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(54) Title: TERRAIN-BASED AUTOMATED DETECTION OF WELL PADS AND THEIR SURROUNDINGS

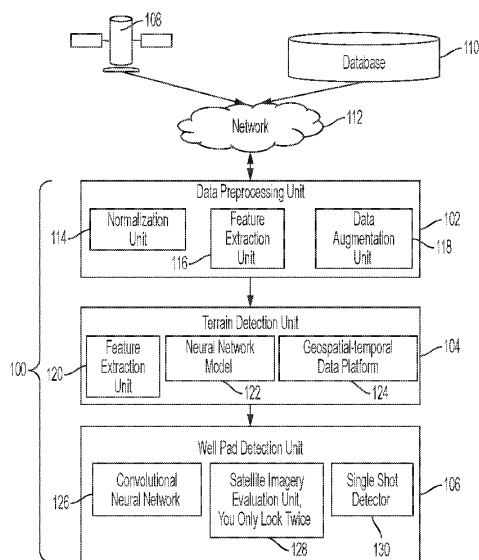


FIG. 1

(57) Abstract: Aspects of the invention include detecting, using a first machine learning model, a first well pad at a first location based at least in part on a first set of data comprising spectral data describing a gas emission from the first location. Detecting an environmental event within a threshold distance of the well pad. Determining a probability of damage to the first well pad from the environmental event.

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