

**KARAKTERISTIK ENDAPAN MINERAL LOGAM DI PESISIR PANTAI
PERAIRAN JAILOLO, KABUPATEN HALMAHERA BARAT,
MALUKU UTARA**

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SARI

Perairan Jailolo terletak di kabupaten Halmahera Barat, Maluku Utara. Daerah ini dikelilingi oleh beberapa gunungapi aktif diantaranya gunungapi Jailolo, gunungapi Gamkonora dan gunungapi Ibu. Penelitian dilakukan untuk mengetahui kondisi geologi dan karakteristik endapan mineral logam serta proses pembentukannya. Metode yang digunakan terdiri dari *sampling* litologi dan mineral butir serta batimetri. Morfologi daerah penelitian meliputi rangkaian gunungapi Jailolo, gunungapi Gamkonora dan gunungapi Ibu di bagian tengah, morfologi bawah laut berupa lereng landai sampai terjal di sebelah barat, lembah dan perbukitan di sebelah timur. Litologi terdiri dari material hasil gunungapi yaitu Andesit dan material ekonomis berupa mineral logam. Mineral logam yang hadir terdiri dari mineral Pirit, Tembaga, Mangan, Kalkopirit, Hematit, Magnetit, Ilminit, Malakit dan mineral logam mulia Emas. Struktur geologi yang berkembang merupakan hasil dari tumbukan tiga lempeng yaitu lempeng Hindia – Australia, lempeng Eurasia dan lempeng Filipina yang menghasilkan sesar naik dan sesar turun. Sistem hidrothermal terbentuk di sepanjang zona sesar sehingga zona tersebut menjadi jalur mineralisasi sedangkan rangkaian gunungapi yang ada menjadi sumber magma.

Kata kunci : geologi, mineral logam, sistem hidrothermal, perairan Jailolo, mineral butir.

**CHARACTERISTICS OF METAL MINERAL DEPOSITS IN COASTAL
WATERS OF JAILOLO, WEST HALMAHERA REGENCY,
NORTH MOLUCCAS**

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ABSTRACT

Jailolo waters are located in West Halmahera district, North Maluku. This area is surrounded by several active volcanoes including Jailolo volcano, Gamkonora volcano and Ibu volcano. The study was conducted to determine the geological conditions and characteristics of metal mineral deposits and their formation processes. The method used consisted of lithology sampling and mineral grains and bathymetry. The morphology of the study area includes a series of Jailolo volcano, Gamkonora volcano and Ibu volcano in the middle, underwater morphology in the form of gentle slopes to steep at west, valleys and hills at the east. Litology consists of volcanic materials, Andesite and economic materials in the form of metal minerals. Metal minerals that are present consist of minerals Pyrite, Copper, Manganese, Calcoprite, Hematite, Magnetite, Ilminite, Malachite and precious metals Gold. The developing geological structure is the result of three plate collisions, namely the Indian – Australian plate, the Eurasian plate and the Philipphine plate which produce upward faults and down faults. The hydrothermal system is formed along the fault zone so that the zone becomes a mineralized pathway while the existing volcano series is a source of magma.

Keyword : geology, metal minerals, hydrothermal system, Jailolo waters, grain minerals.