

OVERVIEW OF COALBED METHANE DEVELOPMENT IN THE U.S.

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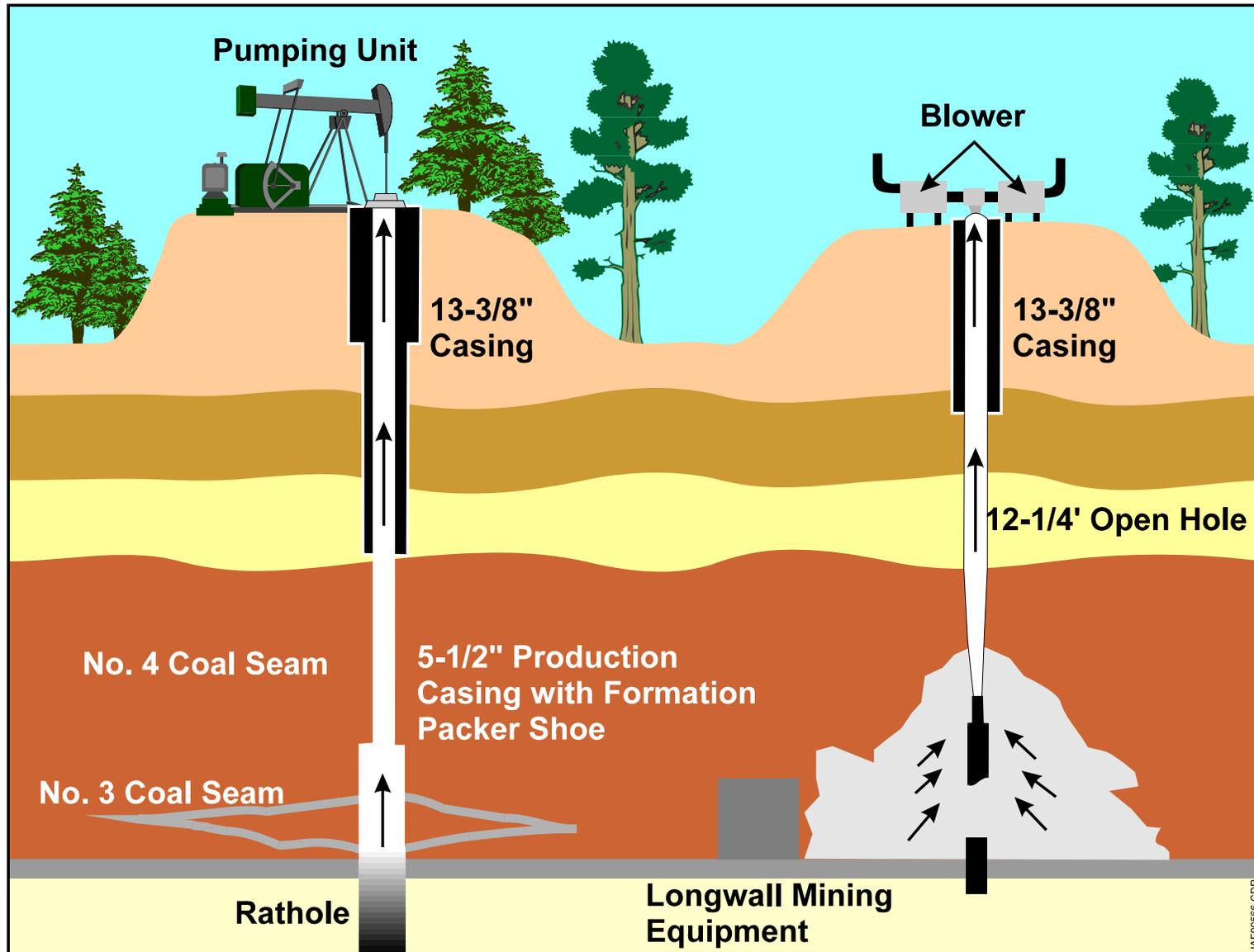
**U.S./India Coal Working Group
Washington, D.C.**

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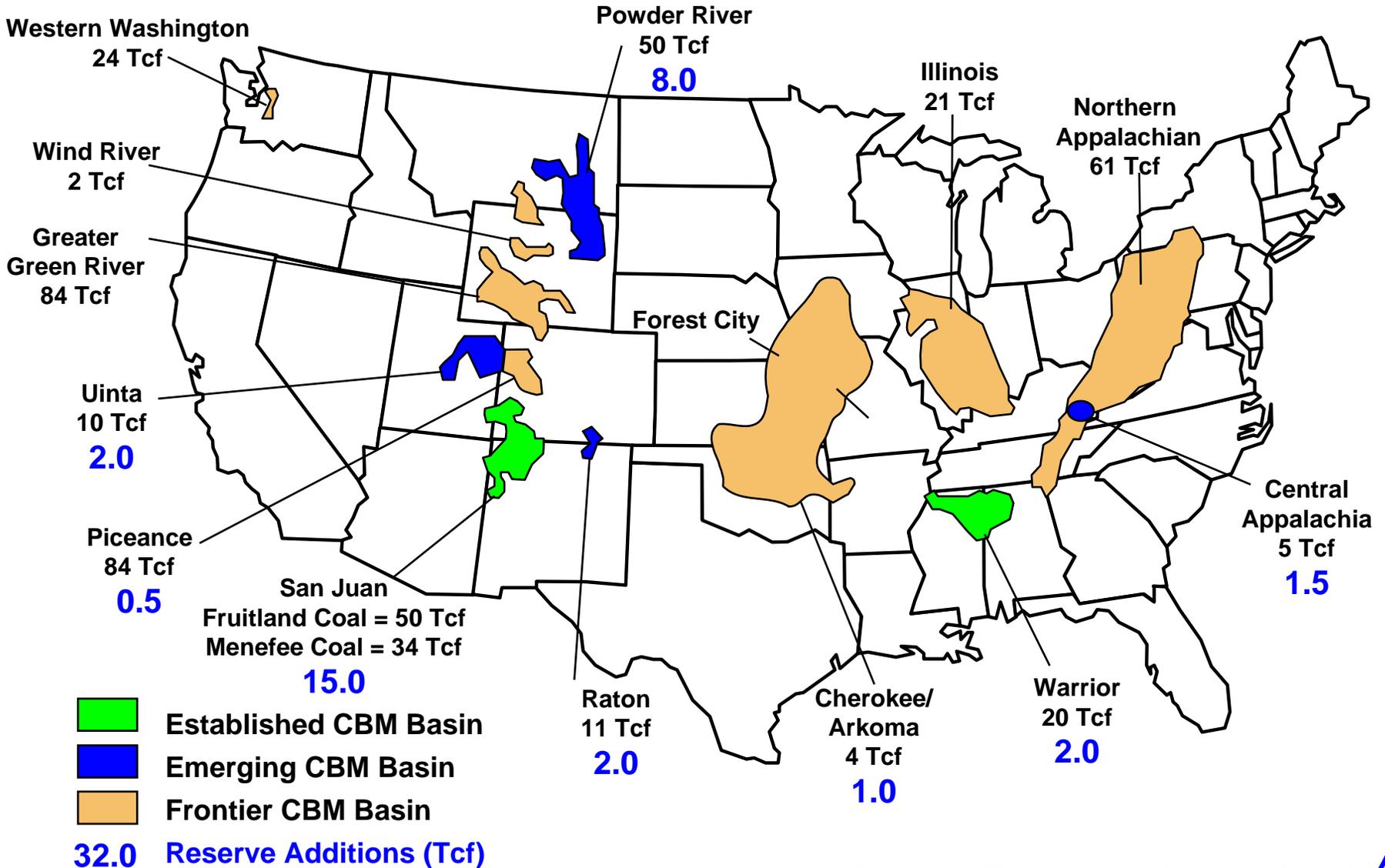
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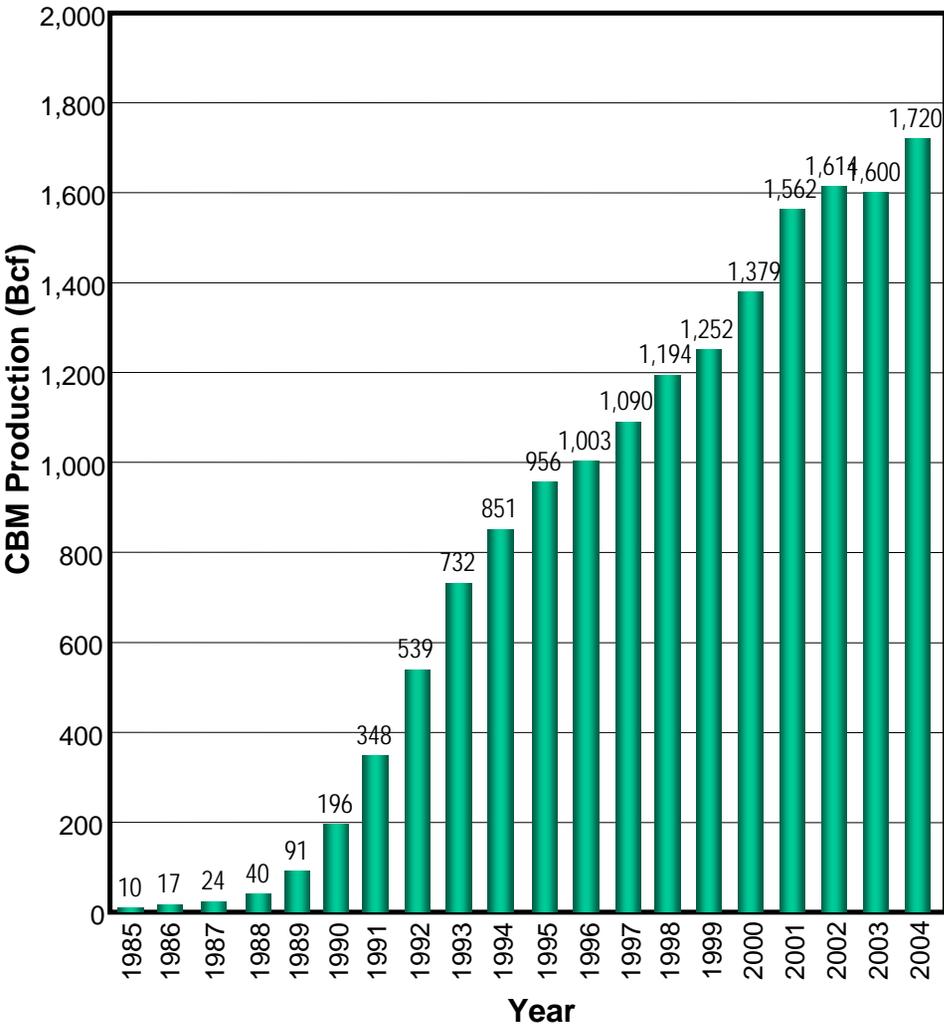
Design of Vertical and GOB CBM Wells



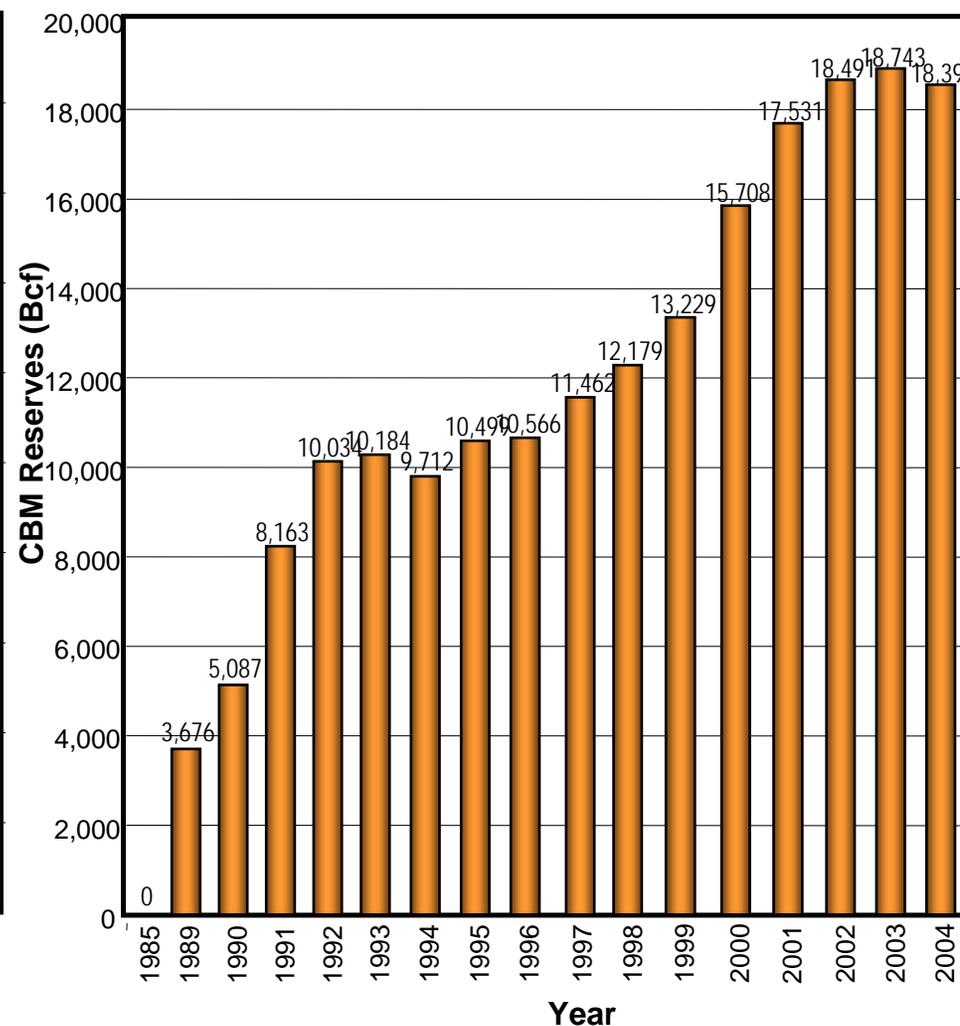
OF 400 TCF OF CBM GAS IN PLACE, OVER 32 TCF OF RESERVES HAVE BEEN BOOKED



CBM Production



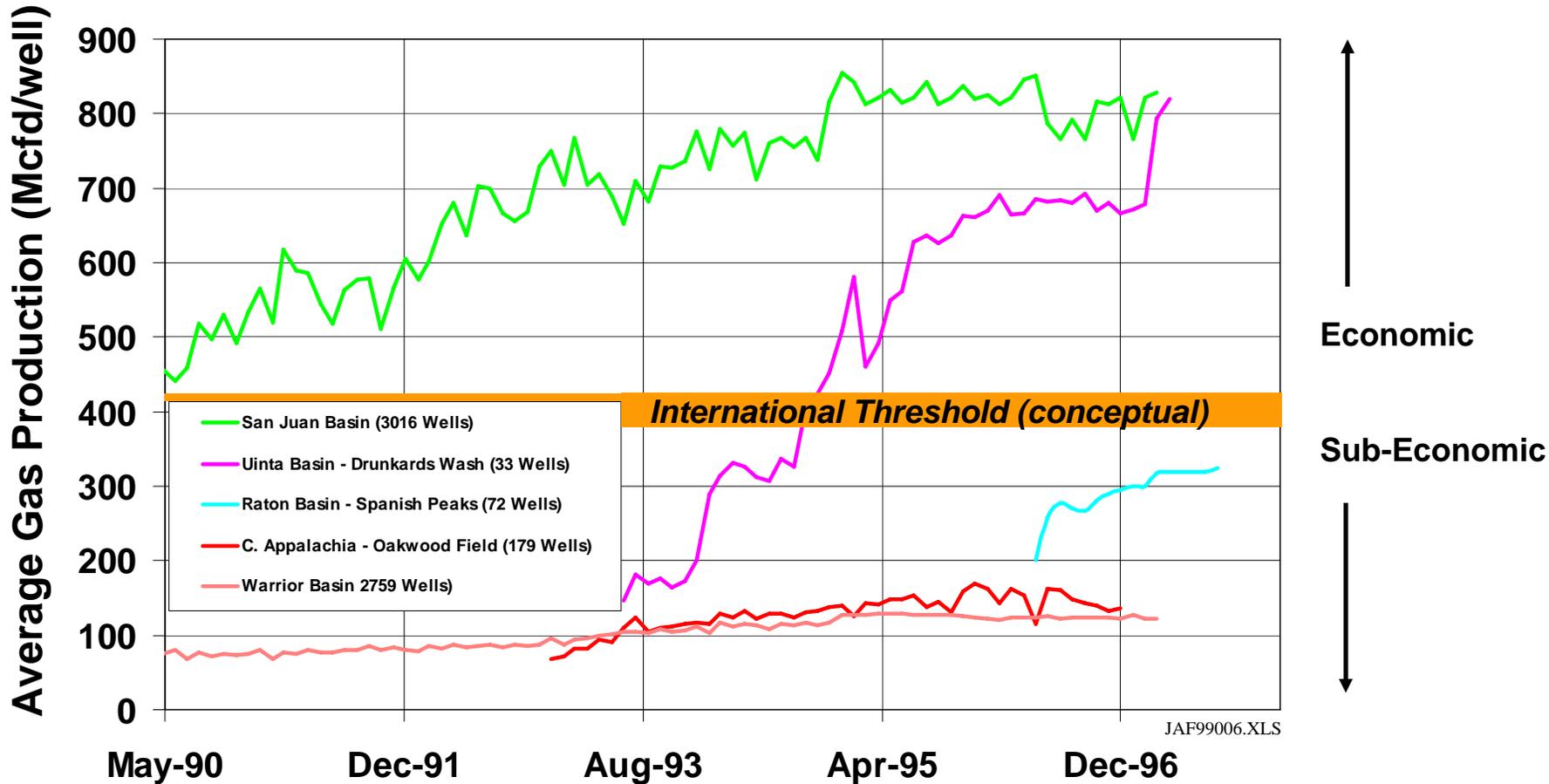
CBM Reserves



Source: EIA 2004 Annual Report.



Well Productivity in U.S. CBM Basins



The Co-Development of CBM and Conventional Gas Helps Improve CBM Economics:

- **Without existing infrastructure, CBM development would have developed much more slowly**
- **In some areas, CBM development took advantage of under-utilized facilities and extended their economic life.**

The Lack Of A Well-Developed Onshore Service Industry Has Hampered The Growth Of India's CBM Industry. Specific CBM Technologies That India Needs Are:

- **Under-Balanced Drilling**
- **Horizontal Drilling**
- **Hydraulic Fracturing**
- **Surface Production Facilities**

All of the above are currently brought in on an “as-needed” basis which results in high mobilization costs.

India will also need to revise its tendering procedures to attract service companies and suppliers that can offer the latest technologies. Tender requests are overly complicated for U.S. companies and need to be simplified.



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