

From: Guide, John  
Sent: Mon Apr 13 19:36:43 2009  
To: Little, Ian; Daigle, Keith G  
Subject: FW: SCAN  
Importance: Normal  
Attachments: image001.gif; image003.jpg; SKMBT\_C55009041313130.pdf; image002.gif

FYI

From: Keeton, John (Houston) [mailto:John.Keeton@deepwater.com]  
Sent: Monday, April 13, 2009 1:19 PM  
To: Guide, John  
Subject: FW: SCAN

*John Keeton*  
*Rig Manager Performance*

Office 832-587-8533  
Cell 713-828-2226  
John.Keeton@deepwater.com

From: Roberts, Andrea (Houston)  
Sent: Monday, April 13, 2009 1:19 PM  
To: Keeton, John (Houston); DWH, OIM (Deepwater Horizon)  
Subject: SCAN

Please see attached.

Andrea Roberts  
Ph: 832-587-8856

From: narscanners2@houston.deepwater.com [mailto:narscanners2@houston.deepwater.com]  
Sent: Monday, April 13, 2009 8:13 AM  
To: Roberts, Andrea (Houston)  
Subject: Message from KMBT\_C550



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BP-HZN-2179MDL00359933



## CHANGE PROPOSAL

Proposal No.: SS -024

LOCATION (Name): Deepwater Horizon	Date: 04/12/09
CHANGE TITLE: Auto Shear Circuit Fluid Leak	Submitted By: Ray Bement
<b>REASON FOR CHANGE (CHECK ONE)</b>	
<input checked="" type="checkbox"/> Non-Conformance	<input type="checkbox"/> Corrective Action
<input type="checkbox"/> Preventative Action	<input type="checkbox"/> Routine Observation (If Applicable)

<b>CHANGE TYPE (CHECK ONE)</b>			
<input type="checkbox"/> Organization	<input type="checkbox"/> Policy/Procedure	<input type="checkbox"/> Change to Regulation	<input type="checkbox"/> MODU Design
<input type="checkbox"/> Documented Work Practices	<input type="checkbox"/> MODU Operating Criteria	<input checked="" type="checkbox"/> Safety Systems/Critical Ops. Equip.	<input type="checkbox"/> Other

**SECTION A: Proposal Description, to be completed by Originator – additional details to be attached if necessary.**

Department: Sub Sea	Name: Owen McWhorter	Date: 04/12/09
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Present Condition (What is the Problem: Auto Shear Circuit has a hydraulic leak when armed (1 gpm). Leak is stopped when system disarmed. Additionally, the casing shear ram is leaking (.5 gpm) and is placed in the vent position to stop that leak.

Proposal Reasons / Benefits (Expected Impact): Communicate that the Horizon is currently operating with a disabled auto shear circuit. This is the same situation as occurred in Feb of 2008 (SS-015) and in October of 2008 with proposal SS-023. The casing shear ram leak is a new development.

Required Resources, Materials, and Labor: Unknown at present time.	<input type="checkbox"/> Major	> \$250,000
	<input type="checkbox"/> Moderate	> \$100,000
	<input checked="" type="checkbox"/> Minor	No effect
Department Supervisor: Ray Bement		Date: 04/12/09

**SECTION B: Risk Factors (Brainstorming)**

Does the Change require a Risk Assessment?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Does the Change impact regulatory requirements?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the Change affect Lightship or Center of Gravity (calculations)?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the Change require a modification of installation drawings?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the Change require Regulatory/Class approval?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the Change require vendor involvement?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the Change require acceptance testing upon completion?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the Change affect the spares inventory?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the change alter Environmental risk?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the Change affect Safety Systems?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Does the Change require a new or different part or material?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the Change require new/revised software?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the Change require design calculations?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the Change require engineering approval?	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Does the Change alter operating procedures?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N

Risk Factors Findings: By disarming the Auto Shear function, the Blind/Shear Rams will not close if the LMRP is inadvertently disconnected from the BOP. See attached TRA.

**SECTION C: Documentation**

Drawing No:	Drawing Title:
Other Documentation Required:	
Formal Risk Assessment Recorded (attach if necessary):	
<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Safety Case Revisions Required (if applicable):	<input checked="" type="checkbox"/> N
Verification Scheme/Safety Critical Elements Revisions Required?	<input type="checkbox"/> N



## CHANGE PROPOSAL

Proposal No: SS-024

### SECTION D: Weight Changes, to be completed by Marine Responsible Person

Is there a weight change? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N			
Weight Changes: +/- Long Tons	VCG:	LCG:	TCG:

### SECTION E: Welding Procedures, to be completed by the Structural Responsible Person

WELDING Procedure Required? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N	WPS No./Ref.:
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### SECTION F: Approvals

	NAME	SIGNATURE	DATE
Technical Manager	Don Ruedelhuber	<i>[Signature]</i>	04/13/09
Rig Manager	John Keeton	<i>[Signature]</i>	04/13/09
Operations Manager	Daun Winslow	<i>[Signature]</i>	04/13/09
Facility Manager	Jimmy Harrell	<i>[Signature]</i>	04/13/09

### SECTION G: Agency Review Approval

Regulatory Agency Approval Required? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
Agency: MMS	Contact:
Date of Agency Submittal:	Date of Agency Approval:

### SECTION H: Technical Support, to be completed if Engineering Support is required.

Technical Support Required? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
Name of Engineer Assigned?	Tel. No.:

### SECTION I: AFE

AFE Amount: \$	AFE No.:
Local Tracking No.:	BSD:
Date of Completion:	Final Total Cost:

### SECTION J: Close Out

	NAME	SIGNATURE	DATE
Proposal Work Fully Completed.			
Drawings Revised.			
Drawings Agency Approved.			
Equipment Documentation Package Rec'd			
Equipment Documentation package Agency Approved.			
Proposal Closed Out			
Rig Manager:		Date:	



## CHANGE PROPOSAL


Additional Information (list applicable section and information):

Operating BOP with the Auto Shear Function in the "Disarm" position.

Operating BOP with the Casing Shear Rams "Open" function in the "Vent" position.

See attached TRA.

Additional Information (list applicable section and information):

	WELL CONTROL HQS-OPS-HB-01	SECTION:	9
		SUBSECTION:	3
WELL CONTROL EQUIPMENT CLOSING UNITS AND ACCUMULATOR REQUIREMENTS			

The autoshear and deadman are back-up systems that can be armed or disarmed. In the arm mode they secure the well in the event of separation of LMRP from BOP or in some cases the event of loss of both hydraulic supplies and loss of power signal to both MUX control pods by closing the blind/shear rams.

The acoustic system is a backup system that can be armed or disarmed and operated with an acoustic signal to control functions on the acoustic pod.

The BOP or Lower Stack mounted and isolated accumulators should only be sized to supply fluid volume and pressure for those functions that are required for the particular backup system after a disconnect has occurred, Dead-man, Auto-Shear, Acoustics, etc. Sizing requirements should meet the requirements of API.

These bottles can however be used to supply high pressure shear and related features during a connected. Accumulator bottles for auto-shear, deadman, and acoustics systems may be shared.

### 3.3 MOORED FLOATING RIGS

On moored rigs the stack-mounted accumulators should provide the hydraulic fluid for closing the largest annular BOP plus 50% reserve.

The stack-mounted accumulators also help minimize the response time to close the annular.

### 3.4 ACCUMULATOR PRE-CHARGE

For subsea systems, piston type or bladder type accumulators must have a pre-charge equal to 1/3rd of the rated pressure, i.e.: 1000 psi (6,900 kPa, 69 bar) for 3000 psi (20,700 kPa, 207 bar) systems and 1500 psi (10,345 kPa, 103.5 bar) for 4500/5000 psi (31,000 kPa, 310 bar/34,500 kPa, 345 bar) systems plus hydrostatic and temperature compensation. Designated shear ram bottles may be precharged higher to maximize the minimum amount of pressure to shear drillpipe.

A gradient of 0.445 psi/ ft (10 kPa/m, 0.1 bar/m) is used to calculate the hydrostatic compensation; additional factors for temperature change are included for systems operating deeper than 3,000' water depths.

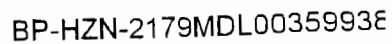
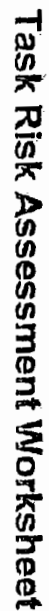
Nitrogen (N<sub>2</sub>) gas must be used for accumulator pre-charge.

Float type accumulators shall not be used subsea for 5000 psi control systems, and are limited to 3000' water depths for 3000 psi control systems.

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ISSUE NO:	03	REVISION NO:	00	PAGE	OF
REVISION DATE:	MARCH 31, 2008			8	7

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### 1. Disarm auto shear function

## 2. Vent casing shear ram open function.

**Competent person(s) to carry out task:** Owen McWhorter, Donnie Williams, Chris Pleasant.

Competent person(s) to carry out risk assessment: Above plus, Jimmy Harrell, James Votaw, Ray Bement, Will Kennedy

[illegible]





## Task Risk Assessment Worksheet

STATE  
TO BE  
ACCOUNTABLE

### Task Risk Assessment worksheet (page 2)

#### Comments and Conclusions:

Reference: Well Control Manual Section 9 subsection 3 page 6 of 7.

The Auto Shear is a back – up system that can be armed or disarmed. In the armed mode it secures the well in the event of separation LMRP from the BOP by closing the blind shear rams.

The Deadman is a back – up system that also can be armed and disarmed. In the armed mode it secures the well by closing the blind shear rams in the event of the loss of both hydraulic supplies and loss of power signal to both Mux control pods.

These two systems are independent of each other. The deadman system is enabled and fully functional.

#### Risk Assessment team members:

Name	Position	Signature	Date
Owen McWhorter	Sr. Subsea Supervisor		4-13-09
Chris Pleasant	Subsea Supervisor		4-13-09
Donnie Williams	Sr. Subsea Supervisor		4-13-09
James Volaw	Sr. Toolpusher		4-13-09
Will Kennedy	Operations Support Engineer		4-13-09
Jimmy Harrell	OIM		4-13-09
Ray Bement	Chief Engineer		4-13-09

#### Reviewed by OIM:

Name	Comments	Signature	Date
Jimmy A. Harrell			13 Apr 2009