

Fwd: Increased Goaf Drainage

From: "Griffiths, Trent" Confidential
To: Grosvenor SLT Confidential
Date: Sat, 02 May 2020 12:53:36 +1000
Attachments: Venting trial report.docx (4.65 MB); Daily GOAF Drainage Report (1.26 MB)

Team,

Unfortunately we losing control of the fault on the face from 93 roof support to 132 roof support.

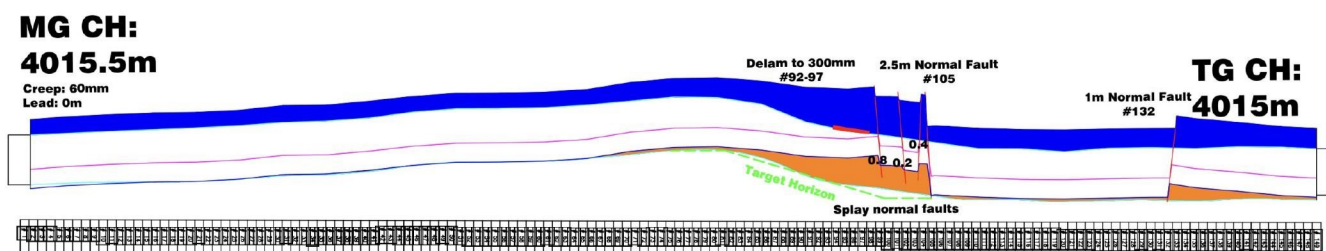
The constant "stop - start" lack of momentum last 48 hours has really impacted us and now we are at the cross roads.

At this point in time we are looking at injecting PUR into the face in this area to help create some stability before get moving again. We are aiming to have this injection work done by around 10am tomorrow.

We need to move on the increased goaf drainage "venting" process immediately. For one reason or another (combination of the Directive on the 2.0% AFC and shearer trip and a **BUCKET** load of gas in a rather small goaf) we are losing the war and are at risk of losing this LW as the fault approaches the TG end of the face.

This is the face pick up from Thursday, we still have at least 60 odd metres of retreat to get the fault off the face and each shear will be critical:

LONGWALL 104 FACE PROFILE



I've given direction this morning that we need to act with urgency immediately on increasing the goaf drainage extraction to lower the TG methane levels to allow us to keep cutting - this is an absolute must.

We have more than enough capable people on the minesite this weekend to co-ordinate this through an IMT and risk management (JSEA) approach (UM, VO, Vent Co-ordinator, Gas Drainage Co-ordinator, Seamgas Supervisor, LW Mining Co-ordinator just to name a few).

Logan has spoken to Johnno (VO) and he will work with the weekend team to get this process completed so the Seamgas Team can get as many additional Venturi skids online as quickly as possible.

Ideally I'd like to see an additional 4-5 venturis on in the next 24 hours increasing the total goaf gas flow by around 3,000l/s (at say 60% methane would be around 1,800l/s) and lower the TG background methane levels by around 0.5% but that might be a tough ask.

Either way, we need to do what we can to ensure we don't lose control of this LW during these next 60 or so metres of retreat.

We've worked too hard to lose control now.

Logan: Please ensure Johnno and the weekend team send out IMT minutes to all Grosvenor Users with detailed action plan by COB this afternoon of how many venturis will be turned on, what holes and when they will be activated.

Any questions or concerns please give me a call.

Regards,

Trent Griffiths
 Site Senior Executive
 General Manager

Confidential

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 A member of the Anglo American plc group

From: Griffiths, Trent
Sent: Friday, May 1, 2020 8:00:09 AM
To: Bachmann, Kate Confidential; Mohr, Logan Confidential; Niehaus, Wouter Confidential; Nowell, Rob Confidential; Needham, Gary Confidential; Johnson, David (Metcoal) Confidential
Subject: Increased Goaf Drainage

Team,

I had a session with Gary yesterday about the following:

- Gas blowers project status.
- Goaf skis project status.
- "De-bottle Knecking" some more areas of unnecessary resistance on the surface goaf network.
- Venting tracking (leading up to the end of year – end of June).

Gary and his team are doing some great work particularly around the surface pipe and plant network, treating the system as an overall "fluid dynamic network" and piece by piece identifying and correcting areas of increased resistance in the system. There is a section of work that we need to act on

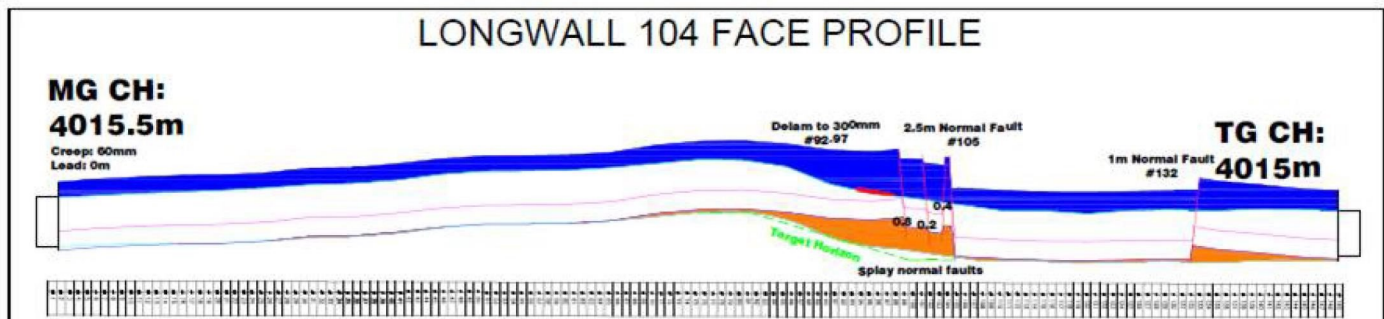
with haste (which will involve working in with the LW to isolate the main TG104 pipeline for 4-6 hours to cut and install a valve) before the LW passes this area so we can tie this line into the sister line and then have a parallel circuit back to the plant.

The blowers and additional skids are tracking well and I'm confident come July / August we will have a 17,000l/s capacity system – this is not far away.

Currently we are extracting goaf gas from the 2 x goaves as below:

- **LW103:** 1,498l/s total gas flow (941l/s of methane) all to the plant.
- **LW104:** 7,828l/s total gas flow (4,260l/s of methane), of which:
 - 2,094l/s total gas flow is on venturi.
 - 5,734l/s total gas flow to the plant.

Unfortunately despite a rather small LW104 goaf (and goaf gas reservoir), the methane levels in the TG are almost to the point of bordering on being unmanageable – causing huge issues (with the new Directive enforced of 2.0% trip AFC and shearer) with constant delays which is starting to concern me particularly as this fault system moves closer to the TG roadway – and in turn, increasing risk profile:



Right now we'd ideally like to see the background methane levels in the TG roadway reduce by 0.5%, which is around 70m³/s of ventilation would equate to around 350l/s of methane.

Based on the 1 to 5 ratio we saw in LW103 (particularly from the Venting Trial – see attached report), this would equate to around an additional 1,750l/s of methane to be extracted from the goaf gas reservoir.

At an average purity of around 60%, this would require around 3,000l/s of total gas flow above current extraction levels. So from 8,000l/s to 11,000l/s.

Majority of this additional 3,000l/s (of say 1,750l/s of methane) would require to be on venturi (until such time obviously as the next flowlers are installed in the coming months).

Some rough calculations show even with this additional 1,750l/s of methane on venturi for 5-6 weeks show we would still come under our tonnes CO₂eq threshold by end of June by around 30,000 to 40,000 (as we are currently running at around 28,000t per month).

I've asked Gary to set aside some time early next week to generate this discussion further with some members of your teams (relevant cross section approach) and potentially move on this work.

We have all the processes from August last year with the "Reservoir challenging Trial" through:

- Risk Assessment.
- Change Management.
- Communications.
- Detailed tonnes of CO₂eq tracking processes.
- Increased goaf monitoring (and nitrogen injection) for spon comb management.

If you have any questions or concerns please touch base with Gary today so he can begin to compile this with his team ready for session next week.

Thanks.

Regards,

Trent Griffiths

Site Senior Executive

General Manager



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