

## Falkland Islands Hydrocarbon Exploration

*Patrick Armstrong*

### Introduction

In two recent papers I have attempted to document the Falkland Islands' attempt to establish a legal base for the Islands' maritime boundaries, and recent developments in the establishment of a legal framework for the exploration for, and exploitation of, the offshore hydrocarbons considered likely to be present in the sedimentary basins of the continental shelf adjacent to the archipelago (Armstrong and Forbes, *Boundary and Security Bulletin*, 1(1) April 1993; Armstrong, *Boundary and Security Bulletin* 2(2) July 1994). This note represents an effort to summarise the situation as it existed at the end of 1994.

### Environmental planning

It is widely appreciated that development of any oil or gas reserves in the continental shelf around the Falkland Islands would have profound effects on the Islands' environment, society and economy and every reasonable effort is being taken to involve the small but closely knit population in decision-making. For example, in November 1993 a pamphlet *The Falkland Islands and Oil* was widely circulated to the people of the Islands to explain some of the issues - legal, economic and political.

In June 1994 a report entitled *Oil Development Strategies for the Falkland Islands* was produced for the Falkland Islands Government by Environmental Resources Management (ERM), and was circulated to the Islands community. In late October 1994, on the eve of the discussion of the Offshore Minerals Bill by the Legislative Council of the Colony, a 'distillation' of the report, and of a 'commentary' on the report prepared from the reactions to the ERM report of various government departments and commercial advisors was widely distributed as an 'Information paper' by the Falkland Islands Development Corporation (FIDC). An 'information offensive' then commenced to involve the population in discussion of the options that face the Islands. Publicity was given to the Information paper, and the Legislative Council's deliberations in the local

press (the *Penguin News* and *Teaberry Express*) and on the local broadcasting service. Comment was actively sought.

An approximate programme has been drawn up as follows:

- i) **Pre-licensing planning**, during which the strategy for development will be determined, an assessment made of social and environment changes anticipated and a legislative framework for licensing, taxation and environmental protection, put in place.
- ii) **Licensing**. It is at present planned that applications for licences would be on sought from March 1995, and the first licences would be actually awarded in early 1996.
- iii) **Seismic survey** would continue eight or nine months a year for the next five years.
- iv) **Exploratory drilling** would be optional during these five years, and there would be little likelihood of drilling before year four. During the second phase of licensing, years six to twelve, some exploratory drilling would be compulsory, and this might continue into a further phase of ten years.
- v) A **construction phase**, would require some two or three years prior to production.
- vi) **Production**. No attempt has been made to accurately forecast the time-frame for this phase as so much would depend on when (and if) a discovery were to be made, the technical difficulty of its development, and a host of other factors. It was noted that the average time from licence to discovery in the North Sea was 7.5 years, and from licence to production 17.2 years. But it was cautioned that too close a comparison with the North Sea should be avoided. Production might last up to thirty years.

It was appreciated that the production phase might never eventuate, and that for the next ten years or so the Islands should plan for a relatively modest **exploration** industry, and with this in view the Chamber of Commerce and Falkland Islands

Government (FIG) have dispatched delegations to Aberdeen and to Newfoundland in attempts to help the Islands' business community and administrators consider what might be needed. (The Governor of the Falklands, David Tatham, also visited the Shetlands in July 1994.) Their conclusions, and that of the Information paper, were that with a few possible exceptions almost everything necessary for the seismic and even preliminary drilling stages already existed on the Islands. These exceptions were: some minor upgrading of the passenger-handling facility at Mount Pleasant Airport, the sealing of the road from this airport to Stanley, "*relatively minor additions to Stanley Harbour*" to render it suitable for supply operations, minimal alterations to Stanley Airport to render it suitable as a helicopter base (it was used as such by the armed forces from 1982-86) and the construction of a transit camp for 150-200 workers. The situation was summarised as follows:

*"in summary there is little to suggest that the Falklands could not adequately cope with several years exploration through judicious improvements to existing facilities."*

The consultants and the authors of the FIDC Information paper go on to detail closely what economic, social and environmental impacts could be expected at each stage of development - seismic exploration, exploratory drilling, construction and production. For example at the seismic stage economic impacts are seen in terms of the "*generation of limited business opportunity of local companies and revenue up to £600,000 per annum*", and some possible spin-off benefits to the local tourist industry if regular air services to Chile or Uruguay were established rather than the use of occasional charters. No appreciable social disruption was foreseen and environmental impacts were summarised as follows:

- "*There is potential for conflict between seismic vessels and fishing vessels, and for disturbance to squid stocks. Seismic work in sensitive areas will need to be regulated to avoid key fishing times.*"

In the exploratory drilling stage appreciably more economic and social impacts are foreseen, and the

following environmental disturbances are envisaged:

- Disturbance of the sea-bed, "*absolutely minimal compared to trawling.*"
- Disturbance to adjacent fisheries, localised and limited in comparison to seismic exploration.
- Operational discharges, capable of being controlled by regulation.
- Potential diesel or chemical spill risk, or drill-hole blow-out. Pollution risks to be controlled by regulation and emergency response facilities.

The impacts mount as the production stage approaches, and the Information paper carefully spells out what these might be, envisaging various scenarios. For example, it is estimated that income to the government might total £30 million per annum for a single small oilfield, to several hundred million pounds in the case of a real bonanza. The social effects of an influx of workers, and the immigration and voting-right aspects are considered. Environmental impacts at this stage are seen in terms of disruption of the islands' "*peace and tranquillity*", the land and buildings required for a deep-water harbour, the increased danger of blow-outs and tanker spills, disturbance of wildlife and marine areas, and noise from aircraft and helicopter movements.

At this stage, it is recommended, as the ERM report put it:

*"[There must be] a heavy emphasis on sharing facilities between oil companies and strong control over the scale and siting of developments ... [with] a slow build-up of onshore activity in a controlled fashion with close co-operation between FIG and the oil companies, and between the oil companies themselves."*

Elsewhere the ERM report stresses the need for:

*"Making sure that best practice environmental protection and pollution control is in place [and] providing some form of protection for environmentally sensitive areas."*

It is clear that it is at least intended that there will be the most careful planning, including the development of appropriate emergency response facilities at each stage.

As it is important that good knowledge exists of the Falklands environment, and its ecology, a programme of 'baseline' studies, is about to be embarked upon, so that the effects of subsequent developments can be monitored. The penguin and seal colonies, the kelp fields, and the distinctive plant communities of the windswept but awe-inspiring Falklands 'camp' (area outside Stanley) are aspects of the environment that residents strenuously wish to protect.

### The legislative framework

The combined effect of *Proclamation No. 4* of 1986, *Proclamation No. 2* of 1990, *Proclamation No. 1* of 1991 and the *Continental Shelf Ordinance* of 1993 establish the Islands' claim to the continental shelf surround in the Falklands (see Armstrong, 1994), prohibiting an individual or body corporate from prospecting for minerals in the "designated area" other than by licence.

The Offshore Minerals Bill was discussed by, and passed by the Legislative Council of the Falkland Islands in late October 1994. It provides a basic legal framework for the exploration for oil around the Falklands, and for the exploitation of any resources discovered. It runs to 85 pages, containing 81 clauses and 4 schedules. It was passed by the Council, with only minor amendments.

The *Offshore Minerals Ordinance* (as of mid-November 1994 still unpublished in the final form passed by the Council) is structured as follows:

- Part 1 is introductory.
- Part 2 allows the government to grant licences to explore for, and to exploit offshore minerals, granting the government extensive powers over the operation.
- Part 3 provides in detail for Health and Safety at Work in the offshore industry.
- Part 4 establishes a legal regime for the building of underwater pipelines which may become necessary to gather oil and

gas from offshore fields and carry it to offshore terminals for shipping, or to the shore. In particular provision is made for the Government to require companies to share pipelines, or to design pipelines with capacity for future developments.

- Part 5 provides for the eventual "decommissioning" of installation.
- Part 6 enables the Falkland Islands Government to require environmental impact statements in relation to specific projects.

It is proposed that the first areas may be offered for licensing in the first half of 1995, and with this in view the "designated area" has been divided into quadrants (1° latitude by 1° longitude), each of which has been divided into 30 blocks. A map of those blocks most likely to be amongst the first to be offered has been published, and circulated to fisheries and other (e.g. military and naval) authorities for comment.

### Financial arrangements

What has not yet been satisfactorily resolved is the arrangement for taxing a potential oil and gas industry in the Falklands. The following sources of revenue are under consideration: fees for exploration and exploitation licences, royalties, acreage rentals, a petroleum revenue tax, signature and production bonuses. The precise mix of these, and the level at which they are to be set, has not yet been determined. The Government and people of the Islands are only too well aware that it is important that they obtain a rightful share of the wealth generated by a part of their extremely limited resource base, but they also appreciate that they are in a very 'difficult' area in which no oil has been discovered, which is remote from markets and the weather can be appallingly bad for several months of the year, and that they need a 'company friendly' and reasonably stable policy. The requirement, as it is at present seen, is for a system which need not deliver huge sums initially, but will deliver a reasonable flow of income to finance the administration and regulation of the oil exploration process, and for the various consultancies and other advice that a tiny community like the Falkland Islands will need to 'buy in'. Advice is being sought from Aberdeen University, the UK Inland Revenue and Treasury and oil companies in several parts of the world on these matters.

### Development on the Islands or on the mainland?

The ERM report, perhaps sensing the concern of the Islanders for the maintenance, as far as possible, of their unique environment and traditional way of life, perhaps because it was perceived that *“very little is any of the infrastructure required to support a major oil extraction industry currently exists on the Islands”*, made a plea for a substantial amount of the development to be on the South American mainland (perhaps in Uruguay or Chile) rather than in the Islands themselves. It was also suggested that consideration should be given to licensing blocks in such a manner as to *“maximise opportunity for developing South American supply bases during seismic and exploration phases...”*.

The Falkland Islands Government strongly disagreed with this viewpoint, arguing that at least in the short-term local facilities were adequate or nearly adequate, that social and environmental impacts would be modest, and local business should have the maximum opportunity of benefiting. It is perceived that if the oil exploration supply and service business goes to South America, the fisheries business may be *“dragged away”* with it. The Information paper of 20 October 1994 summarises the FIG official position as follows:

*“This...would provide the wrong political message; it would almost certainly lead to a South American production phase; it would be damaging to commercial development of the fishery; it would hinder the development of commercial civilian flights. It is difficult to see how anybody could conclude that such a course was in the best interests of the Falkland Islands.”*

While it is possible that as exploration and drilling gathers pace there might be a case for dividing activity between the mainland and the Falklands, it is clear that, at least in the short term, the centre is to be the Islands. It is also clear that at least part of the reason for this is political. Despite some warming of relations between the UK and Argentina, there remains a deep suspicion of the latter country in the Falkland Islands themselves. The recent announcement by President Menem that the islands will be back under Argentine sovereignty by the year 2000 has not helped. It is perceived that if important services for the exploration industry were

provided from South America (even in the ‘friendly’ countries of Chile or Uruguay) pressure of some sort might be brought by these countries' powerful neighbours. Argentine citizens are still not allowed to set foot in the Falklands. And while Argentine financial participation in oil and gas developments has not been ruled out, it would have to be as a minority interest, and under fairly stringent conditions. (Indeed, in mid-October 1994 it was announced that British Gas had formed a link with YPF, Argentina's large privatised oil concern, to explore for hydrocarbons). The Argentine **official** view is that as the Falklands are part of Argentina, any minerals in the continental shelf around them belong to Argentina.

Nevertheless, realities must be faced. South America is the obvious market for the Falklands oil and gas, if oil and gas there should prove to be. It might well prove practicable to pipe oil ashore in Argentina (some oil from the Norwegian sector of the North Sea goes west, not east). And oil rigs are supremely vulnerable targets - to terrorism, for example. It is difficult to see how a major oil production enterprise could develop in Falklands waters without at least a measure of cooperation from the mainland.

### Acknowledgements and Sources:

I thank Kenn Back for providing information, and Viv Forbes for commenting upon a draft of this note. Sources quoted and/or used have included: ERM's *Oil Development Strategies* report, and the FIDC Information paper in part based upon it, the *Falklands Islands and Oil* pamphlet published by the Government in 1993, and the progress report *Oil and the Falklands* produced in October 1994, as well as other official documents and statutory materials. I have also used items published in the *Observer*, *Financial Times*, *Penguin News* and *Teaberry Express*.

Patrick Armstrong teaches geography at the University of Western Australia and has written extensively on the environmental history of remote islands.