

## **A LABORATORY STUDY OF CONDUCTIVITY OF PYRITES FROM EARLY DIAGENESIS TO HIGH GRADE METAMORPHIC GEOLOGICAL CONDITIONS**

K. L. Shrivastava, Virendra Gaur, Hakim, Bhakar Ram and Ram Kishor

*Department of Geology, Jai Narain Vyas University, Jodhpur, India*

*E-mail: klsgeology@yahoo.co.in*

### **Abstract**

A sophisticated procedure and technique have been adopted in the laboratory to determine conductivity of the mineral pyrite by developing a suitable conductivity cell. The pyrite samples showing a range of temperature and pressure in geological environments have been collected from two different mines. Sedimentary pyrite showing early, middle and late diagenesis were collected from a pyrite mine at Amjhore. Metamorphosed pyrites are from the Dariba-Rajpura polymetallic sulphide mine covering the range of mild to high grade metamorphic association. It is concluded that conductivity of the pyrite samples determined in the laboratory is inversely proportional to the original temperature of their formation under geological conditions.

Keywords: Pyrites, Conductivity, Sediment on pyrite, Dariba-Rajpura mine, Temperature-Pressure