



# COMPANY PROFILE



# CROSCO COMPANY PROFILE



# ABOUT CROSCO

COMPANY DIRECTOR’S MESSAGE	...004
CODE OF ETHICS	...006
ORGANIZATIONAL STRUCTURE OF INA GROUP	...008
ORGANIZATIONAL STRUCTURE OF CROSCO GROUP	...009
CROSCO ORGANIZATION	...010
VISION	...012
MISSION	...013
QHSE	...014
HUMAN RESOURCE MANAGEMENT	...018
TRAINING	...020

# COMPANY DIRECTOR'S MESSAGE

CROSCO Integrated Drilling & Well Services Co., Ltd. is an onshore and offshore drilling and well services contractor. It has established a leading presence in the company's three regions of focus, which span Northern Africa, the Middle East and Mediterranean Europe. Moreover, CROSCO provides services for some of the world's most recognized operators and consistently exceeds its clients' expectations by providing record drilling and completion, time and cost saving.

Furthermore, the company's presence is expanded in its regions of focus, entering new strategic markets and continually upgrading, to provide the best overall services and equipment available to its clients. CROSCO has established partnerships and has built up relationships with other leading contractors to ensure access to new technologies and to provide an extensive upgrading program.

Quality, health, safety and environment (QHSE) are highly prioritized and demonstrated through continually achieved improvements in the company's results and records. CROSCO has ISO 9001, ISO 14001, OHSAS 18001 and ISO 50001 certification from Bureau Veritas Certification and is a member and active participant in various organizations including the International organizations including the International Association of Drilling Contractors and the International Well Control Forum. CROSCO also has implemented a near-miss policy

„CROSCO's expertise, coupled with policy of continual class and field training further ensures flexibility, creativity and innovation.“

and is an active participants in its clients' QHSE initiatives. The company's results speak for themselves, since they are consistently better than industry averages and are recognized by its clients and by various levels of government.

The greatest overall strength are CROSCO's employees. More than 95 % of its personnel has either a university degree or a technical diploma. Moreover, many of them gained experience through several services and have worked in numerous countries. This expertise ensures, coupled with the company's policy of continual class and field training, flexibility, creativity and innovation. Furthermore, CROSCO has not reduced personnel during periods of low demand to ensure throughout expert service and utmost efficiency. The company is also able to maintain a continuously high level of performance without compromising on QHSE.

*As we grow and expand we look forward to having the opportunity to offer you our services and satisfy your expectations.*

Management Board/Company Director





CROSCO, as a part of the INA Group, has implemented the INA Group Code of Ethics.

The Code is based on respect for fundamental human rights and the ethical principles of integrity, honesty, trust, respect, humanity, tolerance and responsibility.

Further, it obligates all employees and other natural persons, who are authorized as management board members, executive directors or in any other capacity according to special laws, to conduct business individually and independently/jointly and as a group and who are employed and/or work in INA Group companies in which the Code was passed, where it is in effect and is applicable as one of the labour relations by laws. The Code primarily regulates the types of conduct which occur in course of conducting business operations and in terms of attitude towards work, colleagues, business partners and the public. All persons obligated by the Code are expected to act in compliance with the Code regulations, apply to them and avoid unacceptable conduct in contravention of the Code at all times.

### **Principles of Code of Ethics**

- INA Group is directed towards achieving goals of long-term sustainable development, value increase and attainment of competitive advantages.
- It fosters and encourages mutual trust and respect and professional attitude towards assistants, clients and business partners.
- Diligent work, professionalism and motivation of employees are recognized as a cornerstone for improvement of business processes and attainment of goals.
- Communication between employees on all levels, especially regarding manager/employee relations, is based on mutual respect and tolerance.
- A stimulative work environment for innovative and creative work is being created.
- A special care is taken to protect personal data of employees and applicants for positions.
- The relationship between us and our employees is based on trust and respect, therefore are any offensive behaviour and harassment, either verbal or physical, unacceptable.
- Discrimination or harassment of employees, clients, providers or any business assistants on the basis of their race, religion, nationality, sex, age, physical or mental difficulties, marital status, sexual orientation or any other affiliation shall not be tolerated.
- A fair attitude towards stakeholders, including, clients, providers, INA Group's employees and competitors is expected from each employee, manager and director.
- Usage of persons by manipulation, abuse of confidential data, misinterpretation of material facts or any other unfair activity shall not be allowed.

# INA GROUP

INA-Industrija nafte, d.d. is a medium-sized European oil company headquartered in Zagreb, Croatia. Established in 1964, INA Group has a leading role in Croatian oil business and a strong local position in the oil and gas business today. INA Group had 11,256 employees on December 31, 2015.

Apart from Croatia, INA realizes business operations in the oil and gas exploration and production segment in Angola and Egypt. An extensive development program worth more than USD 1 billion has been implemented in INA's refineries in Rijeka and Sisak. INA manages a regional network of 438 petrol stations in Croatia and neighboring countries.

INA is committed doing business in accordance with sustainable development, which means that it strives towards integrating economic, environmental and social factors in its daily operations. Trying to make energy available, INA wants to be a driver of social and economic development, taking care of people and the environment while fostering responsible business operations and local partnerships.

## **SUBSIDIARIES IN CROATIA**

CROSCO, d.o.o. / STSI, d.o.o. / INA Maziva d.o.o. / HOSTIN d.o.o. / Top Računovodstvo Servisi d.o.o. / INA Maloprodajni servisi d.o.o. / Plavi tim d.o.o.

## **SUBSIDIARIES ABROAD**

INTERINA d.o.o. Ljubljana / INA BH d.d. Sarajevo / INA d.o.o. Beograd /  
INA-Crna Gora d.o.o. Podgorica / Holdina d.o.o. Sarajevo / Adriagas S.r.l. Milano

# CROSCO GROUP

## SUBSIDIARIES

100 %	ROTARY DRILLING Co. Ltd.
100 %	CROSCO INTERNATIONAL Ltd. Tuzla – Bosnia and Herzegovina
100 %	CROSCO INTERNATIONAL podjetje za naftne servise d.o.o. – Slovenia
99 %	CROSCO S.A. DE C.V. Mexico
100 %	CROSCO B.V. – Netherlands
100 %	SEA HORSE SHIPPING INC.
100 %	NORDIC SHIPPING LIMITED



# MANAGEMENT BOARD / COMPANY DIRECTOR



Key Corporate objective and main responsibility of each employee is to provide integrated and individual onshore and offshore drilling and well services with *highly experienced personnel*. Another objective of the company, and the responsibility of each employee, is to continually exceed industry standards for *Health, Safety, Environment and Quality* and to continually improve *Efficiency and Profitability*.



# MISSION

- We will provide **integrated** and **individual services**
- We promote **creativity, flexibility and innovation**
- We **satisfy and exceed** our client's requirements, demands and expectations
- We **strive to develop long-term relationships and partnerships** with clients and other drilling and service companies
- We **continue to increase** our international activities and meet demands of the Croatian market
- We **strive for continual** improvements in Health, Safety, Environment and Quality
- We ensure **highly trained, experienced and motivated employees**
- We strive for **continual improvements in efficiency and profitability**

# QHSE



## QUALITY MANAGEMENT SYSTEM

The quality and development of CROSCO's business are based on a certified system of quality management and control, knowledge and long-time experience in design and performance involved in the exploration and production of oil, natural gas and all types of formation water, testing and completion of wells, geophysical, geomechanical and geotechnical operations and equipment/tools maintenance.

**Our Quality Management System is designed in accordance with internationally recognized ISO 9001:2008 standard and fulfils all requirements stipulated therein. Since 2001 the Quality Management System has been certified by Bureau Veritas Quality International (Bureau Veritas Certification since 2008)**

CROSCO's Scope of supply comprises:

- drilling and well services,
- well design,
- engineering and maintenance of equipment in oil and gas industry.

Our main objectives are the full implementation of our Quality Policy and the continual improvement of the System with the aim of maintaining high quality of our services supplied to our clients.

Our business objectives are:

- Creating and promoting relationships with our clients and suppliers,
- Fulfilling all expectations of our clients and constantly improving our services,
- Continually monitoring global development of technology and learning about areas of activity,
- Educating, training, choosing and motivating workers capable of flawless performance and constantly improving work processes,
- Working in compliance with adopted standards, specifications and any regulatory requirements,
- Permanently monitoring and improving the quality management system

The strategic commitment and objective of CROSCO is to become a globally recognized oilfield service contractor.

Therefore CROSCO is building its position on the market by keeping regular, direct, fair and close relationships with its clients. CROSCO endeavors to provide its clients professional services and assistance in order to develop a relationship based on trust and make them fully satisfied. Fulfilling the needs and requests of clients, and attaining the planned quality of services/products at an optimal cost is the constant routine of the company's daily business.





## ENVIRONMENTAL PROTECTION IN CROSCO

In order to implement the company's **Environmental Policy**, fulfil the commitments established in the Policy and achieve environmental objectives, CROSCO has implemented a high standard Environmental Management System (EMS).

The implemented EMS is helping CROSCO to achieve its ultimate environmental goals, which are minimizing the impacts of the company's operations on the environment and avoiding any damages/losses and/or potential harms to the environment.

### EMS is:

- designed and implemented in accordance with requirements stipulated in ISO 14001:2004 standard
- harmonized with the requirements of OGP guidelines
- fully integrated in the Company's Management System
- certified and periodically audited by Bureau Veritas Certification

Through realizing its operations worldwide, CROSCO endeavors to protect local communities, heritage and wildlife, taking into account legal requirements, local community's environmental requirements and other concerns.

The aim is to be recognized by the company's environmental excellence among drilling and well service contractors and to achieve its environmental goals.

### The goals are to perform operations and supply services:

- without environmental incidents;
- without statutory environmental liabilities; and
- in an environmentally friendly manner.

CROSCO is properly equipped and capable to perform onshore and offshore operations under the requirements of Zero-Pollution.

According to increase international concern on environment, CROSCO gives effort in environmental protection.

A proper waste management plan begins with pollution prevention. During the performance of operations, all generated waste is properly managed in order to minimize its potential to cause harm to the environment.





## OCCUPATIONAL HEALTH AND SAFETY

As a worldwide drilling and oil service contractor, CROSCO maintains Health & Safety (QH&S) as a core value for all employees, and a key element in its business conduct.

The objectives of implementing the occupational health and safety management system are:

- Improvement of work conditions in terms of health and safety of employees;
- Reduction in costs due to accidents;
- Fulfillment of legal and other requirements;
- Stimulation and motivation of employees;
- Strengthening of trust between interested parties.

CROSCO's commitment to QH&S starts with the Top Management and goes all the way through the organization. A standing Safety Committee consisting of Top Management members meets two times per year and is responsible for review and oversight of the corporate QH&S Policy and the whole Safety System.

The committee also evaluates a risk management process, as well as the performance of the whole safety system, and develops strategies for continuous improvement in overall QH&S performances.

The QH&S system is planned, documented, implemented, maintained and audited on regular basis. Further it incorporates responsibility and accountability and creates values for the company's customers.

To achieve the company's goal of QH&S excellence, CROSCO is committed to integrate QH&S practices into all of its business activities by adhering to the following goals:

- Creating incident-free workplace at all time and
- Improving of safety culture

The QH&S system is certified according to OHSAS 18001:2007 standard, and is under control by Bureau Veritas Certification. The QH&S system is also periodically checked, minimum one times per year, and certificates reaffirmed.





## ENERGY MANAGEMENT SYSTEM

CROSCO's Energy Management System based on the internationally recognized ISO 50001:2011 standard and certificated by BVC (November 17, 2015).

### Scope of supply:

Providing oil services (onshore and offshore drilling, workover and well services), maintenance and service support for working facilities, plants and equipment.

### CROSCO's business locations:

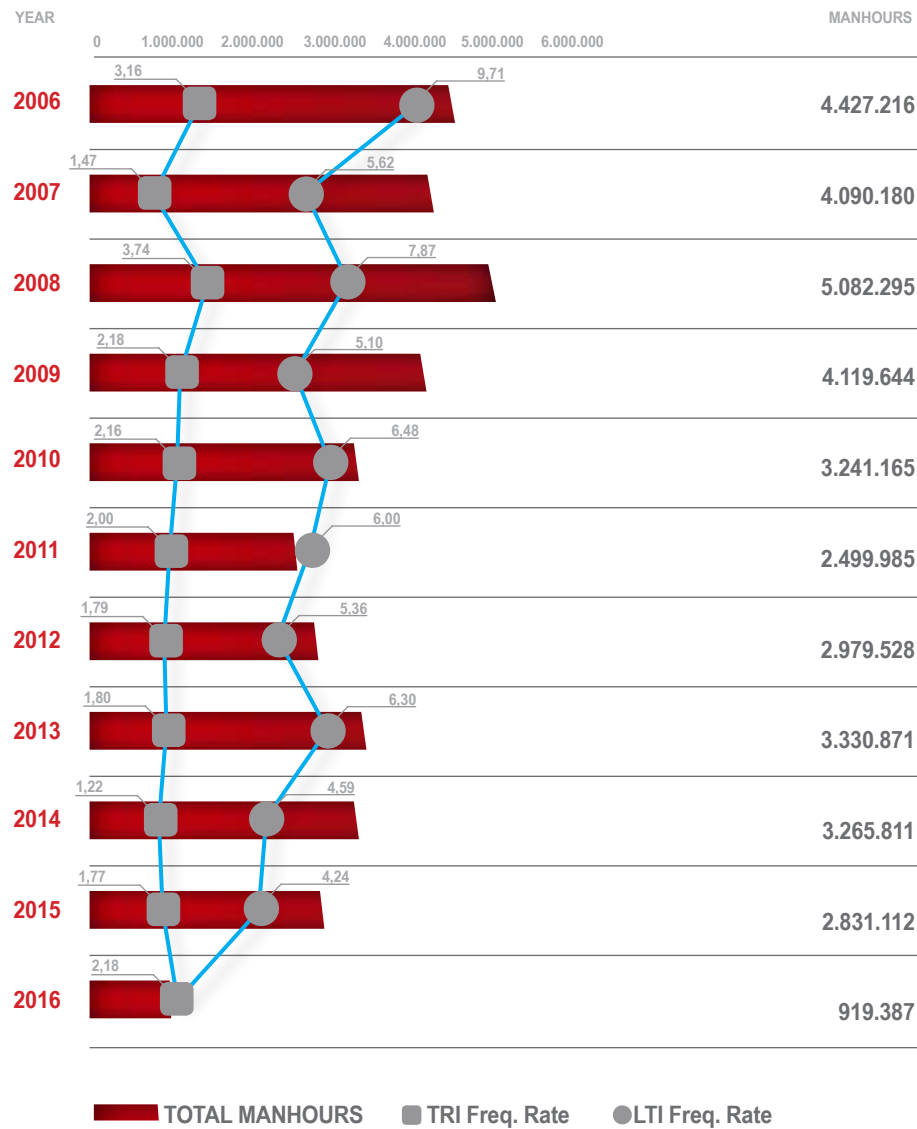
- CROSCO, Integrated Drilling & Well Services Co., Ltd.  
Ulica grada Vukovara 18, Zagreb 10000, Republic of Croatia
- CROSCO, Integrated Drilling & Well Services Co., Ltd.  
Industrial site Ivanić Grad, Industrijska cesta 1, Ivanić Grad 10310, Republic of Croatia
- CROSCO, Integrated Drilling & Well Services Co., Ltd.  
Industrial site Žutica, Žutička bb, Ivanić Grad 10310, Republic of Croatia



Realisation of the Energy Management Policy shall increase the competitiveness of the Company, and thereby reduce greenhouse gas emissions, sustainable manage natural resources and preserve the environment for future generations.

CROSCO'S STATISTIC IN LAST 10 YEARS

Well services - hours worked and LTI & TRI frequency





- CROSCO employs around **1000 employees**.
- CROSCO’s employees have a **high level of know-how and experience**.
- **Workforce and know-how** present the key values of the company’s business success.
- **Care for its employees and their development** is CROSCO’s continuous strategic priority.
- CROSCO continuously **invests in the education and training** of its employees.
- ~ 90% of employees have passed in-house courses and training.
- CROSCO develops and promotes **good team relations and efficient communication** among employees.
- CROSCO promotes **acknowledgement and awards** employees’ commitment and achievements.

EDUCATIONAL STRUCTURE OF EMPLOYEES







**SEMINARS AND SPECIAL COURSES**

Develop new ideas to support company future manpower needs

Internationally recognized certificates:

- IWCF well control certificate (level 2, 3, 4)
- IADC rig pass
- H<sub>2</sub>S alive ENFORM

**IN-HOUSE COURSES**

Based on the special needs and demands of the client/company concerned

**TRAINING CENTRE**

- Courses in the area of well technology, safety and management are continually developed closely following technological improvements
- CROSCO's instructors – certified courses specialized for petroleum industry
- Internal and external trainings
- On job trainings: expanding the scope of job tasks
- Development and monitoring of careers at the local and international level



“As we grow and expand we look forward to having the opportunity to offer you our services and satisfy your expectations.”



# COMPANY SERVICES

INTEGRATED DRILLING SOLUTIONS	...025
DRILLING	...027
WORKOVER	...029
WELL SERVICES	...031
MAINTENANCE	...043



CROSCO is an integrated onshore and offshore drilling and well services contractor. The company has a fleet of 28 drilling and workover rigs and one jackup. CROSCO is also 100% owner of Hungarian based Rotary Drilling Company. Rotary's drilling fleet includes 5 rigs and the company also provides workover and other well services. CROSCO provides the following well services: well testing, cementing, stimulation, well logging, coil tubing, nitrogen, fishing, directional drilling, coring, H<sub>2</sub>S and mud.

## Integrated Drilling Solutions

### DRILLING

### WORKOVER

### WELL SERVICES

- Well testing services
- Cementing & Stimulation services
- Well logging
- Slickline
- Coil tubing & Nitrogen
- Directional drilling services
- Mud services
- Fishing services
- H<sub>2</sub>S services
- Tubular & Running
- Inspection of the lifting equipment
- Well control equipment services
- Tubular inspection service
- Downhole equipment services
- Rig floor equipment services

### MAINTENANCE

- Process machinery services
- Preventive maintenance system
- Energetics services



Operations are performed by using the company’s own fleet of 16 various National, Emsco, Midco, Ideco and Skytop drilling rigs, as well as one jackup. Drilling capacity ranges from 2,300 to 8,000 m (7,546 to 26,247 ft).

**OFFSHORE**

Labin	jackup drilling unit	Levingston 111-C / Independent Cantilever 55 ft / Max. water depth: 329 ft / Drawworks: National 1320 UE (2000 HP) / Mud pumps: National 12-P160 x 3 pcs
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**ONSHORE**

National 801	3000 HP
Emsco 602 / Emsco 603 / Emsco 604 / Emsco 605	2000 HP
Emsco 401 / Midco 501	1500 HP
National 402 / National 403	1000 HP
Ideco 301 / Skytop 3	900 HP

**ROTARY DRILLING Co. – DRILLING RIGS**

R-67	2000 HP
R-68	1500 HP
R-69	1000 HP
Lyb-37 / Lyb-42	900 HP



Services are provided by using the company’s fleet of self-propelled and truck-mounted Skytop, Cardwell, IRI-Franks, Kraz and National workover rigs. Workover servicing capacity ranges from 1,830 to 6,500 m (6,004 to 21,325 ft). All of our workover rigs are self-propelled carrier back-in type units with self-erecting and extended API portable guyed masts.

Skytop 1	136 t
National 2	100 t
National 3	
National 4	
National 5	
Cardwell 8	
Cardwell 1	90 t
IRI 1	65 t
IRI 2	
IRI 3	
Cardwell 5	
Cardwell 7	
Cardwell 3	60 t
KRAZ 4 50 t	
KRAZ 5	
RP-501	
Cardwell 4	40 t

**ROTARY DRILLING Co. – WORKOVER RIGS**

Lyb-38 / Lyb-39 I Lyb-40 / Lyb-43 / KK-10 (SBS DIR-5506)	375 HP
KK-23/24 (SBS DIR-110)	303 HP



# WELL SERVICES



# WELL TESTING

Well testing services are provided with a full array of wireline/slickline units, separators, indirect heaters, surge tanks and various auxiliary equipment. Well testing equipment is sourced from well-known and reputable manufacturers. CROSCO wireline/slickline unit drum capacities are available up to 8,000 m (26, 247 ft) and engine power up to 353 kW. DST services are available with conventional (mechanical) or hydraulic test tools with electronic or mechanical pressure and temperature gauges. Well testing equipment is capable of operating in extreme well conditions with pressures up to 1,100 bar (15,600 psi), temperatures up to 235°C (455°F) and with high contents of CO<sub>2</sub> nad H<sub>2</sub>S. Onshore services were introduced in 1966 and offshore services in 1978.

## SURFACE WELL TESTING SERVICES

	Assets and Equipment
Well clean-up	High pressure separators, WP: 1450 psi
Well deliverability	Middle pressure separators, WP: 500 psi
Drawdown tests	Indirect heaters
Multi-rate tests	Surge tanks
Build up tests	Pipe line, WP: 10 000, 5 000 and 3 000 psi, ID: 2" and 3"
Injection tests	Choke manifolds
Interference tests	Data headers
Step rate tests	ESD system
Reservoir limit tests	Injection pumps
Frac flowbacks	Transfer pumps
	Flares

## DRILL STEM TEST (DST)

	Assets and Equipment
Testing of layers in Open hole diameters: 6" – 12"	Conventional Halliburton hydrospring tools (OH/CH)
Testing of layers in Cased hole	FF Halliburton hydrospring tools (OH/CH)
Diameters: 4 1/2" – 13 3/8"	FF LPR-N tools
Taking of downhole samples	Surface pressure control equipment
Measurements of pressure and temperature, both downhole and surface	Sampling equipment



# CEMENTING & STIMULATION

## CEMENTING SERVICES

More than 40 years of experience and thousands of successfully performed cement jobs worldwide speak in favor of our quality and professional strength. Our skilled employees, up-to-date simulation software and reliable cementing equipment have made us recognizable at the international level.

We provide the services, equipment and technical expertise in:

	Assets and Equipment
Casing and liner cementing	Double Pump Units
Placing of cement plugs	Single Pump Units
Plug and abandonment	Automatic Cement Mixing Unit
Kick-off	Batch Mixers
Loss of circulation	600 m² Bulk Cement Tank capacity
Remedial cementing	Air Compressors
Squeeze cementing	4 Cement Blending Plants
Top-up cementing	10, 20 and 40 m² Mixwater Tanks with Agitators and
Water shut-off	Centrifugal Pumps
Cement job design	Data Acquisition System
Simulation software	Cementing Simulation Software
Laboratory testing according to API specification	Central Cementing Laboratory
Data acquisition	HPHT Thickening Time Testers
Density	Atmospheric Pressure Thickening Time Testers
Pressure	Ultrasonic Cement Analyzer
Flow	Fluid Loss Tester
Cement storage and blending services	Viscometers
Casing equipment	Mobile Cementing Laboratory
Cementing heads and swedges	Cwementing Heads and Swedges
Running cement retainers/bridge plugs	Cement Retainers/Bridge Plug





STIMULATION SERVICES

Our determination in tackling any new professional challenges and our well stimulation know-how are a guarantee for getting the job done right. Offering a full package of stimulation services to suit your needs, we will deliver the results you need quickly and effectively and maximize the value of your assets.

	Assets and Equipment
Hydraulic fracturing	11 HT – 400 pumps, each 500 HHP, total 5500 HHP
Sand fracturing	Blending Units, 75 bbl/min
Acid fracturing	Blending Units, 25 bbl
Breakdown jobs	1500 m³ Fracturing Fluid Tank capacity
Acidizing	200 m³ Proppant Tank capacity
Matrix acidizing	Stimulation Laboratory:
Acid washing	Particle Sizer I Compression Cell for sing mounted samples
Wellbore cleanup	Porosimeter I Permeameter / Traxial Holder
Perforation surge cleanup	High Pressure Filter Cells I UV/VIS Spectrophotometer
Gravel pack	Stereopycnometer I Digital Tensiometer pH/Ion Meter
Stimulation job design	I electronic Balances Fann 50 C Viscometer I Fann 35
Simulation software	Viscometer Hatch Portable Spectrophotometer High-Speed
Laboratory testing according to API specification	Balde Misers I Warring Blenders Centrifuge data
Pumping services	Acquisition System
Data acquisition	Treesaver
Density	Ball injectors
Pressure	
Flow	
Acid storage and mixing services	
	Auxiliary Assets and Equipment:
	Filter Units
	Centrifugal Pumps
	10, 20 and 40 m³ Fluid Tanks
	35 m² Acid Tanks
	Gravel Pack Tools and Equipment
	RTTS Packers
	Hydra Jet Perforator



# WELL LOGGING

## OPEN HOLE WELL LOGGING

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### Resistivity logging

- Electrolog I Dual induction Focused Log
  - Dual Laterolog I Microlog
- 

### Nuclear logging

- Gamma RayI Compensated Neutron Log
  - Compensated Density Log I Spectralog
- 

### Acoustic (sonic) logging

- Acoustic log
- 

### Auxiliary logging

- High Resolution Dipmeter I Directional Log I Core gun sampler
- 

### VSP

- Avalon Science System
- 

### Logging in water wells

- Robertson geologging – gamma Ray,
- Microlog, Temperature, Capacity,
- Caliper, Camera
- 4 open hole units (3 units & one Skid)

## CASED HOLE WELL LOGGING

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### Correlation & technical condition logging

- Gamma Ray/CCL/Neutron
  - Secotr Bong/CBL
  - Pressure/Temperature
  - Dual Detector Neutron
  - Photon Log
  - Free Point
- 

### Production logging – (Pressure, Temp., CCL, GR, FM, FD, Cal)

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### Perforation services

- Stimulation perforation
  - Thru Tubing perforation
  - Casing guns Perforation
  - TCP perforation
  - Back Off
-



# SLICKLINE SERVICES

## SLICKLINE SERVICE AND E-LINE SERVICES

	Assets and Equipment:
Bottom Hole Pressure & Temperature Surveys Electronic BHP/BHT Memory Gauge Services Running & Pulling Downhole Plugs & Safety Values Shifting Sliding Sleeves Locating Tubing Ends, Bottom of Hole & Obstructions Bottom-Hole Sampling and bailing operations Tubing Caliper Surveys Paraffin and Scale Cutting Fishing operations Gas Lift Operations Mechanical tubing perforation Well Investigations Rig and hoist support	Slick line units Slick line units with crane Slick line off shore units with cable – skid mounted Portable slick line off shore units – skid mounted Lightweight slick line units Cable units for SRO measurements BOP and Surface pressure control equipment

## PRESSURE AND TEMPERATURE GAUGES

	Assets and Equipment:
Static and dynamic gradient surveys Bottom Hole pressure & Temperature surveys Electronic BHP/BHT and surface P/T Memory Gauge services	Mechanical gauges Electronic memory gauges (Quartz and Piezo-Resistive) Surface Read Out gauges

# COIL TUBING SERVICES

	Equipment:
Well Lifting/Unloading Well Circulation Wellbore Cleanout Acid Wash and Stimulation Cementing  Light duty drilling/Milling Velocity Strings Fishing Data acquisition System	Coiled tubing unit 1 1” BOWEN 30 MB Coiled tubing unit 1” BOWEN 12 MX Coiled tubing unit 1 1” BOWEN 15 MZ Coiled tubing unit 1 1” MH 100 Downhole Tools: Roll-on Connector; External Slip Connector; Twin Flapper Check Valve; Straight Bar; Multiple Side Flow Port Nozzle; Multiple Flow Port Nozzle; Multiple Back Port Nozzle; Multiple Up Flow Port Nozzle; Heavy duty Hydraulic disconnect; Dual Circulation Valve; Flow Activated Bow Spring Centraliser; Torque Thru Knuckle Joint; dual Action Hydraulic Jahr; Accelerator Dual Action – Flow Thro, Rotary Wash Tool; “PCERX” Type Flo-activated Running Tool; Flow Activated “GS” Running/Pulling Tool; downhole drilling Motor; Risers; Adapters; Flow tee; Pull Test Plate; Inline filter

# NITROGEN SERVICES

	Equipment:
Lifting Pipeleline purging Displacing fluids and generating foam Reducing hydrostatic pressure in wells to perforate or testing	Nitrogen unit SKId I; Nitrogen unit SKId II Nitrogen unit HOBBS; Nitrogen unit Kenworth Additional nitrogen storage (4 pcs) 2,000 gal (7,570 dm³) Equipped with Fluid Level Gauge Pump unit OILWELL

# DIRECTIONAL DRILLING AND CORING SERVICES

	Equipment:
Directional, horizontal and straight hole performance drilling using mud motors  Well planning and managing survey data with directional drilling software Measurement While Drilling (MWD) Services (Directional and Gamma) Surveying operations with electronic single/multi shot instruments Oriented and Conventional coring in consolidated formations	Mud Motors from 4-3/4" OD to 9-5/8" OD H/M Drilling Jars from 4-1/2" OD to 8"OD Positive Pulse MWD/LWD System (Directional and Gamma) rated to 175°C and 20,000 psi Electronic Multishot / Singleshot instrument rated to 125°C  Core Barrels from 4-3/4" OD to 8"OD

# MUD SERVICES

	Equipment:
On site preparation and mud treatment Testing and Lab services according to API specification Solids control	Rig Lab Mud testing equipment HPHT Viscometer HPHT Filter Press Decanter Centrifuges

## FISHING SERVICES

	Equipment:
Cased and Open Hole Fishing Services	Internal and External Catching Tools
Internal and External Catching	Jarring Assemblies
Wellbore Obstructions Removal	Milling Tools and Washover Shoes
Packers and Plugs Milling and Retrieving	Junk Catchers and Junk Baskets
Casing and Tubing Cutting Services	Drillpipe and Casing Cutters
Milling and Washover Operations	Casing Patches
Casing Patching	Accessory Tools
Power Swivel Units	Power Swivel Units
Fishing Tools Workshop	

## H<sub>2</sub>S SERVICES

	Equipment:
Emergency procedures and H <sub>2</sub> S	Self-contained breathing apparatus, work and escape
Contingency planning	breathing apparatus, emergency escape breathing apparatus
H <sub>2</sub> S alive training course	Cascade air system
	High pressure breathable air compressors
	Fixed monitoring system and A/V alarm system
	Personal detectors

## RIG FLOOR EQUIPMENT SERVICES

Service and inspection of Handling Tools (Tongs, Elevators, Spiders, Safety Clamps, Links, Bushings, etc.).  
Tubular Running service (Tubing and Casing standard or Non-marking service).

## INSPECTION OF THE LIFTING EQUIPMENT

Thorough examination, testing and NDT of lifting equipment: General lifting equipment- Slings, Shackles, Clamps, padeyes etc.; Winches & powered hoists; Pedestal & mobile cranes; Overhead gantry cranes, swing jibs & runway beams; Fork lift trucks & stackers; Containers, baskets & other CCU's.

# TUBULAR RUNNING SERVICES

	<b>Equipment:</b>
Tubular running services facilitate safe and efficient running of tubulars (drill pipe, tubing and casing), minimizing wellsite risk and reducing non-productive time.	Hydraulic Power Tong (4 pcs) Manufactured in 1985.-1 pcs; 2000. -3pcs (Weatherford) Type: Model 5,5-15 C/W: Hydraulic Drive System Up to 5 ½"/15,000 lbs*ft
	Hydraulic Power Tong Manufactured in 2000. (Weatherford) Type: Model 16-25 C/W: Hydraulic Drive System Up to 13 3/8"/25,000 lbs*ft
	Hydraulic Power Unit (2 pcs) Manufactured in 2013 (McCoy) C/W: Deutz F6L914, Air Cooled 6 Cylinder Diesel w/interia starter Power: 113/84 hp/kW; 2500 psi
	JAM LV-2 Torq Monitoring/Control System (2pcs) Manufactured in 2002. (Weatherford)

# WELL CONTROL EQUIPMENT SERVICES

Service, testing and field service of Surface Wellhead & Christmas Trees, Ram & Annular BOP's, Choke Manifolds, High Pressure Lines, Gate Valves, Flanges, Flow Heads etc.

# TUBULAR INSPECTION SERVICES

Tubular inspection services following customers' specifications, DS-1, API guidelines and NS-2 standard: Drill pipes, BHA and OCTG.

# DOWNHOLE EQUIPMENT SERVICES

Service, completion, rental and field service of downhole tools (Packers, Anchors, Sliding Sleeves, Safety Joints, LN, Scrapers, etc.).



CROSCO provides corrective and preventive maintenance for drilling and workover rigs (onshore and offshore), and further provides well services equipment, process machinery equipment, electric and electronic equipment and oil tools. These services were developed for the requirements of CROSCO and MOL Group needs, as well as for other clients.

**Maintenance Service provides:**

Oil industry equipment reconstruction and upgrade
Development of construction and maintenance projects for equipment and facilities
Supervision, consulting and project management
Preventive maintenance computerized system management
Ex-proof equipment maintenance & periodic inspections
Service and overhaul of the drilling and workover rigs and all types of drilling/workover/well service equipment and tools

People in CROSCO endeavor to provide its clients professional services and assistance in order to make them fully satisfied in doing business with CROSCO.



# CROSCO IN DETAILS

CROSCO LOCATION	...047
INTERNATIONAL ACTIVITIES WITHIN INA-NAFTAPLIN	...049
CROSCO INTERNATIONAL ACTIVITIES	...050
GENERAL REFERENCES	...052
COMPETITIVE ADVANTAGES	...054
CROSCO OFFICES WORLDWIDE	...056



CROSCO is located in-between  
Central Europe, North Africa,  
Middle East, CIS and North Sea

# CROSCO LOCATION



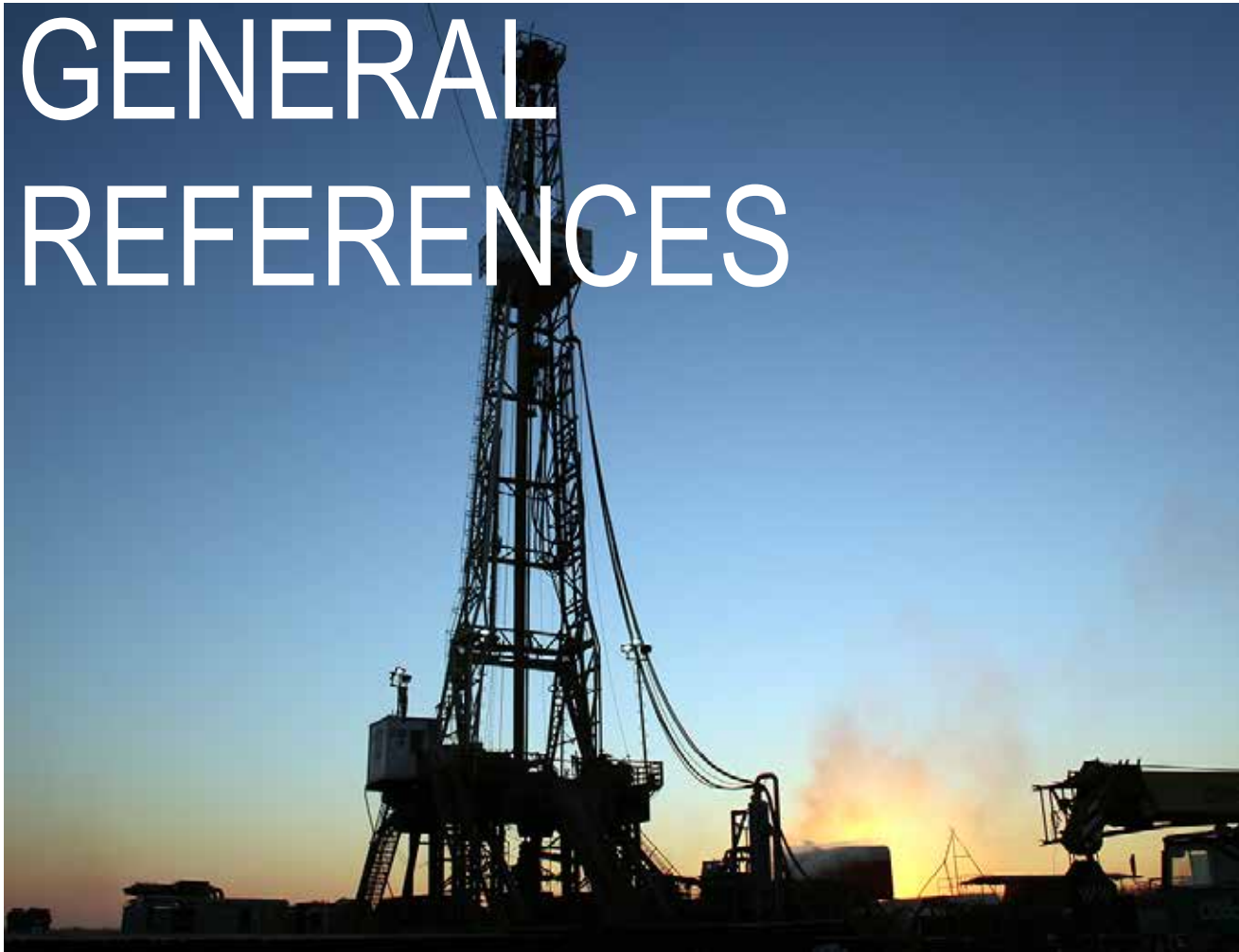


COUNTRY	PERIOD	TYPE OF SERVICE	OPERATOR
ALBANIA	1996 – 1997	Drilling, Well Serv., Well Logging	INA-NAFTAPLIN, PREMIER
AUSTRIA	1995	Drilling Services	ROTARY, BRAUMANN
CROATIA	1969 – 1970	Drilling, Well Services, Geoph. Surveys-Off-shore	AGIP, CHEVRON, TEXACO
CYPRUS	1969 – 1970	Drilling Services – Onshore	FOREST OIL CORP.
CZE	1995 – 1996	Stimulation Serv., Well Logging	KAC
EGYPT	1964 – 1966	Geophysical Surveys	EGDO – EGYPT
ETHIOPIA	1958 – 1961	Geophysical Surveys	ETHIOPIAN GOVERNMENT
INDIA	1964 – 1965	Drilling Services – Onshore	ONGC
IRAQ	1978 – 1984	Drilling Services – Onshore	INOC
ITALY	1978 – 1980	Drill. And Well Serv. – Offshore	SIR, BURMACH OIL, ITALY
JORDAN	1968 – 1972	Drilling Services – Onshore	INA-NAFTAPLIN, JORDAN GOVERN.
LIBYA	1990 – 1992	Drilling and Well Services – Offshore & Onshore	SIRTE OIL, INA-NAFTAPLIN
RUSSIA	1993 – 1996	Consulting/Supervising Well Services	WSS, OMV
SLOVAKIA	1974 – 1979	Stimulation Services	KAC
SLOVENIA	1988 – 1992	Drilling, Well Services, Well Logging Services	GEOTEHNICNA DELA, NAFTA LEN-DAVA
SYRIA	1989 – 1989	Drilling Services – Onshore	SPC
TUNISIA	1988 – 1992	Drilling Services – Offshore	CONOCO, AGIP, INA-NAFTAPLIN, MARATHON, SITEP
TURKEY	1989 – 1989	Drilling Services – Offshore	DEUTSCHE TEXACO
UKRAINE	1996 – 1996	Drilling Services	ITAG
VIETNAM	1979 - 1980	Well Logging Services	AGIP

COUNTRY	PERIOD	TYPE OF SERVICE	OPERATOR
ALBANIA	2000 – 2005	Seismic Services, Drilling Services – Onshore, Cementing, Well Logging etc.	OCCIDENTAL, INA-ALBANIA, OMV
	2000	Geoservices	OMV, INA d.d.
	2009 -	Drilling services	BANKERS Petroleum
AZERBAIJAN	2000 – 2002	Workover Services, Logging Services, DST, Drilling Services – Onshore	SALYAN OIL, KAOC
B&H	2000 – 2012	Geoservices	SODASO HOLDING d.d./ RUDNIK SOLI TZULA
	2004 – 2005	Geoservices	OPĆINA ILIDŽA
	2005	Geoservices	UNIONVEST d.d., SARAJEVO
	2006	Geoservices	ALUMINIJ d.d., MOSTAR
	2008	Geoservices	HERING d.d. ŠIROKI BRIJEG
	2010	Geoservices	OPĆINA BUŽIM
CROATIA	1996 -	Integrated Drilling and Well Services	INA
	1998 – 2013	Geoservices	INA, JANAF, VIADUKT, BECHTEL INT., JAN DE NUL, TEHNIKA, KONSTRUKTOR, HRVATSKE CESTE, HI-DROELEKTRA, HRVATSKE VODE, OSIJEK-KOTEKS, D?APOLONIA, LUKA PLOČE, STRABAG, POMGRAD INŽ., SWIETELSKY, ZAKLADANI STAVEB, RADNIK, TEMPO
	2004	Drilling Services – Offshore	INAgip, EDINA
	2009 -	Drilling Services – Onshore	PSP
	2013 – 2014	Drilling Services – Offshore	INAgip
CUBA	2001 – 2002	Drilling Services – Onshore	PEBERCO
CZECH.REP.	2001	Fracturing Services	KAC-CZECH. REP.
EGYPT	1999 – 2000	Drilling Services – Offshore	PETROBEL
	2001 – 2002	Geoservices	INA
	2007 – 2009	Workover Services – Onshore	KHALDA
	2005 - 2016	Drilling Services – Onshore	INA, RWE Dea, IEOC, AGIBA, SUCO, EDISON, BAY-PETCO, SIPETROL, GUPCO, GSPC, MARINA
EQ. GUINEA	2006 – 2007	Drilling Services – Offshore	OEGC/DEVON
GERMANY	1997	Well Testing Services	NORMEC
HUNGARY	2001	Drilling Services – Onshore	HORIZON, XPRONET
	2005 – 2007	Drilling Services – Onshore	FACON/TXM
IRAQ - KURDISTAN	2011 – 2016	Drilling Services – Onshore	KALEGRAN

COUNTRY	PERIOD	TYPE OF SERVICE	OPERATOR
ITALY	2002	Well Logging	BAKER ATLAS
	1996 – 2013	Drilling Services – Offshore	AGIP/ENI
IVORY COAST	2007	Drilling Services - Offshore	EDISON International
LIBYA	1996 – 2004	Drilling services – Offshore	INA, AGIP OIL, ENI GAS
	2004 – 2006	Crew Services – Workover/Completion Operations	SABRATHA
	2006 – 2012	Crew Services – Maintenance	MELLITAH GAS (SABRATHA)
	2003 – 2014	Drilling Services – Onshore	AGIP OIL, WOODSIDE, TOTAL, WINTERSHALL, MELLITAH OIL & GAS, ENI N.A.
	2013 – 2015	Drilling Services – Offshore	TOTAL E&P LIBYE, ENI NA
MEXICO	2008 – 2009	Drilling Services – Offshore	PEMEX
MOROCCO	2001 – 2002	Drilling, Casing, Tubing, running – Onshore & Offshore	LONE STAR
NAMIBIA	2007	Geoservices	INA d.d.
NETHERLANDS	2000	Workover Services – Onshore	BALANCE POINT CONTROL
OMAN	1999 - 2016	Integrated Services – Onshore	PDO
	2004 – 2005	Drilling Services – Onshore	HUNT OIL, JAPEX OMAN Ltd., ANADARKO
QATAR	2001 – 2006	Drilling Services – Offshore	TOTAL FINA ELF
	2002 – 2003	Geoservices	AL BAIDA TECHNICAL SERVICES
	2006 – 2007	Crew Services	NOBLE HARVEY DUHANEY
SLOVENIA	2000 -2009	Well Services	NAFTA-GEOTERM, PREMOGOBNIK-VELENJE
	2003	Geoservices	GZL GeoProjekt, d.d.
	2010 – 2011	Geoservices	GEOT d.o.o., IRGO CONSULTING
	2004 – 2005	Drilling Services – Onshore	NEMMOCO
	2010 – 2011	Drilling Services – Onshore	ASCENT
SYRIA	2000 – 2012	Seismic Services, Integrated Services Package & Drilling Services – Onshore	GEOFIZIKA, INA SYRIA, AL FURAT, HAYAN PETROLEUM CO., DUBLIN, GULFSANDS, TATNEFT, IPR Mediterranean, DIJLA
	1999 – 2004	Geoservices	INA
THAILAND	1997 – 1999	Drilling Services – Onshore	DEUTAG/AMERADA HESS/ESSO
TUNISIA	2000 – 2004	Drilling Services – Onshore, Offshore (Barge)	OFIS, AGIP, MARATHON, PLUSPETROL, EUROGAS, PIONNER, ATHANOR/CMS/ANADARKO/PREUSSAG/OMB/THYNA Petroleum Services
TURKEY	2000 – 2003	Well Logging	AMITY OIL INTERNATINAL
	2010 – 2011	Drilling Services – Onshore	ARAR
UAE	1999 – 2010	Geoservices	Private Dept. OF HH SHEIKJ NAHYAN, Schlumberger Middle East, S.A.
UKRAINE	1997 - 2000	Workover Services, Drilling Services - Onshore	KASHTAN, EURODRIL (JKX)

# GENERAL REFERENCES



Providing services to the world's most recognized operators and many national oil companies:

AGIP OIL	FALCON/TXM	NEMMOCO
ANADARKO	AL FURATH	NOBLE HARVEY DUHANEY (crew services)
ASCENT	GEOFIZIKA D.D. ZAGREB	NORMEC (well testing services)
AMITY OIL INTERNATIONAL	GUJARET STATE PETROLEUM CORP. (GSPC)	OCCIDENTAL
AMERADA HESS	GULFSANDS PETROLEUM	OEGC/DEVON
ATHANOR	GULF OF SUEZ PETROLEUM CO. (GUPCO)	OMV
AGIBA	HAYAN PETROLEUM COMPANY	PDO
BALANCE POINT CONTROL	HORIZON	PEBERCO
BANKERS PETROLEUM	HUNT OIL	PEMEX
BAKER ATLAS	IEOC	PETROBEL
BAYPETCO	INA	PLUSPETROL
CMS	INAGIP	PREGOMOVNIK-VELENJE
DEUTAG	PIR MEDITERRANEAN	PREUSSAG
DIJLA PETROLEUM COMPANY	JAPEX OMAN LTD.	RWE DEA
DUBLIN	KAC-CZECH REP. (stimulation services)	SALYAN OIL
ENI	KALEGRAN	SIPETROL
EDINA	KAOC	SUCO
EDISON	KASHTAN	TATNEFT
EDISON INTERNATIONAL	KHALDA	THYNA PETROLEUM COMPANY
ENI GAS	LONE STAR	TOTAL E&P LIBYE
ENI NORTH AFRICA B.V.	MARATHON	TOTAL FINA ELF
EUROGAS	MELLITAH GAS (Sabratha) (maintenance, crew services)	WINTERSHALL LIBYEN OIL AND GAS GMBH
EURODRILL (JKX)	MELLITAH OIL & GAS	WOODSIDE
ESSO	NAFTA-GEOTERM	XPRONET







**INTEGRATED AND/OR INDEPENDENT WELL SERVICES**

- CROSCO's proven **cultural and environmental adaptability**.
- **Experienced and highly educated** workforce.
- Experienced with various international markets & operations.
- Excellent **educational and training** system.
- **Integrated and certified** HSE and Quality Management System (ISO).
- Integrated Management Information Systems **SAP R/3, Galiot** - Computerized Preventative Maintenance Management System.

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