

ENERGY COUNTRY REVIEW

# Eritrea

[keyfactsenergy.com](https://keyfactsenergy.com)

# Country Review Eritrea

Eritrea is a mostly mountainous country, bordered by Sudan, Ethiopia, Djibouti and the Red Sea. Its Red Sea coast, 1,200 km long, is one of the hottest and driest areas in Africa, and the Dahlak Islands, which lie just offshore, are one of the least known or explored reefs in the Red Sea. The mountainous Central Highlands, where the capital Asmara is located, are cooler and more fertile.

Eritrea's natural resources-especially oil and gas-remain virtually untapped largely as a result of the 30-year war for independence with Ethiopia. While there is plenty of evidence that Eritrea holds massive oil and gas reserves, the country's leader has kept quiet about it until recently.

In the period 1938 to 1940, extensive drilling was conducted in Dahlak Island but unfortunately, no records survive today. A well that was drilled by the Mobil Company at the Red Sea in the year 1969 blew out and emitted gas and condensate. The border wars prevented further exploration on the land.

Hydrocarbon exploration, primarily offshore in the Red Sea, began in the 1960's when Eritrea was still federated with Ethiopia. In 1995, Eritrea signed a production sharing contract (PSC) with U.S.-based Anadarko Petroleum for the offshore Zula Block. Anadarko signed a second PSC for the offshore Edd Block, located south of the Zula Block, in September 1997. Anadarko announced, in December 1997, that it had reached an agreement with ENI/Agip (Agip) to swap interests in exploration acreage. Anadarko received a 25% interest in a Tunisian block operated by Agip, and Agip received a 30% share in the

---

## Country Key Facts

---

Officially name:	Hagere Ertra
Type of government:	Presidential
Capital:	Asmara (formerly Asmera)
Population:	5,401,231 (2016)
Total Area:	46,842 (sq miles) (21,320 sq kilometers)
Currency:	nakfa
Language:	Tigrinya, Arabic and English
Natural resources:	Gold, potash, zinc, copper, salt, oil and natural gas, fish
Country Code:	+291

---

# Country Review Eritrea

6.7-million acre Zula Block and 30% interest in the Edd Block. Burlington Resources, a U.S.-based independent, later joined the consortium by acquiring a 20% interest in both acreages. Anadarko's first two exploration wells, both drilled on the Zula Block, were unsuccessful. In January 1999, a third dry well, Edd-1 on the Edd Block, was drilled. Citing the disappointing exploration results, Anadarko and its partners ceased exploration activities and relinquished their rights to the offshore blocks.

The most recent attempt to prospect for hydrocarbons in the country is that of Centric Energy (a British oil firm later acquired by Africa Oil) in the Dhlak block of the red sea in 2010. Defba Oil Share company (A joint venture between the Eritrean government and a Chinese group) also explored for energy off the coast of Massawa in the North of the country.

Eritrea's oil refinery can be found in Assab. There are also scattered deposits of ignite coal around the area.

*Source: Soils Limited, Mbendi.com*

## **Geology**

The geology of Eritrea is dominated by metamorphosed Precambrian rocks, which were deformed by the pan-African orogeny, and then further altered by the intrusion of Lower Palaeozoic granites. As a result, the country abounds in minerals such as gold, copper, and zinc, but most of the areas prospective for hydrocarbons are found offshore.

Eritrea lies at the southern end of the Red Sea, which was formed in Oligo-Miocene times (36 – 20 million years ago) as the African land mass broke away from the Arabian shield. Pre-rift arching and break-up of the continental crust led to the formation of the Red Sea, with block faulting on the flanks and strong subsidence in the central part, both very important for the formation of hydrocarbon traps. As rifting continued, fluvial and lacustrine sedimentation was followed by shallow marine clastics and, with circulation in the Red Sea diminishing, the deposition of evaporites. Rifting through the late Miocene was accompanied by horst-graben faulting and fault block rotation, until by the Early Pliocene, about 5 Ma ago, small pull-apart basins along the axis of the Red Sea and Gulf of Aden were developing oceanic crust. These eventually coalesced to form the passive margins

## Country Review Eritrea

found today lying on the edge of the deep water trough of the central Red Sea, which drops rapidly to over 2,000m.

Further potential is offered by the pre-rift, pre-salt horizons, which are completely unexplored, although they can be visually checked at outcrop along the coast. Plays are expected to include rotated fault blocks and horsts, particularly in the less eroded downdip areas, with potential reservoirs including Mesozoic fluvio-deltaic to shallow marine clastic sequences and dolomitised limestones, and Paleozoic fluvio-glacial sandstones.

*Source: OilEdge*

