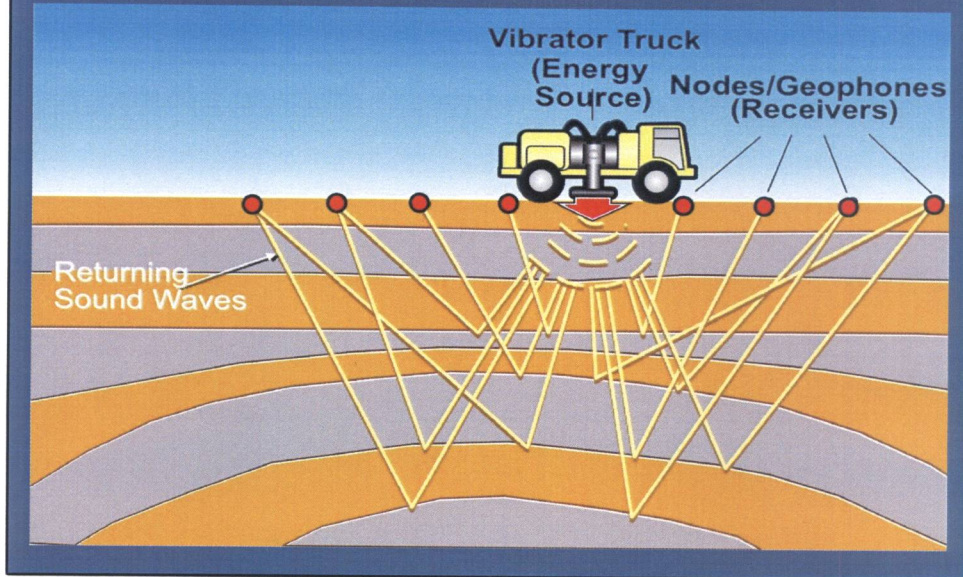




Long Beach – Signal Hill Geophysical Survey

Pilot Phase

Seismic Imaging of the Earth's Crust



Survey Truck

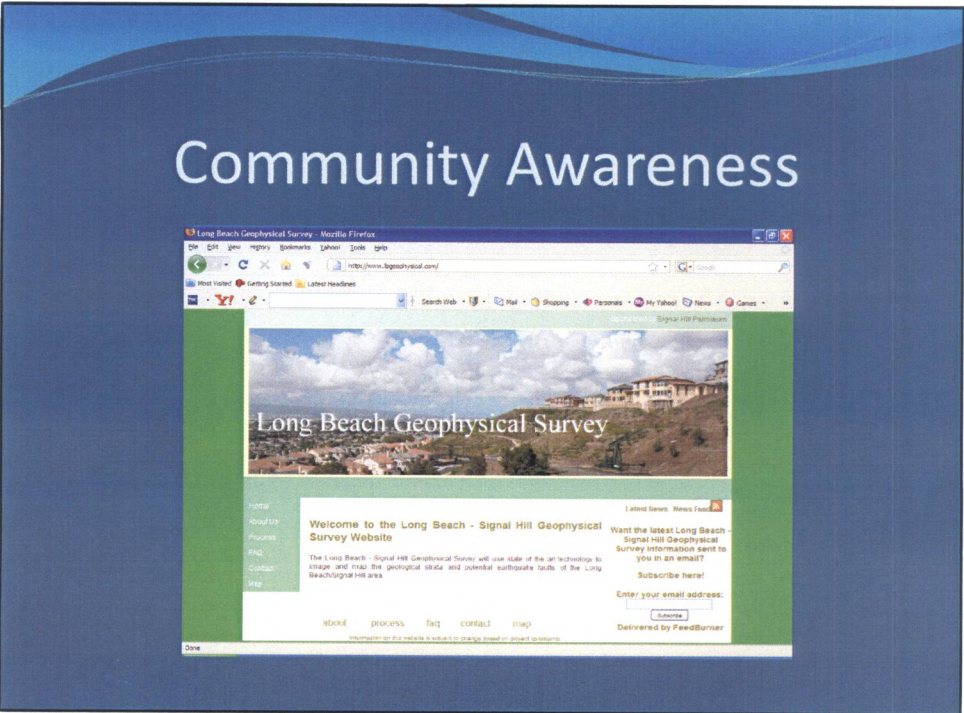
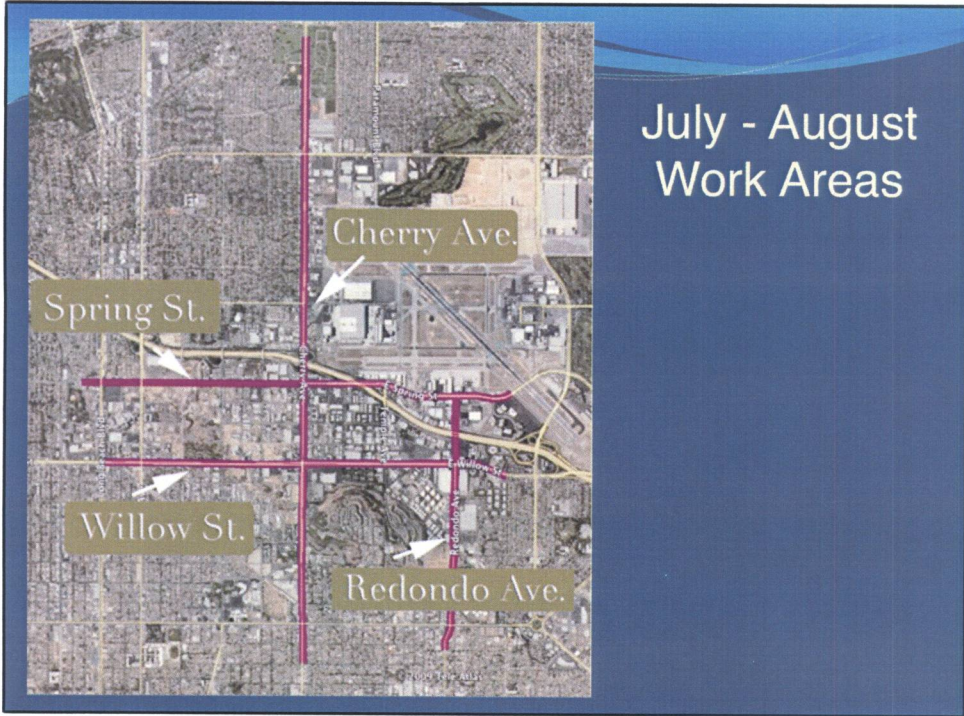


Prototype Technology
"ZLand" Recording System



Industry Best Technology
"BOX" Radio Link Recording System





Project Schedule

- 7 – 10 work days for survey trucks
- No survey truck operations on weekends
- Survey truck operations only on major streets
- Planned start date late July 2009

Public Benefits

- Revenue Increase to City
 - Oil taxes and fees
 - City's ownership share of oil produced
- Local economic stimulus and addition of jobs
- Increased understanding of earthquake faults



Long Beach–Signal Hill Geophysical Survey

Project Contacts:

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Web Address

www.lbgeophysical.com



SURVEY LOCATION MAP

The Long Beach - Signal Hill Geophysical Survey will take place in the cities of Long Beach and Signal Hill, along the major streets Cherry Ave., Willow St., Spring St., and Redondo Ave.

CONTACT INFORMATION

General Information & Project Schedule:
Seismic Imaging Solutions Company, LLC

(562) 326-5186

24 Hour Emergency Contact:

Signal Hill Petroleum, Inc.

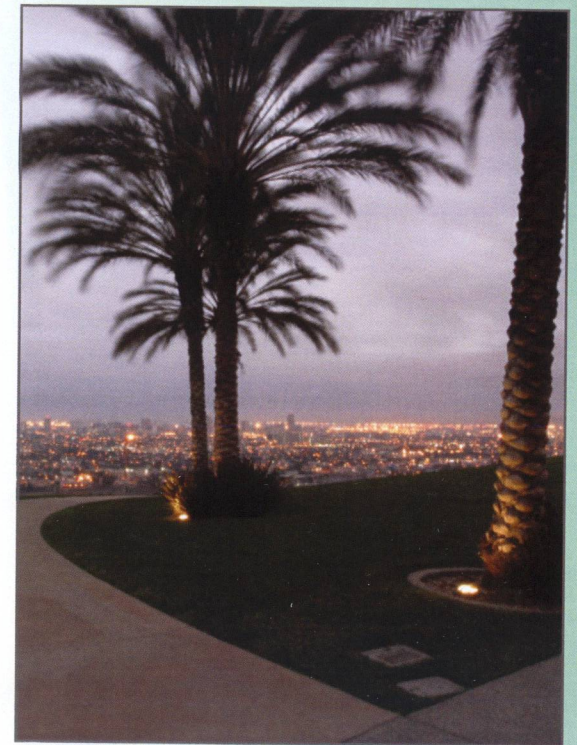
(562) 595-6440

Website:

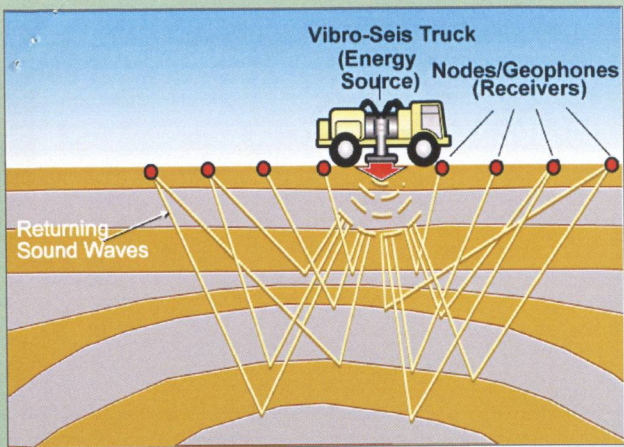
www.lbgeophysical.com

LONG BEACH - SIGNAL HILL GEOPHYSICAL SURVEY
2633 CHERRY AVE.
SIGNAL HILL, CA 90755

LONG BEACH - SIGNAL HILL Geophysical Survey



INFORMATION



WHAT A GEOPHYSICAL SURVEY LOOKS LIKE

Vibro-Seis trucks perform an acoustic test to create maps of the underground. A line of geophones records the acoustic test.

Examples of a geophone and a truck to be used in this survey are shown below.



Long Beach - Signal Hill Geophysical Survey

WHAT IS THE LONG BEACH - SIGNAL HILL GEOPHYSICAL SURVEY?

The Survey will use state of the art technology to image and map the geological strata and potential earthquake faults of the Long Beach/Signal Hill area.

HOW DOES IT WORK?

The technology used to image the subsurface geological strata uses specialized trucks to input acoustical energy into the ground. The acoustic waves generated are very subtle, but can penetrate deep into the earth. The different geological strata generate reflections as the acoustic wave passes by. These acoustic reflections can be detected by very sensitive and specialized microphones called "geophones" that are placed in the ground. The geophones are connected to a data recording device. The raw data that is recorded is processed by highly sophisticated computer programs that generate a three dimensional image of the earth's crust.

HAS THIS TYPE OF SURVEY BEEN DONE BEFORE?

Yes. Multiple geophysical surveys have been conducted in the Long Beach/Signal Hill area in the past. The most recent survey was in the middle 1980's. The past surveys used older technology that could only develop a low resolution image of the earth's crust.

WHAT IMPACT WILL THE SURVEY EQUIPMENT HAVE?

The survey trucks will operate mostly on public streets utilizing larger, commercial thoroughfares. The trucks may operate off street on commercial sites and vacant land with permission of the owners. The trucks create a momentary minor surface vibration when they input acoustic energy into the ground. The trucks will operate at any one location for 10 minutes or less. Technicians will monitor surface ground vibration with digitally recording meters whenever the trucks are operating. Geophones will be placed along street right of ways in landscape area and tree wells. Some geophones may be placed on private property with the owner's permission.

WHO IS PERFORMING THE STUDY?

The study will be done by Seismic Imaging Solutions Company, LLC who owns and operates the specialized equipment required to obtain survey data. The survey is sponsored by Signal Hill Petroleum, Inc.

WHY IS THE STUDY BEING PERFORMED?

The information obtained will provide an unprecedented understanding of the deeper geology and potential earthquake faulting in the area of the survey. The Survey team is working with several universities and government agencies and will share the survey data for academic and scientific research of potential earthquake faults. This information will also give a better understanding of the additional resource potential of the Long Beach/Signal Hill area.

WHAT IS THE PROJECT SCHEDULE?

The project is scheduled to take place early this summer. A final schedule will be issued (and available on the project website) after all city and landowner permits are obtained. The project trucks will work on public streets typically Monday through Friday during normal business hours. The geophones will remain in place 24 hours per day for multiple days at any one location.

WHAT STREETS WILL THE EQUIPMENT WORK ON?

Please refer to the map at the back of this brochure.

WHO DO I CONTACT FOR MORE INFORMATION?

The project manager can be contacted during normal business hours at (562) 326-5186. Additional information, including schedule updates is available on the project website. Emergencies can also be reported to Signal Hill Petroleum any time at (562) 595-6440.