Subsiding into the hole. Each level above 500 shows evidence that the mud zone is sinking. On 430 level 1000 X-cut has collapsed and 1020 X-cut has fill and mud running into it from the south rib. 960 X-cut has collapsed, the old chute there is gone. The fill in the east vein north of the safety exit is gone. On 340 level 960 X-cut has collapsed and 1000 X-cut has mud oozing out of it. On 180 level the sets in 920 X-cut are deforming. And towards 1015 stope it is collapsing. The brow at the south end of 900 W. stope fell down. Rock could be heard falling in 1015 stope. The sets in 820 X-cut are still standing but noise could be heard. In all these areas the rock could be heard moving and the mud could be seen moving. There is visible movement in the open.
Pit. The Causeway and Donkey Run can't be used anymore. Bruce and Darryl came in. We went down to 600, hot-wired the sump pump and got it working. Seems to work ok. All this started at 8:30 AM and no one was underground at the time.

30 Jul 91
The 600 pump ran for a few hours last night and then quit. Cracks on the surface getting bigger. Went down with Dick and Bob. 1015 stope on 150 is now full of mud which ran in from the south rib. The East Vein in the Log Cabin shaft area is all normal. Other levels all appear the same as yesterday. Steve Mesiur found a guy (Everett) who handles pumps and he brought in a 400 GPM well pump.
AFTER LUNCH BOB AND DICK WENT DOWN TO 600 TO GET THE PUMP CONTROL PANEL. THE WATER WAS OVER THEIR HIP BOOTS. I MANNED THE SIGNAL BELL ON 500. BOB, STEVE AND EVERETT WENT TO 600 AT 2:30 AND SET UP THE NEW PUMP. WHEN I CAME BACK AT 7 P.M. IT WAS RUNNING. DAKRYL AND STEVE WENT TO 500 AT 8 A.M. TO START THE 500 PUMP. AT 8:30 IT WAS DISCHARGING MUDDY WATER INTO THE BROOK. WE BROUGHT UP FOUR BUCKETS OF PRIME WOLLASTONITE, TWO BUCKETS OF FRIEDELITE AND A BUCKET OF VEIN RHODONITE AT LUNCH TIME.

31 JUL 91

BOB AND I WENT TO 500 AND 600 TO CHECK THE WATER AND PUMPS. PUMPING ALL NIGHT HAD LOWERED THE WATER ABOUT ONE FOOT. THE 500 PUMP CANNOT
Run between 8 AM and 8 PM and Everett recommended that the 600 pump not be turned off. When the 500 sump filled up it was allowed to overflow. The 600 pump quit anyway during the afternoon and Everett came in and replaced a bad connection in the control circuit. Bob decided no more drilling on 500 or 430 so we gathered up drills, hoses and etc. and moved them to 340 and 180. Took a blowpipe to new 935 stope and blew out holes in the drift round. The hole above 1015 stope on the surface is worsening.

That cut water on 500 level in the old shafts...
1 Aug 91

The water went down another foot last night and is less muddy. Bob and I checked out 500 lev. 980 stope. It looks about the same. We recovered the rest of the drilling gear in 700 X-cut and took it to 180 level. Did some fence work and moved ore cars off the causeway in the open pit.

On 180 - set up at the north end of 800 stope and drilled four strip holes in the F/W Zincite band.

Moved drilling gear to the gravity tram above 935 stope. Fill is not visible in 1120 stope below 430 lev. Fill went down in at least five areas - raising the water level over 30 feet - and causing a tidal wave that put water on 500 level in the old shaft.
2 Aug 91

Bob and I checked on the pumps. Water is 4" deep on 600 station. Set up in the gravity tram on 180 and drilled eight 13' test holes looking for old workings in the east vein. No luck. Mud and rock at the south end of 900 w. Stop is still settling.

3 Aug 91

Me, Bob and John onder went to 600 to assess damage. The water is 6" below the station. The damage on the level is astonishing. So much water came up the shaft and swept out thru the station that it flushed the station practically clean. The Eimco carrier was jammed against the ore pass. The station to shaft bridge was in the
1220 X-CUT BULKHEAD DOOR AND BENT LIKE A PRETZEL. THE MOTOR CHARGER WAS BROKEN IN HALF. HALF OF IT WAS IN 1220 X-CUT BY THE SAFETY EXIT. THE OTHER HALF WAS IN 1100 X-CUT BY 1010 RAISE. THE LID FROM THE FIRST AID BOX WAS IN 1020 X-CUT. STOKES STRETCHERS, LATRINE CAN SEATS, PIPES, STEELS, SCALING BARS, TIMBER AND ETC. WERE DEPOSITED ALL OVER THE LEVEL. THERE WERE PLUNGE POOLS TWO FEET DEEP AND SAND BARS THREE FEET HIGH. MUCK PILES WERE SWEEP AWAY. TRACKS WERE LIFTED UP IN THE AIR AND SNAPPED OFF. THE BIG TUB WE USED TO HOIST MUCK OUT OF 1250 STOPE DISSAPPEARED. THE HEAVY I-BEAMS USED IN 700 X-CUT TO BRIDGE THE WEST VEIN WERE FOUND IN THE WEST VEIN DRIFT. 1200 STOPE AND 1160 STOPE ARE DEVOID OF FILL DOWN TO THE WATER. IN 980 STOPE AREA OF
THE WEST VEIN THE FILL SOUTH OF 1040 X-CUT DISAPPEARED AND THE HANGING WALL IS LYING ON THE FOOTWALL. THIS IS WHAT CAUSED THE MUD ZONE TO SINK. THE CEMENTED FILL ABOVE AND NORTH OF 1040 X-CUT IS STILL IN PLACE. THERE IS A ONE INCH CRACK IN 1040 X-CUT ABOUT SIX FEET EAST OF THE H/W. THE EIMCO WAS PARKED IN A SIDE DRIFT AND WAS UNTouched. OF COURSE IT WAS UNDER WATER AND WILL HAVE TO BE DE-WATERED. WENT TO 4:30 AFTER LUNCH AND HELPED Bob DISMANTLE THE JUMBO AND DRAG IT OUT OF 935 STOPE.

5 Aug 91
Bob, Dick and I went to 600 to get the Eimco carrier. We put it on the cage and sent it to the adit. Turned out one axel was broken and a wheel is gone. Dug around in the mud collecting-
STEELS, TOOLS, SMALL PARTS, ETC AND TOOK THEM TO 180 LEVEL. LEFT A LOT OF STEELS, PIPES, ETC BEHIND. THE WATER IS ABOUT THREE FEET BELOW THE LEVEL. EVERETT'S PUMP WAS PULLED OUT YESTERDAY. BOB AND DICK HAVE DECIDED TO FORGET ABOUT PUMPING FROM 600. THE STATION TO SHAFT BRIDGE IS DESTROYED AND IT WOULD BE HARD TO GET THE LHD OUT TO THE SHAFT SO IT IS BEING ABANDONED. BOB STRIPPED OFF THE TIRES, STARTER, STEERING BOX AND BATTERY. WENT TO 4:30 AFTER LUNCH AND COLLECTED TWO BUCKETS OF POSSIBLE ARSENOSIDERITE. ALSO FOUND A NEW WILLEMITE XL SPECIMEN IN 1020 X-CUT. A SMALL SURGE (ONE FOOT) ON SUNDAY WHILE 5 PEOPLE WERE ON 600 IS WHAT CONVINCED BOB AND DICK TO GIVE UP ON PUMPING. PAUL ASHLEY WAS ABOUT TO GO UNDERWATER TO UNCHAIN THE BAD PUMP.
6 Aug 91  180 - 340
Searched the collapsing mass of mud and rock at the south end of 900W. and 1015 stopes. Found some sphalerite, copper alterations, and hemimorphite. Washed walls on the station and charger room on 340. Found corundum in two places.

7 Aug 91  180 - 340
Broke up a chunk of ore containing possible cuprite in 900 W. stope. Hand mucked in the corner of the motor shanty on 340 level. Found a nice exposure of corundum still in place in the floor. The muck produced many fragments of ruby and a few nice specimens.
8 Aug 91  340 - 430
Set up a drill in the motor shanty on 340. Drilled short holes and wedged out two buckets of corundum specimens. Checked out 1020 X-cut on 430. Between 1010 drop down and 1020 drop down the whole South Rib has collapsed. The fill in 1000 stop can be seen.

9 Aug 91  180 - 430
The compressor has been unable to bring the underground air system up to full pressure. The surge must have caused a leak underwater. Bob and I took parts and tools to 430. We cut out a section of the shaft air main and capped it. Checked out 900 W. Stope on 180. Brought up a pail of green willemite ore. It had fallen at the South end of the stope.
12 AUG 91  180 - 340 - 430
Replaced leaking Victaulic rubber in an eight inch coupling on 430 station. Wedged out more corundum on 340 and drilled four strip holes. Checked out 900W and 1015 stopes on 180. Found a pocket in 1015 containing willemite crystals.

13 AUG 91  180 - 340
Drilled five more strip holes in the motor shanty on 340. Pulled ladders out of the chute raise in 935 stope and hung them down the north manway. Hooked up the air and water pipes for 935 in the gravity tram on 180. Hooked up an air hose to the slusher in 935 and tested it. Moved the bucket to the south side of the chute raise. Checked out the
Rock that is falling in the Passaic Pit. It is rock that was already loose and is dropping with the mud zone. The north wall of the pit is still solid.

14 Aug 91  340 Level
Used a Come-Along to move the slusher in 935 to the north side of the chute raise. Carried a drill and oil bottle into the stope and pinned the slusher in place.

15 Aug 91  180 - 340 - 430
16 Aug 91  340 Level
Worked on 935 Chute. Had to do a lot of pounding with a sledge to get it to open. Hung up the air pipe in the East Vein Drift. It used to lay on the ground. Also did part of the water. This will allow the Emco to get to the wollastonite.

19 Aug 91  340 Level
Finished hanging the water pipe in the East Vein Drift. Had to replace one pipe that broke. Bob worked with me after lunch. We cleaned out pipes and timber out of the drift and worked on the platform over 935 Raise. Cleaned out two camel back cars by the Pierce shaft and pushed them out to the old shaft ore pass.
20 Aug 91  340 Level

Finished hanging air and water hoses out of the way near the wollastonite location. Slushed off the top of the muck pile in 935 stope. Moved the muck closer to the chute raise. Had trouble with large pieces.

21 Aug 91  180 - 340

Moved drilling gear from the gravity tram to 800 stope and set up. Checked 900 W. stope for specimens. Went to 340 and washed drift walls near south bulkhead. Went back to 180 after lunch to drill holes for yellow zincite. Had to replace the drill. The water goose neck and water needle were screwed up on the new drill and when I broke a wrench I gave up in disgust.
22 Aug 91  180 level
Cleaned out the water needle.
Drilled many short holes and
wedges off pieces of ore. A
little more and I’ll find out if
there is any yellow zincite there.

23 Aug 91  180-340-430-500
Drilled relievers and finished
wedging ore. Found only poor
zincite. After lunch I showed
Bernie and three geologists
from the state the areas that
are subsiding.
26 Aug 91  180 - 340
checked out bad ground at the south end of 900W stope.
carried some extra 3/8 wire rope down into 935 stope.
hauling one drill to the top of the muck pile and set up to drill blockholes. washed drift walls in three areas on 340 level.
repaired leak in water line on 180.

27 Aug 91  340 level
drilled four blockholes in 935 stope and wedged them apart.
put in five rockbolts. washed drift walls in two areas. nothing.
great turned up.
28 Aug 91  340 - 500
Washed drift walls in the East Vein South of the Marshall Shaft. Saw some insignificant Barite and one Zircon xls.
Went to 500 after lunch and removed Victaulic connectors from air and water pipes in the W/N F/W drift. All subsided areas look about the same. Got a gray Chalcopyhanite from 1020 Raise.

29 Aug 91  340 - 500
Scaled and bolted in new 935. Four bolts. Drilled four holes for slusher blocks. Added a new piece of cable to the tail rope and did a little slushing. John O. and me carried 400' of one inch pipe to the station on 500. Did some digging and scaling in 1020 Raise. Got a few small Calcite/Chalcopyhanite pieces.
30 Aug 91  180 - 340
Climbed into a large crack at the south end of 1015 stope. Saw nice calcite xls. Couldn't get any. Picked up a few odd pieces. Explored the old open stope north of the Pearson shaft above 340.

3 Sep 91  180 - 430
Got some calcite xls and manganese oxides from 1015. Went to 430 and used the Eimco to bring out some rocks and tools from 1020 pillar. Moved the Eimco carrier from 180 to 430. Found a two inch hose for the air slusher in 935 stope.
4 SEP 91  340 - 430
Put the Eimco on the carrier on 430 level and Fred hoisted it to 340 level. Had to take the bucket off and bring it up separately. Had to scrounge for muck to fill the hole at the bulkhead door. Dug up fill in 1000 and 1040 x-cuts to fill the ditch along 1140 x-cut. Towed two side dump cars from the east vein out to the station. Had to charge the battery at noon as the alternator no longer works.

5 SEP 91  180 - 340
Sent two side door cars from 340 up to the adit. Brought the station doors from 500 up to 340. The fuel system on the Eimco developed a leak and lost its prime. Could not get it started. On 180, picked up a few pieces from 1015 store. Helped
Bob dismantled a steel slusher ramp that was used to load cars. Explored the old open stope north of the Pearce shaft above 340. There are many large slabs of loose that fell off the hanging wall. They are coated with mud so they must have fallen prior to 1896. The mine was flooded between 1896 and 1915.

6 Sep 91 180 - 340

Checked out 1015 stope on 180. Got nothing today. Could hear a lot of stuff trickling down. Helped Fred Kirk get the Eimco primed on 340. Brought all the pieces of the old slusher ramp out and sent them up to the adit. Used the Eimco to fill in ditches from the station back to the wollastonite location.
9 SEP 91  180 - 340
GOT SOME CALCITE XLS AND Mn OXIDES FROM 1015 STOPE ON 180. DID MORE DRIFT WORK ON 340. FILLED DITCHES. GOT OLD PIPES OUT OF THE WAY. BOB HAULED OUT FOUR DRUMS OF WOLLASTONITE AND A LARGE BOULDER.

10 SEP 91  340 - 500
REPAIRED BROKEN WATER PIPE ON 340. FILLED TWO DRUMS WITH WOLLASTONITE AND SENT THEM UP TO THE ADIT. WASHED WALLS IN EAST VEIN DRIFT SOUTH OF MARSHALL SHAFT. ON 500 - DUG THRU MUCK PILE IN 700 X-CUT AND GOT SOME FLUORESCENT FELDSPAR. SCALED OFF A SLAB OF WOLLASTONITE. CHECKED OUT 1020 PILLAR, 1030 RAISE, 1100 PILLAR AND 1140 PILLAR.
11 SEP 91  180 - 340
Got a calcite xl piece from 1015 stope on 180. Moved a drill from 180 to 340. Strung out four air hoses and set up the drill in the east vein. Used the eimco to muck out the wollastonite and move it to the station area. Was almost done when a tire blew out.

12 SEP 91  340 Level
Changed the flat and finished mucking out the wollastonite. Salvaged some mining gear and moved it to the station. Drilled ten 9’ holes in the east vein drift. Slushed some muck out of 935 stope.
13 Sep 91  180 - 340
CHECKED OUT 1015 STOPE ON 180. NOTHING TODAY. MOVED THE DRILL AND HOSES INTO THE WOLLASTONITE DRIFT ON 340. SET UP AND DRILLED ELEVEN 9' STRIP HOLES.

16 Sep 91  180 - 340
SLUSHED MUCK INTO THE CHUTE RAISE IN 935 STOPE. BOB WILL DIG IT UP ON THE LEVEL. MOVED THE DRILL TO THE GUERINITE AREA AND STARTED DRILLING HOLES TO WEDGE OFF PIECES. CHECKED OUT 1015 STOPE ON 180 AND THE LOG CABIN SHAFT AREA. FILL IS FLUSHING DOWN FROM ABOVE IN THE OLD ADIT UNDER THE MILL.
17 SEP 91  340 LEVEL
Ran the slusher in 935 stope. Set up the drill on the muckpile and put in one rockbolt in a bad piece. Also drilled a pin hole, did more slushing. Drilled more holes at the guerinite location and worked on wedging off pieces. Attended a Trustees meeting after lunch.

18 SEP 91 180-340
Checked out 1015 stope on 180. Wedged off pieces of guerinite on 340. Also got minor ravalcar. Slushed muck in 935 stope. Drilled out wedge pins and drilled three strip holes in guerinite area.
19 SEP 91  180-340-430 AM  
 checked out 1015 stope and the 
 east vein on 180 level. Got a rich 
 zincite ore sample from an area 
 mined by Passaic Zinc Co. on 340 
 level- helped Bob load tubs under 
 935 chute. Slushed more muck 
 into the chute. Moved the drill 
 back to the wollastonite area 
 and drilled two more strip holes. 
 on 430 - looked for and found a 
 lollingite specimen for Fred. It 
 came from 1020 pillar.

30 SEP 91  ADIT-180-340 
 scaled loose in Rainbow tunnel. 
 took down five wheelbarrow loads. 
 got some hemimorphite from 1015 st. 
 slushed twice in 935 stope and 
 helped Bob load tubs.
23 SEP 91  180 - 340
RUN THE SLUSHER IN 935. MADE A CABLE SPLICE. SET UP ON 180 AND WASHED WALLS IN THE WEST VEIN AND EAST BRANCH F/W DRIFT. SAW SOME INTERESTING BRIGHT GREEN MICA IN 920 X-CUT. (FUCHSITE #546)

24 SEP 91  180 - 340
WASHED WALLS IN 960 X-CUT, 1000 X-CUT, AND 980 W. STOPE. CHISELED OFF A PAIL FULL OF GREEN MICA IN 920 X-CUT. RAN THE SLUSHER TWICE IN 935 STOPE AND HELPED BOB FILL TUBS.

25 SEP 91  180 - 340
WASHED WALLS IN THE GRAVITY TRAM. SET UP A DRILL IN 920 X-CUT. SLUSHER IN 935 STOPE AGAIN. AFTER A LONG DROUGHT THERE WAS ENOUGH RAIN TODAY TO GET WATER RUNNING DOWN THRU 180 LEVEL.
26 SEP 91  180 - 340
Washed walls in the gravity tram. Slushed twice in 935 stope. Set up a drill on the muckpile and put in four roof bolts at the south end. Also drilled two holes for slusher pins and a block hole.

27 SEP 91  180 - 340

30 SEP 91  180 - 340
Washed walls in gravity tram. Saw wide part of brown willemite zone on north rib. Slushed twice in 935 stope.
1 Oct 91 180 - 340
Washed walls in the gravity tram and the east vein part of 180 level. Saw nice black amphibole xls in the east vein h/w drift to the ore pass. Slushed muck in 935 stope. Made one cable repair.

2 Oct 91 180 level
Washed walls in gravity tram. Moved to shaft station and washed walls in that area.

3 Oct 91 180 - 340
Washed walls in west vein drift and gravity tram one hose length east and west of the west vein drift. Found nice diopside one hose length east of the drift. Wedged off a nice piece. Got the wedges from 340, drilled holes
IN 920 X-CUT AND WEDGED OFF THE REST OF THE FUCHSITE. SLUSHED IN 935 STOPE AGAIN. SEEM TO BE GETTING TO THE BOTTOM OF THE PILE IN THE SOUTH END.

4 OCT 91 180 - 340
DRILLED ANOTHER HOLE IN 920 X-CUT FOR FUTURE USE IN WEDGING OUT FUCHSITE. WORKED ON MUCKING OUT THE SOUTH END OF 935 STOPE. PULLED THE MUCK CLOSE TO THE CRIB. WHEN BOB FINISHED MUCKING UNDER THE CHUTE I SLUSHED THE STANDARD AMOUNT INTO THE CRIB.