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Sonatrach

An Integrated Oil
& Gas Company



سنة في خدمة
التمية الوطنية

50

Years Of Support to
National Development

SONATRACH

Sonatrach is the Algerian state company for the research, exploitation, pipeline transportation, processing and marketing of hydrocarbons and their by-products. Its purpose is to make an optimum use of its hydrocarbon national resources and create wealth serving the country's social and economic development.

As an integrated oil and gas company, Sonatrach is a major player in the oil and gas sector. Sonatrach is today the first hydrocarbons company in Africa and the Mediterranean. It carries out its activities in four main fields: Upstream, Downstream, Pipeline Transportation and Marketing.

It participates in various projects with different partners in Africa, Latin America and Europe.

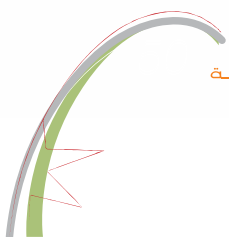
Since its inception, Sonatrach has managed to acquire a strong capacity to integrate

new technologies, to establish a proven and reliable presence in international liquid and gaseous hydrocarbons markets and to capitalize on its experience of partnership with international companies of different sizes and different geographic origins.

It has also adapted to the new global economic environment by diversifying its activities and, therefore, is expanding in other economic niches including mining, power generation, water, air and sea transport ... etc.

Today, Sonatrach is asserting itself not only as an international oil and gas-oriented group but also as a supportive, responsible and Citizen Company.

It is committed to the economic, social and cultural development of populations; it has set essential priorities in terms of HSE, and became resolutely involved in environmental protection and ecosystems preservation.





Upstream Activity

The Upstream Activity covers the research, exploration, development and production of hydrocarbons operations. It operates in giant fields in different regions of the South, such as Hassi Messaoud, Hassi R'Mel, Hassi Berkine, Ourhoud, Tin Fouyé Tabankort, Rhourde Nouss, In Salah, In Amenas, individually or in partnership with foreign oil companies.

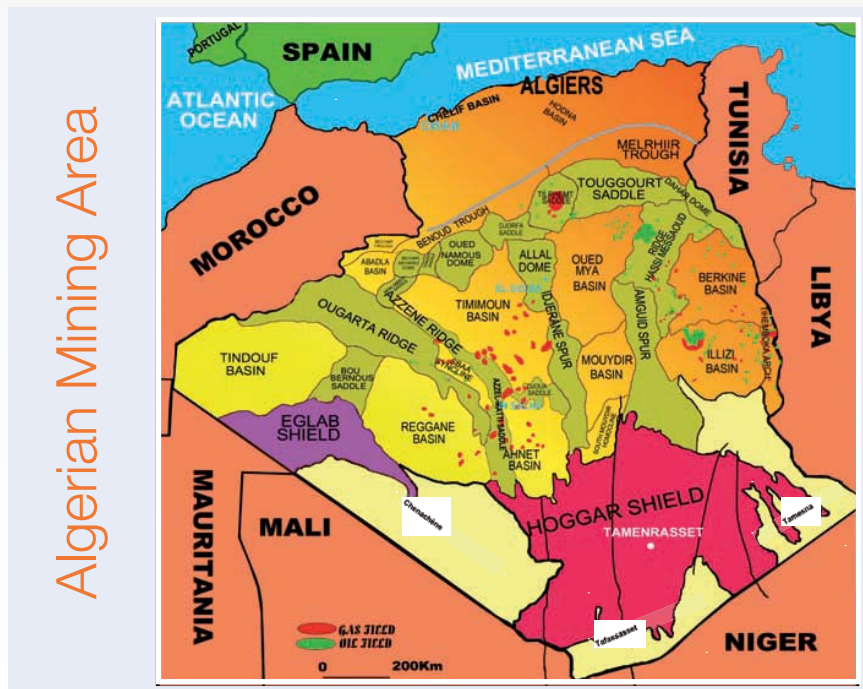
In order to fulfill its primary missions, namely to develop the discovered fields, improve the rate of recovery, reinforce oil and gas production capacities and make an optimal use of hydrocarbons, Sonatrach initiated and achieved large-scale projects. These projects are led by Sonatrach alone or in association with its partners.

Algerian sedimentary basins cover more than 1.5 million square kilometers with a depth exceeding 3000 meters in most cases.

On the Saharan platform and northern Algeria, hydrocarbon potential is very important both in gas and oil. With an average density of drilling of 15 exploration wells per 10,000 km², the Algerian mining area remains unequally and significantly under explored. However, Sonatrach made considerable efforts for research and development of oil, alone or with partners.

This commitment to intensify the exploration effort recorded significant progress, particularly with the introduction of the process of 3D seismic. Since 2000, the efforts of 3D seismic have increased from about 300 km² to over 8000 km² in 2011.

Also, 106 exploration wells were completed in 2011 against 28 in 2000.



Pipeline Transportation Activity

The Pipeline Transportation Activity provides for the transport of hydrocarbons (crude oil, condensate, natural gas & LPG).

Dispatching centers are among the Activity's critical infrastructures.

- The Liquid Hydrocarbons Dispatching Centre, CDHL, located in Hassi Messaoud –Haoud El Hamra.

1,4 million barrels/day presently transit through this real lung of the Activity.

- Gas Dispatching National Centre, CNDG, is located in Hassi R'Mel. This is a hub where gas gathering and dispatching is made through gas pipelines to local (Sonelgaz, third party clients and Sonatrach plants' own final use) and international customers (delivery to liquefaction complexes and transcontinental **gas pipelines**: PEDRO DURAN FARELL, ENRICO MATTEI and MEDGAZ).

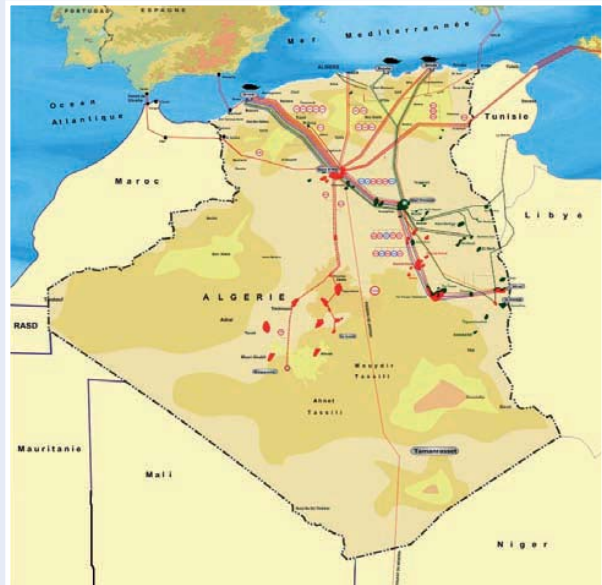
Sonatrach, through the Pipeline Transportation Activity, has 22 Pipeline Transportation Systems (20 in operation, one under construction GK3, and one in a launch phase, GR5) with 82 pumping and compression stations. 39 pumping stations are designed for crude.

Their operational capacity is of 145 million tons.

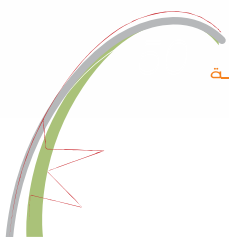
The company also owns many berths for the loading of gas and oil at three oil ports located in the coastal cities of Arzew, Bejaia and Skikda. The 03 ports are equipped with 5 offshore oil loading buoys.

The pipeline network is around 18 512 km long:

- The pipeline transportation network counts 20 oil pipelines with a 9883 km length, with a carrying capacity of 145 million tons.
- The pipeline transportation network includes 14 pipelines with a total length of 8629 km, with a carrying capacity of 142 billion m³.



Hydrocarbons Transportation Network





Transcontinental gas pipelines

Pedro Duran Farell pipeline (GPDF):

Gas pipeline linking Algeria to Spain via Morocco.

Technical characteristics:

- Length: 521 km
- Diameter: 48"
- Capacity: 11.6 Billion cm/year
- Commissioning: 1996

Pipeline Enrico Mattei (GEM):

Gas pipeline linking Algeria to Italy via Tunisia.

Technical characteristics:

- Length: 1647 km
- Diameter: 3 x 48"
- Capacity: 33.15 Billion Cm/year
- Commissioning: 1982

MEDGAZ Pipeline:

Gas pipeline linking Algeria to Spain. Starting from Beni Saf (West of Algeria), this pipeline across the Mediterranean to reach the Spanish coast of Almeria.

Technical characteristics :

- Terminal departure: Beni Saf (Algeria)
- Terminal arrival: Almeria (Spain)
- Length: 210 km
- Diameter: 24"
- Max depth: 2160 meters
- Capacity: 8 Billion Cm / year
- Commissioning: 2011

Projects of Transcontinental gas pipelines

GALSI Pipeline: under development

Project of a direct line linking Algeriato Italy via Sardinia.

- El-Kala Cagliari (offshore):
Diameter: 26"
Length: 285 Km
Depth: 2840 m

- Cagliari-Olbia (onshore):

Diameter: 48"
Length: 300 km

- C.d.Pescaia-Olbia (offshore):
Diameter: 32"
Length: 275 km
Depth: 900 m

TSGP Pipeline: under development

Project of a direct line linking Nigeria to Algeria.

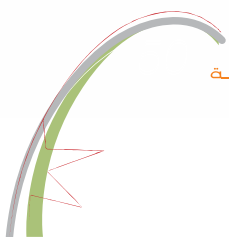
- Departure Terminal: Warri (Nigeria)
- Terminal Arrival: Beni Saf or El Kala
- Length: 4188 km
 - 2310 km in Algeria
 - 841 km in the territory of Niger
 - 1037 km on the territory of Nigeria
- Diameter: 48" or 56"
- Volume: 20 to 30 Billion Cm / year

Downstream Activity

The Downstream Activity is in charge of the development and exploitation of LPG separation and natural gas plants, refineries and industrial gases units.

Through the Downstream activity Sonatrach has:

- Three (03) LNG complexes, 2 in Arzew and 1 in Skikda with a total production capacity of 44 billion cm of LNG / year.
- Two (02) LPG plants in Arzew with a total production capacity of 9 million tons / year.
- Two (02) helium extraction plants: one in Arzew and one in Skikda.
- Five (05) crude oil refineries and one (1) condensate refinery:
 - One (01) in Algiers with a processing capacity of crude oil by 2.7 million tons / year.
 - One (01) in Skikda with a crude oil processing capacity of 15 million tons / year.
 - One (01) in Arzew with a crude oil processing capacity of 2.5 million tons / year.
- One (01) in Hassi Messaoud with a crude oil processing capacity of 1.1 million tons / year.
- One (01) in Adrar in partnership with a crude oil processing capacity of 600,000 tons / year.
- One (01) condensate refinery in Skikda with an annual processing capacity of 5 million tons.





Marketing Activity

The Marketing activity is in charge of the development and implementation of Sonatrach's strategy in the field of marketing of hydrocarbons on the domestic and international markets through trading and shipping. These operations are conducted in cooperation with the subsidiaries NAFTAL to supply the domestic market in oil and gas products (LPG), HYPROC SC for Shipping of these products and COGIZ for the marketing of industrial gases.

The Marketing Activity manages the interfaces and operations with other national operators to meet the demand of the domestic market in the best economic conditions and quality of service.

The national electricity and gas company «Sonelgaz» is the largest client of Sonatrach and the main player in the domestic market for production and distribution of electricity and public distribution of natural gas. The supply of Sonelgaz is completed via 65 delivery points located throughout the country.

As for LPG, it is mainly distributed by National Naftal, a 100% subsidiary of Sonatrach. Naftal operates in the fields of barreling of LPG, storage and distribution of fuels, lubricants, LPG / fuel, tires and special products.

Apart from the expansion of the domestic market (12 MOE of liquid hydrocarbons and close to 30 million TOE of gaseous hydrocarbons), the international market represents nearly 73% of liquid and gaseous hydrocarbons sales. Indeed, Sonatrach managed to position itself as an international oil and gas group. Its strategy results in a participation in the promotion of its products and marketing them directly on global markets.

Sonatrach has (19) transport vessels (09 for LNG and 10 for LPG) and is positioned as a major player in the export of LPG and LNG in the Euro-Mediterranean basin. It aims to significantly expand its market share in the USA and Asia.

As part of its strategy to export natural gas to distant countries, Sonatrach has a regasification capacity at the terminals of Isle of Grain, Montoir de Bretagne and interests in the terminal of Reganosa.



Subsidiaries and Holdings

Sonatrach Group owns 154 subsidiaries both nationally and internationally.

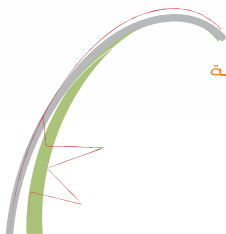
105 subsidiaries are operating in Algeria and 49 others around the world, such as Peru, England, Spain, Mali, Niger, etc..

Sonatrach Group companies operate in various fields, including:

- Production and hydrocarbon exploration;
- Oil services;
- Production and marketing of fertilizers;
- Construction and engineering;
- Seawater desalination;
- Aircraft;
- trading;
- Shipping;

Major subsidiaries of Sonatrach are:

- ENAFOR (Drilling operations)
- ENAGEO (Geophysical)
- ENSP (Well services)
- ENTP (Drilling and Work over)
- ENGTP (construction of industrial facilities)
- GCB (Civil Engineering and Building)
- ENAC (Engineering, Construction & Installation of pipes)
- SAFIR (Engineering and construction of industrial units)
- NAFTAL, (Marketing and Distribution of Petroleum Products)
- HYPROC SC (Shipping)
- Tassili Airlines (Aircraft)
- Group ASMIDAL (production, marketing and development of fertilizers, ammonia and derivatives)





Human Resources & Training

Human Resources :

In an increasingly competitive economic environment, Sonatrach success is largely based on its capacity to develop its human resources and engaging them in its strategic priorities. It is within this framework that Sonatrach committed to making human resources its sustainable source of wealth creation and of improved performance.

Human Resources planning as a central tool of Sonatrach HR policy contribute to Sonatrach development plans through the identification of needs in terms of employment and skills, achieving significant recruitment and training actions oriented mainly on the core businesses of the Company. Thus, an average of 2500 officers are recruited annually and 85% owns university degrees.



Training :

Training is a major Company priority. Thus, Sonatrach devotes significant resource to training.

Sonatrach has three training centers:

Company Development Center (CPE):

CPE intervenes in management techniques, management, languages, trainers' training, finances and legal, computing and information systems and HSE.

Algerian Petroleum Institute Corporate University (IAP-CU):

IAP-CU provides operational trainings at international level in energy and mines fields, and more particularly in oil upstream, hydrocarbons transportation, transformation and refining as well as oil economy.



HSE and Sustainable Development

Meeting the sustainable development challenges is a guiding principle and a strategic objective of Sonatrach. That is why the actions, programs and policies set up by Sonatrach reflect its responsible and practical commitment towards the nation and its peoples.

Sonatrach has adopted an HSE policy in order to combine Health, Safety, Environment and Industrial activity. Everything is made to ensure the security of its plants, the protection of its workers and the reduction of the impact of its activities on environment.

Sonatrach thus contributes to pollution source control: namely reduction of greenhouse gas emissions, waste treatment, soil remediation, groundwater protection, coastal and marine species protection ... etc.

In addition to this, Sonatrach is involved in the promotion of renewable energies which led to the study and development of several projects including solar, wind and biomass. The objective is to meet the energy needs of the domestic or even international markets.

Corporate Patronage, Sponsoring and Community Development

Sonatrach continues expanding while remaining centered on human capital development. It has, since its inception, adopted a strong social policy to respond to civil society's concerns. It thus participates in the development of underprivileged regions and provides support to poor populations, and, whenever necessary, responds to national solidarity with its material and human resources, particularly in situations such as natural disasters.

Since the establishment of Social Investment Management, a significant number of projects was materialized using a participatory approach involving local communities and this, from the identification of needs to the achievement of projects.

Through its corporate patronage and sponsorship activities, Sonatrach is also working to strengthen social ties by promoting research and scientific activities, artistic creation, sports, and by contributing to the preservation of nature and the country's historical and cultural heritage.





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سوناتراچ



Headquarters

Djenane El Malik, Hydra, Algiers - Algeria

Tel.: +213 21 54 70 00 / Fax : +213 21 54 77 00

www.sonatrach.com - sonatrach@sonatrach.dz