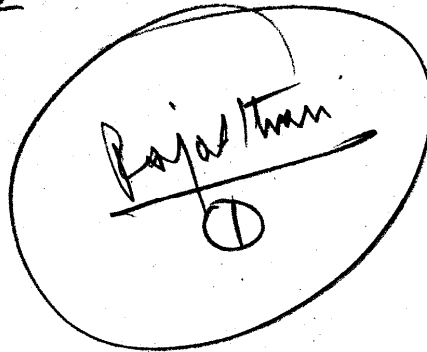


RAJ 12



HINDUSTAN ZINC LIMITED

**FINAL EXPLORATION REPORT - AJMER BLOCK
(RP- 1 / 2001)**

AREA - 471 SQ KM

JULY 2006

**GEOLOGY & EXPLORATION DEPARTMENT
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SUMMARY & CONCLUSION

Reconnaissance Permit (RP) over 471 sq. km within the old Prospecting license area was applied by HZL for grass root level exploration. The RP was approved and granted by Govt. of Rajasthan vide order No. F.19 (16) Mines/Gr-2/2001 dated 13.06.2001 and Deed/agreement was executed on 23.08.2001.

The applied RP area could not be surveyed by fixed wing aircraft on account of topographical constraint when HZL was having 2344 sq km of PL. Thus initially it was decided to find the prospective/target area within the RP for ground follow up by doing Helicopter geophysical (electromagnetic and magnetic) survey. NGRI was designated to carry out the survey but due to height constraint by DGCA (not to fly below 90m to AGL) it was decided to use the OHR (operation hard rock) data for ground follow up.

OHR data was first validated with a reasonable degree of confidence by taking help of state of art GEOTEM survey. OHR electromagnetic (EM) and TMI data was accepted, without involving appreciable error in location of conductors/conductive zones, for ground follow up work.

Since the Kayar deposit is within the RP area, thus Kayar data was reviewed w.r.t. to its geological setup, geophysical and geochemical responses. The Kayar deposit is electromagnetically transparent, magnetically silent but geochemically it has showed excellent response. It was concluded that area can not be down graded even if airborne electromagnetic response is lacking. In other words, a few areas of feeble electromagnetic response might mean hosting a concealed sphalerite-dominated orebody without graphite! Hence possibility of zinc mineralization in low priority anomalies/conductive zones sitting at favourable structural location cannot be ruled out.

Based on above studies, RP area divided in to three sub-blocks on the basis of review of airborne magnetic and electromagnetic signatures (OHR and GEOTEM), geological information, and topographical features. The blocks are designated as AJ-1, AJ-2 and AJ-3

Following is the quantum of exploration work carried out in the three designated blocks.

Activity	Quantity
Geological Mapping	471 sq km
Field follow up of OHR conductors	15 nos. (52.3 sq km)
Geochemical sampling (soil)	1097 (829 in AJ1, 148 AJ-3 & 120 AJ2)
Geophysical Survey	
Magnetic	21 line km
TEM	4 line km
Expenditure	21.5 lakhs

The results of regional geochemical sampling and limited ground magnetic survey have not been ^{found} encouraging in all the three blocks and no targets could be located for drill testing. However, the reconnaissance work comprising litho- geological mapping, interpretation from operation hard rock (OHR) aerial survey data sheets and part of Geotem data, and other available GSI information indicate that the area in vicinity of Kayar can still be considered prospective for hosting of Lead Zinc mineralization.

Accordingly an area of 24.08 sq km (figure 22) near village kayar, Chachiawas, and Makadwali was selected for submission of Prospecting License for exploration of Pb, Zn, and associated minerals and application was submitted on 20/08/04 before expiry of 3 year period of RP.