On Rational Classification of Reconnaissance Prospecting Stages for Solid Mineral Resources

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Abstract

According to the author's opinion, the overall geological exploration work for solid mineral resources from reconnaissance to prospecting may be classified into four stages: regional geological surveying, exploration and evaluation, ore deposit prospecting, and mining geology. In more detail, it could be divided into following nine substages: small, medium and large scale surveying, exploration, evaluation, general, industrial, development and production prospecting. Ore reserves may be classified into two classes: one could be produced under economic conditions by currently feasible technology and the other one could not. Grades of ore reserves are distinguished into seven classes denoted alphabetically by A to G. Feasibility study of mineral resources utilization should be developed in different stages of the geological exploration work in order to achieve more and better prospecting results and economic benefits. Investment cost should be allocated in accordance with the specific contents of the geological exploration work for three different aspects as operating costs, capital construction costs and production costs respectively, to get rid of the drawbacks in current allocation of the geological funds. The classification of geological working stages and the grading of ore reserves, the feasibility study of the utilization of mineral resources, and the funds alloction, must be closely combined together to form a complete geological reconnaissance prospecting program.

湖北黄冈县发现高品位含金石英脉型金矿

该金矿平均品位48克/吨，最高可达137克/吨，现已探明一定储量。自然金呈树枝状、粒状和不规则状与褐铁矿连生。

矿床位于北东向麻城—团风断裂带东侧，大别山金银多金属矿区西北部。含金石英脉主要赋存于大别群铁冶组中段斜长角闪岩夹薄层片麻状混合岩的破碎带内。破碎带近东西向，见有绿泥石化、褐铁矿化和弱硅化。

含金石英脉产状与破碎带基本一致，脉体形态简单、连续，局部有分枝复合或膨大。矿脉最长230米，平均厚0.4米，共生矿物有褐铁矿、磁铁矿、泡铋矿、锐钛矿、黄铁矿、赤铁矿和辉银矿等。

该金矿属单脉型中低温热液充填交代成因。附近还发现多处同一类型的金矿点和矿化点，具有一定的远景。

这个金矿是湖北省地矿局鄂东北地质大队最近在黄冈县金鸡乡发现的。

【何 松供稿】