

**TOMA PETRE GHIȚULESCU –
A HUNDRED AND TEN YEARS FROM HIS BIRTH
(1902–1983)**

Toma Petre Ghițulescu was a brilliant personality of Earth sciences in Romania. He graduated from the Polytechnic School of Bucharest, Mine and Metallurgy faculty. Outstanding researcher, he opened new directions of study in both geology and geophysics. He carried out a rich exploration activity in metallogenic areas searching for ore deposits, especially in the Metaliferi Mts (southern part of the Apuseni Mountains).

He was born in Giurgiu on June 29, 1902. His father, Nicolae, was a Romanian from Transylvania (Vinerea village, Alba county), while his mother, Elena Vasilichia, was the daughter of a Romanian from the Timoc valley (Serbia). In Giurgiu, a small town on the Danube river, the family changed the name from Țurlea in Ghițulescu.

Toma Petre Ghițulescu attended the primary school in Giurgiu and graduated in 1921 “Gheorghe Lazăr” high school in Bucharest. During 1921–1925 he was a student at the Polytechnic School of Bucharest, graduating from Faculty of Mining and Metallurgy. After graduation he obtained an engineer diploma and became an employee at the exploration section of the Geological Institute of Romania, benefiting of Prof. Ludovic Mrazec proposal as director of the institute.

He traveled for study and documentation in Germany (Potsdam, Freiburg and Wansee – Askania laboratories) and in France (l’Institut de Physique du Globe de Paris), returning in Romania in 1927. He became the chief of geophysical section at the Geological Institute until 1935.

During 1927–1935 he was invited at the Polytechnic School of Bucharest to deliver a course on the exploration of metalliferous ores and applied geophysics at the Mining Department (Faculty of Mining and Metallurgy).

At the Geological Institute, during 1927–1930, under his energetic and competent leadership, the geophysical section was endowed with necessary instruments for three main geophysical methods: gravimetry, magnetometry and electrometry. For this pioneering activity he was helped by the younger colleagues Iulian Gavăt and Mircea Socolescu.

In 1929, at the IInd International Congress of Well Drilling in Paris, Toma Petre Ghițulescu gave a scientific presentation on the application of geophysical methods in the geological exploration of Romania. The same year he presented together with geologist A. Streckeisen, at the XVth International Geological Congress, held in South Africa, a paper regarding the gold resources of Romania.

The first geophysical experiments were carried out in 1927 in Dobrogea, at Altân Tepe, in the area of a copper and magnetite ore deposit. They consisted of magnetic and electrometric (S.P.) measurements. In the next year, together with Iulian Gavăt, he tested the gravimetric method by taking measurements with the Schweyder Askania torsion balance, on the Călinești–Florești (Prahova county) salt and oil structure.

In 1930, Toma Petre Ghițulescu, in co-operation with Mircea Socolescu, started geological and petrographical studies in the Metaliferi Mts, a region rich in gold ore deposits. They accomplished during eight years intense field and laboratory researches of this orogenic areal with a surface of about 3000 km². These geological investigations led to an original conception on the stratigraphy, tectonics and metallogenic evolution, being separated several phases of the Neogene volcanism and the associated hydrothermal processes. The authors summarized all results of their geological studies in a map (scale 1:75,000), published by the Geological Institute, considered to be the first metallogenic map edited in Romania, a reference ever since for geologists involved in Mining Geology.

In 1930 Toma Petre Ghițulescu participated to a geological expedition in equatorial Africa (French Congo) led by the Georges Lazerges. The main observations were presented in two scientific papers at the Geological Institute and at the Romanian Royal Geographical Society. In this expedition, Ghițulescu was accompanied by four miners from Apuseni Mts.

In 1935 Ghițulescu left the Geological Institute and started working as adviser for development activities at MICA gold mining company.

During 1938–1939 he participated to the geological and mining study of gold fields from northern Portugal. In the same time (1938–1940) he elaborated exploration and evaluation reports for mines and mining areas for the Bulgarian Balkan – Rhodope mining company.

He was also interested in ore deposits of iron, chromium, manganese and pyrite of Baia Mare mining area (Rodna Veche, Baia Sprie).

Between June 1940 and May 1941, Toma Petre Ghițulescu was appointed general secretary, counselor and, for a short time, State Subsecretary of the Ministry of National Economy.

After WW II he was arrested by the communist regime, together with other former dignitaries of the previous system. Between 1948 and 1964, the period of his imprisonment, Toma Petre Ghițulescu was highly appreciated by new mines managers in the Metaliferi Mts. In these conditions he became a geological expert in this important mining area. After being liberated from prison in 1964 he kept working in the mining industry, at the Gold Trust from Brad (Mining Enterprise Barza).

Toma Petre Ghițulescu returned in Bucharest where he worked in the frame of GEOMIN Enterprise and Geological Enterprise of Exploration for Solid Mineral Substances (IGPSMS). After his retirement in 1980 he was asked by the management of the Ministry of Mines, Oil and Geology to co-operate at geological syntheses and important projects in the framework of the Institute of Geology and Geophysics (presently Geological Institute of Romania).

He was the initiator of a project dedicated to the location of deep drillings in the Metaliferi Mts for studying Neogene subvolcanic structures associated with important ore deposits (base metal sulphides, gold and silver). He described the metallogenic processes which generated the ore deposits in this geological unit, a conception also validated in other areas in Romania with Neogene volcanics.

Toward the end of his life, Toma Petre Ghițulescu carried out an intense research activity, especially in connection with geophysical prospecting efficiency (geomagnetic, geoelectric, etc.) on locating metalliferous ores. He achieved interesting correlations between geological information and geophysical results, collaborating with a staff of experienced researchers – Dragomir Romanescu, Gheorghe Pitulea, Ioana Ghițulescu, Anca Georgescu – when studying the magnetic properties of magmatic rocks.

In 1970, he received “Grigore Cobălcescu” Prize of the Romanian Academy for the scientific paper “Geological evolution of the Metaliferi Mts”, elaborated in co-operation with Virgil Ianovici, Dan Giușcă, Mircea Borcoș, Marcel Lupu, Marcian Bleahu, Haralambie Savu and published in 1969 at the Publishing House of the Romanian Academy. This synthesis is the crowning of his geological studies, leading to the discovery of numerous deposits of gold and silver.

In 1970 he collaborated with eng. Ioan Folea (former Minister of Geology) and two specialists (N. Mihailovici and P. Rebreanu) and published at the Technical Publishing House, the treatise “Mining geological economy”, a paper of reference in this domain.

Although he was aged, he always attended the scientific presentations at the Institute of Geology and Geophysics and at the National Symposium of Earth Physics and Applied Geophysics. At the Carpatho-Balkan Geological Association Congress in September 1981, he presented three scientific works in the frame of the section “Magmatism and associated metallogenesis”.

In the last months of life he worked with enthusiasm at a paper dedicated to the study of potential energies of the volcanic eruptions, concerning, especially, Neogene volcanism from the Apuseni Mts, a paper not finished.

Toma Petre Ghițulescu was a remarkable personality in Geology and in Geophysics in Romania, a great Earth scientist, with courage and intuition in interpretation of geological processes and geophysical data. He was a positive character, optimist in the relationships with his fellow-workers. He was an admirable patriot, a man who loved his country, his people and the national patrimony, including the natural richness.

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