

## MDG 35 – Drill Rig Fatal Incidents

<b>Incident Information</b>	<b>Agent of fatality</b>	<b>Events</b>	<b>Recommendations</b>
<b>OPEN CUT MINES</b>			
<b>Contact with Moving or Rotating Plant</b>			
24/03/2004 United States Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Clothing became entangled in rotating drill steel, victim tried to manually thread the drill steel onto a rotating collar and striker bar with the drill mast in the vertical drill position.	Manufacturers' warnings should be followed during drill operation; suitable clothing should also be work when operating equipment.
1/01/2003 Australia Victoria Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	While loading drill steels into the rig, the operator became tangled in the steel.	
28/11/2002 Australia Victoria Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Operator was found dead after changing drill steel and being caught in the rotating drill.	Re-design of drill giving increased safety features, designing a guard protector for the drill, conducting risk assessments on the activity.
22/04/2002 United States Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	A 22 year-old drill operator with one year mining experience was fatally injured at a dimension stone quarry. The victim was drilling in the quarry when his clothing became entangled in the rotating drill steel.	Equipment operators should stop drill rotation when performing tasks near the rotating steel. Loose fitting clothing should not be worn when working around drilling machinery.
2/04/2002 New Zealand Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Victim was changing drilling rods on a drilling rig when his clothing became entangled in the revolving rods. Died at the scene from injuries received.	
10/04/2000 United States Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	A 40-year-old driller (contractor employee) with 20 years mining experience was fatally injured at a surface gold mine. The victim was adding a drill rod to the drill head when his coat became entangled in the rotating steel.	Rotation to be stopped when manually changing drill rods. Drills to be fitted with automated systems for changing rods, or two persons be present when rods are changed manually. Loose fitting clothing not to be worn when working around drilling machinery.
14/02/1996 United States Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	A mechanic preparing to repair a hydraulic hose on a drill when he fatally injured as drill ran over him. Drill operator was tramming drill backwards to an area where hose could be repaired. Drill operator turned drill and saw mechanic under drill.	Mobile Equipment should possess reversing alarms.

15/06/1995 Australia Western Australia Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	A diamond driller was engaged in operating a track mounted rotary diamond drill machine when he became caught between the rotating drill rod and the mast of the drilling machine.	We recommend that the drilling industry pursues development of a suitable guard for rotating drill rods.
17/02/1995 United States Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	A driller was fatally injured at a limestone quarry while operating a track drill. He was found dead wrapped around the drill steel. It is believed that the employee's clothing got caught on the moving drill stem.	Loose clothing should be restrained when working around machinery to prevent entanglement.
15/05/1992 Australia Western Australia Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	The deceased, a contract driller at an open cut gold mine, was moving the mast of a truck mounted drill rig to drill angled blast holes. He was found trapped between the truck and the mast of the rig.	
13/09/1988 Australia Western Australia Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Was crushed by the mast of a crawler drill when it fell of him while operating the travel motors on the rig.	
23/11/1987 Australia Western Australia Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Was struck in the chest by a loose drill rod which was rotating in the mast of a diamond drill rig.	
22/10/1987 Australia Western Australia Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Fatally injured when his sleeve was caught by rotating drill bit which constricted his neck, resulting in strangulation.	
<b>Fall From Heights</b>			
18/04/2007 United States Non-Coal Open-Cut	Fall From Heights	Operator was near the edge of bench when drill unit tipped on its side and operator was ejected over the highwall.	SLAM all work, ensure levelling jacks are working correctly and ensure all miners visually inspect all ground conditions.
24/11/2004 Australia Queensland Non-Coal Open-Cut	Fall From Heights	Fatally injured when he fell over face with his trac drill	
19/07/2004 United States Non-Coal Open-Cut	Fall From Heights	Driller fell 90 feet from top of highwall to pit floor while rethreading a drill steel.	Safety lanyards much be anchored when working at heights, ensure correct training of contract employees.
9/09/2003 United States Coal Open-Cut	Fall From Heights	Operator was dragging strip mine bench into position for drilling when he drove over the highwall	Procedures so work is stopped when vision is inadequate, ensure safety regulations are followed, put guarding up near the top of highwall.
3/09/1997 United States Non-Coal Open-Cut	Fall From Heights	A driller was fatally injured while drilling a blast hole about 4 feet from the edge of a 92-foot highwall. He was adding drill steel when the hammer feed chain broke causing the victim to fall over the edge. Victim was not wearing a safety belt and line.	

26/02/1997 United States Non-Coal Open-Cut	Fall From Heights	A driller was fatally injured drilling the surface above an abandoned underground mine shaft when the ground caved in under the drill head. The employee fell 20-feet down a mine raise opened up by the drilling and was buried under material at the bottom.	
1/01/1985 United Kingdom Non-Coal Open-Cut	Fall From Heights	Spilled and fell while cleaning the windows of his self-propelled rig.	
<b>Fall of Roof/Sides/Highwall</b>			
21/04/2006 United States Non-Coal Open-Cut	Fall of Roof/Sides/Highwall	A driller was fatally injured and another seriously injured when drilling an uneven quarry floor caused a cracked section of limestone to fall onto both the men. This was assisted by a dysfunctional bladder control valve.	Miners trained to look at hazards and risk assess. Procedures which examine damaged equipment to ensure it is not used until repaired.
15/09/2005 Australia Western Australia Non-Coal Open-Cut	Fall of Roof/Sides/Highwall	Operator was bolting in support operations when a 1 tonne rock fell and crushed him.	
7/01/1999 United States Coal Open-Cut	Fall of Roof/Sides/Highwall	A highwall drill operator was fatally injured when a portion of highwall collapsed. Large pieces of sandstone fell from highwall causing severe damage to drill and operator's cabin. The operator was crushed in the cabin.	Highwalls be examined often. Ground control plan at every mine be followed. Miners to be trained to recognize hazardous highwall conditions. Drill operators not to drill from positions that increase exposure to highwall hazards.
5/10/1998 United States Coal Open-Cut	Fall of Roof/Sides/Highwall	Operator of a highwall drill, at controls, was fatally injured when a large piece of rock fell from highwall onto cab of his drill. Rock fell to a safety bench, split, then fell onto top of cab. Rock that fell completely destroyed operator's cab.	Highwalls be examined and monitored often. Ground control plan at each mine be followed. All miners to be trained to recognize hazardous highwall conditions. Drill operators not to drill from positions hindering their escape from highwall falls.
13/07/1989 Australia Western Australia Non-Coal Open-Cut	Fall of Roof/Sides/Highwall	Was drilling blast holes in a bench adjacent to an old filled stope when the footwall collapsed and he was buried in the material.	
20/08/1970 New Zealand Non-Coal Open-Cut	Fall of Roof/Sides/Highwall	Was hit by a small rock from a high face when he was drilling secondary blast holes in rocks on the floor below.	
29/07/1970 New Zealand Non-Coal Open-Cut	Fall of Roof/Sides/Highwall	Was struck by a rock from the quarry face whilst he was drilling a boulder on the quarry floor	

Other Incidents			
1/01/1979 United Kingdom Non-Coal Open-Cut	Catastrophic Failure	A collapsed drill rig mast struck the operator on the head and killed him. This occurred by an overload as the drill rig mast was being used as a crane boom.	
1/01/1974 Australia New South Wales Non-Coal Open-Cut	Catastrophic Failure	Mast of rock drill broke and fell back on top of machine, crushing operator.	
18/08/1998 United States Non-Coal Open-Cut	Drowning	A driller's helper was fatally injured when he fell into a sump and drowned. After starting the engine of drill truck and engaging the power take-off to start the drill, the driver stepped out of the cab and fell into the sump as he could not see the edge	Safe access must be provided to all working areas. Hidden hazards should be clearly marked and/or means should be provided to protect employees from such hazards.
21/10/1983 Australia New South Wales Non-Coal Open-Cut	Electrocution	A drill mounted on the back of a truck struck overhead power lines and electrocuted the driver while returning from the service shop for repairs to the rig.	
1/01/1962 Australia New South Wales Non-Coal Open-Cut	Electrocution	Electrocuted when he was raising mast on seismic drill and it came into contact with high voltage wires	
6/10/1995 United States Non-Coal Open-Cut	Explosives	A quarryman was fatally injured when drilling plug holes into a granite block to allow the insertion of splitting wedges. An explosion occurred when he drilled into a charged hole that did not detonate during a previous planned blast.	
10/09/2002 United States Non-Coal Open-Cut	Other	A drill operator was fatally injured when he was crushed inside the cab of his drill. After positioning the drill, set the jacks and raised truck, he raised the drill mast. A jack failed permitting the drill rig to become unstable and tip over.	Ensure inspections are carried out and defects addressed prior to operation. Ensure jacks are locked and unit is level before operation. Use adequate cribbing to prevent jacks from sinking. Know limitations of drill and follow operators manual.
5/09/1955 Australia New South Wales Non-Coal Open-Cut	Other Explosion	Killed when a drill hole exploded prematurely	
27/01/2000 United States Non-Coal Open-Cut	Unintended Operation of Equipment	A driller was fatally injured preparing a drill rig for drilling. Victim positioned truck mounted drill parallel to highwall and lowered stabilizers when a stabilizer sank into ground causing drill to overturn. Drill rig fell over highwall crushing cab.	Persons experienced in identifying loose ground should examine highwall edges prior to work beginning and as conditions warrant during the shift. Drills should not be positioned parallel to highwall edges.

16/02/1976 Australia Queensland Non-Coal Open-Cut	Unintended Operation of Equipment	Jack-up leg on a drilling rig overbalanced and fell onto him.	
<b>UNDERGROUND MINES</b>			
<b>Contact with Moving or Rotating Plant</b>			
24/11/2004 Australia Tasmania Non-Coal Underground	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Miner was performing maintenance on a rock drill when he was struck in the neck, causing it to break.	
13/12/2002 United States Coal Underground	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Victim contacted fast feed drill boom lever causing the drill to rise rapidly and trapping him between the drill and the canopy roof.	
30/08/2000 United States Non-Coal Underground	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	A 47-year-old driller with 7 years mining experience was fatally injured at an underground mine. The victim was operating a twin boom jumbo drill when his clothing became entangled on the rotating drill steel coupling sheer pin.	
29/05/1999 United States Coal Underground	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Foreman received injuries when his clothes became entangled in drill steel. He died in hospital following surgery complications.	
10/08/1994 Australia Tasmania Non-Coal Underground	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Clothing became entangled in a drill bit and miner was asphyxiated.	
21/04/1991 Australia Western Australia Non-Coal Underground	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	His clothing became entangled in the rotating steel of a jumbo.	
18/09/1980 Australia New South Wales Coal Underground	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Struck by bent drill, which when rotating in chuck, bent further and struck him.	
12/04/1966 Australia New South Wales Coal Underground	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Shaft sinker up-ended his drilling machine and drill steel to clean a choked drill. The air was left on and the revolving steel drill became entangled in his clothes, which choked him.	
1/01/1961 New Zealand Unknown Underground	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Was killed instantly by being crushed against the revolving Kelly by the breakout line when a fresh length was to be added to the drill string.	

<b>Fall of Roof/Sides/Highwall</b>			
28/08/2007 United States Non-Coal Underground	Fall of Roof/Sides/Highwall	Victim was bolting the roof when the left rib and back fell in, covering the roof bolter.	
1/02/2006 United States Coal Underground	Fall of Roof/Sides/Highwall	Bolting machine operator fatally injured when a rib roll fell on the operator while he was trying to install a permanent roof support.	Installation of more rib bolts when mining height over 6 feet and overburden exceeds 800 feet. Get a machine which allows both rib and roof bolting from a protected position.
10/06/2005 United States Coal Underground	Fall of Roof/Sides/Highwall	Victim was installing roof bolts in the mine roof when a previously supported section gave way due to a roof defect (horseback) of 5 feet in depth.	Roof control plan reviewed and explained to all employees, especially about limiting cuts in fault areas, person cutting should be trained in finding faults.
18/02/2002 United States Coal Underground	Fall of Roof/Sides/Highwall	A miner was fatally injured by a roof fall while operating a roof bolting machine. Victim was installing fully grouted resin bolts when the fall occurred. Position of roof bolting machine exposed victim to unsupported roof.	Never work or travel in by supported roof. Always know and follow your approved roof control plan which may contain provisions for bolting patterns. Always examine roof, face and ribs before any work is started and periodically as conditions warrant.
29/11/2001 United States Coal Underground	Fall of Roof/Sides/Highwall	A roof bolting machine operator was fatally injured in a rib fall. After installing roof bolts and rock dusting walls, operator was preparing to move machine. Walking along side machine from face a fall of rib occurred, crushing victim against machine.	An examination of roof, face, and ribs to be made before work is started. Positioning of personnel in safe locations relating to rib and machinery is essential. Miners to be trained to recognize roof and rib hazards. Be aware of changing roof and rib conditions
20/03/2001 United States Non-Coal Underground	Fall of Roof/Sides/Highwall	A 42-year-old miner with 14 years mining experience was fatally injured at an underground platinum mine. The victim and a co-worker were installing roof bolts when material fell from the rib and crushed him.	Ground conditions be tested, as well as visually examined, prior to commencing drilling activity. Ground conditions that create a hazard to persons be taken down or supported before other work or travel is permitted in the affected area.
26/01/2000 United States Coal Underground	Fall of Roof/Sides/Highwall	A roof bolting machine operator was fatally injured in a rib fall while preparing to move machine for cleaning duties. Operator and co-worker had just finished a row of bolts. Victim walked outby and rib fell crushing him against roof bolting machine.	An examination of roof, face and ribs to be made before work is started in an area. Loose ribs be taken down or supported. Be aware of changing roof and rib defects and take corrective actions. Mining operations to be reflective of roof and rib conditions.

12/10/1999 United States Non-Coal Underground	Fall of Roof/Sides/Highwall	A 58-year-old lead miner with 29 years mining experience and a 49-year-old miner with 30 years mining experience were fatally injured at an underground gold mine. The victims were installing roof bolts near the face when a massive roof fall occurred.	Supplemental ground support to be installed in areas where evidence of faults or slips exist. Temporary ground support to be utilized while permanent support is installed. Risk assessments and ground condition inspections be completed prior to work starting.
18/09/1999 United States Coal Underground	Fall of Roof/Sides/Highwall	A roof bolt machine operator was working just outby the last row of roof bolts when a fall of roof occurred. He was positioning the ATRS when the roof fell inby of last row of bolts. The roof material struck the victim who later died from the injuries.	An examination of roof to be conducted prior to starting installation of roof bolts and during bolting cycle. Any loose material to be taken down prior to installation of roof supports. All miners assigned to perform work underground to be thoroughly trained.
4/11/1998 United States Non-Coal Underground	Fall of Roof/Sides/Highwall	A miner with 10 years of experience was fatally injured at an underground mine. The victim was drilling the face when material fell from the rib and crushed him.	Ground conditions to be tested after blasting and prior to drilling. Ground conditions hazardous to persons be scaled or supported prior to work commencing. When manual scaling is required, a scaling bar of sufficient length to be provided for all work areas.
22/07/1999 United States Coal Underground	Fall of Roof/Sides/Highwall	A roof bolting machine operator was fatally injured in a roof fall accident. Victim was operating a roof bolting machine in an extended cut. He was installing a roof bolt out of sequence when a section of unsupported roof fell and struck him.	All miners, especially roof bolting machine operators, should know and follow the approved roof control plan at all times. All miners to be instructed to check their work area for hazardous roof and rib conditions prior to work in area.
11/03/1999 United States Coal Underground	Fall of Roof/Sides/Highwall	A scoop operator was fatally injured assisting in the installation of roof bolts in a cavity, created for a loading point. A section of mine roof fell striking the victim.	Never work or travel under unsupported roof. Always know and follow the provisions of your approved Roof Control Plan. Take additional measures to protect yourself if unusual hazards or conditions are encountered.
8/08/1998 United States Coal Underground	Fall of Roof/Sides/Highwall	A utility man was fatally injured installing roof bolts when he was inby roof supports. The victim had been installing roof bolts to the left of machine which permitted him to be drilling inby of supports.	Never go inby permanent roof support. Canopies shall be provided over the operating controls on all electric face equipment operating in mining heights 42 inches or more.
6/07/1998 Australia New South Wales Coal Underground	Fall of Roof/Sides/Highwall	On removing a hand held drill during installation of roof bolts a 5.5m wide and about 2m long section of roof fell. The workman attempting to pull the drill was completely buried and sustained fatal injuries.	Roof drilling equipment to be reviewed. Suitable protective devices to be investigated developed.

2/03/1998 United States Coal Underground	Fall of Roof/Sides/Highwall	A fatal roof fall claimed the life of a roof bolt operator. The mining height of a section had been increased in anticipation of future installation of an overcast. ATRS were unable to be used so victim attempted to use a jack when fall occurred.	The roof should be thoroughly examined prior to the work starting. Temporary support must be set using the protection of permanent supports.
3/02/1998 United States Coal Underground	Fall of Roof/Sides/Highwall	A roof bolting machine operator was fatally injured when a fall of roof occurred in an area of unsupported ground. Bolting machine was moved to last row of bolts and operator entered unsupported ground to mark roof for new bolts.	Never work or travel under unsupported roof
11/11/1997 New Zealand Coal Underground	Fall of Roof/Sides/Highwall	killed when struck by a fall of rib stone while drilling a shot hole underground	
1/09/1997 Australia Western Australia Non-Coal Underground	Fall of Roof/Sides/Highwall	A member of a jumbo stoping party, employed by a mining contractor, suffered fatal injuries after being caught in a rockfall in a stope. The jumbo operator, also employed by the same contractor, died in the local nursing post following the accident.	
1/04/1997 United States Non-Coal Underground	Fall of Roof/Sides/Highwall	A driller was fatally injured drilling blast holes using an air-track drill in preparation of removing an additional 25 feet of the floor from the existing drift when a ground fall occurred from a pillar, crushing him.	
3/02/1997 United States Non-Coal Underground	Fall of Roof/Sides/Highwall	A driller with 5 years of mining experience was killed at a zinc operation. The employee was operating a single boom jumbo drill, drilling blast holes in a brow. The victim was crushed when a massive roof fall occurred which collapsed the canopy.	
2/10/1996 Australia Western Australia Non-Coal Underground	Fall of Roof/Sides/Highwall	A drill jumbo operator was struck by some 1.5 tonnes of falling rock from the back of the drive at an underground nickel mine. He had completed about half his work when he went under unsupported ground to place a collar support plate on a bolt.	A system should be developed to assess procedures both practical and theoretical, of an employee's understanding of work practices, bearing in mind the dynamic nature of safeworking practices and the need to continually monitor and/or update them.
18/09/1996 United States Coal Underground	Fall of Roof/Sides/Highwall	Two roof bolting machine operators were installing roof bolts in a crosscut using a dual boom roof bolting machine. Operators were assisting each other with one of operators standing inby when a fall of roof occurred fatally injuring him.	



9/09/1996 United States Coal Underground	Fall of Roof/Sides/Highwall	An electrician was repairing a cable conduit on a roof bolting machine in an active working section. The electrician was sitting on mine floor with his back to the coal rib working on the roof bolter when a fall of rib crushed him against the machine.	
16/08/1996 United States Coal Underground	Fall of Roof/Sides/Highwall	A roof bolting machine operator was fatally injured when a portion of roof fell on him while he was installing roof bolts. The previous day a section of had been drilled and blasted resulting in a large cavity. ATRS were not capable of reaching the roof.	
24/07/1996 United States Non-Coal Underground	Fall of Roof/Sides/Highwall	On July 24, 1996, a miner was killed at an underground gold mine. The employee was drilling at the face when he was buried by material that fell from the roof. He died from suffocation.	Roof and ribs should be supported and unsupported ground should not be entered. Safe work procedures should be in place for working alone in hazardous work places.
8/07/1996 United States Coal Underground	Fall of Roof/Sides/Highwall	A roof bolting machine operator was fatally injured when a fall of roof occurred while installing roof bolts in a crosscut. Roof bolting machine, equipped with ATRS was positioned in such a way that operator was inby supports when roof collapsed.	
25/10/1995 United States Coal Underground	Fall of Roof/Sides/Highwall	An ATRS was in place and a roof bolting machine was moved into position when a fall of roof occurred inby. The slab that fell broke off and hit the operator who was outby of the ATRS. At the time of fall the operator moved dust from a suction hose.	
26/05/1995 United States Coal Underground	Fall of Roof/Sides/Highwall	A roof bolter was fatally injured by a roof fall when the operator entered unsupported roof. A roof bolting machine, with ATRS fitted was positioned angled whilst installing the fourth bolt of a row. As machine was angled the operator was not protected.	It is recommended that all roof supports be installed in a sequence. Employees in work place should not enter unsupported ground. Prior to investigation team arriving on site it is advisable that scene remains as close to it did immediately after accident.
19/03/1993 Australia Western Australia Non-Coal Underground	Fall of Roof/Sides/Highwall	The deceased, a jumbo operator in an underground gold mine, was struck by a rock which fell from the face he had been drilling. He had ceased drilling and changed two drill bits immediately prior to the accident.	
31/05/1991 Australia Western Australia Non-Coal Underground	Fall of Roof/Sides/Highwall	Was attempting to recover a drill steel which was stuck in a rock in a hung up mill hole. The hung up rocks freed and caught him.	

14/05/1991 Australia Queensland Non-Coal Underground	Fall of Roof/Sides/Highwall	Rock fell from backs on miner who was drilling blast holes.	Because of inherent dangers of shrink stope mining in upper levels of Cracow Mine, only experienced managers and miners should be employed in this type of operation. Suitable staging should be readily available for shrink stoping where required.
4/10/1990 Australia Queensland Non-Coal Underground	Fall of Roof/Sides/Highwall	A slab of rock fell from side wall pinning driver against boom of drill jumbo. Rock bolt holes drilled, but bolts not installed.	Face personnel be constantly alert for deteriorating ground conditions and continual need to bar down. Procedures should be adopted to minimise personnel exposure to unsecured ground. Machinery Maintenance should be carried out under supported ground.
21/12/1989 Australia Western Australia Non-Coal Underground	Fall of Roof/Sides/Highwall	Was struck by a fall of ground while drilling long holes in an ore drive.	
14/04/1989 Australia Western Australia Coal Underground	Fall of Roof/Sides/Highwall	Was struck by a section of roof which fell as he was drilling a roof bolt hole.	
3/06/1987 Australia New South Wales Coal Underground	Fall of Roof/Sides/Highwall	Killed on night shift from a rib fall while roof bolting.	
22/02/1984 Australia Western Australia Non-Coal Underground	Fall of Roof/Sides/Highwall	Was assisting to move bolting equipment from the end of a stope to the work area. He was filling his oil bottle when he heard a thump behind him. He turned to see a rock had trapped the miner following a fall.	
1/09/1983 Australia Western Australia Non-Coal Underground	Fall of Roof/Sides/Highwall	Was standing on the back of a drill rig in an ore drive when a rock fell and hit him.	
5/01/1983 Australia New South Wales Coal Underground	Fall of Roof/Sides/Highwall	Man was at controls of joy drill rig and protective device collapsed under roof weight.	
20/01/1982 Australia Queensland Non-Coal Underground	Fall of Roof/Sides/Highwall	Rock fall while drilling rockbolt hole with a rising feed.	
4/05/1981 Australia Western Australia Non-Coal Underground	Fall of Roof/Sides/Highwall	Was buried under 20 tonnes of rubbly oxidised rock which fell from the north wall of a shaft which was being sunk. The shaft bottom was 22.5m below the collar.	

1981 United Kingdom Coal Underground	Fall of Roof/Sides/Highwall	Was killed while holding the drill rod of a percussive boring machine against the face to start a drill hole when he was struck by a large slab of sandstone which fell away from the face.	
1979 United Kingdom Coal Underground	Fall of Roof/Sides/Highwall	Withdrawing a drill from a shothole was struck by a large fall of sandstone. Falling from the face of a new cross-measure drivage being opened out from a junction.	
1977 United Kingdom Non-Coal Underground	Fall of Roof/Sides/Highwall	Was struck by a roof fall on a continuous miner at a junction where a breakthrough had just occurred.	
1977 United Kingdom Non-Coal Underground	Fall of Roof/Sides/Highwall	Was drilling boulders for pop shots when he was killed by a fall of stone. There was a 13m pile of heap stones which had been excavated into a pile and these fell on him and crushed him.	
1976 United Kingdom Non-Coal Underground	Fall of Roof/Sides/Highwall	In a 6m wide by 3m high roadway in a potash mine, 90m behind the face which was being used as a drill rig maintenance area, a miner suspending a new trailing cable was killed by a fall of ore which crushed him against the drill rig.	
1974 Australia New South Wales Non-Coal Underground	Fall of Roof/Sides/Highwall	Was crushed against his drilling rig when a fall of roof rock occurred.	
1974 Australia New South Wales Non-Coal Underground	Fall of Roof/Sides/Highwall	35 tonne rock fell on operator of a drill rig.	
26/01/1968 Australia Queensland Coal Underground	Fall of Roof/Sides/Highwall	Pinned beneath fall of rock while drilling breast holes.	
<b>Other Incidents</b>			
21/01/2003 United States Coal Underground	Electrocution	He touched an energized steel trailer with beams on it. The trailing cable of a roof bolting machine was running through the area.	Additional training provided for all workers and pre-work analysis of an area to be performed for any risks to be eliminated.
1974 Australia New South Wales Non-Coal Underground	Electrocution	Men died when the mast of their mobile drill rig came into contact with 11kV power poles.	
17/10/1969 Australia Queensland Non-Coal Underground	Explosives	Drilled into a misfire at a face on No. 13 level and died as a result of the explosion.	

6/01/2007 United States Coal Underground	Other	Utility man was moving welded mesh panels for the bolter when the panels fell and pinned the victim against a diesel powered scoop.	Adopting procedures for securing bundles of equipment to the rib, and ensure there are no more falls of equipment.
9/03/1996 United States Coal Underground	Other	A contractor core driller died from injuries he sustained in an accident while trying to free drill rods that were stuck in the hole they were drilling. A 24-inch pipe wrench they were using to free drill rods slipped and struck victim in head and arm.	Only suitable equipment should be used when working on machinery.
20/04/1996 United States Non-Coal Underground	Uncontrolled Release of Energy	A continuous mining machine operator was fatally injured installing a belt drive. Using a 5T jack and a drill steel for leverage, operator raised belt drive structure. Either drill steel slipped or jack failed causing drill to hit operator in head.	
7/05/1984 Australia Western Australia Non-Coal Underground	Uncontrolled Release of Energy	A crawler drilling rig was being moved the operator was watching the air hose to make sure it did not get caught. A coupling in the air hose blew apart and the hose struck the operator.	
1981 United Kingdom Coal Underground	Uncontrolled Release of Energy	Had connected a standard 25mm double braided pressure hose with a safe working pressure of 206 bars to a hydraulic bolting tool. When a working pressure of 170 bar was applied the hose burst suddenly and projected a soluble oil water solution from close range causing fluid injection internal injuries.	
UNKNOWN MINES			
26/06/2000 New Zealand Non-Coal Unknown	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	Fatally injured when crushed after his clothes became entangled in the drilling rods of the machine he was operating	
9/07/1982 New Zealand Unknown Unknown	Fall from Heights	Was killed when he fell from the drilling derrick	
3/07/1989 Australia Western Australia Unknown Unknown	Fall of Roof/Sides/Highwall	Was struck by a rock fall from the backs while drilling rock bolt holes.	
4/05/1989 Australia Western Australia Non-Coal Unknown	Uncontrolled Release of Energy	While drilling an exploration hole, a blockage occurred at a hole depth of about 3m. A blank was placed on the drill rod. The compressed air pressure was increased to 300psi to clear the blockage. The flexible hose from the mast to the cyclone moved, disconnected from the cyclone and struck the miner. The clamp of the hose was found 24m away.	

4/03/1984 Australia Western Australia Non-Coal Unknown	Uncontrolled Release of Energy	Miner was standing on the mast of a drill rig as rods were being pulled. When rotation was applied to loosen the top of the rod the bottom joint came loose, the rod struck the operator and he fell 2m to the ground.	
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