



SOCIETY OF ECONOMIC GEOLOGISTS, INC.

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Student Chapter Annual Report Cover Page

Submission Deadline: September 30th

Submit to: studentprograms@segweb.org

Month/Year Reported: From 01/2022 (mm/yyyy) – To 12/2022 (mm/yyyy)

STUDENT CHAPTER:

Check if update needed at segweb.org

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YouTube: _____

Chapter Executive Committee (*in office during the time frame captured on this report*) (type "Vacant" if position not filled):
The new committee is reported on the Student Chapter Membership Information form (SCMIF).

President: Elitsa Lulcheva elitsa.lulcheva@gmail.com
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VicePresident: Georgi Milenkov georgimilenkov7@gmail.com
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Secretary: Martin Plamenov Marinov martinplamenovm@gmail.com
Name E-mail

Treasurer: Yana Georgieva yordanova0907@gmail.com
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Name E-mail Phone

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Douglas J. Kirwin doug@ivanhoemines.com
Name E-mail Phone

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Sponsoring Institution or Company(name): _____



SOFIA UNIVERSITY SEG STUDENT CHAPTER

ANNUAL REPORT

2022

Prepared by:
Elitsa Lulcheva

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1. Regular meetings, lectures

Although it was hard for us to conduct regular in-person meetings due to COVID-19, we managed to do so – either online due to Covid-19, or in the University, when the situation allowed. The aim during these discussions was organizing the annual trip, participation in conferences, organizing lectures and planning our next year’s field trip.

2. Field trips (Western Anatolia, Turkey)

Even though the trip organization was done shortly before the start of our field trip, we were lucky enough to achieve our goal – a field trip to Western Anatolia. It was five days long and we visited five deposits, including:

- Efemçukuru gold mine and Kışladağ gold mine, operated by Tüprag Metal Madencilik San. ve Tic. A.Ş., a subsidiary of Eldorado Gold Corp.
- TV Tower Property Epithermal & Porphyry Prospects, owned by Teck Resources Ltd., Liberty Gold Corp. as a major shareholder, and operated by Orta Truva Madencilik San. ve Tic. A.Ş.
- Ayazmant deposit, operated by Bilfer Mining Inc.
- Lapseki Project, operated by TÜMAD Madencilik San. ve Tic. A.Ş.

Due to a clash of our schedules our academic advisor – Prof. Kamen Bogdanov, could not come with us this year. We had the pleasure of inviting Prof. Tolga Oyman to be our guide in Turkey. Unfortunately, he accompanied us only to the Ayazmant deposit (where he had conducted numerous researches) due to some health issues.

In this trip 8 people in total took part: 4 students from Sofia University SEG Student Chapter, 3 students representing First Quantum Minerals Ltd. and one representative of Velocity Minerals Ltd (*Table 1.*).

#	Name	SEG Student Member	Other Affiliation
1.	Elitsa Lulcheva	<input checked="" type="checkbox"/>	-
2.	Yana Georgieva	<input checked="" type="checkbox"/>	-
3.	Martin Marinov	<input checked="" type="checkbox"/>	-
4.	Georgi Milenkov	<input checked="" type="checkbox"/>	-
5.	Gergana Velyanova	<input checked="" type="checkbox"/>	-
6.	Prof. Tolga Oyman	<input type="checkbox"/>	Department of Geology Engineering, Dokuz Eylul University, Izmir
7.	Vasil Dimitrov	<input type="checkbox"/>	Velocity Minerals Ltd.
8.	Ruben Jimenez	<input type="checkbox"/>	First Quantum Minerals Ltd.
9.	Cristóbal Cantero	<input type="checkbox"/>	First Quantum Minerals Ltd.
10.	José Ángel Callejo	<input type="checkbox"/>	First Quantum Minerals Ltd.

Table 1. A list of participants in our field trip to Turkey. The SEG members have been shown with checked boxes.

Through this trip we were able to understand better the main geological characteristics of Western Anatolia. Also to learn about new and interesting rock variations, alteration and ore mineral assemblages. The trip provided us insight into the exploration and exploitation of the different types of deposits and their stages of development – from an open pit porphyry gold deposit to a project in its developing stages.

We are thankful to our sponsors - without their support we would not have been able to realize our trip. Our sponsors were Society of Economic Geologists (SEG) through the Stewart R. Wallace Fund; Dundee Precious Metals; Geotechmin OOD with their subsidiary - Elatsite-Med AD; Velocity Minerals Ltd. and First Quantum Minerals Ltd. (Fig. 1.):



Figure 1. Logos of our sponsors.

We would also like to thank the companies who welcomed us in each deposit and in particular – Tüprag Metal Madencilik San. ve Tic. A.Ş., a subsidiary of Eldorado Gold Corp.; Liberty Gold Corp.; Bilfer Mining Inc. and TÛMAD Madencilik San. ve Tic. A.Ş (Fig.2.).



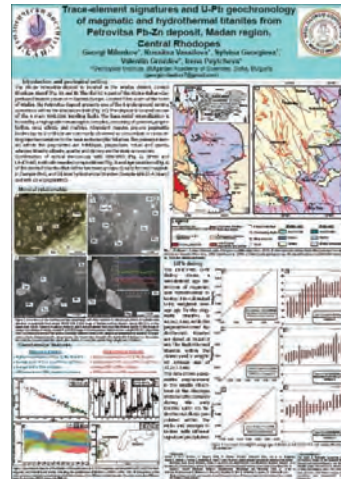
Figure 2. Logos of the companies who supported us in our trip.

3. Participation in conferences, workshops, short courses

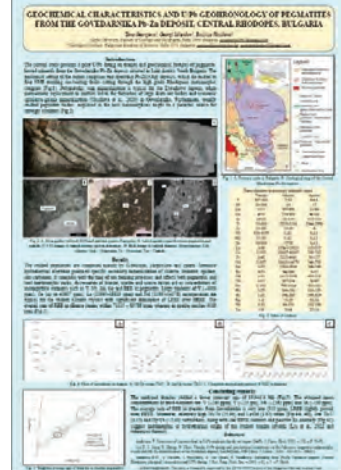
This year two of our colleagues participated in two conferences – one in Plovdiv, Bulgaria and one in Geneva, Switzerland. Yana Georgieva and Georgi Milenkov presented their papers on both conferences for their bachelors and PhD thesis, respectively (Table 2.). They also took part in a workshop about Porphyry-Epithermal Systems. Presented themes were: *Magnetic controls on formation and endowments of porphyry Cu-Au deposits*, led by Massimo Chiaradia from University of Geneva; *Ore-forming processes in porphyry copper deposits* given by Cyril Challe-Michou from ETH Zurich; *Exploration aspects of porphyry systems* by Jamie Wilkinson from Imperial Collage, London and *Epithermal systems* led by Kalin Kouzmanov from University of Geneva.

XXII International Congress Carpathian Balkan Geological Association, 6-11 September, Plovdiv, Bulgaria.

1. Trace-element signatures and U-Pb geochronology of magmatic and hydrothermal titanites from Petrovitsa Pb-Zn deposit, Madan region, Central Rhodopes - **Georgi Milenkov**, **Rossitsa Vassileva**, **Sylvina Georgieva**, **Valentin Grozdev**, **Irena Peytcheva**



2. Geochemical characteristics and U/Pb geochronology of pegmatites from the Govedarnika Pb-Zn deposit, Central Rhodopes, Bulgaria - **Yana Georgieva**, **Georgi Milenkov**, **Rossitsa Vassileva**



Sustainable mineral resources supply - Challenges for future generations, 13-16 September, Geneva, Switzerland.

1. Pegmatites from the Pb-Zn deposits in South Bulgaria as potential source for strategic elements - **Georgi Milenkov**, **Yana Georgieva**, **Rossitsa Vassileva**, **Sylvina Georgieva**

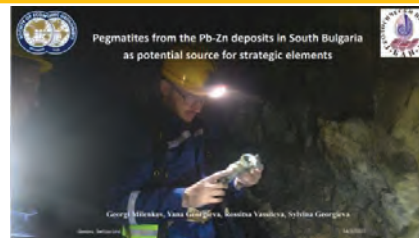


Table 2. Titles and posters from the conferences in which our colleagues participated.

4. Future Activities

- We are planning a lecture with *Stefan Velev* and *Stefan Metodiev* this October regarding their expedition to Antarctica as part of the Bulgarian Antarctic Institute's team there (Fig 3.). Stefan Velev is an assistant professor in Sofia University and Stefan Metodiev is a principal geologist at Dundee Precious Metals. They will tell us about everything they saw, experienced and learned during their time on Livingston Island. We hope that it will be an interesting lecture for us and other students in which we will find out what it is to be working as a scientist or an exploration geologist in such an exotic and interesting place and most importantly what could be the economic significance of Livingston island.
- Presentation from *Keiko Hattori* on "Tectonic Setting and Igneous Rocks Associated with High-Grade Epithermal Gold Deposits" on the 24th of February in Sofia University.
- Presentation for new members and election of new executive committee in the end of October or beginning of November
- Field trip in Spain to deposits in the Iberian Pyrite Belt (IPB) such as *Las Cruces*, *Rio Tinto*, *Aznalcollar* or *Sotiel Copper deposit* in the end of April. We hope to include deposits in Portugal as well. The trip will be a collaboration between our chapter, Geneva's chapter and also Freiberg's chapter.



Figure 3. Poster for the upcoming lecture about Antarctica.

Expense report for the 2022 Field trip to Western Anatolia, Turkey.

Sofia University SEG Student Chapter recieved a direct financial contribution from SEG via the Stewart R. Wallace Fund. The funding amounts to 1400\$ and was spend on the field trip to Turkey, held between 14th-18th of October, 2022. Bellow is shown a representation of our expenses.

Date	Participants	Hotel (US\$)	Transport and Fuel (US\$)	Meals (US\$)	Subtotal (US\$)	Guidebooks (US\$)	Sim Card (US\$)
14.6.2022	5 (4 SEG Student	251.00	223.48	200.00	674.48		
15.6.2022	Members and 1	225.00	267.57	200.00	692.57		
16.6.2022	representative of	212.00	194.58	200.00	606.58	67.54	36.00
17.6.2022	Velocity Minerals		217.83	200.00	629.83		
18.6.2022	Ltd.)*	-	242.61	200.00	442.61		

*The 3 students sent from First Quantum Minerals Ltd. paid with their own finances

Total Expenses (US\$):	3149.61
Stewart R. Wallace Fund (US\$):	1400.00
Other Funding (US\$):	1749.61