

Baker Hughes Incorporated

February 2016

Ian Ayling – Director Business Development



Overview

\$15.7 BILLION

2015 REVENUE

\$483 MILLION

RESEARCH & TECHNOLOGY INVESTMENT

43,000

EMPLOYEES

80+

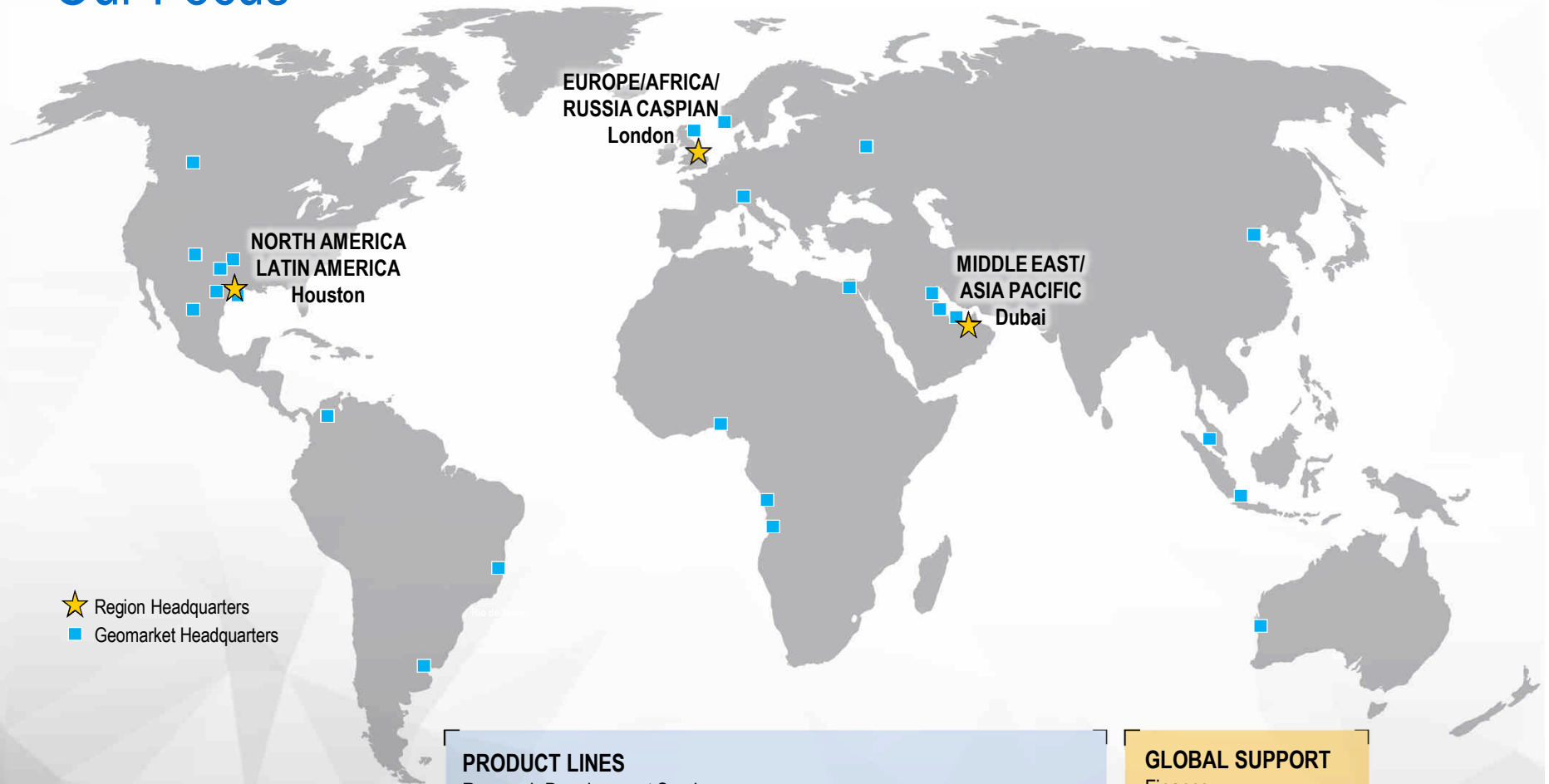
COUNTRIES IN WHICH WE OPERATE



Our Purpose

ENABLING **SAFE,**
AFFORDABLE
ENERGY,
IMPROVING PEOPLE'S
LIVES

Our Focus



PRODUCT LINES	
Reservoir Development Services	Pressure Pumping
Wireline Services	Artificial Lift
Drill Bits	Upstream Chemicals
Drilling Services	Process and Pipeline Services
Drilling and Completion Fluids	Chemical and Industrial Services
Completion and Wellbore Intervention	Integrated Operations

GLOBAL SUPPORT
Finance
Information Technology
Human Resources
Legal
Marketing
Sales
Supply Chain

Our Core Values

INTEGRITY PERFORMANCE
TEAMWORK LEARNING
COURAGE



SUSTAINABILITY

The Perfect HSE Day

**146 PERFECT
HSE DAYS**
A NEARLY 60%
IMPROVEMENT

174 FEWER
EMPLOYEES INJURED
A 33% IMPROVEMENT

59 FEWER
MOTOR VEHICLE INCIDENTS
A 40% REDUCTION

606 FEWER
BARRELS SPILLED
A 40% REDUCTION



Sustainability at Baker Hughes



**ENERGY
CONSERVATION**



RECYCLING



**ENVIRONMENTAL
EFFICIENCIES**

Sustainability for the World

FIRST OILFIELD SERVICE COMPANY TO DISCLOSE 100% OF THE CHEMISTRY CONTAINED IN ITS HYDRAULIC FRACTURING FLUID

LEADER IN O&G SERVICES EQUIPMENT SECTOR
2014 BLOOMBERG ENVIRONMENT, SOCIAL AND GOVERNANCE DISCLOSURE INDEX

HIGHEST-RANKED SERVICE COMPANY
2014 CARBON DISCLOSURE PROJECT

RANKED #20 FOR WORLD, TOP IN ENERGY SECTOR
2014 NEWSWEEK GREEN RANKINGS

SUSTAINABILITY LEADER, EQUIPMENT SERVICE SECTOR
2014 DOW JONES SUSTAINABILITY WORLD INDEX AND NORTH AMERICA INDEX (DJSI)

HIGHEST-RANKED OILFIELD SERVICE COMPANY
CR MAGAZINE'S 2014 100 BEST CORPORATE CITIZENS LIST

HIGHEST RANKED AMONG OUR PEERS
SUSTAINALYTICS ESG REPORT

CREATING VALUE

The Strategy

EFFICIENT
WELLS

OPTIMIZED
PRODUCTION

IMPROVED ULTIMATE
RECOVERY

Efficient Wells

- Quicker, easier access
- Longer, stronger connectivity
- Safer, better processes

WELLS

Optimized Production

- Faster initial production
- Higher production rates
- Long-term production

PRODUCTION

Improved Ultimate Recovery

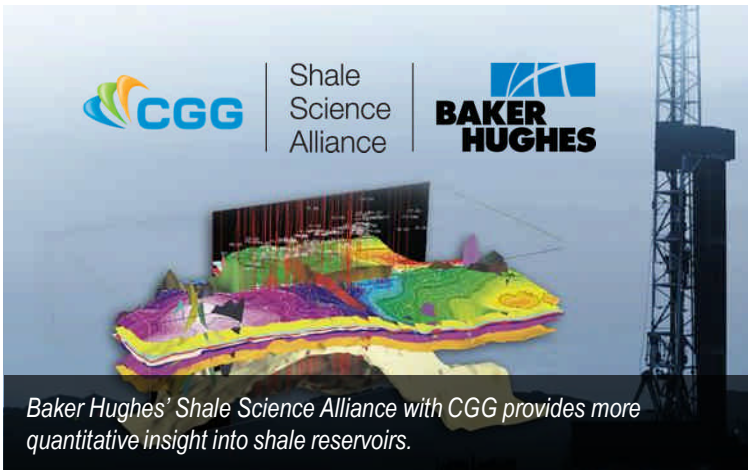
- Superior cash flow
- Increased bookable reserves
- Lower BOE costs

RECOVERY



INNOVATION INTEGRATION
INTERDEPENDENCE

Alliances and Acquisitions

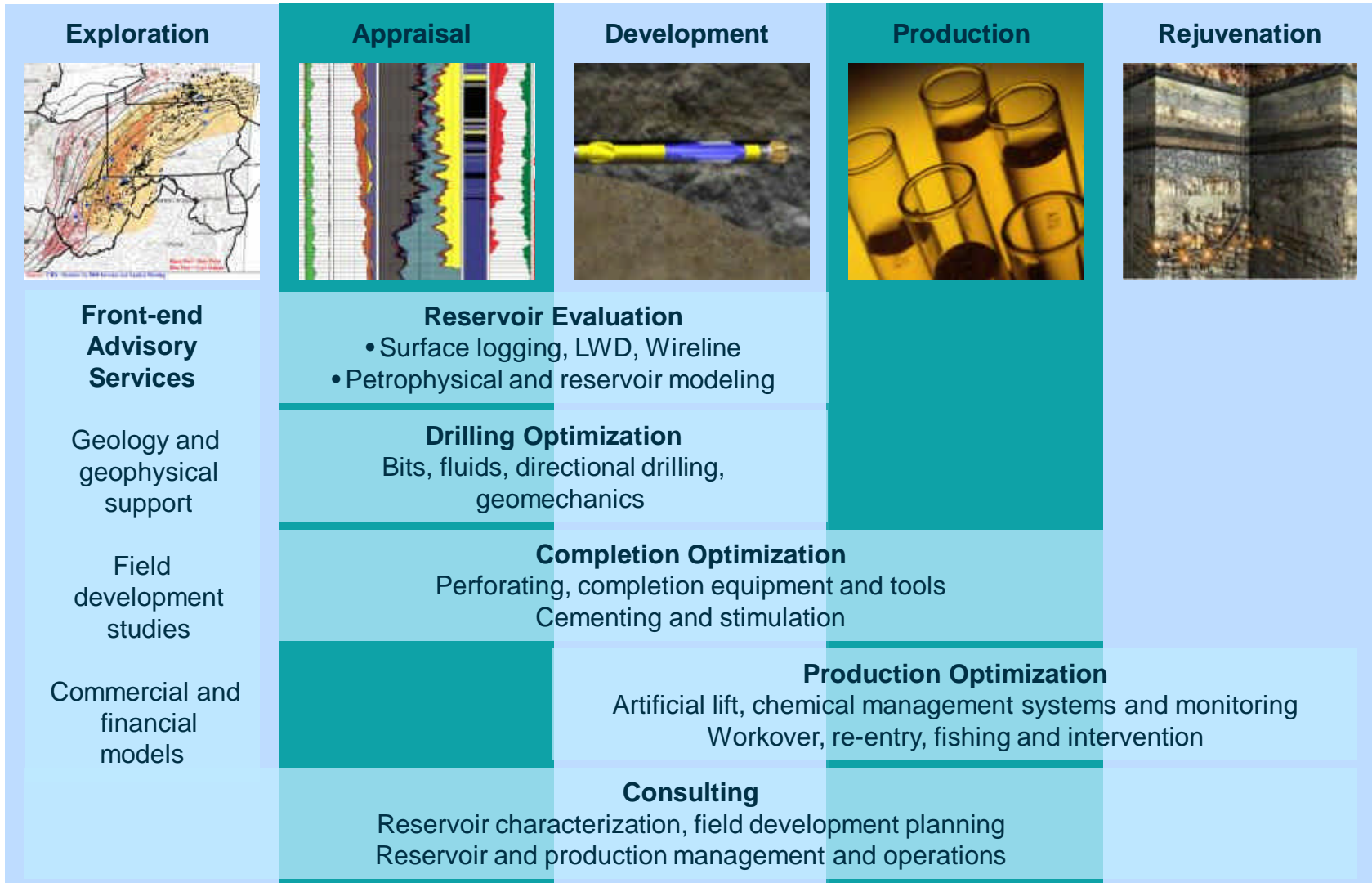


PRODUCT LINES

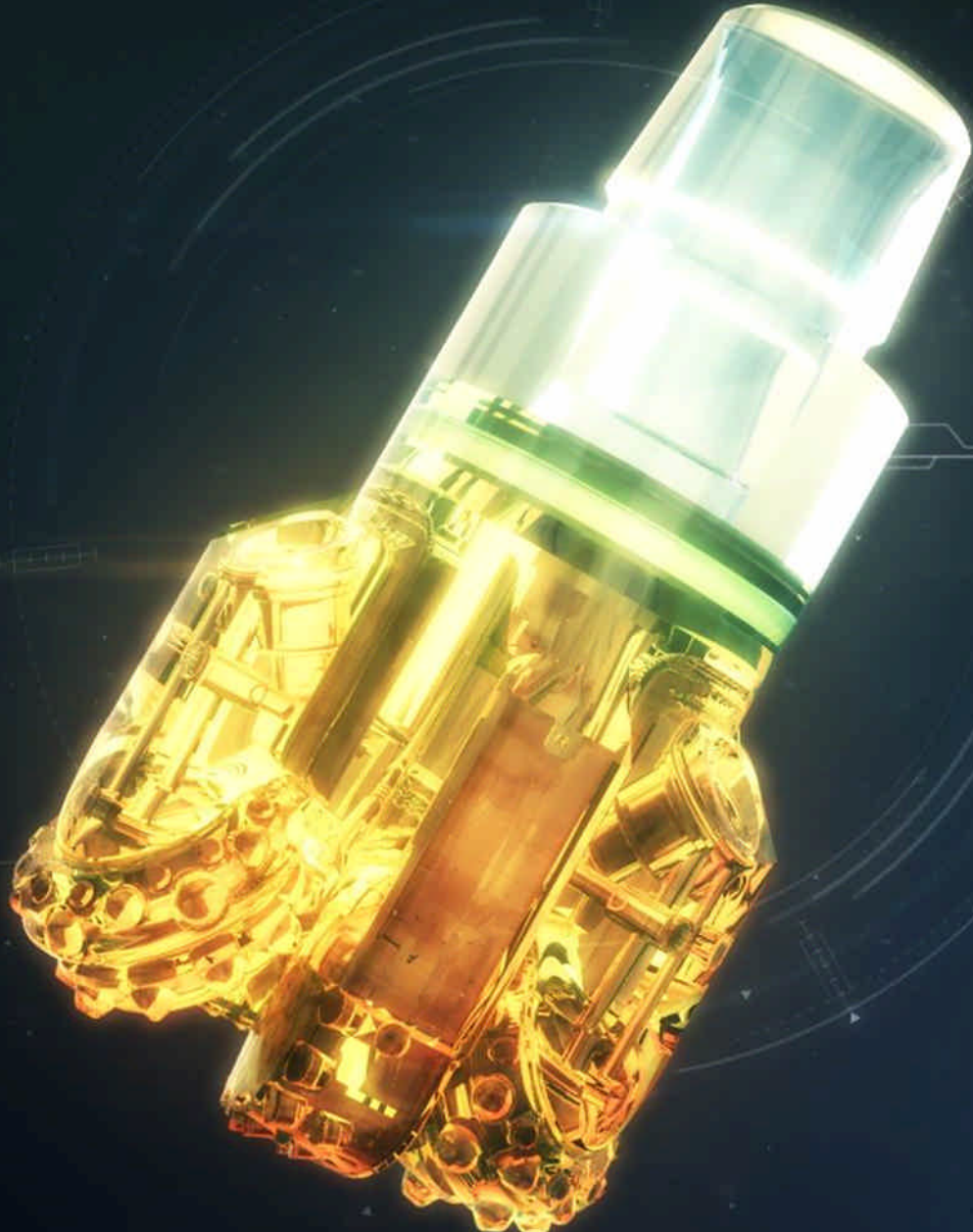
Reservoir Development Services



RDS – Expertise Across Lifecycle to Support Field Solutions



Drill Bits



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BAKER HUGHES TRANSMISSION

Kymera™ hybrid drill bits

Potential Benefits

Compared to PDC Bit:

- Reduced torque fluctuations and stick/slip
- Improved durability in interbedded formations
- Better dynamics & directional control

Compared to Roller Cone Bit:

- Increased ROP potential
- Less axial vibration (bit bounce)
- Eliminate bottom-balling
- Lower WOB requirement



Drilling Services



Drilling the Curve, Producing the Curve

Why drill a high dogleg ?
Kick off deeper in the well

Expose more reservoir

Why the AutoTrak Curve™ system?
Drill wells in smooth, fast runs

Easy casing and completion runs

Why formation evaluation and RNS ?
Optimal well placement

Stay in the reservoir

Drilling and Completion Fluids

Wellbore Cooling Fluid

- Goal: maintain drilling fluid temperature in operational range of sensitive down-hole electronic components
- Drilling fluid with in-situ capability/property to cool fluid temperature with chemical process incorporated into the fluid
- Extended service life for existing tool fleet
- Increase reliability for tools and drill bits

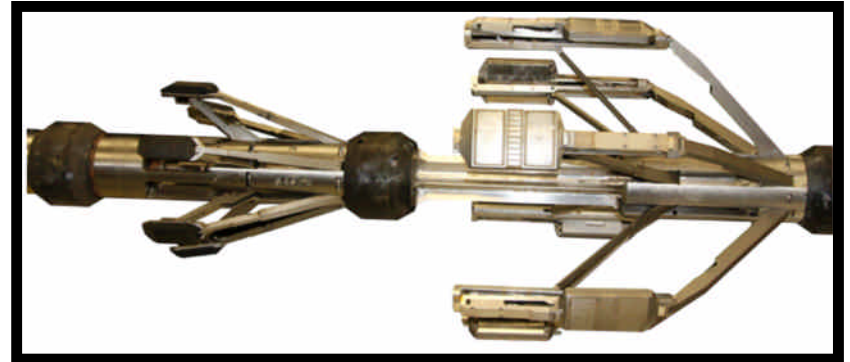
Wireline Services



GeoXplorer™ Imaging Service

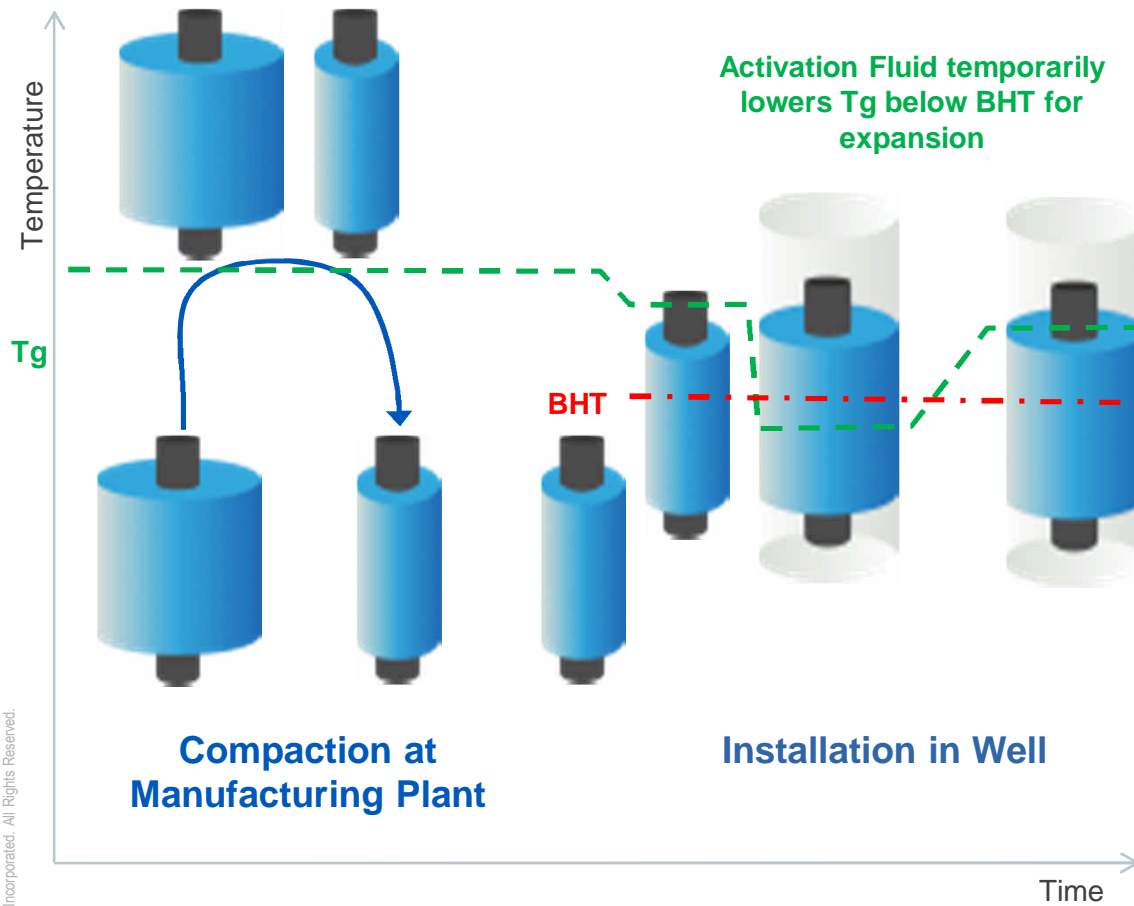
The technology

- High-resolution pads with 10 sensors mounted on six articulated arms providing high-borehole coverage
- Provides information to confirm or refine a seismically derived structural model
- Quantifies thin-bed pay zones within sand-shale sequences
- Identifies natural fractures and determines formation impact



Completions and Wellbore Intervention

Morphic™ Shape Memory Polymer Principle



GEOFORM™ PRINCIPLE

- Smart designer materials
- Shape change around glass transition temperature
- Polymer recovers close to its original strength per current testing



GeoFORM™

Conformable Sand Management System

Nano-Technology: IN-Tallic Disintegrating Balls

- Tripping Balls which degrades over time after the well has been stimulated
- Provides assurance that all restrictions are removed from the production string without costly interventions
- Reacts with flow back water from formation salts for disintegrating.
- Can be rapidly removed with low acid concentrations providing full bore
- Assures that all productive zones in the wellbore are optimizing returns



Packer setting device w/ IN-Tallic ball



Pressure Pumping



Artificial Lift Systems



Drilling the Curve, Producing the Curve

Why CENesis Curve ESP system?

Maximize production in wells with high-build rates

No limits to running ESP systems

CENesis Curve Tight-Radius ESP System

- Sits deeper in the well to improve production
- Enhances equipment reliability
- Lowers OPEX
- Speeds installation time
- Improves tensile strength during pulls

CENesis Curve
25°/100 ft

Traditional ESP System
5°/100 ft

Upstream Chemicals

Upstream Chemicals – Challenges We Solve

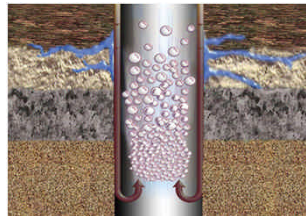
PO



Oil Dehydration



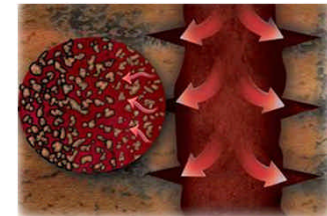
Produced Water Quality



Liquid Loading



Foaming



Skin Damage

FA



Paraffin Deposition



Asphaltene Deposition



Scale Deposition



Hydrate Plugging



Deep Water Challenges

IM



Corrosion



Oxygen Contamination



Microbial Growth



H₂S and Mercaptans



Chemical Automation & Equipment Services

PO = Production Optimization

FA = Flow Assurance

IM = Integrity Management



Process and Pipeline Services

SMARTGAUGE™ Subsea Pipeline Gauging Services

The technology



Allows subsea lines to be completely gauged, saving time & money by allowing hydrotest operations to start without first removing the subsea launcher and receiver after gauging is complete

Gauge plate is segmented and spring loaded:

- Can record multiple hits
- Not just a record of the worst hit

When a hit is recorded SMARTGAUGE sends a signal:

- Early warning of any defect
- Defect location

Chemical and Industrial Services

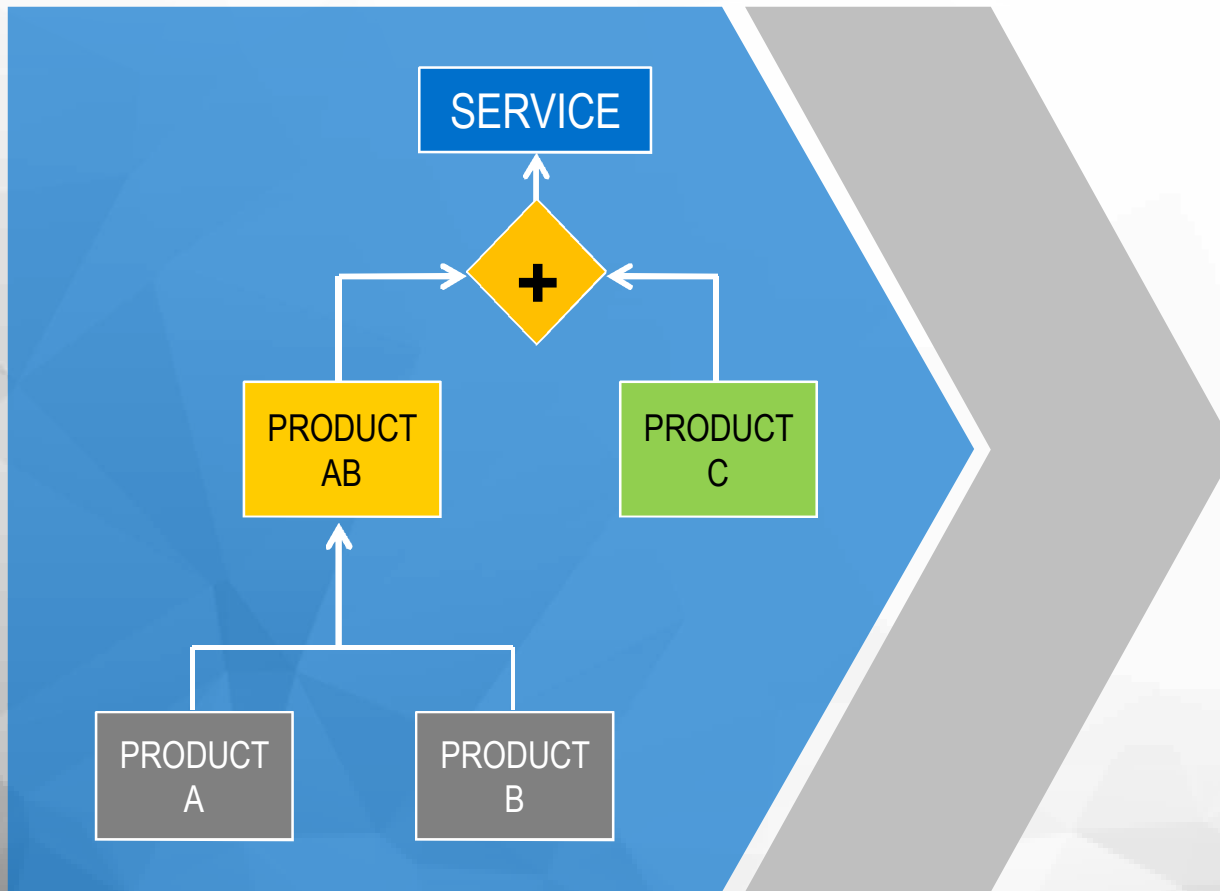


Integrated Operations



Service Value Combinations

LEVERAGING THE STRENGTHS OF BAKER HUGHES & PARTNERS



**LEARNING
FEEDBACK
FORWARD
LEARNING**

COLLABORATION

Subsea Production Alliance – Baker Hughes & Aker Solutions

Integrated Solutions for Subsea Production



- **Well access**

- Cost-effective access
- Simplified intervention by design

- **One control system**

- System-wide optimization

- **Well performance**

- Intelligent completions
- In-well artificial lift
- Intervention-compatible systems

- **Seabed boosting**

- Integrated power and control
- Seamless interface to in-well systems

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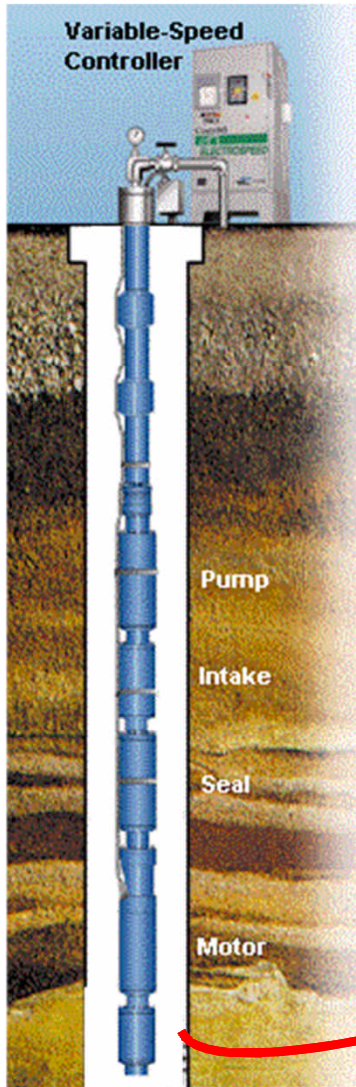
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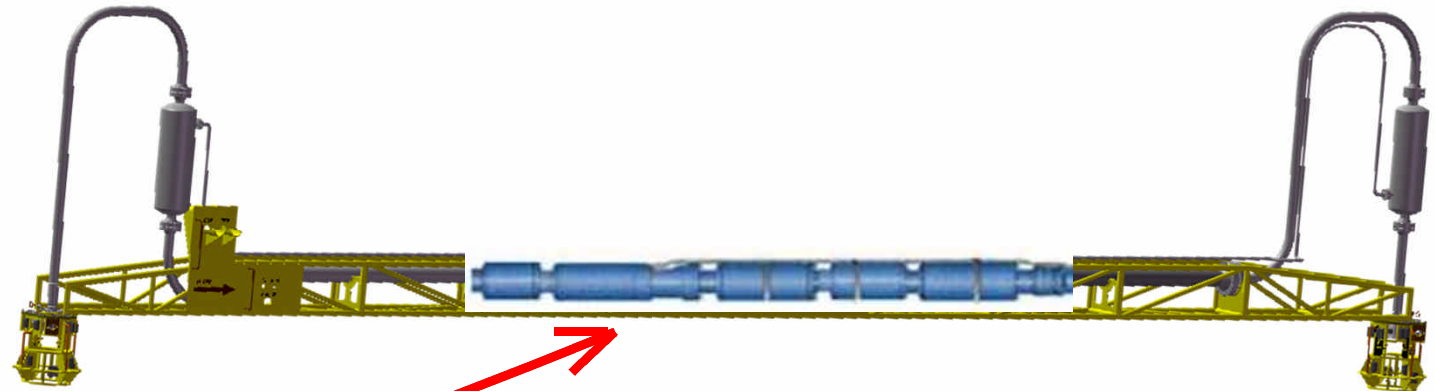
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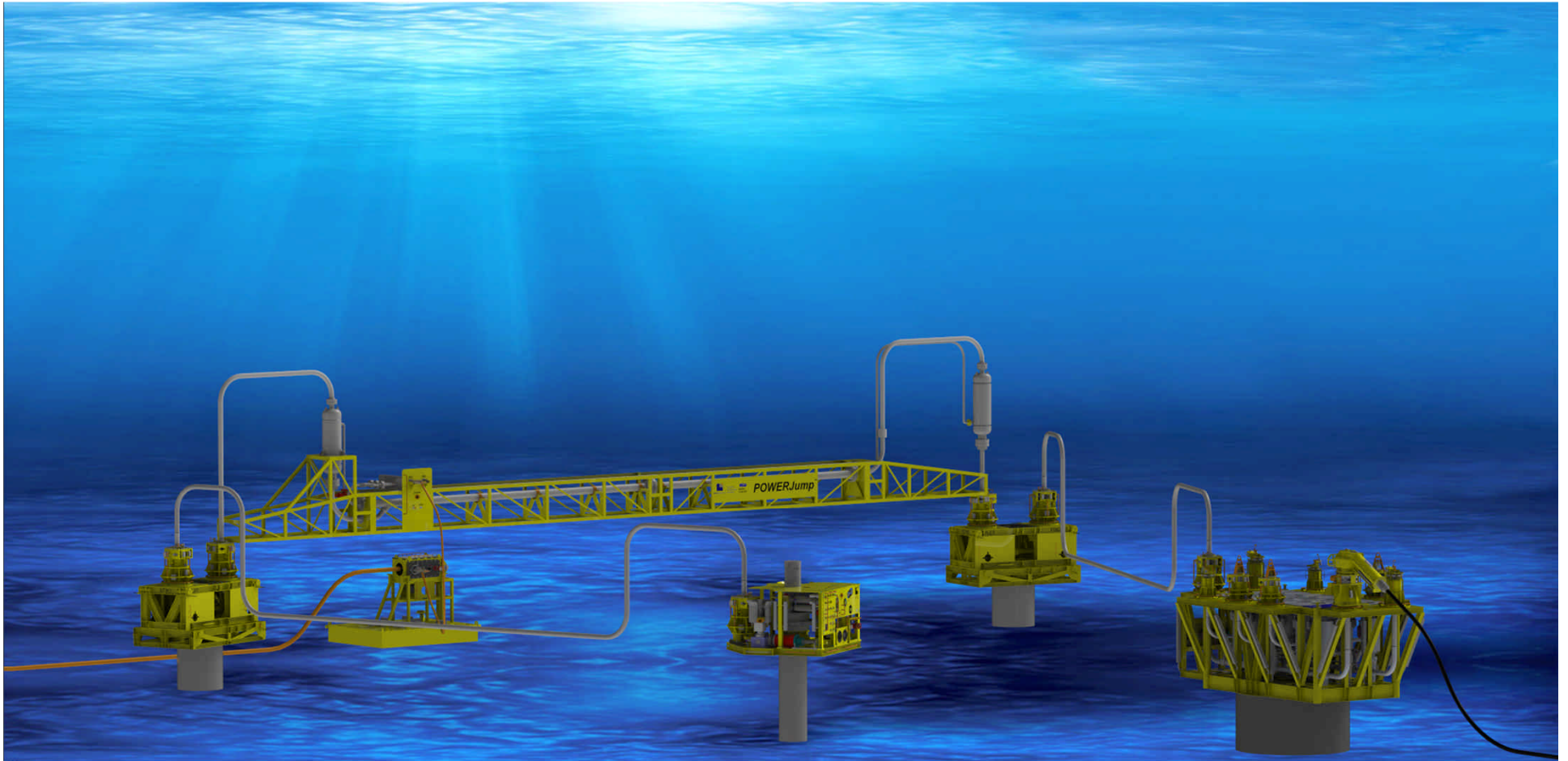
POWERJump™ System



- Use simple, proven technology for a low cost, fast track solution
- Install and retrieve easily
- Make it light weight
- Use modular design to reduce delivery time
- Use existing subsea infrastructure
- Develop with standard system requirements and procedures



POWERJump™ System



Baker Hughes Incorporated

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