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**POLICY CHANGES IN THE DTI'S ADMINISTRATION
OF METERING REGULATIONS**

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Author:

Lewis N. Philp

Department of Trade and Industry, UK

Organiser:

**Norwegian Society of Chartered Engineers
Norwegian Society for Oil and Gas Measurement**

Co-organiser:

National Engineering Laboratory, UK

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POLICY CHANGES IN DTI'S ADMINISTRATION OF METERING REGULATIONS

Lewis N Philp

**DTI Oil & Gas Office,
Aberdeen**

SUMMARY

The paper describes organisational changes in the Oil and Gas Division of the DTI including the setting up of a new centre for technical and administrative functions in Aberdeen. A brief review of current policy for petroleum measurement is given. This is followed by an outline of the proposed new policy to be adopted in the administration of the petroleum measurement requirements of the Regulations.

INTRODUCTION

In the last two years since we last gathered in Norway there have been a number of changes in the Oil and Gas Division of the DTI, not the least of which was the setting up of the Aberdeen Oil and Gas Office. The Division as constituted at present is shown on the first viewgraph. However Branch 6, based in Leicester now only handles work under the Gas Act which deals with downstream aspects. When the new Gas Bill is enacted Branch 6 will be moved out of DTI and into OFGAS, the Office for Gas Regulation.

The Oil and Gas Office, Aberdeen was opened in September 1993 and undertakes a wide range of duties some of which are sector oriented but many of which cover the whole UK and Continental shelf. The second viewgraph shows the structure of the Aberdeen Office, known internally as Branch 4. The technical unit comprises two sections, one dealing with subsurface aspects of fields and the other with topsides. These activities are sectoral except for the metering functions which are nation-wide in their cover.

PAST POLICY

In reviewing licensee's development proposals it has been the practice in the past to consider only the most basic elements of the measurement philosophy at the Annex B (Field Development Plan) stage and to concentrate on the detailed engineering aspects of the method of measurement at a later stage in the programme. When a licensee wished to propose a method of measurement which fell short of what was considered to be full fiscal quality metering it was necessary for the licensee to provide a fully costed justification based on both the technical and economic problems associated with the development.

The need for change

The need for change comes about as a result of changes both in the Tax and Royalty regime and in the way industry conducts its business.

More new developments are small satellites of existing fields. The scope for separate processing is severely limited. Some of the small satellites are developed using the new long reach drilling techniques, some are subsea tied back to parent platforms with long flow lines, and some through minimum facilities structures, often unmanned. Many of these new developments will have short productive lives. Fast track development programmes are becoming more common with the attendant need to define long lead time items earlier in the process. New technology is being introduced at a rate which outstrips the standards organisations to produce new standards or codes of practice.

New developments are no longer subject to PRT and Royalty but through co-processing or common transportation may impact on tax and Royalty paying fields. The Government is pursuing a deregulation policy. This does not impact directly on petroleum measurement as there are no proposals to revoke any of the clauses in the Petroleum(Production)Regulations dealing with metering. However it important that we review the way the regulations are administered in a deregulatory spirit. It is also important that we should play our part as appropriate in support of the CRINE initiative.

NEW POLICY

The new policy is not intended to be a rigid prescription for methods of measurement but rather a vehicle which will facilitate continuous consultation with bodies representative of the industry to ensure a policy which evolves with the changing circumstances in which we operate.

Greater emphasis should be placed on narrowing the options for measurement systems at the pre Annex B stage in the review process. By addressing these issues at an earlier stage than before the preferred option will be identified sooner, to the mutual benefit of all parties.

Consideration is also being given to changes in operating procedures and periodic verification requirements. The review process will use a three stage procedure..

1. Identify the purpose for which measurement is required;

- a) under the "measurement Model Clause" and,
- b) under any other duty to measure petroleum incorporated in the Petroleum (Production) Regulations.

Amongst the most usual purposes under (a) (won and saved) are:

- i) To safeguard revenues for Royalty and PRT paying fields.
- ii) To allocate terminal outturns to contributing fields in shared transportation systems.
- iii) To account for production of petroleum won and saved from stand alone fields not subject to Royalty or PRT.
- iv) To account for petroleum in the form of crude oil, gas or lpg exported from terminals.
- v) To allocate production into shared transportation systems from different fields commingled in shared process equipment.
- vi) Fuel gas and utilities use.

And under (b)

- i) To improve understanding of reservoir behaviour to enable effective reservoir management strategies to be implemented.
- ii) To establish viability of reservoir as production prospect (EWT)
- iii) Flare gas measurement
- iv) To account for gas or condensate re-injected into a reservoir for pressure maintenance or conservation.

2. Categorise the class of measurement associated with each purpose.

A category of measurement may be associated with more than one purpose depending on the nature of the development. Full account would be taken of the technical and economic factors associated with each development.

Examples of the categories of measurement envisaged are:

- i) Fiscal
- ii) Allocation (continuous)

- iii) Allocation (intermittent)
- iv) Fuel and utilities
- v) Flare
- vi) Extended Well Tests
- vii) Reservoir management

The list is not intended to be complete and as circumstances change new categories may be required.

3. Assign target uncertainties for each category of measurement

When agreement has been reached on the categorisation of the available methods of measurement target uncertainties would be applied to each category.

Typical uncertainties for each category are:

- i) Fiscal:- 0.25% oil, 1.0% gas
- ii) Allocation(continuous):- 0.5% to 1.0% oil, 2.0% to 3.0% gas
- iii) Allocation(intermittent):- 5.0% oil and gas
- iv) Fuel and Utilities:- 2.0% to 4.0% gas
- v) Flare:- 10.0% to 20.0%
- vi) Extended Well Tests:- 1.0% to 2.0% oil, 2.0% to 4.0% gas
- vii) Reservoir Management:- 5.0% to 10.0%

Operating Procedures and Periodic Verification

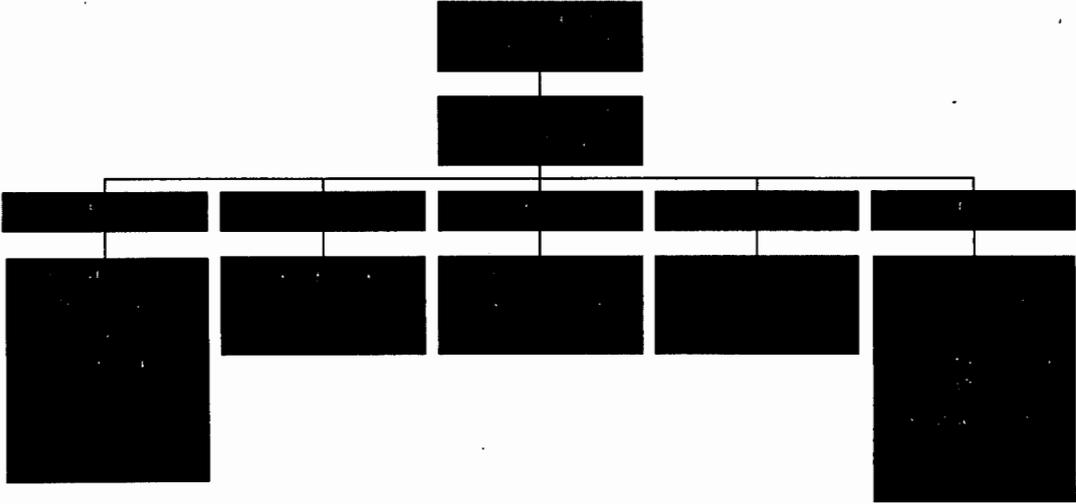
As smarter instrumentation becomes available incorporating self diagnostic capabilities and health check techniques for existing instrumentation becomes more sophisticated there may be scope to move away from verification requirements based on elapsed time and to carry out periodic verification on the basis of perceived need.

CONCLUSION

In conclusion it is hoped that the new proposals will better suit the needs of the Department and the industry for appropriate levels of measurement in the changing technical and economic environment in which we all work.

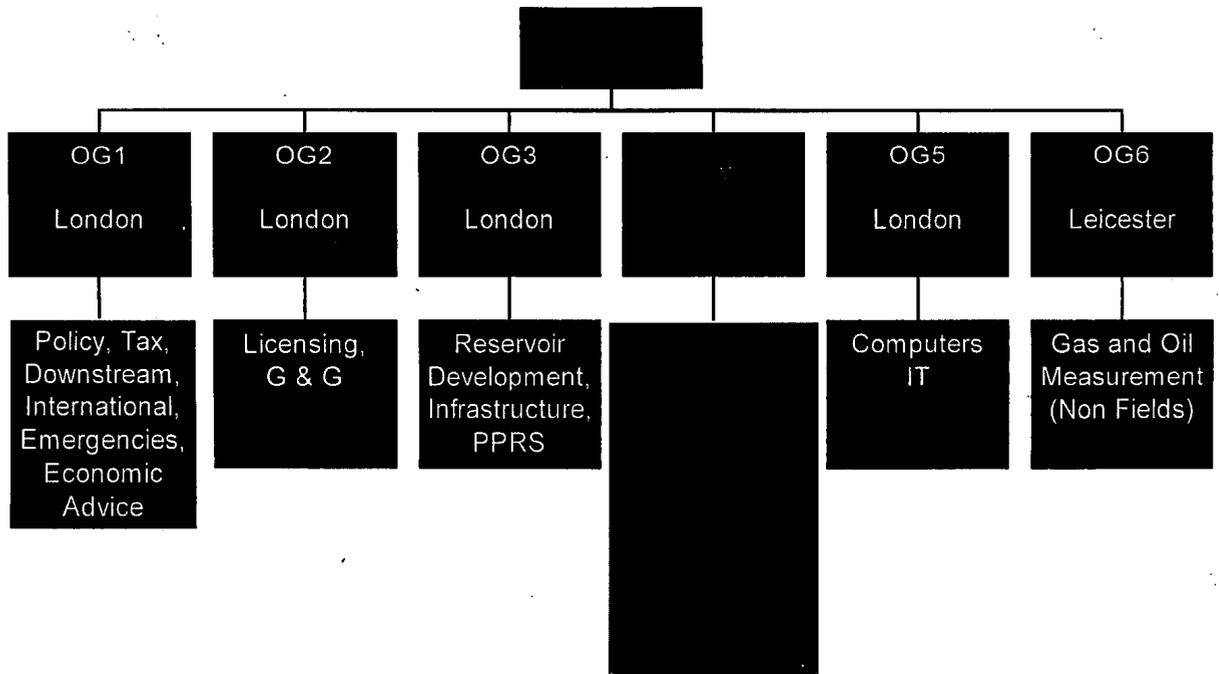
Organisation Structure

Oil and Gas Office



Structure of Oil and Gas (OG) Division

Oil and Gas Office



References

[1] Paper presented at the North Sea Flow Measurement Workshop, a workshop arranged by NFOGM & TUV-NEL

Note that this reference was not part of the original paper, but has been added subsequently to make the paper searchable in Google Scholar.