Actual Mine Shovel Power Cable Handling Techniques

- Presented by: Martin Reyes – Barrick Goldstrike Mines Inc.
Barrick Goldstrike is a large open pit gold mine.

- 4 P&H 2800 Electric Shovels – 420,000 tons per day.
- 20 930E haul trucks, 39 Trolley Equipped 685E haul trucks, 2 Trolley Equipped 730E haul trucks.
- 650 Mine Division Employees.
- 12 “On-crew” Rotating Electricians.
- 3 “In-shop” PM Electricians.
How a Cable Move Comes About.

- Daily - 8:30am
  - meeting at Pit overlook.
- Attending:
  - Mine Operations
  - Survey
  - Dewatering
  - Geo technical
  - Blasting
  - Maintenance
  - cable handling people.
Discussing a Cable Move.

Short Range Planning / Blasting
determine cable moves required for blast.

Short Range Planning / Mine Ops. Determine shovel progress that would require cable moves.

Short Range Gets With The Pit Supervisor and 269 People to determine plan of attack.
Beginning of a Cable Move Due to a Blast Pattern.

• 269 personal calls the Electricians.
• Electricians get to the sub and call the shovel operator to make sure the bucket is on the ground and shovel is shut down.
• Electricians open the breaker, ground it out with the built in grounding bar and verify that the breaker is open and grounded.

• Each Electrician puts their personal lock on, then they meet the 269 people to see what needs to be disconnected.
• Electricians arrive at the box that needs disconnecting.
• They begin by unlocking the box, once again they ground out each phase.
• Then they disconnect the cable, tape the ends up.
• After cable is disconnected, 269 person hooks up to the Box and drags it out of harms way.
Here’s the other end off the cable getting dragged out of harms way.
What Can Happen if J-Boxes Aren’t Moved Far Enough.
• As with any cable or Shovel move it starts at the 8:30 morning meeting.
• Electricians get the call and go down to the sub and stand by in case they trip the Sub while Walking the Shovel.
• 269 people start getting the cable ready to move.
Shovel Walking Down a Ramp
Equipment Used to Pull Cable Along While Shovel is Walking
Shovel Reaches it’s Destination

• Cable handlers begin to lay out the Shovels cable.
Shovel is Called “Up” and Put Back to Work.
B.G.M.I Cable Repair Facilities.
Cable Splicing Shed.
Inside Cable Splicing Shed.
Cable Reeling Equipment.

- 834 RTD converted to fulltime cable reeler.
Stationary Reeler.

- Used for handling the cable through the shed.
Stationary Reeler.

- Controlled by a small VFD inside the shed with remote control.
Good Cable Staging Area.
Bad Cable is Laid Out.
We will start to cadweld our cable connections soon.
This should help on our pilot wire connections. This is our weak link in a splice.
• Internal Grounding Bar.
• 834 Cable Reeler at Work.
• Previous Picture Shows Cable Reeler Reeling This Cable up Going Down This High Wall.