Oil and Gas Services Industry in Myanmar

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Agenda

- Myanmar Overview
- Historical Background
- Schlumberger in Myanmar
- Oilfield Services Industry
- Current Operators’ Landscape
- Oil and Gas Ecosystem
Myanmar Overview

- Population: 53 Million
- Shares borders with:
  - China, India, Bangladesh, Laos & Thailand
- Main Economy:
  - Agriculture, Natural Resources, Tourism
- Oil Production: 13,000 bbls / day
- Gas Production
  - MOGE: 50 MMscf / day
  - Total: 800 MMscf / day
  - Petronas: 250 MMscf / day
  - PTTEP: 350 MMscf / day
  - Daewoo: 500 MMscf / day
Historical Background

- **1886**: Mechanized Drilling introduced by Burmah Oil Co. (BOC)
- **1963**: BOC Nationalized, precursor of MOC and now MOGE
- **1970s & 80s**: Offshore explorations
  - MOC, Gulf, Texaco, CFP, ESSO, Cities, JPDC, JAPEX
- **1990s**: Onshore explorations
  - Shell, Amoco, Unocal, BHP, PetroCanada, Idemitsu, Yukong Energy
  - Offshore explorations and developments
    - Yandanar (Total) and Yetagun (Premier Oil, now operated by Petronas) development
- **2000s**: Offshore discoveries by Daewoo (Shwe) and PTTEP (Zawtika)
- **2010s**: Offshore development of Shwe and Zawtika fields
  - Offshore exploration activities (CNPC, PCML, PTTEP, PVEP, Woodside)
  - Onshore exploration activities (MOGE, PCML, PTTEP, Istech)
Early days in Myanmar, 1933

The first Schlumberger electric wireline log was carried out in Yenangyaung field, Myanmar on 30\textsuperscript{th} Nov 1933 by Mr. Sauvage and witnessed by Mr. Singleton for Burmah Oil Co (BOC).
Schlumberger in Myanmar

- Schlumberger recorded its 1st Electric Wireline Log in Myanmar (Yenangyaung Field) on 30th November 1933 by Mr. Sauvage and witnessed by Mr. Singleton for Burmar Oil Company (BOC) of UK.
- An arrangement was made with MOC in 1970 for technology know-how transfer by leasing a Wireline Logging Truck, Equipment and Training of Burmese nationals from MOC (MOGE).
- Fully upgraded Mann base in 2005 to provide the best services to Myanmar Oil and Gas Enterprise and other customers. Development of engineers from local and overseas.
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- Worked for Foreign Companies operating offshore from mid-70’s and 9 PSC for onshore exploration in 1990-92 and continued working for onshore operators to present time.
- SLB introduced Smith, M-I Swaco & Geoservices in Myanmar.

Timeline:
- 1933: Schlumberger in Myanmar
- 1954: First local University graduate Burmese national recruited as Wireline field engineer (U Stanley Aung) in 1968 through MOC. Continued recruiting engineers through MOC (MOGE) till 1995. Direct recruiting from Universities since then.
- 1968: Fully upgraded Mann base in 2005 to provide the best services to Myanmar Oil and Gas Enterprise and other customers. Development of engineers from local and overseas.
- 1970: Worked for Foreign Companies operating offshore from mid-70’s and 9 PSC for onshore exploration in 1990-92 and continued working for onshore operators to present time.
- 1990: SLB introduced Smith, M-I Swaco & Geoservices in Myanmar.
- 2005: Fully upgraded Mann base in 2005 to provide the best services to Myanmar Oil and Gas Enterprise and other customers. Development of engineers from local and overseas.
- 2006: Worked for Foreign Companies operating offshore from mid-70’s and 9 PSC for onshore exploration in 1990-92 and continued working for onshore operators to present time.
- 2006: Multi-segment offices and operations were setup in Myanmar for efficient and full time support for onshore and offshore customers.
- 2011: OFS office was setup in Yangon and Wireline Shop and Cementing lab were setup in Thaketa to support onshore and offshore operations.
- 2013: Schlumberger completes merger with Cameron.
Oilfield Services Industry: Where do we fit?
Role of Oilfield Services

- To help explore, develop and produce hydrocarbons for operators
- Invest in research, development and engineering
- Application of technology and engineering solutions to industry challenges
- Recruit, train and develop many competencies required for industry
Common Oilfield Products and Services

- Geophysical Surveying
- Land Contract Drilling
- Offshore Contract Drilling
- Artificial Lift (i.e. pumps, gas lift)
- Casing & Tubing Services
- Coiled Tubing Services
- Completions Equipment
- Directional Drilling Services
- Downhole Drilling Tools
- Drill Bits
- Drilling Completion Fluids
- Hydraulic Fracturing Services
- Logging While Drilling (LWD) Services

- Production Testing Services
- Solids Control Services
- Specialty Chemicals
- Subsea Equipment
- Surface Data Logging Services
- Well Cementing Services
- Well Servicing Services
- Wireline Logging Services
- Drilling Waste Management Services

- Offshore construction
- Logistics
  - Aviation, Supply Vessels, Land Transport
Myanmar’s Onshore and Offshore Operators

### Onshore

#### Legacy Blocks
- MOGE: 0
- Goldpetrol: 2
- MPRL: 1
- Nobel Oil: 1

#### 2011 Winners
- Petronas: 2
- PTTEP: 2
- Geopetrol: 1
- Jubilent: 1
- PT Istech: 1
- Nobel Oil: 1

#### 2013 Winners
- Petronas: 2
- PTTEP: 1
- ENI: 2
- ONGC: 2
- Pacific Hunt: 2
- Petroleum Exploration (PVT): 2
- MPRL: 2
- Brunei National Petroleum: 1
- Berlanga: 1
- JSOC Bashneft: 1

- 2013 – 2014: Seismic
- 2014 – 2017: Drilling (Exploration)

### Offshore

#### Legacy Blocks
- TOTAL: 2
- Petronas: 3
- PTTEP: 5
- Daewoo: 2
- Daewoo + Woodside: 1
- CNPC (Chinnery): 3
- PVEP + ENI: 1
- MPRL + Woodside + Total: 1

#### 2013 Winners
- BG + Woodside: 1
- Woodside + BG: 1
- Shell + MOECO: 3
- Statoil + Conoco: 1
- ENI: 2
- TOTAL: 1
- Ophir: 1
- Chevron: 1
- Oil India: 2
- Reliance: 2
- Tap Oil: 1
- Berlanga BV: 1
- Transcontinental: 1

- 2013 Winners: 10 DW Blocks, 10 SW Blocks
- 2015 – 2017: EIA/SIA and Seismic
- 2016 – 2019: Drilling (Exploration)

Source: Public News
**Typical Oil and Gas Ecosystem**

**Exploration**
- Geophysical services
- Geological / Reservoir Studies
- Field development/Reservoir Management

**Development**
- Project Management Consultancy
- Engineering Consultancy
- HSE Consultancy
- Geological Consultancy
- Geophysical Consultancy
- Production/ Upstream Consultancy
- Environmental and Positional Survey
- QA/AC Services
- Building Design
- Major Platform Fabricator
- Minor Platform Fabricator
- Onshore Construction
- Onshore Tank Facilities
- Offshore Construction
- Pipeline Installation Contractor
- Offshore Support Vessel contractor
- FSO/ FPSO Owner/ Operator/ Contractor
- Drilling Rigs
- Drilling Services
- Well services/ Well completions

**Production**
- Lab Services
- Maint-Mechanical (Static)
- Maint-Mechanical (Rotating)
- Maint - Piping & Valve/ Structural
- Minor Fabrication & Repair
- Maint - Pipeline
- Maint - Electrical & Instrumentation
- Maint - Safety Equipment
- Underwater Services
- Asset Integrity Services

**Other Services**
- Health, Safety, Environment (HSE) & Security
- Manpower Services
- Environment Clean-up
- Waste Disposal Services
- Marine vessel services
- Helicopter / Air Transportation services
- Land Transportation Services
- Cargo Tankers
- Decommissioning Contractor
- ICT Services (Information and Com. Tech)
- Integrated Operations
- General Building Maintenance Services
- Other Supporting Services

- **Significant business opportunities in Myanmar Oil and Gas Industry**
- **Exploration and appraisal activities expected in next few years (2016 – 2020)**

Source: MIDA – Malaysian Investment Development Authority
Final Thoughts

- Myanmar oil and gas industry will see exciting times ahead with exploration campaigns
- New development and production activities are likely to follow with more opportunities for Myanmar and businesses
- Oil and gas remain leading energy sources for decades to come; reservoirs will be increasingly more challenging to explore and produce
- Advances in science and technology are critical to fuel economies, sustain the human development index, and protect the environment
Thank You!