



US006021664A

# United States Patent [19]

[11] Patent Number: **6,021,664**

Granato et al.

[45] Date of Patent: **Feb. 8, 2000**

[54] **AUTOMATED GROUNDWATER MONITORING SYSTEM AND METHOD**

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[21] Appl. No.: **09/015,214**

[22] Filed: **Jan. 29, 1998**

[51] Int. Cl.<sup>7</sup> ..... **G01N 11/00; E21B 49/00; E21B 47/00; E02B 11/00**

[52] U.S. Cl. .... **73/53.01; 73/152.18; 166/264; 210/170**

[58] Field of Search ..... **73/53.01, 152.29, 73/152.18, 863.01, 864.34, 49.2; 166/264, 68, 105, 107, 369; 175/59; 417/44.11; 210/170, 198.2**

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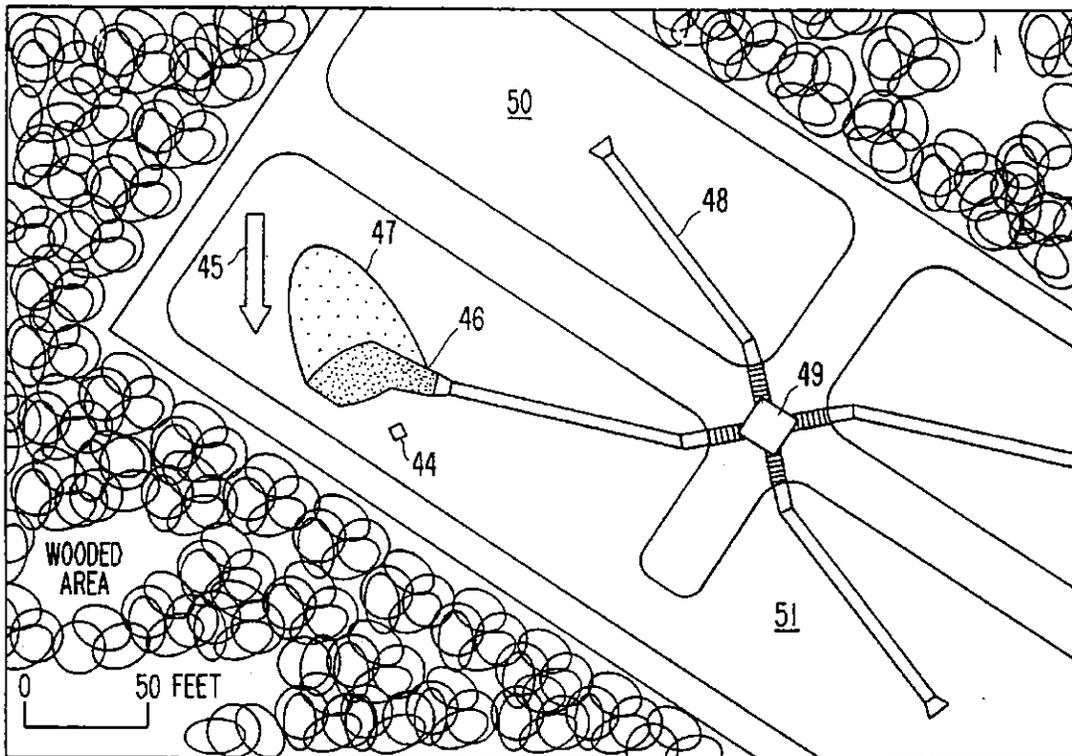
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[57] **ABSTRACT**

A method of monitoring the quality of water at a ground water sampling site without human intervention. Water at the sampling site is purged until at least one preselected purge criterion is satisfied. At least one water quality attribute is automatically measured at the sampling site, and the quality of water at the site is determined based on the measured water quality attribute. The method is performed by a system including a control unit which, in accordance with a computer program, controls the taking of water quality attribute measurements at the sampling site. The control unit may be equipped with a port for downloading data to a technician on site and with a transceiver for communicating data to a base station via a communications network.

**46 Claims, 20 Drawing Sheets**



U.S. GEOLOGICAL SURVEY TOXIC SUBSTANCES HYDROLOGY PROGRAM RESEARCH SITE, MASSACHUSETTS MILITARY RESERVATION, CAPE COD, MASSACHUSETTS