Appendix 1

Exhibit (“Study Specifications”)

Well integrity securance strategies in deep water shallow unconsolidated formations

15th January, 2009

Japan Oil, Gas and Metals National Corporation

1. Title of Study

The Study of well integrity securance strategies in deep water shallow unconsolidated formations. ("Study").

2. Objective of Study

The objective of the Study is to propose the possible risk scenario of well integrity under the conditions of gas hydrate production test in deepwater shallow formation using theoretical model and natural/industrial analogues, currently available techniques, and necessary study items that should be done before the production test planned in 2012, based on the geological and geomechanical conditions of Eastern Nankai Trough area.

The gas hydrate bearing sediments in Eastern Nankai Trough are unconsolidated sand-silt interbedding, and exist in 200-400m interval below sea floor under 800-1200m water depth. To produce gas hydrate intensive drawdown (7-13MPa) will be applied into such weak formation for the depressurization in gas hydrate zones. In such case, water and gas communication to sea floor or deeper aquifers through casing annulus or in formations is one of the possible risks that prevent continuous gas production.

Because the gas hydrate reservoirs exist in shallower and unconsolidated sediments that are not targets of conventional oil and gas production, special attention on the issue of well integrity must be paid. The Study gives current technologies and future R&D targets for optimal well construction.

3. Scope of work

In order to achieve the objective set out in paragraph 2 above, the contractor shall perform, research, prepare and provide Methane Hydrate Research Project Team in Technology Research Center of Japan Oil, Gas and Metals National Corporation ("JOGMEC-TRC-MH") with a written report on the subjects described in paragraphs 3.(1) – 3.(5) below.

(1) Investigate examples of well construction in similar condition as industrial analogues. The investigation should includes the example of gas/oil leakage and prevention/mitigation methods.

(2) Establish possible risk scenario of well integrity problems for MH production by depressurization based on theoretical/numerical models and industrial analogues and field data of Eastern Nankai Trough and Mallik projects*.

(3) List the currently available specific technology of zonal isolation, such as
- Conductor pipe placement;
- Cement and other mechanical zonal isolation technology for deep water shallow sediments;
- Cement and zonal isolation evaluation techniques;
- Diagnosis technology to detect communication behind casings such as optical cable technologies, cased-hole logging etc.

Applicability of those technologies in the MH reservoirs in Eastern Nankai Trough (deepwater, shallow, cold temperature and unconsolidated) should be stated.

(4) List the necessary R&D items for the future offshore production test that will be conducted in 2012 in Eastern Nankai Trough.

(5) Suggestions from the contractor (if any)

4. Deliverables, Duration of Study

Deliverables shall include and satisfy all of the following items:

(1) Three copies of Final Report shall be completed and delivered to JOGMEC-TRC-MH no later than 10th March, 2009.

(2) Three copies of Electronic Files(CD or DVD) of the Report shall be delivered to JOGMEC-TRC-MH no later than 10th March, 2009.:All electronic files consisting of the Report shall be written by Macrosoft Word and recorded on the CD's. Such electronic files shall be editable and citable by JOGMEC-TRC-MH.

5. Methodology

The contractor shall carry out all work related to the Study with such care and skill as could reasonably be expected from a professional providing the same or similar services and in conformance with industry practices and standards.

6. Workplace

The workplace shall either be the contractor's workplace or a place designated by JOGMEC.
End of "Study Specification"

*The following data will be provided to the contractor:
Available data
Full dataset of past two drilling campaigns (1999-2000 METI Nankai Trough (NT), 2004 METI Tokai-oki to Kumano-nada (T-K) that includes
- Geotechnical survey data of shallow silty sediments obtained in METI Nankai Trough
- Core derived formation strength data of shallow silty sediments and hydrate bearing sandy formations (METI T-K)
- Log derived formation property data (gas hydrate saturation and permeability) (METI NT, T-K)
- Raw LWD and wireline logging data (RT, GR, DTSM, DTCO, NPHI, FMI/GRV images (METI NT, T-K)
- Production history of Mallik 2008
- Current plan of marine gas hydrate production test
  - Production test plan
  - Expected gas and water production rate
  - Well construction and completion plans for gas hydrate production in Eastern Nankai Trough using subsea BOPs.
  - METI Tokai-oki to Kumano-nada Experimental Wells drilling reports