



Anglo American Exploration (India) Pvt. Ltd. Tej Kunj, Ambavgarh UDAIPUR, Rajasthan PIN-313 004

7th November 2006

To, The Controller General, Indian Bureau of Mines, Indira Bhawan, Civil Lines NAGPUR - 440 001

> The Director General Geological Survey of India, 27, Jawaharlal Nehru Road, KOLKATA - 700 016

The Director Mines and Geology Government of Rajasthan Khaniz Bhawan, Shastri Circle UDAIPUR - 313 001

Final Report of Reconnaissance Work Done Sub:

(Under rule 7 (iii) & 7 (vii) of Mineral Concession Rules, 1960)

Ajmer - Ajmer RP-3/2001 (405.61 sq km) Ref:

Copper, Lead, Zinc, Silver, Gold, Precious metals and Associated minerals Mineral(s):

Dear Sir,

Please find enclosed herewith the Final Report of Reconnaissance Work Done over the above Reconnaissance Permit as required under rule 7 (iii) & 7 (vii) of Mineral Concession Rules,

We request you that the contents of the report are kept confidential under Rule 7(viii) of MCR,

Yours faithfully,

Place: UDAIPUR

Date: 7th November 2006

Name in full:

Designation:

Brijendra S. Gahlot **Project Geologist** 

Anglo American Exploration (India) Private Limited

ffice: 214, South Ex Plaza-1, 389, Masjid Moth, South Extension, PT-II, NEW DELHI -110 049 

Tel: (011) 2625 8172, 2625 1711 Fax: (011) 2625 0551

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Anglo American Exploration (India) Pvt. Ltd.
Tej Kunj, Ambavgarh
UDAIPUR, Rajasthan
PIN- 313 004
6<sup>th</sup> November 2006

#### FORM-BB

(See rule 3E of MCDR, 1988)

Progress report of reconnaissance survey in respect of <u>Copper, lead, zinc, silver, gold, precious metals and associated minerals</u> [the name of the mineral(s)] for the <u>year ending August 2006</u> (Abandonment of reconnaissance permit).

#### **IMPORTANT**

This Form fully filled-in must reach the Concerned authorities within thirty days after expiration of one year from the date of execution of reconnaissance permit or the expiry of reconnaissance permit or abandonment of reconnaissance permit, whichever is earlier.

To,	•	
1.	The Controller General,	
	Indian Bureau of Mines,	
	Indira Bhawan, Civil Lines	
	NAGPUR - 440 001	
2.	The Director General	
	Geological Survey of India,	
İ	27, Jawaharlal Nehru Road,	
	KOLKATA - 700 016	
3.	The Director Mines and Geology	
	Government of Rajasthan	
	Khaniz Bhawan,	
	Shastri Circle	
	UDAIPUR - 313 001	

## Ajmer RP-3/2001 (405.61 sq km) in Ajmer district

1.	Name of the permit holder	Anglo American Exploration India Pvt. Ltd.		
2. Nature of the firm		A private limited company registered under Companies Act, 1956		
3.	Address of the firm	Anglo American Exploration India Pvt. Ltd. 214, South Ex Plaza – 1 389, Masiid Moth, South Ext Pt II		

		New Delhi - 110 049		
4.	Area under permit	405.61 sq km.		
5.	Location: (i) Topo sheet No. (s)	45 J/7, 45 J/10 and 45 J/11		
	(ii) Co-ordinates of corner points	Given in Figure 1 in the attached report		
	(iii) District (s)	Ajmer		
	(iv) State	Rajasthan		
6.	Date of grant of permit	21st August 2003		
7.	Period of permit	3 years, from 21.08.2003 to 20.08.2006		
8.	Reconnaissance survey work done	Please refer to report attached for the details.		
	(A brief description of the work involved along with particulars of the machines and instruments used would be given against each of the following items)			
,	(i) Regional Survey	Please refer to report attached for the details.		
	(ii) Aerial / Photogeological work	None		
	(iii) Geological mapping including area covered and scale	Please see attached report under heading: Recomaissance survey work done - Geological		
	(iv) Geophysical	Please see attached report under heading: Reconnaissance survey work done – Geophysical		
·	(v) Geochemical	Please see attached report under heading: Reconnaissance survey work done – Geochemical		
	(vi) Test drilling: Number, area of influence meterage and sampling.	None		
9.	Nature and structure of the ore body	Not applicable		
10.	Analysis of the ores or minerals	Not applicable		

11.	If abandonment		
	(i) Date of abandonment	11th August 2006	
	(ii) Reasons for abandonment	Exploration activities completed.	
		Signature: Ballet	
		BRIJENDRA SINGH GAHLOT (Full name of the Signatory)	
		Designation: Project Geologist and	
		Address: Anglo American Exploration (India) Pvt. Ltd.	
		Tej Kunj, Ambavgarh UDAIPUR, Rajasthan	
		PIN- 313 004	
		Date of despatch: 7 <sup>th</sup> November 2006	

## Final Report of Reconnaissance Work Done

(See Rule 7 (iii) & 7 (vii) of Mineral Concession Rules, 1960)

#### A. INTRODUCTION -

In August 2003, Anglo American Exploration (India) Private Limited (AAEIPL) executed Reconnaissance Permit (RP) over an area of 405.61 sq km (Ajmer RP) in Ajmer district of Rajasthan. The area has been licensed for prospecting of Copper, Lead, Zinc, Silver, Gold, Precious metals and Associated minerals.

This final report describes the reconnaissance work accomplished in the Reconnaissance permit area and data and information collected during reconnaissance operations.

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

The RP (see Figure 1) constitute an area of 405.61 sq km in Rajasthan, falling mainly within Ajmer district in the state of Rajasthan.

Location, area and date of execution of the RP are tabulated below and depicted in Figure- 1.

RP Block	Falls in District	Date of execution	Original Area (sq km)	Relinquished Area (sq km)	Present Area (sq km)
RP- 3/2001	Ajmer	21-August- 03	405.61	405.61	405.61

#### C. GEOLOGY OF THE AREA -

## Regional Geology:

Regionally, the rocks of the area belong to Delhi Fold Belt of Proterozoic age. The rocks are primarily meta-sediments comprising of pelites, meta-carbonates and quartzites. The area overlies the transition zone between South Delhi and North Delhi Fold Belts. A number of ENE trending structures traverse the area. Metamorphic grade varies from middle amphibolite to granulite facies.

Kayar zinc deposit, located to the northeast of the RP area, is hosted in the pelitic rocks of the North Delhi Fold Belt. Generative work carried out by AAEIPL indicates that this area is prospective for base metal mineralisation.

## D. RECONNAISSANCE WORK DONE -

#### **GENERAL:**

The permit area has been covered by several airborne geophysical surveys in the past including that of RTZ in 1998 and hence the company has no plans to undertake any aerial survey. Instead, emphasis will be laid on ground based geophysical and geochemical surveys to explore the area. However, efforts will be made to procure airborne geophysical data from relevant government agencies for reprocessing and interpretation.

#### 1. Geology:

Regionally, the rocks of the area belong to Delhi Fold Belt of Proterozoic age. The rocks are primarily meta-sediments comprising of pelites, meta-carbonates and quartzites. The area overlies the transition zone between South Delhi and North Delhi Fold Belts. A number of ENE trending structures traverse the area. Metamorphic grade varies from middle amphibolite to granulite facies.

Main rock type in the tenement area includes granites, quartzites, carbonates, calc-gneiss, mica schists and amphibolites. Generalised geological map of the tenement area is shown in figure 2.

Few regional traverses indicate that major part of the tenement area is covered by unprospective lithologies (quartzites and granites). Regolith mapping indicates that wind blown transported soil in the area will be problem in carrying out regional soil surveys.

## 2. Geophysics:

Ground magnetic survey was conducted to use different approach in exploration compared with what other companies have done in the past.

2127 line km of ground mag was collected in the tenement area. This survey was done by using GSM-19 (V6.0) overhauser magnetometers which is having inbuilt GPS. Another magnetometer is used as a base magnetometer to correct the diurnal variations during the survey period. The specifications of the survey are mentioned

Total No. of Line km : 2127(approx)

Line spacing

: 200m

Line Direction

: EW

Station Spacing

: 0.5m (approx.)

Data interpretation failed to identify any anomalies. Line path for the survey is shown in figure 3 and ground magnetic image (RTP VD1\_grey scale & SA81 i62 colour scale) is shown in figure 4 & 5. Raw Data is given in attached

### 3. Geochemistry:

## a. Regolith Mapping:

Regolith mapping (figure 6) was done over the entire permit area using Landsat image and field observation (figure 7). Major part of the area in north and north east of the tenement area lies within transported environment with thickness of sand cover being plus 40 metres. The middle of the area lies within the erosional environment and south lies in mixed environment. The geochem signature gets masked due to the nature of soil and this was kept in mind during the regional soil survey planning. Field observations points are given in CD.

# E. PERSONS ENGAGED FOR THE WORK -

Geological mapping was carried out by a number of geologists working for the company as well as consultants from abroad are being used for mapping and data interpretation. Field assistants are hired locally to assist the field teams.

The company geophysicist is undertaking most of the ground geophysical surveys. Several field assistants, as per requirement, are hired locally to carry out the surveys.