

**SGS**

**OIL, GAS &  
CHEMICALS  
SERVICES**

**EXPERTISE**

**LICENCE APPLICATION SUPPORT SERVICES**  
**UKCS – 26<sup>TH</sup> LICENSING ROUND**

HORIZON

**SGS**

## THE SERVICE

SGS Horizon (SGSH) has significant in-house expertise with **licence application support**. Projects are managed by principal professionals having substantial licence application experience through previous positions with Oil Majors.

SGSH has supported Operator Companies with technical preparation of Licence Applications for the UK 24<sup>th</sup> and 25<sup>th</sup> Licensing Rounds on a number of tracts spread over six quadrants on the UK Continental Shelf.

SGSH expertise ranges from single block screening and feasibility studies to larger multi-area assessments. Evaluations include seismic and well data interpretation, definition of play fairways, prospect identification, deterministic and stochastic volumetric calculations, uncertainty and sensitivity analysis, prospect and block ranking, and static and dynamic reservoir modelling. If required development screening and technical cost assessment can be included. In addition, SGSH can compile licence application documents and assist in presentations to the Authorities.

## TRACK RECORD - UKCS

SGSH has a substantial track record of varied studies in exploration and development projects in the UKCS.

### ❖ TERTIARY UKCS EXPERIENCE

SGSH work on the UKCS Tertiary includes regional exploration, sedimentological studies, reservoir modelling, borehole image interpretation and petrographic description of a number of Eocene and Palaeocene Formations. Examples include:

#### Northern North Sea (mainly Quad 9)

- Single and multi-well sedimentological, petrographical and reservoir quality evaluation of complex high-density turbidite, debris flow and Tertiary Frigg and Balder sands
- Borehole image analysis, reservoir characterisation and sedimentological evaluation of Tertiary turbidite sediment
- Multi-well study of Eocene and Palaeocene Sandstones
- Prospectivity review in support of Licensing Round evaluations

#### Central North Sea

- Exploration project including Palaeocene correlation, prospect mapping and volumetric evaluation, in support of the 25<sup>th</sup> licensing round
- Well studies of the deep water Eocene Tay Sandstone including sedimentology, petrography and reservoir quality
- Evaluation of borehole images to assess thin bed pay including net to gross calculations, Forties Sandstone

- Structural analysis to investigate potential fill and spill models for the Guillemot area petroleum system
- Property modelling and volumetric calculations, simulation and well planning for an infill drilling campaign
- Structural and property modelling of complex fan systems

#### Moray Firth

- Reservoir characterisation of deep water Palaeocene Andrew Sandstone
- Geological modelling of the Palaeocene of the Quad 15 Field area for simulation and determination in-place reserves

#### West of Shetland

- Review of the Eocene and Palaeocene (focusing on slope canyon, terminal fan and shelf environments) in Quad 205, 213 and 214, Faroe-Shetland Basin in support of the 25<sup>th</sup> Licensing Round

### ❖ JURASSIC UKCS EXPERIENCE

SGSH has extensive in-house experience of the Middle and Upper Jurassic of the UKCS through regional reviews, seismic analyses, prospectivity studies and elaboration of static geological models. Examples are:

#### Northern North Sea

- Sedimentological core interpretation and regional review of depositional systems in the Jurassic Tarbert and Balta Formations, Brent Group, pertaining to various fields Quad 3 and Quad 211
- Evaluation of depth related diagenesis on reservoir quality in Upper Jurassic deep water sandstones, Quad 9
- Multi-well petrographical review of estuarine sediments in the Middle Jurassic Beryl Formation, field on Quad 9
- Assessment of the Jurassic Nansen and Eriksson Formations, Field Quad 9
- High and low case volumetric calculations, detailed structural and property modelling and full field simulation models for field development, various fields in Quads 3, 210 and 211

#### Central North Sea

- Construction of geological models, including facies and property modelling and the determination of in-place reserves in the Jurassic Fulmar and Lower Scott Formations, various fields
- Integrated studies on HP/HT fields and prospects including seismic interpretation, Petrel modelling and fault seal analysis for fluid migration and well productivity

### ❖ PERMO-CARBONIFEROUS

SGSH has worked extensively on both UK and Dutch sectors of the Southern North Sea and can offer solid experience with the Permian and Carboniferous gas plays.

Many of the examples below include seismic evaluation and reservoir modelling.

- Regional review of facies distribution and reservoir quality of mixed-fluvial aeolian depositional systems in the Permian Rotliegend and Carboniferous
- Specific reservoir quality studies of the Permian Leman Sandstone Formation
- Play fairway assessments, exploration potential evaluations including 24<sup>th</sup> Round Licence Application support
- Regional multi-well sedimentology, reservoir quality and sequence stratigraphic studies of fluvial sandbodies of the Westphalian A/B Coal Measures
- Sedimentological core descriptions, petrography and reservoir quality of Namurian sediments
- Large fluvial modelling exercise pertaining to in-place and recoverable hydrocarbons including well optimization
- Field development studies, infill campaign evaluations, equity related projects

## WHY SGS?

Founded in 2001, SGS Horizon became part of the SGS Group in April 2008. As part of SGS's Oil, Gas & Chemicals business, SGS Horizon provides integrated solutions throughout the field lifecycle, covering all subsurface, well and engineering aspects from exploration through development and production to abandonment. These solutions help the oil and gas industry add value to their assets. Our in-depth knowledge and experience of a wide range of oil and gas regions, settings and environments, enables us to tailor our services to almost any specific situation or project.

SGS is the world's leading inspection, verification, testing and certification company. Our global network of offices and laboratories and our dedicated team allow us to respond to your needs, when and where they occur. Our reputation for independence, excellence and innovation have established us as the market leaders in providing services that improve efficiency, reduce risk and deliver competitive advantage for you.

## FOR MORE INFORMATION, CONTACT

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WHEN YOU NEED TO BE SURE