

## Certificate of Calibration

<b>Date of Issue:</b> August 9, 2024		Page 1 of 1
REF NUMBER : By Contract	APPROVED BY CALIBRATION CHARGE QC	
Job No # : QC/JN/24/00314		
CERTIFICATE NUMBER : QC240809-14		


**CUSTOMER DETAILS**

Name : **Zhongman Petroleum Engineering**  
 Address : Basra, South Iraq  
 Rig : ZPEC025

**EQUIPMENT IDENTIFICATION AND SPECIFICATIONS**

Description : **Fixed H2S/LEL Gas Detection System**  
 Manufacturer : SAFETAK  
 Model : GC880  
 Serial Number for Control Panel: **A4911081**  
 Type : Digital  
 Calibrated Range : 25 PPM H2S      50% LEL  
 Resolution : 1 ppm And 1 %  
 Calibrated By : Hussein Alaa  
 Calibration Date : August 9, 2024  
**Calibration Due : November 8, 2024    3 Months Validity from the date of Calibration**  
 Calibration Site : ZPEC25

H2S S/N	LEL S/N	Location
A-072790	A-0721735	Cellar
AUKG1701033	AUBB1701523	Shale Shaker
A-0727909	2017030	Rig Floor
A-0727907	2146056	Bell Nipple


**ENVIRONMENTAL CONDITIONS DURING TEST**

Ambient Temperature : 38 °C ± 2 °C  
 Relative Humidity : 20 %RH ± 5 %RH

**CALIBRATION METHOD**

Reference cylinders consisting of gases LEL, H2S is used , which are detected by gas detector by diffusion.

**TRACEABILITY**

The measurements made by Quality Control, realize the physical units of measurements (SI), through its state of the art calibration standards that are controlled and maintained by QC.

**REFERENCE EQUIPMENT USED :**

DESCRIPTION	SERIAL NO.	Make	Valid Until
Calibration Gas Cylinder (40PPM H2S)	555895	Gulf Cryo	25-Dec-2024
Calibration Gas Cylinder (50% LEL)	140135	Bristol	18-Oct-2024

**CALIBRATION TEST RESULTS**

Applied Gas	Values of UUC	Values on Reference Standard	Error in Reading of UUC	Uncertainty of Measurement
Methane(LEL)% (Cellar)	50	50	0	± 1
Methane(LEL)% (Shale Shaker)	50	50	0	± 1
Methane(LEL)% (Rig Floor)	51	50	1	± 1
Methane(LEL)% ( Bell Nipple)	49	50	-1	± 1
H2S PPM (Cellar)	40	40	0	± 1
H2S PPM (Shale Shaker)	39	40	-1	± 1
H2S PPM (Rig Floor)	40	40	0	± 1
H2S PPM ( Bell Nipple)	41	40	1	± 1

Gas	Alarms Detail	
H2S	5 PPM(Low)	10 PPM(High)
LEL	20% LEL(Low)	40% LEL(High)

**Results :**

The above Value Indicates That the Instrument complies with the Specified Maximum Permissible error tolerance. At The Time of Calibration. and ready for use.