

Exploration history of the Palaeozoic petroleum systems of North Africa

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Abstract: Subsurface exploration of the Palaeozoic petroleum systems of Libya, Algeria, Tunisia and Morocco began in the early 1950s after the discovery of a large prospective Palaeozoic basin in the Sahara Desert province of North Africa. The first exploration well to test this concept was drilled in Algeria in 1952. A non-commercial find in 1953 was followed by major discoveries in 1956. Since that time approximately 1100 new field wildcats have been drilled to test Palaeozoic and basal Triassic reservoir targets in a variety of discrete petroleum systems. This resulted in the discovery of approximately 330 Palaeozoic-sourced accumulations in the Algerian, Libyan and Tunisian portions of the Sahara Desert. By the end of 1996 ultimate recoverable reserves in oil equivalent for these discoveries were estimated to be just over 46 billion barrels. Using measures of activity and reserves discovered, it is seen that the history of exploration of this province has followed a normal cycle, familiar to the petroleum industry, which can be divided into five major periods. They are: Pre-Discovery, Discovery, post-Discovery Boom, post-Boom and Revival. It is anticipated that future advances in technology will result in new ideas and more effective exploration, and ultimately in the future discovery of significant oil and gas reserves.