Agenda

➢ Highlight certain topics
➢ Provide a decommissioning matrix
➢ Takeaways
Decommissioning in Brazil

➢ The ANP Resolution 27/2006 (Decommissioning of Production Installation)
➢ The ANP Resolution 41/2015 (Technical Regulation Subsea Operational Safety System)
➢ The ANP Resolution 46/2016 (Operational Safety System for Well Integrity)
Introduction

➢ Brazil has 150 offshore production units in which 54% have more than 25 years.
➢ Annual expenditures with decommissioning are expected to reach an average of US$ 800 million in the next 3 years.
➢ Government agencies are working to set out the rules for this decommissioning wave as well as to reduce uncertainties for companies which want to buy and produce more oil from mature fields.

Quoting: https://business.braziltexas.org/events/details/decommissioning-and-life-extension-for-oilfields-22
Summarizing the Discussion

- **Scale** - 150 offshore production units in which 54% have more than 25 years.
- **Fiscal aspects** – average US$ 800 million in the next 3 years.
- **Predictability** - rules for decommissioning to reduce uncertainties
Scale

➢ Surface facilities
  ➢ Above the seabed – *e.g.* floating and fixed facilities
  ➢ On the seabed – *e.g.* subsea tree, jumpers, manifolds, mud mats, gathering lines, export pipelines

➢ Subsurface equipment- *e.g.* well, casing, tubing, artificial lift, flow control, monitoring equipment, and downhole tools
Fiscal Aspects

- **Asset utilization** - *e.g.* equipment (*e.g.* vessels and tools), personnel, expertise
- **Taxes** - *e.g.* registration fees, import, export, income, capital gains, harbor maintenance fees, value added, industrial, and social security taxes
- **Performance obligations** – *e.g.* liability, insurance, warranty obligations
- **Financing** – *e.g.* time value of money, cash flow, capital budgeting and access to capital
- **Security** – *e.g.* letters of credit, guarantees, bonds, decommissioning funds, security and trust agreements
Predictability

- **Systematic approach** - clearly defined
- **Fairness** - impartiality and transparency
- **Protecting stakeholders** – *e.g.* citizen’s groups, industry groups, government agencies
# Decommissioning Matrix

<table>
<thead>
<tr>
<th>Decommissioning Activity</th>
<th>Fiscal</th>
<th>Environmental Concerns</th>
<th>Predictability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Surface facilities above the seabed</strong></td>
<td>Asset utilization, Taxes, Performance obligations, Financing</td>
<td>Pollution, Naturally Occurring Radioactive Materials (NORM), Shipping and fishing obstructions</td>
<td>Systematic approach, Fairness, Protecting stakeholders</td>
</tr>
<tr>
<td><strong>Surface facilities on the seabed</strong></td>
<td>Asset utilization, Taxes, Performance obligations, Financing</td>
<td>Pollution, NORM, Shipping and fishing obstructions</td>
<td>Systematic approach, Fairness, Protecting stakeholders</td>
</tr>
<tr>
<td><strong>Subsurface equipment</strong></td>
<td>Asset utilization, Taxes, Performance obligations, Financing</td>
<td>Pollution, NORM, Shipping and fishing obstructions</td>
<td>Systematic approach, Fairness, Protecting stakeholders</td>
</tr>
</tbody>
</table>
Takeaways

➢ Regulatory policies and procedures can substantially change the profile of companies investing and operating in the petroleum industry.
➢ Regulatory policies and procedures may enhance technical capability and financial reliability for end of life cycle activities.
Takeaways

➢ Appreciate that the end of life cycle regulatory regime the petroleum industry now faces in many cases may be the regulatory regime that the alternative energy industry will face going forward.

➢ Promote knowledge sharing in a collaborative effort that does not jeopardize stakeholder interests.

➢ Thank you!