



CLIENTS | PEOPLE | PERFORMANCE

# OIL AND GAS



GHD IS AN INTERNATIONAL PROFESSIONAL SERVICES COMPANY. OUR PEOPLE DELIVER INNOVATIVE SOLUTIONS BY COMBINING TECHNICAL SKILL AND EXPERIENCE WITH AN UNDERSTANDING OF OUR CLIENTS' OBJECTIVES AND ASPIRATIONS.

GHD's Oil and Gas Group delivers innovative, economical and sustainable solutions to the oil and gas industry. Our wide network of offices, unique range of skills, use of innovative technology and commitment to high standards of performance ensure that, even in the most remote areas, clients benefit from our expertise.

Working hand-in-hand with local offices, GHD's Oil and Gas group ensures that regional, cultural and social factors, as well as local technical expertise, are fully considered and utilised in the economical delivery of innovative solutions.

## OIL AND GAS CAPABILITIES

GHD's increased depth of resources and experience from the integration of Egis Consulting Australia strengthens our ability to meet Client's needs.

The Oil and Gas group draws on the expanded company's wide range of in-house disciplines to deliver innovative, economical and sustainable solutions.

Engineering and project management

GHD provides clients with high value solutions in all facets of process facility design. Services cover every phase of a project's life, from feasibility studies, conceptual and front end design, through to construction and commissioning. These services include:

- ▶ Project management
- ▶ Feasibility studies
- ▶ Planning, permitting and approvals
- ▶ Conceptual and front end design
- ▶ Process simulation and optimisation
- ▶ HAZOP and HAZID studies
- ▶ Detailed design engineering and procurement
- ▶ Construction, construction management and commissioning
- ▶ Operating manuals and maintenance programs
- ▶ Asset and facilities management

These services can be provided individually or in combination.



Construction - Mallaty Creek Pipeline, NSW



Wide Bay Pipeline, QLD



BP Kwinana. hydrofiner



## GAS PROCESSING

Through GHD, the expertise gained from over 75 years of experience and the successful completion of over 250 gas processing projects is drawn on for your project. Technology and experience in all aspects of natural gas processing are available, including:

- ▶ Condensate stabilisation
- ▶ Gas sweetening
- ▶ Gas dehydration
- ▶ Natural Gas Liquids (NGL) recovery
- ▶ NGL fractionation
- ▶ Sulphur recovery
- ▶ Gas compression and re-injection
- ▶ Natural gas liquefaction – PRICO® process

Petroleum refining expertise is also available, with experience covering a broad spectrum, including: fractionation; hydro-processing; isomerization; aromatics; hydrogen production; cracking; reforming; desulphurisation; alkylation lube oil blending; and many other applications.

## GAS TRANSMISSION AND DISTRIBUTION

GHD provides services to assess pipeline project feasibility and to bring a project to realisation. Our capabilities include: review of energy market advice; development of conceptual designs; project estimates and construction plans; and, where required, advanced hydraulic modelling and process simulation.

GHD also offers complete detailed engineering and design capabilities, including: route selection and survey; geo-technical and environmental investigations; risk assessments; and pipeline alignment sheets.

Design, construction management and maintenance and operational services for gas transmission and distribution networks include:

- ▶ Network hydraulic design (steady state and transient)
- ▶ Pipeline Design
- ▶ Gate station design
- ▶ Compression station design
- ▶ SCADA design
- ▶ Regulator station design
- ▶ Environmental management plans
- ▶ Operating procedures
- ▶ Meter selection

GHD can provide total integrated solutions for pipeline projects:

- ▶ Independent project management
- ▶ Land acquisition management
- ▶ Indigenous consultation
- ▶ Environmental services
- ▶ Asset management



Temporary pipe support- Mallaty Creek Pipeline, NSW



Hakuryu Oil Rig positioning, Barrow Island, WA



Pipe relocation - Mallaty Creek Pipeline, NSW

## SPECIALISED SERVICES

The precise services needed to achieve appropriate solutions and outcomes are provided through GHD's service group organisation. Service groups provide both a national framework and a local focus for all activities.

Specialised services available through GHD Gardline for projects in the oil and gas industry include:

- ▶ Hydrographic and marine geophysical surveys
- ▶ Subsea pipeline and cable route surveys
- ▶ Rig and platform site surveys and positioning
- ▶ Seabed sampling / geotechnical studies
- ▶ Seismic data acquisition and processing

Other services available from GHD include:

- ▶ Offshore concrete gravity structures
- ▶ Marine facilities, ports and harbours
- ▶ Geotechnical engineering
- ▶ Power generation, delivery and control systems
- ▶ Environmental impact assessments, management plans and monitoring
- ▶ Water and wastewater technology
- ▶ Materials and corrosion technology
- ▶ Engineering technology, including finite element analysis



## ABOUT GHD

GHD is an international professional services company. Our people deliver innovative solutions by combining technical skill and experience with an understanding of our clients' objectives and aspirations.

With more than 6000 people in a network of 100-plus offices throughout Australia, New Zealand, Asia, the Middle East, the Americas and Europe, we serve clients in the global market sectors of infrastructure, mining and industry, defence, property and buildings and the environment.

Central to our clients' prosperity and GHD's success are forward-thinking engineers, architects, planners, scientists, drafters, project managers, economists and supporting staff. Our people embrace the core values that have sustained the company since inception – **Teamwork, Respect and Integrity.**

Established in 1928, GHD is ranked as one of the world's leading engineering, architecture and consultancy firms. We are dedicated to our clients and their stakeholders, to being a responsible corporate citizen and to improving the quality of life around the world.

We contribute to the goals of sustainable development and are committed to managing the social, economic and environmental impacts of our operations and assisting our clients to manage theirs in the provision of our technical consulting services. We recognise innovation as the key to realising this objective.

As a member of the World Business Council for Sustainable Development (WBCSD), GHD actively participates in the public debate on the role business has to play in managing climate change, energy, development and ecosystems.

GHD operates under a Practice Quality Management System that is certified to AS/NZS ISO 9001:2000 and our Environmental Management System (EMS) is accredited to international standard ISO 14001 by NATA Certification Services International (NCSI).

For more information, visit [www.ghd.com.au](http://www.ghd.com.au)



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