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

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(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 .

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

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

(56) **References Cited**

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20 Claims, 8 Drawing Sheets

