

Submit to appropriate District Office

DEC 27 2013

Oil Conservation Division

1220 S. St. Francis Dr.

Santa Fe, NM 87505

RECEIVED

☐ AMENDED REPORT**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN,  
PLUGBACK, OR ADD A ZONE**

<sup>1</sup> Operator Name and Address Occidental Permian Ltd. P.O. Box 4294, Houston, TX 77210-4294		<sup>2</sup> OGRID Number 157984
<sup>4</sup> Property Code 19520	<sup>5</sup> Property Name North Hobbs G/SA Unit	<sup>3</sup> API Number 30- 025-41528
<sup>9</sup> Proposed Pool 1 Hobbs; Grayburg - San Andres <31920>		<sup>6</sup> Well No. 948
<sup>10</sup> Proposed Pool 2		

**<sup>7</sup> Surface Location**

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
F	33	18-S	38-E		2094	North	1963	West	Lea

**<sup>8</sup> Proposed Bottom Hole Location If Different From Surface**

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
G	33	18-S	38-E		2134	North	1863	East	Lea

**Additional Well Location**

<sup>11</sup> Work Type Code New Well	<sup>12</sup> Well Type Code 0	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code S	<sup>15</sup> Ground Level Elevation 3641.9'
<sup>16</sup> Multiple No	<sup>17</sup> Proposed Depth 4515' TVD/4830' TMD	<sup>18</sup> Formation San Andres	<sup>19</sup> Contractor H&P 346	<sup>20</sup> Spud Date February, 2014

**<sup>21</sup> Proposed Casing and Cement Program**

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4	9-5/8	36	1635	650	Surface
8-3/4	7	26	4830	840	Surface

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

BOP type is blind ram-pipe ram-annular (National Oilwell Varco)  
3000 psi working pressure, 1800 psi test pressure

During this procedure, Oxy plans to use a closed-loop system with steel tanks and haul contents to the required disposal facility per OCD Rule 19.15.17 (closed loop system schematic attached)

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: Mark Stephens  
Printed name: Mark Stephens  
Title: Regulatory Compliance Analyst  
E-mail Address: Mark.Stephens@oxy.com  
Date: 12/26/13 Phone: (713) 366-5158

**OIL CONSERVATION DIVISION**

Approved by:

Title: Petroleum Engineer

Approval Date: 12/27/13

Expiration Date: 12/27/15

Conditions of Approval Attached ☐

DEC 31 2013

## Mull, Donna, EMNRD

---

**From:** Mark\_Stephens@oxy.com  
**Sent:** Friday, December 27, 2013 11:13 AM  
**To:** Mull, Donna, EMNRD  
**Subject:** RE: New APD?

Sorry, Donna, North Hobbs G/SA Unit No. 948 (Section 33) will be directionally drilled.

I apologize for the oversight, and thanks for the email!

MES

(713) 366-5158

---

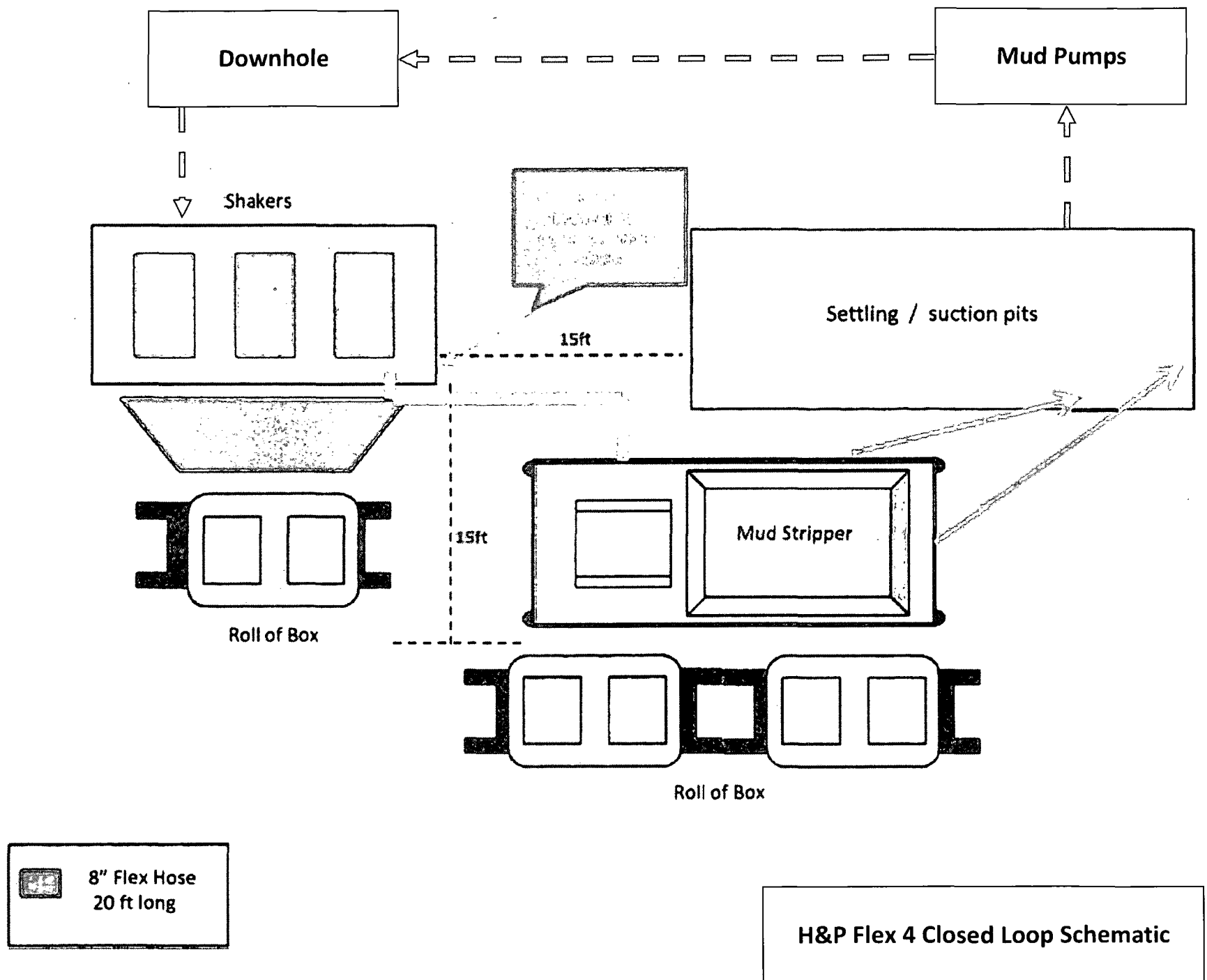
**From:** Mull, Donna, EMNRD [<mailto:donna.mull@state.nm.us>]  
**Sent:** Friday, December 27, 2013 12:10 PM  
**To:** Stephens, Mark E. (Houston)  
**Subject:** New APD?

Mark, OCD Hobbs office has received the APD to drill the North Hobbs GB/SA Unit #948.

Is this going to be a directional drill or a Horizontal? You did not state this on any of the paperwork sent.

Just email me an answer.

Happy New Year, Donna



# APD DATA – DRILLING PLAN

**OPERATOR NAME / NUMBER:** OXY USA WTP LP

**LEASE NAME / NUMBER:** North Hobbs G/SA Unit #948

**STATE:** NM                      **COUNTY:** Lea

**SURFACE LOCATION:**                      2094' FNL & 1963' FWL, Sec 33, T18S, R38E

**SL:**            **Lat:**      32.7052722°N            **LONG:**   103.1551734°W  
                  **X:**            862410.9                      **Y:**            622302.5                      New Mexico East NAD1927

**C-102 PLAT APPROX GR ELEV:** 3641.9'

**EST KB ELEV:** 3658.4' (16.5' KB)

**1. GEOLOGIC NAME OF SURFACE FORMATION**

a. Permian

**2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS**

Formation	TV Depth Top*	Expected Fluids
Base Red Beds	234	Fresh Water
Rustler	1593	Formation Fluid
Top of Salt	1641	Formation Fluid
Base of Salt	2706	Formation Fluid
Queen	3393	Formation Fluid
Grayburg	3683	Formation Fluid
Basal Grayburg	3868	Formation Fluid
San Andres	3973	Hydrocarbon
TD	4515	TD (TVD)

\*Note: Depths are below GL.

A. Fresh Water formations will be covered with the 16" conductor pipe, which will be set at 53' prior to spud.

**GREATEST PROJECTED TD** 4830' MD / 4515' TVD            **OBJECTIVE:** San Andres

**3. CASING PROGRAM**

Surface Casing: 9.625" 36# J55 LTC casing set at ± 1635' MD/ 1620' TVD in a 12.25" hole filled with 9.8 ppg mud

Production Casing: 7" 26# J55 LTC casing set at ± 4830' MD/ 4515' TVD in a 8.75" hole filled with 10.3 ppg mud

String	OD (in)	ID (in)	Coupling OD (in)	Drift (in)	Weight (#/ft)	Grade	CXN	Burst (psi)	Collapse (psi)	Tension (k-lbs)	Torque (ft-lbs)		
											Minimum	Optimum	Maximum
Conductor	16	15.25	17	14.5	65	H40	Weld	1640	670	736	4390	4390	4390
Surface	9.625	8.921	10.625	8.765	36	J55	LTC	3520	2020	564	3400	4530	5660
Production	7	6.276	7.656	6.151	26	J55	LTC	4980	4320	415	2750	3670	4590

#### 4. CEMENT PROGRAM:

##### Surface Interval

Interval	Amount sk	Ft of Fill	Type	Gal/Sk	PPG	Ft <sup>3</sup> /sk	24 Hr Comp
<b>Surface (TOC: 0' – 1600')</b>							
<b>Lead:</b> 0' – 1200' 100% Excess	450	1235	Premium Plus Cement: 94 lbm/sk Premium Plus Cement 4 % Bentonite (Light Weight Additive) 1 % Calcium Chloride - Flake(Accelerator) 0.125 lbm/sk Poly-E-Flake (LC Additive)	9.14	13.5	1.73	880 psi
<b>Tail:</b> 1200' – 1600' 100% Excess	200	400	Premium Plus Cement: 94 lbm/sk Premium Plus Cement, 1 % Calcium Chloride - Flake	6.36	14.8	1.34	1600 psi

##### Production Interval

Interval	Amount sk	Ft of Fill	Type	Gal/Sk	PPG	Ft <sup>3</sup> /sk	24 Hr Comp
<b>Production (TOC: 0' - 4800')</b>							
<b>Stage 1</b> <b>Primary:</b> 3800'-4830' 85% Excess	270	1000	Premium Plus Cement 47 lbm/sk Premium Plus Cement 0.6 lbm/sk LAP-1 (LC Additive) 0.3 lbm/sk CFR-3 (Dispersant) 37 lbm/sk Pozmix A - Class C (Cement) 0.25 lbm/sk D-AIR 3000 (Defoamer) 0.125 lbm/sk Poly-E-Flake (LC Additive)	4.70	14.8	1.12	1236 psi
<b>Stage 2</b> <b>Lead:</b> 0' – 2600' 10 % Excess 1600' – 2600' 200 % Excess	310	2600	Interfill C 0.125 lbm/sk Poly-E-Flake (LC.) 0.5 % Halad(R)-322 (LC Additive) 0.5 lbm/sk D-AIR 5000 (Defoamer)	13.87	11.9	2.44	376 psi
<b>Stage 2</b> <b>Tail:</b> 2600'-3800' 100 % Excess	260	1200	Premium Plus Cement 94 lbm/sk Premium Plus Cement 0.2 % WellLife 734 (Cement Enhancer) 5 lbm/sk Microbond (Expander) 0.3 % Econolite (Light Weight Additive) 0.3 % CFR-3 (Dispersant)	7.72	14.20	1.55	1914

## 5. PRESSURE CONTROL EQUIPMENT

Surface: 0 – 1600' None.

**Production: 1600' - 4600'** The minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required to drill below the surface casing shoe shall be 3000 (3M) psi (including annular).

Casing Size (in.)	Wellhead Flange		BOP Stack			Pressure Test (psi)			
	Size (in.)	Pressure (psi)	Type <sup>(1)</sup>	Size (in.)	Pressure (psi)	Initial		Subsequent	
						Rams	Ann	Rams	Ann
9 5/8"	11"	3000	R, R, A, G	11"	5000	250/1800	250/1800	250/1800	250/1800

- The 11" 3000 psi blowout prevention equipment will be installed and operational after setting the 9 5/8" surface casing and the 9 5/8" SOW x 11" 3K wellhead. A modified Wellhead System with 7" Mandrel Hanger will be used.
- The BOP and auxiliary BOPE will be tested by a third party upon installation to the 9 5/8" 36# J-55 surface casing. All equipment will be tested to 250/1800 psi for 10.
- The pipe rams will be functionally tested during each 24 hour period; the blind rams will be functionally tested on each trip out of the hole. These functional tests will be documented on the Daily Driller's Log. Other accessory equipment (BOPE) will include a safety valve and subs as needed to fit all drill strings, and a 2" kill line and 3" choke line having a 3000 psi WP rating.
- See attached BOP & Choke manifold diagrams.

## 6. MUD PROGRAM:

Depth (ft)	Mud Weight (ppg)	Viscosity (sec/qt)	Fluid Loss (cc's)	pH	Mud System
0 – 1500	8.4 – 9.3	28 – 30	N/C	<9.0	Freshwater / Sweeps
1500 - 1600	8.8 – 9.3	32 – 40	< 25	<9.0	FW – Native Mud
1600 – 3600	9.8 – 10.0	28 – 32	N/C	10.0 – 11.0	Brine Water / Sweeps
3600 – 4830	10.0 – 10.3	36 - 45	<8	10.5 – 11.0	Salt Gel / Starch

Remarks: Pump high viscosity sweeps as needed for hole cleaning. The necessary mud products for additional weight and fluid loss control will be on location at all times.

- Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

## 7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT

- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times.
- Hydrogen sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached. If Hydrogen Sulfide is encountered, measured amounts and formations will be reported to the REGULATORY AGENCIES.

## 8. LOGGING / CORING AND TESTING PROGRAM:

- Mud Logger: None.
- DST's: None.
- Open Hole Logs: None.

## **9. POTENTIAL HAZARDS:**

- A. H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented. If H2S is encountered the operator will comply with Onshore Order #6.
- B. The MASP will be 1254psi and BOP test (MASP + 500) will be 1754psi
- C. No abnormal temperatures or pressures are anticipated. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

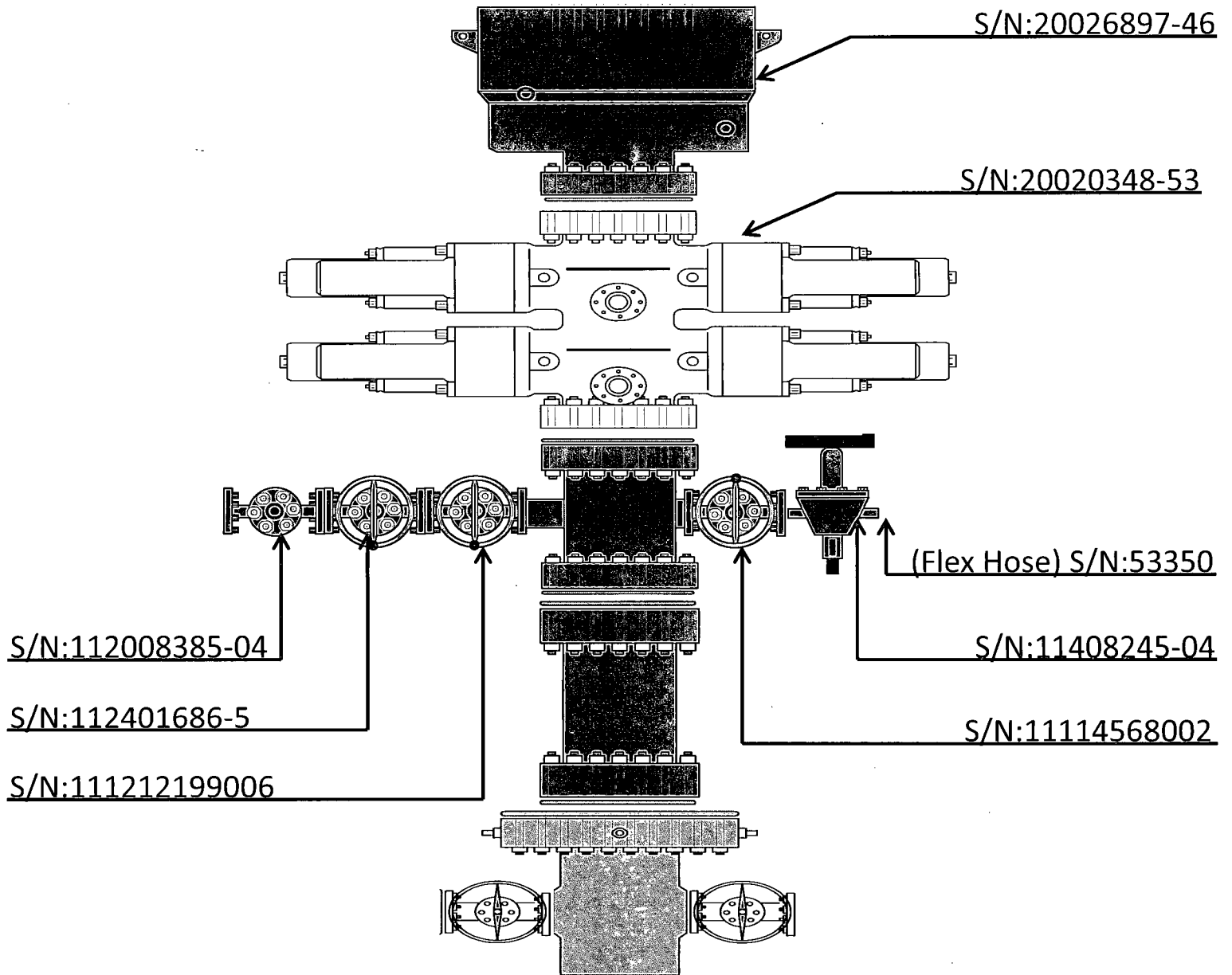
## **10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS**

Road and location construction will begin after Oxy has submitted APD. Anticipated spud date will be as soon as possible after approval and as soon as a rig will be available. Move in operations and drilling is expected to take 10 days. If production casing is run, then an additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.

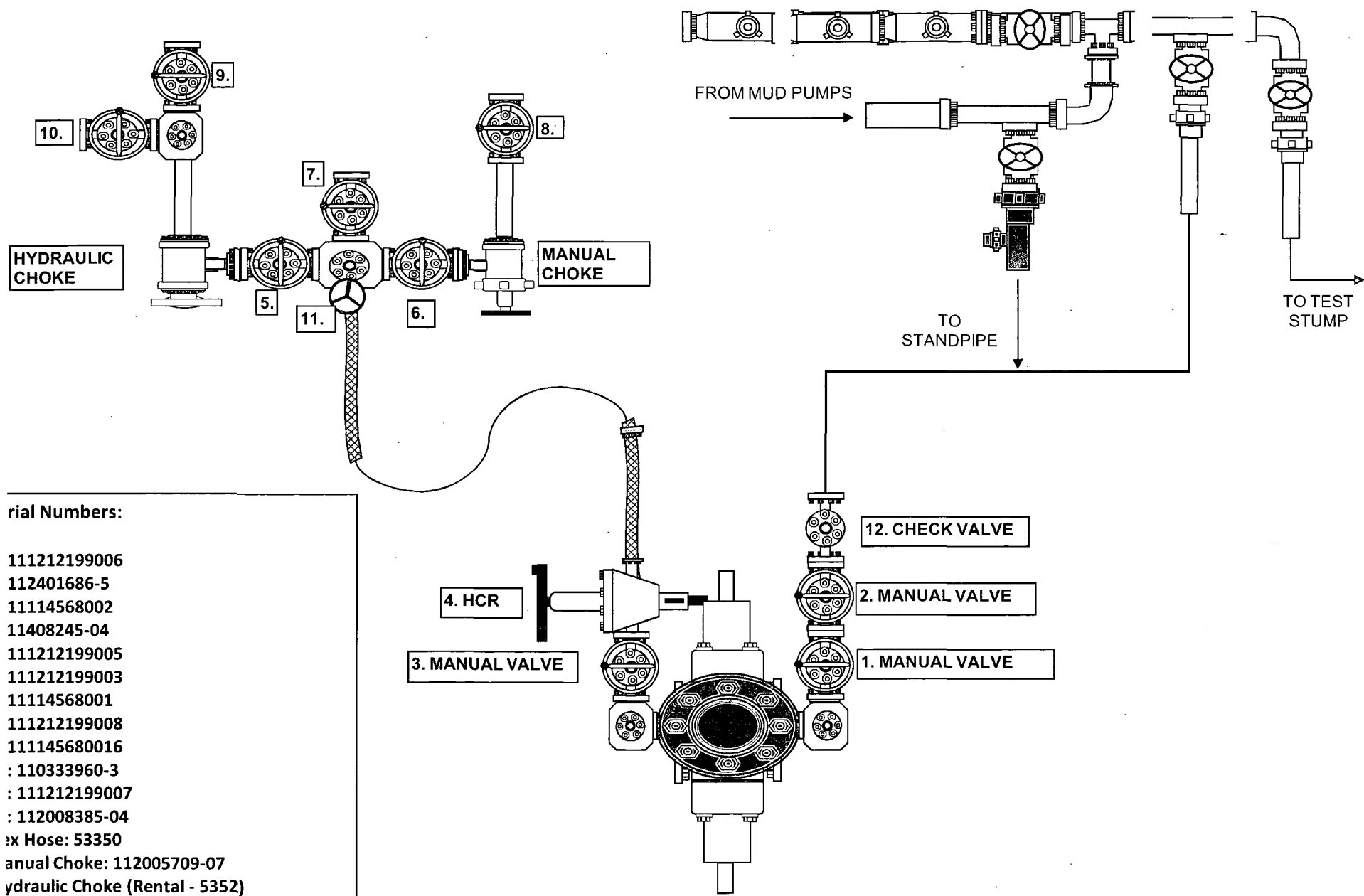
## **11. COMPANY PERSONNEL:**

<b>Name</b>	<b>Title</b>	<b>Office Phone</b>
Edgar Diaz-Aguirre	Drilling Engineer	713-840-3037
Adriano Celli	Drilling Engineer Supervisor	713-985-6371
Kevin Videtich	Drilling Superintendent	713-350-4761
Michael Tessari	Drilling Manager	713-840-3092

# H&P 346 BOP Diagram







#### Material Numbers:

111212199006  
 112401686-5  
 11114568002  
 11408245-04  
 111212199005  
 111212199003  
 11114568001  
 111212199008  
 111145680016  
 : 110333960-3  
 : 111212199007  
 : 112008385-04  
 x Hose: 53350  
 Manual Choke: 112005709-07  
 Hydraulic Choke (Rental - 5352)



Cameron Romania S.A.  
1, B.P. Hasdeu St.  
105600, Campina  
Prahova, Romania  
Tel: +40.244.306600  
Fax: +40.244.336553  
[www.c-a-m.com](http://www.c-a-m.com)

## CERTIFICATE OF COMPLIANCE

**CUSTOMER: CAMERON**  
**CAMERON P.O. NO.: 4700345054/10,20,30**

**PART NUMBER: 141511-31-94-02**

**REVISION: LEVEL : 04**

**DATE OF MANUFACTURE: 8.08.2008**

**QUANTITY: 12 pcs.**

**DESCRIPTION: ASSEMBLY, FLS MANUAL GATE VALVE, 2-1/16 API 5000 FLG ,P+U,  
DD-NL, PSL2, PR2**

**SERIAL NOS.:**

From 111212199001 to 111212199012

The Cameron equipment described above was manufactured and tested per the engineering documents in the Cameron Bill of Material, and all applicable requirements of API Specifications 6A and Q1, the editions in effect at the above date of manufacture. Product Specification Level (PSL) is as noted in the product description above. Manufacture was performed under the Quality Management System certified to API Q1 / ISO TS 29001, API License Number 6A-0327. (Sterom S.A.) This license was active at the date of manufacture.

This certification, and supporting data contained in Sterom company records, has been verified, and is, to the best of our knowledge, true and correct.

Signature

Name: Cristin FLOREA

Title: Quality Control

Date: 8.08.2008

Form: F-824-13 Rev 01

## Certificate of Conformance New Manufacture

**Date:** 25-avr.-12  
**Customer:** CAM DRILLING SYST ODESSA  
**Customer PO Number:** 4700645730  
**Project n° :**  
**Cameron Sales Order Number:** 2110430  
**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)	Line Item Notes
30	141511-31-94-02	06	GATE VALVE ASSEMBLY, MANUAL, MODEL FLS, 2-1/16 BORE, 5,000 PSI, 2-1/16 API FLANGE X FLANGE, API 6A 20TH EDITION, TEMPERATURE CLASS P+U, MATERIAL CLASS DD-NL, PSL-2, PR-2	23	112401686-1 to 23	

Additional Endorsements (if applicable)	Endorsement Report /License Number (If Applicable)	Notes on Scope of Certification
API 6A, 20th ed.	Monogram: License n° 6A-0418.9	
NACE MR0175 latest edition		

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



Stamp

2 May 12  
 Date

Surface Systems

Cameron Romania S.A.  
1, B.P. Hasdeu St.  
105600, Campina  
Prahova, Romania  
Tel: +40.244.306500  
Fax: +40.244.336553  
www.c-a-m.com



## CERTIFICATE OF COMPLIANCE

**CUSTOMER: CAMERON FRANCE SAS**  
**CAMERON P.O. NO.: 4700310851/ 00033**

**PART NUMBER: 141513-31-94-03**

**REVISION: LEVEL : 03**

**DATE OF MANUFACTURE: 29.05.2008**

**QUANTITY: 14 pcs.**

**DESCRIPTION: ASSEMBLY, FLS MANUAL GATE VALVE, 3-1/8 API 5,000 FLG, DD-NL;  
P+U ;PSL3, PR2**

**SERIAL NOS.:**

From 111145680001 to 111145680012, 111145680014, 111145680016

The Cameron equipment described above was manufactured and tested per the engineering documents in the Cameron Bill of Material, and all applicable requirements of API Specifications 6A and Q1, the editions in effect at the above date of manufacture. Product Specification Level (PSL) is as noted in the product description above. Manufacture was performed under the Quality Management System certified to API Q1 / ISO TS 29001, API License Number 6A-0327. (Sterom S.A.) This license was active at the date of manufacture.

This certification, and supporting data contained in Sterom company records, has been verified, and is, to the best of our knowledge, true and correct.

Signature

A handwritten signature in black ink, appearing to read 'Cristin FLOREA', written over a horizontal line.

Name: Cristin FLOREA

Title: Quality Control

Date: 29.05.2008

Form: F-824-13 Rev 01



We, Cameron France, S.A.S., certify that the under mentioned meets order requirements and Cameron specifications, manufactured and tested according to :  
API 6A, 19th Edition, PSL3

<u>MATERIAL CLASS :</u>	DD-NL	<u>TEMP. CLASS :</u>	P+U
<u>CUSTOMER :</u>	CAM-DRILLING SYS - OKC WHSE		
<u>CUSTOMER ORDER :</u>	4700401750		
<u>ITEM :</u>	020	<u>BEZIERS ORDER :</u>	1290301
<u>DESIGNATION :</u>	12 Gate Valve 3.1/8" API 5000 W/ACTUATOR		
<u>SERIAL N° :</u>	111408245-1 to 12		
<u>PART NUMBER :</u>	163936-31-06-03	<u>REV. :</u>	02

Béziers, on 30/06/2009

JL.LLORCA  
QC Supervisor

**Cameron France, S.A.S.**  
Pleins Saint-Pierre CS 620  
~~34535 BEZIERS CEDEX~~  
TEL 04 67 11 15 00 - Fax 04 67 11 15 29  
**Service Contrôle**



10.  
Drilling and Production  
Systems

Drilling Aftermarket  
2101 S. Broadway  
Moore, OK 73160  
USA  
Main: 405-813-3199  
Fax: 405-682-1051  
[www.c-a-m.com](http://www.c-a-m.com)

## Certificate of Conformance Repair/Remanufacture

Certified as of: 07/29/2013

(MM/DD/YYYY)

Customer: HELMERICH & PAYNE INTL

Cameron Sales Order Number: 70490168

Customer PO Number: WHSE-0130006

Cameron Internal Tracking  
Number: 47-2992507-60

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 Number	Line Item Notes
1	141513-41-94-03		GATE VALVE ASSEMBLY, MANUAL, MODEL FLS, 3-1/16 BORE, 10,000 PSI, 3-1/16 API FLANGE X FLANGE, API 6A 20TH EDITION, TEMPERATURE CLASS P+U, MATERIAL CLASS DD-NL, PSL-3, PR-2	1	11033396-03		

Additional Endorsements (If applicable)	Endorsement Report Number/License Number (If Applicable)	Notes on Scope of Certification
Complies with NACE MR-0175		

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

Eduardo Pacini

Cameron Quality  
Representative Name

*Eduardo Pacini*

Signature

Stamp

07/31/2013

Date Signed  
(MM/DD/YYYY)

## Certificate of Conformance New Manufacture

Date: 4 April 11  
 Customer: CAM-DRILLING SYS - OKC WHSE  
 Cameron Sales Order Number: 1898153  
 Customer PO Number: 4700581611  
 Cameron Internal Tracking Number:  
 Project n° :

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	Item Description	Item Specification	Item Quantity	Item Unit
010	162501-31-94-03	05	ASSEMBLY CHECK VALVE TYPE "MS" 2-1/16" API 5000 PSI WP DOUBLE FLANGE R24, ISO 16423 AND API 6A 20TH EDITION PSL-3, PR-1, MATERIAL CLASS: DD-NL-EE-NL, TEMPERATURE CLASS:P+U.	5
				112008385-1 to 5

API 6A, 20th ed.	Monogram: License n° 6A-0418.9
NACE MR0175 -2000	


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



4 April 11  
 Date

## Certificate of Conformance

S/N: 20026897-46

SBOP ASSY, 11-3M, SXF (5M), T-20,  
SST, Xylan COATED

RIG
TBD
SALES ORDER NUMBER
824272
SALES ORDER LINE ITEM NUMBER
0008
CLIENT DOCUMENT NUMBER
345-553-001
SERIAL NUMBER
20026897-46
DOCUMENT PART NUMBER
29010000

REFERENCE	REFERENCE DESCRIPTION
S/N: 20026897-46	SBOP ASSY, 11-3M, SXF (5M), T-20, SST, XYLAN COATED
<p>This document contains proprietary and confidential information which belongs to Varco, LP; it is loaned for limited purposes only and remains the property of Varco, LP. Reproduction, in whole or in part; or use of this design or distribution of this information to others is not permitted without the express written consent of Varco, LP. This document is to be returned to Varco, LP upon request and in any event upon completion of the use for which it was loaned. © Varco, LP</p>	
Varco, LP 12950 W. Little York Houston, TX 77041 Phone 713-937-5000 Fax 713-849-6147	
DOCUMENT NUMBER	REV
20026897-46-COC-001	01



**NATIONAL OILWELL VARCO**



Document number	20026897-46-COC-001
Revision	01

## NOV CERTIFICATE OF CONFORMANCE

Certificate of Conformance	
Equipment Name	SBOP ASSY, 11-3M, SXF (5M), T-20, SST, Xylan COATED
Part Number	20026897
Serial Number	20026897-46
Customer	HELMERICH AND PAYNE INT'L DRILLING
Rig	TBD
Customer Purchase Order	345-353-001
NOV Sales Order	824272
Date of Manufacturing	DECEMBER 2008
Quantity	1

NOV certifies that the above equipment:

- 1) Was manufactured and inspected in accordance with NOV specifications and customer purchase order requirements.
- 2) Manufactured to:
  - ANSI/API Specification 16A, Third Edition, June 2004.
  - ISO 13533:2001, (Modified) Petroleum and Natural Gas Industries-Drilling and Production Equipment-Drill-Through Equipment.
- 3) Meets the applicable portions of NACE standard MR 0175/ISO 15156, First Edition for H<sub>2</sub>S service.

Certified By: Paige McNair  
 Paige McNair  
 Documentation Specialist





**NATIONAL OILWELL VARCO**

Rig Solutions Division  
Houston Repair Center  
5100 N. Sam Houston Parkway W.  
Houston, Texas 77086  
Tel: 281-569-3000  
Fax: 281-569-0992  
www.nov.com

## **CERTIFICATE OF CONFORMANCE**


This is to certify that the following:

<b>SALES ORDER NUMBER:</b>	<b>8014232</b>
<b>CUSTOMER:</b>	<b>HELMERICH &amp; PAYNE</b>
<b>PURCHASE ORDER:</b>	<b>R-324-352-01</b>
<b>PART NUMBER:</b>	<b>20020348RC</b>
<b>DESCRIPTION:</b>	<b>BOP ASSY, 11-5M, DBL, LXT, SxF, w/(4) 3-5M FO, SST, RECON (ASSET # 55-2572)</b>
<b>QUANTITY:</b>	<b>1</b>
<b>RIG NAME:</b>	<b>234</b>

The equipment described above was inspected in accordance with NOV Houston Repair Center and NOV Pressure Control Group, Shaffer BOP Controls Products design and specifications requirements. Equipment is remanufactured to like new condition

All material acceptances, dimensional acceptance, functional checks, and processing surveillance were performed by the Quality Control Department in accordance with established NOV procedures. If required, all non-destructive testing was performed by NOV certified personnel or approved sources that meet A.S.M.E. or customer requirements.

All material meets the applicable portions of the, then current, issue of NACE MR0175 for H2S service.

  
NOV Representative

7-16-10  
Date



# Houston Repair Center

SPECIFICATION: **FRM-075**

REV. **E**

## RIG SOLUTIONS GROUP

Low Pressure: (N/A) PSI

High Pressure: (N/A) PSI

Gauge Number: (N/A)

Expiration Date: (N/A)

1<sup>st</sup> low Start Time: (N/A)

Stop: (N/A)

1<sup>st</sup> low Start Time: (N/A)

Stop: (N/A)

2<sup>nd</sup> high Start Time: (N/A)

Stop: (N/A)

2<sup>nd</sup> high Start Time: (N/A)

Stop: (N/A)

3<sup>rd</sup> high Start Time: (N/A)

Stop: (N/A)

3<sup>rd</sup> high Start Time: (N/A)

Stop: (N/A)

### DRIFT TEST:

Gauge Number: COT 45-6

Expiration Date: 08.07.11

Drifted By: CHARLIE ZARATE

QA Witnessed By: *Jim M. Turner*

Date: *11-26-09*

Assembled By: CHARLIE ZARATE & JOSE PINEDA

Tested By: CHARLIE ZARATE

Date: 12.26.09

QA Final Approval:

*[Signature]*  
*[Stamp: INSP. 5]*

Date: *02-07-10*

**\*\*\*NOTE\*\*\*ANY NOT APPLICABLE IS PER TEST PROCEDURE**



Rig Solutions Group

## Houston Repair Center

SPECIFICATION: **FRM-075**

REV. **E**

QA APPROVAL BY: *G. Hunter*

12 Aug 2009

APPROVAL BY: *H. Parker*

12 Aug 2009

### BLOWOUT PREVENTER TEST CERTIFICATE – 16A

Customer H&P DRILLING

Location: HOUSTON REPAIR CENTER

Work Order #: 8014232

Date: 12.26.09

Part #: 20021308

Serial Number: 20020348-53

Description: *BOP ASSY, 11-5M, DBL, SxF, W (4) 3"-5M SO, LXT (S/N: 20020348-53)*

Test Procedure: AX060172 REV.AK

#### HYDROSTATIC SHELL TEST:

Test Pressure: 7,500 PSI

Gauge Number: HP34

Expiration Date: 01.14.10

Start Time: 0635AM

Stop: 0641 AM

Start Time: 0641AM

Stop: 0656AM

#### HYDRAULIC TEST:

☐

UPPER CAVITY

☐

LOWER CAVITY

Test Pressure: 4,500 PSI

Gauge Number: HP108

Expiration Date: 12.30.09

#### (UPPER CAVITY)

1<sup>st</sup> Close Start Time: 0717AM

Stop: 0723AM

1<sup>st</sup> Open Start Time: 0756AM

Stop: 080817AM

2<sup>nd</sup> Close Start Time: 0723AM

Stop: 0747AM

2<sup>nd</sup> Open Start Time: 0817AM

Stop: 0838 AM

Test Pressure: 4,500 PSI

Gauge Number: HP108

Expiration Date: 12.30.09

#### (LOWER CAVITY)

1<sup>st</sup> Close Start Time: 0855AM

Stop: 0901AM

1<sup>st</sup> Open Start Time: 0922AM

Stop: 0928AM

2<sup>nd</sup> Close Start Time: 0901AM

Stop: 0919AM

2<sup>nd</sup> Open Start Time: 0930AM

Stop: 0947AM

#### CLOSED PREVENTER TEST (ram or mandrel test):

Low Pressure: 200-300 PSI

High Pressure: 5,000 PSI

(low)

(high)

(low)

(high)

Gauge Number: HP99 / HP108

Expiration Date: 02.05.10 / 12.30.09

#### (UPPER CAVITY)

#### (LOWER CAVITY)

1<sup>st</sup> low Start Time: 1245PM

Stop: 1257PM

1<sup>st</sup> low Start Time: 0150PM

Stop: 0202PM

2<sup>nd</sup> high Start Time: 0100 PM

Stop: 0110PM

2<sup>nd</sup> high Start Time: 0202PM

Stop: 0214PM

3rd high Start Time: 0110PM

Stop: 0125PM

3rd high Start Time: 0215PM

Stop: 0226PM

<b>QUALITY CONTROL INSPECTION AND TEST CERTIFICATE</b>				CERT. N°: 1394	
PURCHASER: Phoenix Beattie Co.				P.O. N°: 002738	
CONTITECH ORDER N°: 422321		HOSE TYPE: 3" ID		CHOKE AND KILL HOSE	
HOSE SERIAL N°: 53350		NOMINAL / ACTUAL LENGTH: 8,84 m			
W.P. 34,48 MPa	5000 psi	T.P. 68,96 MPa	10000 psi	Duration: 60	min.
<p>Pressure test with water at ambient temperature</p> <p style="text-align: center;">See attachment. (1 page)</p> <p>↑ 10 mm = 10 Min. → 10 mm = 25 MPa</p>					
COUPLINGS Type		Serial N°		Quality	
3" coupling with		1745 1748		AISI 4130	
3 1/8" Flange end				AISI 4130	
				Heat N°	
				T37676	
				11131	
INFOCHIP INSTALLED /Fire rated/				API Spec 16 C Temperature rate: "B"	
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date:  03. July. 2008		Inspector		Quality Control ContiTech Rubber Industrial Kft. Quality Control Dept. (1)	

	20	40	60	80	100
Q1	+26.85	90	178.33		
Q2	+28.75	90	178.33		
Q3	+30.00	90	178.33		
Q4	+31.25	90	178.33		
Q5	+32.50	90	178.33		
Q6	+33.75	90	178.33		
Q7	+35.00	90	178.33		
Q8	+36.25	90	178.33		
Q9	+37.50	90	178.33		
Q10	+38.75	90	178.33		
Q11	+40.00	90	178.33		
Q12	+41.25	90	178.33		
Q13	+42.50	90	178.33		
Q14	+43.75	90	178.33		
Q15	+45.00	90	178.33		
Q16	+46.25	90	178.33		
Q17	+47.50	90	178.33		
Q18	+48.75	90	178.33		
Q19	+50.00	90	178.33		
Q20	+51.25	90	178.33		
Q21	+52.50	90	178.33		
Q22	+53.75	90	178.33		
Q23	+55.00	90	178.33		
Q24	+56.25	90	178.33		
Q25	+57.50	90	178.33		
Q26	+58.75	90	178.33		
Q27	+60.00	90	178.33		
Q28	+61.25	90	178.33		
Q29	+62.50	90	178.33		
Q30	+63.75	90	178.33		
Q31	+65.00	90	178.33		
Q32	+66.25	90	178.33		
Q33	+67.50	90	178.33		
Q34	+68.75	90	178.33		
Q35	+70.00	90	178.33		
Q36	+71.25	90	178.33		
Q37	+72.50	90	178.33		
Q38	+73.75	90	178.33		
Q39	+75.00	90	178.33		
Q40	+76.25	90	178.33		
Q41	+77.50	90	178.33		
Q42	+78.75	90	178.33		
Q43	+80.00	90	178.33		
Q44	+81.25	90	178.33		
Q45	+82.50	90	178.33		
Q46	+83.75	90	178.33		
Q47	+85.00	90	178.33		
Q48	+86.25	90	178.33		
Q49	+87.50	90	178.33		
Q50	+88.75	90	178.33		
Q51	+90.00	90	178.33		
Q52	+91.25	90	178.33		
Q53	+92.50	90	178.33		
Q54	+93.75	90	178.33		
Q55	+95.00	90	178.33		
Q56	+96.25	90	178.33		
Q57	+97.50	90	178.33		
Q58	+98.75	90	178.33		
Q59	+100.00	90	178.33		
Q60	+101.25	90	178.33		
Q61	+102.50	90	178.33		
Q62	+103.75	90	178.33		
Q63	+105.00	90	178.33		
Q64	+106.25	90	178.33		
Q65	+107.50	90	178.33		
Q66	+108.75	90	178.33		
Q67	+110.00	90	178.33		
Q68	+111.25	90	178.33		
Q69	+112.50	90	178.33		
Q70	+113.75	90	178.33		
Q71	+115.00	90	178.33		
Q72	+116.25	90	178.33		
Q73	+117.50	90	178.33		
Q74	+118.75	90	178.33		
Q75	+120.00	90	178.33		
Q76	+121.25	90	178.33		
Q77	+122.50	90	178.33		
Q78	+123.75	90	178.33		
Q79	+125.00	90	178.33		
Q80	+126.25	90	178.33		
Q81	+127.50	90	178.33		
Q82	+128.75	90	178.33		
Q83	+130.00	90	178.33		
Q84	+131.25	90	178.33		
Q85	+132.50	90	178.33		
Q86	+133.75	90	178.33		
Q87	+135.00	90	178.33		
Q88	+136.25	90	178.33		
Q89	+137.50	90	178.33		
Q90	+138.75	90	178.33		
Q91	+140.00	90	178.33		
Q92	+141.25	90	178.33		
Q93	+142.50	90	178.33		
Q94	+143.75	90	178.33		
Q95	+145.00	90	178.33		
Q96	+146.25	90	178.33		
Q97	+147.50	90	178.33		
Q98	+148.75	90	178.33		
Q99	+150.00	90	178.33		
Q100	+151.25	90	178.33		



P.O. BOX 920939  
Houston, TX 77292  
Office: 713.957.228  
Fax: 713.957.3322

**MANUFACTURER'S CERTIFICATE OF COMPLIANCE**

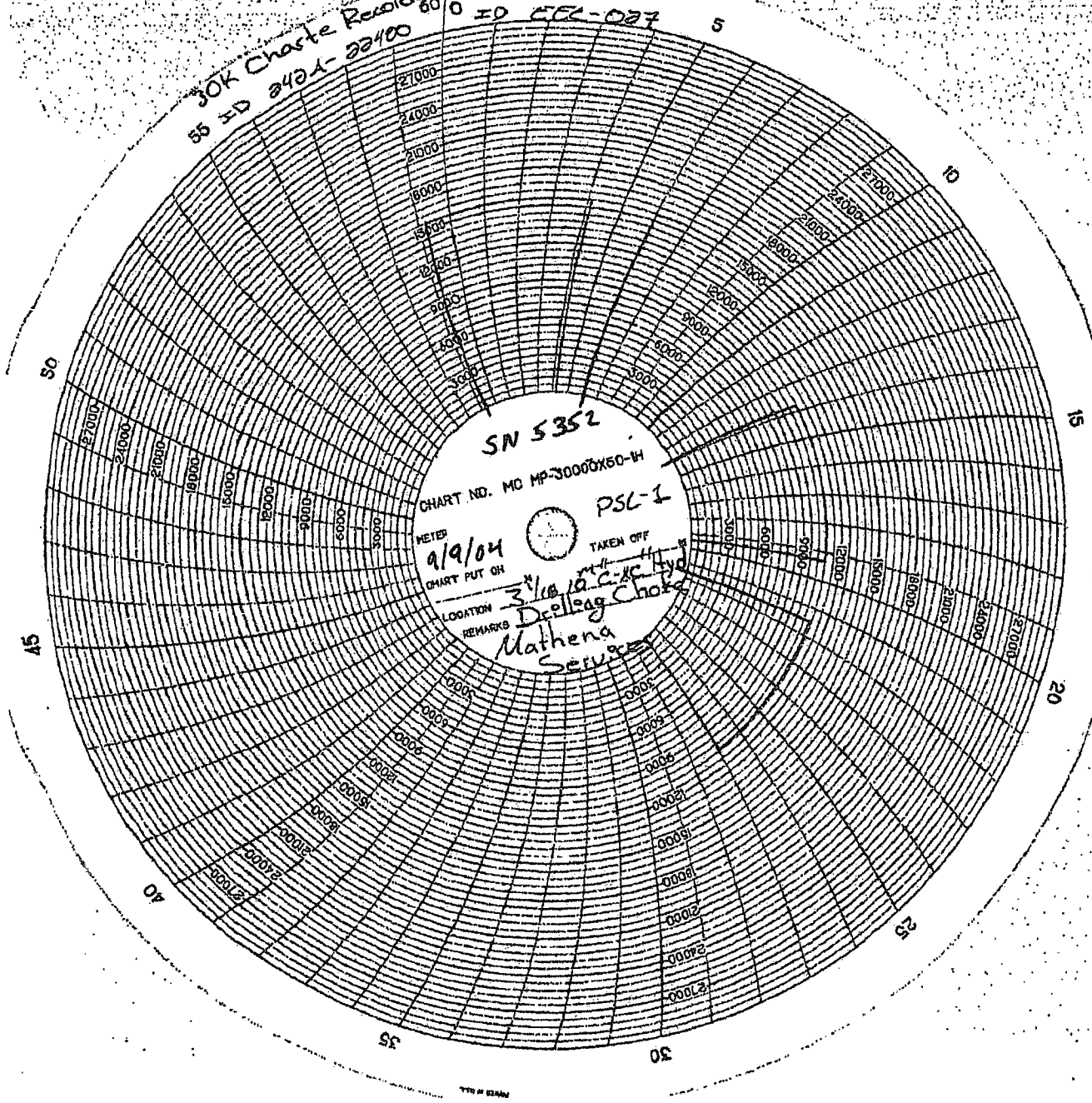
**CUSTOMER: MATHENA SERVICES**

<b>ITEM</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
1.	012-01019-28	CHOKE HYDRAULIC DRILLING, EEC TYPE 'C-SC' 3 1/16"-10,000 PSI WP, FLG X FLG (BX-154) FULL 2" MAX ORIFICE, API 6A PSL-1, MAT. CLASS 'DD', TEMP. CLASS 'U' H2S SERVICE PER NACE MR-01-75. PNEUMATIC POSITION INDICATOR INCLUDED	

This is to certify that Energy Equipment Corporation has supplied the described equipment and all components in accordance with EEC standard practices, which are in compliance with the current editions of API-6A, API-16C, API-17D, ISO-9001 and NACE Standard MR0175/ISO 15156 for use in Sour Gas (H2S) Service.

  
Energy Equipment Corp.

30K Chart Recorder  
55 ID 2424-22400  
0 ID 22-027





**KALİTE BELGESİ**  
(QUALITY CERTIFICATE)



Doküman No / Document Number		Tarih / Date		Sayfa / Page							
1105800		14.04.2011		1							
Müşteri / Customer	Müşteri Sip. No / Your Order No	Sip. No / Our Order No	Belge Norm / Document Norm	Sip. Miktar / Order (Kg)							
COMMERCIAL METALS COMPANY	65247	1111011021	EN 10204/3.1								
Kalite / Quality	Kesit / Dimension	Döküm No / Heat No.	Ağırlık / Weight (Kg)	Adet / Quantity							
SAE 4130	Y/Rd 8.6"	110716									
Malzeme / Product											
HOT ROLLED, NORMALIZED, QUENCHED & TEMPERED ROUND STEEL BARS ACCTO CEC GALLAS TRADING LTD-PUR-418 (10-04-2010) & ASTM A29, A29A, A388, A370, A322, E112, AMS-N-6876A, API 6A PSLS, API 6A, NACE MR-01-76 & API 16A & 16C & API 14D											
Onaylayan / Approved By Subutay SEZGIN											
Çelik Yapım Metodu / Steelmaking Process : Ark Ocak / EAF, Pota Fırın / LF, Vakumlu Gaz Ahısı / VD											
Pota Kimyasal Analizi / Ladle Chemical Composition (%)											
C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	Sn	V
38	22	54	.013	.002	1.68	.25	.10	.028	.19	.013	.003
Manuel Analiz (%) / Product Analysis											
C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	Sn	V
32	22	55	.013	.002	1.07	.24	.10	.027	.19	.013	.003
53	22	55	.013	.002	1.07	.24	.10	.027	.19	.013	.003
Mekanik Özellikler / Mechanical Properties (QTC) 4"x4"x5" (Midradius)											
Serik Hardness	Akma Yield PSI (2%)	Çekme Tensile PSI	Uzama Elongation %	Kesit Daralması Red Of Area %	Çentik Unpeeled	ISO-V (4-8x4) (Midradius)		LE mm	SH %		
217 HB/ SRF	75421	68482	27	68	L 55	50	53	55	-75°F		
217 HB/ SRF					T 40	37	38	38	-75°F		
Tane Büyüklüğü Grain Size (ASTM E-112)					Ezme Oranı Reduction Ratio						
7-8					Ingot: 8 1/1						
<p>HARDNESS ON BARS (SURFACE) : 220-225 HB MECHANICAL PROPERTIES TAKEN FROM QTC LENGTH OF QTC : 20 cm / 7 TENSILE SPECIMEN : RND 12.5 mm GAGE LENGTH (IN) ELONGATION : 2 inch / FIB SIZE MAX : 4 mm &amp; RESULTS WERE OK QUENCH MEDIA WATER / YIELD (RUL 0.01%) : 75855 PSI / CHARTY SPECIMEN : 10X10X5 mm QUENCH TEMPERATURES AT START/FINISH : 100°F &amp; 120°F / TEMP. OF TENSILE SPECIMEN : AMBIANT TEMP NORMALISING TEMP. / TIME : 1670°F / 1.38 HOURS AUSTENITIZING TEMP. / TIME : 1697°F / 1.38 HOURS TEMPERING TEMP. / TIME : 1250°F / 8.50 HOURS 100% MAX-UP CONTROLLED &amp; SURFACE CRACK TESTED 100% ULTRASONIC TESTED ACC TO ASTM A388 AND THE RESULTS WERE OK METHOD OF MONITORING TEMPERATURE : FURNACE TYPE THERMOCOUPLE FURNACE CALIBRATION : AMS 2750 / RESIDUAL MAGNETISM MAX : 20 GAUSS THIS MATERIAL IS FREE FROM RADIOACTIVITY NO WELD REPAIR PERFORMED STEEL IS FREE FROM MERCURY. / COUNTRY OF ORIGIN : TURKEY YÜKARIDA BELİRTİLEN İZLENLERİN TEST EDİLMİŞ VE SPANİŞ SARTLARINA UYGUN OLDUĞU ONAYLANMIŞ IF HERE BY CERTIFY MATERIAL DESCRIBED ABOVE HAS BEEN TESTED AND COMPLES WITH THE TERMS OF ORDER CONTRACT</p>											

Satış / Central  
Tel : +90 224 280 61 00  
Faks : +90 224 280 62 00

İç Satış / Domestic Sales  
+90 224 280 63 00  
+90 224 280 63 09

Değer Satış / Export  
+90 224 280 62 10  
+90 224 280 62 19

Satın Alma / Purchasing  
+90 224 280 61 20  
+90 224 280 61 30

Fabrika / Head Office & Plant

Gemlik Köyü Marmara 16800 Orhangazi / BURSA

Ticaret Sicil : 125642 / 72672

Veri Dağıtım : Büyük Mükteber Veri Dairesi Başkanlığı  
Veri No : 0660052518

2/6 SM



Drilling and Production  
Systems  
Cameron Flow Control  
11331 Tanner Rd.  
Houston, TX 77041  
713-280-3000  
[www.c-a-m.com](http://www.c-a-m.com)

## Certificate of Conformance New Manufacture

sDate: 11/26/2013

(MM/DD/YYYY)

Customer: AC CENTER

Cameron Sales Order Number: 4700580953

Customer 4700580953

Cameron Internal Tracking Number: 112005709

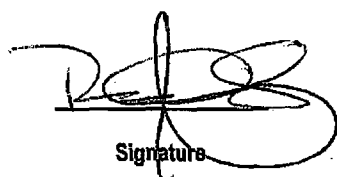
Purchase Order

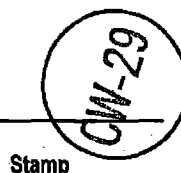
Cameron certifies that the item(s) described herewith is (are) in conformance with the requirements of the above Purchase Order Number and fully comply with applicable Cameron specifications in effect at the date of manufacture. All related documentation in support of the above statement is retained 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	2029833-01	09	2" Nom. H2 Adjustable Choke with 2-1/16" API 5k, R-24 Inlet and Outlet Flanges. Flange Bore: Full API. Dimensions: A = 8.00" +/- 0.12" B = 6.88" +/- 0.12" Trim: 1" Nominal Needle & Seat Trim, Quick Opening Flow Characteristic, Maximum Cv. 26.0. (Body Thread: 1.750"-10UNS-3B) Actuation: Manual T-Bar. Materials: Body, Bonnet & Bonnet Nut (Non-Wetted): Low Alloy Steel, Grade AISI 4130. Trim: Tungsten Carbide / Stainless Steel, Grade 17-4ph. Body Bleed Valve: Ni Alloy 625. Bonnet Seal: Camlast™, API Monogram API 6A 20TH ED Ed., ISO 10423, M/C EE-0,5, T/R L-U, PSL 1, PR 2 API Nom. Size 2-1/16" x 64/64 Ths. Max. Orifice. MWP @ 100F: 5,000 Psig. MWP @ 250F: 5,000 Psig.	11	112005709-01 TO -11	N/A	N/A
Additional Endorsements (If applicable)			Endorsement Report Number/License Number (If Applicable)	Notes on Scope of Certification			

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

Roxanne Gutierrez  
Cameron Quality  
Representative Name

  
Signature



10/26/2013  
Date  
(MM/DD/YYYY)