

ARMS-5 BELL DISCUSSIONWAIT ON WEATHER

A total of two dives were pulled early due to bad weather approaching. Both dives were in June during the 30" and 20" cementing operations. Since there was not a rig camera available, the 30" and 20" casings were cemented "blind" with no attitude or altitude readings for the PGB or 18 3/4" housing. Both operations are considered critical for proper BOP/Wellhead alignment.

The ARMS-5 BELL contains a crew of two; one pilot and one technician. The human factor is a partial contributor to operational considerations for the Arms-5-Bell. The ROV un-manned sub has no human factor present, so it can be operated in sea states where the only consideration is loss of the ROV. In addition, the ROV can dive faster through the air-water interface due to its vertical thrusters, as opposed to the gravity lowered ARMS-5 BELL.

The ARMS-5 BELL did not perform any task that a suitably equipped ROV could not have performed. The ARMS-5 BELL recovered and replaced the AX ring gasket and secured the TGB to the PGB with slings. These tasks are routine with a suitable ROV as well.

For guidelineless deepwater drilling, the diving system employed would be the only "rig" camera available for critical drilling/cementing operations. With the ARMS-5 BELL unable to dive due to moderately rough weather, critical operations were done "blind". This factor could have caused a re-spud of the well, if the operation had failed.

With Global Marine's demonstrated reluctance to properly rig up a heave indicator so they could use the "Bomb-Shell" camera for re-latching the LMRP/BOP connections, the ARMS-5 BELL was employed to observe the operation. This method of operation places the ARMS-5 BELL in a situation where large storm generated waves prohibit launching. This situation was not a planned use for the ARMS-5 BELL.

The ARMS-5 BELL proved to be uneconomical when combined with the rig type, sea states, and job requirements necessary for Yolla No 1. Had the ARMS-5 BELL not been previously installed by Amoco Indonesia, a suitably equipped ROV would have been the proper choice for heavy weather, shallow water operation.