

Safety Reminder Card No. 7

FALCONBRIDGE NICKEL MINES LIMITED

Nickel Division — Sudbury Operations

All Mine Departments

TIMBERING

1. The back, walls, breast or face and surrounding area must be checked for loose ground and thoroughly scaled before timbering of any kind is started.
2. All plank used for staging must be straight grained and free of rot. Staging plank must be 3" spruce.
3. Good housekeeping must be maintained at all times.
4. Keep your feet and legs in the clear when using an axe. Secure the lamp cord to the back of your hat in such a way that it cannot be caught with the axe or any other tool. Be sure you have sufficient room to swing the axe.
5. Use a wedge or short block to guide your saw when starting a cut.
6. Use a chute repair setup to scale down or repair a raise.
7. Before any work is done under a raise, check and scale down the raise and, if necessary, install a bulkhead cover.

8. Before scaling a raise, the bottom of the raise must be fenced off at a safe distance and signs indicating "Men Working Below" and "Men Working Above" must be posted at the top and bottom respectively.
9. Millhole Raising:
 - (a) Clean the area around the millhole thoroughly.
 - (b) Do not work off the muck; put in a staging. Signs "Do Not Pull this Chute" and "Men Working Above" must be placed at the mouth of the chute on the level below. These signs must be removed when work is completed.
 - (c) A safety belt and rope must be worn at all times when working in a millhole or around the top of a millhole unless it is completely covered.
 - (d) When stagings are put in millholes, cleats must be 3" x 8" x required length and fastened with 8" nails. Stagings must be of 3" spruce plank free of rot and cut so that there is no more than 1" end play. Openings between staging planks should not be more than 3".
10. Raising Steel Millholes:
 - (a) Leave the millhole full before raising, wherever possible.
 - (b) Where a staging is required, it is to be built once the millhole has been raised three rings.
11. Manways:
 - (a) Inclined at 70 degrees or more from the horizontal - platforms may not be more than 12 feet apart.

- (b) Inclined under 70 degrees from the horizontal - platforms may not be more than 21 feet apart, but the ladders may be continuous.
- (c) In manways inclined at 50 degrees or less, the ladders may be continuous and no platforms are required except at points of offset.
- (d) Openings in platforms may not be more than 24" x 24".
- (e) Spliced ladders should be butted together, and the proper distance of 12" maintained. Splicing must be done to the mine standards and must be either:
 - (1) with 2" x 4" splints nailed securely along the outside runners of the ladder (in a pattern that won't cause splitting).
 - (2) with 1" x 4" nailed securely on both sides of the runners of the ladder (in a pattern that won't cause splitting).

Check with your supervisor, which standard you must follow.

- (f) Any ladder over 16' in length must be braced and supported.
- (g) Ladders should extend three feet above a platform. Where this is not possible, secure hand holds must be provided.
- (h) Steel slides 70 degrees or more, must be tightly enclosed.
- (i) Manway and steel slide openings must be covered. The covers must be securely hinged and supported on three sides.

12. Square Set Stopping:

- (a) Flooring must be nailed or cleated to

prevent slipping endways and must be kept tight. Fillers are to be placed over caps or girts where necessary.

- (b) Sets must be erected level and square, and as straight as possible.
- (c) Posts are to be secured or laced as erected to prevent them from falling.
- (d) Before blocking sets, face and wall blocks must be in place and joints tight.
- (e) Wall and face blocks must be a minimum of 8" and 5" material respectively, and placed so that all set members are held.
- (f) Never put in a wall block longer than 2 feet. Timber a bastard set.
- (g) Blocking is to consist of bulkhead timber placed cribwise and wedged tight to the back.
- (h) The sets at the face must be lagged with plank to protect the driller. Sets used as travelways must be back lagged. All the face blocks must be lagged over in silling operations.
- (i) Sets are to be reinforced if taking undue weight.
- (j) When building a cribbed bulkhead you must reinforce the sets directly below.
- (k) Secure all braces as they are installed.

13. Millhole Repairing (Square Set Stopes):

- (a) Check any blocking or overhead timber.
- (b) Tight lag the set over the millhole so that nothing can fall through.
- (c) Clean up and cover the millhole with 3" plank leaving only the manhole no bigger than 2' x 2'. All planks are to be nailed. The manhole is to be kept closed at all times when not lowering material.

- (d) Erect and secure proper snubbing timber of adequate size (min. size is 7" on small end).
- (e) Take all necessary precautions to prevent any rolling or side movement of the snubbing timber.
- (f) Brace the snubbing timber with scabs to prevent side movement.
- (g) Place vertical scabs to the bottom of the posts to support the horizontal planks.
- (h) Use two ~~nylon wound~~ wire ropes and take a complete turn around the timber with each one. Attach one rope to the bosun's chair and the other to the safety belt.

14. Millhole Repairing (Cut and Fill Stopes):

- (a) Check walls and back for loose and clean up around the millhole.
- (b) Using 8 foot cribbing erect a square set over the millhole and block it tight to the back, and side brace it.
- (c) Proceed as for a square set stope millhole repair setup.
- (d) If it is preferable, raise the cribbing four rounds. Dap in and toe-nail one cribbing between the third and fourth rounds, and use this for snubbing the millhole repair ropes. Leave the grizzly rails in the millhole. Build a staging with a manhole on one side on top of the grizzly rails, at the floor level of the stope.

15. General Precautions During Millhole Repairs:

- (a) Safety belts, ropes, bosun's chair and setup must be inspected by the shift boss, before the first descent is made, and by

the crew who will be using it each shift thereafter. Refer to the Reminder Card No. 10 on Ropes and Belts for further information.

- (b) If a millhole is winged out, the wings must be thoroughly cleaned down and gobbled up tight.
- (c) Post signs "Men Working Below" and "Men Working Above" at the top and bottom respectively.
- (d) The millhole repair crew must notify the tram crews on the level below, so the train crews will warn them when blasting nearby.
- (e) No work may be done on a chute bottom until the millhole has been cleaned down, inspected and tightly covered.
- (f) Keep safety ropes and belts coiled and hung up in a dry place when not in use.
- (g) The helper on millhole repair work must keep the area around the top of the millhole clean so that chips, nails, or hand tools cannot fall or be dropped down the millhole. The helper also acts as a guard.
- (h) Use a third rope of no less than 1/2" polypropylene for lowering supplies. Do not lower more than one piece of timber at a time.
- (i) Secure the timber with a timber hitch and a half hitch with a nail driven into the timber and bent over the timber hitch to prevent slipping.
- (j) When raising or lowering a man in a millhole at least three men must be at the top.

16. General Precautions for Level Timbering

- (a) Tell the tram crews where you will be working, and put up suitable warning signs, lights, or stop logs as required.
- (b) Check the back and walls for loose in the area where you will be working.
- (c) Brace and support the remaining timber before moving any timber that has to be changed.
- (d) Consult supervision on the method to be used before repairing a hung up chute.
- (e) Inspect the chute stands and timber in your area frequently and report any doubtful conditions to the shift boss.
- (f) Gin poles for hoisting and placing timbers must be at least 6' material and secured so that it cannot slip either sideways or endways.
- (g) If a chain is used for hanging the pulley block from the gin pole, the chain must be no less than 3/8 " AND SPIKED TO PREVENT SLIPPING. If a cable is used, it should be no less than 1/2" in diameter.
- (h) The pulley block being used must be no less than 6" in diameter and must be complete with safety throat latch.
- (i) Horizontal planks used to support stagings must be at least 3" x 6" and be securely spiked to the posts and with scabs from the horizontal planks to the ground.
- (j) Use braces or other means to ensure that standing posts cannot fall.
- (k) Spike an additional plank to the posts above the staging for a guard rail to prevent anyone falling.

17. Hanging Stagings (Transverse Cut and Fill Stopes):

- (a) Lagging to be at least 6" in diameter.
- (b) Points of suspension of a lagging to be no more than 12 feet apart.
- (c) No two laggings may hang more than 6 feet apart.
- (d) Only planks in good condition are to be used.
- (e) Both ends of planks are to be nailed to the lagging. Use nails of 5" minimum size.
- (f) The outside of the staging must be guard railed.
- (g) Cable to be 1/2" with two clamps, or chain to be no less than 3/8".
- (h) Stagings are to be no more than 15 feet off the mucking floor.
- (i) Keep clear of the staging and ladder while the bucket is in use.

Falconbridge, Ontario

February, 1973