

**STRUCTURAL MODEL FOR MINERALIZATION  
IN MOUNT PATUNG PROSPECT AREA,  
BOLAANG MONGONDOW, NORTH SULAWESI**

**ABSTRACT**

**Alexander Gilang S R**  
**111 130 040**

*The research area is located in Mount Patung prospect, Lolayan District, Bolaang Mongondow Regency, North Sulawesi Province. The research area was bounded by a 2 x 2 km<sup>2</sup> area, at the UTM 51N, 633528 mE - 635528 mE, 77833 mN - 79833 mN. The research area is mining area of PT. Bulawan Daya Lestari, containing potential gold mineralization. This study aims to determine the structural model of the research area. The research method used is surface geological mapping and rock sampling with core and XRD secondary data as supporting data.*

*The research area is a subvolcanic defined as proximal volcanic facies, composed by tuff Bilungala unit, interfingering with lapilli tuff Bilungala unit, and andesite Patung lithodem. Geomorphology of the research area is defined as proximal volcanic hills of old stage. Based on its deposit characteristics, the research area is defined as low-sulphidation epithermal deposit. The geological structures are controlled by the subduction tectonic framework that occurs in the north of North Sulawesi arm. Faulting begins in the Late Miocene, developed a second order and third order of strike-slip faults system, in which the main structural control of the gold mineralization is the Patung Fault which is one of the second order fault. Patung Fault is oblique normal left fault that forms flower structure/splay geometry, defined as transtension fault. The structure environment of the research area is a strike-slip system.*

**Keywords:** *flower structure, low-sulphidation epithermal, mineralization, strike-slip fault system, transtension*