

DOCUMENTATION PACKAGE

FOR

CUSTOMER:	Transocean Offshore Deepwater
SALES ORDER NO.:	1475097
CUSTOMER PO NO.:	P1754673
P. O. NO:	111666613
PART NUMBER:	2245752-01 Rev 01
DESCRIPTION:	Body T BOP 18-3/4" 15K Dbl Cavity Flanged Top & Bottom CX-18 w/(4) 3- 1/16" 15K AX Flg Outlets w/All Ring Grooves NBA 625 Inlay w/Spacer 30" Between Rams Per API 16A 3 rd Ed. T- 20 & SP-5050-51
SERIAL NUMBER:	111666613-01
DATE:	July 20, 2010





Drilling and Production
Systems

Cameron Berwick
3007 Hwy 182
Bayou Vista, LA 70380
P.O. Box 188
Berwick, LA 70342
985-395-1010
www.c-a-m.com

Certificate of Conformance New Manufacture

Date: July 20, 2010

Customer: Transocean Offshore Deepwater
Cameron Sales Order Number: 1475097

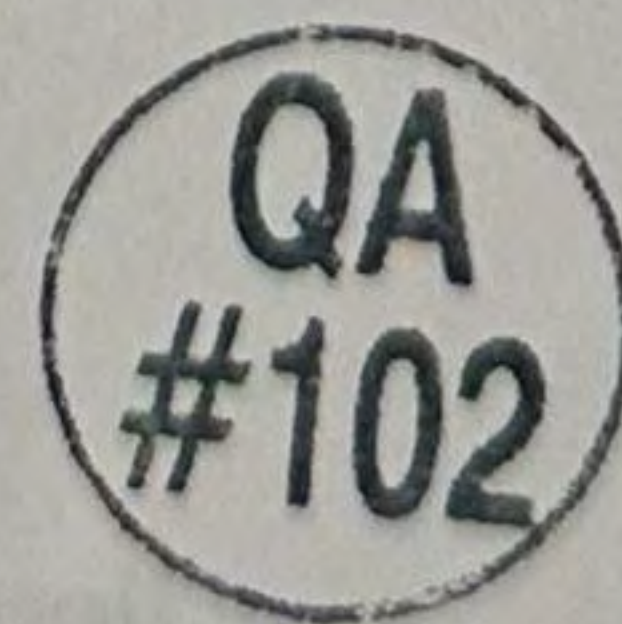
Customer PO Number: P1754673
Cameron Internal Tracking Number: 111666613

Cameron certifies that the item(s) described herewith is (are) in conformance with the requirements of the above Purchase Order Number and fully comply with applicable Cameron specifications in effect at the date of manufacture. All related documentation in support of the above statement is retained on file by Cameron for a minimum of 10 years from date of manufacture and can be made available to the purchaser upon request.

Item #	Part Number	Rev #	Description	Qty	Serial Number(s)	Heat Numbers	Line Item Notes
10	2245752-01	01	Body T BOP 18-3/4" 15K Dbl Cavity Flanged Top & Bottom 1/4" 1/16" 15K AX Flg Outlets w/All Ring Grooves NBA 625 Inlay w/Spacer 30" Between Rams Per API 16A 3rd Ed. T-20 & SP-5050-51	1	111666613-01		

Additional Endorsements (if applicable)	Endorsement Report Number/License Number (If Applicable)	Notes on Scope of Certification
		Part sold to customer untested.

All documents and inspection reports to support this certificate of conformance have been verified to the best of my knowledge to be true and correct



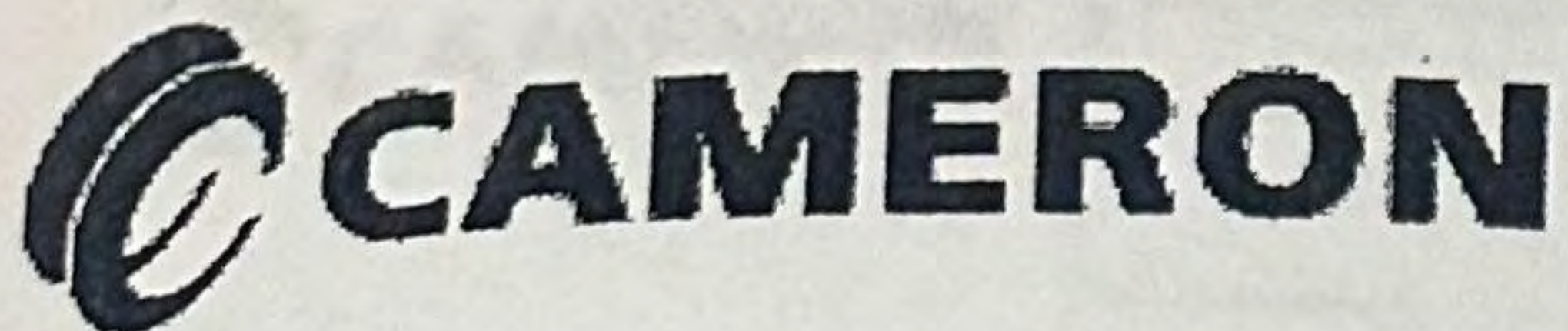
Debbie Gaspar
Cameron Quality Representative
Name

Debbie Gaspar

Signature

Stamp

July 20, 2010
Date



Drilling and Production
Systems

Cameron France, S.A.S.
Siège Social et Usine
Plaine Saint-Pierre – CS 620
34535 Béziers Cédex - France
Tel. # 00- 334.67.11.15.00
Fax # 00- 334.67.11.16.00
www.c-a-m.com

Certificate of Conformance New Manufacture

	☐ Witnessed	☒ Reviewed
	And found to comply with	
	DNV OSE 201	
	Date : 2010-06-07	
Sign : <i>[Signature]</i>		
Det Norske Veritas AS MARSEILLE		

Date: 25-juin-10
Customer: CAM SUBSEA SYS - BERWICK
Customer PO Number: 4700455601

Design Approval f.b. confirmed
Cameron Sales Order Number: 1476082
Cameron Internal Tracking Number:

Cameron certifies that the item(s) described herewith is (are) in conformance with the requirements of the above Purchase Order Number and fully comply with applicable Cameron specifications in effect at the date of manufacture. All related documentation in support of the above statement is retained on file by Cameron for a minimum of 10 years from date of manufacture and can be made available to the purchaser upon request.

Item #	Part Number	Rev #	Description	Qty	Serial Number(s)	Heat Numbers	Line Item Notes
010	2245752-01	01	BODY T BOP 18-3/4 15K DBL CAVITY FLANGED TOP & BOTTOM CX-18 WITH FOUR 3-1/16 15K AX FLG OUTLETS W/ ALL RING GROOVES NBA 625 INLAY WITH SPACER 30" BETWEEN RING PER API 10A 3RD ED. T-20 & SP-5050-51	1	111666613-1		

Additional Endorsements (if applicable)	Endorsement Report / License Number (if applicable)
NACE MR0175-2000	

Notes on Scope of Certification
Drift Test ok Spv 2646

All documents and inspection reports to support this certificate of conformance have been verified to the best of my knowledge to be true and correct

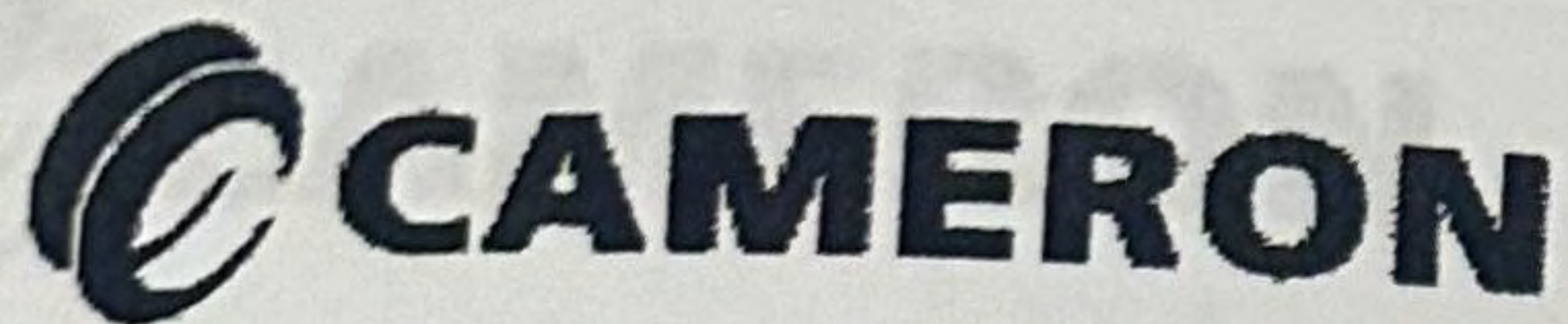
Jean-Luc LLORCA
Cameron Quality
Representative Name

[Signature]
Signature



Stamp

25-juin-10
Date



Cameron France, S.A.S.
Siège Social et Usine
Plaine Saint-Pierre - CS 620
34535 Béziers Cédex - France
Tel. 04.67.11.15.00
Fax. 04.67.11.16.00

CAM SUBSEA SYS - BERWICK
PO Box 457
BERWICK LA 70392
USA

Beziers, on : 15 July 10

Attn. : Purchasing Dept.
Subject : Documentation package

OUR REF. : 1476082
YOUR REF. : 4700455601
Project Name : RIG TRANSOCEAN LEADER

Item 010 : 1 BODY T BOP 18-3/4 15K DBL
Sn° : 111666613-1

www.PetroRigs.com

Dear Sirs,

Would you please find enclosed our :

- ✓ QUALITY DATA PACKAGE
- ✓ Operational & Maintenance Manual is available at :
<http://www.c-a-m.com/>

concerning your above mentioned order.
We trust that this meets with your approval.

Best Regards,

JL.L. ORCA
QC Supervisor

Distribution : 1 Copy by email



CERTIFICATE OF CONFORMITY MATERIAL TRACEABILITY RECORD

Cameron France, S.A Ref:

1476082

Material Number

Item Description

Qty

Customer :

CAM SUBSEA SYS - BERWICK
PO Box 457
BERWICK LA 70392
USA

10 2245752-01

1

BODY T BOP 18-3/4 15K DBL CAVITY FLANGED TOP & BOTTOM CX-
18 WITH FOUR 3-1/16 15K AX FLG OUTLETS W/ ALL RING
GROOVES NBA 625 INLAY WITH SPACER 30" BETWEEN RAMS
PER API 16A 3RD ED. T-20 & SP-5050-51

Cust Order No:

4700455601

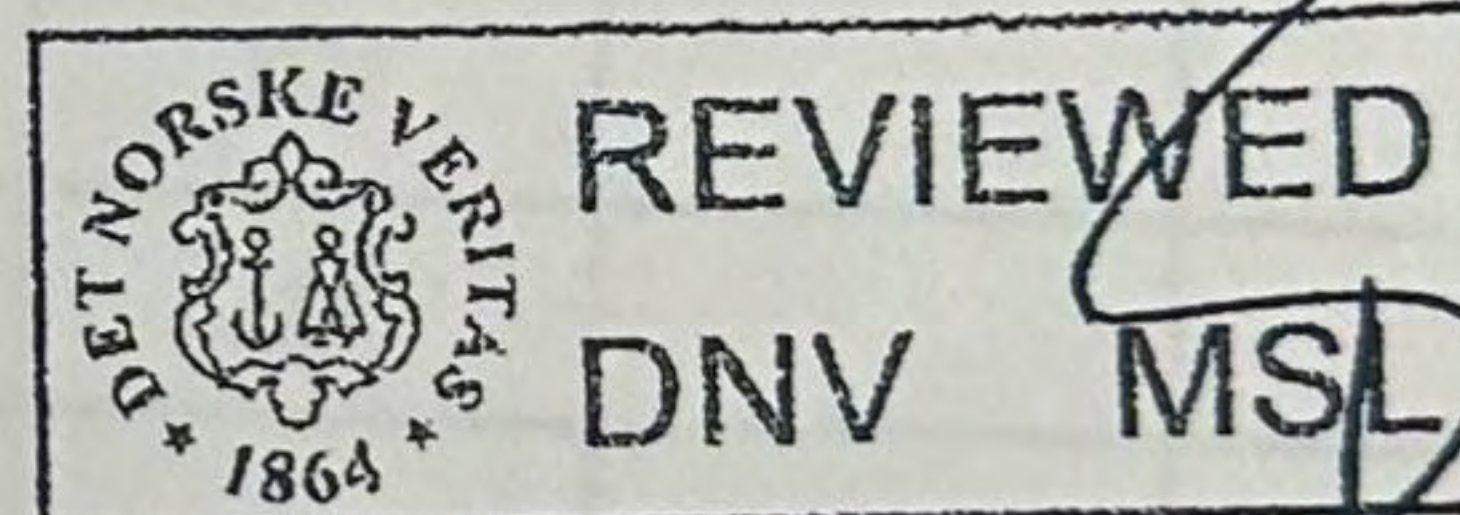
Serial N°

111666613-1

We, Cameron FRANCE, S.A.S. certify that the above mentioned, meets order requirements and Cameron specifications, manufactured and tested according to referenced API. (Hardness Test Report According to X-008065 & applicable Quality plan). Dimensional check found Satisfactory.

Assy body		BODY ASSY							
Serial n°	111666613-1	Upper flange	Weld	Upper Body	Weld	Lower Body	Weld	Lower flange	
Heat n°									
Heat treat.				65036					
HBN				909351					
				205/216/210					
Serial n°		Outlet Open	Weld	Outlet Close	Weld	Outlet Open	Weld	Outlet Close	Weld
Heat n°		4502296101-1-4		4502296101-1-3		4502296101-1-1		4502296101-1-2	
Heat treat.		77290		77290		77290		77290	
HBN		MF1206		MF1206		MF1206		MF1206	
		217	198	223	223	217	223	217	223

www.PetroRigs.com



Beziers,

25-juin-10

QC Stamp



FORM N° : 0238CAMF99A1

Ringmill S.p.A. NUOVA OLONIO (SO) ITALY		CERTIFICAT MATIERE Material certificate EN 10204 3.1. X 3.2.		N° DE COULEE / Heat n°	
				65036	
				N° TRAIT. THERM. / Ht treat n°	
				909351	
MATIERE / Material	QTY	PART NUMBER + REV.		REPERE / Reference	
ASTM A 182 Gr. F22 Mod.	1	2245722-01 Rev. 02		T01	
CLIENT / Customer		N° COMMANDE / Order n°	ITEM	Material Specifications	REV.
CAMERON France S.A.S.		4502174799	0001	MS-011284-09	01
DESCRIPTION PIECE / Part description		N° NCR :		Procedure	
Pre Heat Treat Mach Body for 18-3/4" 15K Type T Material F22-75K per API 16A 3 rd ed T-75		200527547 200545953		MS-003803-01	02

COMPOSITION CHIMIQUE / Chemical composition

C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	Cu%	V%
0.150	0.600	0.009	0.002	0.270	2.280	0.110	0.980	0.160	0.005
Al%	Co%	W%	Fe%	B%	N2%	Ti%	Nb+Ta%	CARBON EQUIV.	FORGING RATIO
0.024	0.010	-	-	0.0001	-	-	-	0.921	9.33:1

CARACTERISTIQUES MECANIKES / Mechanical
 properties after P.W.H.T. : 637 °C x 6 hours → Still air

SUR PIECE / On part : X SUR QTC / On QTC
 TAILLE / QTC size :

TRACTION / Tensile test				RESILIENCE / Impact test (JOULES)			
Rm (MPa) Tensile strength	Re (MPa) Yield strength	A% Elongation	Z% Reduction of area	Type (1)	KV		
720.2	615.3	25.0	81.9	TEMP. (°C)	-59		
DURETE HB X HRC				SENS (1)	L		
HARDNESS	MINI	MAXI	EXP. LATERALE (mm)		181		
SUR PIECE On part	223	235	2.2 2.2 2.2	TAILLE GRAIN Grain Size	177		
SUR QTC On QTC			TEMP. (°C) -59		180		

(1) : PRECISER L'ABBREVIATION CORRESPONDANTE
 Advise the suitable abbreviation

TYPE : KCV = V ; KCU = U ; MESNAGER = M
 SENS : Long = L ; Travers = T

Méthode d'élaboration / Melting Practice :

* Température du bain de trempe à l'eau / Water quench temperature bath : Début / Start = 16.1°C Fin / End = 16.5°C
 ** Température du bain de trempe à l'eau / Water quench temperature bath : Début / Start = 16.0°C Fin / End = 16.2°C

Méthode de contrôle de la température / Temperature Monitoring Method: as per Procedure MS-003803-01 Rev. 02. - Method 'B'.

TRAITEMENT THERMIQUE Heat Treatment

	NORMALISATION Normalize	REVENU Temper	AUST./TREMPE Aust./Quench	REVENU 1 Temper 1	REVENU 2 Temper 2	MISE SOLUTION Solution Treat	VIELLISSEMENT Age harden
TEMP. (°C)	950		935	650			
TEMPS (Min)	1560		780	1560			
MILIEU (1)	A		E*	E**			

MILIEU : EAU/Water = E, AIR/Air = A ; HUILE/Oil = H ; POLYMERE/Polymer = P ; BAIN SEL/salt bath = S

CERTIFIE PAR (NOM DU RESPONSABLE) : R. Bettiga
 Certified by (name)

DATE : 26.02.10

NOUS CERTIFIONS QUE LA MATIERE EST EN ACCORD AVEC LES MS REFERENCEES / We certify that material complies with referenced MS

SIGNATURE:

TAMPON:
Stamp



N° CERTIFICAT : 909351/01 Rev. 00
 Certificate N° Page 2 of 2



Untitled Document

Page 1 of 1

HYDRIL

Hydril Company LP

Hydril Quality Control INSPECTION RELEASE

DESCRIPTION : PACKING UNIT, GX 18 3/4-10MPART NO. 3127398 Revision: G SERIAL NO. 1015-1484MANUFACTURING FACILITY : Hydril Company TYPE MATERIAL : 1179B

WORK ORDER NO.

556903

MOLDING DOCUMENTATION REVIEW

10/23/2015PRETEST VISUAL & DIMENSIONAL INSPECTION Andrew AbeMANUFACTURING FACILITY, Q.C. SUPERVISOR Steve StokesPRESSURIZATION TEST RECORD AND DATE TESTED 2015-11-09

POST-TEST VISUAL & DIMENSIONAL INSPECTION

Andrew Abe

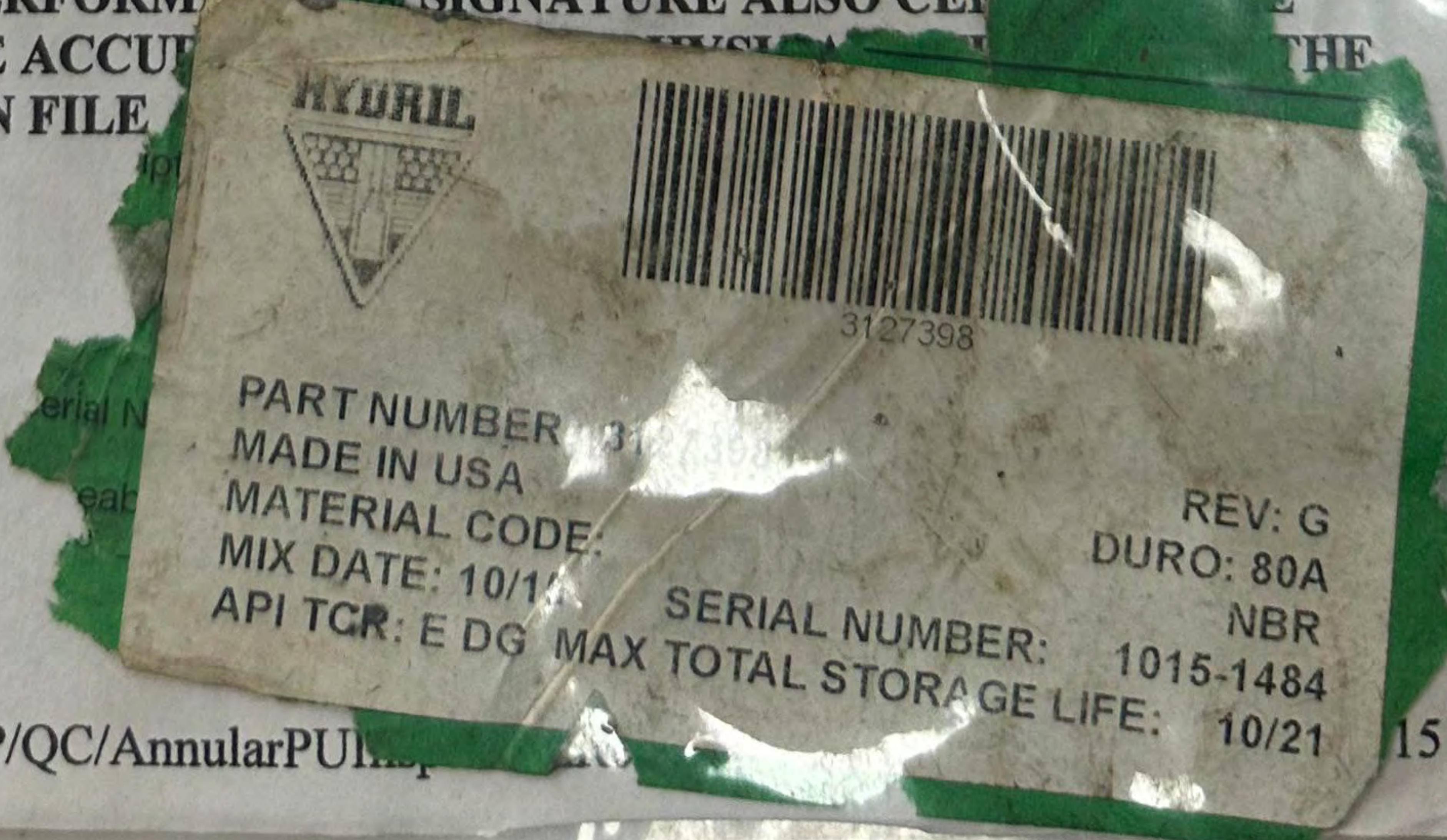
TESTING FACILITY Q.C. SUPERVISOR

Steve Stokes

RELEASE DATE

2015-11-10

THE SIGNATURES OF THE Q.C. SUPERVISORS ABOVE CERTIFY THAT THE
INSPECTIONS HAVE BEEN PERFORMED. THE SIGNATURE ALSO CERTIFIES
THE ABOVE INFORMATION TO BE ACCURATE. THE SIGNATURES OF THE
Q.C. SUPERVISORS ABOVE INSPECTIONS ARE ON FILE AT THE
FACILITY.



<http://hydril-intranet.og.ge.com/HHP/QC/AnnularPUL>



HYDRIL[®]

TYPE

LX

BORE

18.75"

OPERATOR TAG NUMBER

MAX WORKING PRESSURE

10000

PSIG

CONTROL PRESSURE

SEE OPERATING AND SERVICE PROCEDURE

www.PetroRigs.com

MAX CONTROL PRESSURE

3000

PSIG

ASSEMBLY

3165854-1 REV NC

API LICENSE

TOP

18.75"-10M STD

BOTTOM

18.75"-10M FLC

PDC

031610201219

API SPEC

API 16A 4th ED

WEIGHT

55123 LBS (25 TONNES)

SERIAL NO

CSD 3814706

DATE

12/19

TEMP CLASS

T-20

MADE IN

EU

HYDRIL[®]

TYPE

LX

BORE

18.75"

OPERATOR TAG NUMBER

MAX WORKING PRESSURE

12000

PSIG

CONTROL PRESSURE

SEE OPERATING AND SERVICE PROCEDURE

MAX CONTROL PRESSURE

3000

PSIG

ASSEMBLY

16585-1 REV NC

API LICENSE

TOP

18.75" - 10M STD

BOTTOM

18.75" - 10M FLC

P.D.C.

051610201219

API SPEC

API 16A 4th ED

WEIGHT

55123 LBS (25 TONNES)

SERIAL NO

ESD 3814706

DATE

12/19

EMP CLASS

1-20

MADE IN

ELK

CAMERON

Cameron Norge AS

PART NO.

2245752-01

SERIAL NO.

111666613

CAMERON ORDER

www.PetroRigs.com

400406843

CUSTOMER ORDER

2197526-20

CUSTOMER PRODUCT ID

N/A

DRIFT DIA

18.720

DATE

11/12

2068134-08

CAMERON

Cameron North America

PART NO. 644562-05-01

SERIAL NO. 04-SVG-068

CAMERON ORDER 6200074368

CUSTOMER ORDER N/A

CUSTOMER PRODUCT N/A

DATE N/A DATE 3/18



CAMERON

Cameron Norge AS

PART NO.

644562-05-01

SERIAL NO.

04-SIG-066

CAMERON ORDER

6200274357

CUSTOMER ORDER

N/A

CUSTOMER PRODUCT

N/A

DATE

N/A

DATE

3/18

00013400

CAMERON

Cameron Norge AS

PART NO.

2245827-01

CAMERON ORDER

800406843

SERIAL NO.

111931429

CUSTOMER ORDER

201A

CUSTOMER PRODUCT ID

www.PetroRigs.com

DRIFT DIA

18.720

BORE

18 3/4"

M.W.P.:

REPAIR WORK IS DONE ACCORDING TO

INT. STANDARD:

SP-1060-03

DATE

11-12

068134-08 (REV 03)



CAMERON

Cameron Norge AS

PART NO.

644562-01-02-01

SERIAL NO.

12-SUG-070

CAMERON ORDER

www.PetroRigs.com

6200161580

CUSTOMER ORDER

N/A

CUSTOMER PRODUCT ID

N/A

DRIFT DIA

N/A

DATE

04.2019

206-134-08