



INSTALLING A PLATED DETECT 4CAB.

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Background

Plated cables still represent a significant percentage of the total installed in underground mining situations. The DETECT 4CAB can be installed with a faceplate, but it is important to inform YieldPoint Inc. at the time the instrument is ordered.

The most effective strategy for installing a faceplate is to recess the instrumentation head to the toe of the borehole and retrieve the leadwires through a continuous steel conduit. The Head of the DETECT 4CAB and the steel conduit are united at a friction coupling consisting of a capped length of cream coloured CPVC tube. The steel conduit is attached to the cable with the BLACK cable ties which should not be removed during installation

Unwrapping the cable.

1. Plug the cable into the MIU and take a reading with the instrument coiled. The instrument should scroll through its anchors.
2. Cut the smaller white cable ties to release the regular leadwire from the cable.
3. Holding the head of the cable carefully cut the large white cable ties beginning at the toe of the cable. This is most easily accomplished with the cable in an upright orientation. Remember: considerable energy is stored in a coiled cable so care must be taken.
4. Lay the cable straight and if necessary straighten the steel conduit. Do not cut the black cable ties.

IMPORTANT: The Yellow tape indicates the end-point of the instrumentation array.

Install the cable in the borehole:

5. Blow all down-holes and in general make sure the holes are as clean as possible.
6. In poor ground insert a regular (non-instrumented) cable and grout hose to make sure the borehole is viable.
7. Cut a length of grout hole to the appropriate length for the DETECT 4CAB. Remember to cut the end of the grout hose at a 60degree angle to make insertion easier.
8. Securely attach the grout hose to the instrumented end of DETECT 4CAB with electrical tape (toe to collar grouting assumed). The angled end of the grout hose should be within 150mm of the capped CPVC tube at the instrument head.
9. Insert into the borehole carefully by pushing on the grout hose. Tape the grout hose to the DETECT 4CAB at regular intervals during insertion.
10. If problems occur during insertion remove the instrumented cable and probe the borehole with a regular cable to dislodge any loose fragments.

11. Secure the cable at the collar of the borehole by gently tapping on wooden wedges.
NOTE: The cables do not have end holding devices so care must be taken to secure the cable in the borehole.
12. Installing a faceplate requires that 300mm + of cable be left exposed from the end of the borehole.
13. Take a reading with the MIU.

Grouting the cables

14. Grout the cables with a 0.40w:c ratio cement

Zero the DETECT 4CAB

15. Allow 2 days for the cement to complete its initial cure.
16. Zero the DETECT 4CAB by plugging the instrument into the MIU for more than 1 minute. Even if the instrument is reading zero after installation it is still necessary keep the instrument plugged in for 1 minute.

Installing the Faceplate.

17. Either 1 or 2 slotted faceplates need to be available for each DETECT 4CAB.
18. Carefully bend the steel conduit so that it becomes parallel to the rock face at the collar of the hole. Be careful not to kink.
19. Place either 1 or 2 slotted faceplates against the rock face so that the steel conduit runs along the slot.
20. Place a normal faceplate on top of the slotted faceplates.
21. Tension the cable.

The finished installation is shown in Figure 1.

IMPORTANT: The Yellow tape indicates the end of the instrumentation array. The DETECT 4 cable should not be cutoff beyond this point. It may be necessary to flag the cable in order to make sure it is not cutoff by accident. If the end of the DETECT 4CAB is cutoff it is advisable to reseal the end of the instrument.

FINISHED LAYOUT A PLATED DETECT 4CAB

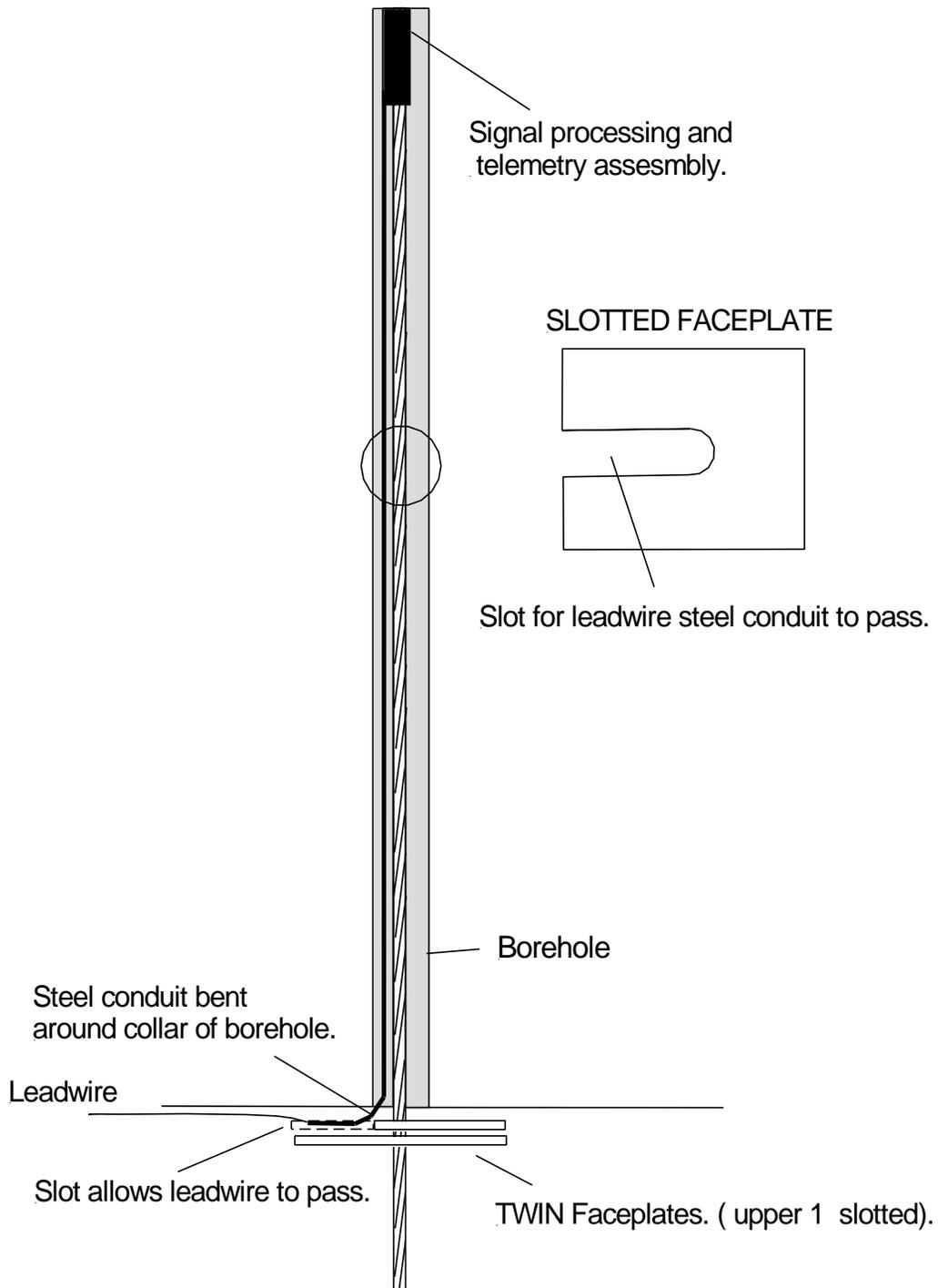


Figure 1: Fully installed DETECT 4CAB.

