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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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Replacing GB/T 35206-2017

Thin section examination of shale and mudstone

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents"

Drafting.

This document replaces GB/T 35206-2017 "Identification of thin sections of shale and mudstone". Compared with GB/T 35206-2017, except for the structure In addition to adjustments and editorial changes, the main technical changes are as follows.

- a) The scope of application has been changed (see Chapter 1, Chapter 1 of the 2017 edition);
- b) Added the technical specifications of "fluorescence system" and instruments and equipment (see 4.1);
- c) The content of "Reagents" has been changed (see 4.2, 4.2 of the 2017 edition);
- d) Added content on "solid organic matter", "oil content" and "acid drop reaction" for visual observation of rock specimens (see 5.1);
- e) Modified some content on "Rock Thin Section Identification" (see 6.1, 6.1 of the 2017 edition);
- f) Modified some content of "Thin Section Identification of Rock Casts" (see 6.2, 6.2 of the 2017 edition);
- g) The nomenclature of shale and mudstone has been modified (see Chapter 7, Chapter 7 of the 2017 edition);
- h) Added "Quality Requirements" (see Chapter 9);
- i) Change the "Schematic diagrams of common special structures" from a normative appendix to an informative appendix (see Appendix A, Appendix A of the 2017 edition).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed and coordinated by the National Natural Gas Standardization Technical Committee (SAC/TC244).

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This document was first published in 2017 and this is the first revision.

1 Scope

This document specifies the equipment and reagents, identification procedures, identification content, nomenclature, identification report and quality for shale and mudstone thin section identification. Require.

This document is applicable to the identification of shale and mudstone thin sections in shale oil and gas exploration and development.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

SY/T 5368 Rock thin section identification SY/T 5788 Specification for geological logging of oil and gas wells SY/T 5913 Rock slice preparation method

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 shale

Rocks are formed by the consolidation of clastic sediments with a particle size less than 0.0625 mm and a content greater than 50%, and have lamination and foliation structural characteristics.

3.2 mudstone

It is formed by the consolidation of clastic sediments with a particle size of less than 0.0625 mm and a content of more than 50%, and has no lamination and foliation structural characteristics. rock.

4.1 Equipment

4.1.1 A polarizing microscope with low, medium, and high magnification objectives and a

photographic acquisition system should be provided, and a fluorescence system is preferred.

4.1.2 Polarized microscope objective lens. low magnification (1x or 1.25x, 2.5x), medium magnification (4x or 5x, 10x), high magnification (20x or 40x, 50x) times, 63 times).

4.1.3 Fluorescence system. UV or blue, green excitation fluorescence filter set with fluorescence color separator holder.

4.2 Reagents

4.2.1 Alizarin Red-S ($\text{C}_{14}\text{H}_7\text{NaO}_7\text{S}$). analytical grade.

4.2.2 Potassium ferrocyanide ($\text{K}_3[\text{Fe}(\text{CN})_6]$). analytical grade.

4.2.3 Hydrochloric acid (HCl). analytical grade.