

Floating Production Systems Market Update Report 2008/12

The Global Perspectives Floating Production Systems Market Update is an in-depth independent analysis of the global floating production system market. This is the fourth edition published by Infield Energy Analysts and has been completely updated to include new prospects, to provide a global five year forecast from 2008.

Report Overview:

Infield Energy Analysts forecast that capital expenditure for the floating production market will exceed \$34bn over the next five years, an increase of 25% over the previous five years. 2007 was seen as a year of consolidation, but during 2008 expenditure will reach similar record levels seen in 2006 and is expected to exceed this \$6bn record in 2009. Going forward Infield forecasts that the year on year growth will be 4.3%. It is the deep and ultra-deepwater sector that will command a significant percentage of this spend.

At the end of 2007 there were 264 operational floating production systems of which 135 were brought on line during 2003/07. Over the next five years a further 175 units are expected to be brought in to operation, including the "speculative" units which are currently in the yard, but as yet do not have an assigned project.

We expect activity in Africa to continue to dominate both numbers and expenditure in floating production as deepwater and, increasingly, shallow water activities are expected to accelerate. Future activity in Asia should establish this region as the second largest region in FPS market sector.

Activity in the FPS sector is one of the key indices of the health of the offshore industry and as a result increasing levels of investment and innovation indicate that the offshore industry will be able to extract resources from the most challenging regions.

Infield expects that as the global fleet continues to grow, opportunities for consolidation and alternative strategies for ownership and development will present themselves and we could see further structural change in the floating production sector.

These issues and the value of FPS market are discussed and detailed in length in the Global Perspectives Floating Production Market Update 2008/12 Report.

Who should buy this report?

Infield has provided reports to a wide cross section of the offshore oil and gas industry, including E&P companies, contractors, manufacturers, government agencies and the financial community. Within these organisations the reports have been purchased by senior managers and engineers, analysts, consultants and government executives.

Why you should buy this report:

- It is an independent and up-to-the minute analysis of the floating production system sector utilising Infield's unique to the industry inventory of floating production systems and future prospects
- The five year forecasts can be utilised in strategic decision making
- Quickly evaluate the region by region, country by country, sector by sector the unit spend and award forecasts to identify key business areas
- Easily compare and contrast this 2008 forecast with the previous edition to establish the key market drivers and issues affecting the global FPS market

Report Contents

- **Summary & Conclusions** provides an executive overview of the global floating production system forecast in terms of units and capital expenditure value
- **Global Market Context** looks at the supply and demand issues within the industry, offshore market overview, comparative analysis of the conventional and surf markets with forecast development costs of major projects. Analysis of commodity pricing, price versus activity levels analysis, geopolitical overview including discussions on operator types, including National Oil Companies
- **Regional Analysis & Forecasts** provides for each region (Africa, Asia, Australasia, Europe, Latin America, Middle East & Caspian Sea and North America) an overall forecast with analysis by country, type of facility including FPSO, FPS, TLP and Spar, water depth, conversion/upgrade versus new builds and topside weight
- **Component Analysis & Forecasts** provides forecasts for each element of the floating production sector

- **Global Forecasts** provides a comparative analysis of this report's forecast to the 2007 forecast in the 2007/11 edition, along with review and analysis of variance in terms of activity and expenditure. All of the regional and sector forecasts are brought together to complete the global fixed platform market using conventional and alternative model profiles



GLOBAL PERSPECTIVES

Floating Production Market Update 2008/12

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1.1 Introduction

The global offshore oil and gas industry is constantly changing. Any forecast is only as accurate as the original source, its verification and the corresponding length of time since reporting it is for the reasons that the new data for this and subsequent reports within the Global Perspectives range are drawn from the Infield Database. This database is a proprietary, offshore energy database. This database is a proprietary, offshore energy database. This database is a proprietary, offshore energy database.

1.2 Forecast Methodology

The Offshore Energy Database is an advanced repository of global offshore field development information. It contains both historic data of activity and its component elements and information of future development and other information. These projects are not a forecast, but a record of activity and expenditure. This database is a proprietary, offshore energy database.

Searchable Online Projects Database

Purchasers will receive 12 months' free access Floating Production Systems (Standard) which identifies all FPS facilities being planned or considered for development 2008/12. For each projects the access details:

- Operator / Owners / Yards
- Facility Name
- Facility Type
- Water Depth
- Location
- Topside / Total Weights
- Project Status
- Topside Function
- Install & Decommissioning Dates
- Manned / Unmanned / Access Means
- Production / Injection Wells

Subscriptions can be upgraded to include the operational FPS fleet, FSO's and all fixed platforms, as well as all global fields, subsea development, pipelines, flowlines, control lines and field ownership.

The Infield Energy Analysts

Infield is an energy analysis and research organisation that is dedicated to the provision of accurate and up-to-date data, market sector reports, mapping, analysis and forecasts to the offshore oil and gas and marine industries. Infield services clients in over 40 countries from a wide range of organisations including E&P companies, contractors, manufacturers, government agencies and the financial community. Infield is widely acknowledged as the definitive independent information resource and has been involved in many US\$bn of merger, acquisition and transaction market due diligence.

Other Global Perspectives Reports:

- Deep & Ultra-deepwater Projects & Technologies
- Deep & Ultra-deepwater Market Update
- Fixed Platforms Market Update
- Subsea Market Update
- Pipelines & Control Lines

Offshore Energy Database

The Infield Worldwide Offshore Database provides detailed and up to date information about all offshore fields, worldwide. The earliest project on Infield is Bibi Eibat which came on stream in 1923 in Azerbaijan. The furthest ahead are decommissioning projects not expected to proceed for several decades. Infield comprises 8,200 offshore fields in 127 countries, involving over 700 operators and more than 1,100 participant companies. Infield is updated daily so clients can expect to be kept informed of new information as and when it happens.

- Fixed Platforms
- Floating Production Systems
- Subsea Trees, Manifolds/Templates
- Rigid & Flexible Flowlines
- Control Lines & Umbilicals
- Single Point Moorings
- Specialist Vessels
- Field Operators & Ownership

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Floating Production Market Update 2008/12

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Global Perspectives Floating Production Market Update 2008-2012

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Some of the statements contained in this document are forward-looking statements. Forward looking statements include, but are not limited to, statements concerning estimates of recoverable hydrocarbons, expected hydrocarbon prices, expected costs, numbers of development units, statements relating to the continued advancement of the industry's projects and other statements which are not historical facts. When used in this document, and in other published information of the Company, the words such as "could," "forecast", "estimate," "expect," "intend," "may," "potential," "should," and similar expressions are forward-looking statements.

Although the Company believes that its expectations reflected in the forward-looking statements are reasonable, such statements involve risk and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements. Various factors could cause actual results to differ from these forward-looking statements, including the potential for the industry's projects to experience technical or mechanical problems or changes in financial decisions, geological conditions in the reservoir may not result in a commercial level of oil and gas production, changes in product prices and other risks not anticipated by the Company. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties.

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This Report

This report concentrates on key market information within the sector. The fundamental aim is to provide the headline information, figures and statistics required to understand the main drivers, size and value of the various elements that make it up.

This report is designed as a business tool and as such makes no apologies for its forthright style.

Outline structure of Report

The early chapters of the report scrutinises the Regions and Key Sectors, whilst the final chapter summarises the report with the reiteration of our main global forecasts.

Clarity & Terminology

Within the context of this report a consistent set of terms is used to ensure clarity, consistency and comparability. The most important of these are:

Deepwater – fields or development activity in water depths $\geq 500\text{m}$.

Ultra-deepwater - fields or development activity in water depths $\geq 1500\text{m}$ (unless stated ultra-deepwater is a subset of deepwater).

Regions – A definitive list of which countries are classified within which regions is appended to this report. If you require a different country/region classification then please contact us directly. Where possible the same colour schemes representing each region have been used throughout this report. In addition, the colour representation for status, country, development type, operator etc. has also been sustained, where possible, throughout this report.

Floating Production Systems Online

With the purchase of *Global Perspectives – Floating Production Systems*, free access to **Floating Productions Systems Online** for a twelve-month period is included. **Floating Productions Systems Online** is a website service which provides information on the fields utilizing floating production systems which are now under development, or which are planned and possible for the 2008-2012 period. This service details key information about each project including; field name, on-stream date, field location, water depth, reserves, production rates, field life, facility type and well numbers, operator names, addresses and contact details.

Floating Productions Systems Online is available via the Internet at <http://www.infieldonline.com> and a subscription form is included with this Report. **Floating Productions Systems Online** is updated on a monthly basis. More frequent updates and expanded coverage may be arranged. Existing users of Infield Systems Databases may modify their current arrangements and should contact us for details.

Data Sources

The base data used in this study relate to fields utilising a floating production system which were brought into production over the 2003-2007 period, or which are currently under development, planned or possible for the period 2008-2012. We refer to fields in the historic period as '**projects**' and to those in the future period as '**prospects**.' It is important to differentiate between basic field information (prospects) and the market information '**forecasts**'. The methodology used to derive these forecasts from the Offshore Energy Database is contained within the OFFPEX™ modelling and forecasting system, outlined below.

The information on the floating production projects and prospects, and their associated development hardware, was taken from the Infield database on during Q2 2006. Data given elsewhere in the text are drawn from a wide range of publications, national and international statistics and internal analysis by Infield Systems. Where appropriate, the relevant source has been cited. This information has been supplemented by our own contacts with operators, contractors and suppliers worldwide.

The OFFPEX™ Modelling & Forecasting System

The OFFPEX™ Modelling & Forecasting System is a proprietary system developed, owned and operated exclusively by Infield Systems. Working in conjunction with the main Infield Systems databases, including the Offshore Energy Database, the OFFPEX™ system allows for the modelling and forecasting of all aspects of the development cycle of the offshore oil and gas industry. This includes project timing, development scenarios, expenditure allocations, supply & demand planning, operator profiles etc. Whilst producing models and forecasts over the medium (5-10 year) and longer-term (10-20 years) the OFFPEX™ system also takes into account the influences of macro-economics, techno-economic, geo-politics and other discerning factors to produce alternative expenditure scenarios.

Built from the bottom up, the OFFPEX™ system is highly versatile and infinitely adaptable to allow for specific field analysis by individual elements through to major global or sectoral forecasts.

The OFFPEX™ Modelling & Forecasting System is the **only** complete global view of the entire offshore industry available today, anywhere in the world, built from the bottom up and data led.

Further details of the OFFPEX™ system can be obtained from Infield Systems Limited.

The Authors

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Will has completed formal training in business and law and has a background in management with a number of blue-chip organisations including Thorn and Total. In addition, Will has spent over seven years undertaking strategic and market analysis at the highest level within the offshore industry. An accomplished author of global reports on key sectors of the offshore energy industry, Will has developed an extensive array of medium and long-term market and financial models that are used by many of the industry's key players. As an analyst Will has completed a multitude of sectoral, geographical and strategic studies as well as providing detailed commentary on macro-economic and techno-economic trends affecting the offshore industry and acting as an independent advisor in multi-million dollar acquisitions and divestitures.

Roger Knight – *Data Services Manager & Author*

For the past 18 years, Roger has been responsible for the collection, validation and evaluation of the global offshore oil & gas data held on the Infield Systems database, the source of the field information used in this study. He holds a PhD in Geology and is a member of the Institute of Petroleum. Prior to the revolution, Dr Knight worked as a university lecturer in Petrology and Structural Geology in Iran.

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George is an economist with a Bachelors degree from Portsmouth Business School. His interests are OPEC Policy, Mergers and acquisitions within the industry and international relations. George is currently specialising in the markets for the supply and demand for high specification heavy lift and accommodation vessels supporting the development of major offshore oil & gas projects around the world.

Infield Systems Limited - Company Profile

Since 1991, Infield database has been providing accurate, timely and detailed data and information on the worldwide oil and gas industry. Now widely acknowledged as one of the definitive independent reference sources, Infield Systems has developed a range of products and services designed to assist senior executives in business decisions. Whether supplying or managing raw data for internal company use or providing high-level strategic views on global market developments, Infield Systems operates with the highest standards of accuracy, clarity and professionalism to gain results.

All of Infield Systems' products and services are supported by direct access to senior analysts and support personnel, ensuring high standards of service and responsiveness across the globe.

- **Comprehensive worldwide offshore field data**
- **Complete global offshore industry model**
- **Project databases & information**
- **Data analysis**
- **Business strategy & analysis**
- **Quantitative & qualitative surveys & analysis**
- **Global, regional & sector publications**
- **Market analysis & benchmarking**
- **Competitor analysis & monitoring**
- **Scenario development & planning**
- **Tailored research & analysis**
- **Market due diligence**
- **Online GIS & Mapping**

Infield Systems' range of in-house skills include all the major industry disciplines from Geology, Finance & Law through to Senior Operational Management, allowing for the provision of data, information and reports that are realistic, accurate and insightful. Infield Systems' reports and services are used to support business decisions at a senior level and as such are presented with a clarity and conciseness that has brought international acclaim.

As well as bespoke data and information services, Infield Systems provide packaged online databases which offer executives key information on various industry sectors:

- **Deepwater Online**
- **Subsea Online**
- **Floating Production Systems Online**
- **Fixed Platforms Online**
- **Pipelines Online**

Infield Systems data and data sets can be interrogated online or downloaded for use offline with all database and spreadsheet software packages. Data can be incorporated into companies' intranets and databases to build powerful knowledge management systems.

Bespoke databases can be drawn from the following data sets:

- **Fields**
- **Platforms**
- **Subsea Structures**
- **Pipelines**
- **Control Lines**
- **Single Point Moorings**
- **Onshore Terminals, LNG & GTL Plants**
- **Operators**
- **Field Ownership**
- **Specialty Vessels Database**

Furthermore, all of these databases can be combined with the OFFPEX™ Modelling & Forecasting System to produce specific business tools.

Infield Systems Limited is also developing the Infield EnergyGateway Mapping & GIS System which provides a geographically presented view of the Infield Offshore Energy Database

Global Perspective Market Update reports are range of insightful publications on key sectors of the worldwide energy industry which not only provide headline market information in a clear and concise manner, but are built with a highly advanced modelling process that allows for infinite interrogation and further analysis for those who require more detail.

- **Deep & Ultra-deepwater Market Update**
- **Fixed Platforms Market Update**
- **Floating Production Market Update**
- **Subsea Production Market Update**
- **Pipelines and Control Lines Market Update**

Global Perspective Technologies & Projects reports provide a comprehensive insight to the technologies employed in industry. They are designed for executives entering the sector for the first time who need a fast and clear understanding and for seasoned individuals who need to keep abreast of new advancements, new technologies and companies entering and leaving the sector.

- **Deep & Ultra-deepwater Technologies & Projects**

Analytical & Consultancy Services

Infield's analytical team works on an independent and strictly confidential basis. The non-exhaustive list below outlines the capabilities of the Analytical Services team.

Project databases, information & research: Collating, verifying and providing specific project data and information by sector, geographic location or company. Detailed company information is maintained on many of the world's oil & gas operators, contractors, key suppliers as well as extensive records of specific and generic assets. Dedicated research of new business concepts or products, diversification opportunities or even acquisition targets.

Data analysis: Providing statistical analysis of offshore data for existing or prospective new markets.

Business strategy & analysis: Supporting senior executives with strategic decision making and analysis.

Scenario development & planning: Development of long-term scenarios and base-case assessments of countries, fields and players. Including macro-economic, geo-political and energy mix analysis to aid strategic, business model, marketing and investment planning.

Market analysis & benchmarking: Comprehensive market information to allow for business development or diversification. Using multiple inputs to develop advanced market models either as an industry 'snapshot' or as a corporate benchmark for further internal assessment. Available as stand-alone reports or a part of a strategic planning or development exercise

Competitor analysis & monitoring: Detailed assessment of key competitors and prospective competitors including market share, strategic developments and financial performance. Continual monitoring service of key competitors, sectors, assets and or new offshore market developments.

Quantitative & qualitative surveys & analysis: Confidential or independent in-depth surveys of key sectors or aspects of the oil & gas industry on a national, regional or international basis.

Market due diligence: Assisting investment banks and other financial institutions through the provision of independent market assessments for products and services. Deal size undertaken to-date ranges from \$0.5m to \$1.2bn and includes new product launches, company formation, mergers, acquisitions and divestitures. Provision of independent market view of markets, sectors and companies including market share, market positioning, customer perceptions, competition issues, threats and opportunities