

OIL POLLUTION

Another Accident at Sea

THE Chevron Oil Company is for the time being the most prominent member of the rogues' gallery of corporations offending against the environment because of its operation of an oil well in the Gulf of Mexico, a burning torch since February 10 which was converted into a source of about 50 barrels of oil a day when it was extinguished on Monday last week. No less a person than the Secretary of the Interior, Mr Walter J. Huckel, has gone to see for himself what damage is being done, especially at the bird sanctuary on Breton Island. Everybody—even the oil company—seems to agree that the offending well was not being operated in accordance with the more explicit regulations for offshore oil wells which were promulgated by the Geological Survey last August, after the escape of oil from an incomplete well off Santa Barbara, California.

The groups of a dozen wells now leaking oil lie about 20 miles east of the mouth of the Mississippi. Since the fire began, the Department of the Interior has suspended operations in the concession of 51 acres which Chevron has been opening up since it first leased it in 1958. Before the fire was extinguished with dynamite, it seemed as if the oil spill that would inevitably follow would be one of the most carefully controlled in the modern history of oil pollution. In the event, however, winds of ten knots in the gulf seem to have broken up the raft of booms constructed between the wild well and Breton Island, with the result that a large slick of oil began moving towards the coast. It is estimated that some two weeks will go by before the wild well can be sealed off from a hole now being drilled in at a slant.

Mr Russell Wayland of the United States Geological Survey explained last week that the new regulations require that oil wells should ordinarily be provided with devices known as storm chokes which are meant automatically to cut off the upward flow of oil in wild wells. The new regulations for offshore oil wells require that all wells should be provided with storm chokes, but the Geological Survey can waive this rule if the pressure in the pipe is too great for the chokes to operate successfully, or if the amount of sand being carried up with the oil is so great that the chokes would be worn out quickly. Although some of the wells in the Chevron field had been granted these waivers, the well which eventually caught fire, and which was unprotected, was not one of these.

In the circumstances, it is understandable that the oil company should have made valiant efforts to prevent the unavoidable oil slick causing damage to the coastline. Mr Wayland says that his department has been giving the oil company a rough time, and that all the offshore operators have been hurrying to comply with the new regulations. One problem, Mr Wayland said, is that of enforcing the regulations which exist—his small field staff cannot be present at all offshore drilling operations to ensure that they are complied with. It remains to be seen how severe will be the penalties which are visited on the Chevron Oil Company by the Department of the Interior. As well as permitting the closing of the oil field for an indefinite period, the regulations also allow the government to recover the money which it will have lost through the escape of oil—not a vast fortune—and to prosecute the offend-

ing companies in the courts, when success will bring fines of up to \$2,000 a day for each violation and up to six months in prison for the violator—possibly the president of the company, possibly the operator of the rig, nobody is quite sure. The ultimate sanction is that flagrant violation of the rules may result in the cancellation of the lease to exploit a tract of offshore oilfield, but this would be accounted a thoroughly radical move by the Department of the Interior.

The delta of the Mississippi, like many other such tracts of land and water, is much frequented by wild fowl. Altogether there are close on a dozen bird refuges, the largest of which runs to close on a hundred square miles and which is maintained by the State of Louisiana, ironically with revenue derived from oil wells on the delta. Mr James Trefethen of the Wildlife Management Institute says that the species most at risk is the red-headed duck, which is at once rare and in the habit of venturing farther out to sea than other waterfowl wintering in the region, the canvas back duck and the pintail, for example. Mr Trefethen also says that if oil does eventually reach these areas, the waterfowl may nevertheless escape serious damage because the migration to the north is about to begin. There is even talk of using aircraft to speed the birds on their way to the north, which is another way of fighting fire with fire.

NUCLEAR POWER

Slow Pace of Reactor Development

THE tightened budget of the Atomic Energy Commission means that the chief innovations in the coming year are likely to consist simply of the design of a 1,000 MW fast reactor using sodium as a cooling material. This much was clear last week. Mr Milton Shaw, director of Reactor Development and Technology at the Atomic Energy Commission, asked for a modest \$194.6 million—substantially less than the \$223.5 million that he asked for a year ago and \$8 million less than his division was actually awarded for the current fiscal year. Spurred on not merely by logic but by the example of European nations, the AEC now says that the liquid metal fast breeder reactor is the cornerstone of its forward programme. What has happened so far is that three contractors are negotiating contracts for a design study, which should be completed in a year or so, when it will be possible to push ahead with the building of a 1,000 MW demonstration plant, probably starting towards the end of 1971. Although the AEC would like to build more than one plant of this kind, it has no authority to do so. So that the sodium fast breeder reactor can go ahead quickly within the confines of the tight budget, other promising candidates such as the molten salt breeder reactor, on which Oak Ridge has set its heart and which operates with thorium rather than uranium, have been put somewhat to one side.

The experimental basis of the sodium breeder reactor has now, according to Dr Shaw, been strengthened partly by the reorganization of the Argonne National Laboratory—a point urged on the AEC by the Joint Committee on Atomic Energy, the commission's most friendly critic—the commissioning of the experimental reactor EBR II (which is operating 25 per cent above its design power at 62.5 MW) and also by