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Deepwater Simulation

Web Version 1.3

STUDENT HANDBOOK

1 | Introduction

In the Deepwater Simulation you manage an oil production company operating in the Gulf of Mexico. Your company produces crude oil from a deep water oil well and sells it on the open oil market.

Your objective in the simulation is to outcompete your rival companies. During the simulation, you and your company will be faced with several ethical challenges. Your responses to these ethical challenges have the potential to affect your business success.

The purpose of the simulation is to provide an experiential learning opportunity to better understand the real-world ethical challenges faced by companies and managers as they make key business decisions. Just like managers in the real world, you will be forced to make trade-offs between short-term and long-term profits, worker safety, environmental impacts and social needs.

The Deepwater simulation was inspired by the oil spill in the Gulf of Mexico. In April 2010, BP was in the process of sealing an exploratory well in deep water fifty miles off the coast of Louisiana. The Deepwater Horizon, an exploration oil rig leased from Transocean, had found considerable quantities of crude oil nearly 13,000 feet under the seabed. In preparation for turning the well over to a production oil platform, management and workers made a series of mistakes. They lost control of the well. Critical backup control systems – including the blowout preventer – failed. Crude oil and natural gas surged up out of the well onto the rig and exploded, killing eleven and injuring many more. Over 200 million gallons of crude oil flowed into the Gulf during the three months it took to cap the well, creating the worst environmental disaster in U.S. history and damaging the Gulf economy at a cost of billions of dollars.

This simulation, while attempting a certain degree of realism, is in many respects not realistic and indeed is not intended to be. The purpose of the simulation is not to model actual offshore drilling operations or oil company management. Its purpose is to provide an experiential learning opportunity to better understand the real-world ethical and challenges managers face in making business decisions.
Disclaimers

This Handbook may contain errors and/or omissions. Definitive statements and clarifications about the simulation are available from R² Simulation Technologies.

2 | Before the Simulation Starts ..............................................................................................................................................

Carefully read both this Student Handbook and any assigned background readings on the oil industry and/or the Gulf oil spill.

Carefully study the example prospectus. It gives you vital information about your operating assets, financial situation and operating environment. You will need this information in order to make good management decisions.

Your company's success will depend in part on your ability to anticipate changes in crude oil prices and weather in the Gulf of Mexico, particularly during hurricane season (June to December). Therefore, you should familiarize yourself with what analysts and oil industry experts expect to happen with crude oil prices over the next 3-5 months and with the official hurricane forecast.

3 | Your Company ...............................................................................................................................................................

Operational Assets

Your company's initial operating assets include a lease to extract crude oil from under the ocean floor in the Gulf of Mexico, a deep water oil well and a production oil rig.

You hold a lease on a particular block of the ocean floor under the Gulf of Mexico, purchased by you from the Federal government at auction. This lease is what gives you an exclusive right to drill for oil on this block of the Gulf floor. You are required to pay the government royalties on the oil you produce.

Your company has already "completed" the well, which means it has drilled an exploratory well, found significant amounts of crude oil under the ocean floor, detached the exploration rig and connected a production oil rig to the well. You will be managing this production oil rig.

Your rig is floating in 5,000 feet of water, directly above the oil well on the ocean floor. The reservoir of crude oil is another 13,000 feet further down through solid rock. Your production well is attached to an undersea pipeline which carries the crude to land for sale to midstream aggregators and downstream refineries.
You earn revenues by producing and selling your crude oil on the open market. (Note that the simulation uses actual oil prices to calculate revenues.) Operating an oil rig exposes you to risks, including accidents that could injure or kill workers. Your rig could also suffer a "blowout."\(^1\)

Your company's challenge is to set production goals and manage your workers, operating expenses and risks to make a profit.

**Financial Assets**

Your company starts the simulation with significant financial assets (cash in the bank, which earns you interest) and liabilities (an outstanding commercial loan, on which you pay interest).

If you mismanage your oil company, you can go bankrupt and be forced out of the simulation. In the simulation, an oil company goes under when it is runs out of cash – that is, when it overdraws its bank accounts.

4 | Understanding Oil Company Operating Risks ..........................................................

Producing crude oil from deep offshore waters is a dangerous business. Your company is exposed to several different kinds of risk.

**Blowout Risk**

Because of the pressures and temperatures involved, drilling for oil from deep inside the Earth risks a blowout. A well blows out when the crew loses control of the well and crude oil and natural gas, under extreme pressure (up to 12,000 psi) and at high temperatures (up to 400° F), burst up through the well into the rig on the surface of the Gulf. The force of the surging liquids is powerful enough to rip apart a rig, killing and injuring workers. In addition, crude oil and natural gas are highly flammable and the slightest spark will cause an explosion, potentially injuring and killing even more.

**Worker Injuries and Fatalities**

An offshore oil rig is a dangerous place to work. Even in the absence of a blowout, workers are at risk of injury and even death. Unsafe working conditions and poorly trained workers increase the chances of an accident.

**Inspections**

Your oil rig is subject to periodic inspection by government regulators. If safety violations are found, you will be fined. The probability of being cited for safety violations during an inspection is a function of the amount you spend on safety programs and the amount of oil you produce. The more spent on safety or the less crude produced, the lower the risk of a safety violation; the less spent on safety and the more crude produced, the higher the risk of a safety violation.

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\(^1\) The noun (and adjective form of the noun) is spelled "blowout" (no space) while the verb is "blow out" (with a space between the words). For example, "She's had two blowouts already, but I hope I don't blow out myself." The piece of equipment that should prevent a blowout is a blowout preventer or BOP.
Pollution and Environmental Damage

Normal deep water oil production, even in the absence of a blowout, causes pollution and damages the environment. In addition to the inevitable crude oil leaks and spills, offshore oil rigs consume tremendous amounts of diesel fuel to power generators and operate equipment. Also, an offshore rig is serviced by a flotilla of ships and aircraft, each of which causes its own pollution.

5 | Managing Oil Company Operating Risks

Because of your exposure to risks that threaten the lives of your crew and could heavily damage the environment and the livelihoods of the people living along the Gulf, risk management is a key aspect of managing your company.

Blowout Risk

Blowout risk is determined by several factors: the amount of oil produced, the operating condition of the rig and its equipment (which in turn is determined by production volume and spending on equipment maintenance and repair), the condition of the rig's blowout preventer (BOP) and weather.

If you do blow out, workers are likely to be injured and or killed. How many injuries or fatalities your crew suffers depends on the severity of the blowout.

Watching the Weather

One important driver of blowout risk is the weather. Because offshore oil rigs need to operate as much as possible to recoup the huge capital investment required, they are built to operate in all kinds of weather. However, hurricanes (which are common in the Gulf, particularly in the Fall) are a different matter. If you continue to operate in the middle of a hurricane, you run a high risk of blowing out.

You have the option of "shutting-in" for any round. The chances of blowing out while shut-in, even in a hurricane, are not zero but are dramatically lower than continuing to operate through the storm. (Note that the simulation is tied to actual Gulf weather.)

Shut-in wells produce no oil, and hence earn no revenues. However, shut-in wells have only temporarily suspended production, so rig operators still incur operating costs and face accident risks and are subject to safety inspections that could result in fines.

Managing Your Rig to Reduce Blowouts

The weather cannot be controlled, and you cannot do anything about the location or depth of your well. But you can manage how much oil is produced and how much is spent on maintenance. The more crude oil you produce, the more wear and tear on the equipment; the more you spend on maintenance, the more that wear and tear is reversed.
You may choose to ignore blowout risk, and to increase production without increasing maintenance, or even to decrease spending on maintenance, but the result is an increased probability that the well will blow out. To keep the chances of a blowout from increasing, increased production should be accompanied by increased spending on maintenance.

Each rig comes with a manufacturer's recommended production level – called the "baseline" level – and a baseline maintenance expenditure. These baselines are neither minimums or maximums. You can decide to produce or spend more or less. Part of the challenge of playing the simulation is to figure out how to balance the risks with the potential profit.

To help you manage blowout risk, the operating reports distributed after each round include a "Rig Operating Condition Index" (RECI). Initially, this indicator reads "100." Your rig's condition can decrease (even go below zero) or it can increase above 100. This number gives you a rough indication of the operating condition of the rig relative to the beginning of the simulation. Note that the RECI indicates the relative condition of your oil rig, that is the part of your equipment that floats on the surface of the Gulf. The RECI, in itself, tells you nothing about the condition of your equipment on the seabed – in particular, it tells you nothing about the condition of your blowout preventer (BOP), located 5,000 feet underwater.

The worse (lower) the RECI, the greater the chances of a blowout. The better (higher) the operating condition, the lower the chances of a blowout. Note that just because the chances of a blowout are high (due to a low rig condition, for example), there is still some chance that the rig will NOT blow out. And, conversely, there is a chance, albeit a small one, that even a rig with a very high operating condition will still blow out.

Managing Your BOP to Reduce Blowouts

Another source of blowout risk lurks under the water: your blowout preventer, or BOP. The BOP sits on the ocean floor, 5,000 feet underwater, where the pressure is over 2,000 psi and the temperature near freezing. Because the Rig Operating Condition indicator represents only the condition of your rig (that is, the part of your operation that is above water), you have very little information about the condition of your BOP. You do know that your BOP is rated by the manufacturer for a certain number of rounds of use at your rig's baseline production rate. (The service life of your BOP is determined by your instructor.) After the end of your BOP's rated service life, the chances of the BOP failing and causing a blowout increase with every round – and even sooner if you produce more than the baseline amount of oil.

Note that spending on maintenance improves the condition of your rig, but does not affect the condition of your BOP. The condition of your BOP is determined solely by how long it has been in service and the amount of crude oil you have produced.

You can manage this risk by overhauling the BOP when it exceeds its rated service life. This requires that you shut-in of the well and order a BOP overhaul. The BOP is pulled off the Gulf floor onto the rig, serviced and repaired, and then returned to the Gulf floor and put it back in service.
You have the option of either a "quick" or a "complete" overhaul of the rig's BOP. A quick overhaul requires the rig to be shut-in for one round and costs $25 million. A quick overhaul adds a certain number of rounds to the BOP's rated service life (this is also determined by your instructor). A complete overhaul requires the rig to be shut-in for two rounds and costs $40 million. A complete overhaul adds even more rounds to your BOP's services life.

It is possible, although unlikely, to go the entire simulation without overhauling your BOP. And equally it is possible, although unlikely, that a BOP could fail before it reaches the end of its expected service life.

During a BOP overhaul round, workers continue to occupy the rig. The workers not involved with the BOP overhaul use the opportunity to perform maintenance and repairs of the rig equipment. Because of this, a BOP overhaul (whether quick or thorough) not only rebuilds the BOP, but also improves a rig's operating condition to 100. (If the rig's condition before the overhaul round is greater than 100, the rig condition does not change as a result of the BOP overhaul.)

Operating expenses continue to be incurred during the round that a rig is shut-in for a BOP overhaul. Maintenance expenses are zero (because no oil is being produced). During a shut-in for a BOP overhaul rig workers are still vulnerable to on-the-job injuries and rigs are still subject to safety inspections (see below). This means you should keep up your safety programs while the rig's BOP is being overhauled.

**Worker Injuries and Fatalities**

The chances of an accident can be reduced in several ways. You can spend more on safety programs, reduce production, reduce the number of hours your crew works, or provide training to your crew. The more spent on safety or the less crude produced or the fewer number of hours your crew works or the more training you give them, the lower the accident risk; the less spent on safety, the more crude produced, the more hours your crew works, the less training you give them, the higher the accident risk.

Each rig comes with a "baseline" recommended safety program expenditure. This baseline is neither a minimum nor a maximum. You can spend more, or you can spend less. You need to figure out how to balance the safety risks with the potential profit.

An injury puts a crew member out of commission for two rounds after the round in which the injury occurs, at which time they return. (For example, if a worker is injured in Round 2, they are off-rig for Rounds 3 and 4, and return at the beginning of Round 5 ready to work.) Injuries and deaths can be expensive. (For a schedule of fines, see the "Quick Reference Guide for Students.")

For maximum safety, it is recommended that during the course of the simulation every worker receive advanced, off-rig training. Training requires crew members to be off the rig and not working for two rounds, after which they return. (See the "Quick Reference Guide for Students" for the costs to train a worker.)
You start the simulation with a crew of 105. Given your equipment, the nature of the well, etc., the crew can produce 180 barrels of oil each person-hour. The baseline production for your rig is 1,100,000 barrels per round. This means that your crew is working an average of 58 hours per round. The recommend maximum number of hours per worker is 65, the physical maximum number of hours is 98. If you work your crew more than the baseline 58 hours per round fatigue sets in and the risk of accidents goes up.

You have the power to hire and fire workers. However, each hire and each firing it costs the company money. (See the "Quick Reference Guide for Students" for these costs.)

**Safety Inspections and Violations**

Your rig is subject to random inspections by government regulators. During these inspections, the inspector may discover a violation of one or more of the safety regulations governing your industry and then you incur a fine. (For a schedule of fines, see the "Quick Reference Guide for Students").

**Pollution and Environmental Damage**

The amount of pollution and environmental damage you cause is determined by how much crude oil you produce. The more you produce, the more pollution you cause. And, obviously, if you blow out, huge amounts of crude oil spill into the Gulf, causing considerable environmental damage and severely affecting the health and livelihoods of hundreds of thousands of Gulf residents.

The ongoing amount of environmental damage is converted into dollar equivalents as Social Cost. Your rig operation reports will track the social costs your operations have caused.

You have the option during the simulation to invest in pollution control equipment for your rig. (See "Pollution Control Equipment" below.)

**6 | Oil Company Fines and Penalties**

**Blowouts**

If you blow out, you will be assessed a fine of and forced to shut in for several rounds. (See the "Quick Reference Guide for Students" for details.)

**Worker Injuries and Fatalities**

Worker injuries and deaths also result in fines. Injured workers are unavailable to work for several rounds. Dead workers are, obviously, permanently unavailable for work. (See the "Quick Reference Guide for Students" for details.)
Inspections

If safety violations are found when your rig is inspected you will be fined. (See the "Quick Reference Guide for Students" for details.)

Pollution and Environmental Damage

As has been mentioned, normal deep water oil production, even in the absence of a blowout, creates externalities, including pollution and environmental damage, which create costs for other companies, individuals and the government. The social costs resulting from your operations, and the total social costs resulting from the operations of all rigs in the simulation, are tracked and reported back to you.

7 | Oil Company Financial Management

Your company's profitability and financial health are driven by revenues, expenses, amount of debt, and cash position.

Revenues

The crude oil you produce is sold on the oil market at the prevailing market price. The price used in the simulation is the actual benchmark West Texas Intermediate spot price for delivery at Cushing, Oklahoma. Crude oil prices change daily, and are subject to considerable fluctuation over a week, month or quarter. (For example, real world crude oil price – the one used in the simulation – have fluctuated between $47 and $102 per barrel over the past year.)

Managing your revenues is essentially a matter of timing increases and decreases in production to take advantage of crude oil price swings. For example, it is much better to shut in for a BOP overhaul when prices are low and to maximize your production when prices are high.

You set the amount of attempted production each round. The amount of crude oil actually produced is dependent largely on the weather and on the number of hours worked by the rig crew during the round. If insufficient hours are worked for the requested production level, less oil than requested will be produced.

Expenses

Some of your company's expenses are controllable and others are not.

The royalty you pay to the government for the right to drill in the Gulf is a flat percentage of revenues, and hence can be controlled only by controlling the amount of oil produced.

Operating expenses consist of equipment operating expenses, which are a flat amount per round in (whether in operation or shut-in) plus production expenses, which are a flat amount per barrel of production, plus labor expenses. You determine how many workers are on the rig and how many hours they work. You have the power to send workers to the mainland for
training and hence remove them from working on the rig for several rounds. Injuries and fatalities can also reduce the number of worker-hours in any given round.

Companies have limited and/or indirect control over other expenses such as fines, the BOP overhaul expense, and spending on pollution control equipment (both of which you can choose to avoid altogether). But you do have complete control over maintenance and safety expenditures.

Managing your expenses is essentially a matter of trading off the benefits of spending more money in that area with the impact on profits – easy to say, but very difficult to do!

**Capital Expenditures**

Certain expenditures are capitalized, not expensed. Examples include spending on pollution control equipment. Because these expenditures are capitalized, they do not immediately affect the company's profitability. Rather, they are expensed over time on a fixed depreciation schedule.

**Pollution Control Equipment**

Each company will have an opportunity to install pollution control equipment for their oil rigs. Spending on this equipment represents a capital investment, not an expense. The benefit of making such an investment is that the social cost of your operations are reduced. There are four different pollution control options, with differing costs and differing benefits:

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Cost</th>
<th>Social Cost Reduction</th>
<th>Depreciation Expense per round</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$25,000,000</td>
<td>5%</td>
<td>$500,000</td>
</tr>
<tr>
<td>B</td>
<td>$50,000,000</td>
<td>10%</td>
<td>$750,000</td>
</tr>
<tr>
<td>C</td>
<td>$75,000,000</td>
<td>15%</td>
<td>$875,000</td>
</tr>
<tr>
<td>D</td>
<td>$100,000,000</td>
<td>20%</td>
<td>$925,000</td>
</tr>
</tbody>
</table>

Investing in pollution control equipment is a one-time investment. That is, you install a particular pollution control system (Equipment Type A-D) once during the simulation, and it is in place throughout the simulation.

**Cash Position**

Keep in mind that management's first priority is not profitability – it is financial viability, particularly liquidity. As with any business, cash is king. Profitability will not matter if you do not have the cash on hand to fund operations. Even if you’re managing your company so that by
the end of the simulation you are very profitable, if you run out of cash for even one round, your company goes bust and you’re out of the simulation.

8 | Quick Overview on How to Play

The following are the basic steps for each round of play.

1. Review your results from the previous round, including your competitive position.
2. Evaluate your strategy; revise as necessary.
3. Gather information about key external variables such as the direction of crude oil prices and the weather forecast.
4. Make management decisions about how much oil to produce, how much to spend on maintenance and safety. Decide if you need to increase or decrease the number of workers, and how many should be sent for training. Finally, decide when you want to overhaul your BOP and which kind of overhaul; and what kind (if any) of pollution control equipment you want to install.
5. Go online to enter your management decisions. Pay attention to the deadlines for entering your simulation decisions!
6. Check your results once they have been posted.

9 | Detailed Instructions

Preparing to Play

Your Prospectus

You will receive an example prospectus with key information about your company. All companies receive identical rigs and leases, and start the simulation in exactly the same financial condition – hence every company receives the same prospectus.

The example prospectus contains the following information:

- Rig Water Depth. The distance between the rig and the Gulf floor.
- Rig Drilling Depth. The distance between the Gulf floor and the underground crude oil reservoir.
- Rig Baseline Production. The manufacturers’ recommended production under standard operating conditions, measured in barrels. This is not a minimum. Players determine the actual production for their rig in any given round.
- Rig Maximum Production. The maximum possible production in any given round, again measured in barrels. Players may not produce more than this maximum in a round. If a player enters more than this maximum, the system will automatically flag this as an error and force you to change your entry.
- Rig Operations Expense. It costs $4 million per round for your rig to be in operation. Even when a well is shut-in (the industry term for temporarily shut down and not producing any oil), a well still incurs operating expenses. This is in effect the minimum cost per round for each rig, even if the rig is idle.

- Lifting Expense. The cost to the player of pulling crude oil out of the earth and bringing it to the surface, measured in dollars per barrel. Players have no control over this expense, which is set at $10/bbl. For example, if a well produces 100,000 barrels, the lifting cost for those 100,000 barrels is $1,000,000.

- Rig Baseline Maintenance Expense. The manufacturer's recommended expenditure for equipment maintenance is $8 per barrel. The baseline expense is not a minimum, simply a recommendation. Spending the recommended amount for maintenance does NOT guarantee that an accident will not happen. In fact, no amount of maintenance makes an accident impossible. But the more that is spent, the lower the probability of a blowout, and the less that is spent, the higher the probability of a blowout. Maintenance expense is measured as dollars per barrel. To prevent egregious data-entry errors, the simulation caps maintenance expense at $50 per barrel (subject to change by your instructor).

- Rig Baseline Safety Program Expense. The recommended expenditure for safety programs such as on-the-job training and emergency drills is $1.2 million. Money spent on safety programs reduces the chances of an accident that could injure or kill workers, and reduces the chances that a government safety inspection will find safety violations. The baseline expense is not a minimum, simply a recommendation. Spending the recommended amount for safety does NOT guarantee that an accident will not happen, nor does it guarantee that an operator won't be fined. Safety program expense is measured in dollars (that is, not dollars per barrel). To prevent egregious data-entry errors, the simulation caps safety expenses at $20 million per round (subject to change by your instructor).

- Rig Baseline Blowout Risk. Even very well maintained wells have a certain probability of blowing out in any given round. This is the manufacturer's estimated average probability that the oil well will suffer a blowout during any given round, assuming optimal operating conditions.

- Rig Baseline Worker Accident Risk. Accidents can happen even on rigs with well-funded safety programs. This is the historical average probability that a worker accident will occur during any given round, assuming optimal operating conditions and an adequately funded safety program.

- Rig Pro-forma Operating Income Statement. An operating income statement for the well based on baseline assumptions about production, the price of crude on the open market, expenses, and the royalty owed to the lessor (i.e., the Federal government).

- Company Balance Sheet. Reports your company's initial assets and liabilities.
Gathering Information: Crude Oil Prices

The simulation utilizes daily spot prices for West Texas Intermediate (WT) crude for delivery at Cushing, OK. You can access this information on the Bloomberg website [here](#). Forecasting oil prices is a black art – in fact, near impossible. And yet, the most successful oil companies are those that somehow manage to correctly anticipate key movements in oil prices.

Gathering Information: Weather

The Gulf of Mexico experiences numerous tropical storms and hurricanes each year, and these can have a major effect on offshore oil production. Not only do storms reduce output, but operators who choose to continue to produce in severe weather run much greater risks of a blowout.

The traditional hurricane season in the Gulf is June 1 through November 30, but storms can hit the Gulf at any time of the year.

The effect of a storm on oil production is determined by the strength of the winds and waves caused by the storm. For this reason, weather in the simulation is represented using two wind and storm strength scales: the Beaufort scale for non-hurricane force weather, and the Saffir-Simpson scale for hurricane force weather. (See the "Quick Reference Guide for Students" for links to explanations of these two scales.)

As the scale numbers increase, production is progressively inhibited, resulting in fewer barrels of oil produced than the operator had planned. At the same time, blowout risk increases. At the top end of the storm scale (Category 4 hurricane), production is reduced to zero and blowout risk for operating wells approaches 100%. Shut-in wells are also liable to weather-related blowouts, but the probability is much less (for example, a shut-in well in a Category 4 hurricane has an estimated 2% probability of a blowout).

A weather forecast for the next round is provided to oil company players in their operating results reports. They have to decide whether to continue operating or shut down for the next round. (Keep in mind that weather forecasts are not 100% reliable. Actual weather can be worse – or better – than forecast.)

Management Decisions

In each round of the simulation, you need to make the following management decisions:

- Whether to operate, shut-in, or overhaul the blowout preventer.
- How much crude oil to produce
- How much to spend on maintenance
- How much to spend on safety programs
- Hiring, firing and training rig workers
- Respond to any round-specific ethical challenges posed by your instructor.
To be successful, you will need to develop a strategy to guide your decisions. Ad-hoc decision-making in this simulation, as in the real business world, rarely results in success.

Players enter their management decisions online. **There are hard and fast deadlines for entering your simulation decisions! You should set a reminder in your cell phone or online calendar so you don’t forget!**

**Management Reports**

The outcome of each round of the simulation is communicated to company management through an Operations and Financial Report and a Market Report. Sign on to Deepwater and download your reports for the round. Note that once the next round closes, the reports for the previous round are no long available!

**Operations and Financial Report**

- Your simulation management decisions for the round as recorded by the simulation system.
- The operating status of your rig.
- Number of barrels of crude produced
- The operating condition of the rig, number of rounds your BOP has been in service and what (if any) pollution control equipment you've installed.
- Count of crew and their disposition.
- Information on the social impacts of your operations, including crew injuries and fatalities, safety violations, carbon footprint and social cost.
- Deadline for next round.
- Actual price per barrel
- An operating income statement for the rig showing operating revenues and expenses, operating margin and net income to-date in the simulation.
- Simplified balance sheet
- Current weather and forecast for the next round
- Historical graph of crude oil prices and actual price for the current round.

**Market Report**

- This report lists all teams (companies) and oil rigs in the simulation with information about each.
Registering and Paying for Deepwater

Register and play the simulation game online at: www.deepwatersim.com

*Note: The screen shots provided here are for illustrative purposes only; actual web pages may differ.

Registering

Click on the "New Students" button to begin the registration and payment process.

Complete the Student Registration form. You must register with the Class Code given to you by your instructor. If you have a Purchase Key (usually provided if you purchased Deepwater from your campus bookstore), enter it also.

Then click on the "Register!" button. You can now sign in to Deepwater and edit your profile.

Payment

Payment of a subscription fee is required in order for you to participate in the Deepwater simulation.

If you purchased Deepwater from your campus bookstore, use the Purchase Key in your Deepwater packet when you register. If your access is prepaid by your department, you will receive a Purchase Key from your instructor.

To purchase access directly from R² Simulation Technologies log onto the Deepwater website and click on the "PayNow" button. This will take you to the PayPal site, where you can use a credit card, debit card or pay with your PayPal account. Once your transaction is successfully processed you will then be able to log on to Deepwater and play the simulation game.
Your Deepwater Home Page

Once you have paid the subscription fee, you have access to the Deepwater home page. Your rig assignment and team will appear here once your instructor has setup the simulation game.

From this page, you can access all the functionality you need to play the simulation: check the simulation calendar, view company details, make management decisions and view or export reports.

Checking the Simulation Calendar

The Calendar & Announcements page shows the deadlines for each round in the simulation and any simulation announcements posted by your instructor.

Gray boxes indicate closed (past) rounds, the pink box is the current decision round, and white boxes are future rounds.

Entering Rig Decisions

The Rig Decision page allows the team leader to enter management decisions for the current round. (If you are playing as an individual, and not part of a team, you are automatically the team leader.)

Other members of the team can view the team leader's decisions, but cannot change them.

For any given round, decisions must be entered before the deadline. Decisions entered after the deadline will be ignored and your oil rig will be shut-in for the round – that is, it will produce no crude oil, generate no revenue yet still incur significant expenses.

Decisions for any given round may be entered at any time up until the deadline. Don't wait until the last minute. Enter your decisions early!
Successfully entering decisions triggers a confirmation email. This email will be sent to both you and your instructor. It will contain the details of your decisions and will confirm that your decisions have been successfully received by Deepwater.

Opening and reading this confirmation email is a critical step in the process of entering your decisions. If you do not receive this email, your decisions have not actually reached the Deepwater system.

If the email does not arrive within 15 minutes of submitting your decisions you should: a) check your spam folder and b) make sure the email address in your Deepwater profile is correct.

To prevent the confirmation email from being treated as spam, you can white list donotreply@businessethicssimulation.com in your email client.

Once this confirmation email has arrived in your mailbox, you should check its contents to verify that Deepwater has received exactly the decisions you intended to submit.

If you do not receive the confirmation email, or its contents do not match your intended decisions, you must log back onto www.deepwatersim.com and resubmit your decisions.

Deepwater is responsible for decision entry errors ONLY when a) you receive a confirmation email and b) the decisions actually processed by Deepwater differ from the decisions reported in the confirmation email.

Remember: You have not successfully submitted your decisions to Deepwater UNTIL you receive a confirmation email that verifies the decisions you intended to make.

Round Results and Reports

After a round ends, you can view reports showing both your team's own results and your competitor's results. Go to the home page and click on the "Reports" links.