

P.O. Box 577  
Brookshire, TX 77423  
U.S.A



**Engineering  
Services, Inc.**  
ISO 9001:2000 Certified

Tel: (281) 934-1500  
Fax: (281) 934-1600  
west@westengineer.com

18 March 2003

Mr. Bill Hauser  
Minerals Management Service  
381 Elden Street  
Mail Stop 4020  
Herndon, VA 20170

**Subject: Evaluation of Secondary Intervention Methods  
in Well Control**

**Reference: Solicitation 1435-01-01-RP-31174**

Dear Mr. Hauser:

Based on your previous comments we have prepared the final report for the research project "Evaluation of Secondary Intervention Methods in Well Control" as required by the contract for your review. Additional comments for clarity of the information and presentation are welcome.

If you have any technical questions about this report or its contents, please do not hesitate to call myself or Jeff Sattler for additional information. We look forward to seeing you in College Station on April 2<sup>nd</sup>. Thank you for the opportunity to provide the MMS with this research data and analysis.

Sincerely,

Raleigh S. Williamson, P.E.

Attachment:

Evaluation of Secondary Intervention Methods in Well Control

## 7.2 Rig with Hydraulic control systems

### Auto shear

The MMS has addressed the risk of accidental disconnect in NTL 2000-G07. The addition of an auto shear circuit is recommended to provide the automatic closure of the well in the event another cause accidentally unlatches the LMRP.

This is the class of rig that would benefit most from an improved design that incorporated the use of existing subsea accumulators.

Past practice has been to not combine components from the primary control system with those of secondary intervention. However, the line between primary and secondary systems is already becoming blurred due to control system manufacturers combining components in both type systems as a method of controlling cost.

MMS guidance on this matter could be very beneficial to the industry.

Again, an ROV would be required to secure a non flowing well.

## 7.3 All Rigs

- Any system designed to shear pipe must be demonstrated to be capable of shearing the pipe.
- Drill pipe tool joint placement at the time the shear activity occurs is critical.
- If a secondary intervention system is added to an existing system, a risk analysis should be performed to ensure the design is compatible and functionality optimal.
- MMS guidance should be provided concerning arming of secondary intervention systems.
- ROV capability as a means of secondary intervention should include the ability to utilize subsea accumulators as a supply source in order to ensure the designated functions can be performed in the API recommended time.
- Monitoring of the status of secondary intervention systems is desirable.
- Acoustic systems are not recommended because they tend to be very costly, and there is insufficient data available on system reliability in the presence of a mud or gas plume. However, acoustic communication in the form of verification of system status and remote arming should be considered.