DIMENSION BID
WELL INTERVENTION | PERFORATION SERVICES

CASED HOLE SERVICES PROCEDURE

DBSB-CHS-01

ORIGINAL ISSUE	:	01/08/2012
REVISION NO	:	02
REVISION DATE	:	24/01/2019

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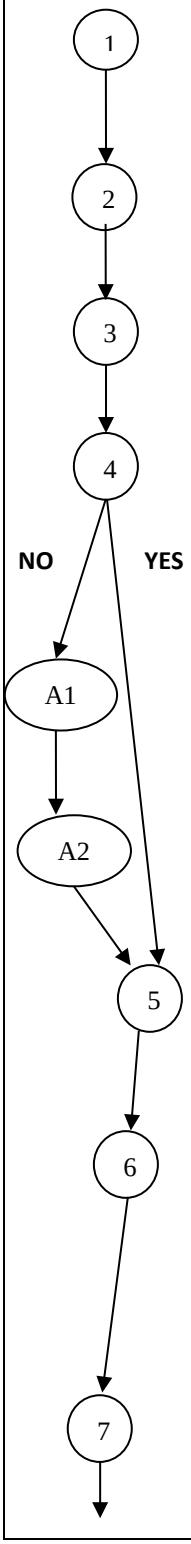
AMENDMENT RECORDS

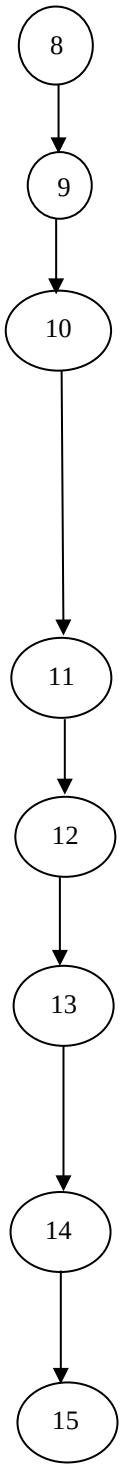
This sheet will record all amendment of this procedure. All particulars of the amendments shall be stated clearly. The ISO Coordinator of Dimension Bid (M) Sdn. Bhd. (DBSB) shall be responsible for the maintenance and update of this record sheet.

CLASSIFICATION	DATE	REVISION PART	REASON/PURPOSE OF REVISION
Original Issue	1/8/2012	Establishment of procedures	Nil
Revision 1	01/09/2013	• Cover • Document layout/ content Format	• Revise as per current organizational structure • As per current documentation format
	01/06/2014	• Cover	• Revise as per current organizational structure
	18/07/2014	• Add Flowchart B : MOC – Tool Specifications • Para 6.6 c	• Descriptions of action to be taken if there is any upgrade of tool specifications.
	02/01/2015	• Cover • Contents	• Revise as per current organizational structure
Revision 2	01/07/2017	1. Revise procedure title 2. Para 5.0 : New revision and additional reference 3. Para 7.0 : Quality Records - Retention period to 5 years	• ISO 9001:2015 Requirements • Compliance to API Spec Q2
	24/01/2019	• Cover • Contents	• Revise as per current organizational structure • As per current documentation format

1.0 FLOW CHART

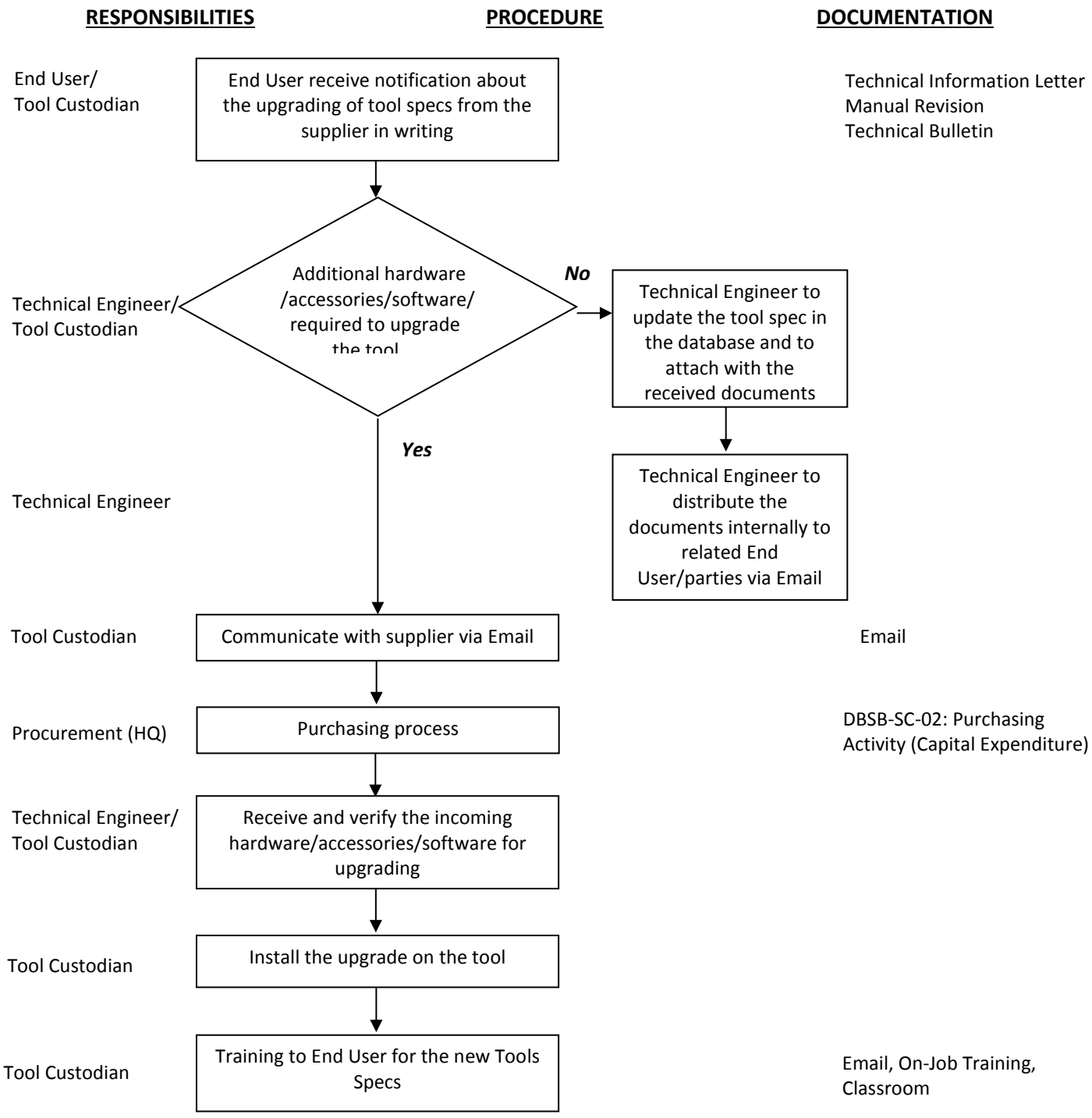
A. QUALITY PLAN

Process Flow	Process No.	Process Name	Item of Control	Item of Inspect	Procedure or Records
	**1**	Received written notification from the client	Individual Client Contract	• Purchase Order/ Sales Order • Cost Estimation	• Individual Client contract • Purchase Order/ Sales Order • Cost Estimation • Service number assignment (Job Files) • **DBSB-CHS-02**
	2	Identify Equipment and Personnel Required	• Tool inventory • Well Data	• Spare part quantity • Tool functioning • Well Data	• Toolhouse Inventory • **DBSB-CHS-03**
	3	Review work scope	Service Program	• Thread connection, cross over, tool required • Well Data & history • Risk assessment	• Service Program Input • Service Program (Job Files) • **DBSB-CHS-03**
	4	Inventory	Equipment list and quantity	• Quantity • Tool Condition and appearance	•Toolhouse Inventory •Downhole Tool Inventory
	A1	Purchase or rental Equipment (3rd Party)	Specification	• Compatibility with existing system • Max Pressure & Temperature rating • Safety Zone classification	• Material Requisition • Purchase order • Delivery order
	A2	Equipment Inspection	Specification	• Specification • Practicality • Reliability	**DBSB-CHS-03**
	5	Equipment Inspection	• Validity • Compatibility with designated contract • Function test • Spare parts	• Specification • Practicality • Reliability	**DBSB-CHS-03**
	6	Packing	• Labeling • Durability	• Packing condition and labeling • Designated Carrier case • Shipment Sticker	• MSDS • Dangerous Goods requirement • Load Out List
	7	Pre-Mob Briefing	• Service Program • Pre-Mob/handover Checklist	• Crew understanding on Service Program and objectives • All required info received from client	• Job Files • **DBSB-CHS-04**



			• All required equipment ready for Mobilization • Job file for inspection	
8	Mobilization	• Transport Arrangement • Documentation	• Dangerous goods and non-dangerous goods • Quantity • Location	• Delivery Order • Custom Clearance • Load Out Instruction • **DBSB-CHS-05**
9	Pre job preparation and inspection	• Function test • Inventory verification	• Tool functioning • Quantity of spare parts as per checklist	• Toolhouse Inventory • **DBSB-CHS-05**
10	Field Operation	• Speed • Depth Control • Well Accessibility • WCE rating • Weak point design	• Well history • Open Hole Gamma Ray Log / Tubing Tally • Tubing clearance/ Dummy run • MPWHP • H2S, CO2 concentration • Estimated grease and other consumable required throughout the job	• Service Program • Well data from Client • Weak point calculation form/ WEST • Field log report • **DBSB-CHS-06** • **CHS-SOP-02** • **CHS-SOP-03** • **CHS-SOP-04**
11	Data Quality Check	Log quality	• Depth correlation • Data calibration • Data noise filtering	• Field Log Report • **DBSB-SOP-01**
12	Demobilization	• Packing • Labeling • Transport arrangement • Documentation	• Packing condition and labeling • Equipment Quantity	• Custom Clearance Records • Logistic Records (MRV/MTF) • **DBSB-CHS-05**
13	Post Demobilization Inspection	• Tools Inventory • Function test	• Spare Parts Quantity • Tool appearance and condition • Tool functioning and calibration	• Inventory Records • Field Handover Note/equipment Utilization • PPM Records • Post-job/handover checklist
14	Reporting	Complete field reports with field data	• Compatible with client contract requirement • All required info for data analysis	• Engineer Reporting Checklist • Crew Chief Reporting Checklist • Data Compilation Checklist • **DBSB-CHS-07**
15	Invoicing	Reports	• Operation summary • MRV/MTF • DO	• Invoice • MRV/MTF • DO

B. MANAGEMENT OF CHANGE – TOOL SPECIFICATIONS



2.0 OBJECTIVE

2.1 To ensure that products and services provided meets the client requirement and expectation, preventing lost time due to inadequate planning.

2.2 To provide a management of changes guideline and make sure the operation running smoothly.

3.0 SCOPE

This procedure is to provide a guideline of the Quality Plan in running CHS operation and maintain the best service quality to clients.

4.0 ABBREVIATION / DEFINITION

4.1 MR - Material Requisition

4.2 MRV – Material Return Voucher

4.3 MTF – Material Transfer Form

4.4 CHS - Cased Hole Services

4.5 FSM - Field Service Manager

4.6 FEIC - Engineer In Charge

4.7 MC - Material Coordinator

4.8 BC – Base Coordinator

4.9 OE – Operation Engineer

4.10 LOI - Load Out Instruction

4.11 MSDS - Material Safety Data Sheet

4.12 MPWHP - Max Potential Well Head Pressure

4.13 WCE - Well Control Equipment

4.14 WEST - Well Entry Simulation Tool

4.15 DO - Delivery Order

4.16 AM - Account Manager

4.17 MOC - Management of Change

4.18 D&D – Design & Development

5.0 REFERENCE

5.1 Quality Manual

5.2 ISO 9001:2015,Para 8.5 : Production and Service Provision

5.3 API Spec Q2, 5.4 : Design and Development

5.4 DBSB-MT-01 : SRP Preventive Maintenance , Inspection and Test Program

6.0 PROCEDURE

6.1 Received written notification from the client

a. Client will submit the written notification to carry out the service through either email/fax/posted letter/hand-delivered letter to OE.

Refer to **DBSB-CHS-02: SERVICE NOTIFICATION PROCEDURE** for details.

6.2 Review work scope

a. Upon receiving the written notification from the client, FSM will review the job scope.

b. FSM will identify the qualified FE to be in-charge for the job requested.

c. FSM and the FEIC will then to request further information about the service from the client including well details and work program. This is important for equipment selection & preparation and personnel preparation.

6.3 Meeting with client

a. The FSM/FEIC must arrange to have a 'kick-off' meeting with the client team in order to get a full information and clarification about the service requested especially the main objectives of the service.

b. FEIC to make sure all the required info for the service execution requested from the client and follow up through email.

c. Further discussions can also be arranged with the client to discuss more about the service requested.

6.4 Identify Equipment Required

a. **A – Designated Contract**

FSM shall identify the equipment required based on the contract designated equipment list.

b. **B - Call Out Package**

FSM shall identify the equipment required based on the service requirement.

c. After all equipment required identified, CHS or OE team will issue a quotation / cost estimation to the client.

d. If the client accepts the quotation / cost estimation, they will issue PO / SO.

Refer to **DBSB-CHS-03: SERVICE PLANNING AND PREPARATION PROCEDURE** for details.

6.5 **Equipment Inventory**

a. Once all equipment required available in the workshop, FEIC for the service together with the client representative will carry out Equipment & Downhole tool checklist.

b. MC will request the Load Out Instruction (LOI) from the client.

6.6 **Purchase , Rental and Upgrade of Equipment**

a. In case of unavailability of the required equipment in our store, equipment will be sourced from suppliers. Sourcing entails purchasing new equipment, rental or upgrading existing equipment. Purchasing activity shall be governed by the purchasing procedure.
Refer to **DBSB-SC-02: PURCHASING ACTIVITY PROCEDURE** for Capital Expenditure and Operational Expenditure.

b. Pre acceptance test and inspection should be carried out prior to equipment delivery to DBSB base.

c. For upgrade of equipment, any changes to normal tools specifications from original specifications shall follow the MOC flowchart.

Refer to **FLOWCHART: MOC - TOOL SPECIFICATIONS** for details.

6.7 **Pre-Mob Briefing**

a. FEIC shall arrange a Pre-Mob Briefing with all outgoing crew for the service, with FSM before mobilization to site.

Refer to **DBSB-CHS-04: SERVICE BRIEFING & DEBRIEFING PROCEDURE** for details.

6.8 **Mobilization**

a. Once all equipment preparation completed and client has approved acceptance check, FE in-charge to help MC / BC in Logistic matters and documentation prior equipment mobilization to Client facilities.

b. Administrator to make arrangement with the client, platform and related port of departure authorities for personnel mobilization to offshore.

Refer to **DBSB-CHS-05: MOBILIZATION & DEMOBILIZATION PROCEDURE** for details.

6.9 **Documentation, packing and transportation arrangement**

a. MC/BC shall prepare a DO prior to mobilization.

b. The equipment will then be sent out to the mobilization point.

6.10 **Well Services Operation**

a. Field personnel must perform an inventory check upon receiving the equipment from base at offshore to confirm all equipment sent out from base have been received.

b. Field personnel must also perform any related maintenance, for example daily maintenance, etc.; as required by the maintenance procedure throughout the offshore operation.

c. After service completion, all equipment will be sent back to base for inspection and carry out preventive maintenance as per maintenance procedure.

Refer to **DBSB-CHS-06: SERVICE EXECUTION, CHS-SOP-02: LOGGING MODULES OPERATION, CHS-SOP-03: WIRELINE DEPTH CONTROL MEASUREMENT, CHS-SOP-04: SURFACE READ OUT and DBSB-MT-01: SRP PREVENTIVE MAINTENANCE, INSPECTION AND TEST PROGRAM PROCEDURE** for details.

6.11 **Reporting**

a. FEIC to make sure communication between field operation team and base support team are well established via verbal communication, standard paperwork and documentation practices.

b. FEIC to summarize all daily operation activities and provides all supporting document for invoicing purpose and job bonus.

c. Field personnel to provide all maintenance daily checklists during operations to be used by mechanic to plan his forward PPM on the machinery.

Refer to **DBSB-MT-01: SRP PREVENTIVE MAINTENANCE, INSPECTION AND TEST PROGRAM PROCEDURE and DBSB-CHS-07 SERVICE PERFORMANCE VALIDATION PROCEDURE** for details.

6.12 **Maintenance**

Maintenance section will carry out the equipment maintenance to ensure the equipment is in good condition. The maintenance will cover:

1. Periodic Preventive maintenance (PPM)

a. **Surface Equipment**

- Maintenance daily checklist need to be filled up by every service prior to start operation by field personnel.
- TRIM-Check form needs to be filled up every 200 hours after running operation by mechanic.
- Q-Check form needs to be filled up by every 600 hours after running operation by mechanic

b. **Well Control Equipment (WCE)**

- QIT-Check form need to be filled up by WCE maintenance teams to be performed on Equipment prior to performing every service.
- QCT-Check form need to be filled up every once per year for inspections and hydrostatic body tests (Annual Survey), except for large vessels such as separators or surge tanks, which shall undergo a hydrostatic body test at each Major Re-Certification.

Refer to **DBSB-MT-01: SRP PREVENTIVE MAINTENANCE, INSPECTION AND TEST PROGRAM** for details.

2. Corrective maintenance / Troubleshooting

a. **Problem Investigation Report (PIR)**

- When Problem Report (PR) has been issued due to equipment problem or failure, CHS technical investigation team will investigate the root cause of the problem. They shall provide detailed investigation with its solution in the Problem Investigation Report (PIR).

- TA shall compile PR and PIR for equipment history records and reference.
- PIR shall be completed within **five (5) working days** from date of incident. If further extension is required, the technical investigation team shall provide justification to OM, CHS.

Refer **Problem Report and Problem Investigation Report** for document references.

6.13 **Invoicing**

a. Account Department will receive paperwork from OE/administrator for invoice preparation and will submit to client for the payment.

7.0 QUALITY RECORDS

No.	Title of Records	Person In-Charge	Retention Period (Year)
1.	**NIL** - Refer to individual procedures		