



### Leader in Bringing 21<sup>st</sup> Century Technology to the Drilling Market









### Our Mission

- To combine unique knowledge, expertise and leadership skills to create a ground-breaking plasma technology
- To ensure all our customers derive real business benefit from our sustainable technology

### Four Key Themes of our Strategy

- Excellent people and capabilities
- PLASMABIT<sup>®</sup> solution for oil and gas well abandonment and intervention market
- · World class research and development projects
- Diversified portfolio of advanced technology services for sustainable clean energy applications



# CEO's Message Founders Advisory Board We Believe in Leadership Team Achievements History Technology PLASMABIT° PLASMABIT<sup>®</sup> Applications Contacts

Content

### GA Drilling proud member of

- DECOM North Sea
- 6
- 6
- 8
- 8

4

- 12
- 14
- 16
- 17

20



PLASMABIT<sup>®</sup> technology is validated by European energy industry leaders associated in InnoEnergy



EGEC





### Iqor Kocis Co-founder/CEO

Igor is responsible for creating and implementing the strategic company direction, leading investment process and driving business. He brings more than 20 years of engineering, business development and managerial leadership experience to the company. Igor was recently selected as one of the TOP 100 innovators in Central and Eastern Europe.

### CEO's Message

"Many key industry sectors have experienced radical technological and operational changes in recent years. However, the geological based hydrocarbon and energy acquisition industries have yet to experience significant application of disruptive technologies. These sectors are now facing increasing challenges and there is a urgent need for "game changing" technology applications.

For example, such innovations are needed for the decommissioning of depleted wells or for providing access to the new energy resources within the deep geothermal layers.

Our company is founded on the desire to discover, develop and bring to the market new technologies that will deliver

a step change in efficiency and improve HSEQ performance. As an example our PLASMABIT° technology creates a fundamentally new way of material disruption with a sophisticated combination of proven physical, chemical

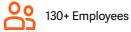
and mechanical procedures. Several global oil & gas companies have recognised the incredible potential of this technology shift and have joined our journey to a market ready product.

The first applications of PLASMABIT° technology are being prepared for testing in real conditions, in the field with our partners. Customers and partners of GA Drilling are together creating a decisive shift in the upstream industry. This will enable them to be the first to improve procedures and processes as well as the reliability, profitability and safety of their operations.

We are passionate about our vision and we are proud of the creativity and dynamics of our multidisciplinary team of 120+ professionals. We have created a company with a long term future and are ready for meaningful mutually beneficial cooperation for our partners as well as for clean and sustainable energy for mankind.

### People









90+ Master level

### Founders



#### Dusan Kocis Co-founder/Managing Partner

Dusan is responsible for company operations, finance, human resources and strategic planning. He has almost 20 years of experience in R&D and business development, being the main driving force of the equity investment rounds and financing in the company.

### Advisory Board



#### Tomas Kristofic Co-founder/Chief Technology Officer

Tomas is responsible for Technology and Product Development. With more than 20 years of experience in R&D management he is specialized in process automation, electronics and embedded system communication for preserving reliability in harsh environments.



#### Ivan Kocis Co-founder/Chief Scientist

Ivan is the expert adviser for the Research & Development Team, he brings new ideas for long-term development. He is engineering and industry veteran with 40 years of experience in leading positions with large organisations and successful start-ups. Acts as a member of scientific bodies of EU.



#### **Gerald Grohmann Business Strategy**

Gerald has been Chairman of the Executive Board and President of Schoeller-Bleckmann Oilfield Equipment AG, the global market leader in highprecision components and leading supplier of oilfield equipment. The main focus is on drilling string components and hi-tech downhole tools for drilling and completing directional and horizontal wells.



Mikhail Gelfnat Technology Development

Mikhail has 50-years work experience in the petroleum industry. He has contributed a lot in realisation of scientific ultra-deep wells drilling projects, development of retractable drill bits and hard rock coring technology. Mikhail has published more than 50 papers and has tens of inventions.



Ted Halstead **Climate Policies** 

American climate expert and policy maker, co-founder and CEO of the Climate Leadership Council, an international research and advocacy organization for climate solutions. He is a co-author of the plan called "The Conservative Case for Carbon Dividends", with respected USA politicians and business leaders.

### Advisory Board



#### Roy Baria Geothermal Energy

Roy is experienced professional in the field of Engineered Geothermal Systems (EGS), he directed several geothermal companies. Roy has been an advisor on EGS to governments in Europe, USA, Australia and the Far East. As the Task Leader for the EGS Annex of IEA/GIA, Roy represented them at the Intergovernmental Panel on Climate Change. In 2018 Roy received GRC's award for his contribution to EGS technology.



### Floris Ansinah Business Growth

In Royal Dutch Shell Floris acted as manager in Brasil, Netherlands, Argentina, Egypt and Turkey. His final position was a 10-year period as President and CEO of the Royal Dutch Shell companies in Saudi Arabia. Currently he is active in the Middle East in a wide range of Advisory and Consulting roles, operating from Dubai.



#### Ferenc Farkas Upstream Business Development

Ferenc has 28 years extensive business advisory and management experience in oil and gas business, as well as in investment banking and consultancy. He fulfilled various managerial positions in the area of upstream business development. Ferenc managed cooperation and strategic alliances in the upstream business for the Hungarian MOL Group worldwide. Currently, he is active with business development advisory mandates with prestigious companies.



#### **Cornelius Gearv** Communication Strategy

Cornelius has extensive experience in corporate communications, media relations and public affairs focused on energy and petroleum segments. He acted as BP Petroleum Senior Director for Communications and Public Affairs; before as Senior Media Relation Director for Amoco Corporation with large portfolio of successful campaigns, crisis management and media relations background within the oil & gas industry.

6





### We Believe in

## Leadership Team



TRUS Giving and receiving trust is fundamental for us.



### CREATIVITY

We always think big and seek for ways which others don't.



#### **FXCFPTIONALITY** We are the best in things that really matter.



COURAGE Striving for success, learning from failures. Getting through anything.



OWNERSHIP Personal accountability for own actions and results.



#### Karl Farrow **Business Development**

Karl is responsible for creating and implementing business and commercial strategy. He has over 30 years' experience in Oil and Gas asset management, decommissioning, commercial contract management, joint operating agreements, joint venture contracts, project funding, IPO's, mergers and acquisitions within the International Energy Sector.



#### Matus Gaidos Research & Development

Matus leads R&D department which brings added value in the form of innovative solutions to other departments and to our future customers. He was involved in several R&D projects and is responsible also for IP strategy of the company. Matus holds MSc. and PhD. from Mechanical Engineering.



#### lain Pittman **Operations Readiness**

lain is responsible for orchestrating departments that prepare the PLASMABIT technology for the market entry. He is a senior well abandonment & intervention engineer, specialising in the implementation of solutions during the design and operational phases of the well lifecycle. Whilst engaged by Shell he was responsible for engineering design, primarily focused on abandonment and complex re-abandonment operations.



Martin Nihlett Supply Chain

Martin is responsible for creating and implementing a supply chain & sourcing strategy. His main oil & gas expertise comes from directing NPD sourcing activities within Schlumberger's down hole directional drilling business. Martin has 30+ years' experience in engineering from design to procurement, within oil & gas, process industry and the automotive sectors.



#### Ninel Cheshire Health, Safety & Environment

Nigel leads a team responsible for all HS&E aspects of the company's operations. As an oil industry professional for nearly 20 years, Nigel brings the level of HSE up to that of oil industry standards to allow the company to operate globally, using one set of standards. Previously, Nigel was Senior HSE Advisor to Cairn Energy and HSE Advisor to the Nord Stream 2 Pipeline project.



#### Milan Pavlovic New Product Development

Milan is in charge of commercialization of GA Drilling products. He has 20 years of experience in new product development, technology and service development of bits, downhole drilling and measurement tools. Formerly he participated in Schlumberger's top drilling and measurements projects and worked in NPD of turbomachinery.



#### Marian Kamendy Infrastructure

Marian leads a team responsible for design, installation and maintenance of all company's infrastructure. He has spent over 15 years in design and delivery of information management solutions for various industries, including oil and gas, energy and finance. Marian led several delivery teams in Schlumberger, Sun Microsystems, Oracle and IBM.



#### Peter Moravek Finance

Peter is in charge of financial procedures, accounting and contracting the company supply chain. Before he was a part of the successful growth of one of the local largest one-way packaging companies and managed its contractors, finances, as well as transformation and merger with Bunzl, the world's leader in one-way packaging materials supply.



#### Sona Sodoma Lacuskova Human Resources

Soňa is responsible for leading HR team focused on recruiting and employee relations. She has years of experience especially in designing and implementation of HR processes, personal development and internal communication. She worked in energetics, finance, pharmaceutics and IT businesses. Most recently she acted as HR Director in software company Sygic.



#### Monika Trokova Strategic Planning

Monika is a head of strategic planning, being responsible for corporate strategy, functional planning and financial controlling. Before she acted as a project manager for technology development. Monika gained her experience in various finance teams of one of the largest electronics retail, as well as in international trade and quality management in an aerospace engineering industry.



#### Lubos Slovak **Corporate Affairs**

Lubos is responsible for corporate affairs and investor relations agenda, after he led a grants team concerned with projects and their life cycle, including their implementation. Before GA Drilling, he has been active in the project management of community programs of the European Union and in a range of international structural funds.



#### Katarina Durechova Quality

Katarina is driving business processes, their design and implementation in GA Drilling. She spent more than 15 years within Deutsche Telekom subsidiaries as a business process manager, she also devotes time to processes & projects as an external consultant and trainer. Katarina is a PRINCE 2 Practitioner, Certified SAFe SCRUM MASTER and Six Sigma Champion.



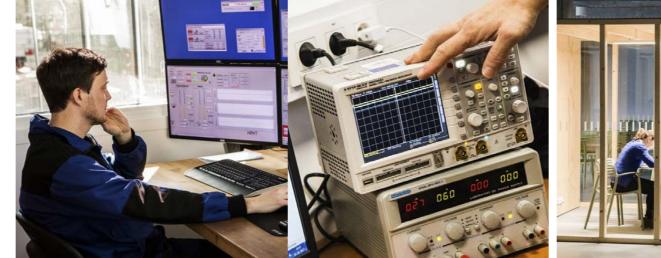
Michal Vrsek Manufacturing

Michal is responsible for production and assembly of testing equipment. He takes care of facilities in production and develops the new product fabrication for final PLASMABIT<sup>®</sup> technology. Before he worked in R&D of the global company in the UK, Germany and Slovakia, where he was responsible for developing bumpers for world-class car producers.



#### lveta Istokova **Communication & Marketing**

lveta is responsible for marketing and communication. Before she managed teams in the international company Deutsche Telekom, where she was responsible for corporate identity, sponsoring, internal communication and was a part of change management process. She also led international PR team within stem cells industry.

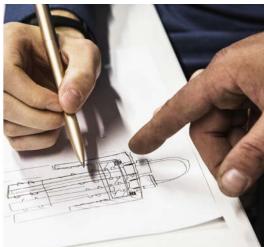














### Achievements

- The Company is operating in Slovakia, United Kingdom (Bristol , Aberdeen) and United Arab Emirates (Abu Dhabi)
- 10 years in the R&D for drilling, well construction and intervention; certified with EN ISO 9001:2015 and EN ISO 14001:2015
- Our intellectual property consists of 10 Granted Patents, 3 US Patent Applications, 2 EU Patent Applications, 5 priority Slovak Patent Applications, 1 international Patent Cooperation Treaty patent application, 2 utility models and 2 international registered trademarks
- Repeatedly ranked among the best European innovative companies and continuously supported by the European Union Framework Programs
- The first ever plasma milling underwater
- The first ever plasma milling in high pressure and high temperature (HP/HT) environment
- The PLASMABIT<sup>®</sup> technology currently in prototyping stage
- Proven performance for continuous milling of oilfield tubular
- Supported by InnoEnergy, the association of top European leaders of energy industry
- Statement of Feasibility for Plasma milling system granted by DNV GL the world's leading O&G certification company
- Oil major MOL Group contracted to perform the first PLASMABIT® field testing at onshore oil & gas wells
- Ensuring our integrated service application and deployment solution is in line with industry standards and approved best practice













# History 2008 2009 2010 2011 2012 2013 **GA Drilling**

- GA Drilling formed as Geothermal Anywhere
- Full focus on PLASMABIT<sup>®</sup> drilling technology for geothermal applications
- · First successful laboratory drilling completed
- First public grant won with the total amount of over €2.5M contracted
- GA Drilling opened a laboratory in the premises of the Slovak Academy of Sciences
- Demonstration of the 1<sup>st</sup> generation of PLASMABIT<sup>°</sup> drilling technology
- GA Drilling certified to the ISO 9001:2008
- Additional large infrastructure grant projects won in fierce competition
- First PLASMABIT<sup>®</sup> test pre-prototype successfully accomplished
- GA Drilling among the best 25 European high-tech companies within the European Venture Contest
- Joint project with Weatherford
- Rebranding to GA Drilling
- Joint Industry Project with major oil & gas companies
- Investment and cooperation agreement with Schoeller-Bleckmann Oilfield Equipment



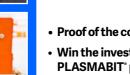
201

2015

2017

2018

2019



- - at onshore oil & gas wells

- clamps & couplings

#### Drilling and milling testing in different environments

GA Drilling ranked as one of the most dynamic technological innovators within the CEE region

- Multidisciplinary R&D team strengthening
- GA Drilling at EXPO Milan as a technology innovator
- The first ever plasma milling underwater
- The first ever plasma milling in HP/HT environment

#### Proof of the concept in high pressure environment – at 42 MPa

#### • Win the investment backing from group of financial investors for PLASMABIT<sup>°</sup> prototype development

• PLASMABIT presented at the EU Council Residence in Brussels

• Statement of Feasibility for PLASMABIT<sup>®</sup> milling by the world's leading O&G certification company DNV GL Feasibility Statement

#### Proven performance for continuous milling of oilfield tubular

Milling of 30ft oilfield tubular on the thickest part including cables,

#### Gaining support of European leaders in energetics associated in InnoEnergy

• Strategic partners for Milling Program and Drilling Program

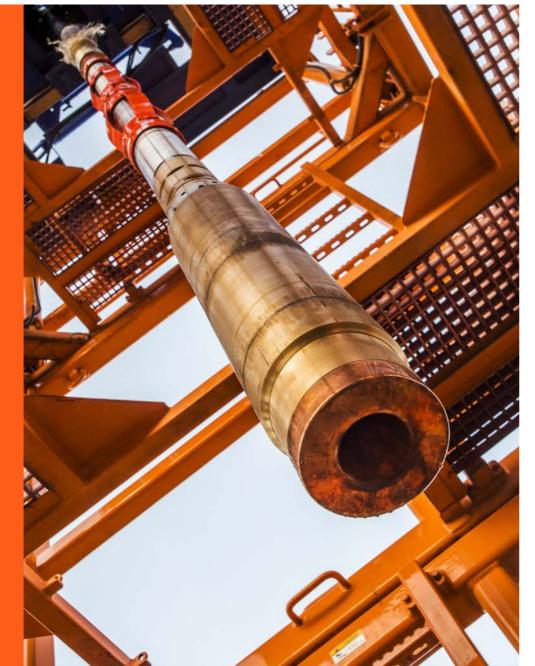
### Oil major MOL Group contracted to perform the first PLASMABIT® field testing

Opening new branch in Bristol, UK

Ensuring our integrated service application and deployment solution is in line with industry standards and approved best practice

## Technology PLASMABIT® is Real Ground-breaker

- A high power rotating electric arc that reaches the temperature of the sun (6,000°C), yet it is safe to operate
- PLASMABIT<sup>®</sup> drilling/milling tool disintegrates any materials – rock, steel. cement – without any physical contact
- PLASMABIT<sup>®</sup> performs exceptionally well in hard rock, resulting in an order of magnitude greater rate of penetration
- Unlike conventional drilling tools, our bit has no moving parts, which means there is minimal wear and tear
- The tool enables a real-time data acquisition with an immediate feedback during the whole process
- Accredited for offshore decommissioning by DNV GL, the leading global oil and gas accreditation organization
- Design of core technology systems completed and protected by 20+ patents in 10 countries of the world



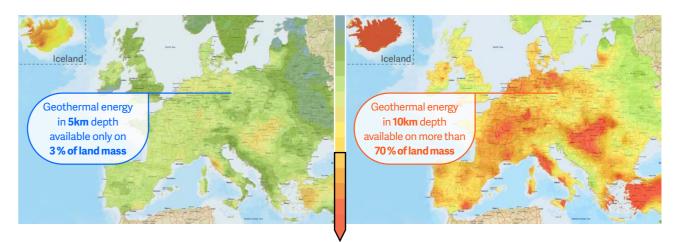
## PLASMABIT<sup>®</sup> Ultra Deep Drilling Application

Geothermal energy is the only renewable source of clean and baseload energy, available 24/7/365. It works regardless of weather conditions or the day-night cycle. It is so clean and compact that geothermal power plant could be built nearby cities.

Despite its tremendous promise, geothermal power is held back by one overwhelming limitation: the cost of conventional drilling grows exponentially with depth, limiting the economic viability

of geothermal power to relatively shallow depths, available in only 3% of the populated world. PLASMABIT<sup>®</sup> overcomes this by offering much faster drilling at "close to" linear costs – to depths of up to 10km, unlocking clean, inexpensive, baseload power in 70% of the world.

PLASMABIT<sup>®</sup> technology also significantly reduces the economic risk of geothermal exploration by tapping the constant heat available at greater depths, instead of searching for isolated pockets



Enabling high power

of heat at shallow depths. PLASMABIT<sup>®</sup> drilling to greater depths also means higher temperatures, making energy production considerably more efficient, which also reduces the cost of energy (LCOE).

The end result of revolutionary PLASMABIT<sup>®</sup> drilling technology is a dramatic environmental and economic double-play: the most promising and abundant new source of clean energy is also the least expensive.

### PLASMABIT<sup>®</sup> Milling Application

Approximately 30 000 wells worldwide have to be decommissioned in the next 15 years. The operation is based on milling key sections of casing and production tubing, then plugged to create a safe environmental barrier.

Conventional approaches are slow, costly and environmentally damaging. PLASMABIT<sup>®</sup> technology utilizes a high temperature plasma stream for rapid steel structural degradation and slag blow-out.

This reduces the time and cost to decommission each well by 35% to 50%.

Contactless plasma milling reduces energy need downhole and brings minimal wear and tear. It removes multistring well tubing as well as casing or control line, all at once. PLASMABIT<sup>®</sup> technology with a rapid, efficient mobilization and deployment enables multiple wells closed in short time.

Besides well plug and abandonment, our technology can be more efficient and productive than traditional methods for various well intervention operations: slot recovery, sidetracking, pipe recovery, fishing and others. PLASMABIT° technology brings significant cost reduction and HSE improvements.

## Future PLASMABIT<sup>®</sup> Spin-off Applications

#### Reservoir Stimulation by Plasma Pulses

Plasma-pulse method is used for generation of pressure waves allowing extraction of share gas, tight gas, tight oil and coal bed methane reservoirs. With reduced water consumption and low energy emissions it has no negative environmental impact.

#### Subsea Decommissioning Operations

A Remotely Operated Vehicle (ROV) with a mounted PLASMABIT milling tool can be used to clean and remove pipelines and mattresses or cut through jackets, anchors, chains or any other subsea infrastructure that needs to be decommissioned.

The operation is diverless, requires minimum personnel and can be deployed quickly and essentially in any water depth.

#### **Mining and Tunneling**

Today's high cost valuation of megaprojects is closely linked to the productivity of tunnel boring machines (TBM's) and their availability to provide real time data. Plasma technology uses thermal rock weakening. In combination with high energy pulses it may induce new cracks within intact rock material. It changes hard-rocks to soft-rocks with all the related benefits. Application is designed for mining and tunneling market.





Norwegian United Kingdom Continental Shelf Canada **Continental Shelf** 3,500+ wells 2.000+ wells 4,500+ wells Viddle East/Arabian Gulf 3,000+ wells Gulf of Mexico 4.500+ wells Brazil Southeast Asia 5,000+ wells 7,000+ wells

#### **Raw Materials**

Raw materials demand is booming due to proliferation of batteries and other new products. PLASMABIT° tool provides Real Time Data Acquisition while drilling with on-line spectroscopy and unique 3D mapping for more efficient mineral exploration.

#### Water Desalination and Purification

By accessing greater heat at greater depths with PLASMABIT<sup>®</sup> technology, ultra-deep geothermal can provide excess heat for efficient water desalination and purification. This can help meet the evergrowing demand for drinking water in developing countries.



# Getting through Anything





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