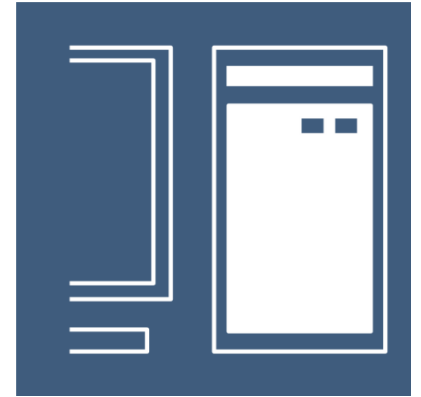
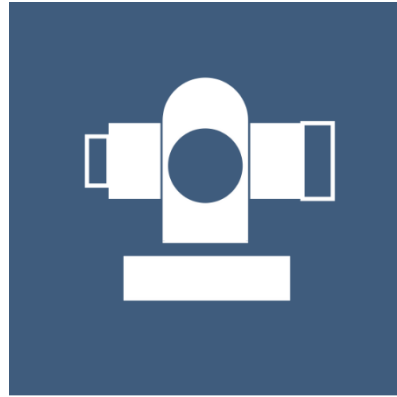


# VOLGOGRADNIPINEFT





# Management



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# Regions of Activity



Astrakhan Region

Irkutsk Region

Kaliningrad Region

Novosibirsk Region

Rostov Region

Sakhalin Region

Samara Region

Saratov Region

Ulyanovsk Region

Tomsk Region

Tyumen Region

Volgograd Region

Krasnodar Krai

Stavropol Krai

Khanty-Mansi Autonomous Okrug

Republic of Bashkortostan

Republic of Dagestan

Republic of Kalmykia

Republic of Kazakhstan

Republic of Mordovia

Republic of Tatarstan

Republic of Turkmenistan

Republic of Uzbekistan

Udmurt Republic



# License

- > **License of the Federal Service for Ecological, Technological and Nuclear Supervision Service № DE-00-011541** dated May 12, 2010 to carry out activities for the examination of industrial safety.
- > **License of the Federal Service for Ecological, Technological and Nuclear Supervision № PM-00-010450** on July 16, 2009 for the production of surveying work.
- > **Certification (design) SRO-P-088-15122009 №34-881-16/029-07** dated November 1, 2016 for admission to works on preparation of project documentation that affect the safety of capital structures: 1, 1.1, 1.2, 1.3, 2, 3, 4, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 5, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 6, 6.8, 6.9, 7, 7.1, 7.2, 7.3, 8, 9, 10, 13.
- > **Certification (engineering survey) SRO-I-001-28042009 №01-I-№2174-2** dated February 14, 2014 for admission to a particular type or types of work that affect the safety of capital structures: 1, 1.1, 1.2, 1.3, 1.4, 1.6, 2, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3, 3.1, 3.2, 3.3, 3.4, 4, 4.1, 4.2, 4.3, 4.4, 4.5, 5, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 6.
- > **Certification (construction) SRO-S-138-22122009 №0515.01-2013-3442088247-S-138** dated May 16, 2013 for admission to a particular type or types of work that affect the safety of capital structures: 32,32.2.
- > **Certification Volgograd State Regional Center of Standardization, Metrology and Testing №279** dated October 9, 2015, "On the state of measurements in the laboratory".
- > **Republic of Uzbekistan License № 001395** dated September 26, 2014 for the design of highly dangerous and potentially dangerous objects.
- > **Certification of membership in the nonprofit partnership ECPB Nizhnyaya Volga.**



# Geology



Alexey N. PERIN

Head of Department

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## Activity

- > Development projects of search and exploration of oil and gas.
- > Creating databases of geological and field information.
- > Geological supervising the construction of wells for oil and gas.
- > Research core and sludge oil and gas wells.
- > Review of reports on geological studies.



# Laboratory Studies of Core Samples

## LITHOLOGIC AND STRATIGRAPHIC ANALYSIS

- > Petrographic study of rocks, reservoirs, and cap rocks
- > Biostratigraphic study
- > Stratigraphic layering and correlation
- > Lithofacies analysis

## PETROPHYSICAL ANALYSIS

- > Porosity and permeability
- > Physical properties of rocks (comparable to GIS data)
- > Relative permeability
- > Study of voids structure
- > Physical and mechanical properties of rocks
- > Study of a process fluid influence on rocks



## Major Projects

- > Mining allotment for Caspian oil field development (Republic of Kalmykia).
- > Nemirofskoe oil field reserves estimation (Volgograd Region, biohermal construction).
- > Exploration of oil and gas deposits at structure of the Central Caspian Sea.
- > Feasibility study of Morozovskoe oil field and reserves estimation (Krasnodar Region, HTHP2, gas content 1000 m<sup>3</sup>/m<sup>3</sup>).
- > Neftegorsky oil field reserves estimation, and feasibility study of oil recovery (Krasnodar Region, 600 wells, 14 objects for reserves estimation and 5 objects for feasibility study of oil recovery).
- > North Vasyugan oilfield reserves recalculation and feasibility study of oil recovery. Customer - OAO Tomskgazprom (Tomsk Region, 36 wells, multi-horizon, measurements 13x11 km, characterized by a large number of tectonic disturbances)





# Specialized Equipment In Laboratory Studies of Core Samples

- > Permeameter-porosimeter СПП-DS30/100
- > Reservoir simulation appliance СМП-ПС/ФЕС-2Р to determine core permeability and porosity, electric and acoustic properties.
- > Roughing-out and manufacturing of core samples:
  - Diamond-drilling system - DD 160
  - Sample splitting tool IK-350/800
  - Facing tool Masterline 6 Star-660
  - Grinding machine
- > Rock petrographic and paleontological study:
  - Petrographic microscope Polam РП-1
  - Microscope XTJ-4400

## Certificate of Laboratory Studies of the Properties of Soils

- > The certificate of the State Regional Center for Standardization, Metrology and Testing in the Volgograd region №302 dated December 12, 2016 "On the state of measurements in the laboratory."



# Reserves Estimation and Field Development Design



Vitaly A. SERGIENKO

Head of Department

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## Activity

- > Creating a topographic survey and tectonic maps.
- > Creating project documentation for field development.
- > Audit inventory. Examination of geological and design materials, evaluation of the quality and reliability.
- > Calculation of oil and gas reserves.
- > Creating digital geological and hydrodynamic models of deposits.
- > Creating projects feasibility studies and proposals.
- > Performance of work on digitization, processing and interpretation of well logging data.



## Major Projects

- > Technological development project of North Vasyugan gas-condensate field (Tomsk Region).
- > Initial development plan of Avilovskoe oil-gas field (Volgograd Region).
- > Technological development project of Ternovskoe oil and gas condensate field (Saratov Region).
- > Addition to the process flowsheet of Caspian oil field (Republic of Kalmykia).
- > Technological development project of Russkiy Hutor Centralnyy oil and gas condensate field (Republic of Dagestan).
- > Feasibility study of investment in development of Shagyrly-Shomyshty gas field (Republic of Kazakhstan).
- > Addition to Initial development plan of Lugovoe oil field (Republic of Tatarstan).

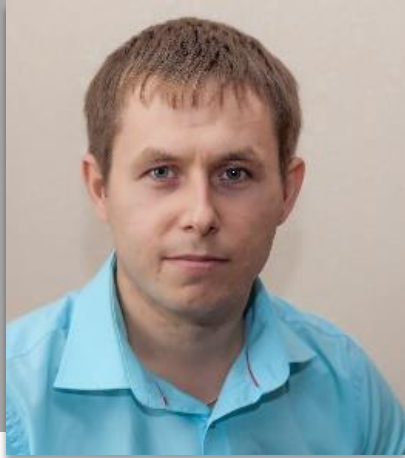


## Specialized Software

- > Hydrodynamic modeling tasks in the department are solved using ROXAR Tempest-More complex, which allows:
  - simulate filtration process of multiphase fluids;
  - predict technological characteristics.
- > Geological modeling tasks in the department are solved with the help of ROXAR IRAP RMS complex, which allows.
  - conduct well correlations;
  - implement structural modeling;
  - implement petrophysical modeling;
  - 3D grid modeling.
- > Geophysical well logging is processed by GeoOffice Solver using pointwise and interval methods.



# Drilling and Well Construction Development Department



Dmitriy V. SIMONOV

Head of Department

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## Activity

- > Development of design estimates on construction of parametric, exploratory, prospecting, operating, forcing, etc. wells for oil, gas (including hydrosulfide and fluid conditions), bischofite, water, field wastewater burial and subsurface gas depository.
- > Development of project documentation for the construction of wells on a sea shelf, and its support for the consideration of the State Ecological Expertise.
- > Design of well abandonment, preservation, re-entry and recovery.
- > Scientific and methodological support and follow on during well works.
- > Supervision over well construction work. Organization of tenders for technological equipment, materials procurement and selection of contracting organization.
- > Examination of project documentation and technical equipment used at a hazardous industrial facilities.
- > Mining plans and technology regulations elaboration.
- > Laboratory analysis of cement and drill fluid.
- > Development of EIA, WGDLB, MPE and environmental support.



# Major Projects

- > Impact analysis of lining technology at the Yuri Korchagin field at the appearance of the annular pressure. Development of procedural regulations for lining wells of "LUKOIL - Nizhnevolzhsk" field (Caspian Sea).
- > Project documentation for group of wells construction at the Astokh and Piltun areas of Piltun-Astokh oil and gas condensate field (Sea of Okhotsk).
- > Design project for construction of well No.1 Dolansko-Erdnievskaya 6500 m deep (Republic of Kalmykia).
- > Construction of production wells at Koviktinskoe gas-and-oil field.(Irkutsk Region).
- > Construction of well No.305 at Shadi Dengizkulskoe field (Republic Uzbekistan).
- > Design project for construction of exploration and appraisal well No.10 at Avilovsk area 5085 m deep (Volgograd Region).
- > Work design for construction of Sulama-1Ex exploration well (Republic of Uzbekistan, Aral Sea region).
- > Project documentation for group of wells construction at Yuri Korchagin field (Caspian Sea).
- > Project documentation for group of wells construction at V. Filanovskiy field (Caspian Sea).
- > Project documentation for construction of exploration and appraisal well No.1 at Bariernaya area Tsekertinskogo license block 5800 m deep (Republic of Kalmykia).





## Forms of Work

- > Elaboration of specific sectors of the project.
- > Engineering support of well construction (Follow on and Supervising)
- > Subcontract with General Designer.
- > Acting as a General Designer.
- > Turnkey designing.



# Laboratory of Drilling And Grouting Mortars

- > Scientific and methodological support and supervision the condition of the drilling mud during the work on the well.
- > Development and testing of drilling mud compositions according to the application at the specific geological and technical conditions of deposits.
- > Quality control of chemical reagents and materials used for the preparation of drilling muds.
- > Development and selection of grout formulations that meet specific geological conditions, for fixing casing columns and install cement plugs.
- > Development and testing of the most effective formulations of buffer liquids
- > Defining the properties of the cement stone, cement quality control

Research is conducted in accordance with state standards and procedures, internationally accepted methods and tests (API Standard, ISO).



## Specialized Software

> Technical section of design project is realized with the help of software of Landmark company:

- EDM
- Compass Directional Basic Package
- Wellplan Drilling Fluids Basic Package (Hydraulics)
- Wellplan Drill Mechanics Basic Package (Torque&Drag)
- Wellplan Cementing Opticem
- Tubulars Basic Package (StressCheck/CasingSeat)

We use a russian and foreign facilities data bank made by the department in our work.

- > RizEks2 - Research program complex simulations of accidents and risk assessment.
- > CREDO volumes – Surface modeling, calculation of volumes between the surfaces.
- > Environment protection section of the project is realized with the help of software of “Integral” company (UPRZA Ecolog, PDV-Ecolog, Inventory, Directory of substances, Welding, Varnish-and-paint, Torch, ATP-Ecolog, Diesel, PNG-Ecolog, AZS-Ecolog, RNV-Ecolog, RVU-Ecolog, RVM-Ecolog, Boilers, Boiler TPP, burning oil, Ecolog-Noise).



# Specialized Equipment In Laboratory of Core Studies

- > Equipment for determining drilling fluids properties (API):
  - metal beam balance,
  - marsh funnel viscometer,
  - 8-speed rotary viscometer,
  - table filter press with a pressure module CO<sub>2</sub> (API under 7 atm),
  - HTHP filter press (penetration test under the bottomhole conditions),
  - 50 ml retort,
  - methylene-blue determination test,
  - H<sub>2</sub>S determination test-kit,
  - sand content tester,
  - calcimeter,
  - portable centrifuge, two-seat, electric,
  - CFC tester (ruling document).
- > Equipment for determining cementing slurry properties:
  - consistometer ZM 1002 M (graphical display of test results),
  - tumulus AzNII KZ-1 (ruling document),
  - vicat apparatus IV-2 (ruling document);
  - hydraulic press compact PGM-100MG4 (to determine grouting stone compressive contact traction and bending);
  - bending apparatus PGM-100MG4;
  - mixer SL-1500;
  - beam molds for testing GOST 310.4;
  - laboratory scales BK-300 with accuracy better than 0,005 g;
  - scales MK-AV with accuracy better than 0,5 g;
  - thermostatic bath.



# Engineering Surveys



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Head of Department

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# Surveying

- > Development of projects of mining leases for hydrocarbon deposits and common minerals.
- > Development and approval of surveying works production projects.
- > Building surveyor reference networks of any complexity.
- > The construction and implementation of high-precision observations of geodynamic polygons.
- > Development of annual production programs surveying works and their implementation.
- > Surveying enterprise providing
- > Creating and updating of surveying and geodetic plans on a scale 1:10000 - 1:500



# Engineering Survey

- > Plane surveying with the definition of existing underground utilities on a scale 1:10000 – 1:200.
- > Geodetic observations of deformations and yield of the building foundation
- > Settings work, fixation of trails and well construction
- > Drilling work and analysis of the core samples.
- > Surveying.
- > Field work, static probing, stamp test.
- > Laboratory study of the soil, water.
- > Geological conditions and the forecast changes in the environment.
- > Analysis and systematization of climatic regime data of the operations area.
- > Study and environmental impact assessment. Geoecological testing and assessment of air, soil and groundwater pollution, investigation and assessment of the radiation environment.
- > Assessment of the ecological state of the territory.



# Hydrogeology

- > Development of projects on geological study of subsurface in order to abstract underground water for purposes unrelated to mineral production.
- > Development of projects on zones of sanitary protection and programs of groundwater monitoring.
- > Estimation of groundwater reserves.
- > Working out ground water deposits development plans.
- > Development of projects on wastewater disposal into deep horizons.
- > Development of projects on well construction for portable and non-portable water supply.
- > Testing of water wells with subsequent interpretation of test results and creation of Report.





# Major Projects

## SURVEYING

- > Development of mining leases of hydrocarbons projects for Joint Venture Volgodeminoil, OOO PROMGAZ, OOO NEKST, OOO Omega (ZAO Kalmpetrol).
- > Mining allotment plan for Shiryayskoe chalk deposit development. Customer OOO Calcite.
- > Mining allotment plan for Beshkul deposited salt in Narimanov district of the Astrakhan region. Customer OOO Stroymetallkomplekt.
- > Survey Control Network construction at Buzulukskoe, Nizhne-Dobrinskoe, Kurkinskoe, Romanovskoe, Berezovskoe, Veselovskoe and Shlyakhovskoe fields. Customer OOO DonNeft (ZAO Frolovskoe NGDU).
- > Surveying Support and participation in the defense at NVU Rostekhnadzor, annual plans for the development of mining work for ZAO Frolovskoe NGDU, OOO Nizhnevolzhskaya neftyanaya kompaniya, ZAO Ilmenskneft, OAO Kalmykskaya neftegazovaya kompaniya, ZAO KalmTatneft, OOO Kaspiyskaya neftyanaya kompaniya.



# Major Projects

## ENGINEERING SURVEYS AND HYDROGEOLOGY

- > Topographical, environmental and hydrometeorological surveys as part of construction project of 33, 113, 115, 117 Avilovskie, 33, 55, 68, 72, 70, 71 Platovskie exploratory wells. Customer OOO SP Volgodeminoil.
- > Complex engineering surveys as part of construction project of 18, 35 Avilovskie, 61 Platovskaya. Customer OOO SP Volgodeminoil.
- > Topographical, geological and hydrometeorological reconnaissance at OAO RITEK facilities.
- > Complex engineering surveys in a business environment of OAO KAUSTIK and AO Volzhskiy trubniy zavod.
- > Ecological monitoring of geological terrain at Iki-Burulskoe and Sovkhoznoe gas field. Customer OAO Gazprom gazorapredelenie Elista.
- > Project of geological study of subsurface for purposes of Onshore Processing Facility industrial wastewater disposal (Sakhalin island).
- > Estimation of groundwater reserves Frolovsky LPUMG (Volgograd region).
- > Groundwater monitoring program in the fields Frolovsky NGDU (Volgograd region).
- > The project of sanitary protection zones of water intake Grachi (Volgograd region).
- > Technological scheme of the development of a single water intake Zenzevatka (Volgograd region).



# Specialized Equipment And Software

## EQUIPMENT

- > Drilling rig URB-2A2 on KAMAZ 5350-42
- > GNSS equipment set Leica GS09 + RTK (3 receiver)
- > Total Station Leica TS09 (5")
- > Digital levelling instrument Trimble DiNi (0.3)
- > Line locator RD8000

## SOFTWARE

- > CREDO DAT
- > CREDO Route survey
- > CREDO Levelling instrument
- > CREDO Volumes
- > CREDO Geology
- > Leica Geo Office
- > PANORAMA
- > Mapinfo
- > GeoExplorer
- > ProGeo



# Specialized Equipment In Laboratory Studies of the Properties of Soils

- > compression device (KPR) 30 pcs,
- > box shear apparatus (PSG) 2 pcs,
- > soil compactor before the shift (UGPS-12) 2 pcs,
- > ion meter 1pcs,
- > PIKAP 1pcs,
- > equipment set for the determination water chemical properties,
- > equipment set for the determination soil sanitary and chemical properties.

## Certificate of Laboratory Studies of the Properties of Soils

- > The certificate of the State Regional Center for Standardization, Metrology and Testing in the Volgograd region №279 dated October 07, 2016 "On the state of measurements in the laboratory."



# Integrated Management System

In the management of production processes much attention is paid to the quality management system of research and development products and environmental conservation. The company operates an integrated management system that meets the requirements of ISO 9001:2015 and ISO 14001:2015 (code certificates № RU229012Q-U and № RU229012E-U dated May 5, 2016 in the domain of engineering surveys, projecting and scientific studies in the oil and gas industry).

The IT department developed and brought into operation the enterprise portal. The Institute workflow system, which is ever-expanding and extends its functionality, is powered by the portal.

Existing electronic archive of geological and engineering data developed and implemented in operation allows employees of the Institute to retrieve necessary documents.

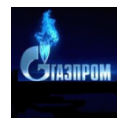
Constantly updated library makes available to engineers the latest scientific achievements and knowledge in the field of oil and gas industry.



The Institute cooperates with more than 50 companies. Among them:



Oil and gas company



Gas Company



Oil Company



International Oil and Gas Company



Oil and gas company



Russian-German Oil and Gas Company



Oil and gas company



International Group of Companies ITERA



All-Union Scientific Research Petroleum Institute



OIL INDUSTRY Journal



International Consulting Company



International oilfield services group



Oil Company



Oil Company



International Oil and Gas Company



Russian Innovative Fuel and Energy Company



Oil Company



Oil Company