

# Alpha Resources, Inc. Certificate Of Analysis

AR 300

CAST IRON STANDARD  
LOT # 001193B

**% CARBON**  
**MEAN = 3.27**  
**ONE SIGMA = 0.03**  
**TWO SIGMA = 0.06**  
**RANGE = 3.21 – 3.33**

**% SULFUR**  
**MEAN = 0.015**  
**ONE SIGMA = 0.001**  
**TWO SIGMA = 0.002**  
**RANGE = 0.013 – 0.017**

Method of Analysis is Combustion / IR Detection  
ASTM E 1019

Standards Employed:  
NIST SRM 4k, 122h, 338, and 892

Notes:

This certificate was updated to reflect our current format in February 2003.

The statistical data was derived by a number of analyses provided by separate instruments over different days.

The precision values represent the standard deviation, two times the standard deviation, and complete range of analyses.

The statistical analysis of this certification was performed by J.V. Likins.

The overall direction and coordination of the analytical measurements leading to certification were performed by D.M. Reasons at Alpha Resources.

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.

Certified November 1993



P.O. Box 199 3090 Johnson Road Stevensville, MI 49127 USA Phone (269) 465-5559 Fax (269) 465-3629

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