

Brazil's Libra Field

Financial Model

Alessandro Bacci and Alistair Watson

October 2016

Context

- An offshore oil field (230 km off the coast of Brazil)
- 8 billion to 12 billion of recoverable barrels of oil
- Brazil's first Production Sharing Contract (PSC)
- A five-company consortium (Operator: Petrobras)
- A very expensive project (\$91 billion capex)
- A hefty signature bonus (\$6.5 billion)
- A flagship project for Brazil's petroleum production

Project Features & Assumptions

Economics

- Plateau: 1.3 million BOPD
- Benchmark price: Dated Brent – 7.9%
- Exploration Costs: \$1 billion (Petrobras & assumption)
- Development Costs: more than \$91 billion (Third party)

Fiscal

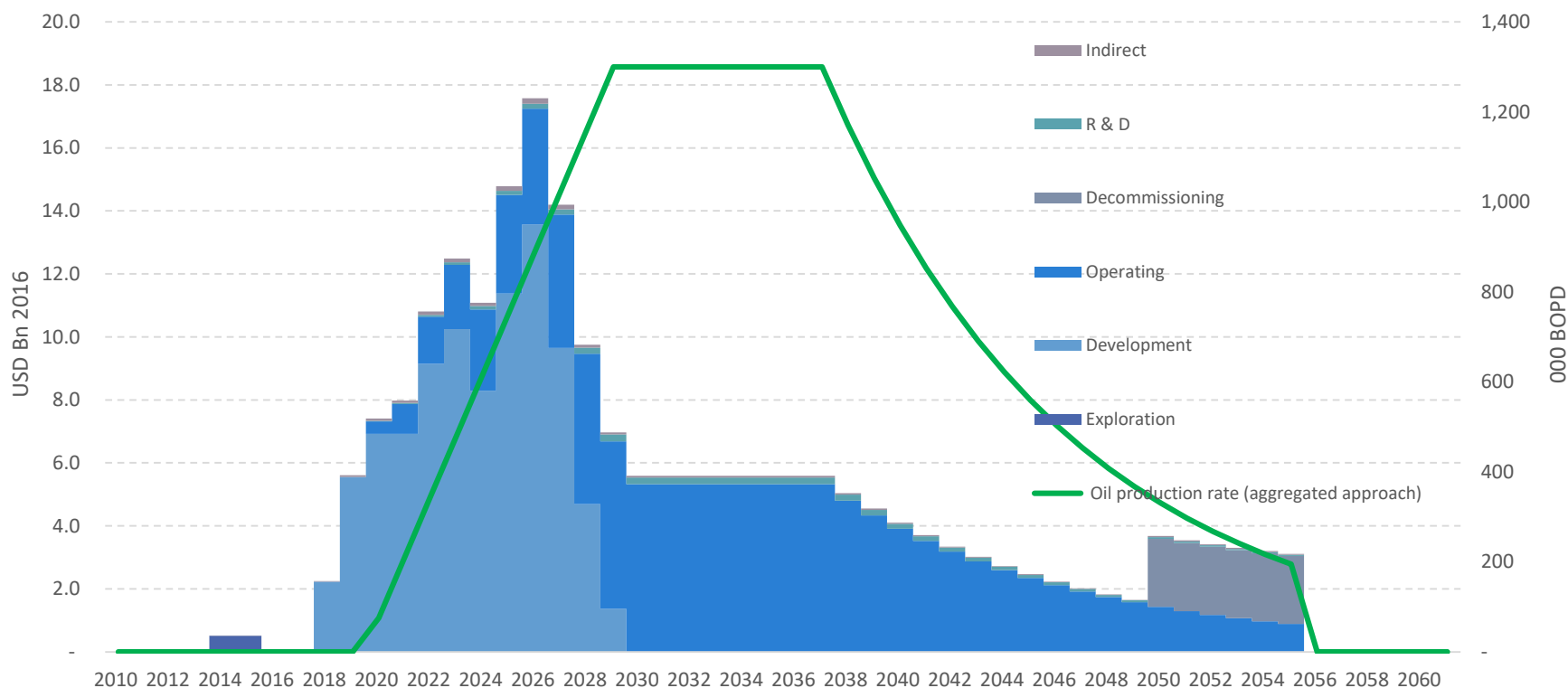
- 15% royalty on gross revenues
- Profit oil from 15% to 45% depending on oil price and production rates
- 34% corporate income tax

Key Findings

- In middle scenario pre-tax IRR is 18.4%, after-tax IRR is 7.0%, and NPV8 is *negative* at current oil prices (\$50 per barrel, October 2016)
- Breakeven is at around \$54 a barrel for the middle scenario (production of 10 billion barrels)
- At low oil prices the royalty is highly regressive
- Capex would need to be cut to achieve profitability
- Given all of the above, the project will likely need to have terms and schedule revised

Libra's Cost Structure (USD)

Cost structure: USD Bn 2016



Information Gap Analysis

- How many floating producing storage and offloading (FPSO) units does Petrobras require?
- What are the cost estimates for the FPSOs?
- How many wells will be required?
- Is the consortium thinking of additionally revising the schedule of the Libra project?