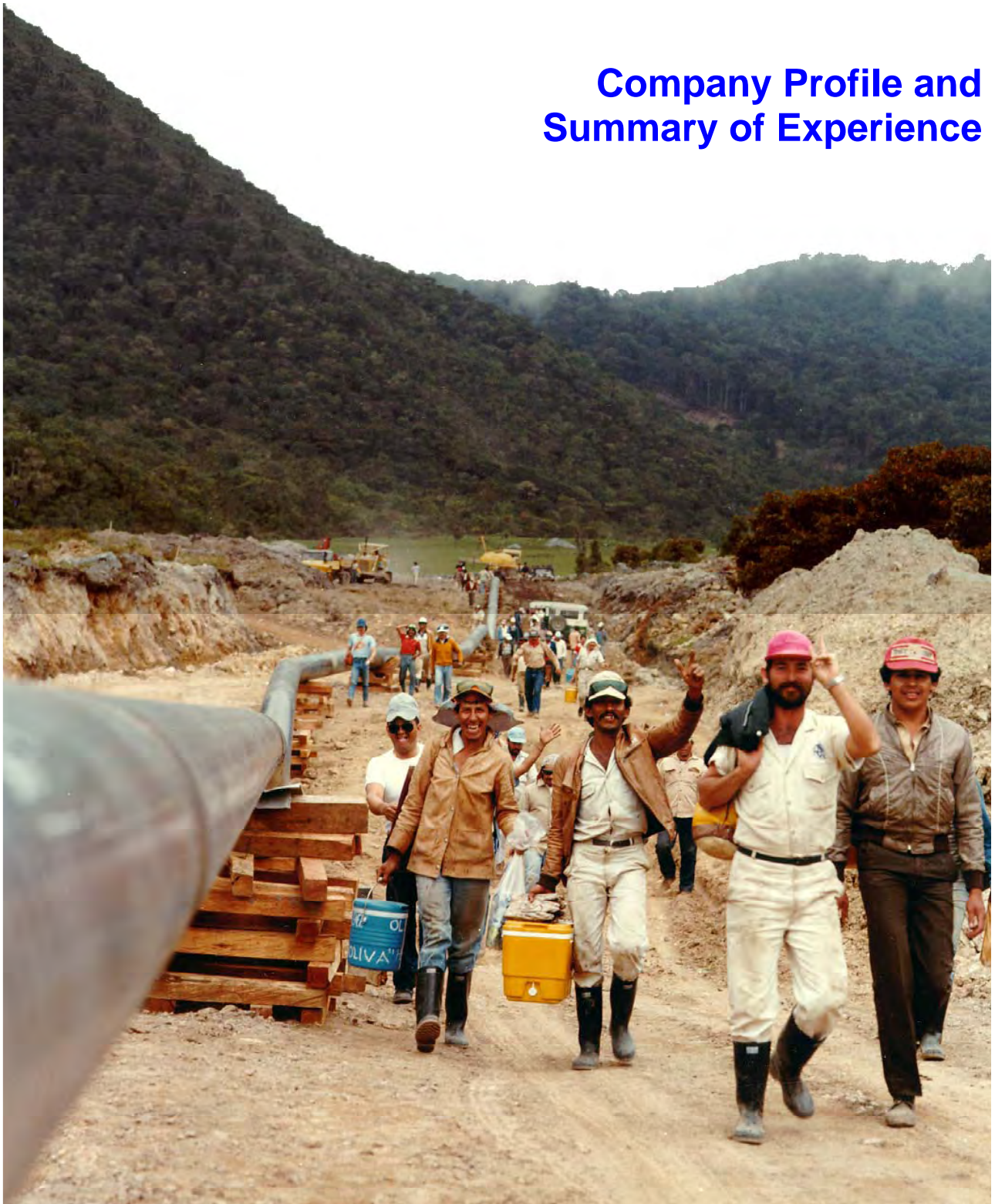




The Oil & Gas Division of
Sir Frederick Snow & Partners Ltd



Company Profile and Summary of Experience



**Engineers and Consultants
to the Oil and Gas Industry**



**COMPANY PROFILE
AND
SUMMARY OF EXPERIENCE**

Contents

Section

1.0 COMPANY PROFILE

- 1.1 IMEG - A Brief Introduction
- 1.2 UK Head/Registered Office & Associated Companies
- 1.3 Quality Assurance Certificate
- 1.4 Organisation Charts

2.0 CAPABILITIES AND RELEVANT EXPERIENCE

- 2.1 Scope of Services
- 2.2 Overall Project Experience
- 2.3 Project Summaries
- 2.4 Client List

3.0 COMPANY STRUCTURE & C.V.'s

1.0 COMPANY PROFILE

1.1 IMEG - A BRIEF INTRODUCTION

IMEG was founded in 1964 as an engineering and management company to undertake capital projects and technical consultancy in the oil and gas industries. IMEG has gained extensive experience on large-scale international projects providing services such as project management, feasibility studies, detailed design and engineering, procurement, construction supervision, commissioning and training. IMEG has arranged finance packages for a number of major international projects. IMEG has carried out contracts in many oil and gas producing countries, including Algeria, Colombia, Iran, Iraq, Malaysia, Nigeria and Oman, as well as being active in its domestic market in the United Kingdom, with a number of recent contracts on gas compression plant, both onshore and offshore.

IMEG was at the forefront of the design of large diameter high pressure gas pipelines and the commercialisation of natural gas, notably the innovative 42" diameter Iranian Gas Trunkline (IGAT I), delivering gas from the oil fields in Southern Iran to its borders in the North. The project's success led to IGAT II, a 56" diameter gas trunkline on which IMEG was also engaged in a project management role.

IMEG provides services to private and state energy producers and users for projects ranging from oil and gas gathering, treatment, storage and transmission through to metering, distribution and loading.

IMEG was responsible for the engineering, supervision of installation and inspection of the first large diameter, high pressure, cross-country gas pipeline in the UK, from the Wash to the Midlands.

The benefits and effects of North Sea development on the British economy were forecast and shaped by The IMEG Report which was published as an HM Government Green Paper. Although produced as long ago as 1972 it is still quoted in Parliament.

The Suez to Mediterranean Trans Egypt Pipeline and the Pacific to Caribbean Trans Panama Pipeline were both major crude oil transportation projects conceived and engineered by IMEG.

IMEG has capitalised upon the experience gained during the early years, and has more recently been involved on several high profile projects worldwide - including Ghana Nigeria, Malaysia, Colombia and Iraq. Employing a team of multi-disciplined and highly experienced individuals, IMEG offers its services for projects ranging from oil and gas gathering, treatment, storage and transmission through to metering, distribution and loading.

In Nigeria IMEG was responsible for the site surveys, detailed engineering and commissioning of four compressor stations and 100 km of 8"/24" transmission line on the Escravos-Lagos Gas Pipeline Project. This US\$ 300 million Project was implemented by the Nigerian National Petroleum Corporation (NNPC).

Also in Nigeria and in Consortium with the Soviet Company Tsvetmetpromexport, IMEG carried out an oil products pipeline project including four fully automated pump stations. This was a Consortium package deal project in which IMEG carried out management, engineering, procurement and commissioning. The value of this Project was in excess of US\$ 200 million.

In Colombia, the US\$ 286 million Caño Limón to Rio Zulia Pipeline System was designed and engineered by IMEG and built by Mannesmann Anlagenbau for Ecopetrol/Occidental. This was one of the highest pipelines in the world and one of the fastest of its scale ever

built. The System comprised 280 km of 18"/20" pipeline with four pump stations. The Project was completed in 1986.

In 1988 Petronas Gas of Malaysia awarded IMEG (in association with MMC Gas) the detailed design and engineering of 705 km of 30"/36" pipeline used to transport and distribute high-pressure gas within peninsular Malaysia. IMEG's responsibility also extended to line pipe inspection, commissioning and provision of general management assistance. The capital value of this project was in excess of US\$ 300 million and it was completed in late 1991. Since then the joint venture Company HOME G formed by IMEG and Ho Hup has successfully completed the engineering, procurement, construction and commissioning of several spur lines and metering stations along the route of the pipeline.

In March 1993 IMEG in partnership with Wavetech of Denver was retained to carry out a technical and financial reconciliation on the viability of a number of feasibility studies prepared for a US\$ 5 billion transcontinental gas export scheme in the CIS.

Subsequently IMEG has performed a number of technical and economic feasibility studies for various clients in the FSU including:

- development of an oil field
- 56 inch Arctic gas line
- rehabilitation of a 600 km oil line
- 300 km multi-products pipeline and sea terminal
- oil field development in the Russian Federation.

In addition to a number of feasibility studies and upgrading projects, National Grid has recently awarded IMEG in consortium with a contractor the engineering, procurement and construction of the following projects:

- Emissions Reduction Project - Kirriemuir Compressor Station
- Emissions Reduction Project - St Fergus Gas Terminal
- Emissions Reduction Project – Hatton Compressor Station

The Kirriemuir Project consists of a 35 MW electrical variable speed motor driven gas compressor, together with ancillary systems and connections to the 33kV grid.

The St Fergus Project has two 24 MW electrical variable speed motor drive gas compressors, including all the ancillaries and connections to the 132kV power supply.

In Ghana, IMEG was responsible for the engineering of 4 No. 20,000m³ oil storage tanks and associated facilities for BOST and has presently commissioned the engineering of a further 4 No. 10,000m³ tanks which are an extension to the existing facilities.

Recently in Nigeria, IMEG has been appointed by NGC to carry out the vetting of EPC designs for 31 km of 24" gas pipeline incorporating 3 No. metering stations for gas supply to 3 No. power stations.

In the U.K., together with Messrs. Halcrow, IMEG have been awarded a contract by Wales and West Utilities for the upgrade of facilities at 16 above ground installations in Wales and the west of England.

Since 2003 IMEG has been owned by the respected consulting engineering firm Sir Frederick Snow & Partners Ltd, which is part of the ACE group of companies. ACE (Associated Consulting Engineers) is a major international consulting engineering practice employing a staff of over 1,000.

IMEG has an accredited Quality Management System to ISO 9001:2000. The entire operation is audited internally and by a third party on a regular basis to ensure that the quality system is effective and that all specified contractual requirements are being met.

1.2 UK HEAD/REGISTERED OFFICE

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ABS Quality Evaluations

CERTIFICATE OF CONFORMANCE

This is to certify that the Quality Management System of:

IMEG Limited

17 Lansdowne Road
Croydon
United Kingdom

has been assessed by ABS Quality Evaluations, Inc. and found to be in conformance with the requirements set forth by:


ISO 9001:2000

The Quality Management System is applicable to:

DESIGN, ENGINEERING AND PROCUREMENT OF OIL AND GAS TRANSPORTATION AND DISTRIBUTION SYSTEMS AND THEIR ASSOCIATED PUMP/COMPRESSOR STATIONS, METERING, STORAGE DEPOTS AND LOADING FACILITIES AND TERMINALS.

Further clarifications regarding the scope of the certificate and the applicability of ISO 9001:2000 requirements may be obtained by consulting the organization.

Certificate No: 32598
Original Certification Date: 05 March 1996
Effective Date: 22 April 2004
Expiration Date: 04 March 2008
Issue Date: 07 April 2005


Charles D. Russo, President



Validity of this certificate is based on periodic audits of the management system defined by the above scope and is contingent upon prompt, written notification to ABS Quality Evaluations, Inc. of significant changes to the management system or components thereof.

ABS Quality Evaluations, Inc. 16855 Northchase Drive, Houston, Texas 77060 U.S.A.

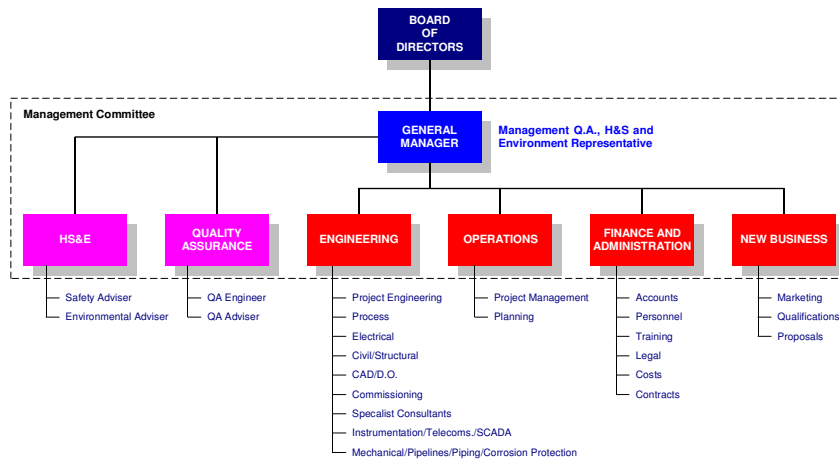
Validity of this certificate may be confirmed at www.abs-qe.com/cert_validation.

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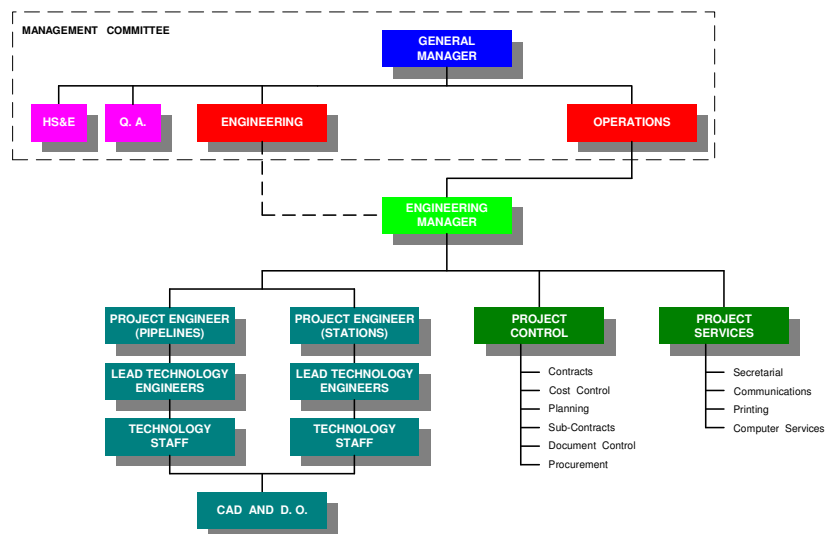
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1.4 ORGANIZATION CHARTS

COMPANY STRUCTURE



TYPICAL PROJECT TEAM

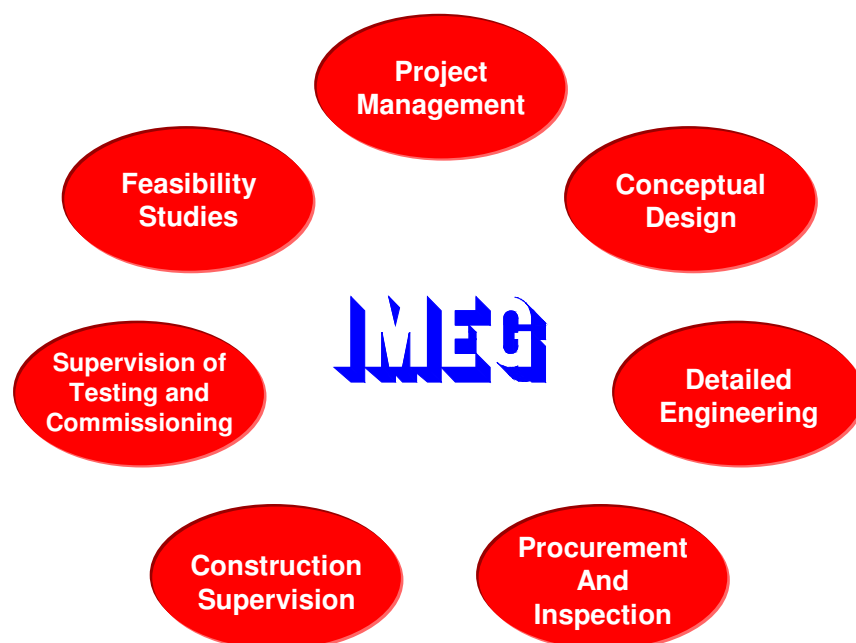


2.0 CAPABILITIES AND RELEVANT EXPERIENCE

2.1 SCOPE OF SERVICES

IMEG is an Oil and Gas Consultant and Engineering Contractor, registered as an oil and gas consultant with the major world development banks and lending agencies (DACON Registration No 944). IMEG has an accredited Quality Management System to ISO 9001.

IMEG's principle spheres of activity include:



Gas Gathering, Transmission and Distribution Systems

Multiproducts Pipeline

Compressor Stations

Pump Stations

Pressure Control

Metering Stations

Gas Processing Plants

Products Storage and Handling

Telecommunications and SCADA

Field Development

Feasibility Studies

IMEG has performed many feasibility studies for both industry and governments to determine the most economically attractive option for the development and transportation of oil and gas resources. These studies usually include:

- Determination of technical alternatives
- Overall route and system optimisation, including profile and hydraulic study
- Estimation of capital cost and operating costs
- Investment appraisal and economic evaluation
- Recommendation of preferred solution (with economic considerations and benefits)

Conceptual Designs

IMEG has produced the conceptual designs and followed these through to the preparation of tender documents and the evaluation of bids for a large number of pipelines. The scope of IMEG's work typically includes:

- Overall system and project definition
- Survey
- Process design
- Material specifications
- Evaluation of tenders

Detailed Engineering

IMEG has performed this role on many major projects. The involvement is determined by the type and scope of the project with the services provided frequently including:

- Process design and equipment specification
- Pipeline routing and construction details
- Pipeline hydraulic and surge analysis
- Rotating machinery and auxiliary systems
- Detailed piping design through to isometrics
- Corrosion prevention; internal/external, above/below ground
- Electrical design through to cabling details
- Instrumentation design through to wiring details
- Structural design and foundation details
- Telecommunication system design
- Control Philosophy and SCADA design
- Preparation of requisitions and material take-offs
- Technical evaluation of material bids and recommendation of vendors
- Preparation of construction specifications

Procurement and Inspection

IMEG's procurement services are directed to obtaining the quality of goods and services required by the project within the available budget and delivered on site within the time scale defined by the overall management system. This function includes:

- Recommendation of suppliers
- Issue of enquiries
- Commercial review of tenders
- Vendor control and expediting
- Inspection and witnessed testing

Construction Supervision

IMEG has frequently provided field management and support engineering at site during construction. This function usually extends from the first on-site works through to 'as-built' drawings.

Supervision of Testing and Commissioning

IMEG carry out commissioning performance testing of projects. This work often includes training of operating and maintenance staff in the use of the installations. Activities may include:

- Preparation of pre-commissioning procedures
- Preparation of commissioning procedures
- Preparation of performance tests procedures
- Pre-commissioning and commissioning
- Performance testing
- Preparation of commissioning and testing reports
- Staff training

Project Management

IMEG has applied computerised management systems to many successful projects. These include:

- Development of project networks
- Estimation of activity duration and resource requirements
- Resource levelling
- Detailed time schedules and resource demands
- Development of project control systems, project reports
- QA/QC monitoring

COMPUTER FACILITIES

Engineering Software

IMEG have utilised computers extensively as an aid to the design and optimisation of pipeline systems since 1967. Originally, programs were developed and run on a small in-house micro-computer, various time-sharing/bureau systems and for the largest program (gas pipeline dynamic simulation), the Atlas computer at Manchester University, which was the largest available computer at the time. During the 1980's with the development of desktop PC computers, IMEG transferred a number of the programs to compiled Basic, so that they are readily available to the engineers who are involved in making technical decisions. Further programs are developed to meet particular requirements or problems on specific projects. The following lists the programs developed by IMEG which are currently used.

Gas Programs

2PHBB	Two phase pipeline calculation of outlet pressure and liquid hold up.
AGA3A	Orifice determination in accordance with AGA3.
AGTEM	Above ground pipeline outlet pressure and temperature.
API521	Calculates height of flare and radiation levels for a flare in accordance with API 521.
BLWDN3	Time to blowdown a piping system to any pre-determined pressure.
BOILPT	Bubble point determination from gas analysis.
CENBW	Prediction of compressor efficiency, temperature for an isentropic process using the BWR equation of state.
CENPCOM	Polytropic calculation for centrifugal compressor power requirements.
CENTCOM	Adiabatic calculations for centrifugal compressor power requirements.
CHRA	Determines gas composition from available characteristics.
COMP02	Calculates gas characteristics from known composition and provides interface to spreadsheets.
COMPREC	Determine compressor recycle flow.
COOLER1	Air-cooled heat exchanger sizing.
CS1A	Optimisation of compressor station location.
CS2A	Outlet pressure and temperature for fixed compressor station locations.
CVG	Control valve sizing - Fisher.
ENTHBW	Prediction of temperature for an isenthalpic process using the BWR equation of state.
FLASH1	Flash at fixed pressure and temperature.
GTEM	Pipeline outlet pressure and temperature at a given flow.
GASENTH	Calculation of outlet temperature as a result of change in pressure on the basis of constant enthalpy.
H2	Water dewpoint.
HCDWPT	Hydrocarbon dewpoint for a known pressure and gas composition.
HYDTEM	Hydrate temperature for a known pressure and composition.

Gas Programs (cont.)

SGV2	Calculates thermal radiation at using SEV2
ISAG	Control valve capacity - ISA 75.
ISO5167	Orifice meter sizing to ISO 5167.
PLT15	Pipeline pressure loss and flow at a known temperature.
PL2S	Determines pipeline diameter, flow, inlet or outlet pressure, double precision.
PLC	Pipeline gas flow - compares various formulae.
PSVGW	Relief valve sizing.
PT1S	Simulation program for the gas compressor transient pressure.
PT3S	Simulates compressor trip with branched downstream line.
PT5S	Simulates compressor trip with branched packed downstream line.
PT6S	Simulates compressor trip leaving one or more running.
QP1S	Calculates flow in a number of parallel pipelines.
QP2	Calculates flow in a number of parallel pipelines with series subsections.
RVT1	Dynamic simulator of a compressor and surge recycle valve.
SETTL	Settling balance pressure of a number of volumes at different pressures and temperatures.
TSETTLE	Transient version for settling pressure of a number of gas volumes.
ZCAL	Compressibility calculation using AGA3 NX-19, AGA8, GPSA, Chao-Seader and BWR.
TTCOMR	Calculates temperatures in compressor recycle loop

Liquid Programs

ISA75I	Control valve capacity for liquids - ISA 75.
LIQD	Liquid pressure drop, flow, diameter or viscosity determination (from other variables).
OILPHP	Optimization of pump station spacing and power requirements, with route profile data.
OILTEMP	Calculates pressure drop and temperature in a liquid pipeline.
PTAP	Pressure transient simulator (surge pressure) for liquid pipelines / networks.
VIS	Viscosity prediction for Newtonian liquids.
WELL0	Wellhead flowing pressure and temperature.

Other Programs

CPI	Cathodic protection attenuation of potentials, protective currents and groundbed resistance.
TELI	Telecommunication radio path loss, Fresnel Zone clearance and earth bulging.
WTCT	Pipeline weight coating requirements.

Proprietary Software Packages

In addition to the usual databases, spreadsheets, planning and graphics packages, we utilise AutoCAD, Microstation, NavisWorks JetStream 3D design review package, HYSIS process simulation software and CAESAR II.

IMEG makes comprehensive use of CAD, based on AutoCAD & Microstation software, to design and produce engineering drawings and associated data for all technologies and applications. The system is fully supported by A0 size plotting facilities.

Additional facilities include scanning and high definition colour printing. Each work station is connected into the Engineering Department network.

The analysis and design of piping systems subjected to operational and environmental loads is an integral part of our engineering services. IMEG has installed CAESAR II for this purpose. CAESAR II is a powerful and interactive PC based pipe stressing package specifically developed for the oil and gas industry and its design codes.

Recent projects have involved the utilisation of the following commercial software:-

HYSYS	Steady state and dynamic process simulator.
PIPESIM	Pipeline 2 phase simulator.
Pipeline Studio	Dynamic pipeline network simulator.

Project Management

IMEG has developed a number of project document and material control programs using database software. IMEG currently utilises Microsoft Project for project planning purposes. Previous projects such as the Escravos to Lagos Gas Pipeline Project and the Caño Limón to Rio Zulia Oil Pipeline Project were managed using Artemis.

Network

IMEG Engineering Department utilises a Windows network to link individual workstations, which run the Microsoft Office suite of programs including word processing, spreadsheet and database. Additionally IMEG have developed specialist in-house programs which are now available on the network.

2.2 OVERALL PROJECT EXPERIENCE

The following pages list, in chronological order, projects undertaken by IMEG together with a short project description.

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
TO FROM					
2010 2009	Nigeria Gas Company	Nigeria	Pipe Mill Assessment 391km of gas pipelines with diameters between 24" and 56"	Assessment of pipe mill capabilities	IMEG
2010 2009	Wales & West Utilities	UK	AGI Design Construction Programme 2010-2013 Design of modifications required for 16 AGI stations	Detailed design and engineering for process, mechanical and piping.	IMEG/Halcrow
2010 2008	Zakhem International	Ghana	Cascades Yard Development Contractors headquarters, warehouse and depot	Review of overall development plan, Civil and structural design of the maintenance shed and warehouse, planned petrol station and convenience store.	IMEG
2010 2007	National Grid	UK	Emissions Reduction Hatton This project consists of one 35MW variable speed electric motor driven compressor with all necessary controls and auxiliaries including tie in to the existing facilities and new vent.	IMEG are responsible for the Mechanical, Process and Piping design and engineering of the new facilities	IMEG/Land & Marine
2010 2005	National Grid	UK	Emissions Reduction St Fergus This project consists of two 24MW variable speed electric motor driven compressors with all necessary controls and auxiliaries including tie in to the existing facilities and new vents.	IMEG are responsible for the complete design and engineering of the new facilities.	IMEG/Land & Marine
2009	STROYTRANSGAZ Consortium	Greece	Komotini – Alexandroupolis Gas Pipeline 53km 36" pipeline through the mountains.	Independent assessment and estimate of construction costs for arbitration	IMEG
2009 2008	Zakhem International for WAPCo	Benin/Toga /Ghana	West Africa Gas Pipeline Three metering stations, Cotonou in Benin, Lome in Toga and Tema in Ghana. Each station had a class 900 inlet line and a class 300 outlet to the power station. 20km of pipeline varying in size from 8" to 16" class 900# and 300#.	Engineering review and detailed procedures for hydrostatic testing, dewatering, drying and pre-commissioning	IMEG
2009 2007	Zakhem International for VRA	Ghana	Kpone Power Plant Phase 1 consisted of two 115MW gas turbine generators capable of running on fuel oil or natural gas. Infrastructure of site included facilities for the ultimate generating capacity of 800MW including combined cycle operation.	Engineering consultancy	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
TO FROM					
2009 2006	Zakhem International for BOST	Ghana	Accra Plains Depot Extension (APDE) Project This is an extension to the existing depot. Four 10,000 cubic meter product tanks, two gasoline and two diesel are to be constructed	Survey and detailed engineering for all technologies to complete the works.	IMEG
2009 2006	Nigerian Gas Company/IESL	Nigeria	Gas Supply to PHCN Power Plants Project Management of 3 meter stations and 31km 24" pipeline	Review design, vetting of Contractor's documents & Commissioning	IMEG
2009 2005	National Grid	UK	Emissions Reduction Kirriemuir This project consists of one 35MW variable speed electric motor driven compressor with all necessary controls and auxiliaries including tie in to the existing facilities and new vent.	IMEG are responsible for the complete design and engineering of the new facilities.	IMEG/Land & Marine
2008	BOST	Ghana	Takoradi: <ol style="list-style-type: none"> 1. A new products depot of 160,000m3 with an offshore loading and unloading facility 2. A multiproducts pipeline 300km 12" 3. A 350km 24" gas line & 2x11MW compressor station 4. A 20km Aviation fuel line 	Feasibility report covering product terminal, multiproduct pipeline and gas line including capital cost estimates.	IMEG
2007	Trafigura	Ghana	APDSS Tank & piping modifications Produce piping drawings & control system specification for modifications to allow Tank T123 to store gasoline or diesel	Detailed Design & Engineering.	IMEG
2008 2005	National Grid Transco	UK	St Fergus Compressor Station Aftercooler Refurbishment Prepare design, cost estimate for materials supply and construction	Detailed Design & Engineering.	Lawrence/IMEG
2006 2004	National Grid Transco	UK	Moffat Seal Oil System Replacement of seal oil pumps and automatic regulation of seal oil flow.	Detailed design, engineering, procurement, construction & commissioning	IMEG
2005	National Grid	UK	Security Fencing at St Fergus	Engineering Design	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD TO FROM	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
2005	National Grid Transco	UK	Didcot Power Station (Enhanced Filtration Scheme) Project Didcot is a Transco Above Ground Installation (AGI) supplying gas to Didcot power station. The facilities on the site include: <ul style="list-style-type: none"> • Filters • Metering • Gas preheat equipment comprising boilers and heat exchangers • Gas letdown / regulating equipment The project is primarily an upgrade and refurbishment project.	Detailed Design & Engineering.	Lawrence/IMEG
2005 2004	National Grid Transco	UK	Security Fencing Upgrade Works at Bacton Terminal, Carnforth, Moffat and Bishop Auckland Compressor Stations The removal of the existing upper razor wire on the fence and its replacement with electrified wire at Bacton Terminal. The installation of new palisade security fence 2.4m high with electrification of up to 3.6m high (located on inner side of palisade security fence) including the replacement of sliding gates and personnel / emergency gates as required at Carnforth, Moffat and Bishop Auckland Compressor Stations.	Detailed Design & Engineering.	Lawrence/IMEG
2005 2004	Zakhem International for BOST	Ghana	APDSS Project This is an extension to the existing depot. Four 20,000 cubic meter product tanks, two gasoline and two diesel are to be constructed plus two road vehicle loading stations.	Survey and engineer all technologies to complete the works.	IMEG
2005 2004	Maldives Airport Co. Ltd	Maldives	MIAUP Phase IVA Design of fuel pipeline.	Detailed Design & Engineering.	IMEG for Sir Frederick Snow (International)
2004	NAKHEEL	Dubai	Palm-Jumeirah Gas Network Overall System Appraisal LPG distribution system, which is to be converted to natural gas at a later date.	Engineering Consultancy.	IMEG for ACE International
2004	Zakhem	Qatar	EPIC for Ras Laffan - Measaieed Gas Pipeline (RMSGP) Prepare cost estimate for materials supply.	Engineering Consultancy.	IMEG
2004 2003	Penspen/Panorama	Qatar	Separator & Flare at Dukhan Field Design review of FEED study for contractor	Engineering Consultancy.	IMEG
2003	NAKHEEL	Dubai	Palm-Jumeirah Gas Network Review of LPG Network design	Engineering Consultancy.	IMEG for ACE International
2003	Transco	UK	Aberdeen Feeder 13 Pressure Raise Production of NRO procedure.	Develop Procedure	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
TO					
FROM					
2003	Transco	UK	Aberdeen Feeder 13 Control System Modifications	Site Survey, Safety Assessments Specification, Site Management and Commissioning.	IMEG
2003 2002	Transco	UK	Summer Flexibility Studies For Seven Compressor Stations Including "Whole Life Cost" of any necessary development to maximise the asset value for a further 20 years of design life.	Engineering Consultancy.	IMEG
2003	Transco	UK	British Auckland to Pannal/Towton Boundary Control Requirements.	Engineering Consultancy.	IMEG
2003 2002	Transco (Lattice Group)	UK	Bathgate Compressor Station 85 bar g Uprating Project.	Project Management, Procurement and Installation Supervision.	IMEG
2003 2002	Transco (Lattice Group)	UK	Moffat Compressor Station 85 bar g Uprating Project.	Project Management, Procurement and Installation Supervision.	IMEG
2003 2002	Transco (Lattice Group)	UK	Wooler Compressor Station - VSAT Survey Survey for design and EL-14 Appraisal for VSAT hub.	Engineering Consultancy.	IMEG
2002	Transco (Lattice Group)	UK	Wisbech Compressor Station Preparation of document packages for certification and validation for uprating operations to 85 bar g.	Engineering Consultancy and Detailed Engineering.	IMEG
2002	Rolls-Royce Power Engineering	Iran	Kupal Compressor Station Dynamic simulation of two Casing Compressor Recycle System	Engineering Consultancy and Detailed Engineering.	IMEG
2002 2001	Gas District Cooling (M) Sdn Bhd	Malaysia	Putrayaya Precinct 2 (Core Island) EPCC of chilled water distribution piping package (Package 2).	Engineering, Procurement, Construction and Commissioning.	IMEG Associate (HOMEG) EPC
2002 2000	Ho Hup Construction Company Berhad	Malaysia	Bukit Jalil, Kuala Lumpur The Supply, Delivery, Installation, Testing and Commissioning of LPG Installation and LPG Storage Tank.	Engineering, Procurement, Construction and Commissioning.	IMEG Associate (HOMEG) EPC
2001	Transco (Lattice Group)	UK	Moffat Compressor Station 85 bar Integrity Risk and Evaluation Preparation of document packages for certification and validation for uprating operations to 85 bar g.	Engineering Consultancy and Detailed Engineering.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
TO FROM					
2001	Transco (Lattice Group)	UK	Bathgate Compressor Station 85 bar Integrity Risk and Evaluation Validation and implementation of required modifications to permit Bathgate compressor station operating pressure to be raised to 75 bar g.	Engineering Consultancy, Detailed Engineering, Project Management	IMEG
2001	Petronas Gas Berhad	Malaysia	EPCC of Metering Station to TNB Power Plant (Expansion) at Pasir Gudang, Johor Construction of a meter station to cater for gas demand of TNB Power Plant (Expansion), utilising turbine meters.	Engineering, Procurement, Construction and Commissioning.	IMEG Associate (HOMEG) EPC
2001	Transco (Lattice Group)	UK	Aberdeen Compressor Station Control System Review Site review and preparation of report on station control system.	Engineering Consultancy.	IMEG
2001	Transco (Lattice Group)	UK	Peterborough Compressor Station Venting System and Cab Ventilation Preparation of basic design and invitation to tender for the modifications.	Engineering Consultancy.	IMEG
2001	Transco (Lattice Group)	UK	Warrington Compressor Station Investment Options Independent Review of N.T.S. Transco Investment Strategy for Warrington Compressor Station.	Consultancy.	IMEG
2001	Transco (Lattice Group)	UK	Moffat Compressor Station Recycle Options Health Check Sizing recycle valve and lines for planned compressor impeller replacement.	Engineering Consultancy and Detailed Engineering.	IMEG
2001	Transco (Lattice Group)	UK	Bathgate Recycle Line Verification Design verification of the sizing of compressor recycle valves, common recycle line and performance valve.	Design Verification.	IMEG
2001	Transco (Lattice Group)	UK	Peterborough Compressor Station Health Check Health check of existing compressor station. Advise on suitability of existing installations to meet head and flow conditions.	Engineering Consultancy.	IMEG
2001	Transco (Lattice Group)	UK	Beatock/Moffat Startup & Asset Integrity HAZOP, GL5 documentation and studies for Moffat AGI tie-in to Bord Gais Eireann (BGE) Beatock compressor station.	Engineering Consultancy and Detailed Engineering.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
TO					
FROM					
2001	Transco (Lattice Group)	UK	Aberdeen Parallel Running Operating range for alternative combinations of compressor impellers for the existing three unit station.	Engineering Consultancy.	IMEG
2001	Ove Arup & Partners	UK	Baglan Bay Power Station Design review of vent system for electric motor driven compressor station.	Design Review	IMEG
2001 2000	Dialog E & C Sdn Bhd	Malaysia	Telok Kalong, Trengganu to Cherating, Pahang The construction of 2 x NPS 8 Propane and Butane Loopline Pipeline Project.	Construction.	IMEG Associate (HOMEG)
2001 2000	Transco (Lattice Group)	UK	Kirriemuir and Moffat Compressor Stations Study of the impact of 85 bar operation on the vent system and compressor recycle valves.	Engineering Consultancy.	IMEG
2000	Premier Transmission	N. Ireland	N - S Pipeline Project Compressor Stations Select size and type of compressors for two new stations with capital and operating cost estimate.	Feasibility Study.	IMEG
2000	Transco (British Gas)	UK	Compressor Station Feasibility Studies Assessment of the compressor capabilities of existing stations with recommendations for changes of impellers and 150MW of new turbo-compressor units. Additional services included preparation of planning application drawings, procurement assistance, HAZOP, and commissioning procedures.	Feasibility Studies, Engineering Consultancy and Procurement.	IMEG
2000	Transco (British Gas)	UK	Bathgate Compressor Station Review of station vent system involving calculations of gas inventory, blow down times and stack radiation levels. Detail design of modifications, Material specifications and Construction drawings.	Engineering Consultancy and Detailed Engineering.	IMEG
2000 1999	Petronas	Malaysia	Gelugor TNB Meter Station, Stage III, Sector 2 & 3 Natural Gas, 3 nos 8" meter run.	Engineering Procurement, Construction and Commissioning.	IMEG Associate (HOMEG) EPC
1999	Rolls Royce	Iran	Kupal Compressor Station-Transient Simulation Audit of current design leading to a Transient Simulation of compressor shutdown.	Engineering Consultancy.	IMEG
1999	Petronas	Malaysia	Kamunting City Gate Station, Taiping Natural Gas, 2 nos 4" meter run.	Engineering, Procurement, Construction and Commissioning.	IMEG Associate (HOMEG) EPC

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD TO FROM	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
1999	Gas Malaysia Sdn. Bhd.	Malaysia	Natural Gas Distribution System to Petronas NGV, Precinct 9, Putrajaya, Kajang NPS 6 x 1.2 km carbon steel pipes, 2.1 km x 180mm Polyethylene (PE).	Engineering, Procurement, Construction and Commissioning.	IMEG Associate (HOMEG) EPC
1999	Gamuda-Mujur-Minat (Joint Venture)	Malaysia	Western KL Traffic Dispersal Scheme for Gas Pipeline Works Section A1, B1 and B2 5 km of 16" Gas Pipeline + Hot Tap and Stopple.	Engineering, Procurement, Construction and Commissioning.	IMEG Associate (HOMEG) EPC
1999	Transco (British Gas)	UK	Aberdeen Compressor Station Transient Simulation of the pipeline network upstream and downstream of station to establish the effect of a compressor unit failure.	Engineering Consultancy.	IMEG
1998	Transco (British Gas)	UK	Bathgate Compressor Station Modifications to Station to enable both series and parallel operation of the compressor Units.	Feasibility Study.	IMEG
1998 1997	Gas District Cooling (M) Sdn. Bhd.	Malaysia	Chilled Water Distribution Piping Package (Package 2) for Putrajaya Chilled Water Pipes 36" x 48" to ASME B 31.4.	Engineering, Procurement, Construction and Commissioning.	IMEG Associate (HOMEG) EPC
1998	Transco (British Gas)	UK	Huntingdon Compressor Station Preparation of Aftercooler Functional Specification for Invitation to Tender.	Engineering Consultancy.	IMEG
1998	Conoco	North Sea, UK	CMS Phase II Compression Review design and operation of 40,000 HP turbo-compressor facility.	Design review.	IMEG
1998	Transco (British Gas)	UK	Huntingdon Compressor Station Addition of gas cooling at station discharge to reduce gas temperature down to +30°C.	Conceptual engineering study.	IMEG
1999 1997	Bumihway Sdn. Bhd.	Malaysia	ERL and B15 Highway Hot Tap 2 stopple of 36" PGU II High Pressure Gas Pipeline.	Relocation / upgrading and loop line installation.	IMEG Associate (HOMEG)
1999 1997	Smit Pantai Sdn. Bhd.	Malaysia	SPM and Associated Submarine Pipeline System for PSR 2 Refinery, Melaka Shore approach construction.	Construction of cofferdam and back anchor.	IMEG Associate (HOMEG)
1998 1997	Transco (British Gas)	UK	Moffat Compressor Station Addition of 3 turbo-compressors (48,000 installed HP) to existing Compressor Station to supply gas to Eire.	Conceptual engineering study.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



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TO					
FROM					
1997	Petronas	Malaysia	Gurun Meter Station, Stage III, Sector 2 Natural Gas, 3 km of 8" meter run.	Engineering Procurement, Construction and Commissioning.	IMEG Associate (HOMEG) EPC
1997 1995	Gas Malaysia Sdn. Bhd.	Malaysia	Kuala Lumpur City Centre Project (Phase II, Stage II) 8 km of 16" dia gas pipeline.	Engineering Consultancy.	IMEG Associate (HOMEG) EPC
1997	CNO - Constructora Norberto Odebrecht	Argentina	Mega Condensate Project 600 km of 12" dia NGL pipeline and pumping stations.	Engineering Consultancy.	IMEG
1997	Costain Oil, Gas & Process Ltd for Qatar General Petroleum Corp	Qatar	Dukhan Consolidated Facilities Upgrade Project Engineering, procurement and construction of 24" dia crude oil pipeline.	Engineering Consultancy.	IMEG
1997	Foster Wheeler Italia for LASMO/FINA	Italy	Tempa Rossa Oil Field Development Flow lines, separation facilities and pipeline transportation.	Engineering Consultancy.	IMEG
1997 1996	Neftegaz	Russian Federation	Zhelezny Rog New LPG and Oil Products Port Black Sea port with 30 km rail link line, rail unloading terminal (5 bays), 300,000 m ³ storage and tanker loading facilities with 4 berth jetty.	Letter of Intent for technical and economic appraisal. Sourcing finance leading to EPC package deal.	IMEG
1997 1995	Gas District Cooling (M) Sdn. Bhd.	Malaysia	Kuala Lumpur International Airport 7 km Water distribution loop line around Airport, various diameters up to 60".	Engineering Consultancy.	IMEG Associate (HOMEG) EPC
1997 1996	Investors in Partnership with Occidental	Komi – Russian Federation	Nobel Oil - Usinskoye Oil Field Development Steam injection scheme to enhance exceptionally heavy crude oil recovery.	Field Appraisal Study Engineering Consultancy.	IMEG
1997 1995	Gas Malaysia Sdn. Bhd.	Malaysia	Kuala Lumpur City Centre Project (Phase II, Stage I) 16" Gas tie-in line to KLCC Complex.	Engineering Consultancy.	IMEG Associate (HOMEG) EPC
1996	Investors	Komi – Russian Federation	Komi Oil Pipeline 138 km of 21" dia oil pipeline with two pump stations. Total installed HP 10700.	Technical Economic Assessment.	IMEG
1996	Occidental	Komi – Russian Federation	Block 15 Field Development Two oil fields with high wax content in arctic conditions.	Review of Field Development and pipeline design.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



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TO					
FROM					
1996	MECOMB for Petronas Carigali	Malaysia	Sabah Gas Custody Transfer Metering Station 3 Stream, 8" dia, orifice plate.	Engineering Consultancy.	IMEG Associate (HOMEG) Engineering, Procurement and Fabrication
1996 1995	KLCC	Malaysia	Kuala Lumpur City Centre Project Utilities distribution (chilled water loop) various diameters up to 60".	Engineering Consultancy.	IMEG Associate (HOMEG) EPC
1996 1995	Gamuda	Malaysia	Gamuda Shah Alam Pipeline Relocation of 8" dia gas pipeline.	Engineering Consultancy.	IMEG Associate (HOMEG) EPC
1996 1995	Cooper Energy Services	Iran	Kupal Gas Injection Compressor Station 2+1 Avon compressors. 45,000 installed HP. Pressure 270 bar. Pressure regulation.	Design review.	IMEG
1995	Lasmo Oil Pakistan Ltd	Pakistan	Kadanwari Field Development 20 km 10"/12" dia duplex pipeline gas gathering system.	Pipeline design audit to determine cause of excessive expansions at pipeline terminations.	IMEG
1995	NADYMEG for Komsomolsk-Na- Amure Oil Refinery	Eastern Siberia	Komsomolsk Oil Refinery Products Pipeline Pipeline to east coast port with storage terminal and tanker loading facilities. Approx 300 km of 12" dia products pipeline with four pumping stations, tank farm and loading terminal.	Feasibility Study.	IMEG Affiliate (NADYMEG)
1995	NADYMEG for GAZPROM	Northwest Siberia	Yamal to Europe Gas Pipeline System 90 km of 3 x 56" dia gas pipelines. (Initial section of Yamal Peninsular to Europe pipeline.)	Pre-investment Economic and Technical Study leading to a Letter of Intent for the procurement and construction of the first 135 km.	IMEG Affiliate NADYMEG
1995 1994	NADYMEG for Sakhalinmorneftegaz	Eastern Siberia	Sakhalin Island to Komsomolsk Crude Oil Pipeline System 620 km of 20" dia crude pipeline system with 3 mainline pump stations.	Technical and Economic Appraisal for rehabilitation of existing corroded pipeline and increasing capacity for future offshore crude production.	IMEG
1995 1994	NADYMEG for Tyumenneftegaz	Western Siberia	Tyumen Crude Oil Field Development, Production and Transmission to Mugen Development of Tailakovskoye and Polynakhskoy oil fields and 275 km of 16" dia transmission pipelines with 1 intermediate pump station.	Field Development Study (Technical and Economic Appraisal).	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD TO FROM	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
1995 1994	Gas Malaysia	Malaysia	Seganbut Spurline 22 km of 16" dia gas pipeline.	Engineering, consultancy and commissioning.	IMEG Associate (HOMEG) EPC
1995 1994	Petronas	Malaysia	Telok Gong Melaka Spurline 22 km of 18" dia gas pipeline and metering station, utilising turbine meters.	Project management, design review, supervision of testing and commissioning.	IMEG Associate (HOMEG) EPC
1994	TOGET for Government of Turkmenistan	Turkmenistan / Iran	Turkmenistan to Turkey (and Europe) Gas Pipeline 1260 km of 56" dia pipeline with 8 compressor stations.	Feasibility Study.	IMEG Affiliate (Wavetech)
1994	Costain/Sime Darby for Shell	Malaysia	Port Dickson Distillate Line 2 km of 12" dia distillate pipeline.		IMEG Associate (HOMEG) construction, testing and commissioning
1994	Cooper-Rolls for NIOC	Iran	Parsi Gas Injection - Compressor Station Examination of the process implications of using 3+1 compressors instead of 4+1. Pressure 166 bar. Pressure regulation.	Consultancy and design audit.	IMEG
1994 1993	Canadian Oxy Inc.	Yemen	Yemen-Messilah Export Project Oil field development.	Project Management.	IMEG
1994 1993	Litimega	Lithuania	Products Pipeline System 800 km multi-products distribution system.	Consultancy.	IMEG Affiliate (LITIMEGA)
1994 1992	Occidental	Oman	Gas Injection Project Gas compression facilities. One 12,600 HP gas turbine driving two compressors giving injection pressure of 310 bar g.	Project financing, engineering management, supply and construction of gas injection station.	IMEG Affiliate (IMEG S.A.)
1994	ZanGas for DEPA	Greece	Bulgarian Border to Athens Gas Pipeline 104 km of 36" dia and 411 km of 30" dia pipeline.	Project management; cathodic protection supply, installation and commissioning.	IMEG Subsidiary (ICE)
1993	Petronas	Malaysia	Serdang Lateral Line 20" dia Spurline and metering station, utilising turbine meters.	Engineering review and commissioning.	IMEG Associate (HOMEG) EPC
1993	Petronas	Malaysia	Tioxide Project Spurline with metering station.	Detail design.	IMEG in J.V. EPC

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



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TO FROM					
1993	Wavemeg	Turkmenistan	Trans-Continental Gas Export Line Gas pipeline scheme.	Consultancy.	IMEG
1993 1990	Occidental	North Sea	Piper Alpha Field re-development.	Provision of engineering management.	IMEG
1993 1987	Nigerian National Petroleum Corporation	Nigeria	Escravos to Lagos Pipeline - Gas Gathering and Treatment System 100 km, 8"-24" dia swamp pipeline. Four field compressor stations, 15200 installed HP. Gas treatment complex. Custody transfer metering plus control metering (30" dia).	Route, soil and resistivity surveys. Detailed design specifications, manuals and as-built drawings. Engineering assistance for construction and commissioning.	IMEG in Consortium EPC
1992	Restricted information	Kuwait	Post War Damage Assessment Well head facilities, flow lines and gathering centres.	Consultancy.	IMEG
1992	Lithuanian Gas	Lithuania	Border Metering Stations Gas transmission system.	Conceptual design and consultancy.	IMEG
1992	Ministry of Energy	Portugal	Gas Concession Project LNG re-gasification terminal, transmission line and underground storage.	Consultancy.	IMEG
1991	Shell Expro	North Sea	Gannet 'C' Offshore oil development.	Detailed CAD services for Department of Energy for Pipelaying Authorization.	IMEG
1991	Dubri Oil	Nigeria	Gilli-Gilli Field LPG Feasibility Study.	Consultancy.	IMEG
1991 1988	Petronas	Malaysia	Peninsular Gas Utilization Project 705 km of 30" and 36" dia pipeline.	Project management, detailed engineering, inspection of linepipe, field engineering and commissioning assistance.	IMEG in Consortium EPC
1991 1988	Entrepose for NNPC	Nigeria	ELP 'B' 30" dia Gas line. Custody transfer metering station at Ughelli (172 MMSCFD).	Technical assistance and commissioning.	IMEG
1990	Dubri Oil	Nigeria	Gilli-Gilli Field Flowstation.	Conceptual design and procurement.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



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TO					
FROM					
1990	Petronas	Malaysia	Peninsular Gas Utilization Project Production of 700 km of 16" to 36" dia line pipe.	Quality surveillance at pipe mills in Japan, Brazil and France.	IMEG
1990 1986	TSMPE for SCOP	Iraq	Trans Iraq Dry Gas Pipeline 40,000 HP gas compressor station. Two metering stations.	Project management, detailed engineering, supply of materials, commissioning. Financing arrangements.	IMEG
1989	Petronas	Malaysia	Peninsular Gas Utilisation Project - Propane/Butane Pipelines Production of 90 km of 6" dia line pipe.	Quality surveillance at pipe mills in Japan.	IMEG
1989	NGC	Nigeria	Administrative Software Development of database software for administration of the operations.	Software preparation and installation.	IMEG
1989	MAB for Shell/Elf	Gabon	Gathering system.	Commissioning.	IMEG
1988	Floatech	Dominican Republic	Refidomsa Stress and stability analysis of submarine LPG pipeline.	Safety study.	IMEG
1987	Tekfen	Turkey	Yumurtale-Kirikale Pipeline Crude oil line.	Commissioning.	IMEG
1987	Exel	Egypt	Belayim Gas Line Gas line.	Commissioning.	IMEG
1987	Investors	UK	Canvey Island Conversion of part completed refinery to generate electricity and produce low lead fuel.	Feasibility study.	IMEG
1986 1984	Occidental de Colombia Inc for Ecopetrol	Colombia	Caño Limón to Rio Zulia Crude Oil Pipeline 280 km 18"/20"/18" dia pipeline. Four pump stations - 67,000 HP. Tank farm. Maximum flow rate 250,000 BPD.	Project financing and management. Detailed design and engineering. Equipment specification and requisition. Procurement and inspection of mainline pumps and associated equipment. Operating and Maintenance Manuals. Supervision of start-up and commissioning.	IMEG in Consortium EPC

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD TO FROM	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
1984 1981	Nigerian National Petroleum Corporation	Nigeria	Oben to Ajaokuta Natural Gas Pipeline 196 km, 24" dia pipeline and metering station to supply steel works.	Project management. Detailed design approvals. Construction supervision. Commissioning assistance. Operator training.	IMEG
1983 1976	TSMPE for Nigerian National Petroleum Corporation	Nigeria	Products Pipeline Network Transmission/distribution network totalling 825 km pipelines, 4"-16" dia. 15,000 HP in five pump stations. Twenty turbine metering systems.	Detailed surveys. Detailed engineering and equipment specifications. Procurement/factory inspection of all equipment and materials. Training of Client's operating and maintenance staff. Commissioning. Operating assistance.	IMEG
1982 1980	National Oil Company, Libya	Libya	Marsa El Brega to Misurata Natural Gas Pipeline 570 km, 34" dia. 24,000 HP turbo-compressor station.	Project management. Design verification. Works inspection. Construction supervision. Training of Client's operating and maintenance staff.	IMEG
1981	Esso	UK	Fawley to London Heated Fuel Oil Pipeline Re-heat/booster station for existing 10" dia insulated pipeline.	Technical/economic study. Conceptual design.	IMEG
1981 1980	Egyptian General Petroleum Corporation	Egypt	Gulf of Suez Gas Project Instrumentation and telecommunications for 265 km, 16" dia gas distribution system.	Systems design. Tender documents for equipment and supply and installation.	IMEG
1981 1978 (suspended)	National Iranian Gas Company	Iran	Iranian Gas Trunk Line (IGAT II) 1420 km, 56" dia. 450,000 HP in nine compressor stations.	Project management (joint venture). Design and engineering approvals. Construction supervision. Procurement, expediting and factory inspection.	IMEG in J.V.
1980	Esso	UK	Pressure and Thermal Relief Study Review adequacy of thermal and surge pressure relief facilities on existing pipeline terminals.	Technical evaluation of system requirements and assessment of existing facilities.	IMEG
1980	Asian Development Bank	Pakistan	Indus Right Bank Pipeline Commission Assistance in design of the pipeline upgrade.	Technical assistance.	IMEG
1980	ADB	Bangladesh	Natural Gas Development Technical assistant to ADB to finalize field development, gas treatment and transmission.	Technical assistance.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
TO					
FROM					
1980 1979	British Gas Corporation	UK	Bishop Auckland Compressor Station Additional two RB211 compressor sets, ancillaries and new control building.	Detailed design and engineering. As-built drawings.	IMEG
1980 1979	Petrobangla	Bangladesh	LNG Production and Exportation 260 km, 20" dia gas pipeline. Floating LNG plant.	Feasibility study: - Preliminary engineering. - Market appraisal. - Transportation study. - Organisation of development and operating company.	IMEG in Partnership
1980 1979	Asian Development Bank	Bangladesh	Natural Gas Development Technical/economic study. Long-term development plan for indigenous gas production and distribution to domestic markets.	Market forecasts for domestic gas consumption. Reservoir analysis and field development programme (joint venture). Evaluate gas transmission requirements. Cost estimates and economic analysis. Review of gas sector management and infrastructure.	IMEG in Partnership
1980 1978	Spie Capag for National Iranian Oil Company	Iran	Kerman to Isfahan Products Pipeline 640 km, 18" dia pipeline. Two pump stations and a terminal.	Detailed design and engineering. Material requisitions.	IMEG
1980 1976	Sonatrach	Algeria	Hassi R'Mel to Arzew Condensate Pipeline 510 km, 28" dia pipeline. 375,000 m ³ tankage. 55000 HP in three pump stations. Jetty tanker loading facility. Supervisory control system.	Project management. Design approvals. Construction supervision. Commissioning assistance.	IMEG
1979	British Gas	UK	Waste Heat Recovery Waste heat from RB211 Gas Turbine exhaust.	Feasibility study.	IMEG
1979 1978 (suspended)	R J Brown and Associates for Oil Services Co of Iran	Iran	Pars Offshore Facilities Gas reception from offshore field. Condensate separation (20,000 bbl/d). Gas supply to LNG plant and re-injection.	Detailed engineering/specifications. Construction Contract documents. Operating and Maintenance Manuals.	IMEG
1978	Nigerian National Petroleum Corporation	Nigeria	Aladja Gas Pipeline System Gathering system from nine fields and transmission to Steel Plant. 160 km 6"-16" dia pipelines. Gas treatment and compression.	Conceptual design. Technical specifications and tender documents. Tender evaluation.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



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1978 1977	Petroleum Services (Middle East) Ltd for Qatar Petroleum Producing Authority	Qatar	Extension to Terminal Facilities, Umm Said Additional tankage and refurbishment of existing (total 70,000 m ³). Tanker loading pumps and metering.	Detailed design and engineering. Technical specifications and equipment indents.	IMEG
1978 1977	Nigerian National Petroleum Corporation	Nigeria	Integrated Gas Gathering System Gas collection from 150 fields and supply LNG complex and industrial consumers. LNG plant and carriers \$4500m.	Conceptual design. Field development programme. LNG marketing study. Economic appraisal.	IMEG
1978 1976	Nigerian National Petroleum Corporation	Nigeria	Oben-Ajaokuta/Sapele Natural Gas Pipeline 230 km, 18"/24" dia.	Detailed design. Tender documents. Tender evaluation.	IMEG
1978 1976	Sonatrach	Algeria	Hassi R'Mel to Arzew Gas Pipeline (GZ2) 517 km, 40" dia.	Design approval. Construction supervision.	IMEG
1978 1976	Petroleum Pipelines Company	Egypt	Ras Shokir to Mostorod Crude Oil Pipeline 360 km, 26"/20"/18" dia. 12000 HP in four pump stations.	Route selection. Engineering design. Tender documents for construction and supply. Design evaluation and post-Contract consultancy.	IMEG
1978 1974	Nigerian National Petroleum Corporation	Nigeria	LNG Complex 2000 MMSCFD feed gas, field development, gas gathering, treatment liquefaction and shipping.	LNG Consultancy. Analysis of gas reserves, optimization for 20 year development, and economic evaluation. Evaluation of Proposals by major oil and gas companies for LNG Complex.	IMEG
1977	Sonatrach	Algeria	Compressor Casing Investigation Inspection and assessment of cracked compressor casings.	Safety assessment.	IMEG
1977 1976	Sonatrach	Algeria	Technical Assistance Secondment of engineers to Algeria to assist in the design and engineering of pipelines and terminals.	Consultancy - technology transfer.	IMEG
1977 1976	National Iranian Oil Company	Iran	Gas Gathering System and Gas Processing, Queshm Island Gas gathering from field and supply to industrial users. 300 km of 16" dia pipeline.	Feasibility study. Detailed design and engineering. Tender documents. Tender evaluation.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



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1976 1975	National Iranian Oil Company	Iran	Marun to Isfahan Crude Oil Pipeline 422 km, 30"/32" dia. Intermediate pumping 550,000 bbl/d.	Route finding and survey. Outline design and engineering. Tender documents.	IMEG
1976 1975	Williams Bros International	Iran	Rey-Rasht Products Pipeline 310 km, 14"/18" dia. 2 pump stations.	Route location and survey. Detailed design and engineering.	IMEG
1976 1974	Elf-Iraq for Iraq National Oil Company	Iraq	Buzurgan to Fao Crude Oil Pipeline 293 km, 28" dia pipeline. 1250 m ³ /hr pump station. 2 Tank farms. Telecommunications system.	Feasibility and route selection, route survey. Detailed design and engineering. Procurement. Tender documents. Supervision of construction. Commissioning (joint venture).	IMEG in J.V.
1975	Sofiran	Iran	GOSP and Secondary Oil Recovery, Sirri Island Gas/oil separation and terminal and pumping facilities. 121,000 bbl/d water injection. Jetty to 350,000 DWT. 30 MW power station.	Feasibility study. Detailed design and engineering. Cost estimation. Tender documents.	IMEG
1975	National Iranian Gas Company	Iran	Marun Compressor Stations 129,000 HP in four compressor stations.	Project management, detailed design, procurement and inspection, construction supervision and commissioning.	IMEG
1975 1974	Sonatrach	Algeria	Hassi R'Mel to Skikda Gas Pipeline 578 km, 42" dia pipeline. 780,000 HP in 6 compressor stations.	Survey, feasibility study, design and engineering.	IMEG
1974	BAA	UK	Maplin Optimization of aviation fuel distribution.	Feasibility study and conceptual design.	IMEG
1974	Scott Lithgow	UK	Dynamically Positioned Drilling Ships Market study of potential for dynamically positioned drill ships.	Market study.	IMEG
1974	Conoco	UK	Hutton Field Drilling and Production Platform Gravity type drilling/production platform.	Conceptual design. Bid evaluation of Contractors.	IMEG
1974	Chase-Manhattan	Italy	Isab Refinery, Sicily Feasibility of a refinery.	Feasibility study.	IMEG
1974	Tyne & Wear County Council	UK	Offshore Services Assessment of supply opportunities and site requirements for platform fabrication and pipe protection facilities.	Market study.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



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TO					
FROM					
1974	HM Government Department etc.	UK	Offshore Drilling and Drilling Contracting Opportunities for a British offshore drilling company.	Market study.	IMEG
1974	Sacor S.A.	Portugal	Crude Oil Transportation Study Optimization of crude line supplies.	Feasibility study.	IMEG in Partnership
1974 1973	INA	Yugoslavia	Trans-continental Pipeline 36" dia Pipeline reducing to 8" with marine terminal, several pump stations and storage terminals.	Feasibility study.	IMEG
1974 1973	Abdullah Nass for Government of Bahrain	Bahrain	Sitra Power and Water Station Gas Transmission Pipeline 14 km, 12" dia pipeline.	Detailed design and engineering. Procurement and inspection.	IMEG
1974 1973	National Iranian Oil Company	Iran	Isfahan Gas Distribution Industrial and commercial gas supply to Isfahan and surroundings.	Marketing study. Optimised design. Construction and supply tender documents.	IMEG
1974 1973	National Iranian Oil Company	Iran	Ahwaz Booster Station 32,000 HP compressor station.	Project management, detail design, procurement, inspection and construction supervision.	IMEG
1974 1972	Oceanic	France	North Sea Jackets - Fabrication Inspection of offshore jacket fabrication.	Inspection.	IMEG
1974 1970	PTT	Iran	Tehran PTT Building 15 Storey telecommunications building.	Conceptual design, design verification and construction supervision.	IMEG
1973	Bestobell	UK	Offshore Equipment Market study for offshore equipment.	Market study.	IMEG
1973	Taylor Woodrow	UK	Offshore Equipment Market study for offshore equipment.	Market study.	IMEG
1973	HM Government Department of Trade & Industry	UK	Offshore - Floating Heavy Lift Cranes Feasibility and market study for offshore lifting cranes.	Market and feasibility study.	IMEG
1973	S G Warburg for Occidental	UK	Refinery on Canvey Island Feasibility of establishing a refinery.	Feasibility study.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
TO					
FROM					
1973	National Iranian Oil Company	Iran	Ahwaz to Bid Boland Gas Pipeline 120 km, 40" dia pipeline.	Feasibility, design and engineering management. Procurement and works inspection. Construction supervision. Commissioning and training.	IMEG
1973 1972	Shell Oil Company of Australia	Australia	Townsville to Yabulu Heavy Fuel Oil Pipeline 27 km, 6" dia heated pipeline. Polyurethane foam insulation. Pumping and heating station.	Feasibility and optimisation. Detailed design and engineering. Route finding and survey. Tender documents (joint venture).	IMEG
1973 1972	Abu Dhabi Petroleum Company	Abu Dhabi	Terminal Facilities for Asab Field 1.8 million bbl Crude storage, tanker loading station, and 5 km, 42" dia submarine pipeline.	Project management. Detailed design and engineering. Pressure surge study. Tender documents.	IMEG
1973 1966	National Iranian Oil Company	Iran	Iranian Gas Trunk Line (IGAT I) 1260 km of main line 40"/42" dia pipelines, 800 km of 6" to 30" dia gathering lines, and 461,000 HP in 17 compressor stations.	Feasibility, design and engineering management. Procurement and works inspection. Construction supervision. Commissioning and training.	IMEG
1972	War on Want	Tanzania	Farming Practices Investigation of current farming practices and future potential.	Economic study.	IMEG
1972	HM Government Department of Trade & Industry	North Sea	Potential Benefits from North Sea Oil and Gas Development Market study for the requirements of UK industry to meet the needs of North Sea developments.	Market study published as HMSO Green Paper.	IMEG
1972	Vickers Oceanics	UK	Underwater Equipment Study of future requirements for underwater equipment and services.	Market study.	IMEG
1972	John Laing	UK	North Sea Opportunities Offshore contracting prospects.	Market study.	IMEG
1972	ICI	UK	North Sea Development Costs Feasibility of developing four alternative fields in the North Sea.	Feasibility study.	IMEG
1972	Oceanic Contractors Inc	Netherlands	Offshore Platforms - Fabrication Fabrication yard supervision and inspection.	Inspection.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



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1972	British Rail	UK	Movement of Liquid Hydrocarbons Forecast pipeline, rail and road movements of liquid hydrocarbons.	Market study.	IMEG
1972 1971	ADPC	Abu Dhabi	GOSP and Pumping Station at Bu Hassa Additional GOSP, pumping, tankage and metering facilities.	Project management, detailed design, construction supervision and commissioning.	IMEG
1972 1970	National Iranian Oil Company	Iran	Bid Boland to Shiraz Gas Pipeline 322 km, 16" dia pipeline and metering station.	Feasibility study, route location, project management, design and engineering management. Procurement and works inspection. Construction supervision. Commissioning and training.	IMEG
1971	Federal Ministry of Industries	Nigeria	LPG and Ethylene Project Recovery of LPG and the manufacture of ethylene plus a marine export terminal.	Feasibility study.	IMEG
1971	Distrigaz	Iran/Turkey	Trans Iran-Europe Gas Pipeline 1728 km 36"/42" dia gas pipeline, an LNG plant and loading terminal.	Feasibility study.	IMEG
1971 1970	Energoinvest	Yugoslavia	Trans Continental Crude Oil Pipeline Multi-crude distribution system with marine terminal and pump stations.	Routeing and feasibility study.	IMEG
1971 1969	Trans Alaska Pipeline Co	Alaska	Trans Alaska Pipeline Supervision of the handling and transportation of 48" dia line pipe.	Supervision and inspection of pipe shipments.	IMEG
1970	Government of Panama	Panama	Trans Panama Crude Oil System 65 km, 30" dia pipeline. 4200 HP in 2 pump stations, 2 terminals with 3 million barrels storage. Offshore loading lines.	Techno economic study for the transportation of crude oil from the Pacific to the Caribbean. Route and site survey, preliminary engineering design.	IMEG in Partnership
1970	Gulf of Suez	Egypt	Utilization of El Morgan Offshore Gas Gas gathering and treatment optimization.	Feasibility study.	IMEG
1970 1969	Associated Portland Cement	Australia	Slurry Pipeline Study 64 km 10" dia limestone slurry line.	Feasibility study and pilot models.	IMEG
1970 1969	Norwegian Mining Company	Norway	Slurry Pipeline Study Design parameters and pilot model for a slurry system.	Feasibility study.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
TO					
FROM					
1970 1966	National Iranian Oil Company	Iran	Pump Station at Semnam Multi-products pipeline and pump station.	Project management, detailed design and construction supervision.	IMEG
1969	Indian Oil and Natural Gas Commission	India	Offshore Drilling Rigs - India Selection of type of rig for offshore drilling.	Feasibility study.	IMEG
1969	National Iranian Oil Company	Iran–Europe	Gas Pipelines to Europe A desk study for export of Iranian gas to Europe.	Feasibility study.	IMEG
1969 1968	General Organisation for Industrialization for UAR	Egypt	Suez to Mediterranean Crude Oil Pipeline (SUMED) 335 km, 42" dia pipeline. 100,000 HP pumps. Tanker loading (200,000 DWT) via 3 SBM's. Tank farms at Suez and Mediterranean.	Conceptual development. Detailed economic and feasibility study. Outline design and optimisation. Tender documents. Tender evaluation.	IMEG
1969 1967	National Iranian Oil Company	Iran	Gas Sweetening and Dehydration Plant – Bid Boland 5-train hydrocarbon dewpoint and sulphur extraction plant.	Project management, conceptual process design, detail off-site design, procurement and construction supervision.	IMEG
1968 1966	The Gas Council (British Gas)	UK	North Sea Gas Feeder Main 197 km, 36" dia - the first high pressure UK pipeline.	Engineering design and advisory services to Gas Council. Construction supervision and inspection. Commissioning.	IMEG
1968 1966	Titas Gas Transmission and Distribution Co	Bangladesh	Gas Trunk Line 80 km, 14" dia pipeline plus gas distribution.	Detailed engineering design. Supervision of town (Dacca) gas distribution system.	IMEG
1968 1964	Iranian Government	Iran	Sugar Factories Modifications to five sugar factories.	Basic design, tender evaluation and construction supervision.	IMEG
1967	National Iranian Oil Company	Iran	Gach Saran Modification to the existing plant and an additional plant and additional compression.	Project management, detailed design, construction supervision and commissioning.	IMEG
1966	North Sea Users Committee	UK	North Sea Submarine Pipeline Study Analysis of possible offshore pipeline construction techniques.	Feasibility study.	IMEG

IMEG PROJECT EXPERIENCE - GAS AND LIQUIDS PROJECTS



PERIOD	CLIENT	LOCATION	PROJECT TITLE/DESCRIPTION	SERVICES BY IMEG	CONTRACTOR
TO FROM					
1966 1965	Regent Oil Co (Texaco & Caltex)	UK	Refuelling System - Prestwick Airport Hydrant refuelling system using remote controlled pumping facilities.	Engineering design, supervision of installation and commissioning.	IMEG
1966 1964	Constructors John Brown	Algeria	Haoud-el-Hamra to Arzew Crude Oil Pipeline 800 km, 28" dia pipeline, tank farm and terminal. 60,000 HP in 6 pump stations.	Project management. Route location. Detailed engineering design.	IMEG in Partnership
1965 1964	Costain Press for Syrian General Petroleum Authority	Syria	Crude Oil Pipeline from Karachok to Tartus 640 km, 22" dia pipeline and 60,000 HP in 9 pump stations. 1.8 m bbl Storage at each of 2 terminals.	Route location and survey. Detailed design and engineering.	IMEG

2.3 PROJECT SUMMARIES

The following summaries are a selection of IMEG Projects.

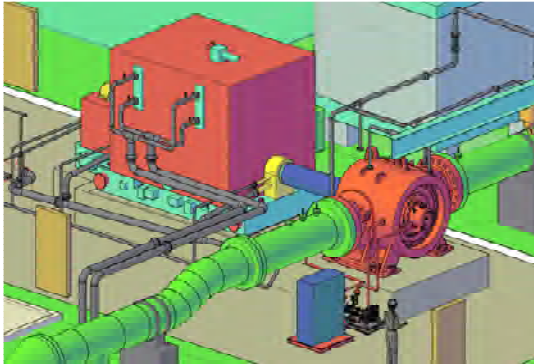
UNITED KINGDOM

EMISSIONS REDUCTION HATTON

CLIENT / PROJECT HISTORY

National Grid

National Grid Compressor Station sites are required to operate under Pollution Prevention Control (PPC) Regulations 2000. National Grid commissioned IMEG and Land and Marine to complete the works as a Joint Venture



PROJECT DESCRIPTION

The objective of the Compressor Emissions Reduction Phase 2 Project is to maximise energy efficiency and deliver a reduction in emissions within and in conjunction with the existing asset infrastructure.

This project consists of one 35MW variable speed electric motor driven compressor with all necessary controls and auxiliaries including tie in to the existing facilities and a new vent.



IMEG's RESPONSIBILITY

- Proof of Concept
- Gas engineering
- Mechanical detailed engineering
- Piping detailed design
- Stress analysis

WEST AFRICA

WEST AFRICA GAS PIPELINE

CLIENT / PROJECT HISTORY

Zakhem International Ghana for WAPCo



West Africa Pipeline Company (WAPCo), have developed the West Africa Gas Pipeline (WAGP) to carry gas from Nigeria to Togo, Benin and Ghana. The original engineering, procurement and construction contractor for the project was replaced in June 2008 by Zakhem International Construction to complete the works on the three metering stations and the associated lateral and link lines in Toga, Benin and Ghana.

PROJECT DESCRIPTION

- Three 900# pressure reducing meter stations
- 20km of pipelines 10" to 18" Class 900# and 300#



IMEG's RESPONSIBILITY

- Engineering review
- Procedures for hydrostatic testing, dewatering, drying and pre-commissioning

GHANA

ACCRA PLAINS DEPOT EXTENSION (APDE)

CLIENT / PROJECT HISTORY



ZAKHEM

BOST

Zakhem International Ghana, who have been contracted by Bulk Oil Storage and Transportation (usually referred to as BOST) of Ghana as the principal contractor.



PROJECT DESCRIPTION

- Four 10,000 cubic meter product tanks
- 12 transfer pumps
- 4 road tanker loading systems
- Inventory Control system



IMEG's RESPONSIBILITY

- Detailed engineering design

UNITED KINGDOM

KIRRIEMUIR EMISSIONS REDUCTION



KIRRIEMUIR



CLIENT / PROJECT HISTORY

NATIONAL GRID

National Grid are systematically up-rating the National Transmission System in the UK to 85 barg, and have awarded the Emissions Reduction Project at Kirriemuir Compressor Station to the Land and Marine/IMEG joint venture.

PROJECT DESCRIPTION

This project consists of one 35MV variable speed electric motor driven compressor, additional station pipework and new vent to tie in to the existing facilities.



IMEG'S RESPONSIBILITY

IMEG are responsible for the complete design and engineering of the new facilities including (3 phases):

- Control system for the new electric drive compressor
- Station control system
- Integration of the existing control system into the new control system

UNITED KINGDOM

ST FERGUS EMISSIONS REDUCTION



ST FERGUS



CLIENT / PROJECT HISTORY

NATIONAL GRID

National Grid are systematically up-rating the National Transmission System in the UK to 85 barg, and have awarded the Emissions Reduction Project at St Fergus Gas Terminal to the Land and Marine/IMEG joint venture.

PROJECT DESCRIPTION

As part of National Grid's emissions reduction project, two new electronically driven centrifugal compressors, using a variable frequency drive system and with all necessary controls and auxiliaries, are to be installed at St Fergus Gas Terminal to complement the existing compression facilities.



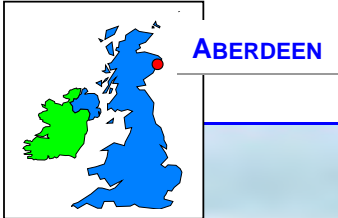
IMEG's RESPONSIBILITY

IMEG are responsible for the complete design and engineering of the new facilities including (3 phases):

- Installation of the new compressor controls
- Development of the new station control system
- The migration of the existing control system to the new system

UNITED KINGDOM

ABERDEEN FEEDER 13



ABERDEEN



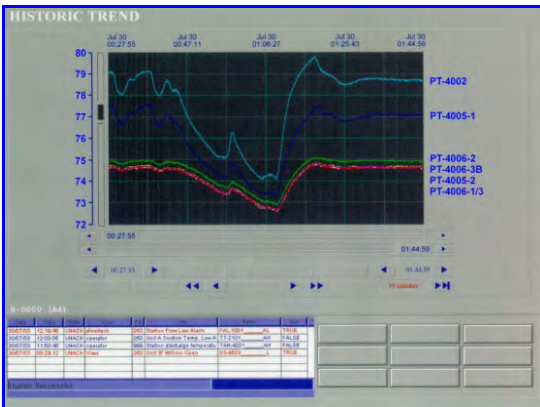
CLIENT / PROJECT HISTORY

TRANSCO

Transco are systematically up-rating the National Transmission System to 85 barg. The up-rating of Aberdeen Compressor station was completed in 2002, but one of the discharge feeders (No. 13) could not be up-rated at that time. To allow the compressor station to operate at 85 barg, the feeder regulator system was modified to provide the necessary pressure protection, while meeting current safety and reliability requirements.

PROJECT DESCRIPTION

- Process assessment
- Hazard review and safety assessment
- Hardware and software modification specification
- Detail design
- Safety system modification
- Testing and commissioning



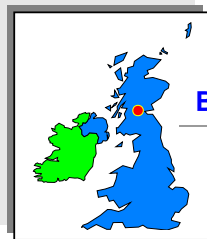
IMEG's RESPONSIBILITY

IMEG undertook process assessments, HAZOP management, safety studies and assessments, the specification and management of the site modification, and the supervision of the testing and commissioning of the systems.

All design and site work was undertaken in accordance with current Client, UK and European standards including safety legislation.

UNITED KINGDOM

BATHGATE COMPRESSOR STATION



BATHGATE



CLIENT / PROJECT HISTORY

TRANSCO

The compressor station was originally designed to deliver a discharge pressure of 69 bar g. The project scope was to raise the station operating pressure from 69 bar g to 75 bar g and then from 75 bar g to 85 bar g.

PROJECT DESCRIPTION

- Verify the capacity and pressure rating of the existing equipment for 75 and 85 bar g operation.
- Specify and procure equipment that requires replacement.
- Re-range field instrumentation and associated control system software for.
- Modify the compressor start sequence software to inhibit the starting of the compressor if the suction pressure is greater than 69 bar g.
- Carry out most of the modifications while the compressor station was operational.

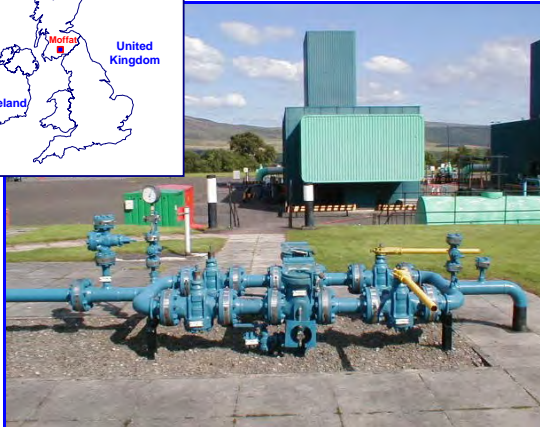
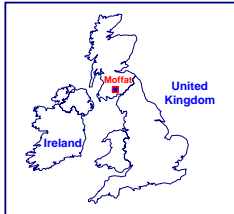


IMEG's RESPONSIBILITY

Carry out a detailed site survey to verify the rating of the existing equipment.
Specify and procure equipment.
Management of site modifications and supervision of the testing.
Produce as-built documentation.

UNITED KINGDOM

MOFFAT COMPRESSOR STATION



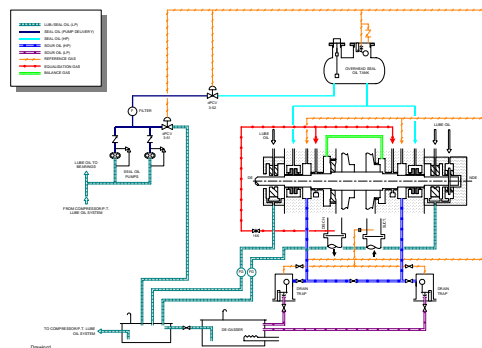
CLIENT / PROJECT HISTORY

TRANSCO

Transco are systematically up-rating the National Transmission System in the UK to 85 barg. In 2002 IMEG were contracted to provide engineering services for the up-rating of Moffat compressor station in the Scottish Borders.

PROJECT DESCRIPTION

- Site Survey
- Process Plant Assessments
- Compressor Assessments
- Control System Assessments
- Procurement
- System Modifications
- Re-testing and Re-commissioning



IMEG's RESPONSIBILITY

IMEG were responsible for all work with the exception of the main pipework assessments. IMEG undertook the process, compressor and instrument assessments to meet UK / European codes and legislation. IMEG identified the necessary modifications and managed the site work, re-commissioning, and the compilation of revised documentation.

OMAN

SAFAH FIELD GAS INJECTION PROJECT



CLIENT

OCCIDENTAL OF OMAN INC.

PROJECT DESCRIPTION

SAFAH GAS COMPRESSION FACILITIES PROJECT

- Period 1992 - 1994
- Value \$32 million
- Design throughput of 50 MMSCFD
- Discharge pressure 4,500 psig.
- 1 x 12,600 hp Gas Turbine Driving 2 Centrifugal Compressors giving injection pressure of 310 bar g



IMEG's RESPONSIBILITY

- Lump Sum Turnkey Contractor

NIGERIA

GAS GATHERING SYSTEM

CLIENT

NIGERIAN NATIONAL PETROLEUM CORPORATION (NNPC)



PROJECT DESCRIPTION

ESCRAVOS - LAGOS GAS PIPELINE SYSTEM

- Warri and the swamplands to the West
- Period 1987 - 1993
- Value \$300 million
- 4 x Compressor Stations - 15,200 installed hp
- Gathering System - 100 km of 8" to 24" diameter Pipeline
- Warri Gas Treatment Plant 300 MMSCFD



IMEG's RESPONSIBILITY

- Cathodic Protection, Topographic and Soil Surveys and Gas Analysis
- Detailed Engineering Design
- Procurement of Cathodic Protection Material
- Field Engineering
- Commissioning

IRAN

GAS TRUNKLINE IGAT II

CLIENT

NATIONAL IRANIAN GAS COMPANY



PROJECT DESCRIPTION

IRANIAN GAS TRUNKLINE (IGAT II)

- Kangan (The Gulf) to Astaran (Caspian Sea)
- Period 1978 - 1981
- Value \$1,500 million
- 17,000 million cubic metres of gas per annum to the USSR market & 10,000 million cubic metres of gas per annum to Iranian internal market
- 1,420 km, 56" diameter pipeline
- Total 450,000 hp, 9 Compressor Stations



IMEG's RESPONSIBILITY

(with Williams Brothers)

- Project Management
- Design and Engineering approvals
- Supervision and Inspection of Construction
- Materials, Procurement, Inspection and Expediting

IRAN

GAS TRANSMISSION SYSTEM IGAT I

CLIENT

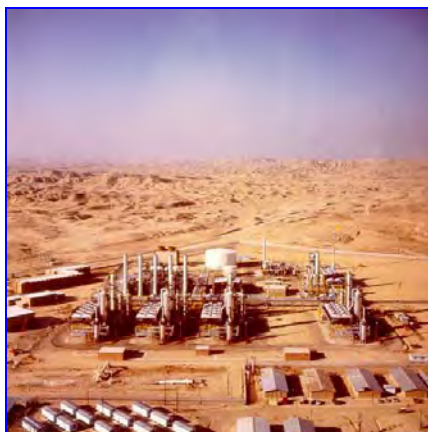
NATIONAL IRANIAN OIL COMPANY



PROJECT DESCRIPTION

IRANIAN GAS TRUNKLINE (IGAT 1)

- Khuzistan to Caspian Sea
- Period 1966 - 1973
- Value \$678 million
- 1,630 MMSCFD Total Gas Flow
- 1,260 km Pipeline, 40" / 42" diameter
- 800 km 6" to 30" diameter Gathering Lines
- 460,000 hp in 17 Compressor Stations
- 1,200 MMSCFD Gas Sweetening and Dehydration Plant capacity



IMEG's RESPONSIBILITY

- Project Management
- Commercial Viability, Feasibility and Optimization Flow Studies
- Detailed Engineering Design
- Procurement and Inspection
- Supervision of Construction and Commissioning
- Training of Personnel



Surveys, Studies & Engineering Audits

The shoreline of Eastern Siberia.

IMEG performed a feasibility study for a 300-kilometre multiproducts pipeline and export terminal comparing two alternative routes and port locations.

Design, Specifications & Management

A 42-inch gas line constructed in Iran.

IMEG were responsible for the design, detailed specifications, project management, commissioning and training of this 1260-kilometre pipeline with 10 mainline compressor stations.



Engineering & Procurement Assistance

Construction of a 24-inch gas line in the swamps of Nigeria.

IMEG's responsibilities included detailed engineering and commissioning of this 100-kilometre pipeline network with four gas gathering compressor stations.

Commissioning & On-Site Services

Loading a 36-inch pig in Malaysia.

IMEG's responsibilities on this 700-kilometre 36-inch pipeline included detailed engineering, linepipe inspection, field engineering and supervision of commissioning.





Gas Gathering Systems

One of the four compressor stations, which formed part of the gas gathering system for the Escravos-Lagos Pipeline Project constructed in the swamps of Nigeria by a consortium of which IMEG were a partner. IMEG's responsibilities included survey, detailed engineering and commissioning.



Gas Pipelines and Metering Stations

The Serdang Gas Metering and Regulating Station in Malaysia for which the engineering, procurement and construction was performed by an IMEG associate company HOMEQ.



Compressor Stations

The air coolers at the North Rumaila Compressor Station in Iraq. Engineering, procurement and on-site assistance for the complete station including two 20,000 hp gas turbine driven compressors was the responsibility of IMEG.



Crude Oil Pipelines and Pump Stations

A 3,500 hp engine being installed at one of the four pump stations on the 280 kilometre Caño Limon to Rio Zulia Pipeline in Colombia. As a partner in the consortium charged with implementing this turnkey project, IMEG's responsibilities included financing, detailed engineering, procurement of pumps and commissioning.



Multiproducts Pipeline System

The Multiproducts Pipeline System under construction in Nigeria. IMEG was responsible for the survey, detailed engineering, procurement, commissioning and training for this 825 kilometre network.



Field Development

IMEG has been involved in a number of oil and gas field development studies and projects in Nigeria, Bangladesh, Oman, Turkmenistan and the Russian Federation.

2.4 CLIENT LIST

(By Country in which Job was Located)

ABU DHABI

- ◊ Abu Dhabi Petroleum Company

ALASKA (USA)

- ◊ Trans-Alaska Pipeline Co

ALGERIA

- ◊ John Brown (for Sonatrach)
- ◊ Sonatrach

ARGENTINA

- ◊ CNO - Constructora Norberto Odebrecht

AUSTRALIA

- ◊ Associated Portland Cement Co
- ◊ Government of Western Australia
- ◊ Shell Oil Company of Australia

BAHRAIN

- ◊ Abdulla Nass (for the Government of Bahrain)

BANGLADESH

- ◊ Asian Development Bank (for Petrobangla)
- ◊ Titas Gas Company

BELGIUM

- ◊ Distrigaz

COLOMBIA

- ◊ Occidental Petroleum (for Ecopetrol)

DOMINICAN REPUBLIC

- ◊ Floatech

DUBAI

- ◊ NAKHEEL

EGYPT

- ◊ Egyptian General Petroleum Company
- ◊ Exel Inspection (for Protech)
- ◊ General Organization for the Industrialization of UAR
- ◊ Gulf of Suez Petroleum Company
- ◊ Petroleum Pipelines Co

FRANCE

- ◊ Coastal States Gas Company
- ◊ Entrepouse International
- ◊ Oceanic Contractors Ltd
- ◊ United Gas Pipeline Company
- ◊ UIE

FSU

- ◊ Azneft
- ◊ Nadymeg (for Gazprom)
- ◊ Nadymeg (for Komsomolsk Refinery)
- ◊ Nadymeg (for Sakhalinmorneftegaz)
- ◊ Nadymeg (for Tyumeneftgaz)
- ◊ Neftegas
- ◊ Occidental

GABON

- ◊ MAB (for Shell/Elf)

GERMANY

- ◊ British Gas Corporation

GHANA

- ◊ Zakhem International for BOST
- ◊ Project Development International

GREECE

- ◊ DEPA
- ◊ Prometheus

HOLLAND

- ◊ Bataafse Internationale Petroleum Maatschappij NV
- ◊ J Ray McDermott
- ◊ Oceanic Contractors Inc
- ◊ Thomassen

INDIA

- ◊ Indian Oil and National Gas Commission

IRAN

- ◊ R J Brown and Associates (for OSCO)
- ◊ Cooper Energy Services
- ◊ Cooper Rolls (for NIOC)
- ◊ Iranian Government
- ◊ Iranian Ministry of Posts and Telegraphs
- ◊ National Iranian Gas Company
- ◊ National Iranian Oil Company
- ◊ OSCO
- ◊ Rolls Royce
- ◊ Sofiran
- ◊ Williams Brothers International Corporation

IRAQ

- ◊ Elf (Iraq) (for Iraq National Oil Company)
- ◊ GHH Sterkrade
- ◊ Machinoimport (for SCOP)

ITALY

- ◊ Chase Manhattan Ltd
- ◊ Foster Wheeler Italia
- ◊ United Gas Pipeline Company

JAPAN

- ◊ United Gas Pipeline Company

KUWAIT

- ◊ John Foord

LIBYA

- ◊ National Oil Company

LITHUANIA

- ◊ Lithuanian Gas
- ◊ State Enterprise Lithuanian Fuel

MALAYSIA

- ◊ Bumihway Sdn. Bhd.
- ◊ Costain/Sime Darby (for Shell)
- ◊ Dialog E & C Sdn Bhd
- ◊ District Gas Cooling (Petronas JV)
- ◊ Gamuda
- ◊ Gas District Cooling (M) Sdn. Bhd.
- ◊ Gas Malaysia Sdn. Bhd.
- ◊ Ho Hup Construction Company Berhad
- ◊ HOMEG (for Gas Malaysia)
- ◊ City Center Berhad
- ◊ Kuala Lumpur International Airport
- ◊ MECOMB (for Petronas Carigali)
- ◊ MMC Gas/Loh & Loh
- ◊ Petronas
- ◊ Smit Pantai Sdn. Bhd.

MALDIVES

- ◊ Maldives Airport Co. Ltd

NIGERIA

- ◊ Dubri Oil
- ◊ Entrepouse for NNPC
- ◊ Federal Military Government of Nigeria
- ◊ Federal Ministry of Industries
- ◊ Federal Ministry of Mines and Power
- ◊ Federal Ministry of Petroleum and Energy
- ◊ Nigerian Gas Company
- ◊ Nigerian National Petroleum Corporation
- ◊ TSMPE (USSR) for NNPC

NORWAY

- ◊ Norwegian Mining Companies

OMAN

- ◊ Occidental of Oman Inc.

PAKISTAN

- ◊ Asian Development Bank (for Sui Gas Transmission Co Ltd)
- ◊ LASMO Oil Pakistan

PANAMA

- ◊ Government of Panama

PORTUGAL

- ◊ Ministry of Energy
- ◊ Sacor SA

QATAR

- ◊ Costain Oil, Gas & Process Ltd
- ◊ Petroleum Services (Middle East) Ltd (for Qatar Petroleum Producing Authority)

SAUDI ARABIA

- ◊ Prospective Engineering Gestion (P.E.G.)

SYRIA

- ◊ Costain Press (for Syrian General Petroleum Authority)

TANZANIA

- ◊ War on Want

TURKEY

- ◊ Tekfen

TURKMENISTAN

- ◊ Toget (for Government of Turkmenistan)
- ◊ Wavemeg

UNITED KINGDOM

- ◊ Bestobell
- ◊ British Airports Authorities
- ◊ British Gas Corporation
- ◊ British Railways Board
- ◊ Conoco North Sea Inc
- ◊ Cooper Energy Services
- ◊ Department of Trade and Industry
- ◊ Esso Petroleum Company Limited
- ◊ ICI
- ◊ Imperial Metal Industries
- ◊ John Laing
- ◊ Land and Marine
- ◊ Morgan Grenfell
- ◊ Occidental
- ◊ Ove Arup & Partners
- ◊ Premier Transmission Limited
- ◊ Regent Oil Company (Texaco and Caltex)
- ◊ Rolls Royce Power Engineering plc.
- ◊ Scot Lithgow Limited
- ◊ Shell Expro.
- ◊ Skanska Jensen
- ◊ Taylor Woodrow
- ◊ Transco
- ◊ Tyne and Wear County Council
- ◊ Vickers Oceanics
- ◊ Warburgs/Chase/Natwest Banks Consortium

NORTH SEA USER'S COMMITTEE

- ◊ Amax Petroleum Corporation
- ◊ American Overseas Petroleum Limited
- ◊ Amoco
- ◊ Atlantic Oil Producing Company
- ◊ British Petroleum Development Ltd
- ◊ Burmah Oil Exploration Company
- ◊ Conoco UK
- ◊ Gulf Oil Exploration Limited
- ◊ Hamilton Brothers Oil Company
- ◊ Mobil Producing North Sea Limited
- ◊ Phillips Petroleum Exploration
- ◊ Shell UK Exploration and Production Ltd.
- ◊ Signal Oil and Gas Company
- ◊ Total Oil Marine Ltd

YEMEN

- ◊ CANOXY Inc.

YUGOSLAVIA

- ◊ Energoinvest
- ◊ INA



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