METHANE EMISSIONS MANAGEMENT

TACKLING CLIMATE RISK

We recognize that **Effective Methane Management** is critical to moving to a low carbon economy. We are committed to reducing flaring, venting and fugitive emissions to minimize the impact of our operations on the environment.
We are committed to undertake efforts to reduce our carbon footprint. Methane (CH_4) emissions by nature of its greenhouse gas effect will have the same focus as Carbon dioxide (CO_2) emissions.

METHANE EMISSIONS GUIDING PRINCIPLES

- Improve surveillance, increase transparency
- Improve accuracy of methane emissions data
- Continuously reduce methane emissions as a percentage of total emissions
- Advocate sound policy and regulations on methane emissions

CONTINOUS MONITORING & REPAIR

Our facilities are equipped with (as of today) 397 fixed and mobile **Methane Detectors**, to assist in leak detection during normal operations or for periods of equipment maintenance, replacement of pressure safety valves and measuring diaphragms in gas metering devices. Also, the gas flowlines are regularly surveilled with mobile methane detectors, and any observed leak will be **immediately actioned for repair**. Integration with our newly implemented Automated Reporting System gives us the ability to pro-actively monitor our processes and provide **real-time dashboards** by the end of 2022.

GHG MITIGATION EFFORTS

Fuel gas flowmeters have been installed and with the addition of three flowmeters to monitor the flare volumes in our Oil Treatment Unit will enable us to quantify our total emissions and better define reduction targets.

A **vapor recovery system** has been installed at all our oil and condensate tanks in the field to ensure minimum hydrocarbon evaporation during storage and transfer. Our terminal LPG loading station is equipped with a fully functional **HydroCarbon (HC) recovery system** preventing HC bleed-off into the atmosphere.

CO2 emissions from stationary combustion of diesel for process heaters is already minimized, by implementing electric power-driven systems whenever possible. In case of future drilling operations, where possible, the drilling units will be running on our electrical power distribution network as was the case for the rigs previously deployed.

Further projects have been initiated to **upgrade our water treatment system** with one of the objectives to mitigate Methane and other light hydrocarbon vapors being released to the atmosphere.

ASSET DIGITALIZATION

Technology for methane detection and quantification is constantly evolving, which allows us to take advantage of **smart Real-time measurement systems**, which are integrating with our bottom-up emission estimation methods with new, emerging technologies.

Furthermore, we are investigating novel bottom up GHG emission quantification tools that give a **holistic view of the entire hydrocarbon value chain**. This level of integrated asset digitalization, together with **forecasting capabilities**, gives us the opportunity to transparently plan our emission budget and react in a timely manner.

CARBON ACCOUNTING & REPORTING

To quantify the results of **Effective Methane Management Systems**, a transparent and consistent Carbon Accounting Solution is required to determine the status quo (baseline), identify mitigation targets, develop mitigation strategies, and continuously monitor and report the success in achieving our **ESG** responsibilities.

Zhaikmunai LLP is actively working on implementing sophisticated **Carbon Accounting Solutions**, which report **Methane emissions** with a fine granularity and based on latest international standards and conforming to RoK regulations.

TRACK PROGRESS AND SET TARGETS

We are committed to introduce a robust **Methane Accounting framework** that builds on established, international standards to continuously reduce GHG / **Methane** emissions by setting challenging, yet realistic targets.