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**Press Releases** 



NANOMALAYSIA BHD AND MY SYNERGY FACTORS (M) SDN BHD LAUNCH SYNERGY 10AS NANO, HPHT FLUID LOSS ADDITIVE FOR DRILLING APPLICATIONS IN THE OIL AND GAS INDUSTRY

Friday 25/11/2022

Graphene-Carboxymethyl Sago-Starch (Graphene-CMSS)-based fluid loss additive is an innovative, green, and cost-effective replacement for commercially available additives today.

**KUALA LUMPUR, Nov 25 (Bernama)** -- NanoMalaysia Bhd (NMB) today, announced the launch of its revolutionary and patented drilling fluid, fluid loss additive **Synergy 10AS Nano** following a successful four-year test and development phase aligning to the Malaysia's National Energy Policy to reduce carbon emission via energy efficiency improvements.

KUALA LUMPUR, Nov 25 (Bernama) -- NanoMalaysia Bhd (NMB) today, announced the launch of its revolutionary and patented drilling fluid, fluid loss additive Synergy 10AS
Nano following a successful four-year test and development phase aligning to the Malaysia's National Energy Policy to reduce carbon emission via energy efficiency improvements.

As an effort to further reduce energy consumption in the country's oil and gas industry, the scale-up of the "Graphene-Carboxymethyl Sago Starch (CMSS)-based fluid loss additives for drilling fluid application" project, or Graphene-CMSS, was a collaboration between NMB, MY Synergy Factors (M) Sdn Bhd (MSF), and Universiti Teknologi PETRONAS (UTP) with an investment of about RM1.75 million under the National Graphene Action Plan (NGAP) 2020 which focuses on developing graphene-based technologies by collaborating with Malaysian industries and universities through NanoMalaysia's Venture Builder Model.

There are at least two sustainability angles to the said technology. Locally produced CMSS

is infused with graphene to form the main component of Synergy 10AS Nano. CMSS contains a biodegradable and environmentally friendly product of the native sago starch, while graphene improves the thermal conductivity of the resultant additive which can be produced by cracking waste bio-gas.

Synergy 10AS Nano is developed to resolve the high cost of drilling operations to control the fluid-loss properties of drilling fluids (DF) at high pressure, high temperature (HPHT) and customer demand for HPHT DF loss additive products at a competitive price. Synergy 10AS Nano is benchmarked on PETRONAS Technical Standards. Synergy 10AS Nano is proven to perform well under geothermal conditions of 175°C to 350°C and enhance rheological and filtration loss properties. It can also be up to 40 per cent cheaper than its competitors.

Elaborating on the success of Synergy 10AS Nano, Dr. Rezal Khairi Ahmad, Chief Executive Officer of NMB, said, "We are extremely proud to announce the launch of the Synergy 10AS Nano, a Malaysian product developed under the National Graphene Action Plan (NGAP) to address the need to improve energy efficiency in the oil and gas sector. Using CMSS as one of the main components makes it an environmentally friendly and cost-effective replacement for drilling fluid products currently available in the market providing a circular economy twist to it. Notwithstanding the foresight on the need for this technology in the oil and gas industry few years ago, it is also a timely and clear pioneering response to the National Energy Policy launched earlier in September this year which prioritizes energy efficiency as the country's immediate step towards reducing carbon emission."

"We are confident that Synergy 10AS Nano will see quick acceptance by all the major players in the oil and gas industry, as it is a product that meets and exceeds industry standards," says Agus Sahar, Managing Director of MSF, "Furthermore, as our additives are produced locally, there will be a shorter lead time as conventional additives have to be imported."

The venture's current production capacity is up to 10 MT per month. It is running performance tests at clients' facilities ahead of actual field trials for the industry and will be followed by verification and improvements based on individual client's requirements.

In the near term, the venture will focus on locally established drilling projects, a specific addressable market with an annual growth rate of five to eight per cent, and worth around RM350 million. Expanding plans through collaboration with regional international companies are expected to help the country achieve its goal of increasing the Gross Domestic Product

(GDP) to RM3.4 trillion by 2030, in line with the National Advanced Materials Technology Roadmap 2021-2030 as well as the National Energy Policy 2022-2040 as mentioned earlier.

## About NanoMalaysia Berhad Group of Companies

NanoMalaysia Berhad was incorporated in 2011 as a company limited by guarantee (CLBG) under the Ministry of Science, Technology and Innovation (MOSTI) to act as a business entity entrusted with nanotechnology commercialization and industrialization activities through a venture builder model. Nanotechnology continues to provide efficient and enhanced solutions to various applications in smart living, smart manufacturing, agriculture, electronic devices, energy and the environment. NanoMalaysia is currently the leading agency for electric vehicle (EV) technology development under MOSTI.

## Source: NanoMalaysia Berhad

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