12 DEC 80  1020 STOPE  1300 LEVEL
RILLED DOWN MUCK PILE AND BOLTED HANGING WALL. MOVED ON TOP OF MUCK PILE AND PUT MORE BOLTS IN. TOTAL 24 BOLTS. DRILLED 50' ON A BIG STRIP.

15 DEC 80  1020 ST.  1300 LEVEL
FINISHED BIG STRIP (10'). MUCKED 44 CARS WITH LHD. DRILLED AND FIRED 21 BLOCKHOLES. FIRED BIG STRIP.

16 DEC 80  1020 ST.  1300 LEVEL
RILLED DOWN MUCK PILE AND BOLTED HANGING WALL. THE LAST STRIP MADE MUCK PILE TOO HIGH TO BOLT THE BACK. WILL HAVE TO MUCK AND RILL DOWN AGAIN TO MAKE ROOM. MUCKED WITH LHD AND FIRED SMALL STRIP ON FOOTWALL. 15 BOLTS, 16 CARS.
17 DEC 80 1020 STOPE 1300 LEVEL

MUCKED WITH LHD, 23 CARS, RILLED DOWN PILE AND BOLTED, 16 BOLTS, DRILLED A 7' STRIP HOLE ON F/W, GOT TWO KRAISSLITE SPECIMENS.

18 DEC 80 1020 STOPE 1300 LEVEL

MUCKED WITH LHD, 24 CARS, HAD TO WORK AROUND FILL CREW, RILLED DOWN PILE AND BOLTED 8 BOLTS, FIRED STRIP ON FOOTWALL, GOT SOME RECRYSTALLIZED ZINCITE, SAW SOME PRIMARY ZINCITE IN MUCK PILE.

19 DEC 80 1380 U.P, 1300 LEVEL

STARTED OUT IN 1020 ST. PUT IN ONE BOLT AND HAD TO MOVE TO 1380 U.P, DRILLED 200' WITH JUMBO, GOT SOME STILBITE FROM 1340 X-CUT.

22 DEC 80 1020 ST, 1300 LEVEL

PUT IN 20 BOLTS, FIRED SOME LOOSE OFF H/W AND A SMALL STRIP ON F/W.
23 DEC 80  1020 STOPE  1300 LEVEL
Scaled and bolted, 16 bolts, mostly on H/W. Drilled and fired 13' strip on F/W. Fired 4 block holes.

26 DEC 80  1020 ST.  1300 LEV.

All the mucking & bolting I've been doing in 1020 is in the East Branch west section. The ore is amazingly similar to 1010 stope (800 to 700 level) and has the same accessory minerals.

29 DEC 80  1020 ST.  1300 LEV.
Bolted - 17 bolts, mucked - 12 cars, drilled & fired strip on F/W - 40'.

30 DEC 80  1020 ST,  1300 LEV.
Mucked with LHD 911 - 46 cars. Rilled muck pile.
31 Dec 80 1020 Stope 1300 Level

Removed Jumbo Drill by dropping the parts down the chute onto a flat car. Finished Fill Prep in north end of west vein. Put in 10 rock bolts.

2 Jan 81 1020 Stope 1300 Level

Bolted - 11 bolts, Drilled and fired strip on F/W - 50' and block holes - 9. Mucked with LHD - 7 cars.

Got some pieces of vuggy ore containing Kraitselite, Holdenite, Barite. ++

5 Jan 81 DDH 437 560 Stope 500 Level

Drilled from 39' to 70', ore 41'-45', the rest white cuttings. Got a mediocre Aragonite from 1060 u.p.

6 Jan 81 DDH 437

Drilled from 70' to 100', ore 85'-100', it was dry. Hit drift on 430 Lev. at 100'. Got a black Willemite xtal from 1100 j.p. 500 Lev.
7 Jan 81  DDH 437  560 St.  500 Lev.
Started tearing down drill set-up.
Smelled fire alarm at 7:45 A.M.
and went to safety exit. Walked up ladders to adit. Got the all-clear at 9:00 AM. Went to 1000 Lev to help stow powder shipment in magazine. Moved diamond drill and tools to station. Will move to 1200 level tomorrow. The fire was caused by a 440 line on 1000 Lev that exploded with enough force to rattle the station doors.

8 Jan 81  DDH 438  1300 U.P.  1200 Lev.
Moved gear from 500 Lev. to 1200 Lev.
Got a center line from the surveyors and set up column and drill. The hole will be drilled from the hull down at -20° thru the black willemite zone. Got some micro's from 1340 U.P.
8 JAN 81  DDH 438  1300 U.P.  1200 LEV.
BEGAN DRILLING. HAD TO DRILL DOWN THRU 3'2" OF LOOSE MATERIAL AND PUT IN CASING. AT 6' THE SLEEVE BROKE OFF THE 5' BARREL AND THE BULL BIT STAYED IN THE HOLE. IT TOOK ABOUT 2 HRS. TO GET IT OUT. FINALLY DRILLED TO 11'. IT WAS ALL WHITE ROCK. STAYED OVERTIME TO GUARD FOR A LARGE BLAST IN 1020 STOPE.
12 JAN 81  DDH 438
RAN ORE PASS FROM 1200 LEV. DOWN TO CRUSHER. DRILLED FROM 11' TO 23' HIT BLACK ORE AT 21.5'. A POOR SEAL BETWEEN PIPE CASING AND ROCK IS CAUSING LOOSE MATERIAL TO FALL INTO HOLE. HAVE TO DIG OUT CASING.
13 JAN 81  DDH 438
DIG OUT CASING AND SEALED HOLE. DRILLED TO 43'. ALL BLACK ORE.
14 Jan 81  1380 U.P.  1300 Level
Helped Bob Williamson load ANFO.
14 bags, wired up round and fired. Got a tremolite specimen
from the P/W drift north of safety exit. Saw a slip covered
with willemite needles and franklinite micros in 1020 stope (West vein).

15 Jan 81  DDH 438  1300 U.P.  1200 Lev.
Drilled from 43' to 69'. Black ore to
59' - green rock to 69'. Got a micro-
crystal specimen from 1020 st. (West vein)
unknown #7, pyroaurite, stilpnomelane, fluorite (#393)

16 Jan 81  1020 stope  1300 level
Rilled down muckpile. Put in 12 bolts.
Mucked with LHD. 36 cars. Got some
nice micros from West vein, #394

19 Jan 81  1060 U.P.  500 Lev.
Drilled uppers with "53", 190'. Got
some azurite samples.
20 JAN 81  DDH 438  1300 U.P.  1200 LEV.
DRILLED FROM 69' TO 87.5', GREEN ROCK TO 75', BLACK ORE TO 87.5'.
GOT SOME MORE NICE MICROS FROM 1020 STOPE, WEST VEIN.

21 JAN 81  1060 U.P.  500 LEV.
DRILLED 55' OF UP HOLES. REMOVED PIPES FROM RAISE. LOADED SLOT AROUND RAISE. 150 POUNDS OF ANFO.
MOVED AND SET UP SLUSHER. FIRED SLOT.

22 JAN 81  1060 U.P.  500 LEV.
PUT 6 BOLTS IN AREA BLASTED YESTERDAY. SLUSHERED TO MAKE ROOM FOR MUCK FROM NEXT ROUND. GOT SOME AZURITE AND WILLEMITE-FRIEDELITE.

23 JAN 81  DDH 438  1300 U.P.  1200 LEV.
DRILLED FROM 87.5 TO 99. WHITE TO 94.5', BLACK ORE TO 99. BAD GROUND IS CAUSING DIFFICULT CORING CONDITIONS.
GOT SOME MICROS FROM 820 PILLAR. (W.V.)
26 JAN 81 SHAFT

WORKED WITH T. LANER. HE CUT OFF A MANWAY TUBE IN 1110 STOPE, 900 LEV. WE DID SHAFT INSPECTION ON #3 & 4 FROM SURFACE TO 1200 LEV. SENT UP SCRAP BOXES FROM BOTH CRUSHERS.

SENT UP A CHUTE BOTTOM PLATE FROM 700 LEV. SENT UP A MOTOR FROM 1650 LEV. SENT UP A CHARGER PANEL FROM 600 LEV.

27 JAN 81 1020 STOPE 1300 LEVEL

MUCKED WITH LHD. 51 CARS. DRILLED A 13' STRIP ON FOOTWALL (W/N). FIRED AT QUITTING TIME. GOT SOME WEST VEIN MICRO'S.

28 JAN 81 1020 STOPE 1300 LEVEL

CARRIED 30 BAGS OF NILITE INTO STOPE. SCALED LOOSE ON BROW. BEGAN LOADING. CHUNKS IN NILITE FOULED UP HEAVY DUTY BUCKET. HAD TO SWITCH TO OLD BUCKET. LOADED 16 BAGS. (800 LBS)
29 Jan 81 1020 STOPE 1300 LEV
Doug came back to work today. Helped him and Sergio finish loading big round. Loaded 33 bags and wired up (3 series). Fired after men went up. Sounded good.

30 Jan 81 DDH 438 1300 U.P. 1200 Lev. Drilled from 99′ to 119′. Black ore to 107.5′ - white rock to 119′.

Checked 1020 stope - round broke perfectly. Got a micro specimen from a pyro croite vein in 1570 E. DDH 438 is finished. Loaded gear on a flatcar.

2 Feb 81 DDH 439 1020 STOPE 1200 LEVEL
Moved gear to the W/N Footwall drift. Set up for a hole at +52°. Drilled 2 feet with bull bit. Water swivel is leaking badly and must be fixed.
3 Feb 81 DDH 439 1020 ST. 1200 LEV. 602
Drilled from 21' to 21', white rock. Having trouble with water swivels. They leak so bad that no water gets up to the bit. Repaired one and sent other to shop.
4 Feb 81 DDH 439
Stowed powder shipment in magazine in A.M. 302 bags of Anfo.
Drilled from 21' to 36'. Hit ore at 27'. Hit a soft spot at 21' and got some sand fill. Apparently hit a crack or drill hole in 1000 stope.
5 Feb 81 DDH 439 #440
Could not continue in 439 due to loose ground. Turned drill 16" north and restarted hole. Drilled to 16', all white rock. Bolted loose near drill site, 8 bolts.
6 FEB 81 DDH 440 1020 ST. 1200 LEV.
DRILLED FROM 16' TO 43.5'. HIT ORE AT 29'. GOT A MICRO SPECIMEN FROM 1020 STOPE.

— VACATION AT TUCSON SHOW —

16 FEB 81 DDH 440
DRILLED FROM 43.5' TO 63'. HIT H/W AT 54'. WHITE ROCK IN H/W
SOFT & CAUSING BIT PLUGS AND POOR CORE RECOVERY.

17 FEB 81 DDH 440
DRILLED FROM 63' TO 88 FEET. ORE 63'-80'. WHITE ROCK TO 88'. SCALED LOOSE IN 820 P.

18 FEB 81 DDH 441 1570 E. STOPE 1200 LEVEL
MOVED TOOLS TO 1570 EAST AND SET UP DRILL
DRILLED 0' TO 8', ALL ROCK. PICKED UP SOME SPECIMENS FROM 820 P. F/W SECTION.

19 FEB 81 DDH 441
DRILLED 8' TO 34', 8'-24' PYROXENE ZONE.
24' TO 34' GNIESS. GOT SOME NICE "RED AND GREEN" FROM 1520 STOPE.
20 FEB 81 DDH 441 1570 E. ST. 1200 LEV.
DRILLED 34' TO 58'. 34' TO 35' GNEISS.
35' TO 37.5' LO-ORE. 37.5' TO 50' ORE.
50' TO 58' WHITE ROCK. HOLE FINISHED.
GOT A PIECE OF "RED & GREEN" FROM 1520 ST.

23 FEB 81 DDH 442 1570 E. STOE 1200 LEV.
MOVED GEAR TO NEW HOLE BY OLD SAFETY
EXIT. BOLTED SET-UP AREA. SET UP
DRILL. GOT A PIECE OF "RED & GREEN" FROM
1520 STOPE. CHISELLED SOME CHIPS OFF
YEATMANITE OCCURANCE IN 820 PILLAR.

24 FEB 81 DDH 442
DRILLED FROM 0' TO 32'. ALL WHITE ROCK
WITH SPARSE FRANKLINITE. LOSING DRILL
WATER THRU CRACKS OVER SAFETY EXIT.
GOT SOME YEATMANITE FROM 820 P.

25 FEB 81 DDH 442
DRILLED FROM 32' TO 60'. LOW ORE BAND
33 TO 41. HIT ORE AT 49.
26 FEB 81 DDH 442 1570 E. ST. 1200 LEV.
DRILLED 60 TO 79 FEET. HIT WHITE ROCK AT 69.5 FEET. CORE BIT WORE OUT AT 62'. HAD TO GET A NEW ONE. GOT SOME YEATMANITE FROM 820' P.

27 FEB 81 DDH 442
DRILLED 79 FEET TO 107 FEET. ORE FROM 79 TO 97 FEET WITH PROMINENT SHEAR ZONE AT 85 FEET. WHITE ROCK AFTER 97'. YESTERDAY'S NEW CORE BIT WENT 20' AND QUIT. HAD TO GET ANOTHER NEW ONE. GOT SOME PYROCHROME VEIN SPECIMENS FROM 1570 E. #399

2 MAR 81 DDH 442
DRILLED 107 TO 132 FEET. ALL WHITE ROCK. HOLE FINISHED. STARTED MOVING OUT. GOT SOME YEATMANITE FROM 820' P.

3 MAR 81 DDH 443 1220 U.P. 700 LEV.
MOVED TO 700 LEV. AND SET UP DRILL. DRILLED 0' TO 5' WHITE ROCK. GOT SOME "RED & GREEN" FROM 1520 ST. 1200 LEV.
4MAR81 SHAFT

STOWED POWDER SHIPMENT IN POWDER MAGAZINE. 193 BOXES ATLAS POWERMAX. WORKED WITH TOM LANER DELIVERING TIMBER, ETC. ATE LUNCH ON 340 LEVEL AND GOT SOME WOLLASTONITE. SAW THE GUERINITE LOCATION. MORE HAS APPEARED SINCE I FIRST COLLECTED IT.

5MAR81 DDH 443 1220J.P. 700 LEV.

DRILLED FROM 5' TO 50'. WHITE CUTTINGS TO 40'. STARTED CORING AT 40'. HAD SPARSE FRANKLINITE IN CALCITE TO 50'. CHECKED 1220 PILLAR. IT IS ABOUT 40' ABOVE 800 LEVEL. SAW MANY SLIPS IN RED ORE COATED WITH MINOR KRAISSLITE.

6MAR81 DDH 443.

DRILLED 50' TO 85'. ALL LOW GRADE ORE. SCALED LOOSE IN 1120 X-CUT. GOT A QUARTZ, MICA, FELDSPAR AND ZIRCON SPECIMEN.
9 MAR 81  DDH 443  1220 1.P.  700  LEV.  
DRILLED FROM 85' TO 117'.  20-ORE TO 110', BLACK ORE TO 117'. GOT SOME ZIRCON XTLS FROM 1120 X-CUT.

10 MAR 81  DDH 443
DRILLED FROM 117' TO 135'. BLACK ORE TO 119'. THE REST IS WHITE ROCK.
THIS HOLE FINISHED. GOT MORE #404, 405 ZIRCON XTLS FROM 1120 X-CUT.

11 MAR 81
SPENT THE DAY PLUGGING PREVIOUS DIAMOND DRILL HOLES WITH CEMENT. RON RILEY WAS ONCE INJURED BY ROCK FRAGMENTS FLYING OUT OF AN OLD DRILL HOLE WHEN A ROUND WAS FIRED AT THE OTHER END OF THE HOLE. GOT SOME STRANGE VEIN SPECIMENS FROM 1260 1.P., 1000 LEVEL. GOT SOME SPECIMENS FROM McGOVERNITE LOCATION IN 740 P., 800 LEVEL. 400
12 Mar 81

Worked on powder shipment in A.M. Went down to 1450 P, 1750 level to drill 2 hammer drill test holes. No location had been marked to show where to drill them. The geologist was out sick (hangover?) today. Went up to 1260 U.P., 1000 level to drill a flat bench. Had trouble with bad ground and rock bolts.

13 Mar 81

1450 Pillar 1750 Level
Drilled three hammer drill test holes. Total 68'.

massive ore

w/ '4'

18'

ore

fill

1510 Section
16 Mar 81 1260 U.P. 1000 LEV.


17 Mar 81 1450 P. 1750 LEV.

Stopped in 1260 U.P., 1000 Level to cover ore crib. Rework broke good. Got a sarkinite specimen. Went to 1450 P. and drilled 3 test holes. Found good ore in all three. Total of 92'.

18 Mar 81 1180 U.P. 600 Level

Set up air slusher in Scram drift. This is probably the last cut in this pillar. They are only mining the central zincite zone. The back shows only disseminated ore. The massive ore is only in the south rib.