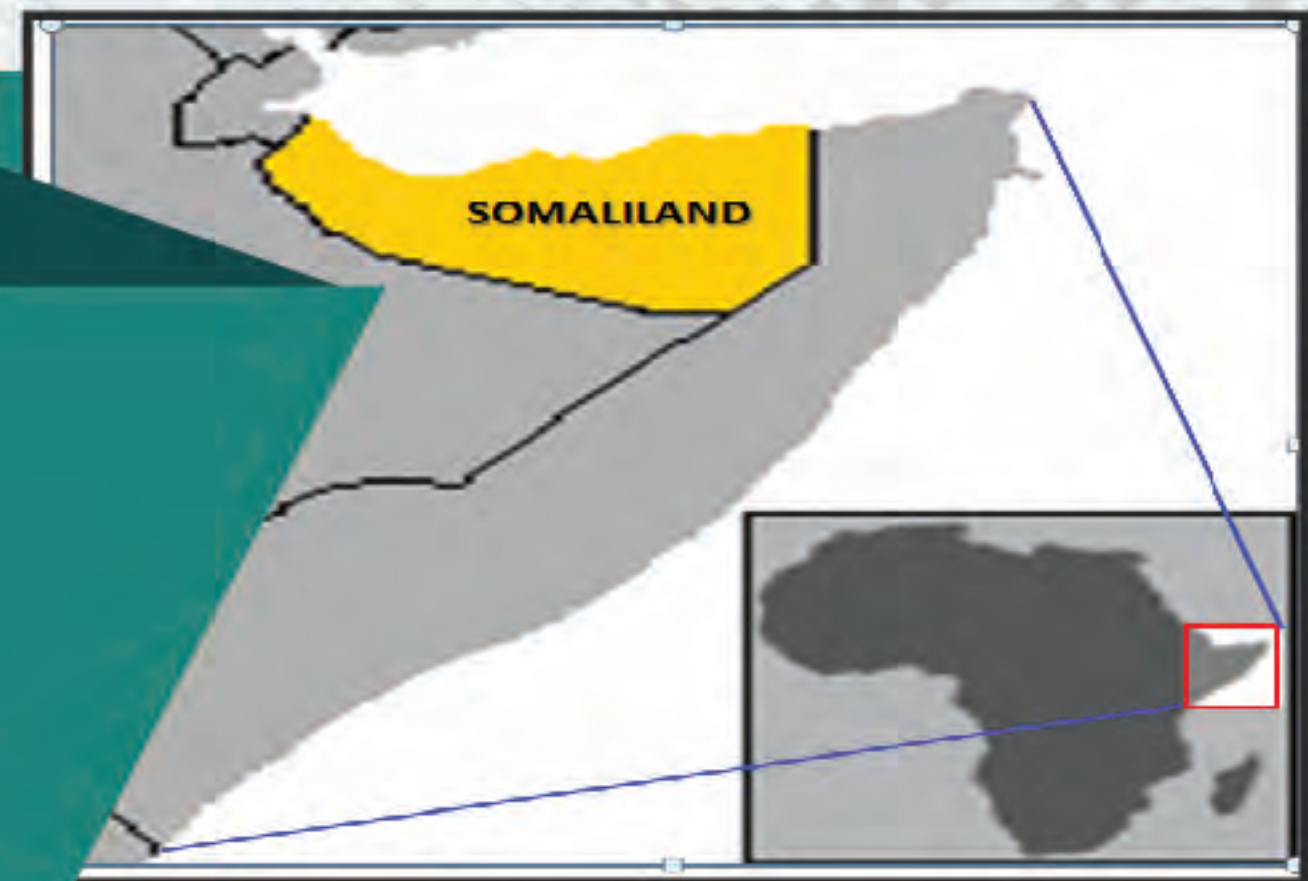




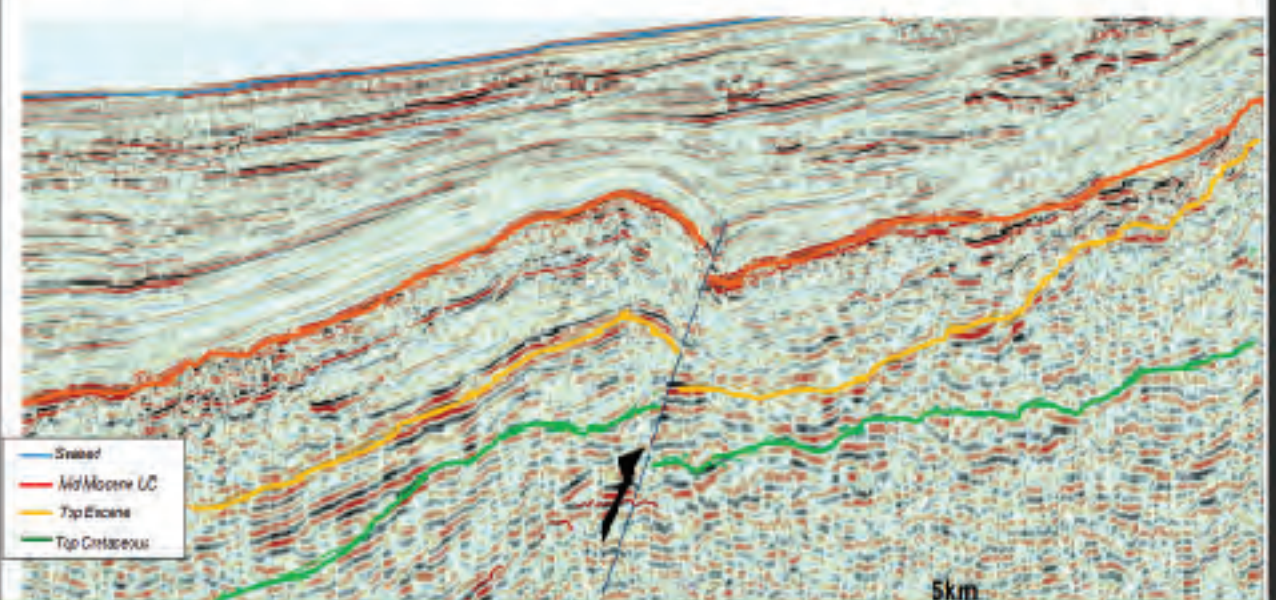
SOMALILAND HYDROCARBON POTENTIAL

2023



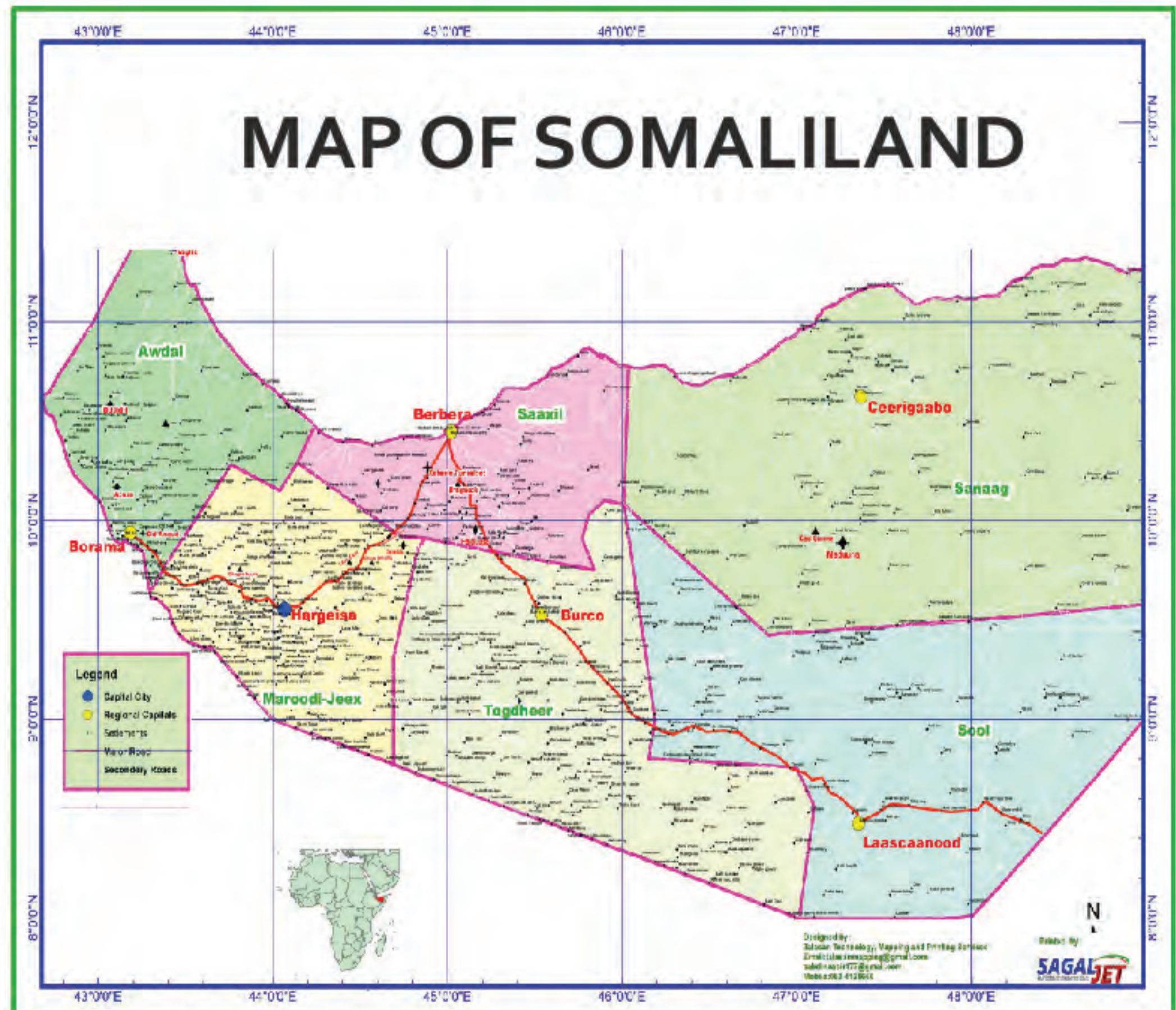
Play Example Roll Over Anticline

Transpressive structures



REPUBLIC OF SOMALILAND

- **Capital:** Hargeisa
- **Regions:** Six main Regions
- **Area:** 176,120km²
- **Coastline:** 850km
- **Standard Time Zone:** GMT +3
- **Population:** ≈ 4 Million
- **Government:** Democratically Elected Presidential System
- **Currency:** Somaliland Shillings (SLS)
- **Language:** Somali, Arabic & English



ABOUT THE MINISTRY OF ENERGY AND MINERALS (MoEM)

MINISTRY OF ENERGY & MINERALS (MoEM)

VISION

To realize Somaliland's social and economic development through the sustainable utilization of the country's energy, minerals and petroleum resources.

MISSION

To establish, direct and promote the sustainable utilization of Somaliland's energy, minerals and petroleum resources, through the development and implementation of policies and strategies that guide, regulate and coordinate the work of the government and all other stakeholders.



MINISTRY'S MANDATE TOWARDS UPSTREAM PETROLEUM

Formulation of the national policies & legal framework towards the exploration and exploitation of the country's petroleum resources

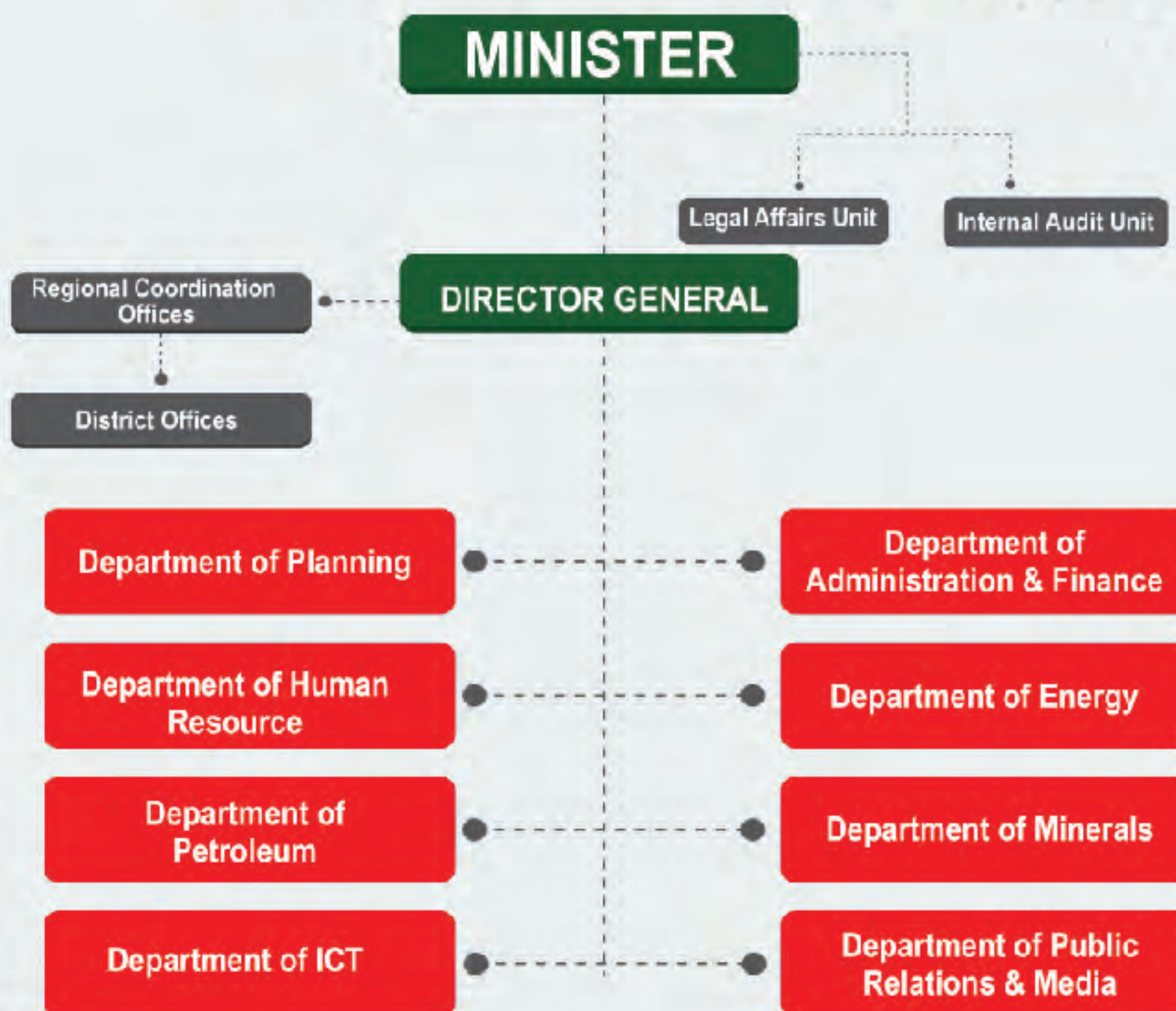
Issuing licenses to oil and gas companies and entering exploration and production sharing agreements

Protection, exploitation and management of the country's petroleum resources



REPUBLIC OF SOMALILAND

MINISTRY OF ENERGY AND MINERALS ORGANOGRAM



UPSTREAM PETROLEUM LEGAL DOCUMENTS

1. Upstream petroleum policy

- Encouraging oil & gas investment
- Optimize recovery of petroleum resources
- Environment and resources conservation
- Promote and implement transparency

2. Upstream petroleum Act

- Agreement procedures & rights
- Resource management
- National content
- HSE

3. Petroleum revenue bill

- Revenue collection & management
- Revenue allocations
- Revenue investment

4. Production sharing agreement

- Company and area specific
- Responsibility and revenue sharing



COOPERATION WITH CROSS-CUTTING MINISTRIES

1. Ministry of Environment

- Protection and sustainable management of Environment
- Ensuring compliance with environmental laws, regulations and procedures during execution of petroleum activities
- Initiation and coordination of strategic environmental assessments prior to petroleum activities in line with internationally recommended standards

2. Ministry of Finance Development (MoFD)

- Collection of various petroleum revenues (State Share, Participation Interest, Taxes, Surface Rental fees and bonuses)
- Efficient processing, monitoring and reporting of all petroleum related revenues
- Petroleum revenue management and sustainable utilization

3. Ministry of Interior

- Constant consultations and communication with regional and district authorities
- Security of petroleum project activities

4. Ministry of Employment, Social Affairs and Family

- Representation of labor force rights
- Application of labor laws and policies to all nationals and expatriates

5. Ministry of Investment and Industrial Development (MIID)

- Facilitate both local and foreign petroleum investment schemes
- Encourage petroleum investment opportunities through promotion, media coverage and employing research and development strategy

6. Ministry of information, Culture and National Guidance

- Assistance in community awareness campaigns through different channels of media



COMMUNITY ASPECT

- Important aspect of oil and gas projects and requires well-organized effort.
- Positive reception and cooperation of the public particularly the local communities in the areas of petroleum activities hugely contribute to the smooth running of the projects.

Community Engagement Methodology

- Meetings with relevant government officials & politicians
- Meetings with regional & districts' authorities
- Carrying out community mapping
- Deploying community liaison officers

- Arranging community engagement workshops
- Having regular meetings with community committees, chiefs & elders
- Organizing community mobilization teams (chiefs & elders)
- Conducting community awareness campaign (Country-wide)

COMMUNITY ENGAGEMENT WORKSHOPS

Attended by all stakeholders in the projects such as:

- Various government officials
- Regional and district authorities
- Village head-persons
- Community committees & chiefs
- Members of the civil society



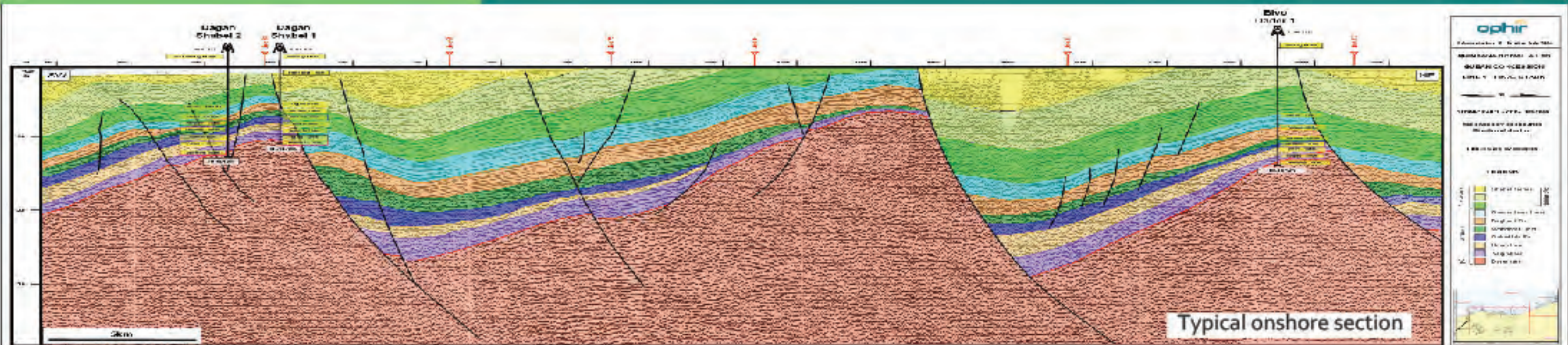


SOMALILAND OIL AND GAS POTENTIAL

SOMALILAND'S PROVEN PETROLEUM SYSTEM

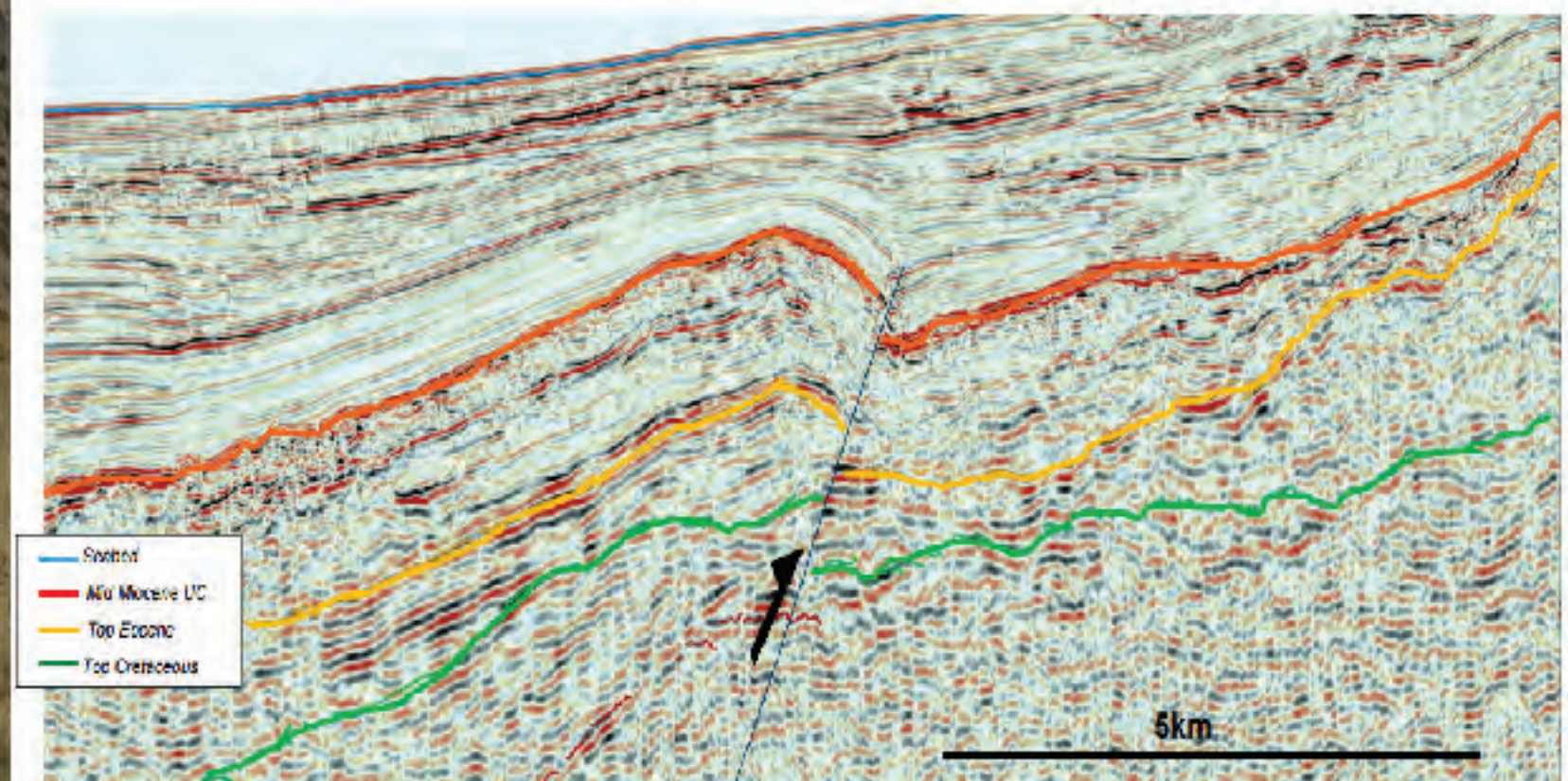
- Somaliland is one of the few highly potential yet under-explored areas in the globe
- The existence of oil and gas in Somaliland was known since 1920s.
- Existence of all the elements and processes of a petroleum system
- Oil seepage in number of places
- Number of drillings both onshore and offshore encountered oil and gas shows
- Technical discovery at Dhagah-Shabeel wells, small amount of oil 33.6 API produced





Surface analogue of rotated fault blocks

Roll-over anticline - offshore section



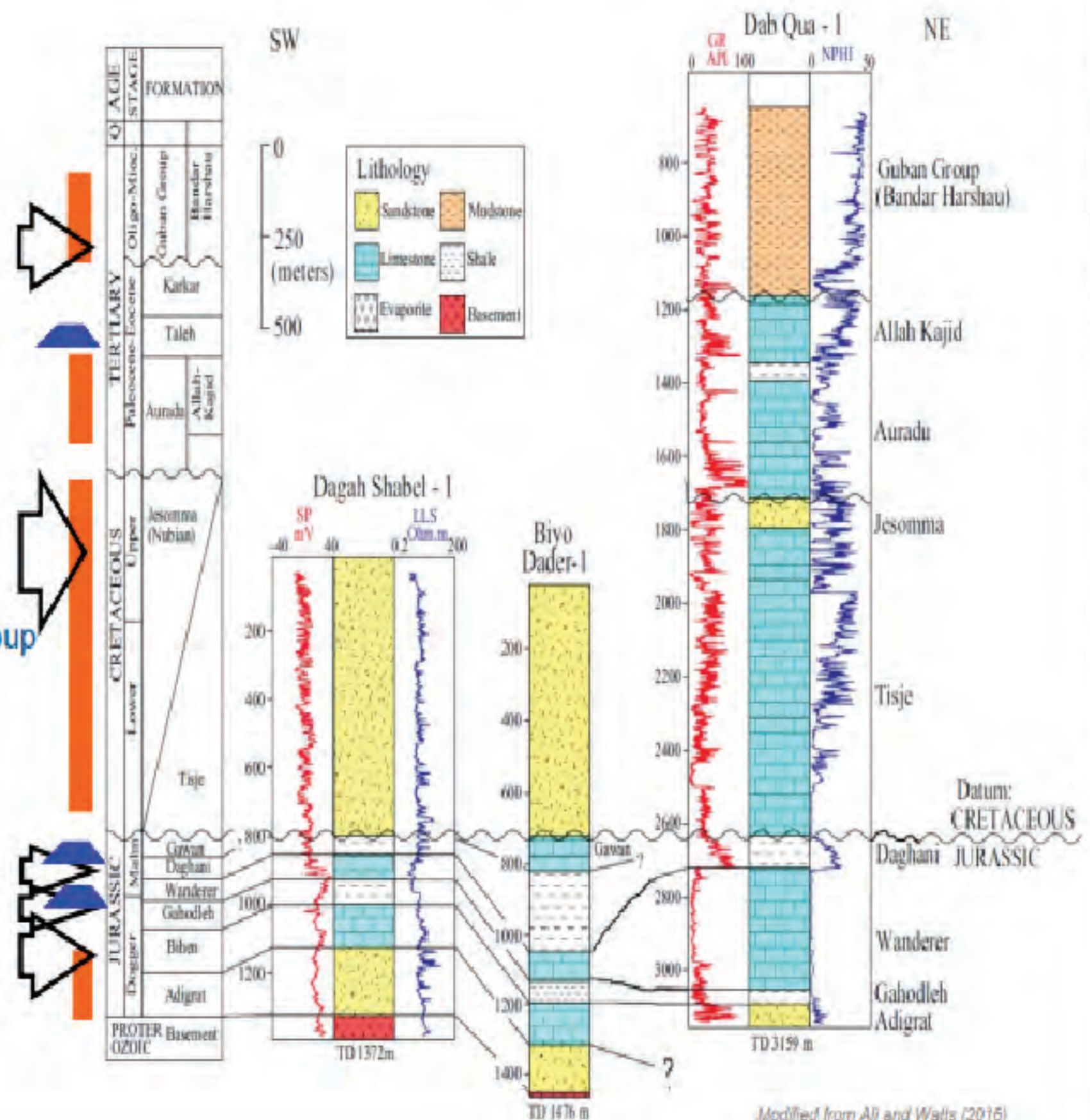
Petroleum Systems

Tertiary Petroleum System:

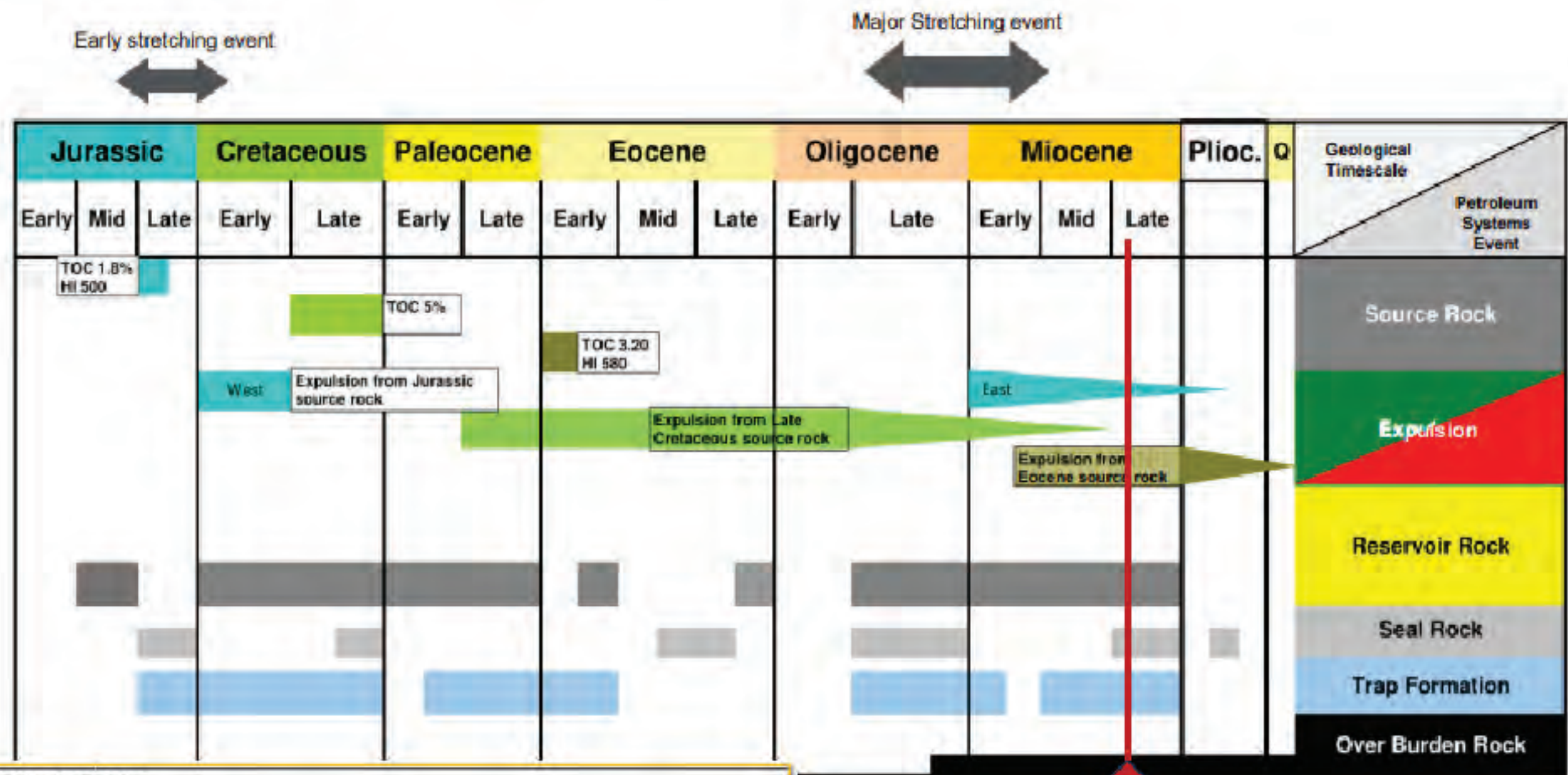
- S** Eocene
- S** Miocene
- R** Miocene Bandar Harshau Group: clastics, carbonates
- S** Eocene Taleh anhydrite
- S** Interbedded shales and mudstones

Mesozoic Petroleum System:

- S** Jurassic Bihen, Gahodleh, Daghani Group
- S** Cretaceous Jesomma shale
- R** Jurassic Adigrat
- R** Cretaceous Jesomma/Tisje
- R** Paleocene Aurado Formations
- R** Miocene Bandar Harshau Group: clastics, carbonates
- S** Eocene Taleh anhydrite
- S** Interbedded shales and mudstones



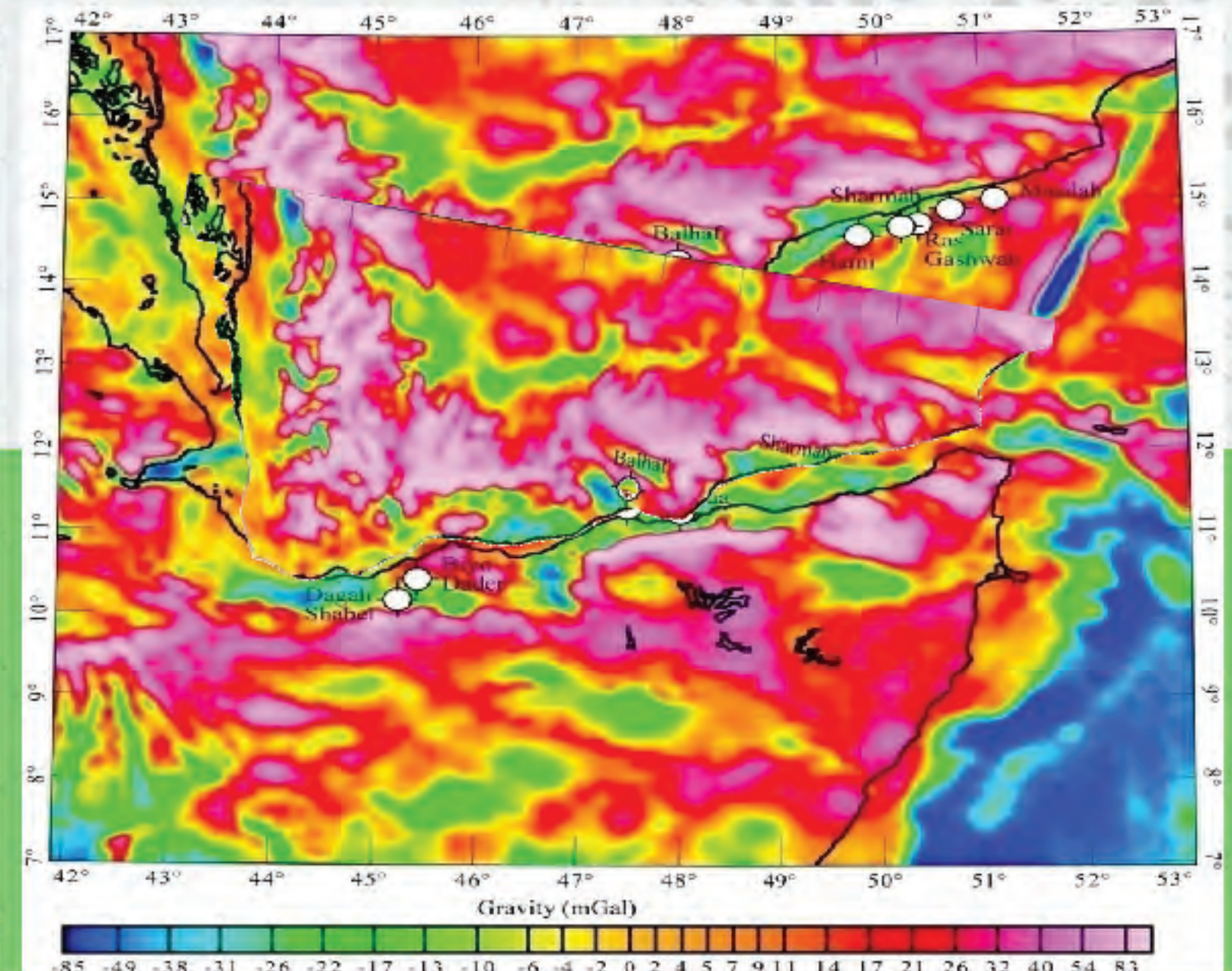
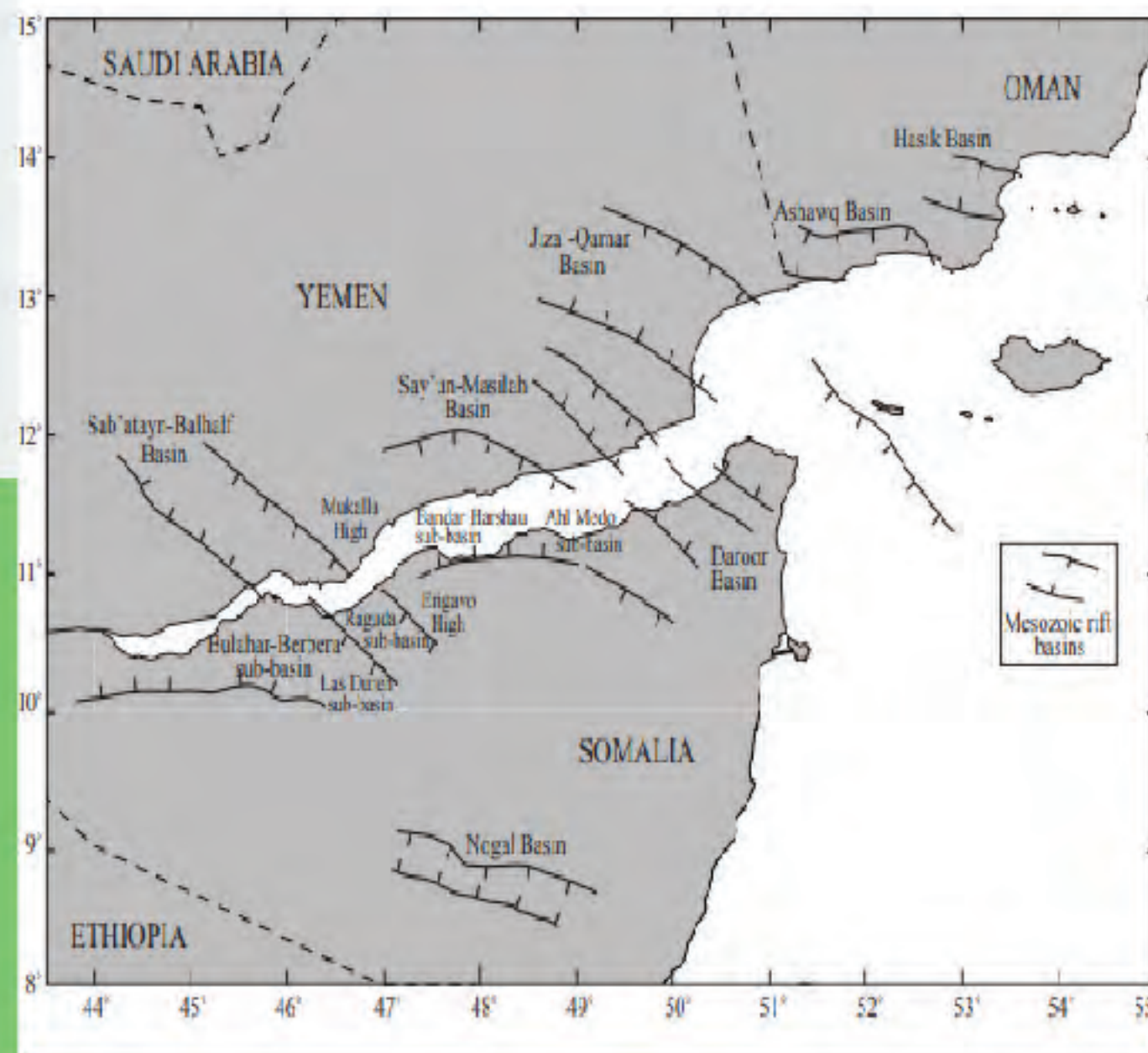
Petroleum System Events Chart



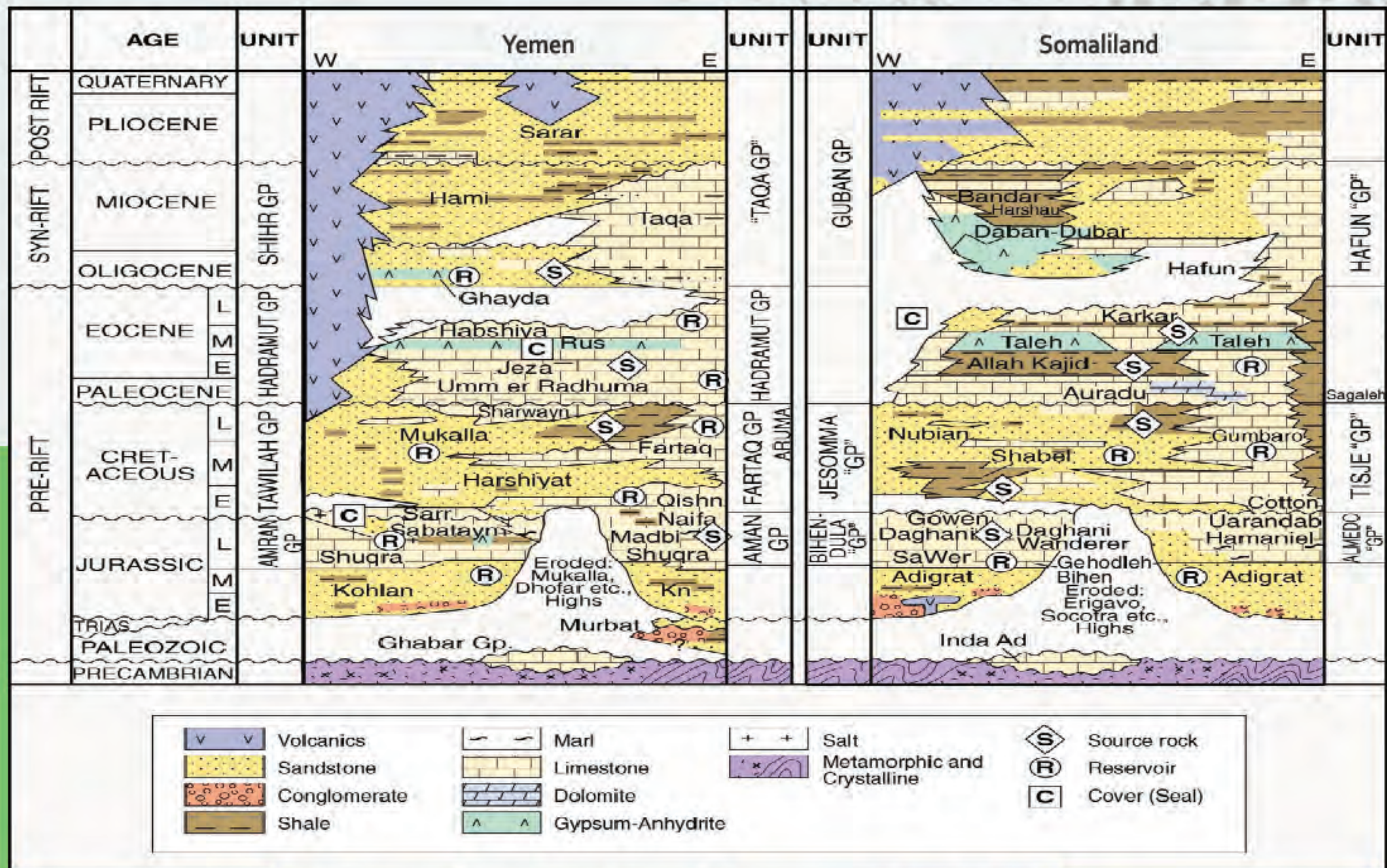
SOURCE-ROCK CHARACTERISTICS

AGE	FORMATION	LOCATION	SAMPLE TYPE	TOC%	TYPE
CRETACEOUS	Yesomma	Offshore well Bandar Harshau-1 (Shell, 1984)	Cuttings	1.1 to 3.2	II-III
	Yesomma	Offshore well Dab Qua-1 (Shell, 1984)	Cuttings	5	II
JURASSIC	Daghani	Offshore well Dab Qua-1	Cuttings	0.5 to 1.2	II-III
	Daghani	Onshore well Dagah Shabel-1 (Mobil, 1958)	Cuttings	0.4 to 0.7	III
	Daghani	Outcrop	Shale	2	II
	Gahodleh	Outcrop	Shale	1.4	

COMPARISON OF SOMALILAND & YEMEN GEOLOGY

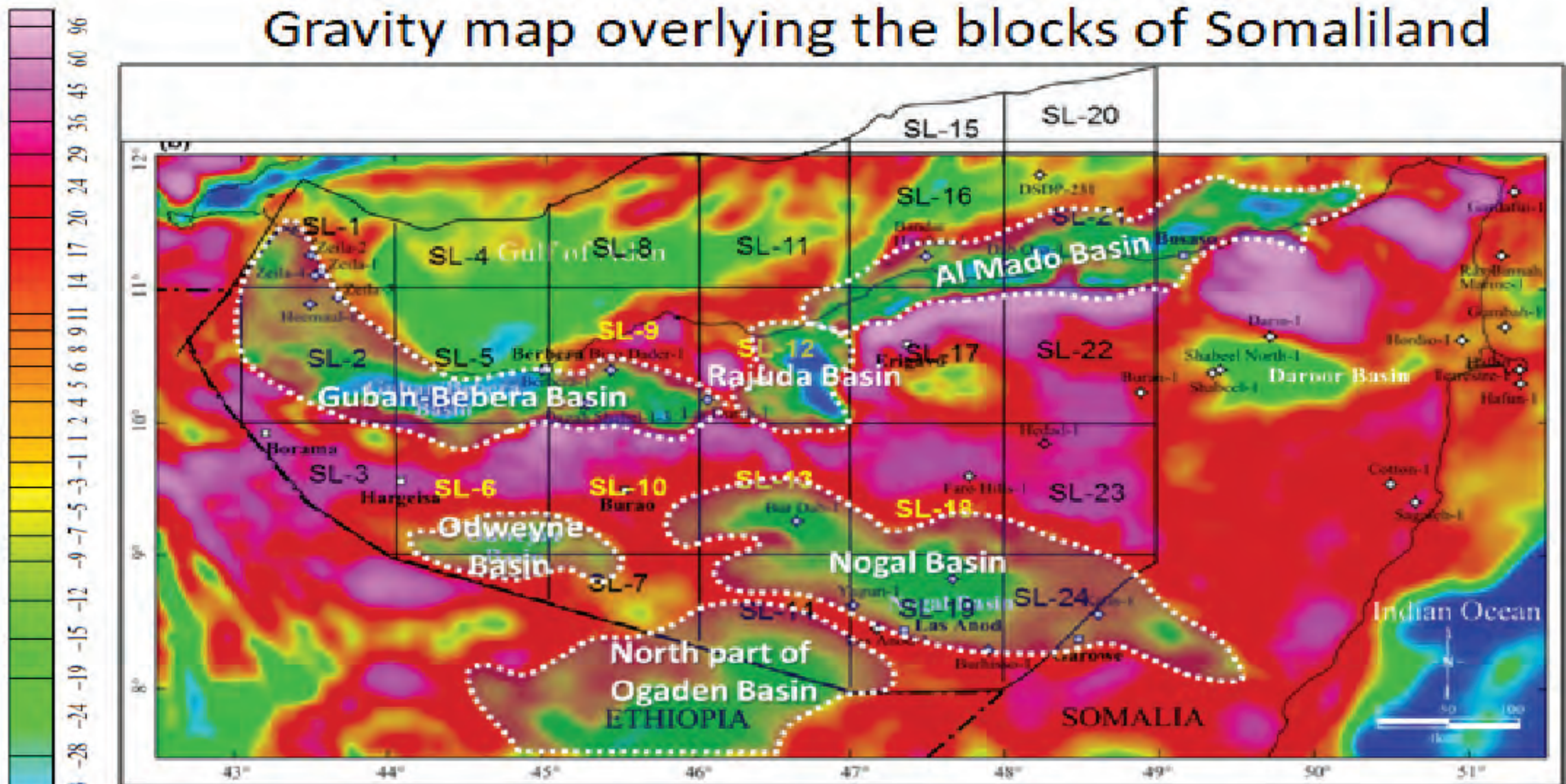


- Reconstruction of Arabian plate shows that the southern Yemen productive basins extend to Somaliland
- Similar petroleum geology and comparable stratigraphy



Stratigraphy comparison of Yemen and Somaliland

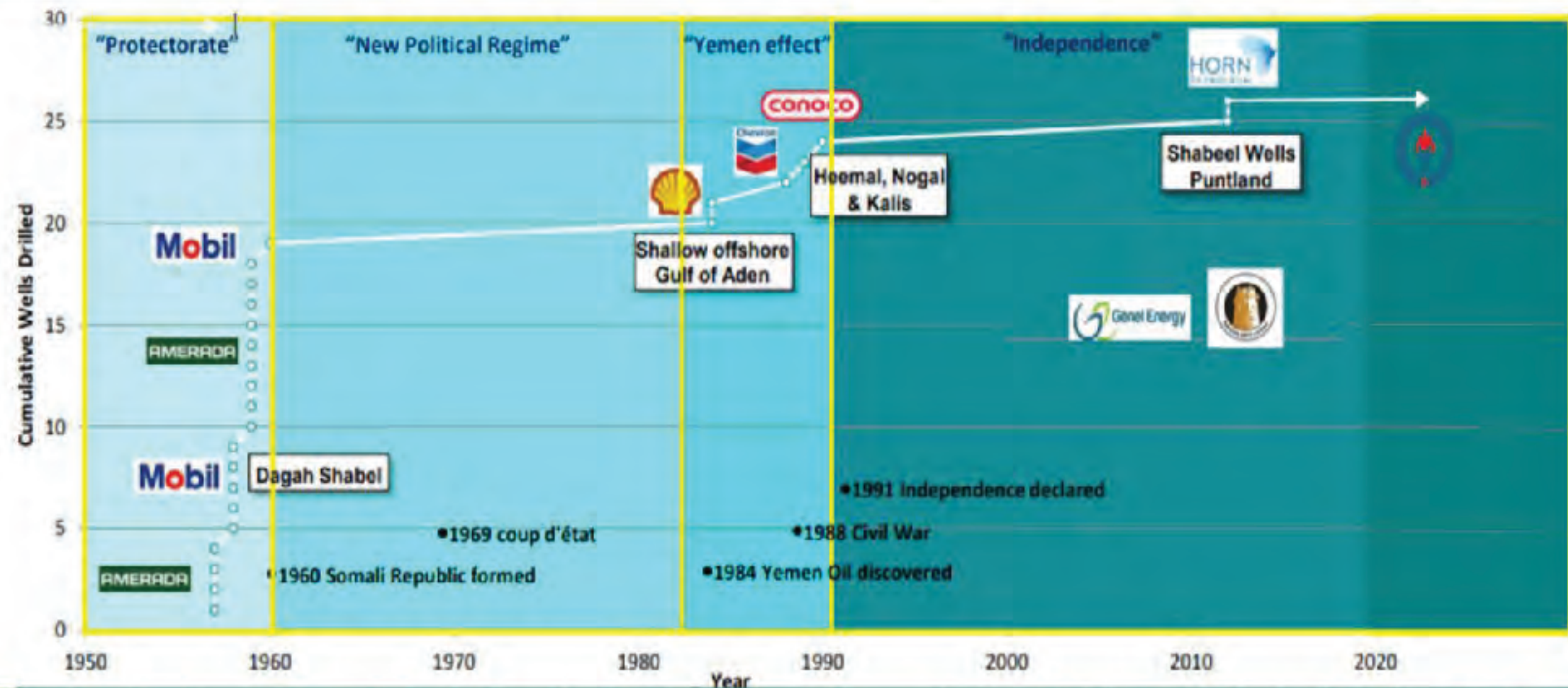
Gravity map overlying the blocks of Somaliland



- Guban-Bebera Basin: SL-1, SL-2, SL-5 & SL-9
- Rajuda Basin: SL-12
- Al Mado Basin: SL-16, SL-21 & SL-17
- Nogal Basin: SL-13, SL-14, SL-18, SL-19 and SL-24
- Odweyne Basin: SL-6, SL-7 and SL-10
- North part of Ogaden Basin: SL-14

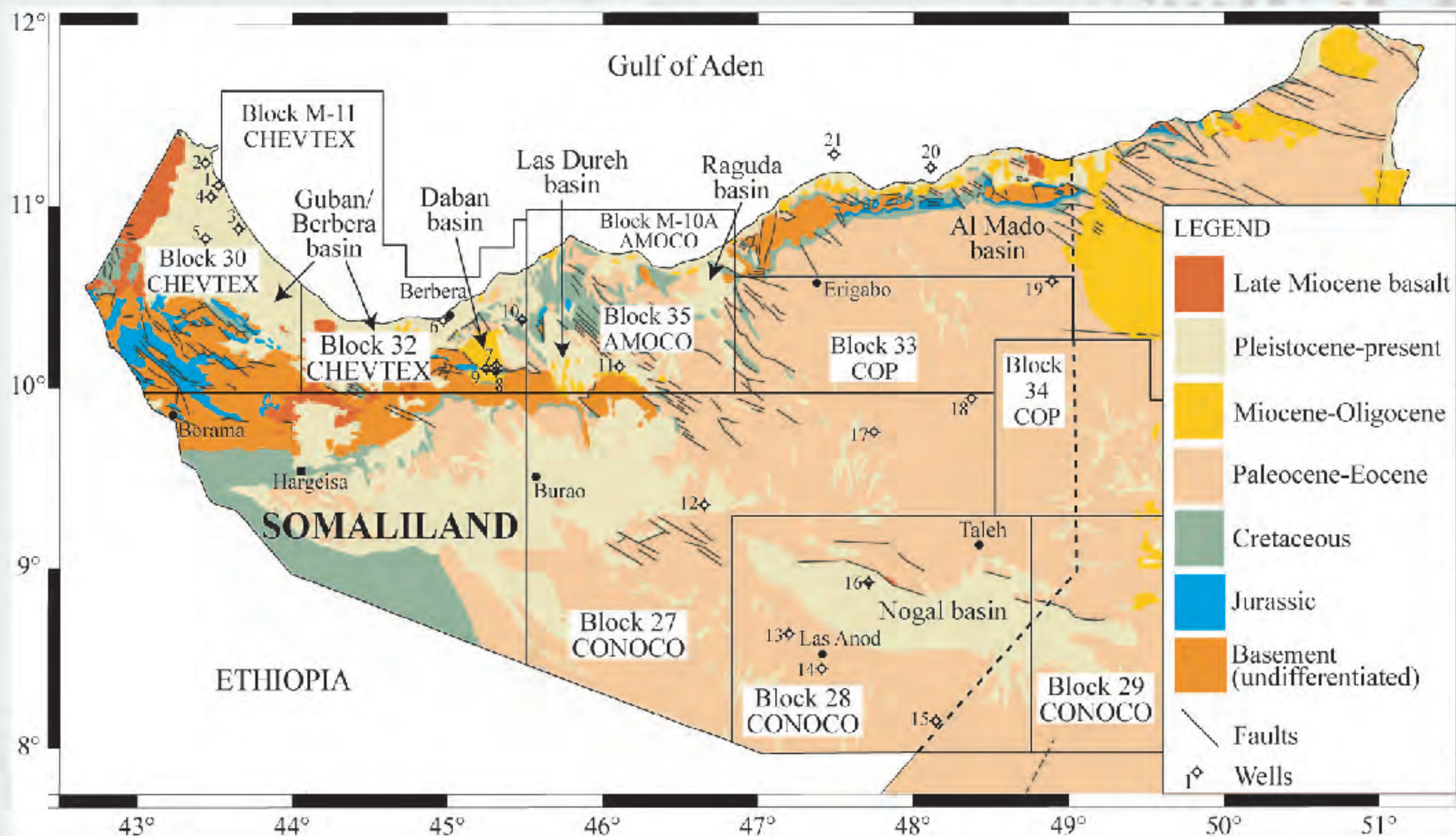


HISTORY OF EXPLORATION

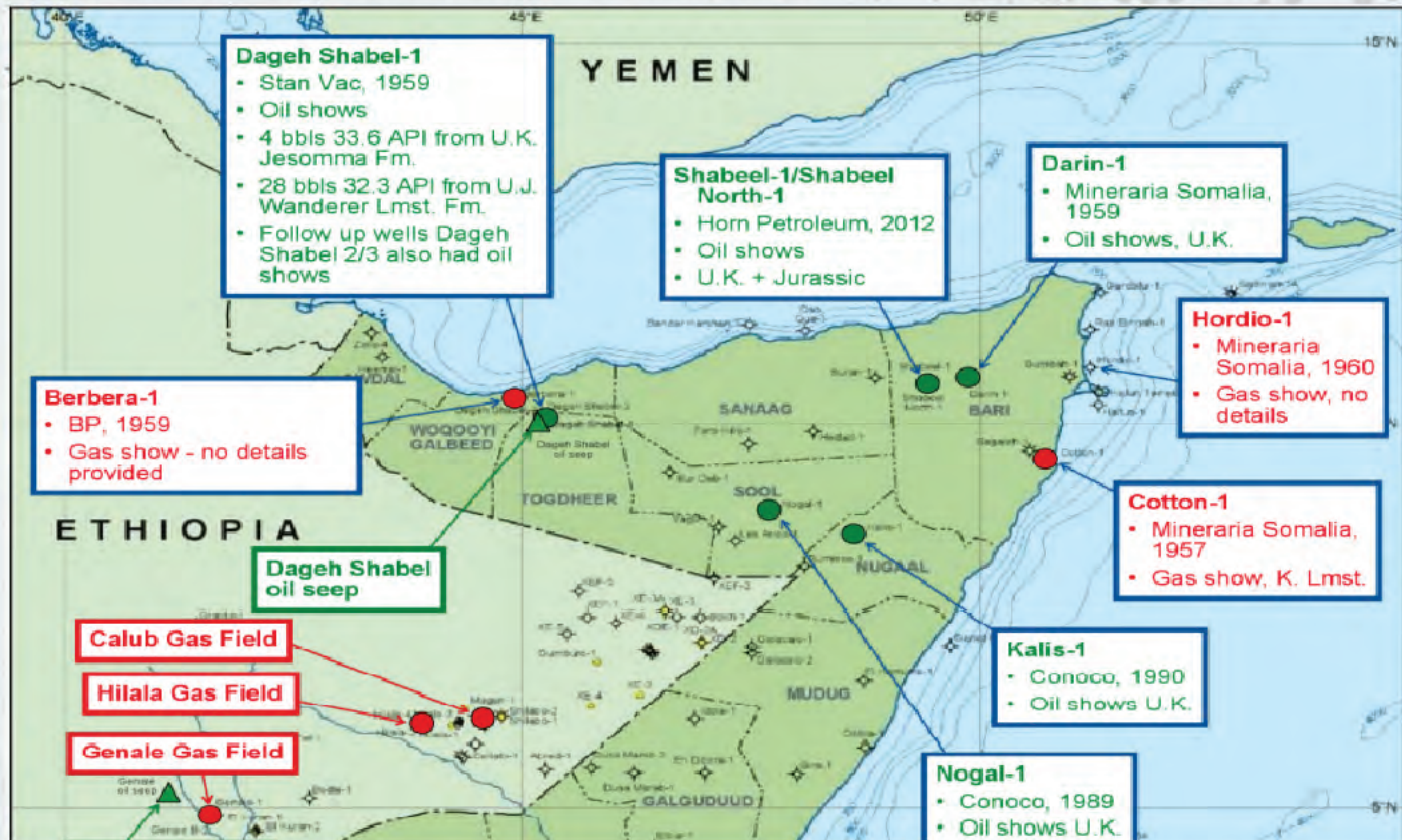


- Exploration interest started with the reporting of an oil seep at Dhagah-Shabel and in 1959, Stanvac drilled three wells (Dhagah Shabel-1, -2 and -3) near the Dhagah Shabel oil seep
- Two of the wells recovered small amount of free oil (33.6 API)
- In 1980's extensive exploration by Conoco , Amoco, Chevron and Shell - drilling number of wells (onshore & offshore) with oil shows in most of them .
- In July 1989 all concession holders (Amoco, Chevron, Conoco) declared "force majeure"
- Recent exploration phase included both seismic and nonseismic data acquisition by TGS, Genel Energy, RAK Gas and most recently the arrival of CPC (Taiwan)
- Only 21 wells drilled (19 onshore and 2 offshore)

GEOLOGICAL OVERVIEW AND WELL LOCATIONS



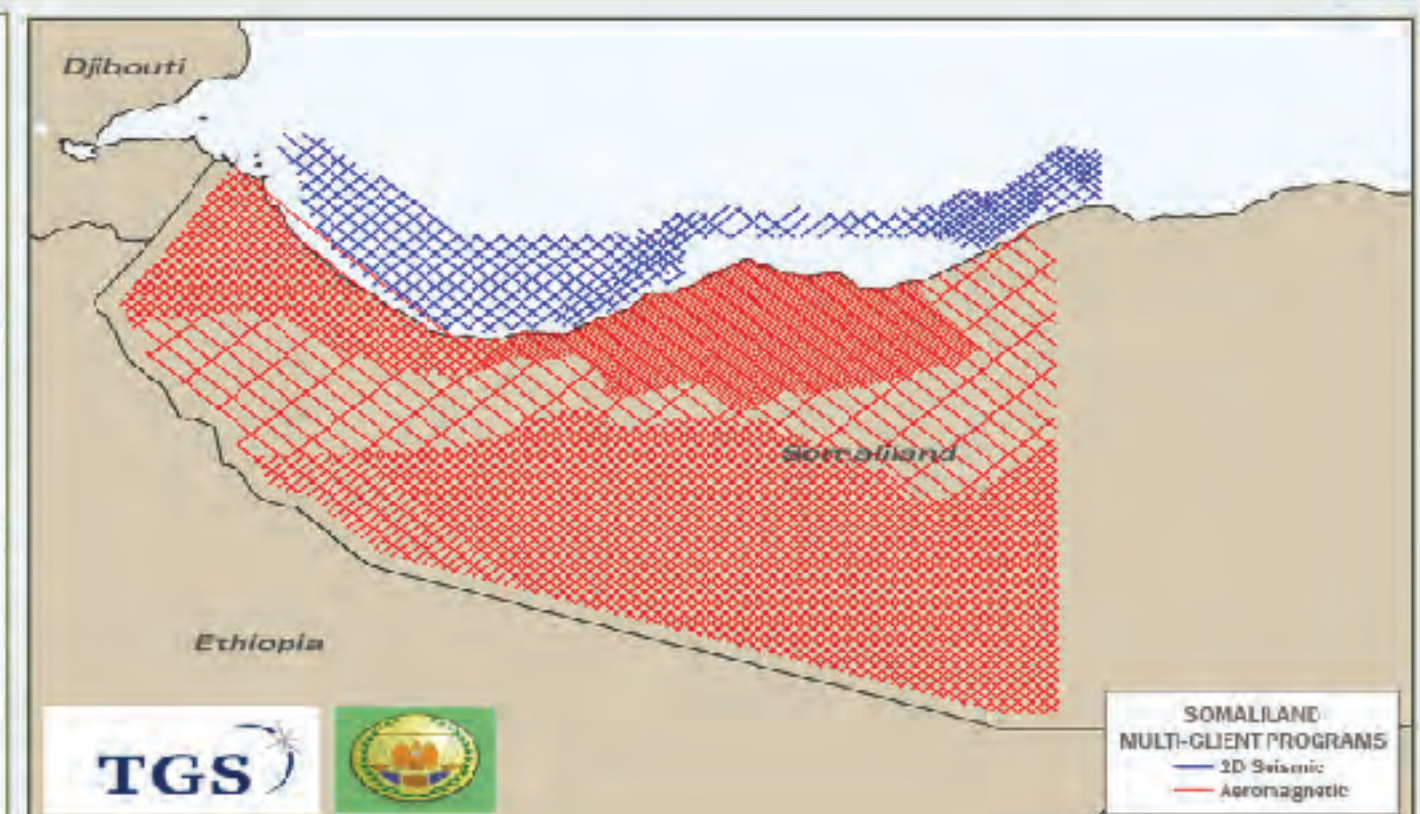
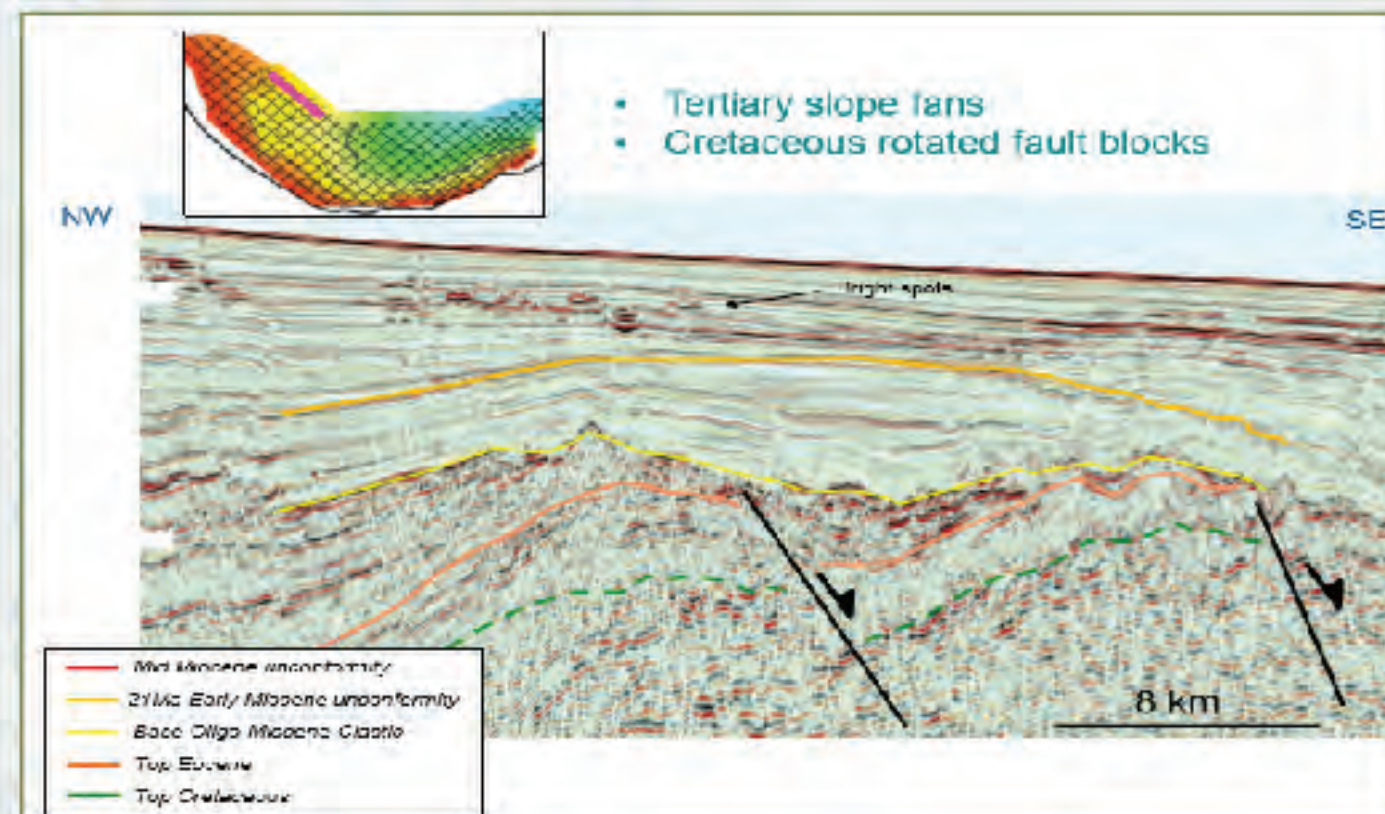
SOMALILAND OIL & GAS EXPLORATION WELLS



RECENT EXPLORATION ACTIVITIES

In 2009, TGS-NOPEC Geophysical Company completed processing and interpretation of speculative seismic & aeromagnetic survey in Somaliland which consist of:

- 5,300 km marine 2D seismic (covering 21,500km) with 6-10km spacing and controlled from 2 offshore wells.
- Approximately 34,000 km of high resolution aeromagnetic data covering on shore areas (2.5km to 25km spacing)
- Data is of good quality and it's owned by Somaliland but TGS has the marketing right to recover its cost



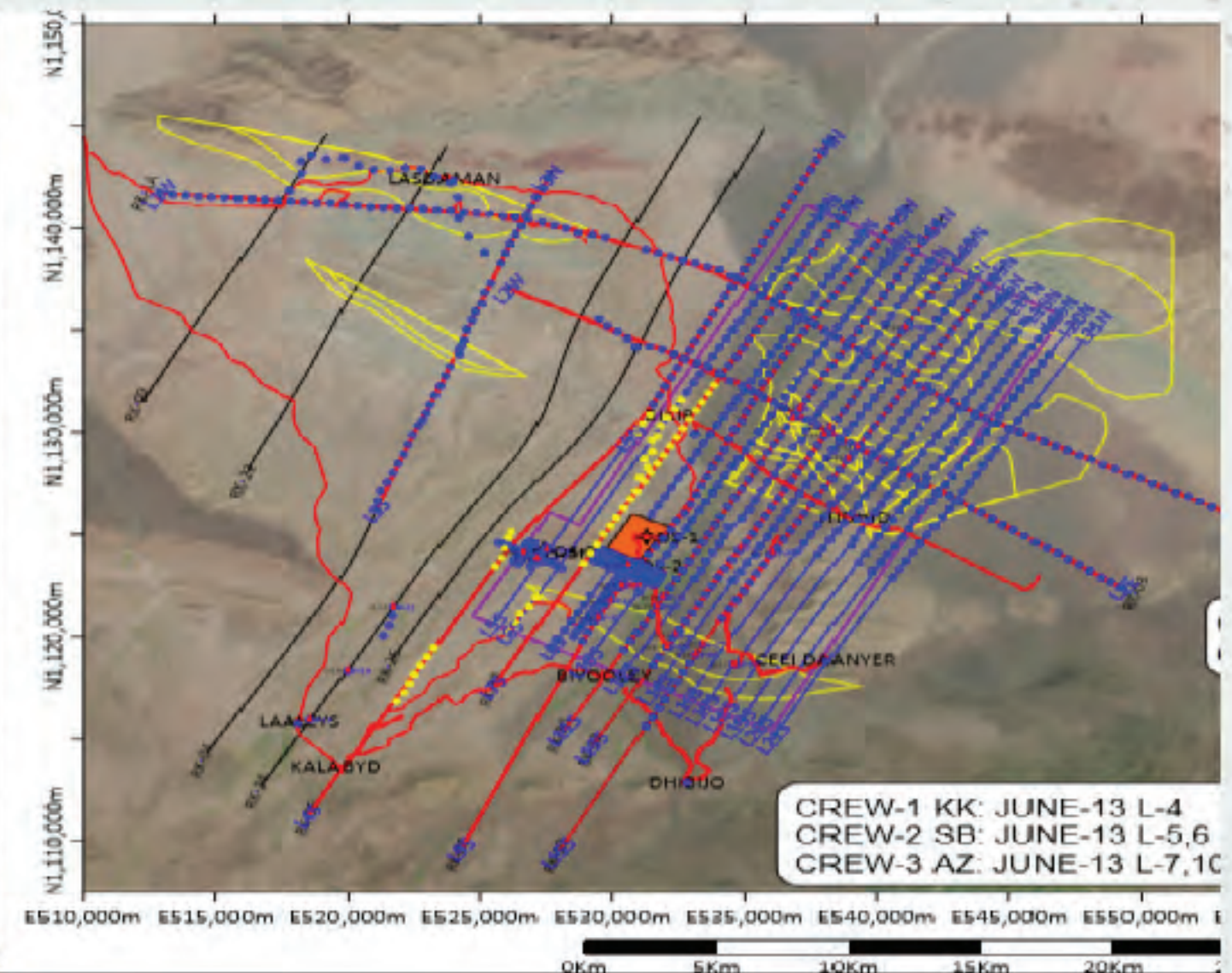
MOST RECENT MULTI-CLIENT 2D SEISMIC PROJECT

- The Ministry of Energy & Minerals facilitated & managed a multi-client 2D seismic project
- BGP Inc, a Chinese national seismic contractor conducted the survey
- January 2018 , 3,500 km of 2D seismic was acquired for Genel Energy on blocks SL6, SL 7a , SL10 & SL13
- July 2018, 800 km of 2D seismic data was acquired for RAK GAS on block SL9.
- Success in security, HSE and community engagement



POST-SEISMIC SURVEYS & DATA INTEGRATION

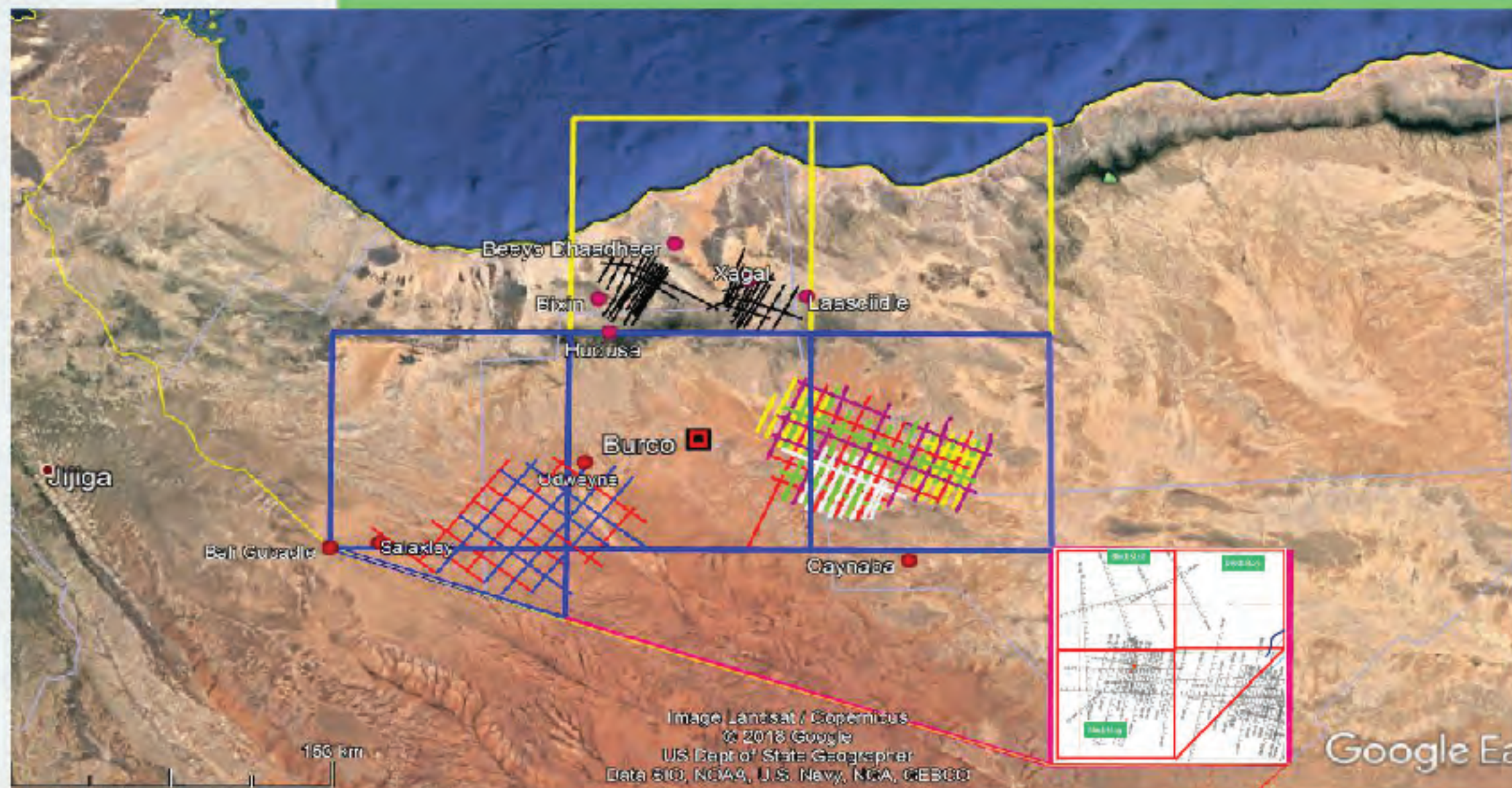
In 2019, RAK Gas and Genel Energy performed further and detailed studies to increase the probability of finding commercial accumulation and decrease risks of unsuccessful drilling. Both of them carried out micro-seepage and macro-seepage.



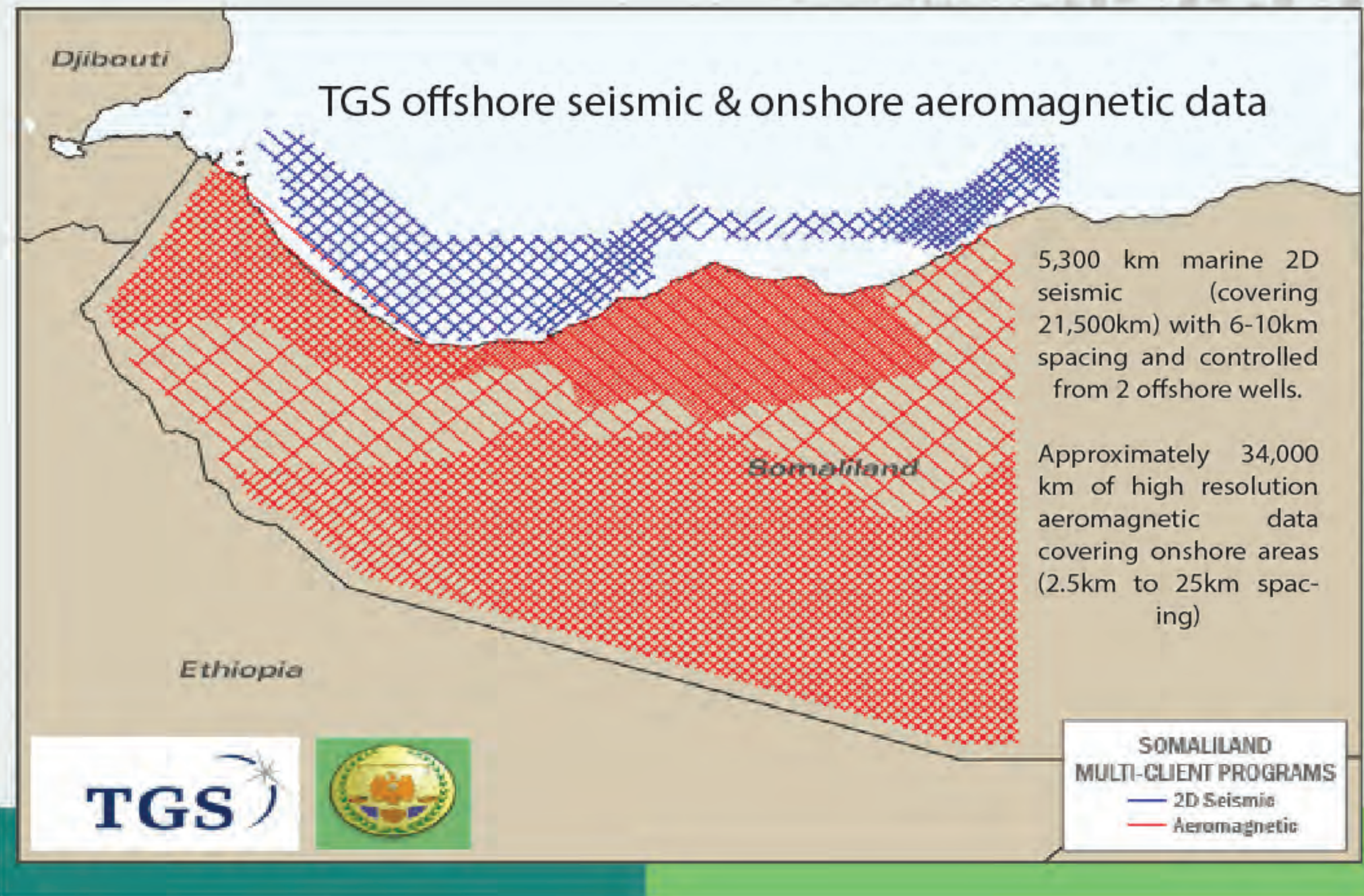
- Held by the ministry – on vacant blocks
- Held by the ministry (and existing operators) – contracted blocks
- Held by other organisations on behalf of the ministry – on vacant blocks
- Data in the open international market (CGG) – country-wide
- Data in the public domain – country-wide general data

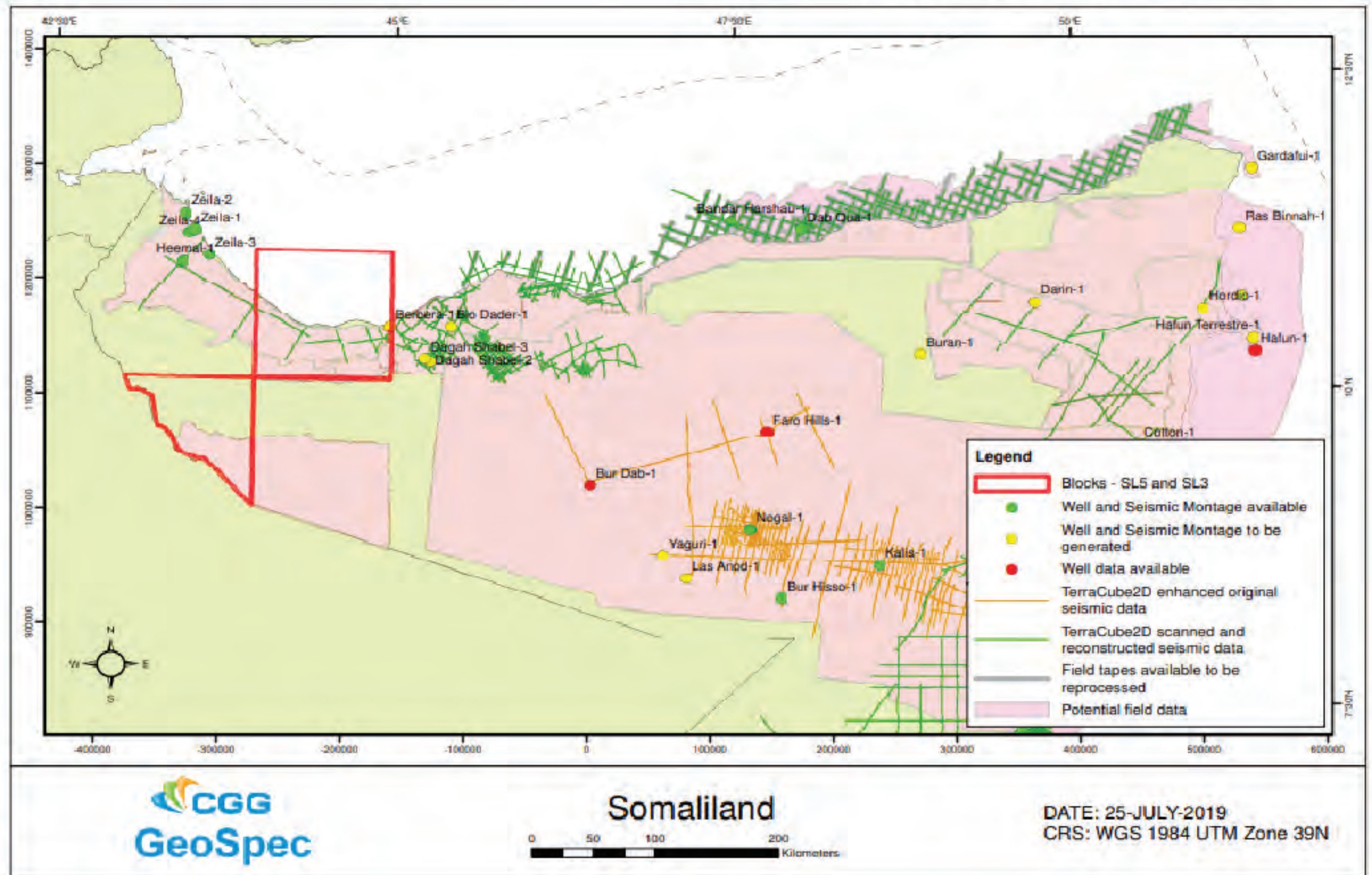


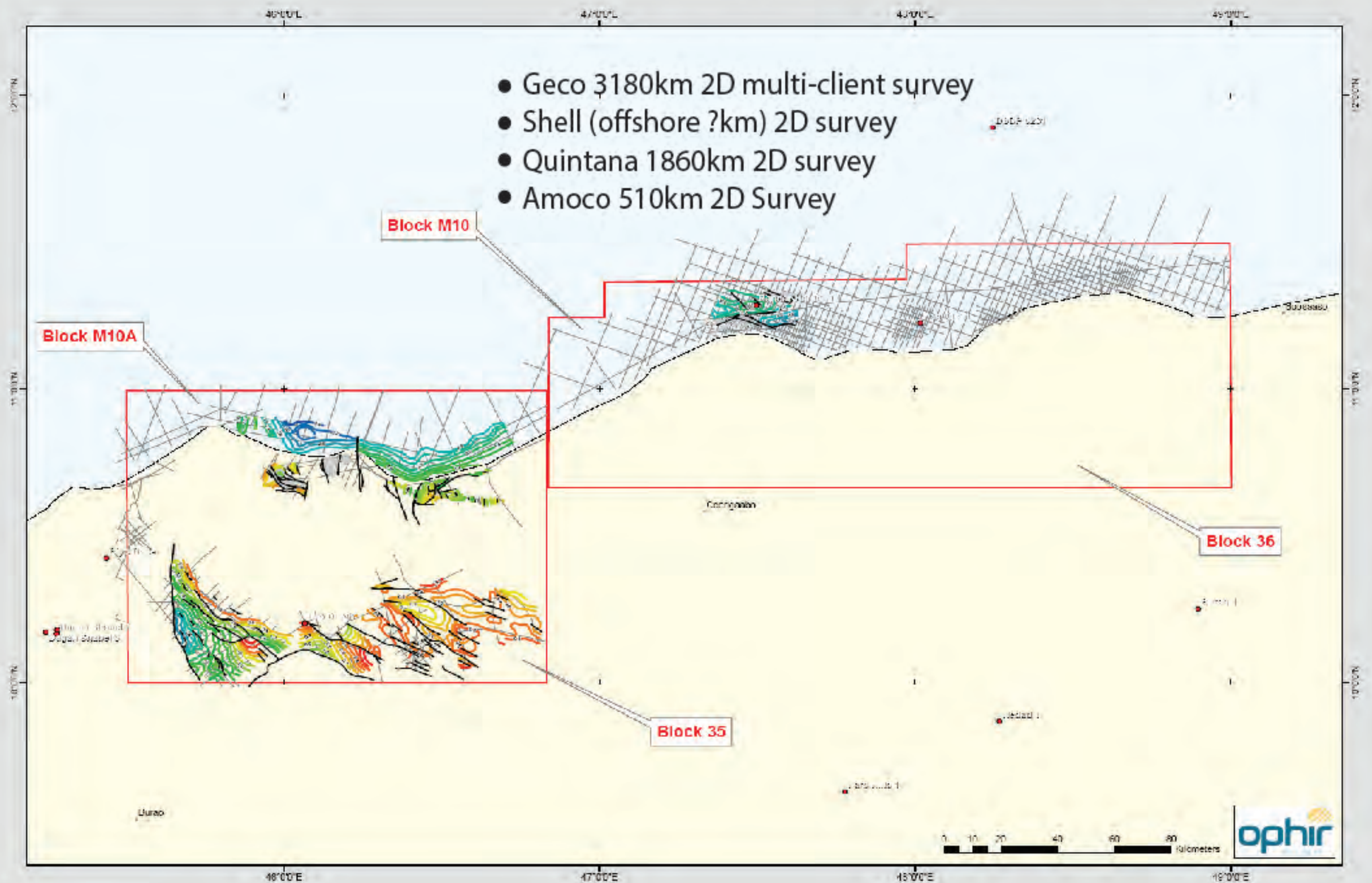
DATA IN POSSESSION OF THE MINISTRY

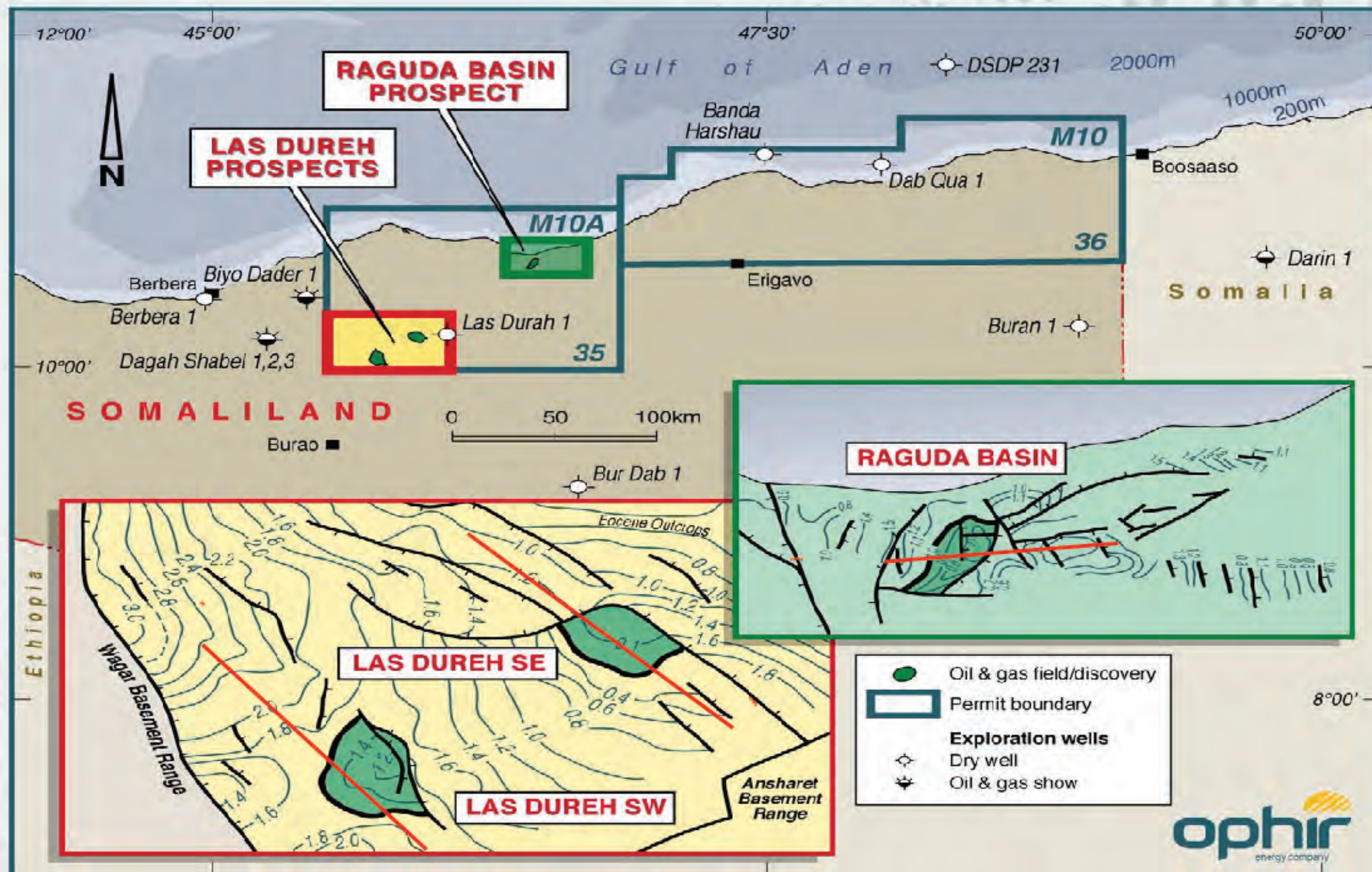


- Genel Energy blocks (blue) total of 2,500km of 2D seismic
- RAK Gas blocks (yellow) 800km of 2D seismic
- Conoco data about 2,000km of 2D seismic
- FTG and other aeromagnetic data
- Well data of most of the important wells









WHY INVEST IN SOMALILAND

- **Political Stability**

Somaliland has been enjoying a stable democratic government for the past 30 years and witnessed six democratic elections in which five presidents smoothly transferred power.

- **Geo-strategic location and accessibility**

- Somaliland is located in a geographically strategic location. Adjacent to one of the main waterways for oil and gas transportation and not far from Bab-el-Mandeb Gate where millions of barrels of oil passes through the strait each day
- Elongated shape of Somaliland along the gulf of Aden means the furthest point being around 300 km from the coastline

- **Investment Attractiveness**

- Open door investment policy for petroleum sector.
- Modern legal framework for petroleum
- Competitive PSA model and fiscal terms

- **Highly Promising Oil Blocks**


- Proven petroleum system and good quality oil




SOMALILAND HYDROCARBON **POTENTIAL**

2023

Ministry of Energy and Minerals

 Road # 1, Presidential Street, Opposite Presidential
Palace, 26 June District

Hargeisa-Somaliland

 www.moem-sl.com

