UT Energy Week 2015
Frontier – Safety, Regulation & Environmental Issues
Anadarko Petroleum Corporation - Mozambique
February 16, 2015
Mozambique

- Former Portuguese Colony
  - Independence 1975
  - Civil war 1977 – 1992

- 1990 Constitution
  - Established Multi-party democracy
  - Stable presidential republic

- Economy
  - Based mainly on agriculture
  - Coal, tourism, Oil & Gas
  - Population 24 million
  - Remarkable economic growth of ~8% over the last 15 years
Anadarko Locations

- **Palma**
  - Site of Future LNG plant
  - Onshore drilling locations

- **Mocimboa da Praia**
  - Airfield
  - Aviation Base
  - Helicopter departure point for offshore

- **Pemba**
  - Shorebase location for drilling support

- **Maputo**
  - Head office
Frontier Activities – HSE

▪ Protecting the Environment
▪ HSE & Regulatory Standards
▪ Protecting Workforce Health
▪ Workforce Safety
▪ Emergency Response
Protecting the Environment

- **Environmental Baseline Studies**
  - Terrestrial
  - Marine
  - Transition Zones

- **Assess Potential Environmental Impacts**

- **Mitigation of Impacts – Hierarchy**
  - Avoid
  - Minimize
  - Mitigate (repair / restore)
  - Offset

- **Stakeholder Engagement**
  - Community Meetings / NGOs
HSE & Regulatory Expectations

- **Country Laws / Country Regulations**
- **Company HSE Programs / Company Values**
- **Good International Industry Practice**
- **Lending Institutions**
  - IFC Performance Standards
  - Equator Principles
- **Stakeholder Engagement**
  - Community
  - NGOs
Workforce Health Protection

- Preliminary Health Baseline Surveys (prior to entry)
- Community Resources available (or not available) for workforce
- International or Regional Health Partner
  - Medical Support
  - Medical Evacuation Plan
- Infectious Disease Mitigation
  - Tuberculosis
  - Malaria
  - Influenza
  - Ebola
- Infectious Disease Corrective Action Plan
  - Medical Evacuation Preparedness
Workforce Safety Challenges

- Local Workforce (non-skilled labor)
  - Life Skills
  - 6HTK = Six Hazardous That Kill
  - 6WPE = Six Ways to Protect the Environment
Emergency Response

- Environmental Incidents / Safety Incidents / Health Incidents
- Evacuation of Personnel (security issues)
- Identify Anticipated Risks / Scenarios

Risk Assessment Matrix
- Likelihood / Probability
- Significance of Event / Severity

Establish Consistent System (Incident Command System)
- Emergency Response Team (Local)
- Incident Management Team (Area Support)
- Incident Support Team (Remote Support)
- “Go Team” Concept

Collaborative Efforts
- Government Resources & Cooperation
- Other Oil & Gas Industry in Area
- Local Industries
- International Response Efforts
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