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[Continued on next page]

(54) Title: NUCLEAR SPECTROSCOPY CORRECTIONS USING MULTIPLE STANDARDS AND SPATIAL REGIONS

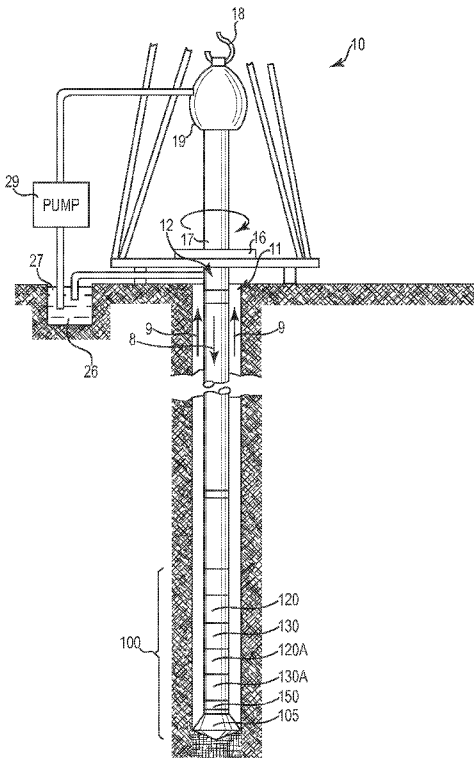


Fig. 1

(57) Abstract: A method for estimating an aspect of a formation using a nuclear spectroscopy tool includes placing a nuclear spectroscopy tool including a neutron source and a gamma ray detector into a borehole and performing a plurality of environmental measurements. Neutrons are emitted from the nuclear spectroscopy tool such that some of the neutrons generate gamma rays from a formation adjacent the nuclear spectroscopy tool, some of the neutrons generate gamma rays from elements within the nuclear spectroscopy tool and some of the neutrons generate gamma rays from an element in the drilling mud. An energy spectrum of gamma rays induced by the emitted neutrons can be detected with the tool and analyzed using a combination of standard spectra including at least two sub-standards that represent a common element or group of elements and that are differentiated based on location of neutron interaction, such as where the neutrons thermalize.



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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 145 814 A (SCHLUMBERGER LTD) 3 April 1985 (1985-04-03) page 1, line 7 - line 14 page 1, line 91 - line 115 page 2, line 2 - line 103 page 6, line 4 - page 7, line 56; figures -----	1-3, 6-12, 15, 18-20
A	FR 2 790 835 A1 (SCHLUMBERGER SERVICES PETROL [FR]) 15 September 2000 (2000-09-15) page 12, line 19 - page 13, line 18 page 16, line 13 - page 19, line 30; figures ----- -/--	1,20
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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