



Graeme Cameron

Trinity, 2008

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Career and Networking Evening  
November 2011

# Overview

- Oil and Gas Industry
- Wood Group Integrity Management
- Career Thus Far

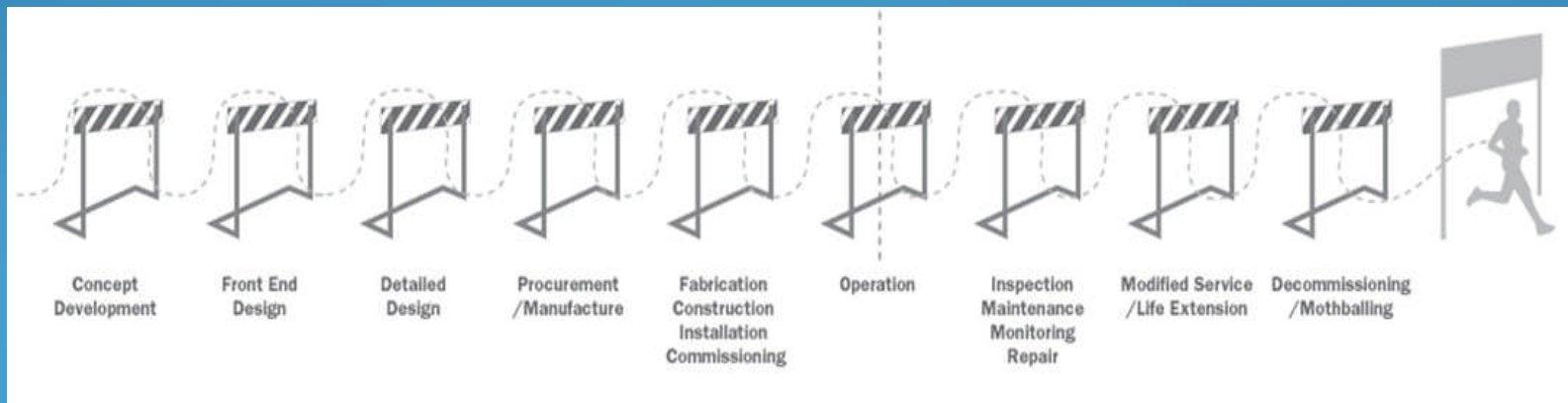
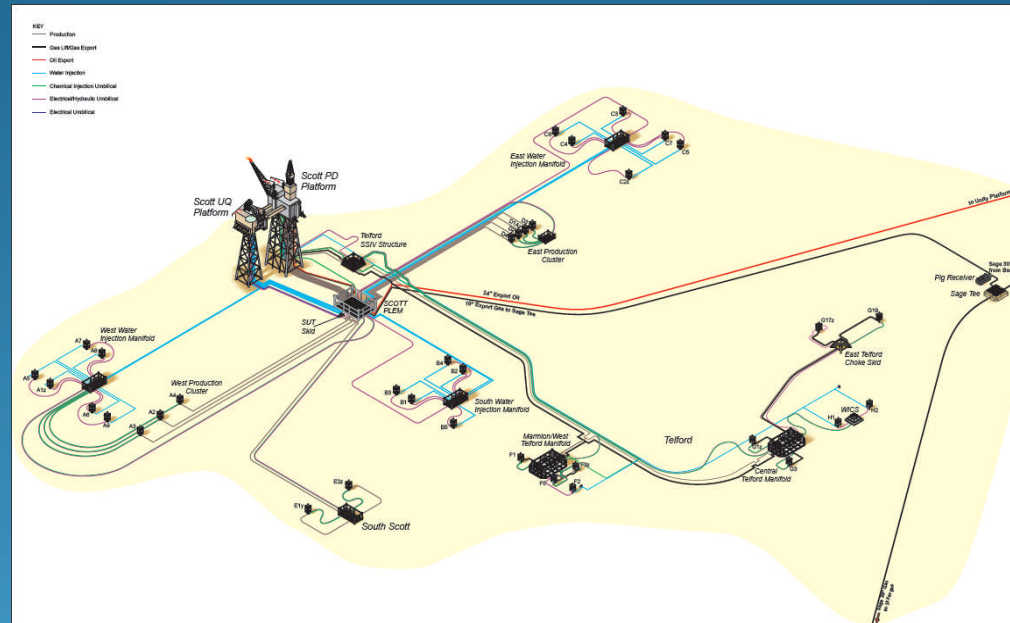
# Oil and Gas Industry: Popular Conceptions

- Dying industry?
  - North Sea
  - Globally



- Environmentally hazardous?
- Blue Collar?

# Oil and Gas Industry: Typical Development



# Wood Group Integrity Management: Summary



Service company providing oil and gas, and power generation industries with:

- Engineering support
- Production support
- Maintenance management
- Industrial gas turbine overhaul
- Repair services

- ✓ More than 28,000 employees
- ✓ Over 50 countries
- ✓ ca. \$5 billion sales

## What does WGIM provide?



### INSPECTION ENGINEERING & MANAGEMENT

- Risk Assessment
- Risk Based Inspection
- Risk based Maintenance
- IMMR Planning & Implementation
- Pipeline Repair Planning & Implementation
- Regulator Documentation Development & Submission
- Remaining Life Assessment
- Fitness-for-Service Assessment
- Integrity Audits
- Coating &/or Insulation Audit
- Cathodic Protection Audit
- Corrosion Audits
- Life Extension
- Change of Service Assessment
- Non-Destructive Inspection Technology
- In-Line Cleaning & Inspection



# Wood Group Integrity Management: Software

**Assets**

Asset	Asset Type
Offshore Windfarm	Windfarm
Accommodation Platform 1	Platform
Adjacent Seabed	Seabed
Boatlanding	Boatlanding
Caissons	Caissons
Helicopter platform	Helipad
Topside Module	Topside
Cable Array	Cables
Cable 001	Cable
Cable 002	Cable
Cable 003	Cable
Export cable	Cable
Transformer Substation 1	Platform
WTG 001	
Adjacent Seabed	Seabed
Blades	Blades
Boatlanding	Boatlanding
Foundation	
J-tube	
Hub	
Nacelle	
Tower	
Section 1	
Section 2	
Section 3	
Transition Piece	
WTG 002	
WTG 003	
WTG 004	

**Photos** **Drawings** **Library** **Pipeline** **Asset history** **Anomaly Triggers**

Show Thumbnails Edit Options View

**Schedules**

Asset	Model	2007	2008	2009	2010	2011	2012	2013
Pipelines								
12" OEP	Offshore Pipeline							
01 - ESDV 24494 (Platform A)	Simple (Cons-v-Like)							
02 - ESDV 24495 (Platform A)	Simple (Cons-v-Like)							
03 - 12" GEP Riser (Platform A)	Riser							
04 - PLEM	Simple (Cons-v-Like)							
05 - 12" Flexible Riser (FSO)	Riser							
16" INFIELD	Offshore Pipeline							
01 - ESDV 26461 (16" INFIELD)	Simple (Cons-v-Like)							
02 - 16" Riser (Platform A)	Riser							
24" GEP	Offshore Pipeline							
01 - ESDV 1331A (24" GEP)	Simple (Cons-v-Like)							

Task Incomplete Anode CP Reading  
Task Complete GVI Survey Note  
Unknown Event Debris

**Risk Matrix - Offshore Pipeline**

Likelihood	Consequence				
	Minor	Moderate	Serious	Major	Catastrophic
Very Likely	Yellow	Orange	Red	Red	Red
Likely	Yellow	Orange	Orange	Red	Red
Unlikely	Green	Yellow	Orange	Orange	Red
Remote	Green	Green	Yellow	Orange	Orange
Improbable	Green	Green	Green	Yellow	Orange

**Tasks** **Library**

Commit Cancel Add Edit Delete Copy Schedule Import Export Columns A Completed T PT

Event	Schedule	Asset	Modified	A	Completed	T	PT
	2005 Riser Inspect WGIM / Pipelines / 12" OEP / 05 - 12" Flexible Riser (FSO)						
	2005 Riser Inspect WGIM / Pipelines / 12" OEP / 03 - 12" GEP Riser (Platform A)						
GVI	2007 ROV	WGIM / Pipelines / 12" OEP					
	2009 SSS	WGIM / Pipelines / 12" OEP					
	2009 ROV	WGIM / Pipelines / 12" OEP					
	2009 ROV	WGIM / Pipelines / 12" OEP / 03 - 12" GEP Riser (Platform A)					
	2009 ROV	WGIM / Pipelines / 12" OEP / 04 - PLEM					
	2009 ROV	WGIM / Pipelines / 12" OEP / 05 - 12" Flexible Riser (FSO)					
	2009 TD	WGIM / Disinfectant / 12" OEP / 03 - 12" GEP Riser (Platform A)					

Unassigned Anomaly Actions Incomplete Tasks Related to a Planning Template.

**Windfarm Overview**

**bits**

# Wood Group Integrity Management: Locations





# Wood Group Integrity Management: Clients



## Career Thus Far...

- Trinity 2004 – 2008
- Part II in Princeton: Block Copolymers
- Joined WGIM Dec 2008

# Career Thus Far: Failure Investigation



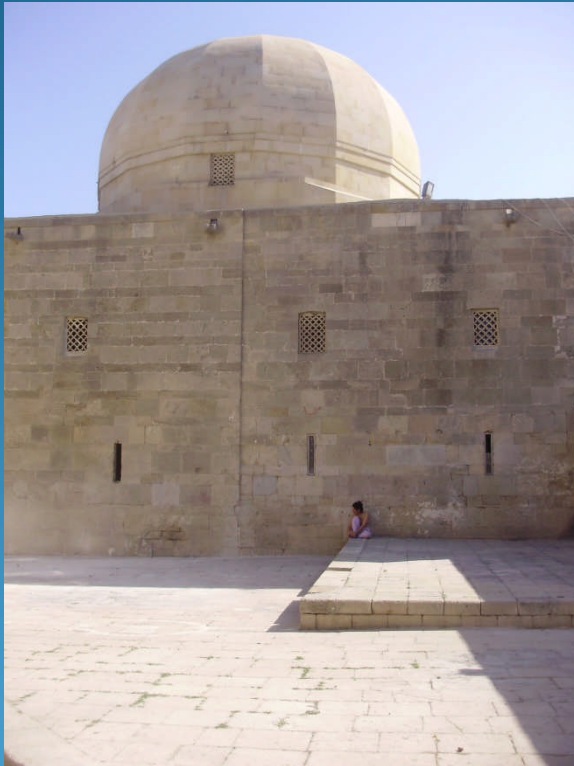
Failure of 2.5" pipe

High cycle fatigue plus defects in material

Cost of lost production >£200k per day



# Career Thus Far: Baku



## Career Thus Far...

- Current role:
  - Technical input for bids
  - Management of team / projects
  - Materials engineering (CP, etc.)

## Advantages of Industry

- Always requirement for materials engineers
- Well remunerated
- Reasonable working hours
- Travel opportunities
- Technical and non-technical opportunities





Thank You

Any questions?

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