

## Recommended Field Running Procedure for GEOCONN & GEOCONN-AB Connections

Rev.1: Revised after content review

### 1. IDENTIFICATION

GEOCONN series is a threaded & coupled connection and **has the following features (compared with BTC):**

- The thread form of GEOCONN series is identical to and fully compatible with API Buttress.
- The GEOCONN series pin nose has a beveled ID for at least 75% of the pipe circumference.
  - GEOCONN-AB will have the pin nose abrasive blasted with the threads mill finished.
- GEOCONN couplings are 1 to 2 inches shorter than Buttress couplings.
- Couplings are clearly marked with GEOCONN stenciled from the manufacturer. **If no stencil is clearly visible, measurements should be taken to ensure the connection is not mistaken for API Buttress.**
- GEOCONN is designed to allow for pin-to-pin abutment and will shoulder internally once made up correctly. If no shoulder is observed the connection should be backed out and inspected for any anomalies in the connection.
- GEOCONN-RS has a non-metallic (Teflon) seal ring pre-installed in the grooves on both sides of the coupling (See para. 2 for special care of GEOCONN-RS).

### 2. RUNNING

#### 2.1 RUNNING PREPARATION

- **Handling plugs are available only for 8-5/8" x 32.0# Wsc2 (9.000" coupling OD)**
- Always use a stabbing guide.
- Use thread compound recommended below, uncontaminated and thoroughly stirred unless customer specifies special thread compound.
  - 1) API Modified
  - 2) Bestolife 2000 series
  - 3) Topco TK-II for thermal application
- Ensure the tong hangs **level** horizontally.
- If integral back-ups are not used, ensure snub line is set at 90° for proper torque to be applied at final make-up.
- Check for correct alignment of travelling block and rotary (see 2.3 Stabbing).

#### 2.2 THREAD INSPECTION

Ensure that the connections are thoroughly clean and dry. Visually check that the connections are free from burrs or tears and have a relatively even thread surface. A "mash" on the pin or box is unacceptable.

##### For GEOCONN-RS

It is strongly recommended to check that the seal ring is properly installed, and that no hump or deformation is visible on the entire circumference of the seal ring.

#### 2.3 THREAD COMPOUND (DOPE)

Prior to stabbing a moderate coating of thread compound should be applied to the pin and box connections. The dope should be applied uniformly to all of the threads using a soft brush.

##### For GEOCONN-RS

As in the case of any connection with a seal ring, special precaution shall be paid to avoid over-doping because excess dope may push the ring down during make-up. Dope shall be applied with a brush lightly and uniformly on both the box threads and on the pin threads.

(Note that dope applied on the box is pushed down the inside of the connection and detrimental to "seal ring popped-in", but pin dope is always extruded towards the outside of the coupling)

## 2.4 STABBING

With the joint hanging freely in the derrick - check the vertical alignment to ensure the pin is directly over the box. True vertical alignment either with a stabber, stabbing arm or with the blocks must be maintained during MU operations. Apply the stabbing guide to the box connection in the rotary. Lower the pipe slowly into the box connection to avoid damaging the threads. After stabbing-in remove the stabbing guide and ensure the pipe remains vertically aligned.

## 2.5 POWER MAKE-UP

Engage the power tong at least 10 cm above the thread run-out area on the pin to ensure that the dies do not contact the coupling face as the make-up loss is absorbed.

If a back-up tong is used it should never be placed directly on the coupling, but always under the coupling. Ensure the tong back-up line is at 90 degrees to the tong and pipe axis (both vertical and horizontal).

Ensure the elevators are not supporting any of the pipe weight.

Using the power tong, make-up the connection at a speed of not more than 25 rpm and ensure that the tong does not slip during the make-up operation and damage the pipe body.

1 to 2 turns prior to shoulder, the tongs must be shifted into low gear with a maximum of 5 to 7 rpm to engage the shoulder and finalize make-up and better torque control to avoid over torque.

Make-up the connection to the correct torque & position with the aid of a torque gauge and confirm that the make-up is acceptable in accordance with the criteria in 2.6.

## 2.6 ACCEPTANCE CRITERION FOR MAKE-UP

Recommended torque values are provided in the Connection Data Sheet (CDS), which can be obtained from the Metal One Connection Web-site. (<https://www.mo-tc.com/connection-data-generator/>)

When a higher-friction-factor thread compound, such as Thread Lock, is used for field running instead of the compounds recommended in this procedure the following conversion shall be applied:

Friction Factor (FF)*	Conversion Coefficient	Conversion of Recommended Torque	
0.8 <= FF <= 1.2	1.0	No conversion is needed.	
1.2 < FF	FF minus 0.2	If FF is 1.5	Converted MUT shall be 1.3 x MO Recommended MUT.
		If FF is 2.0	Converted MUT shall be 1.8 x MO Recommended MUT.
		If FF is 2.5	Converted MUT shall be 2.3 x MO Recommended MUT.

\* Friction Factor is relative to API RP 5A3

Torque should be set at Optimum Torque and if no shouldering occurs the torque should be increased accordingly up to Max. Torque.

Connection make-up is considered successful if all of the following criteria are achieved;

- The two pin noses contact which is indicated on the torque dial gauge as a very sudden increase in torque (“spike”)
- The base of the 3/8” triangle stamp on the pipe body is aligned with the coupling face as Figure 1.
- A small amount of coupling rotation may occur.
- If the rotation is less than 1/4 turn, the make-up operation may be continued.
- Example torque-turn charts are shown in Appendix-A.

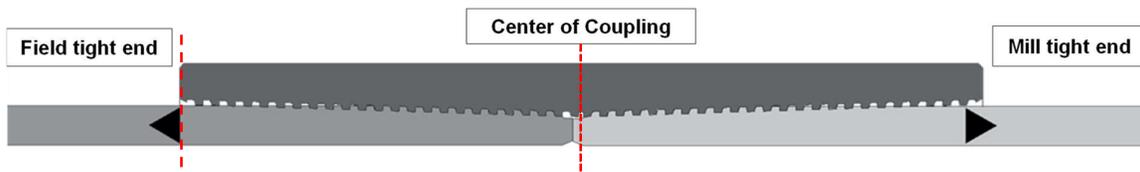


Figure.1 Correct Make-up Position

### 3. PULLING

The equipment required for pulling is basically the same as running.

Back-up tong should be placed on the lower half of the coupling. Use of the rig tongs for this operation is not recommended. If back-up tong is not available, then please ensure the CPLG mill-end side does not rotate and a paint line gives a useful indication.

True vertical alignment either with a stabber, stabbing arm or with the blocks must be maintained during **the break-out operation**.

Engage the power tong at the same area of the pipe as make-up. Break out the connection using controlled torque - do not "jerk". Rotation speed during break out and spinning out should not exceed 15 rpm. Once the threads have disengaged, the pin will "bump" in the box, **rotate approx. 1/3 turn before lifting the pipe out**.

When lifting out, care should be taken to ensure the threads are fully disengaged to prevent jump out.

Use of a stabbing guide will help protect the pin and may assist in the lifting of the pipe out of the box.

### 4. MINOR DAMAGE ON THE THREADS

Light imperfections/corrosion on the threads is acceptable. Minor damage to pin end threads such as burrs can be repaired with a fine file, hone or emery paper.

### 5. INTERCHANGEABILITY WITH API BUTTRESS

GEOCONN series and API-BTC **are** interchangeable and the following points should be noted;

#### GEOCONN series PIN & API-BTC BOX

The pin noses will not contact and the make-up criteria should be the same as BTC. (= Not Internally Flush).

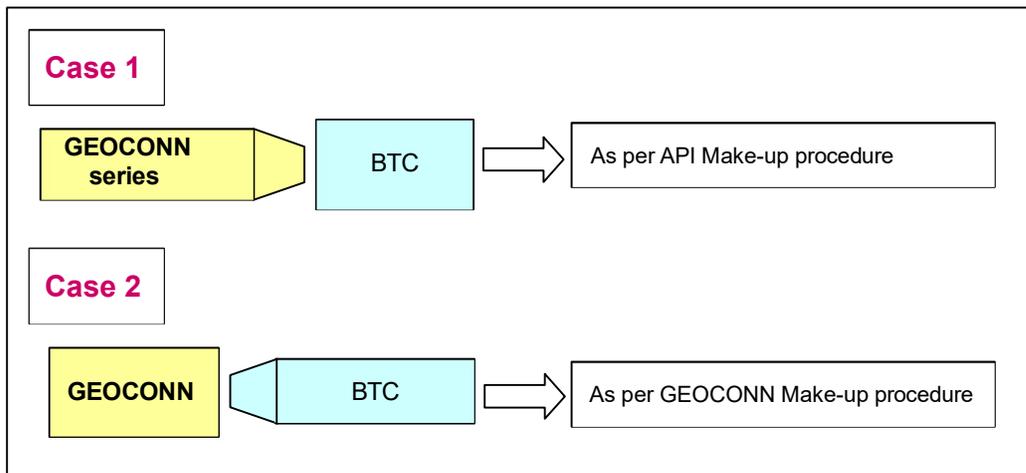
#### GEOCONN BOX & API-BTC PIN

The pin noses will contact and the make-up criteria should be the same as GEOCONN. (= Internally Flush).

#### MAKE-UP PROCEDURE

GEOCONN series Pin & BTC Box → Case 1

GEOCONN Box & BTC Pin → Case 2



**Make-up procedure for GEOCONN series with BTC**

## APPENDIX A – EXAMPLES OF TORQUE TURN GRAPHS

