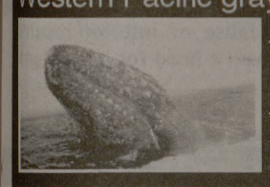
Whale behaviors unaffected by oil drilling

The Sakhalin oil fields, located in Russia's Sea of Okhotsk, contains an estimated 2.3 billion barrels of oil and 17 trillion cubic feet of natural gas.

Western Pacific gray whales



- The world's most endangered whales
- Numbered at less than 100 worldwide

TRAVIS SWENSON • THE BATTALION
SOURCE: THE LOS ANGELES TIMES

By Robert Stackhouse
THE BATTALION

A Texas A&M Galveston study provides evidence that undersea oil and gas exploration has not seriously altered western gray whales' living and feeding behaviors in the waters around Northern Russia's Sakhalin Island, though the point is still debated by conservationists.

Dr. Bernd Wursig, a professor of marine biology at Texas A&M at Galveston, has studied a population of western gray whales over five years, and concluded that oil and gas drilling does not affect the highly endangered species.

"The main purpose was to find the number and habitat usage of western gray whales," Wursig said.

With a limited population of surviving whales, people in the oil and gas industry and environmental groups are concerned about the survival of western gray whales.

These whales are a very endangered species, with only around one hundred left in the world. Disturbing this fragile environment is a concern, but day-to-day behavioral patterns of the whales are negligibly affected by oil and gas operations, Wursig said.

"(The whales) are affected to a degree, but they continue to use that habitat (where oil and gas exploration is ongoing,," he said.

The data supporting his contention – the idea that drilling operations and the world's most endangered whale species can peacefully co-exist – was collected using surveying instruments and global positioning systems.

Such information can provide insight into the behavioral patterns of whales of both a survival and social nature. The surveying techniques Wursig and his group used found specific information on whales' depth, distance from shore, and spacing from each other, he said.

By modeling the whales' positions in three dimensions, researchers can determine if feeding habits are being disrupted by oil operations.

A photographic record of whales can help determine their lifespan, since each whale has its own unique markings, which can be used to identify them over time.

"We go out on a Zodiac inflatable boat to photo-identify each whale. A photo record can say something about longevity," Wursig said.

Whales may also be tracked through their DNA. Samples are taken using a harpoon resembling a crossbow, which are then biopsied and recorded.

But Richard Charter, a marine conservation advocate with the Oceans Program of the Environmental Defense Organization said oil operations are hazardous to whale populations, despite the fact that their feeding and behavioral patterns have not changed.

"There has been an ongoing controversy about the effects of seismic survey activities on whale populations," he said.

The instruments used to conduct seafloor oil deposit surveys are believed by some to be harmful to whales, also.

Oil exploration uses high frequency sound waves directed at the ocean floor to determine the size of oil and gas deposits under the ocean. Seismic impulses such as these have been linked to whales found beached near oil exploration sites, Charter said.

According to an article by the Los Angeles Times, seismic research conducted by the National Science Foundation is being held responsible for the deaths of two beached whales.

Wursig said his reasearch has yet to address the effects of seismic survey techniques on whales.

Wursig's research has been funded in large part by the oil industry.

"The major ones have been Exxon and S.E.I.C," Wursig said.

Though Dr. Wursig's research shows that the day-to-day operations of offshore platforms are not altering the behavior of the western gray whales, it remains to be seen whether the seismic activity portion of oil exploration is harmful to the whales.

NASA e-mails reveal pre-disaster saftey uncertainties

By Ted Bridis
THE ASSOCIATED PRESS

WASHINGTON — One day before the Columbia disaster, senior NASA engineers worried the shuttle's left wing might burn off and cause the deaths of the crew, describing a scenario much like the one investigators believe happened.

They never sent their warnings to NASA's brass, according to dozens of pages of e-mails NASA released Wednesday.

"Why are we talking about this on the day before landing and not the day after launch?" wrote William C. Anderson, an employee for the United Space Alliance LLC, a NASA contractor, less than 24 hours before the shuttle broke apart.

Two days earlier, one frustrated engineer asked, "Any more activity today on the tile damage or are people just relegated to crossing their fingers and hoping for the best?"

After intense debate — occurring by phone and e-mails — the engineers, supervisors and the head of the space agency's Langley research facility in Hampton, Va., decided against taking the matter to top NASA managers.

Jeffrey V. Kling, a flight controller at Johnson Space Center's mission control, foresaw with haunting accuracy what might happen to Columbia during its fiery descent if superheated air were allowed to penetrate the wheel compartment.

Kling wrote just 23 hours before the disaster that his engineering team's recommendation in such an event "is going to be to set up for a bailout (assuming the wing doesn't burn off before we can get the crew out)." Kling the following day was among the first in mission control to report a sudden, unexplained loss of data from the shuttle's sensors in the left wing.

> *"Why are we talking about this on the day before landing and not the day after launch?"*
>
> — William C. Anderson
> NASA contractor

The e-mails describe a far broader discussion about the risks to Columbia than the concerns first raised three days earlier by Robert Daugherty, a NASA senior research engineer at Langley. He was concerned most about the safety of the shuttle landing with flat tires or wheels damaged from extreme heat.

Daugherty was responding to questions on Jan. 27 from Carlisle Campbell, a NASA engineer at Johnson Space Center, about how re-entry heat could damage the shuttle's tires. One day into the debate, Daugherty expressed frustration to Campbell about the apparent lack of interest with his remark about keeping fingers crossed.

Among the messages was one from Daugherty's boss at Langley, Mark J. Shuart, to another Langley supervisor, Doug Dwoyer, describing Daugherty as "the kind of conservative, thorough engineer that NASA needs."

One e-mail, from R.K. "Kevin" McCluney, a shuttle mechanical engineer at Johnson Space Center, described the risks that could lead to "LOCV" — NASA shorthand for the loss of the crew and vehicle. But McCluney ultimately recommended to do nothing unless there was a "wholesale loss of data" from sensors in the left wing, in which case controllers would need to decide between a risky landing or dangerous bailout attempt.

"Beats me what the breakpoint would be between the two decisions," McCluney wrote.

Investigators have reported such a wholesale loss of sensor readings in Columbia's left wing, but it occurred too late to do anything — after the shuttle was already racing through Earth's upper atmosphere and moments before its ultimate demise