

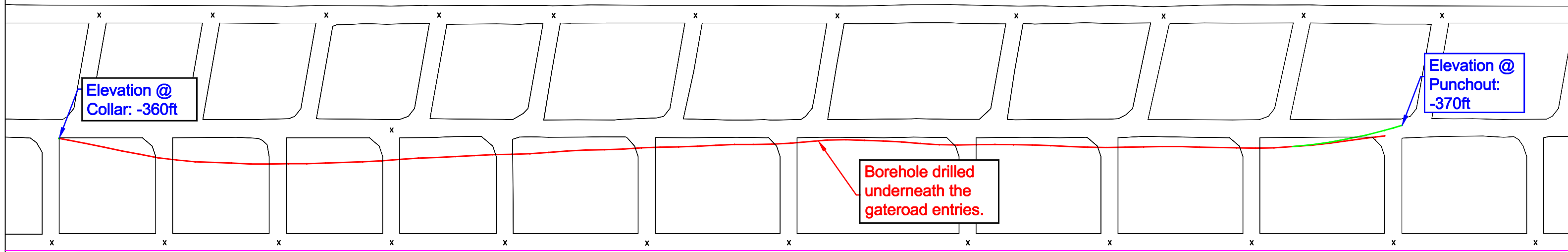
Floor holes to control water in future sealed areas



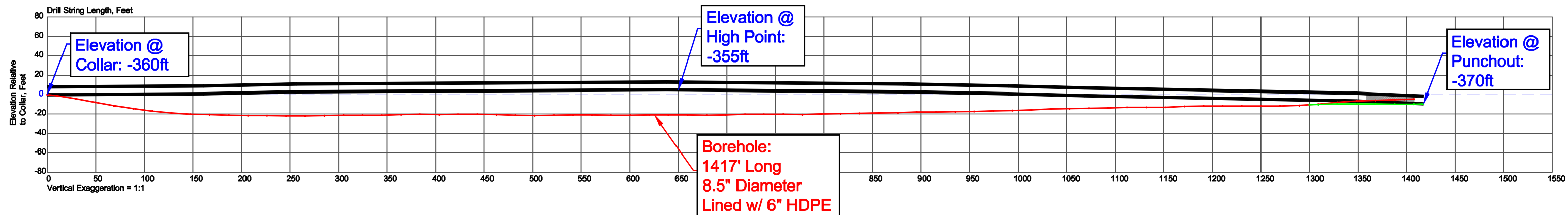
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REI Drilling, Inc. directionally drilled three (3) horizontal water drainage boreholes in the floor at a longwall operation in West Virginia. Boreholes were drilled to depths in excess of 2,800 ft in a hard sandstone and reamed to a final diameter of 6.5". Punchout locations represent low elevation points in the gateroads to facilitate gravity drainage of water to the main sump location. The boreholes were then lined with 4" diameter flush joint steel casing to keep holes open after overmining and maintain the ability to drain water from this longwall district once sealed and safely under-mine lower seam panels. Borehole placement accuracy of 14 ft in 2,400 ft for BH#1 and 7 ft in 2,800 ft for BH#2 was verified by surveying the punchout locations.

Plan View



Profile



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DIRECTIONAL UNDERGROUND

Proactive Gateroad Water Drainage

The purpose of this hole is to connect two low points in the gateroad that are separated by a local high point. The horizontal borehole will allow for water to gravity flow from one low spot to the other without having to pump over or grade the high point. This allows for just one pump to successfully dewater both low points, reducing maintenance and personnel requirements on this gateroad after it is abandoned.