Personal Information

Nationality : Dutch E-mail : <u>Harald.benning@redstonedrilling.com</u>

Country of residence : Scotland, UK Skype ID : Harald.benning

Marital Status : Married

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Drumoak +44 (0)7984 368921

AB31 5AN Scotland, UK

Education

Degree : Ing. / B.Sc. Drilling & Production Engineering, De Hogeschool voor de Petroleum-en

 ${\it Gastechnologie~"Noorderhaaks", Den~Helder, The~Netherlands.~Graduated: 1990}$

MSc. Purchasing & Supply Chain Management with Merit, Robert Gordon

University, Aberdeen. Graduated: July 2019

Summary:

Experienced engineer/manager with 30 years of experience in drilling and well engineering. My experience was acquired working for service companies, drilling contractors, well engineering consultancies and operators (majors and independents) on a global basis involving platform rigs, land rigs, jack-up and semi-submersible rigs assigned as drilling supervisor, senior drilling engineer, wells team leader, drilling superintendent, drilling manager and well engineering manager working in hostile remote environments.

A proven track record to challenge convention and introducing differentiating technologies to enhance the value of projects. Great believer and practitioner of applying a systematic, process driven risked based decision making resulting in a continuous improvement culture to measure performance and deliver upper quartile well delivery performance. Strong focus on delivering long term value to projects and delivering projects under budget by creating collaborative environments with the supply chain and internal stakeholders.

Key Skills:

- Strong HSE leadership. Able to communicate HSE commitments at all levels of an organisation
- Ability to create high performing multi-cultural teams in challenging operating environments
- Able to build effective relationships with internal stakeholders, service companies and JV partners
- Able to manage large scale drilling operations in hostile remote environments
- Ability to challenge convention and introducing differentiating technologies / methodologies to enhance the value of projects.
- Ability to apply systematic, process driven risked based decision making
- Able to manage and lead Drilling / Completion Well on Paper (D/C WoP) and formal risk assessments
- Excellent (technical) analytical skills providing solutions referencing industry standards, best practices and company policies & procedures
- Proven track record managing large scale drilling & completion budgets and contracts
- Broad range of offshore & onshore well engineering experience (drilling, completion, work-over, slot recovery and decommissioning operations) including ERD, HP/HT, MPD and H₂S wells.
- Highly adaptable working in hostile, remote environments with different nationalities and cultures.

Work Experience

Drilling & Completion ENI Egypt Nov 2021 – Present

Superintendent - Rotational Aberdeen, UK - Prospector 5

Overseeing drilling & completion operations for 2 offshore jack-up rigs, 2 land rigs and 6 work-over / rigless operations.

rigs and 6 work-over / rigiess operations.

HPHT Performance Coach CNOOC / Salos Sunesis Sept 2021 – Nov 2021

Aberdeen, UK - Prospector 5

Assigned to Prospector 5 jack-up rig drilling a HPHT well on 'Glengorm' UKCS as performance coach. Monitoring operations and advising the rig site leaders on optimization and performance improvement. Short term contract – fill in due

to Covid-19.

Senior Wells Advisor INDECS Jan 2020 – Aug 2020

Ad-hoc / Call-off Contract London, UK

Performed detailed well engineering review for two offshore well control

incidents (West Africa) on behalf of insurance underwriter.

Drilling & Completion Superintendent - Rotational

ENI Algeria

Aug 2019 - May 2020

Hassi Messaoud, Algeria

Responsible for drilling & completion operations for 2 land rigs drilling HT exploration and development wells. Contract cancelled due to Covid-19 pandemic.

Senior Wells Advisor Ad-hoc / Call-off Contract (Assignments performed during time-off) Exceed

Oct 2016 - March 2020

Aberdeen, UK

Create P&A Basis of Design for Northern North Sea sub-sea well

Technical due diligence review for North Sea offshore HPHT re-development including evaluating effectiveness of differentiating technologies such as MPD / MPC, and drill-in liners.

Well assurance review for offshore field development in Nigeria, offshore field development in the Black Sea, Corrib offshore gas field.

North Sea feasibility study to drill ERD well from Lomond platform.

Conduct technical feasibility study on abandonment of subsea wells in the North Sea referencing DCR regulations, UKOOA Guidelines for Suspension & Abandonment of Wells and industry standard well integrity guidelines.

Peer review Iraq onshore field development plan.

Drilling & Completion Superintendent - Rotational

Oriental Energy Resources Limited

Dec 2018 – July 2019

Lagos, Nigeria

Responsible for offshore platform slot recovery and drilling & completion operations for ERD development wells and HP exploration wells utilizing a jack-up drilling rig. Provide operations support and lead continuous improvement process. Short term contract.

Senior Wells Advisor

Rowan Drilling UK

Sept 2018 - Jul 2019

Aberdeen, UK

Creating integrated services (IS) contracting strategy. Short term contract concurrent with Oriental Energy Resources Limited assignment.

Drilling & Completion Superintendent - Rotational

AMNI Petroleum Lagos, Nigeria

April 2018 – August 2018

Responsible for offshore platform slot recovery and drilling & completion operations for ERD development wells utilizing a jack-up drilling rig. Provide operations support and lead continuous improvement process. Short term contract.

Project Manager / Drilling Superintendent

Petrofac UK Aberdeen, UK

Oct 2017 - April 2018

Leading an engineering team: Planning a subsea water injector well in Northern North Sea. Conceptual well designs to support field development in Central North Sea. Conceptual subsea field decommissioning project - Hudson

Senior Drilling Advisor Independent Competent Person Ad-hoc / Call-off Contract

Lloyds Register Drilling Integrity Services Aberdeen, UK

Sept 2017 – Oct 2017

July 2017 – Aug 2017

Well assurance review for onshore development well in Republic of the Congo. Prepare well engineering section for a North Sea joint field development plan for two undeveloped prospects for maximum economic recovery.

Independent well verification / examination for ultra-deep water (2,200 m water depth) exploration well offshore Ireland.

Drilling & Completion Superintendent - Rotational

AMNI Petroleum

Aug 2016 - Oct 2016

Lagos, Nigeria

Responsible for offshore platform slot recovery and drilling & completion operations for 2 ERD development wells utilizing a jack-up drilling rig. Provide operations support and lead continuous improvement process. Short term 2 well contract.

Drilling Engineering Manager - Rotational

ExxonMobil Iraq Limited Basrah, Iraq and Dubai, UAE

Nov 2014 - Jul 2016

Responsible for safe and efficient delivery of onshore development wells including wells from multi-well pad locations (vertical, deviated & horizontal) and re-entry of existing wells — West Qurna1 using 2 land rigs. Provided operational & technical review of all drilling, completion & workover programs using industry standards including all risk assessments. Responsible for safe planning and execution including well testing of high pressure H_2S exploration well. Leading a team of drilling engineers including local Iraqi drilling engineers

to plan and provide operational support. Mentor local staff. Responsible for implementation and compliance of drilling & completion contracts including drilling rig(s) contract(s). Responsible for specifying and managing supply chain for long lead equipment and well AFE's. Responsible for implementation and execution of drilling & Well integrity standards. Achieved overall cost saving of US\$2.0 MM by redesigning injector well and improving operational efficiencies to the advantage of all stakeholders. Created Wells QMS manual and Wells Basis of Design for West Qurna project.

Well Engineering Manager - UK

OMV (UK) Limited

Dec 2013 - Nov 2014

London, UK

Responsible for safe and efficient delivery of non-operated & operated wells offshore UK. Wells include uHP/HT, HP/HT, deepwater harsh environment (West of Shetland). Responsible for maintaining good working relationships with co-venturers / JV partners on operated & non-operated wells. Responsible for implementation of Well Engineering Contracts, implementation of a UK specific Well Engineering & Integrity Management System and compliance with regulatory & legislative requirements. Ensure correct staffing levels for future well engineering operations.

Drilling Manager - Rotational

BP - Rumaila Operating Organisation

Jan 2011 – Nov 2013

Basra, Iraq

Responsible for safe and efficient delivery of development wells including reentry, drilling and re-completion of existing wells on the second largest onshore oilfield in the world - Rumaila, Southern Iraq. Manage 6 to 12 drilling rigs including drilling engineering staff. Manage 10-25 office-based personnel consisting of JV partners (BP, PetroChina and SOC). Mentor junior local staff. Responsible for introducing innovative technologies to enhance overall performance improvement. Safely manage & lead well control events. Manage supply chain & safety management systems. Contract accountable manager for drilling & completion contracts & budgets. Monitor financial performance of drilling & completion operations. Design and implement contractor key performance indicators (KPI) and organize / lead quarterly performance review meetings as part of continuous improvement process. Implement a Rumaila specific well engineering & Integrity management system. Develop the Learning & Organisational Development capabilities of the organization to support staff development. Initiate quarterly HSSE focus initiatives (DROPS, PtW, Well Control etc.). Develop a systematic process driven audit management system for the drilling group.

Drilling Project Manager

Sterling Energy Plc

Oct 2009 - Dec 2010

London, UK / Sulemanyia, Kurdistan

Responsible for safe and efficient delivery of vertical exploration well (Sangaw) in Kurdistan - Northern Iraq. Drilling operations encountered severe downhole losses, high concentrations of H_2S (\pm 25 – 30 %), well control and socioeconomic challenges. Safely manage & lead well control event. Introduced MPD to project. Lead Root Cause Analysis investigation on all incidents. Created a drilling & completions team. Created a well engineering management system, lead the team to plan and execute the drilling programme. Manage supply chain and safety management systems. Manage financial performance of project.

Well Engineering Team Leader /

Apache North Sea Limited Aberdeen, Scotland

Apr 2009 - Oct 2009

Well Engineering Contracts Team Leader

Responsible for re-writing Well Engineering Policies, Performance Standards & Written Scheme of Verification as per DCR regulations. Responsible for retendering process for Well Engineering Group; Well services Slickline & Coil Tubing, Platform Drilling Contractor, Tubular rentals, Directional & MWD / LWD Services, Fishing tools and Liner Hangers.

Drilling Superintendent

Total E&P (UK) Limited.

Aug 2008 - Apr 2009

Aberdeen, Scotland

Plan & execute ERD sidetrack wells on Alwyn Platform in the Northern North Sea. Safely manage & lead well control event. Perform Root Cause Analysis on well control incident.

Drilling Superintendent

Canadian National Resources International

Jun 2006 - Aug 2008

Aberdeen, Scotland

Plan & execute ERD sidetrack wells on 'Ninian Central Platform' in the Northern North Sea. Operations included: slot recovery, retrieving completion string, P&A motherbore, drill sidetrack and complete wells (ESP). Lead Root Cause Analysis investigation on all incidents. Team Leader for project "Technology selection process for ERD wells in mature assets". Initiate multi-lateral project.

Drilling Superintendent / Project

Senergy UK

Oct 2005 – May 2006

Manager.

Aberdeen, Scotland

Plan & project manage jack-up development drilling campaign in the Southern

North Sea.

Wells Team Leader.

Peak Well Management Limited

Jan 2005 – Oct 2005

Aberdeen, Scotland

Plan & execute multi-operator drilling campaign in the Central & Northern North Sea using a semi-submersible drilling rig. Create detailed well AFE's using probabilistic time & cost estimation using P1 software. Lead tendering & evaluation process for a variety of drilling services.

Senior Drilling Engineer / Drilling Superintendent

Talisman Energy (UK) Limited.

Jun 2002 - Dec 2004

Aberdeen, Scotland

Plan & execute Halley ERD well on Fulmar platform; vertical exploration well 12/22a-D 'Remus'; 'Ross' 13/28a-CC RP12 horizontal development well; exploration well in block 13/29b-9 'Skate' well; HP/HT exploration well 'Roisin' – block 15/27. Create detailed well AFE's using probabilistic time & cost estimation using P1 software. Teamleader for 'Differentiating Technology' focus group during the transformation initiative of the Talisman Wells Group. Lead the rig tendering & evaluation process for a semi-submersible drilling rig.

Senior Drilling Engineer
One well contract

BP Plc

Oct 2001 – Jun 2002

Aberdeen, Scotland

Plan and execute horizontal marginal subsea field development well 'Maclure' 9/19-14 located in Central North Sea. BP classified this as a 'Best in Class' well.

Senior Drilling Engineer

Enterprise Oil Plc.

May 2000 - Oct 2001

Aberdeen, Scotland & Athens, Greece

Plan & execute HP/HT exploration subsea well Amber' 15/28a-8, two finder offshore wells 'West Wick', onshore exploration well in the Ionnina, Greece.

Senior Drilling Engineer

Global Marine - GMIS-E

Mar 1998 – May 2000

Aberdeen, Scotland

Provide engineering & operations support for wells in the Irish Sea and Southern North Sea including a coiled tubing-drilling sidetrack well. Conduct an ultra-deepwater horizontal well feasibility study.

Wellsite Drilling Supervisor

Schlumberger - IPM

Feb 1997 - Mar 1998

Lake Maracaibo, Venezuela

Wellsite drilling supervisor "Urdaneta West Project". Drilling directional development wells for Shell Venezuela SA (SVSA) on jack-up 'lle du Levant'.

Drilling Engineer

Schlumberger - IPM

Oct 1995 – Feb 1997

Office based; Port Gentil, Gabon

Drilling Engineer for two land rigs drilling horizontal development wells working on integrated services contract on the Rabi field - Shell.

Drilling Engineer

Schlumberger - Sedco Forex; Research &

Mar 1994 – Oct 1995

Engineering Montrouge, France

Solving complex drilling problems in support of field operations. Create training modules for deep water well control, horizontal well control, capacity of mudgas separators, HP/HT well control to improve internal learning & development. Revise Sedco Forex Well Control Manual. Expert user in gas-kick simulator 'SideKick'.

Well Site Drilling Engineer

Sea and Land Drilling Contractors (Schlumberger – Sedco Forex) Muscat, Sultanate of Oman Aug 1993 – Mar 1994

Well Site Drilling Engineer seconded to Petroleum Development Oman drilling

onshore horizontal development wells.

Drilling Engineer / Assistant

Driller

Schlumberger - Sedco Forex

Aug 1992 - Aug 1993

Esbjerg, Denmark

Assigned as Assistant Driller to jack-up "Trident X". Work as a rig engineer in

the office, relieving rig manager as and when required.

Trainee Rig Engineer Schlumberger - Sedco Forex

Jul 1990 – Aug 1992

Aberdeen, Scotland

Completed formal in-house training program. Office and rig based; Semi-

Submersible "Sedco 703", "Sedco 704" and "Sedco 712"

Training / Seminars

IWCF - Combined Surface & Subsea BOP Stack - Level 4 Distinction; Expiry date: Nov 2022

Offshore Medical Certificate (Oil & Gas UK) – Expiry date: 22 October 2021 OPITO Minimum Industry Safety Training - Expiry date: 21 October 2023

OPITO BOSIET with CA-EBS- Expiry date: 24 October 2023

- HSE Golden Rules; Upstream & Technical Activities

- The Culture of Asset Integrity

Harvard Edx: Contract Law; From Trust to Promise to Contract August 2020

Understanding & Managing Risk - Open University November 2016

Operations Management – Open University December 2016

Risk Assessment Course 'Risk & the Human Factor'

Drilling Technology II

Drilling Engineering Course by IFP

Drilling Optimization by Prentice Training Company

Horizontal Well Control Workshop

Drilling Operations: Critical Skills and Directional and Horizontal Drilling by OGCI

Schlumberger Wireline & Testing openhole logging seminar at BTC, Livingstone

Stability I & II - Kings College Aberdeen

Sedco Forex Jack-up seminar

ISO 9001 Internal Auditors course (DnV).

Landmark Graphics Software (Compass, Wellplan for Windows, Stresscheck).

Probabilistic Cost & Time Estimation Software (AGR - 'P1', Warrior Technologies - 'UnRiskit')

Enterprise Oil Emergency Response Training.

Improving Performance Management in Well Construction Seminar

MODU Spec 3-day course

Well Productivity Awareness School – TRACS

 $Introduction\ to\ Completion\ Technology-Allomax$

EGIS - Completion Design Course - October 2004

Advanced Casing Design - Entrac July 2002

Dynamic Leadership II

Regulation Awareness Course - Rig Train

Root Cause Analysis (RCA) Course - January 2004.

Incident Investigation Course October 2007

Developing Negotiating Skills by MDT - August 2004

Oil Spill Emergency Response Training 2005

The Newly Appointed Manager – HemsleyFraser July 2008.

Project Leadership - Cornell University - January 2010.

Hostile Environment Training (HET) – January 2011 / Refresher HET – January 2012 / February 2013

Publications

'Use of a Gas Kick Simulator to Produce a Deep Water Well Control Training Package'

IADC Well Control Conference of the Americas - November 16, 1994 IADC Well Control Conference Asia Pacific Region – Dec 1, 1994

Dissertations

BSc / Ing. Drilling & Production Engineering:

Interpretation of Leak-off Tests (Schlumberger Cambridge Research).

MSc. Procurement and Supply Chain Management:

Enhancing Operational Performance Through Novel Risked Based Contracting Strategies for the Upstream Oil & Gas Industry.

Languages

- Dutch Native
- English Fluent

- German Intermediate
- French Basic / beginner