

ARAMCO HANDBOOK

Oil and the Middle East



ARABIAN AMERICAN OIL COMPANY

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Part 1

BACKGROUND OF SAUDI ARABIA AND THE MIDDLE EAST—Highlights of the long history of the Arab world, and of the establishment and development of the Kingdom of Saudi Arabia.

Part 2

THE OIL INDUSTRY AND ITS GROWTH IN THE MIDDLE EAST—A brief account of the beginnings of the oil industry, its growth in importance throughout the world and its development in the Middle East.

Part 3

THE ARAMCO VENTURE—The story of its inception and development of the oil fields both in the desert and offshore in the company's concession area.

Part 4

SAUDI ARABIA: THE GOVERNMENT, THE PEOPLE AND THE LAND—Facts about the country in which Aramco is operating.

Part 5

THE CULTURE AND CUSTOMS OF THE ARABS—Sketches of the religion, literature, calendar and the social and other customs of the Arab people.

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NOTE ON BOUNDARIES

Some international boundaries in the Middle East are undefined or in dispute. Therefore some boundary indications in the Aramco Handbook are necessarily only approximate.

INTRODUCTION

The Aramco Handbook was originated to fill the void in comprehensive texts written in English about the Middle East. Employees of the Arabian American Oil Company coming to Saudi Arabia from abroad, principally Americans, needed reliable and fairly detailed knowledge of the kingdom. Nontechnical employees needed to be grounded in the fundamentals of the oil industry. Although recently a number of books on the area have been published, the handbook continues to be useful as a single source of information and background for Aramco employees.

In order to describe the Aramco venture in perspective, an unusual range of topics must be covered in the pages of this handbook: the history, culture, geography, religion and economic development of Saudi Arabia; the fundamentals of the oil industry; Aramco's early history and its present operations.

The handbook originally was distributed in five spiral-bound booklets in 1950, giving way two years later to a more convenient two-volume set. The previous edition appeared in 1960 in a one-volume version.

In the present edition some material which is readily available elsewhere has been omitted. Sections dealing with Aramco and modern Saudi Arabia have been recast to reflect some of the rapid changes of the past few years. Many of the photographs are new.

Arabic personal names and place names are spelled according to a system used by Aramco, which closely follows a generally accepted system of transliteration from Arabic to English. The system does not always represent the spelling or pronunciation of the Arabic original with complete accuracy, as Arabic contains letters and sounds for which no equivalents exist in English. Furthermore, pronunciation of Arabic varies from region to region.

An inverted apostrophe—standing for the Arabic letter 'ain—is used throughout the handbook. This distinctive consonant, which occurs often in Arabic place and personal names, has no counterpart in English.

The content of the book suggests the continued use of the name "Aramco Handbook," but with the subtitle, "Oil and the Middle East."

Dhahran, Saudi Arabia

Part 1

Background of

Saudi Arabia

and the

Middle East



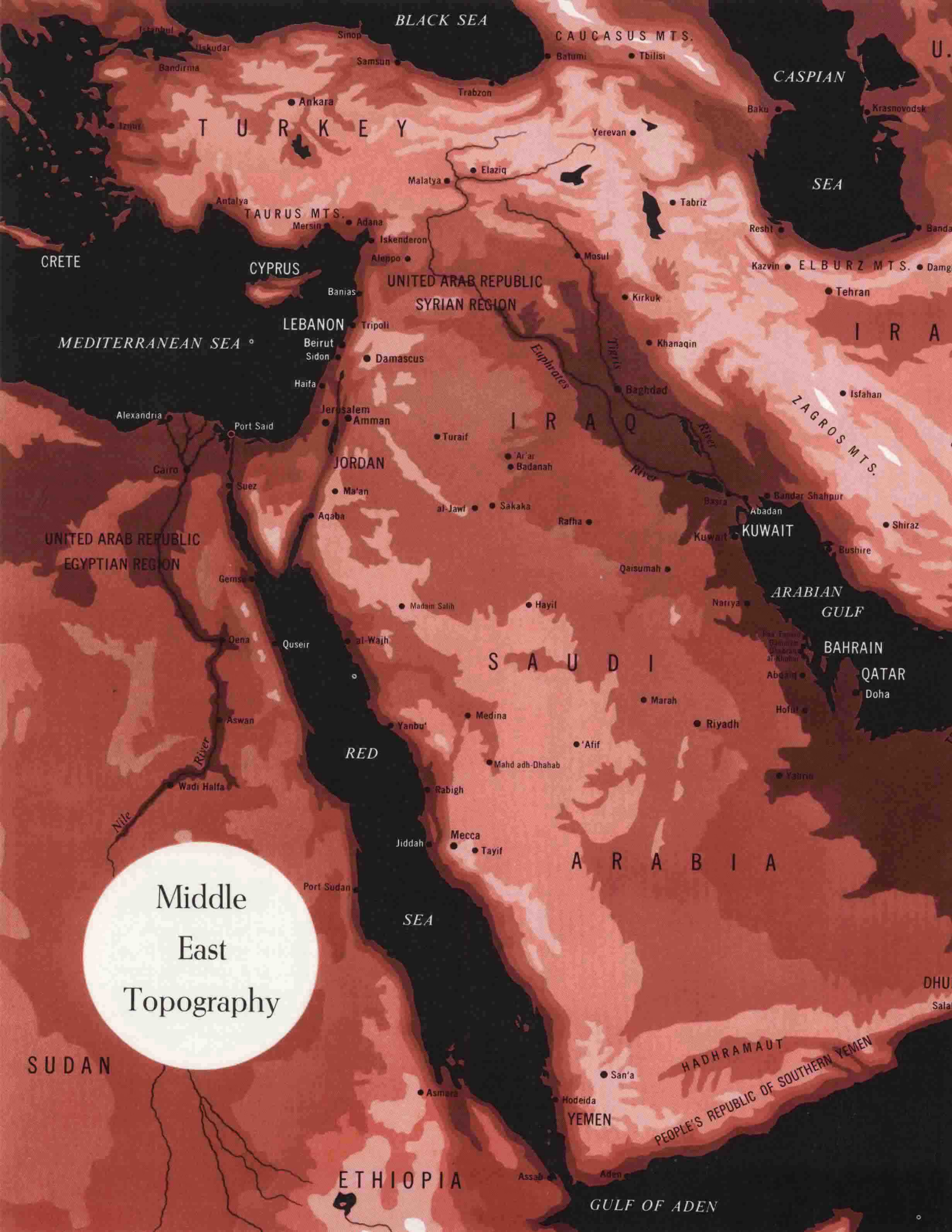
THE MIDDLE EAST IN ANCIENT TIMES

With the march of civilization across Europe and the New World, the Middle East—the region between the eastern Mediterranean and India—for a time became somewhat isolated and eclipsed. Yet at one time that region was the center of the civilized world. Indeed, with neighboring Minoan Crete, it was the whole world then known to civilized man except for ancient China and the Indus Valley. It was in the Middle East that mankind's first steps were taken in the direction of organized social and community life. It was there that man first developed sciences, arts and skills for an intelligent solution of the problems of existence. These are the lands of the Bible, the birthplace of three great religions, all based on the worship of one God.

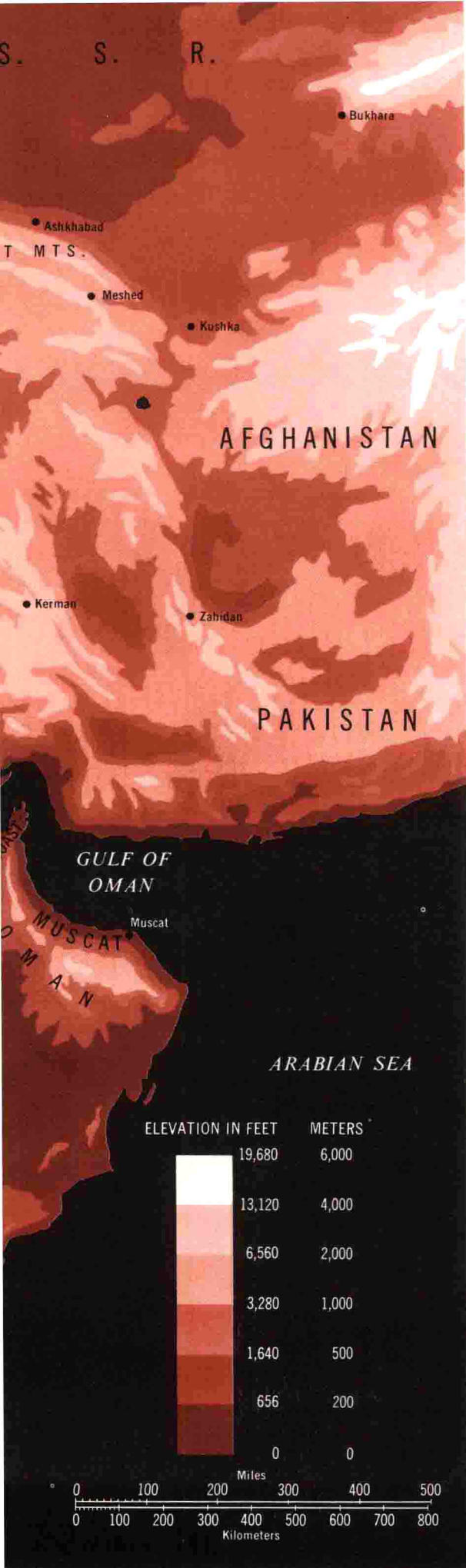
Americans are inclined to regard the discovery of the New World in 1492 as a long time ago, and the birth of Christ as occurring in ancient times. But in comparison with the less than 500 years of New World history, the Middle East measures its history in thousands of years. Christ was born into a civilization whose history was then at least twice as long as the period since His birth. When Abraham, who antedated Christ by about 2,000 years, was born, by tradition at Ur of the Chaldees, that city already had been a civilized community for thousands of years. When Moses lived in Egypt, the Pyramids already were monuments of antiquity.

In Mesopotamia, where civilization early reached a high level, there was from remote times an elaborate irrigation system which made the plains a prosperous region of farms and cities, and there was extensive trade with Arabian Gulf towns and with India. Despite changes of fortune through many periods of history, some of the ancient cities were occupied continuously until the Mongol invasion in 1258. In this disaster whole populations were slaughtered and the irrigation system upon which they depended was destroyed. Thus was eclipsed a civilization which had lasted for more than 5,000 years.

From that time until the modern era of industrial development, the Middle East lived largely in poverty without the productivity or strength to achieve an effective recovery. During the period when Western countries were making rapid progress in the settlement of new lands and in the arts, commerce and industry, the peoples of the Middle East had little to contribute either to their own prosperity or to world affairs. Their long history of civilization and culture, however, had left them with a tradition which manifested itself in gracious hospitality and social relations, in a deep sense of responsibility for their acts and for their relations with family and neighbors and an age-old wisdom of religion and custom.



Middle
East
Topography



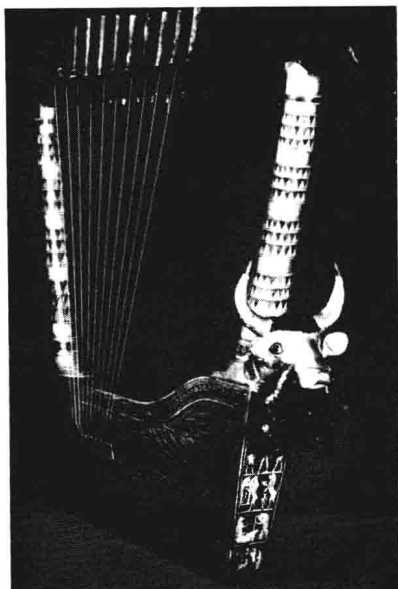
THE BEGINNINGS OF CIVILIZATION Tens of thousands of years ago our ancestors made their living by hunting game with the aid of crude stone and wooden implements. They lived in a period when most of Europe and parts of the Middle East were under a great sheet of ice. The lands to the south of the ice sheet, in Africa and Arabia, were covered with grass and had streams flowing in what today are dry wadis. As the climate gradually changed, the ice sheet retreated and grasslands became deserts. People had to make gradual but drastic adjustments in their way of life.

Some of the people in the Middle East were nomadic herdsmen living upon domestic animals and upon hunted game—and many follow that pattern of life to this day. Others turned to agriculture and began living together in communities. At some stage the store of accumulated skills and experience began to grow into what is known as civilization. Five thousand years or so ago writing was invented, and from that time onward civilized men passed on a record of what they learned and did.

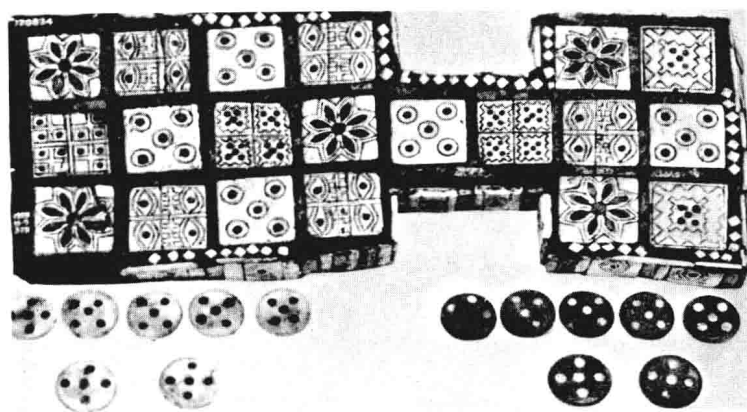
Although much of the earlier story is still unclear, civilization probably began in the vicinity of the basins of the Tigris and the Euphrates Rivers in Mesopotamia, the Nile River in Egypt and the Indus Valley. From here it spread over the Middle East, while men in the rest of the world were still in a savage or primitive state. Some Asiatic and pre-Columbian American civilizations also are old, but in all of them writing and substantial developments in social organization came later than in the Middle East.

The recorded history of the Middle East is filled with drama. It is a panorama of the rise and fall of empires, of the growth and decline of great cities, of the ascendancy and eclipse of peoples, of wars, invasions and deportations, of kings and emperors who had their brief place in the sun, of treachery and intrigue, of great disasters. The story contains examples of rulers who were cruel and ruthless, but it also contains examples of others who were noble and humane. It is a record not

A reconstructed harp with bull's head of gold and lapis lazuli, found in "Royal Tombs" at Ur.



A plaque of shell inlaid in bitumen, which belonged to the sound box of a harp found at Ur.



only of destructive warfare, but also of constructive achievements in written communication and literature, in practical and fine arts, in religion, and in science and law, which greatly contributed to the spread of civilization. There were long periods of comparative peace under stable governments. Some imperial dynasties lasted longer than the life of the British Empire or of the United States to date.

For the details of this long and complex story the reader must turn to the many available histories. He will find instances of lack of agreement among both historians and archaeologists, but he will see that more than a century of exploration and excavation and the resulting reinterpretation of history have added greatly to the previous knowledge of the ancient world. The whole story cannot be told here, but some of the highlights can be touched upon.

THE SUMERIANS One of the earliest civilizations in areas adjoining Arabia was that of the Sumerians. Non-Semites of unknown origin, they occupied by 3000 B.C. their new homeland of Sumer in the lower reaches of the Tigris and Euphrates at the head of the Arabian Gulf. The various city states which arose there were often at war with each other. The Sumerian city best known today was Ur; other principal ones were Erech, Lagash and Nippur. These were river towns, though changes in the courses of the rivers have left their sites, now marked only by mounds, out in the desert. Eridu was a thriving seaport, but because the silt deposits of the rivers pushed the waters of the gulf farther and farther southeastward, the site is now 130 miles inland.

The Sumerians reached an advanced state of civilization manifested by irrigation, extensive trade, the use of money and codes of laws. Their pictorial and syllabic writing, chiefly on clay tablets, developed into the cuneiform script widely used in the ancient Middle East. Their advanced knowledge of the stars, with Babylonian, Greek and Islamic developments, became the basis of our modern

A game board of shell, bone, limestone and lapis lazuli inlaid in bitumen, which was discovered in an Ur grave.



This cuneiform tablet was dug up in 1934 at King Sargon II's palace at Khorsabad. It revealed the succession of 95 Assyrian kings from 2400 to 746 B.C.