
From:
Sent: 08 May 2017 11:46
To:
Cc:
Subject: Cuadrilla - Notification to Drill Preston New Road 2 - Clarifications




I'm currently reviewing the "Notification to Drill well Preston New Road 2 on LJ/06" and have the following clarifications which require a response;

- 1) Notification requires a signed off front cover sheet.
- 2) No latitude/ longitude information provided.
- 3) No target latitude/ longitude information for horizontal section provided.
- 4) Casing Plan (Table 10) –there is no grade provided for 4-1/2" 13.5lb/ft?
- 5) Confirmation of top of 4-1/2" liner if this design is used?
- 6) Cement used for the different hole sections should stipulate compliance with API including lead and tail slurries, weights, cementing contractor QA/QC?
- 7) Casing Centralization – comment should be made with respect to this to ensure good cement placement. Provide details of drag calculations with conducted with respect to centralization (placement and numbers of centralizers).
- 8) With CBL/VDL planned – please advise when will these be conducted?
- 9) 4-1/2" production/frac string (Table 13) – Please provide details regarding the cementation including the depth at which the frac string is to be cemented back to?
- 10) There is no mention that the Well Control equipment (Annular BOP, Rams, etc) are built to API standards. Please confirm that this is the case and the Well Control equipment is monogrammed as such.
- 11) Please provide information as to the shear capability of the shear rams – what pipe can/ can't be sheared – provide details of any verification performed?
- 12) Please provide details of choke manifold, mud gas separator and koomey unit?
- 13) Is there an actuated valve on the diverter line that is interlocked with the diverter/ 21-1/4" annular?
- 14) Please provide details of Separation Factors between PNR-1/1Z and PNR -2 including a description of the horizontal displacement between wells. Note: Vertical displacement appears to be 100m vertically i.e. 2,300mTVD PNR-2 and 2,200mTVD PNR 1/1Z.
- 15) Based on the Separation Factors between PNR-1/1Z and PNR-2, please clarify if those are in line with Cuadrilla Well Planning Standards/ Procedures.
- 16) Provide Barrier table stipulating Primary and Secondary well barriers during the construction process.

- 17) Please provide flow diagrams or similar to describe the contingent operations available such as running the 4-1/2" liner and the scenarios under which those contingent operations would take place.
- 18) Please provide a copy of the risk assessment for the planned operations on PNR 1/1Z.
- 19) Confirmation that Well Examiner has reviewed the programme and that any concerns/issues have been resolved.

If you require further clarification on the questions above, please don't hesitate to contact me on the information below.

Kind Regards,

HM Inspector of Health and Safety | Well Engineering & Operations | Energy Division - Offshore
Health & Safety Executive | HID Energy Division, ED 6, Lord Cullen House, Fraser Place, Aberdeen, AB25 3UB |
: Direct Line : Mobile | : [Please note
updated Direct Line and email address]

From:
Sent: 11 May 2017 09:12
To:
Cc:
Subject: RE: TRIM: Re: HSE - Notification to Drill Well PNR -1/1Z & 2 on LJ/06

Thank you for the reply to the clarifications below.

With respect to the third clarification reply below, my understanding is that the cement returns will be to the cellar floor. Please describe how the returned cement at the cellar floor will be directed to the skip on location.

For the fourth clarification, as suggested, please provide a schematic of the circulation system during reverse circulating drilling.

Best regards,

| **HM Inspector of Health and Safety | Well Engineering & Operations | Energy Division - Offshore**
Health & Safety Executive | HID Energy Division, ED 6, Lord Cullen House, Fraser Place, Aberdeen, AB25 3UB |
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updated Direct Line and email address]

From:
Sent: 08 May 2017 16:16
To:
Cc:
Subject: TRIM: Re: HSE - Notification to Drill Well PNR -1/1Z & 2 on LJ/06

Below please find the additional information requested for the conductor setting on PNR-1 and 2.

1. Potential for SIMOPS with auger rig / RC rig: it is not planned to drill simultaneously in wells 1 and 2. The most that may occur simultaneously is that rigging down the first and rigging up the 2nd may take place, or while the auger rig is operating the drilling rig rig-up might commence (i.e. spotting of equipment). This would be subject to job-specific risk assessment taking into account the actual conditions at the location at that time.

2. Supply of water to site: water is being delivered via a 160mm mains line laid directly to the site, with water supply at mains pressure from United Utilities. This has been sized for the stimulation phases of the project where water requirements are higher, and hence it is expected that supply will exceed requirements for keeping the hole full during conductor setting operations. The water delivery rate will be measured and recorded at the start of operations (tank filling).

3. Handling of cement returns to surface during pressure grouting operations: cementing is planned to cease as soon as cement returns are identified at surface, which will be from the annulus between the

final 28" casing and the larger protective conductor. Such cement as is returned to surface will be directed to a skip lined with plastic sheeting. Once set, any free water on top is drawn off for separate disposal, and the skip with the set cement is sent to landfill.

4. Diverter used for main conductor hole drilling: the diverter forms part of the reverse-circulation drilling system, rather than a conventional diverter in normal circulation drilling. As such it will be used on both boreholes. A schematic of the circulation system during RC drilling will be provided under separate cover to further clarify.

5. Status of Well examination: the Well Examiner has reviewed the conductor setting plans and there are no outstanding remarks. The final executable programme containing additional detail that is agreed with will be sent for his additional review, and any comments closed out before commencing.

Best regards,

From:
Sent: 02 May 2017 13:27
To:
Subject: FW: HSE - Notification to Drill Well PNR -1/1Z & 2 on LJ/06

In addition to the clarifications below, can you please advise the status of the Well Examination Scheme in place for Cuadrilla, if the Well Examiner has reviewed the Notification/Programme and if there are any outstanding remarks?

Regards,

| HM Inspector of Health and Safety | Well Engineering & Operations | Energy Division - Offshore
Health & Safety Executive | HID Energy Division, ED 6, Lord Cullen House, Fraser Place, Aberdeen, AB25 3UB |
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updated Direct Line and email address]

From:
Sent: 02 May 2017 13:25
To:
Subject: HSE - Notification to Drill Well PNR -1/1Z & 2 on LJ/06

Afternoon

I'm currently inspecting the Notifications to "Set Conductor Casings at Preston New Road" received 11th and 12th April 2017. I have the following clarifications which require a response:

- 1) Notification Section 2 describes the planned operations for installing conductor casing at Preston New Road with a plan to batch drill utilizing an auger rig then utilizing a reverse circulating rig. As it is not clear from the Notification, can you clarify whether there are plans for SIMOPs to be conducted with both rigs operating at the same time at Preston New Road?

- 2) Notification Section 4 describes the availability of water at the well-site. Please describe in more detail the arrangement for having water on location?
- 3) Notification Section 6 describes pressure grouting the 28" conductor. Please describe in more detail the arrangement for handling cement returns at surface?
- 4) Notifications for both Preston New Road 1/1Z and 2 describe utilizing a diverter during the drilling of the conductor hole. Please clarify if it is the intention to use the diverter on both wells?

Regards,

HM Inspector of Health and Safety | Well Engineering & Operations | Energy Division - Offshore
Health & Safety Executive | HID Energy Division, ED 6, Lord Cullen House, Fraser Place, Aberdeen, AB25 3UB |
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