Deep-sea drilling

Commercial break raises hopes

Washington

THE US deep-sea drilling community has just been saved — not by the bell but by the slump in world oil prices.

The community has been through years of cliff-hanging debate about which ship should serve for the next generation of drilling. The present vessel, *Glomar Challenger*, must be retired or overhauled at the end of the current season. The focus of this debate has been the giant *Glomar Explorer*, originally built for the Central Intelligence Agency. When the budget was made up last December, it seemed that the \$90 million cost of converting *Glomar Explorer* into a scientific ship was too high and that the plan would be scrapped.

But last week, a special advisory group headed by Dartmouth geophysicist Charles L. Drake told the National Science Foundation (NSF), which runs the programme, to forget *Explorer* because there were better ships on the horizon. It turns out that there are at least six highly capable commercial drillships now lying idle because the oil companies, which used to lease them to prospect for deep-water oil, are no longer doing so. The slump in oil prices has made deep-water exploration unattractive.

This is a boon to ocean science, the Drake group explained, because the government may be able to get an 8 to 10 year lease on one of these ships at a bargain price, and pay no more to convert it than it would have had to pay to modernize the old *Challenger*. Commercial drillships were ruled out during the *Explorer* debate because their running costs were twice those of either *Glomar Challenger* or *Explorer*.

The Drake group advised that oil prices may yet rise again, when industry may need the ships. So scientists have a "window" for obtaining a commercial ship at low rates. Sedco, a Texas company with two drillships, has even given NSF a public estimate of the costs and capabilities of one of their vessels converted for ocean drilling. The result is in the table below.

At the meeting with the Drake group, NSF assistant director Francis Johnson

nevertheless warned the deep-sea drillers of "the myth of budget isolation". In other words, he said, they could no longer consider their objective, a next-generation drillship, in isolation from other competing programmes in ocean geophysical science. The Drake group, which included oceanographers other than ocean drillers, had concluded that there is a need for continued drilling; it also concluded that financing the conversion of *Glomar Explorer* would impose too heavy a "tax" on other scientific programmes.

The commercial option has obviously excited many people in the deep-sea drilling community. The notion of doubling laboratory space, penetrating deeper into the ocean floor and getting a more stable, dynamically positioned ship that can stay on station for only \$10 million in conversion costs, is attractive. The real excitement, however, is that commercial drilling vessels come equipped with blow-out preventers — something *Glomar Explorer* might have had but only at extra cost. The continental margins are likely sites for hydrocarbon deposits. As director of the Scripps Institution of Oceanography William Nirenberg quips, now the ocean drillers can stop being "the only people avoiding the search for oil".

The ocean drillers also believe that a commercial vessel would increase the chance of foreign participation in the next phase of the programme. At present, the United Kingdom, France, West Germany, Japan and the Soviet Union contribute about one-third of *Glomar Challenger's* cost. But the Soviet Union has not been invited to participate in the next phase. The other foreign participants have said that the scientific returns from *Glomar Challenger* are diminishing.

The additional laboratory and berth space and the greater scientific potential of the commercial ship could make the programme more attractive to them. Indeed, US officials are considering making foreign participants pay half the costs of the programme, instead of one-third as at present.

Deborah Shapley

Possible US ocean drillships

Characteristic	<i>Glomar Challenger</i>	<i>Sedco 472</i>	<i>Glomar Explorer</i>
Length of drillpipe (ship to bottom of hole)	28,000 ft	30,000 ft	33,000 ft
Ship characteristics			
length	400 ft	470 ft	619 ft
beam	65 ft	70 ft	115 ft
depth	27 ft	32 ft	50 ft
displacement	10,600 t	16,664 t	40,000 t
Blowout preventer	No	Yes	No
High latitude capability	No	Possible	Yes
Laboratory space	4,500 sq.ft	9,000 sq.ft	19,000sq.ft
Daily operating cost (1983 dollars)	\$53,000	\$53,000	\$57,000
Cost of conversion (1983 dollars)	\$11,000,000	\$10,000,000	\$90,000,000

Source: National Science Foundation.

Soviet science writers

Medium seeks clearer message

SCIENCE journalists in the Soviet Union are not doing their job, according to a leading article in the Communist Party newspaper *Pravda*. Although many Soviet magazines and newspapers publish a steady flow of articles on scientific and technological achievements, the reader is rarely given a clear picture of what is going on, says *Pravda*. In particular, they are failing to pull their weight in what the 1981 Party Congress stressed as a major objective of Soviet science policy — the rapid implementation of research results.

Readers' letters, it seems, frequently complain of the "impersonal" presentation of science writing "decked out with numerical data", with little relevance to the working man.

A leading article in *Pravda* is a standard way of launching a new campaign or Party directive in the Soviet Union. *Pravda*, however, had few concrete suggestions to offer the journalists apart from a general hint that they should avoid stereotyped lists of achievements in favour of in-depth analysis.

Lists, however, appear to be an endemic feature of Soviet journalism. Last autumn, when the Moscow weekly *Literaturnaya Gazeta* decided to celebrate the diamond jubilee of the Soviet Union with reports on the state of science in the fourteen non-Russian Union Republics, it approached the presidents of the academies with three questions: what is the most interesting work your academy is doing, what are the main difficulties, in particular, as regards implementation of results in practice, and how is your academy participating in the All-Union Food programme?

The fact that the foremost literary weekly could fall into such a dullness trap — for the replies consisted in the main of fourteen near-identical lists — suggests that the style of science writing castigated by *Pravda* will not be easy to eradicate.

One participant in the survey, Habib Abdullaev of the Azerbaijan Academy, did seem to be aware of the pitfalls. He avoided giving a list of "achievements" altogether, and avoided the standard complaints of the lack of cooperation from bureaucracy and industry, a shortage of funds and the breakdown of essential supplies. Instead, he suggested that science journalism could help overcome one of the main problems of implementation — a lack of understanding between workers and scientists. Workers in industry and agriculture, he suggested, "should be told not only of the results of research, but also of the postulates and search which gave rise to them", if they are to respond appropriately to innovation. Whether the journalists can respond to the challenge remains to be seen.

Vera Rich