

stances and speculative recovery mechanisms being assumed. One can only admire the tremendous courage of investigators who pronounce their conclusions with confidence in spite of these almost frightening handicaps. Yet, before we accept these estimates, it would be well to examine how such exploratory expectations have fared in the past.

The latest evaluation of the overall exploration statistics (1) confirms earlier studies showing that in only one out of some 50 new-field wildcat wells is as much as 1 million barrels of oil or its gas equivalent discovered. A specific example of recent drilling failure, despite the best of hopes, is extensively described in an article in the Oil and Gas Journal (2): "Ten unsuccessful wildcats have badly wounded hopes for finding major reserves of oil and gas under the first crop of leases in the vast northeastern Gulf of Mexico.... the exploratory opportunities remaining could at best yield only a fraction of the reserves industry expected from this Cretaceous-Jurassic province." The hoped-for prize was the huge Destin anticline structure, over which an Exxon-Mobil-Champlin group acquired, in 1973, six tracts at a cost of some \$630 million, and on which it has now drilled six noncommercial wells. Surely this group must have applied the most sophisticated analytical and operational exploration techniques known to the industry. A major discovery may yet result from further testing, but as of now, the gap between optimistic expectations and reality is wide indeed—both psychologically and financially.

There is widespread feeling that if we only apply conservation measures and begin extensive exploratory drilling on the continental shelves, we shall certainly find the billions of barrels of oil needed to make us independent of foreign supplies by 1985. Very little has been done to set up emergency oil stockpiles or to get started on the development of both the technology and financial structures required for alternative energy sources, such as coal conversion, shale oil extraction, and environmentally acceptable increased nuclear energy production. But what if the shelf drilling should turn up many more unproductive "Destins" than expected? As it is, the only certain new net domestic supplies we can count on by 1985 are the 1 to 2 billion barrels per day in 1977 or 1978, when the Alaskan pipeline is operating, and perhaps 500,000 more barrels per day from expanded secondary and tertiary recovery operations. It would be prudent to consider new oil discoveries resulting from the proposed federal offshore leasing program as unscheduled blessings. Policies to safeguard the national security and economic

stability of this country should be based on conservative judgments about the results of exploring unknowns rather than on anticipated materializations of plausible possibilities.

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Alexandering

After reading Tinbergen's reply to the critics (Letters, 2 May, p. 401) of his views on autism, it came as something of a relief to discover that my own researches on Alexander are likely to be spared the further benefits of his ethological approach. Still, at the risk of encouraging any dormant spirit of collaboration which may remain, I must point out that, through a typographical error, an important line (indicated below in italics) was dropped from my communication to Science. "Now Tinbergen," I wrote, "devotes half of his Nobel Prize speech to the promotion of a curative system which he identifies with the Alexander technique." It may be that the complete sentence would have cleared up (as my entire letter apparently did not) Tinbergen's Alice-in-Wonderland puzzlement about my views: (i) in his Nobel speech Tinbergen appears to be talking not about the Alexander technique-a form of kinesthetic reeducation which I do indeed recommend in my book (1, pp. xlv - xlvi) as effective for many people, although not suitable (1, p. xxxi) for others-but instead about some form of osteopathic treatment or Esalen massage; (ii) he makes a number of specific curative claims for the technique and these are claims which thus far have no scientific support. The final passage of his reply to me does, however, indicate a welcome shift of position. Whereas Bernadette reporting the good news from Lourdes seems comparatively restrained next to Tinbergen in the Alexander half of his Nobel address, he now confines himself to the quite simple and jovial recommendation: "Alexandering may be good for you-why not give it a try?" Tinbergen, it seems, is repeating the wisdom of the onetime label on the Lydia E. Pinkham bottle: "Recommended in conditions for which this preparation is adapted."

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References

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