

DRAGADOS Y OBRAS PORTUARIAS S.A.

PRINCIPAL WORKS

INDEX

DREDGING AND REFULADOS	
Salado River Port Rawson Ruta Nacional № 12 Ruta Nacional № 168	Canal Emilio Mitre Canal Martín García Caleta Olivia Potabilisation establishment San Martín
PORT INFRASTRUCTURE	5
Port Rawson Dock Comodoro Rivadavia Port Piriápolis	Dock Camarones Lifting for ships Dock General Mosconi
DOCKING WORKS	6
Muelle Almirante Storni DUCTS	Muelle Comandante Luis Piedrabuena
Emisario Mar del Plata Gas pipeline Mesopotámico	Drinking water treatment establishment San Martín
COASTAL TREATMENTS	8
Coastal Protection East Waterfront	Defense against floods Coastal Defense Paraná
VIALS	9
Ruta № 27	Ruta Nacioanl № 168
FOUNDATIONS	
Port Loyola PRIVATE WORKS	Dock Comodoro Rivadavia
Port Timbúes Terminal	Port General San Martín
Port Galván	Canal Dock Sud
FOUNDATIONS	
Shipment Terminal SPECIAL WORKS	Arroyo Seco
Canal Dock Sud OTHERS	Dock Sud shipside West morro

Coal and Oil Port in Punta Loyola

DREDGING AND REFULADOS



Salado River

Where Buenos Aires, Argentina.

Work Improving the river mouth of the Salado River - 1st stage.

Description 10 km canal opening to improve the river mouth of Salado

river by dedging and refulado to embankments and construction of a bridge H^o A^o (light approx. 122 m) at the

crossroads with Provincial Route 11.

Amount 9.508.517 **Vol m3** 52.000.000



Port Rawson

Where Chubut, Argentina.

Work Port Rawson's resuffle.

Description Construction of 2 breakwaters and dredging the access

channel.

Amount 15.285.000 Vol m3 136.000



Ruta Nacional nº 168

Where Santa Fe, Argentina.

Work Ruta Nacional nº 168. Santa Cándida island.

Description 3 Km asphalt route construction (Asphaltic concrete; width:

7,30 m), 3 Km refulado's sand embankment and a bridge H $^{\circ}$ A $^{\circ}$ 120 m of length. Board width: 8,30 m. Execution of pillars de H $^{\circ}$ A $^{\circ}$. Tending medium-voltage line: 13,2 Kw -

Aprox. Length 3100 m. Ilumination: 3500 m.

Amount 8.275.800 Vol m3 284.000



Ruta Nacional nº 12

Where Entre Ríos, Argentina.

Work Dredging and refulado for embankment on National Route n⁰

12. Paraná Guazú - Ceibas stretch.

Description Dredging by refulado for embankments. Realized by a cutter

dredger the uncover of soft materials and refulado.

Amount 68.796.093 **Vol m3** 14.000.000



Canal Emilio Mitre

Where Buenos Aires, Argentina.

Work Re-dredging of Canal Emilio Mitre (Km 12 to 43,5).

Description Material extraction (8,5 millions m3)in order to permit

restoration of the operating conditions of the channel.

Amount 35.000.000 Vol m3 12.500.000



Canal Martin Garcia

Where Argentina / Uruguay.

Work Dredging Concession, Signaling and Maintenance of the

channel.

Description Dredging and maintenance of navigation channel Martín

García from Km 37 (Channel access) to Km 0 (Uruguay River).

110 km Beacon system installation on navigation channel.

Amount 180.243.049 **Vol m3** 35.000.000



Caleta Olivia

Where Santa Cruz, Argentina.

Work Landing tank ship with buoy rotating head in Caleta Olivia.

Description Supply and d installation of 1 buoy rotation head (10 m

diameter) with complementary elements for crude oil charge in 60,000 tons ships and discharge of ballast anchored to 2,700 m of the coast with an 35-40m draft, depending on the tide. Provision, coating and laying of two pipes (large: 2,700 m) and laying of two pipes (large: 2,700 m).

m each), 30" and 14" diameter for loading and unloading.

Amount 11.608.676



Potabilisation Establishment San Martín

Where Buenos Aires, Argentina.

Work Establishment of potabilisation extension in San Martín.

Description Dredging of the trench, placement and covered of the

prefabricated elements of the duct, plus the construction and plancenment of a electrical intake tower. Dredging for placement concrete pipes founded on piles in trenches under

water.

Amount 20.055.253 **Vol m3** 500.000



PORT INFRASTRUCTURE



Port Rawson

Where Chubut, Argentina.

Work Remodeling of Puerto Rawson.

Description Construction of 2 breakwaters and dredging of the access

channel. Dock of HºAº on piles of large diameter (180 m

length) for fishing boats.

Amount 15.285.000



Dock Comodoro Rivadavia

Where Chubut, Argentina.

Work Ending of Comodoro Rivadavia Dock.

Description Shelter construction work with outer shell of acropods.

Coastal dock and oversea and basin dredge. Supply and and installation of defenses and bollards.

Installation: drinking water, fire, lighting and prime mover.

Amount 29.478.623 **Vol m3** 410.500



Port Piriápolis

Where Piriápolis, Uruguay.

Work Extension of Puerto Piriápolis.

Description Extension and construction of the port with stone

breakwaters, concrete walls and complementary works. It includes dock extension for Buquebús entry and exit.

Amount 19.526.204



Dock Camarones

Where Chubut, Argentina.

Work Muelle camarones reparation.

Description Gravity dock construction of H^oA^o, stone fill, shelter work, H^o

blocks (Core-Lock) and complemetary works.

Amount 7.803.223



Lifting for ships

Where Buenos aires, Argentina.

Work Civil works constructions of synchronous lifting for ships and

berth quay, No. 4 stand construction and bridges with 100

ton crane transit.

Description Digging and concreting of heads, prestressed beams, large

diameter piles and slabs for bridges, harrow and synchronous

ship lift.

Amount 20.445.774



Dock General Mosconi

Where Chubut, Argentina.

Work Adaptation of pipes trails and mountings lines.

Description Adaptation of pipes trails and mountings lines, removal of

existing dock, construction and placement of tubular beams, loading and unloading platforms, systems

against fire, water, lighting and services on the dock.

Amount 4.682.585



DOCKING WORKS

Dock Almirante Storni

Where Chubut, Argentina.

Work Structural recovery Capacity of massifs N, L, and M of Muelle

Almirante Storni

Description Construction of 3 mooring massifs H^oA^o on stilts.

Amount 2.410.888



Dock Comandante Luis Piedrabuena

Where Chubut, Argentina.

Work Mooring massifs on dock. Madryn Port.

Description Construction of 2 mooring massifs of H^oA^o on slilts.

Amount 600.000



DUCTS



Emisario Mar del Plata

Where Buenos Aires, Argentina.

Work Submarine outfall construction. Mar del Plata.

Description Submarine duct construction



Gas pipe Mesopotámico

Where Entre Ríos, Argentina.

Work Gas pipeline Mesopotámico.

Description Gas pipeline proyect and construction. Subfluvial crossing

of the Paraná river with an 24" diameter and 32 km length duct, buried under water crossing 3 rivers and wetlands

areas.

Amount 40.135.000 **Vol m3** 8.500.000



Drinking water treatment establishment San Martín

Where Buenos Aires, Argentina.

Work Expansion of the drinking water establishment on San

Martín.

Description Dredging of the trench, placement and covered of

prefabricated elements of the duct, plus the construction

and

placement of the intake tower. Dredging for placement

concrete pipe founded on trench piles under water.

Amount 20.055.253 **Vol m3** 500.000



COASTAL TREATMENTS



Coastal protection

Where Misiones, Argentina.

Work Coastal protection work in Posadas, Garupa and Candelaria

Locations in the edge of Argentina.

Description Coastal protection work, bridge construction, dock,

recomposition of urban grid.

Amount 7.704.240 Vol m3 2.408.365



East waterfront

Where Misiones, Argentina.

Work East waterfront - Stage IV.

Description Construction of waterfront avenue and defense.



Defense against floods

Where Entre Ríos, Argentina.

Work Defense against floods on cities of Galeguay.

Description Defense construction.

Amount 15.330.000 **Vol m3** 1.330.000



Coastal defense Paraná

Where Entre Ríos, Argentina.

Work Stabilization gully and coastal defenses Paraná - 1a. Stage.

Description Coastal defense and complementary works: Electrical

installation lighting, railings, landscaping, etc...

Amount 7.559.000 **Vol m3** 22.862



VIALS



Ruta nº 27

Where Tigre, Buenos Aires, Argentina.

Work Conexión road - link Liniers street - rtuta nº 27. Tract 1 a, b,

c, d, 2 a and b.

Description Construction of road linking.

Amount 7.563.200 **Vol m3** 730.000



Ruta Nacional nº 168

Where Santa Fe, Argentina.

Work National Route nº 168. Santa Cándida Island.

Description 3 Km asphalt route construction (Asphaltic concrete; width:

7,30 m), 3 Km refulado's sand embankment and a bridge HºAº 120 m of length. Board width: 8,30 m. Execution of pillars de HºAª. Tending medium-voltage line: 13,2 Kw - Aprox. Length 3100 m. Ilumination: 3500 m. Pilars Hº: 72.

Aprox. Length 5100 m. numination. 5500 m

Amount 8.275.800 **Vol m3** 284.000



FOUNDATIONS



Port Loyola

Where Santa Cruz, Argentina.

Work Carbonero Port construction and general commodity in

Loyola Port.

Description Dock construction with a docking area for shipment of coal

and oil with access viaduct.

Amount 116.576.500



Dock Comodoro Rivadavia

Where Chubut, Argentina.

Work Ending of Comodoro Rivadavia Dock.

Description Shelter construction work with outer shell of acropods.

Coastal dock and oversea and basin dredge. Supply and and installation of defenses and bollards. Installation: drinking water, fire, lighting and prime mover.

Amount 29.478.623 **Vol m3** 410.500



- PRIVATE WORKS-



DOCKS AND TERMINAL PORTS

Port Timbúes Terminal

Where Santa Fe, Argentina.

Work Timbúes terminal port, Noble shipment civil work.

Description Civil work construction, shipment.

Amount 6.510.000



General Port San Martín

Where Santa Fe, Argentina.

Work Fertilizers new dock on San Martín General Port.

Description Shipment civil works.

Amount 8.166



DREDGING

Port Galván

Where Buenos Aires, Argentina.

Work Dredging of the mooring area of the floating plant.

Description Dredging and deepening of the area.

Amount 560.758 **Vol m3** 120.000



Canal Dock Sud

Where Buenos Aires, Argentina.

Work Dredging on Dock Sud Channel.

Description Dredging works on the channel.

Amount 695.000 **Vol m3** 58.000



FOUNDATIONS



Shipment Terminal

Where Santa Fe, Argentina.

Work Dreyfus General Lagos shipment terminal.

Description Grain Shipping terminal construction over the Paraná river.

95 m length pre-metalic transference gallery. Transference gallerys and barges with metal structure on towers, pilings

and heads.

Amount 4.756.000



Arroyo Seco

Where Santa Fe, Argentina.

Work Arroyo Seco dock reconstruction.

Description Dock reconstruction and complemetary works.

Amount 3.967.200



SPECIAL WORKS

Canal Dock Sud

Where Buenos Aires, Argentina.

Work Dock Sud channel expansion. East morro removal.

Description Remodeling by blasting and dredging of the existing morro

and casted wall of H^o A^o.

Amount 8.226.800 **Vol m3** 133.000



Dock Sud shipside West morro

Where Buenos Aires, Argentina.

Work West morro shipside removal Dock Sud, Exolgan.

Description Remodeling by blasting and dredging of the existing morro

and casted wall of Ho Ao.

Amount 1.822.000



OTHERS



Coal and Oil Port in Punta Loyola.

Where Santa cruz.

Description The port work was designed as docking port, advanced,

towards the sea, consisting of a dock with a mooring front, dolphin and their mooring towers; a viaduct earth bonding for motor vehicles, coal conveyor ribbons and pipes

according to the requirements of Y.C.F. and Y.P.F.

Amount 116.576.500

