

# NORTH SEA OPERATIONS BENCHMARKING:

## Peer Comparisons to *Improve Production Performance* & Reduce Controllable Costs



- Analyze *Uptime Reliability & Operating Cost* Performance
- Evaluate Performance for *each Category* of Offshore Asset
  - *World Comparisons*
  - 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 - By World Type

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.**

### Criteria to Set North Sea Peer Groups

Key Characteristics		Well Productivity	Processing Capacity	On-Platform Processing*	# Producing Wells	# Gas Lift Wells	Compression Horsepower	Harsh Conditions
		Ziff Energy's World Production Types						
OIL	Fixed Platform (Simple; Hub)	✓	✓	C	✓	✓	✗	✓
	FPSO	✓	✓	C	✓	✓	✗	✓
	TLP / Semi-Submersible	✓	✓	C	✓	✓	✗	✓
GAS	Complex On-Platform Processing	✓	✓	C	✓	✗	✓	✓
	High Compression	✓	✓	S	✓	✗	✓	✓
	Low Compression	✓	✓	S	✓	✗	✓	✗
	HP / HT	✓	✓	C	✓	✓	✓	✓

\* C = Complex, S = Simple

### Benefits of Ziff Energy's Approach: Why Use Ziff Energy?

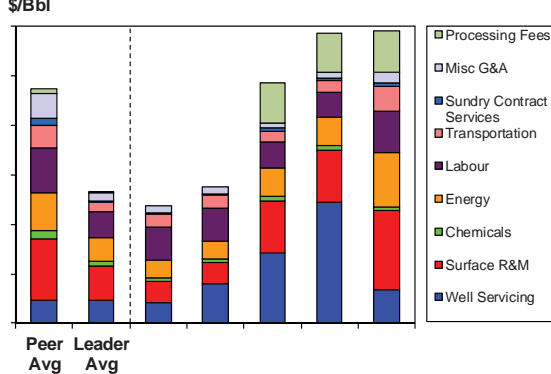
- **fresh approach**
- utilizes **true "peer to peer" comparisons** of oil or gas fields, rather than a hypothetical BOE "black box"
- contains/presents enough information to be an operational tool
- focus operations management on the best improvement opportunities
- increases operational outcome profitability, while decreasing downtime
- *experienced operations professionals* interpret diagnostic results
- **compare North Sea operations to other regions!**
- gas assets are not converted to oil, due to much lower price (12:1).

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

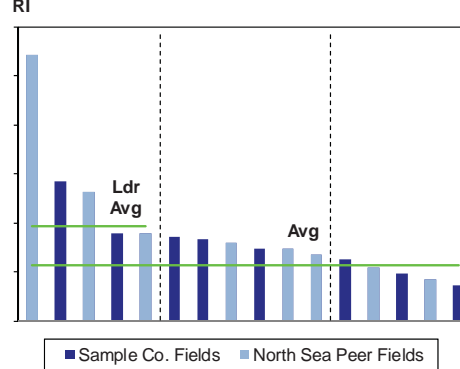
## Your Deliverables:

- **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 Ziff's Reliability Index
- **private debriefing** to help focus your Operations Management Team on immediate solutions and improvements to your operations.

Unit Operating Cost Details



Ziff Energy Reliability Index (RI)



## 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 (i.e. **manning, logistics, helicopter trips**)
- 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.

## Select Ziff Energy Benchmarking Clients:

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

## **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:**

<b>Operations:</b>	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
<b>Production Enhancement:</b>	Well Surveillance Processes, Workover Processes, Completion Processes, Artificial Lift Failure Rate Reduction, Fuel Gas Use

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## **Why Ziff Energy?**

Ziff Energy has completed 180+ multi-client studies, assisting 100+ E&P companies in 3 dozen countries to lower operating costs and increase production by comparing their field operating cost performance against similar gas or oil fields. To date, over 4,000 oil and gas fields (900+ offshore), representing over \$30 billion in operating costs, have been analyzed in our field operations studies.

For 4 years, we have used Electronic Data Gathering to transfer data from your accounting system to Ziff Energy. Clients no longer complete cost spreadsheets. We cross reference your cost accounting codes to our standardized detailed set. The download of your cost data is loaded into the benchmarking categories using the code mapping. Transparency is enhanced, client effort dramatically reduced, and you can drill down into your own cost data to better understand your performance gaps.

## **Ziff Energy’s Center for Benchmarking Excellence**

In 2007, Ziff Energy established a unique World Upstream “Center for Benchmarking Excellence”, to ensure that Ziff Energy studies for upstream operations are the best conceived and executed. The core group, mainly based in Calgary, comprises a full-time cadre of analysts and Project Managers, mainly engineers, with 15 to 30+ years experience with a variety of leading operators (Majors & Independents) in countries around the world. The Center for Benchmarking Excellence works closely with Ziff Energy’s leading desktop publishing team.

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