Alpha Resources, Inc.
Certificate Of Analysis

AR 952
CARBON STEEL CHIP STANDARD
LOT # 120308

% CARBON	% SULFUR
MEAN = 0.470	MEAN = 0.021
ONE SIGMA = 0.004	ONE SIGMA = 0.001
TWO SIGMA = 0.008	TWO SIGMA = 0.002
RANGE = 0.463 to 0.478	RANGE = 0.019 to 0.023

PPM NITROGEN
MEAN= 104 PPM
ONE SIGMA= 2 PPM
TWO SIGMA= 4 PPM
RANGE= 100 to 108 PPM

Method of Analysis is ASTM E 1019-03, ARI 033 and ARI 034
Primary Standards Employed:

NIST	50c, 368, 100b, 12h, 346a, 2160
BAM	284-2, 035-1, 084-1
JSS	102-6, 602-9, 150-15
NCS	HC11001, NS13007, NS13016

Notes:

The mean analytical values were derived by a number of data sets (n=40) by various instrumentation meeting ASTM E1019-03. The precision values represent the standard deviation, two times the standard deviation (k=2, 95% confidence limit), and complete range of analysis. When necessary, professional judgment is applied toward consideration of data and statistical information. The statistical analysis and the overall direction and coordination of the analytical measurements leading to certification were performed by K.E. Dyer at Alpha Resources.

The material used in production of this standard was sampled in accordance with ARI 032. The samples for round robin testing were selected in accordance with ARI 014. The above values relate only to the material used to produce this standard.

Remedies for any claimed defect in this product will be limited to product replacement or refund of the purchase price. In no event shall Alpha Resources be liable for incidental or consequential damages.

This is a Certified Reference Material (CRM), and is traceable to the above-mentioned standards. For good laboratory practice it is recommended that all standards be verified prior to use.

Alpha Resources is an ISO/IEC 17025 accredited laboratory. For more information concerning our scope of accreditation contact Alpha Resources.

This standard was produced in accordance to Guide 34 at the time of certification. These same methods for producing reference materials have now been reviewed by an accreditation body. As of February 2015 our facility has become accredited under the ISO Guide 34:2009 for RMP issued by ANSI-ASQ National Accreditation Board, certificate AR1920.

Certified January, 2009

Kent Dyer

Kent Dyer - Technical Manager

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