# Alpha Resources, Inc. Certificate Of Analysis

#### AR 512

# CARBON AND SULFUR STEEL PIN STANDARD

## LOT # 511803B

% CARBON MEAN = 0.015 ONE SIGMA = 0.002 TWO SIGMA = 0.004 RANGE = 0.0116 - 0.0192 % SULFUR
MEAN = 0.271
ONE SIGMA = 0.008
TWO SIGMA = 0.016
RANGE = 0.251 - 0.283

Method of Analysis is Combustion IR Detection ASTM E 1019 (Latest Revision) Primary Standards Employed were:

NIST

SRM 129c, 368, 133b

BAM 0'

079-1

### Notes:

The certified mean values were derived by a number of data sets acquired over different days, using ASTM E 1019 approved instruments.

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

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.

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 January, 1997

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