AR 648
TITANIUM STANDARD
LOT # 8340708

PPM OXYGEN
MEAN = 1780
ONE SIGMA = 55
TWO SIGMA = 110
RANGE = 1655 to 1897

PPM NITROGEN
MEAN = 58
ONE SIGMA = 10
TWO SIGMA = 20
RANGE = 38 to 73

PPM HYDROGEN
MEAN = 147
ONE SIGMA = 10
TWO SIGMA = 20
RANGE = 124 to 171

Method of Analysis is ASTM E 1409-05, E 1447-05, E 1937-04, ARI 034, and ARI 036

Primary Standards used for calibration:

	Gas Dose
NIST SRM	352b, 2453, 352c, 2452, 2454, 356
NCS	NS57003, NS57004
BCR CRM	24, 276, 59

Notes

The mean analytical values were derived by a number of data sets (n=50) by various instrumentation meeting above ASTM and ARI methods. The precision values represent the standard deviation, two times the standard deviation, 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.

Certified June, 2008

Kent Dyer