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SGC

state budgetary vocational educational institution of Novosibirsk region
"SIBERIAN GEOPHYSICAL COLLEGE"

WORD OF EDITOR-IN-CHIEF



Valeria Loginova

Hello!

We are students of Siberian Geophysical college. We won't to present our attention our student popular science journal "SGC".

We try to impart the atmosphere of unique magic and an inimitable world, open to people of extraordinary soul.

This is a magazine about real people who are passionate their work. The people unusual, active and interesting, extraordinary people looking for adventures, pleasure and thirst for new discoveries.

We hope, that our magazine will catch fancy to you

On the issue of the magazine worked:

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ABOUT COLLEGE



Novosibirian Geological College was organized jointly by order dated on May 22, 1945 №130/390 Affairs Committee of Geology at the Council of People's Commissars of the USSR and of Higher Education Committee at the Council of People's Commissars of the USSR.

October 14, 2014 was completed the reorganization of State Budgetary Educational Institution of Secondary Vocational Education of the Novosibirsk region «Novosibirian Geological College» and State Budgetary Educational Institution of Secondary Vocational Education of the Novosibirsk region «Professional institute №7» (Decree of the Government of the Novosibirsk Region by dated May 26, 2014 № 167-p «About reorganization of State Budgetary Educational Institution of Secondary Vocational Education of the Novosibirsk region Novosibirian Geological College and State Budgetary Educational Institution of Secondary Vocational Education of the Novosibirsk region Professional institute №7»). State Budgetary Educational Institution of Secondary Vocational Education of the Novosibirsk region «Novosibirian Geological College» it was renamed in the State budget vocational educational institution of the Novosibirsk region «Novosibirian Geophysical College» (Decree of the Government of the Novosibirsk region on the March 5, 2015 year № 76 -rp "About renaming of the state budgetary educational institution of secondary vocational education of the Novosibirsk region " Novosibirsk Geological College "). State budget vocational educational institution of the Novosibirsk region «Novosibirian Geophysical College» - It is the only in Russian Federation specialized vocational educational institution, leading the preparation of personnel for the network hard hydrometeorological stations of Russian Federation and former USSR. «Novosibirian Geophysical College» - modern educational institution of secondary vocational education with well- equipped laboratories and classrooms, with a highly qualified teaching staff and more than half a century of history. During the activity the college has trained more than 10 thousand highly qualified specialists. There is a library, a sports hall, two computer classrooms, five laboratories of special disciplines for students of the college. There is a social and academic scholarship, providing hostel for students. Our graduates continue study in the Siberian University of Geosystems and Technology, Novosibirsk State University of Economics and Management, at the Tomsk Polytechnic University, Russian State Hydrometeorological University (Saint-Petersburg). College graduates compound the basis of practitioners in most geological organizations of the Novosibirsk region and service

Roshydromet, working in specialized geological organizations of Siberia, the Far East and other regions, weather stations "West Siberian UGMS", "Northern UGMS" SI "Dickson STSGMS" GU "Yakut UGMS", "Ob-Irtysch UGMS", "Chukchi UGMS", "Kolyma UGMS" SI "Murmansk UGMS", "Central Siberian UGMS" SI "Kamchatka UGMS".

ABOUT PROFESSIONS.

Hello! I am Valeria Loginova, a student of the Siberian Geophysical college. In this issue I will tell you about two exciting specialties, such as geological technician and technician-mountain scout. Since I'm studying in the field geological technician, then I start from it. And so, to start let's see who is a geologist? Geologist - a specialist is studying of the composition and structure of rocks for the purpose of prospecting and exploration of mineral deposits. And now a little about geology. Geology (from Greek «geo» - land and «logos» - teaching) - a complex science about the composition, structure of the crust of the earth and of history. The term "geology" entered the



Norwegian scientist M. Esholt in 1657. Mineral and energy resources of the country - the basis of the significance of geologists working incredibly large. Their heroic and selfless work ensures the development of the national economy. Russia - the richest country in the world, in whose territory are located in a huge amount of deposits a variety of minerals. Profession geologist unique in its kind. For its successful practice is necessary, first of all, excellent specialized education, deep knowledge of As in any profession, there are pluses and minuses. One of the advantages is the high wages. And also, profession of geologist is one of the few professions that are considered romantic, and has their attractive sides for people of all interests. For travelers - romantic work in the taiga, polar,



desert, high altitude, the opportunity to visit different regions of Russia. For fans of extreme sports - field works in difficult conditions on land, at the sea and in the air: the unbearable heat of the desert or the cold north in tens of degrees, myriads of mosquitoes in the forest and wetlands require heroic endurance. Living in a tent, every day many kilometers of routes throughout the field season provide an opportunity to test themselves on the strength. Cons profession: shift method - geologists a few weeks go on an expedition, where they work in a very intensive mode without output; the lack of amenities, the difficulties of camp life, a limited team. In general, the geologist profession does not have a pronounced

economy of any state. Socio-economic

the preparation and interpretation of mapping drawings, capably use of specific measurement and analytical instruments. The work has been uneven and has a possibility of frequent long trips and repeated visits to the object under study. The geologist must also has a good health, good physical fitness, endurance, observation, ability to work in a limited team, to be patient and purposeful. disadvantages. Normative load usually planned before departure expedition team at the facility, but, if necessary, long working hours may have a negative impact on the group's ability to work. Portrait of modern geologist can be described as follows:

About 100 years ago at the International Geological Congress was the motto of "wisely and a hammer." Some complementary: "Eyes and legs." Currently geologist available Prospector satellite images, electron microscope, the drilling machine, various geophysical equipment, computers. Modern geologist must able to use these facilities of labor. However, eyes and legs, hammer and mind saves his appointment."Interesting Facts". People think that they know the first oldest profession, but it is not a true. The oldest profession is a geology profession. Where began human civilization? With that man began to distinguish the stone, which is suitable for making a stone ax from the useless for the purpose of the stone. And this is the basics of geology. Thus, unorganized, non-industrial mining began in ancient times. Later, the miners began to extract clay and coal. Since the beginning of the Age of Discovery began the study of the Earth. People began to wonder how appear deserts, mountains, and so on. They tried to justify their guesses. At this time, and appear the first geologists thinkers who have tried to suggest, where there may be minerals. The professional holiday - Day of Geologist is traditionally celebrated on the first Sunday. This festival of the Supreme Soviet of the USSR instituted decree of the Presidium the 31st of March 1966 in commemoration of soviet geologists in the creation of the mineral resource base of the country. The reason for the establishment was the opening in 1966 of the first fields of the West Siberian oil and gas province. The timing of the celebration was chosen because it marks the end of winter and start preparation of summer field works and expeditions. Day of Geologist celebrated in almost all geological and mining organizations. Besides geologists, consider it their professional holiday surveyors, blasters, sinker mine and the people of those professions, who are engaged in the exploration and production of minerals. And, of course, those people who are always with us it's a technician-scouts of mountains. And now we learn more about them. And so technician mountain scout - a specialist, which

the with the surfaces of earth, controls deepening of the bottom hole of well, mount of the rocks on walls of the well, creation a kind of high-strength casing pipes and cement mortar, opening productive deposits and flows of oil and gas, the elimination of complications and accidents. Technician mountain scout - the profession of real men. Drilling engineer deals design of these works, technician- mountain scout deals the drilling of exploration wells and carrying out exploration workings. Drilling - is the most important, is an almost the main method of obtaining reliable information about the geological structure of the crust and of obtaining samples of rocks and minerals occurring on the greater depths. Any exploration mineral fields is unthinkable without drilling works. Drilling is carried out in a variety of conditions - on land, with the surface of ponds and seas. Currently, demand for techniciansdrillers exceeds the pace of their training, which is associated with a gradual increase in the volume of exploration work and construction in Russia. Technician mountain scout - is not only interesting, but and the eternal profession. Experts by technology and techniques of exploration provide overall management of production (in the rank of drilling master), engaged in the implementation of a new drillings techniques, automation of technological processes, the development of fundamentally new equipment and technology. In the bowels of the earth, mineral deposits lie at depths of up to several kilometers, and,

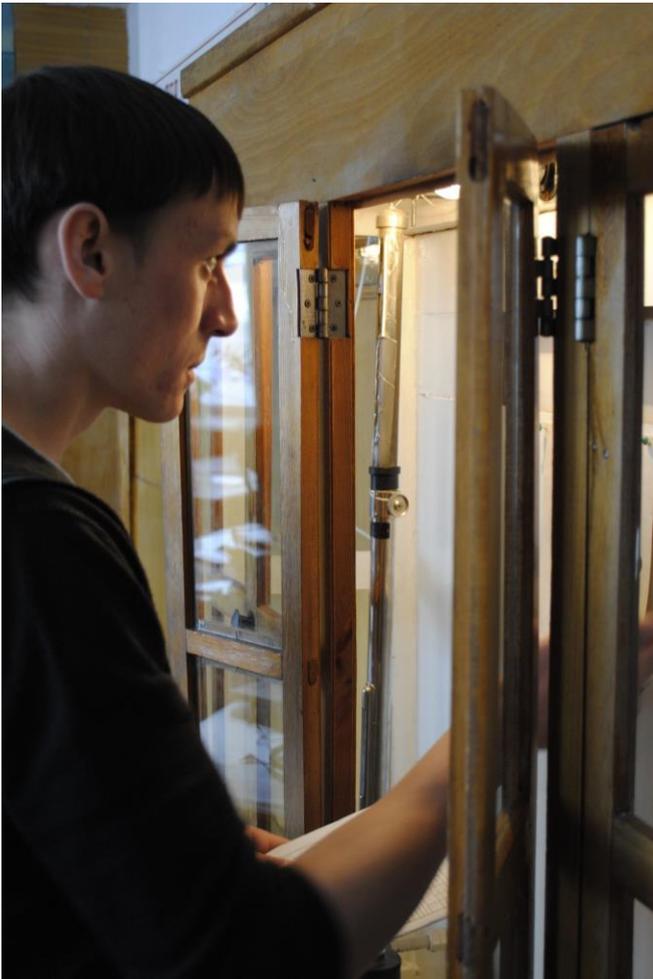
therefore, to find them and get the industrial flow of the surface can only drilled a number of deep wells. For drilling of wells used powerful installation carrying capacity to 300 tons, and sometimes higher, having complicated power equipments, tools, measuring instruments. Technicians mountain scouts involved in the conduct and organization of the drilling, construction, operation and testing of new wells in the overhaul and repair of underground wells. Control activities serviceable of drilling equipment, engines, all sorts of mechanisms in the competence of drillers. And, of course, the pros and cons of the profession. Pros profession: high wages. Cons profession: shift method technician- mountain scouts, a few weeks go on an expedition, where they work in a very intensive mode without output. The lack of amenities, the difficulties of camp life, the limited staff can be attributed to the disadvantages of the profession.

The material prepared by Valeria Loginova.

About Profession – Hydrometeorological observer and specialty - Geophysics technician About this will tell you Svetlana Tcheverda

Hydrometeorological observer. This is the one of the professions, which are taught in our college - Hydrometeorological observer. Oparin Galina Gureevna, a master of industrial training, she has helped us to learn the essence and importance of this profession.





– Galina Gureevna, what that is meteorology? What is it studying?

– Meteorology, the science that studies the atmosphere and the processes occurring in it.

– What inspired you to go into this field of activity?

– When I finished school, I faced the choice of future profession, and I chose meteorology because it just lured me romance. I wanted to learn a lot of new and interesting, because in this school science studying very distantly. As a young I had a dream - visited the North Pole to see the Northern Lights. Alas, this dream did not come true, but I do not lose hope, my life slogan - "Keep one's hope's up."

– What qualities should a - Hydrometeorological observer?

– First of all, one must understand that after graduation, the student will be sent to the station, where survival conditions are very complex. Shutter speed, persistence, curiosity and courage - the main quality of a meteorologist.

– -What is for you the most important and interesting in this profession?

– - In profession all-important! For me there is nothing minor. The observation, understanding the

essence - helps to better learn and learn all the processes occurring on Earth.

– Galina Gureevna as you feel you need to do to attract the attention of young people in this profession?

It is necessary to tell more about this profession, but not only about the pros, but also disadvantages, because if you do not prepare students for a life that will soon change radically, it will be very difficult. We need to show the young generation of documentaries films, letters of alumni, video from meteorological stations. The most important thing is communication with children, communication is not only about this profession, but also on other topics that are of interest to man. Much impressed has made on me the movie "Escape from Khodovarikha". Now my graduate work Khodovarikha Margarita Filatova (release-2013), with whom we still keep in contact, now it is on vacation, but we still share our impressions. My graduates are very demanding specialists who work in all parts of the country, and some even in foreign countries. Geophysics technician. Geophysics it is one of the young and popular sciences of our time, whose teachings can expand human knowledge about the world, hiding from our eyes. The main objectives of this specialization are: finding mineral deposits, construction of relief maps, environmental protection, conservation of resources of rocks, the study of the oceans and outer space, diagnosis and control of natural disasters. The subject of geophysicists measurements can be seismic waves, gravity, magnetic and electric fields. Studies are using logging (logging of well), computerization, special equipment and devices.

- ✓ Activities:
- ✓ seismic survey;
- ✓ radiometry
- ✓ gravimetric electromagnetics;
- ✓ magnetic survey electromagnetics;
- ✓ Integrated geophysical surveys

Depending on their specialization, the geophysicist can work in all areas of the planet, him must be inherent survival skills in all conditions, because the work can be both in the tropics and hot deserts, and in the Far North. Qualities, which must have a geophysicist very diverse: good knowledge of physics, geology, geography, ownership of the work on the computer, mathematical ability, good health, good physical endurance.

Material Prepared by Svetlana Tcheverda

PARTNERSHIP. Russian geographical society

Historical note. The Russian geographical society was founded by Imperial order of Emperor Nicholas I in 1845. This is one of the oldest geographical societies in the world.

It brings together experts in the field of geography and related Sciences, as well as enthusiastic travelers, environmentalists, community leaders and anyone seeking to learn new things about Russia who are willing to help preserve its natural resources.

The regional branch of the Society operated in each of the 85 subjects of the Russian Federation.

On the website you can familiarize yourself with the Structure and Projects of the Society.

In 2010, created the Board of Trustees of the Russian geographical society, headed by President of Russia Vladimir Putin. The Council revived the long tradition of patronage and instituted grants of the Society.

Since 2009 President of the Society is Sergey Shoigu - the Minister of Russiadefence.

In different years the Russian geographical society were led by representatives of the Russian Imperial house, famous travelers, explorers and statesmen.

Among the honorary members of the Society, the state, scientific and public figures of Russia:

P. P. Semenov-Tyan-Shansky, S. Yu. N.I.Vavilov, V. I. Vernadsky, F. P. Vrangell, A. M. Gorchakov, V. I. Dal, V. A. Obruchev, as well as famous foreigners – Belgian king Leopold II, the Turkish Sultan Abdul Hamid, the king of Sweden Carl XVI Gustaf, king of Norway, Oscar II, Shah of Persia Nasser al-din Shah Qajar, famous travelers and explorers – Ferdinand Baron Richtgofen, Roal Amundsen, Fridtyof Nansen, Thor Heyerdahl. Hundreds of expeditions organized by the Society, played a major role in the development of the Arctic, Siberia and the Far East, Middle and Central Asia, Australia, the World's oceans. www.rgo.ru

PROJECTS OF RUSSIAN GEOGRAPHICAL SOCIETY

In 2015-2016 Students of SGC took part in projects of RGS.

THE RUSSIAN GEOGRAPHICAL DICTATION

With the support of the Russian geographical society on 1 November 2015 on the basis of SSGA was the Russian geographical dictation. The Patriotic Theme of geographical dictation - "My country is Russia". The idea to hold such a dictation throughout the country was expressed by President of Russia Vladimir Putin at one of the congresses of the Russian geographical society in 2014. He noted that "geography can and should be one of the most fascinating subjects of the school curriculum".

Leading dictation was Anatoly Kulik, traveler of Russia. Participants were given 25 test items on the knowledge of geographic concepts and location of features on a map. Response time is 45 minutes. Pupils, students and teachers could test their knowledge of managed by geography, as well as all those who are interested in geography. Vadim Melnikov, Maxim Suslov, Alexey Zaremba, Alexander Polukeev - students of SGC took part in the Russian geographical dictation. The test results will be posted on the website of the Russian geographical society [RGS rgo.ru](http://RGS.rgo.ru). All was organized more than 160 sites across of Russia.



OUTLINE-MAP

27 March 2016 students of geophysical College **Filippova Olga**, Professor of Geology, took part in the project "outline map". "outline- map" - a global reference work on geography. Participants had to recall not only the school course of geography, names, expedition famous explorers, but also to demonstrate their knowledge in Geology, as well as General knowledge.

The project "key map" was born under the roof of the Novosibirsk state University in 2015. Faculty and graduate students of geological faculty believe that geography should be fascinating.

40 minutes had to answer twenty questions and apply the answers to a contour map, the participants tried to pass the routes of the great travelers of Magellan, Columbus, and Heyerdahl. The questions touched on three sections of geography – physical, political and economic. A third of them were connected with the geography of Russia.



STUDENT SGFC PARTY PROJECTS

THE RUSSIAN GEOGRAPHICAL SOCIETY

When I was 13, I met with Ivan Petrovich, a geologist from Severobaykalsk. This meeting occurred in the reserve, in the autumn, when my father and I went fishing. Floating down the river of Taipei, these people called this place Taezhka, we ran into a hunting hut. The issue with the bed was solved.

At night in the hut came the same geologist. He stayed in the hunting districts 47, 56, 98 to hunting in the forest. When we are sitting around a campfire, we got to talking. It turned out, that Ivan Petrovich was the chief of a geological party. He talked about the expedition, about how he participated in the selection of the hunting site. I really liked these stories. And over time, I increasingly remembered the night when we met.

Meeting with this person was determined for me in choosing a profession. In 2015, I entered the Siberian geophysical College on a specialty "Geological survey, search and prospecting of mineral deposits". In College, I learned about the society and about the possibility to participate in its projects.

Siberian geophysical today the College is a partner of the Russian geographical society regional status. Students of our College are already involved in its projects. Now I'm working on a science project to get into Summer school PRO.

Summer school of the RGS is a communication platform for exchange of experience and transfer of knowledge about the current state of geographical science to young professionals. Here future geographers and ecologists, graduate students, postgraduates and young scientists from all over the country are getting a rare opportunity to learn from professionals. I believe that to be a member of the Russian geographical society is very prestigious! Participation in projects PRO allows you to expand your personal, business and professional communication; provides the opportunity to communicate with like-minded and activity people, professionals-geographers and young colleagues; develops professional skills and personal growth; equally important has on the development of ties between the Russian geographical society Siberian geophysical and College!

The material prepared by Dmitry Tretyakov



MEETING. Traveller Jacek Palkiewicz

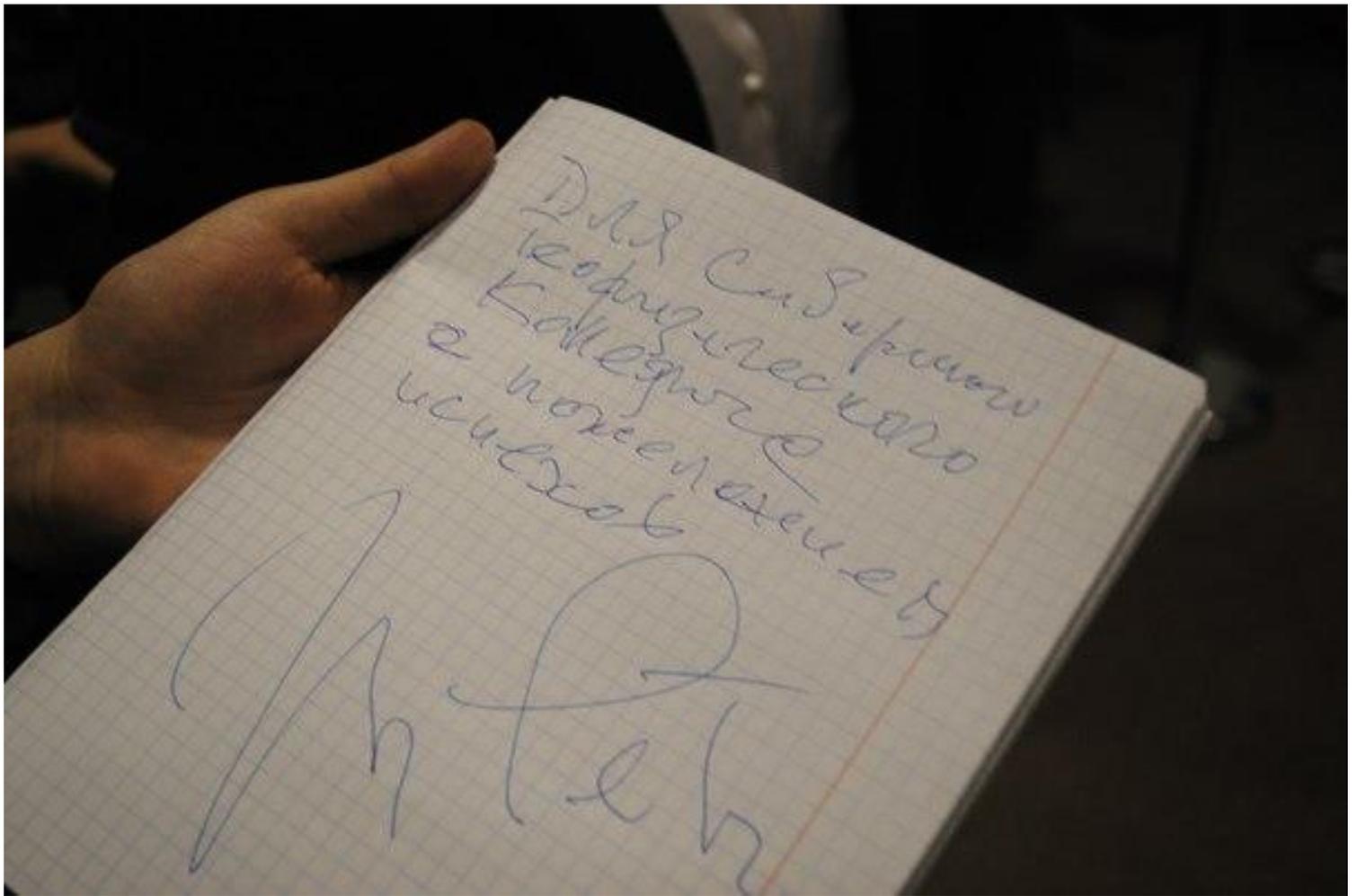
Every Day on television we can see the transfer of travel, endangered peoples, rare animals, but we do not muse about the people, which we can contemplate these reports. March 28, 2016 in Academ park we met with a very interesting man - traveler, journalist, writer and a good talker - Jacek Palkevich.

When we arrived at the meeting, we saw the elderly, but full of energy person. His story began with a presentation where were shown a great photos of his life. Jacek Palkevich talked about his travels, about people and adventure. Everything that had happened to him, embodied on paper and photographs that tell us more than a short article about the meeting. Jacek Palkevich is a researcher, member of the Russian Geographical Society, a member of the Royal Geographical Society Royal Geographical Society in London. He visited all the breadth of the earth, relentlessly extracting documentary evidence disappearing culture of ethnic minorities. He made his way into the most inaccessible places in search of the last unspoilt oases, to prove that they still exist and that we must use all means to save them. Jacek found the mouth of the Amazon and now everyone knows that it starts with groundwater

He is crossed by camel the Sahara desert and the Karakum desert, by elephant crossed from shore to shore of the island of Borneo, the mountains of Bhutan - by yaks, sands of the Skeleton Coast in Namibia - on foot. In 1975 he crossed the Atlantic in a lifeboat for 44 days without radio and navigation devices. In 1983 Jacek Palkevich, using his unique experience, he created the Academy of Survival, where he was taught how to proceed in crisis situations. His performance turned into a fascinating conversation - many ask questions about him, about his work, about his past and future projects. With that interesting person we met and heard his stories about his traveling. For those who do not know this person before, we offer to get acquainted with his work, which sure to be very interesting and exciting for you. We were very lucky to get to that meeting, because he is a very interesting person, versatile, he visited many places. At the meeting was said more than enough about his achievements, discoveries, work, which is certainly very useful for us as future geologists.

The material prepared by
Anna Cherinko, Catherine Trufanova





INNOVATION.

Innovative solution based on geology unmanned aerial vehicles

At the moment to improve efficiency in mining exploration, experts from different countries widely discuss the advantages and problems of using of unmanned aerial vehicles (UAVs).

Unmanned aerial vehicle (drone) is originally of military, mainly reconnaissance purpose, a variety of military robot. Often in the literature of military-style drones called unmanned aerial vehicles (UAVs), civil aircraft of smaller sizes are called drones. How can I use the UAV? Drones are used in sports: personal trainers, track athletes in the marathon; business activity monitoring: topological survey, transmission line monitoring, thermochemica of buildings, transport of fragile objects; in marketing is a promotions; in an emergency is a notification about the earthquake, hurricane monitoring, prevention of avalanches etc.

stability of the slope, for a much more detailed and accurate mapping of the walls of the quarries, at the same time not to expose staff to the dangers of working in the field. "UAVs are also used in the companies «Moore-Quip», «JACON Shotcrete Equipment Mining», «Civil & Marine Concrete Pumps & Consumables».

The experience of Russian companies. One of the latest developments of the Institute of Petroleum Geology and Geophysics Trofimuk Siberian Branch of the Russian Academy of Sciences (SB RAS IPGG) - fleshless aircrafts for geophysical survey (2014). They created the name of the UAV - geophysical reconnaissance. UAV flying above the ground makes measurements of the magnetic field of the Earth and infrared radiation. These observations allow searching for diamond deposits.



Some Russian and foreign companies are already using drones in their work.

Foreign experience. In Germany, in geophysical researches used unmanned helicopter with blades the size of 2 m, but the level of magnetic interference is about 10 nT, which greatly reduces quality of the work. In addition, unmanned helicopter requires the creation of landing infrastructure. Damien Cullen - «McElroyBryanGeological ServicesPty Ltd» the company's chief geologist, said: "Many people think, that exploration of dumps is the main application of UAVs, but how many notice, there are many other possibilities. I know how effectively they can be used to assess the

All experimental work using aeromagnetic complex based on light UAVs in 2014 were carried out parallel with with the standard ground magnetometric shooting a proton magnetometer.

This latest technology is fulfilled only in practice, Siberian geologists have not discovered diamonds yet. Equipping necessary for observation drones equipment, geologists have discovered iron ore deposit in Khakasia and ancient burial for archaeologists in the Novosibirsk region. Company "Baygeo" LLC has developed a technology for UAV applications:



- aerial object using UAVs. For aerial photography on a relatively small set of objects used GeoScan101. Working height from 120 to 1000 meters. The flight speed of 60 km / hr for 40-60 minutes. For one flight GeoScan101 complex allowing to capture an object area of 2-3 square kilometers, or a linear object 15-20 km long and perform 4-6 flight. Start drone carried out with a catapult, landing - on a parachute. UAV is equipped with a camera of 5 SonyNex resolution 16 megapixel or GLONASS / GPS receiver to determine the coordinates of photographing centers.
- Automatic processing of materials. With the software based on survey conducted AgisoftPhotoScan processing aerial photography to produce a highly accurate 3D-model of the object, orthophoto and DEM, the accuracy of which is 2 pixels original frames (10-20 cm). Processing is carried out in an automatic mode.
- automatic data analysis. Three-dimensional model allows operatively to count the volume of dumps of rocks, is a complementary material in the planning of mining operations and the formation of dump complex.

In the process of work on building orthophoto are targeting The distinctive surface, coordinates of the centers of which are determined instrumentally before the aerial survey.

The use of UAVs is justified by for several reasons:

1. Implemented research dangerous areas open mining operations without risk of the life of a geologist.
2. Construct the most accurate models of quarries to create the basis for the design of mining operations for the next period.
3. It turns out a large-scale model of the surface of the quarry.
4. To construct this model takes only one flight, which takes 40 minutes and 6 hours post-processing on a computer in unattended mode.
5. Similar works require the involvement of different specialists for a term exceeding a month.
6. It is economically advantageous, especially for large companies of large enterprises with high-speed movement of the work.

After studying the use of unmanned lethal devices in geology, we concluded that the technology of obtaining the data using the UAV allows any interesting object to study in detail and successfully used for the creation and maintenance of geological documentation. This is caused by growing demand for high-quality data collected in real-time to increase efficiency and production capacity.

The material prepared by
Bezdenzhnykh Valentin, Dmitry Tretyakov

INTERVIEW. KRAVTSOVA POLINA

Year after year in our College come new students who dream to become good specialists in their field. For this they have to go through a very long and difficult path. In the beginning of this path to each of the students wondering: "What awaits him in practice, and how it will be?" Someone chooses for themselves the Geology, somebody meteorology, somebody Geophysics, and



someone drilling. We thought and decided to tell future experts as a place of practice for our kids. To do this we talked with Polina Kravtsova, a third-year student and asked her a few questions.

TELL US ABOUT YOURSELF.

My name is Polina Kravtsova, I came from the city of Vladimir. Study on graduate of Geophysics. Very fond of Mineralogy, drawing, music. Involved in various kinds of needlework, writing scientific papers.

-Polina, WHY YOU CHOSE THIS PROFESSION, AND THAT OUR COLLEGE?

I had heard a lot about this College, I read a lot of good reviews, and the geophysicist profession is quite interesting and the romance field is haunted.

TELL US ABOUT YOUR PROFESSION.

- Technician - geophysicist a very interesting profession, we are studying physical properties of rocks and minerals based on physical properties of minerals, we can predict their location, form of occurrence, and to determine the type of mineral physical properties



TELL US ABOUT YOUR PRACTICE.

- What company are You practice practice, and what were some interesting facts/history?

- I was an Intern in the company JSC "Vostok-Geology". Practice was very interesting. Experienced in Geophysics, at first, literally taking us by the hand through the area and showed what, where and how it works, bug fixes, showing that and how to do better, easier, more comfortable. Saw bears stealing condensed milk, fed the gopher. The first time I saw plants that are growing people, growing in the wild. Loved staying in the field, in the rain, eve sun.

IN WHICH COMPANY YOU WOULD LIKE TO WORK IN THE FUTURE?

To sit in the office bored... I want to work in the field! I hope to settle in a company that will provide me this opportunity. Unfortunately, this is difficult, as the girls in the field do not particularly take.



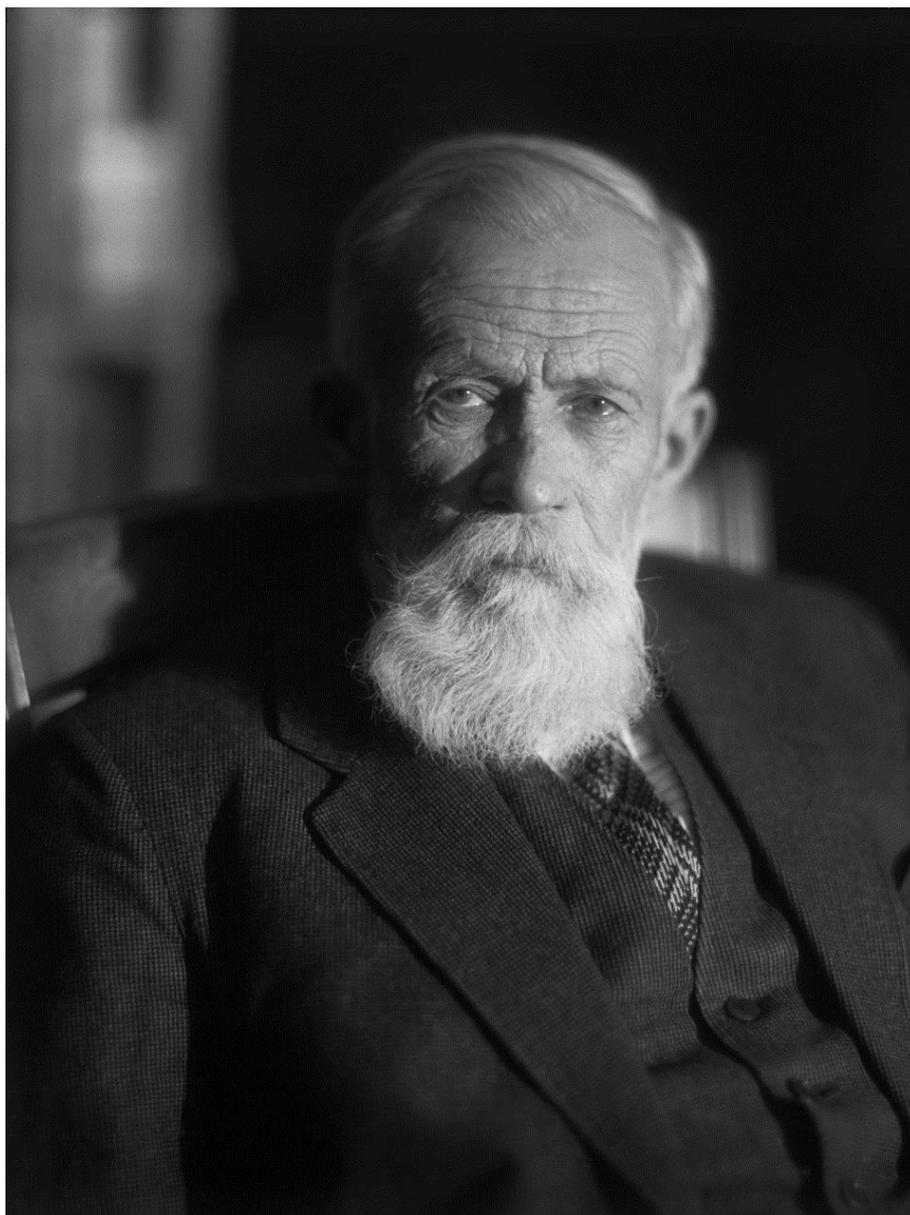
And I want that associates contain from people "Soviet school" and what company is not important.

The material prepared by *Elizabeth Sladkikh*



Photo by Denis Semkin

FAMOUS PERSONALITIES . Vladimir Obruchev



VLADIMIR OBRUCHEV – academician academy of sciences of the USSR, academy-secretary of department of Geological and Geographical sciences of the AC of the USSR. Prominent geologist, famous researcher of Siberia. Author of 3872 scientific work, not consider translated. Honorable president of Geographical society of the USSR from 1947. Academician Obruchev considered the father of Siberian Geology and creator school that prepared a whole galaxy of eminent scientists and experts in the field of mining. In their scientific works, he has developed common questions tectonics and tectonic structure of Siberia, has proved the value of the vertical crust movements in the Neogen-quaternary time, offered the term «Neotectonics», laid the scientific fundamental of the permafrost. His contribution to the study Geology of Siberia has been appreciated by the Academy of Sciences of the USSR, in 1938 Obruchev was awarded «For the best work on the geology Siberia» and in addition to its artistic heritage, there are 17 art works. In 1914, Vladimir Obruchev in the journal «Nature» begins publish scientific and popular articles on geology for mass reader. And then he begins to write two of his science-

fiction novels «Sannikov's Land» and «Plutonium» which were published after 10 years and later received wide fame. At different time Academician Obruchev headed by leading academic institutions of country – Union scientific-research geological Institute (1929-1933), Institute of Permafrost (1939 - 1956.). He was an Academician-secretary of department of geological Geographical Academy of Sciences USSR (1942-1946). He was awarded the title of Hero socialist Labor (1945), was awarded five Medal of Lenin, was awarded the prize named by V. Lenin and two Stalin Prizes. He was a member of the Russian Geographical Society, Mineralogical Society, so he was a member of many other foreign academies. he continued literary activity until the last days of his life. Vladimir Afanasievich Obruchev born 10 October 1863 in the family officer in the village Klepenino, Tver province. The target of his scientific research were: In 1881, he entered in the St. Petersburg mining Institute. In the second half of the XIX century, this oldest higher technical education institution received fame not only in Russia and in the foreign lands. After ended of educational institution in 1886 mining engineer Obruchev was sent in the first geological expedition in Turkestan, where was the building of railroad to Samarkand. In 1886-1888 in the time of research by Obruchev region Trans-Caspian railway

were explored lay, channel of river, set the direction of the former runoff. The Amu Darya and Uzboi described various forms of sand, their origins and were gave practical recommendations the best way for their fixing. Results of the study were published in the «Sands and steppes of the Transbaikal Region» (1887), in monographic «Transcaspian Lowlands» (1890). This work attracted the attention of new, original informations, previously unknown in science. By designation of mining management Obruchev studied the geology of the district Angara River shore Lena river from Zhigalovo to the begin of the Vitim river, determined the age of the layers protruding here Cambrian and Silurian systems, studied deposits of coal, mica, azurite, mineral source. The most importance was the study golden place in the Olekminsk-Vitim Plateau region, which started study of gold-bearing Siberia. It was also supposed to start of studying of permafrost and glaciers of Siberia. In 1892 he participated in the Potanin's expedition to the Central Asia. In early January 1893 Obruchev left Pekin in woody areas of North China. During the expedition was assembled a unique geological and geographical material, 7 rock samples and fossil organic remains, were made 800 measurements of heights, described relief, made up of maps and were made many photographs.

According to the results of expeditions were made important discoveries regarded to geology and geography of Central Asia, the nature of the origin of woods, refuted and rectification conclusions of previous researchers (F. Richthofen et al.), included significant corrections and additions. It should be noted that on the initiative of Professor Vladimir Obruchev were started first geological study of oil-bearing territory of Siberia. In 1905, 1906, 1909 Obruchev on mission and at the TTI funds made three scientific expeditions for geological study of mountain ranges and deserts bordering Dzungaria (Western China). For science was opened «Eoliancity», described deposits of gold, coal and asphalt. In 1912-1918. He engaged in scientific work in Moscow, ready for publication materials, conduct examination of the gold mines in the KuznetskyAlatau, Transbaikal (1912), studied the latest tectonics and ancient glaciers of Altai (1914), carried out the examination of the copper mine in the Caucasus (1915), studied mineral springs in the Crimea (1916-1917), explore deposits of cement raw material in the Donbas (1918).

In 1892 he participated in the expedition of G. Potanin in Central Asia. In the Tomsk period of the Obruchev continued refinement of earlier materials, conducted in scientific expeditions, published results carried out examination of the gold mines in the Altai Mountains, KuznetskyAlatau began publish « Geological Survey gold region of Siberia» (1909-1911). In 1888-1912. Obruchev investigated the gold content of Siberia. These studies he ended in 1901. After post-processing Obruchev collected material prepared and published capital scientific works on Geology of Lensk's gold-bearing region. In 1933. Obruchev compiled his scientific views on the genesis of gold deposits in its capital work «Ore deposits». After completion of the work in TTI Obruchev moved to Moscow in 1912 research geology gold areas gold deposits of Siberia and were

continued by his disciples, but the overall scientific leadership of these works was Obruchev. On June 19, 1956 heart of outstanding Russian scientist stopped in Zvenigorod. He was buried at Novodevichy Cemetery in Moscow. In honor of academician Obruchev were named many geographic features - two volcanoes in the Trans-Baikal and Kamchatka, underwater upland in the Pacific ocean, mountain range in Tuva, several glaciers, Mountains and peaks. Scientific-technical library of Tomsk Polytechnic University and Kyakhtinsky republican Museum of local history, as well as he discovered a mineral which has the name of Academician V. A. Obruchev. In mineralogy collections invariably attracts attention bituminous minerals «Obruchevit». In this way, V.A. Obruchev introduce a great contribution to the popularization science. He led to educate among youth, supporting contacts with schools and homes of Pioneers. «Mikhail Usov (1883-1939)». Obruchev explored questions such as the origin of loess in the Central and the Middle Asia, glaciers and eternal the permafrost in Siberia, general questions tectonics and tectonic structure Siberia, Geology gold deposits of Siberia, determination «Ancient crown» of Asia.

*The material prepared by
Denis Semkin*

SURVIVAL SCHOOL. IF YOU lost in the woods

The problem of survival worried man since his birth. We are fighting for survival, adapting to conditions and trying to do the life more comfortable.

Let's try to find out how to survive if we were in an extreme situation for us, for example, we lost in the wood and couldn't go out from the forest to darkness. The main thing - it doesn't have to worry. If you lost in the wood in warm time of year, it facilitates the task.

To begin with, we need to choose the place where we will go to sleep. It is necessary to do it by sunset. It is desirable that it was the hill in case of rain. Monitor the weather. If in the out-of-doors a small wind, you can stay on an open place, there will be less mosquitoes and midges. If the wind is strong, then it will be better to stay somewhere near the bushes, since the strong wind can break trees. When we chose the place for sleep, we need to equip it. Collect more dry pine branches and put them on the place where you want to spend the night. The bed of pine branches will not give you a strong freeze from the cold ground. If you were to a match, then you have to make a bonfire. It will help you keep warm, will alarm the animals, and the smoke from fire save you from different insects. So, at the beginning make in the land a little hole, removing the top layer of the earth, at a distance of 1-2 meters remove dry grass and leaves. Collect dry lumps and branches in quantity to smoldering campfire until the morning. We must remember in a campfire: wet and rotten logs extract a little heat, but much smoke. Little dry firewood gives a strong flame that burns out in a few minutes. Dry pine branches well-lit and forms a lot of coal and a lot of smoke and soot, and throws



about a large number of small sparks and embers. Many sparks give dry pine needles and fresh spruce pine branches evolved during burning a lot of black smoke, as well as fresh grass and green leaves, it should be used for the signal fires. Excellent firewoods for campfire can serve - oak logs, they produce a lot of heat and long burn. So we built a fire. Now, you can be laid to sleep.

Lie at a safe distance to the fire, in the parallel of it that you can safely roll and warm one or the other side of the body. Fall asleep with good thoughts, and do not be afraid of the dark think that tomorrow you will be sure to go out from the forest.

So, we successfully survived the night and gain strength. Next you need to be sure to pay your attention to the fire if there were smoldering embers, you have to strew them. Next, we need to do something great, so that we have enough strength for further search of people and out of the forest. In the wood, you can find a lot of plant food, the most importantly to know that you can eat and what not. Most affordable food - berries. Not all berries are healthy, some, for example, toxic - such as lily of the valley fruit, crow eyes, wolf bark, black cohosh spiky and others. So do not eat the single blue-black berries on a long stalk and small red berries. Do not use those berries which you do not know. Berries can be found on the sun edges, as well as grass. The next thing you should pay attention to - mushrooms. Edible mushrooms following: oyster mushrooms, truffles, mushrooms and white mushrooms. But mushrooms have to be eaten right. Bite off a little bit and chew thoroughly, watching to your feeling. So, in the forest there are many edible plants for example sorrel and wild bow. You can also make food reserve which you find, because suddenly you did not find the people or out of the wood. It remains to solve the problem with the water, it is difficult. In the morning you can collect dew from plants. When you go out of the forest, pay attention to plants, some of them grow only near water. Listen very carefully, in the silence of the forest you can hear the noise of river, road or people. The main thing do everything with the mind and remember, that you are sure to return home.

The material prepared by ***Evgeniy Koshkin***

KITCHEN. TAIGA

Many people did not wonder about the food traditions which exist in the deep

Taiga. Taiga does not forgive mistakes, how practice shows, if you make a mistake in cooking it is a fatal mistake for you. Being that mushrooms are very common product of taiga, very important of their selection to the basket, ignore special rules may adduct in very negative consequences,



including death. So, taiga's kitchen is the most important component for survival. Not for nothing living here or nearby people from childhood to learn the secrets of the local culinary art.

In the taiga cooking occupies a special place, because the laws of the taiga not forgivable and sometimes do not leave the opportunity to satisfy the need for food. You must be able to get the right products and provide the necessary conditions for the preparation of meals.

Early spring can cooking stewed morels in cream. Delicacy can serve a pair of slices of smoked duck breast or fried grouse. Salad of dandelion leaves. Tea may brew with wild herbs and give it to the jam from taiga's berries.

A spring dinner can include nettle soup, fried morels or bracken with boiled potatoes. In event of successful hunt on toque or drakes preparer roast wildfowl. If there is a fish or wildfowl (which can bestuff to do filler) chance of gourmet cooking dishes are much extended.

In more recent times buffet has got a taiga delicacy as elk lip.

In late summer, autumn in the forest variety of berries: strawberries, blackberries, blueberries, cranberries, cloudberries, blueberries, raspberries, lemongrass etc. Many berries are useful in food and in winter, when it freezing at branches.

In winter on the bear fat you can cook cakes from unleavened dough, by sponge with soda on the size of the dripping pan. Cut in three strips johnny-cake fried until fully cooking totally soaking fat. With these cakes and with a thermos of hot tea you can go out on all day in the taiga, have a dinner in the afternoon.

Kitchen for these people of these places it is not only a test of survival, but also an inseparable part of cultural heritage. Unfortunately, from year to year passing centuries-old tradition his followers is becoming more difficulty, so living in these places people can refer to traditions carefully with honor for his culture, for the uniqueness of taiga's customs

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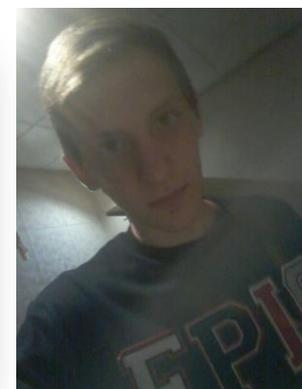
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