Technical Session 4
Challenges, Best Practices & Lesson Learnt in EPCIC Projects
- SUCCESS STORY OF B15 PROJECT EXECUTION

Presenter
Dr Abdul Malek - Project Manager

Co-authored
Khairul Azmee – Operations & Development Manager
Kelvin Atkinson – Gas Assets Manager
Dave Ramsay – Facilities Manager
B15 Field Development

- Water depth ~ 80m
- Four-legged CPP with integrated Wellhead Bay (incl. CTU deck), CCR and LQ
- Topsides ~ 3,000 MT (Op Wt)
- Jacket ~ 1,700 MT (w/o piles)
- 1 development well; 7” tubing
- Plateau at 110 MMCFD sales for 5.5 years
- High pressure reservoir
  - no need for export compression
- 1st Gas – 1st Oct 2017
  - early by couple of days
- *Well within project budget*
B15 Project Cost Trending

- No decline in Ringgit terms
- Marked decline in US$ terms
- Mainly due to currency exchange

Reduction due to other factors

Refer to respective Sections for explanation on project cost progression.
Confluence of Weak Market Conditions

- Decline in World Oil Price causing a decline in cost of global services

- Decline in cost of local services

B15 Development - Cost Trending

- Decline in World Steel Price

PO Issuance

Refer to respective Sections for explanation on project cost progression.
Enabling Project Execution Strategies

✓ Granularity of Contract Control
  • All major contracts subjected to detailed execution control by SEP Project Leads
  ➔ so what happens if it’s EPCICFA? Mode 1 vs Mode 3?

✓ Cost-plus procurement during Fabrication
  • Competitive bidding, cost-plus procurement
  • Strong SEP presence in all Yard TC
  • Priority site resolution with dedicated SEP Site Engineering Team

✓ Optimization of T&I costs
  • Combo - Lump-sum, Reimbursable & Optional scope

✓ Drilling optimizations
  • Competitive rig pricing – market conditions
  • Priority on SIMOP
  • Casing optimization

✓ Strict change management protocol
  • Value Engineering, thereafter no significant design change
  • Bounded parameters for major specifications
  • **Category 1 Items** – Very strict Design & Change Control post-AFC
    • Total of 33 items under strict SEP scrutiny
    • Range from primary beams, major equipment, control system to safety systems

### Contracts

<table>
<thead>
<tr>
<th></th>
<th>Planned Manhours</th>
<th>Actual Manhours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEED</td>
<td>29,787</td>
<td>41,801</td>
</tr>
<tr>
<td>DED</td>
<td>52,808</td>
<td>64,515</td>
</tr>
<tr>
<td>PC Contract</td>
<td>1,207,559</td>
<td>1,614,280</td>
</tr>
<tr>
<td>T&amp;I Contact</td>
<td>226,521</td>
<td>326,581</td>
</tr>
<tr>
<td>HUC</td>
<td>99,456</td>
<td>120,500</td>
</tr>
<tr>
<td>Drilling</td>
<td>190,560</td>
<td>97,848</td>
</tr>
<tr>
<td>PMT</td>
<td>250,000</td>
<td>183,936</td>
</tr>
<tr>
<td>Total</td>
<td>2,056,691</td>
<td>2,449,461</td>
</tr>
</tbody>
</table>
Thank You