PTTEP Australasia (Ashmore Cartier) Pty Ltd
ABN 27 004 210 164
A Company of PTTEP Group

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Your Reference:

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Mr Jerry Whitfield
Director of Energy
Northern Territory Department of Resources
5th Floor, Centrepoint Building
48-50 Smith Street Mall
DARWIN NT 0800

Email: jerry.whitfield@nt.gov.au

CC: Mr Jeremy Dunster
National Offshore Petroleum Safety Authority
Email: jeremy.dunster@nopsa.gov.au

Dear Jerry

Suspension status of Montara development wells other than H1-ST1

We refer to our letter to you dated 26 August 2009 which enclosed suspension diagrams of the Montara H2, H3-ST1, H4 and G1-ST1 wells and to your email to me on 9 April 2010 requesting that we advise whether those wells comply with approvals given by the Department.

PTTEP Australasia (Ashmore Cartier) Pty Ltd (PTTEPAA) informs the Department as follows:

The suspension status of these four wells at the Montara WHP is set out below.

- H2 well remains with a mud-line suspension covered with a 508mm (20") trash cap at Boat Landing Level of the WHP facility. Below the trash cap the 340mm (13-3/8") pressure containing anti-corrosion cap is in place. There is a cement plug set in the 9-5/8" casing from 160m back to 115m. The 9 5/8" casing was cemented with the shoe at 3280m MD, the float valves were successfully inflow tested and the casing pressure tested to 4000 psi.

- H3-ST1 well remains with a mud-line suspension covered with 20" trash cap at Boat Landing Level of the WHP facility. Below the trash cap the 13 3/8" pressure containing anti-corrosion cap is in place. There is a cement plug set in the 9 5/8" casing from 160m back to 115m. The 9 5/8" casing was cemented with the shoe at 3192m MD, the float valves were successfully inflow tested.

- H4 well has had the 20" conductor tied back and cold cut approximately 1m above the Mezzanine Deck of the WHP facility. The 13 3/8" pressure containing corrosion cap is in place. There is a cement plug set in the 9 5/8" casing from 160m back to 115m. The 9 5/8" casing was cemented with the shoe at 3441m MD, the float valves were successfully inflow tested and the casing pressure tested to 4000 psi.

- GI-ST1 well has had the 20" conductor tied back with a 24 inch section in it. Above the 24" section the 20" conductor has been cold cut 4.5m above the Helideck of the WHP facility. Both a 13 3/8" and a 9 5/8" pressure containing anti-corrosion cap are in place. The 9 5/8" casing was cemented with the shoe at 2860m MD, the float valves were successfully inflow tested and the casing pressure tested to 4000 psi.

The table below summarises the findings of a review of the suspension barriers in these wells (GI-ST1, H2, H3 and H4) for compliance with the applicable approved Drilling Programs [Montara H2 & H3 (Batch Drilled) Drilling Program, Document Number TM-CR-MON-B-150-00002, Rev 0, February 2009; Montara GI, H1 & H4 (Batch Drilled) Drilling Program Document Number TM-CR-MON-B-150-00001, Rev 2, January 2009] as varied by Change Controls, and the PTTEPAA Well Construction Standards.

Wellbore Suspension Barrier	**Implemented according to approved Drilling Program (DP)?**	**Meets Well Construction Standards (WCS)?**	**Comment**
9.5/8" cemented string	Yes	Yes	WCS states minimum of 50m of neat cement above the shoe and ≥ 100m above any zone not previously cased containing fluid hydrocarbons Confirmed TTOC with record of parameters during cement placement.
Pressure tested 9.5/8" string	No (H3-ST1) Yes (GI-ST1, H2, H4)	No Test (H3-ST1) Partial Test (H2, GI-ST1, H4)	H3 : Top plug did not bump and 9.5/8 casing not pressure tested. Casing integrity not proven. H2, GI-ST1, H4: Casing in these wells was pressure tested for 10 minutes as opposed to 20 minutes as required by the WCS – but does not impact on well integrity
9.5/8" and 13.3/8" PCCC	Yes (installation)	No	DP does not state that a pressure test is required after the installation of a PCCC. WCS states that any barrier is to be verified. 9.5/8" (GI-ST1 only) and 13.3/8" PCCC's (all wells) were installed but not pressure tested after installation. (See Proposed Well Barrier Verification Programs)
Shallow Cement plug	Yes (H2,H3-ST1,H4)	No	DP does not include pressure / or weight test that should be applied to cement plugs. WCS states that any barrier is to be verified. Cement plugs in H2, H3-ST1 and H4 wells are greater than 30m in length but not tagged or pressure tested. (See Proposed Well Barrier Verification Programs)

The following Tables provide more detailed summaries of a review of the operations undertaken on these Montara wells between January and April 2009 with regards to the construction and verification/testing of the suspension barriers put in place.

Montara GI-ST1 well

Construction	Comment	Verification and Standard
20" Casing Shoe at 150.5m	Assumed cemented to surface. No returns during prejob circulation and no returns recorded during cement job noted on DDR4.	Standard: Cemented to Seabed (WCS Section 10). >300% OH excess applied to cement volume pumped (as per WCS).
13.3/8" casing Shoe at 1637.5m, 13 deg inclination.	Cemented in place with Lead and Tail Slurry. TTOC 1127m in DDR7, >450m above shoe. Plugs bumped and 13.3/8 casing pressure tested to 3000psi for 10 minutes. Conducted FIT to 1.25sg EMW (DDR 9 GI-ST1) No backflow recorded after release of pressure after test (DDR7).	Standard : ≥450m above shoe (WCS Section 10). Meets WCS. **Casing integrity proven.** 10 minutes stated in DP and DDR7. WCS states that the pressure shall be held for a minimum of 20 min, except that for casing sizes ≥ 340mm (13.3/8 ") and strings with length of < 500m. **Verification of float valve integrity.**
9.5/8" Casing Shoe at 2860m, 35 deg Inclination	Cemented in place with Lead and Tail slurry. TTOC 1565m planned. Opticem simulation indicates TTOC is 1258m. Plugs did NOT bump. Theoretically pumped half shoetrack volume before stopping displacement (DDR15). No backflow recorded (Reference Farpack 19/2/09 and DDR15). Casing pressure tested to 4000psi after WOC for 3.5 hours (post job). 15 minutes pressure test conducted.	Standard : ≥100m above HC Zone (WCS Section 10). **Meets WCS.** TTOC from Opticem simulation and volumes. Plugs did not bump. Indicating float collar physical integrity. Standard: minimum of 20 mins pressure test unless >13.3/8" casing (WCS Section 9.2). Duration of pressure test (15 minutes) does not meet WCS (20 minutes), but does not impair well integrity.
9.5/8" PCCC	Indicated on suspension diagram.	Placement noted on DDR. Not pressure tested after installation. **Unverified barrier.** (See Proposed Well Barrier Verification Programs)
13.3/8" PCCC	Indicated on suspension diagram.	Noted as placed in DDR21 for H4 well (20/03/09). Not pressure tested after installation. **Unverified barrier.** (See Proposed Well Barrier Verification Programs)
20" Trash Cap	Indicated on suspension diagram, noted in place on 13/2/09 (DDR15).	Verified placement, **but not a barrier**.

Montara H2 well

Construction	Comment	Verification and Standard
20" Casing Shoe at 150.5m	Assumed cemented to surface. No returns during prejob circulation recorded on DDR2, shoe depth stated as 150.29m. No record of whether returns seen during cement operation.	Standard: Cemented to Seabed (WCS Section 10) >300% OH excess applied to cement volume pumped (as per WCS).

13.3/8" casing shoe at 1608m, 3.5 deg inclination	Cemented in place with Lead and Tail Slurry. TTOC at 1225m in DDR7. Plugs did not bump (good to intermittent returns recorded on DDR7) and 13.3/8 casing not pressure tested. No backflow recorded. Conducted FIT to 1.17sg EMW (DDR 9) Casing pressure tested to 4000psi against shear rams in DDR8 for 10 minutes.	Standard : ≥450m above shoe (WCS Section 10). Sufficient cement pumped to provide for 450m plus 50% excess, but TOC did not come to 450m. Does not meet WCS but does not impair wellbore integrity. WCS states that the pressure shall be held for a minimum of 20 min, except that for casing sizes ≥ 340mm (13.3/8 ») and strings with length of < 500m. Duration of pressure test (10 minutes) but does not impair well integrity. **Casing integrity proven,** meets WCS.
9.5/8" Casing Shoe at 3279.6m, 90 deg Inclination	Cemented in place with Lead and Tail slurry. TTOC 1200m from Farpack, Opticem simulation indicates TTOC is 1225m. Minimal losses when running / cementing casing. Plugs bumped and 9.5/8 casing pressure tested to 4000psi 10 minutes. No backflow recorded (Reference Farpack and DDR16).	Standard : ≥100m above HC Zone (WCS Section 10). Meets WCS. **TTOC proven.** **Casing integrity proven.** Standard: minimum of 20 mins pressure test unless >13.3/8" casing (WCS Section 9.2). Duration of pressure test (10 minutes) does not meet WCS (20 minutes), but does not impair well integrity. **Verification of float valve integrity.**
Shallow Suspension Plug	Set 160m-115m, not tagged or pressure tested.	Cement plug >30m length (as required by WCS Section 14.1). Not tagged or pressure tested. **Unverified barrier.** (See Proposed Well Barrier Verification Programs)
13.3/8" PCCC	Indicated on suspension diagram, Installed on 20/4/09 but no reference to testing on DDR18.	PCCC not pressure tested after installation. **Unverified barrier.** (See Proposed Well Barrier Verification Programs)
20" Trash Cap	Indicated on suspension diagram, Installed on 20/4/09 (DDR18).	Verified placement, **but not a barrier.**

Montara H3-ST1 well

Construction	Comment	Verification and Standard
20" Casing Shoe at 150.8m	Assumed cemented to surface. DDR2 notes shoe at 150.47m, no returns during prejob circulation, no backflow confirmed.	Standard: Cemented to Seabed (WCS Section 10) >300% excess applied (as per WCS).
13.3/8" casing Shoe at 1635.2m, 15 deg inclination	Cemented in place with Lead and Tail Slurry. TTOC 1296m (DDR6).	Standard : ≥450m above shoe (WCS Section 10 for surface casing). Sufficient cement was pumped to provide for 450m plus 50% excess, but TOC did not come to 450m. Does not meet WCS but

	Plugs bumped and 13.3/8 casing pressure tested to 3000psi for 10 minutes. Losses during cement displacement. Conducted FIT to 1.25sg EMW (DDR 9 H3-ST1) No backflow recorded (DDR6).	does not impair wellbore integrity. **Casing integrity proven and meets WCS.** **Verification of float valve integrity**
9.5/8" Casing Shoe at 3191.9m, 90 deg Inclination	Cemented in place with Lead and Tail slurry. TTOC from Opticem (Ref 5) at 956m, Minor losses when running casing. Top plug did not bump and 9.5/8 casing not pressure tested. No backflow recorded (DDR14).	Standard : ≥100m above HC Zone (WCS Section 10). **Meets WCS.** **TTOC verified through opticem simulation.** **Casing integrity not proven**. **Verification of float valve integrity**
Shallow Suspension Plug	Set 160m-115m, not tagged or pressure tested.	Cement plug >30m length (as required by WCS Section 14.1). Not tagged or pressure tested. **Unverified barrier.** (See Proposed Well Barrier Verification Programs)
13.3/8" PCCC	Indicated on suspension diagram, installed on 16/04/09, no test noted.	PCCC not pressure tested after installation. **Unverified barrier.** (See Proposed Well Barrier Verification Programs)
20" Trash Cap	Indicated on suspension diagram installed on 16/04/09.	Verified placement, **but not a barrier.**

Montara H4 well

Construction	Comment	Verification and Standard
20" Casing Shoe at 150.7m	Assumed cemented to surface DDR2 states shoe at 150.5m, no returns during prejob circulation.	Standard: Cemented to Seabed (WCS:Section 10) >300% excess applied (as per WCS).
13.3/8" casing Shoe at 1631m, 32 deg inclination	Cemented in place with Lead and Tail Slurry. TTOC 1269m, DDR8 states shoe at 1642.7m. Cement encountered 481m high (inside casing) at 1150m (DDR9). Plugs did not bump. Casing pressure tested with RTTS during cyclone suspension (DDR 10 GI-) and after BOP nipple up (DDR.9) LOT to 1.27sg confirmed annular cement integrity (DDR 10) No backflow recorded (DDR8).	Standard : ≥450m above shoe (WCS Section 10 Sufficient cement was pumped to provide for 450m plus 50% excess, but TOC did not come to 450m. Does not meet WCS but does not impair wellbore integrity. Calculated 109m of cement in annulus. **Casing integrity proven** **Verified float valve integrity**
9.5/8" Casing Shoe at 3440.9m, 90 deg Inclination.	Cemented in place with Lead and Tail slurry. TTOC 1256m as per Opticem simulation. Plugs bumped and 9.5/8 casing pressure tested to 4000psi for 10 minutes (DDR20)	Standard : ≥100m above HC Zone (WCS Section 10). **Meets WCS Standards.** **Casing integrity proven**. Standard: minimum of 20 mins pressure test unless >13.3/8"

	No backflow recorded (DDR20)	casing (WCS Section 9.2). Duration of pressure test (10 minutes) does not meet WCS (20 minutes), but does not impair well integrity. **Verified plug / shoe integrity**.
Shallow Suspension Plug	Set 160m-115m, not tagged or pressure tested (DDR20).	Cement plug >30m length (as required by WCS Section 14.1). Not tagged or pressure tested. **Unverified barrier.** (See Proposed Well Barrier Verification Programs)
13.3/8" PCCC	Indicated on suspension diagram, noted as installed on DDR20 but NOT tested.	PCCC not pressure tested after installation. **Unverified barrier.** (See Proposed Well Barrier Verification Programs)
20" Trash Cap	Indicated on suspension diagram, DDR21 installed.	Verified placement, **but not a barrier.**

Proposed Well Barrier Verification Programs

A. PTTEPAA is currently planning an operation to board the Montara WHP as soon as practicable for the purposes of carrying out a program to test the suspension barriers in these wells.

After monitoring of the 20" trash caps to confirm no gas is leaking from the wells, the following verification of the installed barriers is proposed:

1. Install a PCCC running tool with a hydraulic probe onto the 13 3/8" PCCC – this will be performed individually on each well.
2. Pressure test below the 13 3/8" PCCC. This will confirm the integrity of the following:
   a) The 13 3/8" PCCC (H2, H3-ST1, H4, GI-ST1)
   b) The shallow set cement plugs (H2, H3-ST1 and H4)
   c) The 9 5/8" casing (GI ST-1)
   d) Inflow test the 9 5/8" PCCC on GI ST-1
   e) The cement in the 9 5/8" x 13 3/8" annulus (H2, H3-ST1, H4, GI-ST1)

If the barriers cannot be proven or have failed, remedial work will be required and PTTEPAA is currently developing contingency plans for action to be taken in the event that a leak is identified during the implementation of the testing program.

B. Once a MODU BOP is on the well for the implementation of the completion program (expected second quarter 2011):

1. During well suspension operations small gas bubbles were observed in the 13 3/8" x 9 5/8" casing annulus. To confirm cement integrity for the 9.5/8" casing (GI-ST1) cement, one of the following risk-assessed alternative operations will be implemented before completing the GI-ST1 well:
   a) USIT or CBL logging;
   b) If cement integrity is evaluated to be unsatisfactory, a remedial squeeze cementing program will be proposed.

2. After the shallow set cement plug in the H3-ST1 well is removed, the 9.5/8" casing will be pressure tested to confirm integrity.

As the planning progresses, PTTEPAA will correspond further with both the Department and NOPSA regarding the regulatory aspects of the proposed well interventions referred to above.

Please contact me if you require any further information.

Yours sincerely

Andy Jacob
Chief Operating Officer