



Eliminating distances,
bringing energy closer

MEDGAZ



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MEDGAZ

Algeria-Europe Gas Pipeline, via Spain

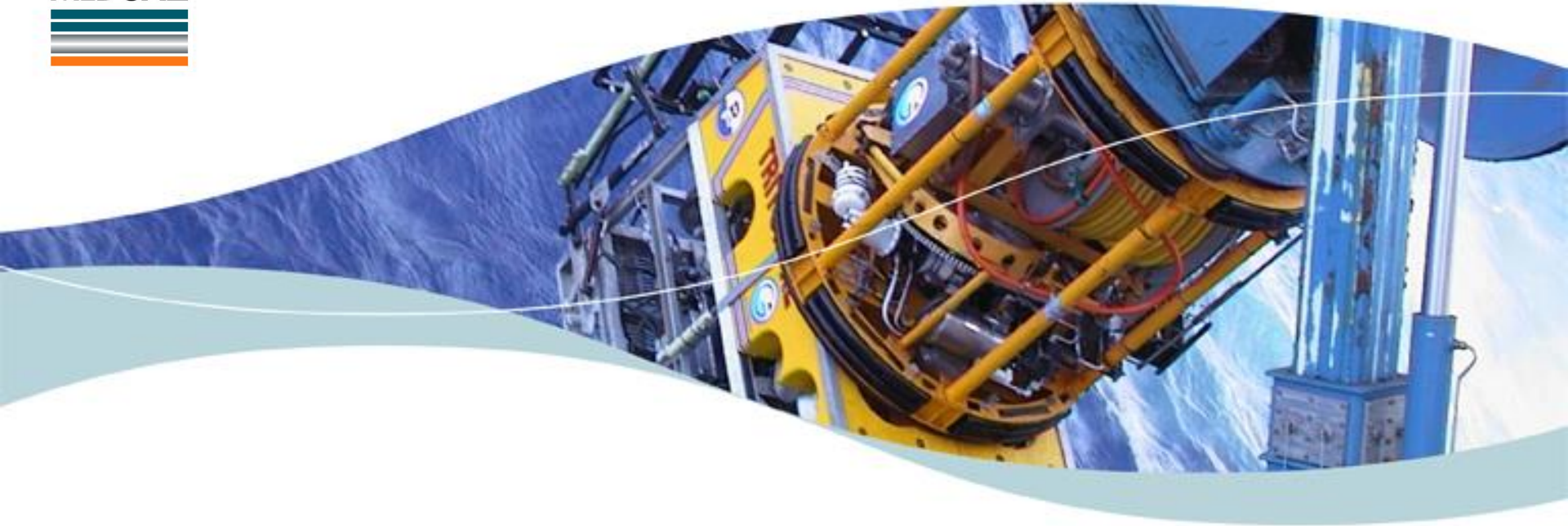
Pedro Miró

WPC

Madrid, July 2008

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Project Description

Mission

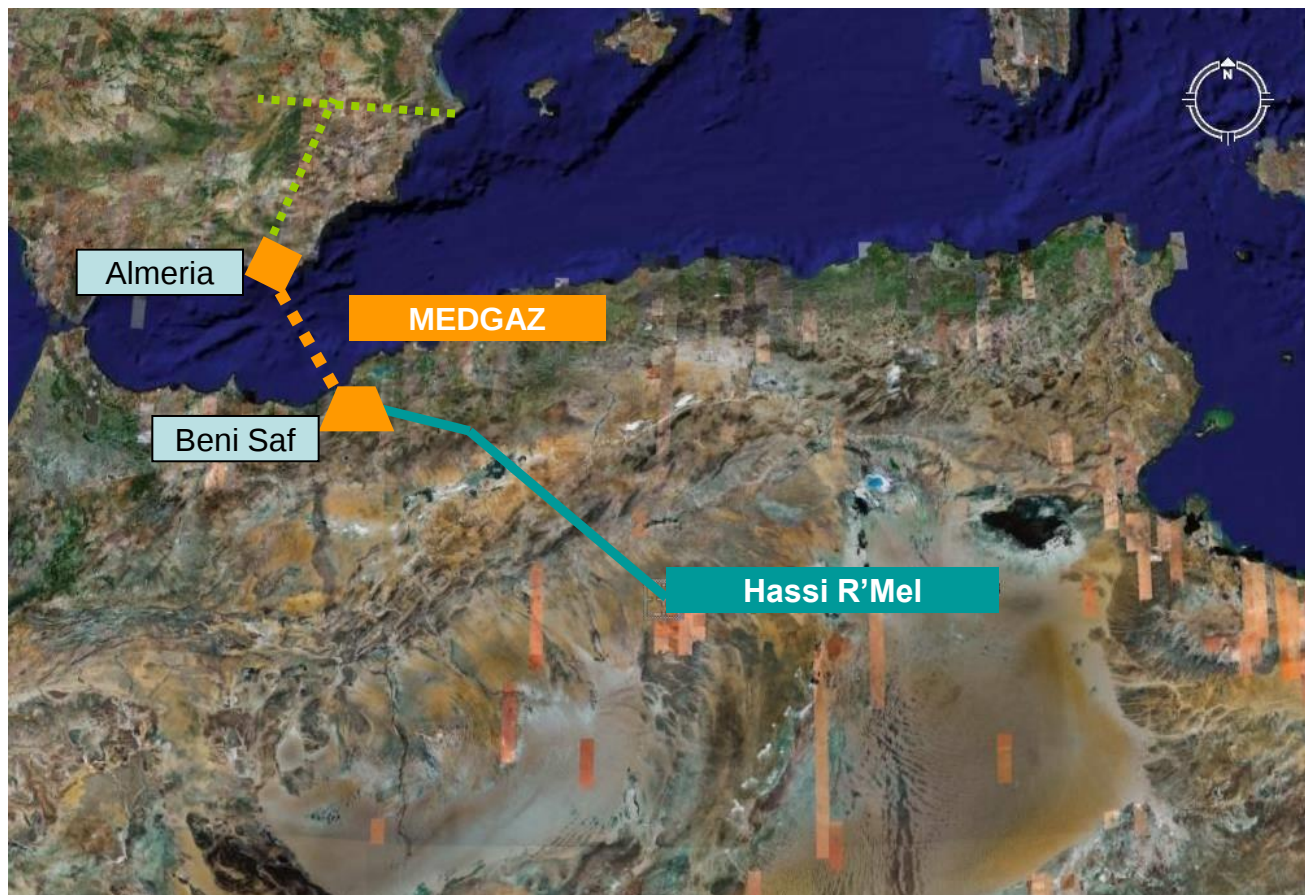
- To **build and operate a deepwater gas pipeline** from Beni Saf, on the Algerian coast, to Almería, on the Spanish coast. MEDGAZ will transport natural gas to the European market, thus helping to meet the growing need for this source of energy in a safe and environmentally responsible manner, creating value for customers, employees and shareholders.

Objectives

- To construct a natural gas pipeline from Algeria to Spain, crossing the ultra-deep waters of the Mediterranean Sea, while meeting the following targets:
 - To respect all international **HSE** standards
 - To remain within the Construction **Budget**
 - To start **“First Gas”** in **2009**
- To provide to its Shippers the entire pipeline capacity throughout the life of the infrastructure on a firm daily basis.
- To be able to expand transportation capacity up to 16 BCM/year via the installation of a second sub-sea pipeline.

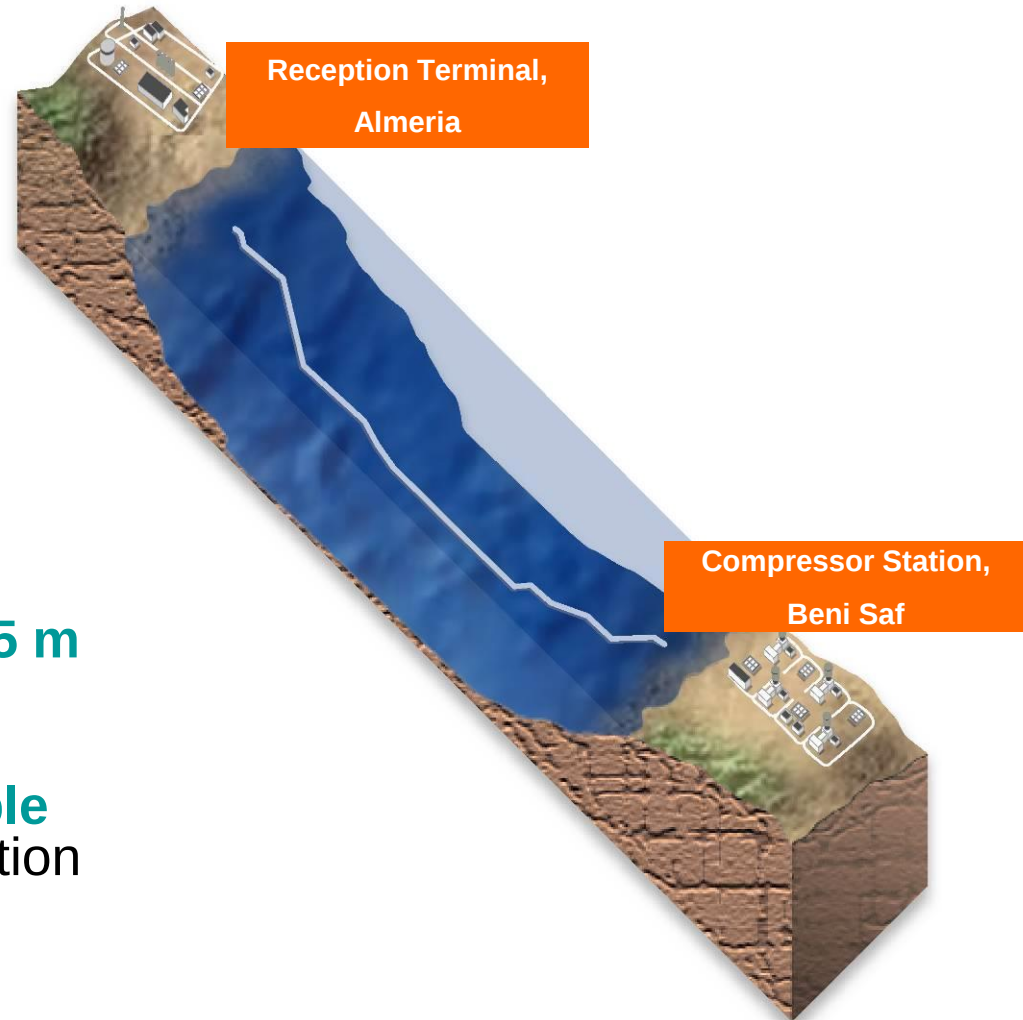
Route

-  Algerian Onshore
-  Offshore Pipeline
-  Compressor Station
-  Reception Terminal
-  Spanish Onshore



Technical Summary

- Length: **210 km**
- Diameter: **24 inches**
- Capacity: **8 BCM/year**
- Maximum water depth: **2,165 m**
- Cost: **900 M€**
- Workforce: Over **2,000 people** will be involved in the construction phase



International Shareholding

- **Founders:** CEPSA and Sonatrach.
- **Other shareholders:** Iberdrola, Endesa and Gaz de France.
- The shareholding structure has been **determined** based **on the natural gas supply agreements** between each partner and Sonatrach.



	Volume of contracted natural gas	Shareholding in MEDGAZ
	BCM/year	%
SONATRACH	2.88	36
CEPSA	1.60	20
IBERDROLA	1.60	20
ENDESA	0.96	12
GAZ DE FRANCE	0.96	12
TOTAL	8.00	100

Company Structure and Contracts

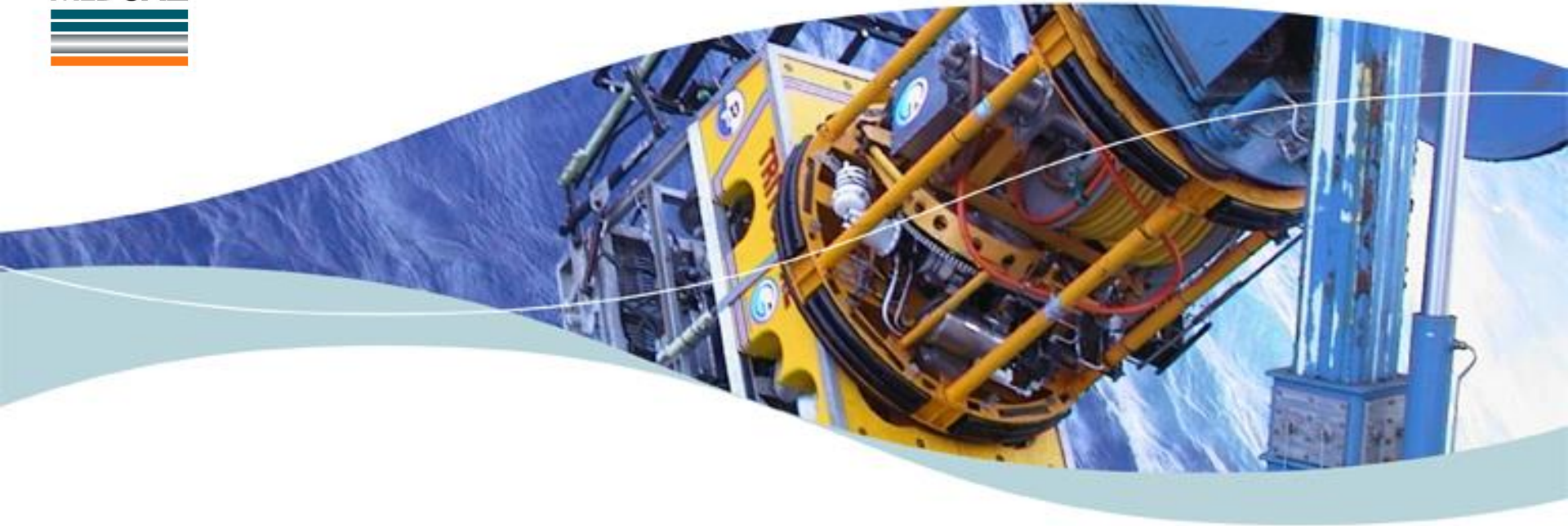
- MEDGAZ SA is a Spanish company with a permanent establishment in Algeria

- Agreements and Internal Contracts:
 - Transportation Contracts
 - Shareholders Agreement

- External Agreements:
 - EPC Contracts
 - Interconnection Agreement with ENAGAS
 - Interconnection Agreement with SONATRACH

Main EPC Contracts

CATEGORY	Successful Bidder
Line pipe supply and coating	-Mitsui -Sumitomo
Turbo-compressors supply	Rolls Royce
Sub-sea pipeline engineering, construction, and pre-commissioning	Saipem, S.p.A.
Compressor Station and Receiving Terminal engineering, construction, and commissioning	Técnicas Reunidas-Amec Spie Consortium

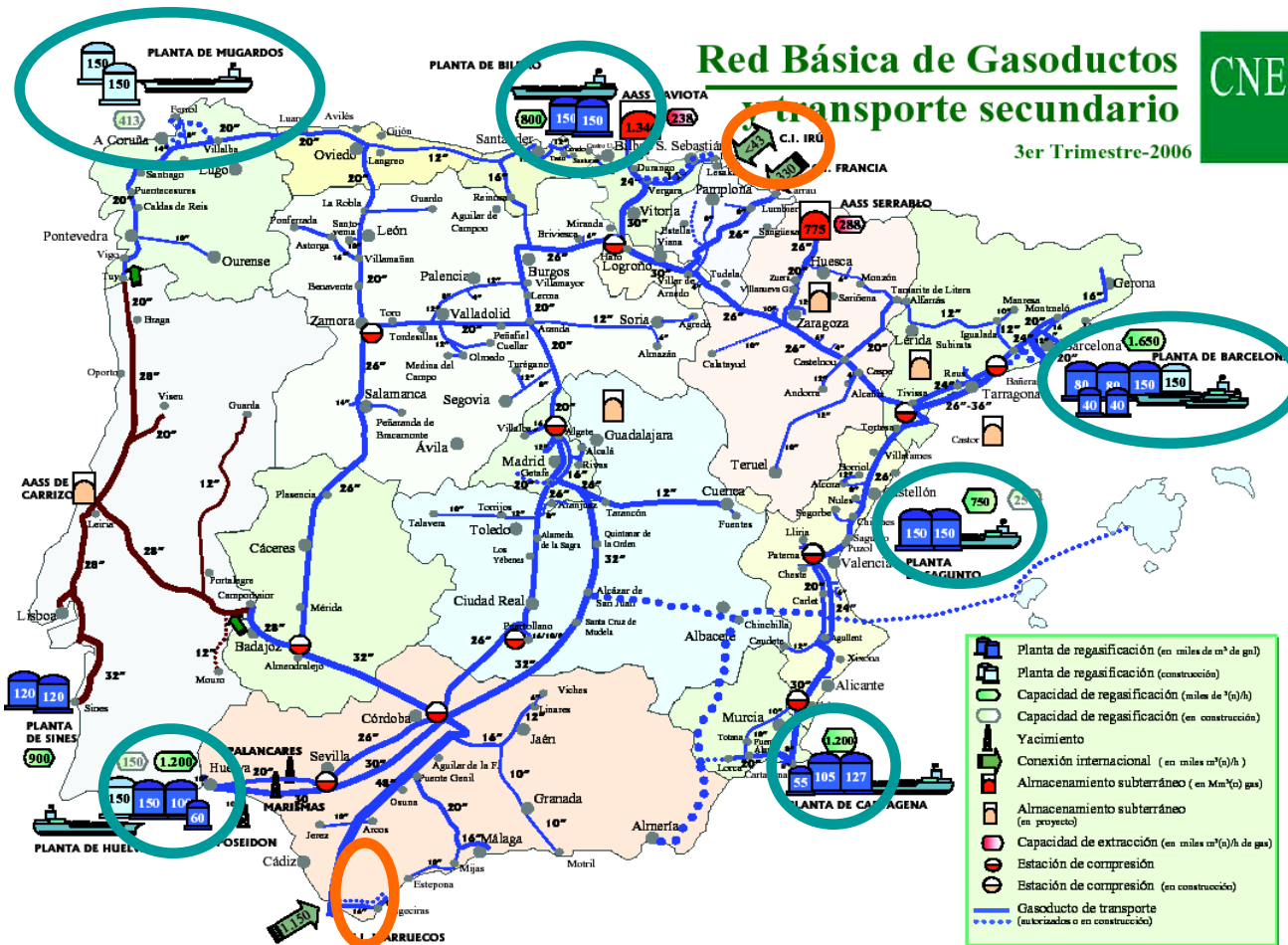


Key Points

MEDGAZ: a Strategic Project

- Improves security of supply
- Is the most cost-effective way of supplying natural gas to Southern Europe
- Meets **growing demand** for natural gas in Europe
- Makes a positive contribution towards the **Kyoto Protocol** implementation
- Is a technological **challenge**
- Has a strong Administration support

NG/LNG Supply 2007



2007 Supply (without MEDGAZ)

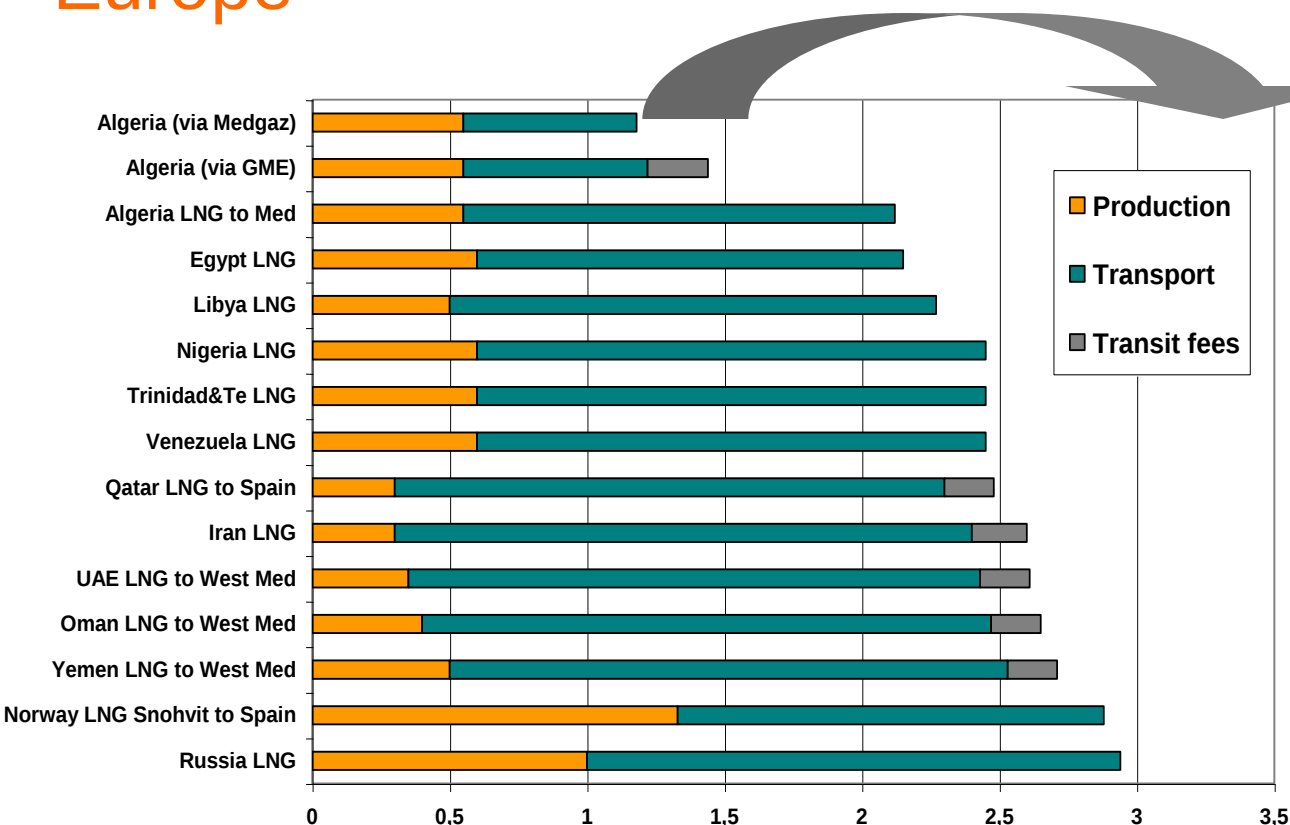
- LNG imports: 69.3%
- NG imports: 30.7 %

2010 Supply forecasts (with MEDGAZ)

- LNG imports: 53.6%
- NG imports: 46.4%

**MEDGAZ = MORE
SECURITY OF
SUPPLY FOR
SOUTHERN EUROPE**

Natural gas supply routes to Southern Europe



Most direct route

Shorter length (than GME*)

Lower energy cost and no transit tolls

Most cost-effective way of supplying natural gas to Southern Europe

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Strong Administration Support

MEDGAZ, a world class, multinational, multitask, high tech project, needs a solid support from the Authorities and has counted on it from the beginning:

➤ Europe:

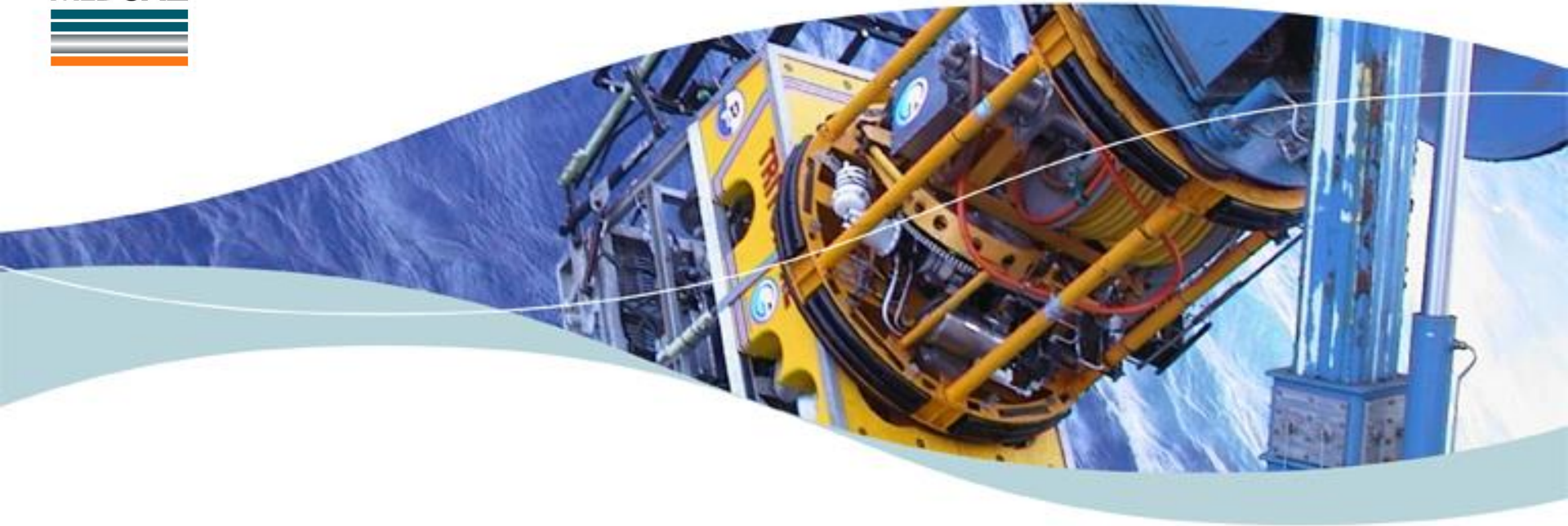
- “**Project of Priority Interest** within Trans-European Networks in the Energy Sector”
- “Quick Start” Program
- Financial aid for preliminary studies

➤ Spain

- “**Priority Project** and **Urgent**: Planning of Electrical Power and Gas Sectors. Development of Transportation Networks 2005-2011” (MIN, 2006).
- All Environmental and Administrative permits obtained on time.

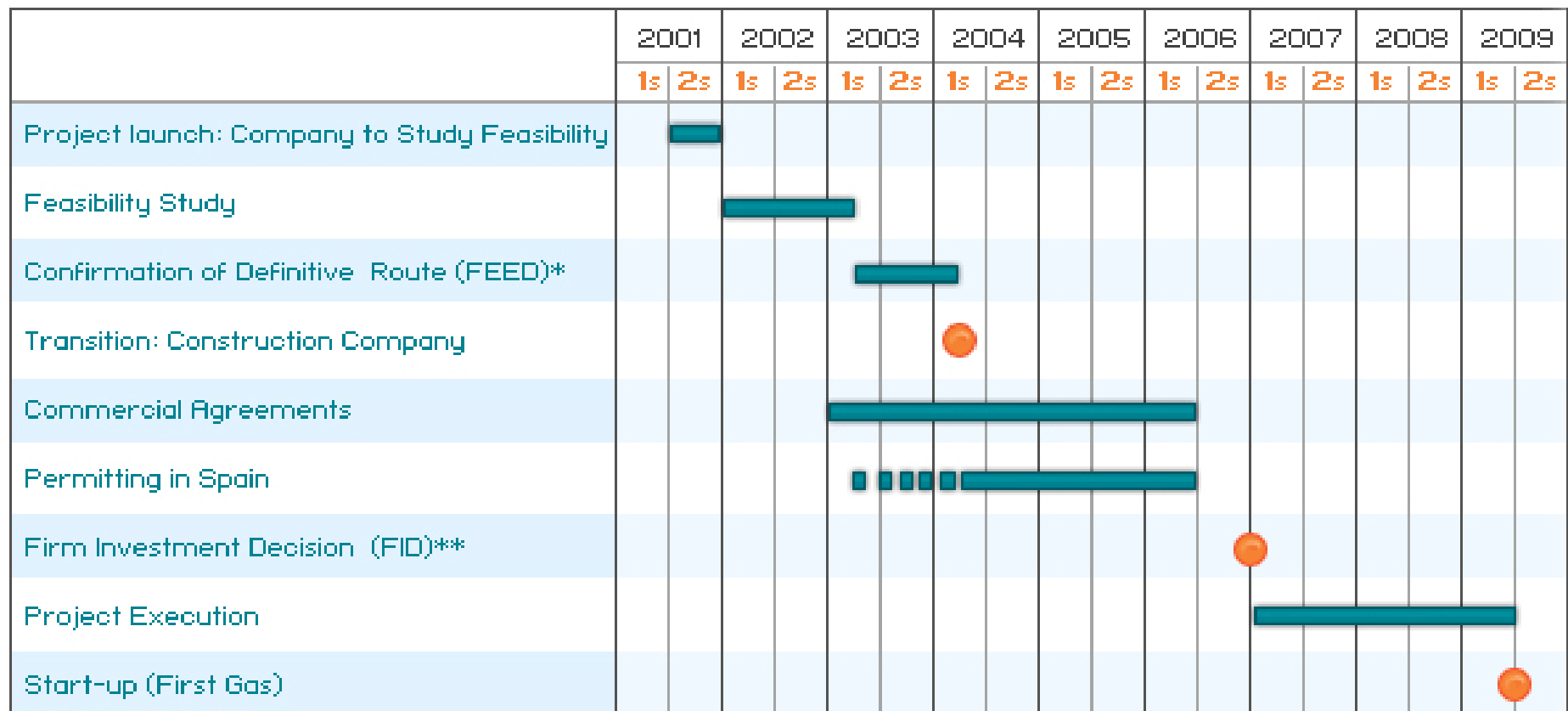
➤ Algeria

- Environmental and Administrative permits obtained on time.



Timetable

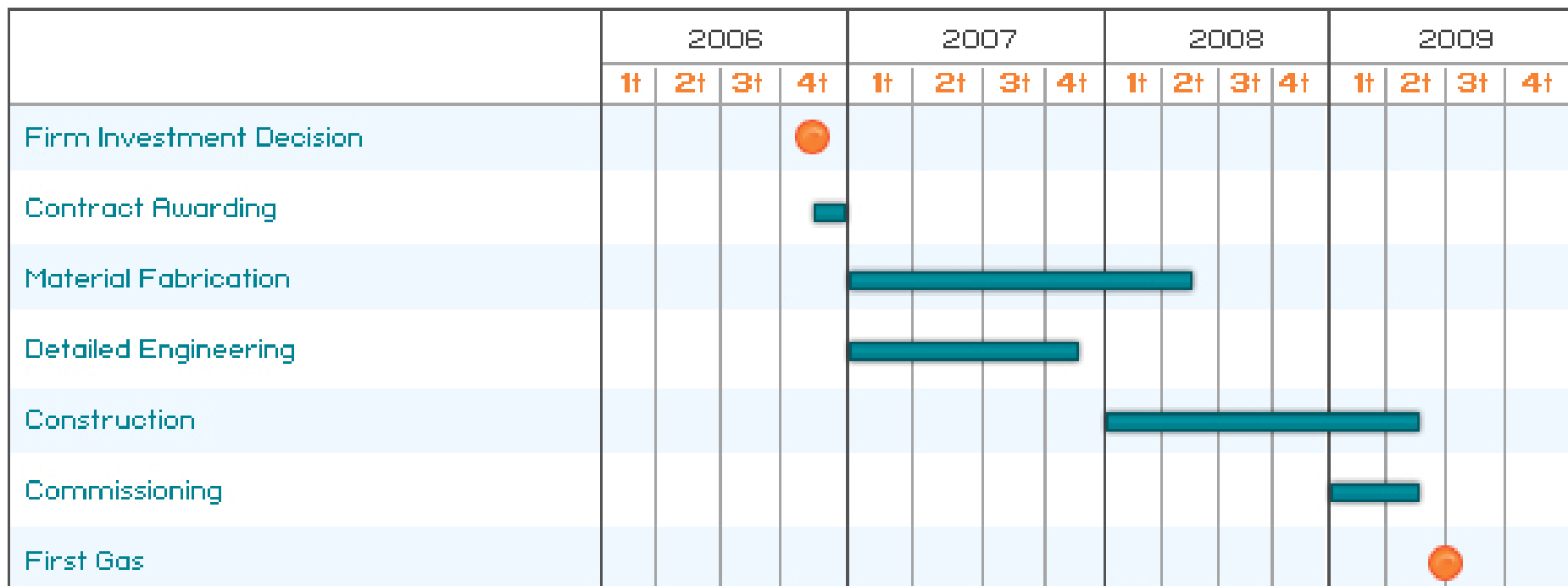
Global Project



**Firm Investment Decision

*Front End Engineering & Design

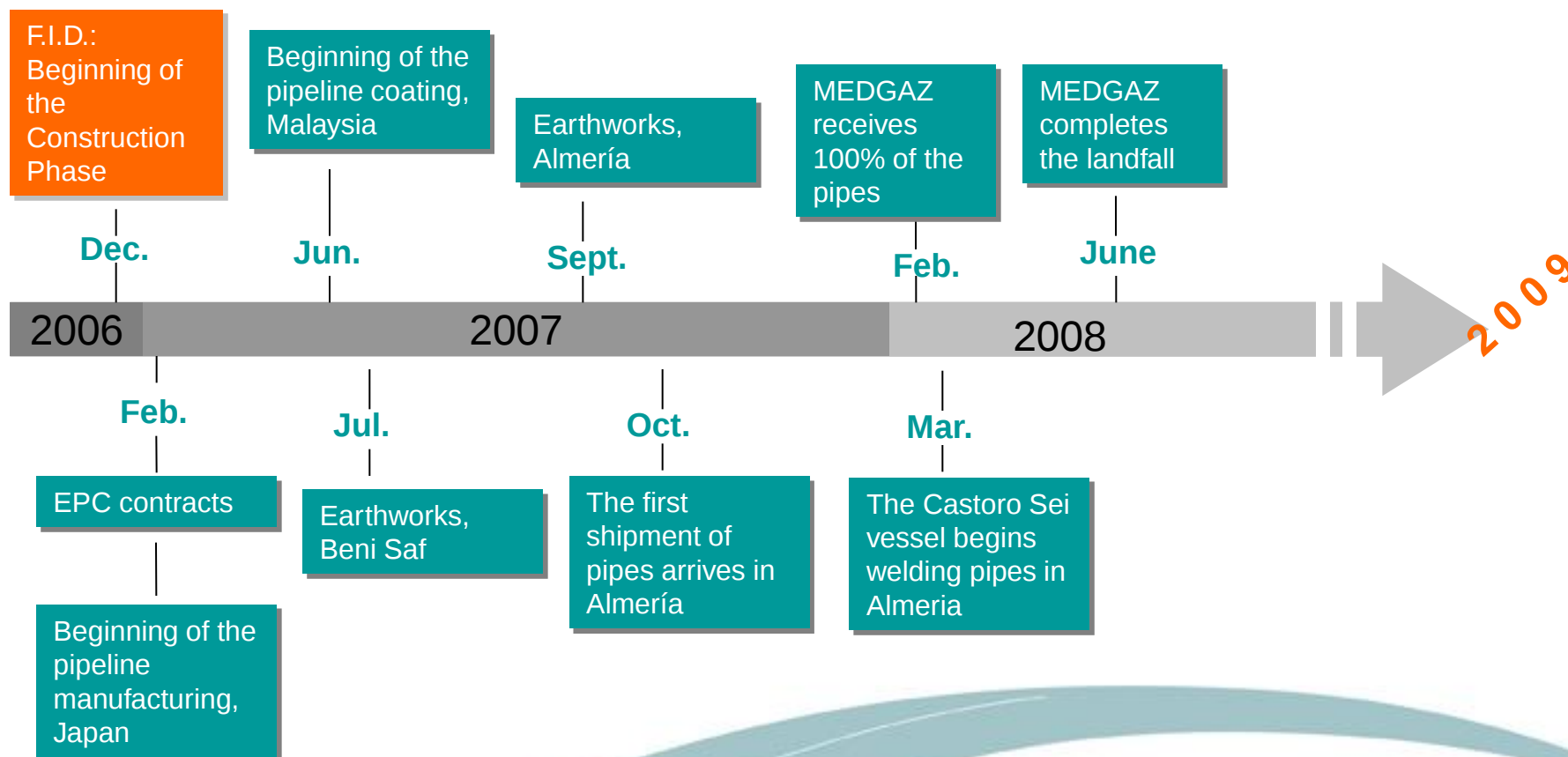
Construction





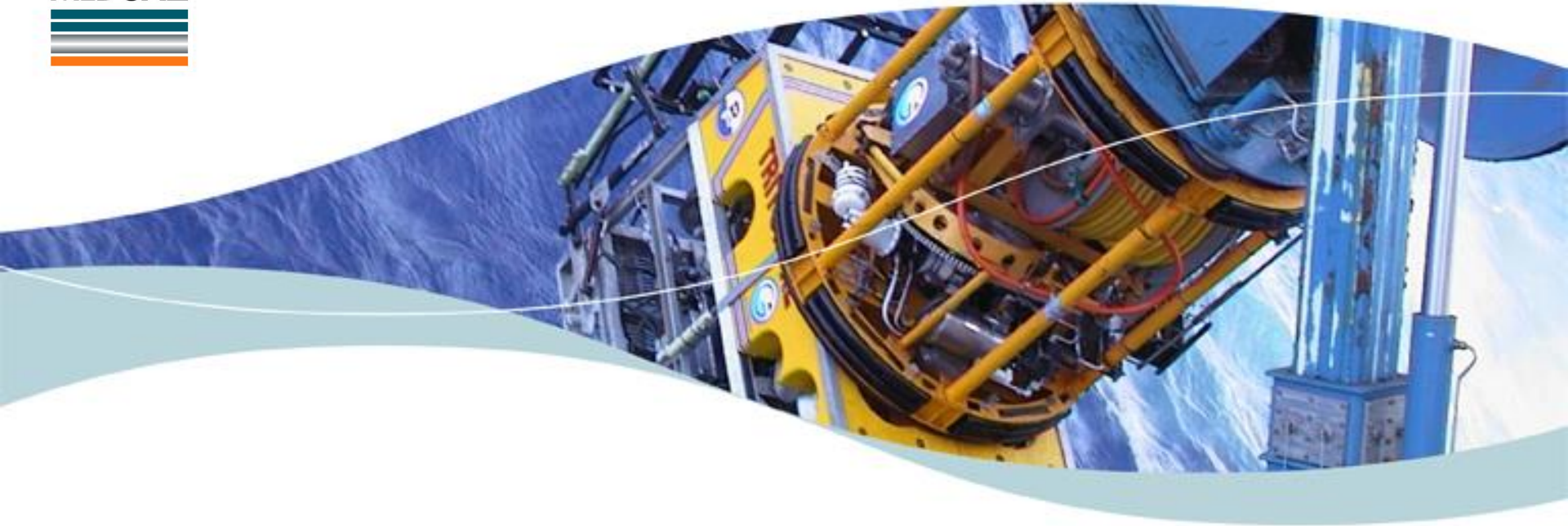
Construction Stages

Chronology: Main Milestones



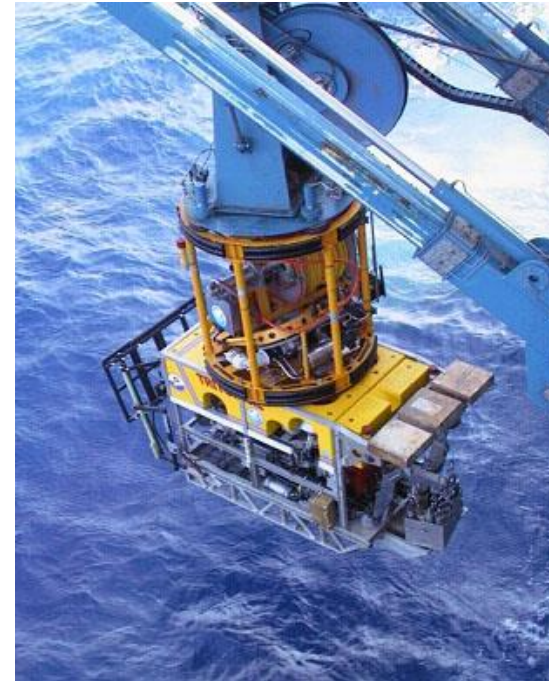
Conclusion

MEDGAZ, a world class project, thanks to the endorsement from the governments and the engagement of the shareholders **is close to reaching its target on time and on budget.**



Additional Information

1- Marine Surveys, 2004



- HUGIN 3000-GC
- 509 Km. Visual inspection

- Triton XL-14
- 15 km Geophysical
- 130 km Visual inspection

2- Pipe Manufacturing



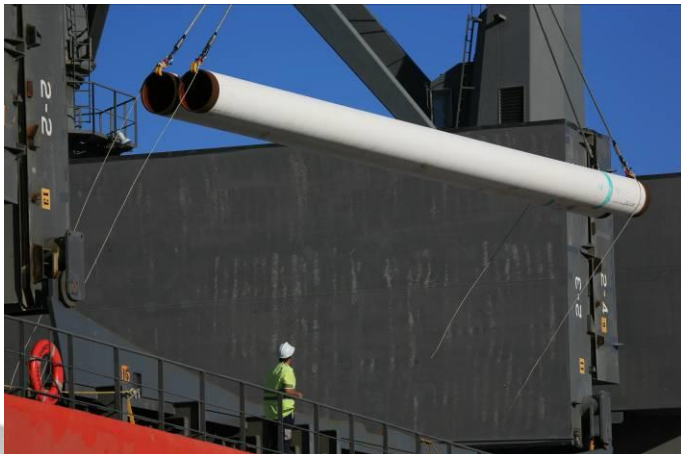
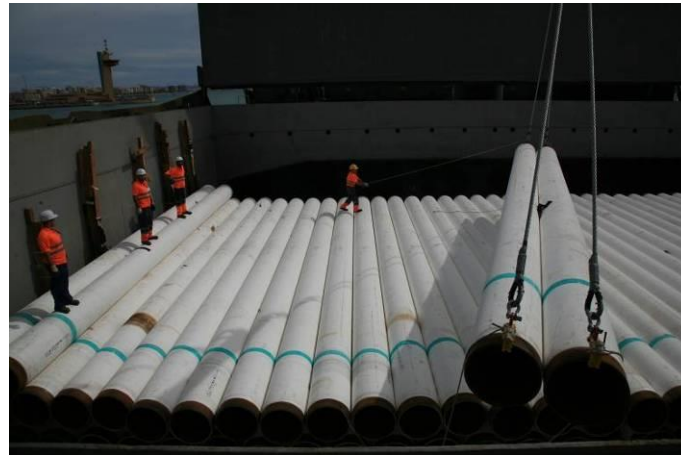
➤ Pipe manufacturing in Japan.
March 2007



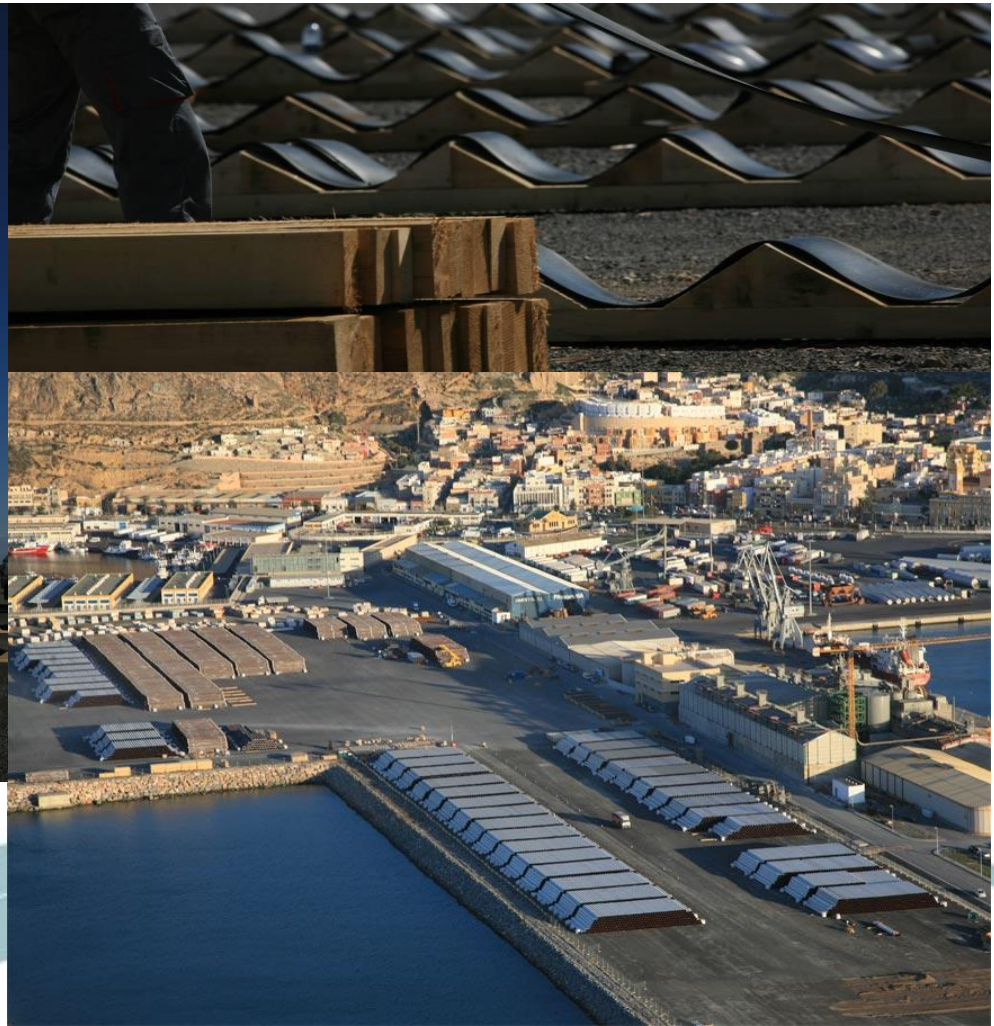
➤ Polypropylene coating in
Malaysia. May 2007

3- Unloading

➤ Almería. October 2007



4- Pipe storage



➤ Almería: Oct. 2007- April 2008

5- Reception Terminal, Almería



➤ Landfall, June 2008



➤ Building foundations, June 2008

6- Compressor Station, Beni Saf



➤ Air coolers foundations, June 2008

➤ Permanent camp, June 2008

7- Castoro Sei, offshore pipeline construction vessel

➤ Almería,
March 2008



8- Quadruple joint welding

➤ Almería, April
2008



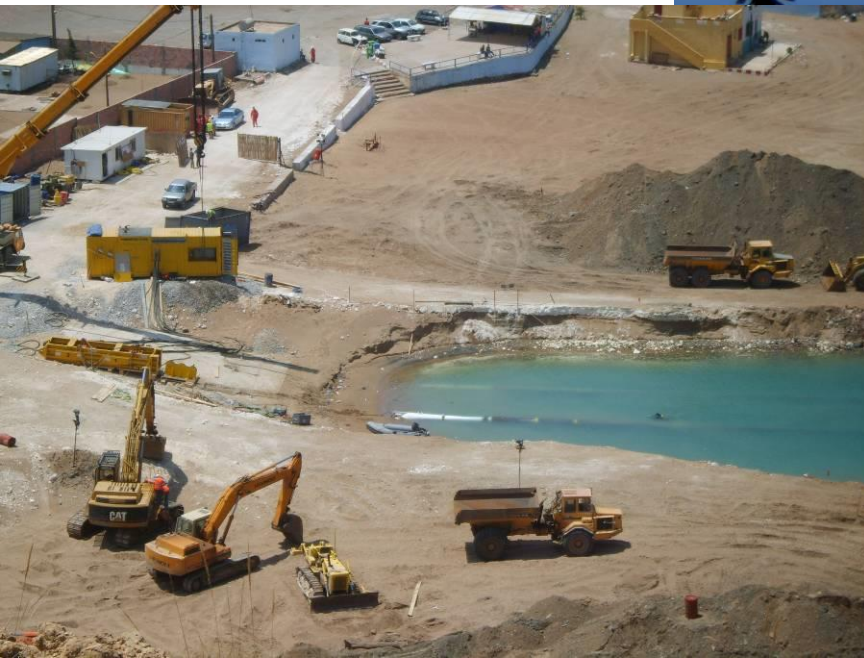
9- Castoro Sei, offshore pipeline construction vessel: pull in

➤ Almería, may 2008



9- Castoro Sei, offshore pipeline construction vessel: pull in

➤ Beni Saf, June 2008



10- Compressors



➤ Gas generator. Montreal, August 2007

➤ Compressor ready for shipment. June, 2008



➤ Turbocompressor preparation. Le Havre, February 2008





Thank you for your attention

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