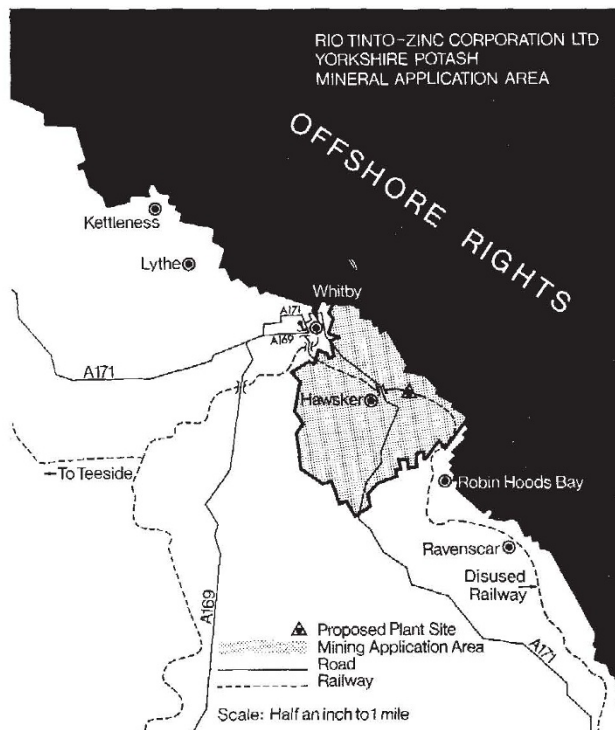


sible for the Dungeness contract. Technical difficulties which could delay completion of the project clearly affect the terms of the merger. Until it is clear how serious these delays are likely to be, no further progress on the establishment of the second company is likely. This could mean that it will be 1969 before the second company is finally unveiled.

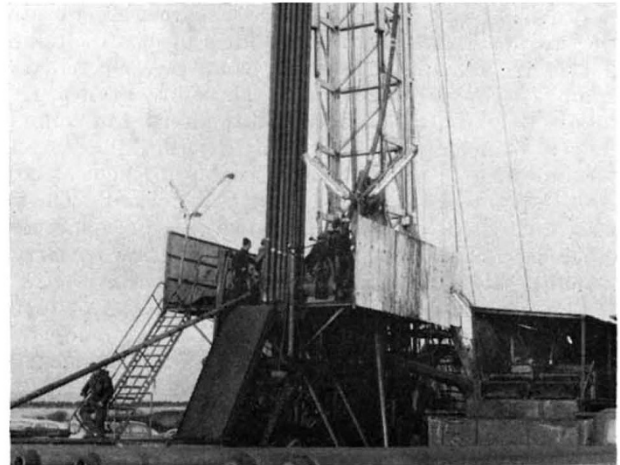
## MINING

### Potash Boost

LAST week Yorkshire Potash Ltd, a subsidiary of the Rio Tinto-Zinc Corporation, applied to the Minister of Housing and Local Government for outline planning consent for a potash mine three miles south of Whitby, in part of the North York Moors National Park. This follows the application in April by Cleveland Potash Ltd, a company owned jointly by ICI and the Charter Consolidated Group, for a site near Boulby, north of Whitby. Although the prospect of industrial encroachment on National Park land is hard to swallow, Mr R. O. Atherton, chairman of Rio Tinto Finance and Exploration Ltd, has estimated that the mines could together improve the balance of payments by £25 million a year, and it is not surprising that the minister has given the go-ahead, at least to Cleveland Potash.



Of the two sites, Cleveland Potash has applied for the larger—200 acres compared with 90 acres for Yorkshire Potash. Both organizations have appointed consultant architects to work out how the mines could best be “disguised”. Yorkshire Potash is proposing to raise hillocks around the site composed of material removed from the proposed 4,200 foot shaft so that only the pithead gear, it seems, would be visible from the coast footpath. At a public inquiry



on the Cleveland Potash scheme, there was some evidence that the county council hopes that new industry will make good the financial loss suffered by the North Riding when the large ICI plant at Wilton passed into the hands of Teesside County Borough. All being well, the Cleveland Potash mine should go into production in about five years time and is expected to yield some 1–1.5 million tons of potash a year.

As well as controlling effluent discharge, Cleveland Potash will have to comply with a percentage rate of potash extraction. The siting, design and external appearance of the buildings, machinery and plant, and the landscaping of the minehead area and means of access, will also have to have the blessing of the local planning authority.

## SCIENCE MUSEUM

### Computers on Show

A CASUAL or even mildly conscientious visitor to the Science Museum in South Kensington could well be forgiven for passing an afternoon there in complete ignorance of the miniature exhibition on “Computers Past and Present” tucked away on the second floor. Failure to spot a discreet sign near the entrance guarantees a conscience-free avoidance of the exhibition. Admittedly the exhibition is small. Sponsored by International Computers Ltd, it consists of a brief résumé of the history of computing from the early Hollerith equipment, used for the 1890 census in the United States, up to the present-day computer based on integrated circuits. Verbal history is interspersed with a selection of components from each vintage of computer, and a few photographs of machinery—old and new—round off the display.

Microcircuits are undoubtedly the most stimulating parts of the exhibit. One of these is set up under a magnifying lens to enable the one or two millimetres of complex circuitry to be seen, but visitors can be forgiven for asking why there is so little publicity for such an important development. It is quite understandable to mount only a small exhibition if that is all that time and finance allow, but it is nevertheless important that the magnitude of the display should be clearly seen not to represent the importance or relevance of the scientific content.



The whole computer display was apparently taken over from the museum in Stevenage and seems not to have been embellished on its transfer to London because of the staff shortages at the Science Museum. It seems, however, to be the museum's plan to install a regular computer and mathematical section in the course of the next few years. The hope is that this will run to 4,000 square feet. Completion depends on the effect of Government economies.

#### UNIVERSITIES

## Graduates to Order

How far should universities tailor their courses to produce the kind of graduates the economy needs? This was one of the problems discussed at the academic consultative conference organized by the Committee of Vice-Chancellors and Principals last week. One of the problems, of course, is that manpower planning is in any case something of an inexact science, but nevertheless there seems to have been agreement that manpower considerations should play an increasingly important part in university decisions. Professor C. A. Moser, Director of the Central Statistical Office, gave a paper which examined the present status of manpower planning, and how its influence on university development interacted with the other pressures—student demand, and cost—to produce the final balance of courses.

Mr S. L. Bragg, Chief Research Engineer for Rolls-Royce (and a member of the University Grants Committee), set out to define the needs of the employers. He took the line that industry needs a large number of generalists and only a few deep specialists. "The whole problem of manpower planning is in the training of the generalist, and will be solved when we can successfully carry this out." With generalist courses, graduates would be sufficiently flexible to make detailed planning unnecessary. But Mr Bragg seems to have been uncertain whether it was essential to have general courses in order to produce generalists. Was it possible, he wondered, to persuade people that specialization was only a vehicle of education, not its purpose?

Professor G. C. Moodie from the University of York and Professor M. Swann from the University of Edinburgh (whose paper was read in his absence by Professor J. G. Ball from Imperial College) discussed the internal academic and administrative changes that manpower planning imposes on the universities. Professor Moodie said that the changing situation would force universities to establish stronger central powers of decision-making, but that this would happen in any case, whether or not manpower planning was the determining factor. He suggested the formation of a central planning agency in each of the universities, staffed by senior academics (not necessarily deans or heads of departments), which would act as an advisory committee. The agency would be responsible for dealing with all the issues that require decisions of policy—it would, for instance, treat requests to fill vacant lectureships as if they were requests for new posts, and back up its recommendations to senate with statistical and other evidence. The task of these CPAs, Professor Moodie said, was not to pre-empt all decision making and all policy initiatives, but to act as a new lens through which these decisions and initiatives should be focused.

#### ENVIRONMENT

## Planning Pollution

IN contrast with many other research topics, the aim of studying air pollution is either to remove the phenomenon itself or to minimize its effects. The terms of last week's conference organized by the Royal Society assumed that the elimination of pollution at source was not yet a practical possibility, and most of the papers presented dealt with the measurement and theory of the diffusion of alien particles in the atmosphere. It was pointed out, however, that the advent of nuclear power on a large scale could well remove the need for a long-term solution to the pollution from power stations.

The contributors to the conference, drawn from Europe and North America as well as Britain, dealt with three specific aspects of pollution—measurement techniques, theories of plume rise and particle concentrations and a variety of more general problems about the atmosphere and plant design. Several speakers referred to experiments carried out at Tilbury, where the plumes emitted by the three power stations in the vicinity were used as subjects for study.

Among the contributions from the Central Electricity Research Laboratory at Leatherhead was a description of the use of a pulsed-light rangefinder (LIDAR)—based on the detection of the backscatter from a pulse of ruby laser light—to measure the concentrations and dimensions of chimney plumes at some distance from the stacks. Another paper from Leatherhead contained a general review of the more conventional methods of particle measurement, including a new gauge to measure the "nuisance value" of the dust as a function of particle concentration, velocity, and size. Some of the meteorological aspects of pollution received attention. The effect of the vertical migration of particles on the crosswind spread of a chimney plume was covered in a paper from the Meteorological Office at Bracknell, and an Italian contributor described how standard meteorological balloons are being used to study the lower atmosphere in the locality of proposed power stations. This type of surveying apparently has particular significance in a mountainous environment.

The most systematic analysis of the chimney stack problem came from Professor K. W. Klug of Darmstadt, who presented a flow chart of the assumptions required to calculate the distance and value of the maximum concentration of dirt from a plume. In another paper, Mr A. J. Clarke of the CEGB outlined in simple terms the pollution factors that must influence planners of power stations. It seems that the dirt concentration varies roughly as the rate of emission and inversely as the square of the height of emission, but overall decisions on chimney construction are still based on qualitative judgments.

#### RONAN POINT

## Who is to Blame?

FEW will derive much comfort from the Tribunal of Enquiry into the Ronan Point disaster of last May (*Nature*, 218, 718; 1968) when a section of a 22 storey block of flats collapsed at Newham (HMSO, 9s 6d). The tribunal finds some grounds to criticize everyone