Fecha de Calibración: 19/9/2025

Fecha de Emisión: 19/9/2025

SILIQUINI S.R.L.
Pacheco 373

(54-0299) 477-4400
ventas@siliquini.com

CERTIFICADO DE CALIBRACION N°: 248187

Cliente:	GREEN OIL SERVICES SA	**Equipo en uso:**	REPARADO Y CALIBRADO
Instrumento:	MULTIGAS DETECTOR, ALTAIR 4XR,CONFIGURED Grupo: 8 - (Portable Instrument)	**Equipo nuevo:**	NO
S/N:	E0-00315654-J22	**Fabricante:**	Mine Safety Appliances Company

Gas Patrón	Objetivo a Verificar	Incert. del Gas	Número de Lote	Mediciones			Incert. de la Medición	Rango
				1	2	3		
Acido Sulfhidrico (H2S) 20 ppm	20 ppm	10	302988	20	20	20	2,0817 ppm	0 - 200 ppm
Metano (CH4) 1,45 %	58 %	5	302988	58	58	58	2,9569 %	0 - 100 %
Monóxido de Carbono (CO) 60 ppm	60 ppm	5	302988	60	60	60	3,0551 ppm	0 - 2000 ppm
Oxígeno (O2) 15 %	15 %	5	302988	15	15	15	0,9465 %	0 - 30 %

ALARMAS

	Deficiency Alarm	Exposure Alarm	STEL Alar	TWA Alarm
H2S ppm	10 ppm	15 ppm	15 ppm	10 ppm
COMB	10 %	20 %	-	-
CO	25 ppm	100 ppm	100 ppm	25 ppm
O2	19.5 %	23.0 %	-	-

Calibración: **Contraste con gas patrón trazable a patrones de peso NIST**

Condiciones ambientales de Calibración: **Cipolletti - R¡o Negro**

Temperatura (ºC) **19ºC**
Presión atmosférica (hPa): **1014 hPa**
Humedad (%): **43 %**

Procedimientos de Calibración: **De acuerdo al manual de cada equipo**

(*) Las especificaciones de tolerancia de medición se encuentran informadas en el manual del equipo.

"La calibración de los equipos, instrumentos y dispositivos utilizados, los métodos de análisis aplicados, y las acciones u omisiones son realizadas en forma exclusiva por personal deSILIQUINI S.R.L.sin intervención deCOMPAÑÍA MSA DE ARGENTINA S.A.quien no responderá por los mismos."

Límites en el uso: **Indicados en el manual del equipo**
Los resultados son válidos solamente para el equipo ensayado no siendo extensivos a cualquier otro.
La trazabilidad de los detectores MSA se realiza a través del número de serie

La reproducción de este documento sólo podrá hacerse íntegramente sin ninguna alteración.

Hugo Puente
SERVICIO TÉCNICO
SILIQUINI S.R.L.

Cantidad de hojas: 1

CERTIFICATE OF ANALYSIS

PortaGas™
A Linde company

ISO 9001:2015 CERTIFIED
ISO 17034:2016 ACCREDITED
ISO/IEC 17025:2017 ACCREDITED

1202 E Sam Houston Parkway S,
Pasadena, TX 77503
Phone:(800) 548 2268 Fax:(713) 928 9961

PO Number: 4503688395
Manufactured For:
MSA Safety Sales, LLC
1000 Cranberry Woods Drive
Cranberry Township PA 16066
United States Of America

Work Order No: 42199100
Certification Date: 30-Dec-2024

Customer Part No: 10045035
Cylinder Size: 58mGAL
Cylinder Type: ISO 7866
Cylinder Content: 58 L (2 CU.FT.) @ 70 F (21 C) & 500 PSIG (3445Kpag)
Cylinder Lot No: 302988; 395 of 503 cylinders
Cylinder Serial Nos: BC142061,BC189305,BC325407,BC339726,BC361462,BC387714,BC399067,BC399940,BC483084,BC483181,BC483185,BC483205,BC486210,BC487038,BC506601,BC511492,BC519774,BC522324,BC594168,BC616881,BC659939,BC669838,BC669845,BC669846,BC670268,BC670272,BC670347,BC670378,BC670379,BC670498,BC670761,BC670792,BC671552,BC674326,BC674359,BC674460,BC674618,BC674672,BC674782,BC674783,BC674957,BC675078,BC675238,BC675245,BC675295,BC675300,BC684072,BC685200,BC693591,BC693663,BC693681,BC693717,BC693791,BC693793,BC693799,BC693802,BC693837,BC693841,BC694543,BC694544,BC694546,BC694547,BC694548,BC694549,BC694551,BC694552,BC694553,BC694554,BC694555,BC694556,BC694557,BC694558,BC694559,BC694560,BC694561,BC694562,BC694563,BC694566,BC694567,BC694568,BC694569,BC694570,BC694572,BC694573,BC694578,BC694583,BC694587,BC694588,BC694591,BC694593,BC694594,BC694597,BC694599,BC694600,BC694601,BC694602,BC694604,BC694605,BC694606,BC694607,BC694608,BC694609,BC694610,BC694612,BC694614,BC694615,BC694616,BC694618,BC694619,BC694621,BC694622,BC694623,BC694624,BC694625,BC694626,BC694627,BC694628,BC694630,BC694633,BC694635,BC694636,BC694639,BC694640,BC694641,BC694644,BC694645,BC694646,BC694647,BC694651,BC694652,BC694654,BC694655,BC694660,BC694661,BC694664,BC694678,BC694682,BC694684,BC694687,BC694692,BC694693,BC694694,BC694695,BC694696,BC694697,BC694698,BC694705,BC694712,BC694714,BC694716,BC694717,BC694721,BC694727,BC694731,BC694732,BC694734,BC694736,BC694737,BC694738,BC694739,BC694741,BC694743,BC694744,BC694750,BC694751,BC694753,BC694755,BC694759,BC694760,BC694763,BC694764,BC694766,BC694767,BC694768,BC694769,BC694772,BC694774,BC694777,BC694778,BC694779,BC694780,BC694781,BC694782,BC694783,BC694784,BC694786,BC694787,BC694788,BC694789,BC694790,BC694792,BC694793,BC694794,BC694795,BC694796,BC694797,BC694799,BC694800,BC694801,BC694802,BC694803,BC694806,BC694808,BC694811,BC694813,BC694817,BC694819,BC694821,BC694825,BC694827,BC694831,BC694834,BC694835,BC694837,BC694840,BC694841,BC694843,BC694844,BC694845,BC694846,BC694847,BC694848,BC694849,BC694851,BC694852,BC694854,BC694855,BC694858,BC694861,BC694864,BC694865,BC694866,BC694869,BC694873,BC694874,BC694876,BC694878,BC694883,BC694884,BC694885,BC694886,BC694889,BC694890,BC694892,BC694895,BC694896,BC694897,BC694900,BC694901,BC694902,BC694903,BC694904,BC694905,BC694906,BC694907,BC694908,BC694910,BC694911,BC694912,BC694913,BC694915,BC694916,BC694917,BC694918,BC694920,BC694921,BC694922,BC694923,BC694924,BC694925,BC694927,BC694929,BC694930,BC694943,BC694947,BC694948,BC694953,BC694957,BC694963,BC694967,BC694968,BC694969,BC694970,BC694971,BC694973,BC694974,BC694975,BC694976,BC694977,BC694979,BC694982,BC694984,BC694985,BC694990,BC694992,BC694993,BC694994,BC694995,BC695001,BC695002,BC695003,BC695006,BC695008,BC695010,BC695011,BC695012,BC695028,BC695029,BC695030,BC695032,BC695035,BC695036,BC695037,BC695038,BC695039,BC695043,BC695044,BC695046,BC695048,BC695052,BC695054,BC695055,BC695058,BC695060,BC695061,BC695062,BC695063,BC695064,BC695065,BC695066,BC695067,BC695068,BC695069,BC695071,BC695072,BC695073,BC695075,BC695076,BC695079,BC695080,BC695083,BC695085,BC695086,BC695087,BC695090,BC695091,BC695095,BC695096,BC695099,BC695100,BC695101,BC695103,BC695104,BC695105,BC695107,BC695108,BC695109,BC695110,BC695112,BC695113,BC695115,BC695116,BC695117,BC695118,BC695119,BC695122,BC695123,BC695124,BC695125,BC695126,BC695127,BC695128,BC695

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Expiration Date: Dec 2026

Component	Nominal (vol)	Accuracy	Analytical Method
HYDROGEN SULFIDE	20 PPM	+/- 10%	Automated Electrochemical Sensor 2.0
CARBON MONOXIDE	60 PPM	+/- 5%	Horiba CO Analyzer VIA-510_97KP6EHE
PENTANE EQUIVALENT 58% LEL	(METHANE 1.45%)	+/- 5%	Mocon 9000 THC_0317DN0931
OXYGEN	15%	+/- 5%	Teledyne 3000M Series Percent Oxygen Analyzer
NITROGEN	BALANCE		

The mixture was manufactured or transfilled from a standard which has been gravimetrically blended with traceability through NIST to the International System of Units (SI) balance. Balances are calibrated by a certified third party with certified NIST weights and NIST test numbers.**Report Number: BU70910-04302025.**The uncertainty is expressed as an expanded uncertainty *U=kuc* with *uc* determined by experiment and a coverage factor *k=2*. The certified value +/-U is presented with a level of confidence of approximately 95%.

Quality Assurance Manager