

VERIFICATION STATEMENT

GLOBE Performance Solutions

Verifies the performance of

Katch Kan™ System

Developed by Katch Kan™ Ltd.
Edmonton, AB, Canada

Registration: **GPS-ETV_VR2023-03-31**

In accordance with

ISO 14034:2016

Environmental Management — Environmental Technology Verification (ETV)



John D. Wiebe, PhD
Executive Chairman
GLOBE Performance Solutions

March 31, 2023
Vancouver, BC, Canada



Verification Body
GLOBE Performance Solutions
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Performance claim(s)

When installed on a drilling or service rig in accordance with the manufacturer's recommendations, the Katch Kan™ System enables the collection and retention of drilling fluids released from the drill pipe during tripping operations. At a 95% confidence level, Katch Kan™ System results in no greater than 1% of the released fluids escaping to the environment directly below the rig floor, under the specified operating conditions.

Performance and operational conditions

Installation conditions:

- The Katch Kan™ System technology was installed on the oil and gas Aikita 41E drilling rig manufactured in 2015;
- Drilling rig has a 9.1 meters (m) floor height and a 6500 m drilling capacity; and
- Installation is fitted and completed by the Vendor's trained and qualified personnel in accordance with their quality management system.

Operational conditions include:

- The use of a 4-1/2-inch, SS105, 16.6 lbs/ft drill pipe with DS40 connections;
- The tripping activities are undertaken by crew that is competent in using the Technology; and
- During favorable summer weather conditions.

Technology description and application

The Katch Kan™ System is designed to collect and retain drilling fluids released during tripping events. The Katch Kan™ System helps prevent drilling fluid from being released onto the derrick floor. The System also collects and re-directs drilling fluid from the derrick floor back into a containment system. Drilling fluid captured by the Katch Kan™ System can be re-introduced into the drilling rig's fluid circulation system. The Katch Kan™ System is composed of two components:

1. Rig Safety System™ (RSS): The RSS™ consists of an inventory of tools and equipment designed for use on the floor of the drilling rig. RSS™ features specific to fluid containment include the following:

- The Kelly Kan™ to control and redirect drilling fluids back into the annulus
- The Splash Guard™
- Mats to collect and retain drilling fluids released to the floor of the rig

The adjustable containment structure and second stage low profile Katch Kan™ which collects fluids from the rig floor and discharges them to a containment system.

2. Zero Spill System™ (ZSS): The ZSS™ is mounted on the blowout preventer (BOP) in the substructure and consists of containment structures that are placed under the floor of the drilling rig. The ZSS™ is installed and sealed with clamps and latches to the upper section of the BOP and includes the following components:

- The upper Katch Kan™ to redirect drilling fluid from the derrick floor into the annulus
- The adjustable containment structure and second stage low profile Katch Kan™ which collects fluids from the rig floor and discharges them to a containment system.

Verification

This verification was first completed in March 2017 by The Edmonton Waste Management Centre of Excellence of Edmonton, Alberta, employing the Canadian ETV Program's General Verification Protocol (June 2012) and conforming to the International Standard, ISO 14034:2016 Environmental Management – Environmental Technology Verification (ETV). It is considered valid for subsequent renewal periods every three (3) years thereafter, subject to review and confirmation of the original performance and performance claims.

The data and information provided by Katch Kan™ Ltd. to support the performance claim verification included the following:

- Test Report: “Technical Assessment of the Katch Kan Spill Containment System,” prepared by December 2015 by WSP of Calgary, Alberta, Canada.
- Formal Application to Canadian Environmental Technology Verification
- Katch Kan™ Ltd., Certificates of Registration for ISO 9001:2008** and ISO 14001: 2004**

This ETV renewal is considered to meet the equivalency of an ETV verification completed using the International Standard, **ISO 14034:2016 Environmental Management – Environmental Technology Verification (ETV)**.

**Note: At the time of this ETV renewal in 2023, Katch Kan™ Ltd. possesses Certificates of Registration for ISO 9001:2015 and ISO 14001:2015

What is ISO 14034:2016 Environmental Management – Environmental Technology Verification (ETV)?

ISO 14034:2016 specifies principles, procedures and requirements for environmental technology verification (ETV) and was developed and published by the *International Organization for Standardization (ISO)*. The objective of ETV is to provide credible, reliable and independent verification of the performance of environmental technologies. An environmental technology is a technology that either results in an environmental added value or measures parameters that indicate an environmental impact. Such technologies have an increasingly important role in addressing environmental challenges and achieving sustainable development.

For more information on the Katch Kan™ System please contact:

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Limitation of verification - Registration: GPS-ETV_VR2023-03-31

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