MEMORANDUM OF UNDERSTANDING

BETWEEN

DEPARTMENT OF TRADE AND INDUSTRY

AND

THE NORWEGIAN PETROLEUM DIRECTORATE

CONCERNING

FISCAL MEASUREMENT SUPERVISION AND COHERENT PRACTICAL ARRANGEMENTS RELATED TO PIPELINES AND INSTALLATIONS GOVERNED BY EXISTING AGREEMENTS BETWEEN THE UK AND NORWAY

1. Introduction

There are a number of existing Agreements between the Government of the United Kingdom of Great Britain and Northern Ireland (hereinafter referred to as the "United Kingdom Government") and the Government of the Kingdom of Norway (hereinafter referred to as the "Norwegian Government") which include provisions for consultation and co-operation in fiscal measurement supervision of oil and gas pipelines and installations. The existing Agreements are listed in paragraph 4 of this Memorandum of Understanding (hereinafter referred to as this "MoU").

The Norwegian Petroleum Directorate (hereinafter referred to as the "NPD") is the designated authority of the Norwegian Government and the Department of Trade and Industry (hereinafter referred to as the "DTI") is the designated authority of the United Kingdom Government for oil and gas fiscal measurement supervision activities.

2. Objective of the MoU

The objective of this MoU is to set out mutual understandings regarding those principles and arrangements which the DTI and the NPD have decided will apply where appropriate to enhance practical co-operation in the planning and operation of fiscal measurement supervisory activities relating to oil and gas pipelines and installations governed by existing Agreements.

These principles and arrangements will apply to the extent necessary in order to implement the terms of existing Agreements and to facilitate the exchange of information on issues related to fiscal measurement. In addition, these principles and arrangements will apply where either DTI or NPD has a legitimate interest in evaluating other measurement systems which are relevant to the effective measurement of throughput in pipelines and installations governed by existing Agreements and exchanges of letters between the two authorities.

Nothing in this MoU or in any of the Supplementary Documents should be interpreted as affecting any of the rights or obligations provided for under the Agreements set out in paragraph 4 of this MoU.

3. Supplementary documents on arrangements relating to each Agreement

DTI and NPD will, where appropriate, agree supplementary documents to clarify the relevant areas of responsibility and the application of the operational arrangements described in this MoU.

4. List of existing Agreements and Letters

Ekofisk Field Agreement:	Agreement, including addendum, between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of Norway relating to the transmission of petroleum by pipeline from the Ekofisk field and neighbouring areas to the
Additional Letters:	United Kingdom, dated 22 May 1973, and the Exchange of Notes between the two Governments, dated 27 July 1994.
	J.Block, Fulmar, CATS Terminal
Frigg Field Agreement:	Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of Norway relating to the exploitation of the Frigg Field Reservoir and the transmission of gas therefrom to the United Kingdom, dated 10 May 1976.
<u>Additional Letters:</u>	Tartan Spur Line, Alwyn, Bruce
Statfjord Field Agreement:	Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of Norway relating to the exploitation of the Statfjord Field Reservoirs and the offtake of petroleum therefrom dated 16 October 1979

Murchison Field Agreement:	Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of Norway relating to the exploitation of the Murchison Field Reservoir and the offtake of petroleum therefrom, dated 16 October 1979, and the Agreements supplementary to that Agreement, dated 22 October 1981 and 22 June 1983.
Heimdal Treaty:	Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of Norway relating to the Transmission by Pipeline of Heimdal Liquids to the United Kingdom, dated 21 November 1985.

In addition to the formal Agreements and exchanges of notes listed above, additional matters of a practical nature have been dealt with by exchange of letters between the authorities involved. These letters are included in the various relevant Supplementary Documents to this Memorandum.

5. Meaning of terms used in this MoU

Terms listed below have the following meaning in this document and its appendices and supplements:

Pipeline :	Information on the meaning of "pipeline" is	
	contained in Articles of each of the Agreements,	
	such as Article 26 of the Ekofisk Field Agreement	
	(as amended by the Exchange of Notes between the	
	two Governments, dated 27 July 1994), Article 30	
	of the Frigg Field Agreement, Article 23 of the	
	Statfjord Field Agreement, Article 23 of the	
	Murchison Field Agreement and Article 15 of the	
	Heimdal Treaty Agreement.	

The term "pipeline" is defined differently in the various Agreements.

Installation :	The term "installation" is defined in the various Agreements listed in Paragraph 4.
Fiscal Measurement Supervision :	All regulatory supervisory activities related to systems and equipment for the determination of quantity and quality of hydrocarbon streams.

6. Objects of regulatory fiscal measurement supervision

The pipelines and installations covered by this MoU are shown in Annex 1.

7. The role of NPD and DTI and the national legal basis for fiscal measurement supervision

- NPD: Appendix I of this MoU.
- DTI See Appendix II of this MoU.

PART II: PRACTICAL ARRANGEMENTS FOR CO-OPERATION IN FISCAL MEASUREMENT SUPERVISION

8. Planning and operation of fiscal measurement supervisory activities

The DTI and the NPD have decided to follow a procedure of appointing one authority to undertake the co-ordinating role with the operator. The details of the arrangements are set out in the Supplementary Documents, which form part of this MoU.

In order to achieve efficient co-operation in conducting supervisory activities and co-ordinate regulatory action, a joint plan covering pipelines and installations governed by the Agreements will be developed. This will result from the DTI/NPD annual liaison review and planning meeting and subsequent exchange of information.

In relation to fiscal measurement supervisory activities carried out jointly where one authority has been assigned a co-ordinating role, this authority will be responsible for arranging the practical matters concerned. When such joint supervisory activities have been conducted, the authority responsible for coordinating will forward a draft report to the other authority for comments and agreement before communicating the findings to the operator.

The two authorities will regularly exchange the results of their measurement supervisory activities relating to pipelines and installations governed by the existing Agreements. Furthermore, both authorities will exchange additional relevant information on the results of their own supervisory activities, as well as additional relevant information of any importance related to the measurement systems and equipment

9. Handling of applications for <u>licences or agreements</u>, exemptions and taking of enforcement or equivalent action.

Consents for fiscal measurement systems, exemptions from legal provisions, or from agreed procedures with regard to pipelines and installations governed by the existing Agreements will be covered by the provisions of the relevant national laws. When receiving a submission relating to pipelines and installations governed by existing agreements, the authorities will consult each other before responding to the submission. This to ensure a co-ordinated approach to regulatory decision-making. Where provided for in the existing Agreements, the authorities will consult prior to the taking of enforcement or equivalent action.

10. Exchanging information on fiscal measurement related issues

DTI and NPD will exchange and discuss relevant information from operation of measurement systems and equipment in general, such as changes in their supervisory systems, issues arising from third party use, and legislative development as a measure to enhance their professional competence.

DTI and NPD will arrange, as appropriate, joint or separate status meetings with the operators to review their performance in ensuring compliance with the relevant measurement regulations and proper functioning of the operator's quality management system.

PART III: REVISIONS - STATUS - DISTRIBUTION

11. Revisions of the MoU

The authorities will review their experiences related to the practical application of the arrangements in this MoU and its Supplementary Documents at regular intervals and make revisions as appropriate.

12. Status of the MoU

The principles and arrangements provided for in this MoU do not exempt the DTI or NPD from their obligations under their respective national laws.

13. Distribution of copies of the MoU

For the purpose of enhancing regulatory predictability a copy of this MoU, Appendices and those Supplementary Documents relevant in each case, along with any revisions will be sent by the co-ordinating authority to each operator of those pipelines and installations which are governed by the Agreements.

14. Date of application and termination of the MoU

This MoU will come into operation one month after date of signature and can be terminated by either authority in writing on 6 months' notice. Such termination will be notified to each operator covered by the arrangements in paragraph 13.

15. Signed

Date

On behalf of Secretary of State for the Department of Trade and Industry

Date

On behalf of the Norwegian Petroleum Directorate

MEMORANDUM OF UNDERSTANDING BETWEEN THE DEPARTMENT OF TRADE AND INDUSTRY AND THE NORWEGIAN PETROLEUM DIRECTORATE CONCERNING FISCAL MEASUREMENT SUPERVISION AND COHERENT PRACTICAL ARRANGEMENTS RELATED TO PIPELINES AND INSTALLATIONS GOVERNED BY EXISTING AGREEMENTS BETWEEN THE UK AND NORWAY

Annex 1

Objects of regulatory fiscal measurement supervision, position as of 23 June 1998

Pipelines and Installations Covered :						
Relevant Agreements :	Norway		United Kingdom			
	Installation	Operator	Installation/ Terminal*	Operator		
Ekofisk	Ula, Gyda Valhall, Hod, Ekofisk	BP Amoco PPCoN	Judy Fulmar Teeside* CATS* Janice	PPCO UK Shell UK PPCO UK Amoco UK Kerr McGee		
Frigg	Frigg East Frigg Lille Frigg Frøy	Elf	Frigg Alwyn North Bruce Claymore Ivanhoe/RR Piper Tartan Galley MacCulloch St Fergus*	Elf Total UK BP UK Elf UK Amerada Hess Elf UK Texaco Texaco Conoco Total UK		
Statfjord	Statfjord A,B,C Nord, Øst Snorre	Statoil Statoil Saga	Statfjord St Fergus*	Conoco Shell UK		
Murchison			Murchison Magnus Brent Sullom Voe* St Fergus*	Oryx UK BP UK Shell UK BP UK Shell UK		
Heimdal	Heimdal	Elf	Brae A, B Cruden Bay* Kinneil*	Marathon BP UK BP UK		

MEMORANDUM OF UNDERSTANDING BETWEEN THE DEPARTMENT OF TRADE AND INDUSTRY AND THE NORWEGIAN PETROLEUM DIRECTORATE CONCERNING FISCAL MEASUREMENT SUPERVISION AND COHERENT PRACTICAL ARRANGEMENTS RELATED TO PIPELINES AND INSTALLATIONS GOVERNED BY EXISTING AGREEMENTS BETWEEN THE UK AND NORWAY

APPENDIXES

TO THE

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE DEPARTMENT OF TRADE AND INDUSTRY

AND

THE NORWEGIAN PETROLEUM DIRECTORATE

CONCERNING

FISCAL MEASUREMENT SUPERVISION AND COHERENT PRACTICAL ARRANGEMENTS RELATED TO PIPELINES AND INSTALLATIONS GOVERNED BY THE EXISTING AGREEMENT BETWEEN THE UK AND NORWAY

Appendix I:	The role of NPD and the legal basis for fiscal measurement supervision in Norway.
Appendix II:	The role of DTI and the legal basis for fiscal measurement supervision in the UK

APPENDIX I

The role of NPD and the legal basis for fiscal measurement supervision in Norway

General information on the Norwegian regulatory regime pertaining to fiscal measurement of oil and gas from the Norwegian Continental Shelf

The purpose and the objective of statutory supervision

The purpose of the Norwegian statutory supervision carried out by the Norwegian Petroleum Directorate (NPD) is, as far as oil and gas measurement is concerned, to supervise the operator's adherence to Norwegian law relating to fiscal measurement activities.

The objective of the supervisory activity is to verify the accuracy of the measurement equipment and to verify the status of related procedures which are being used by the licensees to quantity/quality determination of fiscal hydrocarbon streams.

Oil and gas measurements serve as a basis for royalty tax stipulations and for determining the licensee's income.

Regulatory overview

- a) Legal framework:
 - The Petroleum Act (29 November 1996)
 - Regulations to Act relating to petroleum activities (Royal Decree 27 June 1997)
 - Regulations relating to fiscal measurement of oil and gas (NPD 3 July 1991, with subsequent amendments).

b) Major regulatory issues:

- Internal control requirements
- Requirements concerning the organisation, planning and implementation of the activities
- Technical requirements for the design and operation of the metering equipment
- Allocation methods, metering equipment and measurement methods required to provide adequate accuracy and reliability at all times

Basic features of the Norwegian regulatory system

The Norwegian regulatory system is based on the principle that anyone who conducts or participates in petroleum activities, shall comply with legal provisions, including regulatory decisions which are made pursuant to the Petroleum Act. More specifically, this duty requires such parties to actively seek to bring identified discrepancies into compliance.

Areas of responsibility

Statutory responsibility for the fiscal measurement issues rests with the Ministry of Industry and Energy.

The Norwegian Petroleum Directorate (NPD) is delegated supervisory authority. This includes the responsibility of issuing relevant measurement regulations.

In accordance with established Memorandums of Understanding, the NPD shall co-ordinate supervisory activities which involve the Norwegian agency Justervesenet (Norwegian Metrology and Accreditation Service) or similar agencies in foreign countries such as Germany, UK, Belgium, France etc. This work is important to ensure that no governmental agency enforces legal provisions in a manner that has adverse effects on other agencies' area of responsibility.

Supervisory activities

The NPD does not issue certificates or similar documents, since such documents tend to effectively shift the responsibility for the quality of the operations from the licensee to the statutory authorities, and thus deprive the licensee of a stimulus to seek and ensure compliance. Petroleum activities may not, however, enter certain stages of development, such as the design phase, factory acceptance testing or the operations phase, unless the NPD explicitly has granted the licence to do so. When such licences are granted, it is based on, among other things, that the operating companies confirm and demonstrate compliance with the regulations.

Supervision of measurement systems

The following licences apply to the Planning/design/fabrication/operation of a fiscal measurement system:

- Licence to design
- Licence to leave the manufacturer's site
- Licence to start operation

Various supervisory activities are employed to assess proper operation of measurement systems, such as:

- Technical Audits/Verifications
- Auditing the Quality Management Systems
- Verification of adherence to rules and regulations
- Technical meetings, such as annual meetings and ad-hoc meetings on technical matters
- Review of operator's programme for preventive maintenance.

Planning of supervisory activities

A plan describing the various supervisory activities relating to fiscal measurement of oil and gas is developed annually by the NPD.

The supervisory activities plan is developed with due regard to:

- experience from earlier supervisory activities
- the economic impact of the measurements concerned
- anticipated critical activities of the measurement activity etc.

MEMORANDUM OF UNDERSTANDING BETWEEN THE DEPARTMENT OF TRADE AND INDUSTRY AND THE NORWEGIAN PETROLEUM DIRECTORATE CONCERNING FISCAL MEASUREMENT SUPERVISION AND COHERENT PRACTICAL ARRANGEMENTS RELATED TO PIPELINES AND INSTALLATIONS GOVERNED BY EXISTING AGREEMENTS BETWEEN THE UK AND NORWAY

APPENDIX II

The role of DTI and the legal basis for fiscal measurement supervision in the UK

The role of DTI and the legal basis for fiscal measurement supervision in the UK

Regulatory Framework

The principal legislation which applies to the oil and gas production industry particularly in relation to petroleum measurement is as follows.

The Petroleum (Production) Act 1934.

The Act vests ownership of the petroleum which exists in its natural condition in strata in Great Britain and beneath the territorial waters of the United Kingdom in the Crown and gives the Secretary of State, on behalf of the Crown, the exclusive right to grant licences to search and bore for and get petroleum. The Act also authorises the Secretary of State to make regulations which, inter alia, prescribe the model clauses for incorporation into such licences.

The Continental Shelf Act 1964

The Act extends the powers conferred by the 1934 Act to the United Kingdom Continental Shelf.

The Petroleum Act 1987

Sections 17 and 18 and Schedules 1 and 2 to this Act amend the measurement model clauses which were incorporated into licences in force at the time it was enacted.

The responsibility for the administration of the legislation governing the operations of the UK oil and gas industry rests with the Department of Trade and Industry.

There is no statutory obligation for measurement, but a model clause covering this requirement is included in all licence conditions. The Measurement Model Clause incorporated in Petroleum (Production) Licences states: 1) The Licensee shall measure or weigh by a method or methods customarily used in good oilfield practice and from time to time approved by the Minister all petroleum won and saved form the licensed area.

2) If and to the extent that the Minister so directs, the duty imposed by paragraph (1) of this clause shall be discharged separately in relation to petroleum won and saved –

- a) from each part of the licensed area which is an oil field for the purposes of the Oil Taxation Act 1975,
- b) from each part of the licensed area which forms part of such an oilfield extending beyond the licensed area, and
- c) from each well producing petroleum from a part of the licensed area which is not within such an oilfield.
- 3) If and to the extent that the Minister so directs, the preceding provisions of this clause shall apply as if the duty to measure of weigh petroleum included a duty to ascertain its quality or

composition or both; and where a direction under this paragraph is in force, the following provisions of this clause

shall have effect as if references to measuring or weighing included references to ascertaining quality or composition.

4) The Licensee shall not make any alteration in the method or methods of measuring or weighing used by him or an appliances used for that purpose without the consent in writing of the Minister and the Minister may in any case require that no alteration shall be made save in the presence of a person authorised by the Minister.

5) The Minister may from time to time direct that any weighing or measuring appliance shall be tested or examined in such a manner, upon such occasions or at such intervals and by such persons as may be specified by the Minister's direction and the Licensee shall pay to any such person or to the Minister such fees and expenses for test or examination as the minister may specify.

6) If any measuring or weighing appliance shall upon any such test or examination as is mentioned in the last forgoing paragraph be found to be false or unjust the same shall if the Minister so determines after considering any representation in writing made by the Licensee be deemed to have existed in that condition during the period since the last occasion upon which the same was tested or examined pursuant to the last foregoing paragraph. In order to assist licensees to gain approval of their "methods of measurement" the DTI issues guidance on petroleum measurement. The guidance is prepared through seeking the views of the oil and gas industry by consulting industry representative bodies such as The United Kingdom Offshore Operators Association (UKOOA) and The Institute of Petroleum (IP) and thereby arriving at a consensus view of "good oilfield practice".

Where petroleum is delivered to the UK via a pipeline which serves as a common transportation route for a number of fields then the "method of measurement" will include the measurement of petroleum at the terminal serving the relevant pipeline and the allocation procedures used to determine each contributing field's share of the petroleum used at or exported form the terminal.

In order to satisfy the Secretary of State that no unauthorised alternations to the approved method of measurement have been made, officers from the Oil and Gas Office (OGO) may at their discretion inspect metering systems at any stage from construction through commissioning into production. Throughout the producing life of a field operators may expect that fields liable to pay Royalty or Petroleum revenue Tax (PRT) or being co-produced or transported with such fields will routinely be inspected by officers of the OGO on an annual basis. Additional non-routine inspections may be required if circumstances warrant. Fields with no impact on Royalty or PRT are liable to be inspected on commissioning and thereafter at the discretion of the OGO on a less frequent basis than Royalty or PRT sensitive fields.