

Mineralogy and genesis of Kamar Talar Mn in East of Birjand, Southern Korasan, Iran

M. H. Zarrinkoub¹, A. Kalagari², B. Barghi²

1- Department of Geology, Faculty of Sciences, Birjand University, Birjand, Iran.

2- Department of Geology, Faculty of Sciences, Tabriz University, Tabriz, Iran.

Email: mzarinkob@birjand.ac.ir

(Received: 7/4/2008, in revised form: 18/2/2009)

Abstract: Kamar Tallar mineralization zone in Gazik area is engulfed within ophiolitic melange in Sistan suture zone in east of Iran. The Mn- bearing ore bodies of Kamar Tallar are occurred as discontinuous patches intimately associated with cherts and meta – spilites. Field evidences and study of trenches show that the Mn- bearing patches are principally superficial and laterally limited. Braunite, Bixbyite and Pyrolusite are the major Mn minerals and silica is the main gangue mineral. Mn- bearing minerals mainly occur as veins, veinlets, and podiform, indicating later remobilization of Mn during operation of hydrothermal fluids. Three types of Mn mineralization are recognized in KamarTallar, 1) syngenetic, 2) diagenetic and 3) epigenetic. Mn mineralization occurred in a sedimentary environment as sea floor exhalative process.

Keywords: *Ophiolitic melange, Sistan suture zone, Braunite, Bixbyite, Pyrolusite.*