Our activities in Azerbaijan
50% STAKE IN THE ABSHERON GAS FIELD

PRESENCE IN AZERBAIJAN FOR MORE THAN 20 YEARS

SUPPORTING HIGHER EDUCATION

1996
Opening of the Total office in Baku.

2009
Production and Sharing Agreement (PSA) signed with the State Oil Company of Azerbaijan (SOCAR) on the Absheron block.

2011
First well drilled in Absheron.

2017
Development Program approved by SOCAR.

2018
Start of the drilling campaign with the new semi-sub drilling rig Heydar Aliyev.

2019
Early production scheme and development is expected to start-up by the end of 2019.

2020
First gas is planned to feed the domestic market early 2020.
TOTAL & AZERBAIJAN

MORE THAN 20 YEARS OF HISTORY FOR TOTAL IN AZERBAIJAN

For anyone working in oil & gas Azerbaijan can sound a bit special: it is one of the places where the oil adventure began, with ancient pre-Christian manuscripts making reference to this “fire water”. In 1996, Total opened its office in Baku, and has been engaged in exploration since then. From the outset Total aimed at developing a long-term partnership with Azerbaijan by participating in strategic projects of mutual benefit.

In 1997, Total entered the Lenkoran-Talish Deniz exploration block project, a partnership with Chevron on the Absheron block. Early exploration results were not promising.

In 2005, Total joined the Baku-Tbilisi-Ceyhan Consortium (BTC) transporting crude oil from Baku to the port of Ceyhan in Turkey.

In 2009 Total returned to the Absheron block relinquished in 2001 by Chevron, and this second time around, with a well drilled in 2011, discovered sufficient hydrocarbon to suggest a new future for Total in Azerbaijan. The development of this field will start with an Early Production Scheme (EPS) aiming to deliver gas to the domestic market by 2020. To reach this goal, in collaboration with its partner SOCAR, Total is bringing its globally recognized expertise in terms of deep sea technology, project management and reservoir development.

Our role as a company committed to better energy means that our engagement does not stop at the site gates, and since 1996 Total has been active in local development particularly in education.

DENIS LEMARCHAL
Managing Director & Country Chair Total in Azerbaijan

"The development of the Absheron field will bring us new opportunities for deeper engagement in Azerbaijan."
EXPLORE AND PRODUCE
READY TO MEET AZERBAIJAN’S TECHNICAL CHALLENGES

The Azerbaijani sector of the Caspian Sea poses a number of technical challenges. Drilling and development are complicated by geographic location, being isolated from other sea routes, makes rig and heavy equipment transportation difficult.

The deep water environment with a mobile substratum, shallow gas bearing levels, deep highly pressurized water levels, and mud volcanoes create technical hurdles. The associated tectonic movement requires design and engineering solutions to ensure a safe production environment. To address these challenges, Total can draw on a wide range of know-how gathered from all around the world.

In 2009, Total and the State Oil Company of Azerbaijan (SOCAR) signed an Exploration, Development and Production Sharing Agreement (EDPSA) covering a license area on the Absheron offshore block. This block is located in the Caspian Sea, 100 kilometers from Baku in water depths of around 500 meters.

In 2011 Total E&P Absheron, as the operator of the Absheron EDPSA during the exploration phase, announced a major gas discovery. The Absheron ABX-2 well encountered more than 150 meters of cumulated net gas plays within high quality sands on the northern flank of a major 270 square kilometers structure.

The President of Azerbaijan Ilham Aliyev and the Chairman and Chief Executive Officer, Total Patrick Pouyanné, at DAVOS Forum in 2016.

EDUCATION

Total assists in the provision of education and training to the future Azerbaijan petroleum specialists at different higher educational establishments in France (IFP, ENSG, EDHEC, AUDENCIA and UPPA). Since 2004 37 young Azeri have benefited from this initiative.

In 2013 Total signed a protocol of cooperation with the newly opened Baku Higher Oil School aimed at establishing relations with French schools and universities tied to the petroleum industry, obtaining access to libraries in France and benefiting from training available at Total.

In cooperation with the Azerbaijan Diplomatic Academy and French Embassy, Total has supported since its creation the UFAZ (French-Azerbaijani University France–Azerbaijan) targeting academic excellence benefiting from the quality of full-time and visiting highly-qualified French and Azerbaijani teaching staff.

For many years Total has financed French language training for SOCAR’s specialists. Total sponsors an annual conference for the students of the Oil Academy and occasionally assists Azerbaijan researchers in participation in international scientific events.
Reservoirs are expected to extend over the entire northern part of the structure. The well’s first results confirmed a potential of several trillions of cubic feet of gas and associated condensates. The exploration drilling has been very challenging, requiring Total, as operator, to bring the full weight of its know-how to bear.

The Absheron discovery kick started the pre-development phase. As part of pre-development activities, Total E&P Absheron launched several data acquisition surveys to prepare for future development: offshore and onshore geotechnical and geophysical data acquisition, as well as meteo and topographical surveys. Total E&P Absheron successfully deployed state of the art technology to perform these surveys, such as the AUV (Autonomous Underwater Vehicle) for sea floor bathymetric and geophysical acquisition. All these surveys were conducted with the highest regard for social and environmental protection.

Following the result of the studies, it was decided to start the Absheron field development with an Early Production System (EPS). The development scheme is based on one subsea well tie-back to a receiving facility platform located in shallow water close to the SOCAR Oil Rocks facilities where gas/liquid separation takes place. Gas & condensate will be also exported through SOCAR existing infrastructure. The gas will be delivered to the local market and condensate to export via the BTC (Baku-Tbilisi-Ceyhan) oil pipeline via a swap agreement.

The development program was approved by the Azerbaijani authorities early in 2017, leading to the successful development of this discovery. As a first operational step, in February 2018, the new semi-submersible drilling rig, built entirely in Azerbaijan, operated by the Caspian Drilling Company, and named after Heydar Aliyev, former President of Azerbaijan, set sail to the Absheron field to start the drilling campaign. After the first operation to permanently plug and abandon the discovery well, it will drill the ABD001 subsea development well.

**EPS design rate**
- 152 mmstdc/d (4.3 MSm3/d) of HP Gas
- 12 kb/d (1.9 kSm3/d) of condensate
- 500 Stbl/d (80 Sm3/d) of water

COMMUNITY RELATIONSHIP
Beside its participation in regional development projects such as BTC, Total finances its own initiatives aimed at local community support.
Along with other major players in the Caspian sea, Total is a partner in the BTC (Baku-Tbilisi-Ceyhan) Company, securing transportation capacity for the export of regional crude oil production.

BTC links Baku to the Mediterranean oil terminal at Ceyhan in Turkey. With its loading facilities for Very Large Crude Carriers (VLCC), the Ceyhan terminal opens access for Azerbaijan to world markets. The first shipment from BTC in Ceyhan took place in 2006.

ARTS AND SOLIDARITY

Total supported the Exhibition “Plaisirs de France” co-organized by the Heydar Aliyev Foundation and the Ministry of Culture and Communication of France. For many years Total has contributed to cultural life in Baku by organizing concerts of classical music with the participation of local and foreign artists.

Total also supports teaching of French language and initiation to French culture though the financing of a regional French language competition for pupils of 12 to 17 years old who study French as a compulsory foreign language.
BAKU – CITY OF CONTRAST

Super modern “Flame Tower” building neighboring more classical architecture of the 19th century.
Partnership

1 Denis Lemarchal, Managing Director & Country Chair of Total in Azerbaijan, Bernard Clément, Senior VP Caspian & Southern Europe, the Ambassador Aurélia Bouchez, Mehriban Aliyeva, First Vice-President of Azerbaijan and First Lady, and Ilham Aliyev, the President of the Republic of Azerbaijan at the 2017 Caspian Oil & Gas Exhibition.

Proximity

7 Jury of the contest “Je parle le français” organized in partnership with a local NGO.

Excellence

2 Ship carrying drill strings to the Absheron ABD 001 platform Heydar Aliyev.

3 Operators on the Absheron ABD 001 platform Heydar Aliyev.

5 Beam Pump near Baku.

8 Drilling operations on the Absheron field carried out using the new semi-submersible drilling rig, Heydar Aliyev.

Innovation

4 Launch of the subsea robot Magnum, Absheron ABD 001 platform.

6 Absheron ABD 001 plateform.
A HISTORIC PRESENCE IN EUROPE AND CENTRAL ASIA

AT THE HEART OF THE GROUP’S KNOWLEDGE AND DECISION MAKING

Europe is home to the Group and its decision-making; it is the hub of its research and innovation work and constitutes a strong industrial base for all its branches.

In 2017, regional oil and gas production was 761 kboe/d, 30% of the Group total, with two of our main producing countries being Russia and Norway.

In Russia, home to our largest proven reserves, we produced 318 kboe/d from stakes in Novatek, and since December 2017, the Yamal LNG project. We produce from the Kashagan field (North Caspian license) in Kazakhstan, and we have a production agreement in the Total discovered Absheron gas field, in Azerbaijan.

In Norway, our 2017 production was 239 kboe/d, from numerous fields, notably Ekofisk and Snøhvit, where the Group also holds an 18.4% stake in the LNG plant, and from Troll. We hold stakes in over 80 production licenses on the Norwegian continental shelf, operating 35, we also partner in several fields and projects in the United Kingdom and the Netherlands.

Following Maersk Oil’s acquisition, in March 2018, we entered Denmark and became the second-largest North Sea operator. In Italy, we operate the Tempra Rossa project, with start-up expected in 2018.

Finally, we boast a network of dedicated research centers located in Aberdeen, Stavanger and Moscow, all working in coordination with our key R&D hub at the “Centre Scientifique et Technique Jean-Féger” (CSTJF) in southwestern France.

Serving and supporting our customers and major partners, in Marketing & Services we develop and market innovative and creative solutions aimed at performance and energy efficiency. For transport we offer new energies for the digital age with electro-mobility, natural gas vehicles (NGV), hydrogen fuelling, and LNG bunkering.

We operate a branded service station network of more than 9 000 sites concentrated mainly throughout France, Germany, Belgium, the Netherlands and Luxembourg. We promote new low carbon energy with the deployment of electric charging points on major routes in Europe and hydrogen fuelling stations in Germany. The AS24 brand has a network of over 800 service stations aimed at heavy-duty vehicle customers in 28 European countries. We are also a major fuel card payment provider, with around 3.3 million cards.

We supply high-quality lubricants formulated to the lasted technical specifications through our production sites in Rouen (France), Ertvelde and Schoten (Belgium), Beverwijk (the Netherlands) and Osnabrück (Germany). A new blending plant in Russia will soon be added to enhance this further. Benefiting from our logistics network, we are a partner of choice and a local supplier of products for commercial markets in: bulk fuels, aviation fuel, special fluids, LPG, bitumen and heavy fuel oil.

In Refining & Chemicals Total is the second largest refiner in Western Europe. The region accounts for 72% of the Group’s refining capacity. We own and operate eight refineries in Western Europe (five in France, one in Belgium, one in the United Kingdom and one in Germany), including one currently being converted into a bio refinery (La Mède, France). We also have a stake in a refinery in the Netherlands.

The Group’s main petrochemical sites in Europe are in Belgium and in France. Europe accounts for 48% of our petrochemicals capacity. Total’s 100% affiliate Hutchinson (elastomer processing) has 55 production sites across Europe.

Across Europe and Central Asia Total’s Gas, Renewables, and Power (GRP) division is actively engaged in gas and electricity trading and marketing to industrial, commercial and domestic customers. With LNG, Total has entered into long term access agreements in France and in the United Kingdom, through Fosmax and the South Hook LNG receiving terminal.

We are present across the full solar value chain, with production and sale of solar cells ranging from residential roof tiles, to industrial scale plants marketed worldwide, supported by development of new technologies with key partners such as the Ile de France Photovoltaic Institute (IPVF). We are also active in solar power production such as in the Montalto plant in Italy (84MWp). The acquisition of Saft (advanced batteries) in August 2016 is essential to promote the growth of renewables. The agreement signed with EREN in September 2017 added a further set of diversified assets in solar and wind power to the Group portfolio.

The Group is participating in large-scale pilot projects in the carbon capture, use and storage (CCUS). The Group is also investing in the energy efficiency services market, which is expected to see strong growth in the coming years. The acquisition of GreenFlex in October 2017 is an example of this commitment.
At year-end 2017.

30% of the group’s production (761 kboe/d of oil and gas)

4,140 MBOE of proved reserves in the region

2nd largest E&P operator in the North Sea (following Maersk Oil acquisition)

More than 900 MWC of installed power capacity in 2017

MARKETING OF GAS AND ELECTRICITY IN 6 COUNTRIES IN EUROPE

United Kingdom, France, Germany, Netherlands, Belgium, Spain

40% of the group’s gas production (2,674 Mpc/d of natural gas)

2nd largest refiner in Western Europe

2nd petrochemical producer in Europe

More than 900 MWC of installed power capacity in 2017

More than 9,000 service stations (including AS24)

1,049 kb/d of petroleum product sales

Our activities in Europe and Central Asia.
AN INTEGRATED COMPANY

Our commitment to better energy is reflected in state-of-the-art expertise throughout the whole energy chain. Shedding light on this integrated know-how is part of our responsible energy future.

EXPLORE AND PRODUCE
To meet the energy needs of a burgeoning global population while preparing for the future, we continually innovate to produce sustainable and responsible solutions in oil and gas, solar energy, and bioenergies.

TRANSFORM AND DEVELOP
You already know us through our network of service stations. But we do so much more to improve your daily life. Our industrial expertise in transforming oil and gas helps to produce a wide range of everyday items such as cars, packaging and household appliances.

SHIP AND MARKET
We all require energy for heat, transportation, light in our homes and so much more. Total serves your needs worldwide each and every day. We bring energy from producing regions all the way to consumer hubs, working across a long, complex logistics chain.

To find out more:
www.total.com
WE ARE COMMITTED TO BETTER ENERGY

Total is a global integrated energy producer and provider, a leading international oil and gas company, and a major player in low carbon energies. We explore for, produce, transform, market and distribute energy in a variety of forms, to serve the end customer.

Our ambition?
Becoming the responsible energy major. To do that, we must address the main challenges that lie ahead of us in the next 20 years:
• To meet the needs of a growing world population, we are working to supply affordable energy that meets the highest safety and environmental standards;
• To tackle climate change, we are developing an energy mix consistent with the 2°C scenario and whose carbon intensity declines steadily;
• To anticipate customer needs and be recognized for our convenient, quality local service, we are introducing innovative solutions to promote responsible energy use.

That is what it means to be committed to better energy.

Our strength?
Our 98,000 employees who are fully committed to better energy.
6 MAJOR INTEGRATED PLATFORMS REFINING & PETROCHEMICALS

REFINERY CAPACITY
2.0 MILLION B/D

98,000 EMPLOYEES

16,600+ SERVICE STATIONS (including AS24 networks)

$171.5* BILLION REVENUE

NO. 4 INTERNATIONAL OIL AND GAS COMPANY
BASED ON MARKET CAPITALIZATION IN U.S. DOLLARS AT DECEMBER 31, 2017

2,566 KBOE/D OIL AND GAS PRODUCTION

$14.4 BILLION ORGANIC INVESTMENTS

ABBREVIATIONS
- b: barrel
- cf: cubic feet
- /d: per day
- /y: per year
- €: euro
- $ and/or dollar: U.S. dollar
- t: metric ton
- boe: barrel of oil equivalent
- kboe/d: thousand boe/d
- kb/d: thousand barrel/d
- M: million
- B: billion
- MW: megawatt
- FPSO: Floating Production Storage and Offloading
- FPU: Floating Production Unit
- FSU: Floating Storage Unit
- LNG: Liquefied natural gas
- LPG: Liquefied petroleum gas

CONVERSION TABLE
- 1 boe = 1 barrel of crude oil = approx. 5,390 cf of gas* in 2015
- 1 b/d = approx. 50 t/y
- 1 t = approx. 7.5 b (for a gravity of 37° API)
- 1 Bm³/y = approx. 0.1 Bcf/d
- 1 m³ = approx. 35.3 cf
- 1 t of LNG = approx. 48 kcf of gas
- 1 Mt/y of LNG = approx. 131 Mcf/d

* This ratio is calculated based on the actual average equivalent energy content of Total’s natural gas reserves and is subject to change.

*As of December 2017.
Total is a major energy player committed to supplying affordable energy to a growing population, addressing climate change and meeting new customer expectations.

Those commitments guide what we do. With operations in more than 130 countries, we are a global integrated energy producer and provider, a leading international oil and gas company, and a major player in low-carbon energies. We explore for, produce, transform, market and distribute energy in a variety of forms, to serve the end customer.

Our 98,000 employees are committed to better energy that is safer, cleaner, more efficient, more innovative and accessible to as many people as possible. As a responsible corporate citizen, we focus on ensuring that our operations worldwide consistently deliver economic, social and environmental benefits.

Our ambition is to become the responsible energy major.