Story so far (only half way...!)

My Timeline..

UWA

East Spar Gas Project

Laminaria Subsea

Bosch in London

Perth Project - Aberdeen

Second Trunkline

PSM Project

Perseus over Goodwyn

Western Flank Gas, Pt. 1

BHP Macedon

Western Flank Gas, Pt. 2

QCLNG Project

Baltic Gas Pipeline

Technology Plays

IMR

Dom Gas & FPSO’s

LNG Growth & Mega Projects

Australian Focus

1992

2001

2007

2015

??
Project Experiences – East Spar

Developed

Operated

De-commissioned
Project Experiences – Laminaria
Project Experiences – WEL NWS Projects
Technology Plays – Differentiator

Partners
- Apache
- Shell
- Chevron
- Shell

Facilitator
- ift

Delivery & Coordination
- SEA

Technical Experts
- Liang Cheng (UWA)
- Andrew Palmer (NUS)

Industry Expert & Validation
- DNV-GL

User Interface
- lateral

Span Length Timeseries

Neutral spool position
- Deflected tied-in spool
- Pre-stressed by adverse hub-spool tolerances

Connector hub loads typically reduce by 25-40% from small movement

Allowing small (<10 mm) movement
- at foundation redistributes forces throughout system

Hub loads increase by 5-10% for spools pre-stressed in opposing direction to global movement
Next Few Years – Don’t Panic..!

**Australian Focus**

- **1992**
  - Dom Gas & FPSO’s

- **2001**
  - LNG Growth & Mega Projects

- **2015**
  - Brownfield ??

**Move**
- Focus - Location

**Invest**
- Technology
- Skills

**Adapt**
- Tie backs
- Operations Support

**To Survive**

**Be Efficient**
- F.F.P.
- Target reliability

- By 2016, 6 x Operating LNG Plants in WA/NT, 1 x Offshore FLNG
- Maybe 1 more after that
- All will need in-fill gas over next few years
- All will need operations support, IMR
- Bass Strait tie-backs for East Coast Domestic Supply

- Local experience and talent will remain essential.