

Handbook of Ground Water Development

PREFACE

There has been a long-standing need for a comprehensive book on ground water development. The lack of sufficient texts may be because the industry is highly fragmented, and a number of technologies and sciences are needed for the understanding of the occurrence, extraction, replenishment, and proper exploitation of ground water. There are, however, numerous publications that concern one or few aspects of this activity, but many are regional in scope or apply only to special conditions. To fill this gap, the Roscoe Moss Company sought out and enlisted the talents of distinguished experts in this multifaceted field and blended their knowledge with its 80 years of practical experience in water well design and construction. The result in this handbook which includes much valuable information not found in the literature but know to practitioners in different segment of the industry.

This book is therefor written for use by all those involved in ground water development, be they designers, constructors, managers, or operators. It provides no only an overview of the subject, but it is sufficiently detailed to be useful to professionals. The range of treatment should particularly benefit students and newcomers to the industry.

The text is divided into three parts. In this way it traces the logical progression of the study of ground water from its origin through its development and exploitation. Part I deals primarily with the nature of ground water and where it can be found. Part II considers the parameters related to water and well design and construction. Part III covers well and well field operation.

Although the emphasis is on high-capacity ground water-producing installations, most of the material applies to lower-yield wells. Although monitoring wells are not discussed specifically, the technologies of ground water development presented in this book are applicable, and those readers engaged in protection of this life-giving resource will find this publication useful.

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Added Strength Due to Cementing

Thermoplastic Collapse Formula

Collapse Strength of Well Screen

Safety Factors

Compressive Loads

Bursting Strength

Bending Stresses

Combined Loads

9.7

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