1. Record Nr. UNINA9911006649803321 Autore Jahn Frank Titolo Hydrocarbon exploration and production / / Frank Jahn, Mark Cook & Mark Graham Amsterdam;; New York,: Elsevier, 1998 Pubbl/distr/stampa **ISBN** 1-281-03910-1 0-08-053425-2 9786611039103 0-08-055145-9 Edizione [2nd impression.] Descrizione fisica 1 online resource (397 p.) Collana Developments in petroleum science;; 46 Altri autori (Persone) CookMark GrahamMark Disciplina 622/.1828 Soggetti Petroleum - Prospecting Oil fields - Production methods Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references (p. 373) and index. Nota di contenuto Cover; CONTENTS; INTRODUCTION; About This Book; CHAPTER 1.0. THE FIELD LIFE CYCLE; 1.1 Exploration Phase; 1.2 Appraisal Phase; 1.3 Development Planning; 1.4 Production Phase; 1.5 Decommissioning; CHAPTER 2.0. EXPLORATION; 2.1 Hydrocarbon Accumulations; 2.2 Exploration Methods and Techniques; CHAPTER 3.0. DRILLING ENGINEERING; 3.1 Well Planning; 3.2 Rig Types and Rig Selection; 3.3 Drilling Systems and Equipment; 3.4 Site Preparation; 3.5 Drilling Techniques; 3.6 Casing and Cementing; 3.7 Drilling Problems; 3.8 Costs and Contracts: CHAPTER 4.0. SAFETY AND THE ENVIRONMENT: 4.1 Safety awareness 4.2 Safety management systems 4.3 Environment; 4.4 Current environmental concerns; CHAPTER 5.0. RESERVOIR DESCRIPTION; 5.1 Reservoir Geology; 5.2 Reservoir Fluids; 5.3 Data Gathering; 5.4 Data Interpretation; CHAPTER 6.0. VOLUMETRIC ESTIMATION; 6.1 Deterministic Methods; 6.2 Expressing uncertainty; CHAPTER 7.0. FIELD APPRAISAL; 7.1 The role of appraisal in the field life cycle; 7.2 Identifying and quantifying sources of uncertainty; 7.3 Appraisal tools;

7.4 Expressing reduction of uncertainty; 7.5 Cost-benefit calculations

for appraisal; 7.6 Practical aspects of appraisal CHAPTER 8.0. RESERVOIR DYNAMIC BEHAVIOUR8.1 The driving force for production; 8.2 Reservoir drive mechanisms; 8.3 Gas reservoirs; 8.4 Fluid displacement in the reservoir; 8.5 Reservoir simulation; 8.6 Estimating the recovery factor; 8.7 Estimating the production profile; 8.8 Enhanced oil recovery; CHAPTER 9.0. WELL DYNAMIC BEHAVIOUR; 9.1 Estimating the number of development wells: 9.2 Fluid flow near the wellbore: 9.3 Horizontal wells: 9.4 Production testing and bottom hole pressure testing; 9.5 Tubing performance; 9.6 Well completions; 9.7 Artificial lift; CHAPTER 10.0. SURFACE FACILITIES 10.1 Oil and gas processing 10.2 Facilities; CHAPTER 11.0. PRODUCTION OPERATIONS AND MAINTENANCE; 11.1 Operating and Maintenance Objectives; 11.2 Production Operations input to the FDP; 11.3 Maintenance engineering input to the FDP; CHAPTER 12.0. PROJECT AND CONTRACT MANAGEMENT; 12.1 Phasing and organisation; 12.2 Planning and control; 12.3 Cost estimation and budgets: 12.4 Reasons for contracting: 12.5 Types of contract: CHAPTER 13.0. PETROLEUM ECONOMICS; 13.1 Basic principles of development economics; 13.2 Constructing a Project Cashflow; 13.3 Calculating a discounted cashflow 13.4 Profitability indicators 13.5 Project screening and ranking; 13.6 Per barrel costs; 13.7 Sensitivity analysis; 13.8 Exploration economics; CHAPTER 14.0. MANAGING THE PRODUCING FIELD; 14.1 Managing the subsurface: 14.2 Managing the surface facilities: 14.3 Managing the external factors: 14.4 Managing the internal factors: CHAPTER 15.0. MANAGING DECLINE: 15.1 Infill drilling: 15.2 Workover activity: 15.3 Enhanced oil recovery; 15.4 Production debottlenecking; 15.5 Incremental development; CHAPTER 16.0. DECOMMISSIONING; 16.1 Legislation: 16.2 Economic lifetime: 16.3 Decommissioning funding

Sommario/riassunto

This book on hydrocarbon exploration and production is the first volume in the series Developments in Petroleum Science. The chapters are: The Field Life Cycle, Exploration, Drilling Engineering, Safety and The Environment, Reservoir Description, Volumetric Estimation, Field Appraisal, Reservoir Dynamic Behaviour, Well Dynamic Behaviour, Surface Facilities, Production Operations and Maintenance, Project and Contract Management, Petroleum Economics, Managing the Producing Field, and Decommissioning.

16.4 Decommissioning methods