

QUE\$TOR™ Onshore

Oil & Gas Project Cost Analysis

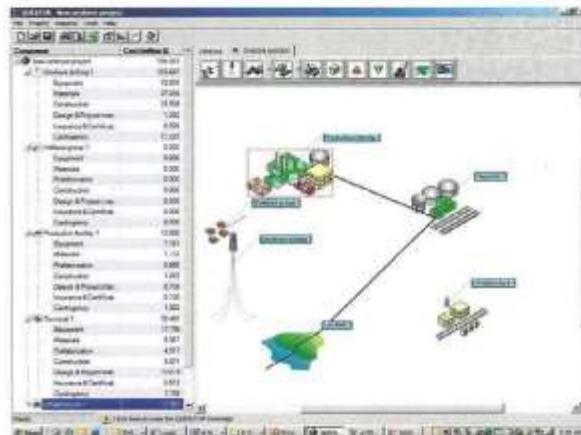


The Source
for Critical Information and Insight™

QUE\$TOR™ Onshore software enables cost, facilities and reservoir engineers to complete complex evaluations within seconds of specifying the required parameters. QUE\$TOR™ Onshore is part of the QUE\$TOR™ cost analysis suite of products, the industry-leading solution for cost evaluation and concept optimisation of new oil and gas field developments.

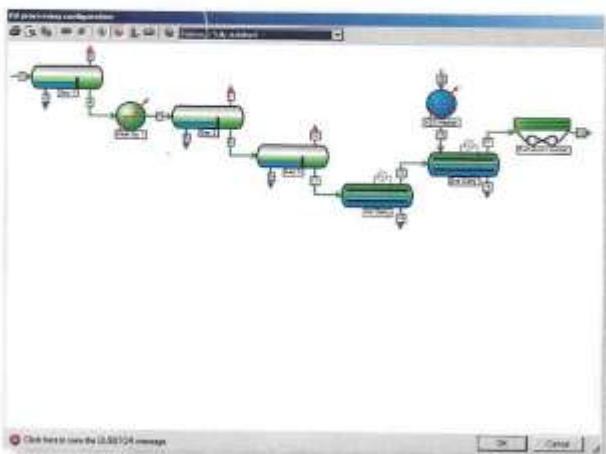
Using detailed technical algorithms and regional databases, QUE\$TOR™ provides a consistent methodology for generating cost estimates and optimising development plans. Used by more than 500 companies in 40 countries, QUE\$TOR™ Onshore:

- Allows more confident evaluations, based on a proven system for screening studies, prospect evaluation and concept optimisation
- Delivers estimates based on up-to-date worldwide cost and technical databases, which can be easily copied and edited
- Provides a rapid, consistent approach to global project evaluation
- Generates complete life-of-field costs, CAPEX and OPEX
- Calculates results in seconds, allowing you to spend additional time modelling sensitivities and different approaches to a project
- Saves thousands of manhours in gathering raw data and building complex spreadsheets



Graphical project setup, a trusted database of regional costs, and rapid calculation of CAPEX and OPEX allow cost engineers to confidently screen costs and optimize new development concepts

At the heart of QUE\$TOR™ is a detailed cost calculation engine leveraging IHS regional field and basin databases, which cover all producing regions of the world, as a starting point for technical assumptions in the project evaluation. These databases are updated every six months with data gathered from actual projects, oil companies, fabricators, vendors and service companies.



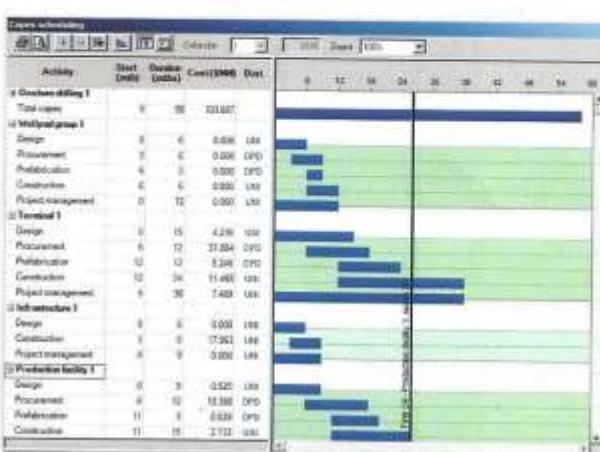
Graphic of the interactive oil processing schematic for individual equipment design

The result is a highly accurate cost estimation system based on detailed, up-to-date regional benchmarks. QUE\$TOR™ Onshore builds on this unique cost database to generate a production profile based on primary inputs such as recoverable reserves, reservoir depth, and more. Then, development concepts are defined and design flowrates calculated. QUE\$TOR™ then sizes facilities, pipelines and substructures, and calculates capital costs, drilling costs and operating costs. These costs are then scheduled to provide project cashflows.

The regional databases are populated with unit rates for equipment items, materials, fabrication installation, hook-up and commissioning.

QUE\$TOR™ Onshore includes cost benchmarks for the following components, as well as an intuitive graphical interface for defining each project's unique configuration of components:

- Wellpads: includes manifolding, equipment and flowlines
- Drilling: includes various types of rig, multiple well profile types and multilaterals
- Facilities: options for manifold stations, gathering stations and production facilities with full oil and gas processing
- Terminals: options for inland and coastal terminals including storage and export systems



Project scheduling capability detailing capital expenditure by component and cost center

- Pipelines: infield flowlines and export pipelines Options for different terrains, crossings and booster and reduction stations
- Infrastructure: construction camps, roads, airstrips, buildings, and more
- New graphics show interdependencies of components and the relationship between the cost centers within a component
- Users can access the technical algorithm databases, making adjustments that reflect their own technical data
- Scheduling is carried out as a separate module and can be modified independently from project costs

IHS Forecaster™ family

QUE\$TOR™, along with AS\$ET™ and IHS Asset Bank, make up the IHS Forecaster™ family, a group of products designed to work together to provide a streamlined framework for assessing development costs and economics for any prospect or discovery – consistently, and with clear audit trails.

QUE\$TOR™

Offshore

Oil & Gas Project Cost Analysis



The Source
for Critical Information and Insight™

The world's leading software solution for new oil and gas project cost analysis with over 500 users in 40 countries has undergone a complete software rewrite, providing all the former capabilities plus a significant increase in speed and functionality. This latest technology framework provides the foundation for future enhancements and functionality and linking to QUE\$TOR™ Onshore facilities.

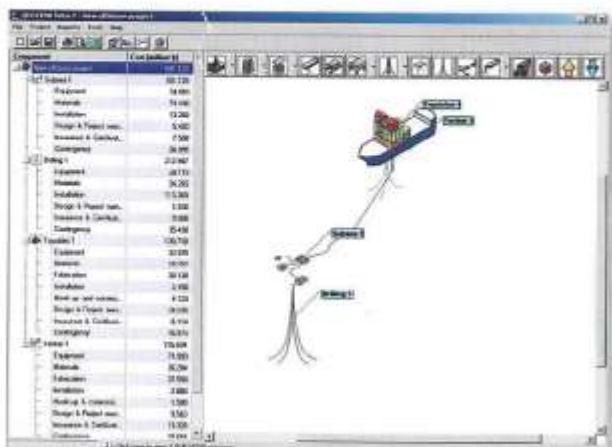
QUE\$TOR™ is a project modelling, evaluation and decision support system for global application in the oil and gas industry. It is the industry standard tool for cost evaluation and concept optimisation of new oil and gas field developments. It enables you to estimate and run sensitivities on the CAPEX and OPEX of alternative field development plans.

- Proven system for screening studies, prospect evaluation and concept optimisation
- Supplied with up-to-date world-wide cost and technical databases (which can be easily copied and edited)
- Modelling of alternative contracting strategies
- Provides a rapid, consistent approach to global project evaluation
- Generates complete life of field costs, CAPEX and OPEX
- Saves thousands of manhours
- Leverages IHS Basin Data as a starting point for reserves size and other technical characteristics

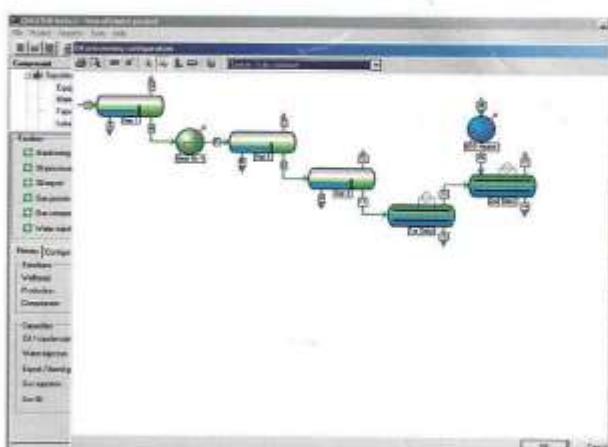
Using detailed technical algorithms and regional databases, QUE\$TOR™ provides a consistent methodology for generating cost estimates and optimising development plans.

At the heart of QUE\$TOR™ are cost and technical databases (user accessible and customisable) covering all producing regions of the world. These databases are updated every six months with costs gathered from actual projects, fabricators, vendors and service companies. Using primary input data (recoverable reserves, reservoir depth, water depth), a production profile is generated, the development concept defined and design flowrates calculated. The program then sizes facilities, pipelines, substructures and calculates capital costs, drilling costs, operating costs and abandonment costs. These costs are then scheduled to provide project cashflows. From field level input to the cost estimate the time is only 2 seconds, using the proven detailed methodology algorithms.

The regional databases are populated with unit rates for equipment items, materials, fabrication installation, hook-up and commissioning and other project costs. QUE\$TOR™ has been benchmarked against actual project costs and is continuously maintained to reflect the latest changes in technology.



Graphical interface to build alternative Field Development Schematics



Process separation schematic and definition

QUESTOR™ produces management quality reports, which can be printed or exported to spreadsheets for further analysis. Project cashflows can be imported into our AS\$ET™ software for post-tax economic analysis.

QUESTOR™ Offshore includes the following components:

- Topsides: from simple wellheads to complex Drilling, Production, Quarters (DPQ) platforms
- Jackets: lightweight structures and conventional 4, 6 and 8 legged jackets, caissons and guyed towers
- Gravity Based Structures: options for conventional condeep and slimline monotower designs
- Pipelines: infield flowlines, export pipelines, multiple riser types and tie-in options
- Offshore Loading Buoys: CALM Buoys, SALMs and Floating Loading Platforms with an option for storage
- Floater: options include Sernis, FPOs, Spar Buoys, Tension Leg Platforms (TLPs) and mini Tension Leg Platforms
- Drilling: options include fixed or mobile drilling rigs, multiple well profile types and multilaterals
- Subsea: includes templates, clusters, manifolds, flowlines and risers

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"When we were commissioned to perform a concept-level CAPEX parametric study for deepwater field developments, we identified QUESTOR™ as a suitable tool for the job. However, even with a tool like QUESTOR™, we were still concerned about the time required to complete this study, given the number of runs to be carried out. After discussing our needs with IHS, we were able to access a beta-test release of QUESTOR™ version 8, and the benefits have been significant.

We had planned to evaluate 25 cases, which previously would have taken weeks to complete. Using QUESTOR™, we completed the same number of cases within days."

Steve Johnson
Manager of Subsea Systems
for Doris Inc.