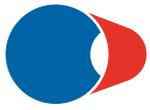
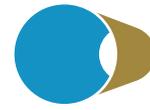


# Panorama

# CPC



JSC Caspian  
Pipeline  
Consortium-R



JSC Caspian  
Pipeline  
Consortium-K

Caspian Pipeline Consortium Corporate Edition

№ 2 (21) July 2018



*Inspiring  
Beauty*  
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# The Heart of the Oil Pipeline System

170 KM SOUTHEAST OF ELISTA LIES A PUMP STATION, COMMISSIONING OF WHICH WAS THE FINAL MILESTONE OF THE EXPANSION PROJECT IMPLEMENTATION.



## IN THE STEPPES OF KALMYKIA

On April 18, 2018, in the PS-2 control room, CPC General Director Nikolay Gorban gave a command to start commercial operation of the pump station in the presence of the Consortium's Shareholders, leaders of the Republic of Kalmykia, and numerous journalists.

The new Pump Station facilities are located near the settlement of Achinery in the Chernozemelsky District of Kalmykia. The construction workers erected frame

buildings, laid 220 km of power and control cables, and installed about 3.7 thousand pieces of equipment at the new PS.

The total cost of the station construction was slightly over 7 billion rubles.

## POTENCY, SAFETY, AND COMFORT

Before putting the station into permanent operation there was a tour held, during which the guests of the ceremony got acquainted with the modern oil transportation technologies and high culture of production adopted at all facilities of the Consortium.

PS-2 is divided into two sites: accommodation camp and production area. The camp comprises 40 two-bed buildings with every convenience, i.e. a full bathroom, air-conditioning, and satellite TV. There is a canteen, public center, first-aid post, gym, and laundry for comfortable accommodation of CPC and contractors' personnel in the camp.

In the production area, the guests were shown a fire engine depot with



**NIKOLAY GORBAN,**  
CPC General Director:

"Today we have a truly historic day, which means a lot not only for CPC and oil producers in Russia and Kazakhstan,

but also for the oil transportation system in the Eurasian Economic Union countries as a whole. We are officially putting into operation the last facility of the Expansion Project, i.e. PS-2 in Kalmykia. New, no less ambitious challenges are waiting for us in the future. The potential, vast experience and knowledge that our multinational highly professional team has allows us make no doubt: even the most challenging tasks are within our range!"

specialized vehicles, an ambulance car, and a bus to transport repair personnel to the pipe run. In the machinery and repair shop, the guests were demonstrated machineries designed to repair the main and auxiliary equipment of the pump station. »



Nikolay Gorban is giving a press conference on completion of the Expansion Project to Moscow mass media journalists from PS-2 control room

## QUOTE OF THE ISSUE

*"Only those are happy who easily take under their protection everything they love."*

Ovid



**ANDREW MCGRAHAN,**  
Chairman of  
the CPC-R  
Board of  
Directors:

"PS-2 located here, in Kalmykia, is the "heart" of the CPC

pipeline. I thank all the participants in the construction for their excellent work and successful completion of the Project. The Caspian Pipeline Consortium has become one of the largest pipeline systems and a global-scale project."



During the walkabout at PS-2, the participants to the celebration got acquainted with modern technologies and clear organization of the facility operation

In terms of production, PS-2 is an intermediate pump station without process tanks. Among its main facilities are the mainline pump house, mud strainers, surge relief system, control room, fire pump house, administration building, treatment plants, and others.

The mainline pump station has four parallel-connected pumps with a capacity of up to 5,000 m<sup>3</sup> per hour driven by 8,300 kW electric motors.

The mainline pumps are equipped with all types of auxiliary systems: lubrication, cooling systems, air pressurization system of the motor enclosure.

The safe operation of the pump station is ensured by a high-tech automated fire fighting system. Constant pressure in fire hydrants located within the entire station is maintained with the help of the fire pump house. Emergency

water is stored in two tanks, the volume of each is 300 m<sup>3</sup>.

The guests were also shown PS output pressure control station, surge relief system and evaporation ponds for treated biological and industrial stormwater.

**A JOY OF TRIUMPH**

A solemn moment has come. In the control room, via video link



Awarding the Expansion Project participants is the most joyful part of the celebration

CPC General Director Nikolay Gorban is listening to the report by Igor Mishchenko, Chief Dispatcher of the Operators Control Center about the successfully completed equipment tests and readiness to start a permanent operation of the station.

"Permit to proceed with operation in the permanent mode," instructs CPC General Director. Cheers, handshakes.

A video message of Transneft President Nikolai Tokarev added a special dignity to the occasion:

"I congratulate the CPC team and Shareholders on the completion of the large-scale project on expansion of the Tengiz – Novorossiysk oil pipeline capacity. By the way, in October 2018, it will be exactly 10 years since the adoption of the resolution on detailed design for expansion of the Consortium's

capacities. During the construction of all facilities, the most advanced technologies and equipment were used, which made this pipeline system one of the most reliable and up-to-date. Much has been done in terms of charity along the entire route of the CPC pipeline."

After that, according to the tradition that had developed during commissioning of new facilities, the participants and guests of ▶



Meeting of the CPC management, Consortium's Shareholders representatives and Head of Kalmykia sparked a keen interest among the republican mass media



**NURTAS SHMANOV,**  
Senior Vice  
President  
for Oil  
Transportation,  
KazMunayGas:

"Putting PS-2 into permanent operation is of great importance

not only for Russia, but for Kazakhstan as well. The throughput of the mainline, which transports almost two thirds of Kazakhstan's export oil, has been increased. Crude oil from the largest fields of Tengiz, Karachaganak and Kashagan is transported completely through the CPC pipeline system."



Nikolay Gorban and Aleksey Orlov are summing up the Expansion Project outcomes



Compliments of Nikolai Tokarev via teleconference added a special dignity to the occasion



**ALEKSEY ORLOV, Head of the Republic of Kalmykia:**

“With the completion of PS-2 construction, the pipeline reaches its designed capacity. This means new business opportunities for the Project participants. For the regional leadership it means that all of us did our best to fulfill the Project, and we got new opportunities for further beneficial cooperation. Hundreds of our countrymen were involved in the construction of new stations throughout the Republic. Many of them even now keep working in operating the CPC pipeline.”

the ceremony opened a symbolic valve. Nikolay Gorban, CPC General Director, Aleksey Orlov, Head of the Republic of Kalmykia, Andrew McGrahan, Chairman of CPC-R Board of Directors, Nurtas Shmanov, Senior Vice President for Oil Transportation of KazMunayGas, and Andrei Bukhaev, Sberbank Branch Manager in Kalmykia, fulfilled the honorable mission of rotating the valve.

**IT'S ALREADY HISTORY!..**

Please be reminded that the implementation of the CPC Expansion Project was launched in 2011 when the construction work was simultaneously started at 22 sites in Russia and Kazakhstan.

By the end of 2015, the construction of a third single-point buoy was completed at the Marine Terminal, PS Astrakhanskaya, Komsomolskaya, Kropotkinskaya, Tengiz and Atyrau were retrofitted, and the first new stations were commissioned: PS-3 in Kalmykia and PS-4 in the Stavropol Krai.

In 2016–2017, eight more pump stations were commissioned in Russia and Kazakhstan, and the capacity of the CPC Marine Terminal Tank Farm was increased to 1 million tonnes. With the successful completion of A-PS-3A start-up and commissioning in early October 2017, the Expansion Project was fully completed on the CPC Kazakhstan section. ■

by Pavel Kretov



# Socially Responsible

ON JUNE 12, 2018, NIKOLAY GORBAN, GENERAL DIRECTOR, CPC, SPOKE AT THE SOCIAL INNOVATIONS #INFOCUS INTERNATIONAL CONFERENCE HELD AT THE UN OFFICE IN GENEVA. CPC CEO PRESENTED A REPORT ENTITLED “CPC: SOCIAL PARTNERSHIP – INTERNATIONAL EXPERIENCE” DURING A PRESENTATION SESSION CALLED “BUSINESS AND SUSTAINABLE DEVELOPMENT: INTERNATIONAL CASES OF CORPORATE SOCIAL RESPONSIBILITY”.



In his speech, Nikolay Gorban stated that the Consortium aims charity activities at investing funds as effectively as possible into specific projects most needed by regions with high quality and maximum benefit for local residents. The basis

of all CPC social projects is Shareholder-approved CPC Charity Policy clearly defining requirements, priority areas, and a procedure for selecting and implementing programs.

“Over the past 5 years, the Consortium has implemented 286 charity projects in Russia and Kazakhstan, which averages at 57 projects a year. USD 47.8 mln was allocated for these purposes in Russia and USD 14.7 mln in Kazakhstan. We have serious plans for 2018 too. In Russia, we plan to allocate over USD 13.3 mln for 41 projects. In Kazakhstan, there will be 7 social projects implemented for a value of USD 2.3 mln,” stressed the head of this international consortium.

Support for socially significant spheres of life of society and humanitarian development of regions the CPC pipeline runs through is

one of the most important areas in the Company’s activities. Social programs have been implemented by the Consortium in Russia and Kazakhstan since the first year of its existence. ■

CPC Press Service

The SOCIAL INNOVATIONS #INFOCUS conference is an annual international platform uniting innovators from various countries making a contribution to social and economic developments the world over. The conference has been held in the UN since 2012 on the eve of a Human Rights Council Session as an intersector platform for developing joint solutions aimed at achieving sustainable development goals.



# On the Sidelines of SPIEF-2018

ON MAY 24–26, CPC DELEGATION HEADED BY GENERAL DIRECTOR NIKOLAY GORBAN TOOK PART IN THE SAINT PETERSBURG INTERNATIONAL ECONOMIC FORUM SPIEF-2018, WHICH WAS THE MOST LARGE-SCALE EVENT IN ITS HISTORY.



Over the years, CPC has been a partner of the SPIEF business program. For the Consortium, the forum has become an important platform for exchanging opinions with partners, state authorities, representatives of the regions where CPC facilities are located, building and developing mutually beneficial business relations. This year as well, the Company's management conducted extensive and multifaceted work on the sidelines of SPIEF.

## CARING FOR EMPLOYEES

Nikolay Gorban, CPC General Director, and Larisa Gorchakovskaya, General Director of VTB Non-State Pension Fund, JSC (VTB NSPF), signed an agreement on non-state pension support between the Fund

and CPC. The document is aimed at enhancing the efficiency of the non-state pension scheme for the Consortium employees and further improving their social security.

"The Consortium management realizes its responsibility not only for the present, but also for the future of its employees; we are set to maintain stability and ensure continuity in the team. That is why, development of in-house programs focused on improving the social security of CPC personnel is an obvious priority to us," Nikolay Gorban emphasized at the signing ceremony.

"A corporate pension program is one of the efficient tools that is used in the best management practices," Larisa Gorchakovskaya noted in her

turn. "We are glad to cooperate with a socially responsible employer who has been implementing the pension program for its employees for many years. Such a tool will help increase the amount of the future pensions of the Company's employees."

According to the credit and profitability rating, VTB NSPF is one of the most successful non-state pension funds in Russia. According to the results of operation in the first quarter of 2018, the mandatory pension insurance savings have increased by 27 % up to RUB 182.4 billion.

## CAPACITY = RESPONSIBILITY

Negotiations were held between Nikolay Gorban and Andrei



the conditions of prospective increase in oil production in the oil-fields of Western Kazakhstan.

The meeting was attended by Vice Presidents Jay Pryor and Bob Dastmalchi, Andrew McGrahan, CPC-R Chairman of the Board of Directors and President of Chevron Neftegaz Inc., and Sergei Kuznetsov, Vice President of Chevron Neftegaz Inc.

## DRIVE FOR BUSINESS

The Consortium did not pass by SPIEF-2018 sports events. Mikhail Grishankov, Deputy General Director, RF Government Relations, took part in the hockey gala-match "SPIEF Team – St. Petersburg Government Team" held as part of the Forum.

"In present-day business environment, sport plays a very important role," he believes. "Constantly accelerating pace of life, effectiveness of solving problems of increasing complexity require the business-process participants to stay fit. A sporty lifestyle contributes to keeping fit." ■

CPC Press Service

Saft specializes in advanced-technology battery solutions for industry, from engineering and development to manufacturing, tuning, and service.

## DEVELOPMENT PROSPECTS

During the working meeting between CPC and Chevron Corporation executives, they discussed the interaction in the field of transportation of hydrocarbon resources. Nikolay Gorban, General Director of the Consortium, presented the results of the Expansion Project of the Tengiz-Novorossiysk pipeline system capacity, current tasks that the CPC team faces and possibilities to further increase the oil pipeline capacity in

Tokarenko, Head of the Oil Pipeline Transport Insurance Directorate of SOGAZ, JSC. The parties discussed CPC liability and facility insurance issues, as well as cooperation prospects in the context of increasing the oil transportation to 67 million tonnes per year. To reach this record volume, the Consortium implemented the large-scale Expansion Project for the Tengiz-Novorossiysk pipeline system.

CPC-R and SOGAZ have been cooperating since 2008. Over that time, the insurance company has proven itself as a reliable and professional partner.

## TOPIC OF THE DAY: ADVANCED TECHNOLOGIES

Nikolay Gorban held a working meeting with David Masgrangeas, General Director of Saft, a Total's subsidiary.

The meeting was also attended by Ghislain Lescuyer, Saft Executive Director, and CPC representatives: Vladimir Shmakov, General Manager, Operations, Aleksey Khodakov, Chief Accountant, Kaingeldy Kabyldin, Deputy General Director for the RK Government Relations.

The parties discussed advanced technologies for ensuring reliable and safe operation of extended pipeline systems, energy saving aspect, and use of highly efficient uninterruptible power supply units at large industrial facilities. Following the meeting, it was decided to continue cooperation in that area.



The agreement between CPC and VTB NSPF signed!



Advanced technologies are an intersection point of CPC and Saft interests

# In the Interests of the University, to the Benefit of the Industry

THE DEVELOPING COOPERATION BINDS THE CASPIAN PIPELINE CONSORTIUM AND THE GUBKIN RUSSIAN STATE UNIVERSITY. AN AGREEMENT SIGNED BETWEEN THE COMPANY AND THE UNIVERSITY IN 2015 OPENED UP AMPLE OPPORTUNITIES TO INTERACT IN A WIDE VARIETY OF SPHERES.



operation of mainline pipeline transportation and oil systems; practice of alteration of the environmental law standards in the oil and gas sector; burning issues of judicial and arbitration practices; English for oil and gas industry specialists, and so on.

CPC is fully engaged in the development of the material, technical and educational base of the University. For example, in 2015 the roof of three buildings in the University's campus was repaired for the amount of over RUB 9 million. And this year CPC charity funds were used to renovate and equip the University's Big Academic Lecture Room with multimedia equipment. The Consortium allocated almost RUB 32 million rubles for these purposes. The ceremony dedicated to the opening of the new lecture room was attended by CPC Shareholders: representatives of the world's leading oil and gas companies, professors and students of the Alma Mater of the Russian oil industry. While speaking to the audience, Nikolay Gorban noted that it was a great honor for the Consortium to take part in this project.

On May 24, Nikolay Gorban, CPC General Director, held a business meeting with Viktor Martynov, Rector of the Gubkin Russian State University of Oil and Gas, on the sidelines of the St. Petersburg International Economic Forum.

In an atmosphere of inclusive and productive dialogue, they discussed aspects of the current cooperation between the Company and the University, and outlined plans for the future. Particular attention was given to the organization of internships and pre-degree practices of undergraduates at the Consortium facilities, as well as joint preparation of scientific publications and advanced vocational training of CPC employees at the Gubkin University.

At present, there are 62 former Gubkin University graduates who are working in the Company. Since 2006, there is a practice of advanced training and professional retraining of employees at the Gubkin University.

For example, in 2017, such training program was attended by 5 persons; in 2018 this figure will increase to 7. The topics of the training programs are various and sundry: improving the efficiency and reliability of operation of oil and gas pipeline transport systems; diagnostics, technical expertise, repair, revamping of pumping equipment; engineering surveys, designing, construction and



Important issues of the University development are addressed at the meeting of the Board of Trustees of the Gubkin University

# Box of Courage

THERE WAS A MISTERIOUS BOX SPOTTED IN THE HR DEPARTMENT OF CPC MOSCOW OFFICE. IT HAD AN INSCRIPTION: A BOX OF COURAGE. TO ALL THOSE ENTERING THE HR OFFICE AND ASKING QUESTION ON WHAT IT MEANT, HR PERSONNEL PATIENTLY REPLIED: "PLEASE WAIT FOR MAILOUT."



hospital and help children be brave is worth a lot.

We are really happy that our colleagues appreciated our idea. It turned out that we are working in a team of caring people who are ready to help children. Many thanks to all!

The most difficult was to choose toys because the Foundation has certain requirements to their type, size and material they are made of. We had to return some toys after delivery and buy something new.

From May 10 to 25, we managed to collect 68,550 rubles, and buy about 400 small prizes with this money. We got 5 large boxes, which we handed over to the Foundation.

We plan to organize similar actions in the future as well. For example, for a long time, we have been cherishing an idea of organizing blood collection in the office, since donated blood is indispensable, and it is impossible to cure children with blood disorders and oncology diseases without transfusion of blood. We hope that we will be able to handle such project, and it will evoke a warm response from the employees of the Moscow office. ■

"The efficient operation of CPC facilities from Tengiz to Novorossiysk is ensured, among others, by former graduates of the Gubkin University," he pointed out.

It is no secret that CPC has an interest in a high level of specialists' qualification that will come to work for the Company in the nearest and far future.

"The Gubkin University is an undisputed leader that deserved to be included in the list of 16 higher education institutions recommended by the World Petroleum Council as to receiving degree in oil and gas," Viktor Martynov noted with pride.

Another well-known fact is the high demand for graduates of the Gubkin University in the industry. Our Company contributes to the quality of their education as well. According to the University Rector, the Big Academic Lecture Room equipped by the Consortium is an example of how to make a lecture room comfortable, bright and functional.

CPC constantly keeps abreast of the University's life largely due to full engagement of Consortium's Director General Nikolay Gorban in activities of the University's Board of Trustees. At its meetings, all pressing topics are discussed, issues of business process, development of the University material base and infrastructure are raised, and solutions are proposed. The Board members, recognized luminaries and leaders of the oil and gas industry, have the opportunity to influence the course of teaching and training of specialists with regard to the real changes that happen in the industry enterprises over time.

A strategic goal of the Gubkin University is to develop the university as a world-class research and educational center – a global think tank in the field of technologies for sustainable development of the oil and gas industry. And the Caspian Pipeline Consortium contributes to the achievement of this goal. ■

At last we received a message to our mailboxes about the volunteer program, in which everyone who felt a desire to make happy and encourage children whose lives the doctors were fighting for could take part. Long months spent in hospital wards, tough and painful interventions – it is probably difficult for a child not to lose courage with all this. Let a vivid toy, which caused their smile, be the beginning of the long hoped-for recovery!

"An idea of participating in a charity action in support of child patients leaped into our mind long time ago," says Elena Migaleva, HR Specialist. "We considered various options and decided to start with the simplest way – collecting toys for the "Box of Courage" of the Charity Foundation Gift of Life, as it did not require special arrangements: premises, equipment, etc. However, "simple" does not mean "unimportant". A possibility to dry little tears, brighten up the stay in a

CPC Press Service

The employees of the CPC Moscow office took part in the volunteer program of the Charity Foundation Gift of Life for children with oncology and hematologic diseases.

More information about the action see at: <https://podari-zhizn.ru//main/node/7688?fullsite=1>

CPC Press Service

# Anniversary Year for Tengizchevroil

THE YEAR 2018 BECAME ANNIVERSARY FOR ONE OF THE FIRST OIL COMPANIES OF KAZAKHSTAN – TENGIZSHEVROIL. TCO SUPPLIES OIL TO THE TENGIZ – NOVOROSSIYSK PIPELINE SYSTEM.



## CAUSE FOR CELEBRATION

A quarter of a century ago, the ball started rolling: on April 6, 1993, an Agreement between the Republic of Kazakhstan and Chevron was signed on the foundation of a joint venture, Tengizchevroil. The main objective of the established joint Kazakh-American company was the development of the oil and gas Tengiz and Korolev Fields.

A festive occasion dedicated to the anniversary of the company was held in April this year in the capital of the republic. To participate in the event, the CPC delegation headed by General Director Nikolay Gorban arrived in Astana.

“Being currently one of the major suppliers of black gold to the Caspian

Pipeline Consortium system, by its reliable and highly professional performance, TCO creates all necessary conditions for CPC sustainable development. We highly appreciate our multi-year partnership and value the existing constructive relationship,” Nikolay Gorban said in his greetings.

## LAVISH TENGIZ

The development history of the Tengiz oilfield had begun long before Kazakhstan gained the status of an independent state. December 18, 1979 the first well in the field gave oil on the west part of Kazakhstan in the Atyrau Region. From that day, drilling activities at the oilfield were aggressively conducted.

At the time of the collapse of the USSR in 1991, Kazakhstan

had a poorly performing economy. The new situation required absolutely new approaches. The country’s leaders understood that in the then-conditions the oil and gas industry was to become the economy growth driver. The President of Kazakhstan Mr. Nursultan Nazarbayev relied on the development of the oil and gas industry by attracting foreign capital. The advent of the largest American company Chevron to the country in 1993 and the entering into a contract with it were called The Contract of the Century.

## RECORDS AND ACHIEVEMENTS

Tengizchevroil reached its quarter-century anniversary with remarkable performance indicators: in 2017, 28.7 million tonnes of oil were produced, which is not only the highest result in the history of TCO’s operation, but also a record for the Kazakh oil market.

Over a quarter of the century, TCO has become one of the leading enterprises for oil exploration, production, and processing.

In July 2016, in Astana, the shareholders of Tengizchevroil, LLP announced a decision on the future Tengiz Expansion Project, which implied USD 37 billion of investment. International media called it the largest investment decision in 2016 in the oil and gas sector and the largest since the fall of oil prices. At the peak of construction of the third-generation plant 20 thousand jobs will be created.



Signing the Agreement on foundation of Tengizchevroil. April 6, 1993

The new plant differs from the previous one in that it will not produce commercial sulfur. Instead, the sour gas containing this sulfur will be completely re-injected into the reservoir maintaining pressure and oil recovery.

Following the implementation of the Future Growth Project and Wellhead Pressure Management Project (FGP-WPMP), it is planned to increase crude oil production in Tengiz by 12 million tonnes. That is, from current 26–27 million tonnes of oil extracted per year up to 38–39 million tonnes.

## APPRECIATION

At the festive occasion dedicated to the celebration of the company’s 25th anniversary, the President of the Republic of Kazakhstan Mr. Nursultan Nazarbayev delivered a welcoming speech.

“For 25 years, Tengizchevroil has taken a leading position in the oil and gas market. From the launch date, crude oil production increased 30 times and reached an epoch-making milestone of three billion barrels,” he noted.

Noting the significant contribution of the enterprise to the economy of the country, the President of Kazakhstan, focused on the fact that Tengizchevroil accounts for more than a third of the total volume of oil produced in the country.

“Tengizchevroil revitalized thousands of Kazakh enterprises in a wide variety of economic sectors: machine engineering, oil and gas, transport and construction. These include taxes, dividends, purchases of goods and services from Kazakh companies. To date, within the framework of the project over 30 thousand of our citizens have already been employed, and a share of Kazakh goods and services exceeds 32 % of all expenses for the project,” emphasized the head of state.

From 1993 to 2017, Tengizchevroil’s direct financial payments to the Republic of Kazakhstan amounted to more than USD 125 billion, including salaries to Kazakhstani employees, purchases of goods and services from domestic commodity producers and suppliers (from 1993 this amount was more than USD 24 billion), payments to state-owned



Ted Etchison, TCO General Director

enterprises, payment of dividends to the Kazakhstani partner, and also in the form of taxes and royalties transferred to the state budget.

In 2017, the company paid USD 8.5 billion to the state. During the same period, TCO purchased goods and services of Kazakhstani suppliers for the amount of more than USD 2.5 billion, including over USD 1.12 billion in the framework of FGP-WPMP.

## RELIABILITY AND SAFETY

Along with the high efficiency and profitability, Tengizchevroil focuses on ensuring the occupational safety, »

## FOR REFERENCE

The recoverable reserves of the Tengiz and Korolev oilfields are estimated at 750 million to 1.1 billion tonnes of oil.

The total explored reserves in drilled and undrilled areas of the Tengiz reservoir manifold are projected at 3.1 billion tonnes, or 26 billion barrels. To date, Tengiz accounts for about 30 % of oil production from the republican level. According to experts, the reserves of the Korolev oilfield are 188 million tonnes or 1.5 billion barrels, which is one-sixth of Tengiz’s reserves.



health and environmental protection. For example, since 2000, TCO has invested USD 3 billion in projects to reduce environmental impact. Currently, TCO utilizes more than 98 % of gas.

At the company's facilities, investment projects aimed at improving equipment reliability have been successfully implemented and are in force, which, in turn, allows reducing the number of technical failures at the plants. For the period from 2000 to 2017, the volumes of sweet and sour gases that are technologically inevitably flared off-schedule decreased by 99 %.

Since 2000, the total specific volume of atmospheric emissions per tonne of produced oil has decreased by 70 %, while TCO has increased the annual oil production 2.7 times following the implementation of capital projects and investments in equipment reliability.

**FACING THE SOCIETY**

Without doubt, such high achievement of Tengizchevroil in industrial and environmental safety and

successful implementation of social programs are the merit of the company's employees. TCO strictly follows social responsibility principles. Over the years of operation, TCO has successfully implemented a number of social projects focused on the public needs in the Atyrau Region. Since 1993, the company has directed over USD 1.4 billion to finance them.

For example, at the outset of its activities, in 1993, TCO launched the 5-year Atyrau Bonus Fund Program with an investment of USD 50 million in order to do good both to the company and the local community. Moreover, TCO decided upon a close cooperation with the leaders of the Akimat of the Atyrau Region in the selection of social infrastructure projects, financing of which would be with the company's funds. The Atyrau Bonus Fund Program was completed in 1998 according to the approved plan. The Program objectives were achieved, and the outcome clearly indicated the need for such program and benefits gained from its implementation.

As a result, in 1999, voluntary social and infrastructure Egilik (Kazakh



*The President of the Republic of Kazakhstan Mr. Nursultan Nazarbayev congratulates the Tengizchevroil team on the occasion of the anniversary*

for benefit) program was launched on the initiative of TCO. The initial budget of the program was USD 4 million. TCO sequentially increased the amount of investment up to annual USD 8 million until 2003, then to USD 12 million in the next three years. In the period from 2009 to 2012, the annual budget of the Egilik program was USD 20 million, and from 2013 to the present USD 25 million. In total, over the years of the implementation

of the Egilik program, more than USD 250 million have been invested and 110 social projects have been implemented. Via the Egilik program, TCO finances the most significant projects that affect most of the population of the Atyrau Region and do not require TCO to maintain constant production, technical and financial support. The Egilik program gave a powerful impetus to the infrastructure development of Kazakhstan oil region, i.e. the Atyrau Region. There were constructed new modern buildings that decorated the regional center, multifunctional health clinics and

an annual budget of USD 1 million. Following organizational decisions made, Tengizchevroil has improved the Community Investment Program, which meets the needs and objectives of the people and production.

TCO's Community Investments Council has developed a strategic line, thanks to which the in-house production and business goals were linked with the company's strategy in the social and economic sphere. As a result, TCO's Community Investment Program implemented since 2010 and aimed at supporting

*Over the years of its operation, TCO has successfully implemented a number of social projects focused on the public needs in the Atyrau Region*

centers, well-equipped schools and other educational institutions. The Egilik program fund allowed modernizing water and electricity supply systems, and performing the long-awaited gasification of urban micro-districts and rural settlements. There are many examples of the positive impact of the Egilik projects on people's lives.

The Community Investment Program (CIP) is another TCO's initiative in the development of the social sphere in the region with

the spheres of healthcare, education and development of socially responsible business in the Atyrau Region is sustainable and systemic.

In 2010–2017, 57 projects were implemented for a total of over USD 6 million.

In 2018, TCO is financing the implementation of seven projects in the Atyrau Region in cooperation with local and international scientific production associations in the following areas:



- Building capacity in people or organizations to benefit TCO and community
- Education, training and socio-economic development
- Health education and improvement
- Environmental education and improvement

One of the strategic objectives of the company is respect by the Kazakhstan public. Therefore, TCO will continue investments in the local community and in the creation of social infrastructure in the region by implementing social projects aimed at solving the most important issues for sustainable development. ■

*by Aina Zhetpisbaeva*

**PREPARING FOR ADDITIONAL VOLUMES**

As part of Tengizchevroil anniversary celebration, a business meeting of CPC General Director Nikolay Gorban and Tim Miller, Chevron Eurasia Subdivision General Director, and Michael Kraly, Project Director, TCO Future Growth Project was held in Atyrau on April 4, 2018.

The participants of negotiations discussed the progress of third phase of TCO expansion. At the Project Director's invitation, CPC General Director plans to visit Tengiz field where the construction work is in progress to expand the production capacities with involvement of over 40,000 persons.

TCO currently produces more than 28 M tons of oil from Tengiz field.

In the course of the meeting, Nikolay Gorban pointed out: "It is supposed that delivery of additional volumes of oil from Tengiz to begin in 2022, increasing by 12 M tons per year. Respective technical solutions will allow to accept those volumes".



# Nurtas Shmanov: “I Grew Up on the Route”

NURTAS SHMANOV, MANAGING DIRECTOR FOR OIL TRANSPORTATION IN NATIONAL COMPANY KAZMUNAYGAS, JSC, HAS MADE A LONG CAREER ROUTE FROM A MACHINERY REPAIRMAN TO A PROMINENT SUPERVISOR IN THE OIL AND GAS INDUSTRY.



With the highest professionalism, profound knowledge in the field of hydrocarbon transportation and vast management experience he is recognized as one of the iconic oil workers of Kazakhstan. A winner of state and international awards, premiums and honorary titles, our interlocutor has been involved in the development and establishment of the oil and gas sector in the republic for almost 40 years.

*“Mr. Shmanov, I would like to begin our conversation with recollection of your father. This year he would have been 90.”*



Nurbek Shmanov at the time of his studies at the Gubkin Oil and Gas Institute. 1951

“My father, Nurbek Shmanov\*, was born in the village of Ganyushkino of the Gurievsky (Atyrau) Region. After graduating from the Kazakh-language secondary school in 1947, he entered the Moscow Oil Institute named after Academician Ivan Gubkin. He was the first Kazakh who graduated from the institute with a degree in Oil and Gas Transportation and Storage.

Unfortunately, my father lived a short life: only 50 years. However it was bright and busy enough. He started his career as a machine operator at pump station No. 4 of the Kaspiy–Orsk oil pipeline built as far back as in 1935. The pipeline was about 700 km long with the diameter of 300 mm. In this sphere, my father developed into the head of the territorial administration of West Kazakhstan trunk oil-product pipelines, which was part of Transneft then.”

*“What is the most memorable event associated with the work of your father?”*

“I remember when I was a 4th year school student, my father went on a business trip to Moscow and took me with him. It was in April 1968, a week after Yuri Gagarin had died. I was massively impressed by Red Square, Rossiya Hotel, Mausoleum, and parks. While walking around Moscow, we saw a Volga car on Red Square, which went to Red Square

and stopped near us when we were in front of the Mausoleum. A woman with two girls got out of the Volga. My father began to take photos and said, “Look, this is Gagarin’s wife and his two daughters.” They walked to the Kremlin wall, to the burial place of the first cosmonaut. For some reason, the photos of the grieving Gagarin’s family did not come off, while other photos taken in Moscow were successful.

On that business trip, I had to have daily lunches or dinners with eminent oilmen. Already then I began to give ear to their conversations and suck in information. In addition I can say about myself that I grew up on the pipe route. Every vacation I went to my grandfather who lived next to the tank farm Shirina, where, by the way, my father worked as a chief engineer for a certain period, or to PS-4 to my grandmother on my mother’s side. Even at that time I could explain the difference between the valve and gate valve or between the piston pump and centrifugal pump.”

*“Why did you not follow in your father’s footsteps and did not go to the Gubkin Institute?..”*

“Ufa was closer than Moscow. In addition, my father once worked with the luminaries in transporting high-viscosity oils: it was the Ufa Institute that trained great specialists and scientists in hydrotechnology

\* Nurbek Shmanov is the first Kazakh scientist to study operation of “hot” oil trunk pipelines and apply his experience and knowledge in practice. One of the oil pump stations of KazTransOil was named in memory of Nurbek Shmanov.

and hydraulics. Just then the Ozen–Guryev–Samara hot oil pipeline was started, and a lot of academic specialists were constantly there to analyze it. While interacting with them, my father apparently understood that this pipe will be the main transport route for Mangistau and Atyrau oil in the next 20–30 years and thus tried to stay closer to it. I did not understand all this at that time, but all those who were engaged in the development and research and practice on hot delivery later professed to me at the departments of heat engineering, hydraulics, hydraulic machines and other. It was a very considerable symbiosis of science and practice.”

*“Mr. Shmanov, why did you start your work career as an ordinary repairman being the son of a well-known specialist in the oil industry? You could surely start with a more prestigious position.”*

“When I was a 5th year student, my father passed away. There was Balykshinsky (now Atyrau) Oil Pipeline Administration in Atyrau (Gurieva back then), which was involved in hot oil delivery. I did pre-degree training there, and then I came there to get a job. Mr. Viktor Balduiev, Administration Head, who knew my father very well, offered me a variety of engineering positions. But I personally wanted to understand the whole process of oil

delivery, to study the entire system from within, that’s why I started working as a 3rd-category repairman for the main process equipment of the Balykshinsky Oil Pipeline Administration Production Service Shop.

I would like to note that my life was very busy and interesting at that time: I had to spend all the time travelling along the route, adjust and repair pumps, other auxiliary equipment of the pump station and heating units. Just six months

*“What were your responsibilities?”*

“As a dispatcher, I supervised the modes and other issues of maintenance of pipelines and switchgears. Work in the dispatcher’s office required promptness and attention to detail; it was necessary to constantly monitor the pipe. Moreover, we traveled to the facilities because the transportation department was in charge of a monthly so-called inventory count, which happened at 6.00 am Moscow time at the beginning of each month across the Soviet Union. This

*I personally wanted to understand the process of oil delivery, to study the entire system from within*

later I was given a higher category. One day G. N. Chebotarev, Deputy Administration Head for Transport Operations, invited me to his office and said, “Probably, enough working as the repairman?” And I replied to him, “In a day or two I will be given the 5th category.” “Your category comes with the job,” he replied, and transferred me to the dispatcher’s trainee position. Two month later I was the shift dispatcher, where I worked for about a year and a half before being transferred to the heads of the production dispatcher service, and later to the operation department.”

process allowed determining the total amount of oil available in the USSR. Exactly at 6 am all the tanks were measured, all the pipes had already been measured, and only pressure correction was required. As a result, summaries were generated that were transmitted to the district administrations, from there the information was sent to the territorial offices, and then to Moscow.”

*“What, in your opinion, has changed since then in the work of dispatchers?”*

“Now the dispatcher monitors the operation of the entire pipeline”



Pipe-welding station. Laying pipelines. 1960s. Aktyubinsk Region





At the Pump Station close to Edmonton, Canada. 1994

system from his workplace; he can see each and every unit or valve remotely controlling the process of oil pumping. In the 80s, we did not have such opportunities. We did not start the pumps from the dispatcher's room, and we did not remotely open or close valves. This was the duty of the field personnel: pump operators, instrument technicians, and operators. For example, commercial oil loading operators manually took measurements of the tanks, every two hours climbing each tank; these data were used to generate a situation report on the transfer mode, oil volumes at the pump station output, pressure in the system and temperature of the pumped hydrocarbons. The dispatchers prepared temperature and process charts in order to obtain the required temperature level at the intake of the next station. For any decrease in temperature can cause freezing and reduction in volume of pumped oil. It was an interesting and responsible work, and today it remains the same."

*"Sometimes there are failures in any complex production systems. Have you ever encountered emergency situations in your work?"*

"Things happened, including accidents. I remember in December 1979 there was a severe accident at PS Atyrau when the pipe was burst on the pig launcher. There

was a very large oil spill; about a month was required to eliminate the damage caused by the accident. Such things happened more often at that time, since there was not yet enough experience of the hot oil pipeline operation. The oil pipeline from Mangyshlak to Guriev put in operation in 1969 was at that time the only oil pipeline in the world with such heating system, with such length and rheological properties of oil. Of course, nowadays such accidents should not generally happen as we have gained vast experience both in operation and prevention of such accidents."

*"Tell us about the period when you went to America for internship in Chevron. It was probably the dream of every oilman of that time..."*



On the production platform. Gulf of Mexico. 1993

Astana, 2008. Altyn Sapa

"Before going to America, I passed all main areas of specialty and had a certain experience in my work: I was Operations Head of the Balykshinsky District Oil Pipeline Directorate, Senior Dispatcher, rose up to the level of the Production Dispatcher Service Head, and a little later – Operations Head of the Balykshinsky District Oil Pipeline Directorate.

In 1985, I was sent to Aktyubinsk to the newly established Aktyubinsk Oil Pipeline Administration as Chief Engineer. A year and a half later, after the work in the new Administration was stabilized, I came back to Atyrau and started work as Shift Supervisor of the Linear Engineering and Technical Service of the Joint Directorate for oil pipelines under construction, which was in charge of construction of all pipelines in the European part of the USSR including the Tengiz–Guriev–Astrakhan–Grozny oil pipeline, and the Astrakhan–Mangyshlak water line. These were already 1988–1989, the time close to the collapse of the Soviet Union.

In 1991, there was an agreement signed on one-year MBA course for management between the USSR Ministry of Oil and Gas and the University of Massachusetts UMASS. The course was called Special MBA Courses for Top Management of the USSR Oil Industry. All oil producing and transporting associations in the USSR received quotas, and our Yuzhnefteprovod association got one place.

I was selected out of several candidates. We went there in 1992. About 60 people in total were trained, half of whom were representatives of the USSR Oil Industry, and slightly less than a half from other ministries and industrial enterprises. 11 people came from Kazakhstan.

During the first year, we studied at UMASS together with other students, only that we were given separate lecturers on MBA, business, etc., and were taught English. The second year was a year of internship. What is more, everyone had to find the relevant company and agree on an internship in it. Of course, it was a unique opportunity to gain practice, experience in a foreign company, but, unfortunately, some people went back to their homeland never having managed to find a job.

Personally, I was fortunate enough to intern in Chevron. But again, probably thanks to a combination of luck. In 1991–1992, when Kazakhstan only gained independence, Chevron had not yet come to the republic. However, preliminary negotiations and studies had been already underway at all levels. I then worked as Chief Engineer at the Balykshinsky Regional Oil Pipeline Administration. A group of specialists from Chevron came to us: they were interested in the entire transportation scheme for export; all export points from where the oil can be exported. Being Chief Engineer, I traveled around the facilities with these groups,

and introduced the work that we were conducting. I also traveled to Moscow several times to negotiate with Chevron top managers, and both times with Yuzhnefteprovod Deputy General Director I. D. Kasper, whom I consider one of my teachers. So, when looking for a company to intern in, I, without much thought, got up the nerve and called from Boston to the company headquarters in California to Jim McCabe, Chevron Overseas Vice-President, with whom I met in 1991 in Moscow. Despite my still rather bad English, I talked to him about the need for me to intern in the company and I heard the reply, "No problem, we'll take you." There were four of us during our practice in Chevron Overseas: N. Balgimbaev, A. Kabdolov, V. Churilov and me. In August 1994, after a year of the internship, I started working for ChevronMunaiGaz Kazakhstan, and in November, I was assigned to Tengizchevroil as a transportation and logistics manager for the Marketing Department. There I worked until 2000. After that I continued my work in ChevronMunaiGaz as a regional manager for oil transportation from Chevron Eurasian Division."

*"The Caspian Pipeline Consortium was under establishment during the period when you were working at TCO. The process of negotiations and pipeline construction lasted for more than one year. How was the issue of transportation before commissioning of the Tengiz–Novorossiysk pipeline solved?"*

"We kept a close eye on the process of establishing the CPC pipeline system. Being responsible for oil transportation, I understood that it could take a long time from the moment of agreeing on pumping and before the pipeline would be able to transport oil and transfer it for export through the terminal on the Black Sea. Against the crude production increase, we were aggressively searching for the possibility to increase its exports. During that period, together with experts we examined almost all the Black Sea coast: simply walked round all the ports where there was

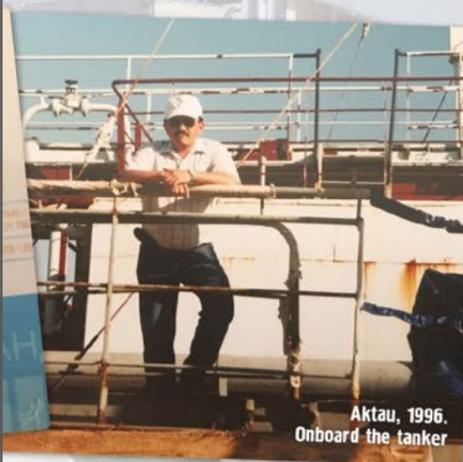


Nurtas Shmanov is awarding Viktor Martynov, Rector of the Russian State University named after Gubkin, with the Medal of the Ministry of Energy of the Republic of Kazakhstan For Contribution to the Development of the Oil and Gas Industry. 2018

transshipment of oil and oil products or where it could be done, up to the ports along the Danube. It took us more than half a year to find these export points. We were started with the border of Georgia and Turkey. For those volumes of oil that could not get into the pipe, railroad transportation was required. All products pumped through the pipe (3 million tonnes) in the KazTransOil system and Transneft system came to the Black Sea to Novorossiysk. The remaining 6 million tonnes of oil had to be transported by rail. We placed 3 million tonnes in Odessa as the local terminal could receive no more, then another 3 million tonnes were delivered to the Crimea, with the port in Feodosiya loaded at the maximum. A little later, we managed to locate up to 1.5 million tonnes in Batumi. By the way, almost 80 % of Feodosiya city budget was formed on the basis of our oil transshipment; in the Republic of Crimea as a whole this activity generated 18 % of budget revenues."

*"Did you take part in the process of CPC establishing?"*

"During two years of work in the position of the Regional Manager at Chevron Kazakhstan, I managed to organize the oil transportation process across Kazakhstan, and in 2004 I was transferred to Chevron ▶"



Aktau, 1996. Onboard the tanker

Moscow. During that period it was necessary to think about further development of the oil transportation system, since the idea of the TCO second-generation plant had already come in, and Kashagan was “around the corner”. Already being in Chevron in Moscow, I took part in negotiations with Western, Kazakh and Russian corporate members of the Consortium. In 2006, I moved to CPC as Deputy General Director for General Affairs in Moscow. In 2007, I was returned to the National Company and transferred to KazTransOil as General Director. Indeed, there were many negotiations on CPC, on expanding the pipeline system. We had been preparing the expansion agreement for almost three years, and then the process itself took about seven years: construction and installation work was performed. At that time, the positions of Chevron Kazakhstan, the Government of the Republic of Kazakhstan and other shareholders did not differ greatly because it was a common interest of both the producer companies and the Government shareholders in general to arrange oil export in the most cost-effective way.”

**“The CPC project is one of the largest projects in the oil transportation sector. Please share your expert opinion on the completed Expansion Project.”**

“As a pipeliner I can say that either the Initial Construction Project for the CPC system or the Expansion Project have been implemented at a very high level and meet all current

requirements. I have no doubt that the Tengiz–Novorossiysk pipeline system will work for many years more. It is important to note that the relationship of all shareholders of the Consortium, including government shareholders represented by the Republic of Kazakhstan and the Russian Federation, despite some political issues, is completely favorable towards CPC. I do not see any problems if there is a common goal – to properly export oil at a high quality level. For this purpose, there is the highly qualified management in CPC, competent experts are working in this direction, and this export

***I do not see any problems if there is a common goal – to properly export oil at a high quality level***

route of Kazakh oil will continue be profitable for all shareholders. Nowadays, CPC is intensively repaying loans of the shareholders in a proper way. I think that by 2021 the issue of loans will be closed, and in the future, payments will take the form of net dividends.”

**“What, in your opinion, are the prospects for the development of the oil transportation industry in Kazakhstan, which is implementing the Multi-Vector Oil Export Strategy?”**

“I believe that for today we have some small, but not that small surplus of pipeline capacities, thanks to some extent to the “vectors”, which

allow us reaching the Black Sea through two pipelines via Transneft and CPC, provide access to the Baltic and to China. Perhaps, if Uzbekistan reaches agreements with producer companies, we will have not very large but to some extent important oil movement vector to the southern border bypassing the Chinese one. We should remember that there are opportunities to deliver certain volumes of oil via the Caspian along the Transcaucasian routes.

Due to decline in oil production in Azerbaijan at Azeri-Chirag-Gyuneshli, the utilization of the Baku-Tbilisi-Ceyhan oil pipeline capacity has decreased, so there are capacities that can be used there. However, we need thoughtful and well-considered solutions in this case.”

**“What would you wish to the CPC team?”**

“When such huge volumes of oil move through the pipe, it is the highest level of responsibility. They are economically important not only for us, but also for all oil producers both in Kazakhstan and the Russian Federation. Any failure means multi-million dollar losses. Therefore, first of all, I would like to wish failure-free operation without violations and injuries. A human life comes first. It is important to take care of each other and give support when it comes to the crunch. It is important that the wishes and demands of the workers are always understood and correctly interpreted by management. I wish that high rates of accident-free operation of the team, which CPC is demonstrated today, would remain at the same level and improve. I wish everyone health and well-being!”

**“Thank you for the interview!” ■**

Interviewed by Aina Zhetpisbaeva



Nurtas Shmanov receives a delegation of the CPC management. April 2018

# CPC – KIOGE 2018 Golden Partner

FROM SEPTEMBER 26 TO SEPTEMBER 28, 2018, EXHIBITION AND CONFERENCE “OIL AND GAS – KIOGE 2018” WILL BE HELD IN ALMATY. THE CASPIAN PIPELINE CONSORTIUM, ALONG WITH THE LARGEST INDUSTRY PLAYERS FROM KAZAKHSTAN, CIS COUNTRIES AND THE NON-CIS STATES, WILL TRADITIONALLY PARTICIPATE IN THE FORUM.

The purpose of the event is to address and discuss issues and hot topics in the oil and gas industry in Kazakhstan, introduce smart technologies and digitized oil production processes.

An important event of this year was the signing of a Memorandum of Cooperation between the Kazakhstan Association of Oil, Gas and Energy Sector Organizations KAZENERGY and the Kazakhstan exhibition company ITECA. To recap, the organizers of the two key oil and gas events — KAZENERGY Forum and Kazakhstan International Exhibition, as well as the KIOGE conference decided to hold the events every two years.

In 2017, the exhibition brought together 310 companies from 25 countries all over the world: Austria, Azerbaijan, Belarus, Germany, the United Arab Emirates, India, Iran, Ireland, Spain, Italy, Kazakhstan, Canada, China, the Netherlands, Poland, Korea, Russia, the USA, Turkey, Uzbekistan, Ukraine, France, Czech Republic, Switzerland, Japan.

The conference was attended by 593 delegates and 28 speakers. Based on the last year’s experience, the organizers expect the number of participants to increase significantly this year.

The KIOGE 2018 Exhibition will present the latest process, engineering and software developments for oil and gas industry from the leading oil and gas producers, oilfield services companies and industry suppliers. In addition, the exhibition will host business meetings, presentations, and negotiations among companies and state agencies.

Traditionally, the KIOGE is officially supported by the Ministry of Energy of the Republic of Kazakhstan, the Akimat of Almaty, JSC National Company KazMunayGas, Association of Oil Service Companies of Kazakhstan KazService, and legations of the participating countries.

The KIOGE 2018 has been officially supported by the Kazakhstan Association of Oil, Gas and Energy Sector Organizations KAZENERGY.



The golden partners of KIOGE 2018 are TengizChevroil LLP, Caspian Pipeline Consortium, Dow Chemical Company and NCOC; the bronze partner is Fluor Kazakhstan Inc.

The KIOGE 2018 organizers are Kazakhstan exhibition company Iteca and its international partner ITE Group Plc (Great Britain). ■



KIOGE is a reputable platform for presentation of innovative technologies and main trends in the development of oil and gas industry. Being one of the most important industry events, it contributes to the development of relevant economic ideas and elaboration of specific solutions for oil and gas sector.



# Innovative Experience of the Consortium

AS A STRATEGIC PARTNER, THE CASPIAN PIPELINE CONSORTIUM PARTICIPATED IN THE IV ALL-RUSSIA HSE WEEK, WHICH WAS HELD ON APRIL 9 TO 13 IN SOCHI.



The CPC delegation headed by Nikolay Gorban, General Director comprised Dennis Fahy, First Deputy General Director, Christopher Scott Bowen, Project and Engineering Consultant, Richard Vincent, HSE Consultant, Igor Lisin, General Manager, Engineering, and Regional Managers Oleg Ivanishchev, Sergei Potryasov, and Ivan Sharai.

## WHAT COUNTS MOST IS LIFE AND HEALTH OF EMPLOYEES

“And now we have an abnormal situation being developed again ...” a female voice joyfully announces in the loud-speaker. The participants and guests of the forum slow down and glance upwards where specially equipped people, on specially made high-level scaffold, are carrying out a rescue operation on evacuation of a worker. It is clear that

the “injured” has suffered only figuratively, it is not about a real accident. These are the representatives of the manufacturer of personal protective equipment for workers at height who are demonstrating their latest developments for safe work.

The leaders and personnel of the largest companies of Russia devoted several days to exchanging their experience in the area of occupational and industrial safety. About 10 thousand practitioners, representatives of supervisory bodies and executive authorities, employers and trade unions, top management of industrial enterprises, business community and state corporations, foreign experts and representatives of international organizations arrived to participate in the forum.

## CPC: CONSCIOUS SAFETY

The key events of the All-Russia HSE Week were the strategic plenary session on Occupational Health:



For Work Safety Culture!

“Achievements and Challenges”, and CPC press conference on the topic of “Conscious Safety Through the Example of an International Consortium”, which was attended by Nikolay Gorban, General Director, Richard Vincent, HSE Consultant and Igor Lisin, General Manager, Engineering.

During the conference, it was noted that today the international symbiosis of technologies, approaches to work organization and occupational safety allow speaking about the CPC experience as one of the best practices in occupational safety, “The Conscious Personal Safety of Each Employee”.

During his speech, Nikolay Gorban noted that one of the main priorities of the Caspian Pipeline Consortium was strict observance of the regulatory requirements to operation and construction of production facilities.

“This was most clearly manifested during the implementation of the large-scale Expansion Project of Consortium pipeline system capacity from 28 to 67 MTA, which was completed in 2017. Before starting work, the CPC management and shareholders set a challenge of making it one of the safest projects in Russia, and this goal had been successfully achieved,” he said.

At the construction sites of the Expansion Project, more

than 8,000 employees and about 1,000 vehicles and construction equipment were involved in the peak period. Along with that, the total operating time was more than 100 million man-hours, and the average accident rate did not exceed 0.2 per 1 million man-hours. The total mileage of vehicles was over 130 million km, with the average accident rate of 0.3 per 1 million kilometers and no road accidents with serious consequences.

## EVERYONE'S RIGHT AND DUTY

CPC General Director Nikolay Gorban spoke about Work Safety Culture and Incident & Injury Free programs which were successfully implemented in 2011 during the Expansion Project and aimed at developing a conscious attitude to personal safety among all participants of the Expansion Project and involving all employees in the process of creating a safe environment at the Company’s facilities.

“Do your job safely, or do not do it at all!” this rule was brought to attention of every participant in the Project, and the employees were conscious in observing it. In this regard, about 60 tools were developed, including, for example, the 12+1 life-saving rules, short-service employees training, field coaching, work safety days, filling in safety hazard observation cards.



All-Russia HSE Week: interesting and useful!

The most important innovation was the Stop Work Authority. Today, every employee knows that no one will be rendered liable to disciplinary action, moreover, he/she will be rewarded for timely exercise of his/her Right in case of refusal to perform work in unsafe conditions or for exercising the Stop Work Authority”, Nikolay Gorban emphasized.

Introduction of the Safety Culture during the period of the CPC Expansion Project implementation showed its effectiveness: the workers themselves recorded and prevented over 100,000 unsafe behaviors and conditions (note: statistics based on observation cards).

The useful experience of the Expansion Project on the Work Safety Culture development is integrated and successfully used in the core activities.

## INJURY FREE

Upon completion of the Expansion Project, the Consortium continued further development of the practices aimed at achieving zero accident rate.

“In 2017, our business unit in Kazakhstan – Eastern Region completed 18 million man-hours without a single injury, the Western»



CPC experience aroused great interest of the forum participants



Valery Korzh, Head of the Department of the Ministry of Labor of the Russian Federation visited the CPC booth

Region in Russia – 15 million man-hours. Last year, across CPC, we did not have a single serious incident involving disability among our employees,” Nikolay Gorban emphasized.

Answering questions from journalists about the international experience implemented in CPC, HSE Consultant Richard Vincent said that CPC not only strictly observed the requirements of the laws in Russia and Kazakhstan and applied all practices, but also adopted experience of all participants of the Consortium.

“We have good relationship within the Consortium, and we have access

to the procedures of other shareholding companies. We choose only the best practices and adopt them in CPC,” he said.

### QUINTESSENCE OF THE BEST

Participating in panel discussions and plenary session, during meetings with colleagues from other companies, CPC delegation representatives actively studied the industrial and occupational safety experience of other large companies. For example, Oleg Ivanishchev, Marine Terminal Manager, believes that the practice of locking electrical and mechanical systems during their repair, as well as measures for vaccinating employees with

advanced types of vaccines could be further developed in the Consortium’s business units. Sergey Potryasov, Head of the CPC Western Region, noted the world-wide and all-Russia trend to widely use digital technologies in personnel instructing and preparation of such documents as work permits. Ivan Sharai, Central Region Manager, supported the Western Region Manager and added that the Consortium would also benefit from the experience of creating 3D models of the facilities and virtual simulation of the production process development in the course of personnel training.

### THE HIGHEST APPRECIATION

The Consortium experience was also highly appreciated at the forum.

During the All-Russia HSE Week, the results of the All-Russia competition for the best solution in safe working conditions assurance, Health and Safety 2017, were announced. The Caspian Pipeline Consortium was awarded the first prize in the nomination “Methodology in Monitoring and Ensuring Occupational Safety” for its innovative project “Incident and Injury Free Culture Concept”.

by Pavel Kretov



Commemorative picture: Christopher Bowen, Richard Vincent and Dennis Fahy



Going home – with a diploma and a medal!

# CPC Philosophy: Risk-Free Way

ROAD SAFETY IS EVERY TRAFFIC PARTICIPANT’S CARE. THEREFORE, OUR COMPANY IS MAKING CONSTANT EFFORTS FOR THIS BEHAVIOR TO BE ADOPTED NOT ONLY BY THE CPC DRIVERS. IT SHOULD BECOME A HARD AND FAST RULE ALSO FOR THEIR COLLEAGUES IN THE REGIONS WHERE THE CONSORTIUM OPERATES, AND FOR ALL DRIVERS OF THE COUNTRY.



### MAJOR THREAT

At a first glance, the non-core activities on transporting employees and cargo to meet the needs of an oil pipeline company are not supposed to be the top priority in developing production safety management system. However, statistics show

the contrary: in the oil and gas industry, more people die in the road accidents than in any other sector. According to the data for years 2001 through 2016 published by the International Association of Oil and Gas Companies, the fatality rate related to production accidents is as follows:

Type of Work	Death Toll	Percent of Total Fatality Rate
Land transport	344	22,7 %
Maintenance, checks, testing	282	18,6 %
Drilling, wells repairing and servicing	167	11 %
Construction, commissioning, decommissioning	158	10,4 %
Air transport	139	9,2 %
Lifting, rigging and loading operations	121	8 %
Waterborne transport, including maritime work	81	5,3 %
Process operations	55	3,6 %
Geological exploration	38	2,5 %
Office services and warehouse operations, catering service	37	2,4 %
Diving/underwater operations, usage of remotely operated vehicles (ROV)	14	0,9 %
Other	81	5,3 %

The table above shows that 22.7 % of the total number of fatal casualties was victims of traffic accidents. This explains the great attention paid to road safety in international oil and gas companies CPC is a part of.

### TRAFFIC MANAGEMENT SYSTEM

Risks in road transportation can be proactively managed and significantly reduced. The traffic management system is usually called the “driver-vehicle-road” system. The development of safety standards applied to each of the elements of this system is the first stage of managing the above risks. The qualification requirements for drivers, as well as the scope and training frequency are determined.

Defensive driving is one of the main tools for reducing road safety risks. Using the defensive driving techniques allows for minimizing both components of the traffic accident risk: probability and severity of the consequences. Simple and easy-to-learn techniques for observing, controlling speed and space, which are included in the defensive driving training program, allow the driver to minimize the probability and severity of an accident regardless of the actions of other road users and traffic situation. The defensive driving course differs fundamentally from the courses of extreme (counter-accident) driving. During the extreme driving courses you are taught how to act »



**DRIVER'S PHILOSOPHY**

Before you get behind the wheel, set your mind on driving and say to yourself,

"I will leave all worries and problems outside the car. I sit behind the wheel, I'm confident and calm. I am fully responsible for myself and my car. I am self-collected and attentive."

Behind the wheel, it is prohibited:

✓ to be blind – turn your head 360 degrees around!

✓ to be deaf – listen to the road!

On the road, do to others as you would have them do to you.

The vehicle serviceability is an essential component of safety. Inspection of vehicles at the CPC Marine Terminal

in an emergency situation, and in the defensive driving courses you learn to avoid such situations.

Requirements to vehicles include not only factory passive and

most vehicles used by oil and gas companies. In-vehicle monitoring systems allow controlling the speed, rapid acceleration and hard braking, operation mode, routes and many other parameters

**In oil and gas industry, more people die in the road accidents than in any other sector**

active restraint systems, but also in-vehicle monitoring systems, which can currently be found in

that characterize the safety level of the vehicle movement. However, what is most important is not

to install a monitoring system in a vehicle, but to establish a system for managing data obtained with the help of this system. Feedback from the driver and positive work on adjusting the driving style is the governing factor at this point.

The element "road" means not only the roadbed and its parts, but the environment as a whole, including other traffic participants, which is least controllable in terms of reducing the risks of accidents. Oil and gas companies evaluate risks on the roads in the areas they operate, implement journey



In the regions of its operation, the Caspian Pipeline Consortium is implementing the Road Traffic Safety program for schoolchildren of local schools. While playing, the children learn the traffic safety rules, participate in concerts, competitions, gain rewards and receive gifts from the Company

management system that involves choosing the safest routes and instructing drivers about the existing danger areas. Moreover, many oil and gas companies influence this challenging element with the help of charity programs aimed at improving the driving culture in the regions of operations and equipping the public transport enterprises with new vehicles.

along the route with the instructor followed by an assessment of the driving skills and behavior, and also scoring the driver.

All CPC vehicles are equipped with in-vehicle monitoring systems; the system for managing data obtained with their help is implemented within the Company. Over several years, constant feedback from drivers allowed for funda-



Alexei Bunarev

**During the defensive driving courses, the trainees are taught how to stay out of emergency (near-accidents)**

**KNOWLEDGE AND SKILLS**

The Caspian Pipeline Consortium uses in its activities all best practices for improving road safety. For many years, the Company has been working to manage risks in the road transportation and reduce number of accidents.

In 2007, standards were introduced in the field of ensuring the safe operation of CPC vehicles.

After that stage-by-stage the defensive driving training course was organized for all CPC drivers. Currently, this training is compulsory. The program of this training covers many aspects. In particular, it includes the methods of defensive driving, organizing trips, and addressing issues of driver's attention and fatigue. Trainees get an idea of the effects of medications and consequences of alcohol or drug consumption, operation of active, passive and post-accident vehicle safety systems, importance of pre-trip vehicle check-ups and proper driving position. During the lectures, they also study local traffic risks (including personal threat), local driving norms and culture. In the end, a trip is conducted

mental improvement of the driving safety evaluations that the system generates.

**TRAFFIC SAFETY IS COMMON CONCERN!**

Purchasing new buses and trolleybuses for city enterprises that

perform fixed-route services, as well as school buses as part of the charity program, the Consortium implements programs in the regions aimed at enhancing the safety culture.

The CPC representatives participate in scientific and training conferences on road safety. For example, in 2012 the Consortium took an active part in the transportation safety forum, which resulted in the decision to create an expert group of the Fuel and Energy Complex of Russia on transport (road) safety. The CPC representative was also included in the list of experts. Unfortunately, until today, this decision has not been fully implemented.

In 2017, CPC took part in the Safe Driving-2017 Conference, where burning issues of companies operating in various sectors were discussed, which concerned road safety assurance, observing state requirements and setting out corporate requirements in this sphere. ■

by Aleksei Bunarev, Transportation Manager, CPC



# Forewarned Means Protected!

DURING THE EXPANSION PROJECT IMPLEMENTATION, CPC PERSONNEL RECEIVED EMAIL NEWSLETTERS ON ACCIDENTS AT CONSTRUCTION SITES AND ON THE LESSONS LEARNED.



Presentation of the first information bulletins to the CPC Shareholders

However, even when numerous contractors have left construction sites, safety topics within the Company still remain relevant; both General Director and Shareholders pay much attention to them. On the initiative of the CPC management, the Company's Press Service proceeded with regular issues of HSE information bulletins.

Whereas the newsbreak for the issue of information bulletins on the Expansion Project was specific already-happened occupational accidents and detected safety violations, our information bulletins are of preventive and proactive nature. They cover the widest range of problems and hazards that employees can face not only at their workplaces and in the course of performing their duties, but also in everyday life. Hence, the variety of the issues covered: the right of each employee to stop unsafe

work; to remind of the defensive driving principles in difficult road conditions; life insurance; life-saving manner of behavior during the high water season; recommendations on how to avoid negative consequences when you meet a dangerous reptile, venomous insect or noxious plant...

The relevance of the topics covered is determined according to the time of the year and season when this or that hazard factor prevails. HSE specialists of the Company participate in generation of the subject matter, as well as in approval of the finished bulletins. The content is prepared by the Press Service, which is also in charge of the design.

For the sake of simplicity of perception, focusing readers' attention on the problems raised in the information bulletins, a vivid form of

material presentation was chosen with the use of infographics. Publication frequency is two or three times a month. Upon the release of the next edition, employees receive an email notification and, following the link, can read the content in Russian or English. If desired, any edition can be printed and used on the information board.

The presentation of the information bulletins to the Shareholders was successfully held during the February meeting of the CPC managing bodies in Moscow.

The participants of the 4th All-Russia Occupational Health Week, which was held in April in Sochi, showed a genuine interest to the publication. Hardcopies of various editions put out on the CPC booth rack were quite quickly taken away by visitors for personal use.

According to the responses of our colleagues in the Moscow office, HSE information bulletins found their regular readers there. We really hope that also the regional offices will be able to view the issues.

For our part, we will try to ensure that the information contained in the bulletins is relevant and useful, and reading is not boring.

We will be happy to get feedback from every CPC employee in order to find out which topics related to the security of vital activity of a human being are of particular concern.

Please email us at: [Press@cpcpipe.ru](mailto:Press@cpcpipe.ru). ■

CPC Press Service

[www.cpc.ru](http://www.cpc.ru)

# Drilled in the Field

ON MAY 23, 2018 CPC TOOK PART IN A COMPREHENSIVE EMERGENCY RESPONSE DRILL WITHIN THE NOVOROSSIYSK MUNICIPAL ENTITY, WHICH WAS HELD UNDER COMMAND OF CHIEF DIRECTORATE OF EMERCOM OF RUSSIA FOR THE KRASNODAR KRAI.



The drill involved the forces and resources of non-professional emergency response team of CPC-R Marine Terminal, Marine Terminal Duty Dispatch Service, Novorossiysk emergency response center, CPC Security, professional emergency response team of the Center for Emergency, Rescue and Ecological Operations, fire brigade of Kubanskaya Pozharnaya Okhrana, LLC for protection of CPC Marine Terminal facilities. The event was attended by representatives of the Novorossiysk Administration, head of the Glebovsky rural district, Novorossiysk Civil Defense and Emergencies Authority, Municipal Public Institution, and others. All in all, 149 men and 18 vehicles were engaged.

According to the drill script, an illegal tap in the area of Yuzhnaya Ozereevka village at kilometer point 1503 of the CPC oil pipeline caused loss of integrity of the Tengiz–Novorossiysk main oil pipeline.

The oil spill message was received at 8 a.m. by the Novorossiysk Unified Duty Dispatch Service and the Chief Directorate of EMERCOM of Russia for the Krasnodar Krai. In order to identify the scale of the spill occurred, the CPC reconnaissance squad and EMERCOM patrol teams were sent to the assumed "emergency site", which confirmed the "oil spill" up to 80 tonnes. The "emergency" was classified at a municipal level.

The CPC Emergency Response units, which arrived at the emergency site, deployed special equipment to contain and recover the oil spill and oil contaminated soil, including installation of retaining walls to prevent further spread of the oil stain, absorbing check dams, knockdown tanks, and oil gathering systems.

In the course of the work, an additional condition was introduced – oil fire in the area of 250 m<sup>2</sup>. The fire was extinguished by two fire units. The drill commanders also set a task to practice evacuation of a person allegedly injured during fire extinguishing.

In the course of the drill the participants practiced reconnaissance of the supposed emergency site, population warning, rescue of the injured, supposed oil spill containment and fire extinguishing at the emergency site.

The Caspian Pipeline Consortium also practiced simulation of oil pipeline shutdown to perform emergency, repair and recovery work, oil pipeline repairs, deployment of knockdown tanks for temporary storage of oil and oil-containing waste.

Thus, in the course of the comprehensive drill the CPC emergency response forces and resources readiness for an emergency on the oil pipeline and efficiency of interaction among all emergency response parties were checked. ■

by Ekaterina Kravivko



[www.cpc.ru](http://www.cpc.ru)

# Time for Tengiz

FOR SHAKAN ONDASYN AZAMATULY, PS TENGIZ IS LITERALLY AN ADOPTED HOUSE. HIS WORK HISTORY IS CLOSELY LINKED TO THE HISTORY AND DEVELOPMENT OF THE STATION.



*Shakan Ondasyn's personal contribution to the industry development was appreciated with the jubilee medal 80 Years of Kazakhstan's Oil Pipeline System*



Production Association Yuzhneft-eprovod, and since 1997 it was transferred under the responsibility of KazTransOil. It happened so that in 2001 the station and I switched over to work in the Caspian Pipeline Consortium,” Shakan Ondasyn jokes today.

**“What could you tell us about the development of the Tengiz oilfield, which took place in front of your eyes?”** we ask the veteran oilman.

“Development of the Tengiz oilfield started in the mid-80s, as they say, with one accord,” he says. “Wells were drilled by such organizations as Balykshinsky Exploration Drilling Directorate, Volgograd Drilling Directorate, and Archadinsky Drilling Directorate. The first stage of

the Tengiz gas processing plant was built by Hungarian company Vede- pser, and on April 6, 1993, the gas processing plant received the first tonne of oil from the Tengiz oil- field. By the way, the 25th anniver- sary of the oilfield development was celebrated this spring. Indeed, time flies!

At first, only several thousand tonnes of oil were produced in Tengiz. Nowadays, the production is 28 million tonnes, and all this volume is transported through the CPC oil pipeline system,” our interlocutor continues not without pride. “In 2022, after implementa- tion of the Tengizshevroil project for the construction of a new-genera- tion plant, it is planned to reach the annual production level of 41 million tonnes. For these grand projects, the CPC Expansion Project was implemented so that we could receive and pump large volumes of oil through the pipeline.”

**“What tasks was the Consortium facing at the moment when you started your career in CPC-K?”**

“In 2001, after the completion of the initial construction of the Tengiz – Novorossiysk pipeline, it was necessary to fill the whole system with oil. This work was completed on time, and in November

In CPC-K, Shakan Ondasyn has worked since 2001, but at PS Tengiz itself he has worked since 1993. His previous professional experience, thorough knowledge of the facility and technologies of pipeline oil transportation turned out to be much-needed in CPC.

“Initially, the oil pump station “Tengiz” was part of the Kulsarin- sky Oil Pipeline Department of



*At PS control center, 2002*

the first tanker with the Tengiz oil was sent to the global market. Our specialists showed high profession- alism and true dedication. In this regard, I would like to acknowledge the people who have already taken well-deserved rest: Shift Supervisor Asan Kashauov, PS Operator Nogai Muhambet, Driver Bolat Biseshev and many others. By the way, the entire team of PS Tengiz worked regardless of time.”

**“What positions did you hold in the Consortium at different times?”**

“Initially, I worked as a shift super- visor at PS Tengiz. In this position I was in charge of the entire pro- cess, starting from receiving oil from Tengizchevroil and ending with its further transfer through the pipeline to PS Atyrau. In 2011, I was appointed PS Deputy Man- ager; hence, the tasks to be solved were also complicated because this position implied responsibility for the work of all operational person- nel of the pump station, as well as contractors.”

**“You mentioned the Expansion Project. Tell us about the specifics of its implementation at PS Tengiz.”**

“The Expansion Project at PS Tengiz was implemented in 2011–2015. The work was carried out at the fa- cility in operation without inter- ruption of oil intake at the station and further transportation. All the specialists tried to ensure that the construction and installation work did not affect functioning of

the equipment in operation, and did not interfere with the basic mission of the pump station – oil transfer. And, of course, safety issues were in the foreground.”

**“How did PS Tengiz change after all construction and installation work had been completed?”**

“Following the implementation of the Expansion Project, a number of new facilities appeared at the sta- tion: a mainline pump station, indoor switchgear 10 kV/package transformer substation, lease automatic custody transfer unit, machine workshop, pressure control unit, quality loop of the leak detection system, and pig trap at KP 0 km. A new administration and office building is currently under construction. The station operates reliably because the state-of-the-art equipment installed here meets the highest engineering standards and the most stringent require- ments for environmental safety. PS Tengiz capacity in the early 2000s was 12–13 million tonnes; today, it has more than doubled its transportation volumes.”

**“Are there many long-service employees working at the station, how do they pass their experience to young specialists?”**

“Our team is exceptionally con- stant. From the very first days of housing the station within CPC-K there have been working PS Man- ager Salamat Altynaliyev, Shift Supervisors Mukhambet Suyunov,



*Shakan Ondasyn with his back-to-back: S. Altynaliyev, Manager of PS Tengiz*

Raiymbek Bazargaliyev, Kuanysb Shakonov, PS Operators Kashkynbai Tapanov, Eset Zhumagaliev, Gabit Sarsenbaev, I&C Technicians Bak- tybai Aitzhanov, Alexander Titov, Konstantin Simonov, and PS Elec- trician Murat Ishchanov. Many of these employees took on the roles of mentors to newcomers who are currently working as specialists at the pump station.”

**“What do you love your work for?”**

“It is interesting and meaningful; it requires a constant learning and mastering something new. And the last but not the least important factor in our time is stability.”

**“Tell us a little about your family. Are there any other oilmen besides you?”**

“I am married and have two chil- dren. My son works as a financial expert in RD KazMunayGaz, and my daughter works in the banking sector.”

**“The work at PS Tengiz is on a rotational basis. What do you do in your spare time?”**

“In my spare time, I like to read an interesting book or go on a jour- ney.” ■

*Interviewed by Aina Zhetpisbaeva*



# Inspiring Beauty

LIFE OF THE CONSORTIUM'S EMPLOYEES IS RICH AND INTERESTING. AS A RULE, IT IS NOT LIMITED TO THEIR OFFICES, PS CONTROL ROOM, PIPE SECTION OR FIELD BLOCK VALVE STATION. TO SOME EXTENT, WORK AND THINKING PROCESSES CONTINUE AT HOME AND AMONG FRIENDS.



*"The beauty is nearby; you only need to know how to see it!" Alevtina with her mother Eugenia in the open air...*

An active, not indifferent specialist is sometimes lost in solving work issue and captured by nurtured business ideas even in vacation. Of course, this state is passed onto the family, and even children begin to feel some connection to the work of their father or mother... Now, let us look at the familiar CPC facilities with the eyes of the daughter of our colleague. Let us

give the floor to Alevtina Kretova, future art expert and artist:

*"In Panorama CPC magazine, which my father brings home from time to time, I can often find his name – Pavel Kretov. My father has been working in the pipeline transportation business for 15 years now. He is a journalist by profession, but I would call him a real oilman. After several years of work in the CPC Press Service, he has thoroughly studied all the processes: how oil gets from the fields to the pipeline, how oil pump stations push it through the pipe to a distance of more than one and a half thousand kilometers, how it is collected, mixed and stored in tank farms, and the most interesting is how, on huge tankers, the oil is sent to the sea voyage. It is expected in different countries of the world where it turns into fuel and into various types of goods that people use every day.*

*My father has visited each CPC facility in Russia and Kazakhstan many times. He says that these facilities are the most up-to-date, reliable and safe as they are equipped with the latest technologies, and they are serviced by experts of the highest level! My father tells about all these things in detail in his journalistic stories.*

*I have also noticed that the CPC facilities are very beautiful and a bit "cosmic" thanks to a huge number of pipes of very different configurations, with their reflecting metal casings sparkling in the sun. And how beautiful is the blue sea with a tanker in the distance! I can judge it by the colorful photos made by my father in business trips. I tried to present this beauty with the help of paints, and this is the result!"* ■

*by Alevtina Kretova*



*... and her father is at work!*

# For the Most Treasured

THE CHILDREN'S REPUBLICAN HEALTHCARE CENTER LOCATED IN ELISTA IS KNOWN FAR BEYOND KALMYKIA.



## A DREAM CENTER

Not only young dwellers of the steppe republic seek medical treatment in the Center, but also children from Dagestan, Chechnya, the Rostov, Astrakhan and Volgograd Regions, and the Stavropol Krai. Annually, about 5.5 thousand patients get treatment in the inpatient department and branches of the Center and about 750 children are daily treated in the outpatient department.

"The Children's Healthcare Center is the major institution in our republic. It consists of eight specialized departments, three polyclinic departments, an emergency department and an outpatient department," says Galina Dinkieva, acting Minister of Health of the Republic.

Cooperation between the Children's Republican Healthcare

Center and the Caspian Pipeline Consortium dates back to 2010. During this time, CPC provided over 90 % of the equipment and furniture to the hospital departments using its own charity funds.

"In the period from 2010 to 2015 alone, the Consortium supplied diagnostic and therapeutic equipment and healthcare furniture worth over RUB 26 million, which made it possible to create optimal conditions for inpatient stay and care, high-quality performance of doctors, middle-grade and junior staff, and administrative department," says Ruslan Kayukov, Chief Physician of the Healthcare Center.

## THE HOLY OF HOLIEST

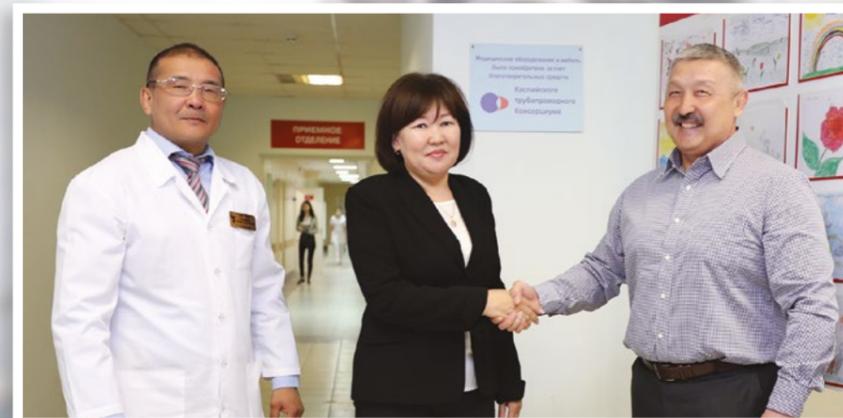
In the operating room – the holy of holies of the Healthcare Center – Panorama CPC correspondents were demonstrated FABIUS

DRAEGER, an anesthetic breathing apparatus purchased with CPC charity funds. This equipment combines high-efficiency ventilation, simplicity of control, reliability, wide possibilities for placing auxiliary equipment, as well as ease of integration into workflow of surgery rooms of any type. CPC purchased two of such machines for the Healthcare Center. The second one is installed in the emergency surgery room.

"This is a very sophisticated machine with a system of controlled ventilation, oxygen supply, carbon dioxide control, which is especially important when operating newborns," comments Ruslan Kayukov.

## NEW POSSIBILITIES OF DIAGNOSTICS

In 2014, the Consortium donated Diakom X-ray diagnostic suite for »



*Ruslan Kayukov, Galina Dinkieva, and Ulyumdzhi Chidzhiev*



three workstations to the Healthcare Center. This allowed performing all kinds of scopic examinations, whereas earlier they had to transport patients to other institutions accompanied by resuscitation and anesthesia teams.

“Thanks to its multiple functionalities, the new unit is used both for early detection and for urgencies: receiving patients from first-aid stations,” explains Kermen Davaeva, Deputy Chief Physician for Treatment.

Diakom X-ray diagnostic suite is used almost day and night in the Center. Little Altana is now being examined in the facility. Together with her father, Garya Shandaev, she has come to receive treatment from the remote Oktyabrsky District of the republic located 300 km away from Elista.

“Indeed, it is quite a long way; however, if the Healthcare Center in Elista had not been so well equipped, we would have to go even farther,” says Garya Shandaev. “Everything necessary is in

place here: great doctors, excellent equipment, and comfortable furniture – thanks to the Caspian Pipeline Consortium!”



Lyudmila Kharechkina, Head of the Infant Pediatric Department, has been working in the Healthcare Center for more than 30 years. She says that there have never been such excellent conditions for the stay of children with their parents in the hospital.

“Everything is very functional and beautiful. It’s nice to go to work when such conditions have been created!” she smiles.

CPC donated dining room furniture, fridges, tables, racks, air recirculators, and split-systems. During sultry summers in Kalmykia, air conditioning systems are not only a matter of comfort for small patients, but also a vital need. Medication storage temperature range should not exceed 24 degrees; it is strictly observed thanks to such high-performance systems purchased by the Consortium.



**IT IS NICE TO GO TO WORK!..**

Olga Goncharenko, Chief Nurse, is demonstrating to Panorama CPC correspondents comfortable furniture in the Healthcare Center, which the Consortium purchased in 2015. After her skillful manipulations special fracture beds quickly assume all kind of positions.

**A MIRACLE OF SALVATION**

The purchase of a burn recovery bed was of a significant help to the Center. Today there are only two of such beds in



Kalmykia – in this Center and in the Republican Hospital for Adults. The method of air-fluidization therapy applied in this equipment allows for successful nursing children even with gross lesions of the body area. Fluidizing beds do save children’s lives. Two boys with burns of 80 % and 93 % of body have been recently successfully cured there.

Valentin Shondzhiev, an experienced combustiologist, put these children on their feet.

“Thanks to the equipment donated by the Consortium we are equipped today as the best burn recovery centers in Moscow. We perform step-by-step operations and skin transplantation. In the future, as soon as we have financing available, we plan to purchase equipment for hydrosurgery treatment. This will make it possible to cure many types of burn wounds without surgery,” he said.

**WITH SINCERE GRATITUDE**

After the Children’s Healthcare Center Panorama CPC correspondents visited the Republican Hospital for Adults named after Zhemchuev.

“The hospital is large, with 582 beds. We have 214 doctors working, among them there are 5 Candidate of Medical Science, 4 Honored Doctors of the Russian Federation, and 34 Honored Doctor of



the Republic of Kazakhstan,” says Svetlana Kusminova, Deputy Chief Physician for Surgery.

The digital X-ray machine donated by CPC significantly expanded the diagnostic capabilities of physicians and quality of the medical care provided.

“This machine is one of the most-needed in our hospital. Only in the daytime shift, about 50

people are examined, another 40 are examined during the evening shift. Due to the digital technology, the time for establishing diagnosis is drastically reduced: a picture of high quality is immediately sent to the doctor’s computer,” explains Lyubov Akimenko, Radiotherapist. “Many thanks to CPC for such essential and much-needed gift!”

The old X-ray machine does not stay idle as well. However, it is not able to work at such a pace as its new congener because it is a film machine, and the film needs to be processed, dried up – only then the specialist can examine it.

It can still take a long time to enumerate high-tech equipment purchased for healthcare institutions in Kalmykia. However, the people whom the Consortium was able to help could best tell us about the large-scale charity work implemented by CPC. During that business trip, we talked with many residents of the republic, and we are happy to convey their words full of sincere gratitude to CPC’s employees! ■

*by Pavel Kretov*



# Loving Means Protecting

EARLY MORNING, THERE WAS A JOYFUL HUSTLE ON THE QUAY OF THE SCIENTIFIC AND RESEARCH CENTER BIOS. HAVING ROLLED UP THEIR SLEEVES IN CONCORD, ADULTS AND CHILDREN, MANAGERS AND EMPLOYEES, SCIENTISTS AND ORDINARY NATURE LOVERS RELEASED STURGEON FRY TO THE VOLGA FROM TWO POOLS INSALLED RIGHT THERE.



## SCIENCE AND PRACTICE

Holding the fingerlings in their hands, the participants of the ceremony carefully, so as not to damage, carried them over from the pools to a special chute with flowing water, on which the fingerlings went straight to the river. Just a moment later, little sturgeons found themselves in a natural habitat and began their independent life. They will have to travel through the Volga Delta to the Caspian Sea. The little sturgeons will come back to the river no sooner than 12 years later when there will be their turn to give offspring.

The employees of the Caspian Fisheries Research Institute, Federal State Budgetary Scientific Institution

(FSBSI "CaspNIRKh") explained all this, as well as many other things to the foster children of the social institutions of the Astrakhan Region during ecology-related classes. These classes were held within the framework of the environmental awareness-raising project "Let Us Preserve the Nature of the Native Shore" implemented with the financial support of the Caspian Pipeline Consortium.

50 children and their teachers gained much interesting knowledge on ichthyology during the spring school holidays in the Children's Health Center named after A.S. Pushkin. Scientists of FSBSI "CaspNIRKh" told them about the ecology and nature of the region, types of fish inhabiting the Volga-Caspian

basin, technological processes of growing sturgeon. During practical studies in the laboratory of ichthyopathology, schoolchildren learned how to work with a microscope and video eyepiece. The children showed a keen interest in modern technologies used in water analysis and methods for determining biogenic substance concentrations.

## IN LIGHT OF CHILDREN'S CREATIVITY

Yet, science is science, and childhood is the most blessed time for creativity. At the jury's judgment, the educators of the social institutions of Kharabalinsky, Enotaevsky, Limansky, Narimanovsky and Krasnoyarsky Districts presented 21 pieces of outreach work



After a small official part, the sturgeon fingerlings were released into the Volga

in nominations "Environmental Performance" and "Decorative and Applied Arts". 12 works were named the best by the organizers, and their creators received certificates of honor and valuable gifts: televisions, synthesizers, and tablets.

Giving out prizes, Mikhail Grishankov, CPC Deputy General Director, RF Government Relations, noted that the environmental awareness-raising project touched everyone's feelings.

"We have seen a lot of talented works, the creators of which not only understand how important it is to protect nature, but already know in practice what exactly needs to be done. To my mind those children who were entrusted to release little

sturgeon will never forget this day. I hope that some of you will continue education in this field, and with the help of modern technologies will contribute to the preservation of the biological diversity of the planet," he stressed.

Oleg Petelin, the Minister of Social Development and Labor of the Astrakhan Region noted that the CPC charity project in several aspects is looking ahead, to the future: it concerns both the prosperity of the planet and upbringing of the rising generation.

## RETURN THE WEALTH GONE BY

The Caspian Basin has historically been regarded as the most

important fishery region both in terms of the volume of fish caught and by their value. For many thousand years there have been sturgeon living. One can find references on these earliest fish in the Caspian Sea in Homer's, Herodotus' and Aristotle's works. Since the time of Tsar Ivan the Terrible, sturgeons were delivered to Moscow to the Tsar's Court. Under Peter the Great, there was a sovereign fisheries office established in Astrakhan. By the end of the XIX century, fish yield in the Astrakhan Region reached 300 to 400 thousand tonnes and was more than in the Black, Baltic, White and Barents Seas taken together.

In 2017, FSBSI "CaspNIRKh" celebrated its 120-year anniversary. ▶





Gifts from CPC to the young eco-protectors

This year, the Scientific Research Center BIOS will celebrate 55 years. Since 1963, fish-breeding enterprise Ikryaninsky Sturgeon Fish Farm, now turned into the Scientific and Research center BIOS, breeds the sturgeon species of fish and releases the great sturgeon and Russian sturgeon fingerlings to the Volga River and its watercourses.

In its territory, there is a workshop to work with producers, where there is an incubation site, a workshop for production of feeder fish, two tank workshops with closed-loop water supply installations, a pond workshop, a fishing gear building workshop, and a scientific and research complex for molecular genetic testing.

In the Soviet period, the breeding plant supplied caviar and fry of seven species of Red Book fish to many countries of the world from Canada to Indonesia. Today, the enterprise

team is gradually recovering its once-lost positions. And this means that the profession of ichthyologist, if children participating in the CPC environmental awareness-raising project choose this career, will retain its relevance in the future.

“As part of the project, you have seen the work of people who work at our company; you took part in the process of fish resources reproduction. I hope that you will come to us to work at production facilities or will be engaged in scientific research, the results of which will allow all of us to properly manage our unique natural wealth,” FSBSI “CaspNIRKh” Director Arsen Mirzoyan addressed the children with these words.

**TOGETHER WITH THE CONSORTIUM**

The next day, the representatives of CPC, FSBSI “CaspNIRKh” and

Volga-Caspian Territorial Administration of the Federal Agency for Fishery released Russian sturgeon and great sturgeon fingerlings – about 9,000 fish – at the near-delta region of the Caspian Sea.

According to Vitaly Plyukhin, Head of the Scientific Research Center BIOS, in 2016–2017 alone, in cooperation with the Caspian Pipeline Consortium, more than 5 thousand sturgeon species yearlings of larger weight were bred and released into nature. The fish breeding plants usually release fry from 3 to 20 grams into nature. But thanks to the financial support of the International Consortium, the Center personnel were able to grow the Russian sturgeon fingerlings to a weight of 150 grams, and great sturgeon fingerlings, to 250 grams. Indeed, this is more costly, but significantly increases the survival rate of juveniles.

“According to our forecasts, the survival rate for these yearlings in the natural environment will be about 90 %,” confirmed German Gorst, Chief Specialist of the Caspian Territorial Administration of the Federal Agency for Fishery. “The Consortium does a great, good and noble work making a huge contribution to the reproduction of endemic fish species that live only in the Caspian Sea.” ■

by Pavel Kretov



Prizewinners and winners of the environmental contest



Oleg Petelin: The CPC Charity Project is looking ahead!

# Under the Banner of Ecology and Childhood

THE YEAR 2017 IN RUSSIA WAS A YEAR OF ECOLOGY, AND, A DECADE OF CHILDHOOD WAS DECLARED IN 2018 IN RUSSIA... IN CPC, HOWEVER, EVERY YEAR IS DEDICATED TO THESE VITAL ELEMENTS OF OUR LIFE: PRESERVATION OF THE ENVIRONMENT AND DEVELOPMENT OF THE RISING GENERATION.



**CULTIVATING THE TALENTS**

200 kilometers of the Tengiz–Novorossiysk oil pipeline out of more than 1,500 pass the territory of the Republic of Kalmykia. Thanks to the regional presence of the Caspian Pipeline Consortium, new schools and kindergartens which are built with the Company’s funds emerge here.

At the beginning of each academic year, within the framework of the CPC to First Grade Pupils program, employees of the Company hand over school bags equipped with everything necessary to children. The annual CPC to Gifted Children program gives a chance to gifted children from the back country of Kalmykia to choose the cultural development of their small motherland as a lifetime project. With the Company’s support, young talents get the opportunity to

mount the big stage and experience an unforgettable and encouraging feeling that gives strength for further wins.

**VIVA LA TERRA!**

Understanding particular vulnerability of the steppe ecosystem has become a drive for CPC to invest in environment protection activities. For example, the support given to the Chornye Zemli Nature Reserve allows providing the best conditions for the life of wild animals and birds.

The Consortium combines its efforts to replenish the natural wealth with environmental awareness raising of the locals, especially schoolchildren who, one day, will become responsible for the future of the nature in Kalmykia.

Since 2014, CPC has been implementing the Let Us Preserve

the Nature of the Native Shore environmental project aimed at upgrading environmental consciousness of the younger generation, cultivating environmental friendliness and preserving populations of endangered species of animals and plants.▶



Nikolai Mantsev and Ulyumdzhi Chidzhiev at the opening of the ecology session – 2018

The environment awareness raising project for saiga preservation was successfully implemented in the educational institutions of Chernozemelsky District where there were classroom sessions held on the topic of Let us Protect the Nature of Kalmykia: Saiga, the Steppe Antelope. Schoolchildren entered contests on drawings, poems, essays, and theatrical sketches.

In 2015, this program was on the march in Iki-Burulsky District. This time creative initiatives of the Let Us Preserve the Nature of the Native Shore project were



**GREEN MARCH TOGETHER WITH CPC**

In May 2018, under the CPC sponsorship, a Green March was organized. Within the framework of the campaign, there were Saturday volunteer activities carried out on planting seedlings in park areas and in the territories of public facilities of Iki-Burulsky and Chernozemelsky Districts. Children, their parents and teachers planted 160 fruit and ornamental trees in the school ground: apple, pear, cherry, and birch trees. The same campaign was held in the settlement of Komsomolsky of Chernozemelsky District: students and teachers of the Komsomolsky upper secondary school and school named after N. Mandzhiev transformed their school area into a garden where the fruit tree seedlings planted in the autumn last year under that campaign has already taken root...

devoted to the protection of the “steppe queens”: red-listed tulips and demoiselle cranes. Onsite the district school there was The Earth is My Home greening campaign held.

After the project completion, CPC funded publication of albums, which collected the best works of children dedicated to the native shore nature.

**OASIS FOR SAIGAS**

The follow-up of the Let Us Preserve the Nature of the Native Shore program was a large-scale environmental awareness raising project implemented by the Consortium in 2016 in cooperation with Tsagan Sedklyasn nonprofit organization in the territory of Chornye Zemli State Nature Reserve. Its goal was to preserve the population and increase the number of saigas, and attract public attention to the existential threat of the steppe antelope.

The Consortium financed a number of activities aimed at improving the habitat of saigas, strengthening control against poaching, and equipping the Nature Reserve to study the situation of the population. In the central part of the Reserve there were organized watering points allowing saiga herds to dwell in the protected area; special-purpose viewing systems and trail cameras were purchased for monitoring animals.

A significant help for the Reserve personnel was off-road UAZ Patriot and UAZ-2206 purchased by CPC, as well as uniforms for the inspectors.

In 2017, the Consortium’s Let Us Preserve the Nature of the Native Shore program covered a vast area including the capital and 13 districts of the republic. Within the framework of the program, the special-purpose support to the Chornye Zemli Nature Reserve was continued to improve the saigas’ habitat.

In the course of cooperation between CPC and Chornye Zemli

Nature Reserve, the number of saigas has increased significantly from 4,000 species in 2015 to 6,000 species in 2017.

**PRESERVE THE ONE AND ONLY**

The rising generations are at the forefront of the Consortium, which has come to this region and here to stay, because the future is in their hands. The following initiative of the Company serves the lofty objective to bring up environmentally conscious people, and true environment defenders.

In July last year, in the Republican Children’s Creativity Center, the first-ever specialized environmental interregional summer session called Preserve the One and Only was organized under the sponsorship of CPC. 35 winners and prize-winners of school, district and republican academic olympics and competitions in biology and ecology took part in it. Summer amusements, theater trips, and swimming in the pool were organized for kids. But the heart of this specialized session program was building environmental culture among students, classes on biology, ecology and local environment studies, field studies in the park, and competitions aimed at solidifying the lessons learned. The staff of the Chornye Zemli Nature Reserve



*The number of saigas in the steppe is growing...*

and the Kalmyk State University acted as teachers.

The successful experience of organizing the specialized summer session called Preserve the One and Only was implemented this year as well: on June 16, 35 young ecologists and nature defenders aged 11 to 13 met again under the cozy shelter of the Republican Children’s Creativity Center, which also carried out the mission of ethnic school.

Participation in such interesting eventful camp session is a kind of impetus for schoolchildren to study natural sciences and develop creative initiative. As experience showed, children who have been there for the first time try to return to the camp next year. These days, Tsagana Mandzhieva, Lyudmila Boevaeva, Svetlana Mesteeva and Naran Dadaev managed to do it: having become the prize-winners of the Let Us Preserve the Nature of the Native Shore CPC republican creative competition, they arrived for the second time to the ecology session.

Among the children who represent different parts of the republic in the camp there is sixth grader Elsa, a prize-winner of the Biology Academic Olympics. The girl told us that in the school where she was studying, the children together with the teachers organized Saturday volunteer clean-ups, and dressed

up the school territory. Elsa confided that she was pleased to realize that she contributed to the improvement of the environment of her native shore and the country, and helped clean up our beautiful planet.

A couple of days before the official opening of the specialized environmental session, which was held on June 18 with the participation of honored guests from the Republican Government and CPC representatives, the children managed to become friends and prepare a vivid idea of their squads named Alye Parusa (Scarlet Sails), Vintery (Winters) and Galaktika (Galaxy). The squads contrived their own slogans and demonstrated them with great enthusiasm during the official opening of the session. “Everyone has a leader inside!” – this statement that was declared in one of the slogans excellently reflects the life philosophy of participants in the CPC specialized sessions. Young ecologists strive to acquire knowledge, show energy and perseverance, thanks to which they will be undoubtedly able to successfully embed their ideas in the public consciousness and protect nature in the future.

Nikolai Mantsaev, Minister of Education and Science of the Republic of Kazakhstan, Mikhail Stroganov, Deputy Minister of Natural Resources and Environment Protection of the Republic of Kazakhstan, Ulyumdzhid Chidzhiev, CPC-R Representative for the Government of Kalmykia relations participated in the official opening ceremony for the ecology session.

As Nikolai Mantsaev noted the preservation of nature was a long process, in this regard, it was especially important to form a community of people who would not only protect the environment, but also become propagandists of environmental ideas. He expressed confidence that the participants in the CPC ecology session would become well educated and motivated environment defenders in



**TO SOW IN CHILDREN’S HEARTS...**

In 2017, within the framework of the Let Us Preserve the Nature of the Native Shore project, CPC held a large-scale creative contest among pupils of schools in the republic on working out materials to protect the flora and fauna of Kalmykia. The results of the contest were summed up in a formal atmosphere with the participation of the leadership of Kalmykia and Consortium in the Great Hall of meetings of the Government of the Republic of Kazakhstan in Elista.

Happiness radiated from eyes of parents, teachers and children with such attention to children’s creativity. The works were evaluated by important experts, and senior management personally congratulated winners and prize-winners, awarded them with gifts and commemorative diplomas, and journalists had interviews with children...

This year, the Consortium continues to sow seeds of love for the native shore, compassion for its inhabitants and desire to do everything to save this world for the next generations in children’s hearts. An environmental creativity competition has been in progress since April, the results of which will be summed up in September.

the future and would solve environmental issues nationwide.

The Minister thanked the Consortium for its longstanding cooperation with the regulatory authorities and the public in Kalmykia in the implementation of charity social and environmental projects. ■

*by Baichkha Manteyeva*



*... thanks to CPC support to Chornye Zemli Reserve*

# Honeymoon Island

IT IS SO GREAT WHEN NICE CHANGES HAPPEN IN THE LIVES OF OUR COLLEAGUES. WE, OUR SMALL, BUT FRIENDLY TEAM OF PRESS-SERVICE AND PROTOCOL OFFICE, WERE SINCERELY GLAD WHEN NADEZHDA NAZAROVA, OUR CHARMING AND RESPONSIVE COLLEAGUE, WHO IS ALWAYS READY TO GIVE A HELPING HAND, TOLD US ABOUT THE CHANGE OF HER FAMILY NAME FROM CHEREDNIKOVA TO NAZAROVA.



At the New Year's corporate party, we came to know Yuri, Nadezhda's chosen one. This young man, interesting, goal-oriented and full of career plans, made the most pleasant impression on us. What is more, these just married were simply brimming with happiness!

And then, together with Nadezhda, we were looking forward to wedding photos, which were received from the wedding organizer only a few months after the ceremony in Thailand. Here they are – wonderful moments of the most important and beautiful event in life!.. I asked Nadezhda to write an article about this unusual trip for Panorama CPC, and she agreed. In fact, Nadezhda has a vast experience in preparing materials for the corporate magazine; she is the author of many articles on travelling. And here is her new story.

## DREAMS COME TRUE

Dreams are given to us to live them out. The most important thing is to meet a twin mate, a person who is in tune with you. I am fortunate to have this happened in my life! We had not the slightest doubt that the wedding ceremony would take place in the country where we had our feeling sprang: in the Kingdom of Thailand.

It is a truly hospitable country with smiling local residents who take their time and believe in Buddha. A warm, fabulous, enigmatic country with age-old culture and ancient historical monuments,

Thailand delivers unforgettable impressions of staying in the "land of smiles". Snow-white beaches with the purest azure water, majestic mountains, and superior ethnic cuisine – all this gives a bunch of impressions and memories!

## A JOURNEY FOR TWO

While planning the dream-wedding, we decided to hold it in privy and booked a professional photo shoot and a video recording. Let colorful photos and a small film tell the story of our love.

While in Moscow, we chose in advance an agency that organized

holidays and events on the tropical island. A team of professionals offered us a wide range of services: photo, video, bride's preparation; they selected a restaurant and a wedding celebrant, made a wedding arch and a host of other things. It was worth spending time looking through many sites, writing a lot of inquiries to wedding planners to find a soul mate, a person and an organizer who would understand our wishes perfectly well and plan a unique wedding exactly as we requested. And we found such person.

Thailand is a country of contrasts! One of the most amazing and

exotic capitals of the Oriental countries is Bangkok. The city is likened to magnificent skyscrapers and neon signs; it never sleeps, and its life never stops for a minute: restaurants, bars, nightclubs... At the same time there are dozens of canals with river buses, antique temples glittering with gold and redolent of odorant incense. For shopping lovers, there are trade malls in the very center of the capital.

## FROM ONE ISLAND TO ANOTHER

Thailand attracts me and my husband Yuri by countless islands of paradise, not all of which are suitable for living. Some places can be reached only by ferries or boats; that is why we always have our backpacks on while travelling: wheeled bags are inappropriate here. During our honeymoon trip we managed to visit three markedly different islands.

Ko Tao is a diving paradise for tourists. In the local crystal clear water, among one-of-a-kind corals there are beautiful turtles and multicolored fish living. This small island seemed a little overcrowded with tourists to us.



Koh Phangan is famous for its night life. But we are fascinated by the local wild nature: waterfalls, majestic mountains with impenetrable jungles and, of course, beaches with white sand and calm sea.

Samui is an island with an international airport, which is located in the bay, and therefore it fears no tsunami. Here you will find an excellent service and a wide selection of hotels, villas, and bungalows. This is a "bounty"

resort with the blue sea, white sand and possibility to organize your dream-wedding. At the end of our trip across the islands of Thailand, it was Samui where we chose to hold our ceremony.

Many people will understand me: this long-awaited day flew by in a flash, but thanks to photos and video it is easy to live through those happy and emotional moments again! ■

by Nadezhda Nazarova



# Fishing in Astrakhan

MANY EMPLOYEES OF THE CPC MOSCOW OFFICE KNOW THIS SINCERE AND ALWAYS POSITIVE MAN. I HAVE LEARNT ABOUT HIS MULTI-YEAR HOBBY JUST BY CHANCE FROM MY COLLEAGUES, AND DECIDED TO QUESTION ANDREY SAKHNO PERSONALLY ABOUT EVERYTHING.



Andrey Sakhno is a driver by vocation

Andrey Sakhno proved to be a very interesting storyteller. During our conversation, the topic of fishing, a hobby of all members of the friendly family of Sakhnos, somehow naturally expanded far beyond the originally planned scope of the future article.

## DEFENSIVE DRIVING AS A FAMILY VALUE

Andrey is a driver by vocation. He simply loves his job, and started his story with it:

“My track record as a personal driver equals to almost a quarter of a century, over 10 years out of which I have been working in the CPC Moscow office. In this period, the team of drivers here has grown: at first there were 15 of us, and now about 25. In general, the CPC team can be called one large and close-knit family. All people are good, kind, and friendly. It is nice to work here!

I like that CPC pays great attention to safety of traffic,” continues Andrey Sakhno. “They conduct

inductions, we undergo additional training on defensive driving – it is really helpful! If only all people behind the wheel adhered to the safety principles cultured in CPC, the traffic accident rate would have drastically decreased – it would almost have disappeared! I have personally changed my views as well, and I try to adhere to these principles not only in the company car, but also in my personal one. They are very useful, my driving style has become calmer over the years of work in CPC, and I believe this is as it should be.”

It turns out that our interlocutor adopted the defensive driving principles in CPC not only at the level of knowledge and skills, not only literally absorbed them consciously turning it into a character trait, but also made a real family value.

“We all do like long-distance travels in the car. We love traveling as a family, it is a real adventure! In long-distance travels, my wife is my co-driver, and I can sleep securely when Ekaterina is driving. My son Nikolai is 20, he also drives a car. In the spring, he went with my mother to her dacha (to the country) and transported some things. She was just fascinated by his good, calm and careful manner of driving. His grandma remained very pleased!” Andrey admitted with pride.

By the way, his 13-year-old daughter Masha also aspires after machinery. She tries not only get behind the wheel, but also shows an active interest in the car, and is curious about its construction: “How is it called? How does it work?..”

Masha likes animals very much, especially dogs. She attends courses

at a dog association. Their dog Chara has been in family journeys more than once. Now the pet is almost 19 years old, and Chara, as our interlocutor put it, is “in retirement”. Long-distance travels are above her strength, however she frequently goes in the out-of-doors, where she is more agile, and feels better.

## IN NATURE'S LAP

Finally, we arrived close to the family hobby of our interlocutor. It's about fishing. But in order to cast a fishing rod in anticipation of the morning bite, the complete family of Sakhnos, often accompanied by relatives and friends, does quite a serious motor rally from Moscow to Astrakhan. There, ashore of one of the tributaries of the Volga, they chose a picturesque meadow.

A welcome rest in nature's lap begins with outdoor cleaning: they collect and put in bags what the previous holidaymakers had left behind. Every other day, the locals take the bags filled with garbage and bring them to the landfill for a small fee; therefore, it is quite easy for non-residents to keep the banks clean. However, not all members of our society are such conscious and responsible, which fact never fails to amaze our heroes.

“They have rest as if there is no tomorrow!..” sincerely bewails Andrey Sakhno.

## A CHARGE FOR THE WHOLE YEAR

Coming here from year to year, they got acquainted with friendly villagers, from whom they buy all-natural food.

Both children and adults enjoy the taste of genuine milk. What a delicious cottage cheese one can make of it! When they made it the first time, the children were in raptures about it. Before the adults could say Jack Robinson, healthy treat was eaten. Indeed, you cannot try this in the city!..

“We love active leisure when you constantly do something. On the day of arrival it is necessary to make a camp, put up a tent, a heater, a table. The next day you feel like catching fish. If there's a catch, you need to clean fish, salt it, and prepare for smoking,” Andrey recounts. “We all gain health there. In Astrakhan Region, the air is very good, rich in beneficial aromas of steppe grasses, wormwood... Even the sky is different there. It's so nice at night to lie down on sand, which has not cooled down yet, and look at the sky – it is so deep, and the Milky Way is clearly visible. You can lie there and count falling stars, especially in August. Extraordinary!.. We get emotions and energy enough for a year.

One can catch pike, perch, sander, catfish, carp, bream, as well as roach and other pan fish in the river. I love sander and perch, they are very tasty, and good both for making fish soup and for smoking. Someone likes trophy fishing, chases for large fish and big catch. We go there to rest, we do not stock fish. We eat what we catch. We smoke fish surplus and bring



A fisherman's capture

it home to treat moms and grandmothers. We all really love Astrakhan fish!” our interlocutor smiles.

## A BIT OF EXTREME

“In these journeys, we value the process itself, some kind of extreme, living in a tent, in the wild,” he goes on. “Once, when we came there, there were many wolves. When the moon was full, we had sleep with their many-voiced howling. We found traces of wolves 50 meters away from the tent. The invasion of these predators was a real disaster for local farmers; one of them came out at night and fired a double-barreled gun airward: he scared off predators from cattle herd. Next year, there were lots of snakes appeared. A huge snake in plain view of my stupefied daughter crawled almost on my feet and disappeared in the bushes,” recalls Andrey.

Our hero willingly shared a secret of delicious fish soup with Panorama CPC readers: “Small fry is good for the first broth. A real fish soup is cooked only over the campfire. It is ideal to use filtered water from the river. But since we have children with us, of course, we use bottled water. We filter the first broth, and then add pieces of sander, potatoes, onion, and carrot; sometimes we add sweet local pepper and tomatoes. We market vegetables in Kharabali. There is also a small market near the ferry crossing through Akhtuba where you can buy necessary food.”

“If one of your colleagues, by your example, intends to have such holiday in the Astrakhan Region, when is it better to go there?”

“The best month is August, but in August there are lots of people there. That is why, for some time past, we try to go there in mid-July. The disadvantage of it is that in July there are not yet genuine Astrakhan water-melons and melons. August and September is their period. Local water-melons that we buy make a real difference to those that are sold in Moscow.”

“Do you plan a trip this year?..”

“Yes, we do want to go there again!” ■



Today we'll have a delicious fish soup!



Spouses Sakhno: a recipe for happiness is harmony of interests

by Ekaterina Suvorova

# A Mystery of the Princess of Ipatovo



SHE BECAME A PART OF ARCHEOLOGY HISTORY AT THE CLOSE OF THE 20TH CENTURY AS "WORLD-SHAKING", "LOTS OF MYSTERIES", AND "STARTLER IN IPATOVO" – A PRINCESS WHO BECAME KNOWN TO THE WORLD THANKS TO A CERTAIN DEGREE TO THE CASPIAN PIPELINE CONSORTIUM.

In the spring of this year, there was the exhibition called Treasures of Archeology opened in the Stavropol State Historical-Cultural and Natural Landscape Museum Preserve named after G. N. Prozritelev and G. K. Prave. Some of the exhibits were found during archaeological excavations started in 1998 by Nasledie, State Unitary Enterprise in the protected zone of the Tengiz–Novorossiysk oil pipeline construction; these excavations covered the north of Stavropol Krai, south of Kalmykia, and part of Krasnodar Krai.

The most outstanding discovery made by the expedition of Nasledie, State Unitary Enterprise that carried out archaeological studies requested by the Consortium was

the Big Ipatovo Kurgan (burial mound). It was located on the high bank of the Kalous River, and was so named because of its impressive size: up to 7 m high with a diameter of 100 to 120 m. There were 195 burials found that were of great scientific and cultural value. Some of them date back to the Bronze Age, others to the Early Iron Age and to the Early Modern Period. But the most important archaeological startler was the discovery of a rich burial of a woman who came up to the world as the Princess of Ipatovo.

One of the discoverers, a professional archaeologist and director of Nasledie, State Unitary Enterprise Andrei Belinsky said the following about the artefact in his interview to the local newspaper: "Excavations with such findings happen once in a hundred years at most. Stavropol Krai has never experienced anything of the kind. Moreover, the Princess of Ipatovo has lots of mysteries... If the Kurgan had not been located in the protected zone of the oil pipeline laid by the Caspian Consortium, who knows when else our archaeologists would have set about it."

The Consortium financed all the survey works.

## MYSTERY OF KINSHIP

Rich burial No. 14 that survived by a miracle from despoliation dates back to the 3rd century B.C., and belongs to the Sarmatian period.

A skeleton of a young short-stature woman was found there. Scientists managed to reconstruct her face by M. M. Gerasimov's method (facial reconstruction by skull).

"The Sarmatians were representatives of the Caucasian anthropological type," says Svetlana Kravtsova, Head of the Department of Archeology at the State Historical-Cultural and Natural Landscape Museum Preserve. "You can see from the anthropological portrait of the "princess" that she has Mongoloid facial features. Specialists explain this unusual fact as follows: the Sarmatians, being nomads, passing large areas, met with different peoples. Noble Sarmatians very often married women from peer families of other peoples. Perhaps this is how she found herself in the Sarmatian environment."

Gold items found in the burial signify noble birth of this woman: a massive torc on the neck made in "animal style" and twisted spiral bracelets on the wrists. It should be said that gold for the ancients was primarily a symbol of power and status. Scientists explain the great number of gold ornaments found in the imperial burial mounds by people's beliefs in the afterworld, in the victory of the sun over eternal darkness.

"Gold is a divine metal, and it belongs only to those who can be drawn near to gods. These are all people of status," Svetlana

Kravtsova explains. "This torc (found in the "princess's" burial vault – author's note) is not easy to hold, I think it was difficult for her to wear it around her neck, besides, this torc was quite big for the "princess". Do you see its lock goes beyond the borders of the torc ring? Perhaps it was intentionally dislocated, or perhaps it was presented to her already after she had gone to the next world..."

## A SORCERESS OR A WARRIORESS?

The torc is by no means the only mystery of the "princess". There were lots of amazing things discovered in the burial, for example, acinaces (dagger) in a leather scabbard decorated with gold plates. Two small leather bags were found on her belt, one of which contained all kinds of amulets: a crosscut belemnite – an ancient cephalopod, a tooth of a fossil shark, several strange items of organic nature resembling ear auricles, a tiny hair comb, which could not be used for its intended purpose because of its size...

"It's this small bag with amulets that allows researchers to talk about an exceptional status of this woman either in a large dynasty, or among the entire population she lived with. The "princess" was

engaged in some kind of cult performing magic actions," Svetlana Kravtsova comments on the unusual contents of the bag.

The second belt leather purse contained... cosmetics with a blusher and lipstick.

In the burial, there was found an elegant pottery black-lacquered vessel, on the handle of which one can notice a "knot": a symbol of fertility. One can see holes on its body around the circumference: these are presum-

"She has an amazing collection of beads!" Svetlana Kravtsova shows the ornaments found in the burial. "Here, in our territory we do not have amber, for example: it could come here only as an imported item – this is an evidence of trading. Perhaps this lady brought them as part of her dowry."

The fact that the burial had been left unscathed by the ancient grave robbers who usually were ferocious in respect of graves and burial mounds is surprising no less than the contents of the burial itself.

*"Excavations with such findings happen once in a hundred years"*

ably traces of "mortification" of this item sent to the afterworld together with its mistress. According to Svetlana Kravtsova, this is definitely a sacril thing. During excavations, archeologists quite often find artefacts with such damages. The "princess" also had a wooden vessel covered with sheet gold carved with images of "animal rut", perfectly survived flat-bottomed amphora, as well as various jewelries made of natural stone and organic material. Many of the jewelries found are made of amber.

"Thanks to the fact that no ancient robber noticed the burial, it could preserve such beautiful set of its goods. Everything that the "princess" was given for the afterlife came to the museum: firstly to the museum of Nasledie, State Unitary Enterprise, and then to the Stavropol State Museum," says Svetlana Kravtsova.

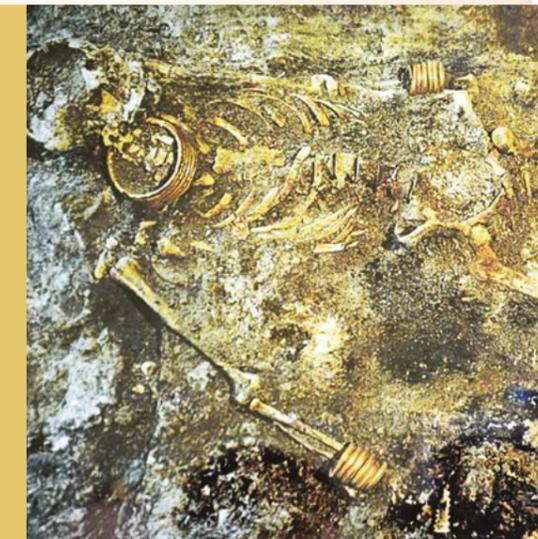
## EXPERIENCE AND WISDOM ON GUARD FOR SCIENCE

Considerable painstaking work of so many people, archeologists and ▶

Information on the "princess's" burial from the web-site of the Ipatovskiy Regional Local History Museum:

Excavations of this burial lasted for 8 days. 80 items were found in the burial. The height of the young woman was about 160 cm, the face of a Mongoloid race. Items lying nearby indicated that this was a person of noble kin. Two gold pendant rings of fine wire were once attached to the temples of the "princess". The buried woman had a gold pectoral on her neck twisted of six thick hollow tubes.

A lock made of the same tubes was fastened on the loops to one end of the pectoral. Both arms of the buried woman were decorated with massive gold bracelets made in six turns from a solid metal bar. Their endings were made in the form of predators' images. A gold ring was on the finger of her left hand. It was made from a Greek coin... In terms of richness, this burial belongs to the rank of rare graves of the steppe people of nobility before Christ. In terms of weight of gold items, it is one of the most significant and fruitful burials of this kind in the south of Eastern Europe, and in terms of historical value, these archaeological finds are invaluable...



Svetlana Kravtsova, Head of the Department of Archeology at the State State Museum

specialists of related disciplines allows for saving items survived through millennia.

“The way an archeologist can extract an item depends on his/her experience,” Svetlana Kravtsova says. “He/she proposes his/her methods of extracting items. When he/she encounters an artifact, he/she expresses his/her opinions about its purpose. His/her experience and intuition help him/her in many issues. However, the assumptions the archaeologist makes still need to be confirmed. For one thing is “experience and intuition” of the archaeologist, and another thing is confirmation by related disciplines: physics, chemistry, botanics, and others. A comprehensive study of items makes it possible to see many key aspects. For example, plant pollen can help in dating monuments in addition to indicative matters and grave structure. It involves a lot of patient professional work, without which most of the findings, fragile and poorly survived, will simply vanish.”

A true professional in this respect was Grigory Prozritelev, one of the founders of the Stavropol State Museum where there is now the Princess of Ipatovo complex being exhibited. A scientist, public figure, lawyer, and local history

expert, he was interested in archeology and ethnography. For example, thanks to his competent approach in the early 20th century, a skeleton of an ancient bony fish was saved from the Sarmatian Sea



A dagger with a scabbard from the burial of the “princess”

(Lower Sarmatian period, middle miocene, 19 million years ago). In gratitude for his work, specialists gave fish of tuna species the scientific name of Thunnus sp. Prozritelevi.

The name of G. N. Prozritelev is also associated with the largest treasure found in the territory of Russia in the 10th and early 11st centuries: the Kazinsky treasure (it is exposed in the State Hermitage as the Stavropol Treasure). 19 gold items of the Sarmatian time weighing 16 kg in total were found in 1910 in a peasant’s garden in the village of Kazinka, Stavropol province. A man who discovered a vessel with gold items had recently bought a land plot from another peasant. The seller got to know about the “finding”, and a non-laughing conflict blazed up. Mr. Prozritelev who was engaged in advocacy at that time settle the peasants’ dispute by explaining that the treasure

belonged to the state, and a person who had discovered it and a person who had sold the land was to be rewarded. The grateful peasants gave part of the premium to Grigory Prozritelev, and the latter in turn purchased two archaeological collections and enlarged the library of the museum of the North Caucasus.

**HISTORY CONTINUED**

“I must tell you that the entire Princess of Ipatovo complex has not yet been published by the researcher (a holder of a permit for archaeological excavations and surveys, i.e. a document giving the right to conduct archaeological excavations – author’s note),” says Svetlana Kravtsova. “It’s his right to be the first to publish this material.”

In 2007, following the excavation of the Kurgan as a facility forming part of the protected zone of PS Komsomolskaya – the Black Sea oil pipeline section construction, a book by S. N. Korenevsky, A. B. Belinsky and A. A. Kalmykov was published with the name of The Big Ipatovo Kurgan in Stavropol Krai (as an Archaeological Source for the Bronze Age on the Steppe Border of Eastern Europe and the Caucasus). It contains such lines: “It is very difficult to publish all the materials about the Big Ipatovo Kurgan at one time. Therefore, the authors’ team decided to introduce the data on excavations into scientific discourse in parts. The section dedicated to the Nogai cemetery has already been published... Another topic of burials in the Early Iron Age (graves 2 and 3, as well as the Sarmatian superior burial 14) is so vast and multifaceted that deserves an independent publication.”

Almost 20 years have already passed since the discovery of the burial No. 14. The mystery of Her Highness has not been fully unearthed yet. ■

by Ekaterina Kravtsova

# Under the Boiling Sun of Arabia

OIL PRODUCTION IN SAUDI ARABIA STARTED IN THE LATE NINETEEN-THIRTIES. HOWEVER, FOR MORE THAN 10 YEARS OIL PRODUCERS HAD CONSIDERED THIS REGION A TRUE “BACK OF BEYOND”.

Tankers sailing from the Persian Gulf with oil extracted had to take a big detour: Leave for the Indian Ocean, and cross the Red Sea and the Suez Canal. This section of the route took up to 20 days for vessels. Therefore, it was right from the start obvious to the managers of oil companies that an oil pipeline from Saudi Arabia to the Mediterranean coast was required to be constructed.

**THE BEST ROUTE**

Initially, oil producers considered a possibility to build the Trans-Arabian Pipeline from the oilfields in the north-east of Saudi Arabia to the Palestinian Port of Haifa. They chose this route because there was an oil loading terminal there for servicing the oil pipeline, which had been built by the British in the 1930s and went from the Iraqi town of Kirkuk. However, due to a politically volatile environment in Palestine after the end of the World War II, which preceded the establishment of the state of Israel, they were forced to reconsider the end point of the route.

It was decided to lay the oil pipeline from Abqaiq to the Lebanese port city of Saida. The plan was as

follows: At first the 1,720-kilometer oil pipeline had to run from Abqaiq to the oil terminals of the port of Ras Tanura on the Persian Gulf coast, then turn north-west towards Jordan, cross the Lebanon-Syria border near the Bekaa Valley, and run down to the Mediterranean Sea. In 1946, all the countries, through the territory of which the main pipeline had to run, i.e. Saudi Arabia, Jordan, Syria, and

Lebanon, gave their consent to this plan, and this led to proceeding with the practical implementation of the project.

**AMERICAN “NEST-DOLL”**

For the oil pipeline, 265,000 tonnes of steel pipes with diameters of 30 and 31 inches were ordered from the plants in Utah and California. While loading on marine vessels, pipes of smaller diameter were placed into the pipes of larger diameter, and various construction materials, like cement, placed into the smaller pipes. Thanks to this type of American “nest-doll”, they managed to save time and cost of transportation twofold.

The pipes and equipment began to arrive to the route site in November



1947. Since the construction of the pipeline was carried out simultaneously from the opposite ends, everything necessary for contractors was transported in two ways. For the Western part of the pipeline, the cargo arrived to the Mediterranean port of Beirut located near Saida, where there were all conditions required for receiving ocean-going vessels. In the Persian Gulf, the situation was more complicated: The vessels could not approach the shore because of the shallow-waters. Therefore an artificial island was erected and convenient stone mooring berths were built three miles from it. From there, the pipes and equipment were transported to the mainland ▶



In Saudi Arabia, the oil pipeline section was mounted on special supports



Many of the jewelries found are of foreign origin

by a special cable way, along which there were shuttling platforms with pipe clamps.

**HARSH REALITY**

The pipes were welded ashore into three-length joints and transported deep into the desert on 50-tonne trucks. This heavy machinery was specially designed in the USA for the construction of the Trans-Arabian Pipeline, and was tested in the state of New Mexico in the conditions as close to Arabian as possible. The motors were equipped with double radiators to protect them from overheating.

Starting the construction, the project managers hoped that it would be necessary to rehabilitate particular sections of the highway for the construction and further operation of the pipeline. The reality turned out to be harsher: There were no roads up to Jordan, and the contractors had to lay also several hundred kilometers of highway.

**UNDER THE LAWS OF THE DESERT**

About 2 thousand specialists from America and almost 15 thousand locals were involved in the construction of the oil pipeline. In the beginning, the language barrier was a real challenge; they had to communicate using sign language, and repeat the tasks over and over



When transporting by ship, small-diameter pipes were placed into large diameter pipes

again. Eventually, an English-Arabic mixed language emerged at the construction sites: The language perfectly understood by all those involved in the construction.

The work was performed under the boiling sun at temperatures exceeding 55 degrees: One could not take any metal part or tool without special safety gloves.

Other considerable challenge during construction was the shortage of water. Neither water delivery by ships nor seawater desalination technology had solved this problem, so the constructors started drilling wells. 52 water wells were drilled in two years, in 40 of which there was water found. According to the unwritten law of the desert, no one can be barred from water; so numerous nomadic Bedouins with their flocks of camels and sheep of tens of thousands of heads arrived shortly after to the new water sources.

**FOR SAFETY REASON**

The Trans-Arabian Pipeline became the first pipeline in the world, in the construction of which a random X-ray inspection of welded joints was performed.

40 % of the pipeline running through the uninhabited areas of Saudi Arabia was mounted on special supports above the ground: It was cheaper in terms of construction and more convenient in terms of further maintenance. In addition, such method made it possible to avoid contact between the pipeline and saline soil that eroded metal.

However, in Lebanon, Syria, and Jordan, where population density was significantly higher, they had to lay the pipeline in a trench blasting rock in order to ensure safety. The pipe section in Jordan was particularly difficult: The contractors had to conquer areas covered with blocks of solid ragstone and large clots of volcanic scoria several tonnes in weight.



For hot environment of the Arabian Peninsula, special-design trucks were constructed

**PIPE MEANS PROFIT!**

Nevertheless, all the difficulties were successfully mastered, and on December 2, 1950, the first four tankers, in triumphant atmosphere, simultaneously moored for loading at the sea terminal in Saida. They were loaded and set sail in less than 20 hours.

With six operating pump stations, the pipeline initially shipped 300 thousand barrels of crude oil per day. Later, several more stations were built bringing the pumping capacity up to 500 thousand barrels.

There were other pipeline benefits. After completion of the oil pipeline construction about 60 tankers were released and sent to transport oil from the Gulf of Mexico to the north-eastern coast of the United States. ■

by Pavel Kretov



**A Festival of Peace and Football**

The FIFA World Cup held in Russia in June-July drastically changed the life of cities where matches were held. Streets were filled with fans from all over the world and resembled a never-ending carnival. Positive emotions were slopping over, and friendly atmosphere prevailed everywhere. The Russians showed their native hospitality, and the guests discovered such unknowable, formerly distant Russia, entered into the spirit of our country and confessed their love to it. It is truly great when people get together! Let's meet more often on such good occasions.



**MEANWHILE...**

... the CPC cross-functional football team came third in the Gold Cup Tournament of the Fuel and Energy Complex amateur football league! Congratulations!



# Caspian Pipeline Consortium: a time-tested international project



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*Kindergarten No. 18 "Treasure Island" in the village of Glebovskoye in the Novorossiysk municipality became the winner of the All-Russia Review Competition "Exemplary Kindergarten – 2018". The kindergarten was named one of the best among almost 42,000 preschool institutions in our country. This is not the first award of the kindergarten built and equipped with CPC charity funds: in 2015, Treasure Island was named the best rural preschool institution in Krasnodar Krai*