

Gaffney
Cline

Due Diligence Expertise





Reducing risk for corporate investment decisions

GaffneyCline provides technical, commercial and strategic advice to clients across the upstream, midstream and downstream sectors of the energy industry, using an integrated project team approach.

This integrated approach to Due Diligence allows the capture of the full range of risk, mitigating factors and potential value.



GaffneyCline's personnel bring extensive experience in the petroleum industry, gained from numerous projects around the world, to every assignment. The diverse backgrounds of our people include employment with international and national oil companies and major consulting and contracting firms. This diversity, breadth and depth of expertise and experience enhances our capability and reputation in providing consistent, high quality, impartial, technically sound and commercially astute advice.

The GaffneyCline team is similar to an integrated oil company, drawn from cross-organisational and business cultures. In short, this helps us to understand all of our clients' individual needs.

GaffneyCline is unique in providing fully integrated subsurface, upstream facilities, midstream, downstream and commercial advice from in-house personnel.

Focused opportunity evaluation and informed risk assessment

Technical and commercial due diligence for the acquisition or divestment of assets, or for project finance is one of GaffneyCline's core businesses. We provide support in all relevant technical and commercial matters across the entire energy value chain facilities, product markets and prices to prepare economic evaluations and risk assessments for any opportunity or project. Due Diligence through the concept of multi-disciplinary teams, can begin with simple pre-data room analyses from public domain information, allowing targeted use of a data room to focus on key elements of an asset or assets, through full technical and commercial Due Diligence, either for indicative bids or for confirmatory Due Diligence.

Our Due Diligence approach captures the full range of potential project risk and uncertainty - including geological and reservoir risk, development risk, commercial risk, engineering, procurement, contracting and project management risk and operational risk.

GaffneyCline enhances its data room and analytical work with experienced personnel to undertake field inspections. Post-acquisition, GaffneyCline offers support services to integrate new assets and assist in the transition of the business to new owners.

Robust commercial evaluations for M&A, Project Finance or RBL

GaffneyCline provides detailed assessments of project resources and reserves, production profiles, development plans, capital and operating costs, development schedules, economics, and project execution plans.

The Due Diligence team constructs cash-flow models specific to the petroleum contract terms and translate independent technical ranges into associated economic evaluations.



Our scope of services

| Strategy | Acquisition | Appraisal | Concept Selection | Technical Definition | Sanction | Development | Operation |
|----------------------------|----------------------------|---|--------------------|----------------------------------|-----------------------|------------------------|--------------------|
| Growth Strategies | Valuations, Due Diligence | Transaction Support & Integration | | CPRs, IPOs and Divestments | | | |
| Opportunity Identification | HIIP Estimates | Geological Modelling | | Reservoir Depletion Planning | | Production Enhancement | |
| Opportunity Screening | GCoS Assessment | Reservoir Modelling | | Reserves and Resources Estimates | | Reservoir Management | |
| Exploration Strategy | Production Forecasts | Resources Estimates & Audits | | Reserves Audits, Unitisation. | | | |
| Development Strategy | Development Plans & Costs | Feasibility Studies, CAPEX, OPEX, Development Schedule | | Design Audits | Budget Review & Audit | Operations Planning | OPEX Optimisation |
| Technology Assessment | Infrastructure & Logistics | FDP Audits | Conceptual Design | Execution Planning | Regulatory Compliance | Cost Recovery Audits | Abandonment |
| LNG Strategy & Markets | Gas Conversion Options | Gas Commercialisation Plans | | Technology Selection | License Agreements | Performance Monitoring | |
| Gas Master Plans | Markets and Prices | Gas Sales & Purchase Agreements | | | Commercial Agreements | Market Options | |
| PSC Terms | Fiscal Terms | Cashflows, Economics, NPVs | | | | | |
| License Rounds | JOAs and Partnerships | Decision Support Packages (FDP, PEP, WBS, EIA), TCMs & OCNs | | | | Execution Support | Operations Support |
| Policies & Processes | Risk Identification | Risk Mitigation | Appraisal Baseline | Risk Management | FID Baseline | Project Surveillance | |

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|---|--|---|--|
| Strategic Advisory | Subsurface Technical & Commercial | Surface Technical & Commercial | Gas Commercialisation |
| Commercial & Economics | Operations & Planning Advisory | Risk Management | |

Our Experience

Over the 50+ years of our existence, the full range of institutions have called upon our Due Diligence services including Energy Majors, Independents, National Oil Companies, National and International Banks, Private Investors, Investment Managers and Private Equity firms. Our experts and professionals understand our client needs and services are tailored to suit individual client's needs.

Independent Technical and Commercial Evaluation – Kazakhstan

GaffneyCline provided a detailed assessment of the Karachaganak field on behalf of the State Oil Company and its Financial Advisers, in support of an equity acquisition. The work included an assessment of future production potential under a range of redevelopment options, determination of associated CAPEX and OPEX and development schedules for each option and preparation of appropriate Cashflow forecasts to support the Lenders valuation of the asset.

Reserves and Technical Advisor – Kazakhstan

GaffneyCline was appointed as Reserve and Technical Advisor to review the reserves, resources and field development of the giant Kashagan Field and four other satellite discoveries. The field is the subject of one of the largest international oilfield investments, located offshore Kazakhstan in the northern part of the Caspian Sea. Working closely with the Financial Advisers, GaffneyCline reviewed the operator's static and dynamic models, and the main project risks, including development costs, gas sales versus gas injection, construction and operation plans and sulphur disposal options. The scope of work included site visits during facilities construction.

Reserves, Technical and Commercial Advisor – Sakhalin

GaffneyCline has worked for the Group of Lenders and the LNG buyers to the Sakhalin II project since 1999. The Sakhalin II project involves the development and the production of oil, gas and condensate from 3 large fields located offshore Sakhalin Island in the Far East of Russia. GaffneyCline has conducted several independent reserve and production profile assessments as well as independently verifying a range of project completion tests.

Due Diligence and Surveillance – UGS Spain

GaffneyCline completed a detailed technical and commercial evaluation of a European Gas Storage Project for a consortium of Lenders. The work included evaluation of reservoir capacity and well injectivity, well and facilities design, development schedule, capital and operating costs, contracts, operator and contractor competency, environmental issues and preparation of a comprehensive risk analysis. Upon financial closure, GaffneyCline continued in a project surveillance role throughout project execution, with personnel permanently assigned to the project, advising the Lenders on progress, expenditures, and approving contractor invoices with detailed monthly reports.

Corporate Acquisition, Valuation and Advice – Europe

GaffneyCline supported a European major in a due diligence of a Germany-based oil company, both from a technical and commercial stand point for acquisition purposes.

Evaluation of UK North Sea Assets – Europe

GaffneyCline assisted an investment trust in the evaluation of a package of UK North Sea oil and gas assets which a major oil company was divesting. The project involved a review of the performance of the assets based on data provided in an online data room, followed by joint work with the client to forecast the future performance of the assets, assuming several scenarios.

Technical Due Diligence for Corporate Acquisition

Dana Gas completed its acquisition of a TSX-listed company providing a major entry to exploration and production assets in Egypt, with a minor interest in offshore Sao Tome and Principe. GaffneyCline provided technical and commercial Due Diligence including an appraisal of the producing assets and an in-depth evaluation of the exploration potential of the areas adjacent to the producing fields.

Due Diligence - European Refinery Acquisition

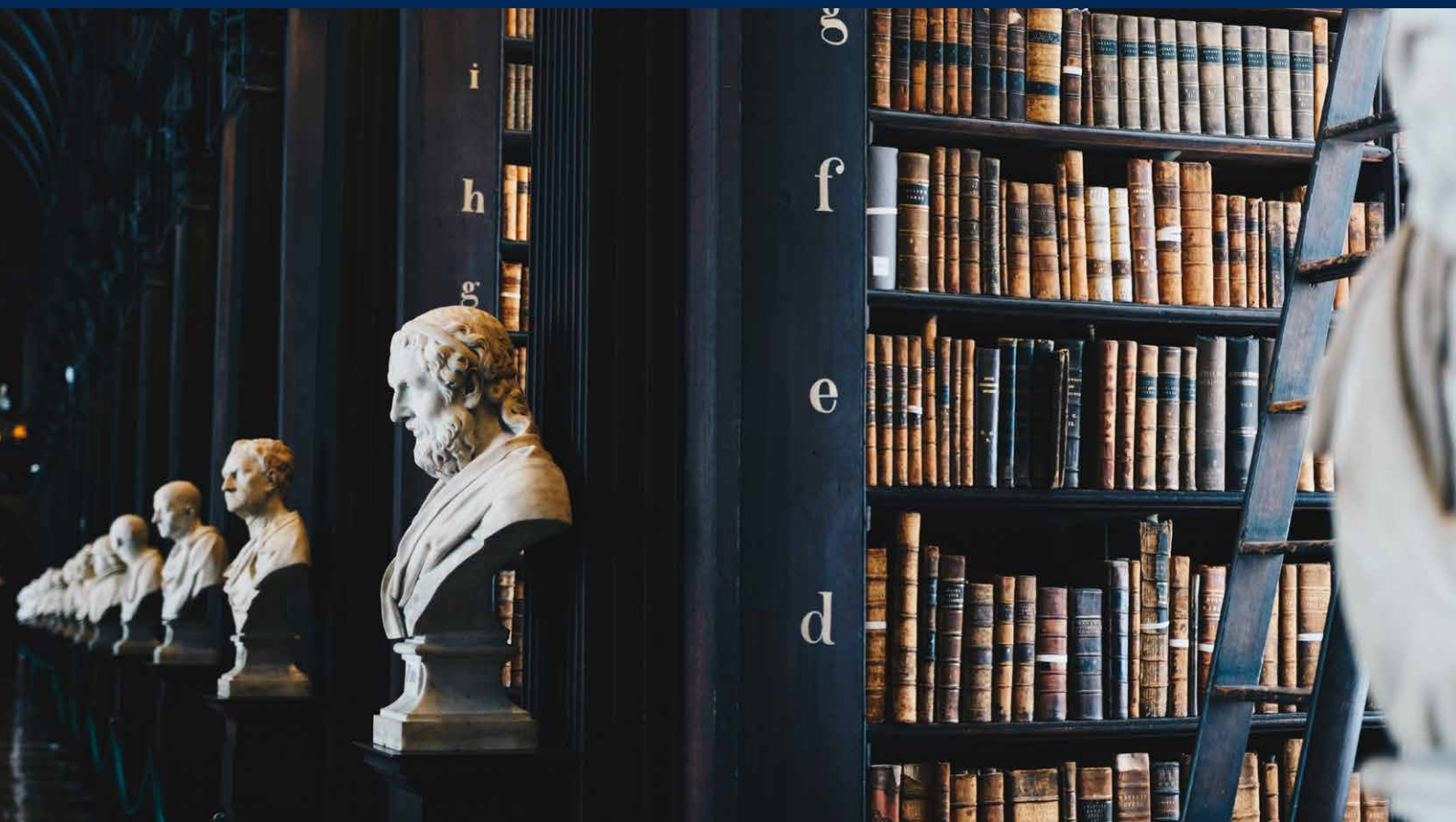
GaffneyCline carried out a technical and commercial due diligence on a European refinery, including market study, as part of a potential acquisition exercise.

Technical/Commercial Due Diligence for Acquisition - Asia

Mubadala Development Company acquired 100% of the shares in Pearl Energy Company from Aabar Investments including 19 concessions in Thailand, Indonesia, Philippines and Vietnam, including production from the Jasmine field in the Gulf of Thailand, from the Salawati Island and Basin and the Tungal fields in Indonesia, development of the Sebuk gas field in Indonesia and exploration in all four countries. In respect of the acquisition, GaffneyCline acted as technical advisor and undertook technical and commercial evaluation of the assets and a site inspection of the Pearl-operated Jasmine oil field in the Gulf of Thailand.

Lenders Advisor - European LNG Project

GaffneyCline recently acted as lender's advisor for an onshore European LNG regasification plant providing technical due diligence of process, market studies and commerciality.





For more information about GaffneyCline's integrated services, please contact your regional GaffneyCline office.

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