

Alpha Resources, Inc. Certificate Of Analysis

**AR-2776
ULTIMATE COAL STANDARD**

LOT# 761202

LID# 761202

DRIED BASIS VALUES

Proximate Analysis

% Ash.....	21.46
% Volatile Matter.....	21.75
% Fixed Carbon.....	56.79
% Sulfur.....	0.86
Btu.....	12,136

Ultimate Analysis

% Carbon.....	69.69
% Hydrogen.....	4.09
% Nitrogen.....	1.21

Sulfur Forms

% Pyritic.....	0.33	% Sulfate.....	0.02
% Organic.....	0.51	% Total.....	0.86

Mineral Analysis

Silica.....	61.36	Sodium Oxide.....	0.23
Alumina.....	26.26	Sulfur Trioxide.....	0.44
Titania.....	1.47	Phosphorus Pentoxide.....	0.14
Ferric Oxide.....	4.39	Strontium Oxide.....	0.04
Calcium Oxide.....	0.59	Barium Oxide.....	0.15
Magnesium Oxide.....	0.96	Manganese Oxide.....	0.02
Potassium Oxide.....	3.04	Undetermined.....	0.32

The Following ASTM Procedures Were Employed In The Analysis Of All Samples:

Preparation.....	ASTM D 2013	Ash Analysis.....	ASTM D 3682
Carbon & Hydrogen.....	ASTM D 3178	Ash.....	ASTM D 3174
Volatile Matter.....	ASTM D 3175	Fusibilities.....	ASTM D 1857
Sulfur.....	ASTM D 3177	BTU.....	ASTM D 2015
Nitrogen.....	ASTM D 3179	Sulfur Forms.....	ASTM D 2492

The material used in production of this standard was sampled in accordance with ARI 031. The above values relate only to the material used to produce this standard.

The overall direction and coordination of the analytical measurements leading to certification were performed by J.R. Shingledecker 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). For good laboratory practice it is recommended that all standards be verified prior to use.

**EXPIRATION DATE
THIS CRM IS VALID FOR TWO YEARS FROM THE DATE OF PURCHASE WHICH
APPEARS ON THE BOTTLE**

J.R. Shingledecker

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