Loss of position of DP DSV

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A Member has reported that a DP diving support vessel was in the midst of a diving operation when it rapidly moved off location by some 107 metres from the work site.

What happened?

Two divers were locked out at the time. Diver 1 was working while diver 2 was at the bell on the guide weight. The effect of the force was such that diver 1 could not return to the bell on his own, nor could Diver 2 manage to haul him back via the umbilical. Once recovered to the bell, the diver, overcome with carbon dioxide toxicity as a result of overbreathing inside the helmet, began to vomit almost immediately upon having his helmet removed. He was settled down, put on BIBS and gradually recovered.

Our Member’s investigation revealed the following:

The company’s investigation concluded that the ‘run off’ was attributed to the effects of a *Soliton*. By the simplest definition, solitons are subsea waves of significant risk potential for diving and ROV operations. Detection by slight surface irregularities with either the naked eye or radar is possible. They tend to be seasonal and, although their direction of travel is somewhat predictable, reliance on direction alone as a precaution is not advised.

Recommendations

The company carried out a risk assessment and made recommendations for operating in waters of known Soliton activity as follows:

- When feasible, schedule work for low season Soliton activity.
- Seek local knowledge and experience with regards to expected activity levels.
- The vessel heading should be into the direction of the most likely Soliton approach regardless of optimum heading for DP or other environmental considerations.
- A dedicated competent person shall remain on radar watch at all times during critical work phases.
- Radar shall be tuned to optimise potential to see approaching Soliton, setting the sensitivity/gain to reduce wave scatter.
- Break away or quick release lines should be installed on all down-lines.
- Facility to overboard the supply end of tool umbilicals with buoys attached

should be provided.

- Clear runs for overboard lines on deck should be established and maintained.
- When feasible, two divers should be working together at all times.
- The DP operator is to be alerted when the divers have entered a structure or confined area.
- Optimise control at subsea structure positions.
- Divers should be immediately alerted of all anomalies.
- No diver ‘turn arounds’ if attached to fixed structures in known Soliton areas.