We are developing a groundbreaking drilling system PLASMABIT™ capable of drilling to deep depths more than:

5 times CHEAPER than any of today’s methods
4 times FASTER than other drilling procedures
3 times LARGER diameter at the bottom
2 times DEEPER than common drill hole
1 PROCESS for casing and drilling
0 TRIPPING and drilling bit replacement

Geothermal Anywhere enables utilization of identified oil and gas deep reservoirs and 90% of global geothermal energy that are not accessible today.
## EXECUTIVE SUMMARY

| Type of business | Deep drilling technology  
|                  | ▪ Clean tech - renewable green energy: Enhanced **geothermal** systems.  
|                  | ▪ **Oil & gas** drilling.  
|                  | ▪ Intelligent **mining and tunneling**.  
| Company stage    | Start-up in the fourth year in the drilling field with secured financing €9 MM.  
| Mission          | To combine original unique technological knowledge, expertise and management skills to **create a cost-effective deep drilling system** for accessing and utilizing vast sources of energy, stored several kilometers under the Earth’s surface.  
| Technology       | ▪ Patented, game-changing innovative **deep drilling system PLASMABIT™**  
|                  | ▪ **Rock disintegration** technology and related solutions  
|                  | ▪ **Non-contact drilling device** based on robust plasma generator  
|                  | ▪ To efficiently reach sources up to **10 km / 35000 ft** deep  
| Market           | ▪ Demand for new cost-effective drilling solutions is **pulled by existing market**.  
|                  | ▪ Estimated **energy market** will be **US$ 800 billion** in 2020.  
|                  | ▪ Estimated **oil and gas drilling** market **US$ 87 billion** in 2011.  
| Company contact  | Igor Kocis, CEO  
|                  | Geothermal Anywhere (GA)  
|                  | Email: [Igor@geoany.com](mailto:Igor@geoany.com)  

**To bring energy to everyone. Anywhere!**
### CHARACTERISTICS OF PLASMABIT UNIQUE SOLUTION

#### What it’s all about?
- Radically innovative plasma drilling system PLASMABIT™
- Geothermal Anywhere enables real drilling revolution

#### What is different?
- Cost-effective drilling for deep wells (3-10 km)
- Linear increase of cost per depth in contrast to exponential
- Large constant diameter along the well
- Continuous casing-while-drilling system ContiCase – well stability

#### What does it mean for the market?
- Efficient extensive deep hydrocarbon reservoirs access
- Cost efficient Enhanced geothermal systems, clean energy
- Onshore and offshore, any geographical location

#### Why have others not done it, but we can?
- Interdisciplinary expert team covering all necessary fields on top level with necessary resources and laboratories
- We built up networked Research Center for Deep Drilling with leading industry, university and academia partners
PLASMABIT deep drilling system
# PLASMA<sup>TM</sup> CORNERSTONES

## Benefits

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost effectiveness</td>
<td>Non-Contact drilling</td>
</tr>
<tr>
<td></td>
<td>No friction, No wear and tear</td>
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<tr>
<td></td>
<td>Energy efficient melting process</td>
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<tr>
<td>Reducing nonproductive time</td>
<td>No tripping</td>
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<td></td>
<td>Casing/sealing while drilling (CwD)</td>
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<td></td>
<td>Measurement while drilling (MWD)</td>
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<tr>
<td>Higher production fluid flow</td>
<td>Large non-tapering diameter of the well</td>
</tr>
<tr>
<td>Drilling depth 5 - 10 km</td>
<td>No mechanical drilling connection between surface and underground</td>
</tr>
<tr>
<td></td>
<td>High temperature, high pressure conditions (HTHP)</td>
</tr>
<tr>
<td>Improved safety</td>
<td>Full automation</td>
</tr>
</tbody>
</table>
PLASMABIT technology process description

1. Thermal rock processing regardless of rock type
   - Intensive heat flow generated by electrical plasma
   - Water steam heated inside the electrical arc (>5 000 K)
   - Heat flow thermally processes the rock and changes the phase of the rock

2. Fragmentation process based on rapid cooling
   - Thermally processed rock cooled with water in the controlled way
   - Controlled process of fragmentation, 98% of fragments below 1 mm
   - Different physical processes based on rapid cooling of thermally processed rock

3. Rock fragments removal
   - Water transport of fragments from PLASMABIT bottom
   - Interface to existing mud system
Our breakthroughs – achieved and future milestones

- **Dec 2010**
  - 2\textsuperscript{nd} generation of plasmatron scale 1:10, pulsed mode
  
  - Non-contact drilling

- **Aug 2011**
  - High pressure and temperature protective vessel (up to 1000 Bar)
  
  - HPHT environment

- **Dec 2011**
  - Plasmatron startup in water environment
  
  - HPHT environment

- **Aug 2011**
  - Gliding arc – protection for electrodes
  
  - Aug 2011

- **Aug 2011**
  - High pressure and temperature protective vessel
  
  - Aug 2011

- **Dec 2011**
  - Plasmatron startup in water environment
  
  - Dec 2011

- **Aug 2012**
  - Continuous casing while drilling
  
  - Proof-of-the-concept

- **Oct 2012**
  - PLASMABIT Field Prototype
  
  - Demonstration

- **Dec 2012**
  - Multiphase laboratory plasmatron with wider diameter
  
  - Drilling speed

- **May 2012**
  - Thermo-hydraulic rock fragmentation
  
  - Speed and efficiency

- **Aug 2012**
  - Continuous casing while drilling
  
  - Casing while drilling

- **Sep 2013**
  - PLASMABIT Drilling System
  
  - Pilot project

- **Oct 2012**
  - PLASMABIT Field Prototype
  
  - Demonstration

- **Dec 2012**
  - Multiphase laboratory plasmatron with wider diameter
  
  - Drilling speed

- **Sep 2013**
  - PLASMABIT Drilling System
  
  - Pilot project
Drilling Costs - PLASMABIT Savings

- **Length of the borehole:** 4.5 km / 15,000 ft
- **Conventional drilling cost:** $6.5M
- **PLASMABIT with ContiCase and enhanced ROP cost:** $1.7M
- **Additional fixed savings:** ~$600k

*ROP – Rate of penetration*
Drilling using PLASMABIT

1. Eliminates *Tripping* costs
2. Increases Rate of penetration (ROP) – constant speed
3. **No weight** on bit
4. Reduces *drilling rig complexity*
5. Decreases requirements on *Mud*
# INTELLECTUAL PROPERTY RIGHTS

- GA has finalized and applied for a set of patents protecting the PLASMABIT IPR

<table>
<thead>
<tr>
<th>Patent</th>
<th>Patent Overview</th>
<th>Patent Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>New drilling concept</td>
<td>Equipment for excavation of deep drill holes in geological formation and the manner of energy and material transportation in the drill holes</td>
<td>PCT/SK2008/050009; EU EP08767327.3 US 12/666,224; Slovak PP5087-2007</td>
</tr>
<tr>
<td>Advanced drilling platform</td>
<td>Equipment for realization of deep boreholes and method of realization of deep boreholes</td>
<td>PCT/SK2010/050002; EU EP10703136.1 US 13/148,032; Slovak PP 5011-2009</td>
</tr>
<tr>
<td>Advanced drilling method</td>
<td>Method and equipment for disintegration of materials</td>
<td>PCT/SK2010/050016; Slovak PP 5062-2009</td>
</tr>
<tr>
<td>Virtual water plasma generator</td>
<td>Virtual water plasma generator and method for generating of electric thermal plasma</td>
<td>Slovak PP 5046-2011</td>
</tr>
<tr>
<td>Thermo-mechanical drilling method</td>
<td>Breaking up rocks with its melting, and interaction of water streams</td>
<td>Slovak PP 5045-2011</td>
</tr>
<tr>
<td>Parallel thermal plasma generators</td>
<td>Thermal plasma generation system for parallel generation of thermal plasma and process of parallel thermal plasma generation</td>
<td>Slovak PP 5044-2011</td>
</tr>
<tr>
<td>Electrode movement</td>
<td>Autonomous governor of the plasma generator electrodes movements</td>
<td>Slovak PP 5048-2011</td>
</tr>
<tr>
<td>Method of rock disintegration</td>
<td>Method of rock disintegration and equipment for performing of disintegration</td>
<td>Slovak PP 5047-2011</td>
</tr>
</tbody>
</table>

- Another two utility models applications in filing process
- New patent applications in preparation
To bring energy to everyone.

Anywhere!