



RMS II - Equipment History

Equipment : BOP Control Pod

Tag : WCS BOPP 003

Date: 20 May 2010

Time: 8:45 AM

Page: 1 of 72

Start Date: 20 Jan 2001

End Date: 20 May 2010

Report Options

Rig(s)

Deepwater Horizon

Craft(s)

* All Crafts

Job Type(s)

PM
Repair
Not Specified
Machinery Report
Crane Report

Include Machinery Report: Yes

Include Child Tags: No

Historical Tags: No

Verification Only: No

Rig : Deepwater Horizon

Equipment : BOP White Mux Control Pod

Mfg : Cameron

Model : 2020708-16-01/02 MARK II

Tag Number : WCS BOPP 003

Equipment ID : 0155001491

Serial# : MUX 11360186-02 / HYD 1

Completion Date: 24 September 2001

Job Description	Job Number	Craft	Job Type	Total Hours
*720 Day Replace Subsea Interconnect Cab	1550038001785	Electronics	PM	0.00

20 May 2010

Deepwater Horizon

Page: 1 of 72

Exhibit No. 4617
Worldwide Court
Reporters, Inc.

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8701-001595-000
 DATESTART : 09/23/2001 00:00:00.000000
 DATECOMPLETE : 09/24/2001 23:59:59.000000
 No Work Reported in EMPAC

Completion Date: 01 November 2001

Job Description	Job Number	Craft	Job Type	Total Hours
*90 Day[Rigmove]-Insulation Test On Flan	1550038001782	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8701-001592-000 DATESTART : 09/24/2001 01:07:27.000000 DATECOMPLETE : 11/01/2001 23:59:59.000000 No Work Reported in EMPAC			
*90 Day[Rig Move] -Inspect Wellbore Tran	1550038001783	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8701-001593-000 DATESTART : 09/24/2001 01:07:47.000000 DATECOMPLETE : 11/01/2001 23:59:59.000000 No Work Reported in EMPAC			
*90 Day[Rig Move] Inspect Solenoid Conne	1550038001784	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8701-001594-000 DATESTART : 09/24/2001 01:08:05.000000 DATECOMPLETE : 11/01/2001 23:59:59.000000 No Work Reported in EMPAC			
*90 Day[Rigmove]-Inspect Interconnect C	1550038001786	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8701-001596-000 DATESTART : 09/24/2001 01:08:38.000000 DATECOMPLETE : 11/01/2001 23:59:59.000000 No Work Reported in EMPAC			
*90 Day[Rig Move] -Inspect Connections O	1550038001787	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8701-001597-000 DATESTART : 09/24/2001 01:08:54.000000 DATECOMPLETE : 11/01/2001 23:59:59.000000 No Work Reported in EMPAC			

Completion Date: 10 November 2001

Job Description	Job Number	Craft	Job Type	Total Hours
*90 Day [Rig Move]-Inspect Male And Fema	1550038002041	Well Control	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8701-001756-000 MALE/FEMALE POD ASSEMBLIES 11/10/2001 13:43:00 AFTER INSPECTION AND SEAL CHANGE OUT, LIGHTLY COAT MALE STINGER WITH LUBRIPLATE AND FEMALE RECCEPTACLE.			
*90 Day[Rig Move] -Inspect Cameron Spm V	1550038002042	Well Control	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8701-001757-000 INSPECT CAMERON SLIDE VALVES 11/10/2001 13:38:56 CHANGED ALL 1" VALVES ON PODS TO THE LATEST UPGRADE REV: MAKE SURE YOU USE THE RIGHT REPAIR KITS FOR THESE VALVES AND ALSO USE UPGRADE KITS ON THE 3/4" VALVES, REV- D01 FOR 3/4" (VALVE CHANGE OUT 9-27-2001)			
*90 Day[Rig Move]Inspect And Test Press	1550038002043	Well Control	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8701-001758-000 INSPECT & TEST PRESSURE VESSEL 11/10/2001 11:28:00 ADD ANOTHER LINE 3, TO STATE(PRESSURE TEST SEM SEALS WITH DC-200 TO 5000PSI TO CHECK SEALS			
*90 Day[Rig Move] Change Pods Filter Ele	1550038002044	Well Control	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8701-001759-000 PODS FILTERS ELEMENT 11/10/2001 11:17:42 STEP 2 & 3 ADD, CHECK O-RINGS ON FILTER AND INSIDE HOUSING.			

Completion Date: 05 March 2002

Job Description	Job Number	Craft	Job Type	Total Hours
*90 Day[Rig Move]Inspect And Test Press	1550038005297	Well Control	PM	0.00

Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8702-000839-000
 SEM SEAL TEST
 03/04/2002 13:06:03
 DONE BLUE AND YELLOW EMPAC WORK ORDER NO : 8702-000839-000
 Mass Closing
 03/05/2002 10:08:13
 ALL RIG MOVE ITEMS PERFORMED FEB. 02

*90 Day [Rig Move]-Inspect Male And Fema	1550038005416	Well Control	PM	0.00
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Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8702-000861-000
 FEMALE RECEPTICALES
 03/04/2002 12:34:05
 LIGHTLY GREASE WITH LUBRIPLATE EMPAC WORK ORDER NO : 8702-000861-000
 Mass Closing
 03/05/2002 10:08:29
 ALL RIG MOVE ITEMS PERFORMED FEB. 02

*90 Day[Rig Move] -Inspect Cameron Spm V	1550038005419	Well Control	PM	0.00
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Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8702-000864-000
 CAMERON POD VSLIDE VALVES
 03/04/2002 12:33:21
 DONE EMPAC WORK ORDER NO : 8702-000864-000
 Mass Closing
 03/05/2002 10:08:30
 ALL RIG MOVE ITEMS PERFORMED FEB. 02

*90 Day[Rig Move] Change Pods Filter Ele	1550038005433	Well Control	PM	0.00
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Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8702-000879-000
 POD FILTERS
 03/04/2002 12:25:53
 DONE ON BLUE AND YELOW POD, ALSO HOTLINE AND RIGID CONDUIT FILTERS CHANGED ON
 2/27/02 EMPAC WORK ORDER NO : 8702-000879-000
 Mass Closing
 03/05/2002 10:08:39
 ALL RIG MOVE ITEMS PERFORMED FEB. 02

Completion Date: 06 March 2002

Job Description	Job Number	Craft	Job Type	Total Hours
*90 Day[During Drilling Operations]Rebu	1550038005967	Well Control	PM	0.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8702-001242-000

SPARE POD

03/04/2002 08:04:30

SENT INTO CAMERON FOR UPGRADE TO INSTALL HIGH SHOCK FLOWMETERS & TO UPGRADE STM A & B.

Completion Date: 31 March 2002

Job Description	Job Number	Craft	Job Type	Total Hours
Install Repair Kit For Lmrp Connector Re	1550038004421	Well Control	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-000237-000 SPARE POD 03/31/2002 14:46:01 SPARE POD IS AT CAMERON FOR UPGRADE. STM A & B HIGH SHOCK FLOWMETERS NEW 3/4" SLIDE VALVE 3-31-02 POD STILL AT CAMERON IN HOUSTON			
Need Plugs For Sub Sea Electronic Module	1550038004706	Well Control	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-000452-000 NEED STK CARDS MADE 11/12/2001 12:40:59 SUPPLIER: SEA CON, 1240 VERNON WAY, EL CAJON CA 92020 PH#619-562-7070 DESC: PLUG CONNECTOR, MFG P/N AWQ4/24MPD COST IS \$47.20 EA: NEED 4 / 2 FOR STK AND 2 FOR IMMEDIATE ISSUE. ***NOTE*** DO NOT SUBSTITUTE VENDOR NOT ON VENDORS LIST, GO THRU WELL SERVICE [HAROLD] EMPAC WORK ORDER NO : 8702-000452-000 CARD READY 01/19/2002 22:36:50 STOCK NUMBER 00-9752 EMPAC WORK ORDER NO : 8702-000452-000 CARD REQUESTED 11/22/2001 07:51:26 CARD REQUEST# 87-302			

Completion Date: 18 May 2002

Job Description	Job Number	Craft	Job Type	Total Hours
*90 Day[Rigmove]-Insulation Test On Flan	1550038007253	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-002181-000 Can not due at this time 05/01/2002 03:05:49 Can't due at this time BOP is down Gene			
*90 Day[Rig Move] -Inspect Wellbore Tran	1550038008294	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-002848-000 Can not due at this time 05/01/2002 03:03:16 BOP is down Can't due at this time Gene			
*90 Day[Rig Move] Inspect Solenoid Conne	1550038008298	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-002852-000 Can not Due 05/01/2002 03:02:46 BOP is down Can't due at this time Gene			
*90 Day[Rigmove]-Inspect Interconnect C	1550038008300	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-002854-000 Can not due 05/01/2002 03:01:48 BOP is down Can't due at this time Gene			
*90 Day[Rig Move] -Inspect Connections O	1550038008318	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-002872-000 Cannot due at this time 05/01/2002 02:57:42 BOP is down cannot complete at this time			

Completion Date: 07 July 2002

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move - Inspect Solenoid Connectors -	1550038010276	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-004115-000 SOLENOIDS 07/03/2002 15:08:16 TAKEN CARE OF BY CAMERON REPS			
Rig Move - Inspect Wellbore Transmitters	1550038010295	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-004134-000 WELL BORE 07/03/2002 15:06:42 TAKEN CARE OF BY CAMERON HANDS			

Completion Date: 14 July 2002

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move - Inspect Male And Female Pod A	1550038010308	Well Control	PM	2.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-004147-000 INSPECTION SPARE POD 07/13/2002 08:09:52 THIS POD WAS DONE AT CAMERON CONTROLS FOR UPGRADE OF FLOWMETER & STM1 & STM2. THEN SPAREPOD WAS PUT IN YELLOW PODS PLACES. WILL SEND IN YELLOW TO CAMERON CONTROLS FOR UPGRADE. SPARE POD WAS AT CAMERON CONTROLS FOR 3 MONTHS			

Completion Date: 25 July 2002

Job Description	Job Number	Craft	Job Type	Total Hours
Installation Of High Shock Flowmeters An	1550038007168	OIM-PIC	PM	0.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8702-002096-000

PROJECT # MR 5121B208

04/03/2002 08:08:54

THIS ITEM TO BE CHARGED TO PROJECT # MR 5121B208, HORIZON BOP CONTROL POD MAINTENANCE.

ESTIMATED PRICE \$63,327.14.

QOUTE # 50/H51/710583.

CONTACT PERSON FOR PO; ED VILLAMARIN, CAMERON. DIRECT PHONE# 713-683-4615.

THIS IS A SPARE POD UPGRADE AT CAMERON CONTROLS.

Completion Date: 10 August 2002

Job Description	Job Number	Craft	Job Type	Total Hours
Spare Pod For Upgrade , Flowmeters, Stm	1550038007135	Well Control	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-002085-000 POD FILTER 10 MICRON 04/02/2002 09:56:03 SENT TWO FILTERS TO CAMRON CONTROL 10 MICRON, SPARE POD AT CAMERON CONTROL HOUSTON. 2EA P/N703741-93 STOCK NO# 000000000417295 BIN C18			

Completion Date: 16 August 2002

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move - Inspect Interconnect Cable -	1550038011555	Well Control	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-005127-000 UNABLE TO COMPLETE 08/13/2002 03:08:42 STACK DID NOT COME TO SURFACE.			
Rig Move - Change Pods Filter Elements	1550038011686	Well Control	PM	2.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-005238-000 POD FILTERS 08/07/2002 22:10:00 CHANGED OUT POD FILTER ELEMENTS ON WHITE POD.			
Rig Move - Inspect Cameron Spm Valves	1550038011692	Well Control	PM	2.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8702-005244-000
SPM VALVES
08/07/2002 21:00:24
REPLACED WELLHEAD POD VALVE.WITH REBUILT VALVE.

Completion Date: 18 September 2002

Job Description	Job Number	Craft	Job Type	Total Hours
Send In Spare Pod For Installation Of Hi	1550038006065	OIM-PIC	Other Maintenance	0.00

Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8702-001324-000
DATESTART : 02/25/2002 15:17:10.000000
DATECOMPLETE : 09/18/2002 23:59:59.000000
No Work Reported in EMPAC

Completion Date: 26 September 2002

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move -Inspect And Test Pressure Vess	1550038012330	Well Control	PM	24.00

Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8702-005617-000
SEE NOTES
09/25/2002 16:11:47
THIS IS DONE ON RIG MOVE BOTH PODS.

Completion Date: 04 November 2002

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move - Insulation Test On Flanged Co	1550038014666	Electronics	PM	3.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8702-007130-000

COMPLETION NOTES

11/04/2002 00:11:49

NAME: GENE / JAY

STEPS COMPLETED: PREFORMED ALL STEPS WITH CAMERON AND REPLACED O-RING SEALS BUT THERE WAS NO DAMAGE NOTED.

STEPS NOT COMPLETED: NONE

EQUIPMENT OUT OF SERVICE (HOURS:) (DOWNTIME:) 2 HOURS /0

COMMENTS: PART OF THE SUBSEA CHECK LIST TO BE DONE EVERY TIME STACK IS UP DURING RIG MOVE.

Rig Move - Inspect Wellbore Transmitters

1550038014671

Electronics

PM

5.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8702-007135-000

COMPLETION NOTES

11/04/2002 00:01:12

NAME: GENE / JAY

STEPS COMPLETED: PREFORMED ALL STEPS WITH CAMERON AND REPLACED O-RING SEALS BUT THERE WAS NO DAMAGE NOTED.

STEPS NOT COMPLETED: NONE

EQUIPMENT OUT OF SERVICE (HOURS:) (DOWNTIME:) 2 HOURS /0

COMMENTS: PART OF THE SUBSEA CHECK LIST TO BE DONE EVERY TIME STACK IS UP DURING RIG MOVE.

Rig Move - Inspect Connections On Interc

1550038014674

Electronics

PM

3.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8702-007138-000

COMPLETION NOTES

11/04/2002 00:12:11

NAME: GENE / JAY

STEPS COMPLETED: PREFORMED ALL STEPS WITH CAMERON AND REPLACED O-RING SEALS BUT THERE WAS NO DAMAGE NOTED.

STEPS NOT COMPLETED: NONE

EQUIPMENT OUT OF SERVICE (HOURS:) (DOWNTIME:) 2 HOURS /0

COMMENTS: PART OF THE SUBSEA CHECK LIST TO BE DONE EVERY TIME STACK IS UP DURING RIG MOVE.

Rig Move - Inspect Male And Female Pod A

1550038015187

Well Control

PM

12.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8702-007516-000

SEE NOTES

11/16/2002 15:48:50

ALL BAD STINGER SEALS CHANGE TUBING FITTINGS CHECKED FOR TIGHTNESS, AND LUBRICATED MALE & FEMALE RECEPTICAL 11-4-02

Completion Date: 06 November 2002

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move -Inspect And Test Pressure Vess	1550038015183	Well Control	PM	12.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-007512-000 SEE NOTES 11/16/2002 15:59:02 DONE ON 11-4-02 GOOD TEST			
Rig Move - Inspect Interconnect Cable -	1550038015184	Well Control	PM	4.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-007513-000 SEE NOTES 11/16/2002 15:56:34 DONE BY SUB SEA & ET 11-2-02 MEG CHECK OK AND FILLED PBOF CABLES WITH DC-200			
Rig Move - Inspect Cameron Spm Valves	1550038015185	Well Control	PM	4.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-007514-000 SEE NOTES 11/16/2002 15:53:59 ALL 1" VALVE LOOKED AT AND INSURE E-CLIP ARE INSTALL CORRECTLY IN VALVE			
Rig Move - Change Pods Filter Elements	1550038015186	Well Control	PM	3.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-007515-000 SEE NOTES 11/16/2002 15:51:37 ALL PILOT FILTERS CHANGED OUT 11-6-02			

Completion Date: 22 November 2002

Job Description	Job Number	Craft	Job Type	Total Hours
White Pod Parts Used During Rig Move	1550038014539	Well Control	PM	0.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8702-007054-000
POD PARTS USED ON RIG MOVE
10/27/2002 10:07:16
CHARGE TO BOP MAINTENANCE PROJECT NO.!!!!

WHITE POD PARTS USED IN RIG MOVE

Completion Date: 01 December 2002

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move - During Drilling Operations Re	1550038012225	Well Control	PM	1.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8702-005614-000 POD REBUILT @ CAMERON CONTROLS 10/23/2002 21:52:40 NEW POD JUST PUT INTO SERVICE 7/02			

Completion Date: 20 January 2003

Job Description	Job Number	Craft	Job Type	Total Hours
Nitrogen Regulator For Sem Purge	1550038017062	Well Control	PM	1.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8703-000349-000 N2O REGULATOR 01/19/2003 21:14:34 RECEIVED SAME			

Completion Date: 24 February 2003

Job Description	Job Number	Craft	Job Type	Total Hours
Repair 3/4" Pod Valve	1550038018429	Well Control	Corrective Maintenance	3.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8703-001006-000 POD VALVE 02/23/2003 20:41:41 INSTALLED REPAIR KIT. CENTERING SPRING WRONG MOD ORDERED NEW ONES.			

Completion Date: 12 March 2003

Job Description	Job Number	Craft	Job Type	Total Hours
Need Seal Kit For 3/4" Slide Valve	1550038018221	Well Control	Other Maintenance	2.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8703-000858-000 WORK NOTES 02/21/2003 21:42:06 INSTALLED NEW SEAL KIT IN 3/4" SLIDE VALVE.			

Completion Date: 02 April 2003

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move - Inspect Solenoid Connectors -	1550038019240	Electronics	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8703-001446-000 DATESTART : 03/12/2003 13:47:09.000000 DATECOMPLETE : 04/02/2003 23:59:59.000000 No Work Reported in EMPAC			

Completion Date: 05 April 2003

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move - Inspect Wellbore Transmitters	1550038019234	Electronics	PM	2.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8703-001441-000 WORK IS COMPLETE 04/04/2003 15:58:19 TOMMY WORK WAS COMPLETED BY SUB SEA AND CAMERON. CHECKS GOOD.			

Completion Date: 26 May 2003

Job Description	Job Number	Craft	Job Type	Total Hours
Pep Board Solenoid Output	1550038021564	Well Control	PM	0.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8703-002904-000
 SOLENOID PEP BOARDS
 05/21/2003 08:55:50
 URGENT ORDER REQUESTED BY HOUSTON OFFICE.:

17 EA. BOARD, PCB, DIGITAL OUTPUT, 619095-14-04-02 EMPAC 3 - 2507

NOTE BOARDS ARE IN THE PROCESS OF BEING DISCONTINUED BY CAMERON CONTROL'S VENDOR.
 HAVE TO BE ORDERED BY MAY 28 TH!!! EMPAC WORK ORDER NO : 8703-002904-000
 CHANGES
 05/21/2003 15:30:40
 MORE CARDS ADDED AND EA CHANGED TO 7 ON TOI # 3-2507.

Kenneth,

Please add to WO 2904 the following:

2 EA. PCB, VSBC-4 CAMERON NO. 619095-14-02-02 PEP EMPAC NO. - 405717
 1 EA. PCB, VM-30, CAMERON NO. 619095-14-01-02 PEP - 402805 (1 IN STOCK)

TOTAL OF 7 EA. OF PCB DIG. OUTPUT 619095-14-04 PEP -3-2507 (3 IN STOCK)
 THIS SHOULD COMPLY WITH ADVISORY BELOW.

REGARDS,

Al Cotten O O
 Sr. Sub Sea Eng.
 Deepwater Horizon
 subsea@dwh.rig.deepwater.com
 Ph 713-232-8262 Fax 713-232-8268

-----Original Message-----

From: O'leary, Steve
 Sent: Wednesday, May 21, 2003 10:13 AM
 To: Allen, Ron; Nobles, Jimmy; Matlock, David; Reudelhuber, Dan; Keeton, John
 Cc: McMahan, Larry; Gunnels, Rick; Rogers, Mike W; Donohue, Steve; Ridgway, Terry; Rig_CAJ, Oim; Moore, Jimmy; LeBlanc, Janet; Hall, Mike; Rig_CAJ, Subsea; Rig_DWH, OIM; Rig_DWH, Subsea; Rig_DWN, OIM;
 Rig_DWN, Subsea; Rig_DWE, Oim; Rig_DWE, Subsea
 Subject: RE: URGENT Cameron PLC Board Obsolescence

Gents

Please note stock numbers for the relevant cards

20 May 2010

Deepwater Horizon

Page: 14 of 72

VSBC-4
Cameron prt number 619095-14-02-02-pep
Stock number 000000000405717

VM30
Cameron part number 619095-14-01-02-pep
Stock number 000000000402805

PBDout
Cameron part number 619095-14-04-02-pep
Stock number 300000000002507

SteveO

-----Original Message-----

From: O'leary, Steve
Sent: Wednesday, May 21, 2003 10:00 AM
To: Allen, Ron; Nobles, Jimmy; Matlock, David; Reudelhuber, Dan; Keeton, John
Cc: McMahan, Larry; Gunnels, Rick; Rogers, Mike W; Donohue, Steve; Ridgway, Terry; Rig_CAJ, Oim; Moore, Jimmy; LeBlanc, Janet; Hall, Mike; Rig_CAJ, Subsea; Rig_DWH, OIM; Rig_DWH, Subsea; Rig_DWN, OIM; Rig_DWN, Subsea; Rig_DWE, Oim; Rig_DWE, Subsea
Subject: RE: URGENT Cameron PLC Board Obsolescence

Gents,

I have just spoken with Jamie Ankrom and cleared up a few grey areas here

The VSBC-4 and VM30 cards are supposedly very reliab EMPAC WORK ORDER NO : 8703-002904-000
CHANGES

05/21/2003 15:30:40

le and cost \$4093 and \$5345 ea respectively Jamie advises that two each of these in stock should cover the possible requirements for the next year. The remaining PBDout card has been problematic and he advises that 10 each of these should be stocked per vessel at \$993 each please check inventory levels and previous usage and raise req for the required card to achieve these stocking levels.

I have spoken also with Janet Le Blanc who has advised that if necessary to get this rolling asap and get our order in today she can r

Completion Date: 02 June 2003

Job Description	Job Number	Craft	Job Type	Total Hours
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Rebuild Pod Solenoids And Replace E-Rece

1550038021703

Well Control

PM

12.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8703-002933-000

POD SOLENOIDS

05/26/2003 18:00:09

REBUILT 3 SOLENOIDS. FOUND O'RINGS TO BE OLD. STOPPED OVERHAULS UNTIL CAMERON CAN RESOLVE. INSTALLED NEW REPAIR KITS AND E-RECEPTACLES TO SAME.

Completion Date: 04 June 2003

Job Description	Job Number	Craft	Job Type	Total Hours
SI - Cameron Inspection Of 60 Electrical	1550038015714	Well Control	PM	0.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8702-007857-000

QUOTE # BC091202

12/05/2002 20:02:03

SL- CAMERON INSPECTION OF 60 ELECTRICAL COMPONENTS FOR VERIFICATION OF USE. ALL COMPONENTS WILL BE TESTED TO VERIFY FUNCTIONALITY.

CONTACT;

Brad Cody

Cameron Controls Aftermarket

Houston, Texas

Ph: 713-683-4327

Fax: 713-683-4363

TOTAL COST; 4109.84

SI - Cameron Service Rep Needed For Soft

1550038018471

Well Control

PM

84.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8703-001036-000

CAMERON REP. FOR SOFTWARE R/R

02/25/2003 15:21:25

1 EA. CAMERON CONTROLS SERVICE REP. FOR SOFTWARE CHANGE TO HPU PUMPS FOR UPGRADE AND INSTALLATION OF RETROFIT KIT TO BOP CONTROLS ON LMRP

\$2,000.00 / DAY FOR 7 DAYS.

CONTACT CARTER ERWIN CAMERON SERVICE MGR. 281-401-7598

Completion Date: 07 June 2003

Job Description	Job Number	Craft	Job Type	Total Hours
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Solenoid Valve Repair Kits

1550038021484

Well Control

PM

12.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8703-002825-000
SOLENOID VALVES
06/07/2003 12:35:12
INATALLER REPAIR KITS INTO SOLENOIDS IN THE SHOP.

Completion Date: 13 July 2003

Job Description	Job Number	Craft	Job Type	Total Hours
Parts To Rebuild Solenoid Valves From Ri	1550038021405	Well Control	PM	0.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8703-002797-000 COILS AND E-CONNECTORS FOR POD 05/18/2003 02:17:15 PATRS REMOVED FROM WAREHOUSE: 3 EA. COILS FOR SOLENOID VALVES STK # 000000000037005 3 EA. RECEPTACLE, E-CONNECTORS STK # 000000000036764EMPAC WORK ORDER NO : 8703-002797-000 COMPLETE 07/13/2003 13:42:09 PARTS USED PER M. GOULET.			

Completion Date: 23 August 2003

Job Description	Job Number	Craft	Job Type	Total Hours
Sm - Repair Lap Top For Pods & Petu Repa	1550038020482	Well Control	Corrective Maintenance	4.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8703-002307-000
LAP TOP AT CAMERON
04/29/2003 07:13:05
LAP TOP WAS TAKEN IN WITH CAMERON SERVICE HANDS.

ER#8703-621EMPAC WORK ORDER NO : 8703-002307-000
LAP TOP FOR PODS
04/24/2003 15:45:44
VENDOR:CAMERON CONTROLS
CONTACT: ED VILLAMAIN
PH# 713-683-4600
DESP: REPAIR OF LAP TOP TOSHIBA TECRA, USED FOR FIRING POD IN TEST STAND.
QUOTE#42003HL.
COST# FOR REPAIR \$1850.00
(SERVICE MATERIAL)

EMPAC WORK ORDER NO : 8703-002307-000
LAP TOP NON-REPAIRABLE
06/24/2003 15:43:50
LAP TOP WAS JUNKED. NEW ONE TO BE ORDERED THRU I.T. DEPT. BY ELECT. SUPVR. CHARGED TO BOP
PODS PROJECT NO.

Completion Date: 24 September 2003

Job Description	Job Number	Craft	Job Type	Total Hours
Sm - Install Fiberglass Grating On Top O	1550038023775	Well Control	PM	5.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8703-004333-000
FIBERGLASS GRATING PODS (SM)
07/25/2003 09:45:32
VENDOR: WELL SERVICE
CONTACT: HAROLD HULIN.
PH# 337-364-3025
EQUIPMENT USED ON: PODS

(SM)

3-PCS EA 3'9" X 6'0 1" THICK X 1-1/2" SQUARE MESH CORVEX FIRE RETARDANT
RESIN. YELLOW IN COLOR SLIP RESISTANT MENISCUS SURFACE MOLDED GRATING.

PRICE @ \$ 324.00 EA PC.

DELIVERY APPROX 3-DAYS

EMPAC WORK ORDER NO : 8703-004333-000
RECEIVED
09/24/2003 15:03:45
COMPLETED

Install New Seal Kits In 1-1/2" Pilot Op	1550038025800	Well Control	PM	12.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8703-005407-000 POCV RIGID CONDUIT 09/24/2003 15:06:48 INSTALLED SAME			

Completion Date: 26 September 2003

Job Description	Job Number	Craft	Job Type	Total Hours
Installation Of Repair Kit For Pocv, Pro	1550038025892	Well Control	PM	1.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8703-005492-000 RIGID CONDUIT POCV 09/25/2003 09:25:19 INSTALLED 4 EA. KITS 1 1/2" POCV VALVES MARK HAY			

Completion Date: 07 October 2003

Job Description	Job Number	Craft	Job Type	Total Hours
730 Day - Replace Subsea Interconnect Ca	1550038023620	Electronics	PM	10.00
Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8703-004244-000 RIG MOVE ET PM 07/27/2003 12:55:57 RIG MOVE , WE UPGRADED TO VERSION 3 PBOF CABLES, SEA CON, CABLES WILL BE REPLACED WHEN BOP IS UP AFTER TUBULAR BELLS WELL M.C-725#1. MATT GOULET. THIS PM NEED TO GO TO ET RIG MOVEEMPAC WORK ORDER NO : 8703-004244-000 COMPLETION NOTES 10/04/2003 13:00:54 NAME: GENE / MATT STEPS COMPLETED: STEPS NOT COMPLETED: COMMENTS/FINDINGS: ALL PBOF CABLES CHANGED TO VERSION 3 PBOF CABLES. PROCEDURE CHANGES NEEDED: HOURS EQUIPMENT OUT OF SERVICE WHILE PM:				

Completion Date: 22 November 2003

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move - Install New Anodes On All Thr	1550038020725	Well Control	PM	6.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8703-002487-000
ANODES FOR PODS ALL THREE
04/23/2003 15:57:05
VENDOR: CAMERON CONTROLS, HOUSTON TX

DESP: ANODES 12" X 3" X 1.5" FOR PODS, CAMERON MARK2

QTY: 118 EA

COST EACH \$54.00

CAMERON P/N#-2711879-01

(CHARGE TO PROJECT I.D. # R512100025 / BOP MUX CONTROL & OVERHAUL)
EMPAC WORK ORDER NO : 8703-002487-000
CARD LOADED
04/30/2003 04:52:25
EMPAC #55323

CRIT: NORMAL

G/L: 590

VENDOR: CAMERON CONTROLS, HOUSTON TX

DESP: ANODES 12" X 3" X 1.5" FOR PODS, CAMERON MARK2

QTY: 118 EA

COST EACH \$54.00

CAMERON P/N#-2711879-01

(CHARGE TO PROJECT I.D. # R512100025 / BOP MUX CONTROL & OVERHAUL) EMPAC WORK ORDER
NO : 8703-002487-000
CARD REQUESTED
04/26/2003 13:40:25
CR#8229

CRIT: NORMAL

G/L: 590

VENDOR: CAMERON CONTROLS, HOUSTON TX

DESP: ANODES 12" X 3" X 1.5" FOR PODS, CAMERON MARK2

QTY: 118 EA

COST EACH \$54.00

CAMERON P/N#-2711879-01

(CHARGE TO PROJECT I.D. # R512100025 / BOP MUX CONTROL & OVERHAUL) EMPAC WORK ORDER

NO : 8703-002487-000

CREATE CARD

04/25/2003 22:42:54

CRIT: NORMAL

G/L: 590

VENDOR: CAMERON CONTROLS, HOUSTON TX

DESP: ANODES 12" X 3" X 1.5" FOR PODS, CAMERON MARK2

QTY: 118 EA

COST EACH \$54.00

CAMERON P/N#-2711879-01

(CHARGE TO PROJECT I.D. # R512100025 / BOP MUX CONTROL & OVERHAUL) EMPAC WORK ORDER

NO : 8703-002487-000

RECEIVED

06/24/2003 16:04:52

RECEIVED EMPAC WORK ORDER NO : 8703-002487-000

INSTALLED NOV 2003

11/22/2003 15:55:09

ANODES INSTALLED DURING RIG NOV. 2003.

Rig Move-Mux Pod	1550038027363	Well Control	PM	10.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8703-006254-000			
	FLOWMETER			
	11/10/2003 19:31:19			
	FOUND F/METER CABLE CORRODED AND PINS EATEN AWAY. USED SPARE FROM BLUE POD.			
	FLOWMETER NOW			
	Rebuilt St. Accum and ST lock pod valve and Man. Reg. With kits			
	ST. ACCUM DID NOT HAVE CORRECT KIT NOT PREMIUM VALVES. REBUILT WITH CORRECT KIT FROM STOCK.			
	ADJUSTED PRECHARGE ON BOTTLES			
	INSTALLED CLEAN PILOT FILTERS			

Completion Date: 14 February 2004

Job Description	Job Number	Craft	Job Type	Total Hours
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Need 1 Quart Bladders & Air Chucks And E

1550038028741

Well Control

PM

2.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8703-006979-000

1 QUART 5000PSI BOTTLES PODS

11/29/2003 09:46:44

TOI# / NUMBER BELOW FOR ITEMS NEEDED

USED ON: ACCUMULATORS, 1 QUART PODS.

SUBSEA DEPT:

1-TOI#100100000000238 / 8 EACH

2-TOI#450000000014613 / 10 EACH NEED TO LOAD NUMBER , GLOBAL CAT#

3-TOI#000000000222665 / 6 EACH EMPAC WORK ORDER NO : 8703-006979-000

RECEIVED

02/01/2004 07:09:55

RECEIVED EMPAC WORK ORDER NO : 8703-006979-000

RECEIVED 10 BLADDERS

02/14/2004 20:44:01

RECEIVED 10 EA. 1 QUART BLADDERS FROM WAREHOUSE. STK: 450000000014613

BLADDERS ARE IN SUB-SEA SHOP.

MARK HAY

Rig Move-Mux Pod

1550038030915

Well Control

PM

4.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8704-000830-000

SEE NOTES

02/14/2004 12:20:26

WHITE POD ON DECK PULLED LMRP, FUNCTION ON ALL FUNCTION ON POD TO FLUSH SEA WATER. CHECK
PACKER SEALS. OK.

MATT GOULET / 2-7-2004

Completion Date: 25 February 2004

Job Description	Job Number	Craft	Job Type	Total Hours
Need Regulator, Medium Duty For Nitrogen	1550038031313	Well Control	PM	1.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8704-000989-000

REGULATOR FOR RISER SPIDER

02/18/2004 23:40:09

NEED REGULATOR FOR PRE-CHARGING BOTTLES ON RISER SPIDER,,, THAT ONLY REQUIRE 100 PSI. AND FOR CHARGING BLIND END BOTTLES ON RISER TENSIONERS. ORDERED BY MARK HAY.EMPAC WORK

ORDER NO : 8704-000989-000

GO GET IT

02/24/2004 07:19:23

MARK

IT SHOULD BE ON THE SHELF. STK #5714 EMPAC WORK ORDER NO : 8704-000989-000

RECEIVED REGULATOR

02/25/2004 00:14:46

REGULATOR WAS IN WAREHOUSE.

Completion Date: 09 March 2004

Job Description	Job Number	Craft	Job Type	Total Hours
Need Solenoid Test Unit For Pods / Proje	1550038025344	Well Control	PM	10.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8703-005173-000 TEST UNIT F/SOLENOIDS PODS 09/05/2003 08:56:28 VENDOR:OCEANEERING T.O.I.#-000000000052981 QTY: 1 EACH PROJECT I.D # R512100025 / BOP MUX CONTROL & POD OVERHAUL. COST \$ 14,525.00EMPAC WORK ORDER NO : 8703-005173-000 RECIEVED 03/09/2004 13:05:26 RECEIVED			
Repair Flowmeter	1550038031841	Well Control	Corrective Maintenance	2.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8704-001314-000 WO ALREADY ISSUED CANCEL 03/09/2004 10:31:32 WILL CLOSE THIS WO 03-7047 ALREADY OPENED			

Completion Date: 07 May 2004

Job Description	Job Number	Craft	Job Type	Total Hours
Subsea Pod, Repair Flowmeter	1550038028852	Well Control	Corrective Maintenance	6.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8703-007047-000 DAMAGED FCR 12/12/2003 05:22:14 FLOODED FCR FLANGED CONNECTOR RECEPTACLE. RETURNED TO FTI FLOW TECHNOLOGY INC., HOUSTON BY STEVE DONOHUE TO DISCUSS DAMAGE AND REPAIRS. HAND CARRIED FROM RIG TO FTI AFTER RIG MOVE. RMA # 2502 \$1,500.00EMPAC WORK ORDER NO : 8703-007047-000 NEW FLOWMETER 05/05/2004 20:55:39 FLOWMETER NOT ABLE TO BE REPAIRED. NEW ONE SENT TO RIG RECV'D 5/5			

Completion Date: 10 June 2004

Job Description	Job Number	Craft	Job Type	Total Hours
Ss To Replace Sem O'Rings - Store Keepe	1550038033679	Well Control	PM	6.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8704-002318-000 POD SEM O'RINGS 04/29/2004 12:00:02 3 EA O'RING STOCK NO. 4093 - 158 3 EA. O'RING 0 - 426218 NEEDED ASAP FOR NEW POD- RGB MODIFICATIONS. CAN BE HAND CARRIED BY CAMERON SERVICE HANDS WHEN THEY COME TO INSTALL SOFTWARE FOR UPGRADE. AVAILABILITY OF ITEMS CAN BE CHECKED THRU BRAD CODY AT CAMERON. CAN BE TWO DAY FED-EX TO RIG ALSO POSSIBLE. THEY ARE NEEDED NOW!EMPAC WORK ORDER NO : 8704-002318-000 RECEIVED 05/30/2004 07:29:23 RECEIVED FROM ENTERPRISE			

Completion Date: 02 August 2004

Job Description	Job Number	Craft	Job Type	Total Hours
Need Bulb And Lamp For Distribution Pane	1550038031269	Well Control	PM	0.50
<p>Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8704-000956-000 DISTRIBUTION PANEL B / CAMERON 02/16/2004 12:22:36 VENDOR: CAMERON CONTROLS ICN# 426212 NEED 1 EACH ICN# 1028-1767 NEDD 1 EACH USED ON: DISTIBUTION PANEL B/ DAMAGED LAMP HOLDER 230 VOLTS</p> <p>CREATE CARDS FOR THESE ITEMEMPAC WORK ORDER NO : 8704-000956-000 LOAD AND ADD 02/16/2004 12:31:06 LOAD AND ADD ITEMS AS PER SS NOTES</p> <p>VENDOR: CAMERON CONTROLS ICN# 426212 NEED 1 EACH ICN# 1028-1767 NEDD 1 EACH USED ON: DISTIBUTION PANEL B/ DAMAGED LAMP HOLDER 230 VOLTS</p> <p>G/L 591 CRIT: NORMAL ORO BOM EMPAC WORK ORDER NO : 8704-000956-000 NEEDS COMPLETION BY ET 08/01/2004 13:04:06 " EMPAC WORK ORDER NO : 8704-000956-000 WORK COMPLETE 08/02/2004 06:40:15 SBERTONE REPAIRED LIGHT ON PANEL.</p>				

Completion Date: 10 August 2004

Job Description	Job Number	Craft	Job Type	Total Hours
Install Repair Kit In 3/4" Cameron Sli	1550038037816	Well Control	PM	4.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8704-004275-000
COMPLETE
08/10/2004 14:14:27
INSTALLED NEW REPAIR KIT IN 3/4" SLIDE VALVE.

MARK HAY

Completion Date: 05 September 2004

Job Description	Job Number	Craft	Job Type	Total Hours
365 Day-Mux Pod	1550038039055	Well Control	PM	1.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8704-004851-000 SEE NOTES 09/05/2004 11:54:26 MULTIPLEX PACKAGE AT CAMERON CONTROLS 9-5-2004 UPGRADE SEE (WO-2881 2004)			

Completion Date: 11 November 2004

Job Description	Job Number	Craft	Job Type	Total Hours
Need 4-Way Dummy Plugs For Pod Stk: 3-	1550038041596	Well Control	PM	1.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8704-006056-000 RECIEVED SAME 11/11/2004 11:29:58 SENT TO STEVE DONOHUE			

Completion Date: 27 November 2004

Job Description	Job Number	Craft	Job Type	Total Hours
1each Grating For Top Of Pod White Pod	1550038038037	Well Control	PM	1.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8704-004461-000
 GRATING FOR POD WHITE
 08/10/2004 17:12:13
 ICN#-SM-00321087

1 EACH FIBERGLASS GRATINGEMPAC WORK ORDER NO : 8704-004461-000
 STOCK NUMBER
 09/19/2004 17:09:32
 000000000490662

GRATING, FRP FIRE RETARDANT, 3 FT X 20 FT, YELLOW, GRITTED SURFACE, 6" CROSS ROD EMPAC
 WORK ORDER NO : 8704-004461-000
 GRATING IN BOP HOUSE
 11/27/2004 14:13:11
 GRATING IN BOP HOUSE, POD STILL AT CAMERON CONTROLS 11-27-04

MATT GOULET

Pod#3 Needs New Anodes	1550038038092	Well Control	PM	1.00
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Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8704-004479-000
 ANODES FOR SPARE POD.
 08/12/2004 21:52:40
 DAVID COLSON
 POD #3 (SPARE) NEEDS 30 NEW ANNODES TO REPLACE ONES THAT HAVE BEEN USED UP.EMPAC WORK
 ORDER NO : 8704-004479-000
 PROJECT
 08/24/2004 20:07:14
 CHARGE TO BOP MAINTENANCE PER JOOHN KEETON EMPAC WORK ORDER NO : 8704-004479-000
 ANODES IN BOP HOUSE
 11/27/2004 14:10:19
 ANODES IN BOP HOUSE 11-27-2004

MATT GOULET

Completion Date: 20 December 2004

Job Description	Job Number	Craft	Job Type	Total Hours
Replace 1" 4 Way, 3 Position Tandem Pod	1550038043808	Well Control	Corrective Maintenance	0.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8704-007234-000
CANCEL THIS WORK ORDER
12/20/2004 07:04:08
SHOULD HAVE BEEN UNDER UNPLANNED. MARK HAY

Completion Date: 13 January 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Pods - Ratchet Strap For Sem For New Conn	1550038039547	Well Control	PM	3.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8704-005170-000
RACHET CLAMPS F/ ATA-FITA CONN
09/11/2004 15:06:40
VENDOR: ABCO PROCUCT INC.
HOUSTON TX,77265
CONTACT: WILLIAM SHULTS
PH#: 713-871-8020
QTY: 3 EACH
NEED CARDS LOADED
PART NUMBER FOR RACHET CALMPS (P/N-2419.21)
DESP: RATCHET CLAMP ASSEMBLY, 4.23" LINE X 16" OD (P/N-2419.21) TO SECURE NEW ATA/FITA
CONNECTOR ON SEM
COST\$ 595.00 EACH * NOTE IF THREE RIGS BUY 9 EACH COST GOES DOWN TO \$ 335.00 EACH SEE
BELOW

The Nautilus approves 3.
Can Janet order and charge to the rigs that agree or do we each order 3 ourselves?

David

Attached is a quote from ABCO for a strap ratchet clamp. This would be used to support the ATA-FITA connector when plugged directly into the SEM. The strap would wrap around the SEM housing and the connector body, with a poly urethane spacer between the two. The ratchet assembly is stainless, but no metallic parts come in contact with either the SEM or connector, so there are no electrolysis concerns.

As you can see there is quite a price break if we order 9 at the same time, that would be 3 per rig. Two in service one spare.

Regards
Steve

Good morning Steve. I have attached the drawing and the quotation for the clamps we discussed last week. Please note that if the quantity is only (3)clamps the price would be greater. The key is to get all of the rigs to agree and purchase the (9) clamps at once. Also we will confirm the stand off between the components before manufacture.

I will be calling you later to discuss this matter.

Thanks & regards,
William L. Shults
Sales Mgr.
ABCO Products Inc.

Tel: 713.871.8020

Fax: 713.871.0492
 Cell: 713.806.7699
 EMPAC WORK ORDER NO : 8704-005170-000
 CARD REQUESTED
 09/30/2004 23:06:46
 ST# 87813

VENDOR: ABCO PROCUCT INC.
 HOUSTON TX,77265
 CONTACT: WILLIAM SHULTS
 PH#: 713-871-8020
 QTY: 3 EACH
 NEED CARDS LOADED
 PART NUMBER FOR RACHET CALMPS (P/N-2419.21)
 DESP: RATCHET CLAMP ASSEMBLY, 4.23" LINE X 16" OD (P/N-2419.21) TO SECURE NEW ATA/FITA
 CONNECTOR ON SEM
 COST\$ 595.00 EACH * NOTE IF THREE RIGS BUY 9 EACH COST GOES DOWN TO \$ 335.00 EACH SEE
 BELOW

The Nautilus approves 3.
 Can Janet order and charge to the rigs that agree or do we each order 3 ourselves?

David EMPAC WORK ORDER NO : 8704-005170-000
 RACHET STRAPS TO SHORT
 01/13/2005 08:05:34
 THE RACHET STRAPS WERE TO SHORT,,,, VENDOR WILL SEND US THREE MORE NEW ONES.

Replacement 1" 4 Way, 3 Position Tandem		1550038043809	Well Control	Corrective Maintenance	2.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8704-007235-000 REPLACED VALVE 01/13/2005 09:38:26 REPLACED LEAKING VALVE				
Rig Move-Mux Pod		1550038044175	Well Control	PM	12.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8704-007398-000 FUNCTION TEST PODS 01/13/2005 08:47:47 FUNCTION BOTH PODS,, AND REPAIRED AS NEEDED				

Completion Date: 14 January 2005

Job Description	Job Number	Craft	Job Type	Total Hours
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Bop Control System Not Talking To Hitech

1550038025275

Electronics

Corrective Maintenance

6.00

20 May 2010

Deepwater Horizon

Page: 32 of 72

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8703-005128-000

TROUBLESHOOTING PROBLEM

09/03/2003 23:26:13

JAY

TESTED THE FIBER PAIR THAT THE DCI WAS CONNECTED TO FROM THE BOP CONTROL BOX IN ELECTRICAL SHOP. EVERYTHING TESTED FINE. THE TRANSMITS JUST BLINK IN TIME WITH THE TRANSMIT LED ON THE CORRESPONDING PLC. THERE IS NO RECEIVE LEDS BLINKING ON ETHIER PLC. THINKING THAT THERE WAS A PROBLEM WITH THE ADAMS CONVERTER. SWAPPED IN THE ONE FROM THE CABINET IN THE BOP CONTROL ROOM AT BOTH ENDS. THE SYMTOM DID NOT CHANGE. NOTEWORTHY IT THAT WHEN THE 232 SIDE OF THE ADAMS AT THE DCI END IS CONNECTED THE CP CARD ON THE DCI DOES SHOW A FAULT. THE CAMERON SIDE SHOWS NO SIMILAR REACTION. TROUBLESHOOTING TO CONTINUEEMPAC WORK ORDER NO : 8703-005128-000

UPDATE 3

11/16/2003 20:22:04

JAY

BEFORE KEN YEO OF CAMERON LEFT WE DISCUSSED THIS PROBLEM. BASICALLY WITHOUT THE PROGRAM THAT HE DID NOT BRING HE WAS NOT ABLE TO SEE WHAT HE NEEDED TO HELP US WITH THIS PROBLEM. HOWEVER WE DID DISCUSS WHAT COULD BE DONE. I HAVE DONE WHAT WAS DISCUSSED AND DETAILS FOLLOW.

WE DISCUSSED THAT PERHAPS IT WAS THE FISO OR THE CPU OR EVEN THE EPROM. WE CAN ONLY SWAP THE CPU AND THE FISO WITH THE CARDS FROM THE B SYSTEM. THIS I DID WITH NO SUCCESS OR CHANGE IN THE PROBLEM. I TRIED EVERY COMBINATION POSSIBLE AND THERE WAS NO CHANGE OR IMPROVEMENT WITH THE COMMUNICATIONS TO THE HITEC SYSTEM. THE FISO CARD HAS ACTIVITY ON THE LED AS DOES THE CPU, BUT NOTHING CHANGES ON THE HITEC SCREENS. THIS WAS AND REMAINS THE PROBLEM. PASSING TO ELECTRICAL SUPERVISOR TO DISCUSS FURTHER OPTIONS. EMPAC WORK ORDER NO : 8703-005128-000

UPDATE 2

12/07/2003 03:59:17

JAY

KEN YEO CONNECTED HIS COMPUTER AND OPENED A PROGRAM THAT SPIT DATA INTO HITEC, ONCE, AND THEN THE PROGRAM ON THE LAPTOP LOCKED UP. THE SYSTEM STILL DOES NOT TALK TO HITEC.

AS PER KEN YEO I SWAPPED THE FISO CARD FROM THE B DIST BOX, WITH NO SUCCESS. NEXT I WILL TRY TO SWAP IN THE CPU FROM B. NOTE THE EPROM MUST BE CHANGED IN ORDER FOR THE CPU TO WORK IN THE A DIST BOX. EPROMS ARE SET FOR ONE OR THE OTHER.

LEFT THE B FISO IN THE A PLC. THE A FISO AND B CPU ARE IN THE BOTTOM OF THE A DIST BOX.

WILL CONTINUE TOMORROW. EMPAC WORK ORDER NO : 8703-005128-000

UPDATE 4

02/24/2004 02:17:51

CAN NOT TROUBLE SHOOT DUE TO OPERATIONS. WILL CONTINUE WHEN STACK HITS THE DECK.

TOMMY

Completion Date: 18 February 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Tracking Sending Used Cameron 1/4" 2	1550038046164	Well Control	Corrective Maintenance	1.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8705-001018-000 TRACKING 02/17/2005 15:28:02 BILL STRINGFELLOW TRACKING. SENDING USED CAMERON 1/4" 2 POSITION 4 WAY VALVES TO CAJUN EXPRESS. SENDING A TOTAL OF 21 VALVES. PART NUMBER 309825-12. EMPAC WORK ORDER NO : 8705-001018-000 DETAILS 02/18/2005 13:04:00 SHIPPED FROM RIG ON CARGO MANIFEST # 5121-2819 FEBRUARY 18 TO BE FORWARDED TO CAJUN EXPRESS			

Completion Date: 19 February 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Pods - Cap Screws For Blanking Plates Fo	1550038041855	Well Control	Corrective Maintenance	4.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8704-006231-000 CAP SCREWS AND WASHERS POD 11/03/2004 07:31:44 VENDOR: CAMERON CONTROLS NEED CARD LOADED FOR CAP SCREWS. EQUIPMENT USED ON : POD BLANK PLATES FOR 1/4" VALVES 1-P/N-702505-04-00-12, 100 EACH, COST \$ 1.00 EACH APPROX 2- P/N-702529-10-02 , ICN#1006-3769 47EA IN (WH) NEED 53 EACH WASHERSEMPAC WORK ORDER NO : 8704-006231-000 CARD REQUEST 11/08/2004 19:00:26 CR# 87-13281 1-P/N-702505-04-00-12, CAPSCREW 1.250 X .312-18 100 EACH, COST \$ 1.00 EACH APPROX			

Completion Date: 22 February 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Install Greasing, Steps, And Hand Rails	1550038045368	Welder	PM	4.00
Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8705-000674-000 JOHN COLLINS 02/22/2005 05:59:04 INSTALLED LAST SECTION OF HAND RAIL,AND PUT END CAPS ON THE OTHER RAILS THAT I INSTALLED LAST HITCH.JOB IS COMPLETED.EMPAC WORK ORDER NO : 8705-000674-000 TATER 01/29/2005 17:10:25 FINISHED ALL BUT ONE SMALL SECTION OF HAND RAILS AND PUT END CAPS ON HAND RAILS THAT I HAVE ALL READY COMPLETED.				

Completion Date: 06 April 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move - SI - 2 Cameron Service Perso	1550038043281	Well Control	Corrective Maintenance	4.00
Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8704-006902-000 LABOR 12/11/2004 07:56:11 2 GUYS, 8 DAYS, \$1800 PER DAY PER PERSON.				

Completion Date: 05 May 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move-Mux Pod	1550038047771	Well Control	PM	3.00
Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8705-001843-000 FUNCTION TEST SAME 05/05/2005 14:03:40 FUNCTIONED POD AND MADE ALL NEEDED ADJUSTMENTS				
7 Ea Repair Kits For Solenoid Valve St	1550038049028	Well Control	Corrective Maintenance	4.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8705-002668-000
INSTALLED KITS
05/05/2005 12:05:35
REPAIRED VALVES WITH NEW KITS

Completion Date: 28 June 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Change Pilot Filters	1550038050419	Well Control	Corrective Maintenance	3.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8705-003474-000 REPLACED FILTERS 06/28/2005 17:21:33 CHANGED ALL FILTERS			

Completion Date: 02 July 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move-Mux Pod	1550038050663	Well Control	PM	4.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8705-003602-000 MADE ALL CHECKS 07/02/2005 10:18:58 FUNCTIONED ALL VALVES REPLACED PILOT FILTERS			

Completion Date: 21 July 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Replace Desiccant Silicagel Bags For Pod	1550038044618	Well Control	Corrective Maintenance	2.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8705-000154-000 IN WAREHOUSE 05/06/2005 17:14:01 IN WAREHOUSE			

Completion Date: 04 August 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Solenoids, Cameron Controls, Pod, Rebuil	1550038052108	Well Control	Corrective Maintenance	30.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8705-004431-000			
	CLOSED			
	08/04/2005 16:41:40			
	CLOSED BY K. PETERSEN			

Completion Date: 09 October 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Pods - Sm - Need Three Each Fcr 90 Degre	1550038038034	Well Control	Corrective Maintenance	8.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8704-004458-000

CARD NEEDED ?

08/13/2004 18:28:19

Item Description Qty Unit Price Delivery ARO

1A MSSSL R/A FCR-ADAPTER per sketch MK07304-01 3 \$991.08 EA 4 WKS ARO

VENDOR:SEACON BRANTNER & ASSOCIATES

HOUSTON TEXAS

PH#281-599-3509

CONTACT: MIKE Mc KINLEY

NEED CARD LOADED

EMPAC WORK ORDER NO : 8704-004458-000

SHIP ONE TO STEVE DONOHUE

08/24/2004 11:58:12

1 EA. FIXTURE NEEDS TO BE SHIPPED TO STEVE DONOHUE IN HOUSTON TO BE INSTALLED ON WHITE
POD BEING REPAIRED AT CAMERON CONTROLS HOUSTON EMPAC WORK ORDER NO : 8704-004458-000

MSSSL R/A FCR ADAPTER (SEM'S)

03/11/2006 10:19:38

VENDOR:SEACON BRANTNER & ASSOCIATES

HOUSTON TEXAS

PH#281-599-3509

CONTACT: MIKE Mc KINLEY

NEED CARD LOADED

Brantner & Associates, Inc.

15720 Park Row Ste. 200

Houston, Texas

Tel: (281) 599-3509

Fax: (281) 599-3716

E-mail: mmckinley@seaconbrantner.com

Website: www.seaconbrantner.com

Attention: Steve Donohue From: Mike McKinley

Company: Transocean Date: August 10, 2004

Subject: Quote Control#: MMQ072804-01

Seacon?/Brantner & Associates are pleased to present to you the following quotation:

Item Description Qty Unit Price Delivery ARO

1A MSSSL R/A FCR-ADAPTER per sketch MK07304-01 3 \$991.08 EA 4 WKS ARO

SEA CON Standard Terms & Conditions Apply

Delivery is based on current workload and can be confirmed upon receipt of order.

Terms: Net 30 for established accounts; Visa/Mastercard orders accepted.

Pricing valid: 30 days

Fob: El Cajon, Ca

Best regards,

Mike McKinley

Pods - Repair Kits For 1/4" Manual Reg L	1550038040772	Well Control	Corrective Maintenance	1.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8704-005637-000			
	DATESTART : 10/09/2004 22:29:07.000000			
	DATECOMPLETE : 10/09/2005 23:59:59.000000			
	No Work Reported in EMPAC			

Completion Date: 11 November 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Connector, Sub Sea, 24 Way Female Pie Co	1550038056660	Well Control	Corrective Maintenance	1.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8705-007082-000
LOAD AND SET OP/OQ FOR STOCK
11/10/2005 19:45:20
PART FOR STOCK ONLY DO NOT ADD TO PAGE 4.
ONCE OP/OQ HAS BEEN SET PLEASE CLOSE WORK ORDER.

AS PER CAMERON RECOMMENDATION PLEASE ADD STK # 405725

CRITICAL
BOM: 87 BOP CONTROL PODS
OP/OP 1/1EMPAC WORK ORDER NO : 8705-007082-000
PRICES AS PER CAMERON
11/11/2005 20:12:35

-----Original Message-----

From: Schwartz, Amy [mailto:schwartz@camerondiv.com]
Sent: Friday, November 11, 2005 2:24 PM
To: subsea
Cc: Gaspard, Daniel L.
Subject: RE: Price

Mark
part number 2197088-01-24 replaces part number 619088-15-14-01
List price \$2,906.00 each, less 20 percent discount for net \$2,324.00 each,
Delivery: 12 to 14 weeks
FOB Katy Texas plant
subject to prior sale

From: subsea [mailto:subsea@dwh.rig.deepwater.com]
Sent: Friday, November 11, 2005 6:53 AM
To: Schwartz, Amy
Cc: Gaspard, Daniel L.
Subject: Price

Amy,
Can I please get a price and delivery on a Pie connector? P/N: 619088-15-14-01
Mark Hay
subsea Eng.
Deepwater Horizon
Rig ? 713-232-8262
Fax ? 713-232-8268
subsea@dwh.rig.deepwater.com

EMPAC WORK ORDER NO : 8705-007082-000
NEED CARD LOADED FOR
12/14/2005 18:25:45
QTY NEEDED IS 2 EA. CONNECTOR, SUB SEA, 24 WAY FEMALE PIE CONNECTOR #6 X 4 CONTACT BOP

20 May 2010

Deepwater Horizon

Page: 40 of 72

FLANGE TO INTERNAL, CAMERON P/N 2197088-01-24

GLOBAL STK:405725

THIS IS FOR WAREHOUSE STOCK

CONTACT:
CAMERON CONTROL

Completion Date: 28 November 2005

Job Description	Job Number	Craft	Job Type	Total Hours
Fabricate Bracket To Mount New Style Pi	1550038057375	Welder	Corrective Maintenance	3.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8705-007507-000 JOHN COLLINS 11/28/2005 05:59:25 MADE NEW BRACKET TO HOLD REGULATOR.GAVE THE BRACKET TO OWEN IN SUBSEA TO INSTALL. JOB COMPLETED			

Completion Date: 10 February 2006

Job Description	Job Number	Craft	Job Type	Total Hours
Need Repair Kit For Regulator	1550038058415	Well Control	Corrective Maintenance	3.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8705-007911-000 NEED REPAIR KIT 12/21/2005 19:49:17 NEED TO ORDER REPAIR KIT STK #427872EMPAC WORK ORDER NO : 8705-007911-000 RECEIVED 02/10/2006 16:59:19 IN SUB-SEA SHOP..... M.HAY 2-10-06 EMPAC WORK ORDER NO : 8705-007911-000 REPAIR KIT INSTALLED 02/13/2006 03:28:16 INSTALLED NEW REPAIR KIT, 02/12/06 BY O. MCWHORTER			

Completion Date: 15 February 2006

Job Description	Job Number	Craft	Job Type	Total Hours
Repair & Replace Valves As Needed On #3	1550038057912	Well Control	Corrective Maintenance	39.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8705-007739-000 already given out 12/14/2005 13:15:02 just issue out and verify EMPAC WORK ORDER NO : 8705-007739-000 REGULATOR REBUILT 12/22/2005 04:27:26 REBUILT (1) ANNULAR REGULATOR FOR POD NO. 3 12/15/05 O. MC. REBUILT (1) 3/4" VALVE FOR THE LMRP OR WELLHEAD CONNECTOR. 12/16/05 O.MC. REBUILT (1) ACCUMULATOR CHARGE VALVE WITH "PREMIUM" KIT. 12/16/05 O.MC. REBUILT (1) 3/4" REGULATOR FOR LMRP OR WELLHEAD CONNECTOR 12/18/05 O.MC. REBUILT (4) 1/4" POD VALVES 12/19/05 O.MC. REBUILT (3) 1/4" POD VALVES 12/20/05 O.MC. REBUILT (1) 1 1/2" VALVE FOR ST LOCK. 12/22/05 O.MC.			

Completion Date: 22 February 2006

Job Description	Job Number	Craft	Job Type	Total Hours
Pod Frame Needs To Be Repaired	1550038060487	Welder	Corrective Maintenance	3.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8706-001080-000 POD FRAME 02/20/2006 13:53:56 BILL STRINGFELLOW OLD POD COVER MOUNTS NEED TO BE REMOVED. AFTER THIS WORK IS DONE THE FRAME NEEDS TO BE SENT IN FOR BLASTING AND PAINTING. EMPAC WORK ORDER NO : 8706-001080-000 COLLINS JOHN 02/22/2006 10:53:16 CUT OLD CLIPS OFF OF FRAME THEN GRINDED SLICK. JOB COMPLETED			

Completion Date: 11 March 2006

Job Description	Job Number	Craft	Job Type	Total Hours
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Move Parts From 05-7739 To Capture Expe

1550038059866

Well Control

Corrective Maintenance

36.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8706-000679-000

REGULATOR REBUILT

01/30/2006 12:31:58

REBUILT (1) ANNULAR REGULATOR FOR POD NO. 3 12/15/05 O. MC.

REBUILT (1) 3/4" VALVE FOR THE LMRP OR WELLHEAD CONNECTOR. 12/16/05 O.MC.

REBUILT (1) ACCUMULATOR CHARGE VALVE WITH "PREMIUM" KIT. 12/16/05 O.MC.

REBUILT (1) 3/4" REGULATOR FOR LMRP OR WELLHEAD CONNECTOR 12/18/05 O.MC.

REBUILT (4) 1/4" POD VALVES 12/19/05 O.MC.

REBUILT (3) 1/4" POD VALVES 12/20/05 O.MC.

REBUILT (1) 1 1/2" VALVE FOR ST LOCK. 12/22/05 O.MC.EMPAC WORK ORDER NO : 8706-000679-000

already given out

01/30/2006 12:31:58

just issue out and verify EMPAC WORK ORDER NO : 8706-000679-000

NOTE

02/20/2006 14:10:18

THIS WO HAS THE WRONG ASSET. ALL WORK DONE TO POD # 2

THIS WO TO BE CLOSED. NEW WO MADE FOR POD # 2.

KENNETH

Completion Date: 05 April 2006

Job Description	Job Number	Craft	Job Type	Total Hours
Send In 3 Each Solenoid'S For Inspection	1550038060337	Well Control	Corrective Maintenance	1.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8706-001011-000			
	3 EACH SOLENOID			
	02/16/2006 11:19:40			
	SEND IN 3 EACH SOLENOID FOR INSPECTION,, SEND SAME TO DAN REUDELHUBEREMPAC WORK ORDER			
	NO : 8706-001011-000			
	SENT IN			
	02/18/2006 10:09:52			
	SOLENOIDS SENT IN ON C/M 5121-3369			

Completion Date: 26 April 2006

Job Description	Job Number	Craft	Job Type	Total Hours
Sm- 3 Each Section Of Grating For Contr	1550038061019	Well Control	Corrective Maintenance	1.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8706-001503-000
 3 EACH SECTION OF GRATING
 03/11/2006 11:25:14

GRATING, YELLOW CORVEX FIRE RETARDANT, 1" THICK X 1-1/2" SQUARE MESH, SLIP RESISTANT
 MENISCUS SURFACE, 3' 9" WIDE X 6' 0" LONG

QTY NEEDED 3 EACH SM00321087 FOR CAMERON CONTROL PODS UNIT COST: \$324.00

VENDOR: WELL SERVICE
 337-364-3025

EMPAC WORK ORDER NO : 8706-001503-000
 ITEMS HERE
 04/03/2006 00:43:00
 GRATING ON DECK. ARRIVED 4/1/06 MAC

Completion Date: 09 May 2006

Job Description	Job Number	Craft	Job Type	Total Hours
Rebuild Spare 1 1/2" Regulator On Shelf	1550038063025	Well Control	Corrective Maintenance	4.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8706-002808-000 WORK COMPLETE 05/09/2006 22:02:29 WORK COMPLETE. 05/09/06			

Completion Date: 26 June 2006

Job Description	Job Number	Craft	Job Type	Total Hours
Replace Used Filters On Rigid Conduit Ma	1550038063730	Well Control	Corrective Maintenance	3.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8706-003172-000 REPLACED ALL FILTERS 06/26/2006 12:40:22 REPLACED ALL FILTERS ON RIGID CONDUIT AND HOT LINE 6-9-06 B.STRINGFELLOW			

Completion Date: 29 July 2006

<u>Job Description</u>	<u>Job Number</u>	<u>Craft</u>	<u>Job Type</u>	<u>Total Hours</u>
Sand Blast And Paint Pod Frame # 3	1550038060548	Well Control	Corrective Maintenance	1.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8706-001127-000
BLAST AND PAINT FRAME
02/22/2006 08:34:27
BILL STRINGFELLOW

SEND POD FRAME TO:

TESCO
50 CONCORD ROAD
HOUMA, LA. 70360

ATTN:

Al Hebert
Operations Manager
Tesco, Inc
Phone (985) 872-6450
Fax (985) 872-9200

Paint spec for the pod frame, Harvey is suggesting Tesco in Amelia to paint the pod frames

-----Original Message-----

From: Delaney, Harvey
Sent: Thursday, June 09, 2005 1:03 PM
To: Donohue, Steve
Subject: RE: Paint

Hey Steve; We have a company in Amelia called Tesco that does a lot of work for us down there and they do a good job.

Harvey Delaney
Coatings Supt.
NAR Technical Field Support
Office 832-587-8734
Cell 713-201-1268

-
Subject: Paint

Harvey,

Also need a blast/paint spec. Sub Sea Service, top coat white. The frame wraps around the pod, and does see some bumps etc as the pod is installed/removed from the stack, need a paint system that will be a little tolerant to the bumps, and not chip off.

SEE PAINT SPECIFICATION FOR POD FRAME:

Surface Preparation

- " Ultra High Pressure Water blast
- " All areas to be blasted shall be free of grease, oil, and other contaminants prior to any blasting.
- " UHP blast all surfaces to a standard of SSPC SP-10 "Near white Metal" with a minimum nozzle pressure of 1700 bar (25,000 p.s.i.).
- " Grit Blast
- " All areas to be grit blasted are to be degreased and fresh water washed to insure a clean surface prior to blasting.
- " All areas to be coated shall be grit blasted to a standard of SSPC SP-10 "Near White Metal" with a minimum profile of 1.5 mils

Coatings System

- " Apply a stripe coat to all lips, welds, and sharp edges of Amerlock II high build epoxy (buff) for immersion at a minimum of 3 mils.
- " Apply a full prime coat of Amerlock II high build epoxy (buff) for immersion at 6 to 8 mils.
- " Apply a stripe coat to all lips, welds, and sharp edges of Amerlock II high build epoxy (white) for immersion at a minimum of 3 mils.
- " Apply a full finish coat of Amerlock II high build epoxy

EMPAC WORK ORDER NO : 8706-001127-000

BLAST AND PAINT FRAME

02/22/2006 08:34:27

'WHITE' for immersion at 6 to 8 mils.

Completion Date: 14 September 2006

Job Description	Job Number	Craft	Job Type	Total Hours
Replace Used Filters On Rigid Conduit Ma	1550038066650	Well Control	Corrective Maintenance	3.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8706-005019-000 COMPLETE 09/14/2006 07:52:52 REPLACE OLD FILTERS IN RIGID CONDUIT AND HOT LINE ON LMRP.			M.HAY 8-20-06
Send In One Pie Connector To Be Install	1550038066811	Well Control	Corrective Maintenance	1.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8706-005111-000

PIE CONNECTOR

08/24/2006 17:36:34

BRAD WILL HAND CARRY THIS PIE CONNECTOR TO CAMERON CONTROL TO BE INSTALLED IN POD #3

SHIP SAME TO:

BRAD ROGERS

1311 Broadfield Blvd Suite 466A

Houston, Tx. 77084

EMPAC WORK ORDER NO : 8706-005111-000

SHIPPED

08/26/2006 14:16:49

CM 5121-3626

1 EACH

ICN 000000000049823

CONNECTOR, ELECTRICAL, RECEPTACLE, BULKHEAD, PIE TYPE, 10K PSI MATED RATING, 5K PSI OPEN
FACE RATING, SEACON P/N AWQ-4/24/BC-SP

SHIP TO

BRAD ROGERS

1311 Broadfield Blvd Suite 466A

Houston, Tx. 77084

Send In 3 Each E-Connector From Sub-Sea	1550038066812	Well Control	Corrective Maintenance	1.00
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Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8706-005112-000
3 EACH E-CONNECTOR
08/24/2006 17:59:07
SEND E -CONNECTOR'S TO CAMERON

ATTN:
CARTER ERWIN OR DARTAGAN HUITT
6650 BINGLE RD.
PHONE: 713-423-8800
FAX: 713-423-8991
EMPAC WORK ORDER NO : 8706-005112-000
SHIPPED
08/26/2006 14:11:52
CM 5121-3626

3 EACH, ELECTRONIC CONNECTOR'S FOR SUBSEA CONTROL PODS

SHIP TO
CAMERON CONTROLS
6650 BINGLE RD.
PHONE: 713-423-8800
FAX: 713-423-8991
ATTN:
CARTER ERWIN OR DARTAGAN HUITT

Completion Date: 16 September 2006

Job Description	Job Number	Craft	Job Type	Total Hours
O-Rings & Back Up Rings For 1 5" 3 Way 2	1550038064830	Well Control	Corrective Maintenance	1.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8706-003917-000
 CARD REQUESTED
 07/01/2006 17:26:15
 SCR 16742EMPAC WORK ORDER NO : 8706-003917-000
 NEED CARDS MADE & LOADED
 07/19/2006 15:11:58
 O-RINGS & BACK-UP RINGS FOR 1.5" 3 WAY -2 POSITION POD VALVE

ORING, P/N: 702645-23-21 GLOBAL STK: 197-1068 QTY NEEDED 20 EACH

BACK-UP RING P/N: 709906 GLOBAL STK: 1028-1640 QTY NEEDED 20 EACH

BACK-UP RING P/N: 709944 FOUND NO STOCK NUMBER FOR THIS? QTY NEEDED 20 EACH

EMPAC WORK ORDER NO : 8706-003917-000
 IN SS SHOP
 09/16/2006 08:48:20
 O-RINGS & BACK UP RINGS ARE IN SS SHOP,,,9-14-06 M.HAY

Job Description	Job Number	Craft	Job Type	Total Hours
Cable For Solenoids On Cameron Control P	1550038065008	Well Control	Corrective Maintenance	1.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8706-003997-000
 CABLES
 09/09/2006 17:14:09
 SOME CABLES CHARGED TO WORK ORDER 1242, BALANCE ARE IN WAREHOUSE - DGATES

Completion Date: 22 September 2006

Job Description	Job Number	Craft	Job Type	Total Hours
60 Each Anodes For Pod #3 Stk: 55323	1550038060920	Well Control	Corrective Maintenance	1.00

Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8706-001441-000
 ANODES ARE ON RIG
 06/22/2006 10:30:53
 ANODES ARE HERE IN THE BOP HOUSE M.HAY 6-22-06

Completion Date: 09 November 2006

Job Description	Job Number	Craft	Job Type	Total Hours
SI - Re- Bill To "Bp" Need Cameron Servi	1550038065675	Well Control	Corrective Maintenance	14.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8706-004398-000
SERVICE HAND
07/26/2006 15:56:23
RE- BILL TO "BP" NEED CAMERON SERVICE HAND TO ASSIST IN DISSEMBLE OF BOTH ANNULAR
OPERATORS
AND TROUBLE SHOOT COIL FAULTS AND POD MIS-MATCH ON BOTH PODS. RE-BILL PER JOHN KEETON

Completion Date: 30 December 2006

Job Description	Job Number	Craft	Job Type	Total Hours
Move Cost From Project 1919 To Normal Du	1550038070730	Materials	Corrective Maintenance	1.00

Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8706-007660-000
DATESTART : 12/29/2006 00:00:00.000000
DATECOMPLETE : 12/30/2006 23:59:59.000000
No Work Reported in EMPAC

Completion Date: 07 January 2007

Job Description	Job Number	Craft	Job Type	Total Hours
Sm - Subsea Pod #3, Repairs & Deadman Mo	1550038062744	Well Control	Corrective Maintenance	2.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8706-002608-000
 SEND IN POD #3
 05/04/2006 05:25:27
 SEND IN POD #3 FOR REPAIRS & UPGRADE TO AMF/ DEADMAN MODIFICATION

SER # 11360186/03

ESTIMATED WIEGHT: 10,000 LBS.

SHIP POD TO
 6650 BINGLE RD.
 HOUSTON, TEXAS 77092
 ATTN:
 Eduardo Villamarin

Quotation

To: Mr. Mark Hay
 Transocean Sedco Forex From: Eduardo Villamarin
 Fax: Pages: 3
 Phone: Date: May 3, 2006
 Re: Repair of the SEM and Test with Mux.

Quote No.: 50306ESEM

Cameron will remove the SEM from the Mux section to replace the pie connectors (customer provided) and to install the AMF/Deadman modification Kit. The SEM will be tested per Cameron specifications. Later, it will be mounted to the Mux. All solenoid valve cables will be connected to the SEM and a solenoid valve firing test will be performed.

Item	Part No.	Qty	Description	Price USD	per Total Qty	Price USD	15% Discounted	Total Price USD
1	619088-12-00-05	18	CONNECTOR, MALE, SUB-D, 50-WAY	\$	105.94	\$	90.05	
2	619088-12-00-07	4	CONNECTOR, FEM., SUB-D, 15-WAY	\$	15.31	\$	13.02	
3	619088-12-00-09	4	CONNECTOR, FEM., SUB-D, 37-WAY	\$	23.77	\$	20.21	
4	619088-12-00-10	4	CONNECTOR, FEM., SUB-D, 50-WAY	\$	25.26	\$	21.47	
5	619088-12-00-01	4	CONNECTOR, SUB-D, 9-WAY MALE	\$	18.40	\$	15.64	
6	619088-12-00-02	4	CONNECTOR, MALE, SUB-D, 15-WAY	\$	9.60	\$	8.16	
7	619088-12-00-08	2	CONNECTOR, FEM., SUB-D, 25-WAY	\$	8.86	\$	7.53	
8	619088-04-05-01	800	CRIMPCONTACT FEMALE, 0.25-0.56 QMM	\$	411.43	\$	349.71	
9	619088-04-05-02	900	CRIMPCONTACT MALE, 0.25-0.56 QMM	\$	282.86	\$	240.43	
10	2197088-01-24	18	SUBSEA CONNECTOR, 24 WAY FEMALE			Customer Provided		
11	619088-12-91	2	CONNECTOR, 11-WAY, FEMALE, H11	\$	58.29	\$	49.54	
12	619088-12-93	6	CONNECTOR HOUSING 15WAY FEMALE	\$	38.23	\$	32.49	
13	6EMPAC WORK ORDER NO : 8706-002608-000							

REQ CANCELLED

05/18/2006 14:10:52

CANCELLED REQ # 574, ADDED TO "POD" WORK ORDER # 1242 TO CAPTURE ALL REPAIR COSTS FOR POD
 ON ONE WORK ORDER PER BILL STRINGFELLOW - -DGATES EMPAC WORK ORDER NO : 8706-002608-000
 SHIPPED CM 5121-3467

20 May 2010

Deepwater Horizon

Page: 52 of 72

12/23/2006 12:05:43
CARGO MANIFEST 5121-3467

SUBSEA BOP CONTROL POD, CAMERON
SERIAL NUMBER 11360186/03

SHIP TO
CAMERON CONTROLS
6650 BINGLE RD.
HOUSTON, TEXAS 77092
ATTN:
Eduardo Villamarin

EMPAC WORK ORDER NO : 8706-002608-000
SEND IN POD #3

05/04/2006 05:25:27

19011-48	1	CASTING SUBSTANCE, 2K SILICON	\$	162.83	\$	138.40	
14	619087-02-16-31	50 WIRE 0.22.MM? TEFLON PTFE WHITE	\$		100.00	\$	85.00
15	619022-02-92-02	2 SHRINK TUBING, 3 - 1 MM, BLACK	\$	17.77	\$		15.11
16	619022-02-93-02	2 SHRINK TUBING, 12.7 - 6.4 MM, BLACK	\$		15.03	\$	

Completion Date: 28 March 2007

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move-Mux Pod	1550038063797	Well Control	PM	40.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8706-003238-000 COMPLETE 09/16/2006 11:52:54 ALL VALVES HAVE BEEN REBUILT			

Completion Date: 29 March 2007

Job Description	Job Number	Craft	Job Type	Total Hours
Sm- 3 Each Section Of Grating For Contr	1550038071766	Well Control	Corrective Maintenance	3.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8707-000610-000
RECEIVED
03/04/2007 18:23:43
CM 5121-3856 QUAN: 3 LOCATION: IN BLUE TOI CARGO BOX.

GRATING, YELLOW CORVEX FIRE RETARDANT, 1" THICK X 1-1/2" SQUARE MESH, SLIP RESISTANT
MENISCUS SURFACE, 3' 9 INCHES WIDE X 6.0' LONG.

EMPAC WORK ORDER NO : 8707-000610-000
GRATING FOR CONTROL PODS
02/03/2007 09:24:18
2 EA. GREASE FITTINGS STK: 55256

GRATING, YELLOW CORVEX FIRE RETARDANT, 1" THICK X 1-1/2" SQUARE MESH, SLIP RESISTANT
MENISCUS SURFACE, 3' 9" WIDE X 6' 0" LONG

QTY NEEDED 3 EACH SM00321087 FOR CAMERON CONTROL PODS UNIT COST: \$324.00

VENDOR: WELL SERVICE
337-364-3025
EMPAC WORK ORDER NO : 8707-000610-000
RECEIVED GRATING
03/18/2007 18:39:20
RECEIVED O.MC.

LOCATED IN THE BOP HOUSE.

Completion Date: 28 April 2007

Job Description	Job Number	Craft	Job Type	Total Hours
Change Pilot Filters On Both Pods	1550038074490	Well Control	Corrective Maintenance	2.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8707-002232-000 COMPLETE 04/28/2007 16:12:21 CHANGED FILTERS 4-25-07			

Completion Date: 26 May 2007

Job Description	Job Number	Craft	Job Type	Total Hours
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Replace Bad Pbof Flange Plug On Sem

1550038071393

Well Control

Corrective Maintenance

1.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8707-000348-000
 REPLACE FLANGE
 01/18/2007 17:48:18
 BILL STRINGFELLOW

Completion Date: 28 May 2007

Job Description	Job Number	Craft	Job Type	Total Hours
730 Day-Mux Pod	1550038053791	Well Control	PM	12.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8705-005490-000 COMPLETE 05/28/2007 16:26:52 MADE ALL CHECKS,,			
365 Day-Mux Pod	1550038053921	Well Control	PM	1.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8705-005570-000 COMPLETE 05/28/2007 16:24:37 MADE ALL CHECKS,,			
Rig Move-Mux Pod	1550038074808	Well Control	PM	6.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8707-002463-000 COMPLETE 05/28/2007 14:46:29 FUNCTIONED ALL VALVES AND REPAIRED AS NEEDED,,5-5-07			

Completion Date: 30 May 2007

Job Description	Job Number	Craft	Job Type	Total Hours
1825 Day-Mux Pod	1550038063393	Well Control	PM	6.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8706-003018-000 COMPLETE 05/30/2007 16:56:30 REPLACED PARTS AS NEEDED			

Completion Date: 23 November 2007

Job Description	Job Number	Craft	Job Type	Total Hours
Bop Control Pod #3 - Rebuilding Solenoid	1550038068455	Well Control	Corrective Maintenance	1.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8706-006217-000 SEE NOTES 10/17/2006 01:53:32 J. MOORE THE FOLLOWING ITEMS MAY NEED CARDS MADE. THEY ARE ALL CAMERON PN#'S FOR PARTS OF THE POD'S SOLENOID VALVES. PN 222808-03 UPPER PISTON, OD: 58.8 X 60.4, REV D01 QTY. 5 PN 222804-02 COIL HOUSING, OD: 63.4 X 121, REV D02 QTY. 5 PN 639151-97 PROTECTIVE COVER, REV B01 QTY. 5 PN 041008-02-50-32 RETAINING RING, SPIROLOX- INT F QTY. 5 PN 702515-21-20-10 SCREW, SOC HD SET, 0.375-16 QTY. 10 PN 619010-03-79 SCREW, HEXAGON SOCKET HEAD CAP QTY. 30 PN 702505-02-00-20 SCREW, SOC HD CAP, 0.250-20 X 2 QTY. 30 PN 710271 SCREW, SOC HD CAP, #10-24 X 3 QTY. 30 EMPAC WORK ORDER NO : 8706-006217-000 PARTS CANCELLED 11/23/2007 15:54:07 PARTS ORIGINALLUY REQUESTED ON PAGE 4 WERE NOT SHIPPED WITH THE POD CANCELLED STOCK ISSUE REQUESTS			

Completion Date: 04 March 2008

Job Description	Job Number	Craft	Job Type	Total Hours
General Maintenance On Pod # 3 For 2006	1550038060672	Well Control	Corrective Maintenance	158.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8706-001242-000
PIE CONNECTORS
02/27/2006 17:37:32
BILL STRINGFELLOW

REPLACE ALL PIE CONNECTORS IN THE SEM OF THE POD.

SEACON BRANTNER
P/N AWQ7442-104
DUAL O-RING
COST \$1589.00 EACH
QTY. REQUIRED 20

CONTACT: NANCY WARD
SEACON BRANTNER & ASSOCIATES, INC.
PHONE: (619) 562-7070
FAX: (619) 562-9706
E-MAIL NWARD@SEACONBRANTNER.COM

CONTACT:

NANCY WARD EMPAC WORK ORDER NO : 8706-001242-000
PIE CONNECTOR NOTE

03/25/2006 10:37:35

ORIGINALLY ORDERED STOCK # 00-405725. SHARED SPARES ORDERED 00-49823, BSTRINGFELLOW CONTACTED SEACON AND DETERMINED THAT 00-49823 IS THE SAME ITEM. CANCELLED REQUISITION FOR 00-405725 & ORDERED 00-49823 - DGATES EMPAC WORK ORDER NO : 8706-001242-000
1 1/2" REGULATORS AND VALVES

07/11/2006 05:23:30

REBUILT (1) 1 1/2" REGULATOR FOR ANNULARS. 03/13/06 O.MC.

REBUILT (3) 1 1/2" VALVES FOR ANNULARS. 03/16/06

NOTE - ALL (4) OF THE KITS THAT WENT IN THESE VALVES HAD ONE SHEAR SEAL IN EACH THAT WAS SLIGHTLY CHIPPED ON THE EDGE. SUSPECTING THEY ALL CAME FROM THE SAME "BATCH". TOOK PICTURES OF ONE AND MADE NOTE OF IT ON THE TAGS ON THE VALVES. PICTURES ARE READY TO SEND TO CAMERON IF THESE VALVES LEAK. 03/17/06 O.MC.

REBUILT (3) 1 1/2" VALVES FOR THE ANNULARS 03/15 AND 03/16/06 O.MC.

REBUILT (3) 3/4" SLIDE VALVES FOR LMRP OR WELLHEAD CONNECTOR. 04/10, 04/11, 04/12/06 O.MC.

REBUILT (2) 1 1/2" REGULATORS FOR ANNULARS AND POD MANIFOLD 04/13, AND 04/14/06 O.MC.

REBUILT (1) 3/4" REGULATOR FOR LMRP OR WELLHEAD CONNECTOR 04/14/06 O.MC.

REBUILT (1) 1" PREMIUM VALVE FOR STACK ACCUMULATOR CHARGE 05/04/06 O.MC.

REBUILT (1) 1/4" VALVE FOR THE ROV FUNCTION 05/04/06 O.MC.

REBUILT (1) 1" VALVE FOR THE RAMS. 05/10/06 O.MC.

REBUILT (1) 1" VALVE OFR THE RAMS. 05/14/06 O.MC.

20 May 2010

Deepwater Horizon

Page: 57 of 72

REBUILT (1) 1" VALVE FOR THE RAMS
REBUILT (1) 1 1/2" REGULATOR FOR ANNULARS 07/04/06 O.MC.

REBUILT (1) 3/4" REGULATOR FOR WELLHEAD OR LMRP CONNECTOR.
REBUILT (1) 3/4" VALVE FOR THE WELLHEAD OR LMRP CONNECTOR. 07/05/06 O.MC.

REBUILT (1) 1/4" VALVE FOR POD. 07/06/06 O.MC.

REBUILT (6) 1/4" VALVES FOR POD. 07/08/06 O.MC.

REBUILT (9) 1/4" VALVES FOR POD. 07/09/06 O.MC.

REBUILT THE LAST (4) 1/4" VALVES FOR POD. O.MC.

EMPAC WORK ORDER NO : 8706-001242-000

INSTALLED VALVES

08/07/2006 20:20:46

INSTALLED ALL VALVES ON POD #3. O.MC. EMPAC WORK ORDER NO : 8706-001242-000

CHANGED O-RINGS

08/07/2006 20:19:10

CHANGED OUT ALL THE O-RINGS ON THE INTERNAL PLUMBING IN POD #3. O.MC. EMPAC WORK ORDER
NO : 8706-001242-000

MADE UP NEW HOSES

08/07/2006 20:29:23

MADE UP AND TESTED NEW HOSES FOR POD #3. TWO 1" HOSES AND ONE 1/2" HOSE. 08/06/06 08/07/06
O.M

Completion Date: 18 June 2008

Job Description	Job Number	Craft	Job Type	Total Hours
Rebuild 3/4" Regulator For Wellhead Conn	1550038087378	Well Control	Corrective Maintenance	16.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8708-003260-000
NEED REPAIR KIT FOR 3/4 REGULA
06/13/2008 11:59:12
QTY. 1 ST.#30-12434EMPAC WORK ORDER NO : 8708-003260-000
NEED KITS 3/4" VALVES
06/13/2008 12:03:29
QTY. 2 ST.# 30-1480 EMPAC WORK ORDER NO : 8708-003260-000
COMPLETE
06/16/2008 08:11:00
VALVE REBUILT 06/13/08 O.MC.
REBUILT (1) 3/4" REGULATOR AND
(1) 3/4" POD VALVE.

Completion Date: 23 June 2008

Job Description	Job Number	Craft	Job Type	Total Hours
Sm - Repair Flow Meter Removed From Yell	1550038086280	Well Control	Corrective Maintenance	1.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8708-002634-000
SEND IN DEFECTIVE FLOW METER
05/11/2008 09:04:10
REPAIR AND SEND BACK TO RIG.

SEND IN DEFECTIVE POD FLOW METER REMOVED FROM BLUE POD LAST RIG MOVE

METER, FLOW, HIGH SHOCK MODEL, CAMERON P/N 2710040-02 (OLD 2185354-01)

MFG: FLOW TECHNOLOGY
LN-5-A-MA-1015
S/N: 2404765
P/N: 2710040-02

SEND TO:
Jennifer Keith
FTI Flow Technology, Inc.
Sales Manager
Direct: (480) 240-3314
www.ftimeters.com

8930 S. Beck Avenue, Ste. 107
Tempe, AZ 85284

Main Phone: (480) 240-3400
Main Fax: (480) 240-3401

EMPAC WORK ORDER NO : 8708-002634-000
SHIPPED
05/23/2008 12:35:51
SHIP IN ON C/M 5121-4429
REF: RMA # 34181

JCLEMENTS EMPAC WORK ORDER NO : 8708-002634-000
RECEIVED
06/22/2008 01:20:34
RECEIVED 1 EA ICN: 429803
METER, FLOW, HIGH SHOCK MODEL, CAMERON P/N 2710040-02 (OLD 2185354-01
ON CM 5121- 4473 GIVEN TO MARK HAY

ASHLEY DEAN

Completion Date: 29 June 2008

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move-Mux Pod	1550038084449	Well Control	PM	8.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8708-001503-000 COMPLETE 06/29/2008 06:35:48 MADE ALL CHECKS AND FUNCTIONED ALL VALVES ON POD #3			

Completion Date: 11 July 2008

Job Description	Job Number	Craft	Job Type	Total Hours
365 Day-Mux Pod	1550038086788	Well Control	PM	18.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8708-002984-000 WORK COMPLETE 07/11/2008 10:11:57 THIS POD SENT TO CAMERON AND OVERHAULED 2006 WORK ORDER #06-1242 ALL SOLINIODS REBUILT AND TESTED. ALL FLUID ENDS REBUILT AND TESTED. SEM UPGRADED WITH NEW BATTERIES.			

Completion Date: 13 July 2008

Job Description	Job Number	Craft	Job Type	Total Hours
Rebuild Pod Regulator	1550038088096	Well Control	Corrective Maintenance	3.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8708-003763-000 WORK COMPLETE 07/13/2008 16:29:10 REGULATOR REBUILT BY JAY ODENWALD 07/13/08			

Completion Date: 08 October 2008

Job Description	Job Number	Craft	Job Type	Total Hours
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Sending 12 Solenoids To D&D For Overhaul

1550038087199

Well Control

Corrective Maintenance

3.00

20 May 2010

Deepwater Horizon

Page: 62 of 72

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8708-003179-000
SENDING PARTS
06/11/2008 05:14:16
SEND FROM RIG:
12 E-CONNECTORS STOCK # 36764
12 REPAIR KITS STOCK #30-12444

TO D&D FOR OVERHAULING SOLENOIDS FROM RIG.
O.MC. 06/11/08EMPAC WORK ORDER NO : 8708-003179-000
SEND SOLENOIDS TO D&D
06/11/2008 05:15:01
QUOTE AND CONTACT INFORMATION BELOW
O. MC. 06/11/08

D&D TECH SYSTEMS
2121 Brittnmoore Rd. Unit #8300
Houston, Texas 77043
Phone: (713) 996-8404
Phone: (832) 622-8608
Phone: (713) 534-4016
ddtechsystems@gmail.com

June 10, 2008

Mr. Dana H. Burkett
Transocean
Subsea Support Group
Houston, Texas

Attention: Dana H. Burkett

Reference: (12) Solenoid Valves - Refurbish (Electrically, Mechanically) and Test

Mr. Dana H. Burkett,

D&D Tech Systems is pleased to provide the following quotation for your review and consideration.

Scope of Supply

D&D Tech Systems will provide all necessary labor to refurbish(electrically and mechanically), and test (12) Solenoid

Valves per your request. Repair parts will be provided by Transocean.

Pricing

Labor

The labor cost for refurbishing and testing (12) Solenoid Valves: \$ 4,500.00

Payment Schedule

Net 30 Days.

Delivery

Delivery is scheduled to be 7 to 10 days from receipt of valves and PO.

Shipping

F.O.B. - Point of origin. D&D Tech Systems

Quote Validity

Prices quoted are valid for 30 days.

Cancellation

Should any event cause cancellation of the purchase order after receipt of purchase order at D&D Tech Systems, Transocean will be charged payment for any costs on parts or labor expended to that date plus 20% handling fees. Any parts that can be returned will be returned. D&D Tech Systems will charge for any restocking fees.

Clarifications

1. Any changes or additional specifications would be revised for cost impact by D&D Tech Systems and approved in writing by Transocean prior to any initiations of changes.
2. Pricing is based on FOB D&D Tech Systems.
3. Prices quoted do not include any third party charges of fees for certification, witness design review, or related services.
4. D&D Tech Systems has based pricing for this project on Transocean supplying approved for assembly drawings and bills of ma EMPAC WORK ORDER NO : 8708-003179-000

SHIPPED

06/11/2008 11:10:42

SENT IN ON C/M 5121-4469

JCLEMENTS EMPAC WORK ORDER NO : 8708-003179-000

COMPLETE

10/08/2008 06:30:15

SOLENOIDS ARE IN SS SHOP. 10-8-08 M.HAY EMPAC WORK ORDER NO : 8708-003179-000

SEND SOLENOIDS TO D&D

06/11/2008 05:15:01
terials.

If you have any questions regarding this quotation, please contact me at (713) 996-8404, or (832) 622-8608.

Sincerely,

Luis Diaz
D&D Tech Systems

Completion Date: 07 January 2009

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move-Mux Pod	1550038092353	Well Control	PM	2.00
Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8708-006838-000 COMPLETE 01/07/2009 14:31:06 FUNCTIONED ALL VALVES AND CHECKED FOR LEAKS...				

Completion Date: 17 January 2009

Job Description	Job Number	Craft	Job Type	Total Hours
Repair Kit Needed To Rebuild 1/4" 4 Way	1550038093229	Well Control	Corrective Maintenance	3.00
Jul 09 2009 Work Log: EMPAC WORK ORDER NO : 8709-000291-000 VALVE REBUILT 01/17/2009 11:06:56 VALVE REBUILT BY DONNIE WILLIAMS. 01/15/09				

Completion Date: 12 February 2009

Job Description	Job Number	Craft	Job Type	Total Hours
Additional Work To Make Spare Pod Ready	1550038094193	Well Control	Corrective Maintenance	1.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8709-000865-000
PARTS MOVED TO WO# 874
02/12/2009 16:05:51
PARTS CANCELLED AND PUT ON NEW WORK ORDER #874 AND CHARGED TO PROJECT # 11036 O.MC.
02/12/09

Completion Date: 30 March 2009

Job Description	Job Number	Craft	Job Type	Total Hours
Rig Move-Mux Pod	1550038094678	Well Control	PM	4.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8709-001240-000 COMPLETE 03/30/2009 15:32:49 DID A COMPLETE FUNCTION TEST ON POD,, ALL GOOD.			

Completion Date: 14 May 2009

Job Description	Job Number	Craft	Job Type	Total Hours
Rebuilding Valves On Blue Pod And Bop	1550038095747	Well Control	Corrective Maintenance	4.00
Jul 09 2009	Work Log: EMPAC WORK ORDER NO : 8709-002131-000 VALVE REBUILT 05/14/2009 13:38:21 VALVE REBUILT BY DONNIE WILLIAMS. 04/14/09			

Completion Date: 04 June 2009

Job Description	Job Number	Craft	Job Type	Total Hours
730 Day-Mux Pod	1550038096703	Well Control	PM	12.00

Jul 09 2009

Work Log: EMPAC WORK ORDER NO : 8709-002819-000

WORK COMPLETE

06/04/2009 13:26:13

THIS POD WAS JUST OVERHAULED AND PUT INTO SERVICE ON 03/14/09.

ENTIRE POD TESTED TO MAXIMUM PRESSURE

ALL JUMPER HOSES FROM THE MUX SECTION TO THE HYDRAULIC SECTION CHANGED OUT.

1" HOSE BETWEEN THE BOP AND LMRP SECTIONS OF POD ON ORDER AND WILL BE CHANGED OUT NEXT

RIG MOVE. NO RECORDS OF THIS HOSE BEING CHANGED DURING THE OVERHAUL. O.MC. 06/04/09

Completion Date: 14 July 2009

Job Description	Job Number	Craft	Job Type	Total Hours
2009 Project - Additional Work And Parts	1550038094201	Well Control	Corrective Maintenance	12.00
Jul 20 2009	Work Log: EMPAC WORK ORDER NO : 8709-000874-000 CHANGED DATE 06/18/2009 13:30:36 INSTALLED ALL NEW PARTS IN POD VALVES			

Completion Date: 15 August 2009

Job Description	Job Number	Craft	Job Type	Total Hours
365 Day-Mux Pod	1550038097559	Well Control	PM	2.00
Aug 15 2009	Work Log: Parts Requested from ICS: -----			
Aug 15 2009	Work Log: EMPAC WORK ORDER NO : 8709-003534-000 UNABLE TO PERFORM AT THIS TIME 07/06/2009 13:17:15 UNABLE TO PERFORM AT THIS TIME DUE TO WELL DRILLING OPERAIONS. O.MC. 07/06/09			
Aug 15 2009	Work Log: INSTALLED NEW SPACER AND NEW NUT ON SPARE POD VALVE. M.HAY 8-15-09			

Completion Date: 13 October 2009

Job Description	Job Number	Craft	Job Type	Total Hours
2009 Project - Rebuild Two Pbof Cables F	1550038094488	Well Control	Corrective Maintenance	1.00

Aug 18 2009

Work Log: Parts Requested from ICS:

Aug 18 2009

Work Log: PARTS ARE RIG,, WILL BOX THEM UP AND SEND TO DANA BURKETT.

Aug 18 2009

Work Log: SEACON PARTS SHIPPED TO DANA ON FEDEX # 7968 7229 6914, DEPARTED RIG 8/19/09 -
DGATES

Oct 13 2009

Work Log: EMPAC WORK ORDER NO : 8709-001119-000

NEED DESCRIPTION

02/24/2009 15:59:19

EMAILED DANA BURKETT FOR A DESCRIPTION BEFORE WE CAN REQUEST CARDS - DGATESEMPAC

WORK ORDER NO : 8709-001119-000

LOAD CARDS FOR THE FOLLOWING

02/23/2009 17:23:52

O. MCWHORTER 02/23/09

Quotation Number 38062

1. 2113-1-b @ \$48.00 Each(4) GLOBAL #103925
2. BS1806-023 O-ring @ \$1.80 Each.(8) GLOBAL #89562
3. BS1806-010 O-ring @ \$1.80 Each.(10) GLOBAL #89564
4. BS1806-026 O-ring @ \$1.80 Each.(8) NO GLOBAL NO.
5. 1806-1-B @ \$20.00 Each.(8) NO GLOBAL NO.
6. 2126-1-D MSSSL-22-CIP @ #574.80 Each.(4) NO GLOBAL NO.
7. BS1806-131 @ \$1.80 Each.(8) NO GLOBAL NO.
8. 2121-1-D @ \$180.00 (4) GLOBAL #65346
9. 2120-1-D @ \$180.00 (4) GLOBAL #65653

REFERENCE

craig.smith@seaconeurope.com

Glenn1SeaCon@cs.com

PLEASE HAVE THESE PARTS DELIVERED TO
DANA BURKETT
1311 BROADFIELD BLVD.
HOUSTON TX.

SEND OLD PBOF CABLES TO D&D.

D&D TECH SYSTEMS
2121 BRITTMOORE RD. SUITE 8300
HOUSTON, TX 77043
ATTEN: LUIS DIAZ

07/12/2009 10:51:36
CHANGED THE REQ. DATE. O.MC. 07/12/09

Oct 13 2009 Work Log: Received (2) PBOF cables and spare rubber goods for same 10/13/09 O.Mc.

Completion Date: 29 October 2009

Job Description	Job Number	Craft	Job Type	Total Hours
PARTS FOR POD VALVE REPAIR AND ORINGS	1550038099383	Well Control	Corrective Maintenance	4.00
Aug 21 2009 Work Log: Parts Requested from ICS:				
Oct 29 2009 Work Log: RECEIVED ALL PARTS OUT OF WAREHOUSE....10-29-09			M.HAY	

Completion Date: 25 November 2009

Job Description	Job Number	Craft	Job Type	Total Hours
NEED ANODES FOR PODS	1550038101664	Well Control	Corrective Maintenance	1.00
Oct 24 2009 Work Log: Parts Requested from ICS:				
Nov 25 2009 Work Log: Received anodes for pods.				

Completion Date: 30 January 2010

Job Description	Job Number	Craft	Job Type	Total Hours
Rebuild Upper Annular Regulator for Pod	1550038106292	Well Control	Corrective Maintenance	6.00
Jan 26 2010 Work Log: Parts Requested from ICS:				
Jan 26 2010 Work Log: Parts Requested from ICS:				
Jan 27 2010 Work Log: Parts Requested from ICS:				