

Alpha Resources, Inc. Certificate Of Analysis

AR-2782
ULTIMATE COAL STANDARD
LOT # 7821097 LID ID 7821097
DRIED BASIS VALUES

Proximate Analysis

% Ash.....	13.13
% Volatile Matter.....	38.02
% Fixed Carbon.....	48.85
% Sulfur.....	4.70
Btu.....	11,495

Ultimate Analysis

% Carbon.....	64.95
% Hydrogen.....	4.57
% Nitrogen.....	1.28
% Chlorine.....	0.057

Mineral Analysis

Silica.....	44.24
Alumina.....	18.18
Titania.....	0.92
Ferric Oxide.....	28.38
Calcium Oxide.....	2.22
Magnesium Oxide.....	0.81
Potassium Oxide.....	2.18
Sodium Oxide.....	0.23
Sulfur Trioxide.....	1.94
Phosphorus Pentoxide.....	0.18
Strontium Oxide.....	0.02
Barium Oxide.....	0.07
Manganese Oxide.....	0.04
Undetermined.....	0.61

Sulfur Forms

% Pyritic.....	0.94
% Organic.....	2.17
% Sulfate.....	1.59

Ash Fusion Temperature

Initial Deformation Red.....	1976
Initial Deformation Oxd.....	2458
Softening-Red H=W.....	1993
Softening-Oxd H=W.....	2475
Softening-Red H=1/2w.....	2015
Softening-Oxd H=1/2w.....	2500
Fluid-Reducing.....	2218
Fluid-Oxidizing.....	2542
Temperature In Degrees F	

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 5373	Chlorine.....	ASTM D 2361
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
Ash.....	ASTM D 3174		

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.

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

