

# Bizon Geological Consulting

[www.bizongeology.com](http://www.bizongeology.com)

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BIZON GEOLOGICAL CONSULTING

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Drilling operations are very complex, time and money-consuming. Numerous problems can be encountered while drilling, some of which can be easily avoided.

The most severe drilling problems include kicks, total or partial static and dynamic mud losses, formation ballooning, wellbore collapse, fault reactivation, pack-offs, high connection/swab gases, tight spots, increased drag and torque - all of which may compromise safety and result in delays or failure of well completion.

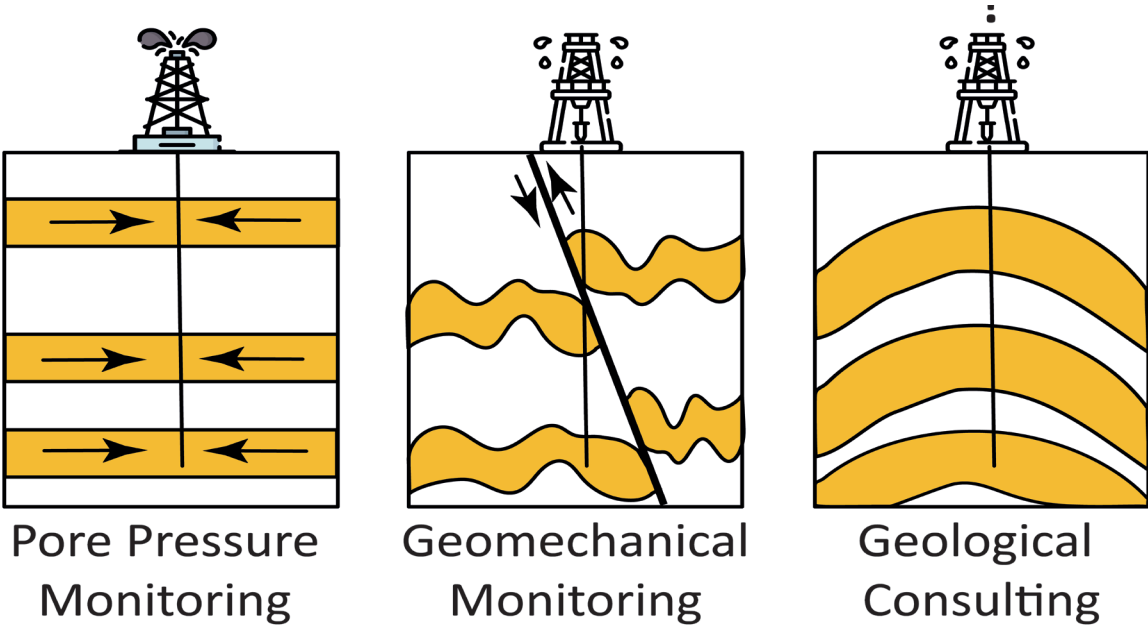
Real-time monitoring of drilling and gas data allows us to estimate and correct pre-drill formation pressure, and adjust mud weight to help with the successful drill-out of the well and achieving well objectives.

In addition to pressure and geomechanical monitoring, we also offer comprehensive geological services for the pre-drill and drilling

stages of the investment. We can provide sedimentological core logging, integration of stratigraphic and sedimentological data, and interpretation of inorganic geochemical data to help you increase your understanding of the subsurface geology and reducing geological uncertainty. We can work in the client's offices at the wellsite or from our office as required.

Bizon Geological Consulting Ltd. was established in 2017. We are an experienced team of geologists with extensive experience in pore-pressure monitoring from numerous basins all over the world, including frontier basins in West Africa, the Middle East, and South America.

We are here to help you at any stage of your operations. Feel free to contact us!



**Real Time  
Pore Pressure  
Projects**

Over  
**2500**  
days working on site

**>200 km** of PPwD  
wellbore monitoring

London      Calais

**3500**  
Reports  
sent

**SURINAME experts**

**11 of 15** wells drilled

**West Africa  
New Frontiers**

**Extreme  
Environments**



Drilling solutions

Pore Pressure while Drilling  
Geomechanics while Drilling  
Wellsite Geology



Geological consultancy

Post-mortem analysis  
Chemostratigraphy  
Sedimentology

Anywhere and anytime,  
we are ready to help with your well

Bizon Geological Consulting offers our customers an independent team of renowned subject matter experts in Quantitative Geosciences.

We provide services in the following areas:

- 1) Real-time pore pressure and fracture gradient analysis (PPwD - Pore Pressure while Drilling),
- 2) Drilling optimisation (Geomechanics monitoring),
- 2) Wellsite Geology (WSG),
- 4) Historical data review (post-mortem analysis),
- 5) Geoscience Software consulting,
- 6) Sedimentology and stratigraphy.

Pore pressure and geomechanical monitoring is a key service of our company. It involves analysis of the drilling, gas, and LWD/wireline data in order to validate and re-calibrate pre-drill pore pressure models. The main objective is to control the stability of the well, preventing kicks, losses, pack-offs, and well collapse.

We offer real-time calculations of the Pore Pressure, Fracture Gradient (drilling window),  $Sh_{min}$ ,  $SH_{max}$ , UCS, FA, overburden, share-failure gradient, and tensile failure gradients. Data are constantly calibrated upon the wellbore behaviour, gas data, and leak-off tests at casing shoes.

Bizon consultants gained experience on a broad spectrum of projects, including ultra-deepwater, HPHT, horizontal, subsalt, and wildcat wells from numerous basins around the world.

3500+

Number of reports

45+

Number of  
high profile projects



World experience



# Expert Team



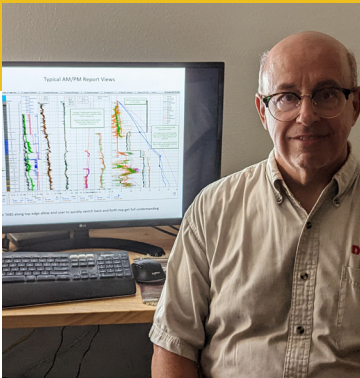
Dr Karol Jewuła  
Director

Karol graduated from Jagiellonian University (Krakow, Poland) with Master’s degree in Geology in 2010 and a PhD awarded by the Polish Academy of Sciences in 2021, specialising in sedimentology and stratigraphy. After graduation, he started working as a Mud Logger, Data Engineer and LaserStrat technician (wellsite chemostratigraphy service) for Halliburton. In 2013 he joined Chemostrat, where he worked as a stratigrapher. Since 2014 he has been working as a pore pressure while drilling (PPwD) Engineer at Ikon Science and as an independent consultant. He has regional experience as a stratigrapher and pore-pressure engineer/geologist in Europe (Southern Permian Basin, Culm Basin, North Sea, Paris Basin); Middle East: Northern Arabian Platform (Turkey); West Africa: Mauritania, Senegal, Ivory Coast; South America: Suriname, Falklands Islands; North America: Gulf of Mexico, Nova Scotia Basin; Asia: Brunei, Myanmar, Iraq. He is the author or co-author of several papers and conference abstracts on geology and engineering.



Łukasz Karda  
Director

Lukasz has a MSc degree in geology from the Jagiellonian University (Kraków, Poland). He started his professional career in 2011 as a Mud Logger, Data Engineer and Unit Manager for Halliburton in Poland, France and the North Sea on HPHT wells. In 2013 he changed roles establishing Real Time Service Quality Centre in Aberdeen, where he provided remote supervision of MWD/LWD/SDL processes, including data acquisition, log generation and delivery of these services to the customers for multiple projects from Europe, the Middle East and Africa. Since 2014 he has been working as Pore Pressure while Drilling Engineer since the beginning of this service in Ikon Science, developing procedures and training junior PPwD analysts and 3rd party clients. He has Pore Pressure experience from over 30 projects from Surinam, GOM, North Sea, Morocco, Coat d’Ivoire, Gabon, Mauritania, Senegal, Falklands Islands and Brunei and a number of other locations working in different roles.



Tim Sheehy  
Pore Pressure Guru

Over the last 40 years, Tim’s career has taken him to live in Halifax NS, Houston TX, Ventura Ca, Houston TX, Bogotá Colombia, Maturin Venezuela, Houston TX, Malabo Equatorial Guinea, and currently in Houston. He started his career working as a mud logger, then in technical support and operations management. After 20 years with Baker Hughes, he joined Knowledge Systems Inc. and returned offshore working as a pore pressure analyst and also worked in client offices doing pre- and post-drill analysis and basin modelling in Trinidad, New Orleans, Kuala Lumpur and Houston. He was the Training Manager at KSI when they were purchased by Halliburton, and Tim transitioned to Verdande Technology to introduce the Case-Based Reasoning branch of Artificial Intelligence into the drilling community. Since 2014, Tim was responsible for developing PPwD service in Ikon Science (Houston). He has experience in all types of drilling operations and rig types and has worked on numerous PP projects all around the globe. Tim has a B.S. in Geology from the University of Manchester, UK.



Team of experienced geologists and engineers



Experience in numerous challenging projects



24/7 monitoring available 365 days per year



# Our Services

## Real-time services



REMOTE 24/7 OR 4/7



CLIENT OFFICE



RIGSITE

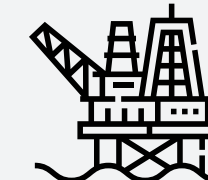
PP/FG analysts can monitor the well from any site in the world as long as a stable WITSML/ batch data stream is available. Advantages of this option include reduced cost due to lack of travelling expenses, less rig headcount and flexibility.

This option allows the PP-GM engineer to interact with the subsurface and drilling team directly, speeding up the decision process regarding determining the drilling window, designing mud weights, planning casing shoe depths, and setting drilling parameters for the most optimal performance.

The PP-GM engineer on the rig has the advantage of monitoring the well directly, observing cutting load and cavings, and can liaise with the drilling crew (company man, toolpusher and WSG) directly. Changes in the PP and geomechanical parameters can be detected even more rapidly than in the office or via remote service.

# Additional Services

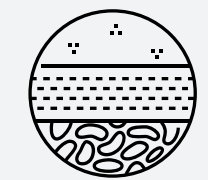
In addition to the pore pressure-geomechanical services, Bizon Geological Consulting can provide various other geological services which may be valuable for your operations.



WELLSITE GEOLOGY



POST-MORTEM  
WELL ANALYSIS



SEDIMENTOLOGY



CHEMOSTRATIGRAPHY

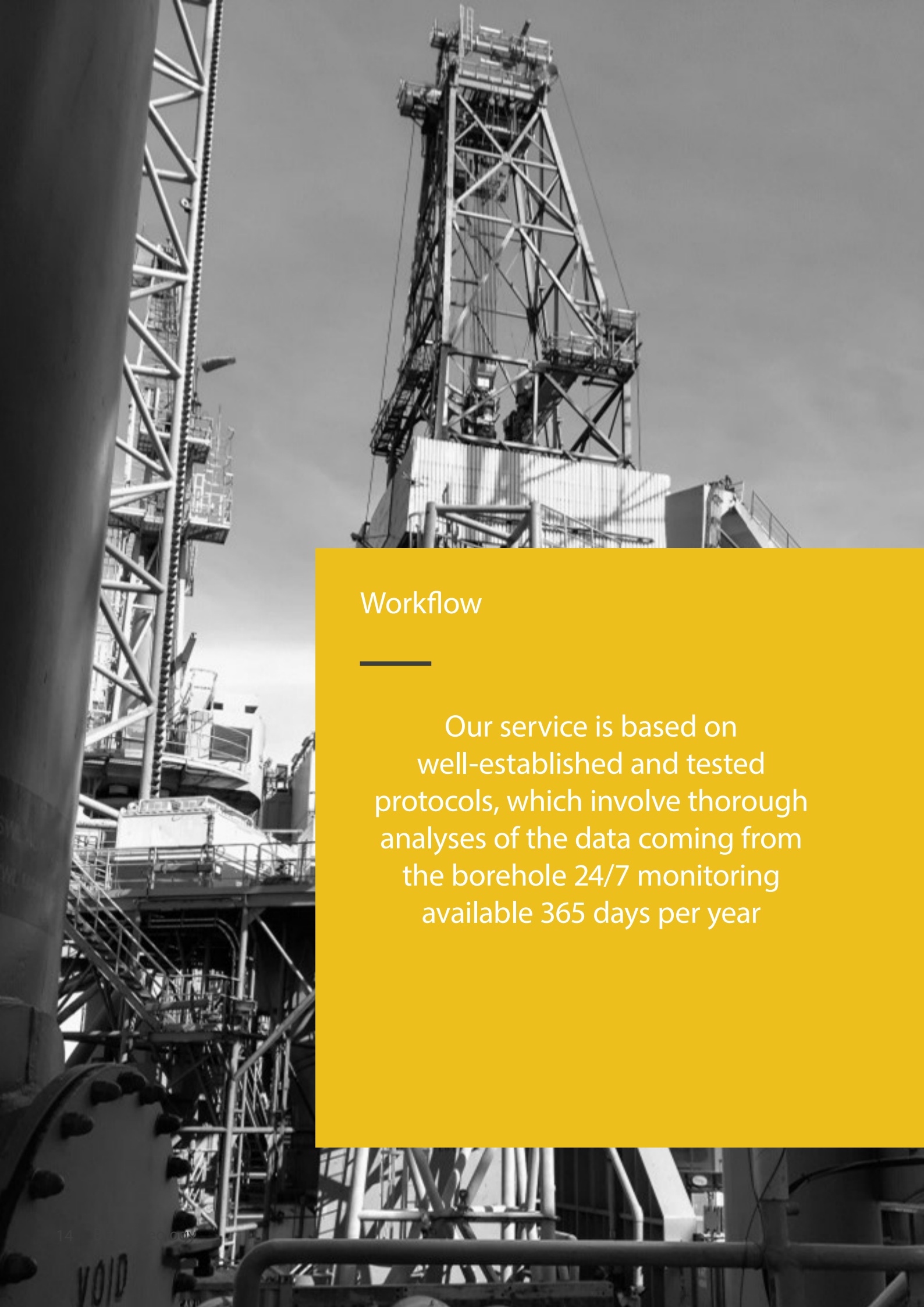


TRAINING



SOFTWARE TESTING

Our team is certified (BOSIET, MIST) and has all medical documentation required for working offshore.



We can provide a quick detection of increased pore pressure in argillaceous (shale) sequences where standard formation pressure testing is impossible due to low permeabilities.

The Pore Pressure while Drilling (PPwD) is a crucial safety service which can minimise the risk of kicks, blow-outs, wellbore instability, and total losses, which can cause an extended non-production time (NPTs). We offer an ROP optimisation by limiting the mud weight required to successfully drill a section.

### Workflow

Our service is based on well-established and tested protocols, which involve thorough analyses of the data coming from the borehole 24/7 monitoring available 365 days per year



#### PREPARATION

Client Pore Pressure/Fracture Gradients Prognosis will be reviewed and an assessment of the available data (Offset wells) will be performed. We will identify geological uncertainties and establish/upload a predrill model for the well and area on which the PPwD service will be based. The available predrill model will be updated in real-time as drilling progresses



#### MONITORING

This service will start as requested by the client and continue to well TD. All available data such as daily drilling, mud and geological reports, MWD, LWD, and wireline are utilised. Data is analysed in both time and depth domains. A daily report will be submitted, typically in time for the morning rig calls, and frequent updates sent to keep the well team informed of the pore pressure at all times.

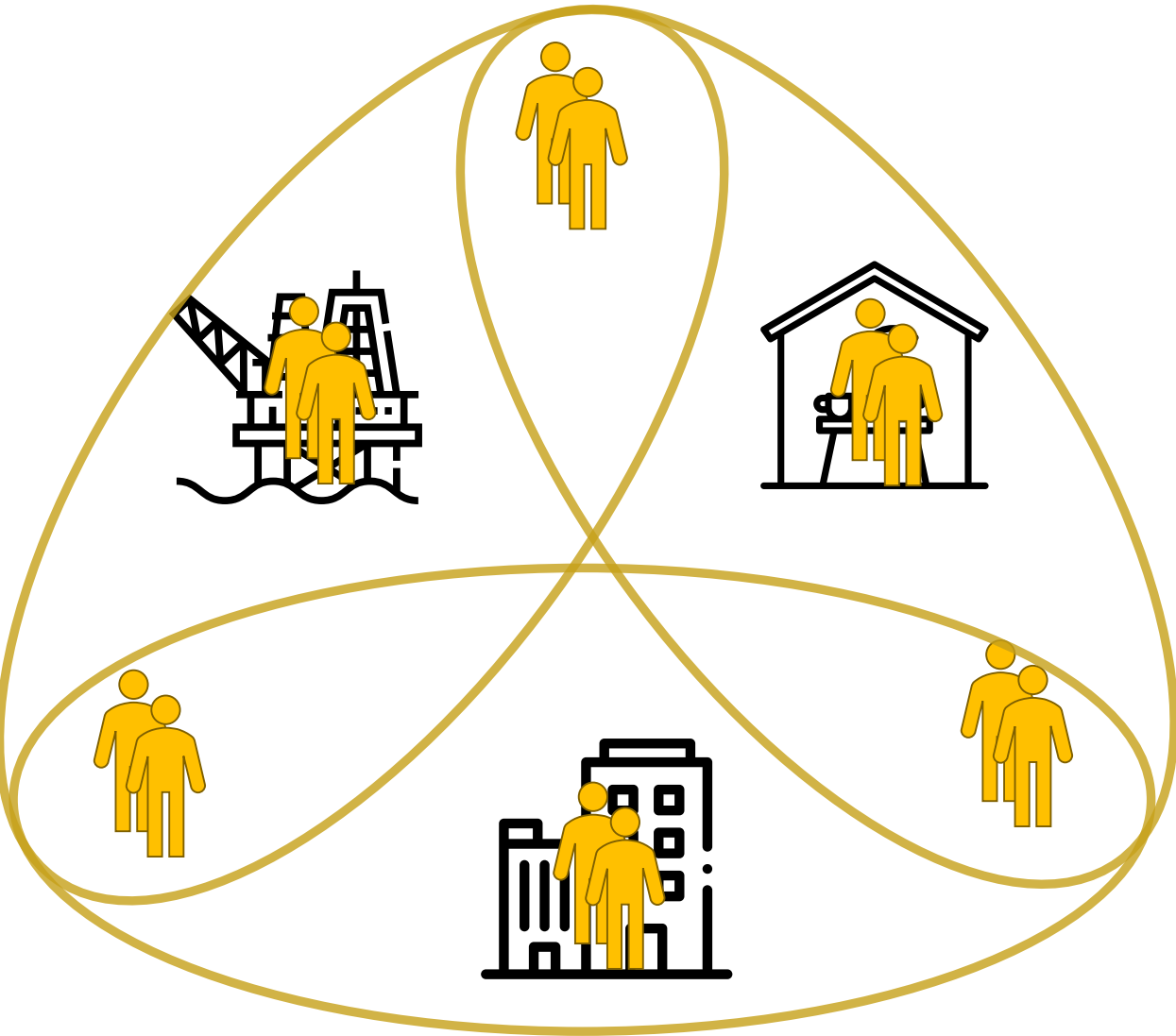


#### POST-WELL ANALYSIS

A report will be written summarising the drilling operation, work accomplished and final results. Relevant data will be provided in digital format together with the final project. If no additional data can be provided due to client confidentiality concerns, no Post Well Analysis is performed.



Becoming our Client



We offer a full-time, round-the-clock, real-time monitoring service to provide continuous updates on pore- and fracture pressure estimates and/or geomechanical parameters at the bit, and prediction ahead of bit to section or well TD. All data types will be used in a consistent, well-established and documented workflow. All of the proposed work will be completed using relevant software.



Visit our website:  
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