

LOGIC aims to double the value of UKCS wells

FACING WHAT IS AGREED to be the biggest challenge to continued investment in the UKCS—high cost—the CRINE/LOGIC Well Group wants to dramatically improve the economics of both exploration and development wells.

Specifically, it intends to double the value of wells through the use of two concepts: the Finder Well and the Well Decision Navigator.

Steve Brady, Manager-Materials, Sourcing & Logistics, **Conoco (UK) Ltd**, outlined the concepts and the group's progress to date at IADC World Drilling 2000 in Paris.

"Overall cost to produce a barrel of oil in the UKCS is \$12-14/bbl," said Mr Brady, "and 30-40% of that is spent on well construction." To compete with other regions of the world where costs are much lower requires that UKCS costs be dramatically reduced.

LOGIC, Leading Oil & Gas Industry Competitiveness, is an industry funded organization that will work with companies to stimulate collaboration and radically improve competitiveness.

It hopes to improve UK oil and gas sector performance by an estimated £1 billion over the next three years and export performance by 50% over the next five years.

"Efficient operators are focused on drilling and completion efficiency," said Mr Brady.

LOGIC was formed by the Oil and Gas Industry Task Force established by the **UK Department of Trade and Industry**. Initial funding is from the UK government's Infrastructure & Energy Projects Directorate and five trade associations.

The CRINE initiative phased out at the end of 1999 and LOGIC was "up and running" in the first quarter of this year.

The CRINE/LOGIC Wells Group has completed two phases of its work. Phase I focuses on doubling the value of exploration wells and resulted in the Finder Well concept.

Phase II developed the Well Decision Navigator for development wells. It has been endorsed and adopted by LOGIC.

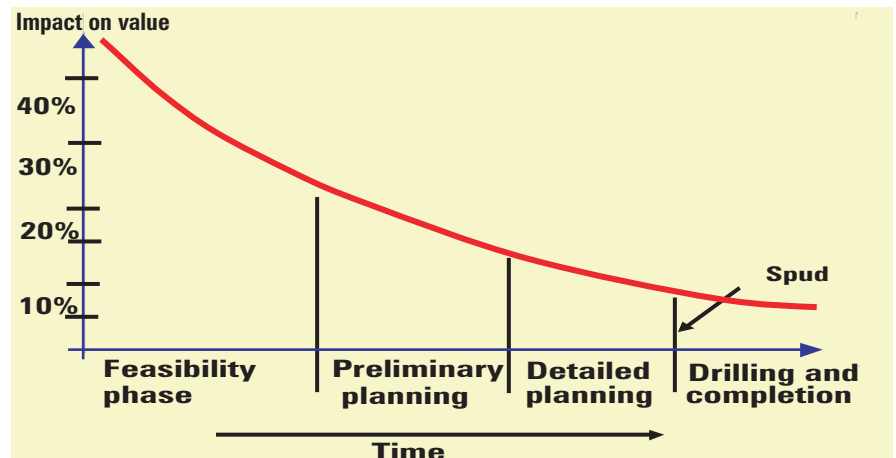
FINDER WELLS

Within today's operator organizations, regional business units aggressively compete with each other for limited exploration cash. The Finder Well concept

is designed to maximize exploration budgets by designing exploration campaigns, rather than just exploration wells.

Prospects are ranked regionally and

Figure 1: The importance of planning



globally according to potential risk. Then what LOGIC calls the Vital Few Objectives of the well and design are determined.

"It's important to satisfy only these objectives," said Mr Brady. "After the design is agreed by a multidiscipline team the design should be frozen so 'scope creep' is avoided."

Mr Brady listed the following ingredients for the success of a Finder Well program:

- A change in thinking;
- Explorers who are driven to get the most from an exploration budget;
- Engineers who are ready to challenge convention;
- Willingness to work together between departments and between companies.

Early indications are encouraging. One operator reports cost reductions of 30% and increased success rates. As more wells are added to the schedule, benefits increase.

WELL DECISION NAVIGATOR

The Well Decision Navigator is a cross-industry authored aid to stimulate thinking early in the well planning stages, to generate new design possibilities and innovation, and to lead to robust decisions and increased value and efficiency.

It also aims to facilitate project understanding throughout a well team.

Mr Brady said a framework of more than 100 questions focused on well planning was "mapped onto simple 'off-the-shelf' software." The method links planners to industry web sites, data bases, and best practices, focused on improving well value.

"It documents why various design decisions were made, not just what was decided," said Mr Brady.

Proper planning is the key to improved performance in drilling any well, said Mr Brady, and well planning should begin with an objective to drill a high value well.

Detailed planning minimizes wasted time and effort during drilling.

And as Figure 1 indicates, early planning has the greatest impact on improved efficiency and lower well costs.

WHAT HAS BEEN DELIVERED

Has the value of wells been doubled?

"No, not yet," said Mr Brady

"But Finder Wells and Well Design Navigator are stretching drilling budgets without cutting contractor and service company profit margins.

"Well Design Navigator is a planning tool whose usefulness can continuously improve with industry use and contribution."

More on LOGIC and its work, objectives, and application can be found at www.logic-oil.com.

Also, the Well Design Navigator can be downloaded from the site. ■