More than sixty years in the market of geophysical services
TNG-Group is one of the leading oilfield servicing companies in the Russian Federation with more than sixty-years history and annual turnover exceeding 400,000,000.00 USD. Rich production experience, wide geography of operations and cutting-edge technology have allowed our company to win a deserving place in the market of geophysical services and to become a reliable business partner for many oil and gas producing companies.

TNG-Group has implemented and certified the Quality Management System in compliance with DIN EN ISO 9001:2000 and received the HSE conformity certificate (Safety Certificate). Two more international standards – DIN EN ISO 14001, OHSAS 18001 have been implemented in TNG-Group aiming at creation of an integrated management system.
1. KAZAKHSTAN
2. UZBEKISTAN
3. INDIA
4. BELARUS
5. TURKEY
6. SYRIA
7. IRAQ
8. JORDAN
9. MOROCCO
10. ALGERIA
11. TUNISIA
12. LIBYA
13. EGYPT
14. GABON
15. ANGOLA
We provide services in the widest climatic range from -50°C to +50°C, from deserts to snow fields and from marshes to seas.
KEY CLIENTS

TNG GROUP

KEY CLIENTS

ГАЗПРОМ

ГАЗПРОМ

ЛУКОЙЛ

РУССНЕФТЬ

Татнефть

ННК

Славнефть

Ериль

Роснефть

Новатэк

Рутекс

енi

Total

Sonangol

Oil India Limited

UZBEKNEFTEGAZ
Main activities of TNG-Group

Exploration Geophysics

Exploration and prospecting of oil, gas and nonmetalliferous fields using high-tech equipment and up-to-date methods of onshore 2D, 3D, 4D Seismic Survey, Marine Seismic Survey, Gravity, Magnetic and Electrical surveys. Seismic investigations in wells (VSP, offset VSP).

Well Logging

TNG-Group provides the entire range of well logging and shooting operations in open and cased holes: modern logging technologies while drilling, operation and repair of wells; geosteering provision of well drilling, informative-technological provision (MWD, LWD); monitoring of hydrocarbon fields exploration and development; application of integrated geophysical technologies for enhanced oil recovery; shooting operations, perforation; hydrodynamic surveys; well testing and development along with establishment of formation’s hydrodynamic properties; test works to develop new methods and equipment.

Geology

Processing and Interpretation of 2D and 3D seismic data, development of know-how methods of Interpretation, Interpretation of VSP data, creation of geological and hydrodynamic models, reinterpretation of vintage well logging data and generation of the Data Bank.
TNG-Group currently has 21 seismic crews.

Workload as of 2017:
- 2D – 5,968 line km
- 3D – 8,922 sq. km

**Exploration Geophysics**

TNG-Group is equipped with the most up-to-date Telemetry systems. We use both explosive and non-explosive seismic sources for operations.

**21 seismic crews are equipped with:**
- 180,000 seismic channels, of them 10,700 are wireless systems (Wireless Seismic RT Sys2, Unite);
- 28 seismic recorders (Sercel 428XL – 20 units, 408UL - 3 units, Unite - 1 unit.; Input/Output System IV - 4 units);
- Seismic Vibrators (NOMAD; Hemi; X-vib, etc.);
- Electromagnetic sources (SEM-100, IDD-20) - 7 units;
- Drilling Rigs (URB-4T, URB-2A2, USh-2T, UBM-045, UBShM, etc.) - more than 350 units;
- Geodetic equipment: GPS Trimble5700, R5GNSS, R7 GNSS - more than 100 units;
Whenever shothole drilling operations are conducted, different types of drilling rigs are used such as URB-2A2, URB-4T, PBU-2, USh-2T, UBM, BMP, UBShM, Rick-Shaw.

Depending upon the geological structure properties, shothole drilling could be conducted by rotary technique or rotary-percussion technique, using drilling rods, solid or hollow augers, with the bottomhole washover or by compressed air blowout.
Gravity, Magnetic, Electrical studies

TNG-Kazangeophysica being in the structure of TNG-Group specializes in:

- Gravity survey;
- Magnetic prospecting;
- Electrical prospecting in its different modifications;
- Thermometry;
- Geochemical survey;
- Aerospace decoding.

Depending on geological tasks particular techniques can be integrated for the improvement of data interpretation reliability and for the effectiveness of geological exploration works.
In 2015 TNG-Group launched an offshore seismic acquisition project in the Sea of Okhotsk for Gazprom Geologorazvedka and successfully completed survey within three blocks in the scope of 2,200 sq. km.

In 2016-2017 TNG-Group completed several projects in the Kara Sea for Gazprom Geologorazvedka and Rosneft companies with the total scope of 6,350 sq. km.
TNG-Group carries out Well Logging, Hydrodynamic and Shooting operations. Works are conducted in different regions of Russia and abroad in vertical wells under drilling, in directional and horizontal wells, as well as in active wells (producing, injecting, etc.).

**Well Logging and Shooting operations**
TNG-Group has at its disposal up-to-date geophysical complexes. Both self-contained and wireline equipment is used during operations.
- More than 500 Geophysical crews;
- 110 Hydrodynamic crews;
- 30 Geosteering crews (MWD, LWD);
- 70 Mud Logging crews.
Research and Development Division

- Research and development, testing and construction activities, methodical and analytical works in geology, geophysics, geochemistry and geoeconomy;
- Development of equipment and machinery intended for geological and geophysical operations;
- Petrophysical provision of G&G data interpretation;
- Development, elaboration and introduction of various computer technologies;
- Development and introduction of metrological means and facilities for geophysical works.

The R&D division offers services in implementation of the following integrated projects:

- Elaboration of integrated methods and technologies for processing and interpretation of geological and geophysical data during drilling and operation of oil wells, including horizontal wells and sidetracks;
- Generation of computer technologies to establish and to control current and residual oil saturation of a formation;
- Development of technologies to control technical state of wells, to determine cement bond based on acoustic methods;
- Informative support in creation of data bases for generation of hydrodynamic models;
- Adaptation of technical facilities and software for various geological and technical conditions;
- Performance of well logging operations applying specialized methods (Pulsed Neutron Logging, Nuclear Magnetic Logging, C/O Logging, Waveform Sonic Logging) both in Russia and in other countries;
- Full set of Mud Logging services providing fast evaluation of formation parameters and control and optimization of drilling, including adjustment of projected borehole during drilling of horizontal wells and sidetracks;
- Support for drilling of directional, horizontal wells and sidetracks.
Performance of all kinds of geophysical surveys in open hole

TNG-Group has all required equipment manufactured in Russia and in other countries for performance of both conventional and exclusive investigations (similar to Schlumberger equipment – FMI, DSI, CMR, MDT, TLC, LWD, MWD). TNG-Group also performs in-house investigations using its own equipment which has no analogue anywhere in the world.

In 2016 TNG-Group successfully completed Well Logging at sea platform in Caspian Sea.

Accomplished fast-track interpretation of open-hole Logging data
Perforation systems used in TNG-Group

- **Wireline-conveyed**
  - **Hollow carrier perforators**
    - **Expendable**
      - KPO 50, KPO 64, KPO 73, KPO 89, KPO 102, KPO 114
    - **Retrievable**
      - KPM 105
  - **Capsule perforators**
    - **Expendable**
      - PMR43-PP, PMR54-PP, PSK 52

- **Tubing-conveyed**
  - **Expendable capsule perforators**
    - KPO 64, KPO 73, KPO 89, KPO 102, KPO 114
GeoInform Center performs the following kinds of activities:

- Processing and interpretation of seismic data (2D, 2D/3C, 3D, 3D/3C, 4D)
- Complex geological and geophysical information analysis
- Development of original methods of interpretation
- Geological and hydrodynamical field modeling
- Re-interpretation of the old well stock logging data and database generation

High qualified personnel having rich experience of successful operation in different climatic and geological conditions provide the solution of a wide range of tasks while prospecting, exploration and supplementary exploration of oil and gas fields.
**Seismic Data Processing:**

Total number of projects per year is 20-25, 70% for 3D and 30% 2D. In addition to new seismic data processing, we perform reprocessing of vintage seismic data.

**Software and Licenses:**

Main software package is Echos 2017 of **Paradigm** company. PSTM and PSDM is performed by Paradigm (Geodepth, ES360) software package. Additionally:

**Schlumberger**
- Omega2100 (License for cluster system without limitation of users number);
- Petrel 2014 (2 licenses).

**CGG**
- Geocluster 5100 (License for server without limitation of users number);
- Hampson-Russell 9 R2.0.3 (1 license)

Software packages CGG Hampson-Russell and Geoplat Pro-S (DV-Discovery) are used for seismostratigraphic binding, AVO-analysis and inversion.
EQUIPMENT MANUFACTURING:

- Manufacturing of specialized machinery (laboratories, self-propelled logging hoists, perforation unit laboratories);
- Manufacturing of borehole geophysical equipment;
- Manufacturing of mobile accommodation trailers and specialized units;
- Manufacturing of drilling instruments for geologic exploration operations;
- Manufacturing and repair of geophysical equipment.
MANUFACTURING OF
SPECIALIZED MACHINERY

• Self-propelled Logging Hoists (PKS-5, PKS-7)

• Perforation Unit Laboratories (LPS)

• Geophysical Unit Laboratories (LGS)
Specialized machinery manufacturing workshop
Manufacturing of mobile accommodation trailers

- housing type
- production type
- stations
- backup-public type

On frame, tractor trailer chassis and skid mounted.
THANK YOU!