

Instant Software Inc.

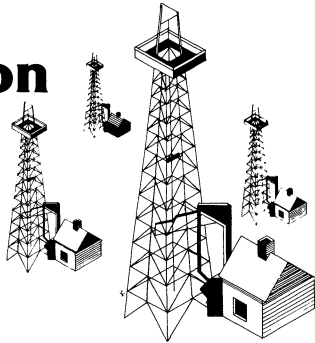
Peterborough, N.H. 03458 603-924-7296

PROGRAM DOCUMENTATION

Designed
for use on
APPLE+
16K

Oil Tycoon

Requires Applesoft



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Peterborough NH 03458 USA

0079A

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APPLE LOADING

The Instant Software programs for the Apple computer are written in either Integer BASIC or Applesoft II BASIC. Be sure that you have the correct Basic language in your computer before attempting to load the program.

Apple Computer, Inc., recommends using the Panasonic model RQ-309 cassette recorder. If you are using this model, set the tone control to ten and the volume control to seven. If you are using a different recorder, you may have to experiment to find the optimum setting for your Apple computer.

To load a program, you must:

1. Insert the program tape into the recorder and rewind it to the start of the program.
 2. Hold the control key (CTRL) down while you press the B key.
 3. Release both keys and press the RETURN button. The prompt should appear — a right arrow (>) for Integer BASIC or a right bracket (]) for Applesoft II BASIC. (If you get an error message, press the RESET key and repeat steps 2 and 3.)
 4. Press the play button on the recorder.
 5. Type LOAD and press the RETURN button.
 6. You should hear a beep after about 15 seconds, indicating that loading is in progress. If you get an error message, press the RESET key and try again.
- If you must load Applesoft II BASIC from a cassette, follow the same routine. Then, place your program tape into the recorder and follow the loading routine from step 4 onward.

If you are still unable to load the program, try this routine:

- A. Remove the MONITOR or EARPHONE plug from the recorder.
 - B. Press the play button on the recorder and listen until you can hear the header tone that precedes the data on the tape.
 - C. When you hear the tone, immediately press the recorder's stop button.
 - D. Replace the MONITOR plug and remove the MICROPHONE plug from the recorder.
 - E. Type in LOAD.
 - F. Press the recorder's play button and then press RETURN.
- If the program still does not load, fastforward the tape to the second dump and start again.

Should you be unable to load, check the cassette with another Apple computer. If still no go, return it to:

Instant Software Miseries
Peterborough, NH 03458

We'll see whether the cassette or your system was awry — and get you a replacement. Things can go wrong . . . go wrong . . . go wrong.

Oil Tycoon

BEFORE YOU BEGIN . . .

This program runs only on the Apple II Plus or the Apple II with Applesoft in ROM. After you've loaded the program, but before you type RUN, you must type in HIMEM:8192 to reserve memory for the program variables.

INTRODUCTION

You are an oil tycoon seeking to be the wealthiest person in the petroleum industry. Your competitor, whether it's your wife, husband, or best friend, is seeking the very same goal. And there's room for only one of you at the top!

You begin with two million dollars and invest a fair portion in research and development so as to bring down drilling and exploration costs. You also hope to reduce the possibility of ending up with a dry well.

Then you explore for well sites and, working from the geologist's report, decide whether to drill or to continue exploration for more productive drilling sites.

Once you have oil to sell, you may set your own prices, but if you get too greedy, the demand for *your* oil may dwindle until you lower your prices to a reasonable level.

When the game is over, you may find yourself the wealthiest tycoon around — or you may be the bankrupt victim of too many oil spills, blowouts, and dry wells. But no matter how you fare in the end, you'll have nothing but fun getting there when you play Oil Tycoon on your Apple II.

The Ledger

After you have typed in the names of the two competing companies, the ledger will appear on the screen, containing all the data for the two companies. Beneath the ledger appear the prompts for the game. The ledger categories are as follows:

Total Net Worth: This figure is the total of your cash holdings plus the value of your oil reserves (number of barrels in reserve times the average price per barrel). The leader can be determined at any point in the game by comparing these values.

Cash Holdings: The amount of cash available for expenditures. If your Cash Holdings drop to zero, you will go bankrupt and lose.

Number of Wells: The total number of successful oil strikes.

Oil Flow: The total number of barrels of oil (per unit of time) being pumped out of all of your successful wells. Each new oil strike will increase your flow. However, as oil wells gradually dry up, the flow will drop (at a rate determined by the ratio of the current flow to the remaining volume).

Oil Reserves: The number of barrels of oil being held in storage tanks or on tanker ships.

Oil Sales: The number of barrels of oil being sold (at your current price per barrel). This amount is arrived at by determining your oil flow, oil reserves, and the relative difference between your price per barrel and your opponent's price per barrel.

Price/100 Barrels: The current price you are charging for your oil.

Drilling Cost/2000 Feet: The amount subtracted from your Cash Holdings every time you drill an additional 2000 feet. It will

start out at \$100,000 but can be reduced to \$50,000 by sufficient research effort.

Net Oil Profit: The difference between your current oil revenues (sales x price per barrel) and the current operating costs (based on your oil flow and research effort). This amount is added to your cash holdings (or subtracted from them if it is a negative number indicating a loss). You can determine if you are gaining on your opponent, or vice versa, by comparing your Net Oil Profits.

Rate of Return: This number is obtained by dividing your oil profit by your operating costs. A figure of 0% indicates that you are just breaking even; -100% indicates that you have no revenue but still have operating costs; and 200% indicates that your profits are twice your operating costs.

Current Drill Depth: Indicates the depth to which your present well has been drilled.

Transaction Choices

Research and Development: Type a "1" if you desire to invest some portion of your cash holdings in research and development. You will then be asked to enter the amount of investment (in thousands of dollars). If you mistakenly enter more than your current cash holdings, the question will be repeated. Since investment in research never comes with guarantees of success, there will be a large random chance element in the results of your research investment. These results can include the following:

1. Drilling costs can be reduced to a minimum of \$50,000 per 2000 feet. Once costs reach this level, further investment will provide no additional benefits.

2. Operating costs can be cut in half with sufficient research effort.

3. Your probability of hitting a dry hole will be reduced.

Explore: Type a "2" if you wish to explore for a new oil site. If you choose to explore a particular drill site, you will receive a geologist's report containing the following information:

1. **Dry Hole Probability:** the percentage probability of not hitting oil at the site regardless of the depth to which you drill. If no money is invested in research, this percentage will vary randomly between 20% and 60%. With the maximum research effort, it will vary randomly between 0% and 40%.

2. **Depth:** the expected depth of the well. This figure is listed only as an estimate and could be in error by up to 2000 feet in either direction. The minimum depth is 1000 feet; the maximum depth is 10,000 feet.

3. **Flow:** the estimated amount of oil that can be pumped out of the well per turn. It may be in error by as much as plus or minus 50%. The minimum flow is 10,000 barrels; the maximum, 100,000.

4. **Volume:** the estimated total number of barrels of oil contained in the field, expressed as a function of the flow. This figure may also be in error by as much as plus or minus 50%. The minimum volume is ten times the flow; the maximum, 50 times the flow.

5. **Report Cost:** the amount that must be paid upon receipt of the report — even if you don't choose to drill the site. The cost will tend to increase as the quality of the report increases. The minimum report cost is \$8,000; the maximum, \$300,000; and the average, about \$55,000.

Based on the information provided in the report, you must choose whether to drill at the site or to refuse the site. If you drill, any previous well being drilled is eliminated, and the new well is drilled to a depth of 2000 feet. The program will then inform you if you've hit any oil. If you refuse the site, the current exploration will have no effect, except that you will lose the cost of the report.

Drill: Type a "3" if you wish to continue drilling an additional 2000 feet deeper at your current well site. The High Resolution graphics of the Apple II allow you to watch a pictorial display of your oil well as it's being drilled.

Re-Price: Type a "4" if you wish to change the price of your oil. Choosing the correct price for your oil should involve strategy on your part. Don't be too greedy, because too high a price could put you above the market, and your oil would stop selling until you readjusted your prices.

There are two circumstances under which you cannot change your price:

1. "You Have No Oil To Sell!" Obviously, you must have a successful well before you can change prices.

2. "You're a Regulated Monopoly!" Both players must be selling oil, or the first to strike oil would have an unfair advantage.

Pass: Type a "5" if you do not desire to select any of the other transactions. The turn will then pass to the other player. Note: Although you pass, your oil (and your opponent's) will continue to be pumped and sold.

DISASTERS

Two disasters may strike your company:

1. **Blowout:** The well you are currently drilling suffered an explosion and fire and was totally destroyed. A new drilling site will be required, and a cost penalty (\$75,000 per 1000 feet of depth) will be incurred. Also, you will lose your opportunity to make a transaction for that turn. There's a 5% chance that a blowout will occur during each turn when a well is being drilled. When you do get a Blowout, your Apple II makes certain that you know it by letting out a siren whoop of disaster.

2. **Tanker Spill:** This means that (1) some percentage of your oil reserves have been lost and (2) you have incurred an additional cost (equal to the number of barrels spilled x \$20) to clean up the environment. You lose your turn, just as in a Blowout. There's an 8% chance of suffering a Tanker Spill on each turn when you have oil reserves. Also, as in a Blowout, the speaker in your computer makes certain that you *hear* your misfortune as well as see it on the screen.

END OF GAME

The game will end in one of two ways. Either one player will go bankrupt, leaving the other as victor; *or* the computer will automatically end the game, in which case the player with the greatest Total Net Worth is the winner.

STRATEGY TIPS

1. To obtain the maximum research effectiveness (which is the reduction of drilling costs to \$50,000), you must spend approximately \$2 million.

2. It would be prudent to spend a nominal amount (\$300,000-\$700,000) on research initially. Then, after you have hit your first well, and cash holdings are sufficient, you can supply the remaining amount required.

3. The first well site should be based primarily on the estimated depth and dry hole probability.

4. Once you've selected a site, be sure to remember the estimated depth so you will know when to quit if it's a dry hole — that is, if you've drilled 2000 feet deeper than the estimated depth.

5. If your oil reserves build to very large values, you will be risking an extremely damaging tanker spill. By lowering your price below your opponent's, you can reduce your reserves.

6. Conversely, if your reserves drop to zero, you should raise your price to obtain more profit.

7. Generally, it is wise to set your price slightly below your opponent's.

8. To determine the effectiveness of price changes, compare your rate of return and oil profits with your opponent's, both before and after the change.

DISCLAIMER

Nothing in this world is completely perfect, including this program. I say this despite the yeoman efforts of the programmer who originally wrote and debugged it and the people in the Instant Software lab who worked far into the New Hampshire nights, all toward providing you with the best possible program.

Please enjoy it. If you come up with any improvements, you should let me know so I can pass along your ideas to other users.

Please note that there is no warranty expressed or implied that this program is going to do anything other than load and work. We don't guarantee that you will enjoy the game programs, that you will make or save money with business programs, or learn anything from educational programs. We don't guarantee that you will lose weight with a dieting program or avoid disasters with a biorhythm program. But if any program causes suffering (other than acute aggravation) or misfortune, we want to hear about it by mail, not through your lawyer. You are entirely on your own in using the programs.

If you run into problems while using a program, you can communicate with us . . . preferably by mail, and we'll try to help out. If a problem turns out to be commonplace, we'll put the update information in MICROCOMPUTING. You are supposed to read MICROCOMPUTING anyway.

Wayne Green

SOFTWARE OPPORTUNITIES

Anyone interested in writing software for fun and profit should send for our instruction sheet: "Dear Programmer." This describes, step by step, the process used by Instant Software for producing these programs. In addition to being able to make rather remarkable money as an author of a program, there are also opportunities to work on a freelance basis (at home) evaluating programs or converting them from one microcomputer system to another.

If you are thinking in terms of distributing your own programs, you can do worse than find out the benefits of having Instant Software do this job for you. Write to: "Selling Your Software The Easy Way."

Instant Software is looking for programs to publish and distribute — business programs, games, home programs, educational programs, scientific programs, etc. For more information, please write to Instant Software, Peterborough NH 03458.

CASSETTE RECORDER MAINTENANCE

Often when you have trouble loading a program, it's not the fault of the tape or your computer system. It may be a problem with your cassette recorder. The staff at Instant Software use a large variety of cassette recorders eight hours a day, five days a week. To insure that the recorders will keep up with the demands of our work load, they are subjected to a rigorous maintenance routine.

As you run a tape in any recorder, a particle of oxide may flake off the tape, or a bit of dust may settle from the air. These bits of debris may adhere to the play/record head, causing variations in the volume level and degrading the performance of your recorder.

To keep your recorder in top condition, clean the recorder heads regularly after every 15-20 loads or saves. Use denatured alcohol (available at any drugstore) and cotton-tipped swabs. Lightly dampen a swab and gently stroke the erase head, the record/play head, and the pinch roller. This will remove accumulated tape oxide and dust. You can also use a soft brush or vacuum cleaner to remove dust from the tape compartment.

Every time you press the record or play button, you put a small amount of stress on the play/record head. Eventually the head will be pushed out of alignment. This is one of the reasons why a program recorded when you first got your system will not load several months later or won't load on another system.

The cure is to have your recorder aligned by a qualified technician, or if you have the know-how, to align it yourself.

The technicians at Instant Software recommend using an industrial standard alignment tape (they use a Panasonic tape, part No. QZZCFM). This tape allows them to test for playback frequency response, playback level, and the head azimuth adjustment. The most critical aspect, especially for PETs, is the azimuth adjustment.

To run a test on your recorder, connect an oscilloscope to the earphone jack, insert the alignment tape into the recorder, push the play button, and adjust the head for the best waveform on the oscilloscope. If you lack test instruments, adjust the head for the loudest sound and the best high frequency response without changing the recorder's volume setting.

Remember, your recorder is a critical link in your computer system. For the best performance, give it the best care.

ACCIDENTAL ERASING

Until you've tried it, you won't believe how easy it is to screw up a data cassette. For instance, the magnet in any loudspeaker can do a fantastic job of removing part of the data . . . and you'll find loudspeakers in portable radios, cassette recorders, TV sets, etc. Power supplies will do even better. No one can even estimate how many tapes have been wiped out by these little TRS-80 power units . . . or by putting cassettes on top of the monitors, where its electromagnetic field can weave its subtle work.

Do not treat your cassettes casually. Give them extra care and attention. Keep them away from anything electrical, magnetic or dusty at all times.

Well, accidents can happen, even to the most careful of us. One of your kids can try out a data cassette and push the record button . . . etc. You should ward this off by punching out the tabs on the back of the cassette to prevent recording. If things do go awry, we'll redo your cassette for you for a nominal service charge of \$2. Just send back the original cassette, a note as to what went wrong (we like to keep statistics) and the \$2. We'll fix it up for you and get it back as quickly as we can. Try not to get worried if it takes three weeks . . . one week each way for the post office (when they are up to that rigorous a schedule) and a week for us to horse around.

COPYRIGHT

This program is protected by copyright. This means that it is illegal to make a copy of the tape or a listing of the program. *Any* copy. We feel strongly enough about this to offer a \$10,000 reward for the conviction of anyone copying this program. This means that when your life-long friend and bosom buddy asks you to run off a copy for him, you have, at that moment, to decide whether he wants the program or the ten thou. If you do decide to make the copy, you'd better be very nice to said friend from then on.

Better, if someone is insistent, is to give them the money to buy a cassette of their own. It could be cheaper in the long run.

Why the fuss? We want to make sure that programmers are paid for their programs and paid well. The more money we pay in royalties, the better programs you'll have.

IMPROVEMENTS

There are very few programs which cannot be improved. If you work out some improvements to this program, it could be worth your while to send them in for possible use in an updated version of the program. Those who contribute to an updated program will share in the royalties which result. Instant Software Inc., Peterborough NH 03458.

READING



Kilobaud MICROCOMPUTING is designed to help the newcomer to computing to understand computers, while still being interesting to the experts. We try to avoid the use of computerese as much as possible. You'll also find a wealth of software in Kilobaud MICROCOMPUTING . . . and more articles every month than any other magazine.

The crew putting out Kilobaud MICROCOMPUTING are the ones who originated BYTE and are the leaders in the field. Only Kilobaud MICROCOMPUTING has a complete microcomputer laboratory for checking both hardware and software.

Kilobaud MICROCOMPUTING is \$2.50 per copy, but is only \$18 for a one year subscription. Back issues are \$3.50 except for a few rare ones which are \$10. To subscribe just send your name and address to Kilobaud MICROCOMPUTING, Subscription Services Dept. ISI, P.O. Box 997, Farmingdale NY 11737. We'll start with the next published issue and send a bill for the subscription. If you are not delighted with the first issue, just return the bill and we'll be disappointed to lose you. Readers of Kilobaud MICROCOMPUTING are generally very enthusiastic and read it from cover to cover. You can also subscribe by calling (during working hours) 800-258-5473.

PROGRAMS FOR YOUR APPLE

Look for these fine programs at a computer store near you and save time and money. Or call toll-free 1-800-258-5473, and have your credit card handy.

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48K (A) in ROM Order no. 0174A. \$9.95

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NOTES