

2012 Improving Field Performance Study

- Key Tool for Operations
- *Identify Opportunities*
- *Increase Uptime*
- *Reduce Cost*



**featuring Ziff Energy's new
"Production Reliability Index (PRI)" for "Operating Efficiency"**

To help you manage your future!

**Operation Analysis:
by Engineers, for Engineers**

What Clients Say:

"We find the Ziff Energy reports to be comprehensive, well written, and most importantly, consistently objective ... The resulting analysis is of high quality and integrity ... Without the Ziff tools, we would find it very difficult to objectively measure."

Senior VP, Canadian Major

"The scope and format of the study assisted us in focusing on specific areas of improvement. The presentation of the results of the study was concise and informative and reflected considerable knowledge of operations ... As a result, we have been able to dramatically improve our operational efficiencies and lower our costs."

Vice President, Super-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 of class.'"

Operations Manager,
Independent Producer

"We are pleased with your work ... Ziff delivers the full package, a statistically rigorous analysis coupled with real suggestions that can be used to improve operating performance. It is refreshing to work with Ziff's staff, which consists of industry professionals who are knowledgeable and experienced."

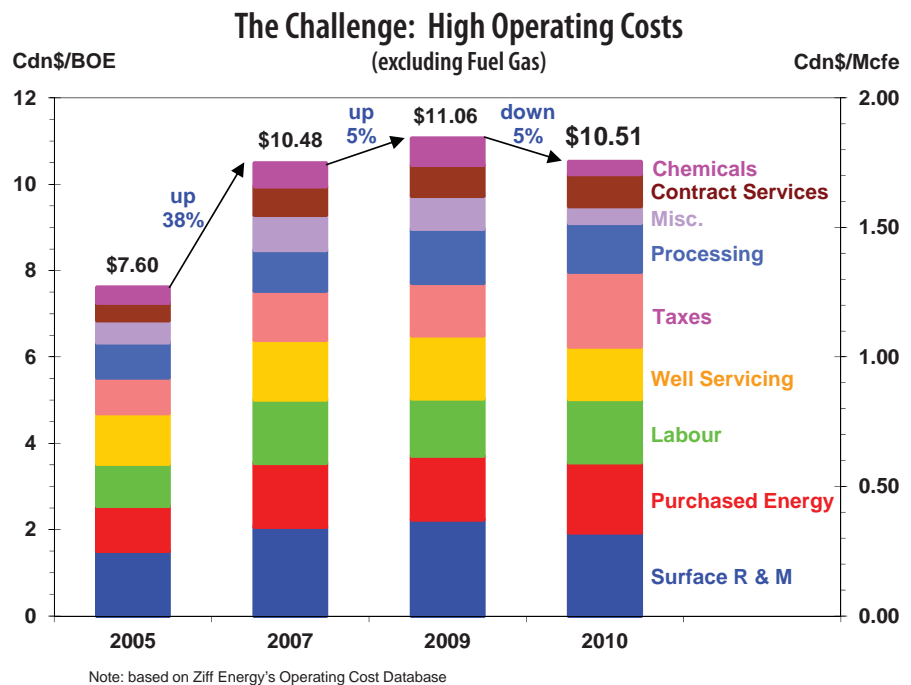
Development Manager,
Large Independent Producer

2012 Improving Field Performance Study

Oil & Gas fields are the basic building blocks of your company, but the WCSB is mature and in decline. While gas prices are much lower, average unit costs remain high. It is not easy to identify which operating cost areas offer the greatest potential for reduction and meaningful savings, and whether field operations are at maximum uptime. This analysis:

1. **COST** - compares the total **field unit operating costs** to peers in 12 Asset groups and provides in-depth analysis of your field operations by cost category.
2. **UPTIME** - assesses the **production efficiency** of your fields versus Canadian peers in 12 Asset groups, and identifies production improvement targets.

Many companies capture large operating cost savings through our field benchmarking. Our extensive database of operating costs covers 1,800 Canadian fields and plants of all types.



Both maturity and escalating costs have driven **unit operating costs up by half in the last 5 years**, and they are "sticky". This study provides **solutions**:

- a detailed analysis for each of your significant properties, using field level diagnostics, e.g. cost performance signals by cost category, field employee productivity
- uncovers key areas of under-performance, enabling Root Cause Analysis to identify appropriate solutions to reduce costs and maximize production
- our new & unique Uptime Analysis identifies issues of Reliability to increase Production
- covers the large majority of your 2010 OpEx.

Are your core assets performing well?

Would a review of your significant operated assets be timely?

This study highlights quick and direct cost reduction opportunities.

KEY FEATURES

A. COST - Key Components Analyzed

Our Categories of key controllable costs reconcile difficult problems such as energy use and third-party processing. We probe deeper: Sub-Classifications focus on specific cost problems. We pinpoint excessive expenses and identify the **savings potential for each important cost category for each property.**

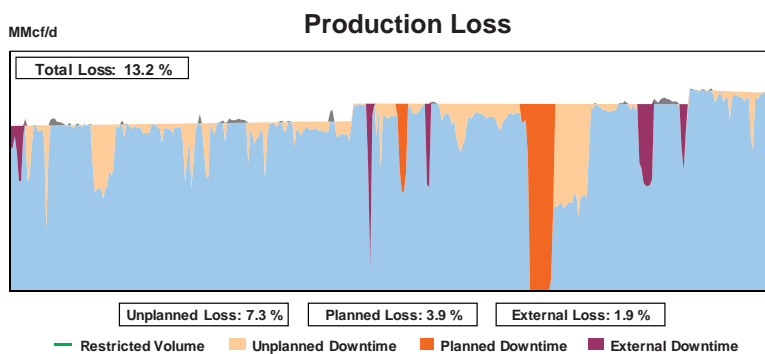
B. Uptime/Reliability Analysis - What is "Best in Class" for your Assets?

Our review of daily production identifies valuable **lost production** opportunities.

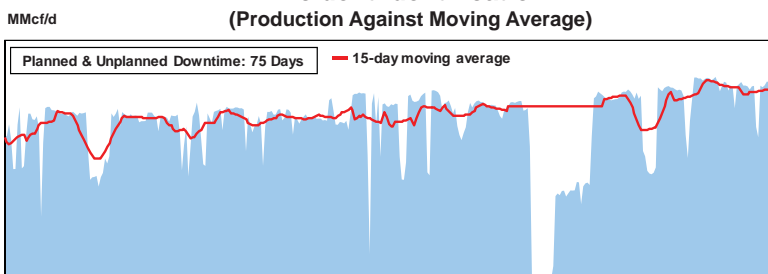
Our operating efficiency assesses your key properties for:

- the frequency & impact of production incidents
- the Ziff Production Reliability Index (RI) ratio of the duration to the time to recover from production incidents
- \$\$\$\$ lost.

Daily Production Regression - Gas



Incident Identification (Production Against Moving Average)



Ziff Energy's New Production Reliability Index for Onshore Gas & Oil

Submit Data Electronically - Much Easier!

Our improved electronic data cost gathering approach is based on your own data structure, --- data retrieval is far easier, & fast! Ask us about **Electronic Data Gathering** from your Q-Byte or SAP system.

STUDY DELIVERABLES

You receive:

- Customized Diagnostic Analysis - targets for each field & cost
- Customized Executive Summary
- Private Debriefings with Staff / Field Personnel
- Data Collection Support
- New! Electronic Transfer of Cost & Production Data.

"We encourage other operators to participate in Ziff Energy's multi-client benchmarking projects.

Some of the benefits are:

- *standardized cost data & peer field comparison*
- *points to areas where we may have gaps in performance*
- *the results encourage us to take a look at our operating metrics and understand the drivers and where to focus our time and efforts*
- *(uptime) reliability metrics*
- *automated data gathering takes effort away from staff, who are stretched these days."*

VP, Large Independent Producer

"Immensely impressive ... much more detailed than other benchmarking studies."

President, Major

"We have been benchmarking with Ziff Energy for almost a decade now, so we are believers in the data. Our costs were still climbing... We thought we had good disciplines. We thought we were doing well, but the data told us otherwise... We asked them [Ziff Energy], to help out... to share some of the best practices they had seen in the industry..."

- *in 2009 & 2010, we managed to flatten our operating costs – the overall operating expenditure was a little bit lower than our growth*
- *in 2009, we saved \$23 million*
- *in 2010, we saved \$40 million."*

Technical Director,
International Independent

"The value for changes we implemented was estimated at \$5 million, a very good return."

Senior Engineer,
International Major

Canadian Asset Groups (12)

Fields & Gas Plants are grouped into Asset Groups by common characteristics for peer assessment

GAS (7 Groups)	Lean Sweet	(Alberta & Saskatchewan)
	Alberta Sweet	(High Well Productivity)
	Alberta Sweet	(Low Well Productivity)
	Alberta Sour	
	Processed Gas	(Alberta & BC)
	BC Gas	
	Gas Plants	

OIL (5 Groups)	Primary	(Alberta & BC)
	Waterflood	(Alberta W5 & BC)
	Waterflood	(Alberta E5)
	Waterflood	(Saskatchewan)
	Heavy Oil	(Alberta & Saskatchewan)

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, currently professional engineers and economists who each have 5-15 years of experience and a Masters or B.Sc. in Engineering or Economics. The group works with Project Managers, Directors, VP's, and Ziff Energy's team of International Associates, based in various countries, who each have 15-30+ years of E&P operations experience. They are supported by two full time IT team members and a leading desktop publishing team.

You are invited to participate in this effective analysis and gain the benefits

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Why Ziff Energy?

Since 1996, Ziff Energy has completed over 180 multi-client studies, assisting 100+ E&P companies in 40+ countries to improve Operations Efficiency and Reliability by comparing performance against similar gas or oil fields (to date, over 4,000 oil and gas fields have been analyzed in our field operations studies). We are Upstream Professionals with 20+ years experience and have the knowledge and background to provide specific and actionable solutions. Our 'Center for Benchmarking Excellence' was established in 2007 to ensure that Ziff Energy studies for upstream operations are the best executed through Automated Data Gathering and centralized control of data integrity, review & analysis.

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