



Tunisian Company for Petroleum Activities  
المؤسسة التونسية للأنشطة البترولية

# ANNUAL REPORT 2019



Tunisian Company for Petroleum Activities  
المؤسسة التونسية للأنشطة البترولية

# STRATEGY AND COMMUNICATION DIRECTION

PLANING AND STRATEGIC STUDIES  
DEPARTMENT



## LIST OF ABBREVIATIONS & PREAMBLE

KUSD/ KUS\$	Thousand US Dollars
MUSD/ MUS\$	Million US Dollars
KTND	Thousand Tunisian Dinars
MTND	Million Tunisian dinars
Bbl	Barrel 1 barrel of oil $\approx$ 159 litres
Bbl/d (BPD)	Barrel per day
Kb/d (KBPD)	Thousand barrels per day
Mb/d (MBPD)	Million barrels per day
Btu	British thermal unit
MBtu	Million British thermal units
CO <sub>2</sub>	Carbon dioxide
LPG	Liquefied Petroleum Gas
LNG	Liquefied Natural Gas
m <sup>3</sup> /d	Cubic meter per day
Sm <sup>3</sup>	Standard cubic meter
Nm <sup>3</sup>	Normal cubic meter
Mm <sup>3</sup>	Million cubic meters
Toe <sup>(*)</sup>	Ton of Oil Equivalent
Ktoe	Thousand tons of oil equivalent
Mtoe	Million tons of oil equivalent
NCV	Net Calorific Value
GCV	Gross Calorific Value

(\*) Below are the standard approximate conversion factors as per the IEA

1 Toe:	➤ 10 <sup>7</sup> K Calories (depending on the calorific value of the listed product)
	➤ 7.33 oil barrels (conventional equivalence)
	➤ 1010 m <sup>3</sup> of natural gas
	➤ 0.9 Ton of LPG
	➤ 40 MBtu



# SUMMARY

## SECTION

1

### ENERGY SITUATION

➔ Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13

## SECTION

2

### TECHNICAL ACTIVITIES

Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63

## SECTION

3

### MANAGEMENT ACTIVITIES

Petroleum Agreements .....	67
Commercial Activities .....	70

## SECTION

4

### GOVERNANCE AND AUDIT ACTIVITIES

Management Control .....	77
Governance .....	80

## SECTION

5

### COMMUNITY & ENVIRONMENTAL ACTIVITIES

Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91

## SECTION

6

### SUPPORT ACTIVITIES

#### I. Technical Support

Petroleum Services .....	96
Exploration Studies .....	100

#### II. Management Support

Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120

## SECTION

7

APPENDICES .....	123
------------------	-----

# ENERGY SITUATION

## AT THE INTERNATIONAL LEVEL

According to the International Monetary Fund, the global economic growth has been characterized by a slowdown, from 3.6%<sup>(\*)</sup> in 2018 to 2.9% in 2019. This decrease stems from the slowdown in economic growth at the level of the main emerging countries, namely: India, China, Russia, and Mexico, as well as most of the developed countries (except Japan and England). This decrease is attributable to uncertainties as to the evolution of the economic activity and that are related to many events (trade tensions between the USA and China, fears concerning BREXIT, etc.).

At the level of the energy sector, the Brent price has experienced fluctuations in a volatile market mainly influenced by the persistence of the geopolitical tensions in the Middle-East and the rise in the American crude oil reserves.

Indeed, the beginning of 2019 has been marked by the upward recovery of the Brent price before pulling back as of May until October. It resumed its upward trend later during November and December. The Brent price registered an annual average of about USD 64.3/b in 2019 against USD 71.0/b a year earlier (a 9% downturn).

### A- OIL MARKET

#### 1- World oil supply

According to the February 2020 OPEC report, the global oil supply reached 99.01 million barrels per day (MBPD) in 2019, compared to 99.1 MBPD in 2018, thus registering a slight decrease of about 0.1%. This negligible decrease is mainly due to the compliance of the main producing countries (mainly those of the OPEC) with the agreement aiming to reduce their production (production adjustment agreement at the end of 2016) as well as to the decrease in the Iranian production and that of Venezuela because of the American sanctions and which was compensated by the increase of the non-OPEC countries' production (+3%).

Indeed, the OPEC oil production witnessed a sharp, 5.4% decrease, falling from 36.62 MBPD in 2018 to 34.65 MBPD in 2019 (35% of the global supply). This decrease is mainly caused by the Iranian (-34%), Venezuelan (-40%), Angolan (-7%) and Saudi Arabian (-5%) supply despite the increase in the Iraqi, Nigerian, and Emirati supply.

<sup>(\*)</sup> Data revised according to the IMF report 'World Economic Outlook' - April 2020.

However, the oil production of non-OPEC countries reached 64.36 Mbb/d in 2019 (65% of the global supply) compared to 62.47 Mbb/d in 2018, thus registering a rise of about 3%. This growth originates essentially from the overproduction of shale by the United States (+10%) and the rise in Brazilian, Russian, Canadian and Australian production.

## 2- World Oil Demand

According to the OPEC (February 2020 report), the global oil demand reached an average of 99.74 MBPD in 2019, compared to 98.84 MBPD in 2018, which means an increase of around 1%. This slight rise is essentially explained by the geopolitical (Iran, Venezuela, Yemen, etc.) and commercial (USA-China) tensions as well as to the evolution of the outlook of global economic growth.

Indeed, the oil demand from OECD countries reached 47.97 MBPD in 2019, compared to 48.01 MBPD in 2018, thus registering a slight decrease of about 0.1%. This is mainly due to the decrease in the demand from Asian countries (OECD) and the stagnation at the level of the European countries because of the economic slowdown.

As for the non-OECD countries, the demand was in the order of 51.77 MBPD in 2019, thus registering an increase of about 1.9 % in comparison to 2018 (50.83 MBPD). This increase is due to a rise in the demand from China and India, ex-Soviet Union countries, the Middle-East, and Africa.

### World oil supply and demand balance

Million bbl/d

	2018 <sup>(*)</sup>	2019 <sup>(1)</sup>	Variation
<b>Supply</b>	<b>99.10</b>	<b>99.01</b>	<b>-0.1%</b>
• OPEC <sup>(2)</sup>	36.62	34.65	-5.4%
• Non-OPEC	62.47	64.36	+3.0%
<b>Demand</b>	<b>98.84</b>	<b>99.74</b>	<b>+0.9%</b>
• OECD	48.01	47.97	-0.1%
• Non-OECD	50.83	51.77	+1.9%

Source: 'OPEC Monthly Oil Market Report - February 2020'

<sup>(1)</sup> OPEC estimates.

<sup>(2)</sup> Including Liquefied Natural Gas (LNG) and unconventional oil.

## 3- Oil Price

During 2019, the Brent price underwent important fluctuations, especially in the second semester, after the collapse of the prices noticed at the end of 2018 (November and December), to be in the [US\$ 59.0/b- US\$ 71.3 /b] range.

(\*) Quantities revised according to the OPEC report- February 2020.

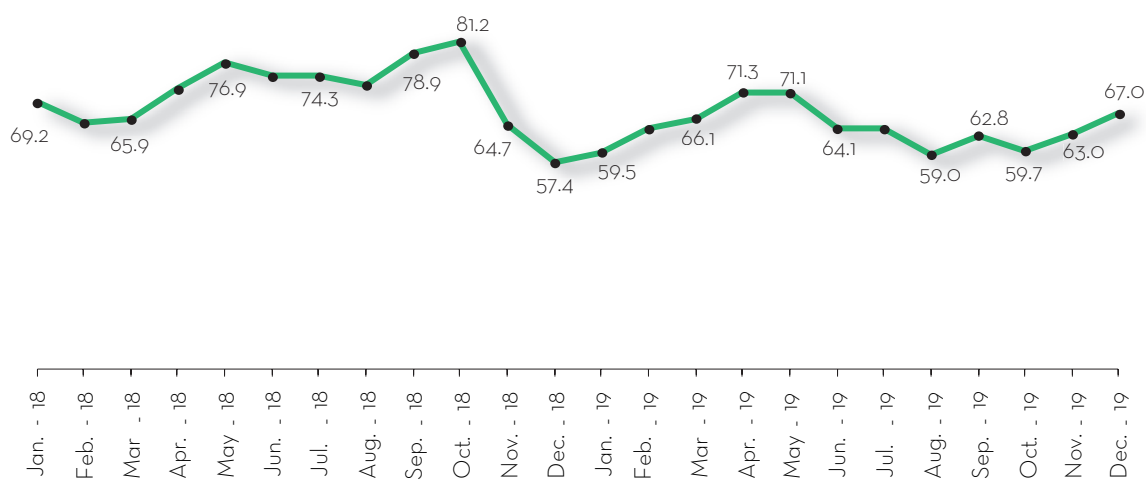
Indeed, the upward trend registered during the (January-April) and (November-December) periods is explained by the compliance of the main producing countries with the commitment to reduce their production (end of 2016) on the one hand, and the rise of the demand outside the OECD coming mainly from China (+2.8%), India (+2.6%), and Russia (+1.2%) along with a decrease in production due to geopolitical tensions (Venezuela and Iran) on the other hand.

However, the downward trend observed during the (May-August) period as well as in October is explained by the persistence of the commercial dispute between China and the United States which favored a climate of economic uncertainty and consequently the slowdown in the growth pace of the demand for oil. Besides, a production surplus was injected into the market; it came essentially from the United States, Iraq, Brazil, Canada, the United Kingdom, and the Emirates (compensation of the decrease in Iranian and Venezuelan production).

This resulted in the Brent prices registering an annual average of about US\$ 64.3/b compared to an annual average of US\$ 71.0/b in the previous year (-9.4%).

#### 2018-2019 Average Brent monthly prices

USD/b



## B- GAS MARKET

Growth of global gas production (+3.4%), along with a decrease in the annual oil prices, contributed to the fall of gas prices in 2019 in comparison to the previous year.

### 1- World gas production

According to British Petroleum (June Review - 2020), the global natural gas production was characterized by an increase of about 3.4%, making its way up from 3858<sup>(\*)</sup> billion m<sup>3</sup> in 2018 to 3989 billion m<sup>3</sup> in 2019. This increase (although slower than in the previous year: +5.2%) is essentially explained by the growth of the global demand for gas as well as by a production surplus of the American shale gas.

Indeed, with the exception of gas production in the European continent (a 6.1% fall compared to 2018) and in South-America (-1.5%), the other regions registered strong growth in their production; for instance: North-America 7.4% (mainly the United States), the Asia-Pacific region 6.3% (essentially China, Australia, and Bangladesh), the Middle-East 2.1% (particularly Saudi Arabia, the Emirates, Qatar, and Bahrain) and the Commonwealth of Independent States 1.9% (especially Russia, Turkmenistan, and Azerbaijan).

It should be noted that Africa's gas production is nearly stagnant (+0.7%).

### 2- World gas consumption

According to BP (June Review - 2020), the global gas consumption was marked by a growth of about 2.0%, going up from 3852<sup>(\*)</sup> billion m<sup>3</sup> in 2018 to 3929 billion m<sup>3</sup> in 2019. This low increase (+5.3% a year before) is mainly due to the slowdown in the global economic activity, and consequently, the global gas demand, as well as the mild winter temperatures, registered particularly in Europe and Russia.

Indeed, this growth varies from a region to the other. Thus, an increase in gas consumption was registered in North America 3.1% (mainly the United States and Mexico), the Asia-Pacific region 4.7% (essentially China, India, Australia and Bangladesh) and the Middle-East 2.3% (particularly Saudi Arabia, Iraq and the Emirates).

It should be noted that the European and African consumption witnessed a slight increase at respectively 1.1% and 0.9%.

---

(\*) Quantities revised according to the BP statistical review of world energy - June 2020.



However, gas consumption registered a 2.7% decrease in South-America and a 1.5% decrease in the Commonwealth of Independent States (CIS) compared to the previous year.

### World gas production and consumption balance

Billion Sm<sup>3</sup>

	2018	2019	Variation 2018-2019
Production <sup>(1)</sup>	3 857.5	3 989.3	+3.4%
Consumption <sup>(2)</sup>	3 851.7	3 929.2	+2.0%

Source: 'BP Statistical Review of World Energy-June 2020'

(1) Excluding flue gas or recycled gas and including gas produced by liquefaction

(2) Excluding gas converted to liquid fuels and including coal derivatives as well as gas consumed upon liquefaction

NOTE : The difference between global consumption and production statistics is due to stock variations in the storage and liquefaction facilities as well as to the measure and conversion of gas data.

### 3- Gas price

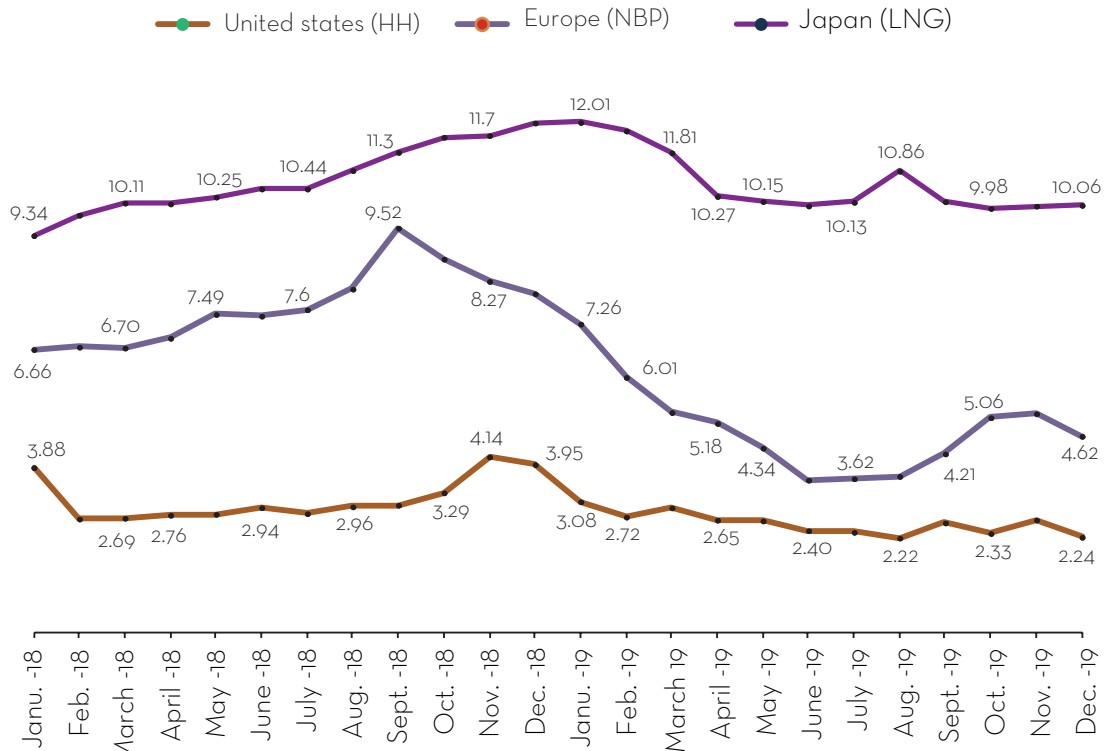
In 2019, the annual gas prices witnessed a decrease on the major global markets; this was due to the fall in oil prices (gas price indexation), the uncertainties as to the global economic growth and consequently as to the demand for gas (geopolitical and trade tensions) and the evolution of stock levels (especially the American ones) in addition to a relatively mild winter (Russia and Europe).

The extent of this decrease varies from one region to the other:

- In Europe, the NBP spot price (London Stock Exchange), partially indexed to the oil price, reached an annual average of about USD 4.80/MBtu in 2019, compared to USD 7.68/MBtu in 2018 (-37%).
- In Asia, the average price of LNG (Tokyo Stock Exchange), almost entirely indexed to the oil price, stood at an annual average of about USD 10.57/MBtu in 2019, compared to USD 10.67/MBtu in 2017 (-1%).
- In the United States, where the rise of shale gas explains the low prices, the Henry Hub price (New York Stock Exchange) was illustrated by an annual average of 2.57 USD/MBtu in 2019 against 3.15 USD/MBtu in 2018 (-18%).

### Monthly average gas prices 2018 - 2019

USD/MBtu



Source: 'World Bank Commodity Price Data'

## C- WORLD ENERGY OUTLOOK: Renewable Energies Accentuation

Due to sustained economic and demographic growth, the global demand for energy kept growing. An energy transition movement towards a safer and less CO<sub>2</sub>-emitting energy mix should take place in response to the willingness to overcome the climatic and environmental challenges thanks to the fast-paced technological progress.

In effect, according to 'BP and Exxon Mobil' (2019 Review- Energy Outlook at the horizon of 2040), the increase in the demand for energy should be favored by the growth of the world population (+1.7 billion inhabitants by 2040) and the high level of economic development in the emerging countries (non-OECD mainly) correlated with the higher standards of living and the levels of urbanization and electrification (during the next 25 years, the production of electricity should be responsible for about 55% of the rise in the demand for energy).

Thus, the global energy demand could increase by 1.3% per year in the next two decades. The major part of this growth comes from the rapidly-growing economies led by China and India. The fossil fuel sources will still occupy the major part in terms of consumption by 2040 (except for coal which will lose market shares in all the future projections).

To meet this demand, the global supply will be more and more diversified, profiting from a wide array of cost-effective and less CO<sub>2</sub> emitting energy sources. Nevertheless, the fossil fuels will keep on providing the larger share of the global supply over the next two decades (77%: 30% oil, 26% gas and 20% coal), whereas the nuclear energy and the renewable energies will witness a significant increase, thus contributing at 23% to the energy mix (16% renewable energy and 7% nuclear).



Wind Farm in Tunisia

# SUMMARY

## SECTION

1

### ENERGY SITUATION

Energy Situation at the International Level .....	5
➡ Energy Situation at the National Level .....	13

## SECTION

2

### TECHNICAL ACTIVITIES

Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63

## SECTION

3

### MANAGEMENT ACTIVITIES

Petroleum Agreements .....	67
Commercial Activities .....	70

## SECTION

4

### GOVERNANCE AND AUDIT ACTIVITIES

Management Control .....	77
Governance .....	80

## SECTION

5

### COMMUNITY & ENVIRONMENTAL ACTIVITIES

Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91

## SECTION

6

### SUPPORT ACTIVITIES

#### I. Technical Support

Petroleum Services .....	96
Exploration Studies .....	100

#### II. Management Support

Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120

## SECTION

7

APPENDICES .....	123
------------------	-----

# ENERGY SITUATION

## AT THE NATIONAL LEVEL

According to the Central Bank of Tunisia (Economic Situation Periodical - January 2020), the economic activity was marked by a decrease in 2019. In effect, the economic growth amounted to 1.4% in 2019, compared to 2.5% in 2018. This rate is essentially founded on the weak activity of the industrial and energy sector despite the improvement in the indicators of the tourism, agricultural, and mining (phosphate) sectors.

Likewise, the trade balance of the country continued its deterioration, registering a deficit of about TND 19409 million in 2019, which means a 2% widening compared to 2018 (TND 19023<sup>(\*)</sup> million).

This deficit of the trade balance is mainly due to the widening of the food balance deficit (-194%) as well as to the rise of the energy deficit (continuous decline in the production of most of the hydrocarbon fields and increase of the natural gas and refined product imports).

The regression of the energy sector activity manifested itself through:

- The widening of the primary energy balance deficit (5.69 Mtoe in 2019 against 5.04 Mtoe in 2018, which means an increase of about 12.8%).
- The absence of 2D seismic acquisitions in 2019 compared to 399 km achieved in 2018.

Moreover, we should note:

- The increase in the number of valid permits (25 in 2019 against 21 in 2018).
- The increase in the number of drilled exploration wells from three (3) wells in 2018 to four (4) wells in 2019 (one (1) on the Jenein Sud permit and three (3) respectively on the Debbech, Baguel/Tarfa, and Baraka concessions).
- The achievement of three discoveries in 2019: the SMG-1 well (started in 2018) on the Zaafrane permit, the Shalabia-1 well on the Jenein Sud permit, and the TRF-6 well on the Baguel/Tarfa concession. No discovery was made in 2018 and 2017.
- The increase in the number of the drilled development wells from four (4) wells in 2018 (3 non-ETAP wells) to six (6) wells in 2019 (1 non-ETAP well).
- A 37 km<sup>2</sup> evolution of 3D seismic acquisitions compared to 2018.

(\*) Value revised by the BCT (Economic Situation Periodical N° 126- January 2020)



## A- PRIMARY ENERGY RESOURCES

The available primary energy resources (including the gas royalties levied from the trans-Mediterranean gas pipeline) experienced a fall of the order of 15%, from 4560 ktoe-NCV in 2018 to 3883 ktoe-NCV in 2019.

### 1- Oil, condensate, and LPG resources

The oil resources (including condensate and LPG) reached 1883 ktoe in 2019 against 2049 ktoe in 2018, thus registering a fall of about 8%.

This fall is especially explained by:

- a- The natural decline in crude oil production in most of the fields, such as: Hasdrubal (-22%), El Borma (-12%), Ashtart (-6%), MLD (-8%), BBT (-33%), Franig (-24%), Rhemoura (-56%), Hajeb/Guebiba (-8%), Ezzaouia (-18%), Djebel Grouz (-23%), Cercina (-6%) and Sidi Litayem (-15%).
- b- Production discontinuation in certain fields to carry out maintenance works and repairs or for social reasons:
  - The planned major shutdown of the Hasdrubal field from 28 October to 25 November 2019, and stoppage of the A1 well from February 04 to 09, 2019, in order to change the amine exchanger.
  - The stoppage of the Rhe-1A well of the Rhemoura field as of June 25, 2019, due to technical problems at the level of the pump.
  - The repetitive disruptions of the EFR-1 well from the Franig concession because of pressure build-up and maintenance work on the compressor.
  - The Sit-ins of the subcontractors operating in the Sidi Litayem and Sidi Behara concessions (CFTP).
  - The stoppage of the PDG-4 well during 29 days, and of the PDG-3 well as of 22 August 2019 at the Djebel Grouz field.

However, during 2019 we could highlight the good performance of the fields: Miskar (+8%), Adam (+23%), and Dorra (+20%), the start of production on the Sondes and Jinane fields, as well as the gradual resumption of production on the Chouech Essaida, Sidi Behara, and Mazrane fields.

It should be noted that the average daily production of oil and condensate went from 38.2 thousand barrels/day in 2018 to 35.4 thousand barrels/day in 2019, thus registering a fall of about 7%.

In 2019, the crude oil, condensate, and LPG resources are summed up in the table below:

### Oil, condensate and LPG domestic resources

Ktoe-NCV

	2018	2019	Variation 2018-2019
Oil	1 838.7	1 707.1	-7.2%
Gabes condensate	23.8	23.2	-2.5%
Primary LPG <sup>(1)</sup>	186.5 <sup>(2)</sup>	152.5	-18.2%
<b>TOTAL</b>	<b>2 049.0</b>	<b>1 882.8</b>	<b>-8.1%</b>

Source: ETAP & National Energy Observatory (NEO)

<sup>(1)</sup> Primary LPG: Fields LPG (except Franig & Baguel/Tarfa and Ghrib) + Gabes LPG Plant.

<sup>(2)</sup> Quantities revised by the NEO (2019 Energy Situation Report - February 2020 version).

## 2- Available gas resources

The available gas resources (domestic production and royalty) reached 2000 ktoe in Net Calorific Value (NCV) in 2019, compared to 2511 ktoe in 2018, thus recording a considerable decrease of about 20%. This reduction is essentially due to the sharp decrease in the royalty levied on the transit of Algerian gas (-40.5%), as well as to the significant fall in the production of the Hasdrubal (-23%), Chergui (-15%), Maâmoura/Baraka (-79%), Franig & Baguel/Tarfa (-15%), Ghrib (-36) fields and the quantities of the South zone Commercial Gas (-7%).

Moreover, it is worth pointing out:

- The increase in the production of the Miskar (+9%), Dorra (+29%), and Adam (+6%) fields in 2019 compared to 2018.
- The start of the flared gas valorization project on the MLD concession on May 3, 2019 (average flow of 38 103 m<sup>3</sup>/d).
- The resumption of sales of the commercial gas coming from the Chouech Essaida concession as of October 29, 2019.

## Available gas resources

Ktoe-NCV

	2018	2019	Variation 2018-2019
<b>DOMESTIC PRODUCTION</b>	<b>1763.0</b>	<b>1555.2</b>	<b>-11.8%</b>
Miskar	525.7	571.6	+8.7%
South Com. Gas <sup>(1)</sup>	319.9	296.2	-7.4%
Chergui	206.6	176.0	-14.8%
Hasdrubal	524.7	400.6	-23.7%
Maâmoura & Baraka	48.1	10.1	-79.0%
Franig & Baguel/Tarfa	83.8	71.4	-14.8%
Sabria	12.8	10.4	-18.8%
Ghrib	29.4	18.9	-35.7%
El Bibane <sup>(2)</sup>	12.0	0.0	-100%
<b>Royalties</b>	<b>748.0</b>	<b>445.0</b>	<b>-40.5%</b>
<b>AVAILABLE RESOURCES</b>	<b>2511.0</b>	<b>2000.2</b>	<b>-20.4%</b>

Source : NEO

(1) South Com. Gas: quantity of processed gas from El Borma, Adam, Oued Zar, Djebel Grouz, Ch. Essaida, Chourouq, Dorra, Anaguid Est, MLD and Jinane.

(2) Start of the commercialization of gas to the company «Power Turbine Tunisia» in May 2018, then production shut down as of October 2018 following technical problems.

## B- DEMAND FOR PRIMARY ENERGY

The demand for primary energy went from 9604 ktoe in 2018 to 9571 ktoe in 2019, thus registering a slight decrease of about 0.3% following the fall in oil products consumption of about 2% on the one hand and the increase of the demand for natural gas of about 1% on the other hand.

### 1- Demand for petroleum products:

The domestic consumption of petroleum products went from 4580 ktoe in 2018 to 4494 ktoe in 2019 thus registering a decrease of about 2%. This fall is essentially due to the decrease in the consumption of diesel, fuel, and petroleum coke by respectively 5%, 17%, and 3% (due to the recession in the economic activity witnessed in 2019).

However, the increase in the consumption of LPG (+5%) is due to the relatively cold climate known during the first quarter of 2019, whereas the 6% rise in the consumption of jet fuel comes as a result of the progress of air traffic (improvement of the tourism sector indicators in 2019).

The domestic consumption as well as the distribution of petroleum products are detailed in the following table and diagram:

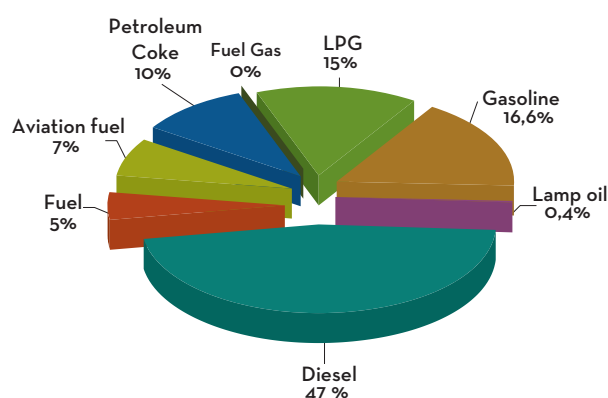
### Domestic consumption of petroleum products

Ktoe-NCV

	2018	2019	Variation 2018-2019
LPG	639	669	+4.7%
Gasoline	702	746	+6.3%
Diesel	2162	2061	-4.7%
Lamp oil	31	17	-45.2%
Fuel	289	240	-17.0%
Fuel Gas (STIR)	0	0	-
Aviation fuel	298	315	+5.7%
Petroleum coke	459	446	-2.8%
<b>TOTAL CONSUMPTION</b>	<b>4580</b>	<b>4494</b>	<b>-1.9%</b>

Source: National Energy Observatory

### Distribution of petroleum products consumption in 2019



## 2- Demand for natural gas

In 2019, the total gas consumption registered a slight increase of around 1%, going from 5024 ktoe in 2018 to 5077 ktoe in 2019. This is explained by the rise in natural gas consumption for the production of electricity (+5%) despite the 8% decrease in the consumption of gas destined for the other uses (excluding electricity production).

The following table summarises the natural gas consumption details:

### Natural gas consumption

Ktoe-NCV

	2018	2019	Variation 2018-2019
<b>TOTAL CONSUMPTION</b>	<b>5024</b>	<b>5077</b>	<b>+1.1%</b>
Production of electricity	3609 <sup>(*)</sup>	3777	+4.7%
Outside the production of electricity	1415	1300	-8.1%
• High pressure	399	332	-16.8%
• Medium & low pressure	1016	967	-4.8%

Source: National Energy Observatory

(\*) Quantities revised by the NEO (Energy situation report 2019 - February 2019 version).

## C- ENERGY BALANCE

The 2019 primary energy balance was characterised by the widening of the energy deficit, going up from 5044 Ktoe in 2018 to 5688 Ktoe in 2019 (+13%).

The widening of the energy deficit is explained by the 14.8% decrease in the available resources of primary energy (oil & condensate -7%, LPG -18%, and natural gas -20%), despite the negligible, 0.3% decrease in the consumption of primary energy (petroleum products -2% and natural gas +1%).

The energy independence rate, which represents the ratio of primary energy available resources compared to consumption, deteriorated by going down from 48% in 2018 to 41% in 2019.

### PRIMARY ENERGY BALANCE

Ktoe-NCV

	2018	2019	Variation 2018-2019
<b>AVAILABLE RESOURCES <sup>(*)</sup></b> (including royalties)	<b>4560</b>	<b>3883</b>	<b>-14.8%</b>
Oil <sup>(1)</sup>	1863	1730	-7.1%
Primary LPG <sup>(2)</sup>	187	153	-18.2%
Natural gas <sup>(3)</sup>	2511	2000	-20.4%
• Production	1763	1555	-11.8%
• Royalties	748	445	-40.5%
<b>CONSUMPTION<sup>(*)</sup></b>	<b>9604</b>	<b>9571</b>	<b>-0.3%</b>
Petroleum products <sup>(4)</sup>	4580	4494	-1.9%
Natural gas	5024	5077	+1.1%
<b>ANNUAL DEFICIT</b> (including royalties)	<b>-5044</b>	<b>-5688</b>	<b>+12.8%</b>

Source: ETAP &amp; NEO

**NOTE :** The primary energy balance is calculated according to the classical approach (taking into account neither the biomass-energy, nor the self-consumption of fields, nor the trans-Mediterranean gas pipeline's compressor stations consumption).

(\*) Without taking into account the primary electricity (1% of the total resources and 0.5% of the total demand).

(1) Including the Gabes condensate Plant.

(2) Fields LPG (outside Franig, Baguel/Tarfa and Ghrib) including the Gabes LPG Plant.

(3) In the energy balance, the natural gas is accounted for in Net Calorific Value NCV. Only the quantity of commercial gas is taken into account in the balance (dry gas).

(4) Demand for oil products: excluding non-energy consumption (lubricants + bitumen +W Spirit).



It should be noted that Tunisia's energy deficit reaches back to 2001; its evolution pace during the 2010-2019 period has become a source of concern, with negative effects especially on the economic plan.

This deficit has become structural in the current decade where it reached a record high in 2019 (40% of the country's trade deficit).

The main characteristics of this deficit are:

- A chronic energy deficit, going from 5044 ktoe in 2018 to 5688 ktoe in 2019, meaning a 12.8% widening (multiplied by 13 during the 2010-2019 period).
- Deterioration of the energy independence rate, from 48% in 2018 to 41% in 2019.
- Increase of the energy deficit share compared to the country's trade deficit (40% in 2019 against 32% in 2018).

It should be noted that the energy deficit originates as much from exogenous factors (ongoing and accelerated depreciation of the Tunisian Dinar in comparison to the US Dollar: 11% fall in 2019 in comparison with 2018) as from endogenous factors (social climate, natural decline in the production of most of the fields and important increase of the natural gas and petroleum products imports).

Given the situation, several solutions are to be considered, of which we may mention:

- The development of fossil energies through the renewal and development of the national hydrocarbon reserves, the improvement of deposits recovery using cutting-edge technologies, the establishment of a gas policy, the promotion of exploration in Tunisia and abroad, and the update of the legislative and fiscal rules of the hydrocarbons sector.
- The development of renewable energies (fostering energy transition).
- Controlling energy and improving energy effectiveness (consumption optimization, reducing wastage, energy audit and control, and rational use of efficient tools for the control of energy).

# SUMMARY

## SECTION

1

### ENERGY SITUATION

Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13

## SECTION

2

### TECHNICAL ACTIVITIES

➔ Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63

## SECTION

3

### MANAGEMENT ACTIVITIES

Petroleum Agreements .....	67
Commercial Activities .....	70

## SECTION

4

### GOVERNANCE AND AUDIT ACTIVITIES

Management Control .....	77
Governance .....	80

## SECTION

5

### COMMUNITY & ENVIRONMENTAL ACTIVITIES

Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91

## SECTION

6

### SUPPORT ACTIVITIES

#### I. Technical Support

Petroleum Services .....	96
Exploration Studies .....	100

#### II. Management Support

Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120

## SECTION

7

APPENDICES .....	123
------------------	-----

# EXPLORATION

During 2019, the exploration activity registered an increase in the number of valid permits, from 21 in 2018 to 25 in 2019. It was also marked by the following events:

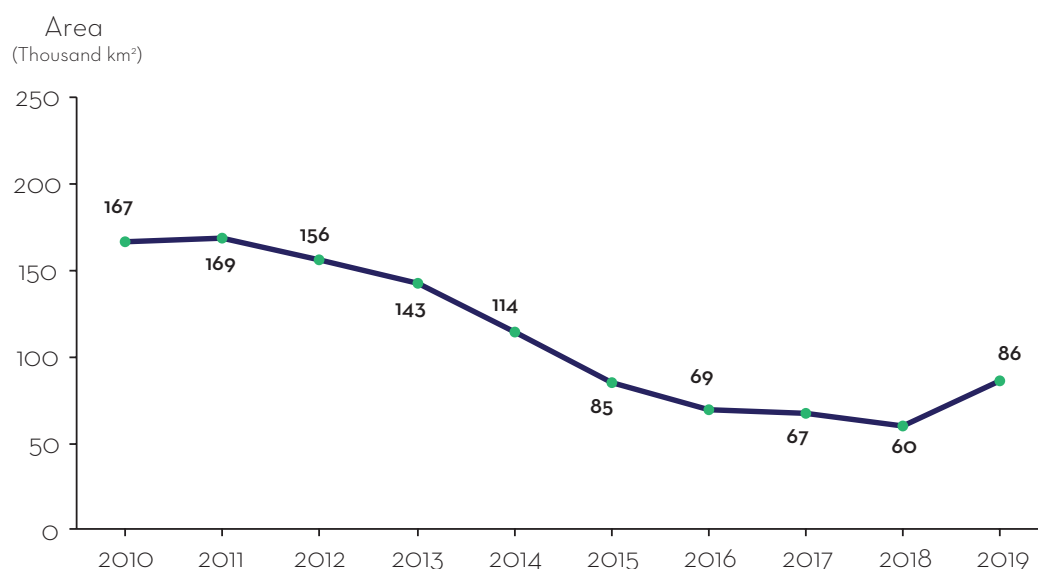
- The drilling of four exploration wells (Shalbia-1 on the Jenein Sud permit, Debbech-B on the Debbech concession, TRF-6 on the Baguel/Tarfa concession, and Baraka-2 Dir on the Baraka concession).
- The 3D seismic acquisition of about 745 km<sup>2</sup> on the Zaafrane exploration permit (530 km<sup>2</sup>) and the Douiret prospecting permit (215 km<sup>2</sup>).

## A- EXPLORATION OPERATION ON PERMITS

### 1- Prospecting and Exploration permit

The number of valid permits by December 31, 2019, is 25 permits (17 exploration permits and 8 prospecting permits); covering a total area of 86451 km<sup>2</sup> of which 50696 km<sup>2</sup> are onshore and 35755 km<sup>2</sup> are offshore.

### Mining domain evolution



#### a- New permits

Granting of six new prospecting permits in 2019 (publication of institution orders in the 12/24/2019 Official Journal of the Republic of Tunisia), namely:

- The Kef Abed, Teskraya and Metline permits, located in the Tunisian Offshore North, operated by Panoceanic, and covering, respectively, an area of 6528 km<sup>2</sup>, 4036 km<sup>2</sup> and 4584 km<sup>2</sup>.
- The Saouaf permit located in the Tunisian Onshore North, operated by Uplund and covering an area of 4004 km<sup>2</sup>.
- The Hezoua and El Waha permits located in the Tunisian Center, operated by Hunt Oil and covering, respectively, an area of 8536 km<sup>2</sup> and 6492 km<sup>2</sup>.

#### b- Renounced or cancelled permits

In 2019, two (2) exploration permits were surrendered and reintegrated among the open blocks. They are detailed as follows:

- Renunciation of the Bargou exploration permit, operated by Dragon Oil (expired on August 07, 2019).
- Cancellation of the Kerkouane exploration permit, operated by Alpine (no-respect of the minimum contractual obligations).

#### c- Renewed permits

Three (3) exploration permits were renewed in 2019:

- Second renewal for a three-year period of the Sud Remada exploration permit, operated by ATOG, for a period extending to February 21, 2021.
- Fourth renewal of the Borj El Khadhra exploration permit operated by ENI, for a period extending to July 11, 2020.
- First renewal for a three-year period of the Jenein Centre permit, operated by ATOG, for a period extending to March 14, 2021.

#### d- Term of validity extension

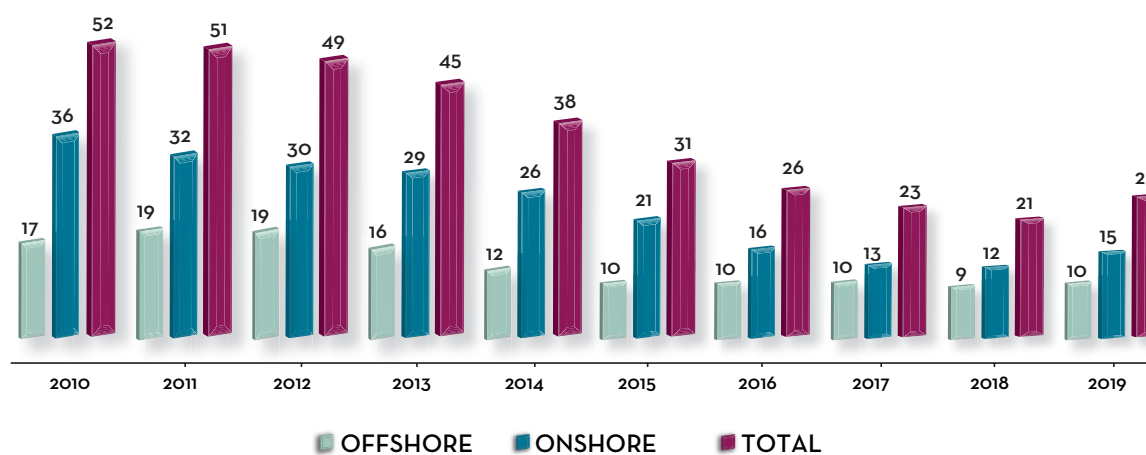
During 2019, there was an extension of the term of validity of four (4) permits. They are:

- Kaboudia exploration permit
- Le Kef exploration permit
- Mahdia exploration permit
- Douiret exploration permit

## 2- Evolution of the number of permits

In 2019, the number of permits witnessed a rise from 21 permits in 2018 to 25 permits in the current year.

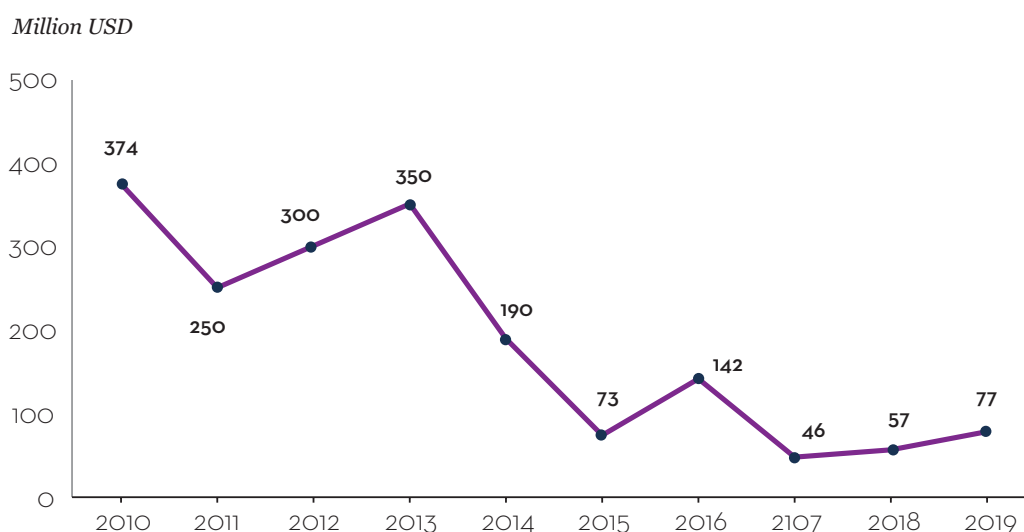
Evolution of the number of permits  
2010-2019



## 3- Investments in exploration

During 2019, the amount of investments in exploration reached MUSD 77.4 compared to MUSD 56.6 in 2018.

Investments in exploration  
2010-2019





#### 4- Seismic activities

In 2019, no 2D seismic acquisition was made (399 km in 2018), whereas 744.5 km<sup>2</sup> of 3D seismic were carried out (Zaafrane exploration permit and Douiret prospecting permit), against 708 km<sup>2</sup> acquired in 2018.

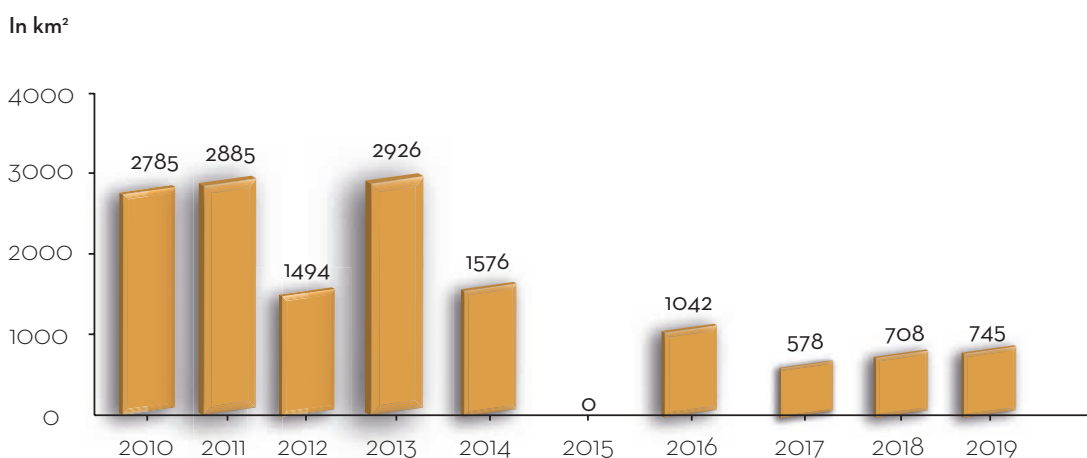
These seismic campaigns are detailed in the table below:

##### 3D seismic acquisition activities

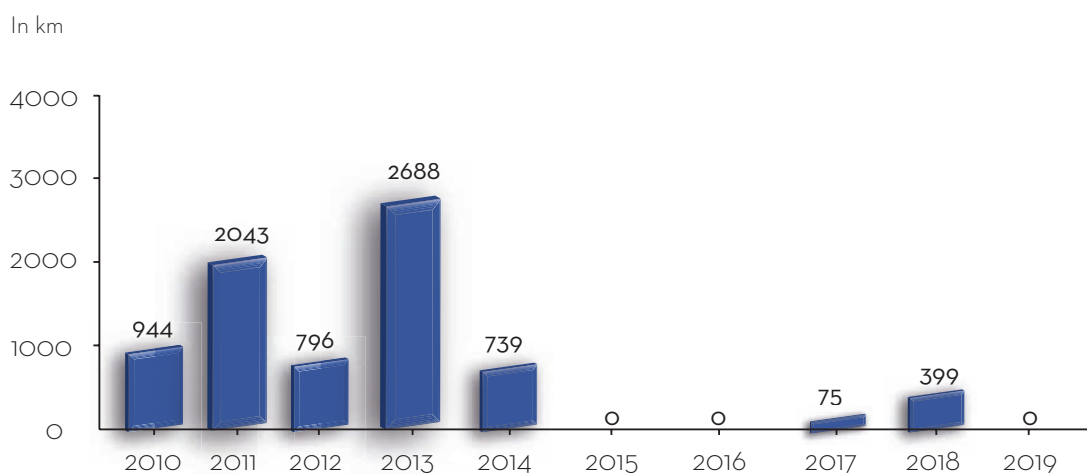
Permit	Operator	Contractor	Onshore/ Offshore	(3D) km <sup>2</sup>
Zaafrane	MAZARINE	CGG	ONSHORE	529.5
Douiret	MAZARINE	CGG	ONSHORE	215

**Total : 744.5 km<sup>2</sup>**

##### 3D seismic acquisitions 2010-2019



##### 2D seismic acquisitions 2010-2019



## 5- Drilling activities

### a- Drilled wells:

In 2019, four (4) exploration wells were drilled (Shalbia-1 on Jenein Sud permit, Debbech-B on Debbech concession, TRF-6 on Baguel/Tarfa concession, and Baraka-2 Dir on Baraka concession).

They are three onshore wells and an offshore one, as detailed in the table below:

Wells	Permit / Operator	Depth. (m)	Drilling objectives	Start of drilling	Release of the Rig	Notes
Shalbia-1	Jenein Sud/ OMV	4257	Silurian (Acacus & Tannezuft)	03/09/2019	27/11/2019	* Well completed and tested * Gas condensate: 320 BPD - 27 MM SCFPD.
Debbech-B	Debbech/ SODEPS	2216	Silurian (Acacus & Tannezuft)	29/11/2019	Not done by 31/12/2019	* Drilling in progress.
TRF-6	Baguel/ PERENCO	3000	TAGI (Development) Permien (Exploration)	13/04/2019	02/06/2019	* Well completed and tested: Permian: Gas condensate: 336 BPD - 3.8 MMSCFPD.
Baraka-2 Dir	Baraka/ ENI	1392	SAOUAF (SF6 Development SF 7 Exploration)	12/12/2019 (beginning of pre-drilling operations). 29/12/2019 (SPUD).	Not done by 31/12/2019	* Drilling start (SPUD) on 29/12/2019. * Drilling in progress.

NOTE: The on-concession drilling activity was marked by:

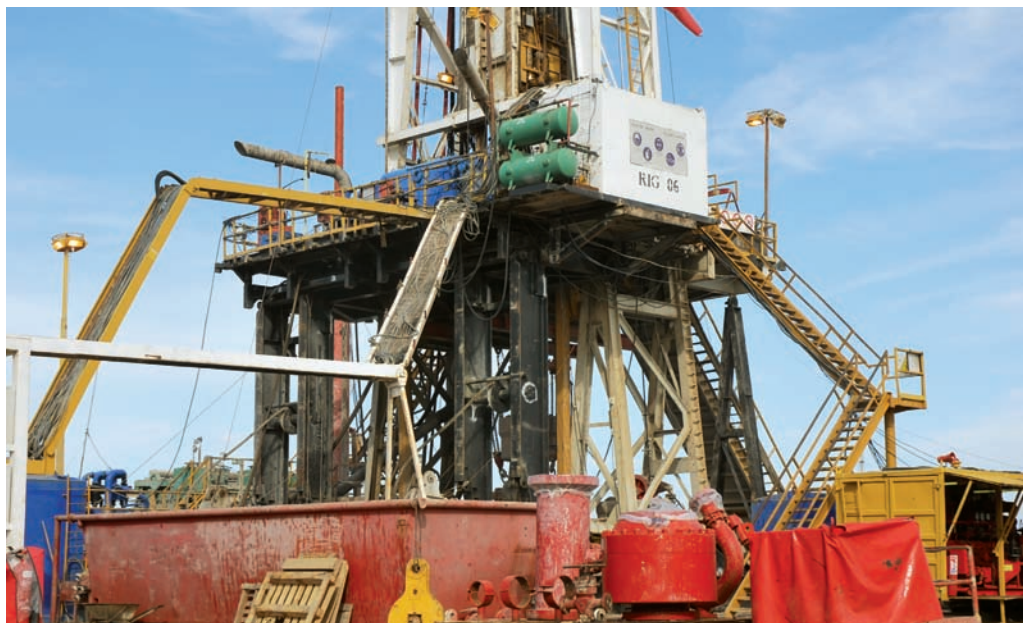
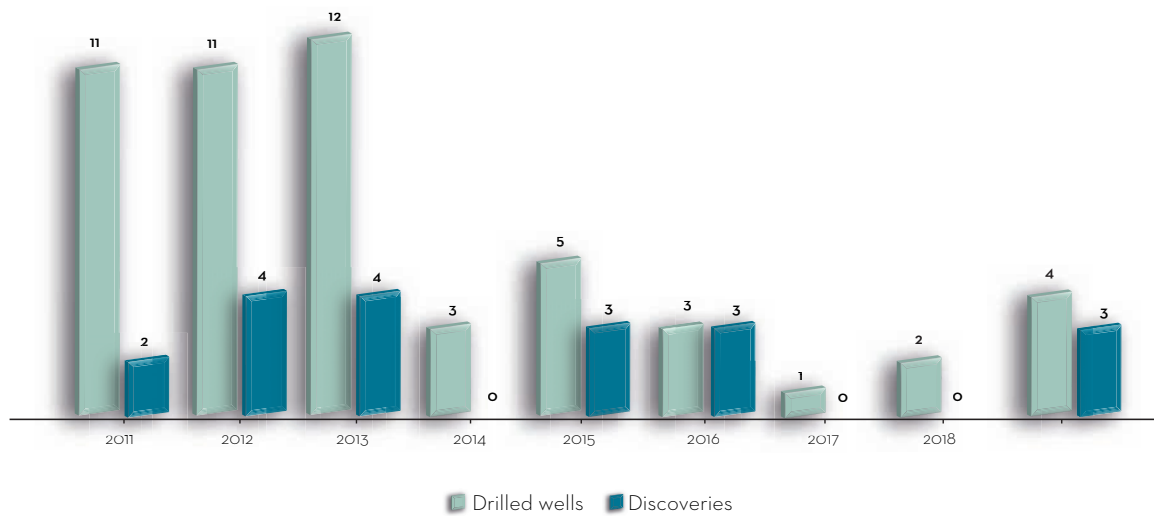
- The drilling of the double-objective (development and exploration) TRF-6 and TRF-4 wells on Baguel/Tarfa concession. Nevertheless, the development objective was not achieved for the TRF-6 well, and it was converted into an exploration well.
- The drilling of Baraka-2 DIR well on Baraka concession (drilling in progress until 31/12/2019), which is an exploration well whose initial objective was the development (a discovery made at the beginning of 2020).
- The drilling resumption for tests of the Ghazela-1 exploration well (accounted for in 2009) on ADAM concession.

### b- Discoveries made:

Contrarily to 2017 and 2018, where no discovery was made, 2019 was marked by the achievement of three (3) discoveries which could be summed up as follows:

- The Shalbia-1 well on the Jenein Sud permit.
- The Sidi Marzoug-1 (SMG-1) well on the Zaafrane permit (started in 2018 and tested in 2019).
- The TRF-6 well on the Baguel/Tarfa concession (a development well turned into an exploration well).

### Evolution of the number of technical discoveries



Shalbia-1 well drilling

# SUMMARY

<b>SECTION</b>	<b>1</b>
<b>ENERGY SITUATION</b>	
Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13
<b>SECTION</b>	<b>2</b>
<b>TECHNICAL ACTIVITIES</b>	
Exploration .....	21
➡ Development .....	28
Production .....	56
Operating .....	63
<b>SECTION</b>	<b>3</b>
<b>MANAGEMENT ACTIVITIES</b>	
Petroleum Agreements .....	67
Commercial Activities .....	70
<b>SECTION</b>	<b>4</b>
<b>GOVERNANCE AND AUDIT ACTIVITIES</b>	
Management Control .....	77
Governance .....	80
<b>SECTION</b>	<b>5</b>
<b>COMMUNITY &amp; ENVIRONMENTAL ACTIVITIES</b>	
Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91
<b>SECTION</b>	<b>6</b>
<b>SUPPORT ACTIVITIES</b>	
<b>I. Technical Support</b>	
Petroleum Services .....	96
Exploration Studies .....	100
<b>II. Management Support</b>	
Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120
<b>SECTION</b>	<b>7</b>
<b>APPENDICES</b> .....	123

# DEVELOPMENT

## A- NAWARA PROJECT

### 1- Introduction

The Nawara field, equally held by ETAP and OMV, is a gas and condensate field located in the southern Tunisia in the Ghadames basin, about 50 km southwest of the production facilities of the Hammouda and Oued Zar fields.

The South Tunisian Gas Project (STGP) was initially designed for a processing capacity of 4.4 million Nm<sup>3</sup>/day, with the possibility to extend it up to 8.8 million Nm<sup>3</sup>/day.

After ENI's left of the project in January 2013, ETAP and OMV decided to include, the main 370-km pipeline from Hammouda to Gabes and the gas processing unit in the Nawara development project.

We should note that following this, the gas processing capacity was reduced to 2.7 million Nm<sup>3</sup>/day. The 24" diameter of the main pipeline was chosen for a maximum capacity of 10 million Nm<sup>3</sup>/day.

### 2- Development

The development of Nawara project consisted in:

- Producing 2.7 million m<sup>3</sup>/day of gas and more than 1,500 Sm<sup>3</sup>/day of condensate from 9 wells already drilled in the exploration phase.
- Building a pre-processing center (CPF) next to the Nawara-1 wellsite to process the gas according to the specifications of the new main pipeline and stabilize/store the produced condensates.
- Building a network of multiphasic ducts to pump the effluents of the other wells up to the CPF.
- Transporting the stabilized condensate by pipe until the TRAPSA line, 12 km from the CPF, and transporting the gas until the Gas Treatment Plant (GTP) in Gabes.
- Building a 370-km-long, 24-inch-diameter duct linking the Nawara CPF to the Gabes GTP.
- Building a gas treatment plant in Gabes to produce commercial gas (2 - 2.4 M m<sup>3</sup>/d), commercial propane, commercial butane and condensate.



Gas Treatment Plant 'GTP'

### 3- Budget

The estimated initial budget of the Nawara project is MUSD 1174, whereas the revised budget, including the previous investments, amounts to about MUSD 1211.

The estimated projections related to the execution phase amount to MUSD 1142.1 (an increase of about MUSD 80 compared to the initial budget: MUSD 1062.2). This upward revision is essentially due to the significant difference between the budget and the implementation of the CPF Package (+MUSD 112).

Unit : MUSD

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021*	Total
STGP Investments 2008 - June 2012	18.1										18.1
Pre-feasibility and feasibility phase	29.7	19.4	1.8	0.2							51.1
Implementation phase		25.0	101.7	245.3	301.3	182.6	74.1	83.64	128.31		1142.1
Operating phase :											
• Future upstream compression of the Nawara CPF										31.0	31.0
• Development well									9.5		9.5
<b>Total Investments</b>	<b>48</b>	<b>44</b>	<b>104</b>	<b>246</b>	<b>301</b>	<b>183</b>	<b>74</b>	<b>84</b>	<b>138</b>	<b>31</b>	<b>1251.8</b>

#### NOTES:

N.1- The estimated overall budget is of about MUSD 1252 in case of considering future investments (FEC operating phase) as well as the drilling of the Nawara-2 development well (projected for quarter 4 of 2020) are included.

N.2- For the GTP package, the cost of the GTP land is not included yet, even though it has been taken in charge 100% by ETAP (reimbursement in progress). The GTP Package projections take into account the application of damages for the EPC GTP.

N.3- The CPF and PPL projections do not include the application of damages for the contractors. Once applied, it will reduce costs.

N.4- The amounts for the 2018 and 2019 achievements as well as the 2020 projections include the amounts committed/allocated by OMV to the projections, and to which ETAP has not agreed yet (negotiations between partners in progress).

#### 4- Planning

Main milestones	End Date
GTP Hot Commissioning	01/10/2019
GTP Ready for Start-Up (Cluster 1 & 2)	01/10/2019
CPF Mechanical Completion Min. Scope (CPF, 3 Wells)	25/10/2019
CPF - TG4	13/12/2019
CPF Ready For Start-Up Min. Scope	28/01/2020
GTP Condensate Agreements in place	31/01/2020
Gas-In from Wells	05/02/2020
NAWARA Gas export to PPL	21/02/2020
First NAWARA Gas export to STEG Grid	10/03/2020

#### 5- Progress and main events during 2019

The table below summarises the progress status of the different components of the project:

Project Components	CPF (EPC 1)	PPL (EPC 2)	GTP (EPC 3)	Nawara (3 -EPCCs)
Supply management and detail engineering	100.00%	99.78%	99.12%	99.54%
Supply (manufacture and delivery)	100.00%	100.00%	100.00%	100.00%
Construction	98.40%	100.00%	99.99%	99.53%
Commissioning	63.77%	82.76%	83.58%	73.69%
Global EPC contracts	98.69%	99.52%	99.77%	99.32%
Line pipe and wickerwork acquisition		100.00%		
Land management		100.00%		
PPL package		99.73%		
GTP package			99.77%	
Wells (water wells, WO, completion equipment, etc.)	100.00%			
<b>Global project</b>				<b>99.42%</b>

##### a- GTP

Deficiencies have been found by OMV concerning the electricity works and essentially the explosion-proof equipment (Atex). The inspection and reparation caused a delay in the completion of the GTP.



The Atex inspections, their reparation, and re-inspection were finished in September. The contractor is completing the preparations to introduce gas in the plant.

#### b- PPL

The mechanical completion of the pipeline took place in April. As of May, the contract with the provider BIMS is suspended (for 8 months) because of the absence of gas.

#### c- CPF

The on-site construction is about all the activities (mechanical and piping works, electricity works and instrumentation, flowlines, storage tanks, and buildings). The CPF has not reached the finishing phase yet. Reinforcements to the qualified workforce were made to speed up these activities. The end of the works is planned for the beginning of 2020 for a minimum scope (production of 3 wells only).

## B- TATAOUIE DEVELOPMENT PROJECT

### 1- Introduction

The Tataouine gas project is located in the south of Tunisia. It is developed by ETAP (100%). It aims to build a unit to process 0.6 million Sm<sup>3</sup>/day of pre-processed gas, transported from Nawara to the deviation point starting from the main 24" pipeline, then through the 12"-diameter, 94 km-long pipeline to the GTP-T (Gas Treatment Plant) located in Tataouine.

### 2- Development

The development of the Tataouine project consists of:

- Building a deviation point DP (KP-228) of the Nawara 24" pipeline.
- Building a 94-km-long, 12-inch-diameter duct linking the Nawara pipeline to the Tataouine treatment unit (Tataouine Branch Line: TBL).
- Building a Gas Treatment Plant in Tataouine (GTP-T) to produce commercial gas, LPG, and stabilized condensate.
- Building two switching stations (LVS1 and LVS2).
- Building a domestic LPG Bottling Unit (BU-T).

Commercial gas will be exported to STEG. The commercial sub-products, namely the LPG (which will be bottled) and the stabilized condensates, will be transported by road to Gabes.



The projected production of the GTP-T and BU-T is summarized in the following tables:

**- GTP-T daily production forecast:**

Products	Quantities	
Humid gas at the entrance of the GTP-T	m <sup>3</sup> /d	600 000
Commercial Gas	m <sup>3</sup> /d Humid Gas at the entrance	560 000
Commercial Propane	Tons/d	34.5
Commercial Butane	Tons/d	25
Pentane	Tons/d	4
Condensate	Tons/d	2.7

**- Bottling unit (BU) daily production forecast:**

Products	Quantities	
Butapro II blend	Tons/d	35.5
Commercial Propane	Tons/d	24

### 3- Budget

The project's overall budget amounts to MUSD 150 according to the estimates made for each lot (Pipelines, GTP-T, TBL, BU, and Civil Engineering):

Item	Value (MUSD)
Gas Treatment Plant (GTP-T)	85.00
Tataouine Branch Line (TBL)	15.00
Line pipe Material	9.10
Bottling Unit (BU)	22.00
Technical assistance	5.00
Land Management & Acquisition	1.90
PM & Overheads	8.00
<b>Sub-Total</b>	<b>146.0</b>
Contingency	4.00
<b>TOTAL</b>	<b>150.00</b>

## 4- Planning

The different milestones of the TGP project are the following:

### a- Calls for Tenders/Contracts

	Dates of the contract's signature	Progress
Purchase of Pipeline	May 09, 2017 (signed)	100%
Civil engineering works (fences, earthwork...)	June 30, 2017 (signed)	100%
TBL (pipeline laying)	August 28, 2018 (signed)	100%
GTP-Tataouine (Treatment Center)	October 16, 2019 (signed)	100%
Project's technical support	October 18, 2019 (signed)	100%
Bottling Unit	July 2020 (estimate)	Examination by the Higher Commission for Public Procurement
Drilling of a water well	September 2020 (estimate)	Preparation of the set of specifications

### b- Works

	Scheduled dates for work completion	Progress
Civil engineering works (fences, earthwork...)	February 28, 2019	42%
TBL (pipeline laying)	April 30, 2020	43%
Drilling of a water well	November 2020	0%
GTP-Tataouine (Treatment Center)	December 2021	0%
BU-Tataouine (Bottling Unit)	December 2021	0%

NOTE: in 2019, the project's overall progress is estimated at 26.71%.

## 5- Main events and progress during 2019

### a- Progress of the calls for tenders:

- A call for tender for the technical support of the project: signature of the contract with the service provider EMCO on 18/10/2019.
- A call to tender for the Tataouine GTP-T (EPCC): signature of the contract with JEREH/EPPM on 16/10/2019.
- A call for tender for the bottling unit: the offers were assessed and submitted to the Higher Commission for Public Procurement on 10/11/2019.
- A call for tender for the drilling of a water well: following approval of the Tataouine CRDA, the call for tenders related to the geological surveys of the well was published on the TUNEPS platform, whereas the invitation to tender related to drilling is in progress.

## b- Progress of work:

Item	Steps	Progress Rate (In %)	
Purchase of the pipeline	Scope of work	100%	100%
	Tendering	100%	
	Execution	100%	
TBL (pipeline laying)	Scope of work	100%	54,6%
	Tendering	100%	
	Execution	43%	
GTP (Civil engineering)	Scope of work	100%	53,6%
	Tendering	100%	
	Execution	42%	
BU (Bottling Unit)	Scope of work	100%	10%
	Tendering	0%	
	Execution	0%	
GTP - Tataouine (Treatment Center)	Scope of work	100%	20%
	Tendering	100%	
	Execution	0%	
Technical assistance	Scope of work	100%	24%
	Tendering	100%	
	Execution	5%	

### b.1- Work related to the GTP-T

The GTP-T construction work was entrusted to the consortium of providers JEREH/ EPPM following the default of the KADI Company. In this context, a contract was signed on 16/10/2019 and the service order was provided on 10/12/2019. The project start-up meetings were held in December 2019.

### b.2- Land Management work

- Permanent coordination with the different institutions (Ministry of Agriculture, Ministry of State Property and Land Affairs, Ministry of Equipment, Ministry of Transport, National Guard, 'SONEDE', 'STEG', 'Tunisie Telecom', etc.)
- The 100% progress of the Chenini LVS1 land plot acquisition. The acquisition/lease of the LVS2 (Guermassa) and LVSO land plots in progress.
- Finalisation of about 70% of the administrative procedures related to land property.

### b.3- Pipeline laying work

The pipeline laying work is carried out by the provider RETEL under the supervision of an ETAP team. The estimated global progress of the pipeline laying work (TBL) is about 54.6%.



Pipeline laying Tataouine project

## C- MAZRANE CONCESSION DEVELOPMENT PROJECT

### 1- Introduction

The Mazrane concession originates from the Nord Medenine permit. It is located on the island of Jerba (Medenine governorate), 13 km south of Houmet Essouk, and 9 km northeast of Ajim.

This concession is regulated by a production-sharing contract signed on July 10, 1993, wherein ETAP is the permit holder and HBS Oil Company is the entrepreneur/operator. The field produces oil mainly.

### 2- Development

- Two wells have been drilled since the acquisition of the Mazrane concession. They are: MZR-1 in 2007 and MZR-2 in 2015. These two wells are activated by two Sucker Rod pumps and connected by an underground connection line (4"/2.35 km flowline). The inspection and maintenance of the above-ground facilities were carried out.
- Upgrade of the facilities (purchase of a heater and installation of a fire fighting system).
- Two other development wells could be drilled after carrying out a reservoir study.
- The produced oil is shipped to the Ezzaouia Terminal - Zarzis by tanker trucks.

### 3- Budget

In 2019, the development expenditure (CAPEX) on the Mazrane concession is of the order of MUSD 0.147. This amount was dedicated to the purchase and installation of a heater.

### 4- Planning

The project Mazrane schedule is detailed in the following table:

Activities	End date
Start of MZR-2	June 2018
Restart of MZR-1	September 2018
Re-mapping of Mazrane Area	December 2018
Production & reservoir evaluation	March 2019
Simulation modeling	August 2019
Upgrading facility	December 2019
Recommendation for future possible infill wells	April 2020
Drilling MZR-3	February 2021

### 5- Progress and main events during 2019

- Purchase of a heater: HBS proceeded to the purchase of a heater in order to process the Mazrane concession's crude oil and reduce its salinity. This heater was put into service on January 24, 2019.
- Upgrade of the HSE component: implementation of a security management system and submission of a site master file for approval.
- Purchase of modular cabins for offices and laboratories (construction in progress).

## D- GHRIB DEVELOPMENT PROJECT

### 1- Introduction

The Ghrib concession, which issues from the Zaafrane permit, is onshore. It is located in the southeast of Tunisia, about 10 km away from El Franig production facilities.

It is an oil and gas deposit held by the partners ETAP (50%), MAZARINE (45%), and BIZERTE ENERGY LTD (5%).

### 2- Development

The development of this concession aims at processing and exporting the liquid and gas. The minimization of gas flaring is a key factor in the success of this concession's development concept.

Its development consists essentially in:

- The construction of a collection/processing facility Ghrib CPF near the «CAT-1» wellsite.
- The connection of the DGH-1 well to the Ghrib CPF.
- The connection, via a 6", 10-km-long pipeline, of the Ghrib CPF to the multiphase pipeline (10") which connects El Franig to the Oum Chiah CPF.
- Valorising the associated gas for the Ghrib CPF's self-consumption, on the one hand, and the transport of the remaining surplus of gas through the pipeline (10 km, 6") from Mazarine to El Franig pipeline, for processing and shipping to Oum Chiah, on the other hand.

The development of this concession consists of two different phases:

#### a- Early Production Phase (EPF) :

During this phase, it is planned to:

- Connect the DGH-1 well to CAT-1.
- Establish 10 km of pipelines (6") for the transport of gas to the El Franig 10" pipeline.
- Implement an EPF on the CAT-1 wellsite.
- First Oil on October 24, 2017.

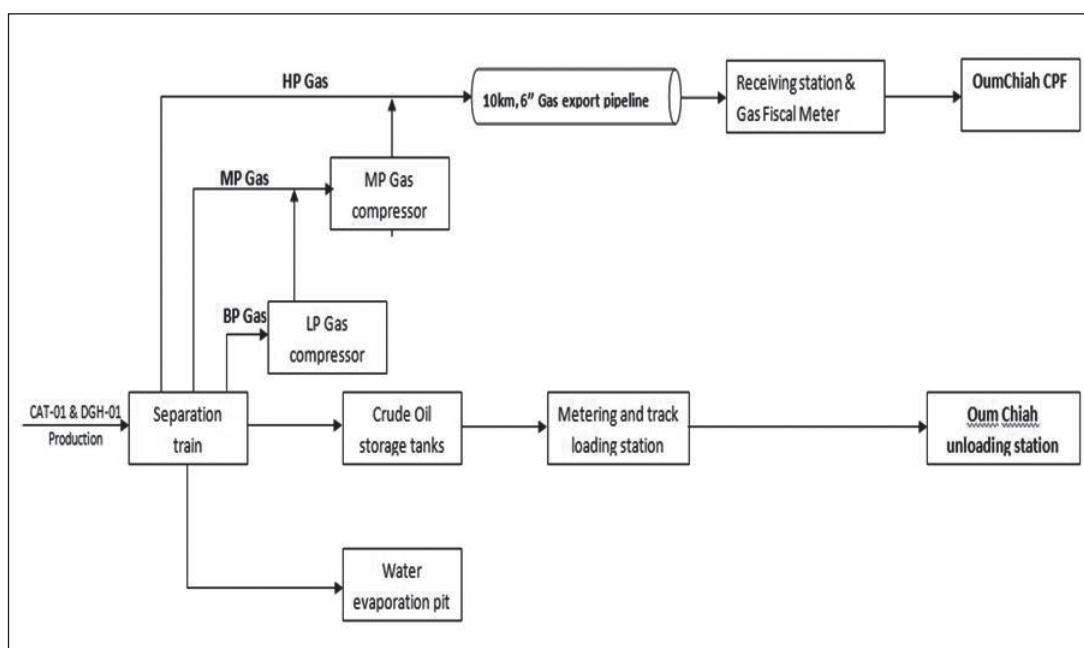
During the production phase, the following actions are to be taken:

- The liquid is transported by trucks to the CFTP's unloading station for export. Oil is exported by the CFTP pipeline to the TRAPSA station.
- The (high pressure) gas will be exported directly, whereas the (low pressure) gas will be compressed and exported through the pipeline (6").

#### b- Permanent Facilities Phase

This phase is characterized by the following actions:

- The collection/processing facility will be located in the CAT-1 site (10 km from El Franig CPF), knowing that the first production (First Oil) was carried out in 2017.
- The oil arriving at the CPF will be transported by truck to the Oum Chiah unloading station, and then exported to the TRAPSA.
- The water will be treated, and then discharged in evaporation ponds.
- The gas will be recovered via:
  - The unit's self-consumption (one part).
  - The gas remainder will be compressed, and then transported to Oum Chiah to be shipped to STEG.



Ghrib concession development scheme

### 3- Budget

The revised budget of the Ghrib project is in the order of 16.20 MUSD. The revision of the aforementioned budget is essentially due to:

- The update of the awarded contracts' value.
- The revision of the budget allocated to the purchase of equipment so that it complies with the engineering work conducted (addition of a separation stage, low-pressure compressor, etc.)

Item	Revised Budget	Achieved 2016	Achieved 2017	Budget 2018		Budget 2019
	MUS\$	MUS\$	MUS\$	MUS\$	MUS\$	MUS\$
		Actual	Firm	Firm	Contingent	Firm
Site & land management	2.05	0.08	0.70	0.45	0.15	0.04
Equipment purchase & consumable	7.10	0.00	1.04	1.50	1.15	1.95
Services	3.18	0.06	1.16	1.30	0.15	0.72
Operating base facilities	0.77	0.02	0.45	0.31	0	0.07
Project management	2.03	0.55	0.82	0.28	0.21	0.07
Permanent Facilities estimated budget	15.1	0.71	4.16	3.85	1.66	2.85
Contingencies	1.1	0.00	0.07	0	0	0
<b>Total</b>	<b>16.2</b>	<b>0.71</b>	<b>4.23</b>	<b>3.84</b>	<b>1.66</b>	<b>2.85</b>

Budget approved during the OCM 1-2019 (June 2019).

## 4- Planning

The different milestones of the aforementioned project are the following:

Main milestones	Progress	End date
Purchase of the line pipe.	100 %	August 2016
EPF Mobilisation and installation	100 %	September 2017
Earthworks of the CPF site and road construction.	100 %	October 2017
Engineering and preparation of the sets of specifications:		
1- Phase 1: Pipeline & flowline and wellsite	100 %	December 2017
2- Phase 2: CPF (Processing center)	100 %	
Installation of the pipeline & flowline	100 %	December 2017
Civil engineering work associated with the pipeline and flowline	100 %	February 2018
Installation of the wellsites	100 %	August 2018
Re-perforation of the CAT-1 well	100 %	July 2019
CPF purchase & construction of equipment	10 %	September 2020
DGH-1 well Frac Job	10 %	March 2021

**NOTE:** The planning changed after the construction of the CPF had been suspended (waiting for the exploration well results).

## 5- Main events and progress during 2019

- Phase I (Pipeline & flowline and wellsite): All the steps were 100% finished.
- Phase II (CPF): The project is suspended following the CAT-1 and DGH-1 test results and the drilling of the SMG-1 exploration well. The GHRIB concession development strategy will be revised. The re-perforation of the CAT-1 well was finished and the frac job for the DGH-1 well was planned (March 2021).

The purchase and construction process of the CPF equipment is 10% finished. The impact assessment (of the purchase option of the initially rented equipment) is approved and the set of specifications launch process to appoint a contractor is in progress. Likewise, the DGH-1 well Frac Job work is being carried out (10% progress in 2019).

## E- JINANE CONCESSION DEVELOPMENT PROJECT

### 1- Introduction

The JINANE concession comes from the Jenein Nord permit. It is located in the south of Tunisia (governorate of Tataouine) near the Laarich, Oued Zar, Adam, and Chourouq concessions. This concession is regulated by an association contract. It was awarded to co-holders ETAP & OMV (50/50).



## 2- Development

### a- Plan:

The development of this concession aims at extracting and transporting oil and gas to the Waha CPF.

Two wells were drilled:

- Jinane-1 well: drilled and tested during 2012.
- Jinane-2 well: drilled during 2013. Its perforation and completion - which were not completed - were finished in 2018.

The concession's development plan consists in:

- Installing Sucker Rod pumps (SRP) to activate the Jinane#1 and Jinane#2 wells.
- Connecting the Jinane#2 and Jinane#1 wells.
- Connecting both Jinane wells (1 and 2) to the trunkline linking Anaguid to the Waha CPF through a 7-km, 4" flowline.

The maximum use of the existing facilities and infrastructures is a key component of the design. This approach makes it possible to reduce the CAPEX (Capital expenditures) and the OPEX (Operational expenditure)

### b- Processing procedure:

- Both wells are activated by Sucker Rod pumps. These pumps enable the pumping of the triphasic fluid from the bottom of the well to the Waha CPF through the trunkline connecting Anaguid to the Waha CPF (built at the end of 2018).
- Upon arrival at the Waha CPF, the mix transits through the Slug Catcher before the oil is processed in a separator train and stored in the Waha tanks. Finally, the oil will be shipped to TRAPSA via pipeline.
- The Slug Catcher gas will be processed in the Waha CPF, and then transported to the 16" pipeline connecting Oued Zar to the STEG's El Borma processing plant where it will be processed then shipped to Gabes through a 10" pipe.

## 3- Budget

In 2019, the revised budget is of the order of MUSD 4.522. This downward revision of MUSD 0.078, compared to the initial budget, is essentially due to the delay in the workover of the Jinane-2 well because of the unavailability of a rig and the delay in the provision of a Multiphase meter.

The budgetary details of the aforementioned project are presented in the following table:

Item	Initial Budget (MUS\$)	Closing 2018 (MUS\$)	Closing 2019 (MUS\$)
Carry Over	-	-	0.106
<b>Wells</b>	<b>3.400</b>	<b>1.485</b>	<b>0.290</b>
Jinane-1 Workover	-	1.315	0.250
Jinane-2 Workover	-	-	0.040
Perforation /Well testing	-	0.170	-
<b>Facilities &amp; Flowlines</b>	<b>1.200</b>	<b>1.710</b>	<b>0.650</b>
Engineering & Project management	-	0.150	-
Installation of new pipelines	1.200	1.100	0.250
SRP installation	-	0.310	0.176
Multiphase Meter	-	-	-
Process Safety	-	-	-
Power Generation	-	0.150	-
<b>Total technical charges</b>	<b>4.600</b>	<b>3.195</b>	<b>1.046</b>
General & Administration	-	0.100	0.050
<b>Total Direct charges</b>	<b>4.600</b>	<b>3.295</b>	<b>1.096</b>
Development overhead @ 3%	-	0.099	0.033
<b>Total expenditures</b>	<b>4.600</b>	<b>3.393</b>	<b>1.129</b>

#### 4- Planning

The execution plan of the project is detailed in the table below:

Main milestones	End date
Workover Jinane-1	15/05/2019
Installation of the SRP pump for Jinane-1	19/05/2019
Installation of the flowline and commissioning	May 2019
Installation of the SRP pump for Jinane-2	May 2019
Jinane-2 workover	April 2020
Purchase of the Multiphase meter	Mid-2020

#### 5- Progress and main events during 2019:

- Installation and commissioning of the pipeline linking the two wells with the Waha Trunkline in May 2019.
- End of the Jinane-1 workover work and installation of the SRP pump.
- The Jinane-2 well is in production with a Jet Pump, waiting for a workover rig to install the SRP pump.
- The purchase process of a multiphasic meter is in progress.

## F- SONDES CONCESSION DEVELOPMENT PROJECT

### 1- Introduction

The SONDES concession, which is derived from the Anaguid permit, is located in the south of Tunisia (governorate of Tataouine). The deposit is located near the El Borma, Debbech, Sanhar, and Djebel Grouz concessions. This concession is regulated by the association contract awarded to ETAP, OMV, and THANI at the respective percentages of 50%, 40%, and 10%.

### 2- Development

The development of this concession aims at the on-site extraction and processing of the liquid before transporting it to the Waha CPF by trucks. Only one well -Sondes-1- was drilled in 2015.

The development of this concession comprises:

- The preparation of the wellsite.
- The installation of a Jet pump system for the activation of the Sondes-1 well (the fluid processed on-site via the Sondes Processing Facility SPF would be subject to an upgrade of OMV's available EPFs).
- The on-site storage of oil, and shipping to the Waha facilities by trucks.
- The on-site evasion of associated gas and the evaporation of the produced water in the local ponds.

### 3- Budget

In 2019, the project's revised budget was of the order of MUS\$ 2.194 (upward revision of about MUS\$ 0.694 compared to the initial budget). This revision is essentially due to the addition of an item (studies, preparation of the invitations to tender and project management) at the level of the engineering and project management work as well as the construction of a water pit planned as a result of the increase in water production.



Sondes concession development project

The budgetary details of the aforementioned project are presented in the table below:

Item	Initial Budget (MUS\$)	Closing 2018 (MUS\$)	Closing 2019 (MUS\$)
Engineering and project management	-	0.220	-
Upgrade of the exiting EPF	0.350	0.050	-
Acquisition of new equipment	-	-	-
Jet pump installation	0.750	0.580	0.300
Installation and wellsite preparation	0.400	0.400	0.200
Water pit	-	-	0.250
<b>Total technical charges</b>	<b>1.500</b>	<b>1.250</b>	<b>0.750</b>
General & Administration	-	0.030	0.100
<b>Total Direct charges</b>	<b>-</b>	<b>1.280</b>	<b>0.850</b>
Development overhead @ 3%	-	0.038	0.026
<b>Total expenditures</b>	<b>1.500</b>	<b>1.318</b>	<b>0.876</b>

#### 4- Schedule

The execution plan of the Sondes concession development project is detailed in the following table:

Main milestones	End date
EPF mobilisation by rental	16/10/2018
Start of production in a natural flow	27/10/2018
Purchase of the Jet pump	February 2019
Site preparation	March 2019
Jet pump installation	March 2019
Construction of the Water Pit	December 2019
Upgrade of the permanent EPF	June 2020

#### 5- Progress and main events during 2019

- The wellsite preparation works are finished in March 2019.
- The Jet pump for the activation of the well is installed; it was commissioned in April 2019.
- End of construction of the Water Pit in December 2019.
- The detail engineering related to the upgrade of the available EPF, as well as the procurement related to the purchase of new equipment are in progress.

## G- ASHTART EXPORT SOLUTION PROJECT

### 1- Introduction

The crude oil produced at the Ashtart facilities is exported to the IFR-II Floating Storage and Offloading unit via a 10" pipeline. This unit is moored to the PC1 buoy, which lies 1.8 km away from the central platform.

Following the inspections carried out in 2013, it was found that the bearing play was no longer operating within the permissible limits, which brings forward the risk of breaking. This failure could result from the bearing play malfunction, which would cause excessive tension, and would change at the level of the mooring and hoses configuration. This breakage could cause an uncontrollable drift or a major crude leak.

The objectives of the project are:

- Ensure the integrity of the Ashtart field facilities.
- Ensure the disconnection of the IFR-II storage barge (operation carried out in 2015).
- Ensure the continuity of production by using a temporary storage unit (FSO).
- Identify and establish a permanent solution for the storage and/or exportation of crude oil.

### 2- Development

The floating crude storage unit IFR-II has never been subject to dry dock operations since its installation on the Ashtart site. Many security and integrity problems have been identified since 2009 (especially the bearing play between the FSO unit and its PC1 mooring buoy).

The ASHTART EXPORT SOLUTION project comprises four work packages:

#### a- WP1: Emergency Response plan

This package consists mainly of preparing the engineering documents and the management procedures for the emergency in the event of a sudden IFR-II unit disconnection occur before the planned disconnection (package carried out in 2015).

#### b- WP2 : IFR-II Disconnection

This package consists of carrying out a planned disconnection of the IFR-II unit with its PC1 buoy, and its preservation in a safe place before potential Dry Dock reparation (Package carried out in 2015).

### c- WP3: Temporary storage solution «FSO»

This package consists in identifying a temporary FSO crude storage unit on the Ashtart site for a maximum period of 9 months, in order to ensure the continuity of production before the disconnection of the IFR-II unit (Package carried out in 2015).

### d- WP4 : Permanent Export Solution

This package consists in identifying and establishing a permanent solution for the storage and/or export of crude oil. Many scenarios of the process were identified, namely:

- Dry Dock of the IFR-II FSO unit.
- Reparation of the IFR-II unit locally.
- Construction of a Pipeline.
- Purchase of a new FSO unit.
- Purchase of a second-hand FSO unit (15-20 years).
- Submarine storage.

Following the OCM on April 28, 2016, the partners chose to purchase a second-hand FSO unit and to install it with a permanent mooring system.

The Permanent Export Solution project (WP4) will be implemented in two phases:

- Phase 1 (in 2016): Purchase of the FSO unit «Navion Europa» from the provider TEEKAY and its installation on the PC2 buoy.
- Phase 2 (planned for 2018 according to the planning): Construction and installation of the unit's permanent mooring system.

## 3- Budget (WP4)

### 3.a- Phase 1:

Lot	Amount (MUS\$)
Project Management	0.4
Tax & Insurance	1
FSO Purchase	14.5
Dry Dock	3
Mobilization	1
Integration	1
FEED for Permanent Mooring	0.5
Contingency	2
<b>TOTAL</b>	<b>23.4</b>

### 3.b- Phase 2 :

Lot	Amount (MUS\$)
Project Management	0.4
EPC and Transportation Contract	7.5
Installation & Commissioning	8.1
<b>TOTAL</b>	<b>16.0</b>

### 4- Planning (WP4)

The key dates of project WP4 (Permanent Export Solution) are:

Main milestones	Dates
Contract negotiation with TEEKAY	May/June/July 2016
Signing the MOA (Memorandum of Agreement)	August 2016
Obtaining of the license of import 'LOI'	September 2016
Issuance of the FEED report concerning the permanent mooring system.	September 2016
Beginning of the 'Dry Dock' works.	October 2016
Execution of the 'Dry Dock' works.	October 2016
Integration to the Ashtart site (PC2).	December 2016
Installation of the permanent system.	May/June 2018

### 5- Progress and main events during 2019

In conformity with the project's plan, the installation of the IFR-III unit permanent system (WP4: phase 2) was due in mid-2018. It consisted in:

- Having 100% availability (no loss in production related to extreme weather conditions).
- Reducing the operations' costs (reduce the minimum 'safe manning crew', HFO consumption).

However, this phase did not go as planned following the transfer of interests and bonds from OMV to PERENCO. The latter required the extension of the concession to carry out the second phase of the project. This has not been fulfilled by the end of 2019.

Note that 2019 was marked by the completion of the Additional Development Plan (POD) for the new granting of the Ashtart concession. Several projects have been studied to extend the lifespan until 2040 while optimizing operating costs. Among these projects, the laying of a pipeline according to the new technologies, namely not welded.

## H- TATAOUINE 10 MW PHOTOVOLTAIC PROJECT

### 1- Introduction

The 10 MW photovoltaic project (20 hectares) is located in the commune of El Gordhab in the delegation of Ghomrassen (governorate of Tataouine) in Southern Tunisian.

Indeed, on November 30, 2016, ETAP and ENI signed a Strategic Partnership Framework Agreement for the development of the 10 MW photovoltaic project from renewable energy sources on the occasion of the Investment Summit Tunisia 2020.

On April 27, 2018, the consortium ETAP-ENI obtained the agreement in principle 01/2018 from the Technical Commission of Renewable Energies for the realization of an electricity production project from a 10-MW photovoltaic (PV) source (authorization scheme) within the framework of a call for projects launched during May 2017. Let us note that the KW/H price is about 117 millimes; that is the lowest price posted for the aforementioned regime.

This agreement in principle has 2-year validity (until April 2020). It should be replaced by a final agreement that will allow producing electricity and selling it to STEG for 20 years.

In this context, a company called SEREE was created (April 2019) between ETAP and ENI for the realization and operation of the new photovoltaic plant.

### 2- Development

#### a- Development plan:

The project consists of installing a 10-MW photovoltaic plant connected to the STEG national power grid in Tataouine with an annual production of 22,573 GWH.

The photovoltaic station is a mobile-structure one (single-axis trackers) with a total number of 30 240 photovoltaic panels connected to four (04) substations converting the direct current (DC) to alternative current (AC).

The connection to STEG's national power grid will be made through a 10.5-km underground line and a 10-MVA Medium Voltage (MV)/Medium Voltage (MV) step-up transformer from 20kV to 30 kV.

#### b- Execution Procedure

The project is made up of 2 lots:

- Realisation of the photovoltaic plant.
- Connecting the photovoltaic plant to STEG's substation in Tataouine.

### 3- Budget

The global initial budget of the aforementioned project amounts to MTND 28.521 (EPC contract).



Additional work and costs in the course of the project execution increased the initial investment by about MTND 7.57 distributed as follows:

- A contract for the connection of the PV plant cable to the STEG plant (9.5 km) for a value of MTND 2.9.
- Diverse (third-party supervision, ENI/ETAP management, and supervision) estimated at MTND 4.67.

Phases	Global amount (MTND)
Phase 1	1.000
Phase 2	6.000
Phase 3	10.100
Phase 4	19.000
<b>Total</b>	<b>36.100</b>

#### 4- Planning

Item	Dates
Agreement in principle	April 2018
Signing the electricity purchase contract with the STEG.	May 2018
Approval of the Commission for the Adjustment and the Restructuring of Enterprises with Public Participation (CAREPP) for the formation of the company SEREE (ETAP-ENI)	June 2018
Request to update the design study to connect to the STEG's power grid	August 2018
Choice of the contractor SOCOBAT	December 2018
Final investment decision ENI	December 2018
Filing the investment declaration	January 2019
Receiving the detailed design study to connect to the power grid (STEG)	January 2019
Signing the contract with SOCOBAT	February 2019
End of the detailed engineering	March 2019
End of the procurement	August 2019
End of the construction	November 2019
Launch of the photovoltaic plant	December 2019

#### 5- Progress and main events during 2019

##### a- Detail engineering :

The progress of the engineering part is about 65%. The key technical documents were approved.

### b- Approvisionnement :

L'acquisition des équipements critiques de la station est résumée au niveau du tableau suivant :

Equipment	Progress status
MV Switchgear	Order issued
PV Module (FAT achieved)	Collected on the site
Trackers :	Collected on the site
- Piles	
- Structure & Tracker system	Order issued (90%). Collected on the site
Power station (FAT achieved)	Collected on the site
String boxes (FAT achieved)	Collected on the site
SCADA & Weather station (WS)	Collected on the site
Cable MV and Cable DC	Collected on the site
Cables LV	Collected on the site
MV/MV Power transformer (FAT achieved)	Collected on the site
Fence	Collected on the site

### c- Mobilisation on the site and construction:

- => Mobilisation: 100%
- => Site fence progress: 68%
- => Drilling of the anchoring holes and driving the piles: 100%
- => MTR construction work (control room): 81%
- => GT construction work (surveillance room): 65%
- => MVPS (Power Station) foundation work: 97%.
- => MV/MV transformer foundation work (STB building): 77%
- => Electricity and Instrumentation (E&I) work: 31%
- => Mechanical work: 35%.

### d- Connecting the photovoltaic plant to the STEG substation:

The update of the detailed study of connection was carried out on 30/01/2019. Following the meeting held with STEG (08/08/2019), it was agreed that the purchase of cable as well as the cable laying work would be carried out by the SEREE Company.

The line construction works will be carried out by the photovoltaic plant's SOCOBAT/ ETELEC consortium (engineering, procurement and construction contractor).

The amendment to the contract related to the aforementioned works is being prepared. Likewise, the MV cable for the connection of the station is delivered on-site. Nevertheless, the launch of the line-laying work depends on obtaining authorizations from the relevant public institutions.

#### e- Environmental impact study:

Pursuant to the letter of the National Environmental Protection Agency (ANPE) and to the current regulation, the project does not form part of its prerogatives.



Tataouine 10 MW photovoltaic project

## I- HAMRA PROJECT

### 1- Introduction

The onshore Hamra permit is in the Southeast of Algeria. It is located in the Northwest of the Illizi basin, 360 km south of Hassi Messaoud.

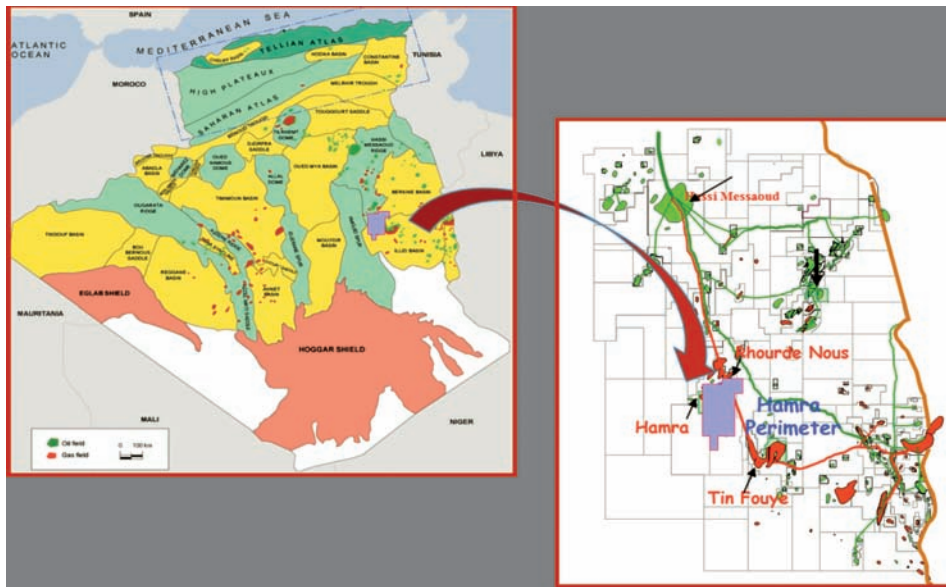
This permit is held by the associates SONATRACH at 75% as operator and NUMHYD at 25% as a partner. It was attributed in 2003 and covers an initial area of about 2473 km<sup>2</sup>.

The Hamra permit is currently in the predevelopment phase as of June 2016. Note that during the exploration period (2007-2016), three (3) discoveries were made and the area retained for the development of these discoveries is as big as 311.24 km<sup>2</sup> broken down as follows:

- Two (2) oil discoveries, namely El Abed Sud (ELAS) and Tabala (TABA).
- One (1) condensate gas discovery, namely Hassi Meksem (HSMK).

### 2- Project development and components

Three (3) Conceptual Development Plans (POD) relating to the aforementioned discoveries were filed twice with the National Agency for the Valorisation of Hydrocarbon Resources (ALNAFT): the first filing in May 2016 and the second filing of the revised version of the POD during August 2018, taking into account the recommendations of ALNAFT.



SONATRACH/Numhyd got the PODs approved by ALNAFT on December 13, 2018. They are mainly related to the:

- Agreement on a pre-development program of a first phase (additional work of analysis and reserves assessment of ELAS and TABA) for a duration of 24 months, followed by a revision of the ELAS and TABA PODs based on the outcomes of the work program of this phase and their submission for approval to ALNAFT.
- Agreement on a pre-development program of a first phase (additional work of analysis and reserves assessment of ELAS and TABA) for a duration of 24 months, followed by a revision of the ELAS and TABA PODs based on the outcomes of the work program of this phase and their submission for approval to ALNAFT.

#### a- ELAS et TABA fields (Oil):

The development of these fields comprises two phases, namely:

- The first phase includes the realization of an additional work program (PVT studies, potential testing, workovers, SCAL measures, and static model) in order to confirm the technical and commercial feasibility of the deposits.
- The second phase consists in:
  - The development of ELAS by the three existing wells.
  - The development of TABA by two wells of which one already exists and the drilling of a new well.
  - Fracturing the ELAS deposit's wells.
  - Establishment of a new collection network to ship the production from both fields to the Rhourde Nouss processing plant.
  - Release of the associated gas to SONATRACH.

### **b- HSMK field (Gas):**

The Hassi Meksem development scheme consists in:

- The development of the deposit by five (5) wells, including an existing well and the drilling of four (4) new wells.
- Treatment of production at the Rhourde Nouss gas processing center.

### **3- Budget**

The overall budget (CAPEX) approved for the development of the three discoveries goes as high as MUSD 58.

### **4- Production planning**

According to the September 2019 revision, the production schedule is detailed as follows:

First Gas: February 2022.

First Oil: April 2023.

### **5- Progress and main events during 2019**

**a-** Creation of the technical and management committees (February 2019).

**b-** During the meetings of the Technical Committee and the Management Committee (CDG) n°4 that were held on September 11 and 12, 2019 respectively, the 2019/2020 action plan, as well as the final version of the Joint Operating Body (OOC) organization chart, were revised and finalized. Besides, a procedure of approval and execution of the HAMRA development works was agreed upon and approved.

According to the agreed action plan, a workshop geared towards «reservoir studies» was held in Algiers on October 14 and 15, 2019. The Reservoir modeling and Geological and Geophysical (G&G) works carried out by NUMHYD were presented and discussed and actions were recommended. A mission was carried out to the Central Direction of Laboratories and core shack of Hassi Messaoud (DLCC) from November 28 to 29, 2019 by representatives of SONATRACH (DLAB, PED, AST) and a representative of NUMHYD, in order to identify the cores and select samples for a Special Core Analysis (SCAL).

Preparation of an agreement for the creation of the OOC and its submission by NUMHYD to the SONATRACH/AST division for approval on October 15, 2019.

NOTE: the OOC creation agreement was approved on December 1, 2019.

**c-** The Management Committee meeting n°5 was held on November 26, 2019. There was the approval of the 2019 closing budget, the 2020 provisional budget as well as the Meet Term Plan 2020-2024.

## J- ZARAT PROJECT

### 1- Introduction

The Zarat field is located 80 km offshore, in the Gulf of Gabes, at about 90 m water depth. It straddles the border between the JOINT OIL block and the Zarat permit held and exploited by ETAP (100%).

Three successful wells were drilled, namely: Zarat-1 drilled in 1992, Zarat-2 drilled in 1995, and Zarat North-1 drilled in 2010. The reserves of the aforementioned field are estimated at 130 million barrels of oil equivalent (MBOE).

### 2- Project Development :

The Zarat project comprises two phases:

**a- First phase:** It consists in:

- The establishment of a housing platform and a central production platform of a processing capacity of 2.8 million m<sup>3</sup>/day of gas and 20 thousand barrels/day of condensate.
- The processing and storage of crude oil in an FSO unit (Floating Storage and Offloading unit).
- The establishment of a sub-sea pipeline to transport the crude oil to the Miskar field.
- The construction of an additional unit at the level of Hannibal for the recovery of LPG.
- The drilling of 4 horizontal development wells.

**b- Second phase:** This phase comprises:

- The drilling of 3 new horizontal development wells.
- The establishment of a permanent housing unit adjacent to the production platform.

### 3- Budget/Investment

The project development budget is estimated at MUSD 1627.

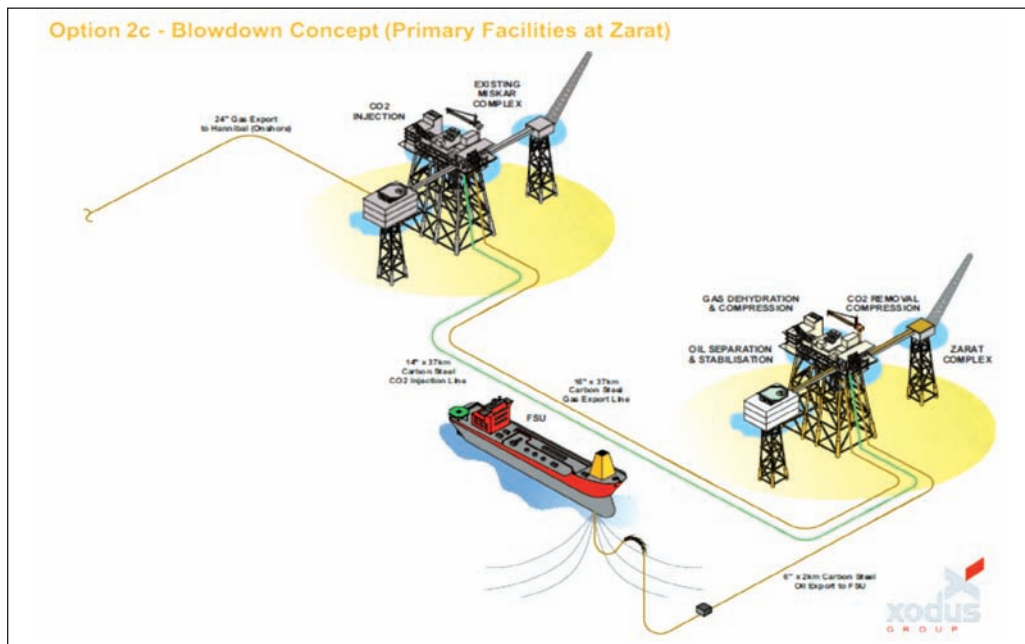
### 4- Planning

The Zarat project execution plan is as follows:

Milestones	Dates
Front-End Engineering Design (FEED)	2021
Execution	2022-2023
Installation	2024
First Oil & Gas	2025

## 5- Main events during 2019

- a- Joint Oil continued the marketing actions under the options EPSA (Exploration & Production Sharing Agreement) and DEPSA (Development & Production Sharing Agreement) via the International Company of consulting and E&P services 'Beicip FL'.
- b- ETAP negotiated with Shell the possibility to use the Miskar infrastructures; a mutual agreement was reached. Besides, a joint team will assess the injection of CO<sub>2</sub> and its use for the reservoir of the Miskar field.



Zarat development scheme



# SUMMARY

<b>SECTION</b>	<b>1</b>
<b>ENERGY SITUATION</b>	
Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13
<b>SECTION</b>	<b>2</b>
<b>TECHNICAL ACTIVITIES</b>	
Exploration .....	21
Development .....	28
➔ Production .....	56
Operating .....	63
<b>SECTION</b>	<b>3</b>
<b>MANAGEMENT ACTIVITIES</b>	
Petroleum Agreements .....	67
Commercial Activities .....	70
<b>SECTION</b>	<b>4</b>
<b>GOVERNANCE AND AUDIT ACTIVITIES</b>	
Management Control .....	77
Governance .....	80
<b>SECTION</b>	<b>5</b>
<b>COMMUNITY &amp; ENVIRONMENTAL ACTIVITIES</b>	
Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91
<b>SECTION</b>	<b>6</b>
<b>SUPPORT ACTIVITIES</b>	
<b>I. Technical Support</b>	
Petroleum Services .....	96
Exploration Studies .....	100
<b>II. Management Support</b>	
Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120
<b>SECTION</b>	<b>7</b>
<b>APPENDICES</b> .....	123



# PRODUCTION

## A- CRUDE OIL AND CONDENSATE PRODUCTION

ETAP concessions crude oil and condensate production (Appendix 5) reached 1.297 million MT (10 061 051 barrels) in 2019 against 1.405 million MT (10 932 787 barrels) in 2018 thus registering a regression of about 8%. This decrease is mainly due to the natural decline in the fields' production: Hasdrubal (22%), Anaguid (-36%), BBT (-33%), Maâmoura (-23%), Ghrib (-22%) and Oued Zar (-14%).

The negative difference recorded in 2019 is due, in addition to the natural decline of most of the fields, to the following technical facts:

- Hasdrubal (-22%): Scheduled general shutdown of the field for 29 days for the Major Shutdown and shutdown of the A1 well for 6 days.
- Anaguid East (-36%): Shutdown of the following wells:
  - Amani-1 and Amani-2 for 27 and 47 days respectively for workover works. These two wells resumed production on 02/02/2019 and 08/06/2019 respectively.
  - Maha-1 as of 06/04/2019 and Chadha-1 as of 30/04/2019.
  - Nada-1 for 58 days following problems at the level of the surface-mounted pump. These wells resumed production on 10/11/2019.
- Bir Ben Tartar (-33%): Repetitive stops of the TT-16 and TT-28 wells because of pressure build-up, and of the TT-6, TT-3, TT-28, and TT-14 wells because of problems at the Jet and Sucker Rod pumps (JP & SRP).
- Ghrib (-22%):
  - Repetitive shutdowns of the CAT-1 well for brine wash operations.
  - Shutdown of the DGH-1 well from 18/07/2019 to 21/07/2019 because of pressure build-up.
  - Shutdown of the CAT-1 well to carry out maintenance work on the compressor (from 04/07/2019 to 10/07/2019) and to install the Memory Gauge as well as the pressure build-up (from 22/10/2019 to 02/11/2019).
- Oued Zar (-14%): shutdown of the HMD-9 (7 days) and the HMD-8 (13 days) wells, as well as the suspension of the HMD-N1 well for 15 days to optimize the gas to be injected.

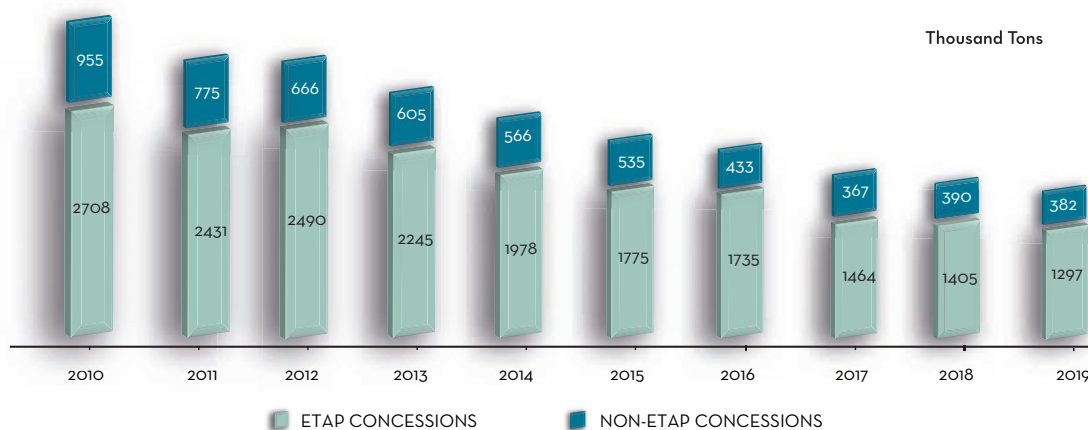
Moreover, 2019 was marked by the increase in the production of the following fields:

- A 23% increase in the Adam field following:
  - The drilling of the HAWA-5 (it began production on 30/12/2018) and Nour-1 DirA (it began production on 23/06/2019) wells.
  - The good performance of the Karma-2 and Karma-1 wells following the perforation of other levels.
  - The resumption of production of the Iklil-I well on 02/06/2019.
- A 22% increase for the Dorra field following the change of the Electric Submersible pump (ESP) and the return to production of the Mona-1 well on 15/02/2019.
- Sondes (+100%): due to the beginning of production of the Sondes-1 well on 27/10/2018 and the installation of a Jet pump on April 23, 2019.
- Jinane (+100%): due to the beginning of production of the field on 24/11/2018 and the installation of the Jet and Hydraulic pumps (JP & HPU).

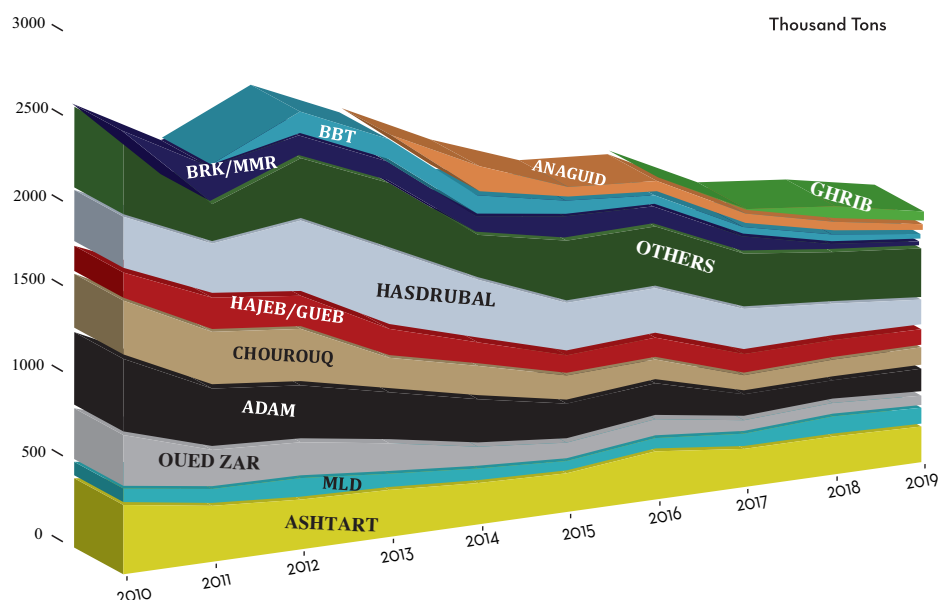
It is worth noting that in 2019, the ETAP concessions' oil and condensate production represents 77.82% of the domestic production (1.679 million MT, which is 12.928 million barrels) against 78.36% in 2018 (1.405 million MT, i.e. 10 932 787 barrels).

The daily average of ETAP concessions' oil and condensate production went down from 29.95 thousand barrels/d in 2018 to 27.56 thousand barrels/d in 2019.

### National production of crude and condensate



## ETAP Concessions' Crude and Condensate Production



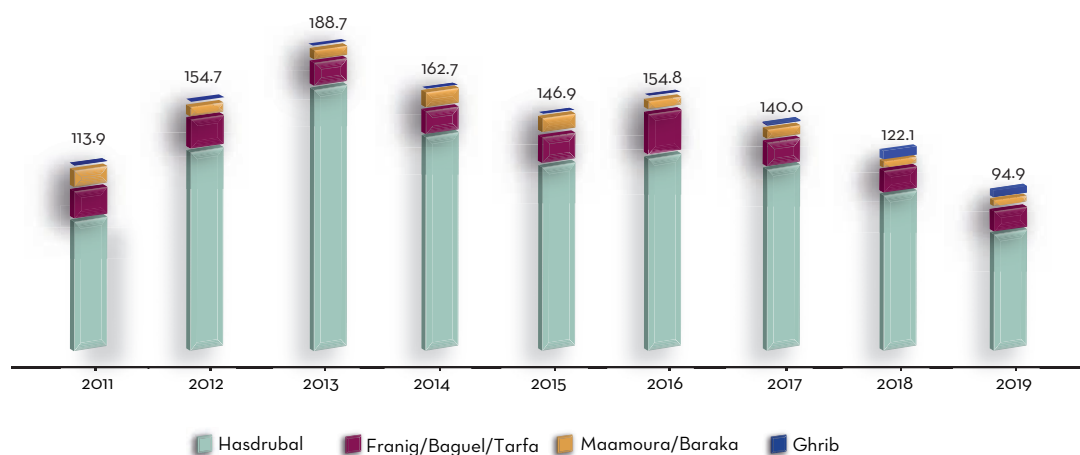
**Note.** OTHERS: Baguel/Tarfa, Cercina/C. Sud, Sabria, El Ain, Sidi El Kilani, Franig, Ezzaouia, Rhemoura, Chergui, Mazrane, Djebel Grouz, Dorra, DST, Jinane and Sondes.

## B- LPG FIELD PRODUCTION

The ETAP concessions' LPG field production (Appendix 6) registered a decrease of about 18%, going from 122.103 thousand MT (1446 thousand barrel) in 2018 to 94.957 thousand MT (1180 thousand barrel) in 2019. This reduction is due to the natural decline as well as to a fall in the production of the following fields:

- A 48% decline of the Maâmoura field following the bad yield of the MMR E-2 and MMR-2 DIR LS wells.
- A 22% decrease in the Ghrif field because of the repetitive stoppages of the CAT-1 and DGH-1 wells.
- A 19% decrease for the Hasdrubal field due to the 6-day shutdown of the A-1 well (February 2019) as well as the scheduled 29-day general shutdown of the field's production for the major shutdown.
- A 14% decrease of the Franig field which came as a result of the repetitive stoppages of the EFR-1 well due to pressure build-up and to maintenance work on the compressor.

## ETAP concessions' LPG production



	2011	2012	2013	2014	2015	2016	2017	2018	2019
Hasdrubal	84.2	129.9	167.5	137.8	121.1	123.7	117.7	99.9	76.3
Franig/Baguel/Tarfa	18.8	18.0	15.1	15.2	17.2	25.1	15.1	13.8	12.7
Maamoura/Baraka	10.8	6.9	6.1	9.8	8.6	6.0	6.3	2.9	1.6
Ghrib	0.0	0.0	0.0	0.0	0.0	0.0	0.8	5.4	4.3
<b>TOTAL</b>	<b>113.9</b>	<b>154.7</b>	<b>188.7</b>	<b>162.7</b>	<b>146.9</b>	<b>154.8</b>	<b>140.0</b>	<b>122.1</b>	<b>95.0</b>

## C- NATURAL GAS PRODUCTION

ETAP concessions' gas production (Appendix 7) reached 1.194 million Toe-GCV in 2019 (1134.772 million Nm<sup>3</sup>) compared to 1.398 million Toe-GCV in 2018 (1336.957 million Nm<sup>3</sup>) thus registering a 15% decrease.

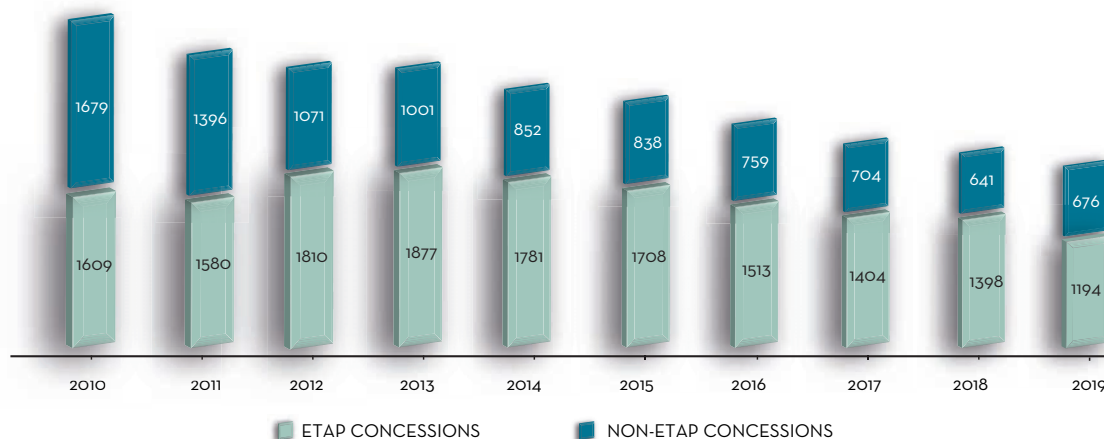
In addition to the natural decline, this regression is explained by the reduction in the production of the following fields:

- Maâmoura (-81%): frequent suspensions of gas sales because of problems at the level of Tazerka amine unit (February 2019) and the shutdown of the MMR-2 DIR LS well since 05/01/2019.
- Chourouq (-45%): shutdown of the gas valorization compressor and repetitive stoppages of the lift gas compressors for maintenance works.
- Ghrib (-35%): Shutdown of the gas export compressor (for maintenance works) and repetitive stoppages of the CAT-1 well.
- Hasdrubal (-23%): following the shutdown of the A-1 well from February 04 to 09, 2019 for the change of the amine exchanger, as well as the scheduled general shutdown of the field production (from 28 October to 25 November 2019).
- Sabria (-16%): Interruption of gas shipment from April 16 to 23, 2019 (maintenance work on the export compressor) and poor performance of the Win-12 bis and Win-13 wells.

The quantities of ETAP concessions' commercial gas, fixed at the end of December 2019, represent about 63.8% of the domestic production (1.869 million Toe-GCV) against 68.6% in 2018 (2.038 million Toe-GCV).

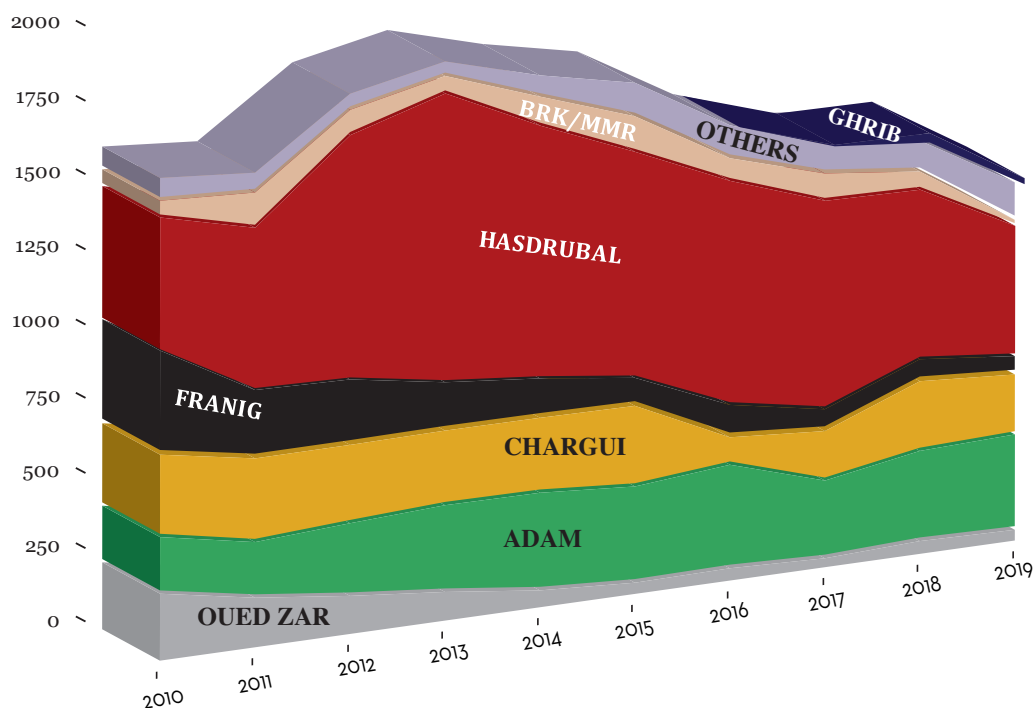
### National production of commercial gas

Thousand Toe-GCV



### ETAP concessions' gas production

Thousand Toe-GCV



Note. OTHERS: Baguel/Tarfa, Sabria, Djebel Grouz, Chourouq, Dorra, MLD, Jinane and Anaguid.

## D- DEVELOPMENT WELLS DRILLING

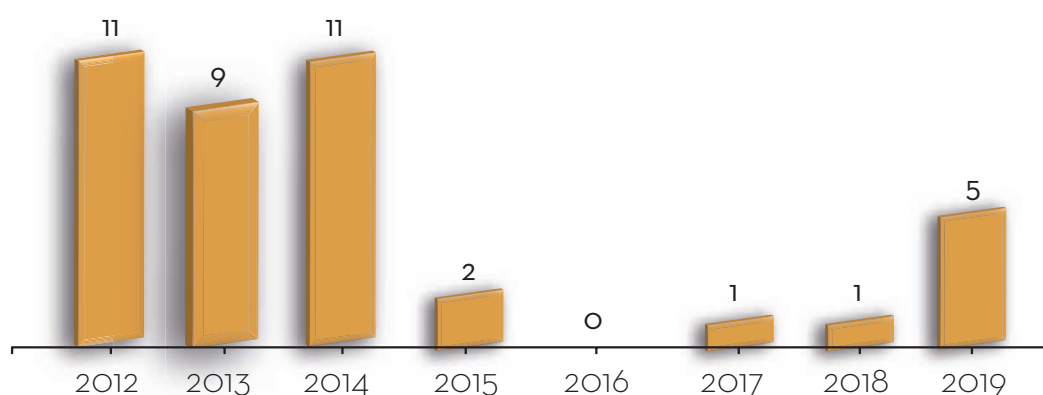
During the year 2019, five (5) development wells were drilled, namely: Amani-3, TRF-5, TRF-4, Nour-1 Dir A and Hawa-1 Dir A.

Well	Concession	Depth (m)	Drilling period	Results
Amani-3	Anaguid Est	2987 m	31-05-2019 21-07-2019	Negative result
TRF-4	Baguel/Tarfa	2435 m	28-01-2019 24-03-2019	Production starts on 20/08/2019 with an initial oil debit of 1100 BPD (600 BPD December 2019)
Nour-1 Dir A	Adam	3636 m	27-03-2019 29-05-2019	Production starts on 23/06/2019 with 280 BPD of oil et 240 k Sm <sup>3</sup> /d of gas
Hawa-1 Dir A	Adam	3668 m	24-08-2019 31-10-2019	Production starts on 14/12/2019 with an oil debit of 220 BPD and 100 k Sm <sup>3</sup> /d of gas
TRF-5	Baguel/Tarfa	36 m	05-07-2019 06-07-2019	Drilling operations suspended given the instability of the platform

### NOTES:

- The TRF-4 drilled on Baguel/Tarfa concession is a dual-objective well (development and exploration).
- The Baraka-2 DIR well drilled on the Baraka concession (being drilled until 31/12/2019), is an exploration well with an initial objective of development (a discovery made in early 2020).

### Development well drilling



# SUMMARY

## SECTION

1

### ENERGY SITUATION

Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13

## SECTION

2

### TECHNICAL ACTIVITIES

Exploration .....	21
Development .....	28
Production .....	56
→ Operating .....	63

## SECTION

3

### MANAGEMENT ACTIVITIES

Petroleum Agreements .....	67
Commercial Activities .....	70

## SECTION

4

### GOVERNANCE AND AUDIT ACTIVITIES

Management Control .....	77
Governance .....	80

## SECTION

5

### COMMUNITY & ENVIRONMENTAL ACTIVITIES

Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91

## SECTION

6

### SUPPORT ACTIVITIES

#### I. Technical Support

Petroleum Services .....	96
Exploration Studies .....	100

#### II. Management Support

Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120

## SECTION

7

APPENDICES .....	123
------------------	-----

# FIELDS OPERATING

The Fields Operating Direction mission is the planning, coordination, and realization of the exploration works on the ETAP-operated permits (alone or in association with partners) in order to meet its contractual obligations towards the Granting Authority.

During 2019, the Fields Operating Direction continued to carry out its activities related to the management of three (03) exploration permits, namely: Chaâl, Jenein Centre, and “Nord des Chotts” (for closing).

## A- ACTIVITIES ON THE CHAAL PERMIT

### 1- Introduction

It should be recalled that the Chaal permit is located in the center-east of Tunisia (Delegation of Bir Ali Ben Khelifa, Governorate of Sfax), and covers an area of 1384 km<sup>2</sup>. It is held 100% by ETAP as an operator. This permit is in the course of being extended from the initial period, which will expire on August 28, 2020.

The work program of the initial period consists of the sidetrack recovery of the Chaal-1 exploration well, with an investment estimated at eight million dollars (commitment).

However, in order to better define the structure of Bir Ali Ben Khalifa, and to take advantage of this structure's significant gas potential, ETAP decided to acquire a 3D seismic (150 km<sup>2</sup>) covering the aforementioned structure to resume the drilling of Chaal-1 (initial program) or the drilling of a new well in a better area.

### 2- Activity during 2019

In 2019, the Field Operating Direction finished the 3D seismic treatment as well as the geological, geophysical, and reservoir studies:

- a-** Geological studies and laboratories: geological, geochemical, sedimentological, and biostratigraphic.
- b-** Geophysical studies: placement of the old drilled wells, Chaal 3D seismic treatment, and 2D & 3D seismic interpretation.
- c-** Reservoir studies: petrophysical interpretation, reservoir modeling, reservoir uncertainties study, and interpretation of the drilled well's tests.



The realization of these studies (G&G&R) allowed:

- The estimation of the gas reserves and resources.
- The choice of location of the well to be drilled in 2020.
- The total depth: 4600 m.
- The drilling options: sidetrack or new well.

Within the framework of the HTHP (High Temperature & High Pressure) well, the following actions were carried out in 2019:

- Presentation of the advantages, disadvantages, stages of the drilling operation, costs, and the planning of drilling activities for each drilling option (Sidetrack and new well).
- Launch of a call to tender related to the technical assistance to the drilling (drilling manager, superintendant, drilling supervisors and technical assistance).
- Signature, along with the Tunisian Drilling Company (CTF), of statement to include the drilling in its schedule during 2020.



Chaal project 3D seismic acquisitions

## B- ACTIVITIES ON THE JENEIN CENTRE PERMIT

In 2019, the Fields Operating Direction carried out the monitoring of the works on the aforementioned permit as well as the geological and geophysical studies. Besides, it contributed to the choice of location of the commitment well to be drilled in 2020 (Q4).

## C- ACTIVITIES ON THE “NORD DES CHOTTS” PERMIT

### 1- Introduction

It should be recalled that the “Nord des Chotts” permit is an exploration permit located in the Southwest of Tunisia, occupying an area of 3894 km<sup>2</sup>. It is regulated by a joint contract and held at 70% by ETAP as an operator, and 30% by NUMHYD as a partner.

This permit is in the extension period of the first renewal which expires on 27/03/2018, with a commitment to carry out an exploration drilling and to reprocess about 500 km of the existing 2D seismic in order to highlight certain deep objectives: the Jurassic Play in this instance. All these commitments were honored in 2018.

In view of the disappointing results of the KB-2 drilling, realized in 2018 on the Jebel Kebir structure, ETAP and its partner NUMHYD notified the Granting Authority on July 13, 2018, of their relinquishment of the “Nord des Chotts” permit.

### 2- Activities during 2019

- The site rehabilitation of the Kebir-2 (KB-2) drilled well was carried out.
- The closure of the “Nord des Chotts” permit is in progress.



Rehabilitation of the KB-2 wellsite

# SUMMARY

## SECTION

1

### ENERGY SITUATION

Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13

## SECTION

2

### TECHNICAL ACTIVITIES

Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63

## SECTION

3

### MANAGEMENT ACTIVITIES

➡ Petroleum Agreements .....	67
Commercial Activities .....	70

## SECTION

4

### GOVERNANCE AND AUDIT ACTIVITIES

Management Control .....	77
Governance .....	80

## SECTION

5

### COMMUNITY & ENVIRONMENTAL ACTIVITIES

Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91

## SECTION

6

### SUPPORT ACTIVITIES

#### I. Technical Support

Petroleum Services .....	96
Exploration Studies .....	100

#### II. Management Support

Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120

## SECTION

7

APPENDICES .....	123
------------------	-----

# PETROLEUM AGREEMENTS

## Introduction

The year 2019 was marked by the continuation of ETAP's efforts to face the decline in fossil energies and to take part in mitigating the country's energy deficit.

## A- HYDROCARBONS TITLES DEMAND

### 1- Prospecting permit

An official request for the granting of a prospecting permit covering the "Zaphir" block was filed on October 18, 2019. A favorable opinion was issued by the Hydrocarbon Consulting Committee (CCH) during the meeting held on November 29, 2019.

### 2- Hydrocarbon exploitation concession

#### a- Maâmoura concession issued from the Enfidha ex-permit

A new grant of the concession for a 20-year period, as of January 1, 2019.

#### b- Gremda concession from Kerkenah Ouest ex-permit

A new grant of the concession for a 15-year period, as of January 1, 2019.

#### c- Ezzaouia concession issued from Zarzis ex-permit

A new grant of the concession for a 20-year period, as of January 1, 2019.

#### d- Jebel Douleb concession from the "Tunisie Centre-Nord" ex-permit

A new grant of the concession for a 16-year period, as of January 1, 2019.

## B- GRANT OF NEW HYDROCARBON TITLES

### 1- Permits

The prospecting permits mentioned below were granted in 2019:

- The Hezoua prospecting permit was granted for a 2-year period (an area of 8536 km<sup>2</sup>) under the production sharing formula where ETAP is the permit holder and Hunt Oil is the entrepreneur. The permit expires on 23/12/2021.
- The El Waha prospecting permit was granted for a 2-year period under the association formula between ETAP and Uplund. The permit expires on 23/12/2021.
- The Saouef prospecting permit was granted for a 2-year period under the production sharing formula between ETAP and Uplund. The permit expires on 23/12/2021.

- The Kef Abed prospecting permit was granted for a 2-year period under the production sharing formula where ETAP is the permit holder and Panoceanic is the entrepreneur. The permit expires on 23/12/2021.
- The Teskrea prospecting permit was granted for a 2-year period under the production sharing formula where ETAP is the permit holder and Panoceanic is the entrepreneur. The permit expires on 23/12/2021.
- The Metline prospecting permit was granted for a 2-year period under the production sharing formula where ETAP is the permit holder and Panoceanic is the entrepreneur. The permit expires on 23/12/2021.

## C- HYDROCARBON TITLES MANAGEMENT

### 1- Permit extensions

- «Araifa» exploration permit: a two-year (O2) extension from 27/12/2018 to 26/12/2020.
- «Chaal» exploration permit: a one-year extension, as of 29/08/2019.
- «El Jem» exploration permit: a two-year (O2) extension from 03/06/2018 to 02/06/2020.
- «Jenein Sud» exploration permit: a one-year extension, as of 20/04/2019.
- «Mahdia» exploration permit: a two-year (O2) extension of the validity period of the first renewal from 20/01/2018 to 19/01/2020; then an exceptional one-year extension of the validity period of the first renewal going from 20/01/2020 to 19/01/2021.
- «Zaafrane» exploration permit: a two-year (O2) extension from 04/05/2019 to 03/05/2021.

### 2- Permit renewal

Borj El Khadra exploration permit: by an amendment to the agreement, a 4th renewal was granted to the “Borj El Khadra” permit. It covers the period from 14/06/2013 to 01/07/2020.

A favorable opinion was issued during the meeting held on January 31 2019 for the proposed procedure concerning the regularisation of the aforementioned permit.

### 3- Name change of the hydrocarbon right-holding companies

- Sale of the Medco Energi Tunisia Company shares for the Anglo-African Oil & Gas Company.
- Disposition of rights and interests of the Panoro TPS Production GmbH for the company Panoro TPS (UK) Production Limited on the Rehmoura, Hajeb/Guibeba, Gremda/El Ain, and Cercina /Cercina Sud concessions.

# SUMMARY

<b>SECTION</b>	<b>1</b>
<b>ENERGY SITUATION</b>	
Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13
<b>SECTION</b>	<b>2</b>
<b>TECHNICAL ACTIVITIES</b>	
Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63
<b>SECTION</b>	<b>3</b>
<b>MANAGEMENT ACTIVITIES</b>	
Petroleum Agreements .....	67
➡ Commercial Activities .....	70
<b>SECTION</b>	<b>4</b>
<b>GOVERNANCE AND AUDIT ACTIVITIES</b>	
Management Control .....	77
Governance .....	80
<b>SECTION</b>	<b>5</b>
<b>COMMUNITY &amp; ENVIRONMENTAL ACTIVITIES</b>	
Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91
<b>SECTION</b>	<b>6</b>
<b>SUPPORT ACTIVITIES</b>	
<b>I. Technical Support</b>	
Petroleum Services .....	96
Exploration Studies .....	100
<b>II. Management Support</b>	
Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120
<b>SECTION</b>	<b>7</b>
<b>APPENDICES</b> .....	123

# COMMERCIAL ACTIVITIES

## A- EXPORTS

### 1- Crude Oil & Condensate (Miskar/Hasdrubal)

During 2019, ETAP's exports increased significantly compared to 2018. Indeed, ETAP exported 1.1 million MT of crude oil and condensate Miskar & Hasdrubal for a total value of MUSD 535. This is a 387 thousand MT rise in quantity and a 163 MUSD increase in value compared to 2018.

This increase is explained mainly by the 402 thousand MT rise in the Zarzaitine mix quality crude oil in 2019 following the decline in the quantities transferred to STIR (92 thousand MT in 2019 against 483 thousand MT in 2018) due to the 9-month shutdown of the latter for maintenance.

In 2019, the average export price (across all qualities) was USD 63.32/b, that is a 7.8% decrease compared to 2018 (USD 68.67/b).



Skhira terminal



The crude oil and Miskar & Hasdrubal condensate exports are summed up in the following table:

QUALITY	QUANTITY MT	QUANTITY Bbl	PRICE USD/b	AMOUNT USD
Zarzaitine mix	715 730.566	5 618 361.000	63.58	357 202 290.13
Ashtart	150 675.643	1 086 891.000	67.50	73 369 559.93
Rhemoura mix	127 753.215	931 704.000	61.30	57 108 599.92
Ezzaouia mix	23 031.452	178 406.000	62.63	11 173 210.97
<b>CRUDE OIL TOTAL</b>	<b>1 017 190.876</b>	<b>7 815 362.000</b>	<b>63.83</b>	<b>498 853 660.95</b>
Miskar & Hasdrubal Condensate	73 719.883	635 494.000	57.09	36 277 774.91
<b>TOTAL</b>	<b>1 090 910.759</b>	<b>8 450 856.000</b>	<b>63.32</b>	<b>535 131 435.86</b>

## 2- Petroleum products

During 2019, ETAP exported 20 thousand MT of Hasdrubal Propane for a value of 7 MUSD, thus registering an 11 thousand MT decrease compared to 2018. This is explained essentially by the natural decline of the Hasdrubal field production on the one hand, and the scheduled, one-month technical shutdown of the aforementioned field on the other hand.

Moreover, ETAP exported 23 thousand MT of Gabes condensate on behalf of the STEG for a value of MUSD 10. Thus, the quantity of these exports stagnated in 2019 compared to the previous year (+0.7%).

The petroleum products exports are summed up in the following table:

QUALITY	QUANTITY MT	PRICE USD/MT	AMOUNT USD
Hasdrubal Propane	19 706.664	366.399	7 220 501.12
Gabes condensate	22 729.725	452.345	10 281 671.98

## B- PURCHASES FROM PARTNERS

During 2019, ETAP purchased 33 thousand MT of Tunisian crude oil from its partners for a value of 17 MUSD, of which 8.4 MUSD are payable in the US dollar and 8.2 MUSD are payable in their equivalent in Tunisian dinar. They are detailed in the following table:

### ZARZAITINE MIX PURCHASE (USD)

PARTNER	QUANTITY MT	QUANTITY Bbl	PRICE USD/b	AMOUNT IN USD
CNPCI	2 406.300	18 879.000	63.057	1 190 453.10
PERENCO	2 807.350	22 026.000	63.057	1 388 893.48
CNPCI	2 178.090	16 991.000	66.117	1 123 393.95
<b>TOTAL</b>	<b>7 391.740</b>	<b>57 896.000</b>	<b>63.96</b>	<b>3 702 740.53</b>



### EZZAOUIA MIX PURCHASE (USD)

PARTNER	QUANTITY MT	QUANTITY Bbl	PRICE USD/b	AMOUNT IN USD
ECUMED	8 160.448	63 212.000	61.228	3 870 344.34
HBS	1 678.280	13 000.000	61.228	795 964.00
<b>TOTAL</b>	<b>9 838.728</b>	<b>76 212.000</b>	<b>61.23</b>	<b>4 666 308.34</b>

### BENI KHALLED CRUDE PURCHASE (TND)

PARTNER	QUANTITY MT	QUANTITY Bbl	PRICE USD/b	AMOUNT IN USD
EXXOIL	271.337	2 128.000	71.29	151 705.12
EXXOIL	258.354	2 012.500	59.93	120 609.13
<b>TOTAL</b>	<b>529.691</b>	<b>4 140.500</b>	<b>65.77</b>	<b>272 314.25</b>

### ZARZAITINE MIX PURCHASE (TND)

PARTNER	QUANTITY MT	QUANTITY Bbl	PRICE USD/b	AMOUNT IN USD
TRAPSA	8 021.00	62 930.000	64.477	4 057 537.61
SEREPT	1 200.30	9 440.00	62.438	589 414.72
SEREPT	1 210.05	9 440.00	65.777	620 934.88
TRAPSA	5 041.875	39 331.00	67.377	2 650 004.79
<b>TOTAL</b>	<b>15 473.225</b>	<b>121 141.000</b>	<b>65.36</b>	<b>7 917 892.00</b>

## C- DOMESTIC SALES

In the context of supplying the country with hydrocarbons, ETAP conducts the sale of crude oil and LPG to STIR and of Tunisian gas to STEG.

### 1- CRUDE OIL AND LPG SALES TO STIR

#### a- Crude oil

Crude oil sales to STIR reached 101 thousand MT in 2019 for a total value of 49 MUSD, thus registering a substantial, 80%-decrease in quantity and an 83%-decrease in value compared to the previous year.

This decrease is mainly due to the 80% fall in the quantities of the Zarzaitine mix crude oil sold to STIR (a 391 thousand MT decrease in 2019 compared to 2018) following the 9-month shutdown of the refinery for maintenance.

It should be noted that the “Zarzaitine mix” crude oil sales to STIR are made in FOB mode from La Skhira, ensured by oil tankers and billed in Tunisian Dinar, whereas the Maâmoura/Baraka and Beni Khalled sales are ensured by tank trucks.

The Tunisian crude oil sales to STIR in 2019 are detailed in the following table:

QUALITY	QUANTITY MT	QUANTITY Bbl	PRICE USD/b	AMOUNT USD
Zarzaitine Mix	91 560.891	715 334.000	62.23	44 514 497.62
Maâmoura/Baraka	8 488.053	65 914.000	62.01	4 087 318.59
Beni Khalled	756.701	5 915.000	65.17	385 471.35
<b>TOTAL</b>	<b>100 805.645</b>	<b>787 163.000</b>	<b>62.23</b>	<b>48 987 287.56</b>

## b- LPG

In 2019, and within the framework of supplying STIR with LPG, ETAP delivered 31 thousand MT for a value of 13 MUSD, thus registering a decrease of about 6 thousand MT in quantity and 7 MUSD in value compared to 2018.

Let us note that in 2019:

- The Hasdrubal Propane sales to STIR registered a slight, 5.43% increase in quantity to 10 thousand MT, against 1 MUSD decrease in value compared to 2018.
- The Hasdrubal Butane sales to STIR registered a fall in quantity as well as in value, respectively of 6 thousand MT and MUSD 5 compared to the previous year.
- The Maâmoura and Baraka LPG sales to STIR reached 0.917 thousand MT for a value of KUSD 399, thus registering a 52% decrease in quantity and a 61% decrease in value compared to 2018 following the workover carried out on these concessions during 2019.

The LPG sales to STIR are broken down as follows:

QUALITY	QUANTITY MT	PRICE USD/MT	AMOUNT USD	AMOUNT TND
Hasdrubal Propane	10 257.952	369.907	3 794 493.372	11 196 318.48
Hasdrubal Butane	19 916.635	428.876	8 541 764.49	25 235 234.78
Maâmoura/Baraka LPG	917.435	435.380	399 432.55	1 170 163.997
<b>TOTAL</b>	<b>31 092.022</b>	<b>409.613</b>	<b>12 735 690.42</b>	<b>37 601 717.25</b>

## 2- NATURAL GAS SALE TO STEG

### a- Tunisian natural gas

In 2019, ETAP sold about 597 thousand Toe of Tunisian gas to STEG, coming from the fields: Adam, Oued Zar, Djebel Grouz, Maâmoura/Baraka, Sabria, Baguel & Franig, Hasdrubal, Chergui, Chourouq, and Ghrib. The value of these quantities goes as high as about MUSD 172.

The sale of natural gas to STEG registered a decrease of 113 thousand Toe in quantity and USD 35 million in value compared to 2018. This is essentially explained by the natural decline in the production of certain fields.

It should be pointed out that the Tunisian fields produced quantities are entirely sold to STEG.

The Tunisian gas sales to STEG are broken down in the following table:

GAS	QUANTITY TOE	PRICE USD/TOE	AMOUNT USD	AMOUNT TND
Adam <sup>(1)</sup>	160 134.300	242.114	38 770 816.930	114 463 684.142
Oued Zar <sup>(1)</sup>	18 611.480	240.057	4 467 824 .650	13 173 192.554
Djebel Grouz	6 588.060	274.542	1 808 698.23	5 366 212.128
Maâmoura/Baraka	5 715.545	244.143	1 395 408.746	4 084 839.728
Sabria	6 552.66	271.510	1 779 082.560	5 245 166.274
Baguel & Franig	40 505.32	294.840	11 942 579.284	35 026 408.048
Hasdrubal	222 438.65	315.710	70 227 142.36	207 071 128.599
Chergui	107 550.550	307.060	33 024 200.070	97 021 102.103
Chourouq <sup>(2)</sup>	17 577.456	285.209	5 013 254 .460	14 653 388.741
Ghrib <sup>(2)</sup>	11 583 .69	314.998	3 648 842.971	10 751 902.546
<b>TOTAL</b>	<b>597 257.697</b>	<b>288.113</b>	<b>172 077 850.27</b>	<b>566 706 346.693</b>

### b- Pseudo-liquid gas

During 2019, the quantities of Baguel & Franig and Ghrib LPG (residual gas, Propane, Butane, and Naphtha) sold to STEG go as high as 10 thousand tons for a value of about MUSD 4, compared to 12 thousand tons sold in 2018 for a value of MUSD 5.

Pseudo-liquid gas sales are broken down as follows:

PSEUDO-LIQUID GAS	QUANTITY (TON)	PRICE USD/TON	AMOUNT USD	AMOUNT TND
BAGUEL/FRANIG LPG <sup>(3)</sup>	6 366.88	296.299	1 886 414.75	5 541 011.353
GHRIB LPG <sup>(4)</sup>	3 600.00	450.000	1 620 000.00	4 769 840.400
<b>TOTAL</b>	<b>9 966.88</b>	<b>351.817</b>	<b>3 506 414.75</b>	<b>10 310 851.753</b>

Provisional data (1), (2), (3) and (4):

(1) Waiting to receive the December 2019 production reports.

(2) Delay in the signature of the delivery reports.

(3) Billing data for the months of August, September, November and December not received yet

(4) Contract not approved yet.

### 3- UTIQUE CO<sub>2</sub>

It should be recalled that ETAP holds 100% of a CO<sub>2</sub> field in Utique, where the produced quantities are sold to the UTIQUE GAZ SA Company.

The delivery of CO<sub>2</sub> to the UTIQUE GAZ Company during 2019 reached 23 thousand tons (a decline of about 4% compared to 2018) for a value of about MTND 4.

CO<sub>2</sub> sales to the UTIQUE GAZ Company during 2017, 2018, and 2019 are broken down as follows:

DELIVERY PERIOD	2017	2018	2019
Overall quantity (Ton)	21 065.490	24 219.300	23 206.400
Overall amount (TND)	3 240 211.190	3 640 429.680	3 720 004.150

# SUMMARY

## SECTION

1

### ENERGY SITUATION

Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13

## SECTION

2

### TECHNICAL ACTIVITIES

Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63

## SECTION

3

### MANAGEMENT ACTIVITIES

Petroleum Agreements .....	67
Commercial Activities .....	70

## SECTION

4

### GOVERNANCE AND AUDIT ACTIVITIES

➡ Management Control .....	77
Governance .....	80

## SECTION

5

### COMMUNITY & ENVIRONMENTAL ACTIVITIES

Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91

## SECTION

6

### SUPPORT ACTIVITIES

#### I. Technical Support

Petroleum Services .....	96
Exploration Studies .....	100

#### II. Management Support

Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120

## SECTION

7

APPENDICES .....	123
------------------	-----

# MANAGEMENT CONTROL

The activity of the Management Control Direction is based essentially on three axes, namely:

## A-AUDIT OF CONCESSIONS

Within the framework of the concessions audit activities, the following missions were carried out in 2019:

- A mission to check the development and operating expenditures of the concessions managed by ENI for the period extending from 2013 to 2017 (mission in progress).
- Resumption of the audit of the Hasdrubal concession development expenditure for the period extending from January to May 2011, the capital expenditure (CAPEX), and the operational expenditure (OPEX) for the period between 2009 and 2013.
- An audit mission of the Baguel and El Franig concessions' development and operating expenditure for the years 2016 and 2017.
- An audit mission of the investment, development, and operating expenditure of the Sabria concession for the year 2017.
- An audit mission of the Mazarine concession's operating expenditures and those of the long-term test, for the period extending from 1993 to 2017 (mission in progress).
- An audit mission of the Sidi El Kilani concession's development and operating expenditure billed for the years 2017 and 2018.
- Sub-contracting the audit mission of the TPS' managed concessions, billed for the years 2014, 2015, 2016, 2017, and 2018.
- Ensure the safeguarding of the association's consumables stock through physical inventory operations.

## B- BUDGET ACTIVITIES

For 2019, the Management Control Direction ensured the following budgetary activities:

- Preparation of the 2019' revised budget, the 2020's initial budget and their support within ETAP board of directors and the supervision ministry.
- Provision of the necessary information through a dashboard in order to control the management and the current and forecasting activities.

- Budgetary monitoring of the commitments for the non-concession activities (recurrent budgetary control work with the issuance of specific notes to promote the respect of the procedures and the good management rules).

## C- MANAGEMENT OF SUBSIDIARIES

The subsidiaries management activity consists in ensuring the management and monitoring of the different shareholdings of ETAP. It is essentially about the following operations:

- The management and monitoring of ETAP's shareholdings in the subsidiaries while ensuring the respect of the current legislation and agreements.
- Monitoring ETAP's shareholdings file being implemented (control of the dividends received and monitoring of the account "N bis 292").
- Monitoring the calls for funds on the fixed assets of the joint-venture companies and the reimbursement of the revenues resulting from this funding as well as collected interests.

# SUMMARY

<b>SECTION</b>	<b>1</b>
<b>ENERGY SITUATION</b>	
Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13
<b>SECTION</b>	<b>2</b>
<b>TECHNICAL ACTIVITIES</b>	
Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63
<b>SECTION</b>	<b>3</b>
<b>MANAGEMENT ACTIVITIES</b>	
Petroleum Agreements .....	67
Commercial Activities .....	70
<b>SECTION</b>	<b>4</b>
<b>GOVERNANCE AND AUDIT ACTIVITIES</b>	
Management Control .....	77
➡ Governance .....	80
<b>SECTION</b>	<b>5</b>
<b>COMMUNITY &amp; ENVIRONMENTAL ACTIVITIES</b>	
Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91
<b>SECTION</b>	<b>6</b>
<b>SUPPORT ACTIVITIES</b>	
<b>I. Technical Support</b>	
Petroleum Services .....	96
Exploration Studies .....	100
<b>II. Management Support</b>	
Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120
<b>SECTION</b>	<b>7</b>
<b>APPENDICES</b> .....	123



# GOVERNANCE

## 1- Introduction

Pursuant to the Governmental Decree No 1158-2016 of August 12, 2016, ETAP established the Governance Cell and attached it to the Board of Directors. This cell operates in coordination with the Chief Executive Officer of ETAP as well as with the Central Cell at the supervision ministry, the Governance Services within the Presidency of the government, the Civil Society, and the other affected authorities.

The Governance Cell's main task is to help adopt a transparent system and to establish good governance practices.

The ETAP's Governance Cell activity was marked by a multitude of interventions, which affected various aspects since its creation. Thus, the cell entrusted with governance committed itself to examining the files and to participate in the enterprise's different internal projects.

## 2- Objectives:

This cell aims at:

- Ensuring the proper application of the principles of governance and of the fight against corruption in accordance with the regulations in force.
- Participating in the design of the programs and of the national and sectoral strategies, as well as in the action plans in order to:
  - Implement governance.
  - Fight against corruption.
  - Ensure their proper application.
- Within the enterprise, establishing
  - The culture of governance and transparency.
  - The values of integrity and good management.
  - The respect of the codes of ethics.
  - The proper application of the procedure manuals.
- Strengthening the relations with the Civil Society within the framework of the participatory and consultative process.

## A- ACCESS TO INFORMATION

Following the promulgation of the March 24, 2016 law, the right of access to information is the most important task of the governance cell of the enterprise. The table below illustrates the evolution of the number of requests to access information during the last three years:

Year	2017	2018	2019
Number of requests	13	7	16

These requests for information coming from a multitude of institutions or people such as the I Watch organization, STEG, Accounting Experts, The Observatory of Transparency and Good Governance, the National Authority for the Fight against Corruption, etc. Most of these requests were answered in a timely fashion.

## B- FIGHT AGAINST CORRUPTION

In close collaboration with the National Authority for the Fight against Corruption, the Governance Cell contributed to clarifying certain files, among which we cite:

- Answering ETAP's non-exercise of pre-emptive rights in the disposition of the Petrofac Company's interests in the Chergui concession to the Perenco Company.
- Answer concerning the acquisition of the PA Resources Company's interests in Tunisia.
- Answer via the supervising ministry concerning the recourse to the accounting experts firm related to the choice of ETAP's auditors.

## C- COMMUNICATION ON PROGRESS (COP)

The Governance Cell carried on collaborating with the UN network in Tunisia, aiming to implement the international principles regarding human rights, labor rights, environmental rights, and the fight against corruption.

Within the framework of this collaboration, a report was published on May 17, 2019, on the website of the United Nations' Global Compact.

This report highlighted the efforts of the enterprise and its strategy of opening up to its environment via its corporate social responsibility program (governorates of Tataouine and Kebili).

Indeed, the COP report underlined the success of both experiences at the level of the aforementioned governorates, especially regarding job creation, infrastructure development, micro-credit granting, development via the associations, etc.

## D- ETAP'S TRAINING AND REPRESENTATIONAL ACTIVITIES

Within this framework, the Governance Cell personnel took part in the following activities:

- 'Conference on integrity' organized by I WATCH
- "National symposium on strengthening the role of Governance Cells in the control and monitoring of public services" organized by the High Committee of Administrative and Financial Control (HCCAF).
- International forum titles "New Forms of Governance on an international scale: what answers for Tunisia".
- National conference organised by the Global Compact (Tunisia's Local Network) on the theme "preparation of a national strategy of corporate and organisational social responsibility".
- Training organized by the Central Governance Cell of the supervising ministry whose theme is "role of the Governance Cells between the legal framework and the practical aspect".
- Training organized by the Governance Services at the Presidency of the Government in coordination with the OECD, on the theme "planning the prevention of corruption and promoting integrity, transparency and inclusion in the public sector".
- Event organized by the Governance Cell of the Ministry of Industry relating to the presentation of the Governance Cells experiences of TRAPSA and STIR.
- Training organized by the HCCAF in coordination with the OECD whose object is the strengthening of inspections.
- Work meeting organized by the General Directorate of Hydrocarbons, and whose object is access to information in the petroleum sector.

## E- DIVERSE ACTIVITIES

In the application of the provisions of the governmental decree N°2016-1158 dated on 12 August 2016 on the creation of governance cells and establishing their powers, the Governance Cell took part in the following actions:

- The enterprise's different boards of directors.
- The meetings of the Permanent Audit Commission.
- Monitoring the report of the High Committee of Administrative and Financial Control, especially its 2007/2011 report on natural gas.
- Following up on the Judicial and Financial Pole files.

# SUMMARY

<b>SECTION</b>	<b>1</b>
<b>ENERGY SITUATION</b>	
Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13
<b>SECTION</b>	<b>2</b>
<b>TECHNICAL ACTIVITIES</b>	
Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63
<b>SECTION</b>	<b>3</b>
<b>MANAGEMENT ACTIVITIES</b>	
Petroleum Agreements .....	67
Commercial Activities .....	70
<b>SECTION</b>	<b>4</b>
<b>GOVERNANCE AND AUDIT ACTIVITIES</b>	
Management Control .....	77
Governance .....	80
<b>SECTION</b>	<b>5</b>
<b>COMMUNITY &amp; ENVIRONMENTAL ACTIVITIES</b>	
➔ Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91
<b>SECTION</b>	<b>6</b>
<b>SUPPORT ACTIVITIES</b>	
<b>I. Technical Support</b>	
Petroleum Services .....	96
Exploration Studies .....	100
<b>II. Management Support</b>	
Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120
<b>SECTION</b>	<b>7</b>
<b>APPENDICES</b> .....	123

# CORPORATE SOCIAL RESPONSIBILITY (CSR)

## Introduction

ETAP spared no effort to participate and encourage its partners to progress in the corporate social responsibility actions on profit of the populations surrounding oil exploitation sites. Indeed, ETAP works on several fields at the same time, namely the Tataouine, Kebili, and Kasserine consortia, or jointly with each of its partner companies in order to reach an optimal balance between the three goals, namely: economic performance, social progress, and environmental protection.

## A- TATAOUINE CSR PROGRAM

It should be recalled that, on May 6, 2015, ETAP signed a Corporate Social Responsibility (CSR Tataouine) charter with the supervising ministry and the partners ENI, OMV, and MEDCO (currently named ATOG) for a three-year duration. A three-year action plan was prepared by an external consultancy firm. The allocated total budget estimate reaches 11.640 MTND (i.e. 3.9 MTND per year).

The Tataouine CSR program actually commenced in June 2015. It aims to contribute to the efforts of sustainable development and the improvement of the living standards of the population in the governorate of Tataouine via the creation of a consortium (ETAP, ENI, MEDCO, OMV) coordinated by ETAP.

It should be noted that, in 2019, the CSR team worked on two main aspects, namely the finalization of the first Tataouine CSR program and the preparation of the new program named Social Responsibility Program (SRP) following the expiry of the internal regulatory texts which constitute the legal framework of CSR activity at ETAP.

### 1- Tataouine CSR program axes

The Tataouine CSR program comprises four main axes, namely:

- Promotion of private initiatives.
- Economic and social development through the associational network.
- Strengthening infrastructure in relation to the previous main axes.
- Promotion of the Tataouine CSR.

## 2- The partners of the Tataouine CSR program

- The Micro-credits Associations (AMC).
- The Tunisian Solidarity Bank (BTS).
- The Small and Medium-Sized Enterprises Financing Bank (BFPME).
- The ILEF association and the Regional Directorate of Social Affairs.
- The Association of Physicians of Tataouine, the Regional Hospital, and the Regional Directorate of Health.
- The Regional Commissariat for Agricultural Development (CRDA).
- The Regional Commissariat for Education (CRE).
- The 'SONEDE'.
- The National Institute of Patrimony (INP) and the Association for the Preservation of the Ghomrassen Patrimony (ASPG).
- The regional organizations (UGTT, UTICA, CONECT, and UTAP).
- The local Authorities

## 3- Actions achieved in 2019

During 2019, the CSR action was focused on two (02) axes:

### Axis 1: Finalisation of the first Tataouine CSR program:

#### a- Development via the associations

##### a.1- Medical caravans:

In January 2019, a medical caravan on behalf of an important part of the population in the region, as well as training for forty physicians of the region, dealing with diverse specialties, took place.

##### a.2- The Tunisian Association for Aid to the Deaf (ATAS):

Within the framework of the Tataouine CSR's commitment to helping people with special needs, ATAS received pronunciation-helping equipment for a total amount of KTND 30.

#### b- Infrastructure

##### b.1- Youth, sports, and culture:

- The Beni Mhira football pitch, funded by the Tataouine CSR program at TND 174 195, was finalized.
- Execution of the final phase of the extension and redevelopment of the Earth Memory Museum in Tataouine with a total budget of TND 108 670.

### b.2- Renovation of the Municipal Market:

This project consists of the restoration, development and maintenance of Tataouine's Municipal market in order to face the chaotic situation of the merchants. The participation of the CSR program is as high as TND 230 000.



Tataouine Municipal Market

### b.3- Agriculture:

The CSR program set aside a budget of TND 350 000 to participate with the SONEDE in the construction of a water tower in Kambout (delegation of Remada). This project is in its final phase.



Kambout water tower



#### b.4- Health:

Within the framework of the upgrade of the Regional Hospital of Tataouine, an agreement was signed between the CSR program, the regional council of Tataouine, and the Regional Hospital of Tataouine in order to equip the latter with a complete laparoscopic column (delivered at the end of 2018) and an operation table (delivered in April 2019) for a global amount of KTND 320.

#### b.5- Education:

Following the redevelopment and construction work of the dining hall of Ghariani Primary School (delegation of Smar), the latter was fitted with the necessary equipment for an amount of TND 10 148.

#### **Axis 2: The new Tataouine Social Responsibility Program (SRP):**

Following the expiry of the internal regulatory texts governing all the CSR activities at ETAP, the different stakeholders of the Tataouine CSR program decided to launch a new Social Responsibility program for an overall budget of MTND 15.

In this respect, many meetings were held with the petroleum partners with the objective to prepare the necessary paperwork in order to launch the invitation to tender relating to the choice of the service firm.

To do so, a set of specifications was prepared while making sure to avoid the deficiencies identified in the previous consultation.

Likewise, other meetings were organized with the managers of the BTS and PFPME banks to assess the programs launched in the region and to have the final financial statements of these programs.

## **B- KEBILI CSR PROGRAM**

ETAP and its partners PERENCO, MAZARINE, and WINSTAR (SERINUS) carried out a study in order to prepare a Social Responsibility plan for the petroleum companies in the region of Kebili. This study, funded by a consortium of 4 petroleum companies, aims mainly to define an intervention framework for these companies in the Governorate of Kebili.

A three-year action plan was prepared by a consultancy firm. The allocated total budget estimate goes as high as MTND 5 (i.e. MTND 1.67 per year).

The Kebili CSR Program commenced effectively in May 2016 (charter signed on April 07, 2016). It aims at contributing to the efforts to develop and improve the living standards of the population in the Governorate of Kebili (especially the delegations of Douz and El Faouar), through the creation of a consortium (ETAP, WINSTAR, PERENCO, and MAZARINE) coordinated by ETAP.



## 1- The Kebili CSR program main axes

The Kebili CSR program comprises four main axes, namely:

- Promotion of private initiatives.
- Economic and social development via the associational network.
- Strengthening infrastructure in relation to the previous main axes.
- Promotion and marketing of the Kebili CSR.

## 2- The Kebili CSR program partners

- The Micro-Credit Associations (AMC)
- The Tunisian Solidarity Bank (BTS).
- The Small and Medium-Sized Enterprises Financing Bank (BFPME).
- The Association of Physicians of Kebili, the Regional Directorate of Health, and the Medicine University of Sfax.
- The Regional Directorate of Social Affairs.
- The Regional Commissariat of Agricultural Development (CRDA) and the Agricultural Training Centers.
- The Regional Commissariat of Education (CRE).
- The Regional Commissariat of Craftsmanship (CRA).
- The Regional Union of Women (URF).
- The regional organizations (UGTT, UTICA, etc.).
- The local Authorities.

## 3- The actions carried out in 2019

### a- The private initiatives

#### a.1- Micro-projects in partnership with the BTS:

- Release of an amount that goes as high as TND 62 354.838 for the extension of 13 micro-projects of greenhouse cultivation.
- Distribution of sheep and ewe on behalf of the Kebili community for a cost that goes as high as TND 538,000 (10% of the cost of the CSR program, a 30% contribution of the Ministry of Agriculture, and 60% in the form of credits granted by the BTS).

#### a.2- Actions in favor of the SME:

An amount of TND 116,000 was released via the Small and Medium-Sized Enterprises Financing Bank (BFPME) for the project of creation of cold storage facility (Company Mansour Refrigerated Warehouse «SMEF»).

#### b- Education and youth

Within the framework of its social responsibility, ETAP distributed school supplies on behalf of pupils from needy families residing in the southern region (Tataouine, Kebili, and Gabes).

#### Remark:

In 2019, the team entrusted with the CSR at ETAP took part in the various training actions in relation with the CSR program activities likely to improve the skills of the personnel assigned to the aforementioned program. Among them, we cite:

- A “Social Responsibility of the Banks and the financial institutions” seminar was held on 20/06/2019.
- A national conference organized by the Global Compact (Tunisia’s local network) whose theme is “preparation of a corporate and organisational social responsibility national strategy” on July 09, 2019.
- A training session on November 25, 26, and 27, organized by the KEY CONSULTING firm and dealing with “the corporate social responsibility according to ISO 26000”.

# SUMMARY

## SECTION

1

### ENERGY SITUATION

Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13

## SECTION

2

### TECHNICAL ACTIVITIES

Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63

## SECTION

3

### MANAGEMENT ACTIVITIES

Petroleum Agreements .....	67
Commercial Activities .....	70

## SECTION

4

### GOVERNANCE AND AUDIT ACTIVITIES

Management Control .....	77
Governance .....	80

## SECTION

5

### COMMUNITY & ENVIRONMENTAL ACTIVITIES

Corporate Social Responsibility (CSR) .....	84
➡ Health, Safety, and Environment (HSE) .....	91

## SECTION

6

### SUPPORT ACTIVITIES

#### I. Technical Support

Petroleum Services .....	96
Exploration Studies .....	100

#### II. Management Support

Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120

## SECTION

7

APPENDICES .....	123
------------------	-----

# HEALTH, SAFETY AND ENVIRONMENT

## A- IMPLEMENTING AND MONITORING HSE PROJECTS

### 1- Cooperation project between ETAP and EBC (ECO PARK Borj Cedria)

**a- Reminder of the project:** Research work for the treatment of the production waters, and cultivation of microalgae for the production of biodiesel:

The waters generated by petroleum activity are highly saline and have a high concentration of heavy metals, which represents a threat to the environment.

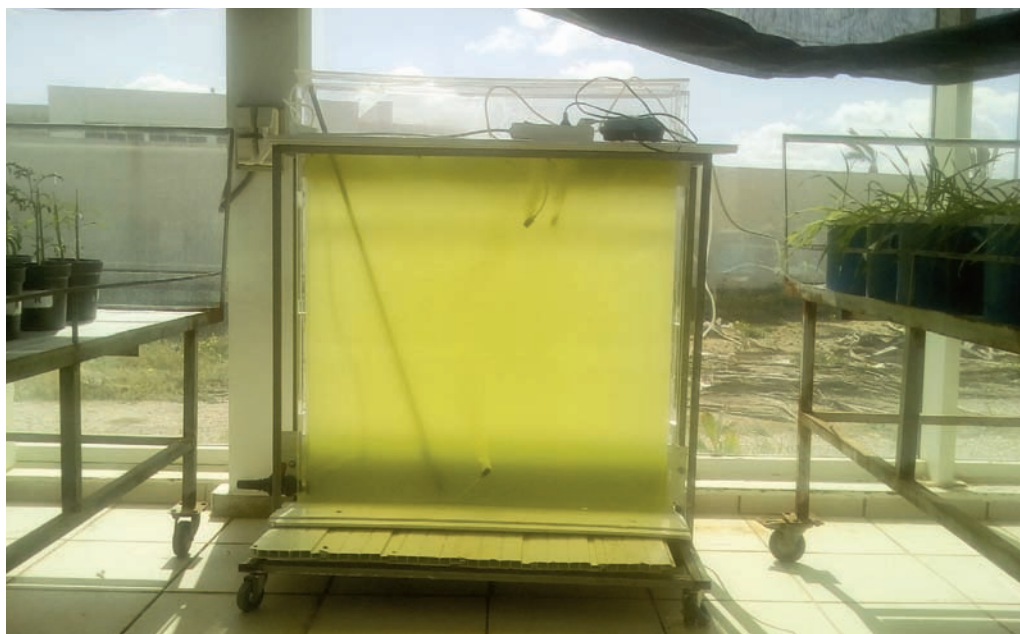
Looking for a solution, ETAP identified one in collaboration with the Water Researches and Technologies Centre (CERTE), through a research contract (signed in 2016) which has two objectives:

- Research on the development of a treatment procedure for oil sites' production waters, and of a method for the valorization of the obtained by-products.
- Research on the development of a procedure of microalgae cultivation for the production of biodiesel through the use of oil sites' production waters and the available CO<sub>2</sub> stream

### **b- Activities during 2019 :**

The actions carried out in relation to this project are:

- The preparation of a fraction of the microalgae lipid phase for the combustion analyses.
- Meetings with the head of the project and the General Directorate of the Borj Cedria Technopole to finalize the synthesis report and close the project (treatment of production waters and cultivation of microalgae for the production of biodiesel).



Project of treatment of production waters and cultivation of micro-algae

## 2- Request for technical assistance from the African Development Bank (AfDB)

In order to accomplish the audit recommendations, and to ensure the realization of the actions associated with it, ETAP solicited the financial and technical assistance from the AfDB to update its Environmental and Social Management System “SGES” (including the Nawara project).

Following the preparation of a document specifying the terms of reference of this mission and its submission to the African Development Bank, an update of the “SGES” was carried out with the technical assistance of the AfDB. Likewise, a visit to the GTP-Gabes and to the CPF-NAWARA was made in 2019 within the framework of this mission.

## B- HSE ACTIVITIES WITH PARTNERS

- HSE inspection visit to the Sidi El Kilani concession (ETAP/CTKCP).
- Workshop with Perenco about monitoring the drilling activities.
- Meetings with SODEPS on data collection for the establishment of ETAP’s “SGES”.
- Visit of the following sites: TARFA-4 well, MLD concession, and GTP project.
- Participation in the kick-off meeting of the greenhouse gas emission certification project related to the Tataouine photovoltaic project (SEREE: ETAP/ENI).
- Treatment of the invitation to tender files and participation in the assessment of the HSE aspects.

## C- ACTIVITIES AT ETAP PREMISES

### 1- Personal Protection Equipment (PPE)

Personal protection equipment was purchased and distributed to the related personnel.

### 2- Follow-up of the renovation works at the ETAP headquarters located in Kheireddine Pacha Avenue

The following, HSE-related works were carried out:

- Monitoring the fire-safety work.
- On-site meetings (fire hydrant booster, door trim, firebreak, etc.).

### 3- Renovation of the systems at the Petroleum Research and Development Centre (CRDP)

- Renovation of the fire-detection system at the “CRDP”.
- Starting the procedures for the renovation of the laboratories gas distribution conduits.

### 4- Activity of the Occupational Health and Safety Committee (CSST)

Adoption of the action plans for the coming periods by the members of the “CSST” committee.

### 5- Other activities at ETAP premises

During 2019, many actions were carried out (within the framework of the enhancement of prevention against the different risks), namely:

- => The verification, enhancement, and upgrade of the fire-detection and gas leak detection equipment in the buildings.
- => The maintenance, regular verification, and enhancement of fix and mobile fire fighting media in all the buildings.
- => Monitoring of the periodic and regulatory technical controls of the electrical, gas, and fire-detection installations carried out by the approved technical inspection agencies at the ETAP buildings.

## D- DIVERSE ACTIVITIES

- Participation, along with the workgroup GT 109, led by INNORPI, in the preparation of an APNT 109.25 standard project related to the safety of the hydrocarbons transport (liquid and gas) by assembled pipeline, without welding operation.
- Realisation of a KB-2 drilling mud processing action and restoration of the site (in compliance with the environmental impact study).
- Disposal of the chemical products and oils from the Didon concession.
- HSE supervision mission of the Zarzis hangars.
- Participation in workshops organized by the ANME, MOIG, PROTECTA, and APAL organizations.
- HSE inspection visit and emergency plan update of the Utique concession.



Disposal of chemicals from Didon concession

# SUMMARY

<b>SECTION</b>	<b>1</b>
<b>ENERGY SITUATION</b>	
Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13
<b>SECTION</b>	<b>2</b>
<b>TECHNICAL ACTIVITIES</b>	
Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63
<b>SECTION</b>	<b>3</b>
<b>MANAGEMENT ACTIVITIES</b>	
Petroleum Agreements .....	67
Commercial Activities .....	70
<b>SECTION</b>	<b>4</b>
<b>GOVERNANCE AND AUDIT ACTIVITIES</b>	
Management Control .....	77
Governance .....	80
<b>SECTION</b>	<b>5</b>
<b>COMMUNITY &amp; ENVIRONMENTAL ACTIVITIES</b>	
Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91
<b>SECTION</b>	<b>6</b>
<b>SUPPORT ACTIVITIES</b>	
<b>I. Technical Support</b>	
➡ Petroleum Services .....	96
Exploration Studies .....	100
<b>II. Management Support</b>	
Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120
<b>SECTION</b>	<b>7</b>
<b>APPENDICES</b> .....	123



## PETROLEUM SERVICES

The Petroleum Services Direction serves as a support to the hydrocarbon activities in Tunisia, by offering various oil database, assets, and laboratory services to ETAP technicians as well as to oil operators, academics, and other sector stakeholders, in compliance with the current internal procedures.

### A- PETROLEUM DATABASE (PDB)

PDB technical services ensure various services. They are essentially the duplication and consultation of the technical documents, seismic navigation, and the consultation of the core samples and the cuttings.

In 2019, the PDB activity was marked by the finalization of projects: scanning the technical documents and transcribing the technical data. It was also characterized by the entry into the final phase of the project: the standardization of the primary technical data:

#### 1- Scanning technical documents, and transcribing seismic data:

Scanning technical documents and transcribing seismic data aimed to preserve and safeguard the documents and data as an important technical heritage on the one hand, and to exploit them (in a digital format) by the technical software available at ETAP on the other hand.

#### 2- Transmission of technical data and automation of the workflow:

This project aimed to prepare technical data transmission standards for each type of data; it was materialized in a document titled “Guidelines Book of Well and Seismic Data and Reports to ETAP”.

The latter details the exploration and production data transmission procedure in compliance with the standards required by the petroleum industry (general rules and requirements).

This document is essentially destined to the operators. It will serve as a reference to them to provide ETAP with high-quality data within reasonable timeframes.

#### 3- Standardising the primary technical data:

This project is essentially focused on the implementation of the standards governing the form, format, and use of the three types of data (cultural data, wells data, and Business Associates). The standardization of the primary technical data will be finalized in the first quarter of 2020.

## B- LABORATORIES

The presence of the ETAP laboratories in Tunisia, the quality of the services they provide as well as the upgrade plan of these laboratories (started in 2006) constitute an interesting opportunity to all the operators in the country insofar as they can benefit from all the necessary supports for the various technical studies they need.

### 1- SERVICES (internal and external):

#### a- External services:

**a.1-** ETAP laboratories continued to provide services in various projects for the benefit of petroleum operators. Indeed, during 2019 the service orders registered a substantial increase. The majority of the operators (SODEPS, CFTP, TPS, ENI, CTKCP, NUMHYD, SEREPT, PRIMOIL, PERENCO, MAZARINE, OMV...) resorted to the aforementioned laboratories for the realization of geochemical and sedimentological studies.

#### a.2- Other services:

- The ETAP - Water Researches and Technologies Centre (CERTE) project: the treatment of Sabria concession's waters, microalgae cultivation study, lipid fraction extraction, and alcohol/bio-oil volume optimization were carried out successfully.
- Compatibility study of the production waters for OMV.
- Compatibility study of the produced oils for MAZARINE.
- Evaluation of the Hasdrubal field's soil and groundwater quality on behalf of APO.

#### b- Internal services:

Contribution of the Geochemistry, sedimentology, and biostratigraphy laboratories to the different studies related to the Chaâl project.



Organic Geochemistry Laboratory: Rock-Eval 6

## C- MISCELLANEOUS

**1-** In 2019, the PDB staff participated in the preparation of the Data Rooms in collaboration with the Exploration Studies Direction.

**2-** An OMV Austria repatriation of a 15-ton core and cuttings relative to the Ashtart field was carried out in collaboration with OMV Tunisia. These core and cuttings samples were received on 27/12/2019 and integrated into the Petroleum Research and Development Centre core shack.



Repatriation of core and cuttings samples

# SUMMARY

<b>SECTION</b>	<b>1</b>
<b>ENERGY SITUATION</b>	
Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13
<b>SECTION</b>	<b>2</b>
<b>TECHNICAL ACTIVITIES</b>	
Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63
<b>SECTION</b>	<b>3</b>
<b>MANAGEMENT ACTIVITIES</b>	
Petroleum Agreements .....	67
Commercial Activities .....	70
<b>SECTION</b>	<b>4</b>
<b>GOVERNANCE AND AUDIT ACTIVITIES</b>	
Management Control .....	77
Governance .....	80
<b>SECTION</b>	<b>5</b>
<b>COMMUNITY &amp; ENVIRONMENTAL ACTIVITIES</b>	
Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91
<b>SECTION</b>	<b>6</b>
<b>SUPPORT ACTIVITIES</b>	
<b>I. Technical Support</b>	
Petroleum Services .....	96
➡ Exploration Studies .....	100
<b>II. Management Support</b>	
Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120
<b>SECTION</b>	<b>7</b>
<b>APPENDICES</b> .....	123

# EXPLORATION STUDIES

The Exploration Studies Direction mission consists mainly of two aspects, namely, the promotion of the Tunisian subsurface and the performing of regional and thematic studies to support the promotion and exploration activities.

## A- STUDIES ACTIVITIES

In the context of its projects of a regional nature, the Exploration Studies Direction continued to execute the following enterprise projects in 2019:

### 1- Finished projects:

- a- Synthesis of the Ghadames basin hydrocarbons reserves and the Ordovician resources: This project was finalized at the end of the third quarter of 2019.
- b- El Atchane Play in the Chotts basin (expansion, resources, and risks): This project was equally finished towards the end of the third quarter of 2019.

### 2- New Projects :

Four new thematic and regional projects were initiated during the third quarter of 2019:

- a- Evaluation of the oil potential of the Lower Cretaceous plays in the Jeffara basin.
- b- Prospectivity study of the Acacus reservoir in the Ghadamès basin.
- c- The Jurassic and Triassic plays in Central Tunisia.
- d- The evaluation of the oil potential of the Eocene and the Cretaceous carbonate reservoirs in the Gulf of Hammamet.

### 3- Participation in promotion-related activities

During 2019, engineers from Studies Department collaborated with the promotion entity to realize a new boundary delineation of open blocks, the assessment of certain open blocks, the preparation of promotional brochures as well as the hosting of certain data rooms for potential investors through technical presentations.

### 4- Miscellaneous activities

The Exploration Studies Direction carried out the geological assessment of the Chaal permit as well as that of the Mahres concession on behalf of the Fields Operating Direction.

## B- EXPLORATION PROMOTION ACTIVITIES

### 1- Marketing actions

#### a- Data Room

##### a.1- Virtual Data Room project:

The promotion team continued to comb the market to identify the Virtual Data Room solution that suits ETAP best (in terms of Tunisian subsurface promotion). This is done while respecting the confidentiality of the technical data that will be made available to the providers interested in implementing this solution.

##### a.2- Access to the Data Room:

During 2019, nine (09) Data Rooms were hosted. The open blocks consulted concern mainly the offshore region of Tunisia (Gulf of Gabes and Gulf of Hammamet) and the south of Tunisia (the Chotts and Ghadames basins).

Month	Consulted blocks	Company's Country
January	O9 Zaphir	Norway
February - March	S5 Jebil - S11 Sidi Toui - S2 Tamazret - O8 Chaffar - O14 a,b Chenini - O9 La Skhira - S6 Bir Abdallah	China
April	S10 a,b Boughrara	Canada
April - May	S5 Jebil - S11 Sidi Toui - S9 Kambout - O4 Mrezga - N6 Kairouan	UK
June	S6 Bir Abdallah	Ukraine
July	S11 Sidi Toui - S9 Kambout	Russia
July	S9 Kambout (DR complement)	The Netherlands
October	C4 Majoura	Ukraine
October	S4 a,b Smida - S6 Bir Abdallah	Russia

#### b- Participation in promotional events :

During 2019, the Exploration Studies Direction took part in a lot of national and international events with promotional stands as well as technical presentations.

##### b1- international conferences:

Four (04) promotional actions were carried out in 2019:

Conference	Month	Venue
(NAPEC 2019) 'North Africa Petroleum Exhibition and Conference'	March	Algeria
AAPG 2019 'Annual Convention and Exhibition' (ACE)	May	The United States
(EAGE) 'Annual 81st Conference & Exhibition 2019'	June	UK
'Global Petroleum Show' (GPS) 2019	June	Canada

## b2- Events in Tunisia:

During of 2019, ETAP, through the Exploration Studies and the Petroleum Services Directions, participated in the Tunisia Oil and Gas Summit in Hammamet and the PETROSERV 2019 exhibition in Sfax respectively through a technical presentation and a stand to highlight the servicing activities of the Petroleum Services Direction.

## 2- Projects :

### a- New boundary delineation of the open blocks:

In collaboration with the Exploration Direction, it was carried out the update of the open blocks map. This update is based on carefully-selected criteria, such as:

- The location and area of the block (depending on the limits of the main oil basins of Tunisia).
- The technical data available (wells and seismic).
- The number of leads and prospects.
- The depth of the objectives.
- The existing infrastructure.

### b- Multi-Client project:

In 2019, and in the context of the promotion of the Tunisian offshore, the Exploration Studies Direction launched consultations to services companies specialized in the acquisition and treatment of seismic data.

This project was in the negotiation phase until December 31, 2019. Its goal is the implementation as well as the execution as of the second semester of 2020.

### c- Standardisation of the wells coordinates and the onshore seismic campaigns:

This project was launched in 2019, in collaboration with the Petroleum Services and the Exploration Directions, in order to update and standardize the aforementioned coordinates within the Petroleum Database, as well as at the level of the permit maps and the open blocks. This project will be carried out in three phases, namely:

- Gathering of the available data.
- On-the-spot survey of the coordinates.
- Processing the data and uploading the results in ETAP's Petroleum Data Base.

## 3- Evaluation of the open blocks:

During of 2019, the Exploration Studies Direction carried out the geo-petroleum evaluation of the following open blocks: Taguelmit, Jebil, Smida, El Garci, Triaga, Tibar. Likewise, it finished the technical presentations of the aforementioned blocks as well as their technical sheets included in ETAP's brochure promoting exploration.

# SUMMARY

<b>SECTION</b>	<b>1</b>
<b>ENERGY SITUATION</b>	
Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13
<b>SECTION</b>	<b>2</b>
<b>TECHNICAL ACTIVITIES</b>	
Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63
<b>SECTION</b>	<b>3</b>
<b>MANAGEMENT ACTIVITIES</b>	
Petroleum Agreements .....	67
Commercial Activities .....	70
<b>SECTION</b>	<b>4</b>
<b>GOVERNANCE AND AUDIT ACTIVITIES</b>	
Management Control .....	77
Governance .....	80
<b>SECTION</b>	<b>5</b>
<b>COMMUNITY &amp; ENVIRONMENTAL ACTIVITIES</b>	
Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91
<b>SECTION</b>	<b>6</b>
<b>SUPPORT ACTIVITIES</b>	
<b>I. Technical Support</b>	
Petroleum Services .....	96
Exploration Studies .....	100
<b>II. Management Support</b>	
➡ Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120
<b>SECTION</b>	<b>7</b>
<b>APPENDICES</b> .....	123



# HUMAN RESOURCES

## & GENERAL AFFAIRS

### A- RENOVATION PROJECT OF ETAP'S FORMER HEADQUARTERS

#### 1- Introduction

By renovating the former headquarters, located in Kheireddine Pacha Avenue - Tunis, ETAP aims for better functionality and smooth functioning of its equipment (Electricity, IT cabling, Fluids, Elevators, Fire safety, etc.), while respecting the urban planning regulations of the area, fire safety standards and the rational use of energy.

It should be pointed out that the part to be renovated extends over an approximate area of 7000 m<sup>2</sup> for an initial cost estimate of the works of about TND 8 870 000.

A preliminary phase (preparatory demolition works) carried out during 2015, resulted in an amount of approximately TND 393 728.830.

#### 2- Budget

N°	Package description	Contract Value (TND)
Lot 1	Civil engineering & Exterior layout	5 692 512.064
Lot 2	Access control and secured corridors	342 864.668
Lot 3	Electricity and Technical Building Management (BMS)	830 927.208
Lot 4	Low current (telephony, network & computer cabling, and remote monitoring)	1 205 811.320
Lot 5	Fire safety	399 298.430
Lot 6	Elevators	172 058.300
Lot 7	Fluids	921 627.790
Contracts Total Amount		9 565 099.780

NOTE: The difference between the initial budget and the total amount of the contracts is essentially due to the resumption of the studies related to lot 4 (low current) to integrate the new technologies in the field.

#### 3- Planning

Initially planned for the end of 2018, the completion of the works was postponed to mid-2019 due to the difficulties and obstacles encountered by the contractor of lot 1 (civil engineering and Exterior layout). To overcome this obstacle, ETAP released the payment to relaunch the finishing work of the project.

#### 4- State of the Project's progress

##### a- Reminder of the project:

The project's progress of the renovation of ETAP headquarters encountered several obstacles during 2015.

Indeed, the start of the renovation works (7 separate packages) was planned for mid-June 2015. These works were postponed due to technical, administrative, and legal constraints.

As a consequence, solutions, improvements and especially important modifications were made to this project, in witness whereof the sets of specifications were approved by the procurement commission on December 14, 2015.

The renovation of the ETAP's headquarters extends over two stages:

- 1<sup>st</sup> stage: the execution of demolition for the cracked, unstable and/or soon to be replaced parts, as well as laying bare those parts of the structure to be repaired and strengthened.
- 2<sup>nd</sup> stage: following the identification of numerous hidden defects during the demolition work, there was a resumption of the execution studies in order to integrate the technical solutions necessary to remedy the anomalies identified at the level of the renovation project's call for tender file.

##### b- Progress and main events during 2019 :

###### b.1- Progress (%) :

Until 2019, the physical progress of the project as well as the payments made to the different contractors are illustrated in the following table:

N°	Package description	Work progress	Amount of payments made (TND)	Percentage of the payments
Lot 1	Civil engineering and exterior layout	80 %	3 334 620.046	59%
Lot 2	Access control and secured corridors	80 %	156 632.256	47%
Lot 3	Electricity & BMS	90 %	666 950.464	80%
Lot 4	Low Current (telephony, network & computer cabling and remote monitoring)	90 %	425 094.811	35%
Lot 5	Fire security	80 %	79 519.162	20%
Lot 6	Elevators	90 %	113 120.399	66%
Lot 7	Fluids	90 %	679 195.472	73%

## b.2- Main events during 2019:

### ➤ Lot N°1: Execution of the «Civil engineering and exterior layout» works

Given the financial and technical constraints experienced by the provider CIC, the enterprise witnessed a nine-month delay in starting the following works:

- Installation of the façade's quartz cladding panels after the validation of the product and the support structure.
- Installation of the aluminum-joinery curtain walls system and the security glazing.
- Installation of the wooden carpentry for the internal doors and wood paneling.
- Start of the painting work.

### ➤ Lot N°2: Execution of the «Access control and secured corridors» works

The enterprise KEYWARE was only able to carry out the installation works of the ducting network. While all the equipment were supplied on site, they still depend on the execution of the surfacing works of the main hall and the aluminum joinery and the reception desk. This required the notification of the service orders of the suspension and resumption of the execution deadlines.

### ➤ Lot N°3: Execution of the «Electricity & BMS» works

The enterprise SOTECA was able to carry out the installation works of all the equipment that did not depend on the progress of the civil engineering works, namely:

- Laying, installation of the transformer substation as well as the low-voltage switchboard, and receipt by the STEG, the studies office, ETAP, and the Technical Assistant.
- Laying of the cable trays and the wiring networks.
- Installation of the power generator, trial, and receipt by the studies office, ETAP, and the Technical Assistant.
- Installation of all the electrical cabinets of the normal current, the undulating current, and the lightning rod.
- Installation of the offices' chandeliers with strong and undulating current outlets.
- Installation of the protection and security equipment: undulating current cabinets and lightning rods.

NOTE: Only the installation of the chandeliers and luminaries at the level of the 7th floor, the corridors, and the meeting rooms was delayed because of the false ceiling work in progress.

➤ **Lot N°4: Execution of the «Low Current» works**

The enterprise NEST STEP IT was able to carry out the installation works of all the equipment that did not depend on the civil engineering works' progress, namely:

- Execution of the computer wiring network.
- Execution of the data sockets.
- Supply of all the IT equipment such as the inverters and the capacitor banks.

The remaining works (10%) on the establishment of the aforementioned equipment are conditioned by the installation of the carpentry for doors and windows and the end of the painting work of the computer areas.

➤ **Lot N°5: Execution of the «Fire security» works**

The enterprise ACTI was able to carry out the installation works of all the wiring networks for automatic extinction, fire detection, and armed fire hydrant network lots. However, the enterprise was sent a notice of default because of the delay incurred in the installation of the fire-proof doors, smoke extraction grids, and smoke and fire detectors.

➤ **Lot N°6: Execution of the «Elevators» works**

The enterprise SERVITRADE was able to carry out the installation works of the elevator motors, cars, and control cabinets. However, the displays, control buttons, and the test markets were delayed, waiting for the enterprise CIC to execute the quartz-cladding works of the elevator frames and lobbies.

➤ **Lot N°7: Execution of the «Fluid» works**

The enterprise SOTECA was able to carry out the installation works of all the equipment (except those depending on the progress of the civil engineering lot work), namely:

- Installation of all the air-conditioning external units.
- Installation of all the air-conditioning distribution networks (internal and external).
- Installation of the drinking water distribution network and the wastewater disposal system.

NOTE: Only the installation of the airflow and recovery grid at the level of the 7<sup>th</sup> floor, the corridors, and the meeting rooms was delayed (the false ceiling and the sanitary basin benches works are in progress).



ETAP headquarters renovation project

## B- HUMAN RESOURCES

The human resources activity deals mainly with personnel management, careers and training, as well as with the social welfare of the employees.

### 1- Evolution of the Workforce

#### a- General data

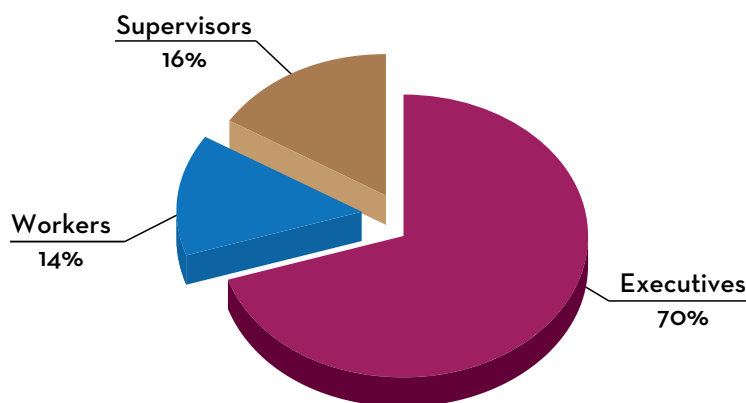
On 31/12/2019, the total workforce of ETAP was 785 employees, 629 of whom work at ETAP, and 156 are detached, against 802 employees in 2018, including 646 working at ETAP and 156 are detached.

This decrease in the workforce is due to retiring, resignations, death, etc.

### b- Distribution of the workforce

In 2019, the distribution of the workforce by professional category is presented as follows:

**Distribution of the workforce by category in 2019**

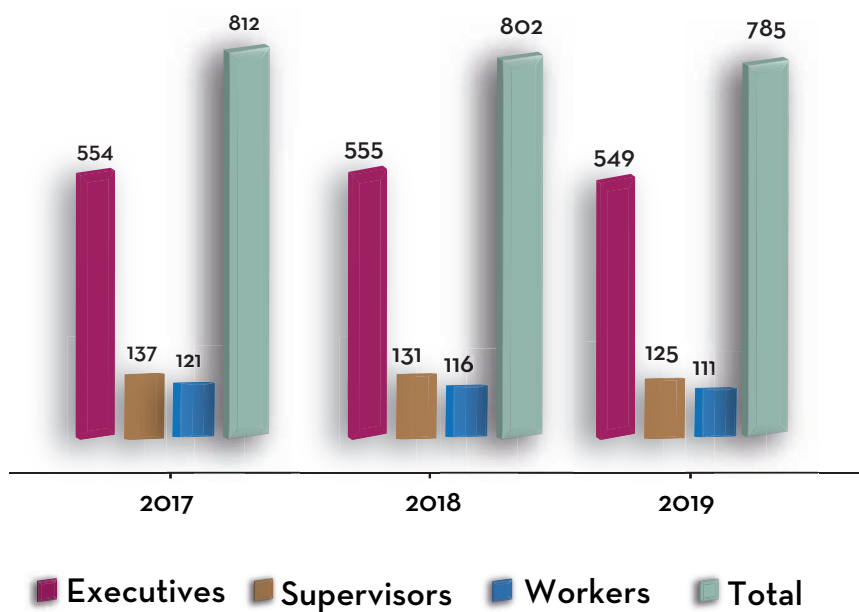


In 2019, the distribution of the workforce by category knew a slight modification compared to that of the previous year:

- Executives: 70% (69% in 2018).
- Supervisors: 16% (16% in 2018).
- Workers: 14% (15% in 2018).

The workforce by category during the 2017-2019 period is as follows:

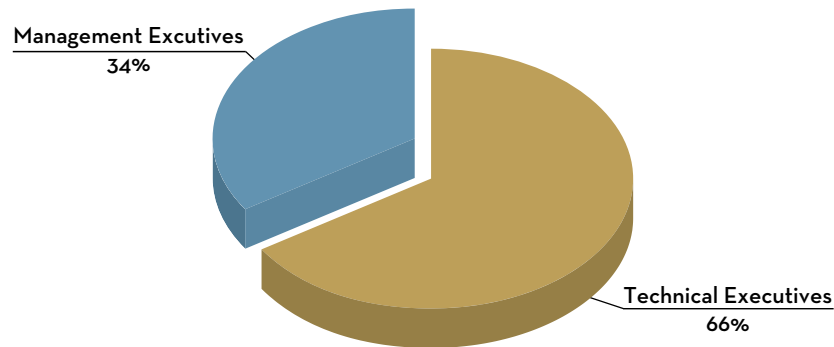
**Evolution of the workforce during the period 2017-2019**



Moreover, technical and managerial executives are as follows:

- Technical executives: 66% in 2019.
- Management executives: 34% in 2019.

#### Distribution of the technical and management executives in 2019 (in %)



This distribution did not witness a significant change compared to 2018.

## 2- TRAINING POLICY

The training expenses during 2019 were as high as TND 1 494 529 against TND 1 578 874 in 2018. Yet, the percentage of employees having benefited from at least one training action rose from 42% in 2018 to 46.5% in 2019.

The expenditure by training theme, for 2019, is presented as follows:

Themes	Amounts (TND)	Rate (%)
Drilling, Geology, Reservoir, and Production	608 611	40.7%
Management, Finance, Audit, and Soft Skills	657 709	44.0%
Information Technology and Software	52 251	3.5%
Languages	34 085	2.3%
Evening courses	33 162	2.2%
Membership and contribution to Forums	1 440	0.1%
Conferences, congresses, seminars, exhibitions, and workshops	46 752	3.1%
Other training	60 519	4.0%
<b>TOTAL</b>	<b>1 494 529</b>	<b>100.0%</b>

### NOTES:

N.1- For a better knowledge of languages, ETAP continued to make available to its personnel the possibility to benefit from language courses at the French Institute of Tunis, Amideast and The British Council.

N.2- In the context of the collaboration with higher education institutes, 465 trainees were able to benefit from training, final school projects, etc.

### 3- CAREER MANAGEMENT

At this level, 2019 witnessed the validation by the expertise commission of the results of the file evaluation of the auditors, managers, and engineers. It is detailed as follows:

#### a- Engineers expertise

##### a.1- 2015 & 2016 sessions:

- Expert engineers: 9

##### a.2- Opening of the 2017 & 2018 sessions.

#### b- Managers expertise

##### b.1- Positioning session 2015 :

- Senior manager 2<sup>nd</sup> grade: 1
- Senior manager 3<sup>rd</sup> grade: 1

##### b.2- Regular sessions 2016 & 2017 :

- Confirmed manager: 12
- Manager 1<sup>st</sup> grade: 5
- Manager 3<sup>rd</sup> grade: 16

##### b.3- Positioning session 2018 :

- Confirmed manager: 10
- Manager 1<sup>st</sup> grade: 5
- Senior manager 2<sup>nd</sup> grade: 10
- Senior manager 3<sup>rd</sup> grade: 5
- Expert manager: 4

b.4- A modification note of the stay length in the management executives' expertise as well as a note specifying the criteria for evaluating candidates for the grade of management executives were drawn up during the month of December 2019.

### 4- SOCIAL POLICY

#### a- Insurance services:

- Improvement of the amounts to be repaid at the level of the schedule of benefits of the Group Insurance (April 2019).
- Conclusion of new agreements with many organizations and update of the conventions in progress.



### b- Social funds:

In 2019, the social fund granted loans whose total amount goes as high as TND 1 266 505, hence an increase of about 4% compared to 2018 (TND 1 223 060).

The loans granted from the social fund are broken down as follows:

Loans	Amounts (TND)
Purchase of housing and construction	770 000
Purchase of land	252 000
Renovation and improvement	10 000
Construction and improvement supplement	15 000
Marriage	94 505
Improvement and more	25 000
Improvement supplement 2	100 000
<b>TOTAL</b>	<b>1 266 505</b>

## 5- SOCIAL AND CULTURAL ACTIVITIES

ETAP's personnel benefited from numerous activities organized by the Friendship and Sports Associations, among which we mention:

- Language courses as well as cultural and artistic activities on behalf of the personnel's children.
- An award winners' day (personnel's children) and ceremony for the benefit of those loyal to ETAP.
- Organization of an Umrah for the personnel and their families.
- Organization of stays in hotels and excursions for the personnel as well as their families.
- Team building, hiking, and relaxation days were organized for the benefit of the personnel.
- Various conventions (ARVEA, driving schools, insurances, etc.) for the benefit of the personnel.
- Sports training and tournaments for the benefit of the personnel members and their families.

# SUMMARY

## SECTION

1

### ENERGY SITUATION

Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13

## SECTION

2

### TECHNICAL ACTIVITIES

Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63

## SECTION

3

### MANAGEMENT ACTIVITIES

Petroleum Agreements .....	67
Commercial Activities .....	70

## SECTION

4

### GOVERNANCE AND AUDIT ACTIVITIES

Management Control .....	77
Governance .....	80

## SECTION

5

### COMMUNITY & ENVIRONMENTAL ACTIVITIES

Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91

## SECTION

6

### SUPPORT ACTIVITIES

#### I. Technical Support

Petroleum Services .....	96
Exploration Studies .....	100

#### II. Management Support

Human Resources & General Affairs .....	104
➡ Information Technology .....	114
Legal Affairs .....	120

## SECTION

7

APPENDICES .....	123
------------------	-----

# INFORMATION TECHNOLOGY

The IT Direction is invested with the mission of implementing ETAP's strategy in the field of Information Technology systems. Its primary role is to deliver IT services to the technical and managerial users following the needs and choices of ETAP.

In 2019, ETAP carried on its computerization efforts, mainly through the achievement of numerous projects:

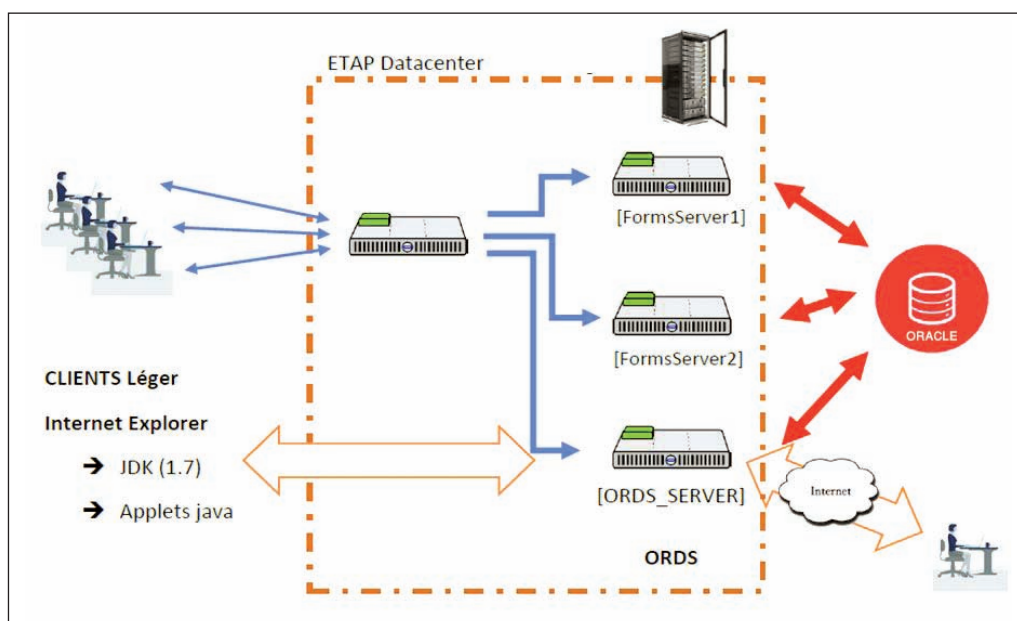
## 1- Projects

### a- Migration of the Management Information System (MIS)

The IT Direction, supported by experts from the supplier "Oradist Tunisie", started this migration phase of the management information system (servers, database, management information system, etc.) while ensuring the continuity of the services of different directions.

Through this MIS migration project, the IT Direction contemplates having a well-organized, consistent, secure, and agile information system in order to adapt to the technological innovations as well as to the enterprise's needs. This will allow ETAP users to benefit from a modern web platform that is developed according to the latest technology trends, namely: Angular, Weblogic, etc.

This project is in its final phase.



The new architecture of the PROD environment

#### b- Launch of the ETAP website overhaul project:

This project aims to have a dynamic, evolving website that is adapted to all the new media, developed under a Content Management System (CMS), and based on open-source tools in three languages.

This system aims to:

- Modernize ETAP's digital presence.
- Promote exploration in Tunisia by integrating a Web Mapping module (presentation of the multi-layer hydrocarbon map: open blocks, permits, concessions, wells, infrastructure, etc.).
- Sustain communication to optimize the enterprise's services and image.
- Meet the visitors' expectations and answer those seeking information in a timely fashion.
- Piece together a privileged relationship with the enterprise's external environment.

#### c- Upgrade of and access to the petroleum database

This project consists in upgrading the ProSource software and the data referenced therein. The achievement of the project is carried out according to the following steps:

- Upgrade of the current version of ProSource from 2016 to 2018; application of the standardization rules and the migration of the database to the new version of the software.
- The exploitation of all the features of the ProSource Front Office 2018 module via secure web access for all of ETAP's G&G engineers.

#### d- Upgrade of the storage infrastructure and the datacenter

This project, initiated in 2019, aims to establish a technical platform for the oil database, the exploitation of the technical data, the storage, and replication of the inter-site data.

The aforementioned project is made up of the following two aspects:

- The virtualization of the servers and the technical data.
- The centralisation of the inter-site data storage (the Med V Headquarters, the "CRDP" Chargaia II, and the ETAP El Manar) and the replication of critical data.
- The implementation of client virtualization technology: virtual desktop infrastructure (VDI) which provides light access and guarantees a good working environment to the specialized engineers.

### e- Primary data standardization project

The primary technical data standardisation project was negotiated between ETAP and SCHLUMBERGER. The main objective of the aforementioned project is to standardize in form and format all the E&P data stored in the SEABED database and to allow the G&G users to freely access the data in their new format.

The initial phase of this project targets the primary data (general data of the wells, cultural data, and Business Associates). At the end of this phase, a road map will be prepared and will serve as an action plan for the standardization of mass data (seismic, logging, production, etc.).

The project reached its final phase.

### f- Production data management and establishment of a dashboard (DATA Production Management System: DPMS)

The Data Production Management System constitutes one of the components of ETAP's digitisation plan. It consists of establishing a management and monitoring system of the daily and monthly production data submitted by the different operators.

This project will allow ETAP to:

- Consolidate all the exploration and production (E&P) data in a single database and thus avoid the Silos effect.
- Provide a single access point to all the technical data (seismic, production, etc.).
- Provide instantaneous information concerning production.
- Improve the oil and gas domestic reserves projections.

NOTE: The DPMS system will be based on the E&P Data Management solution ProSource, purchased from Schlumberger, and working since 2007.

### g- Management of the business processes and of the documents

This project aims to purchase and implement a platform for Business process dematerialization (Business Process Management: BPM) and Electronic Document Management (EDM). This platform, both integrated and evolving, respects the norms and standards of the electronic management and archiving of the documents.

With these software packages, ETAP targets the following goals:

- The dematerialized management of the documents.
- The optimization of the circulation, management, and distribution of the different documents through the establishment of computerized procedures.
- The improvement of the document processing deadlines, as well as permanent security and traceability.
- The cross-cutting management within the same department, between directions, and between ETAP and third-parties.

These BPM/EDM applications are among the main components of the digital transformation of ETAP.

## 2- Purchases

### a- Purchase of licenses from Schlumberger

In taking into account the expiry of the old framework contract with Schlumberger, the IT Department proceeded to renewing the maintenance contracts on the one hand and to the purchase of additional new licenses from Schlumberger on the other hand. The purchase of new licenses as well as the renewal of the software maintenance contracts were subject to a single procurement with the aforementioned provider.

### b- Purchase of the Arcgis software and of licenses for the technical directions

Following the recruitment of new Geomatics engineers and technicians, new mapping licenses were purchased to facilitate the work. These licenses are floating and accessible from any PC or workstation and have the advantage of great flexibility of use.

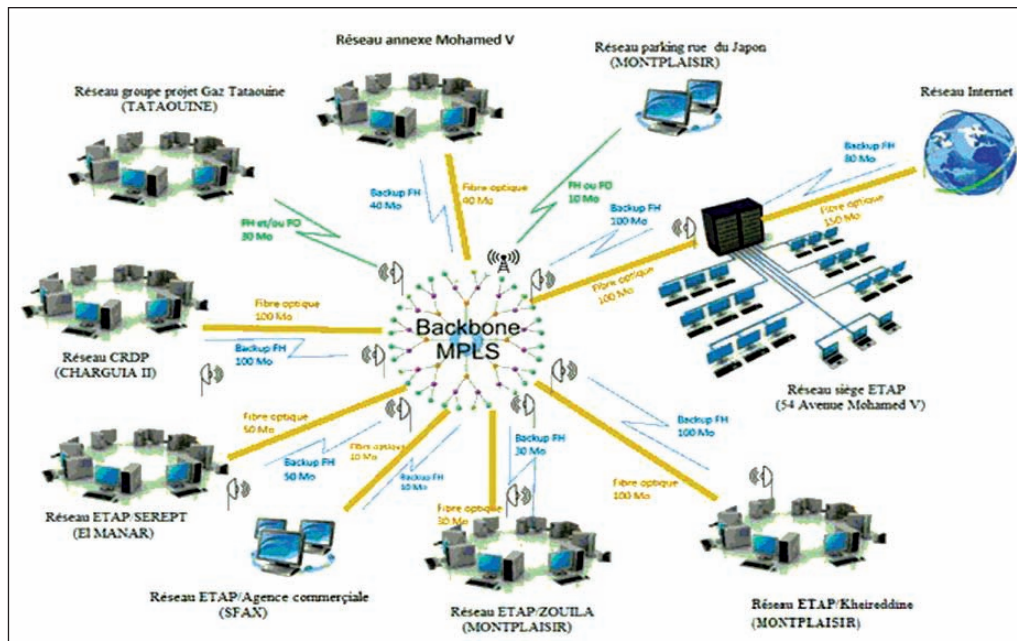
The choice of the ESRI-developed Arcgis software was dictated by the fact that it is one of the best systems. This software is composed of different geographical information data management platforms. It is designed to collect, store, process, analyze, digitise, manage, and display all types of spatial and geographical data.

A three-year maintenance contract was signed with 'Graphtech Tunisie' (exclusive distributor of ESRI software in North Africa).

## 3- Renewal of the Multiprotocol Label Switching (MPLS) contract

In 2019, the maintenance contract, elaborated with Orange, expired. Thus, the IT Direction started the procedures for the elaboration of a new MPLS subscription contract through an invitation to tender in which the service provider Orange won the contract.

The internet speed, the bandwidth of the service quality and the support service were improved in the current contract. This made it possible to guarantee seven (07) synchronous liaisons between the Med V headquarters and the different ETAP premises with a fiber-optic connection of up to 150 Mbps.



The new ETAP's MPLS Architecture

#### 4- Establishment of a video conferencing solution

This project is composed of two main aspects:

- The implementation of the Cisco Jabber solution which provides instant messaging, video calls, voice mail, etc.
- The establishment of a Cisco video conferencing solution in different remote sites such as the Mohamed V Headquarters, the Petroleum Research and Development Centre Charguia II, and the ETAP Tataouine.

# SUMMARY

<b>SECTION</b>	<b>1</b>
<b>ENERGY SITUATION</b>	
Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13
<b>SECTION</b>	<b>2</b>
<b>TECHNICAL ACTIVITIES</b>	
Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63
<b>SECTION</b>	<b>3</b>
<b>MANAGEMENT ACTIVITIES</b>	
Petroleum Agreements .....	67
Commercial Activities .....	70
<b>SECTION</b>	<b>4</b>
<b>GOVERNANCE AND AUDIT ACTIVITIES</b>	
Management Control .....	77
Governance .....	80
<b>SECTION</b>	<b>5</b>
<b>COMMUNITY &amp; ENVIRONMENTAL ACTIVITIES</b>	
Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91
<b>SECTION</b>	<b>6</b>
<b>SUPPORT ACTIVITIES</b>	
<b>I. Technical Support</b>	
Petroleum Services .....	96
Exploration Studies .....	100
<b>II. Management Support</b>	
Human Resources & General Affairs .....	104
Information Technology .....	114
➡ Legal Affairs .....	120
<b>SECTION</b>	<b>7</b>
<b>APPENDICES</b> .....	123



# LEGAL AFFAIRS

The main activities of the Legal Affairs Direction consist in the elaboration of the contractual documents (sets of specifications, contracts, etc.) and the delivery of legal opinions relating to the activities of ETAP, as well as the follow-up of corporate litigations.

## A- CONTRACTUAL ACTIVITIES

### 1- Participation in drawing up procurement contracts for:

- Two hydrogen generators, equipment, and gas for the needs of ETAP's laboratories.
- Petrophysics IP interactive licenses.
- Active Directory management solution.
- Transportation materials.
- Personal protection equipment and work clothes for staff.
- Three baggage scanners.

### 2- Participation in the establishment of contracts related to works of:

- Renovation of the former ETAP headquarters.
- Maintenance of IT software, Lotus Notes mail manager, and existing licenses.
- Maintenance of the inverters.
- Maintenance of the fire-detection system at the "CRDP".
- Security of the ETAP premises.
- Design and printing of the 2018-2019-2020 ETAP activities report (a 3-year contract).
- Maintenance and servicing of the elevator of the Khalil building.

### 3- Participation in drawing up contracts related to services and studies such as:

- Security audit of ETAP's information system.
- Customs clearance of ETAP's property.
- Training under the theme «communication and public speaking».
- The Master suscription agreement.
- The contract for the organization of the recruitment competition and Amendment n°1 relating to this contract.
- The establishment of an MPLS network, an internet service, and the hosting of ETAP's website.

**4- Participation in the establishment of the following leases:**

- The Mohammed V building.
- Zarzis Park warehouse.

**B- PARTICIPATION IN THE PROJECTS ACTIVITY****1- Tataouine Gas Project (TGP) :**

**a-** Unblocking and resolution of litigations relating to the land situation, in cooperation with the public authorities (change in land use, land purchase, lease, etc.).

**b- Establishment of the contracts relating to:**

- The construction of a Gas Processing Plant.
- Making the solicited personnel available for the requirements of the project.
- Geophysical studies.
- Making certified inspectors available for the supervision of pipeline-laying works.
- Maintenance of a server for the information system.
- Rental of a CLOUD solution for the management of the documents.

**2- Photovoltaic project:**

In the context of the construction of a 10 MW photovoltaic power plant, a bare land lease contract was established between ETAP and the company SEREF.

**3- Chaal project:**

Within the framework of the Chaal project, the Legal Affairs Department was entrusted with following up the land files (Bir Ali Ben Khalifa delegation) in coordination with the regional and local authorities.

**C- ETAP LITIGATION**

In 2019, the Legal Affairs Direction ensured the follow-up of ETAP litigation through occasional internal and external affairs.

# SUMMARY

## SECTION

1

### ENERGY SITUATION

Energy Situation at the International Level .....	5
Energy Situation at the National Level .....	13

## SECTION

2

### TECHNICAL ACTIVITIES

Exploration .....	21
Development .....	28
Production .....	56
Operating .....	63

## SECTION

3

### MANAGEMENT ACTIVITIES

Petroleum Agreements .....	67
Commercial Activities .....	70

## SECTION

4

### GOVERNANCE AND AUDIT ACTIVITIES

Management Control .....	77
Governance .....	80

## SECTION

5

### COMMUNITY & ENVIRONMENTAL ACTIVITIES

Corporate Social Responsibility (CSR) .....	84
Health, Safety, and Environment (HSE) .....	91

## SECTION

6

### SUPPORT ACTIVITIES

#### I. Technical Support

Petroleum Services .....	96
Exploration Studies .....	100

#### II. Management Support

Human Resources & General Affairs .....	104
Information Technology .....	114
Legal Affairs .....	120

## SECTION

7

➡ APPENDICES .....	123
--------------------	-----

## APPENDIX 1:

### ETAP BOARD OF DIRECTION

**Mr. Mohamed Ali Khelil**

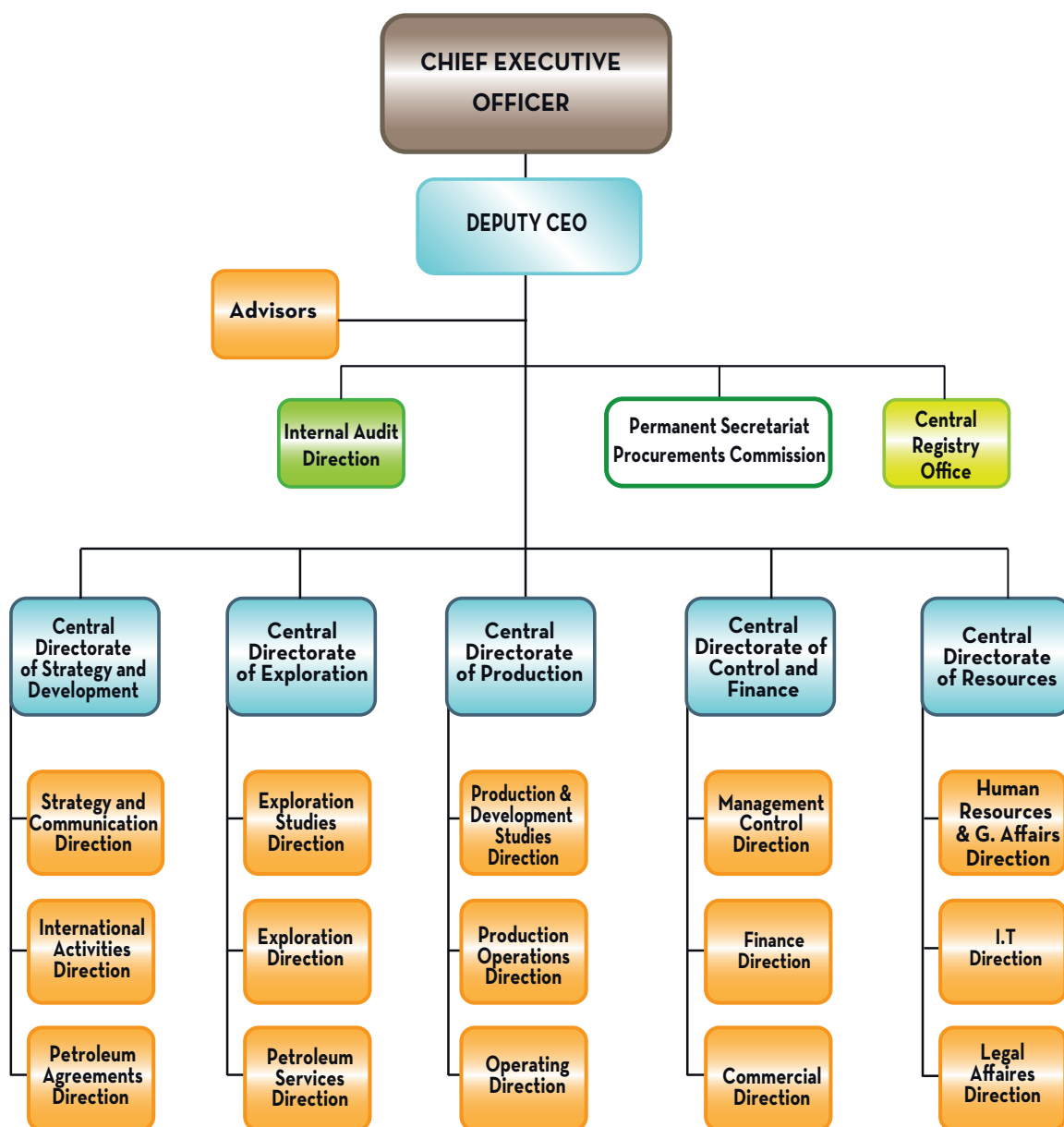
President & CEO of ETAP

• Mr. Moncef HAMDİ	Administrator / Presidency of the Government
• Mr. Hazem YAHYAOUİ	Administrator / Ministry of Industry and Small and Medium-Sized Enterprises
• Mme. Ibtissem BEN ALGIA	Administrator / Ministry of Finance
• Mr. Abdel karim LASSOUED	Administrator / Central Bank of Tunisia
• Mme. Ikbel FKIİH	Administrator / Ministry of Development, Investment and International Cooperation
• Mr. Brahim BESSAIS	Administrator / Ministry of Higher Education and Scientific Research
• Mr. Riadh BERJEB	Administrator / National Agency for the Control of Energy
• Mr. Ridha BOUZOUADA	Administrator / for Competence in the Oil & Gas Sector
• Mr. Kais EL BEJAOUİ	Administrator / Representative of the Company's Executives

• Mme. Azza KHALİL	State Supervisor
• Cabinet GTOKR	Legal Auditor

## APPENDIX 2:

### ETAP ORGANISATION CHART



## ANNEXE 3:

### ETAP PARTICIPATION PORTFOLIO

SECTOR	COMPANIES	RATE (%)	TND
EXPLORATION	1. JOINT OIL	50.0%	476 250
	2. NUMHYD	50.0%	644 337
PRODUCTION	3. SEREPT	50.0%	3 608 660
	4. CTKCP	50.0%	50 000
	5. MARETAP	50.0%	150 000
	6. SODEPS	50.0%	50 000
	7. TPS	50.0%	50 000
	8. APO	50.0%	250 000
	9. SEREE	50.0%	500 000
DRILLING	10. CTF	90.0%	450 000
TRANSPORT	11. SOTRAPIL	18.28%	534 619
	12. SOTUGAT	99.8%	199 600
	13. SERGAZ	33.23%	32 900
STORAGE	14. TANKMED	24.0%	115 385
BANKS	15. BTS	0.83%	500 000
	16. STUSID BANK	0.125%	125 000
OTHERS	17. SOTULUB	27.09%	1 490 000
	18. BITUMED	8.0%	48 000
	19. SNDP	-	50
	20. TECI	4.8%	36 000
	21. PAEZ	12.4%	741 000
	22. T.A	0.086%	1 012 100
	23. SNIPE	4.86%	70 000
	24. ITF	0.4%	40 000
	25. SSC	40.0%	400 000
	26. S.A.GE.S	0.2%	1 000
DEVELOPMENT & INVESTMENT	27. SODIT-SICAR	60.00%	3 000 000
	28. FCPR-FP-PME	71.42%	5 000 000
	29. SODIK-SICAR	59.98%	2 999 000
STATE' ACCOUNT SECURITIES	30. SGTBC	4.1%	205 000
	31. BNA	2.2%	8 843 634
	32. STB	2.2%	36 375 427
	33. BH	16.6%	55 566 234
	34. TRAPSA	35%	15 709 196
	35. STAR	19.0%	5 715 197
	36. TUNIS RE	3.8%	6 166 348
	37. SCITT	25%	250 000
	38. BTL	-	7 125 300

## APPENDIX 4:

### OPERATIVE ETAP CONCESSIONS



	SHAREHOLDING	OPERATOR	START OF PRODUCTION DATE
01-ASHTART	50.0%	SEREPT	MARCH 1974
02-M.L.D	50.0%	SODEPS	JULY 1983
03-CERCINA/C.S	51.0%	TPS	MAY 1994
04-RHEMOURA	51.0%	TPS	MAY 1993
05-AIN/GREMDA	51.0%	TPS	FEBRUARY 1989
06-HAJEB/GUEB	51.0%	TPS	JULY 1985
07-DORRA	50.0%	OMV	JULY 2011
08-EZZAOUIA	55.0%	MARETAP	NOVEMBER 1990
09-SIDI EL KILANI	55.0%	CTKCP	SEPTEMBER 1991
10-BIR B. TARTAR	CPP	ATOG	MARCH 2009
11-SABRIA	55.0%	SERINUS	AUGUST 1998
12-ADAM	50.0%	ENI	MAY 2003
13-DJEBEL GROUZ	50.0%	ENI	NOVEMBER 2005
14-OUED ZAR/HMD	50.0%	ENI	AUGUST 1996
15-CHARGUI	55.0%	PERENCO	MAY 2008
16-FRANIG	50.0%	PERENCO	JULY 1998
17-BAGUEL/TARFA	51.0%	PERENCO	AUGUST 1998
18-HASDRUBAL	50.0%	SHELL	DECEMBER 2009
19-CHOUROUQ	50.0%	OMV	NOVEMBER 2007
20-BARAKA	51.0%	ENI	MAY 2010
21-MAAMOURA	51.0%	ENI	DECEMBER 2009
22-UTIQUE <sup>(*)</sup>	100.0%	ETAP	MAY 2007
23-ANAGUID EST	50.0%	OMV	AUGUST 2012
24-MAZRANE	CPP	HBS	JUNE 2018
25-DOULEB	70.0%	SEREPT	MAY 2016
26-TAMESMIDA	95.0%	SEREPT	MAY 2016
27-GHRIB	50.0%	MAZARINE	OCTOBER 2017
28-SONDES	50.0%	OMV	JANUARY 2017
29-JINANE	50.0%	OMV	NOVEMBER 2018

(\*) CO<sub>2</sub> - producing concession

## APPENDIX 5:

### OIL AND CONDENSATE PRODUCTION

### FROM ETAP CONCESSIONS 2019

CONCESSIONS	SM <sup>3</sup>	MT	BBL
ASHTART	248034	216320	1560875
FRANIG	4572	3664	28759
BAGUEL/TARFA	58240	46701	366332
CHERGUI	13881	9647	87296
ADAM	178159	138277	1121157
OUED ZAR/HMD	68895	56490	433557
DJEBEL GROUZ	18416	14335	115890
BARAKA	5142	3777	32362
MAAMOURA	26585	20154	167302
CHOUROUQ	130782	105988	823009
DORRA	26003	20372	163639
ANAGUID	41391	34503	260475
SONDES	12092	10021	76093
JINANE	12931	10797	81377
EL HAJEB/GUEBIBA	110612	94624	696078
CERCINA/CERCINA 'SUD'	87480	75750	550510
EL AIN	5432	4508	34182
RHEMOURA	4951	4272	31154
MLD	118299	96312	744449
HASDRUBAL	205923	150438	1296078
SIDI EL KILANI	33975	28027	213806
EZZAOUIA	30322	24682	190725
SABRIA	30433	24383	184506
B-TARTAR	34808	27846	219046
DST	15778	13066	99227
GHRIB	68857	55523	433611
MAZRANE	7878	6431	49555
<b>TOTAL</b>	<b>1 599 872</b>	<b>1 296 910</b>	<b>10 061 051</b>



## APPENDIX 6:

### LPG FIELDS PRODUCTION

### FROM ETAP CONCESSIONS 2019

CONCESSIONS	SM <sup>3</sup>	MT	BBL
HASDRUBAL BUTANE	52602	30352	389910
HASDRUBAL PROPANE	90130	45967	565310
HASDRUBAL LPG TOTAL	142733	76318	955220
FRANIG	14346	7461	90282
BAGUEL/TARFA	10084	5273	63431
BARAKA	306	164	1927
MAAMOURA	2717	1454	17095
GHRIB	8202	4286	51587
<b>TOTAL</b>	<b>178 389</b>	<b>94 957</b>	<b>1 179 541</b>



Hasdrubal Field

## APPENDIX 7 :

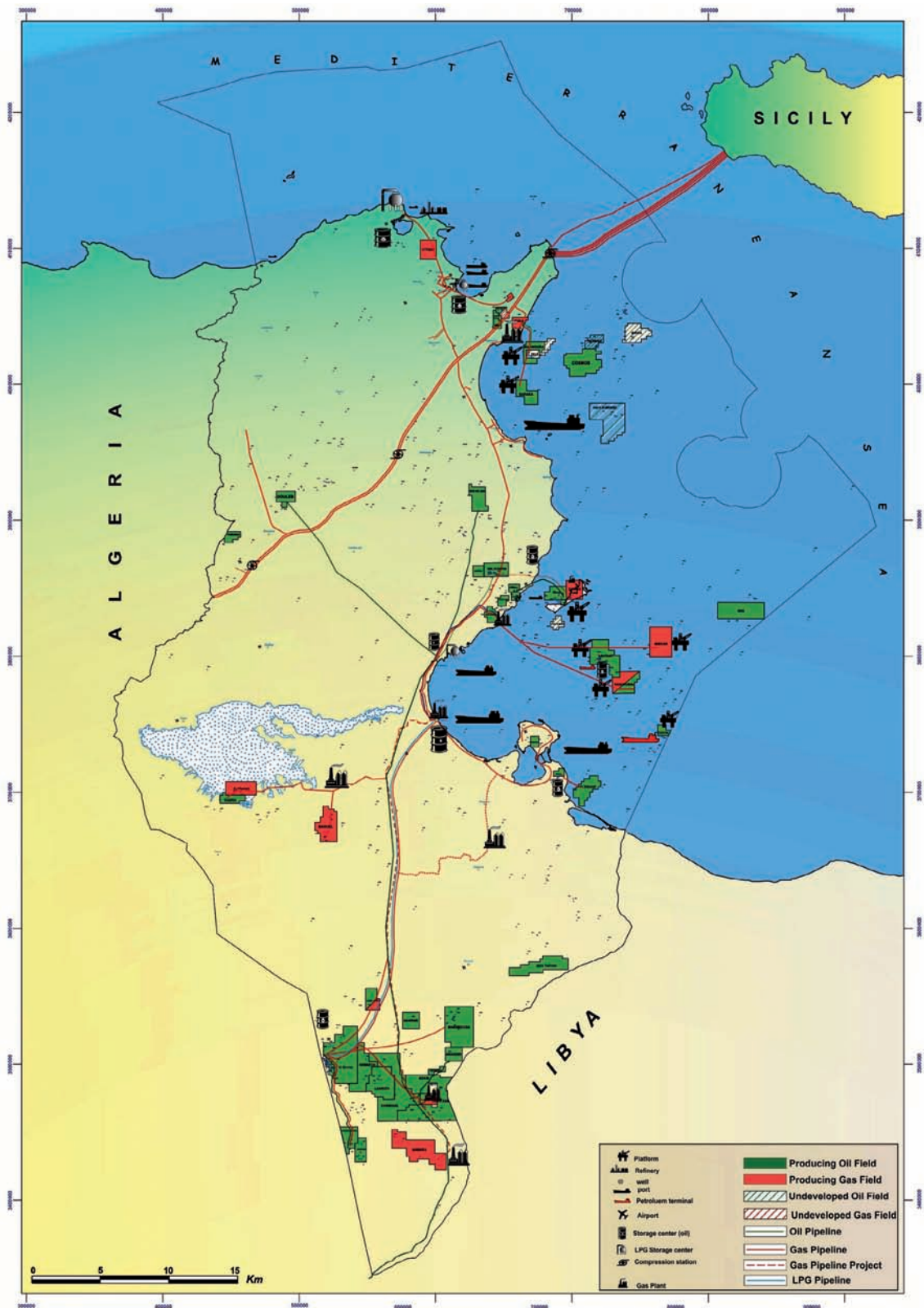
### COMMERCIAL GAS PRODUCTION

### FROM ETAP CONCESSIONS 2019

CONCESSIONS	MILLIONS NM <sup>3</sup>	MILLIONS SCF	TOE
HASDRUBAL	447.378	16698.698	445169
FRENIG	44.63	1665.865	47039
BAGUEL/TARFA	32.189	1201.47	33908
CHARGUI	193.645	7227.961	195923
ADAM	281.112	9933.283	319463
OUED ZAR/HMD	32.808	1159.31	37209
DJEBEL GROUZ	10.782	380.981	13225
BARAKA	0.992	35.041	1139
MAAMOURA	9.945	351.424	10076
CHOUROUQ	1.752	61.866	1790
DURRA	25.109	886.612	27043
ANAGUID	6.745	238.161	7276
GHRIB	20.108	747.629	21130
SABRIA	11.336	399.582	11948
MLD	16.037	598.590	20970
JINANE	0.204	7.217	219
NAWARA	0	0	0
<b>TOTAL</b>	<b>1 134.773</b>	<b>41 594</b>	<b>1 193 526</b>

# TUNISIA OIL & GAS

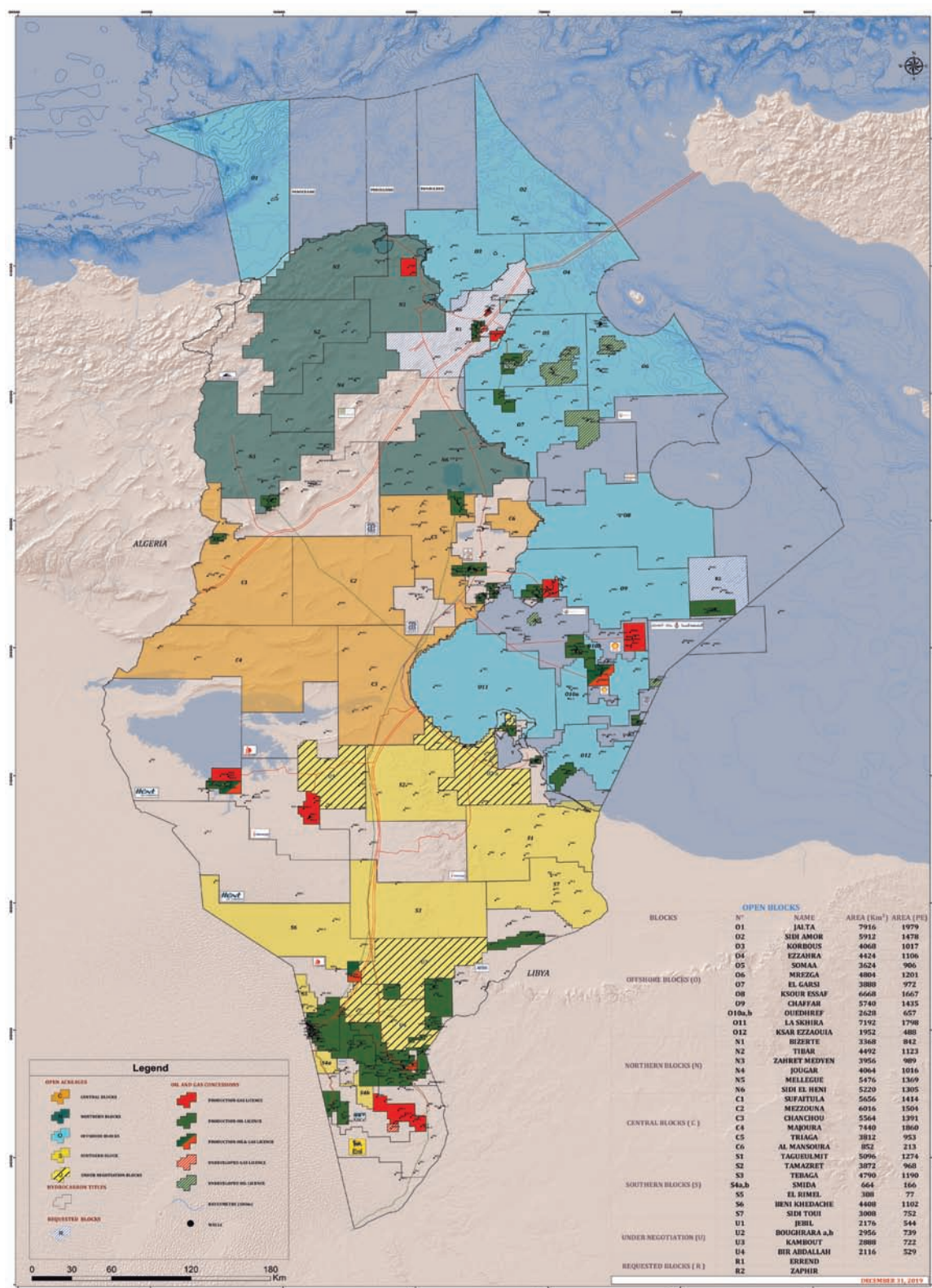
## INFRASTRUCTURES MAP





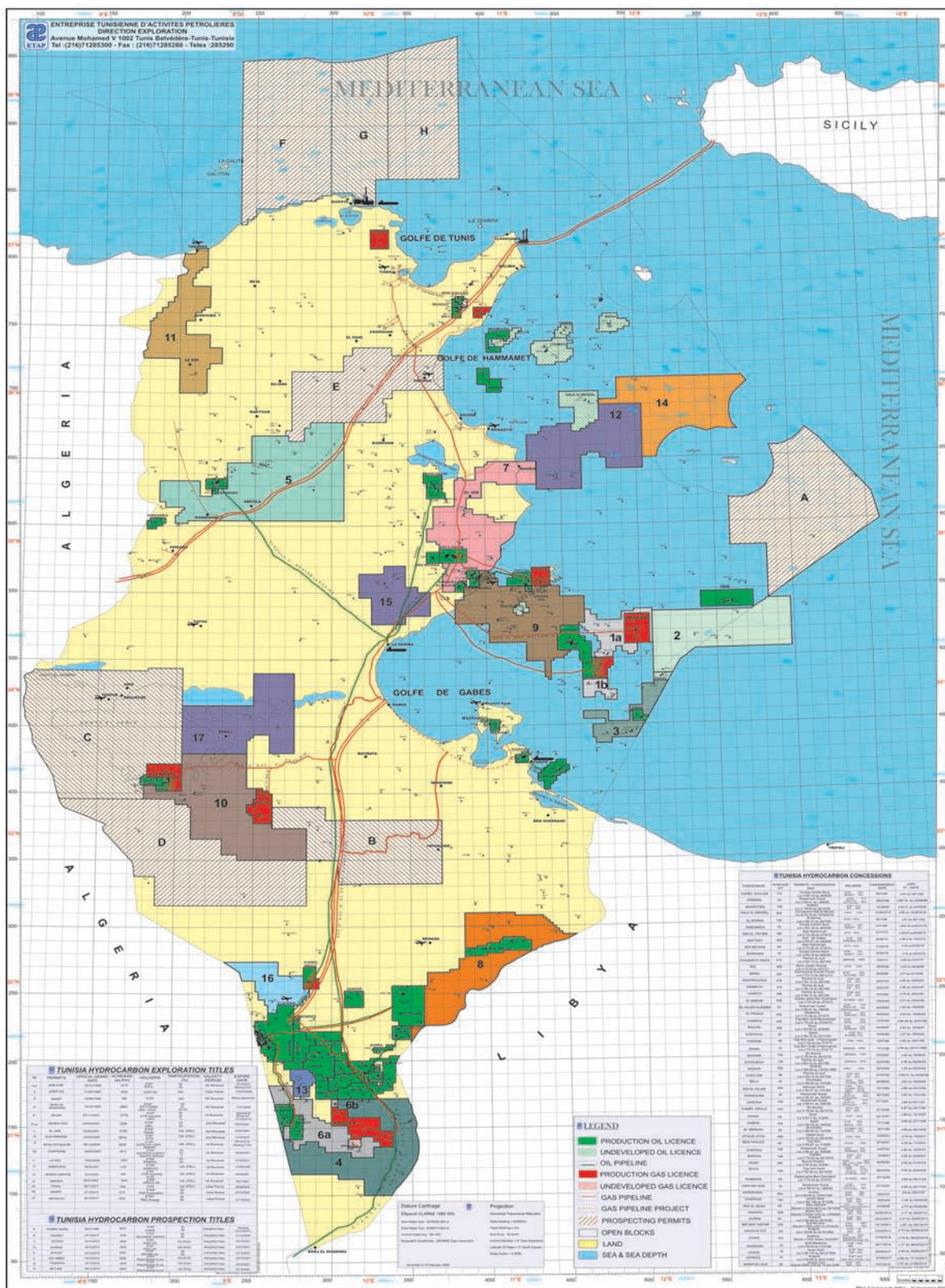
# TUNISIA OPEN

## BLOCKS MAP





# TITLES MAP





54, Mohamed V Avenue - 1002 Tunis, Tunisia  
Phone: (+216) 71 28 53 00 - Fax: (+216) 71 28 52 80