This exciting action game is for the Atari and the VIC. Blast out new caverns, dig the gold, and return to the surface for your reward. If you run out of dynamite, get to the surface fast or you'll wander the mine forever. And watch out for cave-ins – they can block your exit, or worse!

Gold Rush!

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After reading the fascinating article "Using The VIC Joystick," by David Malmberg (*Home and Educational Computing!*, Fall, 1981), I couldn't wait to try out what I had learned. It wasn't long after I got to the VIC keyboard that the Gold Rush game started to emerge.

After a few false starts, here it is.

The game gives you one more chance to use your joystick. In this game you have five miners to dig as much gold as you can from the Lost Goldmine. Each miner has ten sticks of dynamite (charges) to blast his way into the mine. The miner gathers them by moving to the same space as the dot (poke X,81).

The number of pieces of gold is counted and displayed at the bottom of the screen. The number of charges left is also displayed at the bottom of the screen. After gathering all the gold you can, you must move out of the mine to the Assay Office (the heart) to exchange the gold for money. When you touch the heart, the gold is exchanged for money at the rate of Gold times Remaining Charges.

Cave-ins Can ... Put You Out Of The Game

That all sounds easy enough, but there are several things that can happen to slow up your progress. First, there are the cave-ins. Since the Lost Goldmine is very old, cave-ins occur every time you blast. These cave-ins can block your way out or (how can I put this nicely) ah... put you out of the game. When you are caved-in upon, your gold is lost and the miner is replaced with an asterisk. If you can reach the asterisk, you regain all of the gold the "dead" miner had.

Another danger can beset you if you should use up all of your charges. When this happens, you have only a short time to get back to the surface. If you cannot exit the mine, either due to a cave-in or a slow miner, then all is lost and you end up wandering the mine forever.

Let's plug in our joysticks and strike it rich. There's gold in them there hills!

Program 1. Atari Version

Atari Version Notes

This game simulates the appearance of the VIC version by using a custom character set in Graphics mode 1. Notice that only half of the character set in ROM needs to be transferred to RAM, since Graphics modes 1 and 2 can only access 64 characters (to allow multicolor text), so we loop from 0 to 511.

This game makes extensive use of the LOCATE command to "look at" the computer's screen, such as checking for various objects the miner finds. Also, unlike the VIC version, if you clear the mine of all gold, you can start over with a new mine when you "cash in" your gold. You get three "lives."

```
100 REM ATARI GOLDRUSH
110 REM
120 REM Custom characters:
130 DATA 56,56,16,56,84,16,40,68
140 DATA 170,85,170,85,170,85,170,85
150 DATA 0,28,60,110,126,62,28,0
160 DATA 129,66,36,24,24,36,66,129
170 DATA 128,64,32,16,8,4,2,1
180 DATA 1,2,4,8,16,32,64,128
190 DATA 16,16,124,16,16,16,56,124
200 DIM CHAR$(8),WHICH(3,2)
210 CHAR$="%+-=()%":MINER=3
220 GRAPHICS 1+16:SETCOLOR 4,6,4:SETCOLO
R 0,1,10:SETCOLOR 3,4,10
230 ? #6;"GOLDRUSH!":SETCOLOR 2,3,0
240 POSITION 9,0:? #6;"please wait"
250 CHSET=(PEEK(106)-8)*256:CHORG=57344
260 IF PEEK(CHSET+9)<>0 THEN 340
270 FOR I=0 TO 511:POKE CHSET+I,PEEK(CHO
RG+I):NEXT I
280 FOR I=1 TO 7
290 CHPOS=CHSET+(ASC(CHAR$(I))-32)*8
300 FOR J=0 TO 7
310 READ A:POKE CHPOS+J,A
320 NEXT J:NEXT I
330 FOR I=32 TO 39:POKE CHSET+I,255-PEEK
(CHORG+I):NEXT I
340 POKE 756,CHSET/256
350 POSITION 9,0:? #6;"    (D)         "
360 NUGGETS=0
370 FOR I=1 TO 22:FOR J=0 TO 19
380 IF RND(0)>0.4 THEN COLOR ASC(CHAR$(2
))+128:PLOT J,I:GOTO 400
390 IF I>3 THEN COLOR ASC(CHAR$(3)):PLOT
 J,I:NUGGETS=NUGGETS+1
400 NEXT J:NEXT I
410 CHARGES=10:POSITION 9,23:? #6;"!CHAR
```

```
GES| ";CHARGES
420 XPOS=11:YPOS=0:EMF=0:GOTO 590
430 REM MAIN LOOP
440 ST=STICK(0):TR=STRIG(0)
450 IF PEEK(20)>15 THEN POKE 709,(INT(16
*RND(0))*16+10):POKE 20,0
460 IF EMF THEN SOUND 1,T,10,8:T=T*(T<8)
+2:TI=TI+1:IF TI>200 THEN SOUND 1,0,0,0:
GOTO 1120
470 IF 1-TR THEN IF EMF=0 THEN 820
480 IF ST=15 THEN 440
490 U=-(ST=14)*(YPOS>0)+(ST=13)*(YPOS<22
)
500 H=-(ST=11)*(XPOS>0)+(ST=7)*(XPOS<19)
510 COLOR 32:PLOT XPOS,YPOS
520 XPOS=XPOS+H:YPOS=YPOS+U
530 LOCATE XPOS,YPOS,WHAT
540 IF WHAT=32 THEN 590
550 IF WHAT=ASC(CHAR$(3)) THEN GOSUB 640
:GOTO 590
560 IF WHAT=ASC(CHAR$(7)) THEN GOSUB 760
:GOTO 590
570 IF WHAT=4 THEN GOSUB 670:REM CASH IN
!
580 SOUND 0,100,12,8:FOR W=1 TO 20:NEXT
W:SOUND 0,0,0,0:XPOS=XPOS-H:YPOS=YPOS-U:
COLOR 138:PLOT XPOS,YPOS:GOTO 440
590 COLOR 138:PLOT XPOS,YPOS
600 IF EMF AND YPOS=0 THEN EMF=0:COLOR 3
2:PLOT XPOS,YPOS:SOUND 1,0,0,0:GOTO 410
610 FOR W=8 TO 0 STEP -1:SOUND 0,W*5,12,
W:NEXT W
620 GOTO 440
630 GOTO 630
640 FOR W=15 TO 0 STEP -1:SOUND 0,20,10,
W:NEXT W:GOLD=GOLD+1:NUGGETS=NUGGETS-1:I
F NUGGETS<0 THEN NUGGETS=0
650 POSITION 0,23:? #6;"sold ";GOLD;"   "
;
660 RETURN
670 REM CASH IN!
680 SOUND 2,4,10,4
690 FOR W=10 TO 5 STEP -1:FOR I=15 TO 0
STEP -1:SOUND 0,W,10,I:NEXT I:NEXT W
700 SOUND 2,0,0,0
710 CASH=CASH+GOLD*CHARGES:GOLD=0
720 GOSUB 650
730 POSITION 14,0:? #6;CASH
740 IF NUGGETS=0 THEN POP :GOTO 360
750 RETURN
760 REM GET THE GOLD FROM DEAD MINER
770 FOR I=3 TO 1 STEP -1
780 IF WHICH(I,0)=XPOS AND WHICH(I,1)=YP
OS THEN 800
790 NEXT I:RETURN
800 GOLD=GOLD+WHICH(I,2):GOSUB 650
810 RETURN
820 REM EXPLOSION
830 XP=XPOS+H:YP=YPOS+U:IF YP=0 THEN 440
```

```
840 RESTORE 3007
850 DATA 0,0,-1,-1,1,1,-1,1,1,-1
860 FOR I=1 TO 5:READ A,B
870 IF XP+A>=0 AND XP+A<=19 AND YP+B>=1
AND YP+B<=22 THEN LOCATE XP+A,YP+B,ZZ:IF
 ZZ=45 THEN NUGGETS=NUGGETS-1
880 NEXT I:COLOR ASC(CHAR$(4))
890 IF XP>0 AND XP<20 THEN PLOT XP,YP
900 COLOR ASC(CHAR$(5)):IF YP>2 AND XP>0
 THEN PLOT XP-1,YP-1
910 IF YP<22 AND XP<19 THEN PLOT XP+1,YP
+1
920 COLOR ASC(CHAR$(6)):IF YP>2 AND XP<1
9 THEN PLOT XP+1,YP-1
930 IF YP<22 AND XP>0 THEN PLOT XP-1,YP+
1
940 DL=PEEK(560)+256*PEEK(561):SU=PEEK(7
12)
950 FOR W=15 TO 0 STEP -0.5:SOUND 0,50,0
,W:SW=1-SW:POKE 712,SW*(4*16+6):POKE DL,
112*SW:NEXT W
960 POKE DL,112:POKE 712,SU
970 REM
980 COLOR 32:PLOT XP,YP:IF YP>2 AND XP>0
 THEN PLOT XP-1,YP-1
990 IF YP<22 AND XP<19 THEN PLOT XP+1,YP
+1
1000 IF YP>2 AND XP<19 THEN PLOT XP+1,YP
-1
1010 IF YP<22 AND XP>0 THEN PLOT XP-1,YP
+1
1020 COLOR 138:PLOT XPOS,YPOS
1030 FOR I=1 TO 20
1040 RX=INT(20*RND(0)):RY=INT(22*RND(0)+
1)
1050 LOCATE RX,RY-1,Z2
1060 LOCATE RX,RY,Z:IF Z=32 AND Z2=171 T
HEN COLOR 171:PLOT RX,RY
1070 IF Z=138 THEN 1130
1080 NEXT I
1090 CHARGES=CHARGES-1:POSITION 17,23:?
#6;CHARGES;" ";
1100 IF CHARGES>0 THEN 440
1110 TI=0:EMF=1:POSITION 9,23:? #6;"set
out(A)    ";:GOTO 440
1120 REM DEAD MINER
1130 FOR I=14 TO 0 STEP -0.5:SETCOLOR 3,
4,I:SOUND 0,I,10,I:NEXT I:RESTORE 3400
1140 READ A,W:IF A>0 THEN SOUND 0,A,10,8
:FOR I=1 TO W*2:NEXT I
1150 IF A>0 THEN SOUND 0,0,0,0:FOR W=1 T
O 5:NEXT W:GOTO 1140
1160 COLOR ASC(CHAR$(7)):PLOT XPOS,YPOS:
WHICH(MINER,2)=GOLD:GOLD=0:GOSUB 650
1170 WHICH(MINER,0)=XPOS:WHICH(MINER,1)=
YPOS:MINER=MINER-1:IF MINER=0 THEN 1210:
REM GAME OVER
1180 SETCOLOR 3,4,10:GOTO 410
1190 DATA 100,30,100,20,100,5,100,30,85,
```

```
40,90,30,100,20,105,10,100,30
1200 DATA -1,0
1210 POSITION 0,0:? #6;"game over"
1220 POKE 709,PEEK(53770)
1230 IF PEEK(53279)<>6 THEN 1220
1240 RUN
```

Program 2. VIC Version

```
100 CLR:S=0:C=10:M=4:L=0:W=0
110 PRINT"{CLEAR}"
112 GOSUB300
120 POKE36879,9
130 GOSUB800
132 Z=7712:FB=0:Y=250
140 POKEZ,32
150 IFJ1THENZ=Z+22:IFPEEK(Z)=102THENZ=Z-22
160 IFPEEK(Z)=35THENZ=Z-22
170 IFJ2THENZ=Z-1:IFPEEK(Z)=102THENZ=Z+1
180 IFPEEK(Z)=35THENZ=Z+1
190 IFJ3THENZ=Z-22:IFPEEK(Z)=102ORZ<7680THE
    NZ=Z+22
200 IFPEEK(Z)=35THENZ=Z+22
210 IFJ0THENZ=Z+1:IFPEEK(Z)=102THENZ=Z-1
212 IFPEEK(Z)=35THENZ=Z-1
220 IFPEEK(Z)=81THENS=S+1:GOSUB6000
222 IFPEEK(Z)=83THENGOSUB4000
224 IFPEEK(Z)=42THENGOSUB3000
230 IFFBTHENGOSUB5000:GOSUB8000
240 PRINT"{HOME}{20 DOWN}{REV}GOLD{OFF}";S;
    TAB(10)"{REV}CHARGES{OFF}";C
250 POKEZ,90
260 IFC=<0THENGOSUB9000
270 DD=37154:P1=37151:P2=37152
280 GOSUB500
290 GOTO140
300 REM INSTRUCTIONS
310 PRINT"{DOWN}{04 RIGHT}{REV}VIC GOLDRUSH
    {OFF}"
320 PRINT:PRINT:PRINT"{04 RIGHT}{REV}Z{OFF}
     = MINER"
330 PRINT:PRINT"{04 RIGHT}{REV}Q{OFF} = GOL
    D"
340 PRINT:PRINT"{04 RIGHT}{REV}*{OFF} = DEA
    D MINER"
350 PRINT:PRINT"{04 RIGHT}{REV}&{OFF} = DIR
    T"
360 PRINT:PRINT"{04 RIGHT}{REV}S{OFF} = ASS
    AY OFFICE"
362 PRINT:PRINT:PRINT"{02 RIGHT}USE {REV}FI
    RE BUTTON{OFF} TO"
364 PRINT"{02 RIGHT}BLAST"
370 PRINT"{HOME}{20 DOWN}{REV}PRESS ANY KEY
     TO PLAY"
380 A$="":GETA$:IFA$=""THEN380
390 PRINT"{CLEAR}"
400 RETURN
500 POKEDD,127:P=PEEK(P2)AND128
510 J0=-(P=0)
520 POKEDD,255:P=PEEK(P1)
530 J1=-((PAND8)=0)
540 J2=-((PAND16)=0)
550 J3=-((PAND4)=0)
560 FB=-((PAND32)=0)
570 RETURN
800 REM DRAW BOARD
810 X=7702
820 FORI=1TO22
830 POKEX,35
840 X=X+1
850 NEXTI
860 POKE7712,32
870 X=7724
880 FORI=1TO18
890 FORJ=1TO2
900 POKEX,35
910 X=X-1
920 NEXTJ
930 X=X+24
940 NEXTI
950 X=8098
960 FORI=1TO22
970 POKEX,35
980 X=X+1
990 NEXTI
1000 FORI=1TO180
1010 X=INT(RND(1)*374)+7724
1012 IFPEEK(X)=35THEN1010
1014 IFPEEK(X)=102THEN1010
1020 POKEX,102
1030 NEXTI
1040 FORI=7724TO8097
1050 IFPEEK(I)=102THEN1070
1052 IFPEEK(I)=35THEN1070
1060 POKEI,81
1070 NEXTI
1080 POKE7689,35:POKE7692,35:POKE7691,83
1090 GOSUB2000
1200 RETURN
2000 REM PLACE MINERS
2002 IFM<0THEN9500
2010 X=7680
2020 FORI=0TO4
2030 POKEX,32
2040 X=X+1
2050 NEXTI
2060 X=7680
2070 FORI=1TOM
2080 POKEX,90
2090 X=X+1
2100 NEXTI
2110 C=10:S=0
2120 Z=7712
2130 PRINT"{HOME}{20 DOWN}          "
2140 FORI=8142TO8164:POKEI,32:NEXT
2150 IF M=0THENPOKE7680,32
2200 RETURN
3000 REM DIG UP MINER
3010 S=S+S1
3200 RETURN
4000 REM TALLY GOLD
4002 FORI=7694TO7701:POKEI,32:NEXT
4010 FORJ=1TO5
4020 FORI=15TO0STEP-1
4030 POKE36878,I
4040 POKE36876,230
4050 FORT=1TO10:NEXT
4060 NEXTI
4070 POKE36876,0
4080 NEXTJ
4090 C1=C:IFC1=0THENC1=1
4100 W=S*C1+W
4110 PRINT"{HOME}{REV}{WHT}{13 RIGHT}$";STR$
     (W);".00{RED}"
4120 POKE7691,83
4130 M=M-1
4140 GOSUB2000
4150 RETURN
```