

NORTH SEA OPERATIONS BENCHMARKING: Peer Comparisons to *Improve Production Performance* & Reduce Controllable Costs

2010



- Analyze Uptime Reliability & Operating Cost Performance
- Evaluate Performance for *each Category* of Offshore Asset
 - Best Practices Workshop

What Clients Say:

"It has been a pleasure working with Ziff Energy for the past 10 years. During that period I have been involved in more than 10 Ziff Energy operations benchmarking studies, including onshore and offshore studies ... the Ziff studies point to areas where we may have gaps in performance as compared to peers. The benchmarking study results force our people to take a hard look at our operating metrics to really understand the drivers and where to focus our time and efforts."

VP, Major
...

"We got more than what we paid for, which is a pleasure to say. I would recommend this process to any company wanting to move from the 'also ran class' to 'best in class.'"

Operations Manager,
Independent
...

"The study provided several opportunities to pursue, and a 'value-add' to implement operating cost reductions ... it helped us to get good comparative data and to understand industry performance standards."

COO, Major
...

"We have been using Ziff Energy for many years to benchmark our operations, with good results. I am also impressed by their database and the global spread of their benchmarking activities."

Engineering Manager,
Super-Major

North Sea Operations Benchmarking

Efficient, cost effective and reliable operations are particularly important in the North Sea as fields mature, production declines, and costs rise. Ziff Energy Group is the leading international energy upstream benchmarking firm, with sophisticated **upstream operations analysis** capabilities. This study focuses on Production Reliability performance, and cost efficiency. Comparative 'peer to peer' performance evaluations will be provided for each of your offshore assets, oil & gas, by type. This analysis of North Sea fields using the unique Ziff Energy approach will yield **large benefits from improved production efficiency & reliability.**

This study is for you if ...

- you want to **increase and sustain your production volumes through improved reliability**
- you want to **reduce your operating costs & improve production efficiency**
- you want peer to peer **comparative benchmarks** for your oil or gas operations
- you want reliable information on which to set specific, achievable production & operating cost targets
- you are considering expanding your assets, especially through acquisitions.

We invite you to join our North Sea Operations Benchmarking initiative and enhance your competitiveness

North Sea Peer Groups (Preliminary)

- Oil: *Harsh Conditions: North U.K. North Sea/West of Shetlands/Norwegian N. Sea*
Other: Central N. Sea/Denmark
(FPSO's assessed in Q4 2009 International FPSO Study)
- Gas: South North Sea/Netherlands

Benefits of Ziff Energy's Approach:

- utilizes *experienced operations professionals* to interpret diagnostic results
- provides current, accurate information to guide decision-making
- focuses operations management on the best improvement opportunities
- increases operational outcome profitability while decreasing downtime risk
- utilizes true "peer to peer" comparisons of oil or gas fields, rather than a hypothetical BOE "black box".

Ziff Energy's Method:

- *quantifies* performance of each field/facility by comparing your field level operating performance to 'like kind' assets (our approach does not use a hypothetical field as a benchmark)
- utilizes *performance metrics* appropriate for North Sea offshore assets
- identifies and analyzes significant 'Cost Drivers' for various types of offshore production systems
- uses a **proven electronic data gathering** approach for cost and production data to *minimize your staff time*, while ensuring the highest data integrity
- delivers strong insights into your company's areas of competitive strength
- involves Ziff Associates with strong North Sea Operations experience.

Your Deliverables:

- **customized asset analysis** - cost profile analysis which identifies & quantifies potential cost savings by cost category for each asset
- **a comprehensive report** organized by North Sea asset categories/production systems, and designed with considerable input from clients
- **operating cost driver analysis** - specific drivers are evaluated, to identify additional improvement opportunities
- **production reliability metrics** - consistent "cross company" measurement of deferred production, production efficiency, Mean Time Between Incidents (MTBI), Mean Time to Recover (MTTR), and our Reliability Index
- **private debriefing** to help focus your Operations Management Team on immediate solutions and improvements to your operations.

Exclusive North Sea Best Operating Practices Workshop

After completing the study, Ziff Energy plans to offer a Best Practices Workshop for the exclusive benefit of study participants. The full-day workshop will feature presentations by clients chosen specifically for their strong performance in a specific area of North Sea operations. Typically there is much "give and take" among the participants, with high energy for discussing common challenges, and peer networking among the attending operations professionals.

Potential Topics:

Operations:	Staff Organization/Labor,Transportation, Sub-Sea Operations Well & Facility Automation, Chemical Programs, Well Servicing, Surface Facilities/Maintenance, Compression/Rotating Equipment, Asset Management Team Structure & Job Duties
Production Enhancement:	Well Surveillance Processes, Workover Processes, Completion Processes, Artificial Failure Rate Reduction, Lease Fuel Use

Select Ziff Energy Benchmarking Clients:

Anadarko
Apache
BP
BG
Cairn Energy India
Centrica Canada
Chaco
Chesapeake
Chevron
ConocoPhillips
Devon
DONG
Ecopetrol
El Paso
ENI
ExxonMobil
Gaz de France
Hess
Husky Oil
Maersk
Marathon Oil
MedcoEnergi
Murphy Oil
NAM
NEXEN
Occidental
OMV
Pan American Energy
Pemex
Petrobras
Petrotrin
Petro-Canada
PTTEP
Repsol YPF
Samson
Shell
Suncor
Talisman Energy
TAQA
Total
VICO

North Sea Operations Project Timeline

Task:	Month							
	1	2	3	4	5	6	7	8
Group Client Design Meeting		■						
Kick-off Client Meeting		■	■					
Data Collection		■	■	■				
Finalize Peer Groups			■	■				
Data Review & Confirmation			■	■	■			
Field Performance Analysis				■	■	■		
Cost Driver Analysis				■	■	■		
Deliver Preliminary Diagnostic Results					■	■		
Key Insights in Management Report						■	■	
Custom Private Debriefing							■	■
Best Operating Practices Workshop (for study participants)								

Why Ziff Energy?

Ziff Energy's diverse team of experts has completed over 170 multi-client and custom upstream industry performance studies, far more than any other consultancy. During 2009, Ziff Energy commenced a study focused on the operations of *Mature Hubs in the Danish and UK North Sea*, our first benchmarking project focused on North Sea assets. The planned 2010 North Sea study will cover all assets in the North Sea (not just Mature Hubs). Since 1994, Ziff Energy studies have assisted 100+ E&P companies to lower operating costs and increase production efficiency by comparing their field performance against similar gas or oil fields. To date, **over 770 offshore** (+ 3,000 onshore) **gas and oil fields have been analyzed**, by far the **largest operations database in the world!**

For its 25th Anniversary in 2007, Ziff Energy established a unique '**Center for Benchmarking Excellence**', to ensure that Ziff Energy studies are the best conceived and executed for upstream operations. The core group, based in Calgary, comprises a full time cadre of analysts, mainly experienced engineers. They are supported by IT specialists, a group of full-time senior operations engineers and Associates, and a leading desktop publishing team. Our veteran operations professionals have 15 to 30+ years experience each, with a variety of leading operators (Majors & Independents) in 60 countries around the world.

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