



Experts in Nigeria

**Gaffney,  
Cline &  
Associates**

## Who is Gaffney, Cline & Associates?

Gaffney, Cline & Associates (GCA) is a global consultancy that has been offering technical, commercial, and strategic advice to the oil and gas sector for over 50 years. GCA's reputation demonstrates that advice, along with its insight, is high-quality, impartial, technically based, and commercially astute. GCA is often referred to as one of the leading Reserves consultants within the industry, but in reality, GCA offers a much wider range of upstream, midstream and downstream technical and commercial consultancy services. These range from seismic interpretation, static and dynamic reservoir modelling, field development planning, field engineering, gas monetisation, LNG/GTL, mergers and acquisition, economics and project finance. GCA operates worldwide from three main offices in London, Houston and Singapore, and from local offices located around the world.

## Nigeria

Nigeria is a good example of somewhere GCA has been active recently. Over the past seven years, 90 projects have been carried out involving over 57 clients, including some 38 indigenous Independents and International Oil & Gas Companies, 12 International banks/Lenders and 7 Local banks/Syndicated Lenders. GCA has also collaborated with many more companies within the Nigerian Energy Industry. The projects covered several of the services provided by GCA (see Table 1), including Reserves evaluations, field development studies, acquisitions and divestments, technical due diligence and support and Competent Person's Reports (CPR) for stock market listings. In terms of dimensions, these projects covered some 67 licence blocks, 230 fields/discoveries and over 2,900 reservoirs, with the focus being mainly the onshore and shallow-water offshore regions. The following provides brief descriptions of selected studies with no reference to size or budget.

### Technical & Commercial Due Diligence for Acquisition, Nigeria:

Technical/commercial review of an offshore oil field in support of a client's competitive bid for an equity stake in the field.

### Assistance for Field Divestment Valuation:

GCA has assisted eight different clients to date, both Nigerian and International, with recent acreage divestments by Shell, ConocoPhillips, Chevron and other Operators in Nigeria. GCA analysed the acreage and valued the many assets concerned including the facilities. During this process GCA provided technical support to the banks and the clients during the bidding and closing process.

### Competent Person's Report for Stock Exchange:

GCA prepared a Competent Person's Report on certain assets in Nigeria, Kenya and Gambia in which Camac Energy holds an interest, in connection with an application for admission to the Johannesburg Stock Exchange (JSE).

### Offshore Field Development Plan Advice:

GCA carried out a reservoir characterization and simulation study to identify remaining development potential in a mature offshore oil field.

### Assessment of Interests, Nigeria:

For a London-listed independent oil company, GCA prepared an assessment of its petroleum interests onshore in the Niger Delta in Nigeria. These assets comprised formerly producing oilfields.

### Play Concepts & Opportunities:

A review of the oil plays and exploration opportunities in four West African producing countries, on behalf of a client. GCA's report summarized source, reservoir, seal and trap types for all the coastal basins. Potential recoverable volumes distribution by play type were documented and recommendations regarding open acreage, future relinquishments and under-explored leased acreage were included. The database for this work was strictly public domain information supplemented by GCA's long-term experience in Nigeria and West Africa.

### Independent Estimation of Oil Initially-in-Place, Nigeria:

GCA undertook an independent assessment of the oil initially in place in an offshore Nigerian field. This assessment followed an original oil Reserve estimation previously undertaken by GCA.

### Field Evaluation, Nigeria:

For a small independent oil company, GCA carried out a review of third party reports for offshore Nigerian fields to audit the proved oil Reserves. The client required this audit to take a decision regarding the provision of a loan to the operator.

### Competent Person's Report for Stock Exchange:

GCA carried out an independent assessment of Reserves estimates and economic evaluations of a Nigerian block under consideration for acquisition by a UK-based client. GCA provided a Competent Person's Report which was included in the publication of a rights issue and listing application in accordance with the rules of the London (LSE) and Irish (ISE) Stock Exchanges.

Table 1: Summary of Projects in Nigeria (2010-2016)

Nigeria Projects	
Job Category	Number of Jobs
Reserves Audits/Reviews	32
Acquisitions & Divestments (A&D)	21
Evaluation Studies/Field Development Plans	17
Training	6
U&R/Expert Witness	4
CPR (Listing Document)	4
Facilities Engineering/Site Visits	3
Gas Monetisation	3
<b>Total</b>	<b>90</b>

**Review Unitisation Agreement, Nigeria:** GCA provided commercial advice on elements of Unitisation and Redetermination procedures for a potential Nigerian field unitisation between two major oil companies.

**Field Development Review of Offshore Discovery, Nigeria:** GCA carried out a subsurface evaluation of a recent offshore oil discovery, including seismic re-interpretation, volumetrics, notional field development plan and economic evaluation.

**Assessment of Exploration Opportunities, Offshore Nigeria:** GCA assessed the exploration opportunities of a Nigerian offshore block on behalf of a client. The study was based on the geological and geophysical data and exploration well test results. GCA also carried out an economic evaluation of the potential recoverable oil and gas volumes, for the success case.

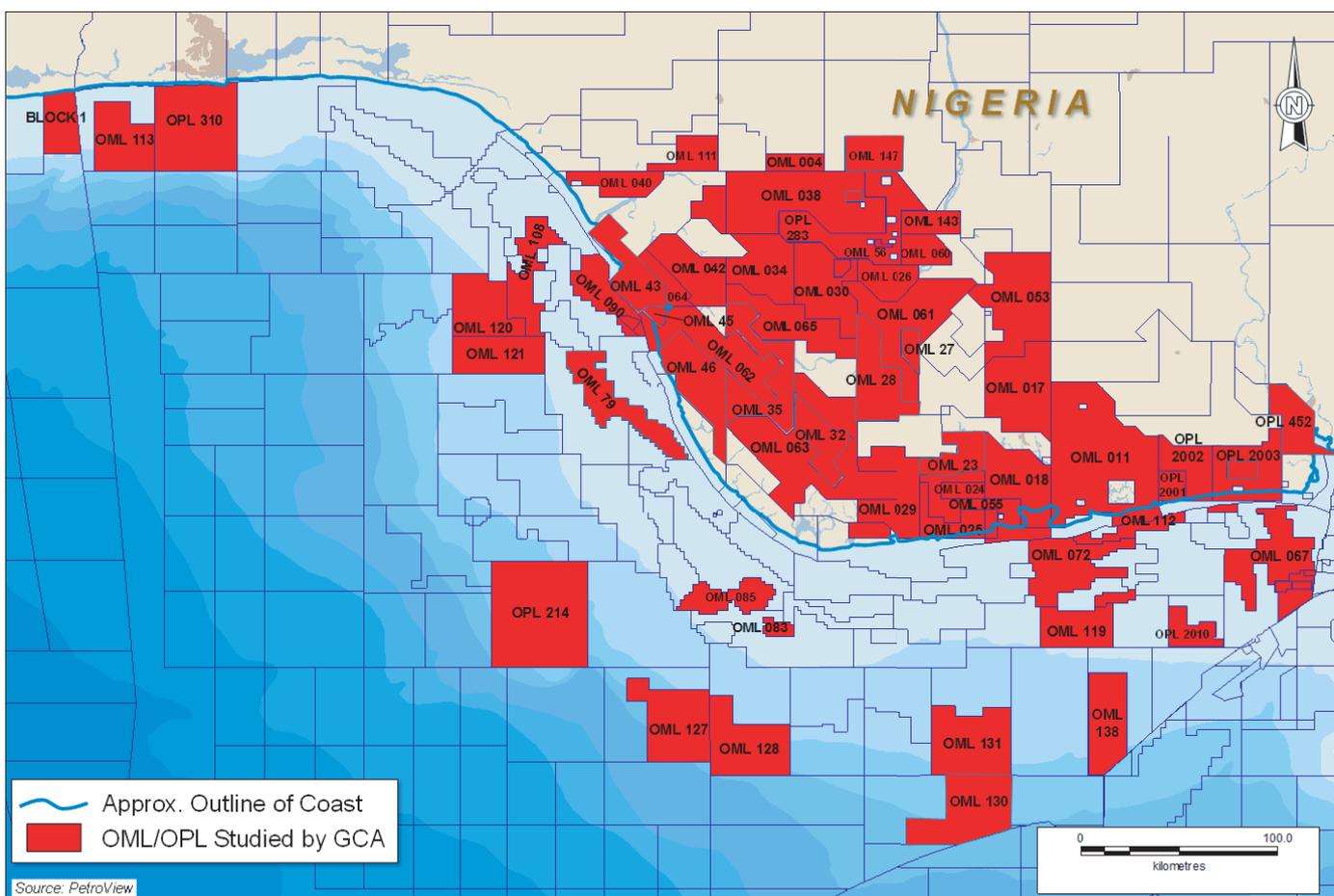
**Due Diligence Review and Subsequent Field Supervision, Nigeria:** On behalf of a European bank, GCA carried out a due diligence review of a Nigerian offshore oil field development for project financing purposes. Subsequently, GCA was instructed to monitor and report on the field development and production.

**Fiscal & Political Risk Analysis:** GCA has conducted many comparative analyses of the fiscal and cost structure of the main producing countries in West Africa. GCA's fiscal models are developed from public domain data plus understanding of how these terms are applied in practice. GCA's cost database is constantly updated to incorporate current costs. In parallel with its economic assessment, GCA has also supplied summaries of political and economic conditions as related to oil and gas projects in selected African countries including Nigeria.

**Review of Discoveries, Nigeria:** For an indigenous Nigerian operator, GCA was commissioned to provide an opinion concerning the estimated oil and gas in place for the company's hydrocarbon discoveries onshore Nigeria.

**Independent Reserves Opinion, Nigeria:** GCA was commissioned by an independent oil company to provide an opinion on its oil and gas Reserves, onshore Nigeria in accordance with SPE PRMS Guidelines.

**Review of Exploration Licences, Nigeria:** GCA conducted a review of two exploration licences, deep water Nigeria, on behalf of an Asian oil and gas company. The limited time available necessitated a very rapid review and data was also limited. However, GCA was able to provide an initial opinion on the assets.



## Nigeria Offshore Shallow Marine Reserves Evaluation:

GCA undertook an evaluation of the Reserves, Contingent Resources and Prospective Resources associated with a shallow offshore OML for an indigenous Nigerian company. This included an audit of the geoscience, petroleum engineering and commercial aspects of the project to derive the resource estimates and NPVs.

## Nigeria Onshore Facilities Audit:

GCA undertook an on-site facilities review of an OML with multiple fields, onshore Niger Delta, as a requirement for a Reserves Based Lending application by a client. The London bank required an audit of all facilities to verify the nature and state of the equipment and whether it was fit for purpose.

## Nigeria Offshore FPSO & Facilities Audit:

GCA carried out a facilities audit of an FPSO operating in the shallow offshore, Nigeria, on behalf of a trader. GCA staff inspected the vessel to verify if it was fit for purpose.

## GCA PROJECTS IN NIGERIA OVER PAST 7 YEARS (2010 - 2016):

- 90 Projects
- 67 OMLs/OPLs
- 57 Different Clients
- About 230 fields & 2,900 reservoirs

## Nigeria Onshore Gas Advisory for Fertilizer Plant:

GCA evaluated the adequacy of the gas supply and Reserves from the gas supplier, which was targeted for use as the feedstock for a new fertilizer plant. The report was required by the client to provide assurance to the banks for the project loan.

## Additional Information

For more information about GCA's integrated services, please contact your local GCA office.

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