

Ziff Energy Group

Global Energy Advisors



Ziff Energy Group is a leading international energy consulting firm, with offices in Houston and Calgary focusing on two areas:

- **Operations Benchmarking and E&P Consulting Services** for upstream oil & gas performance enhancement (operating & drilling costs and best practices, uptime reliability/operating efficiency, finding & development strategies, G&A cost /'people productivity').
- **Natural Gas Consulting** - in-depth analysis of North America gas supply (including LNG imports & future Alaska gas), transportation, gas markets, pricing outlooks, gas storage, and regulatory issues. Available for expert testimony for litigation cases and regulatory hearings.

E&P Consulting

OPERATING COSTS & EFFICIENCY AND PERFORMANCE 'GAP' CLOSURE SERVICES

Ziff Energy has assisted 100+ E&P companies to improve their field performance (operating costs and operating efficiency/uptime) by comparing their operating costs and production uptime against similar gas or oil fields. Best operating practices are identified. Studies & Services have been provided in 20 countries including the Gulf of Mexico (Shelf & **Deepwater**), all onshore regions of the U.S. & Western Canada, South America, Asia Pacific & Europe.

The Ziff Energy's Operating Cost database has detailed cost & technical information on 3,500 oil & gas fields – **the world's largest by far**. The firm has assessed over 600 offshore fields and 2,800 onshore fields.

Our studies focus on extensive analysis of best operating practices and key drivers of operating costs. **Offshore studies** analyze transportation (personnel & cargo), labor, facilities repair & maintenance, compression and rotating equipment (including turbines, generators, engines and pumps), chemicals, sub-sea wells, and artificial lift.

Onshore operating practices assessed include compression, well servicing, liquid loading, automation, surface repairs, and completion techniques.

Our international work is "customized" and conducted in phases. **Phase 1** (diagnostic) focuses on the analysis of cost and production data to identify the 'performance gaps'; **Phase 2 consulting** focuses on the specific practice/gap areas with the greatest impact on the client's production operating efficiency. We evaluate your current practices and utilize our world-leading best practices data and engineering experience to recommend improvements to **reduce or/and eliminate performance gaps** in these targeted areas. This maximizes value for you by targeting change initiatives on priority areas of the client's operations.

UPTIME RELIABILITY & OPERATING EFFICIENCY (NEW SERVICE)

During the current period of high energy prices, operating efficiency and facility uptime are key parameters in Ziff Energy's benchmarking studies. Production Efficiency, Operating Efficiency and Reliability are determined by comparing daily production to **Maximum Sustainable Capacity (MSC)**. Ziff developed an approach to MSC that allows for peer field comparison. Reliability metrics such as **Mean Time Between Incidents (MTBI)** and **Mean Time To Recover (MTTR)** are used to benchmark overall production performance and are based upon downtime incidents. Our use of production metrics to identify downtime removes the subjectivity of the definitions of downtime and MCS between clients.



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DRILLING COSTS & BEST PRACTICES SERVICES

Ziff Energy conducts a variety of services. Studies have evaluated drilling costs and practices for deep wells in South Texas, and 3,400 gas wells in Western Canada. The studies examined cost drivers (geographic depth, pressure conditions, environmentally sensitive areas, and contract services) and evaluated unplanned downtime. Best Practices were studied, including procedures to avoid trouble and maximize rate of penetration. A new broader oil & gas drilling study is about to start in Canada.

OVERHEAD/PEOPLE EFFECTIVENESS

In Western Canada, Ziff Energy's unique approach to measuring People Productivity benchmarks E&P technical staff requirements at the Business Unit (or Asset Team) level by type of BU, and by type of strategy (growth or harvest strategies have very different staffing requirements).

Another innovative feature is the correlation of key performance metrics -- F&D, and OpEx results -- with staffing at the Business Unit/Team level.

Internationally, we have assessed the ratio of ex-pats to nationals, and evaluated the staffing needs of E&P staffs during different parts of the business life cycle (development, exploration, production/exploitation, & harvest).

Natural Gas Consulting

GAS CONSULTING SERVICES

Ziff Energy offers a variety of gas consulting services to meet individual client needs such as:

- Regional gas production outlooks, with particular attention to new pipeline capacity
- potential bottlenecks associated with transportation to downstream markets from areas with increased gas production
- opportunities related to entry into E&P
- outlook for gas needs for power generation
- influence of fundamentals on price outlooks



- future shifts in gas pricing/basis differentials
- comprehensive gas demand outlooks by sector, by region, by year
- potential for LNG imports, and related pricing
- northern gas (Alaska, MacKenzie Delta).

NORTH AMERICA GAS STRATEGIES RETAINER SERVICE

- monthly reports on key gas issues
- 2 private customized briefings in your offices
- client advisory services (quick response)
- discounts on Ziff Energy multi-client studies.

Ziff Energy custom gas consulting is done on a highly interactive basis with clients to provide results with a long shelf life and sufficient detail to link strategic and operational visions.

MULTI-CLIENT STUDIES

Ziff Energy conducts detailed multi-client studies on focused topics:

- **Economic Ranking of North America Gas Basins** – an assessment of the full cycle cost of 24 North America gas basin cost (65 plays), covering conventional, Tight Gas, CBM, Shale Gas, Off Shore, Alaska, & the full cycle cost of LNG imports to North America
- Northern Gas: New Assessment of the Impacts
- Outlook for Western Canada Gas Supply.

The regional studies focus on gas supply, gas transport, gas storage, gas markets (four sectors), and gas price/basis differentials outlook with forecasts of each fundamental for up to 10 years.

TESTIMONY SERVICE

- expert reports & expert testimony
- wide depth of staff and external Associates
- 'one opinion' and unbiased
- strong Client & Legal references.