


PROBLEM INVESTIGATION REPORT

All investigation report must be submitted not later than **5 days**

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|----------------------------------------|--------------------------------------------------------------------|
| Problem Statement: | Wellhead crossover missed out mobilization to Angsi B for well B15 |
| PR Running No.: | PR2024-CTS-AUG-057 |
| Date of Investigation: | 18 th August, 2024 |
| Date of Investigation (Closed): | 20 th August, 2024 |

| (A) | BACKGROUND |
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| | <p>i. Detailed Description of Problem</p> <p>On June 27, 2024, the Project Engineer (PE) issued a request to prepare a 7-5 x CB22 crossover for the upcoming operations at Angsi Bravo, for well B15.</p> <p>By July 1, 2024, the crew had prepared two different crossovers: a 7-5 x CB44 and a CB44 x CB22, along with the necessary chemicals intended for well B22. The plan at that time was to load out the equipment for both wells B15 and B22 together on July 4, 2024.</p> <p>However, on July 9, 2024, a sudden change in operational plans occurred. The focus shifted from wells B15 and B22 to well B18L, which required different preparations, including the mobilization of an N2 package. Consequently, the List of Loadouts (LOL) for B18L was submitted, and the loadout equipment for wells B15 and B22 was put on hold.</p> <p>By July 16, 2024, the loadout for well B18L was successfully completed. Due to changes in plan, the wellhead crossover, which was initially planned for well B15 was excluded from this loadout.</p> <p>Finally, on August 6, 2024, the EIC asked to loadout items for well B15 that was prepared on 1st July 2024. Due to congested space on the main deck area, the B22 equipment was left out from the loadout. Unfortunately, the crossover was stored inside chemical container for well B22. This oversight led to the crucial error of excluding the wellhead crossover required for well B15.</p> <p>ii. Investigation Team</p> <p>Team Leader: Mohd Khairul Ridhwan Azizan Member 1: Nurul Farahana Muhammad Khairul Teo Member 2: Mohd Shahfariz Salim Member 3: Nur Izzah Norsham</p> <p>iii. Supporting Documents/Attachments/Picture/Investigation details</p> <div style="display: flex; justify-content: space-around;">  </div> <p style="text-align: center;">Figure 1: 7-5 X CB44 and CB44 X CB22 Crossover Packed in Cargo Container MM6-1002</p> |



DIMENSION BID

| (B) INVESTIGATION ANALYSIS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <i>Note: The WHY's could be more or less than 5 WHYs until the point where the WHY is no longer reasonably actionable</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | WHY 1: Critical equipment intended for well B15 was overlooked and not mobilized to the Angsi B platform. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | WHY 2: Critical equipment designated for well B15 was packed in closed container for well B22. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | WHY 3: The plan to load out equipment for multiple wells together. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | WHY 4: The use of a single load-out plan for multiple wells, combined with the practice of packing mixed equipment for same location. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | WHY 5: The absence of a dedicated document to segregate and track equipment specific to each well has led to critical oversights during the packing and mobilization process. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Root Cause of Incident (Acquire from the last WHY): The root cause was determined to be the lack of documentation to track the packing of critical equipment prior to load-out. There is no proof for the items packed prior load out. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ROOT CAUSES CLASSIFICATION (Refer to QA-REF-01: Root Causes Classification) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>People</th> <th>Process</th> <th>Equipment</th> <th>Environment</th> </tr> </thead> <tbody> <tr> <td>a. Lack of knowledge <input type="checkbox"/></td> <td>a. Inadequate Procurement/ Purchasing <input type="checkbox"/></td> <td>a. Inadequate Engineering /Manufacturing <input type="checkbox"/></td> <td>a. Due to well condition <input type="checkbox"/></td> </tr> <tr> <td>b. Lack of Skill <input type="checkbox"/></td> <td>b. Inadequate Maintenance/ Repair <input type="checkbox"/></td> <td></td> <td>b. Subcontractor/ client negligence <input type="checkbox"/></td> </tr> <tr> <td>c. Improper Motivation <input type="checkbox"/></td> <td>c. Inadequate Standards/ Procedures/Work Instructions <input checked="" type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td>d. Abuse & Misuse <input type="checkbox"/></td> <td>d. Excessive Wear and Tear <input type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td>e. Inadequate leadership & supervision <input type="checkbox"/></td> <td>e. Inadequate Communication <input type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td></td> <td>f. Inadequate Logistics/ delivery <input type="checkbox"/></td> <td></td> <td></td> </tr> </tbody> </table> | | People | Process | Equipment | Environment | a. Lack of knowledge <input type="checkbox"/> | a. Inadequate Procurement/ Purchasing <input type="checkbox"/> | a. Inadequate Engineering /Manufacturing <input type="checkbox"/> | a. Due to well condition <input type="checkbox"/> | b. Lack of Skill <input type="checkbox"/> | b. Inadequate Maintenance/ Repair <input type="checkbox"/> | | b. Subcontractor/ client negligence <input type="checkbox"/> | c. Improper Motivation <input type="checkbox"/> | c. Inadequate Standards/ Procedures/Work Instructions <input checked="" type="checkbox"/> | | | d. Abuse & Misuse <input type="checkbox"/> | d. Excessive Wear and Tear <input type="checkbox"/> | | | e. Inadequate leadership & supervision <input type="checkbox"/> | e. Inadequate Communication <input type="checkbox"/> | | | | f. Inadequate Logistics/ delivery <input type="checkbox"/> | | |
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| (C) SOLUTIONS/ WAY FORWARD AND TRAINING REQUIRED | |
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| 1 | Correction (Short Term): <ul style="list-style-type: none"> - We attempted to expedite the WHXO by 2 crew change hand-carrying it via FCB on Sunday (18.8.2024), unfortunately, KTSB did not permit this method due to total weight for both WHXO are 121.3 kg which exceed allowable weight to be carried around 20 kg. - We also discussed with the logistic team on the possibility of loading the WHXO onto a vessel to Tiong, which was scheduled to sail on (17.8.2024), and then routing the Angsi FCB to pick up the item tomorrow. However, the RO at Angsi informed us that the FCB could not be released due to the platform's packed schedule. - Thus, as a way forward, we will load out the WHXO on the 24.8.2024 sector boat. |

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| 2 | <p>Corrective Action (Long Term) / Way Forward:</p> <ul style="list-style-type: none"> - Enhancement of Equipment Request and Tracking Processes for Critical Mobilization: To improve operational efficiency, the documentation will be upgraded to include requests for critical equipment such as iron, crossovers, and other essential components. The new 'Wellhead Crossover Request' form will clearly specify the equipment required for each well, ensuring comprehensive accountability and minimizing the risk of oversight. - Enhancement of the Load-Out List (LOL): The existing Load-Out List will be improved by adding a new column to specify the well number associated with each basket and container. This enhancement will allow for more precise tracking and segregation of equipment, ensuring that items are correctly allocated to their intended destinations. - Implementation of 7-14 Day Operational Lookahead for Enhanced Resource Planning: To address the crossover issue and ensure all necessary resources are properly allocated, the Project Engineer will develop a 7-14 day operational lookahead for campaign mode. This lookahead will serve as a proactive planning tool, capturing and scheduling all required elements, including personnel, equipment, chemicals, and boat schedules. By systematically identifying and planning for these needs well in advance, the lookahead will help to ensure that critical items, such as crossovers and other equipment, are not overlooked, thereby improving overall operational readiness and efficiency. |
| 3 | <p>Training Required:</p> |

| Prepared by | Verified by | Approved by |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------|
|  |  | |
| Name : Mohd Khairul Ridhwan Azizan | Name : Aliff Adenan | Name : |
| Position : Team Leader | Position : General Manager | Position : |
| Date: 22/8/2024 | Date: 28/1/24 | Date: |

Note: Verified and Approved Signatories are according to DBSB-QA-09: Operation Problem Management. Refer to the table below:

| SEVERITY | VERIFIED BY | APPROVED BY |
|----------|-----------------------|-------------------------|
| HIGH | Operation Manager | Chief Operating Officer |
| MEDIUM | Field Service Manager | Operation Manager |
| LOW | Field Service Manager | Operation Manager |

| (D) | CLASSIFICATION OF MANAGEMENT SYSTEM CONTROL | | |
|------------------------------------------------------------------------------------|---------------------------------------------|--|-------------------------------------------|
| Note: To be filled by Head of Dept. Refer to QA-REF-01: Root Causes Classification | | | |
| a. | Commitment, Leadership & Accountability | | e. Risk Management |
| b. | Policies and Objectives | | f. Business Processes |
| c. | Organizations and Resources | | g. Performance Monitoring and Improvement |
| d. | Contractor and Supplier Management | | h. Audit and Reviews |

Submit a scanned copy of this PIR & supporting documents in NeuPublic\8. Technical\1. Problem Management\1. Problem Report & Investigation.

Doc. Ref No: OP-FORM-02

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Revision No.: 08

Effective Date: 14/09/2022

(Rev.07, Dated: 22/10/2018-OBSOLETE)