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PEOPLE'S REPUBLIC OF CHINA**

GB/T 9151-2023

Terms of drilling engineering

钻探工程术语

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents" Drafting. This document replaces GB/T 9151-1988 "Drilling Engineering Terminology". Compared with GB/T 9151-1988, except for structural adjustment and compilation In addition to editorial changes, the main technical changes are as follows:

- a) "Basic terminology" (see Chapter 3, Chapter 2 of the 1988 edition) has been changed, and "Drilling Methods" (see Chapter 3 of the 1988 edition), Incorporation of relevant terms for "drilling and drilling" (see Chapter 5 of the 1988 edition);
- b) Changed the terms related to "rock drilling characteristics" (see Chapter 4, Chapter 4 of the 1988 edition);
- c) The terms related to drilling technology and drilling parameters have been changed (see Chapter 10 of the 1988 edition), and the terms related to drilling technology have been included in the "drilling technology" "Drilling Method" (see Chapter 5), and incorporate terms related to drilling parameters into "Drilling Technology" (see Chapter 9);
- d) Changed the terminology related to "drill bit" (see Chapter 6, Chapter 8 of the 1988

edition);

e) Changes in terms related to "drilling equipment" (see Chapter 8, Chapter 6 of the 1988 edition);

f) "Sampling methods and tools" (see Chapter 13 of the 1988 edition) were changed, and terms related to sampling methods were included in "drilling technology" (see Chapter 13 of the 1988 edition) Chapter 9), incorporating terms related to sampling tools into "drilling tools" (see Chapter 7);

g) "Borehole deflection and measurement" (see Chapter 14 of the 1988 edition) and "Directional Drilling" (see Chapter 10 of the 1988 edition) have been changed. Chapter 15) related terms;

h) Changed the relevant terminology of "borehole flushing" (see Chapter 11, Chapter 11 of the 1988 edition);

i) Combine "well formation technology" (see Chapter 17 of the 1988 edition), "engineering geological drilling" (see Chapter 18 of the 1988 edition) and "engineering construction". "Hydraulic drilling" (see Chapter 19 of the 1988 edition) was changed to "Hydraulic ring geological drilling" (see Chapter 14);

j) Replace "management" (see Chapter 21 of the 1988 edition), "technical and economic indicators" (see Chapter 22 of the 1988 edition), "operational technology" (See Chapter 23 of the 1988 edition) changed to "Drilling Engineering Management" (see Chapter 15);

k) Added terms related to "ancient Chinese drilling" (see Chapter 16). Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed by the Ministry of Natural Resources of the People's Republic of China. This document is under the jurisdiction of the National Natural Resources and Land Spatial Planning Standardization Technical Committee (SAC/TC93). This document was drafted by: Institute of Exploration Technology, Chinese Academy of Geological Sciences, China University of Geosciences (Wuhan), China University of Geosciences (Beijing), Beijing Institute of Exploration Engineering, China Geological Survey Hydrogeological and Environmental Geological Survey Center, China Geological Equipment Group Co., Ltd. The main drafters of this document. Liu Xiumei, Jiang Guosheng, Liu Baolin, Li Yi, Tao Shixian, Zheng Jitian, Jia Jun, Wu Xiang, Zhu Jianglong, Zhang Wei, Zhang Yongqin, Wang Yu, Gao Fuli, Li Guomin, Sun Jianhua. The previous versions of this document and the documents it replaces are as follows:

---First published as GB/T 9151-1988 in 1988;

1 Scope

GB/T 9151-2023 is the Chinese vocabulary of drilling engineering - the exploratory and

engineering drilling of geology, mining, water and foundations, as distinct from petroleum drilling. It replaces a vocabulary from 1988, and the intervening decades brought directional drilling, wireline coring and modern flushing and plugging practice into ordinary use, none of which the old terminology covered. The standard defines the basic terms, then the terms of rock drillability, drilling methods, bits, drilling tools and strings, directional drilling, borehole flushing, wall stabilisation and lost circulation control, downhole accidents, hydrogeological and engineering geological drilling, and drilling project management, closing with a section on the terms of ancient Chinese drilling, the percussion technique that reached over a kilometre in the Sichuan brine fields centuries before Western rotary drilling. It took effect on 1 January 2024.

This document defines terms commonly used in drilling engineering. This document is applicable to other areas of geological drilling engineering and natural resource exploration.

2 Normative reference documents

This document has no normative references.

3 Basic terminology

3.1 borehole; drillhole; hole A cylindrical hole drilled in the formation to explore underground resources and geological conditions or to meet other engineering needs.

3.1.1 elementsofborehole Factors characterizing borehole structure, size and morphology.

3.1.1.1 boreholeaxis boreholeaxis The centerline of the drilled hole.

3.1.1.2 boreholetrajectory The path the drill hole extends.

3.1.1.3 orifice boreholehead The open end of the drilled hole.

3.1.1.4 boreholebottom Drill the end of the hole.

3.1.1.5 boreholediameter The diameter of the borehole cross-section.

3.1.1.6 hole depth boreholelength The length of the drilling axis.

3.1.1.7 hole wall boreholewal The side surface of the drilled hole.