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Oil; 2.6.4 Tar Sand Bitumen; 2.7 References; 3 Exploration, Recovery, and Transportation; 3.1 Exploration; 3.2 Drilling; 3.2.1 Preparing to Drill; 3.2.2 The Drilling Rig; 3.2.3 Drilling; 3.2.4 Well Completion; 3.3 Recovery; 3.3.1 Primary Recovery (Natural Methods)

3.3.2 Secondary Recovery 3.3.3 Enhanced Oil Recovery; 3.4 Bitumen Recovery; 3.4.1 Mining Methods; 3.4.2 Non-Mining Methods; 3.5 Transportation; 3.6 Products and Product Quality; 3.7 References; 4 Crude Oil Classification and Benchmarks; 4.1 Crude Oil Classification; 4.1.1 Classification as a Hydrocarbon Resource; 4.1.2 Classification by Chemical Composition; 4.1.3 Density and API Gravity; 4.1.4 Viscosity; 4.1.5 UOP Characterization Factor; 4.1.6 Pour Point; 4.1.7 Recovery Method; 4.2 Classification of Reserves; 4.2.1 SPE Standards; 4.2.2 SEC Standards; 4.2.3 Russian Standards

4.2.4 Miscellaneous Standards 4.3 Benchmark Crude Oils; 4.4 References; 5 The Petroleum Culture; 5.1 The Petroleum Culture; 5.2 Oil in Perspective; 5.2.1 History; 5.2.2 The Middle East Emerges; 5.2.3 Recent History; 5.3 The Seven Sisters; 5.4 Reserve Estimates; 5.4.1 Historical Variation of Reserve Estimates; 5.4.2 Patterns of Use; 5.4.3 Energy and the Political Costs of Oil; 5.4.4 Price Swings; 5.5 References; 6 Oil Prices; 6.1 Oil Price History; 6.2 Pricing Strategies; 6.3 Oil Price and Analysis; 6.4 The Anatomy of Crude Oil Prices; 6.5 The Anatomy of Gasoline Prices

6.6 Effect of Refining Capacity 6.6.1 Refinery Types and Crude Slate; 6.6.2 U.S. Refining Capacity; 6.6.3 World Refining Capacity; 6.6.4 Refining and Refinery Economics; 6.7 Outlook; 6.8 References; 7 The Crude Oil Market; 7.1 The Crude Oil Market; 7.2 Global Oil Consumption; 7.3 Refining and The Markets; 7.4 Profitability; 7.5 References; 8 Oil Supply; 8.1 Physical Factors; 8.2 Technological Factors; 8.3 Economic Factors; 8.4 Geopolitical Factors; 8.5 Peak Oil; 8.5.1 Peak Oil Theory; 8.5.2 Effects and Consequences of Peak Oil; 8.6 The Impact of Heavy Oil and Tar Sand Bitumen; 8.7 References

9 The Future

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## Sommario/riassunto

The perfect primer for both the layperson and the engineer, for the new hire and the old hand, describing, in easy-to-understand language, one of the biggest and most lucrative industries in the world. There is only one substance known to mankind that can cause wars, influence global economies, and make entire countries rich: petroleum. One teaspoon of the stuff carries enough energy to power a ton truck up a hill. It's in the news every single day, it influences our lives in ways that we cannot fathom, and it is the most important commodity in the world. But how much does the average

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