Geochemistry of iron ores in Syria (Zabadani Area)

Dr. Eng. Mohamad Rukieh Counselor of Minister Communications and Technology-Syria Email:mrukieh@gmail.com

During the last 30 years I have performed many studies covered the Syrian iron Ores by studying its geological ,mineralogical, structure, geochemical properties, in addition to its main kinds and the different conditions of their formation including Oolitic and pisolitic iron ores in Zabadani area, which revealed in many locations. This paper presents geochemical properties for iron ores in Zabadani area and the distribution of trace elements in it, and its negative and positive effects. This ores presents in clay, iron, limestone, marl, and sandy Aptian layers, which laid by discontinuity on the errion surface of dolomite, limestone, upper Jurassic rocks, and consist of two main horizons :

The lower horizon is located in lower part of the lower formation of Aptian sediments, which known as "Grede base" and consist of pisolitic ores, thickness (2-8 m),otherwise the upper horizon belong to sediments of upper formation for upper Aptian, and it consists of several layers from Oolitic iron ores (brown, green and quarts according to our classification 1980) thickness till13 m (separated by sandy ,marly, and clayey layers .the results of our studies as follows :

1-the iron distinction with un balances in its distribution in Oolitic ores in Jdaydet yabous mine ,and the high percentage of it presents in southern west part of the deposits (more than 40%) this percentage is decrease constantly in north direction with the increase of the depth 2- There are no accordance with the increase of Oolitic iron thickness layer and the percentage of iron concentration in Jdaydet Yabous mine .

3- there are reversal ratio between the continents of calcium and silisium in Oolitic iron ores in Zabadani area.

4- the Oolitic and pisolitic iron ores in Zabadani area is distinction in both horizons with an increase of this trace elements (Ti, V, Co, Zn, Mo, Ag) which considered as an important pointer that the basic volcanic rocks are the main source for irons in the ores.

Also that is considered an important pointer for excavation of high concentration elements in studied area and that is confirmed when mineral sulfides are discovered by us.

5- Du to the percentage of iron and other characteristics, the first economic importance is given to all kinds of Oolitic iron ores in Zabadani area.

Key words, Iron ores ,Geochemistry, oolite, pisolite, trace elements, Zabadani Area