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# She certifies aviation turbine fuels

## PNG Media Release

14 February, 2019

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Meet Grace Kega, a Chemist at the Oil Search Petroleum Laboratory in Kutubu, Southern Highlands.

She tests and certifies Jet A-1 fuel according to ASTM International standards, which are the recognised international Test Methods for Aviation Turbine Fuels.

“One of my key responsibilities in the Laboratory is quality testing and certification of refinery fuel products such as Jet A-1 to support Oil Search’s aviation and operational requirements. Before the fuel is safe for use in an aircraft, it must be free from water contamination as low temperatures in the upper atmosphere can cause the water to form droplets which can supercool to below 0 degrees Celsius.

“If the droplets come into contact with a surface, they can freeze and may result in blocked fuel inlet pipes which might prove fatal,” Grace explains.

“We perform a Micro-Separometer Rating Test (ASTM D3948), that enables the release of water from jet fuel using a water-sensitive filter pad, and also a Freeze Point Test (ASTM D2386-15), to ensure the fuel has a very low freeze point temperature so that it will not crystallise in higher altitudes. Apart from these two tests we also conduct 15 other tests on the Jet fuel to ensure it’s safe to use.”

Before Oil Search was able to use its own Jet A-1 fuel for commercial aviation, the fuel had to be certified by the PNG Civil Aviation Safety Authority (CASA). Grace was part of the project team that helped acquire the Licence.

“Not only does Oil Search value safety, it values diversity and inclusion. Helping obtain the CASA Licence was definitely a highlight of my career and is a further endorsement of the very high safety standards that we have here. This is why I love working for this Company.”

The Oil Search Petroleum Laboratory is accredited to ISO-17025 which meets international standards in testing and certification. Data produced here is as precise and accurate as anywhere else in the world.

These days, Grace enjoys nothing more than training new chemists. “I have worked alongside the best in the industry for over a decade. I now have the opportunity to impart that knowledge to new chemists or graduates. My advice to young women and girls is to study hard as a career in science is rewarding.

“Science helps us appreciate the natural phenomenon in all that is around us. It helps us understand how we are all connected and what we must do to survive. As a scientist, we have the opportunity to make the world a safe and better place.”

Oil Search’s team of petroleum chemists are responsible for the analysis of crude oil and condensate; natural gas sampling and testing; environmental water analysis for regulatory compliance and performance monitoring. They also provide daily analytical support and analysis for the Company’s oil and gas production operations and oversee the safe management of production chemicals used in the operations.

**End.**

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**Photos**



*Grace Kega, a Chemist at the Oil Search Petroleum Laboratory in Kutubu, Southern Highlands. The Oil Search Petroleum Laboratory is accredited to ISO-17025 which meets international standards in testing and certification.*

*Photos courtesy of Oil Search.*