

# **Relentless Pursuit of Perfection Ltd**

**April 2015** 



### Core Areas



Operations
Optimisation

Personnel Development

**HSE Support** 



Manpower

Track Record

**Technical Forum** 

## 15 Years, 35 countries, 300+ workshops





#### Performance Facilitation

- DWOPs (Drill-well-on-paper optimisation workshops)
- i-DWOPS (Improvement DWOPs)
- Operational Reviews, Benchmarking and Gap Analysis
- Team-based Workshops (Goals, Expectations, Cultural Awareness)
- Fostering a Performance Culture Everywhere We Go

3 April 2015

#### Core Services



#### Performance Facilitation

- i-DWOP's
  - Improvement
  - Efficiency
- DWOP's
  - Also CWOP, TWOP, SWOP
- Systems Gap Analysis
- Project Kickoff
- Well Design Challenge
- Peer Assist Review
- Teambuilding Alignment
- Develop Performance Plans
- Best of the Best Analysis
- After Action Reviews

#### **HSE Services**

- HAZOP's / HAZID's
- Risk Assessments
- Safety Cases/ MAHRA
- Bridging Documents
- Safety Management Systems
- DROPS (Policy, Survey, Systems)
- Operational Safety Reviews
- Incident Investigations
- Bow Tie Analysis



Cost &

Risk

#### Performance Coaching

Academy

Creating

- Technical Limit Coaches
- Developing Performance Thinking
- Rig Start Ups
- HPHT Coaching
- Helping Hands
- Building National Competency

#### Recruitment

- Short Term Hire
- Well Delivery Disciplines

### On the job support





#### Wellsite Coaches

- Highly Experienced Coaches Support the Crews
- Performance Optimisation through Pre-section Meetings, After Action Reviews, Video Capture & Analysis
- Crew Development through "Helping Hands" Support, Advice and Fun
- Development of National Crews

#### Onshore Coaches

- Manage offshore coaches
- Focal point for office staff
- Keep the performance attitude burning in the team

5 April 2015

## Typical Achievements



### Bench-Marking & "Prepare to Excel"

- Wells drilled in just over half the AFE
- "Breakthrough in performance culture"

### Helping Hands

- Experienced Drilling personnel as extra "eyes and ears"
- Contributed to well cost savings of up to €4.5 million per well

### DWOPs, CWOPs, HAZOPs

- Deepwater, HPHT, Geothermal,
- Coal-bed methane, conventional

#### Recruitment

See further Testimonials later. Contact us for more details specific to your needs



Safer,

**Faster** 

Cheaper

## The Drilling Performance Consultancy



#### HSE Services

- Expert Technical Facilitators to invigorate your HAZOP/HAZID meetings
- Introduction to Process Safety; KPIs developed & owned by your crews
- DROPS, MAHRA/Safety Case, Investigations
- On-boarding Risk Assessments



### Manpower



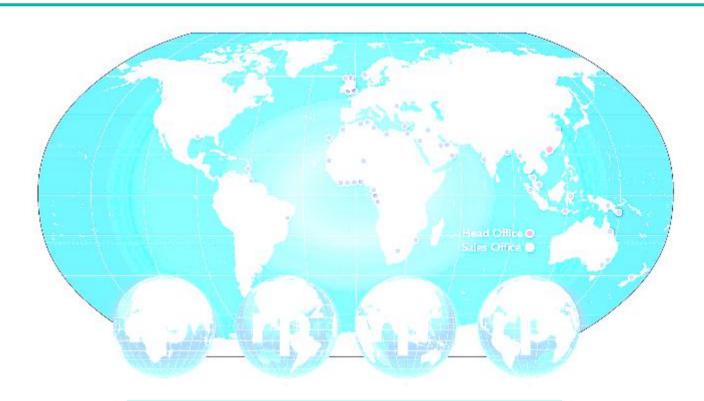


### All Technical Disciplines for Well Construction

- Drilling Engineers, Superintendents, Managers; Technical Assistants
- Completions Engineers & Production Technologists
- Logistics, Contract & Procurement
- Offshore Drilling Supervisors, Materialsmen, Completion Supervisors
- Testing & Workover Engineers & Supervisors
- Complete teams

## A Long History.....All over the World....





178 teams supported

148 installations

58 "operators"

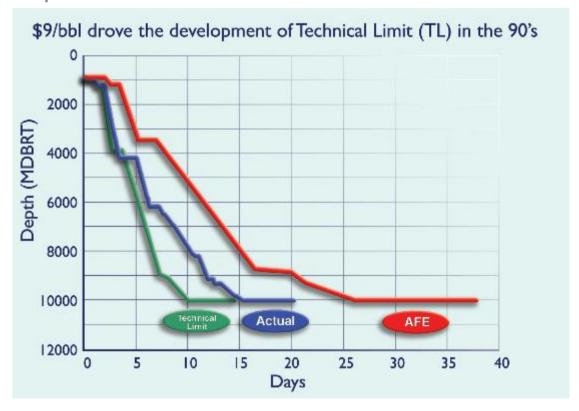
53 installation owners

321 workshops with 14,000 delegates

## Typical Experiences



- Technical Limit Service (office and/or wellsite)
  - bp Indonesia: booked \$60 million benefit from our work.



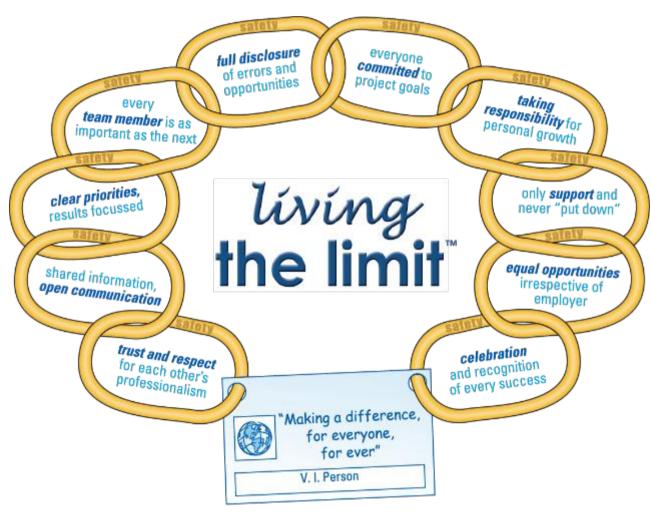
Safer, Faster, Cheaper.

- i-DWOPs
  - i = Improvement. The focus is on efficiency.
  - Address any "Failure to learn"

## Nurturing World Class Teams...



#### ... by helping you to create an Enabling Environment



"Living the Limit" is a trademark of Relentiess Pursuit of Perfection Ltd and cannot be used without permission.

### Powerful vision or fear of failure





### Our Mission ...





To work with you to drive out waste, maximise value and minimise the learning curve whilst preserving your core values.



"If we were to do this together for the first time, knowing what we know now from our years of experience, how would we do it?"



"If we were to do this *again*, knowing what we know now, how would we do it?"



# "Living the Limit"

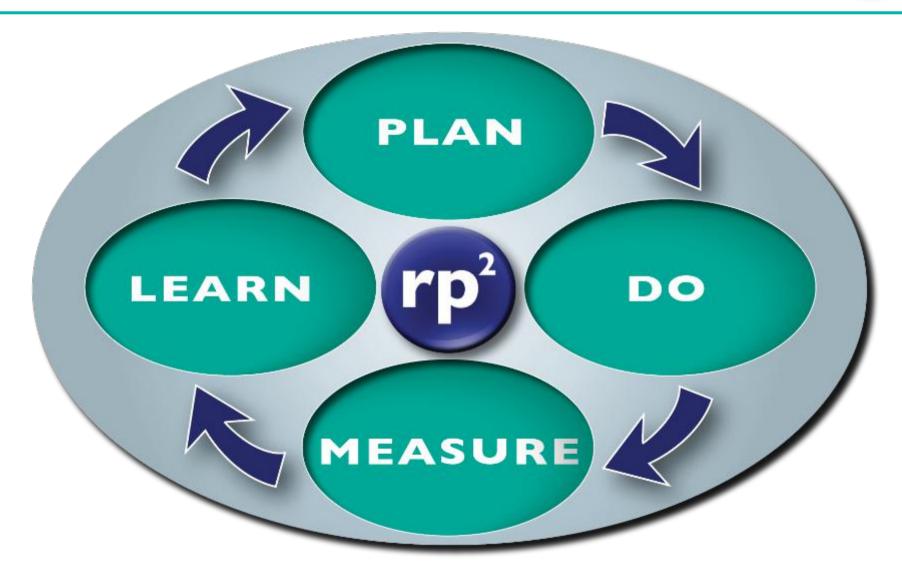
Is believing that everyone should want to do the very best possible..

With what we've got With what we could get

## "The Perfect Outcome"

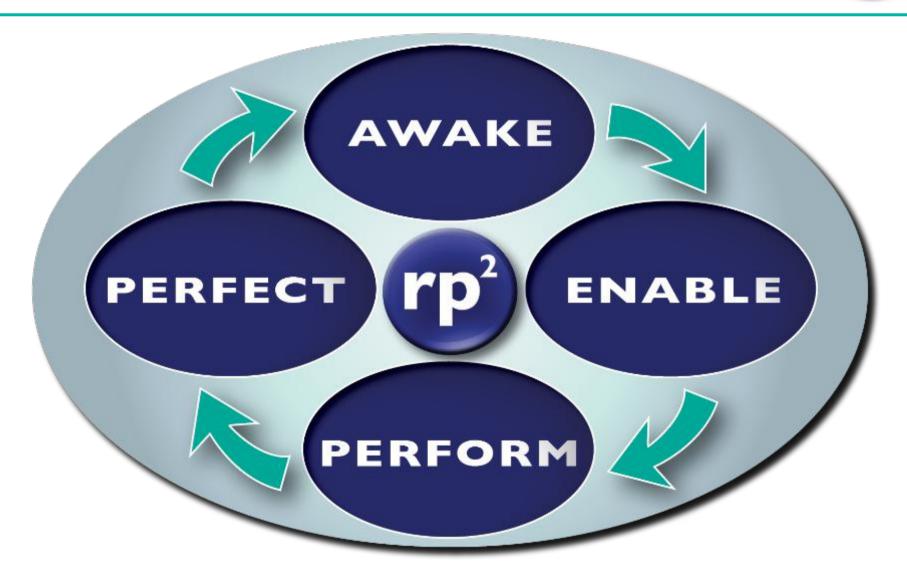
## Appeal to our heads ...





### ...and make it come alive in our hearts





## Embedding the Culture



### Workshops – tailored to the greatest need

- Team Development
- Motivational Movies
- Team Building Activities
- Crew-derived Technical Limit
- Trust Workshops



### Other items in our tool-box



- "Gap Analysis" on Works Systems & Organisation
- Trust-building Workshops
- Well Concept Identification Sessions
- I-2 day Workshops to develop relationships and tailor performance methodology to the 'personality' of each team
- 1/2 I day Awareness Seminars for all team members
  - includes link with **safety**, what's in it for me.
- Design & Objective Review Sessions.
  - $\frac{1}{2}$  I day reviews that feed robust designs into the next planning phase.
- Risk and Opportunity Workshops with the onshore team and key "site" personnel.
- CWOPs, Test Well on paper, Supply Well on paper
- Start-up Field on Paper
- Project Wash-ups

## It's not just drilling



- Ops/Safety Reviews
- Brownfield Extension Programme
  - Align all departments / team-building
  - Challenge the planning assumptions and look for efficiencies
  - Dive-the-workface-on-paper ("DWOP")
- Dewax-pipeline-on-paper ("DWOP")
- Start-up Field on Paper
- Turbine Overhaul AAR
- Field Development Wash-ups (Technical, Commercial, Contractual, Partners)
- 90-day safety plans
- Workshops to develop relationships and tailor the methodology to the 'personality' of each team
- Performance Seminars for all team members
- Project Wash-ups

## MySpread Discussion Forum



www.myspread.co.uk





# **Experience Profile**

# Living the Limit



### Installations



- Drillships
- Semisubs
- Land Rigs
- Platforms
- Tender
- Sub Barge
- Floating Production
- Geotech
- LWI Vessel
- HWU



In locations worldwide



## **Testimonials**

Sample – more available on request





February 28, 2014

TO:

Whom It May Concern

FROM:

Nelson Emery

RE:

David Taylor - Letter of Recommendation

Dear Sir/Madam

David Taylor was a very critical part of our highly valued communication and respectful work place we were able to install and maintain on our deep water drilling operation.

He was our instigator and facilitator at all our processes that we held at our company to achieve the phenomenal, safe operation success we had. We were integrating a working semi sub to come into Indonesian water, and drill 1,800' – 8,000' water depth wells to 20,000' in remote areas of Indonesia over 3,500 miles apart.

Dave was an integral and successful part of our Team through all our process as both a participant and the facilitator for the following events:

- 1. Nlko Project Process 3-Day Risk Review over all Project Processes
- Niko Drilling Process 3-Day DWOP focusing on Culture Training & S.D.C.Drilling Task Planing – Jakarta – (Crews A & C)
- W.W.C. Well Control Training Niko / Diamond / Mud Engineer/Logger rig and office teams – Jakarta
- Niko Drilling Process 3-Day DWOP focusing on Culture Training & S.D.C. Drilling Task Planning – Singapore (Crews B & D)
- W.W.C. Well Control Training Niko/Diamond/Mud Engineer/Logger rig and office teams – Singapore
- Niko MPD 2-Day Řísk Review Niko/Diamond/Weatherford/Mud Engineer/Logger – Jakarta

His education and profession as an experienced Petroleum Engineer with lengthy rig experience, allows him to be respected during all these events.

Thank you,

Nelson Emery Drilling Superintendent – Niko Resources



Dear Dave.

On behalf of Repsol Exploración Murzuq S.A., I would like to extend our appreciation of your time and expertise to organize and facilitate the successful

EPSA IV Exploration Drilling Campaign 'Drill-the-Well-On-Paper' (DWOP)

held at the Hotel Corinthia in Tripoli (Libya) on the 10th and 11th of February, 2013.

The event was a success and your coaching, facilitation contributed significantly to it.

Your guidance taught the attendees to confidently share their skills and experience using your effective techniques. Your style and interactive program allowed each member to craft, deliver and receive coaching. Your thorough hand-out with templates, customized examples further helped members to contribute with enthusiasm to the definition of operational look ahead and challenges.

We the REMSA Drilling Team enjoyed working with you and looks forward to future opportunities to utilise the Relentless Pursuit of Perfection Ltd. (Rp2) top quality expertise.

As well. I heartly recommend you to other Repsoi Drilling Departments who desire a professional, energetic and experienced DWOP Facilitator, but where also entertainment and fun are required.

You are a true partner in Projects success, a consummate professional.

7



#### Chris Brown

Senior Drilling Engineer

19 December 2006

To whom it may concern

Direct 01224 835167 Main 01224 832000 Mobile brownoj@bp.com

The Clair Team have employed Dave Taylor and the RP2 team since late summer 2004 in a variety of technical limit scenarios. These range from the initial wide-ranging teambuilding session for the brand new Clair rig and service teams in which we brought the teams together, communicated the expectations and standards of how we wanted to work on Clair, and used technical limit activities to illustrate these expectations, to detailed technical limit work with a subset of the teams on individual well sections.

RP2 technical limit programmes typically have a rigid structure and contain a high level of detail and complexity ensuring technical limit improvements are addressed right down to the lowest level. Their sessions are characterised by high energy and are at their best when led by members of RP2 highly experienced in managing the format and with close involvement and good advance preparation by the operator, taking advantage of the detailed work breakdown structure used by the programme.

We have no hesitation in recommending RP2 as a technical limit consultancy and will be happy to give further information at the following contact details:- Richard Smith 01224 835296 smithris@bp.com, Chris Brown 01224 835167 browncj@bp.com

Sincerely.

Christopher John Brown. Senior Drilling Engineer, Clair

A. R. M.O.L.ER-MAERSK CROUP



#### MAERSK OIL NORTH SEA UK LIMITED

13 May 2010

Mr Davie Taylor Managing Director Relentless Pursuit of Perfection Ltd Enterprise Business Centre Admiral Court Povnernook Road Aberdeen **AB11 50X** 

Dear Dave

I'd like to thank RP Squared for the contribution you've made to enhancing our drilling performance here in Maersk Oil UK. It was something of a challenge to convince a team that knew they were performing well, that they could improve further and there was definitely some resistance in some quarters. But, largely down to the methods you have applied, what a difference in attitude we now have. I now regularly have people in our team questioning "why did that take so long?", "did we really need to do that?"

The proof of the benefit of course is in the results. The work we have done with yourselves will apply to all of our central North Sea development wells but we focused primarily on well D11 at our DWOP. I've attached the time versus depth curve from that well and as you can see we were very close to the "Best of the Best" curve throughout and beat it overall as the completion also progressed very smoothly. We reached TD in less than half the planned time (helped by the shorter well length than originally planned). The DWOP identified a number of operational steps that could be improved or preparations that could be made more efficient and many of these have been implemented. Beyond that, we have got people thinking about improvements much more than they were previously.

The rig safety record is excellent and this has continued to be the case.

Our subsequent well has had bad luck due to weather, which held us up for a number of days waiting to get on location and we lost a few days waiting for people due to the volcanic ash. If we back-out waiting on weather time we would be well ahead of our original estimate. So with the renewed focus that the work you did with our team has provided, I'm hopeful that we will sustain the improvements that have been made.

The success we've seen on our central North Sea development wells has contributed to our desire to use your company's services on our HPHT well planning.

> Yours sincerely For MAERSK OIL NORTH SEA U.K. LIMITED

> > Derek Charlton



#### Eni Oil do Brasil

As File Brance, I = 605 - Centro Rio de Janeiro - RJ CEP 20030 - 003 Phone, (95) (21) 3082 6460 Fox (95) (21) 2082 6460



23-Febuary-2010

Dave Taylor Managing Director Relentless Pursuit of Perfection Ltd UK Mobile: +44 7748 678 176

Subject - Technical Limits Workshops for Eni Oil do Brasil's Belmonte 3 Project

To Whom It May Concern:

Dave Taylor of RP<sup>2</sup> was contracted by Eni Oil do Brasil to provide Technical Limit Workshops for our Belmonte 3 project in 2009. The project required preparing an operations team who had never worked in Brasil for a deepwater, HTHP well test of an unconventional tight gas sand that would require fracturing to establish commerciality. Dave's company was selected using the normal bid process. The selection was based upon his knowledge of operations and structure of the proposal. I personally had never used his service before and have been a big proponent of one of his competitors. Nevertheless, I ventured out of my comfort zone and was impressed by his ability to perform the tasks we had envisioned in an energetic and stimulating manner.

My goal for this project was to avoid past problems and build an operations team that focused on communications within Eni and with Service Providers. I did believe we could do better than past exploration wells in terms of performance while meeting both local and corporate HSE goals. Previous Eni offset wells were lost due to shallow water flow at great expense. In addition LTI's had occurred during each of the previous operations. In order to accomplish building a team, a foundation was built first with a Supervisory Alignment Meeting, then a DWOP was held with supervisors and service providers for the drilling operations and finally a CWOP was held prior to the well test.

Overal, I believe the meetings accomplished the goals set out. The project was completed with no major safety events resulting in injury and the equipment accidents were used in a productive manner to highlight potential and improve processes. The well was drilled and logged without recurrence of previous catastrophic events and with faster drilling rates. In the end, the well test was performed with dedicated rig crews and service providers challenged with minimum deck space and very limited quarters for this type of operation. Dave did not supply rig sits service due to the limited quarters, however, if there had been room or Eni had a sustainable program, this service would have been actient.

Eni engineers were somewhat skeptical of the purpose of these meetings. It was their first time to be exposed to a Supervisor Alignment Meeting, DWOP and CWOP, initially they thought the SAM was too philosophical because it focused on operating principles and communications and not on how to construct the well. However, it was necessary since no one in the project had worked together previously. So in assence the SAM set the ground rules for operations as well as goals for the DWOP & CWOP. The 2° day of SAM included the service provider coordinators who were indoctrinated into a unified Eni Team who were able to consistently convey expectations for the DWOP and upcoming operation. In the end Eni Operations & HSE management as well as service providers found it helpful to become acquainted prior to the DWOP.

The DWOP and CWOP meeting were held with full service provider crews attending. The meetings focused on the usual details of the well plan, operation protocol and HSE requirements. Ent's HSE department found it very helpful since it fulfilled basic Brazilian Training Requirements and established a free flow of information between Operations, Service Providers and HSE.

I hope this testimonial provides support for the value of this service for future operations. In the end, performance is always measured but all too often goals and objectives are not fully understood.

Craig T. Castille Well Operations Manager Eni Oil do Brasil



Enson Gerudi (M) Sdn. Bhd (303856-H) 7<sup>1</sup> Floor, East Block Wisma Selangar Dredging, 1428, Jelan Ampang, 50450 Kuala Lumper, Malaysia

Phone: 460 (3) 83135570 Fax: 460 (3) 21660455 Www.enscools.com

Date: 3rd March 2014

To whom it may concern,

Subject: Services of Dave Taylor as a facilitator for Well Construction and Completion pre and post operational meetings.

I have worked with Dave Taylor since early April 2009 when he was conducting a DWOP session for Total Borneo for one of our Drilling Units. Since this time I have attended several Pre and Post Well Construction and Completion activities that Dave has conducted and found him to be an excellent facilitator. These include DWOP's (Drilling Well on Paper), CWOP's (Completing Well on Paper) AAR's (After Action Reviews), HAZID's and HAZOP's.

He has added value to all sessions through upfront planning and set up, ensuring he understands the subject matter and through providing the tools required to park and ensure all issues and actions are either closed or brought to a matrix for further action close out.

I would not hesitate to recommend Dave to any Energy Operating or Services Company that requires an expert facilitator to add value to the their organizations projects aimed at Well Construction and Completion.

Yours Sincerely,

Mhomax

Mike Lomax Rig Manager – Ensco 8504

Relentless Pursuit of Perfection Ltd

**April 2015** 





Relentless Pursuit of Perfection Jakarta, Indonesia,

Attention: Dave Taylor

Dear Dave,

Mubadala Petroleum Indonesia wish to thank you for the excellent service provided to organize, facilitate and close out the 2 DWOPs held for our Trilobi-1 Exploration and Ruby Field Development wells in 2013.

A good DWOP requires thorough planning, facilitation and reporting. You did a fantastic job on all three and the pay back for MPI was many times over. Your professionalism impressed our upper management as well as our partners.

I hope we have the opportunity to work together again many times in the future.

Regards.

Steve Hall Drilling Manager.

Mubadala Petroleum Indonesia



#### TOTAL ESP MALAYSIA

7th March, 2014

To whom it may concern:

#### Reference on behalf of Dave Taylor

I hired Dave for our DWOP & PMCD HAZOP sessions based on the recommendation of one of my Drilling Engineers who had worked with him before. It was for Total E&P Malaysia's first deepwater well in the country and we planned to drill the main target in PMCD mode with the Ensco 8504 – only the second rig worldwide to be equipped with such equipment.

Due to the criticality of the project, it was imperative to have a facilitator that could not only help us convey the key aspects of the drilling program during the DWOP but who could also help facilitate the HAZOP session for the PMCD equipment & process.

Dave delivered on both fronts and was well received by all parties involved. DWOP's are his specialty and ours went exceptionally well. Although he doesn't usually facilitate HAZOP's, he did a really good job keeping everybody involved while ensuring we covered all the material that was required.

I would definitely recommend Dave to facilitate any DWOP and/or HAZOP sessions and would not hesitate to hire him again in the future.

Sincerely,

Gregoire Chabrol Drilling Manager Total E&P Malaysia

gregoire.chabrol@total.com

## Coaching service





NO. BOX 78048 NO. - 1070 LF AMSTERDAM

Reientiess Pursuit of Perfection Ltd Attn.: Mr. Dave Taylor, Managing Director 3905 Two Exchange Square Suite No. 8640 8 Connaugt Place Hong Kong

Amsterdam, May 22<sup>rd</sup>, 2014

Dear Dave,

Thanks to the efforts of you and your team during the two DWOP and the involvement of your "Weltsite Advisor" team offshore, we have seen vast improvements in timings during the second well of the Ensoo 52 drilling campaign.

We initially hired your team to provide 'boots on deck' support to the Ensco 92 team, due to concerns about crew turn-over and competence that coincided with the start-up here in Dutch waters. During the first well, we quickly found that your team were able to 'keep us out of trouble' and gain the respect of the wellsite personnel including Ensco.

For the second well, rp<sup>3</sup> facilitated an improvement-OWOP, where the focus was on efficiency improvements and lessons learnt.

The rig has now been released and your team, Billy Meldrum and Mark Guthrie, did a great job to coach the Ensco 92 workforce (Ensco and Service Companies; our business partners) towards improved performance.

The days saved on this second well alone were 10 days (2.4 million Euros) excluding contingency. If you include contingency, it was some 20 days and (4.8 million Euros approximately). Both cases excellent results!

I attach the Time vs Depth and Cost vs. Depth curves for your confidential viewing.

ONE has not had an LTI in their operations since 2008 and this campaign continued the good HSE trend

I can recommend both Billy and Mark to any other customer, and would be more than happy to see both back in my operation in the future.

Not long after your team started, I sent you an email to say how happy I was that I had met you and your company, and I am glad to say that view is unchanged.

I hope that both companies can work together again in the future

Kind regards

Oranje-Nagray Energie B.V

Joan Horbdek Orilling Markag BG GROUP 🙎

Mr Dave Taylor Relentless Pursuit of Perfection dave@relentlesspursuit.co.uk Aberdeen Scotland

Dear Dave

#### Performance

rp² provided on and offshore performance coaching for BG in the UK some 6 years ago. Since then, BG has not been without a performance coach embedded within the Well Engineering team. Once we were up and running with a couple of campaigns under our belts, the systems that we introduced with rp² were considered sufficiently robust for us to take them on ourselves. This provided us with another step change in performance which came about due to the teams driving it from within. The enabling environment that you are so passionate about and deliver in such a compelling manner is very much alive and well at BG.

Yours sincerely,

Peter Greaves

**BG HPHT Wells Team Leader** 

21/5/10

## Coaching service



bp



BP Berau Ltd Pekantoran Hijau Arkadia JI TB Simatupang Kav 88 Jakarta 12520 Indonesia

06/09/2009

#### rp2 Performance Management Services to the BP Tangguh Project

\*rp² provided performance management services to the BP Tangguh drilling & completions team for the duration of the 2 year project.

The Tangguh project is located in the remote region of Papua in Indonesia and presented some unique challenges, such as managing remote logistics, drilling through long intervals of vugular, karstified limestone formations with total losses and completing and testing high rate gas wells capable of producing up to 240 mmscf/d.

The Tangguh development is the first major LNG development in the Papua region of Indonesia and, due to the initial lack of analogous offset well data, it was expected that significant performance improvement could be achieved if a rigorous learning process was utilised through the project.

rp² provided rig site and office based performance coaches to help the Tangguh D&C team to implement a learning process and enabled the project to realise the expected rate of fearning which has been estimated to be valued at \$60 million. This achievement can be attributed way the rp² coaches integrated into the bp team and helped it to apply pre-phase planning, after action reviews and capture and implementation of lessons. In addition, rp² organised and facilitated several team building workshops which enabled a greater team engagement with the performance goals of the project.

The key to rp<sup>2</sup> success, where some other performance management companies often fail, was due to the quality of the personnel that they provided. They were all experienced drilling personnel but with the interpersonal skills required to effectively engage the BP team, drilling contractor and service company personnel with their performance management processes. Many team members commented that this was the best experience that they had ever had using performance management services.

I have used rp<sup>2</sup> services on several occasions and I have always been pleased with the service that they provide and the results achieved. I hope to be able to use them again on future projects".

Attanena.

Andy Hanneman, Wells Team Leader, Tangguh D&C project

#### "A well for free"

#### bp

#### Martin Varco

Wells Manager Angola Business Unit BP Exploration Operating Co. List Chartesy Road Surbory on Thermas Widdlesex TW18 21 N

January 13th 2007

Dave Taylor Performance Consultant & Managing Director Relentless Pursuit of Perfection Ltd

Reference: Testimonial for Relentless Pursuit of Perfection Ltd.

Direct: +44 1932 767015... Mobile: +44 7775 705855. martin.varco@bp.com

#### To Whom It May Concern

During the drilling campaign for the InSalah Gas project in late 2003 we implemented a Technical Limit program in order to under pin the delivery of the remaining 10 gas wells needed for delivery of First Gas. To support the implementation of this program we chose to partner with "Relentless Pursuit of Perfection". They provided us with a field consultant to coach and support our field crews in embedding the Technical Limit process into the way we worked.

The use of the wellsite TL coach from "Relentless Pursuit of Perfection" enabled us to review the Technical Limit way of working with all our crews. This was a key success factor in getting the programme up and running quickly. .... The result of our 10 well programme Was been excellent – first 3 wells showed 25% well-on-well improvement, gas targets delivered 4 months ahead of schedule, and the cost savings enabled the last well to be drilled for "free".

Yours truly,

MARTIN VARCO

Martin Varoo

Angola Wells Manager

April 2015

### Coaching service



#### Wellservices

#### To Whom It May Concern:

Application of Technical Limit to Wells Decommissioning - BP North West Hutton

#### Relentless Pursuit of Perfection Ltd

On 22nd January 2004, the wells team laid down the last joint of conductor on the catwalk of Rig 2 on NW Hutton. It marked the end of the biggest well abandonment programme in the Northern North Sea and possibly in the world. The programme, which was part of the overall NW Hutton platform decommissioning project, is notable for many reasons, but the principle achievement is that, in a twenty two month period, 414,000 man-hours, all of the required work was completed without a lost time incident.

Given the scale and repetitiveness of the project it was recognised the principles of Technical Limit (TL) would be applicable to the operations. The company Relentless Pursuit of Perfection Limited were engaged to provide TL support to the wells abandonment and conductor team. It is believed this is the first time TL had been applied to well intervention and abandonment operations. Following intensive onshore planning, preparation and discussion TL was introduced into the project.

Significant performance improvements were noted in both phases of the abandonment project; 17% improvement during reservoir abandonment and 28% improvement seen during conductor recovery phase. In total over 500 suggestions were noted covering a wide range of health, safety, and technical application.

Personnel provided by Relentless Pursuit of Perfection Limited exceeded all expectations of the well abandonment leadership team. I would have no reservations in recommending them to provide TL instruction and support to any drilling or well service related activities.

Garry Skelly
Brent Wells De-commissioning Leader
Telephone: 01224 - 884826
Mobile: 07712 - 765648
E Mail: Garry.Skelly@Shell.Com



### Relentless Pursuit of Perfection Technical Limit Services Tangguh Development Drilling Programme BP Berau Ltd., Papua, Indonesia

The contract for Technical Limit Services for the Tangguh Development Drilling Programme (TDDP) was awarded to representing Relentless Pursuit of Perfection (RP²), a UK based company with previous experience working with BP in April 2007 for a period of 12 months after being competitively tendered.

The TDDP technical limit process has been successfully implemented by RP<sup>2</sup>. The process is based on a continuous improvement cycle of Plan-Do-Measure-Learn. As from early 2009 we are now into the sustainability phase whereby BP's Well Site Leaders and Drilling Engineers will continue to implement the process of Technical Limits at the rigiste and hence fill the role of the previous Technical Limit Coaches.

The measure of successful implementation is the improvement in drilling performance i.e. reduction in productive time to drill the well, the reduction of non-productive time and 'invisible lost time', reduction in accidents and incidents and developing individual and team behaviours that promote open communication, trust, inclusively and reward of successful outcomes. A critical part of the execution phase was to capture the knowledge and suggestions from the rig site team that could be carried forward for implementation in subsequent operations. This was done using lessons and opportunity gathering (LOG) on a daily basis with reviews during the daily operations call and After Action Reviews at the end of each well. Over 1,300 LOG items were captured: just over 1,000 implemented and 96% closed. It has been conservatively estimated that the savings through greater operational efficiency were almost US\$62 million.

Other and arguably more rewarding benefits come from team involvement, sharing information, empowering people to believe they can and do make a difference when the process is fully implemented and committed to. We have found that without exception when everyone becomes committed to the project goals, every aspect of the operation improved: improved safety, lower crew turnover, better maintenance and house keeping in general. Input from the crews to RP2's system has been good and demonstrates the team involvement. The tangible improvements in overall operational performance, the cost savings and team building are attributable to RP2's technical limits system and the quality and experience of the people assigned to the Tangguh Drilling Programme. In particular I would to thank David Taylor, Bob Anderson, Ron Mackay, Paul Leatham, Bill Forest and Bryce Gilles for their commitment, dedication and hard work throughout the programme.

In conclusion I would not hesitate to employ RP2 in the same capacity for the next phase of operations.

Simon Shaw Drilling Superintendent BP Berau Ltd. Indonesia

**April 2015** 

Date : 5 May 2009