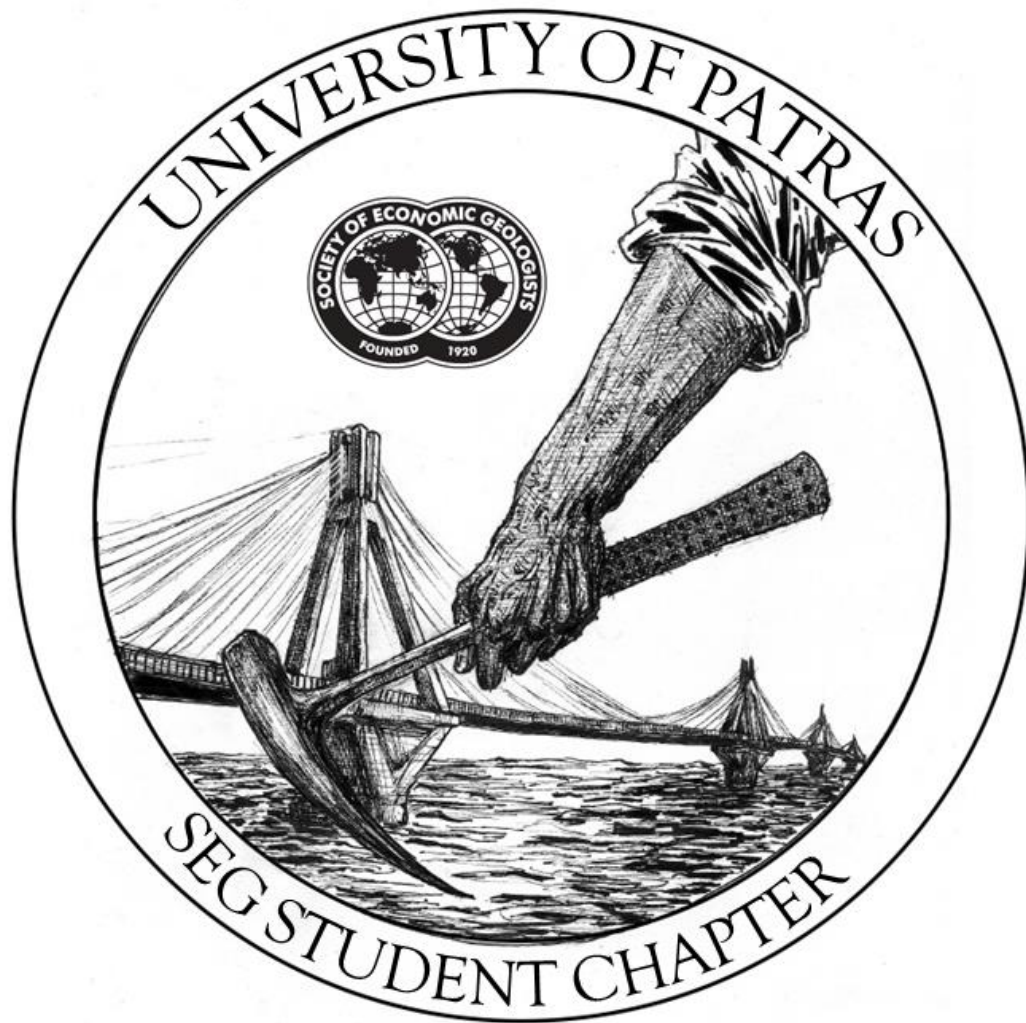


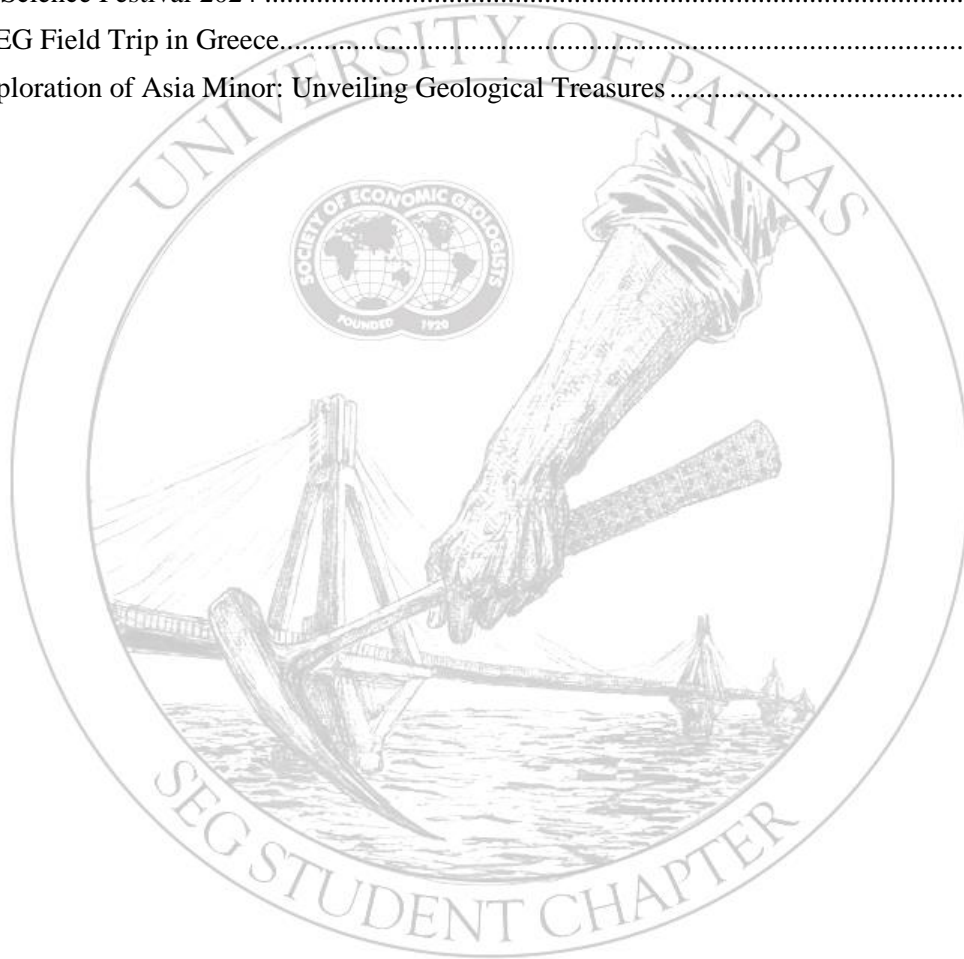
UPatras S.E.G. Student Chapter Activities 2023-2024



Patras, September 2024

Table of Contents

Patras Innovation Quest (IQ).....	1
Joint UPatras, NKUA, and AUTH SEG Student Chapters Seminar.....	2
SEG Travelling Lecturer Seminar.....	4
Joint NKUA, UPatras and AUTH SEG Student Chapters Seminar.....	5
Athens Science Festival 2024	6
UBC SEG Field Trip in Greece.....	7
Geo-exploration of Asia Minor: Unveiling Geological Treasures.....	8



Patras Innovation Quest (IQ)

25-27 November 2023

The UPatras S.E.G. Student Chapter, in association with the Minerals and Rocks Research Laboratory of the Department of Geology, participated in the three-day Innovation & Technology Transfer Exhibition – Patras Innovation Quest – PATRAS IQ, which took place on November 25th, 26th, and 27th, 2023 at the Conference & Cultural Center of the University of Patras.

Our chapter had its own booth, and with the help of our members from all levels of study (BSc, MSc, and PhD), we introduced visitors to the field of geology, specifically economic geology-mineral deposits, and highlighted the necessity of mineral raw materials in our daily lives. These objectives were achieved through the exhibition of a variety of minerals and rocks, as well as modern portable analysis tools such as NIRS (Near-infrared spectroscopy).



Figure 1: Photos from Patras IQ

Joint UPatras, NKUA, and AUTH SEG Student Chapters Seminar

24 February 2024

The UPatras S.E.G. Student Chapter organized a seminar entitled "Joint UPatras, NKUA, and AUTH SEG Student Chapters Seminar: The Role of Mineral Exploration Geologist – Best Practices and Key Learnings from the Greek Bauxite Mining Industry," in collaboration with the corresponding chapters from Athens and Thessaloniki, on Saturday, February 24, 2024, at the Conference and Cultural Center of the University of Patras.

Approximately 70 students from the University of Patras and the National and Kapodistrian University of Athens participated in the event, along with 10 students from Aristotle University of Thessaloniki who joined via the ZOOM teleconferencing platform.

During the seminar, lectures were delivered by the academic advisors of the SEG Chapters, Associate Professor Dr. Stavros Kalaitzidis, Professor Dr. Stefanos Kilia, and Professor Dr. Vasileios Melfos, as well as by Dr. Panagiotis Zachariadis, Principal Geologist at IMERYS.

The participants were introduced to the fields of Mineral Deposits and Economic Geology, with a particular focus on the importance of bauxite as a raw material in the Greek industry, as well as the methods of exploration, discovery, confirmation, and exploitation of this resource. The goal of this initiative was to create new channels of collaboration between the UPatras S.E.G. Student Chapter and the other Greek chapters.

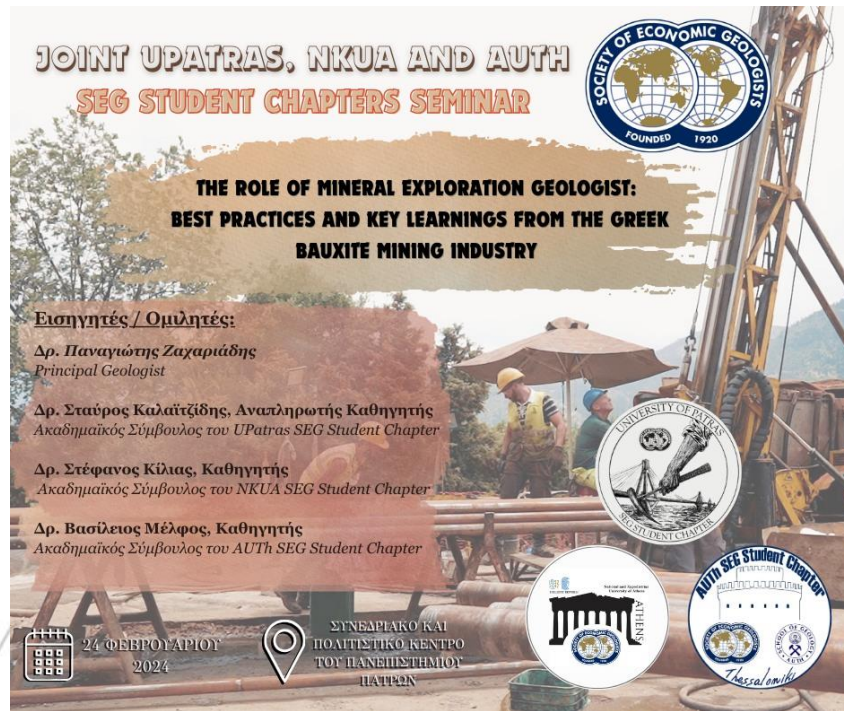


Figure 2: Poster from the Joint UPatras, NKUA, and AUTH SEG Student Chapters Seminar

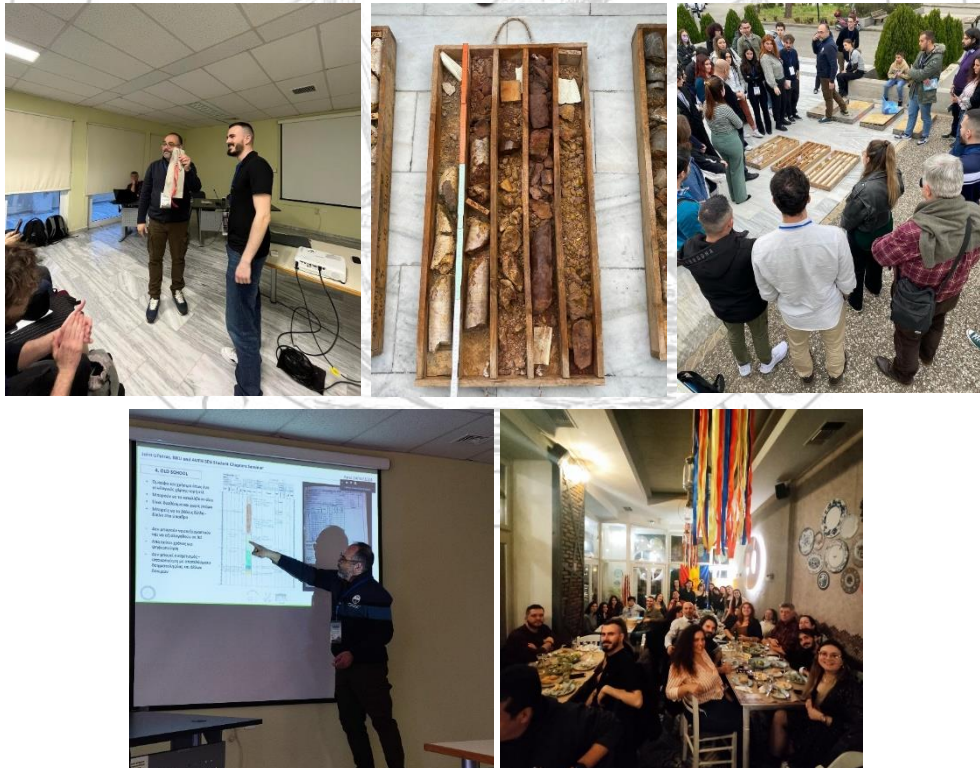


Figure 3: Photos from the Joint UPatras, NKUA, and AUTH SEG Student Chapters Seminar with Dr. Panagiotis Zachariadis and chapter members.

SEG Travelling Lecturer Seminar

29 March 2024

As part of the SEG Travelling Lecturer Seminar, a lecture was given by Dr. Dare Sarah, Associate Professor Université du Québec à Chicoutimi (UQAC), Canada, on the topic: "Processes that Control the Distribution of Platinum Group Elements (PGE) and Chalcophile Elements in Ni-Cu-PGE Deposits: Insights from Laser Ablation ICP-MS of Base Metal Sulfides", at the Department of Geology of the University of Patras.



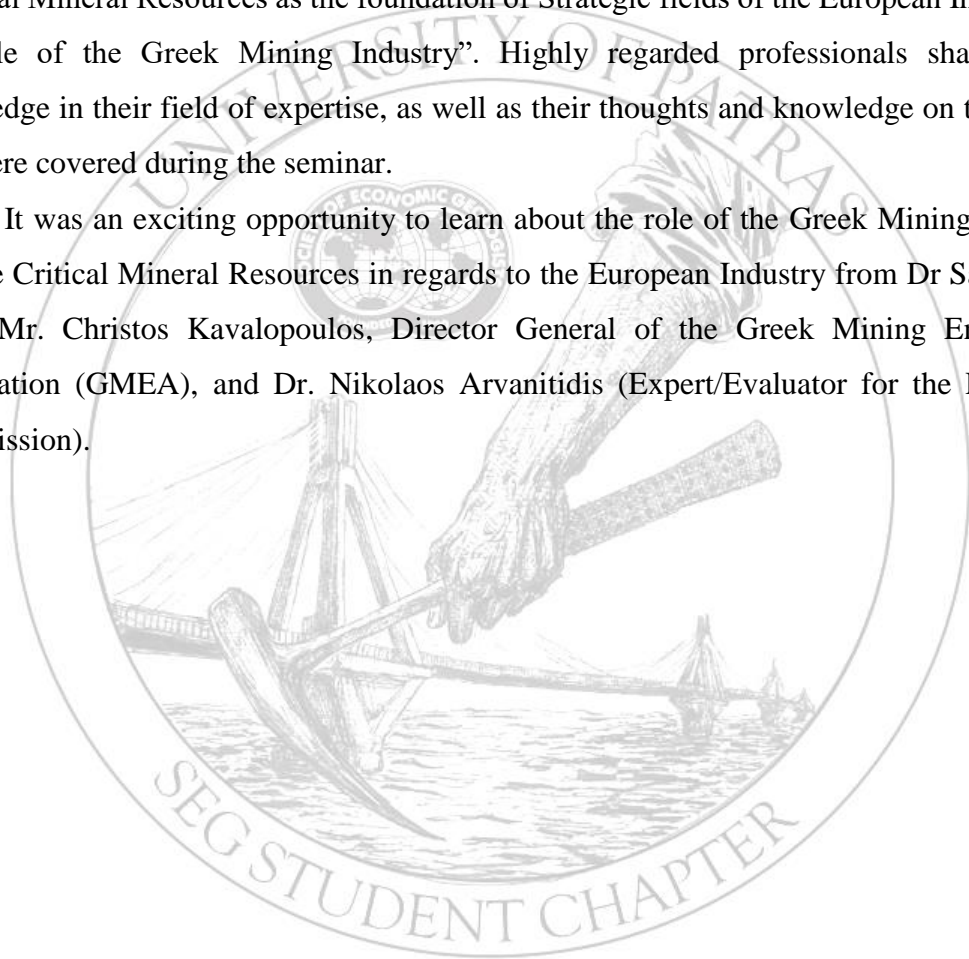
Figure 4: Poster from SEG Travelling Lecturer Seminar, Dr. Dare Sarah.

Joint NKUA, UPatras and ATh SEG Student Chapters Seminar

30 March 2024

Our Chapter attended the seminar organized by the NKUA SEG Chapter, which took place on the 30th of March at the National and Kapodistrian University of Athens entitled “Critical Mineral Resources as the foundation of Strategic fields of the European Industry & the role of the Greek Mining Industry”. Highly regarded professionals shared their knowledge in their field of expertise, as well as their thoughts and knowledge on the topics that were covered during the seminar.

It was an exciting opportunity to learn about the role of the Greek Mining Industry and the Critical Mineral Resources in regards to the European Industry from Dr Sarah A.S. Dare, Mr. Christos Kavalopoulos, Director General of the Greek Mining Enterprises Association (GMEA), and Dr. Nikolaos Arvanitidis (Expert/Evaluator for the European Commission).



Athens Science Festival 2024

19-21 April 2024

From 19th to 21st of April our Chapter joined the “Athens Science Festival 2024” in collaboration with the Science and Technology Museum of the University of Patras, where a workshop conducted with the aim of presenting the Museum's kits for Junior, Elementary and High School students about water and sustainability.

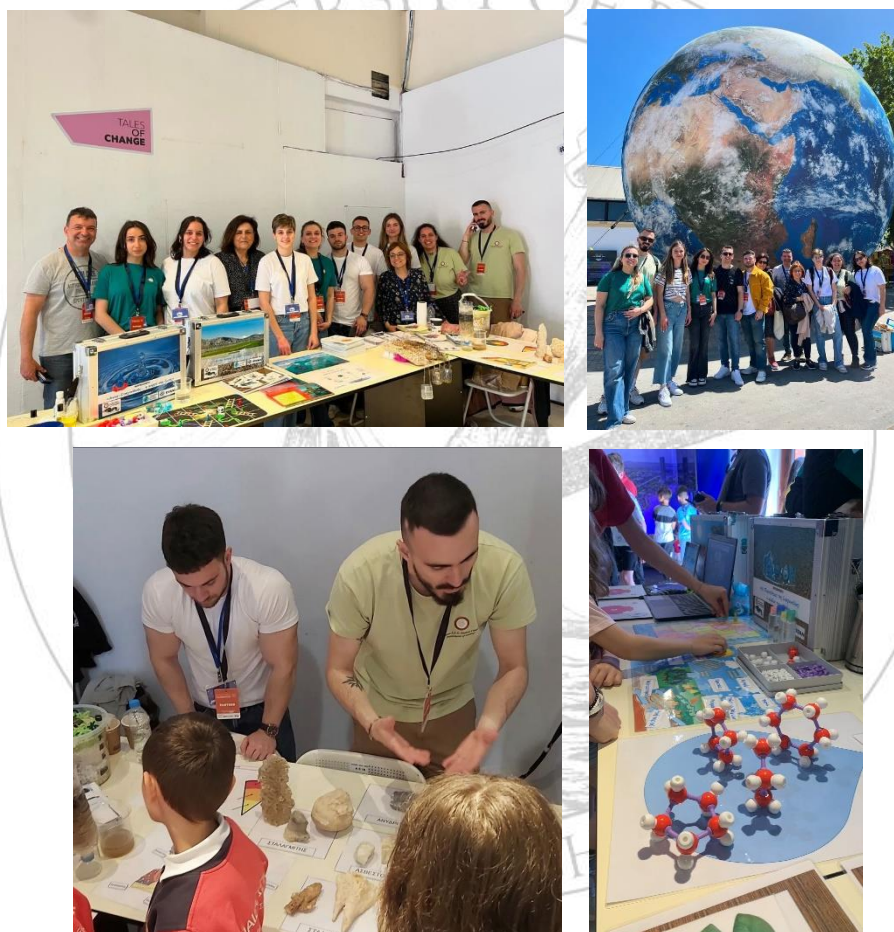


Figure 5: Photos from the Athens Science Festival 2024.

UBC SEG Field Trip in Greece

15-18 May 2024

During the period of May 15th to May 18th, members of the UPatras SEG, conducted a joint educational activity with the corresponding team UBC SEG from Vancouver, Canada, by visiting GEOHELLAS in Grevena, and DELPHI DISTOMO at Parnassus mining district, as well as to the peatland of Keri in Zakynthos. During their stay in Patras, the UBC students had the opportunity for a brief tour of our Department's facilities, as well as to indulge in the culinary delights of our city.



Figure 6: Photos from UBC SEG and UPatras SEG student chapters.

Geo-exploration of Asia Minor: Unveiling Geological Treasures

23-30 June 2024

Our Chapter having been awarded by the Stewart R. Wallace Fund has managed to accomplish an 8-day field-based workshop entitled "Geo-exploration of Asia Minor: Unveiling Geological Treasures " in Turkey in collaboration with Dokuz Eylül Üniversitesi, in Izmir Turkey, during the period of 23-30 June.

This year's annual Field Trip took place in multiple areas of Turkey, mainly nearby Izmir. This educational journey had multiple objectives including training in: Au ores formation, Fe-Cu skarn deposit, and Industrial Minerals, as well as to observe techniques and methods of ore mining and final distribution of the commodities. A minor part included a visit to an active lignite mine, while we had a great opportunity to visit an active Geothermal Plant.

Leader of the field trip was our Academic advisor Assoc. Prof. Dr. Stavros Kalaitzidis, University of Patras but it was also accompanied by Profs., Dr. Kimon Christanis and Dr. Eleni Zaggana. Additional support was provided by Assoc. Prof. Dr. Mehmet Akbulut, Dr. Hulya Inaner and Mrs. Zeynep Buckun from Dokuz Eylül Üniversitesi, in Izmir Turkey. In total 16 students of the UP Chapter participated in this activity.

On Sunday, 23/06, our team flew out from Athens to Izmir and the next day we visited the Dokuz Eylül Üniversitesi Jeoloji Mühendisliği. In the morning we attended several talks given by Dr. Stavros Kalaitzidis, Dr. Elena Zagana, Dr. O. Ersin Koralay and Dr. Mehmet Akbulut. The seminar was followed by an introduction to the organic petrography lab. In the evening, we had a stroll around the Izmir's infamous "pazar" and tasted local delicacies.

On 25/6 our team visited the Efemcukuru mine which is an intermediate sulfidation epithermal gold deposit. At first we had a safety presentation and later a site-specific presentation too. After that, the group was equipped with all the necessary PPE and visited the underground mine. The mineralization is comprised by galena, pyrite, chalcopyrite and sphalerite along with quartz, rhodonite and rhodochrosite as accessory minerals, hosted within phyllite and schists. Later we visited the drilling core storage area and had a brief lecture on core logging by the company's geologists.

On the 26/6 our team visited the Kizildere Geothermal Power Plant in Turkey, owned

by Zorlu Energy Inc. The Kizildere geothermal field is located in the Saraykoy–Buldan area, and is associated with the major fault along the northern boundary of the Büyük Menderes Graben. This field is a liquid-dominated system with a steam fraction of 10–12%, while reservoir's temperature varies between 200 and 242°C.

At the beginning we attended the presentation and got informed about all the necessary information regarding the reservoir, as well as the Geothermal Power Plant by Ms. Raziye Sengun Cetin, Assistant Manager of the GPP. Later, we visited all the facilities of the power plant and learned about their operating principles. We also had the opportunity to visit the fumaroles in the geothermal field.

On 27/6, our team visited Imerys Perlite Plant, which is located 105 km northern of Izmir. During our visit, we attended a health and safety presentation, followed by a site-specific presentation that provided more detailed information about the perlite deposit and the plant's infrastructures. After that, our team was equipped with all the necessary PPE and visited the perlite mine which was an open pit excavation.

Later that day, we visited the Ayazmant iron mine, owned by Bilfer Mining Inc. The Ayazmant mine is the largest Fe–Cu skarn deposit in the region, distinguishing itself from other iron skarns in the Aegean back-arc basins through its unique mineralogy and geochemistry. This Fe–Cu skarn is associated with a magmatic–hydrothermal system formed in a high-level porphyry environment. Our team visited the open pit excavation and we had the chance to obtain some samples.

On 28/6, we visited the Yatagan power plant and coal mine, owned by Yatagan Termik Enerji. At the beginning, we attended a presentation and were informed about the geology of the area and the environmental impact. We were informed by Yatagan's staff that as part of their rehabilitation program, they are growing lavender and olive trees and producing olive oil from the later. After that, our team was equipped with all the necessary PPE and visited the coal mine which was an open pit excavation.

On 29/6, we traveled to the town of Kula in the province of Manisa, where our team had the honor of meeting the local mayor and receiving gifts from him, thus enhancing the international image of our chapter. Later, we visited Turkey's first and only UNESCO Geopark, where we encountered the unique natural landscape of the area, which is due to the volcanic activity that occurred in the recent geological past.

You can find more analytical information about our field trip in our booklet:

<https://upatrassegstudentchapter.wordpress.com/wp-content/uploads/2024/09/upatras-s.e.g.-field-trip-geo-exploration-of-asia-minor-unveiling-izmirs-geological-treasures.pdf>





Figure 7: a) Photo from our visit at Dokuz Eylül Üniversitesi Jeoloji Mühendisliği, b) Efemcukuru drilling core storage area, c) Efemcukuru mine, d) Imerys Perlite mine, e) Kizildere Geothermal Power Plant, f) Yatagan coal mine, g) Group photo with the mayor of Kula town, h) Kula UNESCO geopark, i) Izmir Clock Tower, j) Imerys Perlite Plant.

Apart from S.E.G. the trip was also sponsored from the Research Office of University of Patras and the Companies: P & C Development SA., Imerys SA., Topalidis SA - Marble & Granite, Delphi-Distomon S.A, Lithos Geological Services, Pavlidis SA. Marble-Granite, Zisimopoulos SA., Tuprag Metal Madencilik A.S., and GEOENVIRO - Xenofon Stavropoulos & co. Limited Partnership, for transportation and accommodation purposes of our team.

Our Sponsors:



Figure 8: Sponsors of the UPatras S.E.G. Student Chapter.

The UPatras SEG is planning a conference for the three Greek S.E.G. Chapters (AUTH and NKUA) to take place between 05 and 10 of January 2024. More reports on this activity will follow on the new year's activity report.

Our Chapter's primary goal for the upcoming academic year is to organize more in-person or virtual talks on a monthly basis, as well as another field trip abroad possible in Italy.

Sincerely
UPatras S.E.G. Student Chapter