Panoram JSC Caspian







Caspian Pipeline Consortium Corporate Edition

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Esteemed colleagues, dear friends,

I wish you a happy upcoming New Year! We worked hard in the past year, successfully combining the uninterrupted transportation of oil by the Tengiz – Novorossiysk pipeline and reliable tanker shipping at the Marine Terminal with large-scale construction of new facilities under CPC Expansion Project.

Oil transportation volumes through the Consortium's pipeline system in 2016 will be about 45 million tons, and, based on our shareholders' requests, in the next year 2017, we will reach the value of more than 60 million tons. Today, our shippers successfully operate new fields, at Kashagan in Kazakhstan, and the Filanovsky Field in Russia. Having secured the necessary surplus pipeline capacity well in advance, the CPC actively promotes

the development of the most important centers of oil production in the Caspian.

The Consortium's pipeline system is already capable of pumping more than 52 million tons of oil a year. Almost all Marine Terminal facilities are ready, including the tank farm and Operations Control Centre. This autumn, A-PS-4 was launched, PS-8, A-PS-4A, A-PS-5A, PS-5 were filled with oil, the installation of the process equipment at A-PS-3A was completed, and PS-2 is under construction. At the end of the third and at the beginning of the fourth quarter of 2017, all the works for the pipeline expansion will be completed.

Bringing together 11 shareholders from six countries, the CPC stands

out as a strong case for successful international cooperation. To all participants of the project, it has become a unique school of exchange of best practices and modern technologies. Thanks to strict compliance with the requirements of legislation in the area of construction and operation of hazardous production facilities through the adoption of the best international practices, CPC has achieved impressive results in terms of occupational health, safety, and environmental protection.

May all your plans and endeavors come true in the coming year. My heartfelt greetings to all wishing you great health, happiness and joy. ■

by Nikolay Gorban, CPC General Director

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Dear colleagues,

Speaking on behalf of the staff and the management of Transneft PJSC, I congratulate you on the coming New Year! In the past year, many of the important challenges associated with the Expansion Project were successfully addressed: the new Operations Control Centre of the Consortium's pipeline system became operational, the construction of the Tank Farm of the CPC Marine Terminal was fully completed, A-PS-4 was launched into operation, and the construction of several additional pumping stations is drawing to a close.

Commissioning of new facilities will serve all the Consortium shareholders' needs for the transportation of raw materials, and, that is even more impressive, in volumes that became a record high in the history of operation of the Tengiz – Novorossiysk pipeline system. After ensuring the necessary surplus capacity in advance, in the autumn of 2016, the Consortium began receiving Caspian oil from Kazakhstan's offshore Kashagan Field and Russia's Filanovsky Field.

In 2017, after the completion of the Expansion Project, the Consortium's pipeline system will reach its design capacity of 67 million tons of oil per year. This will significantly expand export opportunities for oil producers in Russia and Kazakhstan, and the Caspian will become one of the continent's most important oil production regions.

As your peers in the oil transportation industry, we cannot but note with satisfaction the increasingly active role of the Caspian Pipeline Consortium on the global stage. The CPC became seriously involved in the work of the International

Association of Oil Transporters, it is a regular participant of international professional competitions and experience exchange programs. Further systematic development of the Consortium will require vigorous efforts and dedication from all those involved in its activities, and I'm particularly pleased to note that the shareholders, the management, and CPC staff members are up to the challenge and capitalize on the accumulated cooperation potential and long-term experience.

This said, I wish all the CPC team new professional successes in the coming year! Good health, happiness and prosperity to you and your loved ones!

by Nikolai Tokarev, Chairman of the Board, President of Transneft PJSC





Dear colleagues!

Congratulations on a very successful year in which CPC realized many major accomplishments both in Base Business and the Expansion Project. We join you in celebrating the completion and incident-free operational commissioning of A-PS-4, A-PS-4A, Tanks 7, 9 and 10 at the Marine Terminal, and two LACTs at Pump Station Atyrau. During the August shutdown, a tremendous amount of work was completed at multiple locations, enabling the successful increase of throughput capacity to an all-time high. With start-up of the Kashagan and Filanovski fields, pipeline deliveries to Novorossiysk are

averaging 1,145,000 barrels of oil per day in November, a record, and CPC is transporting all the volumes nominated by its Shippers.

I'm also extremely proud of your continued focus on safety, which continues to be at a level comparable with the best oil & gas operators throughout the world. These accomplishments would not be possible without all of your individual contributions, and I thank you for those. I'd also like to thank Nikolay for his leadership, and the CPC Management Team for continuing to meet the many challenges you face daily.

I'm honored to serve as the CPC-R Board of Directors Chairman, and appreciate the contributions of all the directors and shareholders in working together to ensure that CPC meets its obligations and continues to develop as a successful and thriving organization.

I wish you all the very best for the upcoming holiday season, a Merry Christmas and continued success in the New Year; Be Safe! ■

> by Andrew McGrahan President of Chevron Neftegaz Inc. Chairman of the CPC-R Board of Directors

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Consortium Destined for Growth



Distinguished colleagues,

The outgoing year 2016 has been a landmark for the Caspian Pipeline Consortium, an idea of which emerged only a few months after Kazakhstan gained its independence.

CPC acquired its current organizational structure 20 years ago, after the Restructuring Agreement was signed on December 6, 1996. Cooperation between top energy companies and the three countries based on mutual respect and interests produced an impressive success story and provided an essential outlet for Caspian oil to the world markets.

Yet again, you are headed for the coming year 2017 with new achievements, with the long-awaited Expansion Project nearing its completion, to allow Kazakhstan to look to the future with hope thanks to the large capacity reserve prepared for the export of Kazakh hydrocarbons.

On October 17 of this passing year, your Company reached another milestone in the history of the national oil industry by processing the first batch of Kashagan oil.

In addition to the NCOC oil company, the Consortium also gets an undisputable credit for this achievement, because it launched all the facilities under the Expansion Project necessary to process additional volumes of hydrocarbons in good time.

All of these impressive achievements are based on your professionalism, which transpires not only in quantitative data from direct operations, but also in indicators such as the level of safety, pipeline system operation coefficient, and the proportion of environmental payments depending on production volumes.

Your victory in international competitions among colleagues with pride make it safe to say that Kazakh pipe operation experts reached the level of global industry leaders.

Moreover, the CPC's contribution to the implementation of regional social projects and charitable causes, as well as sponsorship in the EXPO-2017 trade show, which will become a major event in our country in 2017, are particularly appreciated by the leadership of Kazakhstan.

For the coming year, I wish all CPC employees great health and happy family life. The professional level you've reached allows us to confidently expect the completion of the integration of new facilities into the existing CPC system and reaching the expected capacity in the coming year 2017. Happy New Year!

by Kanat Bozumbayev, Minister of Energy of the Republic of Kazakhstan



Working meeting of CPC management with the Minister of Energy of the Republic of Kazakhstan



Autumn Marathon 2016

WHEN THE KASHAGAN FIELD WAS PREPARING TO COME TO A NEW COMMERCIAL LEVEL OF PRODUCTION IN EARLY NOVEMBER, A SURPLUS CAPACITY OF THE PIPELINE SYSTEM WAS REQUIRED TO BE ENSURED IN ADVANCE.



Workshop A-PS-4 in Kazakhstan

At a meeting with Mr. Kanat Bozumbayev, Minister of Energy of the Republic of Kazakhstan, and Mr. Sauat Mynbayev, Chairman of the Board of Kazmunaigaz, on September 15, Mr. Nikolay Gorban, General Director of CPC, assured his colleagues that the Consortium is fully prepared for this task.

On September 17, 2016, in the framework of his working visit to Kazakhstan, Mr. Gorban visited stations under construction. At A-PS-4, he was informed of the completion of all construction operations and its readiness to start filling process pipelines. Contractors promised to complete comprehensive testing of all PS' systems by October 15, and they kept their word.

In mid-October, CPC received oil from the Kashagan field. "The required surplus capacity in the pipeline system was promptly provided, and we are ready to honour all of our shareholders' requests," said General Director of the Consortium.

On October 31, 2016, after a reconstruction, the Operations Control Centre of the CPC Pipeline System opened at the Marine Terminal. Monitoring of all processes 24/7 is now simultaneously carried out by

three experts using new dispatcher consoles. The OCC premises are equipped with advanced equipment, including a SCADA operational control and data acquisition system.

On November 8, Mr. Akhmetzhan Yesimov, Chairman of the Board of JSC "National Company "Astana EXPO-2017", and Mr. Kairgeldy Kabyldin, Deputy General Director for Kazakhstan Government Relations, JSC "Caspian Pipeline Consortium-K", signed a memorandum of cooperation. Mr. Yesimov, head of the National Company "Astana EXPO-2017" noted the highlighted importance of the Consortium's participation in the upcoming exhibition.



The opening of the Operations Control Center after reconstruction

On November 15–16, Mr. Nikolay Gorban took part in the 6th Meeting of the Board of the International Association of Oil Transporters (IAOT), which was held in Budapest. IAOT participants discussed the results of the work of Permanent Expert Groups on Energy Efficiency, Legal Affairs and Supplies, as well as plans for the next two years. The Meeting also approved an agreement for the development of energy efficiency benchmarking techniques among IAOT participants between the IAOT and the Transneft Research

Institute, LLC. As part of the exchange of experience, IAOT participants visited the Százhalombatta Refinery.

"We saw a large refining and petrochemicals production facility, two large dispatch centres for pumping oil and petroleum products. I believe such visits are extremely useful: we exchanged experiences and received information that can make use of at our facilities," commented Mr. Nikolay Gorban.

As of November 19, 2016, more than 350,000 tons of Kashagan oil was transported through the CPC pipeline. As part of a "Government hour" in the Majilis, it was reported that 400,000 tons of hydrocarbons was extracted from the deposit in total.

The exhibition "Development of Oil and Gas Sector of Kazakhstan" was scheduled to coincide with the event, with the participation of representatives of the CPC. As Mr. Kairgeldy Kabyldin noted, currently, the Consortium completes an expansion project, in connection with which A-PS-4 was already built on the territory of Kazakhstan, and the A-PS-3A is expected to be commissioned in the second half of 2017.

by Pavel Kretov



Participants IAOT in PS "Százhalombatta"

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20th Anniversary of the CPC Shareholder Agreement

ON DECEMBER 6, 1996, THE CPC SHAREHOLDER AGREEMENT WAS SIGNED IN MOSCOW. WE ASKED MR. KAIRGELDY KABYLDIN, CPC-K JSC DEPUTY GENERAL DIRECTOR, KAZAKHSTAN GOVERNMENT RELATIONS, AND A LEADING FIGURE IN THE KAZAKHSTAN OIL INDUSTRY, TO COMMENT ON THIS IMPORTANT DATE IN THE HISTORY OF THE CONSORTIUM.



Mr. Kairgeldy Kabyldin

I will dwell on the events that preceded this important date. History of the CPC Project is closely linked with the development of the Tengiz Oil Field, which was discovered in 1979 and breathed new life into the development of the Kazakhstan oil industry. In 1991, the country passed the law, under which all the resources on its territory came under the jurisdiction of Kazakhstan. In May 1991, Mr. Mikhail Gorbachev and Mr. Nursultan Nazarbayev agreed that negotiations with Chevron concerning the Tengiz Project would involve only Kazakhstan representatives.

Getting ahead, I remind you that, following two years of negotiations, the decision to establish Tengiz-Chevroil, LLC was finally taken in 1993. There was a question of building a special export pipeline from the North-Western Kazakhstan on the agenda. Tengiz oil had a number

of quality indicators requiring separate transportation.

Several options for the construction of the pipeline were considered: there were over a dozen of Kazakh oil transportation routes proposed, including through Russia – towards the Black Sea coast, through Iran – to the Persian Gulf, via Baku – to Ceyhan, through Turkey – to the Mediterranean. As a result, the experts identified a priority route Tengiz – Atyrau – port of Novorossiysk, because it was the shortest export route for Kazakhstan.

To arrange the financing and construction of the pipeline, a consortium, CPC Ltd., was set up by Kazakhstan and Oman in June 1992, which was joined by Russia in July.

In April 1996, the Protocol on CPC Reorganization was signed in Almaty. The document provided for the entry of foreign oil companies into the project and their acquisition of respective participation interests.

Negotiations on the draft CPC Shareholder Agreement were underway from May to December 1996 in Metropol Hotel of Moscow. It was the very first time we participated in such large-scale project, negotiating with international companies was a completely new experience for Kazakhstan. We started discussing issues at 9.00 am and would sit late into the night. In the course of negotiations, the Kazakhstan party was represented by me and Mr. Keshubaev, Vice-Minister of Oil and Gas, Mr. Kasymov, General Director of Yuzhnefteprovod Production

Association, and Mr. Kasper, Mr. Kasymov's Deputy. We did not have our own consultants familiar with international law and leveraged financing,



Moscow, December 6, 1996. Mr. Balgimbaev, Minister of Oil of the Republic of Kazakhstan, reports to Mr. Nazarbaev, the President of the Republic of Kazakhstan, on signing the CPC Shareholder Agreement

nor did we have our own technical experts on international standards. As our legal advisors, the ministry involved legal counsels of Sherman & Sterling. The experience of negotiations on CPC agreement proved to be quite useful, because we learned to understand the attitude of the international oil companies to transactions of this kind.



The signing of the Shareholder Agreement, December 9, 1996



Unfaltering support for the project at the highest level in Kazakhstan and Russia and the personal involvement in the developments around the CPC on the part of the Presidents, Mr. Nursultan Nazarbayev and Mr. Boris Yeltsin, was what made this project a reality. At the suggestion of Mr. Nursultan Nazarbayev, the ten principles of partnership were developed, which included the conditions for participation of oil companies in the project in exchange for guarantees of Initial Construction Project (ICP) financing, and the said conditions became the basis of CPC operations. The importance of the CPC project for Kazakhstan was highlighted by attention paid to it by Mr. Nursultan Nazarbayev. He personally conducted over a dozen meetings with the leadership of the Russian Federation to secure all the necessary arrangements in the financial and legal areas with the aim of long-term, safe and reliable transportation of oil via Russia.

December 6, 1996, when the CPC Shareholder Agreement was signed



The ground-breaking ceremony for the CPC pipeline system, May 12, 1999

in Moscow, became the turning day in the history of the project. To be more precise, agreements for the establishment of Caspian Pipeline Consortium-R, Closed Joint-Stock Company, and Caspian Pipeline Consortium-K, Closed Joint Stock Company, an agreement on the reorganization of the Caspian Pipeline Consortium Ltd. The documents were signed by representatives of Oman Oil Company Limited, Chevron Overseas Petroleum Inc.,



Kazakhstan President Mr. Nursultan Nazarbayev and Russian Prime Minister Mr. Viktor Chernomyrdin discussing issues related to the international consortium

LUKOIL Oil Company, Mobil Corporation, Rosneft Oil Company, AGIP SpA, British Gas Exploration and Production Ltd., Munaigaz, Public Holding Company, Oryx Energy Company, and Caspian Pipeline Consortium Limited.

Russia and Kazakhstan contributed to the project by their assets, namely their respective segments of the main oil pipeline Tengiz -Grozny. The evaluation of the Kazakhstan section of the pipeline was carried out by E&Y professionals. The Kazakhstan segment was estimated at approximately \$232 million, and the Russian segment at about \$292 million. Subsequently, Kazakhstan received 19 % stake, Russia – 24 %, Oman – 7 %. Fifty per cent of the shares were transferred to private oil companies in exchange for a commitment to fully finance the first stage and the commissioning of the pipeline.

Tengiz and Karachaganak deposits were allotted to CPC Project. We only had to solve the problem of transporting the oil produced there for export by implementing the Initial Construction Project of an oil pipeline from Kazakhstan to the Black Sea with the capacity of up to 28 million tons, including 22 million tons from Kazakhstan.

In order to support investments into the project, on April 19, 1997, Mr. Nursultan Nazarbayev signed a decree on currency regulation of CPC funds. On April 24, a similar decree was signed by Mr. Boris Yeltsin.

On May 12, 1999, an official ceremony was held near Yuzhnaya Ozereevka village, starting the Initial Construction Project (ICP) of oil pipeline to the Black Sea, with the capacity of up to 28 million tons, including 22 million tons from Kazakhstan. In October 2001, the first oil tanker was loaded at the Marine Terminal with oil from Tengiz.

Today the Consortium pumps almost two-thirds of the entire volume of oil exports of Kazakhstan. As time has shown. CPC route is the most reliable and cost-effective in comparison with other options for oil transportation. In 2002, the Consortium created a oil quality bank, the first of its kind in the former Soviet Union. As of now, it remains the region's only oil quality bank, through which shippers receive full value for their oil.

Taking this opportunity, I would like to wish everyone who stood at the forefront of the CPC, as well as employees of our unique multinational Company, happy New Year! I am confident that together we will write many more great pages into the history of the Caspian Pipeline Consortium!

> by Kairgeldy Kabyldin, Deputy General Director, Kazakhstan Government Relations, CPC-K, ISC



First CPC President

2017 MARKS THE 25TH ANNIVERSARY OF RUSSIA'S ACCESSION TO THE CASPIAN PIPELINE CONSORTIUM. ON JULY 23, 1992, THE RUSSIAN FEDERATION, THE REPUBLIC OF KAZAKHSTAN, AND THE SULTANATE OF OMAN ESTABLISHED THE CPC LIMITED COMPANY, AND MR. VIKTOR OTT, CHAIRMAN OF THE COMMITTEE FOR OIL INDUSTRY OF THE RUSSIAN FUEL AND ENERGY MINISTRY, WAS APPOINTED AS ITS PRESIDENT.



Viktor Ott

This appointment was no coincidence, as the choice fell on one of the most experienced professionals in the oil industry. In the 1980's, Mr. Ott led the Nizhnevartovskneftegas Production Association, the largest in the Soviet Union, which accounted for one in three tons of oil the country produced. Additionally, he had an experience of working abroad – in Cuba, as well as the first-hand knowledge of the challenges related to the extraction and transportation of Kazakhstan oil.

"After returning from Cuba, I became Chief Engineer of Tengizneftegaz Production Association and, of course, I had a good command of the matter: even then we thought of a variety of options for the construction of an oil pipeline from the Kazakh village of Kulsary to the Black Sea coast to export oil from the Tengiz Field," recounts Mr. Ott.

Initially, CPC Limited was incorporated in Bermuda. Offshore islands jurisdiction at that stage made it possible to fully take into account

the interests of all three countries participating in the Consortium.

"First of all, the entire venture required a neutral ground with a clear and predictable legal status, we all can remember well enough that the establishment of the Consortium came about at a very challenging time: an unstable economic and political situation in Russia, complicated developments in Kazakhstan on its way to sovereignization," expands Mr. Ott.

In 1994, the Government adopted a decree On the Construction of the Tengiz – Astrakhan – Novorossiysk Export Pipeline System of the Caspian Pipeline Consortium. It seemed that the venture was just about to take off the ground, but the main difficulties were still ahead. After pledging the initial funding for the project, Oman then failed to raise the necessary investments. The crucial problem was that the agreement was concluded

on the international level, without taking into account the process of privatization that just started and, consequently, the interests of the major companies engaged in oil production in the Caspian.

"In order to unravel this tangle of interests and contradictions, personal intervention of Presidents Boris Yeltsin of Russia and Nursultan Nazarbayev of Kazakhstan was required," says Mr. Ott. "A major role in the negotiation process and in the preparation of the restructuring of the Consortium fell to Mr. Viktor Chernomyrdin and Mr. Nurlan Balginbaev, Prime Ministers of our countries at the time, Mr. Yuri Shafranik, Russian Fuel and Energy Minister, his First Deputy Mr. Anatoly Shatalov, Mr. Kadir Baikenov, Minister of Energy and Fuel Resources of Kazakhstan, Mr. Valery Chernyaev, President of Joint-Stock Company Trans-oil, OJSC, Mr. Vagit Alekperov, President of LUKOIL, OJSC, Mr. Richard Matzke, President of the American company Chevron Overseas Petroleum Inc., businessman Mr. Iohn Deuss, etc.



Management Team of the Caspian Pipeline Consortium, 2001





CASPIAN PIPELINE CONSORTIUM The signing of the Protocol on the Accession of the Russian Federation to the CPC Establishment Agreement between the Republic of Kazakhstan and the Sultanate of Oman - 1992 From left to right: Mr. John Deuss; Oil Minister of the Sultanate of Oman; Mr. Viktor Chernomyrdin (Russia); Mr. Kadir Baikenov (Kazakhstan); Mr. Viktor Ott (Russia)



CASPIAN PIPELINE CONSORTIUM The signing of the Protocol on the Accession of Chevron Company to the CPC Left': Mr. Richard Matzke, President of Chevron Overseas; Mr. Kadir Baikenov, Fuel and Energy Minister of Kazakhstan; right: Mr. Viktor Oft, First Vice President of Rosneft Public Company; Mr. Viktor Chernomyrdin, Chairman of the Russian Government. Hamilton (Bermuda), 1993

In December 1996, after extensive consultations and negotiations, the founding states chose to transfer 50 percent of CPC shares to private oil companies in exchange for a commitment to fully finance the construction of the first stage of the pipeline system and its commissioning. Another milestone was marked by the change of the place of registration of the Consortium. Instead of offshore CPC Limited Company, two new legal entities were created -CPC-R, CJSC, registered in Russia, and CPC-K, CJSC, in Kazakhstan. From this point on, all the taxes went into the budgets of the founding states of the Consortium.

One of the last obstacles to the start of project financing was restrictions on free circulation of foreign currency, for which no necessary legal framework existed that time, neither in Russia, nor in Kazakhstan. In April 1997, Mr. Nursultan Nazarbayev, the President of Kazakhstan, signed a decree on currency regulation of CPC funds. A few days later, a similar decree was signed by Mr. Boris Yeltsin, the President of Russia.

"Then there was the construction. It was a big work among friends," continues

Viktor Ott, who was involved in all the stages of CPC development, first as First Vice-president of Rosneft National Company, JSC, then as the First Deputy Minister of Fuel and Energy of the Russian Federation, and, finally, as the Chairman of the Board of Directors of Transneft, ISC. "Still to lay a pipeline like this in just two years, that's quite a task."

The effort was truly monumental in its scale. Construction of the CPC oil pipeline began on November 17, 1999: On that day, the first pipes were laid in the trench in Stavropol and Krasnodar Regions. In total, 748 kilometres of the new pipeline was built in a year. About 90 % of the work was contracted by local construction companies.

Twelve water crossings, including across such major rivers as the Volga and Kuban, were constructed using an environmentally responsible method of horizontal directional drilling. In the course of project implementation, latest technical resources and technologies that were unique in the CIS countries were used to the greatest extent possible. These included gas turbine generators and pump

drives, ball valves on pipelines, and the SCADA system in combination with fibre optic cable.

On November 22, 2000, a ceremony of welding the "golden joint" that marked the closure of the laying of the linear part of the Consortium pipeline system was held in the Tank Park of the CPC Marine Terminal. On November 28 of that same year, installation works on single point moorings were completed at the Marine Terminal.

"Fifteen years of completely faultless, reliable, environmentally safe operation of the CPC pipeline confirms that all our decisions were correct. I look back to my participation in this project with nostalgia and keep following the development of the Consortium in the media. I am pleased that the CPC shareholders have agreed on the implementation of the expansion project, which is now nearing its completion. I am confident that the Consortium has a long and successful history ahead and new stages of development still await it. Do not slow down!" wished Viktor Ott to the CPC team.

by Pavel Kretov



PURR Project: From Modernization to Innovations

UPGRADING OF EXISTING PUMP STATIONS HAS BECOME AS CRUCIAL FOR THE EXPANSION PROJECT AS CONSTRUCTION OF NEW FACILITIES.



Dennis Fahy

"This year we proudly celebrated an important anniversary – 15 years since the commencement of the CPC operations," says Dennis Fahy, Consultant, Operations Issues. "The Consortium successfully passed this way largely due to reliable operation of PS "Atyrau", PS "Komsomolskaya" and PS "Kropotkinskaya" powered by turbine-driven mainline pump units (MPUs). To increase the oil pumping capacity as a part of the Expansion Project, seven new MPUs with an increased capacity of up to 5.7 MW were recently commissioned at the above pump stations. Since the new MPUs are not technologically compatible with the originally built units, a need arose for a technical retrofitting project which became known as the PURR (Pump Upgrade and Rotor Replacement) Project, successfully completed this year and allowed for improving the operational reliability of the CPC's pipeline system.

The PURR project was a truly pioneering initiative for CPC. It was unique

in terms of its nature and scale, and was successfully implemented at highly hazardous facilities operated by the Consortium without the oil pumping interruption," notes Dennis Fahy.

MANAGEMENT MODEL

A matrix project management organizational structure was successfully introduced at the Company and proven during the implementation of the PURR Project. The Project team approved by the General Director included specialists from the Operations Department and the Expansion Project. The composition of this highly mobile and professional team headed by Maxim Sonin - the only CPC employee permanently assigned to the PURR Project - was finalized by the end of 2013. Dennis Fahy was charged with overall responsibility for the team's activities.

Working on the PURR Project involved many days and weeks spent on site at CPC operating pump stations. Maxim Sonin, PURR Project



Dismantling of the existing turbine and preparation for installation of the new one



Maxim Sonin

Manager, shares his thoughts about this collective effort and its outcome with Panorama CPC:

"The selected management model enabled efficient use of the resources already available to the Company, and allowed avoiding demobilization of the personnel involved in the PURR Project after its completion. This way, we were able to retain valuable employees who have also acquired additional professional experience which will be useful for implementation of the Company's future development and capacity expansion plans."

TECHNOLOGY AND ENVIRONMENT

"Maxim, can you tell us what kind of results were achieved through joint efforts of the project team members?"

"The target technological effect was achieved by increasing the capacity of the existing MPUs installed at



the pump stations and putting the old equipment which was in service since early 2000s and the new units deployed as a part of the Expansion Project in parallel synchronized operation," says Maxim. "In addition, a number of secondary tasks related to improvement of certain stages of the gas turbine cycle were addressed during the implementation of the PURR Project, including MPI replacement with DLE, air filtration system replacement (HEPA filters installed), lube oil coolers replacement to ensure failure-free MPU operation in winter conditions etc."

"Can you share some details about the new DLE combustion system? Why was it introduced?"

"Today industrial facilities are subject to stringent requirements regarding their environmental sustainability. Our Company is committed not only to ensuring occupational safety of our employees and contractors, but also to preserving the environment through continuous improvement of its environmental performance. Replacement of the MPI combustion systems with DLE in our gas turbine units (GTUs) has become an important component of this process.

The atmospheric emission level is one of the most important indicators of sophistication of the GTUs developed by the world's leading design centers. Compliance with the strict standards governing emissions of combustion products (first of all, carbon dioxide -CO₂) into the atmosphere can be achieved only through use of state-of-the-art process technologies in the turbine combustion chambers. Such technologies include the DLE (Dry Low Emissions) system installed as a part of the upgrade Project. It enables lean homogeneous mixture combustion at a constant flame temperature (1,700-1,800 K), thus reducing the amount of harmful emissions." >>

Productive Partnership

FOR FLOWSERVE CORPORATION, THE PURR PROJECT BEGAN IN 2012 AND BECAME ONE OF THE LARGEST FACILITY UPGRADE PROJECTS WE HAVE EVER BEEN ENGAGED IN.



The challenge lied not only in the need for significant changes in the mechanical design and hydraulic characteristics of the existing equipment, but also in the remote location of Pump Stations Kropotkinskaya, Komsomolskaya and Atyrau where a major scope of work was to be performed on the mainline pump units.

The pumps needed a complete retrofit. The foundations for the new gearboxes needed to be modified to fit the upgraded Siemens gas turbines. Installation of the upgraded units was carried out without taking the pump stations out of service, which required the highest level of professional skills. Several parties speaking different languages were involved in the Project organization and planning, which created an additional challenge, but did not impede productive collaboration in any way. The latter was facilitated by competent Project management on CPC's part as well as positive attitude and commitment from all participants of the process. As a result,

we were able to successfully prepare and implement the Project.

I can't claim that there were no unforeseen issues at all, but those are normal for such a large-scale project. Nevertheless, everyone's professional experience and constructive attitude enabled quick and efficient decision-making, allowing us to proceed with the Project on schedule.

Flowserve Corporation is proud to have been selected as a contractor for this Project and given the opportunity to work together with other partners under the guidance of CPC towards making the PURR Project a success both for the Consortium and for the equipment suppliers.

We have gained a wealth of experience while working on individual pump stations, especially with regard to processes specific to pump station operation as well as working at remote sites and providing personnel and materials for quick, efficient and high-quality performance of work. We will be happy to see CPC leveraging this experience for the benefit of day-to-day operations, as we view CPC as our key customer for this type of equipment, and already have a well-trained team prepared to carry out any maintenance activities required to ensure reliable and failure-free operation of the oil pump stations within Caspian Pipeline Consortium's pipeline system.

by Cor Christianen, Director General Manager for Northern Europe, Russia and Kazakhstan, Aftermarket Operations



Well-Coordinated Teamwork



On behalf of Siemens, I'd like to express my gratitude to everyone involved in the upgrade Project: CPC as the customer, Flowserve, Starstroi, Schneider Electric and Siemens Lincoln as the contractors, and all other participants of the Project who have made an important contribution to its success. This kind of result wouldn't have been possible without well-coordinated teamwork. The experience gained with each new unit commissioned helped us address any issues in a quick and efficient manner, ultimately leading us to success. I am certain that this will serve as an excellent example for future joint projects.

CPC has been a key partner for us for many years. Today, we face the future with certainty, and are looking forward to exploring new business opportunities.

> by Aleksandr Tanichev, Director, Power Generation Services Department, Siemens LLC

"What are the fundamental differences between the new DLE technology and the old MPI process?"

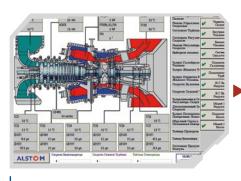
"With the previous-generation MPI (Multiple Point Injection) combustion systems, the fuel mixture was fed directly into the combustion chamber. This resulted in a rich mixture which produced a relatively large amount of combustion products that were released into the atmosphere. The next-generation DLE system includes an additional intermediary mixture tuning cycle which "leans" it to the lowest limit enabling combustion. Therefore, combustion of this type of mixture produces a minimum amount of exhaust gases while maintaining the same efficiency factor of the turbine unit.

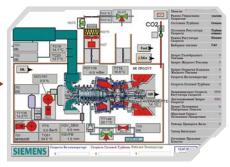
In terms of the achieved effect, it is comparable to modern passenger vehicle engines of different environmental classes. In terms of technological differences, it is similar to a carburetor vs. an injector: one is simple and easy to maintain, but is more harmful to the environment, while the other is sophisticated, contains additional electronics and is more expensive to maintain, but achieves better environmental performance and fuel efficiency.

By the way, it was not just the hardware that was affected by the upgrade process – the software was upgraded, too. New software with enhanced functionality, including remote management of additional MPU parameters during operation using a SCADA system, was successfully developed and installed."

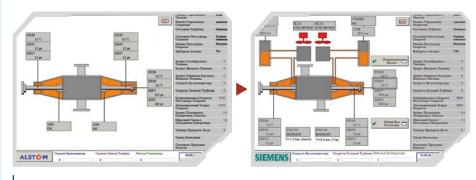
MANAGEMENT AND COORDINATION

"Implementation of the integrated Project in Russia and Kazakhstan was managed by CPC using its own resources, without involvement of a general contractor or any management companies," continues Maxim Sonin. "Initially, the contract system included 9 main contracts (with amendments) with Russian and Western companies in addition to the design, authorship supervision and QA/QC services. Later, in March of 2016, the project was joined by JSC CTN in Russia. Its personnel





Overview diagram of the turbine (old and new)



General view of the mainline pump (old and new)



provided support and shared their experience accumulated over many years of coordinating construction and installation operations at the Transneft facilities with the Operations Department specialists.

To prevent potential gaps in any areas, special attention was given to analysis of the work scope and work performance requirements as well as coordination of the roles and responsibilities of each Project participant at the planning stage. Due to the unique nature of the project and involvement of both the Operations Department and the Expansion Project personnel, the Company's existing procedures turned out to be insufficient, and special provisions had to be developed to ensure efficiency of the joint efforts by the representatives of both organizational units."

"What were the key components of the ultimate success?"

"I believe that the key components were professionalism, coherent teamwork, and high level of responsibility of everyone involved," says Maxim Sonin. "The contractors' operations on site were coordinated by the management and employees of the Consortium's regional branches: PS "Kropotkinskaya" - Sergey Potryasov, Alexey Fomenko, Andrey Molodichenko, Ivan Nesterov, and others; PS "Komsomolskaya" – Ivan Sharay, Vladimir Groshev, Murad Agadzhanian, Andrey Ryadovoy, and others; PS "Atyrau" - Sarsembai Murinov, Victor Sutyagin, Alexander Yeryomin, Gabiden Yerbulekov, and others.

All of our Project participants have a lot to be proud of. The pump head and flow rate curves obtained as a result of comprehensive testing showed that the upgraded MPUs were fully compatible with the new ones that were delivered from the supplier in a fully assembled state and installed as a part of the Expansion Project. A number of load tests were conducted to prove that the units were capable of safe parallel operation. »

Examples of Upgrades

Let us take a closer look at some differences in the process characteristics of the equipment before and after the upgrade.

New Air Filters





Before

After

New air filters were installed as a part of the PURR Project. Unlike the previous single filters, the new ones are equipped with a second (additional) filtering stage that uses high-efficiency particulate air (HEPA) filtering technology. HEPA is one of the most advanced technologies existing today. It allows trapping dust and dirt particles smaller than 0.1 µm or 0.0001 mm, thus preventing contamination of the generator's axial compressor blades and improving the overall efficiency of the gas turbine engine. By the way, this system is used both at industrial facilities and in public buildings such as health care centers where air purity is strictly regulated.

On the outside, the old and new lube oil coolers look very much alike. But of course, appearances are deceiving. The new oil cooler is designed to operate at low ambient temperatures which are the normal environmental conditions for the gas turbine units (GTUs) installed at CPC's facilities. The "winterized" design features a dedicated enclosure with inlet, outlet and recirculation shutters. This new solution enables circulation of warm air inside the oil cooler during the start-up of the mainline pump, thus preventing the typical adverse effects typical for the GTU operation during the winter.

Ivan Nesterov's Breathing Valve



After

Breathing filters are installed on vessels that are open to the atmosphere to protect their interior space from ingress of microbiological contaminants and solid particles from the air, and also to protect the environment from aerosol emissions.

EDITORIAL NOTE

Before

Panorama CPC would like to thank the PURR Project Manager, PhD (Oil and Gas Engineering) Maxim Sonin for the detailed explanation of the objectives, content, and some fine technological points of this unique Project implemented at CPC's facilities.

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It is also interesting to note that the difference between the theoretical flow rates of the upgraded pumps and the actual values measured after the completion of the PURR Project turned out to be even smaller than initially expected. This is an excellent result for technologically sophisticated equipment that was retrofitted in difficult field conditions which were far from ideal or from the typical factory workshop environment.

TEAMWORK

Maxim Sonin is very proud of the fact that a systemic, teamwork-oriented approach to all tasks was successfully established in this truly international Project team:

"The initial scouting (and, therefore, the most complicated) work scope was carried out at PS "Komsomolskaya". In this regard, I'd like to distinguish the efforts of Murad Agadzhanian, Operations and Repairs Lead Engineer, who proved to be an excellent on-site coordinator. The largest scope of construction and assembly operations as well as the most comprehensive scope of start-up and commissioning activities was carried out at PS "Kropotkinskaya" where Ivan Nesterov, Operations and Repairs Senior Engineer, was in charge of operational coordination.



Pavel Petrenko, Ivan Nesterov and Vitaly Gondarev





PS "Kropotkinskaya": main pump piping before and after implementation of the PURR Project

Retrofitting of PS "Atyrau" also presented a number of unique and multidimensional engineering challenges that were successfully addressed under the guidance of Alexander Yeryomin, Lead Turbines Operation and Repair Engineer.

The start-up and commissioning process on all sites was supervised by Vitaly Romanov, Deputy Head Mechanic, Gas Turbines Operation and Maintenance. As a highly experienced turbine engineer, he was personally present during almost all MPU start-ups, and proved to be of great help in addressing a number of operational and practical issues. Maintenance Systems Manager Stewart Sharpe acted as and operational advisor, and assisted us in finding solutions to some of the most complex and controversial problems. Marat Ibragimov, Head Mechanic, Operations and Maintenance lent his services as a mechanical consultant, while Alexander Stepanov, Chief Process Engineer, Engineering Team and Yessen Kokushov, Deputy Engineering Manager were in charge of the project design development and approval.

Almost everyone in the Company was involved in our activities.

Matters related to supply and QA/QC were jointly overseen by the relevant Expansion Project and Base Business Operations Departments. The Engineering, Oil Transportation and Commerce, Price Control,

Contracts Team, Project Controls, SU&C, Regulatory Affairs, CS&C, Engineering and Projects, HSE, and other departments were all actively engaged in the Project at one stage or another.

I'd like to specially recognize the contribution of Kyle McMillian who oversaw the first stage of the Project as well as Edward Ashbridge who took an active part in the preparation of the work scope.

Occupational safety was the key topic covered by Dennis Fahy at the introductory meetings held in all CPC Regions, since life and health of every person working at or visiting the Consortium's facilities has always been our primary responsibility and our key value. Special emphasis was placed on strict compliance with the procedure governing the issuance of permits to work. All this together with the daily efforts of the responsible specialists and coordinators enabled us to achieve excellent performance under the Incident and Injury Free Project, which we are rightfully proud of," emphasized Maxim Sonin.

SHARING EXPERIENCE

According to Maxim Sonin, two expert meetings were held in Krasnodar and Atyrau following the successful completion of the comprehensive tests to summarize and analyze the experience gained. Both



events were organized jointly with Tatiana Korotkova (Coordinator, Interface from Kirsten Brixton's team) and all key stakeholders of the PURR Project.

"The entire life cycle of the Project was reviewed, including design, contracts execution, construction and installations operations, start-up and commissioning etc.," Maxim Sonin recalls the details of these important events. "Each participant was offered to complete an anonymous survey and submit their proposals on the lessons learned. In the end, there were over 100 such proposals, mostly related to the design and procurement management processes. As a result, the key lessons learned were summarized and submitted for review to the CPC Base Business Operations to be considered as potential changes needed to be made to the Company's existing procedures. This allowed achieving a crucial objective – ensuring continuity, accumulation and sharing of valuable experience between the specialists from different organizational units of the Company for use in initiation of future projects."

"And what can you say about abnormal situations that inevitably occur during implementation of such complex projects as the upgrade Project we're talking about?"

"Abnormal situations encourage searching for new engineering solutions, and provide an excellent opportunity for the specialists to demonstrate their creativity," believes Maxim Sonin. "Implementation of the PURR Project by the Consortium showed that leveraging the experience of the world's leading oil and gas companies is an important foundation for establishment and development of professionals capable of handling even the most complex tasks in a very short time.

For example, in the course of comprehensive testing of the »

Excellent Level of Cooperation

AS A PART OF THE UPGRADE PROJECT (PURR), OUR COMPANY HAS SUCCESSFULLY COMPLETED THE UPGRADE OF THE CONTROL SYSTEM MASTERBLOCKS.



The obsolete masterblocks were replaced with state-of-the-art Masterblock MB 400 units manufactured by Schneider Electric at PS "Komsomolskaya", PS "Kropotkinskaya" and PS "Atyrau" in cooperation with our French colleagues.

Of special note is the excellent level of coordination between the CPC and Schneider Electric specialists during the Project preparation stage when a lot of important work related to approval of specifications and signing of contracts was carried out. This resulted in delivery, startup and commissioning detailed terms and conditions development that accommodated the interests of all parties in equal measure, which in turn facilitated successful completion of all subsequent stages of the upgrade Project.

The Project was unique not only in terms of its scale, but also because it was implemented across two countries: Russia and Kazakhstan. To ensure efficient management, Schneider Electric put together an integrated international project team. Coherent teamwork by all

project participants enabled flexible project management at all stages, starting from the initial design, and all the way through to the equipment delivery and production scheduling. However, the project team encountered a number of challenges, including those related to the legal aspects of cooperation, which required additional attention and detailed investigation of the specifics of the national legal framework.

I would like to specially mention the contribution of the CPC-R employees who have proven to be true professionals, and have shown great knowledge and love of their craft. Schneider Electric is especially grateful to Maxim Sonin, Upgrade Project Manager, Denis Sidelnikov, Procurement Team Leader, and Marina Pureskina, Lead Contracts Specialist, for their support and assistance in implementation of the Project.

Our company has recognized competences in the field of consulting services for maintenance personnel as well as diagnostics and maintenance of electrical equipment. We're looking forward to future cooperation between Schneider Electric and CPC, and are eager to jointly explore and successfully implement other interesting projects.

And of course, we wish Happy New Year and Merry Christmas to all our colleagues from CPC! ■

by Vladimir Shatunin, Deputy General Director for Aftersale Services in Russia and the CIS, Schneider Electric





Installing the oil cooler enclosure

upgraded MPUs, the factory-installed Lufkin breathing valves were found to be extremely inefficient due to multiple leaks. To resolve the problem, Ivan Nesterov, Operations and Repairs Senior Engineer

for the Western Region, promptly suggested an alternative device design which proved to be much more reliable than the original one. Novelty and industrial applicability, reliability and safety, ease of manufacture and low cost - those are the primary criteria that any innovative engineering or process solution must meet. Based on these criteria, the process engineers of Flowserve B.V. (Etten-Leur, the Netherlands), the manufacturer and supplier of the pump equipment for the CPC facilities, highly appraised the design proposed by Ivan Nesterov, and recommended it for use on all Company sites. As of today, the new breathing valves have been installed and are successfully used on the gearboxes of the upgraded MPUs in the Central, Western and Eastern Regions. By the way, this was the first and only case in our practice when a design proposed by a CPC engineer sparked such an interest and caused such a response from a recognized Western organization, and the positive Industrial Safety Expertize (ISE) conclusion registered with the territorial branch of the Federal Environmental, Industrial and Nuclear Supervision Service of Russia is just another testament to that.

I'd like to once again emphasize the innovative role played by CPC in introducing and testing new, reliable and, what is most important, technologically and economically efficient process solutions. There are very few oil pumping operators either in

Professionalism, Efficiency and Quality

IN OCTOBER OF THIS YEAR, STARSTROI TOGETHER WITH SIEMENS, FLOWSERVE, SCHNEIDER ELECTRIC AND CPC HAS SUCCESSFULLY COMPLETED THE MAINLINE PUMP UPGRADE PROJECT (PURR) AT PS "KOMSOMOLSKAYA", PS "KROPOTKINSKAYA" AND PS "ATYRAU".



This Project involved replacement of rotors and auxiliary support systems of the existing mainline units as well as replacement of the gearboxes between the pumps and the turbines. This work was directly related to expansion of CPC's pipeline system, as it allowed increasing the capacity of the existing pump stations on the Tengiz – Novorossiysk pipeline to the target values.

Our staff includes highly qualified specialists in various construction fields as well as in start-up and commissioning of hazardous facilities.

The highly experienced engineering personnel of Starstroi LLC have

demonstrated their ability to provide efficient support and safely carry out their assigned tasks under the Project during non-stop operation of the oil pipeline, which was a demanding challenge in itself.

As a part of preparation for the implementation phase, the CPC management represented by PURR Project Manager Maxim Sonin and subject matter experts from the Operations Department conducted a series of kick-off meetings with the contractors' management. Matters such as organization of operations and communication between all project participants

and the site coordinators were elaborated in detail. Periodic teleconferences and offsite meetings attended by the Project management, regional CPC representatives and contractors' specialists were set up. All this enabled proper coordination of efforts required to complete the technically challenging scope of work, and ensured efficient overall communication.

During the implementation of the PURR Project, there was often a need to make prompt changes to the project documentation. For this purpose, a technical committee consisting of specialists from the CPC Operations Department,



our domestic market or the foreign markets with such an impressive experience in this field. Our partners share the knowledge of such implementations at various oil and gas conferences and forums, citing CPC as an example.

I'd also like to take this opportunity to wish a Happy New Year and Merry Christmas to my dear colleagues and esteemed partners! May there always be love and happiness in your homes, may your friends and family be always near you, may your professional challenges be interesting and diverse, and may all your plans come true. Thank you for your support and cooperation!" ■

Recorded by Yekaterina Suvorova



Fitting the mainline pump cover





Removed FLENDER gearbox and the new LUFKIN gearbox

Siemens, Flowserve, Starstroi and Giprovostokneft was set up. This significantly accelerated the process of reviewing and making decisions on potential changes to the working Project documentation, up to the point where it caused virtually no interruptions to the construction and assembly operations. Presence of responsible operations personnel from CPC and Giprovostokneft on the construction site enabled quick and efficient resolution of many issues arising during the performance of work, prioritization of individual work items, and clear communication between all contractors.

Realizing the significance of the MPU upgrade Project for CPC, the Starstroi LLC management made a special effort to ensure that it was completed in time. Mr. Rykov, Head of the Construction and Repair Department, was appointed as the project manager in the Russian Federation, while Mr. Kustadinchev, Deputy Director of the Atyrau Branch of Starstroi LLC, assumed the same duties in the Republic of Kazakhstan. These specialists contributed greatly to the preparation and performance of work, which

allowed completing all Project objectives on schedule.

Using its own resources, Starstroi LLC carried out foundation construction, installation of equipment and steel structures, installation of pipelines of various diameters, electrical cabling, I&C cabling, and installation and connection of distribution boxes and devices.

In addition, Starstroi LLC provided personnel and equipment to Siemens and Flowserve for performance of work falling within their respective areas of responsibility. All personnel provided at the request of the above companies was properly trained, highly qualified, possessed the necessary professional experience, and fully met the requirements of the imported equipment suppliers.

The Project management placed special emphasis on the quality of the work performed. Quality control was carried out by the engineering supervision services and the operations personnel. Availability of Starstroi LLC's own construction quality control service (including electrical, metrological and NDE laboratories)

also contributed to the continuous quality assurance process.

Occupational health and safety was also of primary concern, as work was carried out at the CPC facilities while they were in operation. HSE engineers were assigned to the Project by an administrative order of Starstroi LLC. They continuously monitored the performance of work and made sure that all necessary PPE, tools, accessories etc. were always available. In the end, the Project was completed with no serious incidents, accidents or injuries.

All of us – the management, engineers and other specialists of Starstroi LLC – are confident that the experience and skills acquired in the course of the MPU upgrade activities at the CPC facilities will enable us to successfully implement similarly significant projects in the future.

I'd also like to take advantage of this opportunity and wish everyone a Happy New Year! ■

> by Boris Zabuldin. General Director. Starstroi LLC



Rocky King:

My Experience is in Demand by CPC

THIS TIGHT-KNIT GROUP CONSISTING OF SPECIALISTS OF TWO DISCIPLINES WORKS AS A TEAM.



"Our Expansion Project Operations Group was formed in May 2010 and comprises the Operations Group itself and Commissioning Group," explains Mr. Vasily Roschin, Head of the Division, Operations Manager. "The basic mission of our Operations Group is developing procedures of performance tests, operations procedures, including maintenance plans in the Maximo system with due regard to the safe working practice requirements to new PS and Tank Farm. Our specialists are involved in implementing technical solutions on site, in testing PS performance; they cooperate with the Operations Department jointly planning activities on oil pipeline shutdown or operational changes.

Commissioning Group specialists are usually located at PS under construction; they are directly involved in testing station equipment and tanks after construction completion, in facilities assurance review for oil filling, in testing PS equipment performance with oil, etc. They go to the Pump Stations to participate in commissioning of the turbines and electrically driven pumps. The Commissioning Group administers the supervision contracts with the main equipment suppliers – these are mainline pumps, large bore block valves, surge relief systems, and HVAC systems. Involvement of our supervisors helps the construction contractors to properly install, commission, and test highly technical equipment. The Group

participates in review, acceptance, and hand-over of acceptance and as-built documentation for all constructed facilities to the Operations Department." Mr. Vasily Roschin summarizes.

Mr. Rockwell Alan King, an expatriate, Start-up and Commissioning Consultant, is highly esteemed among the Operations Group personnel. With great warmth the colleagues call him Rocky. We asked him to tell us about himself - about his education, previous employment experience.

"I received my undergraduate degree in Chemical Engineering in 1995, and my master's degree in Business Administration (from the University of Texas) in 2003. The university is one of the biggest in the U.S., and offers a variety of disciplines for study, with the Accounting, Latin American Studies, and Petroleum Engineering graduate programs deemed the best in the U.S. The two most useful business classes were Complexity Management and Knowledge Management. These courses are focused on non-linear interactions between people and organizations, and in managing human nature. What I learned in these classes helped me adapt more quickly to new cultures and management methods when working outside of the U.S.

The most beneficial technical knowledge I gained at University was from the three introductory engineering classes regarding Static Forces, Dynamics (momentum and energy principles). These helped me understand how the world "physically" works. I had no shortage of technical knowledge when I started my engineering career, but certainly lacked experience in practical application of this knowledge. I believe it would be useful for all oil industry professionals to spend a semester or two working as a technical intern, and I believe that the oil industry in general benefits from funding this."

"What educational institutions, do you think, are the best and the most popular among oil industry specialists?"

"For most U.S. oil industry specialists, and the companies that employ them, it is more important that the undergraduate of master's degree is awarded by an "accredited" university, not which particular university. Similarly, we have many very well qualified specialists on the Expansion Project Operations/Start-up and Commissioning teams who have studied at Omsk State Technical University, Ufa State Petroleum Technological University, and Gubkin University. Tyumen Industrial University has a good international reputation. So clearly Russia has many "world class" oil industry universities."

"Where did your professional life begin?"

"My first professional oil industry steps were prior to receiving my



degree. I was working in the Petrochemical industry as an intern, and then as designer and drafter regarding instrument installation and wiring. In 1991-1992 I worked in Syria to complete the installation of instrumentation and controls for oil production facilities. During this project I made my biggest steps in ability, as I was required to resolve design errors, equipment defects and process operation problems, without the assistance of equipment supplier specialists. This taught me to comfortably figure out how to solve a problem myself, rather than to wait for anybody else.

I had 25+ years of project experience prior to joining CPC. My international project and commissioning experience was in demand by the Consortium. The Expansion Project has taught me better methods of integrating multinational best practices, and that modern complicated solutions are not always more effective than simple solutions. I am lucky to have this Russian experience, and enjoyed being part of the multinational team. This will help me adapt better on future international projects.

I am a consultant to the CPC Expansion Start-up and Commissioning

Team, and advise the team on both technical issues and tactical decisions. My Supervisor, Mr. Vasily Roschin, and the Operations and Commissioning Team have been very patient with me in figuring out how to combine my international experience with Russian project execution methods and regulations to best support CPC."

"What country did you find to be the best for working and living in?"

"Russia is the most comfortable place I have worked in. Previously I worked in Syria, Algeria, Iraq, Angola and China, usually living in a small housing trailer in a remote location. However, the commissioning work where I lived at the job site and usually had tools in my hands every day and was required to make equipment and production processes work properly was more fun.

Moscow is very clean, relative to my other expat work locations. Additionally, Russia is unique in my experience in its ability to fully staff a project with qualified local professionals. I expected this prior to coming to CPC, as about 25 % of our commissioning team on my previous project (in China) were Russians."

"Work in the oil industry requires certain stamina. Did you do military service? If so, how useful was that experience for your future life?"

"I was a sailor in the U.S. Navy from 1977 to 1981. Most useful from this time was learning to interact with people from different cultures. My ship sailed the Pacific and Indian oceans, making stops in Mexico, Japan, the Philippines, Fiji, Samoa, Singapore, and Australia.

Still more amazing to me was the experience I gained working as a contractor for the U.S. Army Corps of Engineers in Northern Iraq in 2005, building infrastructure for the Iraqi Army and Police. I observed many actions based on wisdom, courage and compassion from young U.S. soldiers and local Iraqis, both men and women, who were working in dangerous and difficult conditions."

"Do you have any hobbies?" we ask our companion in conclusion.

"I am a lousy golfer," Mr. Rocky King smiles. "And I have completed as many as 100–200 km charity bicycle rides in the past 20 years." ■

Recorded by Ekaterina Suvorova



Expansion Project Operations Group in CPC Moscow Office



Happy to be Oil-Industry Worker

DIFFERENT PATHS BRING PEOPLE TO THE OIL BUSINESS; NOT ALL OF THEM HAVE DESCENDED FROM THE OIL WORKERS' FAMILIES. THE READERS OF THIS MAGAZINE WILL SURELY SMILE HAVING KNOWN THAT IT WAS MY WIFE WHO BROUGHT ME INTO THE OIL INDUSTRY.



Kenensary Kabdoldin

TOGETHER WITH INDUSTRY

My wife Umit studied in Moscow at the Oil and Gas Institute named after I. M. Gubkin at the Chemical and Engineering Department. I decided that it would be also good if I got a similar profession and I enrolled at the Moscow Institute of Petrochemical and Gas Industry (MIPC and GI) at the Department of Refinery Equipment.

Having obtained diplomas, in 1973 my wife and I set forth to Kazakhstan under the appointment, to the Mangyshlak Peninsula, to the Kazakh gas processing plant under construction. I started as the category 5 Machine Operator in the compressor shop; I was Shift Supervisor of the young workers' team, head of the compressor shop, head of 95%-ethane plant; I worked on the modernization of the booster compressor station carried out with the participation of Krezo-Luar, a French company; I dealt with

pre-assembling, installation, commissioning, and operation.

In 1986, I was transferred to the construction project of the Tengiz complex by the Ministry of Oil Industry as the Production Operations Manager of Complex Technological Lines (CTL) 1 and 2 where I got experience of a team work with foreign specialists, i.e. representatives of Lurgi (Federal Republic of Germany), Litwin (France), Lavalin (Canada). At that time the Main Contractor was the Soviet InterGasStroy, Main Subcontractor being Vedepser, a Hungarian company. Quality was controlled by the Swiss SGS-Energodiagnostics.

In 1994, after the transfer to Kazakhgas a new chapter of my oil life history began. I was appointed to a position of the Chief Specialist for processing raw hydrocarbons at the Karachaganak oilfield. It was a hard time of the breakup of

the Soviet Union and the formation of the independent republics. The industry was thrown into confusion; many specialists left the oilfield. There was lack of staff. Those who remained bore a great responsibility, we had to do everything. I worked on repairs, adjustment of processing equipment, and operation; I implemented oil and gas transportation technology from the Karachaganak oilfield to the Orenburg plant and Salavat Orgsynthesis Plant in Bashkiria. At the same time we handled problems of oil hydrogen sulfide and high molecular compounds stripping, and oil and condensate processing...

Generally speaking, I was really lucky as a professional to work at all phases of the oil industry process chain from hydrocarbons production to their processing. In 1998–2000, as the Production Manager of Stepnoi Leopard, a joint Kazakh-Canadian company, I participated in



Acceptance of the processing equipment in France at Solyvent-Ventec. From right to left – Mr. Gorek, Lurgi Manager (FRG), Mr. K. Kabdoldin, Petr, Translator, and Solyvent-Ventec Managers. 1988





Near well No 8 that produced the first oil at Tengiz on April 6, 1991. From right to left – Mr. K. Kabdoldin, Mr. V. Nadein, USSR Deputy Minister of Oil Industry, Mr. L. Churilov, USSR Minister of Oil Industry, etc. Picture taken in 2003

the preparation of a modular unit for raw hydrocarbon purification from sour compounds at the oilfield, dealt with issues of oil and gas production and transportation from Tokarevskoye, Teplovo-Tokarevskoye, Gremyachinskoye, and Kamenskoye oilfields.

CPC: OPERATION

I came to work for CPC-K in 2000. 27-year oil experience and expertise in working with expatriates were very useful while modernizing PS "Tengiz" and PS "Atyrau". I had to establish relations with field engineers, Main Contractor with which we always arrived at compromises in solving technical issues of construction and installation.

Mr. Marat Ibragimov, CPC Chief Mechanic, has been giving me an invaluable help from the beginning to the present day. A team of mechanics he is in charge of is notable for its high professionalism. In particular, these are Mr. Oleg Kolesnikov (Central Region), Mr. Alexei Fomenko, Mr. Vitaly Romanov and Mr. Vladimir Guschin (Western Region), Mr. Alexei Astashkin and Mr. Vasily Gorkin (Marine Terminal). The solve all the problems together helping each other which fact contributes to even more cohesion of the CPC mechanical group.

Being a regional mechanic my duties included ensuring continuous operation of PS mechanical and process equipment and line section of oil shipment, i.e. mainline and booster pumps, block valves, secondary pumps, tanks, lease automatic custody transfer units, ventilation systems...

At first we had lots of problems with mainline and booster pumps operation. The matter is that we performed equipment maintenance according to the procedures issued as far back as in the Soviet period after running for a certain time we performed routine maintenance, current, medium repairs, and overhaul, following which we were not able to reach normal operating conditions for quite a while. We were not satisfied with such approach; we consulted with vendors and designers of this process equipment. Having examined the experience of the foreign companies we came to a conclusion that equipment needed to be repaired based on its actual condition, i.e. to undergo diagnostics on a regular basis and a certain type of repair based on its results. It allowed optimizing significantly the equipment operation.

In 2009, we also succeeded in resolving a problem with PS "Tengiz" booster pumps. There were NPV (Vertical Booster Pump) 2,500/80 pumps running there. But one NPV 1,250/60 pump did not function at all due to its low capacity. After consultation with Mr. Sarsembai Murinov, Regional Manager, we referred to the manufacturing plant and the Chief Designer for a piece of advice on how to increase NPV 1,250/60 capacity. They met our needs and gave recommendations to replace the booster pump rotor with a more powerful one that we successfully put into action. As a result the pump capacity was increased by 1,250 m3/h and the station had a proper pump overcapacity.

And in 2010, Mr. Sarsembai Murinov instructed us to increase the capacity of PS "Tengiz" mainline pumps. I contacted the plant of Sumy,



In Tengizchevroil (TCO) control room – Mr. Makushenko, Chief Project Engineer from All-Russian Research and Development and Design Institute Gaspererabotka, Mr. Yu. Makhoshvili, Plant Director, and Mr. K. Kabdoldin. 2003, 12 years after TCO start-up

the Chief Designer of which had once taken part in designing our mainline pumps. Together with Mr. Oleg Kozhevnikov, CPC Lead Process Engineer, they made calculations and reported on the possibility to considerably increase their capacity. As per these calculations rotors with a higher capacity impellers had been manufactured at the plant that were then installed within the mainline pumps increasing the capacity of each pump by 650 m3/h. That way instead of 2,500 m3/h pumps A, B, and C began to transfer 3,150 m3/h each!

MORE PRECISE THAN LASER

I will tell you one amusing story. In December 2012, I came to Flowserve Etten-Leur for testing PS "Tengiz" mainline pumps. In the course of the alignment check they showed me a laser device used to perform this critical work with two decimals of millimeter accuracy. I informed my colleagues that we also aligned the pumps at the station using similar devices and that we also presented the alignment parameters

up to two decimals of millimeter. However to check pumps on-load operation and alignment accuracy we use one more "device" which they have not heard of before. »





Flowserve specialists took an interest in the innovation, and I suggested that we should use my device to check the alignment during bench tests of the mainline pumps.

Next day the mainline pump was switched on with the electric motor on the bench. When the pump reached 100 % load, I took a 10kopeck coin out of my pocket and set it edgewise on the motor frame. The coin did not fall down and remained standing on the running pump. After that I set the coin on the pump bearing assembly, it remained on the edge, spinning, but did not fall. Then I said: "The pump is indeed properly aligned, my "device" has shown it, it is more precise than the laser!" The participants of the testing, from managers to mechanics and fitters that

had been aligning the pump, were very surprised. They started to take pictures of the pump with the coin edgewise on it...

AT THE EXPANSION PROJECT

Switching over to the Expansion Project, I really appreciated a professional approach to business by Mr. Vasily Roschin, Operations Manager, Mr. Alexander Doroshenko, Start-Up and Commissioning Manager, Mr. Vladimir Guschin, Operations Procedures Lead Specialist, Mr. Chris Webster, Deputy Commissioning Coordinator. Their support and pieces of advice at a new stage of my oil life history were extremely important!

Work in the Commissioning Group means work on a rotation basis. It held true during the modernization

of the operating PS "Tengiz" and at a new A-PS-3A station. By the way, the workers' accommodation conditions and leisure time at Tengiz are arranged really at an international level: Comfortable rooms, excellent food, and several gyms at the rotation workers' disposal. The team camp at A-PS-3A is made of 40-foot well-furnished containers divided in two rooms. The conditions are not the same as at Tengiz, but quite comfortable for life.

What is so attractive in the Expansion Project for me personally? First of all, high technology and state-of-the-art equipment. A new SCADA system for oil transportation process from Tengiz to Novorossiysk is amazing.

I would also like to say about an importance of the home front – family – for an oil worker. We are a very close family, there is the support and complete mutual understanding at home! I can say that an oil dynasty has been established, as my two sons are oil workers, and my daughters-in-law also work in the oil industry. So, as I said before, my wife Umit Urazovna is the very person that has laid an oil path of our common track. And then the choice is with our grandchildren.

by Kenensary Kabdoldin, PS "Tengiz" Lead Operations Specialist





Humanwise, each of us comes from the childhood. professionally we owe our origin to a particular Alma Mater. From Latin "Alma Mater" is translated as "nourishing, kind-hearted mother". It is an old-time student name for a university – an institution that provides spiritual food. Further professional pathway and generally speaking a man's destiny depends greatly on the knowledge and skills obtained during the studentship.

The CPC Panorama editors asked themselves: Which Alma Mater do CPC specialists owe their expertise to? How useful was a particular higher school? Did students just out of the university acquire needless knowledge useless for life? What, in practical oil pipeline operators' opinion, is to be reasonably changed in the education system in order to improve professional training within the industry? What is the study time remembered for? Specialists of which higher schools are particularly valued at production sites? Alexandra Simonova, Document Administrator, has collected and sent replies to these questions from CPC colleagues to the Press Service; many thanks for it!

Higher Schools with Great History

"I OBTAINED MY FIRST HIGHER EDUCATION IN 2004 AT ASTRAKHAN STATE TECHNICAL UNIVERSITY AT ELECTRIC POWER PLANT OPERATION DEPARTMENT"

I owe my industry-specific "oil" education to Ufa State Petroleum Technological University (USPTU) – in 2014 I graduated from the department of Engineering, Construction, and Operation of Gas and Oil Lines and Gas and Oil Storage Facilities with a degree in mechanical engineering.

USPTU is a university with a great history. Founded in 1948, it became one of the leading universities in Russia in the area of oil specialists training. Many famous oil-industry managers and politicians studied there. For instance, Murtaza Rakhimov, the first President of the Republic of Bashkortostan, Alexander Ananenkov, Deputy Chief Executive of Gazprom, OJSC, Ralif Safin, Vice-President of Lukoil, OJSC, Dmitry Kobylkin, Governor of the Yamalo-Nenets Autonomous District are USPTU ex-students.

The University faculty members are highly professional. Lots of them have worked for many years at production sites, and they know oil-industry work firsthand. Besides, the key factor of the high quality students training is a good material and technical support



to the educational process, availability of laboratories for practical training, etc.

Education in this university helped me to succeed as a professional. Knowledge obtained in USPTU was helpful in practical work, as fundamental principles and approaches are unchangeable, only tools and processes change. There is a training method being used in the university partially inherited from the Soviet era – there were subjects that, at first sight, seem

totally unnecessary for a production engineer, but they broaden the mind and are important for overall development. During practice and moving up the career ladder you understand that it is not only knowledge of mechanisms and terminology that matters, but an ability to talk meaningfully to your companion that is unfamiliar with technical terminology but whom you need to send a message using a plain language.

To improve training of the oil-industry specialists I consider it necessary that updating of the libraries and study guides in the higher schools should keep up with equipment and processes being introduced at production sites. It could greatly reduce the time for a young professional adaptation within the industry.

In my opinion, the Russian most popular, leading and top-ranked higher schools among oil-industry specialists are I. M. Gubkin Russian State University of Oil and Gas and USPTU. ■

by Alexander Antonov, Acting PS and Pipeline Coordinator, the Republic of Kazakhstan

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My Dear Grozny Oil Institute...

IN 1992, HAVING GRADUATED FROM GROZNY OIL INSTITUTE (GOI) NAMED AFTER ACADEMICIAN M. D. MILLIONSCHIKOV, I GOT A DEGREE IN AUTOMATION AND OVERALL MECHANIZATION OF CHEMICAL TECHNOLOGY PROCESSES.



Evgeny Shinkar

SCIENCE...

GOI was notable for its close connection to production and design institutes based in the city of Grozny – All-Russian Research and Development and Design Institute PromAutomatica and North Caucasian Research, Development and Design Institute, material and technical resources, well equipped laboratories and, of course, academic personnel. Lots of our faculty became internationally known owing to publications, scholarly books on drilling, geology, treatment technology of crude hydrocarbons. The names of such professors as G. M. Sukharev, A. Z. Dorogochinsky, Yu. A. Sterlenko, K. M. Dontsov, S. S. Itenberg can be still found in information academic publications, although more than twenty years have passed since the time of their professional activity. Several generations of engineers, production managers have been brought up on the works of these and

the other academics, as well as a pleiad of scientists.

...AND LIFE

Our institute proved to be very interesting in terms of the public life. Student Spring Talent Shows carried out on an annual basis were very significant events. The students of different departments were competing in their skills to sing, dance, and in their sense of humor. One could not get tickets to the concerts. Final performances that were usually carried out in May after the try-outs meant as much as an arrival of Alla Pugacheva. The GOI concert hall that could place more than 1,000 people was always full. There were lots of clubs and sections in our institute. At that time, in the southern Russia there was a well-known GOI Jazz Studio; the students of the oil mechanical department were leading in the humour festivals in Odessa.

For me, my studies in GOI were a wonderful time when you could try out your skills and find an area of activity that you liked and that was the most successful. This institute gave me a lot. In professional respect, it is primarily the ability to think, compare information, make open-minded conclusions, and, of course, have a global vision of production processes.

MY TEACHERS

Many of the professors conducted their classes with ease, with a sense of humour that did not stress the students and limit perception of the material.

For instance, laboratory classes of G.D. Tatevosov on the control system construction and adjustment were interesting because complex material was understood in an easy way, we did not get tired during these classes.

One cannot but remember the lecturers of Professor K.M. Dontsov who was delivering introduction into the course. Despite his considerable age, he was conducting the classes vigorously with a lyrical digression from the practical training. A sense of humour and understanding of the youth's way of thinking of this man were comparable to the skills of professional comics and psychologists.

NOTHING "EXTRA"

Knowledge in the area of automatic control, control instruments, and Boolean algebra were very useful within the selected field. However, an automation engineer should know not only his/her particular specialty, but also the processes he/she is controlling. That is why such subjects as hydraulics, thermodynamics, treatment technology of crude hydrocarbons, applied and theoretical mechanics that were included in the training course for the automation engineer were such area of expertise that provided insight into almost any process in the oil, gas, and partly chemical industries.

There were, of course, subjects that were non-essential at production sites. Such as Communist Party of the Soviet Union History or Philosophy. However, by the middle of one's life almost every thoughtful person becomes a little philosopher. Hegel's



dialectics or Feuerbach's essentialism could not improve anyhow understanding of cascade control system setting. But there are some moments in life when a person needs a different grasp of reality. In this respect these "extra" subjects gave the basis for perception of some social processes that are happening these days.

GOI ADVANTAGES

Speaking about a knowledge deficiency that a specialist ultimately faces in some time after a graduation, I would say the following. Since hardware and software applicable to DCS develop very quickly, the applied knowledge obtained in the institute is getting out of date. But the most important for the automation engineer is an ability to acquire new information, in other words, to learn new incident free operation principles, programming techniques, and many other things. There will be always a knowledge gap, but an advantage of engineers' training in GOI is just that the breadth and depth of lessons learnt allow for a quick adaptation to requirements of a present-day production both at designing stage and at commissioning and operation stage.

CALL OF THE TIMES

How could the quality of specialist training in higher schools be improved? Given that for the last twenty to thirty years, both science and applied aspects of production have made great strides, I believe that there is a sense, for instance, to split my specialty in two - a DCS design engineer and a DCS operation engineer. These are a bit different scopes that have the common root. If a design engineer should be familiar with Russian and international standards not only for DCS designing but for engineering as a whole, a DCS operation engineer should be well familiar with applied work connected to programming, telecommunications, hardware,

and, of course, understanding of the process as it is and technology he/she is controlling. Within a couple of decades, the content of such knowledge has increased greatly and it would be more correctly to train such specialists separately, but within a common trend of understanding production process as a whole.

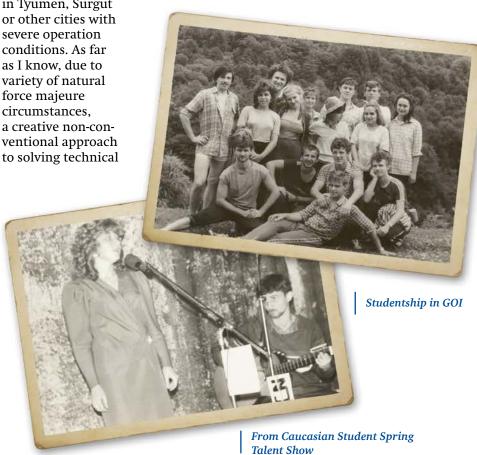
PROFESSIONALS

Which of the higher schools that prepare the future oil workers would I call the best? It is difficult to reply fairly. For me, it is of course GOI. Out of those people that I worked with at different times, specialists from Tatarstan, Ufa, and Saratov proved to be reasonably good in the area of automatics. As far as I know, they graduated from some local higher schools. I can highlight their familiarity and practical skills in the area of DCS. When I worked for Gazprom before, we valued specialists who worked in the North in Tyumen, Surgut

tasks was always welcomed there. Out of lots of worthy specialists that I personally was acquainted to at different times, the graduates from Tyumen and Ufa Oil Institutes, and, of course, many of the northerners come from Grozny Oil Institute.

If we talk about the specialists from abroad with whom I had to work with not only in CPC but before, these were engineers from Germany and USA. I can mention, personally of course, good professional skills of the Germans, their honesty, and working efficiency. With engineers and managers from the USA we also developed good relations due to their interpersonal skills, knowledge of project implementation phases, and a good certain-specialty dedicated training.

by Evgeny Shinkar, Lead Engineer of Control Systems, CPC Astrakhan Office



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Between Past and Future

I BEGAN MY WORK FOR CPC IN MARCH 2001 AS PS "KOMSOMOLSKAYA" SHIFT SUPERVISOR. IN RESPECT TO EDUCATION, IN 1979 I GRADUATED THE PETROLEUM TECHNOLOGICAL DEPARTMENT OF GROZNY OIL INSTITUTE (GSOI) NAMED AFTER ACADEMICIAN M. D. MILLIONSCHIKOV WITH A DEGREE IN TECHNOLOGY OF BASIC ORGANIC AND PETROCHEMICAL SYNTHESIS.



Gapur Kuzhuev

Frankly speaking, my memories about the university years are ambivalent. It is nice to recall the university fellows, collective recreation, sports activities, students' concerts... Sports were highly popular in our GOI. There were national champions, medal winners of the international competitions, USSR and international masters of sports among the university students. Suffice to say that 8 sportsmen from our university were members of the Burevestnik central council boxing team. An excellent Palace of Sports, sports grounds, sports and health camp of Burevestnik in the settlement of Agoi by the Black Sea and recreation facilities in Checheno-Ingushetia and North Ossetiya were at the students' disposal.

But there were times when night after night you had to deepen into a designing harvester, term papers, prepare for daily colloquiums – in

this respect, of course, I am happy that it is over. It happened that sometimes there were hockey or boxing world championship matches transmitted on TV especially enjoyed by the students at that time but you could not take the liberty to sit in front of the TV. At those moments we dreamt about the time to start gaining field experience, when you did not have to prepare for tomorrow lesson or exam... But we are not going to talk about it today. I would like you to get to know better our beloved and glorious GSOI.

A few words about the history of the establishment of this higher school. After nationalization of established as per the directive of the Council of People's Commissars. During first years this institution had the following departments: Higher - mining and petroleum, petrochemical, electrical engineering, and economic-accounting, and primary (for workforce) - mining and petroleum in the oilfields, chemical in the factories, mechanical and construction in towns. In 1929 Grozny Petroleum Technical School was reorganized into Grozny Oil Institute. This institution became a real Alma Mater for the oil industry.

One can talk about GSOI days and nights. So many wonderful professors and honored graduates! Among

Night after night you had to deepen into a designing harvester, term papers, prepare for daily colloquiums

the oil industry in the country a topical issue was to prepare own resources, for which reason on August 1, 1920 Grozny Higher Petroleum Technical School was the GSOI graduates there are four Heroes of the Soviet Union, five Heroes of Socialist Labor, award winners of Stalin, Lenin, State prize, prizes of Council of Ministers of





the USSR and other international ones. Grozny Oil Institute significantly contributed to development of geology study, search, exploration, drilling, and development of oil and gas fields, oil refining and oil chemistry. It had educated students that became afterwards industry and enterprise leaders and qualified scientists. Among them there are USSR Oil Industry Ministers Mr. Maltsev and Mr. Churilov, **USSR Ministers of Petrochemical** and Refinery Industry Mr. Fedorov and Mr. Khadzhiev, RF Minister of Geology Mr. Fedorov, Head of USSR Gas Industry Chief Department Mr. Shmarev, Head of the largest USSR Central Administration of Glav-Tyumenneftegaz Mr. Muravlenko, members of the Academy of Science of USSR Mr. Millionschikov and Mr. Dorodnitsyn.

Famous educators and researchers gave lessons in GOI: Mr. Butorin, Mr. Tilicheyev, Mr. Sakhanov, Mr. Obryadchikov, Mr. Lindtrop, Mr. Golomshtok, Mr. Schelkachev, Mr. Amerik, Mr. Zhischenko, Mr. Brod, Mr. Fedorov, Mr. Bagaev, Mr. Zenkov, Mr. Itenberg, Mr. Zabarinsky, Mr. Guzhov, Mr. Kagermanov, Mr. Mirsky, Mr. Lotiev, Mr. Pykhachev, Ms. Smirnova, Mr. Simonyants,

Mr. Bashilov, Mr. Saidov, Mr. Blagonravov, Mr. Abramov, Mr. Alexandrov, Mr. Grishin, Mr. Leibman, Mr. Dontsov, Mr. Belikov, Mr. Dakhkilgov, Mr. Bozhedomov, Mr. Yusupov, Mr. Mamaev, Mr. Sterlenko, Mr. Keramidi, Mr. Manovyan, Mr. Mezhidov, Mr. Katryshev, Mr. Magomadov, Mr. Airapetov, Mr. Makhukov, Mr. Zombe, Mr. Tvertsyn, Mr. Bashirov, Mr. Vtyurin, Mr. Kolesnikov, Mr. Tepsaev, et al.

During my university times at GSOI there were 8 faculties, 35 departments, 4 applied research laboratories, a computing center, postgraduate training program, and the largest



library which kept one and a half million books in its scientific, technical, and art archives. There were over 6,000 students studying that time at GOI. This institute gave me a lot in terms of professionalism! Sometimes in the course of studying it seemed that this or that subject was given in vain, and it was simply an extra load. But now, after many years you understand how important it is for a specialist of any discipline to have a general outlook together with specialty knowledge. A higher school graduate should be familiar with many spheres, and be able to keep up the conversation on any topic.

The sad comes in conclusion. Two military campaigns in the Chechen Republic in the end of XX – early XXI centuries inflicted irrevocable damage to GOI (currently Grozny State Oil Technical University -GSOTU). First of all it concerns its teaching personnel. Highly professional team that GOI was famous for had been forming over the decades. Buildings can be constructed, great resource base can be established. But will we be able to recreate that international environment that GOI once had? How many years do we need to bring up a new academic teaching staff within this institution, team of like-minded colleagues? Time will reply to these questions. And we shall hope for the best.

> by Gapur Kuzhuev, PS "Komsomolskaya" Manager



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From Oil-Workers' Dynasty

MY ALMA MATER IS MOSCOW INSTITUTE OF PETROCHEMICAL AND GAS INDUSTRY NAMED AFTER I. M. GUBKIN (MIPC AND GI), CURRENTLY GUBKIN RUSSIAN STATE UNIVERSITY OF OIL AND GAS. THREE GENERATIONS OF OUR FAMILY GRADUATED FROM THIS HIGHER SCHOOL.



Aizharyk and Aitbai Kenzhalyev

THE HIGHER EDUCATION INSTITUTION QUALIFIED ENVIRONMENTAL SPECIALISTS

I entered MIPC and GI in the days of the Soviet Union when enterprises were sending young workers to higher schools. Boys and girls were given a possibility to obtain a higher education so that when they were back to the enterprise they could contribute to its development being skilled specialists.

MIPC and GI was considered one of the most reputable higher schools in the USSR; besides, Gubkin Russian State University is currently highly ranked and well-known throughout the world. There was a case I am aware of when a student, who got education far-abroad, was required additional knowledge while employing to an oil company in Kazakhstan, and as a result he had to obtain a second degree in our country.

In the Soviet Union, environmental issues at production sites were not given such consideration as today.

However, MIPC and GI trained environmental specialists though they were qualified as thermal power engineers. In course of studying we were actually trained as environmental specialists; concentration program No 0308 was called Use of Gas and Black Oil, and Environmental Protection.

Our Institute historically educates at such level that enables a graduate to become a professional in the selected field. Many of those graduated MIPC and GI are holding high-ranking positions at KazMunaiGaz, in the Ministry of Oil Industry, and large oil enterprises of Kazakhstan. For instance, Mr. Cherdabaev, first Minister of Oil Industry of the Republic of Kazakhstan, Mr. Sarsenbaev, first PS and Pipeline Coordinator in the Republic of Kazakhstan under the Expansion Project, Mr.

Murinov, CPC-K Regional Manager, Mr. Karabalin, CPC-K Executive Director.

The Institute gave me a lot. After graduation, having returned to my co-workers in Embaneft, Production Association, I took part in establishing environmental sector of focus within oil production – it included laboratory examination of environment components, management of environmental issues during crude oil production, processing, transportation, and many others.

While working for the CPC-K Expansion Project I am regularly using the knowledge obtained in MIPC and GI, supported and enriched by many years of practice.

Completed facilities commissioning is performed without claims and



Group of Embaneft Engineers and Technicians that participated in installation of the first refinery and well tests plant at Tengiz oilfield. July, 1981



comments from the state environmental protection authorities, and there is usually a Without Violations status in the Acts of Contractors and Subcontractors Scheduled Environmental Inspections by the state authorities.

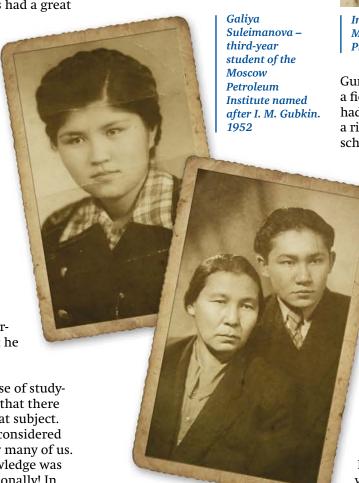
KNOWLEDGE IS POWER!

I am looking back to my Institute with appreciation. Mainly all MIPC and GI course lecturers had a great

work experience and academic titles, as well as pedagogical gift. Each time beginning the lecture Mr. Mark Ravich. Gas and Black Oil Department Chair, Doctor of Engineering, Professor, addressed to us, students, saying: "Dear colleagues". At that moment we felt as if being quasi specialists, engineers that gave us a great motivation to obtain a worthy education. Mr. Ravich was a teacher, mentor for almost all faculty lecturers, and I consider that he gave us a lot!

Sometimes in the course of studying the students think that there is no need in this or that subject. Materials Science was considered one of such subjects by many of us. But in reality this knowledge was very useful for me personally! In particular, during installation of 88-kilometer oil pipeline section under the Expansion Project, more precisely – in course of discussion of the issues on the installed pipeline preservation. As a matter of fact, there are no needless subjects in the higher school.

After graduation I have been twice to my Alma-Mater – after 17 years when my elder daughter entered the Gubkin Russian State University, and just recently when my younger son has become a student. The Institute has greatly changed! The departments have been brought up-to-date, new subjects introduced, teaching process modified: Groups are split into subgroups which fact improves the quality of teaching. We had been dreaming about it during our studies because it took a lot of time to present laboratory works, tests, and term papers, to pass credits as one professor could have a great number of students.



Ruslan Suleimenov with his mother Nursulu, 1951

DYNASTY FOUNDER

I am a third-generation oil worker. My children have chosen this way as well, being the fourth generation of our "oil" dynasty, the founder of which was my grandfather Mr. Abish Suleimenov.

Mr. Abish Suleimenov was born in 1897 in the area of Taisoigan of



In the center – Ruslan Suleimanov, Chief Mechanic of Dossorneft, Oil-and-Gas Production Department, early 1960-ies

Gurievsk Region in the family of a field-hand. Until he turned 20, he had been working as a shepherd for a rich landowner. In 1918 he went to school, learnt reading and writing;

in 1927 he graduated from

the Orenburg remedial school for workers, and in 1936 - from the Baku Academy of Industry. He had been working for many years as a drillman for Makat drilling office. In 1932-1934 he was the Chairman of Gurievsky Regional Committee of the Oil Workers Trade Union, in 1936 - 1944 - Baichunas and Sagiz Oilfields Director. During the Great Patriotic War he was Zholdybai Exploration Manager of Makat Region, and after the war - Oil Production Shop Manager at Makat oilfield, HSE Engineer, Kaznefterazvedka Drilling Trust Deputy Manager. He was Teren-Uzek Oil Exploration Manager when in the summer of 1953 an oil spouter gushed out

to a height of more than 20 meters above the rig.

My grandfather took a well-deserved rest in 1957. He was awarded the Order of the Red Banner of Labor, medals for Valiant Labour in the Great Patriotic War 1941–1945, for Labour Valour, for Valorous Labour in Commemoration of the 100th Anniversary of the Birth of Vladimir Lenin, and twice – Certificate of Merit by the Supreme Soviet of the Kazakh Soviet Socialist Republic. »

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Aslan, an elder son of the Kenzhalievs, followed in the steps of his father

WE ARE GUBKIN'S STUDENTS

My father, Mr. Ruslan Suleimenov, a native of Atyrau Region, became the first Gubkin Institute student in our family. In 1956, having returned to the native shore with a degree in Engineering Mechanics, he began his work life as a fitter in the assembly shop, then - a foreman in the machine shop at the Gurievsky Machine Building Plant named after Petrovsky (currently Atyrauneftemash Plant). In 1957 his oil life history began. For a long time my father was the Chief Mechanic in Dossor Oil Production Department that included five oilfields, i.e. Dossor, Makat, Sagiz, Koshkar, and Komsomolsk; he was the Chief Mechanic of a newly developed oilfield Prorva. For his labor he was awarded the Order of the Red Banner of Labour, many medals, Certificate of Honors of the USSR Oil Industry. My father received the Certificate of Honors of the President of the Republic of Kazakhstan Mr. Nursultan Nazarbaev for his contribution to the oil industry.

My father was often recalling his mentors. When he, being a young specialist, came to the settlement of Dossor, he was lucky to work with such excellent managers as Mr. Aron Kaplan and Mr. Bulekbai Sagingaliev, with Oil-and-Gas Production Department foremen Mr. Kairgali Dzhilkishiev, Mr. Zhetpys Botabaev, Ms. Avgusta Kvashenkina, Mr. Gennady Soloviev, etc. Practical skills

obtained at that time are invaluable. For instance, Mr. Nikolai Shaikhudinov could define the location of a tractor defect by the sound made by its components... My father had been working among people selflessly committed to work. "We have never considered the time; we were back at work by the first call at two, three a.m. When we began a well production, we had been working day and night and did not go home until the process was over. That was the swing of production; there was a battle for oil going on that our motherland required", my father recounted.

ON FEMALE LINE

The family of my mother, Ms. Giliya Suleimenova, suffered persecution in the 30-ies, and unwillingly left the homeland. They were fleeing from persecution in the Mordovian Autonomous Soviet Socialist Republic where they had lived till the end of the Great Patriotic War, and came back to the native land only in 1946.

My mother was sent to Dossor boarding school named after V. G. Belinsky, after which she entered the Moscow Petroleum Institute named after Academician I. M. Gubkin. In 1956, having a degree in Organization and Planning in Oil Industry, my mother came to work at Dossor oilfield where she was a planning engineer, head of Planning and Economic Division of Building and Construction



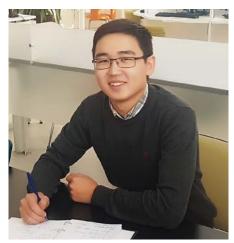
Aigerim, Head of Technical Engineering Department of Anticor-S, LLP

Department of Kaznefterazvedka Trust. In 1969, she was elected a chairperson of Makat District Committee of People's Control where she had worked till 1974; then she was appointed to a post of the First Deputy Chairperson of Makat District Council of People's Deputies. In 1980 she became a chairperson of Makat District Executive Committee, and in 1983 - Party Committee Secretary of Dossorneft, Oil-and-Gas Production Department. My mother's achievements in the oil industry were noted by the government awards, i.e. Order of Lenin, Order of the Badge of Honour, medals.

My grandmother, Ms. Nursulu Suleimenova, dedicated all her warmth and wisdom to bringing up her grandchildren (my parents have three children). She was a guardian of the hearth of our family, supported my grandfather in his work throughout her life, and then doted on her son's family. During the Great Patriotic War she joined the All-Union Communist Party (bolsheviks) and remained in the party for more than half a century, for which reason she was awarded a special badge.

THE KENZHALIEVS

After school it took some time for my husband, Mr. Aitbai Kenzhaliev, to enter the institute – he could not leave alone his father who was well into old age.



Asylkhan, second-year student at the Gubkin Russian State University



Aitbai waited for his brother to have graduated from the institute and entered MIPC and GI with concentration in Metal-Cutting Machines and Tools. Having finished the studies, he entered employment in 1985 as a fitter at the plant named after Petrovsky in the town of Guriev, and then he was transferred to the mechanical department of the plant. In 1990, he was invited to Embaneft, Production Association, where he had worked until 2003 as the Deputy of Technical Engineering Department of the Central Maintenance Workshop, the Chief Mechanic at Dossor-Munaigaz, oil production enterprise. Currently my husband is a structural steel specialist in the maintenance workshop of the Atyrau Oil Refinery.

Our daughters, Aigul and Aigerim, carried on our family tradition and became oil workers after graduating the Gubkin Russian State University in 2002 and 2003. Aigul is a manager in KazMunaiGaz, National Company; Aigerim is an engineer of the technical engineering department in a construction company. Our son Asylkhan is a second-year student of Pipeline Transport Systems Engineering, Construction, and Operation Faculty in the Gubkin Russian State University. Our elder son Aslan followed in the steps of his father, he is a fitter at AtyrauNefteMash Plant."

> by Aizharyk Kenzhalyeva, Environmental Specialist, CPC-K Expansion Project Group



Aigul, Manager of Technical Development and Innovative Technology Department at KazMunaiGaz, National Joint-Stock Company

The Best Higher School

I GRADUATED FROM THE MOSCOW INSTITUTE OF PETROCHEMICAL AND GAS INDUSTRY NAMED AFTER I. M. GUBKIN WHERE I HAD BEEN STUDYING FROM 1980 TO 1985 MAJORING IN CONSTRUCTION OF MAIN GAS AND OIL PIPELINES, GAS STORAGE TANKS, AND OIL TANK FARMS.

This Institute was notable for me because in 1955 my father Mr. Saktapbergen Bekmurziev graduated it with honors. My wife Vera had been also studying here from 1976 to 1981. In 1981, we celebrated a merry komsomol wedding with Vera in the students' hostel of Russian State University at 3 Butlerova.

Thanks to deep and systematic knowledge obtained in the Institute, I have been successfully working for many years in pipeline transport system both in construction, operation, and at the project. Up to now I have been gratefully thinking of our remarkable Institute. I have excellent impressions remained of such disciplines as Physics given by Ms. I. Volodina, Assistant Professor, Chemistry by Mr. S. Shalyt, Assistant Professor, Thermodynamics by Professor Porshakov, Prorector, Soil Mechanics by Professor P. Borodavkin, Dean, Construction of Gas and Oil



Pipelines by Ms. L. Skugorova, Assistant Professor, (she was tenderly called "NS mother" by the students), Hydraulics by Professor Rotenberg...

Was the Institute giving any knowledge that did not prove useful for life to its former students? Looking

back from the present time, one may probably say, even with an assumption, that "needless" knowledge was received on history of the Communist Party of the USSR, on scientific communism – works of Lenin, Marx, and Engels. However, for general development, broadening of outlook of any thinking person the philosophical basics is not a useless knowledge at all.

According to my own production experience I believe that the most popular and in-demand higher schools in the oil industry within the former Soviet Union are the Russian State University named after I. M. Gubkin, Ufa State Petroleum Technological University, and Ivano-Frankovsk National Technical University of Oil and Gas.

by Samat Bekmurziev, Senior Turnover Documentation Specialist of the CPC-K Expansion Project

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For the Sake of Children's Health

CHILDREN'S REGIONAL CLINICAL HOSPITAL NAMED AFTER N. N. SILISCHEVA RECEIVED MEDICAL EQUIPMENT AS A GIFT FROM CPC.



The hospital physicians shared their thoughts about the new equipment with the honoured guests

On November 1, 2016, a handover ceremony of the medical equipment as a gift from the Caspian Pipeline Consortium took place in the Children's Regional Clinical Hospital named after N. N. Silischeva (CRCH named after N. N. Silischeva). 112 pieces of equipment (18 items) for a total amount of 20 million rubles completed the institution offices within the framework of implementation of the Company's charity and cooperation with the Ministry of Health of the Astrakhan Region.

Mr. Nikolay Gorban, CPC General Director, attended ceremony of medical equipment documents hand-over to the Hospital management and wished to the staff members that it would serve for a long time, do good for children and give joy to their parents. Mr. Alexander Zhilkin, Governor of the Astrakhan Region, Mr. Mikhail Grishankov, CPC Deputy General

Director, RF Government Relations, Mr. Radik Kharisov, Astrakhan Region Government Deputy Chairman – Minister of Industry, Transport, and Natural Resources, Mr. Pavel Dzhuvalyakov, Region Minister of Health, participated in this event.

"CPC is a socially responsible company, and we keep working in this direction", Mr. Nikolay Gorban said. "You know that we build nursery schools, supply medical equipment to healthcare centers. There are lots of social projects ahead that we are going to be involved in".

Mr. Artashes Simonyan, Chief Physician of the CRCH named after N. N. Silischeva, returned warm thanks to the Consortium management for such generous gift that would make medical service for children readily available. Over 110 thousand children visit the hospital per year coming not only from

Astrakhan Region but neighbouring regions as well.

UNIQUE SOCIAL PROJECT

Mr. Artashes Simonyan gave a detailed description of the new equipment sets and arranged a small tour around the offices to the honoured guests. The institution received ultrasonic imaging systems, enzyme immunoassay analyzer designed for in vitro laboratory diagnostics, resuscitation and anesthetic monitor, cardiology electrical equipment complex for 24-hour monitoring and twelve-channel electrocardiograph with ECG record in manual and automatic modes. ultraviolet storage chambers for aseptic tools and bactericidal ultraviolet cleaners/air re-circulators. Moreover, the otolaryngologist's and ophthalmologist's automated work stations were equipped owing to the Consortium, and a specific dental unit was purchased that, according to the chief physician, was an "unique social project" in itself. It is designed to cure children with psycho-emotional disorders that prevent them from getting help in ordinary dental care centers. During treatment, such children require general twilight anesthesia that takes away psychological blocks and fear of people in white coats.

"For me, today it is not just simply equipment. It is not even a special day for the hospital", Mr. Artashes Simonyan noted. "Today is a big day for children! As each of these pieces of equipment has a certain function that will help relieve suffering of a certain child and save not a single life. For instance, all resuscitation departments of the hospital received blood defrosters that will allowshortening time



(from hours to a few minutes) for blood preparation for transfusion to children injured in car crashes and accidents. Each minute means someone's life.

In the package there is also a portable high-tech ultrasonic scanner that will help resolve the problem with children transportation to the hospital allowing performing diagnostics directly at the places where they live, including orphan asylums.

"Believe me, all 112 items are meaningful. They are filled with meaning of children's life and health", the chief physician added.

MAKE A BREAKTHROUGH

Having inspected the offices equipped with the new equipment, Mr. Alexander Zhilkin, Astrakhan Region Governor, thanked CPC for its long-term social focus stating that it had already become the Company's ideological bent.

"I am expressing appreciation to the Consortium and you personally, Mr. Nikolay Gorban, for such attitude. I hope that our collaboration and social projects in Astrakhan Region will be even expanding", he said.

The chief physician of the CRCH named after N. N. Silischeva proudly told about an up-to-date 64-slice multidetector computed tomography scanner that would be delivered to the children's hospital





Charity Policy

On October 27, a working session was held at CPC Moscow Office dedicated to implementation of a new charity policy within CPC-R and CPC-K. The document was prepared by the Department of RF Government Relations with contribution from the colleagues from Kazakhstan and Internal Control Group, and came into force on November 1, 2016.

"Hardly all big companies have such an exceptional document", Mr. Mikhail Grishankov, CPC Deputy General Director, RF Government Relations, comments on the new policy. "It is generating a justified interest among business community representatives. Closely controlling the negotiation and implementation process for the Company's charity projects in Russia and Kazakhstan, the Policy will allow avoiding many issues in terms of price control, feasibility of a certain project, it will improve transparency of each of them, and, finally, it will act to enhance the CPC image being a socially responsible company".

until the end of the year with financial support from the Consortium. The tomography scanner costs 40 million rubles.

"This device will be breakthrough for the hospital because it has such functions that will allow



performing emergency high-tech medical care in the neurosurgery sphere up to the world standards!"

Aid to the healthcare services of the region, in particular, assistance to the regional treatment centers in purchasing equipment is one of the Consortium's charity priorities. For instance, over several years CPC has been cooperating with social rehabilitation center Rus in Astrakhan region. Thanks to the Company's financial support, the center received vehicles and up-to-date rehabilitation, physiotherapeutic, and diagnostic equipment that is used to recover the patients with locomotor and nervous system disorders, as well as children from deprived backgrounds.

by Ekaterina Krapivko



Day of Grace and Sport

IN KRYMSKY DISTRICT OF KRASNODAR REGION, A HORSE-RIDING HALL WAS CEREMONIALLY OPENED WITHIN THE TERRITORY OF KRYMSKY SPORTS TRAINING CENTER.



Riding-Hall is Open!

CPC presented the center with the complex that totally costs over 17 million rubles together with auxiliary equipment and special machinery for horse transportation. The riding-hall area allows for training of 130 riders all year round regardless the weather. Moreover, the sportsmen and women can now accompany their horses to the competitions in the most comfortable conditions saving strength for future wins.

"LUCKY" HORSESHOES

The honored guests of the ceremony – Mr. Sergei Les, Acting Head of Krymsky District, and Mr. Mikhail Grishankov, CPC-R Deputy General Director, RF Government Relations – were welcomed by

a heart-warming tradition with a bread and salt and accompanied to the riding-hall. The feast began.

To the entrancing strains of waltz from the film "Moi Laskovy i Nezhny Zver" (My Gentle Tender Beast) the sportsmen and women of the Haute Éole Department performed gracefully pas de deux. The enchanted spectators had hardly come to senses when the solemn march sounded the beginning of the official ceremony. Mr. Sergei Les congratulated the trainees of the center and expressed his appreciation to the CPC management for its contribution to the development of the youth sports in Krasnodar Region noting a longterm cooperation between the Company and municipal

Mr. Mikhail Grishankov, in his turn, replied that support to children and young people was an important charity focus of the Consortium, and he wished new wins and personal bests to the young sportsmen and women.

"I shall be honest with you, hearing the names of the Krymsky Sports Training Center trainees amongst winners and medalists of competitions is especially pleasant for me", he underlined. "It is even more pleasant to understand that CPC has to do with it. Our collaboration produces good results. I wish to the sportsmen and women to gain the highest prizes defend-



ing the honor of their region and country with dignity. As to us, we shall support Krymsky District. I think that we shall have lots of common projects in the future".

Ms. Nadezhda Sinelnikova, equestrian sport trainer, winner of



the Russian Cup 2016, Champion of the Southern Federal District and Krasnodar Region of 2016, was entitled to cut the ceremonial ribbon together with the honored guests.

"Now we are able to contest at the top-class competitions", noted the sportswoman. "We promise to represent Krymsky District and Krasnodar Region not only at the nationwide but at the international level as well".

The music began again. The young riders joined in the vigorous beat of the song "Edut, Edut po Berlinu Nashy Kazaki" (Our Cossacks are Riding Through Berlin) by performing a foot-tapping cotillion.

All the honored guests were presented with the horseshoes for luck.

VALDAI, BESPODOBNAYA, PLOT, AND KAPELLA

The spectators could not only appreciate the skills of the young riders but see the pride of the school – the best horses of the stable, multiple champions that were introduced to the audience by Ms. Anastasiya Kuzmina, Head of the center.

Valdai, a Budyonny breed stallion, competes in horse trials. This Olympic sport demands courage and stamina both of the horse and sportsman or woman – within three days a pair should pass combined trials: Show ring competition, jumping competition, and cross-country run. Valdai is a multiple champion and prize winner of Krasnodar Region and Southern Federal District, the region's only qualification holder for the Russian Championship that it has gained at the competitions in Moscow.

A horse named Bespodobnaya jumps over hurdles competing at show jumping. It is capricious in a feminine way. But they forgive its tough temper as it is the champion – this season it has left no competitions without medals. The sole fitting rival of Bespodobnaya in this

sport is its brother, a male horse named Plot. They often compete against each other for the 1st and 2nd places, that is why they have similar titles – multiple winners and medalists of the Championships of Krasnodar Region, Southern Federal District and Russian Cup 2016 for young horses.

There is a real celebrity in the center – Capella, a granddaughter of Cornet Obolensky itself. The prize fund won by the offspring of this stallion at the international competitions equals to millions of Euro. Although initially they did not laid high hopes on Capella because of its small height, this season it won a silver medal in tough competition of Nadezhdy Rossii (Russia's Hopes). And it is just 4 years old; all wins and titles are ahead!

TO NEW WINS!

"Before coming to our center all these horses had neither experience nor achievements in sport", Ms. Anastasiya Kuzmina noted. "However due to systematic training, especially in such outstanding conditions as the center has now, we got ourselves talked about not only in Krasnodar Region, but throughout Russia as well".

In conclusion she expressed sincere appreciation to the Consortium for this feast given to all those present.

"Equestrian sport is our life", Anastasiya said. "Our Center is only

three years old, and when we only started horseback riding we did not have suitable conditions for training. The riding-hall was our dream. And now when we are able to train all year round at any time of day and in any weather, go to the competitions to other regions, the center has been ranked among the regional



CPC fulfilled the dream of the center sportsmen and women about own riding-hall

schools and has even moved them from the podium. We shall try to defeat everyone!"

The complex has begun to operate several months before the official opening ceremony. In the season of 2016 the center sportsmen and women, together with their four-legged companions, have already won over 80 prizes at the regional and nationwide competitions.

by Ekaterina Krapivko



The spectators appreciated the skills of the young riders and saw the best horses in the stable



Housewarming Party in Akkistau

THE POPULATION OF AKKISTAU VILLAGE IN ISATAIDISTRICT OF ATYRAU REGION HAVE BEEN LOOKING FORWARD TO THIS EVENT. A JOYFUL ANTICIPATION RESULTED IN A TRUE FEAST WHEN CPC-K PRESENTED THE VILLAGE WITH A WONDERFUL NURSERY SCHOOL "NURSHUAK" FOR 160 CHILDREN.

The celebration was performed before a vast assembly because this event concerned almost each family. The building of the new nursery school is festively decorated, live national music is heard, and curious kids are peeping out of the nursery school windows...

Addressing to the audience, Mr. Gumar Dyusembaev, First Deputy
Akim of Atyrau Region, expressed sincere gratitude to the Company's management for the implemented charity policy focused on solving social issues of concern in the region.

"Today is a big day for the village. Putting in service of such a necessary institution for the region is an outcome of the implementation of the Agreement between Atyrau Region Akimat and CPC-K", he underlined. In accordance with the Decree of the President of the Republic of Kazakhstan, Mr. Nursultan Nazarbaev, all kids from three to six should have

rious

Main persons on the celebration

been provided with places in nursery schools by 2020. CPC-K contributes to solving this issue of state concern implementing a variety of social projects in the region where it operates. Over 400 million tenge were invested by the Company in the construction of nursery school "Nurshuak" translated into Russian as a "Sun Ray". The nursery school did turn out to be sunny and bright.

"The nursery schools for 200

and for 160 children in

children in Zhylvoi District

Atyrau and Akkistau have been already constructed and commissioned under this project", noted Mr. Kairgeldy Kabyldin, Deputy Director General of the Caspian Pipeline Consortium. "CPC-K priorities in implementing social projects in the region are the construction and overhaul of healthcare and education facilities. In particular, almost 4 billion tenge were allocated for constructing preschools, schools, hospitals, purchasing medical equipment, constructing sports grounds and recreation parks under the Expansion Project."

Until recently, 739 children in Isatai District have been waiting their turn for a place in preschools. After commissioning of nursery school "Nurshuak", this waiting list has considerably decreased!

A lovely two-storey building of the nursery school complies with the latest requirements and materializes a cherished dream of the parents that have concern not only about children's educational level, but general development as well. Everything necessary for a comfortable



Singing the national anthem together with the children did sound exceptionally

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stay and creative development of the rising generation is provided here –cozy premises for eight groups of kids, play rooms, music and sports halls, rooms for hobby groups and preschool teachers, there is even children's own puppet theatre. A room for demonstration lessons is equipped with an interactive whiteboard. Special chambers to dry clothes and shoes are available in order for children not to be exposed to common colds in rainy and snowy weather.

There is a medical aid station and two isolation rooms in the building. A speech therapy station where a speech therapist and speech pathologist work is the first to have been opened in the district. Availability of a day nursery makes it possible for kids from 1.5 to 3 to visit the nursery school.

The preschool employees have already appreciated the convenience and potential of the new

building. Meals for children are prepared on the state-of-the-art advanced equipment; there is a service elevator to aid the personnel. Own boiler unit and transformer substation supply the childcare center with heat and light. Improved adjacent area pleases the eye: Shelters, sandpits, slides, swing sets, playgrounds...

It is significant that the opening of the nursery school created more jobs. Twenty five teachers out of 65 preschool employees are highly skilled.

Ms. Zhumagul Bektabanova, Nursery School Director, speaking on behalf of all preschool staff members, underlined:

"We have been collaborating with CPC-K for 6 years, during which the Company has been providing a great sponsor support to our nursery school. I appreciate very much the Company's assistance".

On behalf of the parents, the gratitude to CPC-K and the region administration was expressed by Ms. Gulbanu Kabuova, a grandmother of eight grandchildren, three of whom became pupils of nursery school "Nurshuak".

"I express my profound respect and appreciation for your care about



rising generation, for your contribution to upbringing our children, i.e. our future. It is a joy for the whole village. It is very important for us in which conditions our children are brought up and educated", she said.

As Ms. Lyubov Evstifeyeva, CPC-K Public Relations Department Lead Specialist, told to the journalists



All the best to children!..

about 30 social infrastructure facilities were planned to be implemented by the Company this year, 70 % of them have been already commissioned. Among them, there is the construction of three sports grounds for the Atyrau Oil and Gas University, repair works in nursery schools Nos 6 and 16. Thanks to the CPC sponsor support, gymnasium school No 30 was given a new look; its repair cost 31 million tenge.

At the moment, using the funds of CPC-K, gymnasium school No 17 overhaul works are in progress, running repairs of the sports hall of the secondary school in the rural locality of Sartogai of Makhambet District are ongoing, territory improvement of nursery school "Meldir" is in progress in the settlement of Balykshi, and in the rural locality of Makhambet of the District there is a bathhouse and laundry being constructed for the boarding school where children with special needs live and study.

In the course of the years, CPC-K has implemented many social projects and organized charity events in Atyrau Region of the Republic of Kazakhstan. Being an enterprise bearing a high social responsibility, the Company is heading for due performance of undertaken obligations aimed at improving the quality of life of the locals.

by Aina Zhetpisbaeva



Exhibition of children's creative works



Company of Good Deeds

IN MY OCCUPATION I OFTEN HAVE TO TRANSLATE VARIOUS CONTRACTS, INCLUDING CHARITY AGREEMENTS.



Zharkyn with her niece Erkenaz wish a Happy New Year to all CPC employees!

Today Ms. Lyubov Evstifeeva, Lead Public Relations Specialist, has again sent a request for translation of a similar document. I open an attachment: It concerns providing support to another preschool, this time to nursery school No 54. There is quite a number of such preschools, schools, healthcare centers in Atyrau and regional

districts to which CPC-K has given a helping hand. It is not just one of the expenditure items of a stably developing Company, not just one of the demonstrations of the Corporate Social Responsibilities - it is a good deed of an immense significance. It is aimed at handling the loftiest mission, i.e. upbringing of the rising generation of sovereign Kazakhstan. The end of the year 2016 will be marked by several historical dates, the main of which, undoubtedly, is the 25th anniversary of Kazakhstan's independence.

Over the years of independence, big changes have happened and impressive success was achieved in many spheres in Kazakhstan. One of the realities of the modern life is the non-surprising fact that can be considered almost a norm nowadays that Kazakh young people are as mobile as young people of the developed countries; they are freely traveling around the world under student exchange projects, entering and studying in the reputable foreign higher education institutions. Goal-oriented graduates have a chance to get a good job in large international companies

coming up to the expectations of their parents and contributing to the success of their homeland. It becomes possible only due to giving sufficient attention to education and upbringing of the young people.

The President of the Republic of Kazakhstan Mr. Nursultan Nazarbaev always stresses the importance of the education; it is one of the priorities of the national policy. In one of the traditional President's messages to the people of Kazakhstan there was a catch phrase: "A country that is not able to develop knowledge in the XXI century will be doomed to failure." Acquiring a high-quality education by the students, free access to the global education environment depend greatly on material and technical resources at schools and their compliance with the modern requirements. It is a long-term methodical work, the fruits of which can be seen even now, and year by year they will be becoming even more notable. However, a vast territory of the country, many other urgent social issues result in shortage of time and funds for everything.





It is when our Company comes to help my fellow citizens. It allocates necessary funds for construction, refurbishment, modernization of various education and healthcare facilities. There is a Cooperation Agreement concluded between the Company's management and the Region Akimat, under which a large CPC-K social program is being implemented. Moreover, the Company does not stop at, let us say, schools overall repairs, but also equip them with state-of-the-art equipment; it is concerned not only about the classrooms and lecture-rooms being lit and warm, but also about schoolchildren and students' harmonious development and sports activities, veterans having places to go for a walk, and the settlements having no problems with water supply.

After another grand ceremony, be it an opening of a completed nursery school, repaired school, university sports ground, handover of ambulance cars or equipment to the regional hospital, presents to boarding school pupils or certificates to disabled people, all of us ask questions to the Company representatives present thereat with a joyful excitation, review photographs, and feel glad that to some extent we happened to be involved in it, we are proud to work for such company that practically, without many words, demonstrates its commitment to high humanist ideals.

What touches me most is that children – nursery school kids or schoolchildren – make preparations to welcome the guests with a great sense of responsibility: They discuss the concert program, choose presenters, and learn simple songs and poems by heart. Of course, the adult generation, i.e. the administration of the establishment and parents, express their appreciation through words, aksakals respected by the people give their traditional bata (a blessing wish), and the children, just

One of the main aspects of the CPC-K activity is its involvement in the development of social infrastructure of the regions where the pipeline is passing. During the period from 2010 to 2015, 1,787 million tenge were allocated to implement the CPC-K charity program under the core activity, including such spheres as supporting rural localities, education, healthcare, and the disadvantaged.

The social program of the year 2016 includes construction of a vast number of new facilities, such as recreation parks in Isatai, Kurmangazy, and Zhylyoi Districts, sports grounds for the Atyrau Oil and Gas University, the 5th stage of the summer water line in Makhambet District, school building in Inder District, buildings for laundry and bath-house of a specially needs school, moreover, roof overall repairs of school No 17 and nursery school No 8, as well as equipment supply, in particular, computer equipment for secondary school No 16, medical equipment for the center for cardiology, video endoscope system for general surgery in the infectious diseases hospital, video endoscope system for pediatric surgery in the regional hospital, furniture supply and dining room repairs in the regional arts college, territory improvement for nursery school "Meldir" and nursery school No 6 in Atyrau, elaboration of design and estimate documentation for construction of nursery school No 31 annex and musical school in Balykshi settlement of the town of Atyrau, various charity programs for the disabled people. Totally, 736.82 million tenge have been spent for this purpose.

In 2011–2015, the amount invested into the social services under the Expansion Project equaled to **2,692.8** million tenge. Overall repairs of 8 schools in the regional districts and Atyrau was done, nursery school for 160 children in Birlik settlement of the town of Atyrau and nursery school for 200 children in the town of Kulsary of District were constructed and commissioned, sports ground in Akzhaiyk settlement of District was constructed, four Toyotas Hiace were purchased as a donation to the ambulance station, regional maternity hospital was transformed into a perinatal center.

In 2016, the construction of a nursery school for 200 children is ongoing under the Expansion Project charity program in the rural locality of Ganyushkino in District. Another preschool much needed to the local people has been just recently commissioned: on November 8, 2016, there was a presentation of a new nursery school in District where A-PS-3A is located.

like this, experience their own happiness skipping around spacious rooms, stroking new blackboards and desks hundreds of times, exulting and laughing with joy. Happiness given by our Company!

After that we read publications on it in the local press, watch TV news items, and at home there is an exciting story that I will hear from my cousin's small daughter whom he brings sometimes from the district to the town, having come back home from his rotation shift, so that she could jump on the trampoline, play on a specially equipped playground as they do not have them yet in their rural locality. However, year

after year the things are changing to the better, also, to a great extent, thanks to CPC-K. I hope that someday my niece Erkenaz will be able to get a worthy education and choose her own way in life because she will be lucky to go to school under the CPC-K sponsorship. Even if it is not her, than it will be hundreds of other girls and boys thanks to whom the glory of our motherland will be augmented in the future. Therefore, long live our multinational Consortium! Success and prosperity to CPC!

by Zharkyn Kenzhebayeva, Translator, Atyrau office



Names for the Some of the Most...

THE KAZAKH PEOPLE'S NAMING SYSTEM HAS ITS OWN TRADITIONS. PERSONAL NAMES ARE ATTRACTIVE BY THE REASON THAT A BLESSING WISH IS ALLUDED IN THEM ROOTED IN THE YEAR DOT WHEN OUR REMOTE ANCESTORS CONSIDERED A NAME BEING SOMETHING WITH MAGIC POWER.

We have already acquainted our readers with the female names focused on elegance, tenderness, and beauty (CPC Panorama, the April edition of 2014). The male names reflect an image of a male ideal, i.e. strong, robust, brave, fair, honest, handsome, and rich. What is more, these perceptions in the people's memory are connected with the traces of heathenism and to-temism.



Hardly anybody knows, for instance, the relation of the name of Ruslan that has already become international and the old Turkic name of Arslan that symbolizes vigour and fearlessness. These names are actually derived from a common noun "arslan" (lion).



Ruslan Sultanov, Economist

The name of Arslan is quite frequently used by all Turkic-speaking peoples in diverse variations. In the Kazakh naming book these are Arystan and Aslan; there are such derivatives as Arystanbek, Aslanbek, Arys, Bekarys, Zhanarys.

Naming their sons with names of Aslan and Ruslan, the parents of our



Aslan Berikov, PS "Atyrau" Operator

employees, Mr. Aslan Azhigaliev, Mr. Aslan Berikov, Mr. Aslan Bertleu, Mr. Ruslan Nurmukhanov, and Mr. Ruslan Sultanov, wished them health, strength, courage, stamina, and dignity typical of the king of beasts. In addition please be informed that there are other lions in the Kazakh naming book, like Khaidar ("khaidar" means "lion" in Arabic), Alisher ("ali" means "great" in Arabic, "sher" means "lion" in Persian).

CODE OF HAPPINESS

There are lots of Kazakh names; they vary greatly in origin, meaning, and structure. The male names, as opposed to the female ones, are also used in patronymics and family names; as a result their variety is even wider. That is why it was quite difficult for the author to define a criterion for choosing the names to be described in this article.

In order to determine the most frequent male names among our staff members, I carried out a statistic analysis, in which I included patronymics and family names (female as well) apart from the proper names of our men. As a result, the most



Bakytzhan Zhokebaev, Translator

frequent name was defined as being Bakyt ("bakht" means "happiness" in Persian). It can be either male or female. Besides, it is frequently used as a stem to form composite names with constant components (Bakytbek, Baktybai, Bakytzhan); the third peculiarity of this name is existence of sounding and spelling variations (Bakyt/Bagyt, Bakytzhan/Bagytzhan, Baktygali/Bagytkali).

In each case by using the word "bakyt" as the stem for the name the parents wished happiness to Mr. Bagitzhan Karakuzov, Mr. Baktybek Ergaliev, Mr. Baktybai Aitzhanov, Mr. Bagytkali Aisagaliev, Mr. Bagytzhan



Alibek Esenaliev, PS "Tengiz" Manager

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Zholdybaev, Mr. Bakytzhan Zhokebaev, Ms. Bakytgul Khamitova, as well as to the fathers of our staff members Mr. Boizhanov, Nurkairat Bagitovich, Ms. Saparova, Saltanat Bagitzhanovna, Mr. Umirov, Erbol Bagytkalievich, Mr. Mukashev, Samat Bagitovich. Traditional components -bai, -bek, -gali/kali, -zhan are used in the composite names.

ETERNAL VALUES

Two more male names frequently found in our lists are Kuanysh (joy) and Aman (healthy and sound) together with its "twin name" of Esen (aman-esen means alive and healthy, and is frequently used in the forms of greeting, as well as in wishing well-being); they also function more frequently as the composite names.

Below are our employees – owners of the names wishing joy and well-being: Mr. Kuanysh Shakonov and Mr. Kuanyshkali Iskaliev; Mr. Amangali Saginbaev, Mr. Amanzhol Salikhov, and Mr. Esen Kulshetov. These and other names that have the same root can be found in the patronymics and



Kuanysh Shakonov, PS "Tengiz" Deputy Manager

family names of our colleagues, for instance, Mr. Alibek Esenaliev, Ms. Kenzhebaeva Zharkyn Esenovna.

The name of the Prophet Mohammed has the greatest number of variations. The name of Mukhambet is phonetically adapted in Kazakh. However, among the family names and patronymics of our staff members one can frequently find Makhambet, Mukhamediya,



Esen Kulshetov, HSE Engineer

Mukhambetzhan, Dosmukhambet, Izmagambet, Narmaganbet, Nurmukhambet, as well as a shortcut of Mukhan, Mukan, and its derivatives of Nurmukhan and Kalmukhan.

EVERY DAY IS LUCKY!

A range of names which have the names of the week days in their stem, are of a special interest. Duisenbi, seisenbi, sarsenbi, beisenbi, zhuma, senbi, and zheksenbi, that is how the names of the days of the week sound in Kazakh. They



Andir Mukhambetzhanov, Head of Transport Service

are formed, in their turn, from the similar names in Farsi: doshenbe, the second day (Monday), seshenbe, the third day (Tuesday), chakharshenbe, the fourth day (Wednesday), pyandzhshenbe, the fifth day (Thursday), dzhuma, Friday, shenbe, Saturday, iekshenbe, the first day (Sunday).

In the Tajik language which is the closest to Farsi the words which the Saturday's name, shenbe, is



Sarsembai Murinov, Eastern Region Manager

added to, are used for counting: iek/ yak, one, do, two, se, three, char, four, pandzh, five. There are many names in the Kazakh naming book that are derived from the names of the week days. As per the naming tradition a child born on Monday could be named Duisenbai, Duisenbek, Duisengali, etc. The most honoured days of the week are sarsenbi (Wednesday) and zhuma (Friday). It is believed that all important things should be started on Wednesday, therefore, owners of the names of Sarsen, Sarsenbai, Sarsenbek, Sarsengali, Sarsenkul should be lucky. Zhuma (Friday) is a day to visit the mosque. This day in commemoration of the departed relatives it is traditional to bake shelpek (flatbread) and bauyrsak. The names in which the word "zhuma" appears are also frequent: Zhumabai, Zhumabek, Zhumagali, Zhumagul, Zhumazhan, Zhumatai, Baizhuma. Many names of such types have undergone changes in the Russian transcription: Dyusengali, Sisenbai, Bisengali, Dzhumagul. »



Zhumabai Taganiyazov, Logistics Warehouse General Laborer

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Eset Zhumagaliev, PS "Tengiz" Operator

In the CPC-K staff lists there are Mr. Sisenbai Kenzhiev, Mr. Sarsembai Murinov, Mr. Sarsenkul Shernivazov, Mr. Zhumabai Ismadiyarov, Mr. Zhumabai Taganiyazov. The names of the week days can be found in the patronymics and family names of several employees: Ms. Dzhubaeva, Bagdagul Bisengazievna, Mr. Dzhalgasbaev, Nurzhan Baizhumaevich, Mr. Zhandos Dzhumabaev, Mr. Eset Zhumagaliev, Mr. Sultan Zhumin, Mr. Ischanov, Murat Bisengalievich, Mr. Galymzhan Sarsenbaev, Mr. Sarsengaliev, Salamat Sarsengalievich, Ms. Asel Sarsenova, Ms. Mukan, Lyazzat Zhumabaikyzy, and Ms. Nelli Sarsengalieva.

FROM FATHER TO SON

Generally, the Kazakh official naming system is distinctive in that the family names, as well as patronymics, are formed from the names being lively used, and not inherited or passed to the next generation. Therefore, the Kazakhs adapt commonly required knowledge

of the forefathers' names till the seventh generation (zheti ata) to the Russian system including a family name, a personal name, and a patronymic.

How does it happen in reality? Two to three generations back the Kazakh naming system was completely different from what it is today: It was binominal, and while introducing themselves the Kazakh mentioned their personal name and the name of their father, for instance, Mustafa Shormanuly.



Sarsenkul Sherniyazov, Leading Instrumental Engineer

After the revolution in the course of the passport system introduction the family name was formed from the father's name on the model of the Russian family name (Shormanov), and the following generation had already have all three components: family name, personal name, and patronymic. The process had been developing further on in two directions: in some families the family name was formed from the grandfather's name, so that the father's

name served as patronymic; in other families the father's name served as the basis both for patronymic and family name. The family name was inherited as per the Russian model for a short while and not in every family. However, after recovering independence by Kazakhstan the Kazakhs' self-identification resulted in modification of the official naming. Modern Kazakh family names and patronymics vary greatly in form; family names and patronymics with the Russian endings -ov/ev(a), -ovich/-evich/-ovna/-evna that have become familiar are quite commonly used; the Russian suffixes are frequently replaced with the Kazakh -uly/-kyzy, and the family names are formed simply from the father's or grandfather's name without using any suffix.

As opposed to the Russian tradition, the Kazakhs do not name their children in honor of the parents; that is why a father and a grandfather (great-grandfather) of a person named Akhmetov, Mukash Akhmetovich are not namesakes, his family name and patronymic are formed from the father's name. Transforming his records as per the modern model he may have a family name of Akhmet or Akhmetuly. By the way, as per the statistic data the family name of Akhmetov is considered to be the most frequent within Kazakhstan, and within Atyrau Region the first place belongs to the family name of Zhumagaliev.

> by Marzhan Diarova, Senior Translator, Atyrau Office





To See Personally

BEFORE COMING TO WORK IN CPC TAGIR ALTUNBAEV, SENIOR ELECTRICAL ENGINEER OF THE WESTERN REGION, WAS A CHIEF POWER ENGINEER AT THE KROPOTKINSKY CHEMICAL PLANT – A LARGE FACILITY HAVING ITS OWN COGENERATION STATION, 110/6 KV SUBSTATION, GAS AND WATER SUPPLY SYSTEMS, HYDROGEN PRODUCTION UNIT, COMPERSSOR EQUIPMENT, AND SEWAGE TREATMENT PLANT.

"Here at the Consortium we have significant equipment as well. For instance, PS-4 and PS-7 pumps with installed power over 32 MW. This power is sufficient to provide electricity to the population of such town as Kropotkin", he says. "Due to implementation of the Expansion Project, the CPC facilities equipment has become even more advanced and reliable: soft starters have been integrated, cable power line has been pulled between the stations".

Tagir Altunbaev is responsible for power supply to the CPC Western

Tagir Altunbaev and his wife Natalia at the Naiad Fountain on the Square of the Republic in Rome

Region facilities. His work involves frequent business trips, the number of which has increased greatly during equipment commissioning at the new plants. However, Tagir got accustomed to travels and the road long ago. What is more, traveling is one of his hobbies.

It is even surprising that before coming to CPC, Tagir Altunbaev has never been abroad. And it is during his work for the Consortium that he had a chance for the first time to travel abroad due to business needs – to the United Kingdom. Since then, Tagir has visited different European countries, now as a tourist, got to know their culture and history. He spread his passion onto his wife.

"We visited Germany. We liked Italy very much. We went to Rome, Assisi, Pompeii, and other cities and towns. It is very convenient to travel all round Italy on the suburban electric trains. And we traveled throughout Spain by a rented car. We crossed over from the south of Spain to Morocco, and Gibraltar was not neglected, too", Tagir recalls.

Another Tagir's hobby is associated with travelling – collecting dolls. Several years ago he represented the Consortium at an oil and gas exhibition in Almaty. Therefrom he brought several dolls in traditional Kazakh dresses for the colleagues



from the CPC Krasnodar office. The present was to their liking.

And soon Tagir was carried away by collecting figurines bearing national flavors.

"Sometimes my colleagues, friends, having been abroad, bring dolls for my collection, I really appreciate it. I think that I simply must visit those places these presents came from! Each doll is attractive by its unique story", Tagir Altunbaev finishes his narration.

by Pavel Kretov

www.cpc.ru Panorama CPC December 2016 43



India's Golden Triangle

SOMEBODY PREFERS PRE-ARRANGED GROUP TOURS, BOOKS TICKETS AND HOTELS THROUGH TRAVEL AGENTS AND RESERVES EXCURSIONS IN ADVANCE, BUT OUR FAMILY ALWAYS TRAVELS ON ITS OWN.



Anna and her daughter Sasha

We hold a family council to choose a country to visit, and afterwards, during long evenings, we plot our routes by consulting travel guides, Wikipedia and talking to our friends. Last March we chose India, so vividly described by the Australian writer Gregory Roberts in his best seller Shantaram.

I would like to share with the readers of CPC Panorama my experience of visiting this country deemed controversial for travelers, and the more so for travelers with children. For that reason, we decided not to risk travelling with our 8 year-old son, but our 12 year-old daughter agreed to join us for new experience.

When planning our week-long trip, we at once decided not to go to seaside resorts and chose an educational route. We decided to visit three cities that form the so-called Golden Triangle: New Delhi, Agra and Jaipur.

So, we booked air tickets and hotels via www.anywayanyday.com, and applied for visas in advance.

THE FIRST OF THE THREE CITIES

The flight to New Delhi was not very long; it took only 5 hours. Just as much as from Moscow to Madrid. Upon arrival it was not difficult to find a taxi to get to the hotel.

A taxi to get around the city can be arranged through the hotel concierge desk, but you can save money by doing it yourself.

For this, it is necessary to get out of the hotel and look around attentively. Most probably there will



be a group of taxi drivers a few meters away, with whom you can directly negotiate hiring a car for one journey, one day or a few days to get around the city or even to go to other cities. You certainly will be impressed by riding in an Indian made Ambassador car. By the way, Indians speak English very well, since it is an official language of the country, you just have to get accustomed to their accent.

We chose several major shrines and monuments to explore the city.

VISITING VISHNU

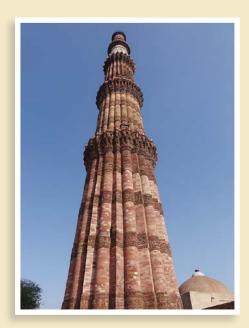
Our first excursion was to the Qutub Minar, located near the airport. This ensemble of religious buildings is one of the most spectacular sightseeing attractions in New Delhi,



The embodiment of ancient wisdom

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which is visited not only by tourists, but also by Indians.

The Qutub Minar Tower is located on the site where, for many a century, Hindu houses of worship, including the Vishnu temple, were situated. The Muslims did not raze everything to the ground, but developed the architectural ensemble of the mosque by using the existing buildings.

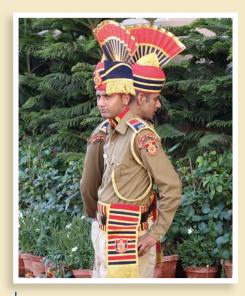
In addition to the Qutub Minar itself, there is an iron column just above 7 meters high and 6 tons in weight. According to some sources, it was cast in 895 BC (!), but it is still

unclear how iron could persist to the present day and not get rusted. Earlier, visitors were allowed to touch and wrap their arms around the column, but now there is a small metal fence and no one can touch it.

RED FORT

Our next stop was at the Red Fort. We had to pass through merchant stalls to get there. It is interesting to pop into shops and talk with merchants. Antique lovers can find some very interesting items there. The owner of one jewelry store is a numerology expert – on request, he can tell you your past and future and caution against possible mistakes. He does it absolutely free of charge, but you should still buy a little trinket in his shop to thank him.

The Red Fort, the famous sandstone fortress made, was built in 1648 by the legendary Mughal emperor Shah Jahan. However, he didn't manage to move there, as he was deposed by his son Aurangzeb and imprisoned in the Agra Fort. Aurangzeb was the first and the last emperor to live in the fortress. Then, the Fort started to fall into disrepair, and after the First War of Independence, in 1857, the British turned the largest buildings into ugly barracks and army units.



Indian Gate Guard

I advise you to visit the Red Fort in the morning or in the evening to avoid the tourist crowds. Also, there is a light show there in the evening.

The entrance to Old Delhi is located not far from the Fort. We did not dare to go there with the child. This area is flooded with merchants, paupers, beggars, street food vendors, with a sharp and pungent smell of spices, incenses, and indecent «aromas» drifting over all this pandemonium.

The next day, after a walk near the India Gate and Presidential Palace we went to the Akshardham »



Delhi. The Qutub Minar





Temple, built in 2005 and listed in the Guinness Book of World Records as the largest Hindu temple in the world.

CONTRASTS OF AGRA

After our two-day excursion to New Delhi was completed, we took a ride to Agra in an air-conditioned minivan, having made arrangements with a street taxi driver in advance. The trip took about 6 hours of driving on bumpy roads, which were blocked in settlements by cows, people, loaded wooden carts, kids washing their hands in the puddles... Through the car window, we saw the real life of Indians: their houses made of cow dung, tumble-down dwellings, and rich villas resembling palaces, modern plants and factories, and high-rise business complexes.

We spent two days in Agra, visited the Taj Mahal, a white marble mausoleum built by Shah Jahan in memory of his beloved wife Mumtaz Mahal; the Agra Fort, where he was imprisoned by his son Shah Jahan; and the Tomb of Akbar the Great – the third Mughal Emperor (the grandfather of Shah Jahan).

There was nowhere to walk in Agra in the evening, so we spent time at the hotel preparing for the next days of travel.

PINK CITY

Another 6 or 7 hours in a car, and we were in Jaipur, called the Pink City because of the reddish-pink color of its buildings.



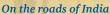
An incompatible combination of historical monuments, modern buildings, jewelry stores and five-star hotels with appalling poverty, begging children, a horrendous number of vehicles, carts, carriages drawn by camels and elephants. People with bales, cows freely walking in the downtown – at first, it is a real shock. But then you get used to it, join the stream and become part of it. Walking through Jaipur and Agra is not for the faint-hearted, that is why I highly recommend taking a taxi or a local rickshaw.

Two days in Jaipur were enough to visit four places of interest.

The Hawa Mahal, or the Palace of the Winds, is a five-tier harem wing of the palace built in 1799 by Maharaja Sawai Pratap Singh from pink sandstone. The fatae of the building is riddled with 953 small windows that allow air flow into the interior spaces on broiling days.

The Amber Fort, built in 1592, is located high on a hill 11 kilometers away from Jaipur. Formerly, it served as the capital of the Kachwaha ruling dynasty from 1037 to 1727, when the capital was moved to Jaipur. The Amber Fort impresses with its elegant artistic style combining the Hindu and Mughal architectural forms. The fort can be reached on foot or by car, but







Wearing festive clothes everyday





Jaipur. Palace of the Winds

the most popular «ascend» is on elephants.

Located nearby is the Jaigarh Fort or the Victory Fort, built in 1726 to provide extra protection to the Amber Fort and the palace inside it. Both forts were part of a single defensive system and are connected by underground passages.

From the promenade along Lake Mansarovar we admired the Jal

Mahal (the Water Palace) located in the middle of the lake. Unfortunately, we did not have a chance to visit the palace. The water level in the lake rises during the monsoons and four floors of the palace are flooded.

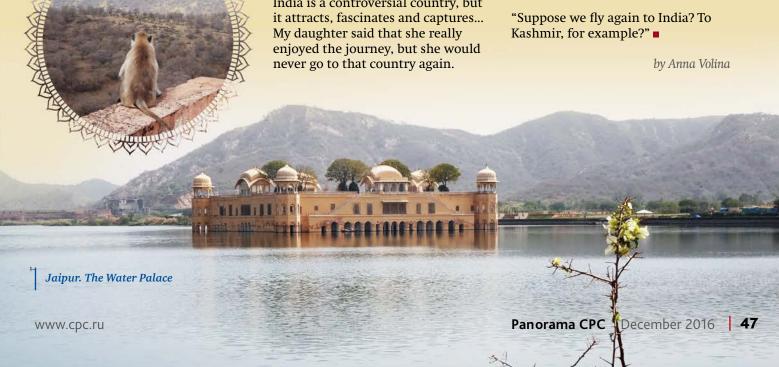
After having enjoyed Jaipur, we moved to New Delhi. Again 7 hours in a car, and we found ourselves in the capital, which differs from regional cities by being relatively clean, having much fewer paupers and beggars, moderate smells in the streets, and decent street shopping.

India is a controversial country, but

If you decide to visit India, do not forget about certain precautions not to spoil your journey to this wonderful country:

- Drink only bottled water, preferably carbonated.
- Do not eat fresh fruits and vegetables. Vegetables should be cooked (stewed or fried, i.e. heat-treated), and you should peel fruits yourself.
- Be sure to brush your teeth with bottled water and try not to swallow water while taking a shower.
- · Never drink beverages with ice. Be sure to say that to the waiter. "No ice" should be your mantra when ordering a cocktail, juice or whiskey.
- Do not go to the local restaurants or cafes, unless you are invited by a local who knows the tastes of Europeans. It is better to eat in hotels.
- Take disposable socks. The point is that visitors must take off their shoes before entering any local temple, and as there are many people around and they are very different, it is desirable to protect the feet.
- One more preventative measure: take a sip of whiskey before each meal.

However, one year passed and she started to hint:





We Met During a CPC Project

HELLO! MY NAME IS KSENIYA, AND I WANT TO SHARE MY STORY – AND NOT ONLY MINE – OF LOVE AND ROMANCE THAT BEGAN DURING A CPC PROJECT.



I'm from Siberia. After obtaining a degree in construction engineering, I found a job corresponding to my qualifications in Saint Petersburg and was sent to work on major construction projects in central Russia. I participated in the construction of a gas complex at the Marine Trading Port in Ust-Luga, the Moscow – Saint Petersburg highway, and power unit No. 4 of the Cherepovets GRES power plant. In January 2013, fate brought me to work on the extension project of the CPC pipeline system.

I worked as an engineer at the tank farm in the Marine Terminal with the production and Technical Department of Kontinent LLC. I fell in love with this site right away and, of course, with this beautiful city on the Black Sea. When our organization completed its mission, I took on another job in order to remain at the site. Now - some personal details. In the summer of 2014, my friend and I were strolling along the Novorossiysk Quay. A nice boy came up to me and asked me for a date. I was confused and refused. of course. I regretted it later... After some time, I got a message on the Internet from an interesting

man called Yuriy. We seemed to have many common interests: music, cinema, art, travel... and also – working on the construction of the tank farm at the CPC Marine Terminal, where our offices were right beside each other! Over time, it turned out that Yura was the guy who had approached me on the waterfront!

It's amazing how fate brings people together! Yuriy Tribulkin graduated with a degree in automated technological processes from the Technical University in Bryansk, and has travelled throughout most of Russia. In 2014, he was sent to work on the CPC tank farm as part of Spets-ElektroMekhanika CJSC team from Bryansk.

Our relationship grew into a strong friendship. Yura courted me in a very special way: he scattered rose petals on the staircase leading to my apartment, set off fireworks on the waterfront... In our spare time, we took walks in the forest, among the dolmens, listened to music, and talked a lot. I told him about blues and blues-rock music, about movies and art. Yura told me about the places he'd visited, about the books he'd read, about history.

We enjoyed being together, and decided to stay and live in the Krasnodar Region. Yura was offered a responsible position in the Bryansk office, but neither of us wanted to leave! At that time, while Yura was working on transferring existing equipment under the supervision of the CPC operational staff, he accidentally learned of a job vacancy.

It was the last day that resumes were being accepted, but fate smiled upon us, and Yura was hired by the CPC in December 2015.

Now, he works as an instrument

technician at PS-8. I'm happy for him, probably even more than Yura himself because from the very beginning the CPC employee policy appealed to me, and I'm really happy for my husband!

Although we have no family or relatives close by, we live better in Novorossiysk than back home. Saint Petersburg and other big cities offer amazing creative opportunities and other advantages, but they clearly lose out when it comes to clean air, tranquility, the seascape, and the sight of dolphins leaping over the waves. We've brought many friends here; half of them are from out of town. They've started a family here; many of them already have children.

Yura and I got married in September. It was very romantic! Our families came, as did many colleagues and friends. The wedding was held in the village of Natukhaevsk, in the midst of lush southern nature. Patriarchal rural landscape, live music... We created all the decorations with our own hands. After arriving from Krasnoyarsk, my family had its hands full with different wedding chores.

The weather was gloomy on our wedding day, but it didn't rain so we could continue the festivities outside. Only at the very end, during the symbolic lighting of the hearth, did it start to rain. But, some friends put a plaid blanket over us and themselves for protection against the rain. It turned out to be a very nice end to a family gathering. Friends and family wished us many good things, saying that the flame of our family hearth would never die out and that happiness would live forever in our home. May this be so!

by Kseniya Potylitsyna



Freedom of Choice

IN THESE MAGICAL DAYS PRECEDING NEW YEAR'S EVE, WE ALL WANT TO GET AWAY FROM ROUTINE... DO SOMETHING UNUSUAL AND FANTASTIC, SO LET'S TALK ABOUT THE SPIRITUAL AND ETERNAL! ALL THE MORE SO AS TODAY WE WELCOME THE REMARKABLE IRINA EYR.

Our guest has many names and titles: famous astropsychologist, radical life coach, managing partner of the "School for the Development of Child Consciousness", novelist, poet, essayist; she holds the Knight of the Adam Mickiewicz Medal awarded by UNESCO, and the 200th Anniversary of M.Yu. Lermontov Medal awarded by the Ministry of Culture of the Russian Federation. Apropos, Irina Eyr is also a former colleague.

"With regard to my work in the oil business, I'm an expert in oil and gas business management," she says. "I worked in a major international company for ten years, and at the same time, I wrote several books, and practiced astropsychology. Over time, I realized that what I considered my hobby brought me true happiness and professional satisfaction. So, I chose a new path in life. Now, I counsel people on their destiny and mission in life, teach them how to get rid of negative emotions, and help shape a new generation of happy, fulfilled, gifted, free, and successful people."

"Irina, is it true that astrological horoscopes can foretell not only a person's destiny, but also that of a company?"

"First, let's take a look at the terminology. I'm absolutely against horoscopes because predictions about the future block free choice in the present. But, astropsychology tells us what you're born with: your talents and skills, your complexities, your purpose and mission in life – the external factor of yourself. Coaching is a dialogue with intuition and the subconscious – that's the internal factor. Connecting them will enable you to understand who you really are, your path in life, and where your career and personal life are heading. In fact, we're talking about your own "instructions for use", keeping in mind that you can make a conscious choice every day, thus taking responsibility for your own life. Do you see the difference with predictions?

As for companies, I can say yes... according to the position of the planets at the moment the company was founded, you can see the most harmonious ways for its development and give your client essentially the same "instructions". Once again, I'm not talking about destiny, but namely about the best approach to promote the development of the Company. But, you must know the precise date of its "birth" – precisely to the minute. A company is composed of people who perform specific functions in order to reach a common goal. So, when I speak of a Company's success in terms of astrology, I'd put more emphasis on the people. By the way, the oil and gas industry deals with quite a precarious type of energy – Earth. It's the energy of regeneration, the energy of life and death. People have a hard time dealing with such elements in this environment."

"KTK has a cosmopolitan team. I've heard that every nation on Earth has a special mission ..."

"Every nation has its own history, experience, and karma that its representatives subconsciously carry inside themselves. Everyone (or soul, since we're talking about the spiritual!) chooses his date, time and place of birth, and hence, the influence of the planets. The soul chooses his family, country and people that will help him make the best decisions. When several nationalities are united in one company – it's not only cooperation in terms of technology, finance and professional expertise, but also a much deeper subconscious relationship. It's both mutual enrichment and complexity. That's why

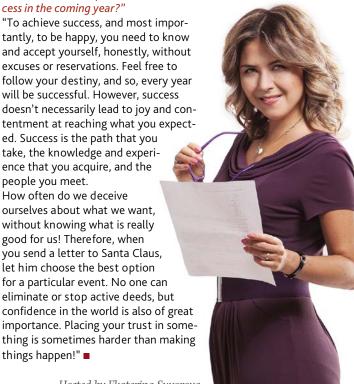
major international companies pay great attention to internal corporate culture in terms of understanding and incorporating the traditions of different peoples."

"All of us depend on the development of the situation on our planet. What will 2017 be like?"

"I don't make predictions. That's my principle and my position. Any kind of prediction creates patterns and programs in your head even if you think that you don't attach any importance to it. Furthermore, predictions are effective only at the moment when they're made. It's important to know that people make choices every day, selecting one of many bifurcating paths – these are potential possibilities. The course of history may depend on a single important decision. I can only say that the world is on the threshold of change. This is obvious in children who were born from the year 2000. Most of them are different, more advanced and capable, much wiser and more perceptive than us.

They look at the world through the layers of knowledge from a different angle. At school, they can solve a problem in a single stroke; but, they don't know how to solve things in the standard way, and that's why they get low grades. Modern education and the consciousness of most adults are simply not able to "attain" their level. That's why two things can happen: either we're ready to take a dramatic step in developing our consciousness, or we suffer complete collapse. The second may happen if our children cannot fit into existing society. The truth is that they possess enormous creative strength, a high potential for scientific discovery and change. But, they also have a vibrant rebellious and destructive force. It's namely for these children that we opened our school."

"What should each person do to maximize suc-



Hosted by Ekaterina Suvorova

Panorama CPC December 2016

Caspian Pipeline Consortium: a time-tested international project



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Tanker loading at the CPC Marine Terminal near Novorossiysk in winter. As a result of using single point mooring installations (SPM), heaving of the sea does not disrupt oil loading operations





INFORMATION ANNEX TO "PANORAMA CPC" TO CORPORATE MAGAZINE OF THE CASPIAN PIPELINE CONSORTIUM



The CPC participates in the official launch of the Kashagan Oil and Gas Condensate Field

ON DECEMBER 7, 2016, THE KASHAGAN FIELD WAS OFFICIALLY LAUNCHED INTO COMMERCIAL OPERATION IN KAZAKHSTAN. A TV-LINKUP DEDICATED TO THE OCCASION WAS HELD IN ATYRAU, THE NATION'S OIL CAPITAL.



To participate in the TV-linkup, Mr. Nursultan Nazarbayev, President of Kazakhstan, arrived in Atyrau along with top managers of major oil and gas companies in the industry. The Caspian Pipeline Consortium was represented by Mr. Nikolai Gorban, General Director, and Mr. Kairgeldy Kabyldin, Deputy CPC General Director.

THE PRESIDENT'S PRIDE

"On behalf of Kazakhstan, the Consortium and all oil industry professionals, I am here today to announce the launch of oil production at Kashagan, one of the world's largest oil and gas fields, with which I congratulate all the Kazakhstanis. It will serve the nation and bring great satisfaction to companies that have

invested their money, mind, heart and technology in our country. In turn, we will support them and continue to work as a team. Kazakhstan is a country located at the very heart of the continent. We do not have access to the seas, but we have opened an access way to the seas and oceans thanks to the pipeline. Here it is, the result of our work," said Mr. Nazarbayev with evident pride.

KASHAGAN FIELD IN NUMBERS

During the TV-linkup, Mr. Kanat Bozumbayev, Kazakhstan's Energy Minister, reported about the launch of oil production at Kashagan. In his words, the recoverable reserves reach two million tons of oil and about »



one and a half trillion cubic meters of gas. The Minister reminded that, with over 75,000 barrels of oil extracted daily, the production at Kashagan reached the commercial level on November 1, 2016. Efforts are underway to develop the production capacity and stabilize it at 180,000 barrels daily.

"By the end of this year, we expect to produce up to one million tons of oil and 680 million cubic meters of gas. Plans for the year 2017 include production of up to 8.5 million tons of oil and 5.5 billion cubic meters of gas. In the following years, it is planned to increase production to 13 million tons of oil and 9 billion cubic meters of gas per year," said Mr. Bozumbayev.



Mr. Nursultan Nazarbayev, President of the Republic of Kazakhstan

ISLAND D

Following the report by Kazakhstan's Minister of Energy, facilities designed to extract and transport Kashagan hydrocarbons connected to the TV-linkup. Participants of the ceremony were shown Island D – a large-scale hi-tech structure on the Caspian Sea shelf, where oil is gathered and an initial gas separation process is performed.

A speaker for the Bolashak Processing Plant reminded the TV-linkup participants that the first batch of Kashagan oil was exported on October 14, 2016, and, as of today, oil is transported through the CPC and KazTransOil pipelines on an industrial scale.

AT CPC FACILITIES

A broadcast from the production facilities of the Caspian Pipeline Consortium with the presentation



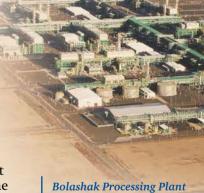
The teleconference bridge in Atyrau has taken place! A photo for memory

of PS "Atyrau" followed. At this pumping station for receiving oil from the Kashagan Field, metering unit No. 9 was just launched. The capacity of this oil metering unit is 3,000 m³ per hour with the possibility to double the figure.

Currently, oil is received through the metering units of PS "Atyrau" from the Kashagan and Karachaganak, including oil stock from suppliers such as Embamunaygas, Ozenmunaygas, Kazakh Oil Aktobe, South's Oil, and Maten Petroleum.

The staff of PS "Atyrau" totals 48, and, as a result of the implementation of the expansion project, further 9 jobs were created.

Sarsembay Murinov, Regional Manager of Caspian Pipeline Consortium-K, JSC, who was present on the site, reported to participants of the event that, as at the time of the





TV-linkup, over 500,000 tons of Kashagan oil had been transported through the CPC pipeline. Then he addressed Mr. Nazarbayev:

"Distinguished President, the Consortium set up under your direction and with your personal involvement has now been recognized as one of the world's best oil pipeline projects!"

"To build the Caspian Pipeline Consortium, I worked with the Russian leadership for six years", commented the President of Kazakhstan. "Back then, the Kashagan Field virtually did not exist..."

Addressing the Consortium staff via the TV-linkup, Mr. Nazarbayev further dwelt on the importance of increasing the capacity of the CPC pipeline to 67 million tons for the transportation of Kashagan oil:

"You have now entered a critical stage, and I wish you every success on that path!"

REFERENCE POINT

Subsequently, the CPC Marine Terminal near Novorossiysk was connected to the TV-linkup, and the participants could see the Main Control Centre of the Consortium Oil Pipeline System, recently relaunched after a revamp. The TV-linkup participants were also able to observe the loading of a Kazmortransflot tanker with a deadweight of 115,000 tons. The single-point mooring located 5.5 km off the coast used to load oil is actually the "reference point" for the measurement of nautical miles on

the route of Kazakh oil to world markets.

The entire oil transportation route from the Bolashak Plant in the Caspian to the CPC Tengiz - Novorossiysk oil pipeline, and then - to the Consortium's Black Sea Marine Terminal was visualised in a special feature prepared for the occasion. Kazakhstani experts pointed out that the CPC is the largest international oil project involving Kazakhstan and Russia, as well as the world's leading oil companies, set up for the construction and operation of the pipeline with the length of over 1.500 km.



December events in Atyrau with CPC's participation have received wide coverage in the media

A GIFT FOR THE ANNIVERSARY

It is noteworthy that the TV-linkup dedicated to the launch of commercial oil production at Kashagan was held on the eve of the 25th anniversary of Kazakhstan's independence, a date widely celebrated across the nation. Nursultan Nazarbayev, President of Kazakhstan, used the TV-linkup broadcast as an occasion to address some words of encouragement to all the professionals involved in the development of the oil and gas industry that stands as a firm foundation of the national economy.

Commenting on the participation of the Caspian Pipeline Consortium in the TV-linkup dedicated to the launch of operations at Kashagan, Nikolai Gorban, CPC General Director said:

"I have a great impression about the entire event with the participation of the President of Kazakhstan! It had »







a festive aura to it to match the significance of the occasion marked these days: a quarter of a century ago, the Republic of Kazakhstan gained its sovereignty."

The country's leadership is highly responsive to the needs of the oil industry, which has a positive impact on the development of the economic component. It was for a reason that all top oil producing com-

panies, including our company involved as a transporter, were invited to partic-

ipate in the TV-linkup. I'm pleased to note that, among the three routes currently used to transport Kazakhstani oil to world markets, our Tengiz - Novorossiysk pipeline is regarded as the main export route. This said, the CPC plays an important part in the development of Kazakhstan's oil industry, and the increase in our pipeline system capacity allows the country to successfully expand in foreign markets. By creating a surplus capacity of the pipeline system, we contribute to the active development of the North Caspian fields.

It should be noted that, during the TV-linkup, the CPC was adequately represented by our employees, in particular, Sarsembay Murinov, who prepared a report for the President from PS "Atyrau". Our new metering unit for Kashagan oil came across as highly commendable!" noted Mr. Gorban with satisfaction.

A SOCIALLY RESPONSIBLE PROJECT

The development of the CPC pipeline system has a positive impact on the socio-economic situation in the regions, through which the pipeline Tengiz – Novorossiysk runs. On December 6, 2016, Caspian Pipeline

Consortium-K, JSC and the Akimat of Atyrau Region signed a five-year cooperation agreement. The document was signed by Nikolai Gorban, CPC General Director, and Nurlan Nogayev, Akim of Atyrau Region.

The agreement will enable a successful development of cooperation between the parties, improve financial and economic potential and investment situa-

tion in Atyrau Region, and contribute to maintaining social stability and wellbeing of the region's population.

The Consortium will continue to implement large-scale social programmes and provide sponsorship and charitable assistance.

Under the agreement, a number of initiatives will be implemented to support education, healthcare, physical culture and sports, culture, the environment, and to provide targeted assistance to socially vulnerable social groups.

"Since 2011, the amount of sponsorship and charitable assistance provided in Atyrau Region under the CPC expansion project amounted to USD 23 mln. As for

the main operations of the Consortium, the financing support for social projects in the region totals about two million dollars a year, and we will do our best to maintain this level in the future. I would also like to note that, all of the facilities, except for one school, have already been put into service in line with approved plans," said Nikolai Gorban.

To sum up, the Caspian Pipeline Consortium has been and will remain a reliable partner of actively developing sovereign Kazakhstan. ■

CPC Press Service



An agreement between CPC and the

Akimat of Atyrau Region is signed!