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Letters

Economy of oil shale

The major problem associated with developing the crude oil potential of oil shale ("Squeezing Oil Out of Stone" [SN: 12/3/83, p. 362]), aside from environmental consequences, appears to be efficiency. How many calories are necessary to extract 1000 calories equivalent in a specified quantity of crude shale oil? How much energy is necessary to produce the energy found in the 10,000 barrels per day by the Union pilot operation, and how does this requirement compare to other alternative crude oil and energy production sources? How long would be the production life of these oil shale fields in the United States if the energy produced had to supply not only present U.S. demands but also the compounded demands of having all present demands supplied by crude shale oil?

This Week

- 52 Stitchless Junction Supports Healing Nerves
52 The perils of pandas: Where has all the bamboo gone?
Cover: Flowering—a rare occurrence—and subsequent die-off of arrow bamboo in the Chinese Sichuan province threatens more than a quarter of the wild giant panda population. (Photo: World Wildlife Fund)
53 NMR imaging offers new view of pelvis
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In answering these questions, the realization may be that oil shale development will become the primary consumer of its own product. Perhaps economic realities are a reflection of this fact.

Stuart Luttich
Regional Wildlife Biologist
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Units for breakeven

Your note on fusion breakeven (SN: 11/12/83, p. 311) did not mention that the reaction involved is deuterium-tritium; for a D-D one, the Lawson criterion would have been about 100 times higher. This criterion is not a dimensionless number, the quoted result should have been $7 \times 10^{13} \text{ cm}^{-3} \text{ x sec}$.

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A Thomson by any other name

I found the article "Wine-Tasting in Vitro" (SN: 12/3/83, p. 365) most interesting. However, I believe that Dietrick Thomsen has gotten his Thompsons mixed-up. Benjamin Thompson bore the title of Count Rumford. According to my somewhat ancient Columbia Encyclopedia, it was William Thomson who bore the title of 1st Baron Kelvin.

Both Thompson and Thomson were noted for their studies on heat which might make for confusion.

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