

Technical Consulting

Safety Management – Technical Feasibility Study



Aviation Requirements for Alaskan Offshore Oil Exploration & Production



Shell Aircraft International (SAI) on behalf of Shell Exploration and Production Western hemisphere (EPW).

A feasibility study to determine the long-term fixed and rotary wing support to 2020 in the on and offshore areas of the multi-billion dollar Shell operations in the Alaska region. The study encompassed aviation requirements to support the survey, drilling, construction and operational phases of Shell EPW's operations in the north of Alaska. Air support roles included drill rig crew rotation, search & rescue, oil spill recovery, air survey and environmental/indigenous mammal monitoring.

Client Profile

Shell is a global group of energy and petrochemical companies organised into Upstream, Downstream and Projects & Technology. Shell focuses on exploring for new oil and gas reserves and developing major projects where their technology and know-how adds value to the resource holders. Upstream businesses explore for and extract crude oil and natural gas. The Arctic's remoteness and harsh conditions require a range of advanced technologies to develop resources safely.

The Challenge

The client wanted to quantify all the aviation requirements for Shell EPW operations in Alaska and consider the solutions available at the time and in the future.

This involved consultation with Shell oil industry experts in Houston and Alaska within a very challenging time scale of only four months. Metocean data and the experience of operators in the region had to be gathered to allow key constraints to be considered. In total seven different Shell divisions were accommodated in the study.

The Solution

The Study concluded that the use of aviation for efficient and flexible mass transport of rig workers, plus the additional safety-related and environmental tasks was viable.

- ▶ A total of 46 recommendations were put forward, including specific ones dealing with the temperature envelope for aircraft operating in Alaska, new technology nav-aids to supplement situational awareness, airfield ILS systems, anti-ice, de-ice and Rotor Ice Protection Systems, Arctic experience levels, company ethos towards HF, air operators' surge flying procedures, the optimum contract strategy and its suggested implementation.
- ▶ Baines Simmons consultants mobilised very quickly; a consultant arrived in Houston within the first week and one in Alaska the following week.
- ▶ Data was efficiently collected from across the divisions of Shell, their aircraft manufacturers and Air Operators in the Arctic environment. This produced a consolidated report to assist Shell's Management Board.
- ▶ Data was expertly analysed, developing practical recommendations and competently presented to justify forward budgeting for capital and operational expenditure on air systems.

"I am extremely pleased with the pace of the study."

Shell Houston

"Your professionalism as well as enthusiasm for the project, has been greatly appreciated."

Shell Houston

"Based upon my perception of your inputs during our discussions I've no doubt. The report is top drawer."

Bristow Inc., Canada.

"It looks good. Thanks!"

Shell Anchorage

"I can't believe that you assimilated so much information in such a short time."

Cougar Helicopters,
Newfoundland

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The Outcome

Shell was extremely pleased with the findings and recommendations and concluded that this had been a highly satisfactory project. The study will be built upon over the coming months and years.

Baines Simmons was asked to be available for further Shell projects and commenced a major SMS project in Brunei in late 2011.

Summary of Baines Simmons services utilised

Consulting support

Safety, Regulatory & Technical Consulting