



Brent Charlie Ultra Late Life

A Journey in Optimising for Platform Decommissioning

Ian Jackson, Andy Colman, Fola Sanwoolu & Joanna Chan

Production Technology

Brent Field, Shell UK Ltd

Disclaimer

Reserves: Our use of the term “reserves” in this presentation means SEC proved oil and gas reserves.

Resources: Our use of the term “resources” in this presentation includes quantities of oil and gas not yet classified as SEC proved oil and gas reserves. Resources are consistent with the Society of Petroleum Engineers 2P and 2C definitions.

Organic: Our use of the term Organic includes SEC proved oil and gas reserves excluding changes resulting from acquisitions, divestments and year-average pricing impact.

Resources plays: Our use of the term ‘resources plays’ refers to tight, shale and coal bed methane oil and gas acreage.

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate entities. In this document “Shell”, “Shell group” and “Royal Dutch Shell” are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. Likewise, the words “we”, “us” and “our” are also used to refer to subsidiaries in general or to those who work for them. These expressions are also used where no useful purpose is served by identifying the particular company or companies. “Subsidiaries”, “Shell subsidiaries” and “Shell companies” as used in this document refer to companies over which Royal Dutch Shell plc either directly or indirectly has control. Companies over which Shell has joint control are generally referred to as “joint ventures” and companies over which Shell has significant influence but neither control nor joint control are referred to as “associates”. The term “Shell interest” is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in a venture, partnership or company, after exclusion of all third-party interest.

This presentation contains forward-looking statements concerning the financial condition, results of operations and businesses of Royal Dutch Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management’s current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Royal Dutch Shell to market risks and statements expressing management’s expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as ‘

‘anticipate’, ‘believe’, ‘could’, ‘estimate’, ‘expect’, ‘intend’, ‘may’, ‘plan’, ‘objectives’, ‘outlook’, ‘probably’, ‘project’, ‘will’, ‘seek’, ‘target’, ‘risks’, ‘goals’, ‘should’ and similar terms and phrases. There are a number of factors that could affect the future operations of Royal Dutch Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this presentation, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell’s products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, fiscal and regulatory developments including potential litigation and regulatory measures as a result of climate changes; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; and (m) changes in trading conditions. All forward-looking statements contained in this presentation are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements.

Additional factors that may affect future results are contained in Royal Dutch Shell’s 20-F for the year ended 31 December, 2015 (available at www.shell.com/investor and www.sec.gov). These factors also should be considered by the reader. Each forward-looking statement speaks only as of the date of this presentation, 7th Dec 2016. Neither Royal Dutch Shell nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this presentation. There can be no assurance that dividend payments will match or exceed those set out in this presentation in the future, or that they will be made at all.

We use certain terms in this presentation, such as discovery potential, that the United States Securities and Exchange Commission (SEC) guidelines strictly prohibit us from including in filings with the SEC. U.S. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website www.sec.gov. You can also obtain this form from the SEC by calling 1-800-SEC-0330.

Agenda

- Brent Charlie: 40 Years Young
- Entering the Oil Industry
- The Decommissioning Mindset
- What is Plug and Lubrication (P&L)?
- Opportunities:
 - Production (I thought you said decommissioning?)
 - Operating Cost Reduction
 - Development
- Summary

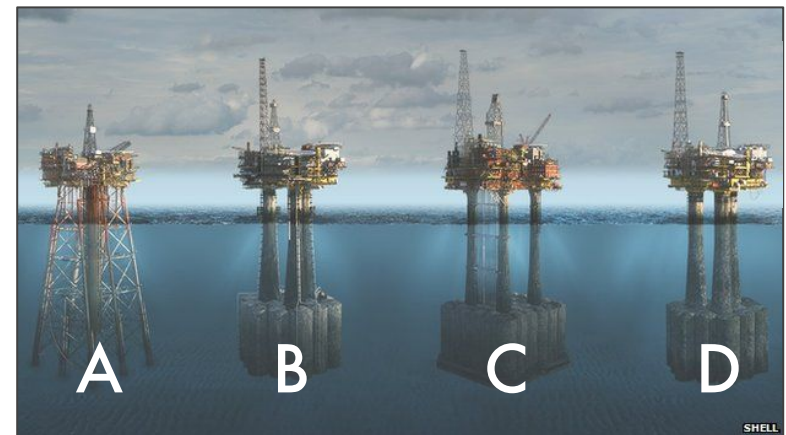
Brent Charlie: 40 Years Young

Brent Field:

- Discovered in 1971
- Producing for 40 years
- 50/50 JV with ExxonMobil
- Charlie last remaining producer
 - 16 active wells

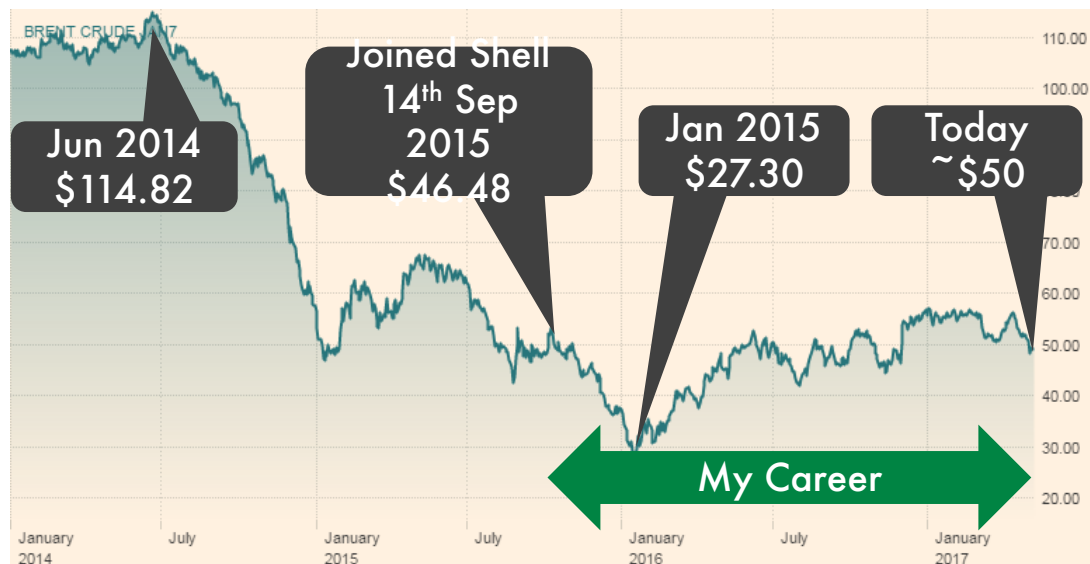
Current Status:

- Alpha: P&L complete, P&A ongoing
- Bravo: P&A complete
- **Charlie: Producing, P&L/P&A ongoing**
- Delta: Topside lifted, legs capped



Entering the Oil Industry

- “Were there opportunities for new graduates anymore?”
- “How could a new graduate develop in such a climate?”
- “What was the general mood like surrounding the industry?”



The Decommissioning Mindset

Move from...

“Ensuring a well is fit for production”

To...

“Ensuring a well is fit for decommissioning”

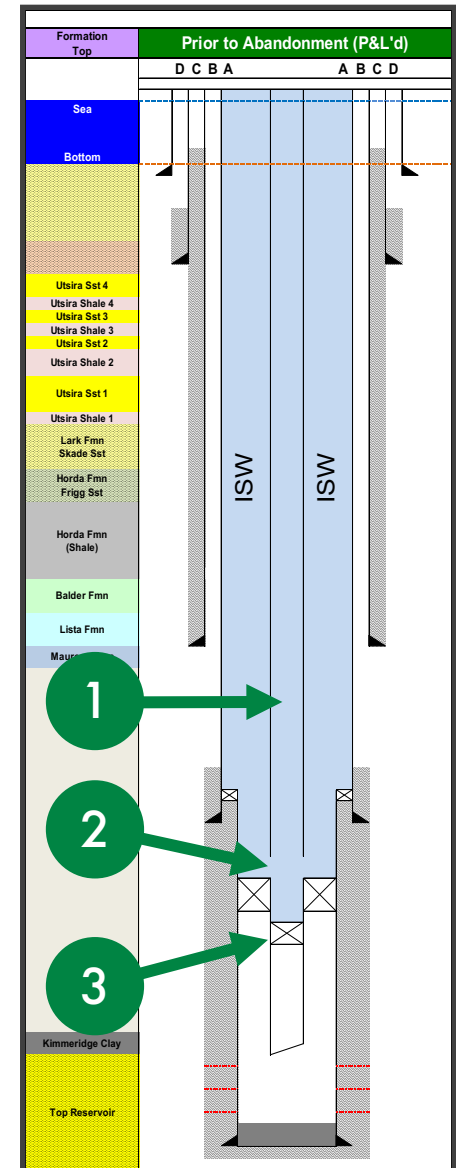
The platform priority **was** safely abandoning wells – starting with Plug and Lubrication (P&L).

What is Plug and Lubricate (P&L)?

- 1 Deep set wireline bridge plug set to isolate well from reservoir fluids.
- 2 Tubing punched / perforated above production packer.
- 3 Well lubricated to ISW and all HCs removed.

Why P&L a well upfront?

- Remove integrity risks for long term shut-in wells
- De-risks wells for Plug and Abandonment (P&A)
- Saves ~7 days rig time
- **Opportunity to utilise wireline for other activities!**



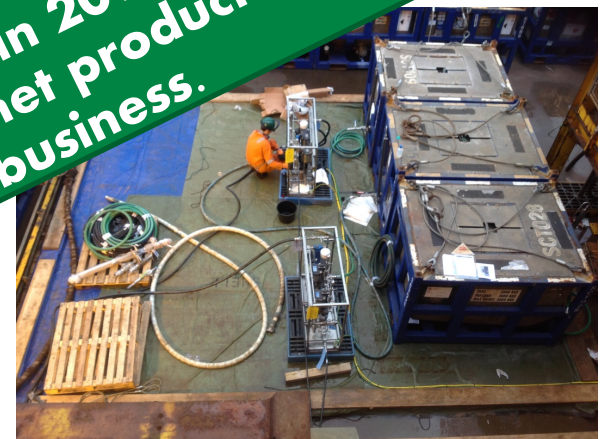
The Opportunities Increasing Production



- Well Deliquification
- Scale Treatment
- Perforations
- Retrofit Gas Lift
- MSAS-G Installation
- SSSV/GLV c/o



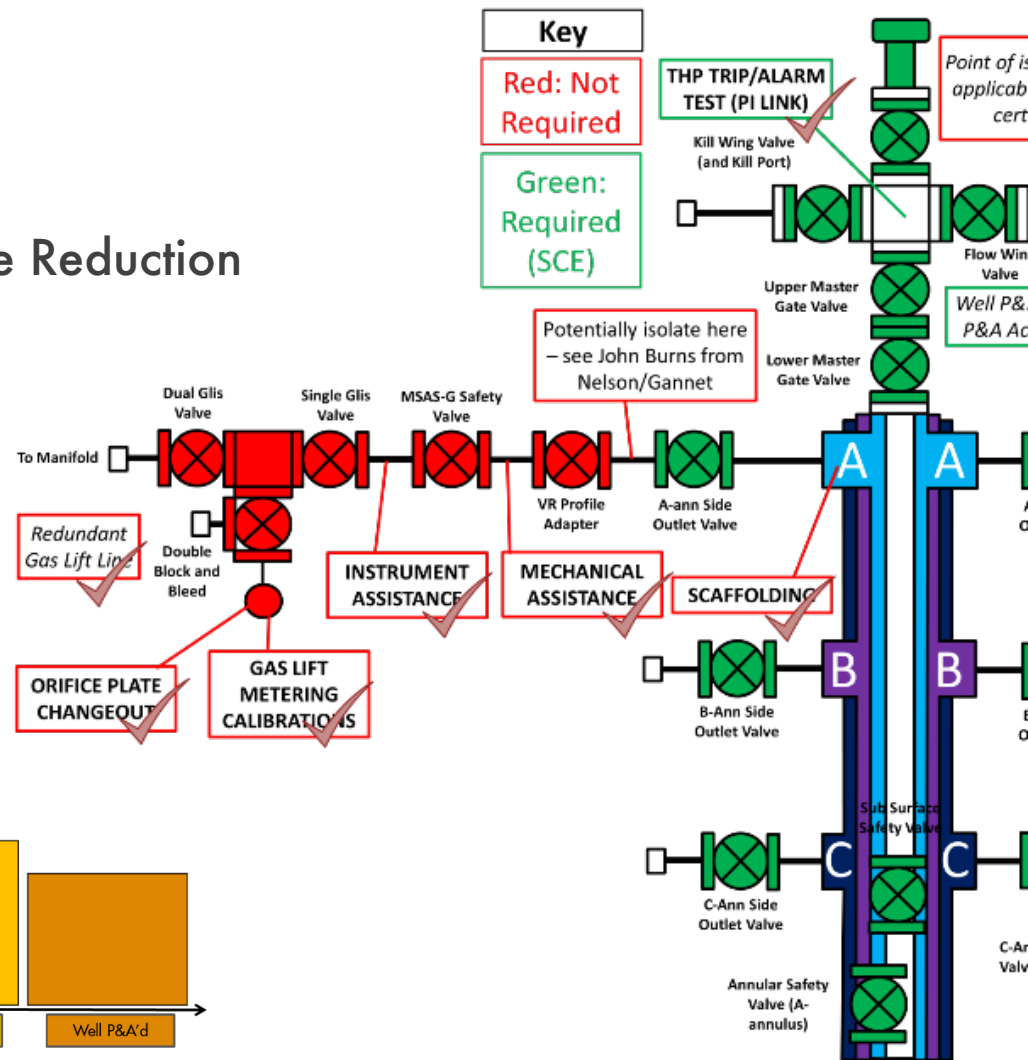
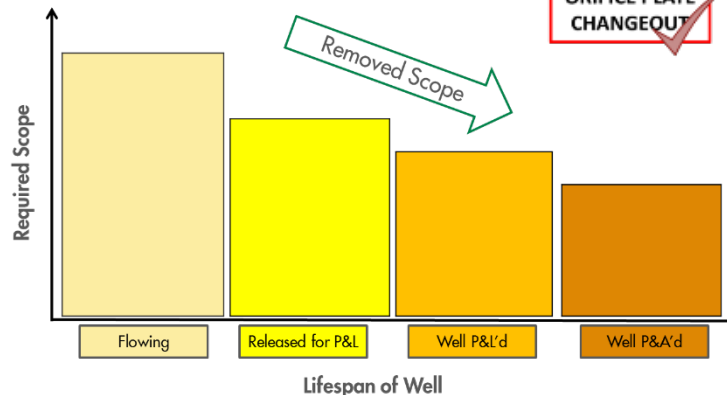
WRFM Activities PAID for the P&L of all 13 wells in 2017*, as well as delivering net production to the business.



The Opportunities Reducing Operating Cost



- Maintenance Scope Reduction
- WIT Optimisation
- SIT Optimisation



The Opportunities

Professional and Technical Development

- Shell Graduate Development Programme
- 8 Key Competencies covered by 99 proof points
 - Only 3 are in Abandonment
 - 96 are in Production
- Now managed to develop 82/99
- Offshore team
 - Learn about topsides, intervention equipment
 - Pass on subsurface understanding



Summary

- Ultra Late Life does not mean no opportunities!
 - Simultaneous abandonment / barrel casing
 - Production gains / operational cost reduction
 - Professional and technical development

- Move from “optimising for production” to “optimising for decommissioning”





Q&A

Ian Jackson

Production Technology

Special thanks to Al Tucker, Danial Leybourne, Darren Paul, Sham Rahman, Operations and Well Engineering.

