



GEOPHYSICAL CONTRACTOR



DELIVERING VALUE



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As a geophysical company operating in many regions, our first priority is to offer competitive, safe and superior-quality services to our clients.

Geofizyka Kraków is a reliable contractor providing its clients with modern geophysical services. We design, execute and deliver integrated solutions that give our clients optimum results and minimize exploration risk. With high quality data, we bring better answers to subsurface questions.

Worldwide experience

GK offers proven know-how based on a wide experience in regions we operate. Our seismic crews have gained their expertise in diverse, even toughest environment conditions. We have successfully performed field operations starting from highly urbanised areas of Europe, through mountains of Pakistan and Libyan dunes, up to protected natural sites. Our field experience is reflected in geological knowledge of our professionals. They process and analyze data acquired in Europe, Middle East and North Africa.

Europe

GK's main operational base is in Poland, where we started our activity more than 50 years ago. Now we support our clients in several European markets delivering complex seismic and wireline services. We have gained wide experience working in Poland, Slovakia, Czech Republic, Austria, Denmark, Hungary, Turkey and other countries.

Middle East

For more than 10 years Geofizyka Kraków has been a renowned provider of seismic services in Pakistan. Working for local and international clients GK has successfully rendered several 2D and 3D projects. We offer vibroseis operations with high peak force, as well as explosive sources for the surveys performed in difficult terrain conditions. Our experience in Middle East includes field operations in Syria and processing of seismic data from Pakistan, Oman and Yemen.

North Africa

Since 2005 Geofizyka Kraków has been extensively developing its activity in Libya. Equipped with the newest technology GK crews are experienced in conducting large-scale projects in most challenging conditions of sandy desserts and wadies.



Geofizyka Kraków strives to be recognized both as a modern geophysical contractor and a trustworthy partner. That is why we set the highest standards in all areas of our business.

Sustainable development

We know that our long-term success strongly depends on how we do business. As a company we are evaluated not only for our performance, but increasingly for social and environmental consequences of our activities. Being aware of that, we have based our company standards on the concept of sustainable development.

When setting our business goals we always consider the concerns of all our stakeholders. Being responsible to our clients, employees and neighbouring communities, we strive to achieve and maintain excellence in all aspects of our activities.

Clients: more than quality

Through over 50 years we have gained our most valuable capital: trust of our clients. That obliges us to provide them always the highest quality in safe and responsible manner. Working together we focus on every detail and close partnership. We always look for new ways to improve our services and best address our clients' needs. Our efforts have resulted in total compliance with international standards of ISO 9001 and 14001.

People: more than workplace

Geofizyka Kraków is a people – driven company. That is them who shape the organization and constitute its most valuable resource. Thus we strive to be a reliable employer for all of our people.

As a service company we are committed to employ talented and highly motivated people, who bring the competences and professionalism. Focusing on permanent development, we encourage performance and innovation, offering our employees international opportunities and continuous knowledge transfer.

We create safe and friendly workplace based on our corporate values and ethics.

Local communities: more than neighbour

Everywhere we work, our staff is particularly aware of the principle that good relations with local communities are essential while performing seismic surveys. Working around the world GK always shows respect and understanding for local culture, religions and customs. We actively support local employment in our markets. Sharing our knowledge and experience is an important GK policy in establishing good relations with neighbouring communities.



Zero harm attitude is a leading preoccupation in all our operations.

Philosophy

Strong conviction that efficiency and safety are inseparable determines the way we do our business. That is the basis of long-standing commitment to HSE performance and excellence. Whatever we do, wherever we work, we have deep awareness of the impact on our surrounding. As a result we treat HSE standards as common principles company-wide: on every level and in every field of our activity. Safety of our operations and limiting their environmental impact are our firm strategic goals. To achieve it, we set our overriding HSE challenge: to be always a step before accident happens.

Methods

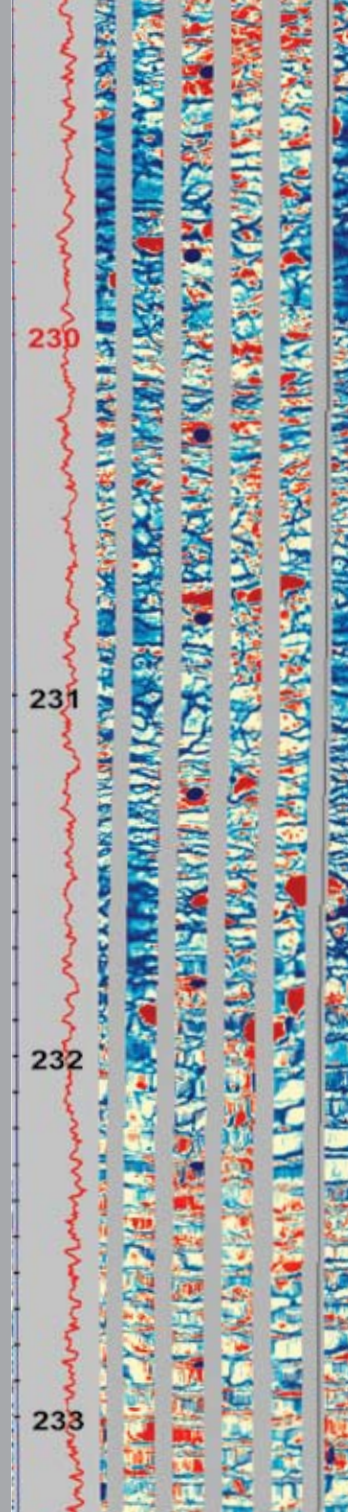
HSE system in Geofizyka Kraków is based on proven know-how and highest international standards. It consists of a complementary set of practical tools for proactive and reactive risk management. The proactive approach contributes to build powerful tools for safety prevention. It starts from work environment recognition, mapping & assessment of risks and HSE planning. Then guidelines issued at system level are played out in the field by implementation, training, monitoring and continuous verifying of preparedness. Reactivity is based on effective management of accidents which includes emergency management and root cause analysis. The lessons we learn from these investigations are shared with all our employees and contractors due to our "learn from mistakes" approach. This way we continuously draw the guidelines for further improvement. Detailed objectives and effective management lead us to create a consistent self-improving HSE System which is an integral part of GK Integrated Management System.

People

Clear and inviolable principles set by HSE system stand for the basis for day-to-day practice. In Geofizyka Kraków we treat safety as a work-style and actively promote safe behaviours and attitudes. Everyone of our employees demonstrates individual engagement in improving HSE performance. We believe that strong commitment and responsibility of every individual leads us to building safety culture.



OUR SERVICES



Seismic services

- Designing & consulting
- Seismic data acquisition
- Seismic data processing
- Seismic data interpretation

Wireline services

- Well logging
- Downhole seismic

Reaching the success is our common goal, that is why each project is individual as much as individual are our clients requirements.

Tailor - made solutions

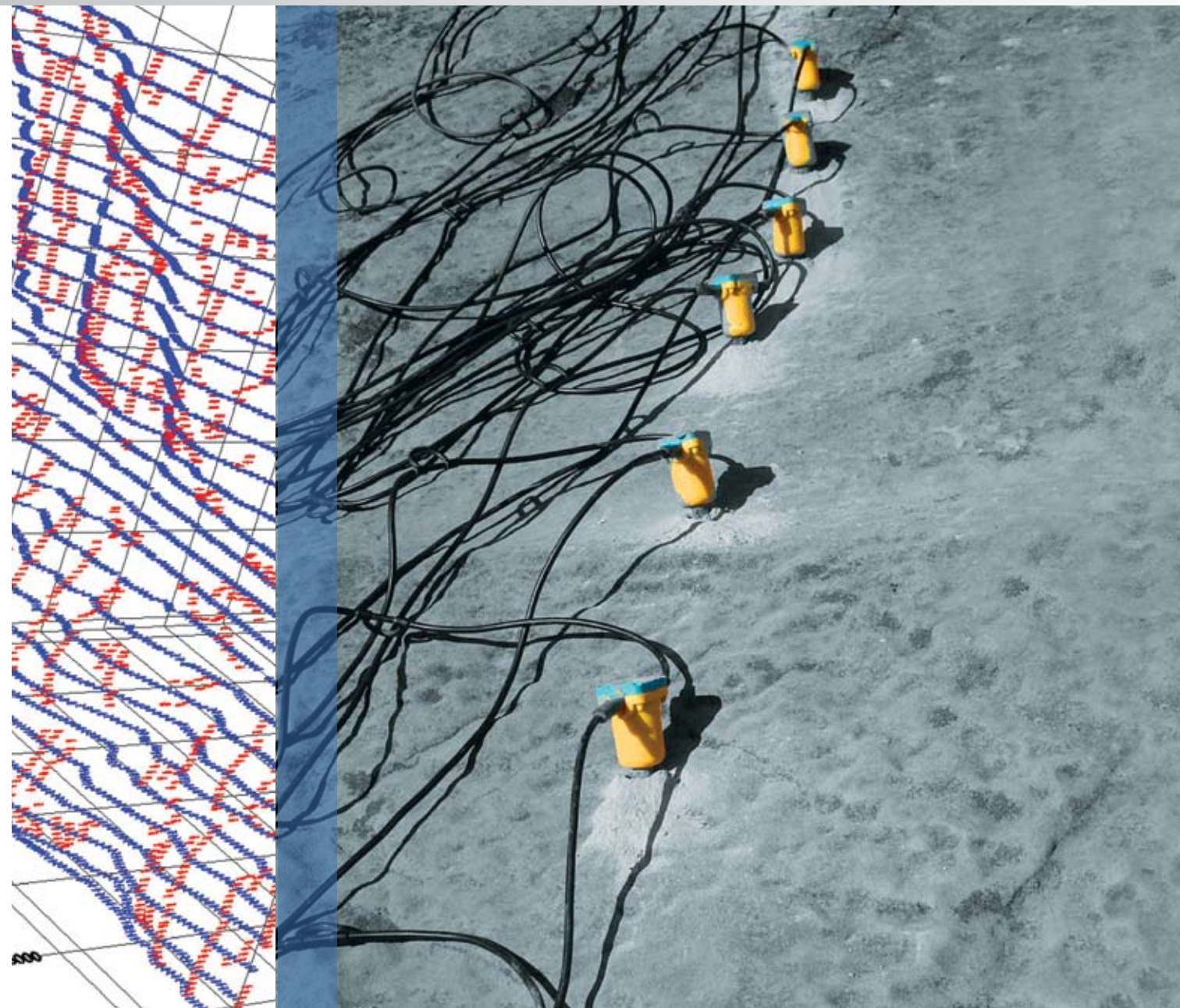
Designing, the first step in seismic research, determines the final result of the whole process. Therefore our staff is entirely engaged in the project from its start and cooperates with a client to meet his even most challenging demands. We offer professional consultation covering all aspects of survey methodology as well as formal and local conditions of field operations .

Quality & effectiveness

When selecting recording geometry parameters to achieve the best quality data for geological target set, we always consider the cost effectiveness of the project. Early simulations allow to predict the areas where the acquired data will have the best quality and to select the acquisition geometry parameters.

Experience & technology

Our multidisciplinary team of experienced geophysicists, geologists and surveyors has developed numerous 2D and 3D projects successfully performed worldwide. GK designers are equipped with the latest versions of OMNI and MESA software packages. Aiming at continuous knowledge transfer, we maintain long-term partnerships with leading academic and scientific organizations. Our experts actively participate in research & development projects sharing their experience and working out new solutions.



- Designing of 2D/3D seismic surveys
- Pre-planning & work simulation
- Consulting: survey methodology, formal requirements, local aspects

Operating reliably and efficiently in even most adverse conditions is the way we do seismic.

Meeting the challenge

GK offers land seismic services using vibroseis and dynamite energy sources. The surveys are conducted in different terrain and climate conditions including mountains, deserts and highly urbanized areas. The recorded data undergo preliminary processing and stringent quality control in the field. We secure complete permitting and geodetic services within seismic projects. Quality of data, safety and close partnership with our client are main objectives in all projects we run.

Highest standards

Geofizyka Kraków is a company geared to safe performance. That is why all seismic projects are complied with rigorous HSE procedures based on highest worldwide standards. We successfully manage even large scale projects, providing our clients with high quality services in safe and responsible manner.

Equipment & technology

RECORDING SYSTEMS

- Sercel: 428XL, 408UL
- I/O: IMAGE System, System TWO
- Geometrics: Smart Seis, Strata Visor, Strata View

VIBRATORS

- Sercel: NOMAD 65
- IVI: HEMI 50 (Mark IV), Failing Y-2400 (Mark IV), Failing Y-1100CBB (Mark III)

DRILLING UNITS

- truck mounted rigs capable of drilling up to 200 m holes
- man portable drilling units capable of drilling up to 30 m holes
- jackhammers for shallow holes
- flushing system

GEOPHYSICAL DEVICES

Different types of telemetry boxes, cables, geophones and hydrophones in number sufficient to carry out even most expanded seismic surveys.



- 2D/3D vibroseis acquisition
- 2D/3D dynamite acquisition
- 2D/3D vibroseis – dynamite acquisition
- LVL surveys (shallow refraction and up-hole measurements)

Offering advanced processing services and innovative solutions, we provide our clients with a clearer seismic image.

Top expertise

Our Seismic Data Processing Centre is a multidiscipline team of seismic data processors & geophysicists equipped with the newest technologies. They have wide experience in processing data acquired in different regions marked by even most difficult statics solution and complex velocity distribution.

Quality & efficiency

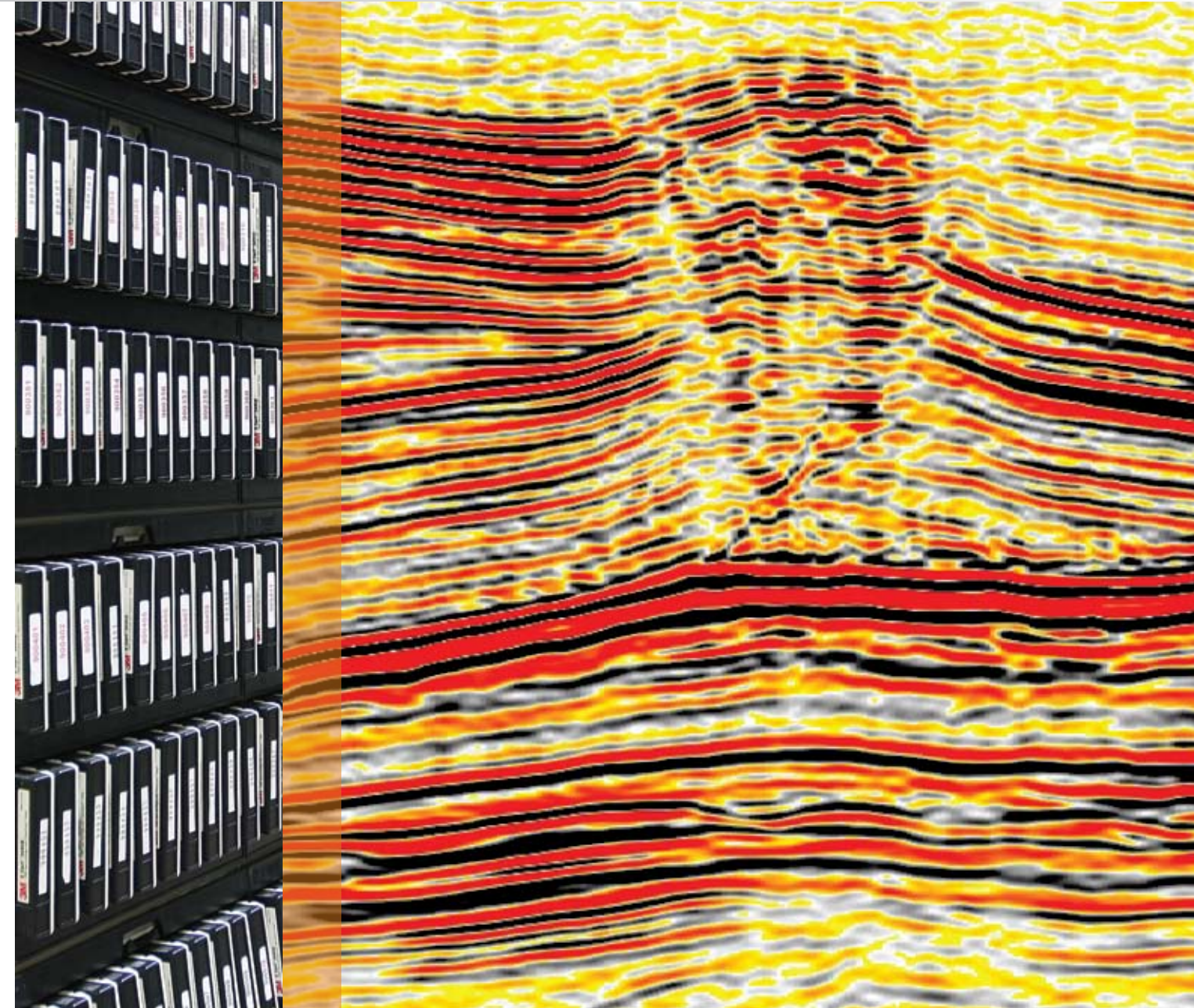
Joining proven knowledge and the highest level of technical solutions, we guarantee the best quality results, delivered on time and in safe manner. Focusing on close cooperation, we ensure our clients remote supervising and progress controlling at every stage of the project. Dedicated processing units created in our seismic crews perform quality control and preliminary processing in the field.

Software

- OMEGA2 Seismic Processing System (WesternGeco)
- GeoDepth 2D/3D and 3D Tomography (Paradigm Geophysical)
- ProMAX R5000 Seismic Processing System (Landmark)
- GLI3D - 2D/3D Refraction Statics package (Veritas Hampson-Russell)
- SDI plotting software

Hardware

- IBM BladeCenter & eServer clusters
- multi-terabyte disk storage (Panasas storage cluster & disk arrays)
- modern Linux workstations (Fujitsu Celsius)
- wide range of tape drives (3592, 3590, LTO4 etc)
- high speed network
- wide format colour/bw plotters



2D/3D seismic data processing services:

- In-field and QC processing
- Processing, reprocessing and merging of different vintages of data
- Prestack time and depth migration, seismic inversion, AVO study
- High resolution data processing
- Multicomponent seismic data processing and modeling
- Seismic data base management

Interpreting data, we always aim at one overriding goal: to minimize exploration risk.

Reliable experts

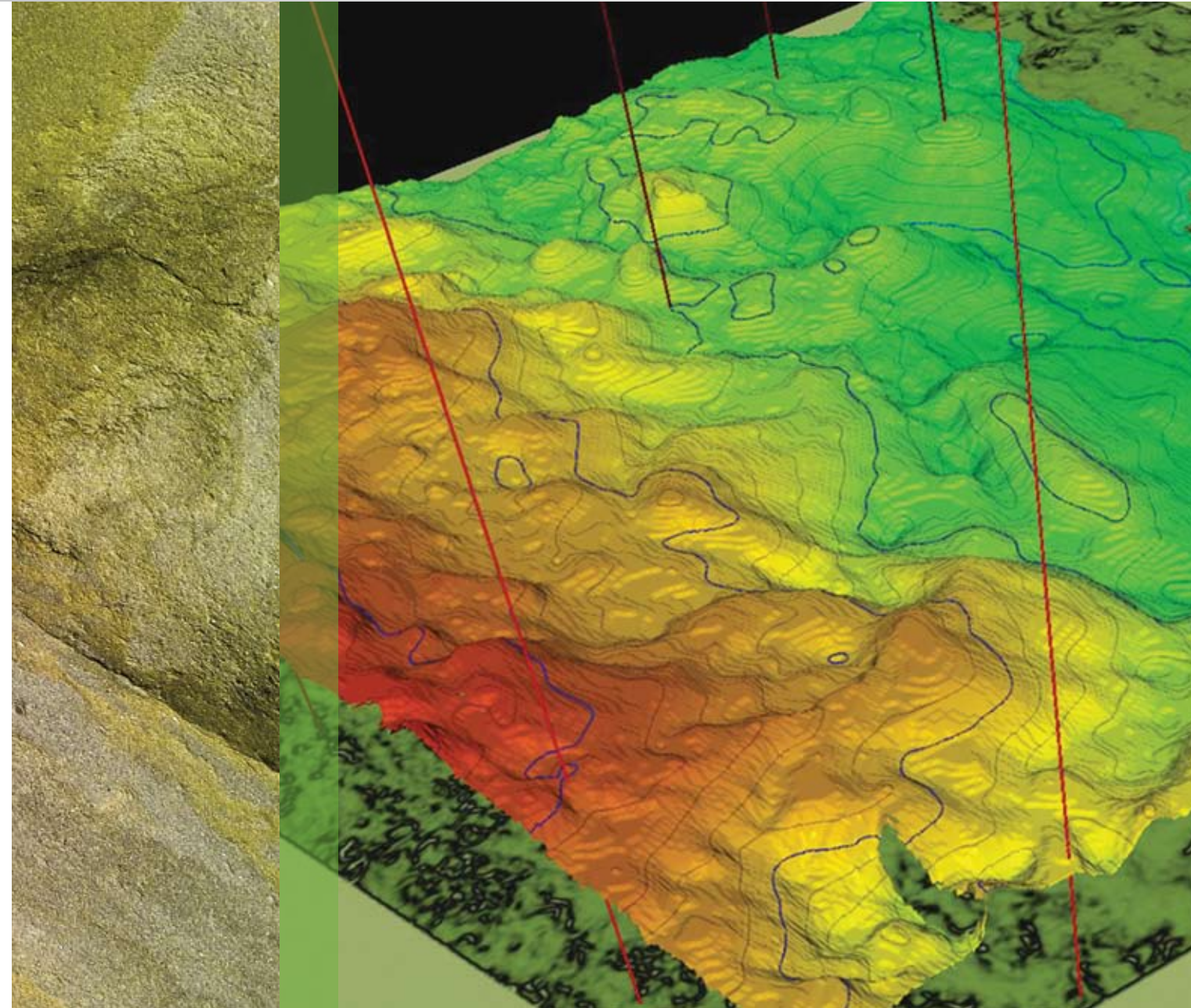
GK Seismic Data Interpretation Centre offers profound experience and skills in interpreting 2D, 3D and 3C seismic data from the most demanding areas in Europe and other geological regions. We are recognized as reputable experts in complex interpretation of data from the Carpathians, the Carpathian Foreland and the Permian Basin in Poland. Expertise developed by our interpretation team guarantees high quality results, aimed at geological objectives.

Modern tools

We rely on ongoing advances in seismic, joining proven knowledge with the newest technology solutions. Modern servers and graphics workstations with the latest versions of software are the basis of our work.

Our specialists in Interpretation Centre work with advanced software tools:

- OPEN WORKS Integrated Interpretation System R5000 (Landmark HALLIBURTON)
- STRATA Seismic Inversion (Hampson Russell)
- AVO (Hampson Russell)
- AFI AVO Fluid Inversion (Hampson Russell)
- EMERGE for statistic seismic attributes analysis (Hampson Russell)
- OPENTECT Sequence Seismic Interpretation System (dGB Earth Sciences)
- Statistica (StatSoft)
- TESSERAL modeling system (Tesseral Technology Inc.)
- Montage System (SDI Graphics Products)



- Structural interpretation
- Complex lithology and facies interpretation
- Seismic inversion and AVO study
- Deposits parameters prediction
- Environments of deposition analysis

Providing high quality wireline services and advanced log analysis, we help our clients to monitor drilling process and support them in exploration activity.

Efficient measurements

Over a half century of experience together with modern technologies enables to carry out effectively logging and perforating operations. We guarantee fully equipped logging and perforation crews, that can be immediately mobilized on client's request on the European territory.

Equipment & technology

Our down-hole tools are always calibrated in the base shops and field calibrators at the well-site. GK has set up a unique Tool Facility Station for thorough testing and full range calibration, using different types of natural and artificial rock models.

Well logging equipment:

- open hole logging units equipped with complete set of down hole tools (Halliburton & Tucker)
- cased hole and production logging unit equipped with complete set of down hole tools (Halliburton) and pressure control equipment
- cased hole logging unit (Warrior) with down hole tools (Sondex & Hotwell)
- tool pusher for measurement in deviated and horizontal wells
- equipment and explosive materials (Baker & DYNAenergetics) for perforation and casing cut off performed on the cable and tubing

Data processing & interpretation

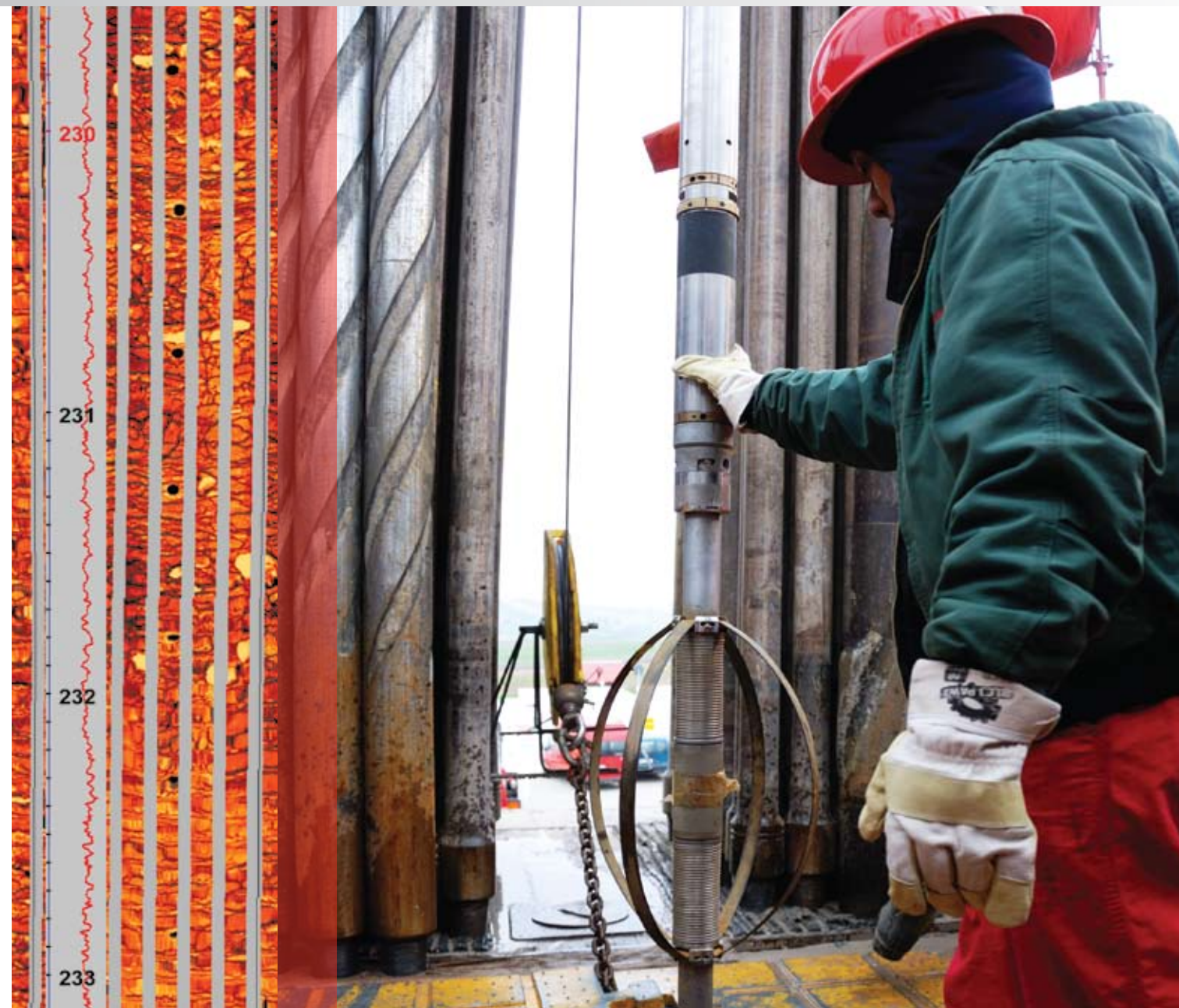
GK specialists have broad experience in processing and analysing the most complex well logging data. They point at joining their knowledge with possibilities given by modern software tools from Halliburton, Landmark, Sondex, Hotwell & Weatherford. The expertise and precision of our professionals guarantee accurate formation evaluation.

Well logging measurements:

- Open hole logging
- Cased hole & production logging

Data processing & interpretation:

- Quantity log analysis for lithology, porosity, saturation and permeability determination
- Geological interpretation of well logging data including sequence stratigraphic analysis
- Transformation of well logging data to seismic standard
- Scanning, digitizing and calibration of archive analog logs



We perform high quality downhole seismic to get the information for enhancing surface seismic and well logging data.

Widening the image

To complete its service activities, GK offers recording, processing and interpretation of vertical seismic profiling (VSP) measurements in vertical and deviated wells. Using modern recording systems and three component downhole tool by Avalon Sciences, we provide high quality data, comprehensively analysed in short time after measurement.

VSP services:

- Check shots
- Zero-offset VSP
- Offset VSP
- Walkaway VSP
- Recorded data analyses:
 - average and interval velocity calculation
 - synthetic seismogram generation
 - pre-survey modeling
 - corridor stack
 - VSP-CDP transform Pwave and Swave



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