



US006388948B1

(12) **United States Patent**
Vincent et al.

(10) **Patent No.:** US 6,388,948 B1
(45) **Date of Patent:** May 14, 2002

(54) **METHOD AND SYSTEM FOR DETERMINING UNDERWATER EFFECTIVE SOUND VELOCITY**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(57) **ABSTRACT**

A method and system for determining the effective sound velocity between a source of sound energy located at an initial depth Z_S and an actual target located at another depth. A system utilizing a device such as a computer or micro-processor is used for implementing the method of the present invention. An effective sound velocity ("ESV") matrix is generated wherein ESV values are a function of actual target depth and actual target elevation angle. The ESV matrix is then used to determine the ESV between a source of sound energy located at an initial depth Z_S and an actual target located at any depth between Z_S and a final target depth Z_T .

(21) Appl. No.: **09/688,473**

(22) Filed: **Oct. 12, 2000**

(51) **Int. Cl.**⁷ **G01S 15/88**

(52) **U.S. Cl.** **367/89**

(58) **Field of Search** 367/89, 902

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20 Claims, 8 Drawing Sheets

