Bringing 21st Century Technologies to Drilling Industry

Bratislava - London - Abu Dhabi
GA Drilling is an European high technology company developing and commercializing the groundbreaking technology platform PLASMABIT delivering substantial time and cost savings in Oil & Gas and other energy industries.

GA Drilling at a glance

- Prototype stage of the PLASMABIT technology
- Six years in the R&D for drilling, well construction and intervention
- Cooperation with world high-tech leading companies and institutes
- 60+ employees
- Eight patents
Groundbreaking technology platform PLASMABIT

PLASMABIT technology is based on a **non-contact solution** using focused electric plasma delivering applications for both **milling and drilling**.
PLASMABIT STEEL MILLING

Well Intervention
• Well Plug and Abandonment
• Re-Entry
• Casing exits
• Fishing services

Benefits
• Shortening of P&A process due to its structural simplification by approx. 50% - from planning to execution
• 100% rigless operation - LWI vessel
• Protection of existing assets by keeping production tree and production tubing - shift from permanent to temporary P&A
• Simple and fast cut of production tubing and logging cables
Well construction

• Hard Rock Drilling
• Pre-Salt Layer Drilling

Benefits

• Non-Contact process
• No friction
• No wear and tear
• Reduced tripping
• Higher rate of penetration (ROP)
• Full automation
• Spectroscopy Data Collection
To address some of the current O&G challenges, such as **Well Intervention** (steel milling, re-entry, casing exits) and **Hard Rock Drilling**, GA Drilling initiated the **PLASMABIT Joint Industry Project (JIP)** with well-known Oil & Gas companies.

**JIP Members’ benefits**

- Cost savings ahead of competitors
- Technology customization for partners’ preferred applications
- Product volume discounts
- Expertise exchange opportunity with top innovators
- Cutting-edge technology available for partners ahead of the market
PLASMABIT – JOINT INDUSTRY PROJECT MEMBERS

E-ON  Statoil  TullowOil  SaudiAramco  Weatherford  SBO
# IPRs in crucial patent zones

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<thead>
<tr>
<th>Priority Date</th>
<th>Title</th>
<th>Patent/App. No.</th>
<th>Patent Office</th>
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<tr>
<td>24/10/2012</td>
<td>THE PROCESS OF CASING CREATION BY ADDITIVE WAY IN WELLS AND EQUIPMENT FOR ITS IMPLEMENTATION</td>
<td>PCT SK2013-050008</td>
<td>Patent Cooperation Treaty</td>
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<tr>
<td>03/05/2013</td>
<td>GENERATION OF ELECTRIC ARC DIRECTLY THERMALLY AND MECHANICALLY EFFECTING THE MATERIAL AND EQUIPMENT FOR GENERATING ELECTRIC ARC</td>
<td>PP 50006-2013</td>
<td>Intellectual Property Office of Slovak Republic</td>
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<td>18/09/2013</td>
<td>CASING CREATION BY LAYERING OF MATERIAL USING KINETIC SPRAYING AND EQUIPMENT FOR ITS IMPLEMENTATION</td>
<td>PP 50043-2013</td>
<td>Intellectual Property Office of Slovak Republic</td>
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<td>23/12/2014</td>
<td>A METHOD OF REMOVING MATERIAL BY DISINTEGRATION USING AN ELECTRIC PLASMA</td>
<td>PP 50079-2014</td>
<td>Intellectual Property Office of Slovak Republic</td>
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Competence center for new materials, advanced technologies and energy

Innovative Energy Sources for High Pressure Impulses

Robust Sensoric System for Extreme Environments

Materials for deep geothermal study

Innovative Energy Sources for High Pressure Impulses

Plasma research and development, ceramic materials

Impact of Drilling for Geothermal Applications (EU CIP Brussels)

Thermal Vitrification Casing while Drilling technology case study

Drilling Platform Control Unit

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Advanced Thermal Rock Processing - EU FP7 Brussels

Contactless Drilling Methods and Simulations

Drilling technology for ultra-deep geothermal wells

Drilling platform for extreme environment

Plasma-based high productivity material treatment

Infrastructure for pulsed plasmothermic rocks disintegration

R&D Center for Robust mechatronic systems

R&D Center for Plasmothermic processes

EU Structural Funds

International Projects

National Grants