Perspective on ANS Methane Gas Hydrates

Alaska Hydrate Planning Workshop

Scott Digert, BP Exploration (Alaska) Inc.

August 17, 2005

BP is supporting MGH assessment

We recognize the in-place magnitude of MGH, and are working to understand if MGH could be a commercially viable resource in the future.

BP has been a leading corporate supporter of Methane Gas Hydrate resource assessment:

- Corporate partner with DOE in resource assessment projects in Alaska
- Part of Malik research consortium
- Supporting MGH research at UAF, UA, and CSM

Impact of Hydrates on the ANS

Can a Risk become a Resource?

- MGH are currently more of a risk to production operations than an asset:
  - In-situ MGH are a significant, but well known, drilling risk
  - Formation in wellbores or flowlines can block production
- MGH is of interest for several potential applications:
  - Fuel for field use in power generation, compression, etc
  - Injection into oil reservoirs for pressure support
  - Fuel for potential thermal operations for geographically-coincident viscous oil recovery
  - Sales via export pipeline
- But...commercial viability of MGH is not yet clear.

Design of BP/DOE MGH Appraisal Program

Program designed to assess potential in 3 phases:

1. Compile and assess existing data: develop volumetrics and model reservoir performance and regional production scenarios, and check screening economics
2. Obtain new well data: cores, logs, possible flow test, from "well of opportunity" or test well
3. Acquire additional data or well: more core & log data, possible longer flow test

Other significant industry criteria:

- Require clear decision gates between phases
- Use dedicated external team to provide focus
- Minimize impact on BP asset teams and producing units

Current Status

- We're pleased with the Phase 1 progress to date:
  - Thorough interpretation and mapping of data released in Milne Point Unit
  - Identification of likely MGH and associated free gas accumulations
  - Initial modeling of several depletion scenarios

- There is still much work to be done
  - Still assessing depletion scenarios
  - Have identified potential MPU subsurface data acquisition sites, but these would require further delineation
  - Surface options for potential use of gas have not been developed