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(54) Title: MODELING GEOLOGIC SURFACES USING UNILATERAL NON-NODE CONSTRAINTS FROM NEIGHBORING SURFACES IN THE STRATIGRAPHIC SEQUENCE

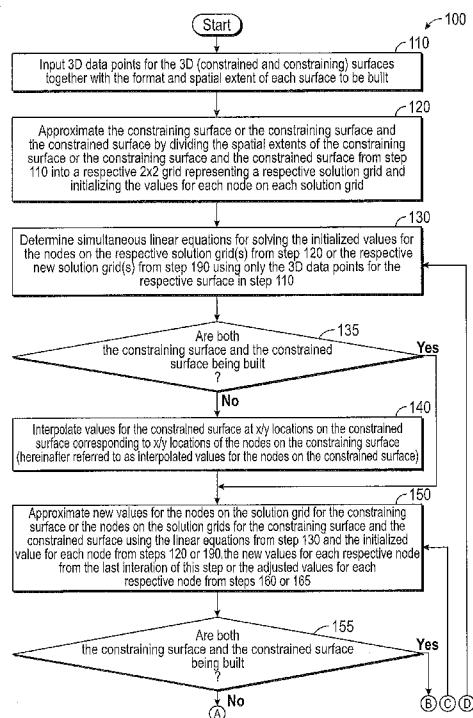


FIG. 1A

(57) Abstract: Systems and methods for modeling three-dimensional ("3D") geologic surfaces, which represent a constraining surface and a constrained surface, in a stratigraphic conforming relationship that do not intersect or overlap. The method builds 3D surface models that represent constraining and constrained surfaces in a stratigraphically conforming relationship that do not intersect each other or overlap. In an embodiment, 3D data points from the constrained surface may be used as maxima or minima while building the constraining surface. In this manner the constraining surface will not have any 3D data points from the constrained surface on both sides of it. In another embodiment, both the constraining and constrained surfaces are built simultaneously so that they can be used as mutual minima or maxima and prevent their intersection or overlap.