis is based on a comprehensive mineralogical and analytical approach involving several microbeam techniques to identify, quantify and fully characterize all forms and carriers of gold. We are very happy to inform that the results from AMTEL has indicated gold recoveries in excess of 85% by adopting minor changes in the process technology. We have also carried out additional Preg Robbing Index Tests at Shiva Analyticals in Bangalore to understand the influence of organic carbon in gold recovery. The results from AMTEL and Preg robbing tests indicate only minor losses due to preg-robbing by organic Carbon present in the gold ore which is excellent for gold recovery.

Shareholders will appreciate that DESPL is taking all efforts in understanding the characteristics of the gold ore in order to finalize a robust processing technique for getting the best recovery of gold in a cost effective manner.



#### (2) PROCESS PLANT ENGINEERING DESIGN

DESPL has appointed CPC Engineering (CPC), Perth, Australia based engineering firm for undertaking Engineering Design for the processing plant and also to develop  $\pm$  15% capital and operating cost estimates for the project. We had received proposals from a total of 6 engineering companies both from India and abroad and CPC was finalized after meticulous technical screening and negotiations. The engineers from CPC visited Ganajur Project site during the last week of November along with our Process Engineer. CPC team expressed its satisfaction regarding site location and infrastructure.

#### (3) **FEASIBILITY STUDIES:**

The FS comprises several disciplines such as Resource geology, Mine planning, Geochemistry, Process and metallurgy, plant designing and engineering, Tailings disposal and design of the tailing dump, Geotechnical engineering, hydrology and hydro-geology and environmental studies.

We are happy to summarise the significant progress has been made in most of the disciplines covered by the FS in the following paragraphs.

#### **Resource Geology**

The updated Mineral Resource Estimates produced by Snowden and announced on September 23, 2016 to BSE are reproduced hereunder for ready reference.

Ganajur Mineral Resource as at August 2016 reported above a 0.8 g/t Au cut-off

Classification	Deposit	Tonnes (kt)	Au (g/t)
Measured	Oxide	580	2.8
	Sulphide	1,700	4.0
	Total Measured	2,300	3.7
Indicated	Oxide	130	1.9
*	Sulphide	320	2.1
ν	Total Indicated	450	2.1
Measured + Indicated Total Measured and Indicated		2,700	3.4
Inferred	Oxide	100	2.3
	Sulphide	110	2.3
	Total Inferred	210	2.3

Note: Small discrepancies may occur due to rounding. The Mineral Resource estimate was classified and reported in accordance with the 2012 JORC Code guidelines.



#### Updated Summary from Snowden of work done till 24-11-2016

Milestone Name	%	
	Complete	
Resource Geology	98%	
Surface Water	64%	
Groundwater	52%	
Geotechnical Engineering		
- Pit	82%	
- Ex-pit	58%	
Mine Planning	27%	
Tailings	48%	
Geochemistry	69%	
Environmental	75%	
Project Management	78%	
Total	55%	

#### Hydrology

Our consultants, EI Technologies, Bangalore, who visited the Project and collected the required data to study and report on surface water design criteria, hydrological modelling, preparation of flood map and water balance, water quality analysis and water management, have submitted their draft Hydrology Report. Prime Resources (Pty) Ltd, South Africa (Prime) (associate of Snowden) is reviewing the same.

#### Hydrogeology

Prime has reviewed the draft report submitted by Mr M.C. Reddy and Mr Jayankumar, DESPL's consultants. While advising certain minor changes which have been addressed by DESPL's consultants, Prime has overall opined that the Report is a well prepared document and is of international standards. The Consultants are now preparing the ground water modeling studies in the project area.

#### Geo-Technical Engineering

M/s Sarathy Geotech & Engineering Services Private Limited, Bangalore (SGES), Consultants appointed to undertake detailed geotechnical studies for the open pit mine, processing plant and Tailings Storage Facility (TSF), have submitted their draft report for the Mine pit area. As already reported, DESPL completed 4 drill holes in the mine area and 3 drill holes in the processing plant area for geotechnical engineering studies. Further, DESPL also excavated 18 pits in the proposed plant and tailings facility (TSF) and SGES has completed all the relevant tests on these samples and the test results have been submitted. We are happy to inform that SGES has since submitted the Geotechnical report for the processing plant and TSF area. Both these reports are being reviewed by Snowden and Prime.

#### **Environmental Studies**

M/s BS Envitech, Consultants have submitted their draft Baseline Environmental Report which is being reviewed by Snowden and Prime.



#### Mine Planning / Cost

Snowden has completed a preliminary pit optimization study using Whittle optimization software. The Study was carried out using multiple gold per ounce rates between USD 250-2700 and considering production rate of 1000 tonnes per day. The other parameters considered include 10% discount rate, 5% dilution and 2% ore loss. The results indicate that at gold per ounce price of USD 1250, the project economics is robust which is a positive sign and is similar to the results obtained under the earlier Scoping Studies commissioned by DESPL and conducted by SRK Mining Services (India) Private Limited in 2012. Snowden will be completing pit designing and scheduling based on the report on geotechnical studies submitted by SGES.

We have also received quotations from Indian mining contractors for undertaking mining operations. The operating mining cost taken from these quotations will be considered for mine scheduling.

#### Mill Tailings

Prime has submitted a preliminary design for the Tailing storage facility as per best practices and Indian regulations which is being reviewed by DESPL.

#### Geochemistry

The geochemistry will address the potential Acid Rock Drainage (ARD) and its environmental impact assessment. DESPL has sent 31 samples for ARD characterisation studies to ALS-Global laboratory in Brisbane, Australia and the results are being reviewed by our Process Engineer and Prime.

#### Release of Feasibility Study Report

As stated above, the appointment of CPC took some time due to the stringent measures adopted by DGML when selecting the right firm for this very critical aspect of the FS. CPC have indicated that due to the upcoming Christmas holidays and their recent appointment their report will only be ready by the first week of February 2017 which means the release of the FS report will also have to be postponed to the middle of February 2017 to take account of the CPC report.

# (4) OTHER INFRASTRUCTURE FACILITIES FOR GANAJUR GOLD PROJECT

#### Land acquisition

Based on the 'No Objection' issued by the District Revenue Department and submission of consent of 80% of the land owners (farmers), land acquisition process for the Ganajur Gold Project has been finalized by the Special Land Acquisition Officer of Karnataka Industrial Area Development Board (KIADB). It is expected that the proposal would be recommended to the Managing Director of KIADB and Government of Karnataka shortly.

#### **Electricity Supply**

On 24/11/2016, an application seeking sanction of 5 MW electrical power has been lodged with Hubli Electricity Supply Company, Haveri, Karnataka (HESCOM). The Executive Engineer, HESCOM has forwarded our application on 25/11/2016 to the Executive Engineer, Karnataka Power Transmission Corporation Limited, Haveri to carry out feasibility study for sanctioning 5 MW power supply from the 110 KVA line that passes adjacent to our Project site.



#### Water Supply

DESPL's application dated 14/11/2016 seeking sanction of water supply from the Varada River that is close to the project site is under process at the Office of Secretary, Water Resources Department, Government of Karnataka. The water supply requirement is estimated to be 3000 cubic meters per day.

# Wildlife conservation plan

A Project Wild Life Conservation Plan has been finalised and will be lodged shortly with the Chief of Wild Life Warden, Forest Department, Government of Karnataka for approval.

# Meeting with the Hon'ble Minister for Large & Medium Industries & Infrastructure Development, Government of Karnataka

At our request, the Hon'ble Minister has agreed to convene a meeting to be held under his Chairmanship and along with the Hon'ble Minister for Mines & Geology to fast track the Ganajur Gold Project clearances. This meeting would be attended by the officials of the concerned Departments of the Government of Karnataka. We expect this meeting to be held shortly.

#### **Project Business Registration**

We have also lodged our application with the Department of Industrial Policy and Promotion, Ministry of Commerce and Industries for obtaining Industrial Entrepreneur's Memorandum (IEM), and the same is expected to be approved shortly.

## (5) OTHER DEVELOPMENTS:

#### **Hutti SLP:**

DESPL's Special Leave Petition (SLP) with regard to its Prospecting Licence applications over the Hutti Belt Prospects in the State of Karnataka came up for hearing on November 24, 2016 before a two member Bench of the Hon'ble Supreme Court.

Our Senior Counsel elaborated on the provisions of the Mines & Minerals (Development & Regulation) Act, 1957 and Amendment Act, 2015 that clearly conferred a preferential right on DESPL to get a PL granted over its Hutti Belt prospects.

The hearing could not be completed as all sides presented their arguments. The Hon'ble Supreme Court thereafter posted the case for further hearing on 12/01/2017.

### **Grant Notification / Letter of Intent:**

The Commerce and Industries Department, Government of Karnataka have updated their website to indicate that the Ganajur ML application has been received by the Department for further action. We are monitoring the progress and will update shareholders of further developments in this regard as these become available.

