

PERSPECTIVES I

THE NATURAL HISTORY OF OIL

BEFORE YOU CAN BEGIN TO EVALUATE THE VALUE OF HYDROCARBON RESOURCES IN THE ARCTIC NATIONAL WILDLIFE REFUGE, YOU NEED TO DEVELOP A SENSE OF WHAT OIL DEPOSITS ARE AND HOW THEY FORM.

IN THESE TWO VERY BASIC READINGS, YOU'LL EXPLORE THE ORGANIC CHEMISTRY OF OIL AND LEARN MORE ABOUT HOW, ONCE FORMED, OIL CONCENTRATES INTO ECONOMICALLY VIABLE DEPOSITS.

WHILE THESE READINGS FOCUS ON FACTS AND OBSERVATIONS ABOUT PETROLEUM, YOU SHOULD THINK ABOUT THEM AS PROVIDING BACKGROUND FOR OUR SEPTEMBER 15 DISCUSSION ABOUT THE GLOBAL DISTRIBUTION OF PETROLEUM RESOURCES. TO BE AN ACTIVE PARTICIPANT THAT DAY, YOU'LL HAVE TO GO BEYOND THESE READINGS. COME TO CLASS THAT DAY ARMED WITH MAPS SHOWING THE LOCATIONS OF MAJOR OIL FIELDS, AND WE'LL DISCUSS WHY OIL IS FOUND WHERE IT IS. WHAT ARE THE IMPLICATIONS OF A NON-UNIFORM DISTRIBUTION OF OIL WITHIN THE EARTH SYSTEM WITH REGARD TO THE DESIRABILITY OF EXPLOITING THE ANWR RESERVES?

ONE OF THE MOST EXCITING DEVELOPMENTS IN OIL EXPLORATION OVER THE PAST FEW DECADES IS THE CAPACITY TO DEVELOP THREE-DIMENSIONAL IMAGES (ABOVE) OF OIL RESERVOIRS DEEP WITHIN EARTH BASED ON THE PROPAGATION CHARACTERISTICS OF SOUND ("SEISMIC") WAVES. IF YOU ARE INTERESTED IN FURTHER READING, FOLLOW [THIS LINK](#) TO DOWNLOAD A COPY OF A PAPER ON THE SUBJECT BY LIDIA LONDERGAN AND NICKY WHITE, PUBLISHED IN THE **PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY OF LONDON**.