

# Safety Alert



## Drilling Rig Boom Dump Rams Fail



IN MAY 2017 WJ'S SOILMEC PSM1350 DRILLING RIG HAD A MAJOR FAILURE OF THE MOUNTING PIN SECURING THE HYDRAULIC DUMP RAMS ON THE ARTICULATED BOOM ARM OF THE RIG.

ON THE DAY OF THE INCIDENT WHILST IN THE PROCESS OF DRILLING THE UPPER SECTION OF A WELL USING AIR HAMMER DRILLING TECHNIQUES. THE SYMMETRIX DRILLING CASING BECAME JAMMED WITHIN THE WELL AT CIRCA 4M DEPTH. THE LEAD DRILLER USED THE RIG CLAMPS TO GRIP THE RODS / CASINGS AND OPERATED THE ARTICULATED BOOM ARM DUMP RAMS PULLING UPWARDS ON THE DRILLING STRING TO ATTEMPT TO FREE UP AND RETRIEVE THE RODS & CASINGS. WHILST ATTEMPTING THE ABOVE PROCESS, THE INTEGRAL PIN RUNNING THROUGH THE MAST HOLDING THE TWO NUMBER BOOM DUMP RAMS SHEARED OFF COMPLETELY AND THE RAMS FELL TO THE DRILLING RIG BED.

THE INCIDENT HAS BEEN FULLY INVESTIGATED BY WJ, OUR CLIENT AND THE RIG MANUFACTURER. ALL PARTIES CAME TO THE CONCLUSION THAT INCIDENT WAS CAUSED BY THE MACHINE NOT BEING USED CORRECTLY OR BEING USED TO DO SOMETHING IT WAS NOT DESIGNED FOR

### KEY POINTS

- No Point of Work Risk Assessment was undertaken when the casing got jammed to provide a hold point to identify alternative measures to free up the jammed casing with WJ Senior Management and the site project team
- Insufficient risk reduction controls within the drilling risk assessment for jammed casing retrieval
- The lead driller used a "common" practice to extract casing though outside the manufacturers recommendations



### RECOMMENDATIONS

- When using drilling rigs with an articulated boom arrangement, the dump rams should not be used to free up jammed casing due to the forces applied to the dump ram pin
- All Global WJ operational staff & British Drilling Association members should be briefed on the risks using the dump rams on articulated boom type rigs to extract jammed casings & tooling
- All UK drillers to receive specific Tool Box Talk regarding the PSM1350 drilling rig over the acceptable use of the dump rams on this rig

© WJ Groundwater Limited  
 t +44 (0)20 8950 7256 | info@wjgl.com | f +44 (0)20 8950 7959 | wjgl.com

Registered Office: Unit 5, Abbots Business Park, Primrose Hill, Kings Langley, Herts, WD4 8FR  
 Registered in England and Wales No: 1586827 VAT Number GB 367004564

