

North Sea  
**FLOW**  
Measurement Workshop  
1995

**Paper 27:**

**NPD REGULATIONS. RECENT UPDATES.  
NPD's ATTITUDE WHEN NEW TECHNOLOGY  
IS INTRODUCED**

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6.1

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## 1. SUMMARY

### *A) REGULATIONS*

The Norwegian Regulations for fiscal measurement of oil and the equivalent Regulations for fiscal measurement of gas were originally issued in April 1984.

Due to changes in technology but mainly due to changes in the Petroleum Directorate's inspection/verification philosophy, the fiscal oil and gas measurement regulations were commingled and reissued in a new format in 1991. (Regulations relating to fiscal measurement of oil and gas etc.)

NPD's system for administrating the regulations/guidelines is intended to be flexible, it means that when it is needed the regulations/guidelines can in theory be updated annually. It is, however, unlikely that such frequent updates will take place.

The Regulations relating to fiscal measurement of oil and gas etc. (1991), was updated in 1993, and in 1994.

The intention behind the corrections has not been to introduce tighter requirements to the industry, but to eliminate misleading statements and to give guidelines in areas where we occasionally have seen dubious quality design.

The 1993 update covered section 33 and 34 of the regulations where misleading statements were changed or deleted. It also covered quite a number of the Re sections in the guidelines, where wider experience/increased knowledge made it obvious that additional text should be added ( Re Section 5,9,11,21,25,26,31,32,33,36,41,47,61 and 67).

The 1994 update covered section 5,12,17 and 18 of the regulations. Section 5 was changed due to misleading text. Section 12 and 18 got additional text included to clarify the purpose and thereby avoid unnecessary discussions. Section 17, got new text due to input from the Ministry and the NPD legal department.

The 1995 update also covered an update of the Re sections in the guidelines (Re Section 12,17,23 and 43). Re section 12 and 17, were changed because the sections which they referred to were changed. Re section 23, was changed to give a positive signal to the use of new technology. Re section 43, was changed to give additional technical information.

### *B) NPD's ATTITUDE WHEN NEW TECHNOLOGY IS INTRODUCED*

The operating companies/licencees) will have to inform the NPD (section 9), if they intend to use measurement equipment or methods not mentioned in the regulations. NPD will then based on the available information decide whether it is an acceptable solution or not.

All deviations will have to refer to the relevant sections in the NPD, Regulations relating to fiscal measurement of oil and gas etc.

The items which NPD will focus on in such a process is given in viewgraph 1.

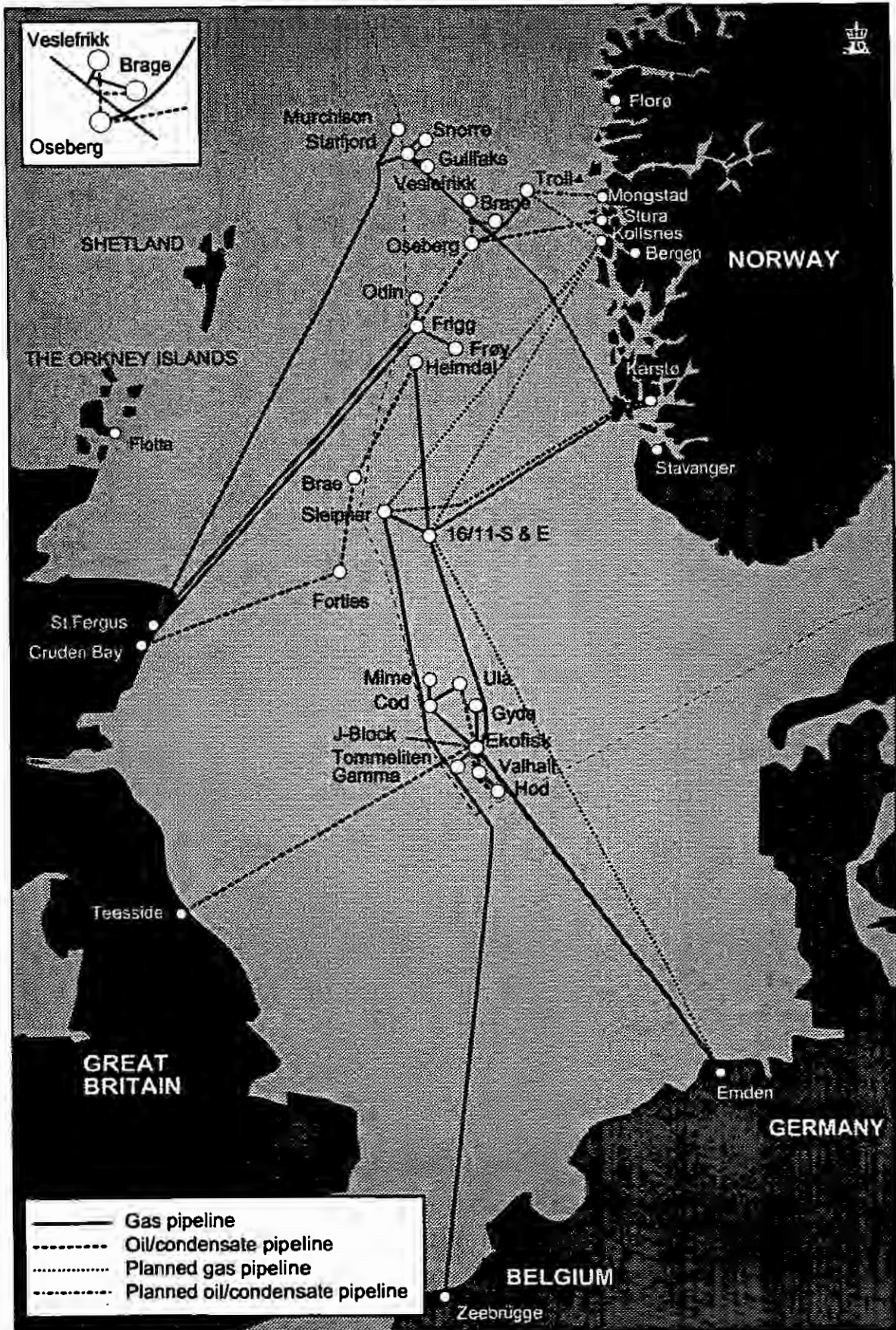
NPD is of course from a general point of view regarding the use of new and more cost efficient technology as very positive.

Our policy in this matter will, however, as a start up be to accept new technology on less critical metering points to build up experience/confidence.

The greatest challenge for a regulatory authority will then be to accept the new equipment at the right time (see fig 2).

It is no doubt that whenever a decision to use new technology is taken, then some people will argue that it is too late, while others will say that it is too early (see fig 3).

Fig. 2.10  
 Transportation systems for oil and gas from Norwegian North Sea fields





**Forskrift  
om fiskal kvantumsmåling av  
olje og gass mv**

*Regulations relating to fiscal measurement  
of oil and gas etc.  
(Unofficial translation)*

**Veiledning til forskrift om fiskal kvantumsmåling av olje og gass mv**  
*Guidelines to regulations relating to fiscal measurement of oil and gas etc.*  
*(Unofficial translation)*

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**THE OIL COMPANIES WILL HAVE TO MAKE SPECIAL APPLICATIONS TO NPD WHEN THEY WISH TO UTILIZE NEW TECHNOLOGY**

1. NPD TREAT EVERY DEVELOPMENT INDIVIDUALLY BASED ON CRITICALITY.

**INFLUENTIAL PARAMETERS ARE:**

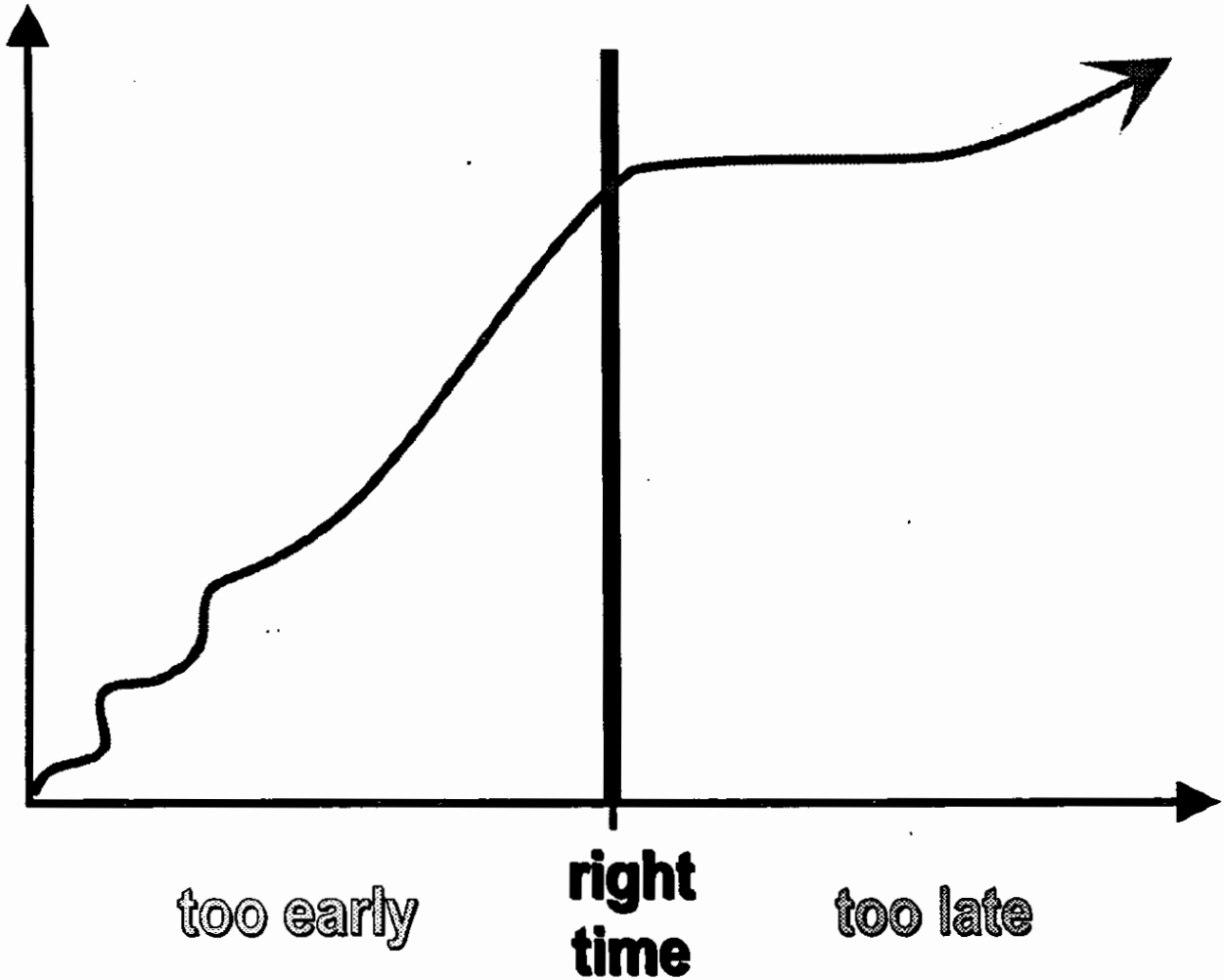
- OWNER STRUCTURE IN LICENCES
- SALES METERING/ALLOCATION METERING/ CRITICALITY OF ALLOCATION METERING
- AN ECONOMIC EVALUATION SHOULD BE DEVELOPED

**THE RELEVANT SECTIONS OF THE REGULATIONS ARE 9,10,13 AND 23.**

2. REDUNDANT SYSTEM IS GIVING INCREASED CONFIDENCE
3. TEST DATA GIVES INCREASED CONFIDENCE
  - REAL TESTS
4. POSSIBILITIES FOR CALIBRATION
  - THE EQUIPMENT SHOULD BE AVAILABLE FOR CALIBRATION (MASTER METER, CALIBRATION RIG ETC.)

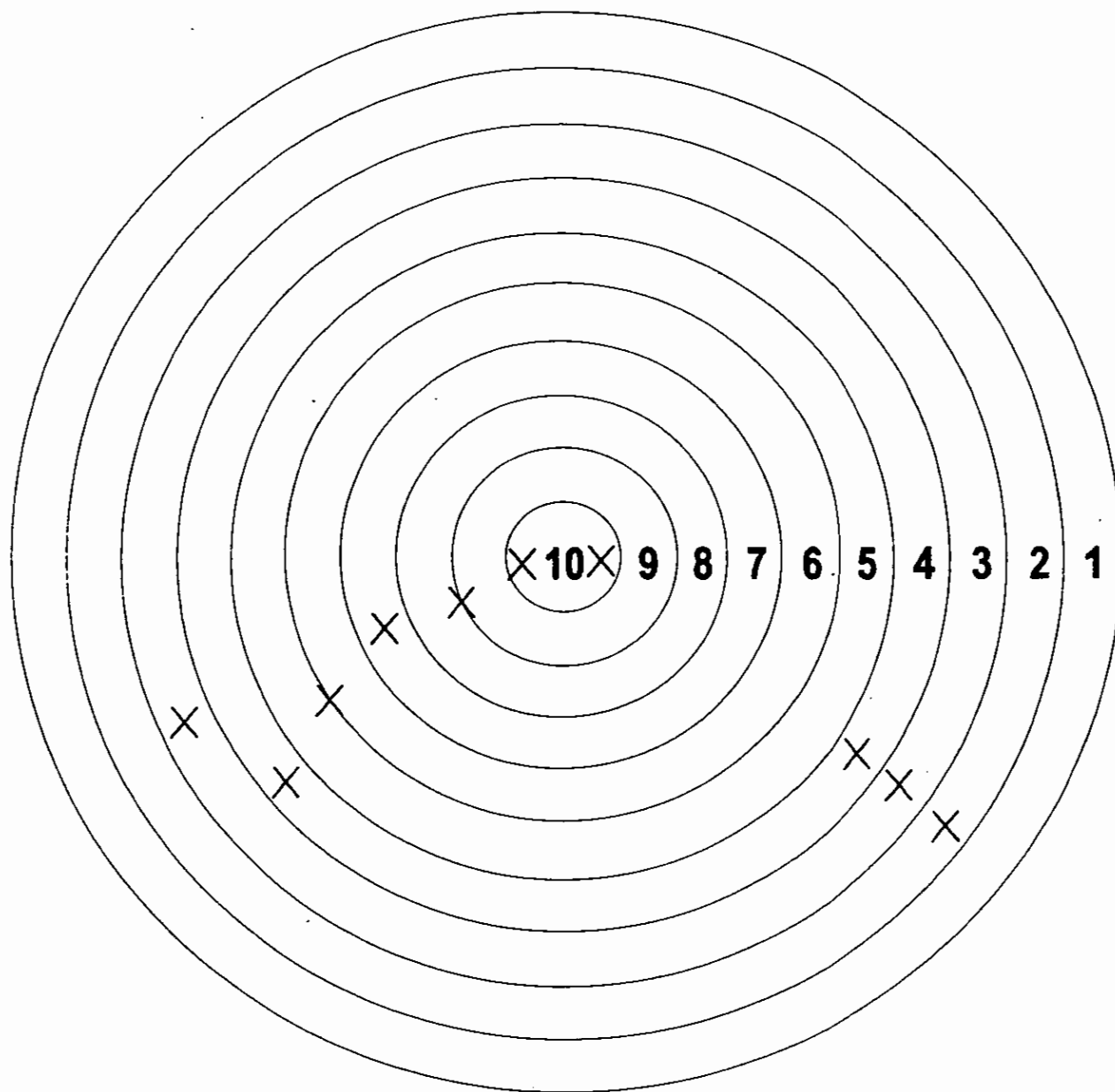


New technology  
technical  
knowledge  
competence



**Whenever a decision to use new technology is taken,  
it is no doubt that some people will always  
argue that the decision was taken  
too late or too early**





**Is it possible to hit target every time?**

**Two professional engineers would normally have different views on where the target is on the time axis.**