

**LUMAN'S LABORATORIES**

P.O. Box 326 · Chetopa, KS 67336  
(620) 236-7874

August 11, 2010

Kansas Geological Survey  
The University of Kansas  
1930 Constant Ave.  
Lawrence, KS 66047-3726

Attn: K. David Newell

Please find listed below analysis on the following sample.

Lab ID. 80603 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
548'0" to 548'8".

	As Received	Moisture Free	MAF
Moisture	2.62%		
Ash	68.27%	70.11%	
Volatile Matter	17.78%	18.26%	
Fixed Carbon	11.33%	11.63%	
BTU/lb	3,841	3,944	13,197
Sulfur	2.98%	3.06%	

Respectfully,



Carrol Luman

CGL:pdl

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Please find listed below analysis on the following sample.

Lab ID. 80604 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
573'9.5" to 575'0.5".

	As Received	Moisture Free	MAF
Moisture	2.84%		
Ash	68.93%	70.95%	
Volatile Matter	19.84%	20.42%	
Fixed Carbon	8.39%	8.63%	
BTU/lb	3,620	3,726	12,828
Sulfur	2.65%	2.73%	

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Please find listed below analysis on the following sample.

Lab ID. 80605 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
757'6" to 759'0".

	As Received	Moisture Free	MAF
Moisture	2.80%		
Ash	69.72%	71.73%	
Volatile Matter	18.64%	19.18%	
Fixed Carbon	8.84%	9.09%	
BTU/lb	3,689	3,796	13,426
Sulfur	3.00%	3.09%	

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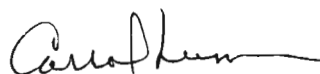
Attn: K. David Newell

Please find listed below analysis on the following sample.

Lab ID. 80606 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
781'3" to 782'8".

	As Received	Moisture Free	MAF
Moisture	6.10%		
Ash	19.57%	20.84%	
Volatile Matter	36.54%	38.92%	
Fixed Carbon	37.79%	40.24%	
BTU/lb	10,379	11,053	13,963
Sulfur	4.65%	4.95%	

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Please find listed below analysis on the following sample.

Lab ID. 80607 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
816'2" to 817'2".

	As Received	Moisture Free	MAF
Moisture	9.08%		
Ash	13.71%	15.08%	
Volatile Matter	34.72%	38.19%	
Fixed Carbon	42.49%	46.73%	
BTU/lb	10,904	11,993	14,124
Sulfur	2.68%	2.95%	

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Please find listed below analysis on the following sample.

Lab ID. 80608 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
955'8" to 956'9".

	As Received	Moisture Free	MAF
Moisture	4.53%		
Ash	48.79%	51.11%	
Volatile Matter	23.84%	24.97%	
Fixed Carbon	22.84%	23.92%	
BTU/lb	6,294	6,593	13,485
Sulfur	3.33%	3.49%	

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Please find listed below analysis on the following sample.

Lab ID. 80609 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
965'8" to 966'2".

	As Received	Moisture Free	MAF
Moisture	5.97%		
Ash	16.62%	17.68%	
Volatile Matter	36.94%	39.28%	
Fixed Carbon	40.47%	43.04%	
BTU/lb	11,060	11,763	14,288
Sulfur	6.49%	6.90%	

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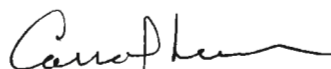
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Please find listed below analysis on the following sample.

Lab ID. 80610 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
995'0" to 995'6".

	As Received	Moisture Free	MAF
Moisture	4.92%		
Ash	33.58%	35.32%	
Volatile Matter	26.89%	28.28%	
Fixed Carbon	34.61%	36.40%	
BTU/lb	8,602	9,047	13,988
Sulfur	5.73%	6.02%	

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Please find listed below analysis on the following sample.

Lab ID. 80701 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
1041'5" to 1042'11".

	As Received	Moisture Free	MAF
Moisture	4.87%		
Ash	33.38%	35.09%	
Volatile Matter	30.17%	31.72%	
Fixed Carbon	31.58%	33.19%	
BTU/lb	8,556	8,993	13,855
Sulfur	2.94%	3.09%	

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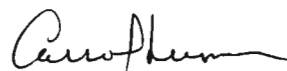
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Please find listed below analysis on the following sample.

Lab ID. 80702 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
1180'6" to 1181'6".

	As Received	Moisture Free	MAF
Moisture	2.56%		
Ash	33.92%	34.81%	
Volatile Matter	31.24%	32.06%	
Fixed Carbon	32.28%	33.13%	
BTU/lb	8,847	9,079	13,927
Sulfur	7.93%	8.14%	

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Please find listed below analysis on the following sample.

Lab ID. 80703 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
1192'0" to 1193'2.5".

	As Received	Moisture Free	MAF
Moisture	3.26%		
Ash	20.25%	20.94%	
Volatile Matter	37.36%	38.62%	
Fixed Carbon	39.13%	40.44%	
BTU/lb	10,817	11,181	14,142
Sulfur	10.60%	10.96%	

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Please find listed below analysis on the following sample.

Lab ID. 80704 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
1193'2.5" to 1194'8.5".

	As Received	Moisture Free	MAF
Moisture	3.76%		
Ash	15.43%	16.03%	
Volatile Matter	39.21%	40.74%	
Fixed Carbon	41.60%	43.23%	
BTU/lb	11,964	12,430	14,803
Sulfur	2.55%	2.65%	

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Please find listed below analysis on the following sample.

Lab ID. 80705 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
1201'0" to 1201'5.5".

	As Received	Moisture Free	MAF
Moisture	5.90%		
Ash	10.45%	11.11%	
Volatile Matter	37.54%	39.89%	
Fixed Carbon	46.11%	49.00%	
BTU/lb	12,235	13,003	14,628
Sulfur	4.48%	4.76%	

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Please find listed below analysis on the following sample.

Lab ID. 80706 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
1217'2.5" to 1217'10.5".

	As Received	Moisture Free	MAF
Moisture	4.68%		
Ash	14.67%	15.39%	
Volatile Matter	37.42%	39.25%	
Fixed Carbon	43.23%	45.36%	
BTU/lb	11,698	12,272	14,505
Sulfur	5.70%	5.98%	

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Please find listed below analysis on the following sample.

Lab ID. 80707 Sample ID. Kansas Geological Survey Douglas County Core Hole #1,  
1271'1" to 1271'8".

	As Received	Moisture Free	MAF
Moisture	3.13%		
Ash	19.06%	19.68%	
Volatile Matter	35.16%	36.30%	
Fixed Carbon	42.65%	44.02%	
BTU/lb	11,017	11,373	14,160
Sulfur	9.05%	9.34%	

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