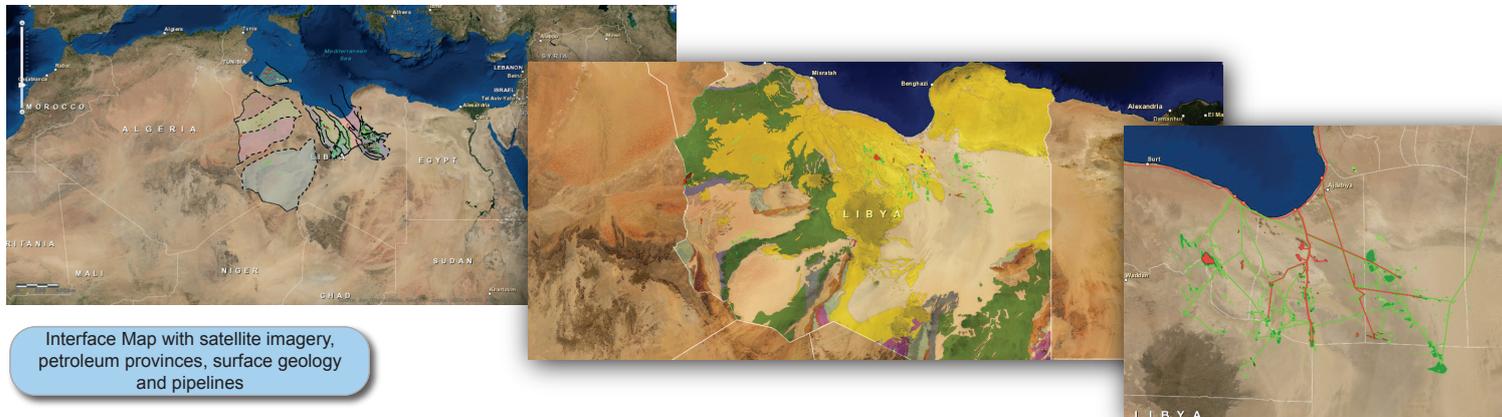


# NUBIAN CONSULTING NC

## Oil & Gas Atlas of Libya on ArcGIS Online

This Online Atlas of Libya is established as an important tool for operating in Libya and is highly valued by a number of key players in the Libyan oil patch. IOCs operating in Libya find the atlas easy to use on a day to day basis and value its extensive functionality.



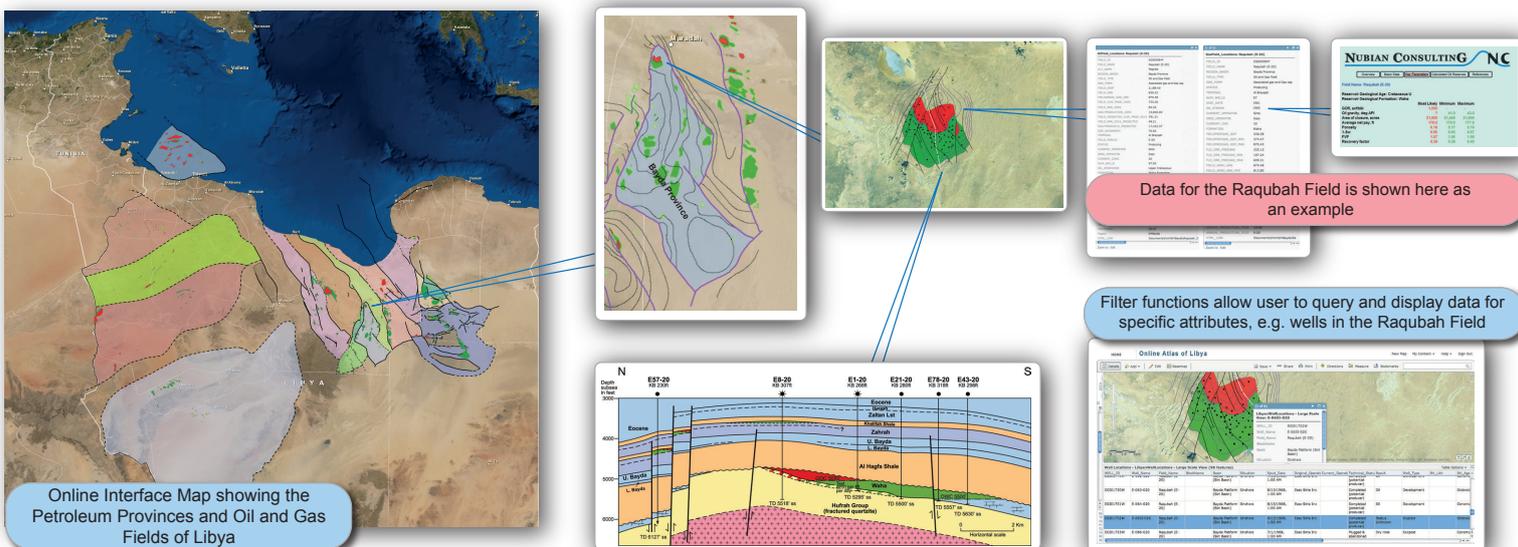
Interface Map with satellite imagery, petroleum provinces, surface geology and pipelines

### The Atlas features:

- Descriptions, histories and reserves estimates for all oil and gas fields discovered onshore and offshore Libya
- Well locations and summarised well results
- Top reservoir structure maps for the majority of fields with originally recoverable reserves of more than 10 million barrels of oil or 60 bcf of gas
- More than 160 geological sections across fields and 35 regional geological cross-sections
- Transparent reserves calculations for each field with specified reservoir parameters
- Regional depth maps on major horizons
- Petroleum provinces and licencing areas

**The maps, cross-sections and reserves calculations distinguish this atlas from other field databases.**

ESRI's 'Cloud' based ArcGIS Online platform is used to deliver this Atlas. An alternative platform is available to EGI Corporate Associates who may use the EGI iCORDs global database to gain access to the Atlas.



Online Interface Map showing the Petroleum Provinces and Oil and Gas Fields of Libya

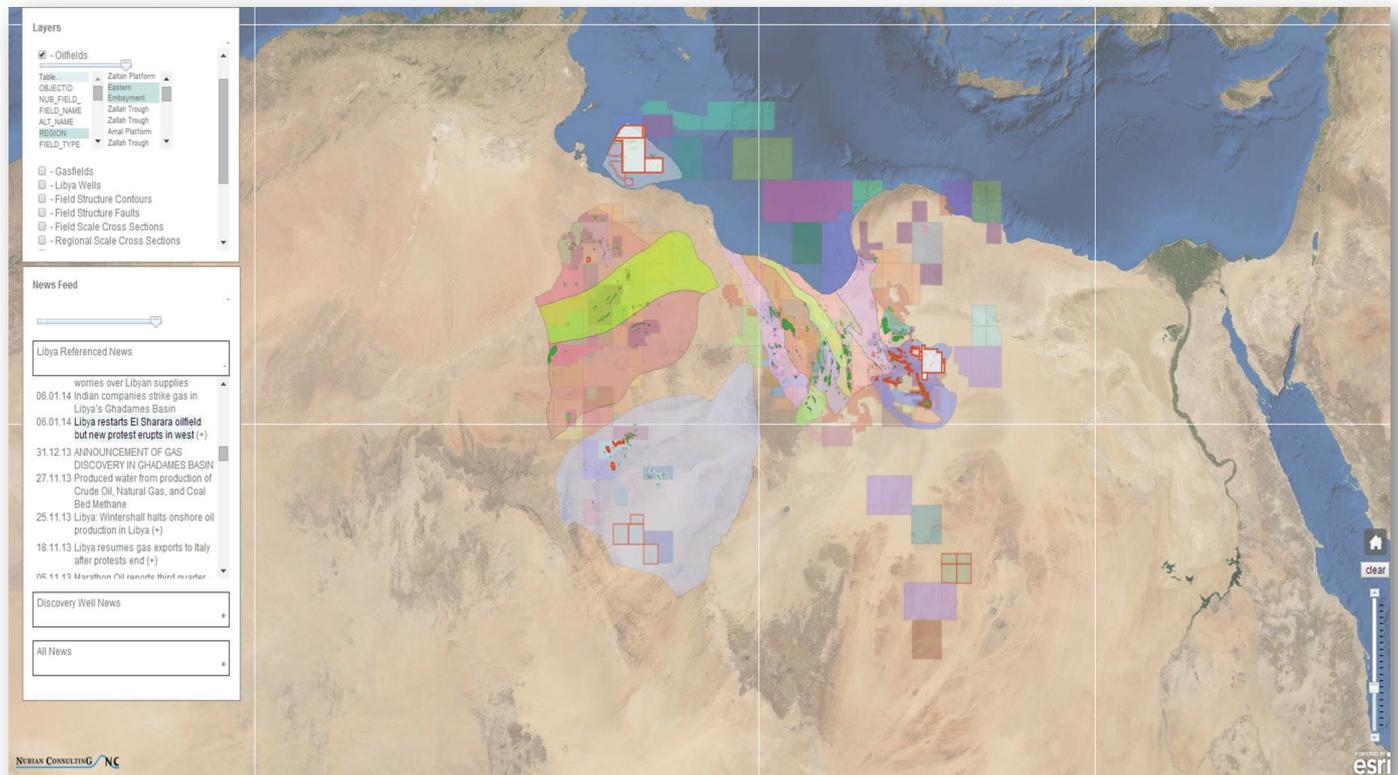
Data for the Raqubah Field is shown here as an example

Filter functions allow user to query and display data for specific attributes, e.g. wells in the Raqubah Field

With a few clicks, even on a smartphone or tablet, users can:-

- Zoom and navigate over the entire map of Libya with a background of petroleum province, surface geology or satellite imagery
- View status of exploration, appraisal and development wells
- Search for data on specific fields and wells
- See fields in the context of regional cross sections, key depth maps, petroleum provinces and stratigraphic columns
- Review top reservoir depth map and cross section, field by field
- Identify trapping mechanisms
- Discover oil and gas reserves estimates and see the reservoir parameters behind the calculations
- View petroleum geology literature with references for each field
- See location of oil terminals and oil and gas pipelines
- Place all the above data in context of current licences and licensees

The newsfeed app is a **general** and **technical 'live' feed** of oil and gas industry news that keeps the user up to date about the latest developments in the Libyan industry.



The image shows the newsfeed in operation. The highlighted news item of the 'News Feed' panel (bottom left) includes references to El Shararah and ENI's operations at El Feel. Consequently the El Shararah fields and ENI's acreage at El Feel and elsewhere in Libya are automatically highlighted. The map also illustrates the filtering capabilities of the app. Of the many layers present in the 'Layers' panel (top left), the oil field and gas field layers are shown here with the oil fields of the Eastern Embayment selected to be highlighted (outlined in red).

News items are updated in real time and location specific news items are illustrated on the map.

#### Location specific news items include:

- referenced oil and gas fields
- discovery wells by licence or relative to a referenced city or oil /gas field
- acreage holdings of referenced oil company

The newsfeed app is linked to the Nubian Consulting Online Atlas and replicates the majority of its functionality. The news sources include reputable sites such as Reuters, NOC website, Oil & Gas Technology, Libyan Business News, Rigzone and Operator websites.

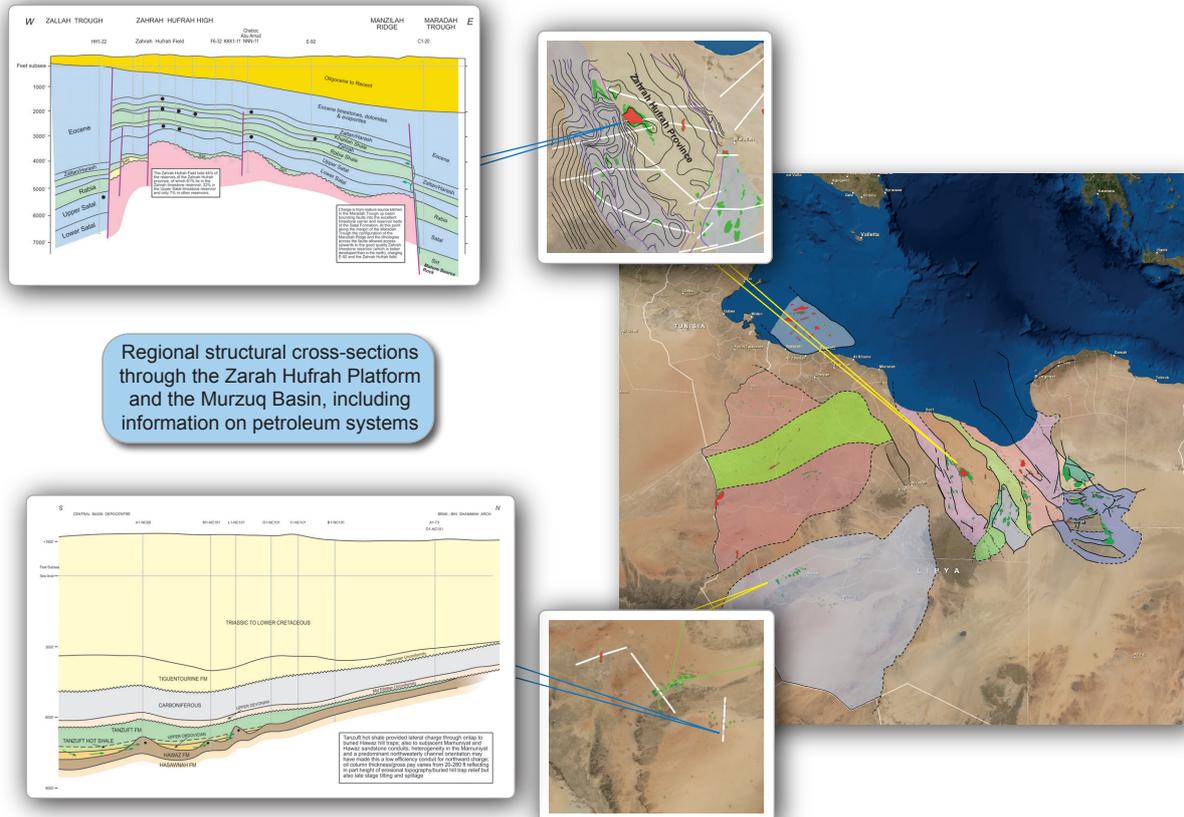
The newsfeed and Online Atlas are readily adaptable to other petroleum regions globally and to other ArcGIS Online maps.

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Nubian Consulting is recognised as the leading consultancy on Libyan Petroleum Geology. The descriptions contained in this atlas, the structure maps, cross-sections and reserves estimates, are more comprehensive and authoritative than any others previously available. The atlas is kept up to date with reserves estimates being reviewed and updated annually incorporating recent production data.



The **Prime package** includes all mapping, reserves and reserves calculations data (remaining reserves updated annually); also field cross-sections and stratigraphic columns.

The **Master package** is a more comprehensive package which includes all data in the Prime package plus past and current detailed geographical and corporate information on licensing. Also additional cross-sections, stratigraphic charts and play fairway maps. This package includes the exciting new feature, the general and technical newsfeed which keeps the user completely up to date on a daily basis with developments in the oil industry. It primarily covers Libya but also includes some items on Tunisia, Algeria and Morocco.

The **Elite package** allows licensees to become affiliates of Nubian Consulting benefitting not only from all the data in the Master package but also sharing selective access to hard data packages on Libya in Nubian Consulting's archives.

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