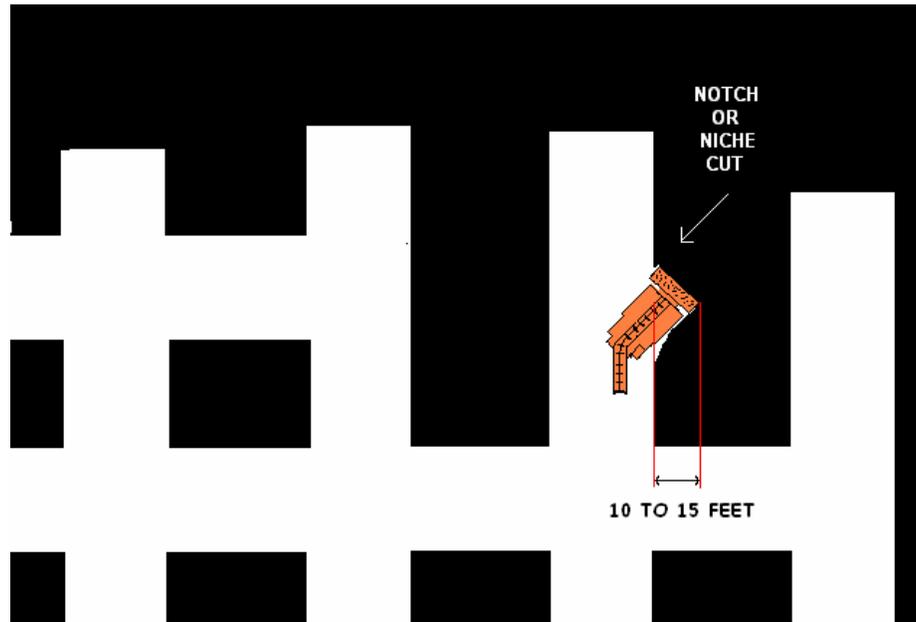


BEST PRACTICES: Turning a Crosscut with a Remote-Controlled CM

#1 - Use of a Notch or Niche Cut

The use of a “notch” or “niche” cut is one recommended best practice to reduce the likelihood of continuous miner (CM) operator injury due to roof falls while mining crosscuts. A notch cut is a shallow, initial cut made at a



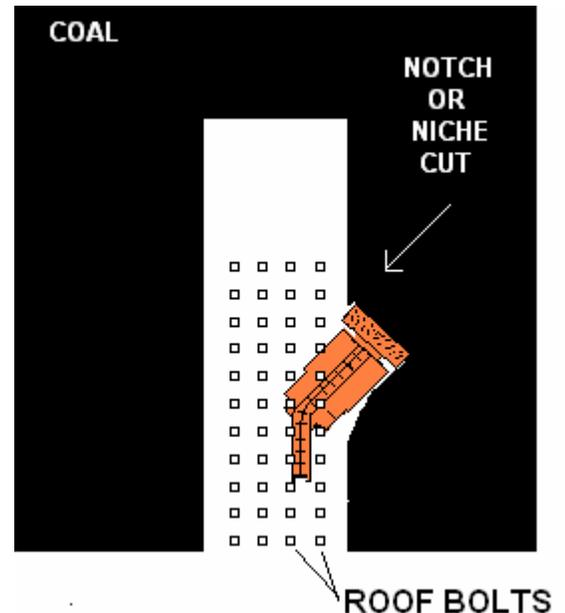
planned intersection location. Although some people refer to any cut that is less than the “normal” approved cut depth as a niche or a notch, for this discussion, a niche or notch will be considered to be a shallow, wedge-shaped side cut in the 10-to-15 ft. depth range.

A June 2003 review of MSHA roof control plans concluded that over 100 mines already utilize a notch cut to reduce CM operator exposure to unsupported roof at the mouth of the crosscut being mined. The approach used for the notch cut is very simple. As the continuous mining machine is being withdrawn from a normal cut up the straight entry, a side-cut is mined on a shallow angle. The side-cut typically is limited to 10-to-15 ft. deep and one miner head wide; no attempt is made to “turn” the crosscut. The miner is backed out of the place and a bolting machine is used to support the just-mined notch cut and then the cut up the straight entry.

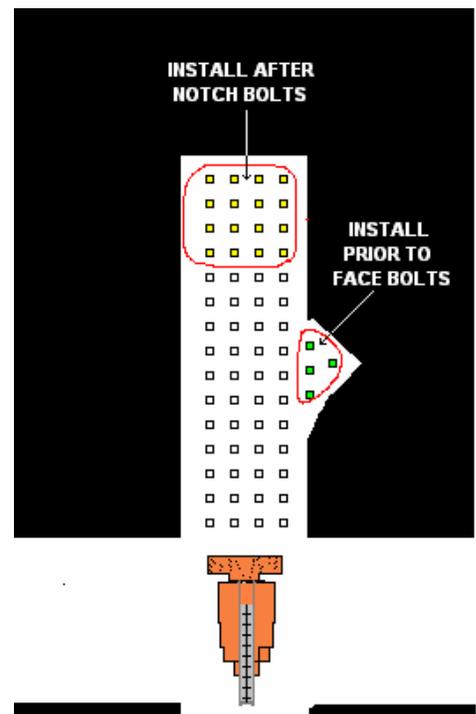
The supported notch area provides a buffer between the CM operator and unsupported roof created as the remainder of the crosscut is mined. Additionally, the supported notch allows for improved visibility and mobility.

A few important points to remember when implementing such a plan are as follows:

- Prior to mining the notch cut, the inby side of the proposed intersection of the proposed notch cut center line must be permanently supported according to the roof control plan. The supported area should extend inby the opening to be created by the notch. (Many plans call for three rows of bolts to be installed inby the notch before the notch is cut).



- The notch cut should be treated as an unsupported opening at an intersection. As such, the area should be permanently supported or at least one row of temporary supports should be installed on not more than 5-foot centers across the opening before any other work or travel in the intersection.
- A safe bolting sequence should be developed specifically for the notched area. This sequence should be included in the roof control plan along with precautions to address damaged bolts. If roof bolts in the entry are disturbed during the mining of the notch, these bolts should be replaced as appropriate while supporting the notch area.



- CM operators should maintain a position no nearer than two rows of bolts outby unsupported roof. Many roof control plans specify two “full rows” of bolts. Bolts installed in the wedge-shaped notch will not extend from rib-to-rib once the full width of the crosscut has been established. In this sense they are not “full rows” and roof control plan wording may need to be revised to clarify how these partial rows should be considered in defining a relative operator position.