



# Kazan Federal UNIVERSITY

GEOLOGY



**INSTITUTE OF GEOLOGY  
AND PETROLEUM TECHNOLOGIES**



Kazan University has always attracted talented, active young people seeking strong knowledge that is why KFU diploma is always valuable. Today our university became federal. There are even more opportunities to get modern education, to prepare students for success in their profession. One of the most popular and interesting specialties are available at the Institute of Geology and Petroleum Technologies. The Institute and its graduates has really good prospects. We invite students willing to become a true professional in their field!

**ILSHAT GAFUROV**

Rector of KFU, Professor.



Our graduates hold senior positions in major respectable geological organizations and are recognized by their outstanding professional and personal qualities.

**DANIS NOURGALIEV**

KFU Vice Rector for Research,  
Director of the Institute  
of Geology and Petroleum  
Technologies,  
Professor, Doctor of Science  
in Geology and Mineralogy.

# ***The Institute of Geology and Petroleum Technologies of Kazan federal university.***

## **OUR MISSION:**

High quality education in the field of Earth and Petroleum sciences.





## OUR VISION:

IGPT is a point of mutual interests of science, education, industry and business in the field of geological sciences and oil and gas industry.

### Internationally recognized research areas developed in the institute:



- Physics of minerals and their synthetic analogues
- Paleomagnetism
- Stratigraphy and paleontology of the Permian system
- Oil-bearing capacity of ancient platforms
- Lithology and Earth's crust minerals
- Exploratory Geophysics
- 3D modelling of oil and gas fields



Professor Golovkinsky  
(1834-1897)

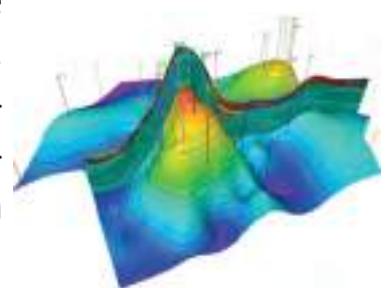
## KAZAN SCHOOL OF GEOLOGY IS A COMBINATION OF INNOVATIVE TECHNOLOGIES AND 200-YEAR TRADITIONS OF CLASSICAL UNIVERSITY

Internationally recognized Kazan school of geologists originated in the XIX century from the faculty of Geology. The founder of the School was Professor Golovkinsky (1834-1897) who introduced the principle of facies migration in space and time.

This principle is the basis of sequence stratigraphy and modern 3D geological modeling.



Principle of facies migration  
(Golovkinsky)



Modern geological model





## “BIG OIL” IN TATARSTAN

There are over 150 oilfields in Tatarstan with more than 3000 deposits. Since the first discovery over 3 billion tons of oil and 90 billion m<sup>3</sup> of associated gas were produced.

Geologists from the Kazan University develop oilfields of Tatarstan.

Large practical experience in oil exploration, as well as a wide range of research in geology has made significant contributions to the theory and practice of geological science.



**TRAINING OF STUDENTS IN THE INSTITUTE OF GEOLOGY AND PETROLEUM TECHNOLOGIES PURSUES THE DIRECTION OF GEOLOGY (05.03.01), OIL AND GAS BUSINESS (21.03.01).**

### **Bachelor's programs:**

- GEOLOGY
- GEOPHYSICS
- GEOLOGY AND GEOCHEMISTRY OF FOSSIL FUEL
- HYDROGEOLOGY AND ENGINEERING GEOLOGY
- OIL AND GAS BUSINESS

*Duration of bachelor's degree programs - 4 years full-time study.*

### **Master's programs:**

- MODERN GEOPHYSICAL TECHNOLOGIES OF PROSPECTING AND EXPLORATION OF HYDROCARBON
- PERSPECTIVE GEOINFORMATION TECHNOLOGIES IN GEOLOGY AND GEOPHYSICS
- GEOLOGY AND GEOCHEMISTRY OF OIL AND GAS
- EXPLORATION OF HIGH VISCOSITY OIL AND NATURAL BITUMEN
- STRATIGRAPHY
- ENGINEERING GEOLOGY AND HYDROGEOLOGY OF URBANIZED AREAS
- COMPLEX ANALYSIS OF OIL AND GAS GEOLOGY DATA (IN ENGLISH)

*Duration of master's degree programs (bachelor's degree or specialist degree is required ) - 2 years full-time study.*

### **Joint educational program with TU Bergakademie Freiberg (double degree):**

- STRATIGRAPHY

*Duration of master's degree programs (bachelor's degree or specialist degree is required ) - 2 years full-time study. Third semester - training in the TU Bergakademie Freiberg, Germany.*



# EDUCATION PROGRAMS

## First doctoral degree programs (Aspirantura):

- GEOLOGY
- PALAEOLOGY AND STRATIGRAPHY
- MINERALOGY, CRYSTALLOGRAPHY
- LITHOLOGY
- HYDROGEOLOGY
- GEOPHYSICS AND GEOPHYSICAL METHODS OF INVESTIGATIONS
- GEOLOGY, PROSPECTING FOR OIL AND GAS DEPOSITS

Our graduates successfully work in national and international companies



Statoil



ROSNEFT

HALLIBURTON







## DEPARTMENT OF OIL AND GAS GEOLOGY NAMED AFTER TROFIMUK



**BORIS USPENSKY**

head of department of oil and  
gas geology

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 Boris.Uspensky@kpfu.ru

Training of the Petroleum Geologists at the Kazan University began after the discovery of Big Oil in Tatarstan in 1940s. In 1954 the Department of Petroleum Geology and gas was established and headed by the outstanding petroleum geologist Troepolsky.



Graduates of the department were involved into the exploration of Big Oil of Tatarstan



There are 6 PhDs and 3 Candidate of Sciences among the department's staff.

Main research areas:

- The study of geology and petrophysical properties of the Permian bitumen deposits
- Integrated studies of reservoirs and seals
- Geochemical studies of organic matter, oil and natural bitumen
- Innovative approaches of the development of the oilfields
- Integrated studies of shale oil and shale gas





## DEPARTMENT OF GENERAL GEOLOGY AND HYDROGEOLOGY



**EDUARD KOROLEV**

head of department of general  
geology and hydrogeology



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Edik.Korolev@kpfu.ru



Department of Geology was established in 1952 and renamed as the Department of Geology and Hydrogeology in 1960. Most famous scientists of the Kazan school of geologists Golovkinsky, Shtukenberg, Shcherbakov, Krotov, Noinsky were established scientific study of Tatarstan groundwaters.



There are 3 PhDs and 7 Candidate of Sciences among the department's staff.

Main research areas:

- Hydrogeology and hydrogeochemistry
- Engineering geology and geodynamics
- Geology of nonmetallic deposits
- Simulation of the formation of composition and properties of groundwaters
- Study of processes in the system “water-rock”
- Study of the nature of the mobilization and accumulation of organic and mineral matter by groundwaters in different environments
- Soil geomechanics and study of reservoir rocks filtration properties







Reconstruction of building in ancient city Bolghar

# DEPARTMENT OF GEOPHYSICS AND GEOINFORMATION TECHNOLOGIES



**DAMIR HASANOV**

head of the department of  
geophysics and geoinformation  
technologies



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In 1944 at the Department of Geology and Soil Science the new specialty “Geophysical methods of prospecting and exploration mineral deposits “ was established. Integrated Department of Petroleum Geology and Geophysical exploration was created in 1952. A separate Department of Geophysical prospecting of minerals deposits was established in 1954 and renamed as the Department of Geophysics and geoinformation technologies in 2011.



There are 3 PhDs and 5 Candidate of Sciences among the department's staff.

Main research areas:

- Deep structure of the crust
- Modern geodynamic and tectonic processes
- Rock magnetism and paleomagnetism
- Forecast of regional oil and gas potential
- Geophysics in archeology
- Engineering geophysics
- Modern petrophysical core studies
- Unique geophysical equipment development





## DEPARTMENT OF REGIONAL GEOLOGY AND MINERAL RESOURCES



**RINAT HASANOV**

head of the department of  
regional geology and mineral  
resources



(843) 292-52-60



Rinat.Khassanov@kpfu.ru



Department was formed in 2007 by merger of Regional geology and Mineral fossil and exploration departments.



There are 3 PhDs and 5 Candidate of Sciences among the department's staff.

Main research areas:

- Geology and mineral resources of the Volga-Ural region
- Crystal chemistry of copper sulfides
- Coal-bearing areas of oilfields of Tatarstan
- Magnetostratigraphy of Permian and Triassic
- The metamorphic complexes of deep horizons of the Earth crust
- Minerageny of ophiolite complexes
- Stratigraphic correlation of cosmic dust in rocks





## DEPARTMENT OF HEAVY OIL AND NATURAL BITUMEN



**ALIM KEMALOV**

Head of Department of heavy  
oil and natural bitumen



(843) 253-51-57



Alim.Kemalov@kpfu.ru



Tatarstan has large reserves of heavy oil, as well as a significant scientific and educational potential. In 2011 the new Department of heavy oil and natural bitumen was created.

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There are 2 PhDs and 2 Candidate of Sciences among the department's staff.

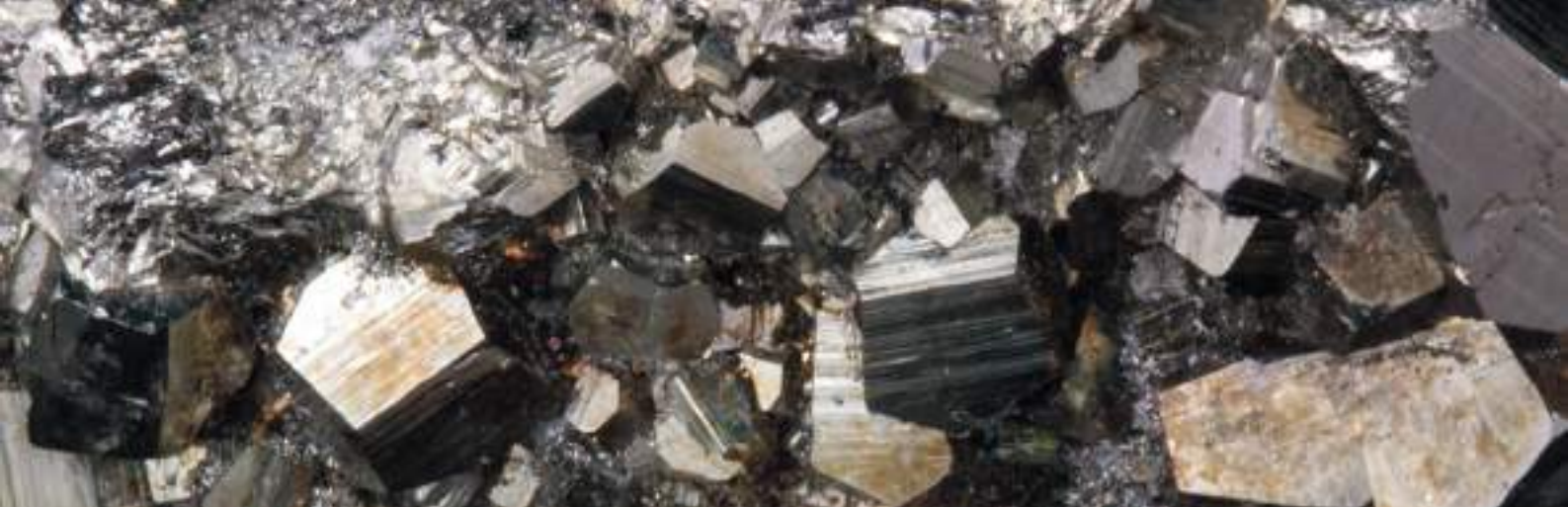
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Main research areas:

- Designing processes of heavy oil and natural bitumen development
  - Petroleum technologies and gas chemistry
  - Processing of heavy oil and natural bitumen
  - Physical methods of affection on the heavy oil and natural bitumen
- 
- Fuels, oils, lubricants and special liquids
  - Composite reagents and bituminous materials
- 







# DEPARTMENT OF MINERALOGY AND LITHOLOGY



**VLADIMIR MOROZOV**

head of the department of  
mineralogy and lithology



(843) 233-79-88



Vladimir.Morozov@kpfu.ru

It is one from the oldest Department, it was established in 1840.

The Department is a large educational and scientific unit equipped with modern laboratories. There are many professors and researchers, working with a wide range of mineralogical, lithological, geochemical and crystal problems.



There are 4 PhDs and 4 Candidate of Sciences among the department's staff.



Main research areas:

- Lithology
- Petroleum lithology
- Optical spectroscopy
- Geochemistry
- Physics of minerals
- Phase analysis of geomaterials
- Crystal chemistry
- Mineralogy





Tatarian stage outcrop on the surface

# DEPARTMENT OF PALEONTOLOGY AND STRATIGRAPHY



**VLADIMIR SILANTIEV**

head of the department of  
paleontology and stratigraphy



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(843) 292-08-19



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History of the Kazan paleontological school began in 1805 with the formation of the Cabinet (museum) of Natural History in Kazan University.



The Department of Geology and Paleontology was established in 1866, Nikolai Golovkinsky was the first head of Department. He became one of the most famous Russian stratigraphers.

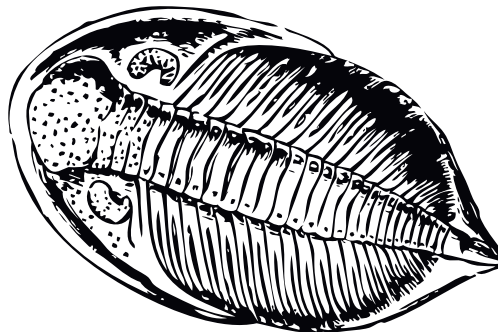


There are 1 PhDs and 3 Candidate of Sciences among the department's staff.



Main research areas:

- Zonal biostratigraphy of the Phanerozoic of East European platform for the prospecting of mineral resources





# GEOLOGICAL MUSEUM

Geological Museum named after Alexander Shtukenberg of the Kazan University - one of the oldest and richest natural science museums in Russia. Modern collection of the museum (more than 400 000 items) includes sections of Mineralogy, Crystallography, Paleontology, Historical geology, Ice Age fauna, Petroleum geology, Geodynamic processes, Human evolution.

Monographic museum collections are the basis for the interdisciplinary research for master's degree and doctoral theses in all Geological sciences.



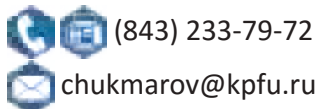


# CENTER FOR ADVANCED TRAINING, QUALITY MANAGEMENT AND MARKETING



**ILDUS CHUKMAROV**

director of the center  
for advanced training,  
quality management and  
marketing



We offer training, retraining programs and internships in the most advanced scientific centers. A complete list of the programs is on the [www.cdogeo.ru](http://www.cdogeo.ru) and [www.kpfu.ru/geo/catqmm](http://www.kpfu.ru/geo/catqmm).

Training programs provided by leading specialists of domestic and foreign organizations, using all labs of Kazan University.

In accordance with your requirements we are ready to form the training program, retraining, professional development and training for your employees and customers of your services and technologies. If you study in our Center, you are provided with not only high quality knowledge but also with comfortable conditions for accommodation, catering, sport and recreation as well as opportunities for visiting museums, cinemas and cultural trips.



Courses for Cupet, Kuba, Havana, 2015.



International Summer School of Sedimentary Geology  
“Stratigraphy and facies analysis of permian reference  
sections of the Volga–Urals region”, 2014



**«WE COMBINE EVERYBODY'S  
POSSIBILITIES FOR THE  
SUCCESS OF EVERYONE!»**



(843) 233-79-70



[cdogeo@kpfu.ru](mailto:cdogeo@kpfu.ru)



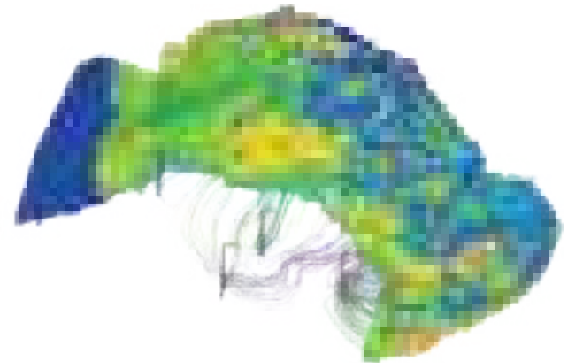
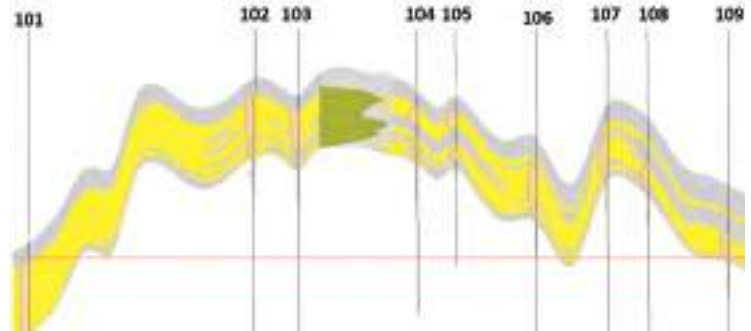
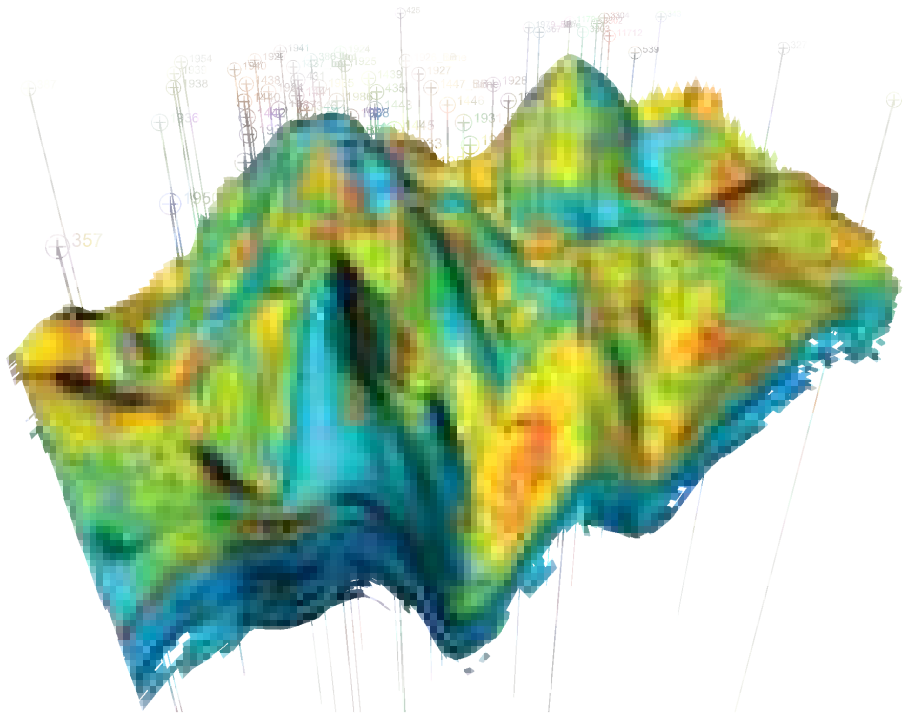
[www.kpfu.ru/geo/catqmm](http://www.kpfu.ru/geo/catqmm);  
[www.cdogeo.ru](http://www.cdogeo.ru)



[www.vk.com/cdogeo](http://www.vk.com/cdogeo)

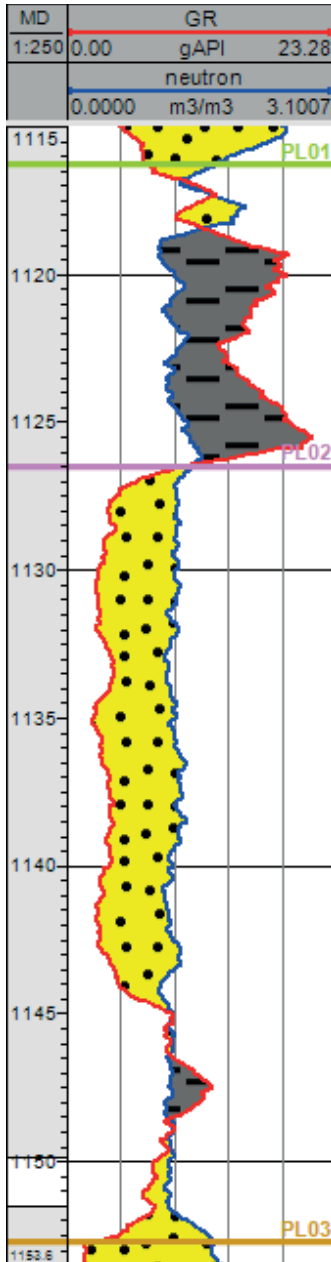


**Institute has the best  
equipment for educational  
and scientific activity**





## THE INSTITUTE HAS THE FOLLOWING LABS USED IN STUDY PROCESS:



- LITHOLOGICAL LABORATORY
- LABORATORY OF OPTICAL SPECTROSCOPY
- LABORATORY OF PHYSICS OF MINERALS AND THEIR ANALOGUES
- GEOENGINEERING LABORATORY
- X-RAY COMPUTED TOMOGRAPHY RESEARCH LABORATORY
- HYDROGEOCHEMICAL LABORATORY
- LABORATORY OF STRATIGRAPHY OF PETROLIFEROUS RESERVOIRS
- GEOCHEMISTRY AND FOSSIL FUELS LABORATORY
- LABORATORY OF ELECTRON MICROSCOPY
- LABORATORY OF PALEOMAGNETISM AND ROCK MAGNETISM
- LABORATORY OF GRAVITY SURVEY
- LABORATORY OF MAGNETIC SURVEY
- EDUCATIONAL AND SCIENTIFIC LABORATORY OF PETROPHYSICS AND NUCLEAR GEOPHYSICS
- EDUCATIONAL AND SCIENTIFIC SEISMIC LABORATORY
- LABORATORY OF GEOELECTRIC SURVEY
- EDUCATIONAL AND SCIENTIFIC LABORATORY OF PROCESSING AND INTERPRETATION OF GEOPHYSICAL WELL LOGGING
- IN-SITU COMBUSTION LABORATORY
- LABORATORY PREPARATION AND PROCESSING OF HEAVY OIL AND NATURAL BITUMEN
- LABORATORY OF DEVELOPMENT OF POLYMER-BITUMEN ORGANIC BINDERS
- LABORATORY OF THE CARBON ISOTOPE ANALYSIS
- LABORATORY OF X-RAY FLUORESCENCE ANALYSIS
- LABORATORY OF GEOINFORMATION TECHNOLOGIES "KAZAN GIS STUDIO"
- INTERDISCIPLINARY MULTI-FUNCTIONAL LABORATORY FOR GEOLOGICAL AND HYDRODYNAMIC MODELLING «3D GEO Center»
- GRINDING ROOM



Extraction of oil from the core samples

# GEOCHEMICAL RESEARCH

## ORGANIC AND NON-ORGANIC GEOCHEMISTRY:

- ROCK EVAL METHOD: TOC, TMAX, S1, S2, HI, PI
- ELEMENTARY AND GROUP COMPOSITION OF ORGANIC MATTER AND KEROGEN
- GAS CHROMATOGRAPHYMASS SPECTROMETRY OF EXTRACTS FROM HIGH-CARBON STRATA
- GAS CHROMATOGRAPHIC ANALYSIS OF NON-EXTRACTION CORE
- VITRINITE REFLECTANCE MEASUREMENTS
- GAS-LIQUID CHROMATOGRAPHY OF FLUID EXTRACTS FROM HIGH-CARBON STRATA
- CARBON ISOTOPE RATIO MEASUREMENT IN MINERAL AND ORGANIC MATTER
- QUANTITATIVE GEOCHEMICAL ANALYSIS OF THE ELEMENTAL COMPOSITION MINERAL MATTER OF THE SAMPLE
- GEOLOGICAL, PALEOECOLOGICAL AND PALAEOCLIMATIC RECONSTRUCTION TO DETECT THE VARIATIONS IN PALEOBIOPRODUCTIVITY OF CONTINENTAL AND MARINE BASINS
- CHEMOSTRATIGRAPHY
- CHEMICAL COMPOSITION OF PRESENT AND SEDIMENTOGENIC SYSTEMS IN CHEMICAL AND BIOCHEMICAL PROCESSES
- DEVELOPMENT OF X-RAY FLUORESCENCE TECHNIQUES FOR ELEMENTAL ANALYSIS OF VARIOUS FACILITIES
- ELEMENTAL ANALYSIS OF GEOLOGICAL, ARCHAEOLOGICAL, PALEONTOLOGICAL AND OTHER FEATURES



Gas chromatograph Clarus 500



Isotope mass spectrometer Delta V Plus

## GEOCHEMISTRY AND FOSSIL FUELS LABORATORY

laboratory chief

**FIDANIA NOSOVA**

 [Fidania.Nosova@kpfu.ru](mailto:Fidania.Nosova@kpfu.ru)

## LABORATORY OF THE CARBON ISOTOPE ANALYSIS

laboratory chief

**GEORGII BATALIN**

 [GABatalin@kpfu.ru](mailto:GABatalin@kpfu.ru)



## LABORATORY OF X-RAY FLUORESCENCE ANALYSIS

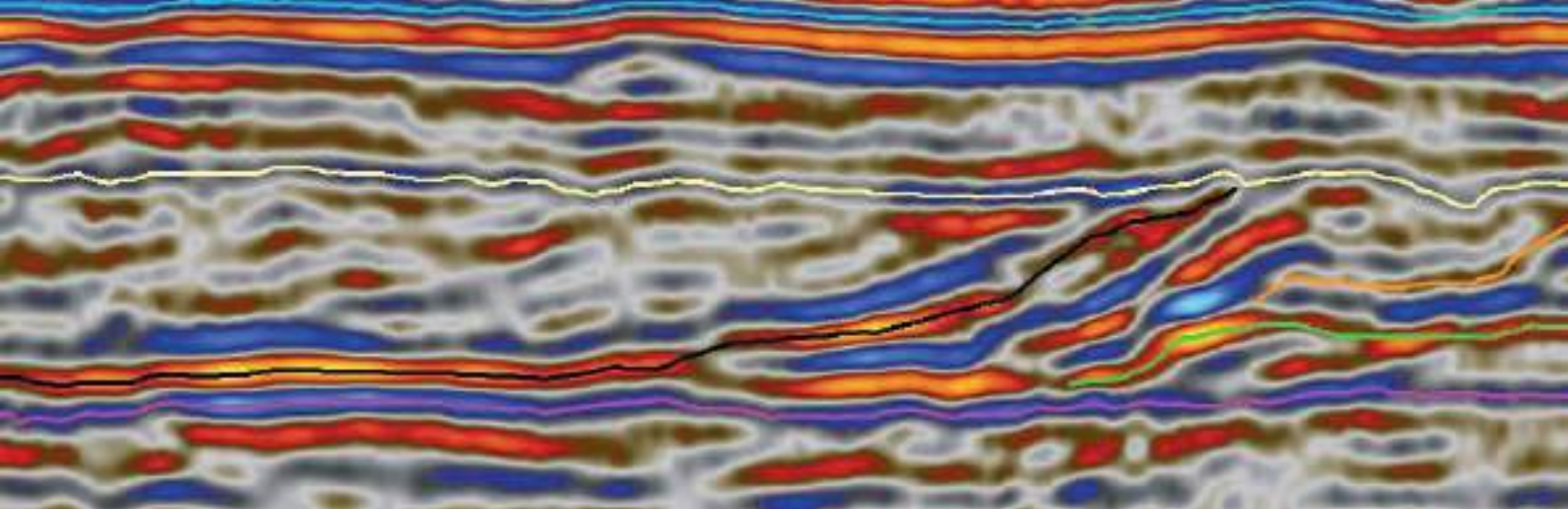
laboratory chief

**BULAT GAREEV**

 [BIGareev@kpfu.ru](mailto:BIGareev@kpfu.ru)







# GEOPHYSICAL RESEARCH

## GEOPHYSICAL TECHNIQUES OF PROSPECTING AND EXPLORATION OF HYDROCARBON DEPOSITS:

- ENGINEERING GEOPHYSICS - STUDY OF THE NATURAL AND INDUSTRIAL ENVIRONMENTS AND PROCESSES
- GEOPHYSICS IN ARCHEOLOGY
- GEOINFORMATION TECHNOLOGIES IN THE FIELD OF GEOSCIENCES
- GEOPHYSICAL MONITORING OF THE NATURAL AND INDUSTRIAL ENVIRONMENTS AND PROCESSES
- PHYSICAL-GEOLOGICAL MODELING OF NATURAL PROCESSES AND SYSTEMS
- GEOPHYSICAL WELL LOGGING, INTERPRETATION OF WELL LOGGING DATA
- NUCLEAR MAGNETIC RESONANCE CORE ANALYSIS
- SCANNING AND DIGITIZING OF MAPS, URBAN AREA PLOTS, BUILDING PLANS, WELL LOGGING
- PERFORMING THE RESEARCH AND PROSPECTING PROJECTS USING GEOINFORMATION TECHNOLOGIES, FROM DATA COLLECTION AND INPUT TO COMPLETE SOLUTIONS

## EDUCATIONAL AND SCIENTIFIC LABORATORY OF PETROPHYSICS AND NUCLEAR GEOPHYSICS

laboratory chief

**SHAMIL IBRAGIMOV**



Shamil.Ibragimov@kpfu.ru

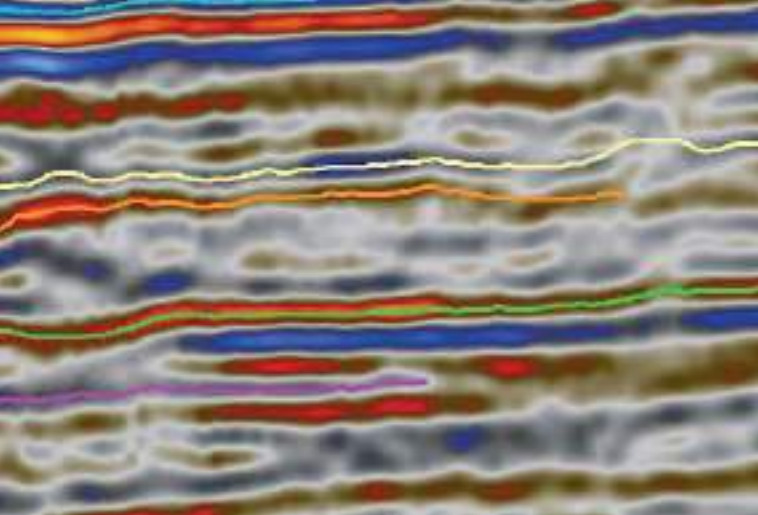
## EDUCATIONAL AND SCIENTIFIC SEISMIC LABORATORY

laboratory chief

**ANDREY TEREKHIN**



andrey.tereokhin@kpfu.ru



Tracing seismic horizons

## LABORATORY OF PALEOMAGNETISM AND ROCK MAGNETISM

laboratory chief

**DANIS NOURGALIEV**



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## LABORATORY OF GEOINFORMATION TECHNOLOGIES “KAZAN GIS STUDIO”

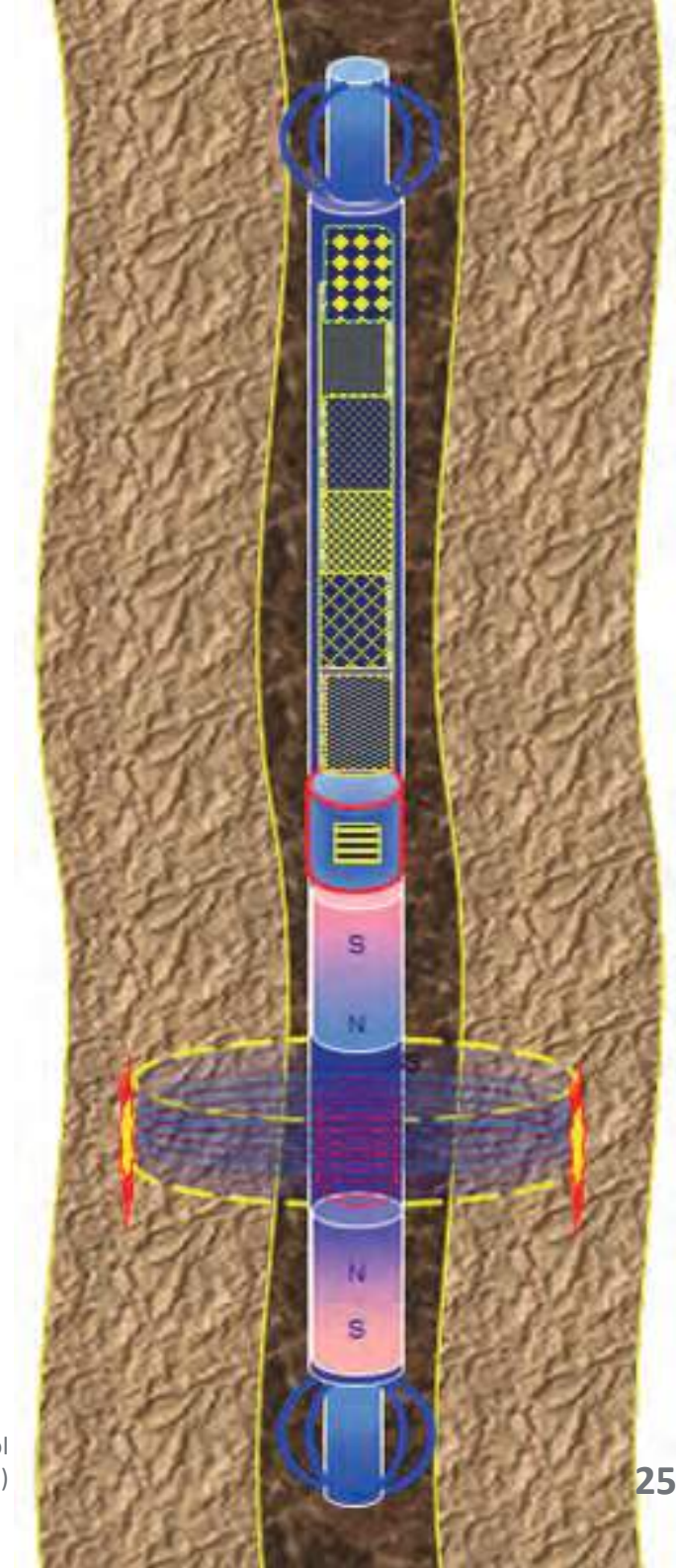
laboratory chief

**INNA CHERNOVA**



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Nuclear magnetic logging tool  
(development of KFU and TNG-Group)



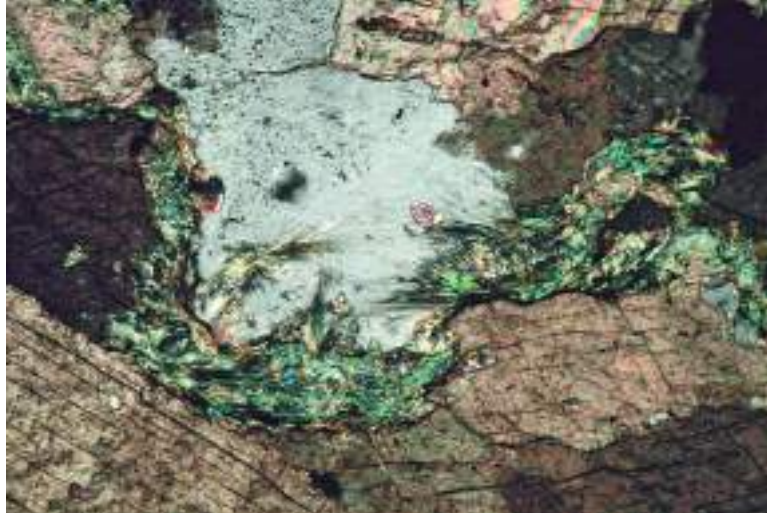




## LITHOLOGICAL AND PETROPHYSICAL RESEARCH

- MODELING OF FLUID FILTRATION PROCESSES UNDER NORMAL AND RESERVOIR CONDITIONS BASING ON X-RAY COMPUTED MICRO-TOMOGRAPHY
- HYDROGEOMECHANICAL STUDY
- STUDY AND MODELING OF GEOLOGICAL ENGINEERING PROCESSES
- PALEONTOLOGY
- MATERIALS AND OBJECTS WITH COMPLEX INTERNAL STRUCTURE
- NON-DESTRUCTIVE TESTING OF MANUFACTURED OBJECTS
- THERMOBARIC CRYOMETRY, THERMAL STUDY OF MINERALS, ROCKS AND FLUIDS, A STUDY OF FLUID INCLUSIONS IN MINERALS AND ROCKS
- OPTIC MICROSCOPY, ELECTRONIC MICROSCOPY
- GRINDING OF CORE AND ROCK SAMPLES





Microscopic study of the rock sample in a thin section under parallel polarized light



Synchronous thermal analysis tool  
Netzsch STA 449 F3 Jupiter

## X-RAY COMPUTED TOMOGRAPHY RESEARCH LABORATORY

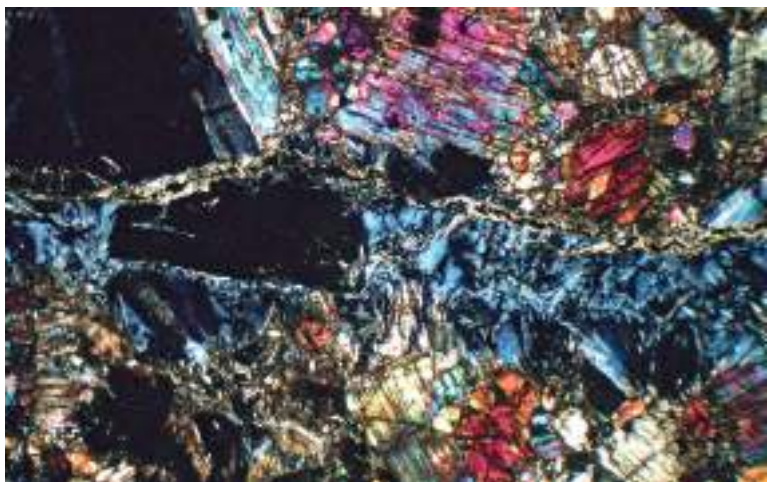
laboratory chief  
**EVGENIJ STACENKO**

 [evgenij.stacenko@kpfu.ru](mailto:evgenij.stacenko@kpfu.ru)

## LITHOLOGICAL LABORATORY

laboratory chief  
**VLADIMIR MOROZOV**

 [Vladimir.Morozov@kpfu.ru](mailto:Vladimir.Morozov@kpfu.ru)



Microscopic study of the rock sample in a thin section under cross polarized light

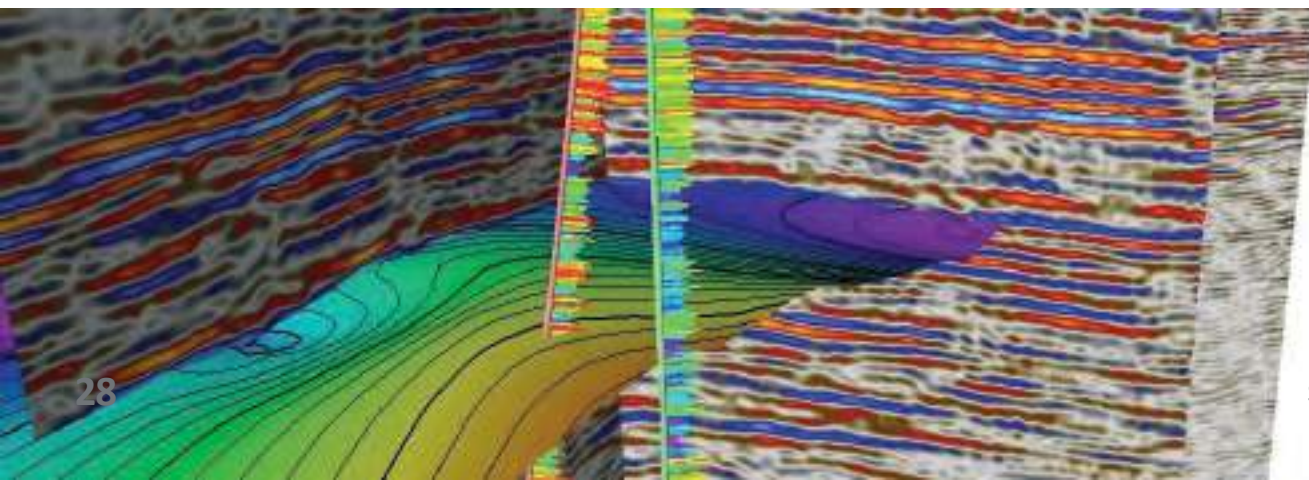




Facies distribution model

# INTERDISCIPLINARY MULTI-FUNCTIONAL LABORATORY FOR GEOLOGICAL AND HYDRODYNAMIC MODELING «3D GEO Center»

- GEOLOGICAL MODELING OF OIL AND GAS DEPOSITS
- RESERVOIR SIMULATION MODELS
- BASIN SIMULATION OF MAJOR OIL AND GAS BEARING REGIONS
- SEISMO-STRATIGRAPHIC STUDY




Seismic model





## INTERDISCIPLINARY MULTI-FUNCTIONAL LABORATORY FOR GEOLOGICAL AND HYDRODYNAMIC MODELING «3D GEO Center»

laboratory chief  
ILDUS CHUKMAROV

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PetroMod



ECLIPSE



CMG



COMPUTER  
MODELLING  
GROUP LTD.



roxar







The complex for tests of dispersive soil

# GEOENGINEERING AND HYDROGEOCHEMICAL RESEARCH

- GEOCHEMISTRY OF NATURAL AND DISCHARGE WATERS, TECHNOGENIC GEOCHEMISTRY
- MODELING OF WATER'S COMPOSITION AND PROPERTIES FORMATION PROCESSES
- STUDY OF STRUCTURE AND ANOMALOUS PROPERTIES OF WATER
- STUDY OF WATER-ROCK SYSTEM PROCESSES
- MONITORING OF COMPOSITION AND PROPERTIES OF NATURAL WATER
- DEVELOPMENT OF PROXIMATE ANALYSIS TECHNIQUES OF GROUNDWATER CONTAMINATION DEGREE
- DEVELOPMENT OF WASTE WATER CLEANING AND WATER TREATMENT TECHNIQUES AND EFFECTIVE TECHNOLOGIES.
- LABORATORY SURVEY OF PHYSICAL AND MECHANICAL PROPERTIES OF SOILS
- IDENTIFICATION OF DANGEROUS GEOLOGICAL AND GEOENGINEERING PROCESSES
- GEOENGINEERING STUDY - SEISMIC SURVEY, GEOELECTRIC SURVEY, GRAVITY SURVEY, GEORADAR SURVEY, MAGNETIC SURVEY
- PERMAFROST-ENGINEERING SURVEY
- FIELD TESTS OF SOILS THE DEFINITION OF STRENGTH AND DEFORMATION CHARACTERISTICS (PENETRATION TESTING, STAMP TEST, PRESSURE TEST)
- RESEARCHES OF SOIL BUILDING MATERIALS
- IDENTIFYING THE SOURCES OF WATER SUPPLY BASED ON GROUNDWATER



Titrimetric analysis



Installation for dynamic triaxial compression  
Wille Geotechnik

## HYDROGEOCHEMICAL LABORATORY

laboratory chief  
**MUSIN RUSTAM**

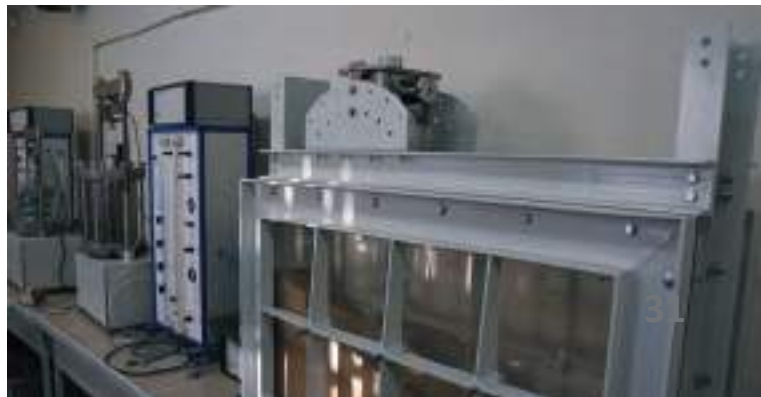
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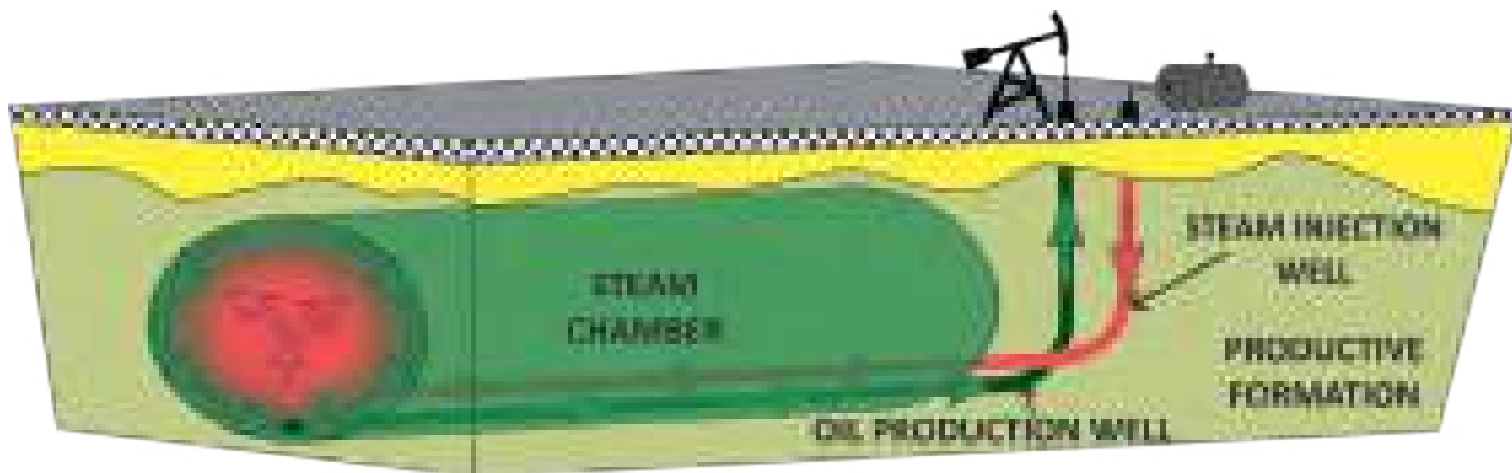
## GEOENGINEERING LABORATORY

laboratory chief

**AJRAT LATYPOV**

 [Ajrat.Latypov@kpfu.ru](mailto:Ajrat.Latypov@kpfu.ru)





## CENTER OF EXCELLENCE NEW TECHNOLOGIES OF HIGH-VISCOSITY OIL AND NATURAL BITUMEN PRODUCTION

- STUDY OF THE KINETIC PARAMETERS OF CATALYTIC AND NON-CATALYC OXIDATION OF OIL IN POROUS MEDIUM
- BUILDING OF GEOLOGICAL AND RESERVOIR SIMULATION MODELS OF OIL EXTRACTION BY THERMAL METHODS BASING ON LABORATORY AND FIELD TRIAL DATA
- DEVELOPMENT OF CATALYST SYSTEMS FOR HEAVY OIL UNDERGROUND PETROLEUM REFINING
- DEVELOPMENT OF RECOMMENDATIONS ON THE EFFICIENT USE OF THERMAL AND CATALYTIC-THERMAL TECHNOLOGIES OF HYDROCARBON RECOVERY
- STUDY OF THERMODYNAMIC PROPERTIES OF UNCONVENTIONAL CRUDE HYDROCARBON (THERMAL STABILITY, PHASE TRANSITIONS AND CALORIFIC CAPACITY)
- DEVELOPMENT OF METHODS FOR THE CONTROL OF THE IN-SITU COMBUSTION FRONT
- CREATING A CUSTOM PROGRAM ALGORITHM FOR THE SIMULATION OF OIL EXTRACTION PROCESS



## IN-SITU COMBUSTION LABORATORY

laboratory chief  
**VAHIN ALEKSEY**

 [AVVahin@kpfu.ru](mailto:AVVahin@kpfu.ru)



Rheometer MCR 302 Anton Paar

## LABORATORY PREPARATION AND PROCESSING OF HEAVY OIL AND NATURAL BITUMEN

laboratory chief  
**RUSLAN KEMALOV**

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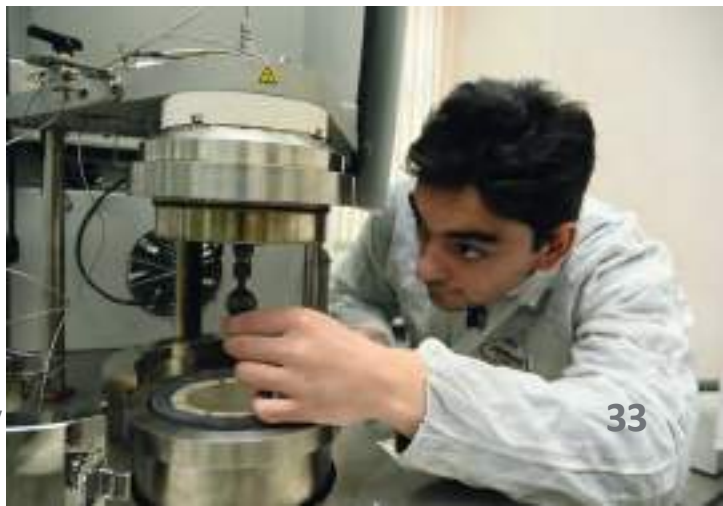


Digestion bomb Parr Instruments

## LABORATORY OF DEVELOPMENT OF POLYMER-BITUMEN ORGANIC BINDERS

laboratory chief  
**RUSLAN KEMALOV**

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Adiabatic calorimetry



CMS8400 spectrometer 3 cm range

## MINERALOGICAL RESEARCH

- STUDY OF THE VALENT STATE AND POSITION OF THE IMPURITY ELEMENTS IN THE MINERALS BY EPR AND OPTICAL SPECTROSCOPY AND THERMO-CHEMICAL ANALYSIS
- STUDY OF ISOMORPHISM AND TYPOMORPHISM OF MINERALS, FACIES ANALYSIS
- STUDY OF THE SPECIES COMPOSITION, STABILITY AND CONFIGURATION OF RADIATION DEFECTS OF THE STRUCTURE, IDENTIFYING MIGRATION ROUTES OF NATURAL RADIONUCLIDES IN ROCKS OF SEDIMENTARY COVER
- CREATING NMR AND ESR TECHNOLOGIES OF NONDESTRUCTIVE TESTING OF PETROPHYSICAL PROPERTIES OF VOIDS AND MINERAL COMPOSITION OF ROCKS
- STUDY OF THE DEFECT STRUCTURE OF PARAMAGNETIC MINERALS AND THEIR ANALOGUES ON THE BASIS OF METHODS OF MAGNETIC AND OPTICAL SPECTROSCOPY

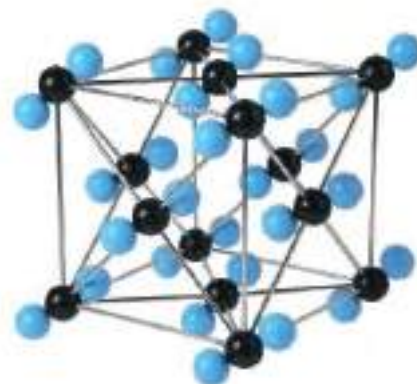
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Dummy of crystalline grid



# STRATIGRAPHY OF PETROLEUM BEARING RESERVOIRS


ALL OF THE MODERN TRENDS IN PALEONTOLOGY AND STRATIGRAPHY:

- DEVELOPMENT OF BIOSTRATIGRAPHIC METHODS BASED ON SMALL SCALE FOSSILS AND MICROFOSSILS FOR BIOSTRATIGRAPHY OF DRILLING CORES
- IMPROVEMENT OF METHODS FOR PALYNOFACIES ANALYSIS AND ASSESSMENT OF HYDROCARBON POTENTIAL OF SEDIMENTARY SEQUENCES
- IMPROVEMENT OF SEQUENCE STRATIGRAPHIC METHODS FOR ANALYSIS OF MIXED MARINE-CONTINENTAL AND CONTINENTAL DEPOSITIONAL SEQUENCES ON THE EAST-EUROPEAN PLATFORM
- THE EXPERTS INVITED FROM TU BERGAKADEMIE FREIBERG, GERMANY ARE FOCUSED ON SUPERVISION OF GRADUATE AND DOCTORAL STUDENTS, INVOLVED TO PROJECTS OF LABORATORY

## LABORATORY OF STRATIGRAPHY OF PETROLEUM BEARING RESERVOIRS

laboratory chief

**VLADIMIR SILANTIEV**

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**MANY DIFFERENT INTERNATIONAL EVENTS ARE HELD IN INSTITUTE OF GEOLOGY AND PETROLEUM TECHNOLOGIES WHERE DIFFERENT COMPANIES AND UNIVERSITY PARTICIPATE:**

- THE INTERNATIONAL SUMMER SCHOOL OF SEDIMENTARY GEOLOGY (2014)
- INTERNATIONAL STRATIGRAPHY WORKSHOP «KAZAN GOLOVKINSKY STRATIGRAPHIC MEETING»
- INTERNATIONAL CONGRESS OF CARBONIFEROUS AND PERMIAN (2015)
- SEMINAR “PROBLEMS OF ROCKS GEOMAGNETISM, PALEOMAGNETISM, GEOMAGNETISM AND ROCK MAGNETISM (INCLUDES THEORY, PRACTICE AND EXPERIMENTS)



جامعة شعيب الدكالي

Université Chouaib Doukkali

BOISE STATE UNIVERSITY



BOISE STATE UNIVERSITY



# INTERNATIONAL ACTIVITY



Society of Petroleum Engineers is the largest individual member organization serving managers, engineers, scientists and other professionals worldwide in the upstream segment of the oil and gas industry.

**RITA FAZLYEVA**

President of SPE chapter



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**Kazan Federal University  
SPE Student Chapter**

## MISSION OF OUR SPE CHAPTER:

- TO COLLECT, DISSEMINATE, AND EXCHANGE TECHNICAL KNOWLEDGE CONCERNING THE EXPLORATION, DEVELOPMENT AND PRODUCTION OF OIL AND GAS RESOURCES
- PROVIDE OPPORTUNITIES FOR PROFESSIONALS TO ENHANCE THEIR TECHNICAL AND PROFESSIONAL COMPETENCE

## RESOURCES:

- ONE PETRO
- TRAINING COURSES, VEBINARS





## OUR CUSTOMERS



## OUR PARTNERS



Presentation of 3D GEO Center to president of Tatarstan republic Rustam Minnikhanov.  
The international specialized exhibition "Oil, Gas. Petrochemicals", Kazan






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### CENTER OF SUBURBAN TRAINING FACILITIES AND FIELD WORKS

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Well-equipped learning environment consists of campuses located out of Kazan city. Each year 500 students and tutors from “Institute of Geology and petroleum technologies” and “Institute of Fundamental Medicine and Biology” complete their field internships.

Location of campus in environmentally clean area allows performing different cultural and sport activities in nature that contributes to improvement health, communication and team working skills.



## STUDENTS COMPLETE THEIR INTERNSHIPS AFTER THE SECOND AND THIRD COURSE IN THE FOLLOWING SUBJECTS:

- GRAVITY SURVEY
- MAGNETIC SURVEY
- GEOELECTRIC SURVEY
- SEISMOLOGY



Gravimeter, 2000

Magnetometer MMPOS-1



Modern absolute gravimeter A10





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FOR LIFE AND  
STUDYING!**



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TOGETHER TO MAKE  
WORLD BETTER!»

## STUDENT LIFE IS NOT ONLY STUDYING

Our students in their free time participate in different sport, cultural and other events. First of all there are Sport Games and Student Spring Festival. Last three years we took first places on major Student Spring festival.









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