

roads in the new region. Power supplies to the region require relatively modest expenditures. Existing electrical power stations can be used, and several more should be built and completed. I would term this complex of measures an intelligent beginning to opening up this new region for exploitation."

Inevitable Expenses or Wasteful Excess?

Question: "Dr. Trofimuk, enormous funds are needed to create all this - oil and gas pipelines, railroads, atomic blasts, electrical power stations. There simply isn't enough money. Wherever you look, huge investments are needed - education, health care, machine-building, agriculture, housing construction..."

Answer: "Yes, money is needed. The ministries have estimated that 300 billion roubles will be needed from the current Five-Year Plan (period) to the end of the century to cover the cost of working the oil and gas fields in Western Siberia. And that is only to maintain output at current levels. But it is the State that is providing this money: after all, we are not talking about just anything, but about oil and gas. Yet the output level can be maintained by other means, too: those aimed at ensuring that maximum output can be obtained from the deposits. I mentioned several approaches, and there are others. For example, hydraulic fracturing of a formation is a method used everywhere. A well is 100 millimetres, or at best, 200 millimetres wide, and the drainage area is naturally not very great. The seam is blasted with various types of special equipment. Cracks appear leading hundreds of metres away from the well, greatly enlarging the drainage area. The Americans