

# PANORAMA

CASPIAN PIPELINE CONSORTIUM



CORPORATE MAGAZINE  
No 3 (42) September 2023



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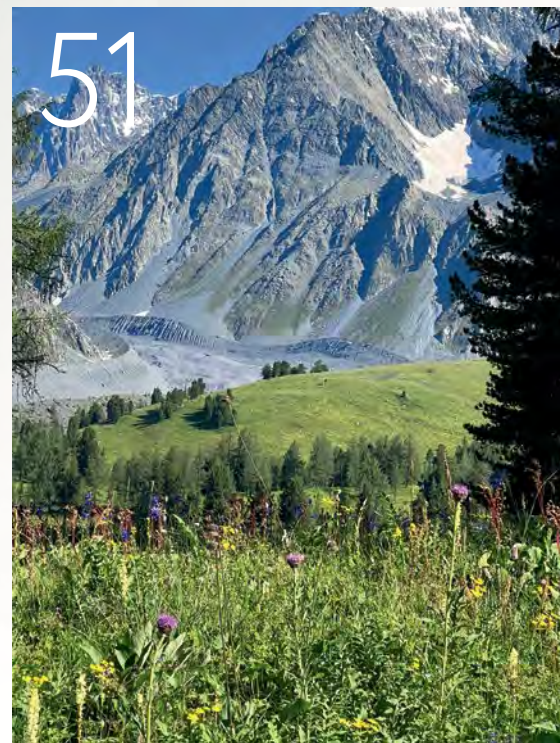
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## DEAR COLLEAGUES AND FRIENDS!

Congratulations on the Day of Oil and Gas Industry Workers!

Significant spring-summer events for our company are the loading of the 8,000th tanker since the start of operation and the completion of the construction of a new oil quantity and quality measurement system at the Marine Terminal. In the face of new challenges of the time, the Caspian Pipeline Consortium not only steadily receives oil from shippers, pumps oil over a considerable distance and ships oil to tankers, regularly pays dividends to shareholders, but also works for the future, successfully and without deviations from the schedule completing the Debottlenecking Program. By this, the company proves its reputation as a reliable partner, steadily and uninterruptedly supplying hydrocarbon raw materials across the territory of the Republic of Kazakhstan and the Russian Federation.

At present, all key DBNP facilities along the route of our pipeline system have been built and are ready to receive increased volumes of oil from shippers (up to 82 million tons per year), but this does not mean that the company will lose focus on issues of labor protection, industrial safety and environmental protection. Consistently developing the corporate Safe Work Culture, we observe in CPC and contractor organizations a conscious compliance with labor protection requirements, the personal interest of managers and all employees in this. The leaders of the Safe Work Culture play a significant role in this development. Their meeting in Elista has become an effective platform for the exchange of experience and the formation of new schemes for constructive interaction.

Over the years of sustainable development, the Consortium has developed a good reputation in the regions of presence. CPC is a major taxpayer and employer, the company actively supports medicine, education, culture, children's sports, and the environment. With the prospect of developing new import-substituting technologies and equipment, we are of interest to the scientific community. The younger generation has the opportunity to realize their creative potential on the best stages of the country. Festival "CPC for Talented Children!" this year celebrates its 25th anniversary with a new generation of participants, and this cannot but rejoice.

On the day of our professional holiday, I would like to congratulate every employee, specialist and manager of our close-knit multinational team. Professionalism, the will to win and the energy of everyone brought together are able to successfully fulfill the tasks set for the organization of any level of complexity. I wish you new successes in your work and in all your endeavors, good health, optimism and confidence in the future. Happy holiday!

**N.N. GORBAN,**

GENERAL DIRECTOR

CASPIAN PIPELINE CONSORTIUM



AUTHOR  
PAVEL KRETOV

# THE RESULT OF TEAMWORK

ON JULY 25, 2023, A GRAND EVENT WAS HELD AT THE CPC MARINE TERMINAL DEDICATED TO THE COMPLETION OF THE CONSTRUCTION OF A NEW LEASE AUTOMATIC CUSTODY TRANSFER (LACT)

The ceremony was attended by CPC General Director Nikolay Gorban, Acting Minister of Fuel and Energy Complex and Housing and Communal

Services of the Krasnodar Krai Vyacheslav Shaposhnik, Head of the Novorossiysk City Municipality Andrey Kravchenko and other officials. Kreshimir Filippovich,

Vice-President of the construction contractor VELESSTROY LLC, handed over a symbolic key and a set of documents for metrological registration of the LACT.



After it, the facility will be involved in the commercial accounting of oil exported through the CPC pipeline system.

"The teamwork of all participants in the Debottlenecking Program from Tengiz to Novorossiysk has resulted in the CPC pipeline system achieving a throughput capacity of up to 82 million tons of oil per year", said Nikolay Gorban, CPC General Director, in his speech. "This serves as a reliable basis for the further development of large oil production centers

were only two metering units at the CPC Marine Terminal, which means that even with three single-point moorings (SPM), only two tankers could be loaded with oil at a time.

Thanks to the construction of three new LACT nodes at the Marine Terminal, CPC will have the opportunity, if necessary, to ship oil simultaneously from three SPMs. In particular, this will allow increasing the shipment of crude oil after forced downtime in the autumn-winter period due to stormy weather conditions.

site, most of whom represented the Krasnodar Territory.

The Debottlenecking program is aimed at increasing the throughput capacity of the Tengiz-Novorossiysk pipeline to 82 million tons of oil per year and at improving the reliability and safety of the oil pipeline system.

MORE THAN

80%

OF EQUIPMENT OF DOMESTIC  
PRODUCTION WAS USED  
DURING CONSTRUCTION  
WORKS

in the Caspian Sea, as well as the image of Russia as a reliable partner in the transit of hydrocarbon resources. Thank you for the responsible and conscientious work of the contractors, representatives of the construction and operation services of the Consortium, who were involved in planning and ensuring the work".

As part of the solemn ceremony, the construction participants were acknowledged and awarded certificates of honor and commemorative signs from the Governor of the Krasnodar Krai and CPC.

It is important to note that before the implementation of the Debottlenecking Program, there

The construction of the LACT has been underway since February 2021. More than 80% of domestically produced equipment was used in the course of construction work. The volume of investments in the implementation of the project amounted to about 7.6 billion rubles from the total budget of DBNP on the territory of the Russian Federation (29 billion rubles). Over the entire period of implementation of construction and installation works, more than 43 contractors and subcontractors involved about 1,500 employees of various specialties and professions, at the same time there were more than 300 people at the construction







A new system of oil quantity and quality measurement (LACT), consisting of three nodes and 12 measuring lines in total, is located at the end point of the CPC oil pipeline system and is

designed for commercial metering of oil export shipments.

“Only the most experienced specialists were involved in the work. Thus, the reduction station, the inlet manifold of which we

have completely rebuilt, is actually the bottleneck of the entire oil pipeline”, Yury Belov, Construction Office Manager, told reporters. “We had to act with precision, on small sites, and I am proud that we not only kept the pipelines in the designed position without complications, but also completed the entire operation ahead of schedule”.

The contractors assembled more than 550 tons of metal structures, laid 145 km of cables and wires. The volume of concrete work amounted to 7.5 thousand m<sup>3</sup>.

A special task for the builders was the development, including rocky soil. A total of 155,000 m<sup>3</sup> of rock was mixed. Large volumes of clay sediments had to be removed and 13 meters of crushed stone was poured instead before the LACT operator house could be installed. In addition to the LACT and the control house, the contractors installed a platform for drainage tanks and safety valves, reliably



UPGRADED AUTOMATIC DISCHARGE VALVE SVFRT-100000

protecting the perimeter with powerful reinforced concrete retaining walls with buttresses.

“The facilities were built, tested, connected to the SCADA control system, passed the stage of pilot testing. Now we will move on

to the third stage of the DBNP, which provides for the dismantling of the old LACT and the installation of a new pressure control unit and a pressure mitigating system”, Alexander Volkov, Head of the Capital Construction Projects Support Service in the Western Region, shared his plans.

The Marine Terminal is CPC largest production facility, and its progressive renovation and development continues not only within the framework of the DBNP. For example, an increase in the volume of transportation and transshipment of oil requires the preparation of the Consortium’s facilities for working with hydrocarbons with a higher temperature.

“In 2022, to ensure the operation of tanks in conditions when the oil temperature reaches 50° C and above, the rack sleeves were finalized, additional sealing sleeves and breathing valves were installed on floating roofs”, said Nikolay Pankov, Deputy Regional Manager for Shore Facilities and Tank Farm.

The work was carried out during the periods of serial withdrawal of tanks SVFRT -100000 for maintenance: a total of 676 sleeves

were modified, 104 breathing valves and 1720 couplings were installed.

The implementation of this project is an important improvement of the tanks, which increased the safety of their operation and made it possible to almost 100% eliminate the loss of light fractions of oil entering the Marine Terminal. Also last year, a new closed switchgear and an additional complete transformer substation were built, which provided the necessary reserve of power supply to the main consumers.

Over the past two years, a large amount of work on the territory of the Tank Farm has been carried out on the diagnostics of technological pipelines, main buildings and auxiliary facilities: fire extinguishing, water supply and others.

Andrey Banduryan, Head of the Capital Construction Projects Support Service, notes that the Marine Terminal has not yet seen such serious construction volumes as are planned for 2023–2024. This year alone, 26 objects are in operation at once. The berths of the auxiliary ships harbor are now equipped with a system for collecting and diverting storm and waste water.

“The fire and gas detection system was reconstructed at the Shore Facilities and the Tank Farm. Also this year, the construction of a three-story checkpoint building in the Tank Farm will be completed”, says Andrey Banduryan.

The recent commissioning of a new multi-purpose tank at the Shore Facilities has made it possible to proceed with the modernization of the previously used.

Among the important works scheduled for 2025–2026 are the reconstruction of both administrative and amenity buildings at the Shore Facilities, the construction of the Maritime Service building, and the installation of a pressure control system at the inlet to the Tank Farm.



NEW MULTI-PURPOSE TANK (LEFT) AND THE ONE USED BEFORE (RIGHT)



**AUTHOR**  
ANTON GLINYANOV,  
LEAD PROJECT ENGINEER, CPC-R

# DBNP GOES WEST

2023 IS A SIGNIFICANT YEAR FOR CPC WESTERN REGION. AT PS-4 AND PS-5, LOCATED IN THE STAVROPOL REGION, AS PART OF THE DBNP, THE INSTALLATION OF NEW FREQUENCY CONVERTERS (VFD) IS PLANNED TO CONTROL THE SPEED AND AUTOMATICALLY CONTROL THE OPERATING MODES OF FOUR 10 KILOVOLT ELECTRIC MOTORS WITH A CAPACITY OF 8,300 KW. IMPLEMENTATION OF AN AMBITIOUS TECHNICAL SOLUTION WILL ALLOW TO SIGNIFICANTLY INCREASE THE RELIABILITY OF OPERATION OF OIL PIPELINE PRODUCTION FACILITIES



**FROM LEFT TO RIGHT:** LEAD PROJECT ENGINEER A.Y. BUKREEV, DEPUTY MANAGER OF PS-4 A.V. BACHMANOV, LEAD SPECIALIST FOR ELECTRICAL INSTALLATION WORKS A.R. GAREEV, CONSTRUCTION OFFICE MANAGER K.V. BOYTISOV

**T**o solve the task, the headquarters for the construction of the WR DBNP was organized, similar to the headquarters in the Central region and on the Shore Facilities of the MT. Konstantin Boytsov, who has practical experience in the construction of VFD-10 kV and PMS in the Central region, heads the construction headquarters of the WR.

On May 19, 2023, a contract was signed with the contractor Construction Company SMU-6 LLC, and already in June, the builders began implementing the project for the technical re-equipment of the PS-4 facility. As part of the project, it is necessary to install 201 piles for the foundations of the VFD site and the cable rack. Also in the plans is the construction of the fifth PMS tank (100 m<sup>3</sup>), for the installation of which it is necessary in cramped conditions to make sheet piling of the excavation from 67 pipes with a diameter of 219 mm and a length of up to 7 m each.

A cable rack and a floodlight mast will also be installed.

The total weight of the assembled metal structures will be 43.5 tons, the length of the cable products to be laid will be 14.7 km.

At the time of preparation of this publication for printing (early August), the diesel power plant and zero-sequence filters were dismantled. During the scheduled

shutdown, a new section of the PMS drainage pipeline was installed and connected. It was also carried out the installation of piles of the VFD building, a searchlight mast, cable racks from the VFD to the 10 kV indoor switchgear building and to the diesel power plant.

**CONSTRUCTION OFFICE MANAGER K.V. BOYTISOV**







SCOPE OF DBNP WORK AT CPC FACILITIES

General construction works are scheduled to be completed in December 2023. In October, the contractors will begin the installation of four VFD block boxes, the total weight of which is 327.4 tons. A heavy-duty crane with a lifting capacity of 100 tons is planned to be involved in the installation of these structures.

An important role in the process of work at the DBNP facilities is played by an accurate assessment of risks and their minimization. During construction and installation works, these risks increase and issues in the field of labor protection, industrial safety and environmental protection, including fire safety and road safety, are given increased

attention. Oleg Gavrilov, Manager of PS-4, and Konstantin Boytsov, Construction Office Manager, serve as a personal example for colleagues of a responsible attitude to compliance with safety rules at the workplace and construction site.

CPC specialists, together with colleagues from the contracting organization, hold regular meetings

THE TOTAL WEIGHT  
OF FOUR BLOCK-  
BOXES OF VFD IS

327.4  
TONS

of the Committee for the Development of the Safe Work Culture, where topical issues are discussed

and initiative proposals are considered. The concept of zero injuries adopted by the Consortium should

not have exceptions during the period of peak construction loads. Both during the implementation of the Expansion Project (when PS-4 and PS-5 were built and commissioned), and now, when the stations are being upgraded as part of the DBNP, the issues of life, health and safety of all construction participants remain a priority.



AUTHOR  
PAVEL KRETOV

# PUMPS AND ORCHARD

MORE THAN 90% OF THE ASTRAKHANSKAYA PS WAS UPGRADED DURING THE IMPLEMENTATION OF DEBOTTLENECKING PROGRAM.

IN JUST THREE YEARS, A NEW MAINLINE PUMP, A CLOSED SWITCHGEAR, A COMPLETE TRANSFORMER SUBSTATION, A FOAM GENERATING UNIT, AND MUD FILTERS WERE BUILT HERE

**D**espite the fact that another station of the same type was actually placed on the existing territory of the PS, the production facility continued to transport Kazakhstani

oil to the Black Sea coast around the clock.

“To protect the operating equipment of the station, we have taken unprecedented security measures”, says Viktor Antsupov, Deputy

Manager of the Astrakhanskaya PS. “Two zones were allocated — «A» and «B». In one, it was possible to work on the orders of a construction contractor, in the other — of the CPC Operation Service”.

The zones had not only fences and locks on the gates, but also control sensors.

Victor became deputy chief two years ago, having worked at the station for a total of 14 years. He started as an intern, then worked as an instrumentation engineer, and was a shift supervisor. In other words, he saw the Astrakhanskaya PS as it was built by Soviet builders in the late 1980s.

“The technical equipment of the station has increased significantly after the completion of the CPC Pipeline System Expansion Project in the middle of 2010”, continues Viktor Antsupov. “The capacity of the pump station was increased by a new metering unit, safety was increased by the introduction of shockless start-up and pressure mitigating systems.

However, now we can talk about a shockless soft start device in the past tense — for the new mainline pump, as part of the implementation of DBNP, variable frequency converters (VFD) were installed. This significantly saves both energy and equipment life. If earlier the CPC dispatcher had to completely stop some unit to change the operation mode of the oil



pipeline “downward”, now it is enough to reduce the speed of the electric motor.

Thanks to human care and an automatic watering system, apple trees, apricots, pears and other

THERE IS A SEPARATE ROOM FOR EACH TYPE OF ANALYSIS IN THE LABORATORY. EVERYTHING IS DONE ACCORDING TO INTERNATIONAL STANDARDS

VIKTOR ANTUPOV



Completion of the pilot operation phase made it possible to decommission the old indoor switchgear and complete transformer substation.

A lot of attention is traditionally paid to landscaping issues at the station. Last year, about one and a half hundred coniferous and deciduous trees were planted on the territory of the PS. This spring, land reclamation began on the site of the former construction workers' camp. Perhaps, over time, an orchard will spread here, similar to the one that was once transplanted from the territory of the administrative zone closer to the analytical laboratory.

fruit trees successfully survived the “move” and even managed to give a good harvest.

Speaking of the laboratory. It was built at the station in 2017. There is a separate room for each type of analysis. Everything is done according to international standards: many fume hoods, dishwashing rooms, warehouses for chemicals and reference samples.

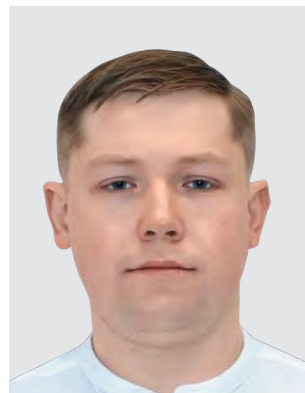
Soon, the premises of the parking lot for special equipment and the mechanical repair workshop will become as comfortable as the laboratory — a major overhaul is scheduled for the end of this year. Having changed by 90% during the DBNP, the Astrakhanskaya station continues its way to perfection.



AUTHOR  
DMITRY KONSTANTINOV

## FROM THE LASER'S PERSPECTIVE

THE FEBRUARY ISSUE OF CPC PANORAMA ANNOUNCED THE TESTING OF TERRESTRIAL LASER SCANNING TECHNOLOGY AT THE MARINE TERMINAL BY JOINT EFFORTS OF SCIENTISTS FROM GUBKIN UNIVERSITY AND CPC SPECIALISTS. IN JUNE, THE FIRST STAGE OF THE PROJECT WAS IMPLEMENTED, AND WE ASKED IGOR LEONOVICH, CANDIDATE OF TECHNICAL SCIENCES, ASSOCIATE PROFESSOR OF THE DEPARTMENT OF CONSTRUCTION AND REPAIR OF GAS AND OIL PIPELINES AND STORAGE FACILITIES AT THE GUBKIN RUSSIAN STATE UNIVERSITY OF OIL AND GAS (NRU), TO TELL US ABOUT IT



CPC employs many graduates of Gubkin University, and the university provides program training for the company's specialists, such as dispatchers. In 2015, the Consortium and the Gubkin Russian State University of Oil and Gas (NRU) signed an official cooperation agreement, and under this document, several large-scale projects have already been implemented, such as the restoration of the entrance group, the Large Academic Auditorium and the university's open lecture hall.

— **How is the project evaluated in the scientific community? Were there similar precedents (in Russia and in the world)? If so, why weren't they implemented?**

— CPC successfully operates a facility unique in Russian practice — the Marine Terminal with 100,000 m<sup>3</sup> tanks. There are only 14 such reservoirs in Russia, 10 of which are located in one CPC Tank Farm. On the one hand, this is extremely efficient in terms of the operation of the Marine Terminal, and on the other hand, it creates increased risks for the environment due to a significant amount of potential leaks. Therefore, the introduction of new technologies for monitoring the technical condition of such facilities is, of course, an urgent task. Terrestrial laser scanning is actively used to study the spatial geometry of tanks, search for defects in their geometry and assess the technical condition in Russia and the world quite widely. The University,

together with CPC, decided to go further and try to use TLS to search for and assess the risk of developing fatigue defects.

Marine Terminal tanks have an important operational characteristic, they constantly operate in the loading and unloading cycle. Tanks that are not related to marine terminals (for example, those that are part of the PS) usually experience about 100 loading and unloading cycles per year, and the tanks of the Marine Terminal can work out up to 1500 such cycles. When loading and unloading, there is a risk of occurrence of local areas in which a significant amplitude of stress changes occurs. In such areas, fatigue defects may subsequently occur, the development of which can lead to the destruction of the tank wall. The work is aimed at creating a methodology for searching and identifying such areas.

— **Did the university cost the existing scientific and technical base when implementing the project, or did it need to attract additional forces and resources?**

— At the moment, we manage with the existing base, formed as part of the research activities of the university.



JUNE 2023. ANTON SALNIKOV, ASSOCIATE PROFESSOR OF THE DEPARTMENT OF CONSTRUCTION AND REPAIR OF OIL AND GAS PIPELINES AND STORAGE FACILITIES DEMONSTRATES A LASER SCANNER.

— **How did external circumstances affect the implementation of the project (import sanctions, the measles epidemic at the university)?**

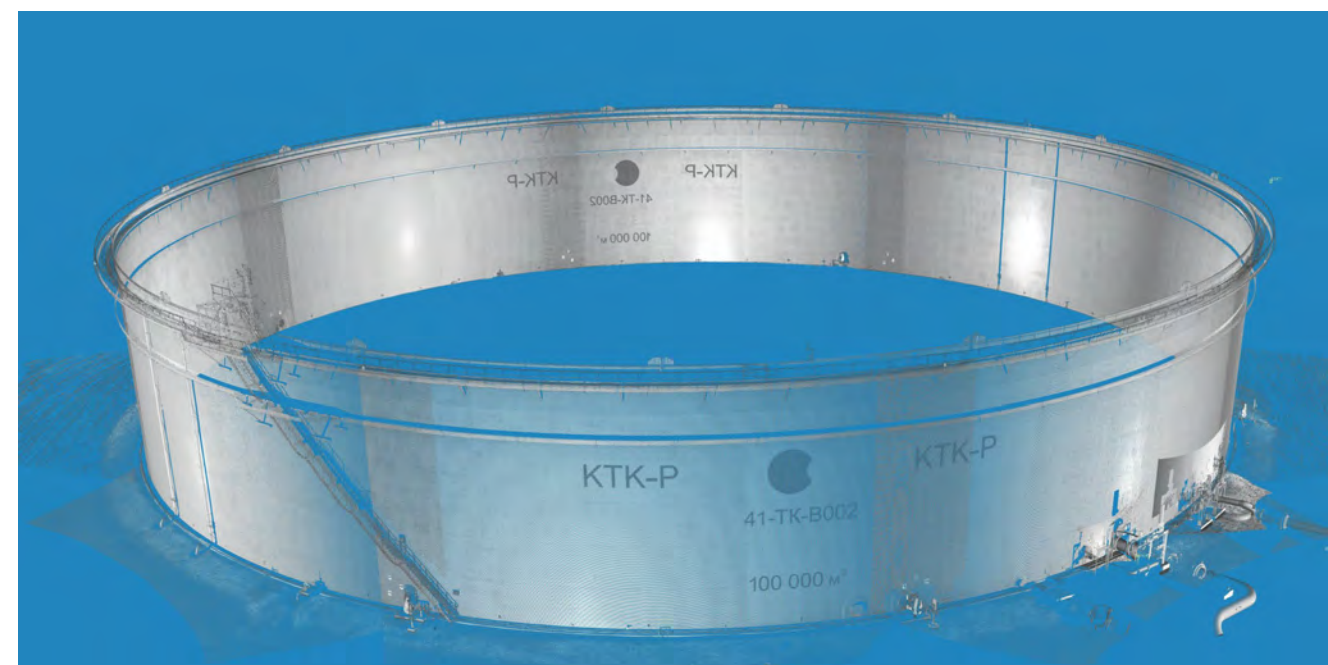
— External circumstances did not have a significant impact on the implementation of the project. The preliminary study of the program and schedule of field work was actively carried out in the spring of 2023 together with CPC employees. General Manager for Operations Aleksey Dmitryukov,

Tank Farm Senior Engineer Dmitry Benderov and Training Manager Alexandra Rabinovich provided us with great assistance during the preparatory phase. In addition, a very significant contribution to the organization of work and to the development of technical and scientific issues even before the stage of signing the contract was made by CPC General Director Nikolai Gorban.

**Igor Alexandrovich, why was Gubkin Russian State University of Oil and Gas (NRU) chosen as the contracting organization implementing the project?**

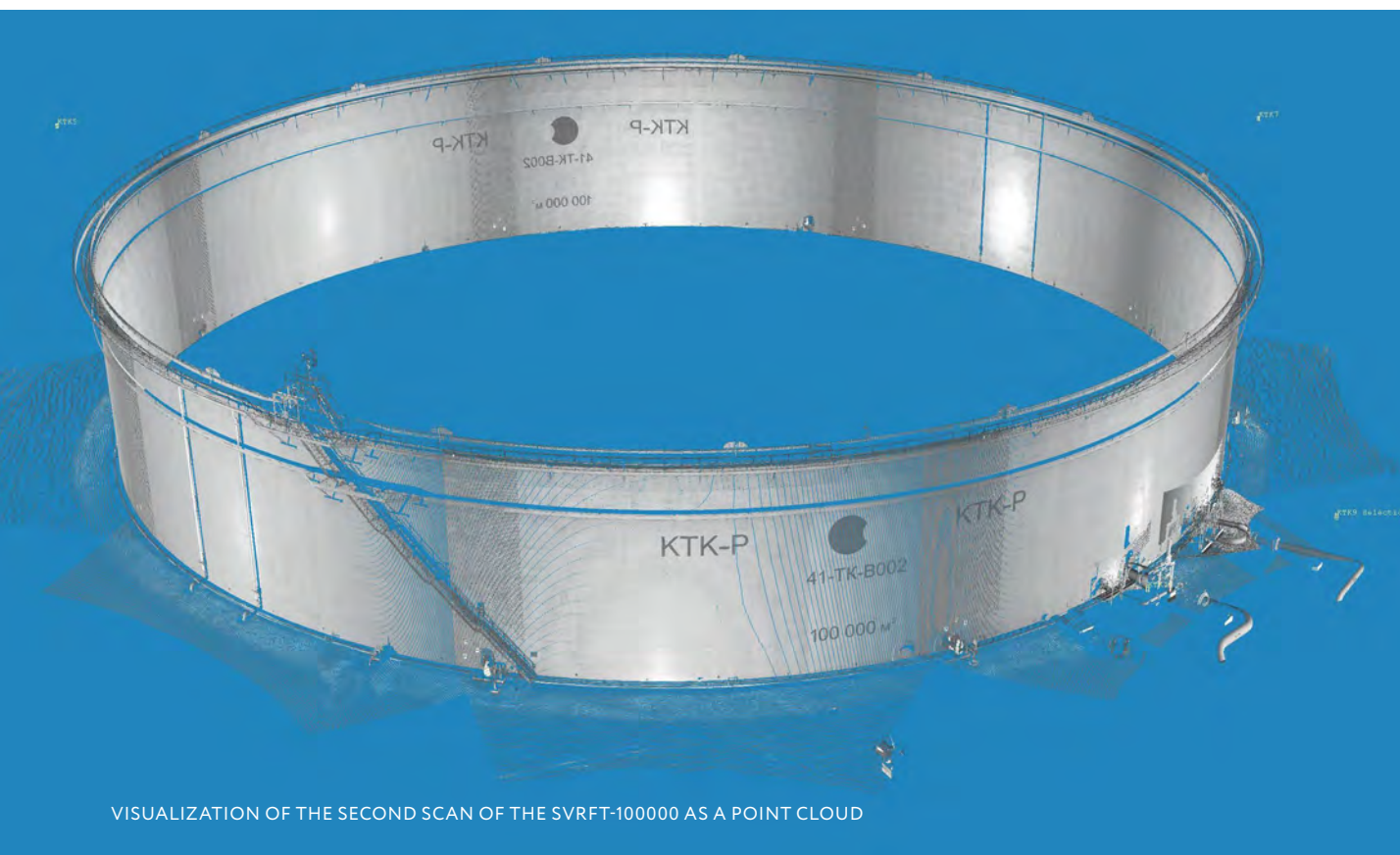
— The University has close ties with CPC and has significant experience in mutually beneficial cooperation. Gubkin Russian State University of Oil and Gas (NRU) has been cooperating with CPC since its inception. Specialists of the Gubkin Russian State University of Oil and Gas (NRU) took part in the work of the state expertise, which evaluated the design solutions for the construction of the first stage of the Marine Terminal, performed work to increase the productivity of the pipeline transport system.

For more than 10 years, the staff of the department of construction and repair of gas and oil pipelines and storage facilities of the university, headed by the Head, Professor Gennady Vasiliev, have been dealing with the problems of applying the TLS technology to solve the problem of technical diagnostics and assessing the technical condition of various structures of oil and gas facilities. Employees of the department, together with colleagues from the Transneft Research Institute, carried out the first surveys of vertical steel tanks in Russia and developed approaches to assessing their technical condition based on the results of TLS.



VISUALIZATION OF THE FIRST SCAN OF THE SVRFT-100000 AS A POINT CLOUD





VISUALIZATION OF THE SECOND SCAN OF THE SVRFT-100000 AS A POINT CLOUD

FOR THE FIRST TIME IN RUSSIA,  
LASER SCANNING  
OF A TANK WITH  
A VOLUME OF

1000

BILLION M<sup>3</sup> WAS PERFORMED

**— What were the stages of implementation of the first stage of the project? How much time was spent?**

— The main goal of the first stage is to obtain a point cloud, that is, a full-size digital copy of the scanned reservoir in the form of a significant number of points (about 10 million). Before the start of the field stage, a cameral stage was held, at which a program and work schedule were drawn up, a site visit was agreed and formalized. To obtain a point cloud, university staff conducted a field stage of work directly on the reservoir from June 20 to 23. The entire surface of the reservoir was scanned twice and uploaded into a single point cloud. In the course of the work, marks were installed

on the tank wall, the best positions of the scanner stations were determined, the labor intensity and complexity of scanning a tank with a volume of 100,000 m<sup>3</sup> was estimated. After the field stage, a cameral stage was held to process the results obtained and obtain a single point cloud of the entire wall of the SVRFT-100000.

**— How many specialists and equipment were involved?**

— A creative team worked from the university, consisting of the head of the department for the construction and repair of gas and oil pipelines and storage facilities Gennady Vasiliev and associate professors of the department Igor Leonovich, Anton Salnikov and Semyon Levin.

CPC was represented by tank farm senior engineer Dmitry Benderov, deputy regional manager for Shore Facilities and Tank Farm Nikolai Pankov, deputy manager for Shore Facilities and Tank Farm Vladimir Kostyukov, lead mechanical engineer, Vasily Gorkin, senior engineer for oil and gas pipeline operations Mark Skrylnikov. The key device was a laser scanner.

**— What work during the project had to be done for the first time? How successful was it?**

— Laser scanning of a 100,000 m<sup>3</sup> tank was performed for the first time in Russia. The work has been successfully completed, the resulting digital copy of the reservoir – a point cloud – will be used at further stages to search for and identify defects in the wall geometry.

**— Who headed the project from the Gubkin Russian State University of Oil and Gas (NRU) and who supervised from CPC?**

— The head of work from the university is the Head of the department for the construction and repair of gas and oil pipelines and storage facilities, Professor, Doctor of Technical Sciences Gennady Vasiliev. On behalf of CPC, the project was supervised by Alexey Dmitryukov, General Manager for Operations, and Dmitry Benderov, Tank Farm Senior Engineer. Scientific guidance – Nikolai Gorbun together with Gennady Vasiliev.

**— What tanks were scanned? Was it possible to do this without emptying the reservoir, as previously planned?**

— We scanned the second tank (No. 41-TK-B002), scanning was carried out in accordance with the terms of reference for the filling level.

**— What security measures were applied?**

— As part of the work program, a set of safety measures was developed, which was strictly observed at the production site. The work was accompanied by constant monitoring of gas pollution, all employees were provided with personal protective equipment and familiarized with the methods and techniques of safe work.



MONITOR THE SCANNING PROCESS



A GROUP OF MANAGERS IN THE FIELD  
EVALUATES THE SCAN RESULT

## DIGITAL MODELS BASED ON PROVEN TLS TECHNOLOGY HAVE A HUGE POTENTIAL FOR USE AT CPC FACILITIES

**— What was the agenda of the seminar?**

— On June 23, a seminar for managers on the technology and capabilities of TLS was held directly at the facility. University staff demonstrated in the field the processes of work and data processing, considered the advantages and disadvantages, as well as potential areas of application of this technology. For more than an hour and a half,

an intensive exchange of experience took place at the facility, the problems of maintaining tanks at a high level of safety and reliability, and the prospects for using TLS to solve these problems were discussed.

**— When is the second stage planned?**

— The second stage is scheduled for August-October 2023 and will be aimed at obtaining detailed information on

the state of the reservoir wall according to the TLS results.

**— Please rate the practical value of the project based on the experience of the implementation of the first stage.**

— Digital models based on the proven TLS technology have a huge potential for application at CPC facilities. The TLS will make it possible to build a full-fledged digital twin of equipment, buildings and structures, as well as CPC technological processes, predict potentially dangerous elements, schedule tank maintenance in a timely manner, which will become a new page in the development of methods for ensuring the reliability and safety of the pipeline transport system. ●



AUTHOR  
PAVEL KRETOV

# UNITING EFFORTS

IN MID-JUNE, ST. PETERSBURG HOSTED THE REGULAR XXVI ST. PETERSBURG INTERNATIONAL ECONOMIC FORUM. “SOVEREIGN DEVELOPMENT IS THE FOUNDATION OF A JUST WORLD. LET’S UNITE OUR EFFORTS FOR THE SAKE OF FUTURE GENERATIONS” – WAS THE MAIN THEME OF SPIEF-2023

Over the four days of the Forum, 17 thousand guests representing more than 130 countries of the world took part in it. The most numerous delegations came from the UAE, China, India, Myanmar, Kazakhstan, Cuba and the USA. Representatives of over 3,000 companies took

an active part in the discussions of the business program. More than 900 agreements for a total of 3.9 trillion rubles were concluded at the Forum. The largest number of them concerned the industrial and construction sectors.

As is tradition, the key SPIEF event – the Plenary Session – was

attended by President of the Russian Federation Vladimir Putin. In particular, he stated the expansion of contacts “with reliable, responsible partners in countries and regions that today act as locomotives, drivers of the global economy”. The President of the People’s Democratic Republic of Algeria,

Abdelmajid Tebboune, who spoke next, called for “not to politicize the economy”. Many international companies are now acting in this way, continuing and developing their economic activities in Russia.

Sanctions have played not only a negative, but also a positive role: the vacant market niches have opened up new opportunities for both domestic industry and states that are not participating in the sanctions. The issues of import substitution of products began to be resolved in the country at an accelerated pace.

“Of course, we did not sit idly by and identified 140 key positions for ourselves that require delivery from alternative manufacturers. Of this number, we already have analogues for 136 positions and can replace them”, CPC General Director Nikolay Gorban told RIA Novosti correspondent at the Forum site.

“The logic and policy in matters of import substitution for us is not to break and change everything at once”, added the head of the Consortium. “We are following, let’s say, the path of elimination. This means that when the end of the resource life of the equipment approaches and it is necessary to change something, and there are no spare parts, then by this time we have already carried out testing, scientific developments, and we can implement them or have already implemented them”.

The CPC delegation discussed the issues of import substitution, in particular, with Yury Zaitsev, Head and Chairman of the Government of the Republic of Mari El. The region has large centers of machine and instrument engineering, metalworking, production of automation equipment.

At the specialized sessions of the SPIEF, it was repeatedly noted that Russia must first of all deal with technologies of its own development, expand production capabilities, and have ready-made solutions in critical areas. Digital sovereignty



is often mentioned among the important areas in this regard, as the digital economy has already undoubtedly become an important component of the world order.

The topics of digital transformation of the enterprise, as well as strengthening cybersecurity, were discussed by CPC representatives with Olga Kharlamova, Vice President, Director of the Key Clients Department of Sberbank PJSC. In particular, cloud

solutions, automation of primary document management, architectural consulting and more were discussed.

Sberbank is a strategic partner of CPC, providing cash services for the Consortium’s activities and organizing a salary project for its employees. The Bank, with its extensive branch network, fully meets the needs of CPC-R JSC in all regions of the Consortium’s operations in Russia.



Four years ago, it was at the SPIEF site that CPC-R JSC and Sberbank-AST CJSC signed a cooperation agreement, which made it possible to promptly, professionally and safely solve procurement tasks in the interests of CPC using an electronic trading platform.

The topics of national health were also in the focus of the Forum discussions. These are the issues of drug safety – the availability of medicines, the achievement of financial stability and technological independence of pharmaceutical industries, the implementation of state guarantees for the provision of medicines to society, and the activity of the Healthy Society project with a demonstration of advanced scientific and innovative developments in the field of medicine and pharmaceuticals. About 200 leading health experts spoke to the participants.

Andrey Kravchenko, head of the Novorossiysk City municipality, conveyed gratitude from local residents to the CPC team at SPIEF. Three primary healthcare facilities were commissioned in the municipality: a general practitioner's office (GPO) in Yuzhnaya Ozereyevka and two feldsher-obstetric stations (FOS) in the villages of Vasilievka and Severnaya Ozereyevka. CPC allocated 100 million rubles for

the design, construction and equipment of facilities. Comfortable and well-equipped medical stations have become an important contribution to increasing the availability of quality medical care not only for local residents, but also for those who come to the Black Sea coast for a vacation.

Cooperation between the international consortium and the regional administration in the field of healthcare was one of the topics of the working meeting between CPC General Director Nikolai Gorban and Governor of the Astrakhan Region Igor Babushkin. At the beginning of 2023, CPC delivered a new CT scanner worth almost 60 million rubles to the Alexandro-Mariinsky Regional Clinical Hospital. The material base of the Astrakhan Regional Social and Rehabilitation Center Rus was strengthened with modern equipment in the amount of about 20 million rubles.

The most important component in the formula “national health

and well-being of people” is physical culture and sports. Discussions on the future of sport became an attractive topic of the Forum. In all regions of its presence, CPC also supports this direction. Recently, two sports stadiums in the Iki-Burulsky and Chernozemelsky regions of Kalmykia were built using the Consortium's charitable funds. Within the framework of SPIEF-2023, the results of interaction and further cooperation were discussed by CPC General Director and Head of the Republic Batu Khasikov.

One of the last in sequence, but at the same time one of the most significant in terms of significance, was the meeting of the CPC General Director with the Minister of Energy, Industry and Trade of Kazakhstan Almasadam Satkaliyev. The head of the Consortium informed the minister about the results of CPC work in 2023 and about the company's immediate production plans. In particular,

## IN ALL REGIONS OF ITS PRESENCE, CPC SUPPORTS AN IMPORTANT AREA – THE DEVELOPMENT OF PHYSICAL CULTURE AND SPORTS

Nikolay Gorban informed that by the end of the year the Debottlenecking Program (DBNP) will be fully completed, which has already ensured the mechanical readiness of the Tengiz-Novorossiysk pipeline system to increase the throughput capacity to 82 million tons of oil per year.

During the conversation, it was noted that currently CPC is an important component of world energy security. The consortium supplies about 80% of Kazakhstan's export volumes of oil to world markets, being the safest, logistically verified and economically favorable route for it.



### AUTHOR

ALEXANDRA RABINOVICH,  
TEAM LEADER, PERSONNEL TRAINING  
AND DEVELOPMENT (TRAINING MANAGER)

# THE ART OF RESCUE

THE COLLAPSE OF BUILDING STRUCTURES, AN ACCIDENT OR AN ELECTRICAL INJURY – IN THESE AND OTHER SITUATIONS, THE LIFE OF THE VICTIM OFTEN DEPENDS ON TIMELY FIRST AID. THEORY IN THIS CASE IS NOT ENOUGH – IT IS IMPORTANT TO CONSOLIDATE THE KNOWLEDGE GAINED IN PRACTICE SO AS NOT TO LOSE PRECIOUS SECONDS AT THE RIGHT MOMENT

In 2022, the Standards of CPC-R JSC and CPC-K JSC “First Aid Training for Employees” were updated.

As a result of the changes, all employees of the company will undergo first aid training once every five years, and for some categories

of personnel, in accordance with legal requirements, training will be held once every three years

To maximize the effectiveness of the training, the Health Services and Staff Training and Development Department have supplemented the standard training program with

first aid techniques for children and the practice of using an automatic external defibrillator.

Until November 2023, it is planned to train 1,071 company employees in all regions of CPC presence. The organization of the process and the participation rate is provided







by the Personnel Training and Development Department.

The two-day first aid course is as practical as possible. Training is conducted by instructors with real first aid experience: rescuers, qualified

if a person is choking. All practical techniques are practiced on people of different builds in order to clearly show how to act in cases where the victim is taller than you, wider in the shoulders and heavier.

During practical exercises, panic is simulated among the victims, artificial blood is used, and mock-ups of various injuries are used.

Participants share their opinions and impressions about the course.

“The information is presented vividly and figuratively, precisely for the purpose of memorizing at the level of muscle motor skills, and not writing it down in a notebook”, senior attorney Elena Konashenkova characterizes the practical orientation of training.

To ensure that training participants are not confused in a real situation where help may be needed, instructors create the most realistic environment.



## “THE FIRST AID TRAINING FOR THE VICTIMS IS THE BEST EVER HELD IN THE COMPANY”

doctors, EMERCOM staff. Instructors illustrate each block of theory with real examples from their own experience. Training is conducted in small groups of up to 15 people — this format allows the instructor to pay maximum attention to the participants and develop practical first aid skills for each trainee.

Practice, practice and more practice is the motto of this training. Participants practice cardiopulmonary resuscitation (CPR), artificial respiration, bandaging for bleeding, first aid for loss of consciousness, and the Heimlich technique to help

“The first aid training for the victims is the best ever held in the Company”, says administrative assistant Yekaterina Golubchikova. “The skills and knowledge gained are invaluable!”

“The trainers are passionate about their work and they managed to infect the rest of the trainees with love for the work”, — Larisa Akchurina, HR specialist, shares her impressions of the training. “Excellent practice — everything is clear and understandable. It even turned out to be team building to some extent.

Positive emotions in the comments are typical not only for those who have been trained. Instructors, thanks to whose knowledge and practical experience each participant of the training could actually feel the full degree of responsibility for the use of correct and high-quality methods aimed at effective results, also give positive marks.

“I liked the team of CPC specialists because they perfectly “grasp” the logical schemes of first aid, actively ask questions, clearly work

out practical tasks and understand the processes”, says Boris Ovodov, Russian Red Cross instructor. “This indicates an absolute understanding of why the employees of an oil pipeline company need knowledge of first aid”.

An important part of the training is information about the legal aspects of providing first aid — when

you can do it yourself and when it is better to wait for a doctor.

Based on the results of successfully attending the course and completing the practical tasks in full, each participant receives a certificate of completion of the first aid course and a guide with basic information on this topic.





AUTHOR  
PAVEL KRETOV

# IN THE MIDDLE OF THE ROUTE

IN THE MIDDLE OF SUMMER, A CORPORATE EVENT WAS HELD IN THE CAPITAL OF THE REPUBLIC OF KALMYKIA, AIMED AT IMPROVING LEADERSHIP PRACTICES IN THE DEVELOPMENT OF THE CPC SAFE WORK CULTURE



**T**op managers, heads of all CPC production facilities in Russia and Kazakhstan were welcomed by the Chairman of the Government of the Republic of Kalmykia Gilana Boshomdzhieva.

"We are grateful to you for choosing our republic as a platform for such a non-standard team-building event. We hope

the meeting will help the Consortium employees in developing their competencies".

CPC General Director Nikolai Gorban recalled that back in 2017, the Consortium was one of the first companies in Russia to join the Vision Zero international zero injury initiative. In six years, the company has achieved a lot and continues to confidently move forward.

BACK IN 2017, THE CONSORTIUM WAS ONE OF THE FIRST COMPANIES IN RUSSIA TO JOIN THE VISION ZERO INTERNATIONAL ZERO INJURY INITIATIVE

our guests will enjoy it: for many years we have been making significant efforts to improve the comfort level of the urban and rural environment, and CPC plays a very important role in this process", noted Giliana Gerasimova. "We are confident that

Taking into account the practical experience of CPC, its shareholder companies and the global oil industry as a whole, as well as based on the results of independent diagnostics, the HSE Strategic Plan for 2022–2024 has been developed and is being implemented.

**PAVEL MOSKATOV,**  
MANAGER, OPERATIONS  
AND MAINTENANCE:

« A leader is by no means a social burden. It must be part of a person's nature. If he considers that he has been "loaded" with leadership, you will not get the necessary return from him. The leader must be purposeful, competent and, of course, be able to captivate. An important leadership practice is site visits to correct staff actions.







"I am convinced that all incidents are preventable and we will be able to achieve a complete elimination of accidents and emergencies at CPC facilities. The corporate program "Leaders

of the Safe Work Culture" adopted by us is based on the equal interest of managers and all employees, they value it and make every effort to ensure it", Nikolay Gorban emphasized.

**SERGEY AKSENOV,**  
MANAGER,  
SHORE FACILITIES  
AND TANK FARM:

« Being a leader means being an example for everyone: "I know the way, I follow it and show the way to everyone else." It is also important to be caring and purposeful. How do I apply leadership practices? Now we

are cleaning the reservoir at MT, and my immediate supervisor and I made a leadership visit there. All the employees went up from the floating roof of the tank to the observation deck, and we had a conversation with them. We talked with the performers who directly performed high-risk work for the erosion of oil sludge deposits, cleaning and degassing of the SVFRT-2. As a survey, we found out whether employees understand the risks, what importance they attach to safety issues. Such a leadership visit allowed us to make sure that the contractor takes the matter with all responsibility, complies with all requirements, uses personal protective equipment, knows about the procedure for carrying out these works.

At the moment, according to the Bradley scale, the Caspian Pipeline Consortium has reached a new level — an independent level of Safe Work Culture. It is characterized by the high involvement of the staff and representatives of contractors in the continuous improvement of safe working conditions. This means that a person's personality and the awareness of making all his decisions come to the fore.

In February 2022, the corporate standard "Leadership in the development of a Safe Work Culture" came into effect at CPC. Its provisions have been adopted in all divisions and in all regions where the company operates. In accordance with the standard, any employee of CPC and the contractor who is able to motivate and inspire colleagues not only to consciously comply with the requirements of labor protection and industrial safety, but also to take active steps to develop a Safe Work Culture can be considered a leader.

During the three-day seminar, the participants reviewed the results of the implementation of the Safe Production Culture and the Vision Zero concept of zero injuries,

**VLADIMIR DMITRIEV,**  
DEPUTY MANAGER,  
SHORE FACILITIES  
AND TANK FARM  
MAINTENANCE:

« To be a leader means to be a person who will be followed by colleagues. A leader must be an example, be able to motivate and organize. The leader must always wear personal protective equipment and remember the right to stop work.



studied problematic issues and expert recommendations. Improvement roadmaps were also formed based on the change matrix. With full dedication, managers and specialists practiced working out cases on investigating dangerous situations and incidents and identifying their root causes, formulated new

proposals for changes to the corporate standard «Leadership in the development of a Safe Work Culture».

AT THE MOMENT, ACCORDING TO THE  
BRADLEY SCALE, THE CASPIAN PIPELINE  
CONSORTIUM HAS REACHED A NEW LEVEL —  
AN INDEPENDENT LEVEL OF SAFE WORK  
CULTURE



**DENIS SHEVEKA,**  
SENIOR SPECIALIST,  
MARINE OPERATIONS:

« To be a leader is to inspire the people around you and unite them around you. A leader must be attentive, be able to communicate with people and be purposeful. I remember how I came as a young specialist to an officer position in the fleet, where I was surrounded by adult sailors, whose authority I still had to win, and after a while I learned to convey my principles to them.





AUTHOR  
DMITRY KONSTANTINOV

# HELP COMES IN TIME

IN JUNE 2023, IN ORDER TO PROTECT THE POPULATION AND TERRITORY FROM THE NEGATIVE IMPACT OF FLOOD WATERS, THE PERSONNEL AND SPECIAL EQUIPMENT OF STARSTROY LLC PROFESSIONAL EMERGENCY RESCUE FORMATION, A DIVISION OF CPC-R GENERAL CONTRACTOR ELIMINATED THE THREAT OF FLOODING IN THE VOZDVIZHENSKOYE VILLAGE, APANASENKOVSKY DISTRICT OF THE STAVROPOL KRAI

In the history of mankind, most settlements arose on the banks of rivers. The river, as a source of water, food, and later electricity, also provided convenient transport links and, last but not least, provided the villagers with comfort in getting rid of all that was superfluous: construction debris,

household waste. For centuries, people carelessly polluted the rivers that give life and prosperity to their cities and villages, thinking that retribution is somewhere else far away, in a couple of generations at most. And now it has come, this is retribution.

In 1874, on the banks of the Kalaus River (on the modern border

of the Stavropol Krai with the Republic of Kalmykia), the village of Vozdvizhenskoye appeared.

They built it reasonably, considering the only unpleasant river factor in the presence of all other bonuses — the spring-summer flood. It, according to the observations of the villagers, was regularly regulated by

nature. Excess water was taken over by floodplains and channels, thanks to which the village functioned properly during this critical period. Here they sowed bread and raised cattle, churned butter, pottery, took meat and grain to the fair in the provincial city of Stavropol. The Soviet period, as well as modern history, was also quite prosperous for the Vozdvizhenskoye village, and the river did not cause any particular inconvenience, although the threat of flooding due to the littering of Kalaus with waste from at least five settlements was repeatedly put under consideration.

At the beginning of the 21st century, the CPC oil pipeline was laid nearby. The passage of the steel pipeline downstream deep under the Kalaus riverbed, new jobs, hundreds of millions annually in support of the regional budget. Apanasenkovsky district, where the Vozdvizhenskoye village is located, was declared sponsored, as well as any region of the presence of the international project.

At the end of May — beginning of June, a record amount of precipitation hit the Stavropol Krai. Monthly norms were exceeded every day, there was a downpour and hail. At the end of the first week of June, the abnormal



reed floodplain, clogged with debris, like a faulty filter. The channels no longer functioned, and the water went back, expanding the riverbed in the area of the Vozdvizhenskoye village. The threat of flooding of about 10,000 hectares forced the authori-

ties to declare an emergency in the Apanasenkovsky district at 12:00 on June 8, 2023.

water with a maximum depth of one and a half meters. In floodplains, neither the usual technology nor people would have coped with such a task. People in boats, of course, will enter the floodplain, but they will pull out a maximum of a hundredweight of plastic bags per shift. And larger garbage simply will not withstand boats. Use helicopters?

THE THREAT OF  
FLOODING OF ABOUT

10 THOUSAND  
HECTARES FORCED  
THE AUTHORITIES  
TO INTRODUCE  
AN EMERGENCY  
REGIME

precipitation stopped and the danger of regional significance seemed to have receded. But not for the Kalaus River.

Hydrologists, oil pipeliners and everyone who somehow deals with substances in liquid and gaseous states use the term bypass. "Supported" by anomalous rains, the water of the Kalaus River in the first days of June passed the Vozdvizhenskoye village without flooding the territories. However, after 8 km downstream, the river flow, enhanced by precipitation, collided with the «dam» of the

## FORCES AND MEANS

According to the data of the Main Directorate of the EMERCOM of Russia for the Stavropol Krai, obtained as a result of an aerial survey, the "garbage dam" that locked Kalaus was at least half a kilometer in length. It needed to be urgently cleared, but the situation was complicated by the fact that the work had to be carried out on







A river dredge, that is, a ship with a large displacement, would quickly clear everything (although it would also quickly get stuck in the reeds in shallow water), but how could it be transported to the disaster area by a river with a depth of one and a half meters?

The complicated situation was resolved by the experience of exercises that were repeatedly held in the area of the underwater crossing of the CPC oil pipeline. Such drills, aimed at checking the readiness of specialists and equipment, are regularly held jointly by the employees of CPC, the contractor organization for oil pipeline maintenance in Russia, STARSTROY LLC, with the participation of the EMERCOM of Russia and state supervisory authorities. Tasks of any complexity are being worked out, and once during an exercise to eliminate a simulated oil spill here, on Kalaus, a Komatsu PC 130-8 floating excavator was used on SWAMPKING caterpillar pontoons, model SK 200SDS-4E.

In the early 1960s, the Soviet design bureau Gazstroy Mashina designed an excavator on a pontoon chassis for the construction and maintenance of pipelines in wetlands. The project was approved by Glavgaz of the USSR. Some time later, the idea was creatively reworked and put into industrial production by the American company Wilco, the Finnish company Remu, the Chinese brand CZDM and others. Now the domestic company Grafft is engaged in the production and supply of such machines in Russia.

The rotary tower of the serial excavator is mounted on two pontoon—that resemble World War I tanks. But they can swim! Each of the pontoons is encircled by a caterpillar, both as the only mover and to overcome difficult terrain. Inside are hydraulic motors. The design provides the machine with buoyancy with entry into water bodies with a depth of up to 1.5 m.

How is the bucket of such a “dredge” able to cope with a large load? After



all, the unit is not even on the pavement, where cranes and excavators usually rely on special hydraulic supports, but in the water, where everything is somewhat different with overturning? There are also hydraulic supports here — they extend along the sides of the pontoon tracks and stand on the bottom of the river while the machine is running. For a floating excavator, the main thing is to get there and get back. Everything else it already does in compliance with the usual laws of physics.

There are currently two such floating excavators in the Southern Federal District of Russia, both are operated by STARSTROY LLC.

#### CHRONICLE OF THE OPERATION

The day before the introduction of the high alert regime for the functioning of the link of the Apasankovsky municipal district of the regional territorial subsystem of the Unified State System for the Prevention and Elimination of Emergencies, everyone “concerned” was ready.

### THE COMPLICATED SITUATION WAS RESOLVED BY THE EXPERIENCE OF EXERCISES THAT WERE REPEATEDLY CONDUCTED IN THE AREA OF THE UNDERWATER CROSSING OF THE CPC OIL PIPELINE

Having analyzed the situation, the Main Directorate of the EMERCOM of Russia for the Stavropol Krai on June 7 requested CPC to provide special equipment. The management of the Consortium promptly responded to the situation and transferred the relevant powers to the head of the STARSTROY Professional Emergency Rescue Formation Ruslan Yuferev.

On June 8, in the Divnoye village, the regional center of the Apasankovsky district, a meeting of the Commission on the emergency situation was held. Simultaneously with



the protocol event, the combined forces of the EMERCOM of Russia for the Stavropol Krai, in cooperation with the PERF of STARSTROY, reconnoitered the critical territory on light small-sized vessels using unmanned aircraft.

“Unfortunately, there were not only plastic bags, but anything, including logs, entire islands of garbage”, Ruslan Yuferev comments. “When we returned, we reported the specifics, and a protocol decision was made to use our special equipment to eliminate blockages”.

superfluous, the rescuer must be ready for any situation.

On June 11 Swimming started work and cleared 460 m of floodplain in a day. The next day, another half a kilometer of littered swamp became a river. As follows from the video recordings, the excavator floated in some places, scooping out the encountered pollution with a bucket, and in some places stood up on supports, clearing the “islands”. It’s actually quite an impressive movie: evidence of human carelessness left behind and disgustingly green, and a Komatsu bucket forced to dig through it.

On June 13, the rescue team was corrected by aerial observations of the EMERCOM of Russia: two more blockages needed to be cleared downstream. The next day they finished 140 m of the most difficult jam for the entire expedition and finally reached clear water. Further, with an asset of 1150 m of the riverbed of the Kalaus river cleared from garbage blockages, they went to disassemble the unit. The river water went into full force and Vozdvizhenskoye village was no longer in danger.

Sweat-stained blue T-shirts, white plastic helmets, orange vests — a line of pretty tired rescuers. On June 15, 2023, according to the protocol of the operational meeting of the Commission for the Prevention and Elimination of Emergencies and Fire Safety in the Apasankovsky Municipal District of the Stavropol Territory, the PERF of STARSTROY LLC completed its tasks in full.

The excavator left Krizhanovsky Emergency Recovery Center of the Krasnodar Krai on June 9. Only tomorrow? Alas, three autotrailers are needed to transport this equipment: one for each pontoon track and one for the turret with a bucket. And one more day to build. On June 10, these large-sized «trawls» reached the place and unloaded.

“While we were assembling the car, we worked out the technique of rescuing a fallen from a floating caterpillar”, says the head of the PERF of STARSTROY, — safety is never



AUTHOR  
GULNAR MALGAZH DAR

# HUMAN FACTOR

THERE ARE EXPERIENCED PEOPLE WORKING IN THE EASTERN REGION OF CPC. THERE ARE THOSE WHO CELEBRATE OILMAN'S DAY IN THE CONSORTIUM FOR THE 20TH, OR EVEN THE 22ND TIME – LIKE ELENA MUKHAEVA AND MARAT UTEULIYEV

## SPECIAL PURPOSE LAB

Elena Mukhaeva is a Testing Laboratory Head of Atyrau PS. She is responsible for oil quality control at the pipeline section within the Eastern region of the CPC. The laboratory where Elena works is part of the metrological service of the oil transportation and commerce department, which ensures the uninterrupted operation of the oil quantity and quality measurement system within the permissible error.

"My task is to ensure that our laboratory delivers quality results in a timely manner and works stably 24/7", says Elena.

The laboratory technicians, supervised by Elena, constantly monitor the quality of oil, issue quality certificates, according to which the pumping volume is calculated, and conduct laboratory analyzes

to determine the compliance of the parameters. By the way, for all the years of Elena's work in the laboratory, there were no claims from oil shippers.

Elena has been working at CPC for 22 years. Her working day begins with the acceptance of the night shift report. After that, the scope of work moves on to the day shift. Before starting work, each laboratory technician must check the availability of personal protective equipment,

the serviceability of fume hoods, measure the level of gas pollution in the room and control the temperature. After all these procedures, the laboratory technician proceeds to his main work – he conducts oil sampling and analysis. Elena values honesty, competence and responsiveness in her employees.

While still at school, Elena Mukhaeva chose the direction of her future specialty: she spent three years studying at the Young Chemist Club. In 1991 she graduated from the Faculty of Chemical Technology and Ecology of the Gubkin Moscow Institute of Oil and Gas with a degree in chemical processing of oil and gas. Elena joined CPC in January 2001 as a laboratory technician, and in August of the same year she was transferred to the position of head of the laboratory.

"I remember working during the COVID-19 pandemic", says Elena. "The laboratory team is small – only 11 people. We had to work under tight time pressure. There were cases when only six people went to work with a four-shift schedule. But the team stood firm. Thanks to the professionalism and dedication of the employees, not a single case of disruption of oil testing and unreliable analysis results. All acceptance and delivery operations were carried out smoothly and in a timely manner. Once again we are convinced that the main wealth is people. As long as there is a desire to come to work as if it were a holiday, as long as you want to do something better than yesterday, then everything will be fine.

Elena's responsibilities also include the management of the production and economic activities of the laboratory. As head of the laboratory, she must control the procurement of necessary materials, the transportation of personnel, as well as the uninterrupted supply of water and electricity. Elena also carefully monitors and cares for the plants on the territory of the station – so that it is comfortable, cozy and the air is clean.

"In front of the laboratory building, we set up a small flower garden, only two flower beds. But every year we are pleased with colorful

peonies, irises, lilies and roses. They cheer up, and consequently, the efficiency of the staff, since a positive attitude has a positive effect on performance", Elena Mukhaeva sums up.

## ATTENTION: DBNP!

As is known, the launch pad among all CPC facilities is the Tengiz PS, located in the Atyrau region at the mile zero of the pipeline system. Hundreds of employees of contracting organizations were involved in the construction of new facilities as part of the DBNP implementation.

The tasks of the Shift Supervisor Marat Uteuliyeu include not only monitoring the pressure and amount of pumped oil, but also checking and admitting the DBNP workers to the facility, monitoring the condition of the equipment and generally ensuring the safe and accident-free operation of personnel – both their own and contractors.

"Sometimes the construction of a new facility was carried out just a few meters from the operating equipment", says Marat. "For example, mainline pumps are operating in the main pumping station, while welding works and digging of communications are going on nearby. In such situations, it is necessary to constantly monitor both the con-

"At present, the acceptance is underway, the tanks are being surveyed, hydrotesting is underway", Marat explains. "The new "twenty-thousanders" are to be filled with oil from the Tengiz field.

According to Marat, even with a high level of control over production processes, sometimes mishaps can occur. One winter,

«AS LONG AS THERE IS A DESIRE TO COME TO WORK AS IF IT WERE A HOLIDAY, THEN EVERYTHING WILL BE FINE»

struction sites and the accident-free operation of the equipment.

Soon, two new tanks with a capacity of 20,000 m<sup>3</sup> will be put into operation on the territory of the Tengiz PS, which will allow to ensure the oil reserve in the tank farm in the face of increasing pumping volumes.

during a routine inspection of the Atyrau PS, Marat discovered a fox inside the reservoir. It somehow managed to overcome a great height and climb up, and then go down inside to the pontoon roof. Marat had to make a lot of efforts to safely rescue the fox from the tank and bring it down to the ground.

Marat Uteuliyeu graduated from the Atyrau Institute of Oil and Gas with a degree in construction of gas and oil storage facilities and gas and oil pipelines. Somewhat later, he received his second education there, specializing in oil and gas equipment mechanics. Marat began his career in the Balykshinsky oil and gas exploration department as a minder of the 4th category. In 1998, he participated in a large-scale project – drilling the first oil well in the Kazakhstan section of the Caspian shelf.

Marat Uteuliyeu has been working in CPC-K for 20 years out of 34 years of his professional career. He was recently transferred to the Tengiz PS from the Atyrau station.

"In the CPC system, the Atyrau PS is considered one of the largest and most complex", says Marat. "I have worked here for 19 years. In 2012–2015, I participated in the CPC Expansion Project, under which Atyrau PS was reconstructed. ●





AUTHOR  
DMITRY KONSTANTINOV

## CRYSTAL UNITY

IN PIPELINE TRANSPORT,  
THE MAIN AND STRONGEST  
CONNECTION IS WELDING.  
PANORAMA CPC  
CONGRATULATES DMITRY  
ANATOLYEVICH ZAVALINICH,  
CHIEF WELDER OF CPC-R,  
ON HIS 50TH BIRTHDAY



**D**mitry Zavalinich was born on April 4, 1973 in Dnepropetrovsk. Graduated from the Mechanical and Metallurgical College. In 2000, he found a job at the Novorossiysk Shipyard (OJSC NSRZ), where he mastered the profession of a welder.

At the same time, he entered the correspondence department of the Don State Technical University, where he received the specialty of an engineer in welding production. "For four years at NSRZ OJSC I repaired large-capacity tankers", recalls Dmitry Anatolyevich. "I took part in the development and implementation of technical solutions for the conversion of southern-type tankers to the ice class. Progressed from a welder to the head of the certification welding center — Deputy Chief Welder".

In 2004, Dmitry Zavalinich passed the competitive selection for the position of Chief Welder of the Black Sea Department of Transneft OJSC.

For six years of work at ChTN, he participated in the reconstruction of tank farms at the Grushovaya and Tikhoretskaya TOB, the reconstruction of the Sheskhari TC, and built the ESPO oil pipeline.

In 2010, Dmitry Anatolyevich started maintenance of the CPC pipeline system as an engineer for maintenance of the linear part and automatic input of a reserve of STARSTROY LLC. For three years of work in the contractor of the Consortium, he acquired the skills of personnel management as a manager for maintenance of PS and LP of the Western region of STARSTROY. As a head manager for maintenance of mainline pump in the Western region of CPC, he supervised the connection of the sections of the first stage of the Expansion Project at Kropotkinskaya PS.

### THE MORE COMPLEX THE EQUIPMENT AND ACCESS TO IT, THE MORE TECHNOLOGICALLY COMPLEX THE WELDING PROCESS IS

"As maintenance contractors, we participated in CPC exercises, and also went to unauthorized tie-ins (UTI)", says Dmitry Zavalinich.

In 2011 and 2012, Dmitry received a commendation from CPC-R for organizing emergency response and eliminating UTI. He was awarded

a Certificate of Merit from the EMERCOM for Krasnodar Territory in 2012 for preparing, organizing and conducting joint exercises at a section of the main oil pipeline of CPC-R.

Work in the Consortium began for Dmitry in March 2014 — he joined the Expansion Project team and built new facilities of the Marine Terminal Tank Farm.

"While still working as a contractor, I was able to appreciate the advantageous differences between CPC and other enterprises", says Dmitry Anatolyevich. "First of all, it is the organization of work, attitude

to people and the culture of safe production, built on the personal interest of everyone. In essence, the Consortium is a strong fusion of all the main advantages of its shareholder companies".

The experience of an engineer and a manager accumulated during

his work in pipeline transport contributed to the appointment of Dmitry as a mechanical engineer of the CPC Marine Terminal. Today, as the Chief Welder, he is responsible for the organization and quality of welding work. All objects of the pipeline system have II hazard class, so welding, like other work with fire, is under special control.

"The more complex the equipment and access to it, the more technologically complex the welding process is", says Dmitry Zavalinich. "This includes preparatory work, the welding process itself, and control. Sometimes unique tooling is developed to solve a complex problem. Such non-standard questions are worked out with the maintenance contractor on training stands and only after positive testing are applied at the facility".

"The welding process is used exclusively on decommissioned equipment or at reduced modes, which in turn affects the volume of oil transportation", says Dmitry

Zavalinich. "In this regard, the complex of welding works needs a constant search for possible technologies that can reduce the time for performing operations that affect the period of stoppage of product pumping. And here the research developments of Transneft Research Institute LLC come to our aid. For example, the technology of ultrasonic flaw detection on phased arrays was introduced at CPC, which made it possible to reduce the time required to complete a complex of construction and installation works (CIW). To eliminate defects on the linear part, the technology of installing coupling tees developed by Transneft PJSC is used, which also makes it possible to reduce the time for stopping pumping.

Long-term experience in the industry allows Dmitry to establish in each contractor organization not just service and subordination, but truly friendly relations, which, in turn, serve as links in a high-quality CIW organization. This is quite natural: in 2004, together with the specialists of the VELESSTROY company, he reconstructed the reservoirs of the Grushovaya transshipment oil base, and now he is building DBNP facilities. He himself worked in the CPC contractor for maintenance of STARSTROY LLC and knows everyone there without fail. Contact with the team of KazTransOil, the CPC contractor for maintenance in Kazakhstan, was also established in a short time.

"The level of training of a maintenance contractor depends on the competencies of CPC specialists, they are in fact our mirror image", Dmitry Zavalinich believes. "We grow and improve together. The maintenance contract is our "common child", in which both the customer and the contractor invest both their soul and strength. To support and develop the qualifications of the maintenance contractor, training sessions (TS) are provided, where assembly and welding of all possible sizes and elements are practiced.



TRANSNEFT, ESPO

Dmitry Anatolyevich has been living in Novorossiysk for 23 years. He believes that it is a dream come true to live in a seaside city that is changing noticeably for the better over time without diminishing its industrial value.

Family values are 14-year-old Timofey and eight-year-old Miloslava, very creative children. The son is engaged in vocals and theatrical skills, multiple prize winner of the festival "CPC for Talented Children" and other international competitions, finalist of the TV project "The Voice. Children".

His daughter is just starting her creative path. Helping children in the formation and development of talents is a family matter. Mom takes pictures of them, dad mounted a recording studio at home. And of course sports as a lifestyle — boxing, cycling.

"Thanks to the properly organized CPC production regime, there is enough time for hobbies and recreation", says Dmitry Zavalinich. "This is another tangible plus of the company in which I have the honor to work for almost 10 years".



2023 WITH HIS SON TIMOFEY  
IN MOSCOW



AUTHOR  
PAVEL KRETOV

# 30 YEARS OF LABOR SUCCESS

IN AUGUST 2023 THE WORLD'S LARGEST OIL TRANSPORTATION COMPANY, CPC SHAREHOLDER TRANSNEFT PJSC CELEBRATED ITS 30TH ANNIVERSARY. IN APRIL 2023, BY THE DECREE OF THE PRESIDENT OF RUSSIA, THE STAFF OF THE ENTERPRISE WAS AWARDED WITH THE BADGE OF HONOR "FOR SUCCESS IN LABOR"

**T**he Transneft team brings together true professionals — engineers, managers, workers, builders — talented, dedicated specialists. A close-knit team of oil pipeliners has rich, in many ways unique experience

in implementing large-scale projects in hard-to-reach regions and harsh climatic conditions.

Today, Transneft's staff consists of 125,000 people working in 64 regions of the country. They are responsible for over

67,000 km of main oil pipelines, including the longest oil pipeline on the planet, Eastern Siberia — the Pacific Ocean (ESPO). The Transneft system uses many pipelines with diameters ranging from 530 to 1220 mm. The pressure

in the pipes is maintained by more than 500 oil pumping stations.

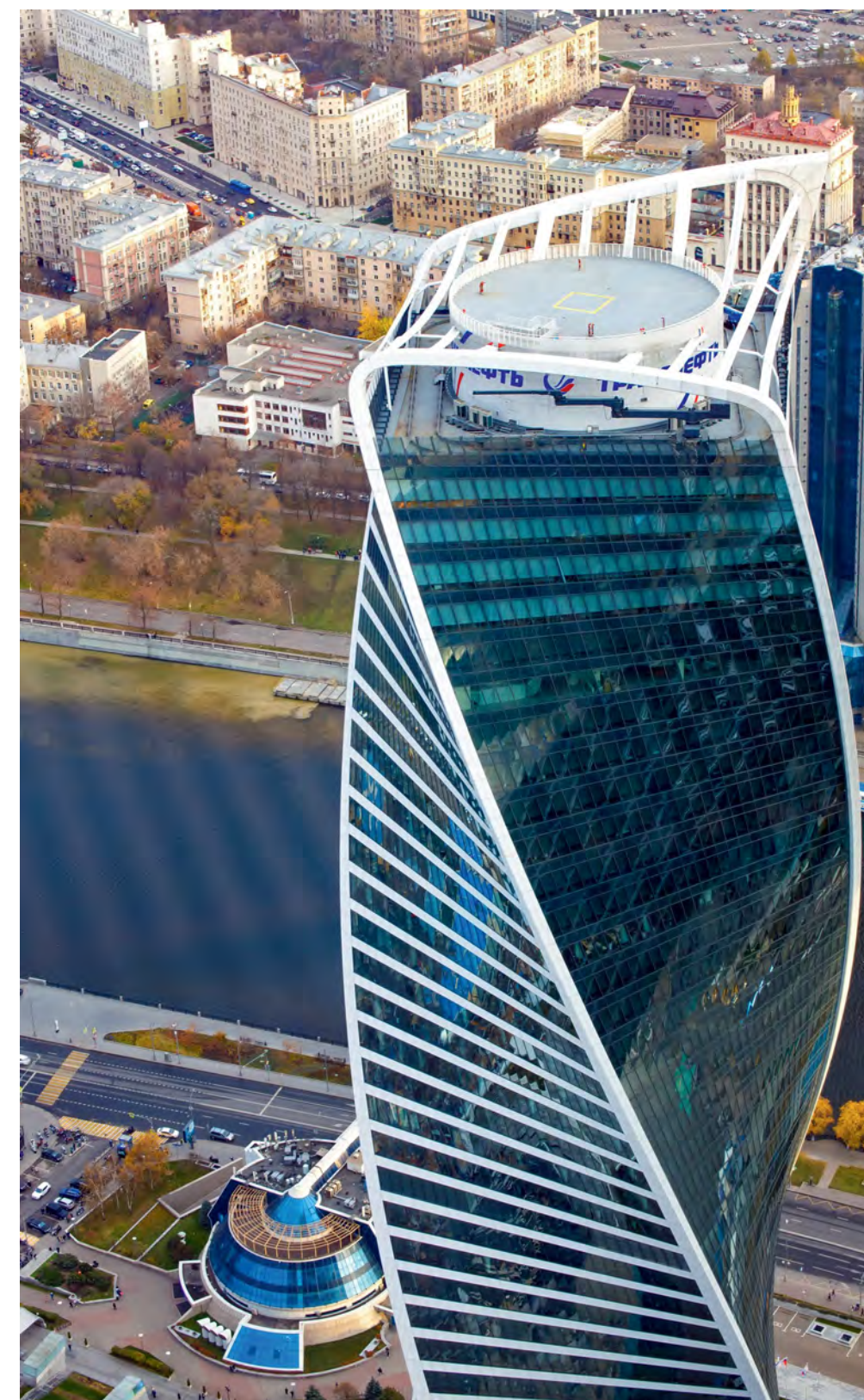
The starting point in the history of Transneft PJSC (until 2016 — Transneft JSC) was August 14, 1993, when a resolution was adopted by the Council of Ministers of the Russian Federation on the establishment of the company.

This event fixed the fact that the new economic relations in the country have finally changed the role of the domestic main oil pipeline transport. The oil pipeline system has ceased to be a functional intermediary between producing and processing enterprises, it has become a completely independent industry, the most important and integral segment of the Russian fuel and energy complex.

In the 1990s, Transneft went through a difficult period of declining production in the country, but was able to keep the infrastructure in working condition. And at the turn of the millennium, a new stage of growth began. In the spring of 2000, a 312-kilometer oil pipeline was put into operation, bypassing the territory of the Chechen Republic. This increased the reliability of the transit of Azerbaijani oil along the Baku-Tikhoretsk-Novorossiysk route.

At the same time, a pipeline was laid from the oil depot in Makhachkala. It became possible to receive Kazakh and Turkmen tankers and then send raw materials to the marine terminal of Novorossiysk. In the summer of 2001, Transneft completed the construction of the 259-kilometer Sukhodolnaya-Rodionovskaya oil pipeline. This route made it possible to ensure the transportation of black gold to Novorossiysk without transit through the territory of Ukraine.

It should be noted that the transit states persistently tried to dictate their terms. This was especially noticeable in the Baltic. After the collapse of the USSR, the Latvian Ventspils and Lithuanian Butinge oil terminals became foreign to Russia. To resist the "transit dictate",



TODAY, TRANSNEFT'S  
STAFF CONSISTS  
OF 125,000 PEOPLE  
WORKING IN

64

REGIONS OF THE COUNTRY



in 2001 the Baltic Pipeline System (BPS) was created. The new route opened a direct route for the export of oil from the Timano-Pechora region, Western Siberia and the Ural-Volga region through the port of Primorsk. At the end of 2006, the capacity of the BPS was increased to 74 million tons of oil per year.

In the mid-2000s, there was an intensive increase in production in the northern part of the Timan-Pechora oil and gas province. It was necessary to increase the capacity of the main oil pipeline Usa-Ukhta up to 23 million tons of oil per year. Two PSs (Tayozhnaya and Pechora) were built in record time, as well as an oil heating station at the Chikshino PS. A large-scale reconstruction was carried out at the main Usa PS.

At the same time, shortly before the start of construction of the Eastern Siberia-Pacific Ocean pipeline system (ESPO), the throughput capacity of the Trans-Siberian main oil pipelines was expanded. Under the Taishet+30 program, extended sections of the Omsk-Irkutsk pipeline were replaced, five PSs were

reconstructed and four new stations were built.

The year 2006 became a turning point in the history of oil pipeline transportation — the construction of the first stage of the ESPO, the largest Russian construction project, began, which allowed the domestic oil industry to enter the growing markets of the Asia-Pacific region. The first pipes of the new strategic route were welded near the city of Taishet.

“This is not just a pipe: these are bridges, railways and highways, communication systems. Everything was done at the most modern technological level”, emphasized Vladimir Putin, the head of the Russian government, who personally launched the facilities of the first stage three years later. “The ESPO builders worked in very difficult conditions: in the impenetrable taiga, without any infrastructure, without electricity. And now it’s all done.”

In parallel with the construction, and then with the expansion of the ESPO, from January 2010 to December 2012, the construction of the

ESPO-2 was going on. The 2,045 km oil pipeline was laid through the Amur and Jewish Autonomous Regions, Khabarovsk Krai and Primorsk Krai.

At the same time, Transneft continued to develop and diversify its capacities in the western direction. In June 2009, the construction of the second stage of the Baltic Pipeline System (BPS-2) started. In March 2012, nine months ahead of schedule, a new oil loading complex was launched in Ust-Luga, and the first tanker with oil delivered via BPS-2 left the port. Primorsk and Ust-Luga on the Baltic Sea, oil loading port on the coast of the Sea of Japan in Nakhodka reduced almost all the risks associated with the transit of Russian oil through neighboring countries.

At the end of 2011, the Purpe-Samotlor oil pipeline was put into operation with a length of 429 km and a capacity of 25 million tons per year. The pipeline ensured the reception of oil from the large Vankor field and, most importantly, linked Russian oil pipeline routes in western and eastern directions into a single system.

#### N.P. TOKAREV

PRESIDENT OF TRANSNEFT PJSC:

For many years, the company has been one of the general sponsors of the State Tretyakov Gallery — both exhibitions and the technical reconstruction of museum areas. We also support the Moscow Kremlin Museums, in particular, we help with the restoration of the Kremlin’s Uspensky Cathedral. Transneft co-financed the construction of the famous Rzhevsky memorial to the Soviet soldier. We participate in the creation of serious and necessary feature films for the country, such as “Ilyinsky Frontier” about the feat of Podolsk cadets, “The Nuremberg Trials” and so on. For more than

ten years we have been helping to publish the unique book series “Literary Monuments”. The Front Chronicle of Ivan the Terrible was published — we got 40 volumes. We donated these books to 93 national libraries around the world. We supported the release of a six-volume academic World History. Currently, with the participation of Transneft, large-scale work is underway to create a historical and archaeological park at the Tauric Chersonese Museum-Reserve. In total, over the past five years, we have allocated about 60 billion rubles to support science and culture. I believe that this serious humanitarian side of our work

is extremely important: if we can do something useful in this direction, then we should do it.

From an interview with the “Historian” magazine  
July 12, 2023



The new route became part of a unique project — the Zapolyarye — Purpe oil pipeline (capacity — up to 45 million tons of oil per year, length — 485 km), put into operation in 2017.

In 2012, work began on the construction of the Kuyumba-Taishet main oil pipeline, the route of which was laid mainly through the territory of the

Krasnoyarsk Territory. The route made it possible to start commercial exploitation of the Yurubcheno-Tokhonskoye and Kuyumbinskoye oil and gas fields.

In 2017, the first stage of the project was put into operation with a throughput capacity of up to 8.6 million tons and a length of the linear part of 700 km. The implementation of the second stage, with a throughput capacity of up to 15 million tons of oil per year, is planned to be completed in 2023.

In November 2019, Transneft reported on the launch of ESPO-1 to its maximum capacity of 80 million tons and ESPO-2 to 50 million tons of oil per year. In addition, within the framework of the Sever project, the company increased the export volumes of diesel fuel pumped in the direction of the port of Primorsk.

Transneft PJSC is entering its fourth decade of operation on the upswing, demonstrating steady growth of financial indicators, systematically carrying out reconstruction

and modernization of existing facilities. As priorities for the coming years, the company identified the innovative development of production activities and an increase in the level of reliability, industrial and environmental safety, and energy efficiency of the main pipeline system.

The company is dynamically improving in the areas of digital transformation and import substitution. For example, Transneft has fulfilled all of the 29 items of the import substitution program over 12 years. One of these items is an anti-turbulence additive, which is currently produced in Tatarstan and, in particular, is used in the CPC pipeline system. As a result, 96% of Transneft’s needs today are covered by domestic products. The enterprise switched to the use of domestic software and hardware in all areas of activity. Particular attention is paid to the systems of dispatch control and infrastructure monitoring, information security and cyber defense.



IN APRIL 2023, BY THE DECREE OF THE PRESIDENT OF RUSSIA, THE STAFF OF THE ENTERPRISE WAS AWARDED WITH THE BADGE OF HONOR “FOR SUCCESS IN LABOR”





# LAND OF RECORDS

MUCH ATTENTION IS PAID TO SPORTS IN THE REPUBLIC OF KALMYKIA, BECAUSE IT IS THANKS TO THEM THAT REAL HEROES CAN BE RAISED. AS PART OF THE CHARITABLE ACTIVITIES OF THE CASPIAN PIPELINE CONSORTIUM, FOUR MODERN SPORTS GROUNDS HAVE BEEN OPENED ON THE TERRITORY OF THE REPUBLIC, WHICH ARE ACTIVELY USED FOR HOLDING COMPETITIONS AT THE DISTRICT AND REGIONAL LEVELS

## Combined sports ground Orgakinskaya secondary school named after E. Chonoskaev»



Opened May 20, 2022. A football field with artificial grass, a basketball and volleyball court with a non-traumatic surface, an outdoor exercise area with a triple horizontal bar, parallel

bars, outdoor exercise equipment and other sports complexes. It is used for physical education lessons and electives in 1<sup>st</sup>-11<sup>th</sup> grades, for sports clubs, for training village youth and students (out of school hours).

Since its opening there have been:

- open republican sambo wrestling tournament among youths 2005–2010;
- open district mini-football tournament for the Cup of Honored Teacher of Russia E.N. Goryaev;
- sports day camp camp under the «Eagles of Russia» program;
- watermelon festival;
- open archery tournament for the E.M. Montykov Memorial Cup;
- district mini-football tournament among school teams, dedicated to the memory of the participants in the liquidation of the accident at the Chernobyl nuclear power plant;
- District mini-football tournament for the Cup in memory of "Uralan" player V.U. Kurnoskin among the national teams of Iki-Burulsky district settlements.

## Multifunctional sports ground of Iki-Burulsky secondary school named after A. Pyurbeev

Opened on October 27, 2021. Soccer field of 2000 m<sup>2</sup> with artificial grass surface, running tracks, athletics, volleyball and basketball courts.

Since its opening there have been:

- district football championship «Locoball» among school teams;
- district championship in track-and-field cross-country among students 2005-2008;
- championship of the district in track and field athletics quadrathlon "Shipovka younyh" among students 2009-2010;
- IV open district football tournament in memory of K.V. Khokhlov;
- Republican football tournament dedicated to the 50th anniversary of the BUDO "Iki-Burulskaya Youth Sports School named after N.B Bogaev";
- Republican cross-country tournament dedicated to the 50<sup>th</sup> anniversary of the BUDO "Iki-Burulskaya Youth Sports School named after N. B. Bogaev".

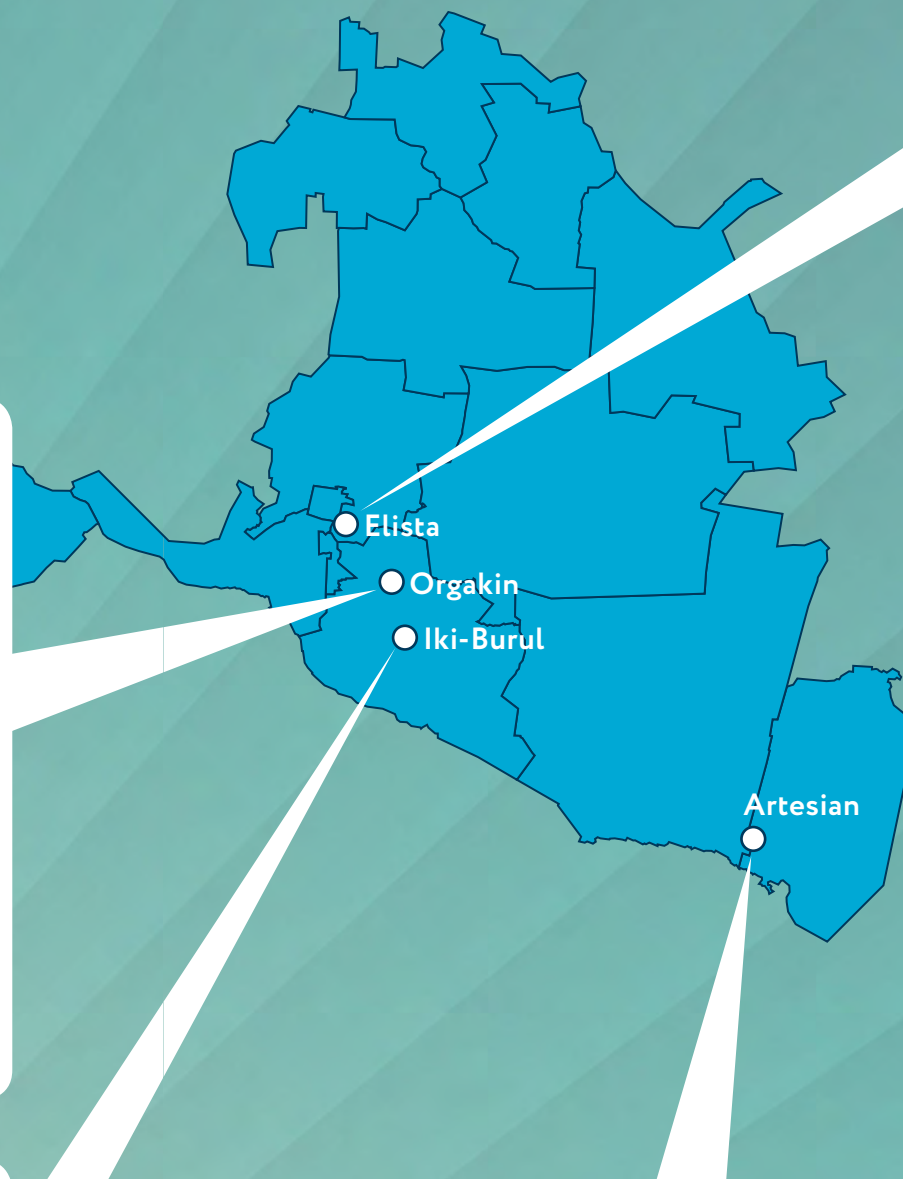


## Combined sports ground Artesian secondary school named after Z.N. Boschaeva

Opened May 24, 2022. A football field with artificial grass, a basketball and volleyball court with a non-traumatic surface, an outdoor exercise area with a triple horizontal bar, parallel bars, outdoor exercise equipment and other sports complexes. Physical education lessons are held here from 8:30 to 14:00, extracurricular activities from 14:00 to 16:00, school sports sections are open from 16:00 to 18:00: football, volleyball, karate, boxing. During the holidays and in the evening, all residents of the village have access to sports facilities.

Since its opening there have been:

- traditional health days;
- school sports day;
- «Fun Starts» for elementary grades;
- volleyball tournament for the prize of the head of the village;
- friendly matches in volleyball, basketball and football between two schools in the village;
- football tournament among the teams of the village in support of school graduates.



## Skatedrome in the Victory Park of the city of Elista

Opened December 23, 2020. The facility is equipped with jumps for performing spectacular stunts, as well as for rollerblading, skateboarding and cycling. The structure consists of inclined side and radius figures located on an area of 1000 m<sup>2</sup>. It includes a multifunctional skating facility that imitates urban obstacles — the street plaza — which also serves as an accelerating platform for other figures. There are extreme platform figures that are mandatory for a skate park — quarterpipes used in the freestyle discipline in skateboarding, BMX cycling and other sports. Equipped with a spine and several flyboxes — springboards for performing spectacular stunts in the air. During the construction, a special bioprotected coniferous timber was used, laced into two layers of plywood. Up to 30 skateboarders and BMX cyclists can train at the skate park at the same time. The advantages of the new rollerdrome were appreciated by the winners of world and all-Russian competitions.

Since its opening there have been:

- Elista City Day (September 18, 2021);
- Teegin Fest (April 16, 2022);
- Inter-regional festival of street subcultures (July 15–16, 2023).



AUTHOR  
PAVEL KRETOV

# LONG AWAITED EVENT

OVER THE 185-YEAR HISTORY OF NOVOROSSIYSK, VARIOUS SOCIAL INSTITUTIONS HAVE BEEN OPENED HERE MANY TIMES, BUT THIS IS THE FIRST TIME THAT THREE NEW MEDICAL CENTERS HAVE BEEN OPENED IN THE CITY. THIS EVENT MADE POSSIBLE DUE TO CPC CHARITY PROJECT WORTH ABOUT 100 MILLION RUBLES



At the beginning of the summer of 2023, a general practitioner's office (GPO) in Yuzhnaya Ozereyevka and two feldsher-obstetric station (FOS) opened their doors in the villages of Vasilievka and Severnaya Ozereyevka.

FOS in Severnaya Ozereevka, along with similar institutions in the villages of Bolshie Khutor and Dyurso, is part of the city hospital No. 2.

"Our old feldsher-obstetric station was located in an extension to a residential building, which was built in 1964", says Igor Karasev, acting chief physician of hospital No. 2. "Of course, there was no question of any compliance with modern standards".

The hospital serves about 5 thousand people, of whom almost 900 live in Severnaya Ozereevka. Therefore, we can say that the possibilities of the new FOS will be sufficient even when the rapidly growing population of the village will increase several times. The area of the new

point (about 200 m<sup>2</sup>) is 10 times larger than the previous one. The spacious bright rooms housed the offices of a paramedic, physiotherapy, a physiotherapeutic nurse, as well as a treatment room, a day hospital ward, a temporary stay room and ancillary facilities for domestic, technical and service purposes.

A year ago, a paramedic, the head of the FOS, Olga Bolshakova, came to the Black Sea coast from the Urals. An important factor for changing the place of residence and work was the working conditions offered in the Krasnodar Krai.

"This is not just a medical station, but a whole mini-clinic", says Olga. "With modern equipment, air conditioning and a staff rest room, often not envisaged by the project at all.

From the first steps on the new feldsher-obstetric point, it is clear that the authors of the project took care

of the comfort for patients and medical staff. You can wait your turn in the lobby with a large TV. Kids will be entertained and soothed by bright educational busyboards and toys. There is also a special path for visually impaired visitors. Many Russian polyclinics have electronic scales and height meters that automatically calculate the body mass index. But heated changing tables are not found everywhere.

As Olga Bolshakova notes, the physiotherapy room is equipped with equipment at the level of a full-fledged surgical operating room. It has an ultraviolet apparatus for



1,2  
BILLION RUBLES

CPC HAS INVESTED  
IN SOCIAL PROJECTS  
IN NOVOROSSIYSK ALONE

treating colds and viral diseases with short ultrasonic waves. The UHF device will help in the treatment of inflammatory processes in the skin, lungs and gastrointestinal tract. The apparatus for general magnetic therapy will effectively help in the treatment of osteochondrosis and damage to the musculoskeletal system. Previously, for such medical assistance, one had to go through traffic jams to the city hospital. Now all the necessary therapy can be received within walking distance.

The general practitioner's office in Yuzhnaya Ozereevka is also equipped with the latest medical technology.

"We have such a unique modern device as HELIK-scan-M, which allows us to perform rapid tests for Helicobacter pylori, a common cause of diseases of the gastrointestinal tract", says the head nurse



Svetlana Krasnoshchek. "We have all the necessary CardioChek biochemical express analyzers that detect heart attacks and strokes, which is especially important with the current increase in cardiovascular pathology. We now have ample opportunities for ophthalmological examination: slit lamps, skiascopic rulers and other equipment".

"Dreams have come true, now we don't have to go to Tsem dolina with children", says one of the first visitors to the FOS in Yuzhnaya Ozereevka, a local resident Natalia Petrova.

Feldsher-obstetric stations are designed for about 25 visits per day, GPO — for 50 visits. In the first half of the day, doctors will see patients, then work on calls.

"Modernization of primary care remains a key area in the development of our region's social sphere", said Valentina Ignatenko, Deputy Minister of Health of the Krasnodar Krai, at the opening ceremony of the facilities. "Our long-standing partner, the Caspian Pipeline Consortium, has invested 1.2 billion rubles in social projects in Novorossiysk alone. Today's opening of three institutions at once has become a truly long-awaited event!"

For many years, CPC has been supporting the healthcare sector in Novorossiysk, as well as in other regions of its presence. In particular, the city's polyclinic No. 2 was completely reconstructed in the Black Sea hero-city using the company's charitable funds. Modern

medical devices (surgical, anesthesia, resuscitation, diagnostic and others) are equipped with the Perinatal and Clinical Diagnostic Centers, City Hospital No. 1 and City Infectious Diseases Hospital No. 3. ●



AUTHOR  
DMITRY KONSTANTINOV

# ONCE AND FOREVER

11-YEAR-OLD TSAGANA BOKTANOVA TOOK PART IN THE 2002 “CPC FOR TALENTED CHILDREN” FESTIVAL IN KALMYKIA. TODAY SHE IS A CHOREOGRAPHER IN THE REGIONAL HOUSE OF CHILDREN’S CREATIVITY IN THE VILLAGE OF KOMSOMOLSKY, CHERNOZEMELSKY DISTRICT OF KALMYKIA. WE ASKED TSAGANA OLEGOVNA TO TALK ABOUT THE IMPACT OF THE COMPETITION ON HER FUTURE CAREER AND GIVE A COMPARATIVE ASSESSMENT OF THE FESTIVAL THEN AND NOW

interest and encouraged everyone. That’s how we cheered up before the performance. Successfully passed two district rounds and became Grand Prix laureates.

— How did your creative career develop in the future? When exactly did you get interested in ballet? Was it a family tradition?

— Everything turned out well with creativity. Now I have my own choreographic group. I always liked to dance for myself, but when my mother got “Oasis”, I asked her to take me into her group. I always imagined myself on stage when I watched the performances of artists. I liked the applause and when the audience chanted “Bravo!”.

You are right about the family tradition. My dad wrote phonograms, my mother danced, my brother played the accordion, my aunts are honored workers of culture of Republic of Kalmykia in the field of vocal and instrumental music, my grandfather played the accordion, and my grandmothers sang.

— Can we say that the contest “CPC for Talented Children!” had a certain influence on your creativity and professional activity?

— I guess so. I used to dream of working for the police and catching criminals like in the movies. But after the competition, I was drawn into creativity. I liked winning, receiving praise and awards.

—We realize that the festival-competition “CPC for Talented Children!” could not have existed for so long if it had been initiated only from above and artificially. The decisive role was played by local initiative, the talents of children and the energy of teachers. What is your opinion on this matter? Where is the strongest pedagogical school in the Republic of Kalmykia, where the most talented students grow up?

TEACHER TSAGANA ALBATAYEVA  
(BOKTANOVA) WITH HER GRADUATE  
STUDENTS, 2023



“OASIS” GROUP, 2002.  
TSAGANA BOKTANOVA —  
FAR RIGHT



PERFORMANCE OF THE CHOREOGRAPHIC GROUP “OASIS”  
AT THE FESTIVAL “CPC FOR TALENTED CHILDREN!” IN 2002.  
TSAGANA BOKTANOVA — FAR RIGHT

— Indeed, there are many talented children in our republic, and this competition helps them to reach the stage. There are strong schools, I can’t give preference to a specific one, but I know for sure: teachers and leaders of creative teams are truly dedicated to their work.

— Initially, the competition was held in the regions separately, and only then did the idea come up to unite the laureates, to appreciate their work at the

of the participant? Young contestants learn to overcome stage fright, expand the horizons of communication, socialize, and acquire many useful life skills. Is it so?

— Yes, of course it is.

— What is your pedagogical credo? Your ideal teacher.

— Always be sensitive with children. My ideal choreographer is Peter Timofeevich Nadbitov (founder and artistic director of the State Dance Theat-

— This competition helps self-assertion, gain courage and self-confidence, which not everyone can do on their own.

— Are there any participants in the “CPC for Talented Children” competition among your students?

— Yes, my middle group is participating in the competition for the second time, and my daughter is also participating in this team.

— History, as we see, repeats itself, becoming a good tradition. What would you advise your contestants, do you have your own recipe for victory?

— Move forward, smile and fear nothing.

## “THE CPC COMPETITION HELPS SELF-ASSERTION, GAIN COURAGE AND SELF-CONFIDENCE”

gala concerts in the Russian capital. How good was the idea, in your opinion? What did it bring to the participants and winners?

— It was a very good idea to gather the laureates in the capital of our country. Children make new acquaintances, get a motivating sense of celebration, exchange skills and gain experience of performing on a big stage.

— Can we say that participation in the competition not only improves skills and professionalism, but also has a beneficial effect on the personality

er of Kalmykia “Oiraty”. — Ed. note). I really like his work, you can say that I am inspired by him.

— How important are such competitions for the younger generation?

The editors would

like to thank

Mingiyar Batnasunov,

Representative,

Government Relations,

for his help in preparing

the material.



CHOREOGRAPHIC ASSOCIATION  
“BAYR” OF THE REPUBLIC  
OF KALMYKIA





AUTHOR  
GULZHAN ISMAGULOVA

# HEALTH IS GROWTH

HEALTH IS A CREATIVE, FLOURISHING STATE, IT IS GROWTH, NOT JUST THE ABSENCE OF DISEASE. MANY DISEASES DO NOT IMMEDIATELY ANNOUNCE THEMSELVES "OUT LOUD". OFTEN WE LEARN ABOUT THEM WHEN SERIOUS DEVIATIONS ALREADY BEGIN. THEREFORE, IT IS NECESSARY TO IDENTIFY AND CORRECT IMBALANCES IN THE BODY AT EARLY, SUBTLE STAGES

As a health coach, I can work with a client on my own or with a doctor. The principle of working with a doctor: I collect an anamnesis, which is the most important diagnostic tool. Then I compile a so-called matrix with complete information about the client, so that the doctor can get a comprehensive picture and correctly interpret certain conditions, and only then begin treatment and prescribe medications. This matrix includes both the client's own medical history and the medical history of his close relatives in order to identify a risk factor for hereditary diseases; information about the client's lifestyle — his eating habits, level of physical activity, the presence / absence of bad habits, etc.

Next comes the joint management of the client — tracking the dynamics and, if necessary, further adjustment of the doctor's prescriptions and my recommendations.

I became interested in preventive medicine after I failed to find answers to some questions related to my mother's health in the official classical medicine. Medicines prescribed by both local and foreign doctors not only did not give a positive result, but also had a negative effect on the liver and kidneys. It seems that they fought with one pathology, but others appeared.



More than a year has passed since I received a diploma in health-coach — a specialist in non-pharmacological health improvement and lifestyle modification, and also became a member of INTERAPEM — the International Association of specialists and organizations in Preventive and Educational Medicine. Health coaching is a new trend of the 21st century, which emerged after medicine began to change its paradigm — from general population to personalized and preventive-oriented.

In many countries, including Russia, a system of interaction between specialists in the "supporting" health-coach profession and doctors has already been formed. In Kazakhstan, health coaching has been practiced for only a few years, and communications with medical specialists are still being built.

No one disputes the priority of the conventional approach, as well as the achievements of modern medicine, but in connection with the introduction of more aggressive agricultural methods, new sources of information, as well as the negative impact on the environment of industrial enterprises, new etiological factors for the development of pathological conditions have appeared: poor nutrition, stress, electromagnetic pollution, overload of the body with toxic substances. Back in the last century there was no such colossal load on the human body.

As a result, most people are in the pre-disease position, the so-called pre-doctoral state. My task as a health coach is to recognize these conditions, help prevent these conditions, help prevent pathology, using a comprehensive systems approach. The disease is easier to prevent in the early stages than to treat, spending a lot of money and nerves on it.

Therefore, I wanted to understand why some approaches are not viable, and decided to get additional education at the Moscow University of Educational Medicine (UEM). After receiving a diploma, my mother became my first client. I used a variety of tools learned during my university studies, from nutrition and replenishing deficiencies to adjusting habits and stress management. Today I see changes in her analyzes and in her well-being: what she was a year ago and what she is now are two completely different people.

Since I was educated to address the health issues of my loved ones, I did not have a goal in providing further consultations with other people.

But one day one of my friends asked me for a consultation, and her sister signed up as well. Then unnoticeably the number of clients grew to over 15.

Given my work at CPC, I consult only in the evenings and weekends. On average, one counseling session takes 3-4 hours. Client age range is 27-63 years old.

I am often asked if aging can be stopped. There are no tools that would help to stop the aging process completely. However, it is quite possible to slow down this process. Of course, the topic of "anti-aging" is relevant, since the optimization of health itself implies rejuvenation of the body at the cellular level. For example, "growing" the telomeres of our chromosomes is a burning issue both among scientists and anti-aging experts, and among ordinary people who are far from medicine and science, who simply want to keep their youth for many years. But in medicine, not everything is so simple. The enzyme telomerase, which serves to prevent shortening of telomeres in chromosomes, also shows increased activity in cancer cells.

Proper nutrition is one of the most powerful tools in the fight against premature cell aging. It is necessary to eat the most natural food, which enhances the antioxidant defense of the body, improves the intestinal microbiota. All industrially processed foods in cans only increase the systemic inflammation of the body.

Food should be varied — these are vegetables, especially cruciferous, greens, seasonal berries and fruits, animal meat (grass-fed), seafood, eggs, legumes, nuts. Drinking water (ideally with a negative redox potential), green tea. If necessary (according to the results of the analyzes), it is worth adding nutraceuticals. Deficiencies in some substances are difficult to get through nutrition, and yet some of them play an important role, for example, for the detoxification process.

Refusal of food for a while also triggers cell rejuvenation processes. Physical exercises are also useful, they accelerate the lymph, increasing blood flow in tissues, organs, and improve mood.

Also, do not forget about the rejection of bad habits, reducing the toxic load. The aging process is accelerated by stress, and it is helped, for example, by meditation or visceral massage, which relieves spasm in the internal organs and improves blood circulation in tissues. It is important to remember that all these tools do not work without proper healthy sleep.

I am glad that now there are a lot of available sources about health. But there is also a downside: people began to uncontrollably buy supplements and thoughtlessly take them, not knowing about the true deficiencies of the body. Case study: One of my clients came to me after

## THE AGING PROCESS OF CELLS CANNOT BE STOPPED, BUT IT IS QUITE POSSIBLE TO SLOW IT DOWN

Sometimes people ask me if there is a magic dietary supplement that will help slow down aging. But supplements alone do not work, so the use of only geroprotectors (substances that slow down aging), without changing the diet, is not effective.

The topic of proper nutrition is vast, and there are many nuances in it. For example, legumes, eggs, dairy products are not suitable for everyone due to genetic features and autoimmune diseases. The condition of the internal organs also plays an important role: if there are pathological processes in the gastrointestinal tract, the intake of nutrients into the body is significantly reduced, so an individual approach is important, taking into account the history of the disease and genetics.

taking high doses of iodine on her own for a long time, trying to solve a problem with the thyroid gland. Such self-activity led to a deterioration in her health.

It is important not to bring your condition to a critical point and periodically take tests. According to the analyzes, you can understand whether the fat / carbohydrate, protein metabolism in a person is correct, how macro- and micro-nutrients are absorbed. Also, do an ultrasound of the internal organs, tracking deviations, engage in adequate physical activity, eat fully. Improve sleep and aim to go to bed between 9 and 10 pm.

The Soviet medical scientist Nikolai Amosov said: "Doctors treat diseases, but you need to get health yourself", and I completely agree with him.



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ANNA VARENTSEVA,  
LEAD ENGINEER, SOURCE AND PERMITTING DOCUMENTATION

# KNOWLEDGE IS POWER

WHO IS A HEALTH COACH, NUTRITIONIST AND WHAT IS THE DIFFERENCE BETWEEN THEM? WHAT FOODS CAN PROLONG YOUTH? NOT ALL QUESTIONS HAVE UNAMBIGUOUS ANSWERS, BUT LET'S TRY TO FIGURE IT OUT



of its effect on the human body. Nutritionists help to change eating habits, create an optimal diet and food intake, determine the daily calorie requirement, recommend the necessary biologically active supplements. Of course, nutritionists have a wide knowledge base on healthy lifestyles and in the process of counseling they will draw a person's attention to the need to fight bad habits, recommend certain physical exercises, but still the main horizon of their activity is a well-composed diet and a person receiving all the macronutrients necessary for health — and micronutrients.

The basic principle of the work of health coaches and nutritionists is: "Do no harm". When seeking advice from each of these specialists, it must be clearly understood that they do not make medical diagnoses, do not prescribe treatment for diseases, and do not provide medical services. The mission of these specialists is to consult healthy people in order to improve their quality of life and health. If there is a suspicion of deviations from the established medical standards in the client, these specialists should advise which doctor to contact, what tests to pass, what to pay special attention to the doctor during the appointment. If the client is already undergoing treatment, a health coach and a nutritionist can, in tandem with the attending

physician, adjust the diet, establish a more correct sleep and wakefulness regimen, and so on.

A dietitian is a doctor, a specialist who has an appropriate medical education. His main task is to treat people with various diseases caused by improper nutrition.

Increasing life expectancy has always been of concern to mankind. I think not every reader has heard about the Hayflick limit and telomeres, so I will try to tell in simple terms without delving into the wilds of biochemistry.

There are approximately 300 types of cells in the human body, and all of them are divided into two large groups: some can divide and multiply, while others cannot. The German scientist Leonard Hayflick proved in 1961 that the life path of a normal cell sooner or later comes to its logical conclusion. Each somatic cell divides a certain number of times, after which

cells. At the same time, telomeres each time become a little shorter. As a result, the cell, considering short telomeres as damaged DNA, stops growing. The length of telomeres and the rate of their shortening depends on age. In addition, telomeres shorten at different rates in different people. Thus, this speed is strongly influenced by stress. 2009 Nobel Prize winner in Physiology or Medicine, Elizabeth Blackburn, based on the theory of the Soviet scientist Alexei Olovnikov, found that women who are constantly under stress (for example, mothers of chronically ill children) have significantly shorter telomeres compared to their peers.

It must be clearly understood that the biochemical processes in the human body are very complex processes, which are studied by scientists from all over the world. Until the end, the algo-

But, following the well-known proverb "The rescue of a drowning man is the drowning man's own job", we can already now, with the help of dietary adjustments and healthy lifestyles, have a positive effect on our body and life span.

In nutrition, for example, advanced glycation end products (fried and smoked red meat, fried potatoes, etc.) provoke oxidative stress and inflammation in the body. An excess of carbohydrates and proteins in the diet contributes to atherosclerosis, osteoporosis, oncology, and type II diabetes. Foods with a high glycemic index (pastries, sweets, sugary drinks and other monosaccharides) also increase the risk of type II diabetes and heart attacks. On the other hand, following a diet with a low glycemic load (for example, diets based on vegetables and lean white meat), on the contrary, has a beneficial effect on the body. Calorie restriction over a long period of time (while keeping all the substances the body needs at normal levels) significantly slows down the aging of the cardiovascular system and skeletal muscles.

To maintain normal telomere length, B vitamins (B3, B9, B12), zinc and magnesium are needed.

Also, the use of omega-3 polyunsaturated fatty acids has a good effect on the "health" of telomeres. However, given our individuality, before buying and taking, I recommend taking an analysis to determine the level of these substances in the body and consulting with a therapist or endocrinologist to determine the correct dosage.

Research is being conducted around the world to find the optimal diet that could slow down the aging process and the development of age-related diseases. In this regard, a new branch of science has even emerged — nutrigerontology, which is designed to understand these issues at the molecular level. Let's hope that scientists will be able to unravel the mystery of longevity.

## THE BASIC PRINCIPLE OF WORK OF HEALTH COACHES AND NUTRITIONISTS IS: "DO NO HARM"

it dies. This discovery was called the "Hayflick limit". As it turned out, the Hayflick's limit depends on age: the older the person, the fewer times his cells double in culture. Thus, somatic cells in newborns can go through 89-90 divisions, cells taken from 70-year-old people divide only 20-30 times. For most human cells, the Hayflick limit is 50-52 divisions. In fact, there is a "division counter" inside the cell, and upon reaching a certain limit, the cell stops dividing.

Another factor in biological aging is telomeres. These are non-coding segments of DNA attached to the end of each chromosome. Telomeres act like perforations on a movie film, ensuring accurate DNA replication. During somatic cell division, two strands of DNA are untwisted and new copies of this molecule are created in daughter

cells. At the same time, telomeres each time become a little shorter. As a result, the cell, considering short telomeres as damaged DNA, stops growing. The length of telomeres and the rate of their shortening depends on age. In addition, telomeres shorten at different rates in different people. Thus, this speed is strongly influenced by stress. 2009 Nobel Prize winner in Physiology or Medicine, Elizabeth Blackburn, based on the theory of the Soviet scientist Alexei Olovnikov, found that women who are constantly under stress (for example, mothers of chronically ill children) have significantly shorter telomeres compared to their peers.

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The most important thing for any person is health, I am no exception. There is so much conflicting information in the modern world that it is simply impossible to figure it out without special knowledge. I decided to study the issues of healthy lifestyle in more detail and during the pandemic I received additional professional education at the Moscow State University of Technology and Management named after K.G. Razumovsky with a degree in "Classical and Innovative Nutrition. Nutrition and dietitian specialist. Nutritionist". I received education not for the purpose of private practice, but to apply the knowledge gained to control my health and the health of my loved ones.

Of course, in recent years, the demand for consultations with specialists in a healthy lifestyle has increased manifold. In my opinion, this is due to the rapid deterioration of the environment, an increase in the number of stressful situations, and the deterioration of the quality of products. Another problem of modern humanity is the

uncontrolled flow of information through the Internet: pseudoscientific research, theories developed "on the knee", entail misunderstanding among the inhabitants and, as a result, distrust of medical opinion. The lack of at least basic knowledge about the physiological processes occurring in the human body only exacerbates this situation.

Now there are several types of health professionals. The phrase health-coach speaks for itself. This specialist deals with healthy lifestyle issues in their broadest aspect, helping people to change their lifestyle in such a way that they can maintain their health as long as possible. This type of coaching is evidence-based, that is, a specialist in his work can use only the information and methods that have passed good randomized trials.

A nutritionist is a specialist who deals with nutrition. He understands what components the product consists of, what minerals, vitamins and other substances it contains, and how they are beneficial or harmful. Nutritionists study how food is prepared in terms



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DMITRY KONSTANTINOV

# MOUNTAINS AND SUBSOIL

TRAVELING TO ALTAI IS BECOMING AN INTERESTING ALTERNATIVE TO THE MORE EXPENSIVE AND SOMEHOW DISTANT MEDITERRANEAN. IT TURNS OUT THAT THERE, IN ALTAI, YOU CAN NOT ONLY FIND PLACES OF POWER AND PANTOCRINE, BUT ALSO FULLY RELAX IN RESORT CONDITIONS

A direct flight from Moscow Sheremetyevo to Gorno-Altai lasts 4.5 hours and costs 10-15 thousand rubles, depending on the season and the comfort of the seat. In the capital of the Republic of Altai, Yandex.Taxi is perfectly catchable, and it's just a matter of choosing a further route. If you need not only mountains, but also a lake of impressive beauty, then it will be called Teletskoye, located 160 km from Gorno-Altai, and the driver of the right-hand drive "Japanese", who still caught

Emperor Hirohito, will charge you 4800 rubles, according to the tariff of the mobile application.

On the two-lane route 84K, asphalt is shifted in places, so the distance is overcome in at least four hours. On the sides there are beautiful and somewhat reminiscent of Switzerland, bright green grassy and wooded slopes with placers of houses or grazing cows, stormy small rivers, which by the end of the route are replaced by a powerful stream of the only flowing out of Lake Teletskoye River Biya. There

is no traditional shop with sham-bals, shamanic jewelry and individual amulets along the way, but in the coastal village of Kebezen there is a small but very high-quality Chaga restaurant with a fireplace located in the center and the best recommendations from St. Petersburg snobs.

Teletskoye Lake, named after the Teles tribe that existed here, is called "small Baikal". About 80 km long, 5 km at its widest point and 325 m at its maximum depth. Ultra-fresh and practically drinking

water is cold even in summer, but in the southern bays it warms up to bathing temperatures with warm air coming, according to local residents, straight from Mongolia located 400 km from here.

Here you will also be told about Genghis Khan's cavalry guard that fell under the ice and is still standing at the bottom in full armor, about the magical power of the Love Island from the point of view of demography and innumerable reserves of gold in the local mountains. The latter is partly true, although gold is found here mainly in the bottom layers of clay. The rest you just have to believe in, then it will come true, impress and scare you properly.

## SHELTER AND ACTIVITIES

About two dozen camp sites, hotels and guesthouses located on different shores of the lake and connected by a concrete bridge in the villages of Artybash and logach, can offer comfort from three to five stars. For 3000 rubles per day you will get a junior suite in a log cottage of a camp site with all amenities: a shower, a bathroom, an electric heater and a refrigerator, but without air conditioning. There will be everything you need on the territory, including a sauna, a laundry room with a washing machine, a kitchen, a swimming pool and a barbecue.

For 6000 you will have air conditioning and double-glazed windows with laminate in a four-story stone spa hotel with steam heating from a coal-fired boiler. For 8000 you can rent an entire two-story log house on the shore for up to 20 people with all amenities. And for 15,000, glamping, fashionable in the season, is available — an inflatable tent with panoramic windows, a hot pool and a private lake. Altay Village Teletskoe, standing on the outskirts of the city, holds the glamor bar from 80,000 and higher. According to local legends, this price includes breakfast, antler baths, a jeep with a driver, a boat with a captain in a white cap and a helicopter.



The infrastructure of both villages is quite developed and tolerable. Almost everywhere they accept plastic cards, you can cash out at the local branch of Sberbank, on the shelves of the supermarket of the local chain «Maria Ra» you can find everything you need. In the same building there is a pharmacy with Teraflu and pantocrine, hardware stores, as well as a hairdresser, work on the streets in the neighborhood. When barbecues get boring, hungry tourists are ready to shelter the Sadko cafe with an assortment of good factory canteens and Chalet Teletskoye located on the other side of the river — a hotel res-

right-hand drive cars arbitrarily, depending on inspiration.

To see one extremely interesting Altai landmark — Shaman Lake — you need to get to the regional center located 70 km away. Here, on the place of the old Biya riverbed, there remains a small pond, green from lack of flow, into which fragments of a rocky shore slid down, beautifully turned by water in ancient times. Nearby and within its current course, the Biya skirts a small stone cape, the so-called Stone of Love, with a megawatt flow and violent whirlpools. And here and there are places of power where dreams come true.

## TELETSKOYE LAKE, NAMED AFTER THE TELES TRIBE THAT EXISTED HERE, IS CALLED "SMALL BAIKAL"

taurant with a beautiful panoramic view and a skilled chef.

Mobile internet here has 4G speeds, with a repeater installed high up on a mountain slope. At the same time, Yandex-taxi is not working, the phone numbers of two competing companies are written on a rickety fence. Prices are set by drivers of long-outdated Japanese

There are enough activities on the shores of Lake Teletskoye for about a week. You can go up by cable car to the snowy peak of the Kokuya mountain to look around from the ski slope up to 1.5 km high on the terrace of a cozy cafe with a bartender who announces the order by broadcasting with the voice of a circus ringmaster. You can be







a sailor today on a 250-horsepower speedboat, and tomorrow — a fisherman and captain of a 20-horsepower rubber motor boat.

Going out on your own in the middle of the lake gives you special pleasure and new views. Not everyone is lucky with fish, although there are 14 species of it here. Sailing regattas on the lake did not take root due to capricious winds, but boats and the relic motor ship “Altai Pioneer” regularly deliver tourists to picturesque mountain waterfalls. You should be careful about the gliding mode: jumping the boat on the water can sensitively echo the next morning in the back. In the logacha spa-hotel, such victims are quickly restored with a sports massage, running them through a sauna in a cedar barrel. Healing comes almost immediately, the next morning

you can get on the saddle of ATVs, especially powerful in these parts, and conquer the hills and fords.

In Artybash there is a zoo with deer, bears, lions, tigers and leopards. Here you can also ride to the observation deck on the steep bank on humble and well-trained horses, accompanied by a very competent trainer. The horses remain quiet until a herd of local mustangs comes into view. All these horses and mares belong to someone, but the owners allow them to graze freely throughout the warm season. So they hang around the shores of the lake and flowing rivers, decorating the landscape in the spirit of the romantic prose of Shukshin or Lipatov, bringing joy to tourists, and inconvenience to locals due to fallen fences and dented cars. In such cases, the owner is announced, but

as a rule, there is nothing to pay him — and the horse goes to the victim.

But in general, the locals live in a friendly way, either in the tourist business or by welding new cages in the zoo. In Artybash, for example, the population has only two surnames. The villagers are supplied with firewood by a sawmill, ringing lonely among the giant abandoned industrial zone of the village of logach, where empty silicate-brick warehouses of different times of construction are adjacent to empty reinforced concrete hangars. This is the former Kedrograd, a forestry complex of all-Union significance, which arose in the 1960s on the enthusiasm of students of the Leningrad Forestry Academy and which, even before the collapse of the USSR, had become mired first in “Byvalovshchina” (bureaucracy) and then in “Gasilovshchina” (falsification).

The best time to come here is somewhere in the second half of June. It is still cold in May, although the mountains are beautifully full of evergreens and leafy trees. Closer to the peaks, there is still snow here and there. In early June, it will almost completely melt, the formed streams will fall into the lake, raising the water level, sometimes by a meter. And then, as a rule, the weather improves and quite a resort continental summer sets in with a daily temperature of + 25–30 ° C. ●



**AUTHOR**  
AINA ZADABEK

## EPICENTER OF BEAUTY

THE KATON-KARAGAI NATIONAL PARK IS ONE OF THE WORLD NATURAL RESERVES OF UNESCO. GEOGRAPHICALLY, THIS IS THE SOUTHERN PART OF ALTAI AND LAST YEAR I WAS LUCKY ENOUGH TO VISIT THIS FABULOUS PLACE



The road from Astana to Katon-Karagay leads through Ust-Kamenogorsk, the regional center of the East Kazakhstan region. The distance is 1000 km. You can get from Astana to Ust-Kamenogorsk by plane (one and a half hours), by train (about 30 hours) or by bus (about 20 hours).

We left Astana by car. We spent the night in Ust-Kamenogorsk and moved on — along one of the most dangerous and at the same time beautiful roads in the country — the Eastern Ring highway. It has a curious alternative — the Old Austrian road, built by prisoners of war who fought in the First World War on the side of Austria-Hungary.

The Osinovsky Pass is a dizzying descent that alternates with sharp turns. Landscapes partly compensate for fear. Among the picturesque mountain ranges covered with pine forests, the legendary Bukhtarma reservoir shines. This is a man-made lake formed by the dam of the Bukhtarma hydroelectric power station on the Irtysh River. By the way, the East Kazakhstan region accounts for 40% of the water resources of Kazakhstan. The Irtysh is the most powerful river in the country, so almost all of Kazakhstan's hydropower is concentrated here.

Then our road becomes even more interesting — the foothills and slopes of the mountains have turned into a boundless yellow ocean. Sunflower, rapeseed and buckwheat are grown here, so bee hives are often found. Over 70% of honey from the national volume is produced in these regions. Those who wish can stay in the village of Kaindy and improve their health with a unique method called hive-resonance therapy. Developing this topic, I will note that East Kazakhstan is famous for pantotherapy. On the territory of the Katon-Karagay region there are many maral farms and a sanatorium where you can take antler baths and thereby prevent premature aging, strengthen

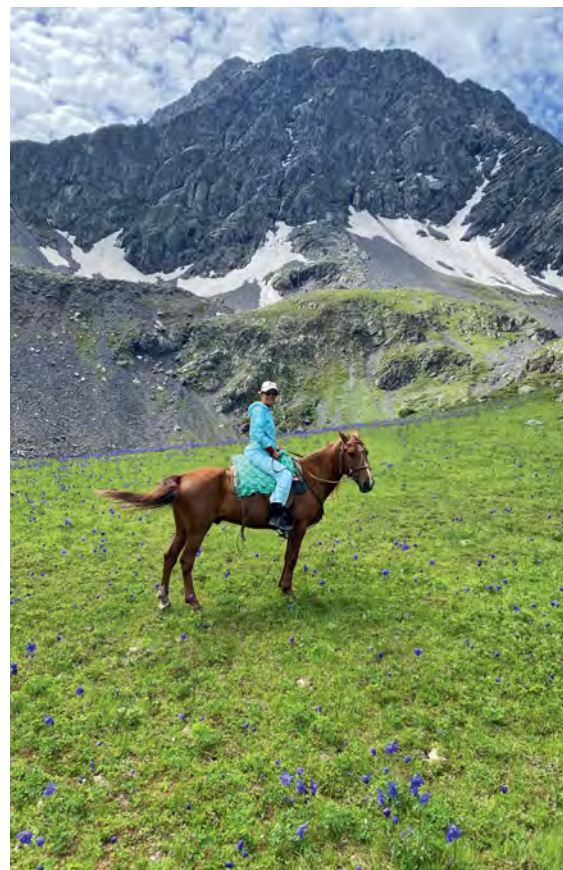


immunity, and remove toxins from the body.

In the mountains, the sun sets early and already in the almost night darkness we park at the Rakhmanovskie Klyuchi sanatorium, located at an altitude of 1700 meters above sea level. The local name of the resort is Arasan, which means "warm spring" in Kazakh. The water here contains healing radon.

At dawn, a fabulous picture opens up: in ringing silence, a thick cloud rises from the surface of the Great Rakhmanovsky Lake and wraps the surrounding mountains. The road ends here (as well as mobile communications) and further on the legendary Belukha Mountain can only be reached on foot or on horseback. We chose a ride on horseback — loaded tents, warm clothes, food and slowly set off.

The path from the Rakhmanovskie Klyuchi runs through high



mountains and a dense pine forest. There is another, less difficult route — along the foot of the mountains from Lake Yazevoe, also known as Karakol. The color of the water here changes during the day,

any place, which is not surprising: the height of the snowy mountain is 4500 m above sea level. 169 glaciers with a total area of 150 km<sup>2</sup> are known on the slopes of the Belukha massif and in the valleys. This is al-

Nicholas Roerich considered this peak to be the place from where the Earth receives the energy of the cosmic energy. At the foot of Belukha is «Kindik tas», which means «navel stone». It is also called Roerich's stone, people come here to bow to the mountain and ask to fulfill a wish.

The programs of most tours are designed for 8-12 days. Lake Yazevoe, as well as Bolshoi Rakhmanovsky, can only be reached by a full drive. But there is another option: a helicopter tour. The cost per person will be about 300 thousand tenge (about 60 thousand rubles) and in one day you can immediately see all the sights of these places.

Fast transport or meditative, quiet rest or extreme — all this can be chosen here according to preferences. Only one thing is invariable — the unique beauty of the local nature.

## NICHOLAS ROERICH CONSIDERED THIS PEAK TO BE THE PLACE FROM WHERE THE EARTH RECEIVES THE COSMIC ENERGY

the Red Book fish ide lives in the depths. Horseback riding requires extraordinary physical and emotional endurance. On the way, you will have to wade the fast Akkem River with milky white water and steep rocky slopes. Summer days in these parts can be warm and even hot, however, evenings and nights are cool. Belukha peak is visible from

most half of the entire snow cover of the Katunsky ridge. On the way you can meet brave climbers from different countries. Climbing to the top of Belukha belongs to the highest category of difficulty.

It took us two days to get from the Rakhmanovskie Klyuchi to Belukha. The mountain is shrouded in many legends. The traveler artist



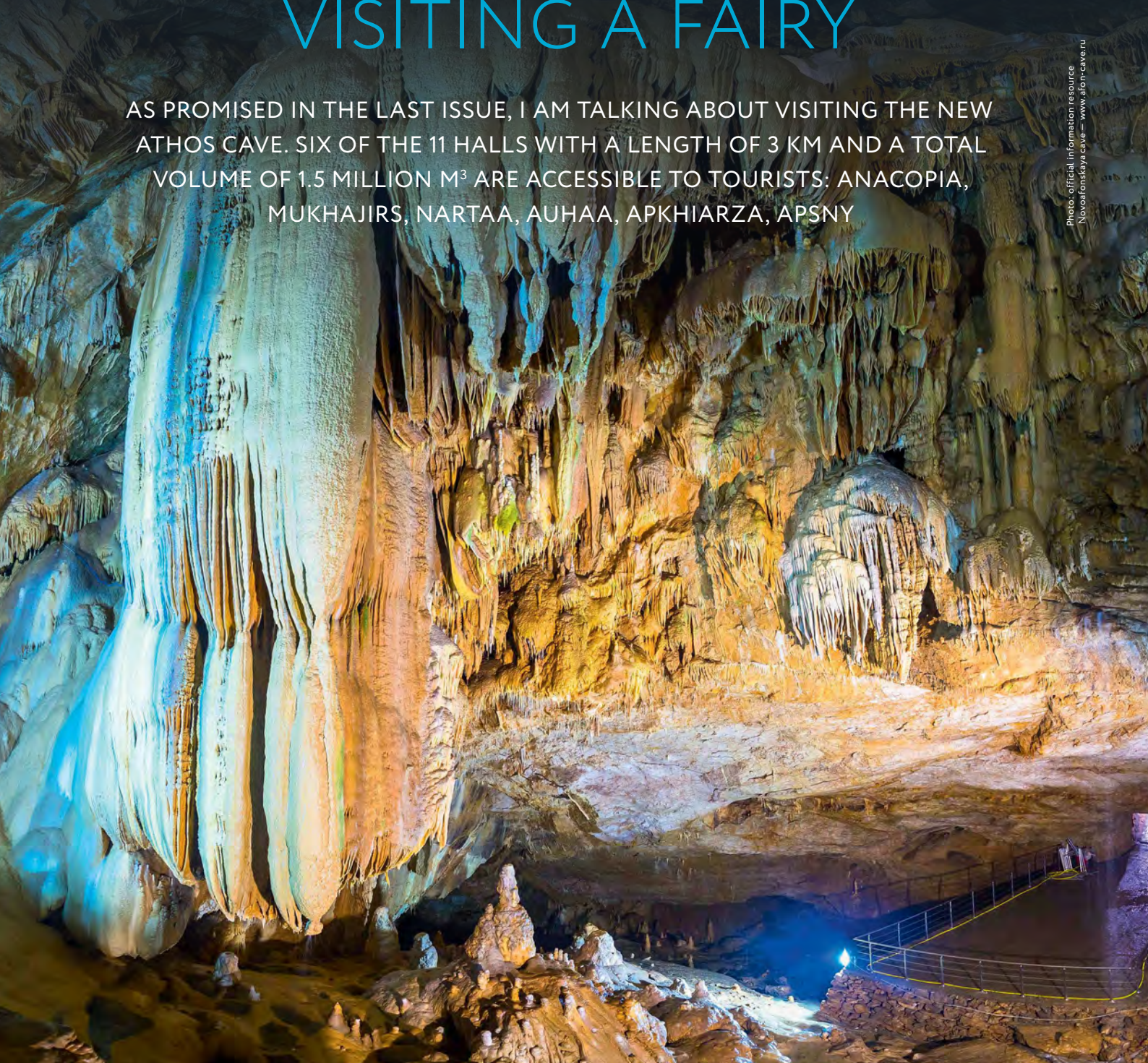


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ILONA LATSUZHBA

## VISITING A FAIRY

AS PROMISED IN THE LAST ISSUE, I AM TALKING ABOUT VISITING THE NEW ATHOS CAVE. SIX OF THE 11 HALLS WITH A LENGTH OF 3 KM AND A TOTAL VOLUME OF 1.5 MILLION M<sup>3</sup> ARE ACCESSIBLE TO TOURISTS: ANACOPIA, MUKHAJIRS, NARTAA, AUHAA, APKHIARZA, APSNY

Photo: official information resource  
Novoafonskaya cave — www.afon-cave.ru



**F**rom the central entrance to the depths of the cave, an electric train leaves every 20 minutes. It resembles the Moscow metro, but only the train assembled at the Riga Carriage Works is twice as narrow and shorter: five cars with 20 seats each. The length of the route with three stations is 1.3 km, the tourist path through six excursion halls is 1.4 km. It is important to remember that the cave is very humid, therefore slippery, and the temperature even on the hottest day does not rise above 10–12 °C. Therefore, clothes should be warm, and shoes should be waterproof.

### ANACOPIA HALL

The first hall of the cave is the same Bottomless Pit into which the discoverer Givi Smyr descended in 1961. The height of the “ceiling” here reaches 40 m — as up to the roof of a 12-storey building. The total length of the hall — 150 m, width — 300 m — more than a football stadium. You will see thousands

of stalactites, stalagmites and stalagnates in front of you. Everyone knows about stalactites and stalagmites thanks to Mark Twain’s story *The Adventures of Tom Sawyer* (the book was filmed, by the way, also partially here, in the New Athos cave). The growth of these natural architectural formations begins with a drop of water, which for many years grows calcium salts and other minerals. What hangs from the “ceiling” is a stalactite, what grows towards you from the “floor” is a stalagmite. When these formations grow together in a column — this is called a stalagnate.

The most impressive stalactite here is shaped like a human skull. This is a real miracle of nature, as if someone made it on purpose, not just by chance.

There are also two communicating freshwater lakes in the Anacopia Hall — Anatolia and Goluboe. The depth of reservoirs varies from 25 to 40 m depending on the season. To prevent the hall from being completely flooded, there are

tunnels leading to the outside of the hall.

### HALL OF MUKHAJIRS

Like the embankment in Sukhum, the largest hall of the New Athos cave is named with an Arabic word for forced resettlement. This happened in the history of the Abkhazians. Hall length — 360 m, width — 75 m, height — 50 m.

Thanks to the mineral-rich spring, the karst process in the Hall of Mukhajirs continues — the 15-meter calcite dome “White Mountain” grows by 1 mm per year. During the rainy season, the clay depression turns into a lake, but the world’s longest 120-meter cave bridge allows sightseers to easily move to the next hall.

### NARTAA HALL

The third hall is named after folklore heroes — the Narts. There is Lake Bezmyannoye, which is home to mollusks. In the cracks of clay there is also a beetle *Trechus*. The stalagmites here are red from manganese salts and yellow from iron oxides.

Photo: official information resource  
Novoafonskaya cave — www.afon-cave.ru





**AUHAA HALL**

This hall is the narrowest (10 m wide) and dry place in the cave. From the Abkhazian the name is translated as “canyon”. Stalactites, stalagmites and stalagnates are found here in all colors of the rainbow. The crystals are 50 thousand years old, and on the route you can buy almost the same ones collected in the surrounding mountains.

**APKHIARZA HALL**

The hall with red stalagmites is named after the traditional Abkhazian musical instrument. It's not just for nothing — the acoustics here are unique. Water has cut voids in the vaults, and they work like organ pipes. Everything seems to be specially created by nature for ideal concert conditions. Here on certain days you can hear the singing of the soloists of the Abkhaz State Choir.

**APSNY HALL**

The final hall of the route (the name of which is translated as “country of the soul” — this is also the name of Abkhazia) is memorable for the frozen calcite “waterfall” 20 m high and 6 m wide. cave pearls. And also by the fact that in the bottom cavities of calcite guras oolites — cave pearls — are formed for 50 years. A necessary condition for the occurrence of such a miracle is the continuous contact of calcite with running water. And the necessary condition for the emergence of a persistent feeling of falling into a fairy tale is a visit to the New Athos cave. ●







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CASPIAN PIPELINE CONSORTIUM

CPC PANORAMA Corporate Magazine. No 3 (42) September 2023. The issue is prepared by the CPC Press Service.  
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Publisher: LLC Media Service. 111116, Moscow, Energeticheskaya Str., 16. [www.vashagazeta.com](http://www.vashagazeta.com). Tel.: +7 (495) 988 18 06.  
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General Director: Vladimir Zmeyushchenko. Managing Editor: Yulia Kuznetsova.  
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Photos: CPC Press Service, Shutterstock/FOTODOM.  
Printed in the «A2Press»: 2d Yuzhnoportovyy pr., 26a, building 12, 115088, Moscow.  
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