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CONSULTING GEOLOGICAL & MINING ENGINEERS
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VANCOUVER 1, B.C.

British Columbia Hydro and Power Authority

HAT CREEK COAL DEPOSITS
PROPOSED NO. 1 OPENPIT

STATISTICAL TABLES OF PROXIMATE ANALYSIS DATA

July 15, 1975

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INTRODUCTION

This memorandum accompanies and provides interpretation of computer-generated statistical tables of coal quality in the No. 1 Openpit area of the Hat Creek coal deposits. The data presented are proximate analyses (moisture, ash, volatile matter and fixed carbon), calorific value, sulphur, Na₂O and K₂O for all samples collected from drill cores during drilling programs in 1957-59 and 1974-75. Excluded are samples from Hole No's 42, 45, 48 and 52 which lie south of the Finney fault. That fault is the presently accepted southern geological boundary of the No. 1 Openpit.

Quantities represented by the analyses are as follows:

	<u>No. of Drill Holes</u>	<u>Footage Sampled</u>	<u>No. of Samples</u>
1957-59	15	8184.5	195*
1974-75	<u>14</u>	<u>9062.0</u>	<u>409</u>
Totals	29	17,146.5	604

* Includes 61, 200 series samples. See "Labelling of Samples" below.

The computer statistical tables are presented in the following sequence:

1. Overall summaries at various arbitrary ash cutoffs for all samples, for 1957-59 samples, and for 1974-75 samples.
2. Summary for each drill hole, 1957-59 and 1974-75.
3. Listing of each sample by drill hole, 1957-59 holes.
4. Listing of each sample by drill hole, 1974-75 holes.

A few insignificant corrections to the data are still required. For example, a zero sulphur value shown for one sample is an incorrect entry. Also, additional drilling and sampling will be required before the commencement of plant construction. New analytical data would be integrated with the existing data.

GENERAL INFORMATION

Labelling of Samples

<u>Sample No.</u>	<u>Significance</u>
1 to 199	Field proximate analysis sample.
201 to 299	2nd, 3rd, etc. portion of a field proximate sample in which the portions, analysed as a single sample, are separated by unanalysed, high-ash sections. The first portion of such a sample is given a 1 to 199 number.
301	Unanalysed section of unconsolidated overburden.
302 to 399	Unanalyzed section of waste or weakly carbonaceous rock, above, within or below the coal beds. For the most part, waste bands less than 10 feet in thickness are included in analysed samples.

By the above sample numbers, every foot of each drill hole is accounted for on the statistical tables.

Weighting

Values are weighted by length of drill core but not by true width of coal intersection or by volume. A slight increase in mean ash content may result from weighting by true width and volume.

Explanation of Summary Tables

The summary tables show the maximum, minimum, range and weighted mean for each component both on a dry basis and at an estimated mean in situ moisture content of 20 %. The arithmetic mean is also derived so that the standard deviation and coefficient of variation (ratio of standard deviation to arithmetic mean) can be calculated. Although related to the arithmetic mean, the standard deviation can be applied to the weighted mean with only a small error.

The linear regression equation is derived for ash versus calorific value on the dry basis. The Y axis intercept shows the ash content at zero calorific value and the X axis intercept shows the calorific value at zero ash. The second term in the equation for X shows the change in calorific value per pound for a 1 % change in ash content. For a small number of samples, as is the case for some drill holes,

a single erroneous analysis or geologically erratic sample can strongly influence the slope of the regression line. For the combined total of several hundred samples, the influence of a few erratic ones is not great.

The linear regression calculation includes only those samples containing less than 55 % ash on a dry basis. The higher ash samples are excluded first because they are more likely to be geologically erratic and second, because they are well removed from the mean ash content of the bulk of the material which will be mined and processed.

The linear correlation coefficient, shown on the summary tables, is a measure of how well the points fit a straight line. A coefficient of 1.0 indicates a perfect fit.

Significant Figures

On the statistical tables, the concentrations of coal components are shown to two decimal points and the calorific value to the nearest Btu. This is done for convenience and to avoid round-off discrepancies on chain calculations. However, it suggests a greater accuracy than actually exists. For example, the ash content is probably reliable to only ± 0.3 to 0.5 % ash and the calorific value to ± 50 to 75 Btu for the 1974-75 data. When the 1957-59 and 1974-75 data are considered as a group, the accuracy is less.

ASH AND CALORIFIC VALUE

Table 1, attached, summarizes the proximate analysis data.

The mean ash and gross calorific value for all samples (total resource) are 28.66 % and 5814 Btu per pound, respectively. The slope of the regression line is approximately 160 Btu per pound per percent change in ash content (or 130 Btu per pound per percent change in moisture content at a fixed ash content). There are small differences in both the relative values and line slopes between the 1957-59 and 1974-75 data. These differences are attributed to analytical procedures. The more recent data is considered to be more reliable. The mean ash content for all samples in 1974-75 is 30.11 % and in 1957-59 is 27.04 %. The higher mean in 1974-75 reflects the fact that higher ash material was included in the samples to permit a better assessment of the total resource.

To give further insight into the nature of the coal deposit, summary tables were prepared at three arbitrarily chosen ash cutoffs. These were 44, 40, and 36 % ash at 20 % moisture (55, 50 and 45 %, dry basis). The results are shown on

the statistical summary sheets and, for ash and calorific value, are summarized in Table 2, attached.

Table 2 shows, for example, that if all material grading more than 44 % ash were to be rejected by selective mining, the reject would constitute about 12 % of the resource tonnage and contain 20 % of the ash and 5 % of the heat content. As a result, the product would decrease from 28.7 to 25.9 % in ash content and increase from 5814 to 6231 in Btu's per pound. (Note: To a first approximation, the feet of core can be equated to volume or tonnage of resource.)

Additional comments concerning the data in Table 2 follow:

1. The data give trends related to the elimination of high ash material by selective mining; they cannot be equated to the results which could be expected from washing the coal.
2. Eliminating the + 44 % material by selective mining is probably practical. There is no guarantee that it would be practical to operate at lower ash cutoffs.
3. The data suggest that eliminating higher ash material by selective mining becomes increasingly less attractive for the project as a whole as the ash cutoff is lowered. For example, by lowering the cutoff from 40 to 36 %, the product is improved by only 1.6 % in ash and 250 Btu per pound but an additional 7 % of the heat content is wasted and, overall, 16 % of the heat content is wasted.

MOISTURE

Early in the present investigation of the Hat Creek coal deposits, an overall mean in situ moisture content of 20 % was assumed in order to permit presentation of the data on a standard basis. It is recognized that the bed moisture will not be uniform but the probable range of values is difficult to estimate. More highly fractured areas should contain more surface moisture and consequently have a higher average moisture content.

The as-received moisture contents are summarized below:

	<u>Mean</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Std. Dev.</u>
1957-59	19.06 %	7.45 %	41.50 %	4.60
1974-75	20.41 %	1.49 %	30.58 %	4.28
Combined	19.78 %	1.49 %	41.50 %	4.38

The fact that the mean moisture content of 19.78 % is almost identical to the assumed moisture content of 20 % is considered to be a coincidence. No matter how carefully the samples are processed and packaged in the field, the moisture content when a sample reaches the laboratory is dependent on, among other things, the current weather, the drilling conditions, and the fact that the cores are split with a diamond saw with water used as a lubricant before shipping. For the 1974-75 samples, the maximum recorded as-received moisture of 30.58 % was for a rotary drill hole sample unavoidably bagged with contamination from drill water. The minimum value, 1.49 %, was recorded for a high ash sample exposed to the elements during the winter and then collected during re-sampling of high ash material in April.

A second approach to estimating the possible in situ moisture content is to measure the equilibrium moisture in the laboratory. The equilibrium moisture is considered to be the condition of the coal when all the pores are filled with water but no surface moisture is present. It may be slightly higher or lower than the bed moisture depending on the degree of saturation and the presence or absence of surface moisture on fractures, etc.

Equilibrium moistures determined for Hat Creek coal samples are as follows:

	<u>No. of Samples</u>	<u>Mean</u>	<u>Minimum</u>	<u>Maximum</u>
1957-59	22	24.4 %	20.9 %	28.0 %
1974-75	49	22.9 %	16.8 %	32.5 %
Combined	71	23.3 %	16.8 %	32.5 %

Thus, the mean equilibrium moisture value of 23.3 % suggests that an in situ moisture value higher than 20 % should be used. One unresolved problem is that recent analytical data on both Hat Creek and other coal samples indicates that there is a discrepancy between the results reported from different laboratories even though a standard A.S.T.M. procedure is used.

An additional complicating factor is that the in situ and plant feed moistures may be different because of draining and drying during mining and stockpiling. For the Hat Creek coal, an average decrease in moisture of 3 to 4 % may occur, particularly during the hot summer months.

The following conclusions are drawn.

1. The maximum mean in situ moisture content is estimated to be 24 % and the minimum mean to be 20 %.

2. The maximum mean plant feed moisture is estimated to be 20 % and the minimum mean to be 16 %, assuming the coal is not washed.

3. Firmer values can be derived only by careful sampling of bulk samples.

4. In the interim, it is reasonable to continue using the 20 % moisture figure as a standard for presentation of data. However, the significance for plant design of a lower mean plant-feed moisture could be investigated.

The following table is compiled to show the effect of applying different moisture levels to the overall mean values for the No. 1 Openpit deposit:

Item	Moisture Level		
	16 %	20 %	24 %
Ash - %	30.1	28.7	27.2
Vol. Mat. - %	28.5	27.1	25.8
F.C. - %	25.4	24.2	23.0
S - %	0.40	0.39	0.37
C.V. - Btu/lb	6105	5814	5523

VOLATILE MATTER AND FIXED CARBON

Significant differences exist between the volatile matter and fixed carbon as reported for 1957-59 samples and 1974-75 samples. In particular the carbon ratio (fixed carbon to volatile matter) is different as shown in the following table (moisture basis - 20 %):

	Ash	V.M.	F.C.	Ratio F.C./V.M.
1957-59	27.04 %	29.20 %	23.76 %	0.814
1974-75	30.11 %	25.23 %	24.66 %	0.977
Combined	28.66 %	27.10 %	24.24 %	0.894

The 1974-75 data are considered to be more reliable. The first impression from the above data is that because the fixed carbon contents are almost the same, the error in the 1957-59 carbon ratio results from the volatile matter being too high. However, because of the relative ash contents, the 1957-59 fixed carbon should be about 2½ % higher. Since the fixed carbon is determined by difference, this increase must be compensated for by lowering the volatile matter the same amount. Thus, a 2½ % increase to fixed carbon and a 2½ % decrease to volatile matter brings the 1957-59 data almost into line with the 1974-75 data. The

bias in the data could have resulted easily from the burning off of fixed carbon during the determination of volatile matter. (The fact that biased reporting in 1957-59 of moisture and/or ash could also affect the data has not been overlooked. However, an examination of all the data suggests that any such bias is less than 1 % for either component and, therefore, is too small to warrant further consideration.)

The incombustible mineral matter in the coal exceeds the ash in the coal by a considerable amount, principally because of a high content of water of hydration in the associated clay minerals. During incineration of the sample, this water reports with the combustible volatiles giving values which are too high. From the regression equation on page 9 of the statistical summary tables (all samples, 1974-75), the ratio of mineral matter to ash can be determined as follows:

$$\text{Ratio, mineral matter to ash} = \frac{100}{82.11} = 1.2179$$

When this ratio is used in a Parr-type formula and the 1974-75 carbon ratio is applied, the following reconstituted mean analysis can be calculated.

<u>Original Mean</u>		<u>Reconstituted Mean</u>	
Moisture	20.00 %	Moisture	20.00 %
Ash	28.66 %	Ash	28.66 %
V.M.	27.10 %	C.V.M. (1)	19.72 %
F.C.	24.24 %	F.C.	25.38 %
		I.V.M. (2)	6.24 %
	100.00 %		100.00 %

- Notes: (1) Combustible volatile matter.
(2) Incombustible volatile matter.

The reconstituted mean reflects more accurately the true character of the coal in the No. 1 Openpit area at Hat Creek.

SULPHUR, Na₂O AND K₂O

Table 1 shows the mean sulphur content to be only 0.39 % with a standard deviation of 0.28. The summary statistical tables show no significant change in sulphur concentration at various ash cutoffs. However, sulphur values markedly higher than the mean will probably be encountered over significant periods of production.

Table 1 also shows that Na_2O and K_2O have low mean concentrations, 0.26 % and 0.19 % respectively, and markedly narrow ranges of values.



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July 15, 1975

TABLE 1
SUMMARY OF PROXIMATE ANALYSIS DATA

ITEM	1957-59 Samples				1974-75 Samples				All Samples			
	Mean	Range		Std. Dev.	Mean	Range		Std. Dev.	Mean	Range		Std. Dev.
		Min.	Max.			Min.	Max.			Min.	Max.	
Ash - %	27.04	10.96	59.67	10.84	30.11	9.64	65.74	13.04	28.66	9.64	65.74	12.59
V.M. - %	29.20	14.34	39.14	4.86	25.23	9.87	35.33	5.08	27.10	9.87	39.14	5.26
F.C. - %	23.76	2.79	37.62	7.10	24.66	1.66	39.38	8.46	24.24	1.66	39.38	8.14
S - %	0.40	0.01	1.83	0.30	0.37	0.00	1.92	0.27	0.39	0.00	1.92	0.28
Na ₂ O - %	-----	-----	-----	-----	0.26	0.10	0.89	0.14	0.26	0.10	0.89	0.14
K ₂ O - %	-----	-----	-----	-----	0.19	0.01	0.67	0.18	0.19	0.01	0.67	0.18
C.V.-Btu/lb	5984	1479	8672	1685	5693	519	9013	1965	5814	519	9013	1903

- Notes: 1. All values are at 20 % in situ moisture.
2. Na₂O and K₂O are arithmetic means for 49 samples.

TABLE 2

MEAN ASH AND CALORIFIC VALUE VS ARBITRARY ASH CUTOFFS

ITEM	All Samples	<44% Ash				<40% Ash				<36% Ash			
		Product		Reject		Product		Reject		Product		Reject	
		Unit	%	Unit	%	Unit	%	Unit	%	Unit	%	Unit	%
Ft. Core	17,146	15164	88.4	1982	11.6	14054	82.0	3092	18.0	12525	73.0	4621	27.0
Ash - %	28.7	25.9	79.8	50.1	20.2	24.6	70.3	47.2	29.7	23.0	58.5	44.1	41.5
C.V. - Btu/lb	5814	6231	94.8	2623	5.2	6418	90.5	3069	9.5	6664	83.7	3510	16.3

Note: Values are at 20 % in situ moisture.
Additional reject has 3865 BTU.

Add. reg. 4401 BTU

NOTE

This abbreviated copy of the report contains only the General Summary statistical tables.

Summaries of individual drill holes and listings of analyses by drill hole are not included.

GENERAL SUMMARIES

The following 12 general summaries of proximate analysis data are presented in the sequence listed below:

1. All holes: All samples.
2. All holes: Samples with less than 44 % ash, moist basis.
3. All holes: Samples with less than 40 % ash, moist basis.
4. All holes: Samples with less than 36 % ash, moist basis.
5. 1957-59: All samples.
6. 1957-59: Samples with less than 44 % ash, moist basis.
7. 1957-59: Samples with less than 40 % ash, moist basis.
8. 1957-59: Samples with less than 36 % ash, moist basis.
9. 1974-75: All samples.
10. 1974-75: Samples with less than 44 % ash, moist basis.
11. 1974-75: Samples with less than 40 % ash, moist basis.
12. 1974-75: Samples with less than 36 % ash, moist basis.

SAMPLE TYPE	TOTAL LENGTH COUNT	MOISTURES										ESTIMATED IN-SITU MOISTURE OF 20.00%						
		DRY BASIS										GROSS						
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SERIES 1-199 :	16069.5	543																
SERIES 201-299 :	1077.0	61																
SERIES 301-399 :	16453.0	163																
SOCA & PCTASH TESTS:		49																
			41.50	82.17	48.92	49.22	11266	2.40	1.118	0.837	65.74	39.14	39.38	9013	1.92	0.854	0.670	
MAXIMUM			1.49	12.04	12.34	2.07	649	0.00	0.124	0.009	9.64	9.87	1.66	519	0.00	0.099	0.007	
MINIMUM			40.01	70.13	36.58	47.15	10617	2.40	0.994	0.828	56.10	29.27	37.72	8494	1.92	0.795	0.663	
RANGE																		
WEIGHTED MEAN		604	19.78	35.83	33.88	30.29	7277	0.48				28.66	27.10	24.24	5814	0.39		
(EXCLUDING SERIES 301-399)																		
ARITHMETIC MEAN		543	19.96	38.35	32.19	29.46	6994	0.50	0.320	0.243	30.68	25.74	23.56	5595	0.39	0.256	0.194	
(SERIES 1-199)																		
STANDARD DEVIATION			4.38	15.74	6.58	10.18	2378	0.35	0.174	0.225	12.59	5.26	8.14	1903	0.28	0.139	0.180	
Coeff. of VARIATION %			21.92	41.04	20.43	34.55	34.00	70.91				41.05	20.44	34.56	34.00	71.61		

REGRESSION EQUATIONS (DRY BASIS):
 $Y = 81.45 - 0.00622X$ WHERE Y = PERCENTAGE OF ASH,
 $X = 13080.38 - 160.59Y$ X = GROSS BTU PER POUND.

LINEAR CORRELATION COEFFICIENT = -0.9761

<>> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 455 SAMPLES CONTAINING ASH VALUES < 55.00% HAVE BEEN USED.
 (55.00% DRY ASH = 44.00% ASH AT 20.00% MOISTURE)

* GROUP 1 DRILL HOLES: DDH 57-008, 009, 010, 011, 012, 013, 014, 015, DDH 59-016, 017, 018, 019, 020, 021 AND 022.

** GROUP 2 DRILL HOLES: RH 75-004, DDH 74-023, 025, 026, 039, 041 AND DDH 75-050.

*** GROUP 3 DRILL HOLES: DDH 74-037, 038, 043, 044, 046, DDH 75-051 AND 053.

DATE: 3 JUL 75

HAT CREEK COAL PROJECT - STATISTICAL ANALYSIS OF PROXIMATE TEST DATA
 COMBINED DRILL HOLES - GROUP 1* + GROUP 2** + GROUP 3***
 SAMPLES < 55% DRY ASH

PAGE 1

SAMPLE TYPE	TOTAL LENGTH COUNT	*****										*****						
		MOISTURES					DRY BASIS					ESTIMATED IN-SITU MOISTURE OF 20.00%						
		*****					*****					*****						
SERIES 1-199 :	14277.0	455	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SERIES 201-299 :	887.5	49	%	AS	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SERIES 301-399 :	16453.0	163	EQUIL	RECVD	ASH	V.M.	F.C.	/LB.	SULFR	SODA	POTAS	ASH	V.M.	F.C.	/LB.	SULFR	SGCA	POTAS
SODA & POTASH TESTS:		39	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
MAXIMUM			41.50	54.91	48.92	49.22	11266	2.40	1.118	0.672	43.93	39.14	39.38	9013	1.92	0.894	0.537	
MINIMUM			8.60	12.04	20.35	12.59	3294	0.01	0.124	0.009	9.64	16.28	10.07	2635	0.01	0.099	0.007	
RANGE			32.90	42.87	28.57	26.63	7972	2.39	0.994	0.663	34.29	22.86	29.31	6378	1.91	0.795	0.530	
WEIGHTED MEAN (EXCLUDING SERIES 301-399)		504	20.14	32.33	35.20	22.47	7795	0.48			25.86	28.16	25.98	6231	0.39			
ARITHMETIC MEAN (SERIES 1-199)		455	20.47	33.33	34.13	22.54	7728	0.51	0.298	0.181	26.66	27.30	26.02	6182	0.40	0.238	0.145	
STANDARD DEVIATION			4.10	11.46	4.96	7.83	1797	0.36	0.159	0.173	9.17	3.97	6.26	1437	0.29	0.127	0.139	
COEFF. OF VARIATION %			20.01	34.39	14.52	24.06	23.25	70.95			34.39	14.52	24.07	23.25	71.75			

REGRESSION EQUATIONS (DRY BASIS):
 $Y = 81.45 - 0.00622X$ WHERE Y = PERCENTAGE OF ASH,
 $X = 13080.38 - 160.59Y$ X = GROSS BTU PER POUND.

LINEAR CORRELATION COEFFICIENT = -0.9761

<>> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 455 SAMPLES CONTAINING ASH VALUES < 55.00% HAVE BEEN USED.
 (55.00% DRY ASH = 44.00% ASH AT 20.00% MOISTURE)

* GROUP 1 DRILL HOLES: DDH 57-008, 009, 010, 011, 012, 013, 014, 015, DDH 59-016, 017, 018, 019, 020, 021 AND 022.

** GROUP 2 DRILL HOLES: RH 75-004, DDH 74-023, 025, 026, 039, 041 AND DDH 75-050.

*** GROUP 3 DRILL HOLES: DDH 74-037, 038, 043, 044, 046, DDH 75-051 AND 053.

STATISTICAL ANALYSIS

SAMPLE TYPE	TOTAL LENGTH	COUNT	*****															
			MOISTURES					DRY BASIS					ESTIMATED IN-SITU MOISTURE OF 20.00%					
			%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SERIES 1-199 :	13230.0	412																
SERIES 201-299 :	824.5	43	%	AS	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SERIES 301-399 :	16453.0	163	EQUIL	RECVD	ASH	V.M.	F.C.	/LB.	SULFR	SCDA	PCTAS	ASH	V.M.	F.C.	/LB.	SULFR	SODA	POTAS
SODA & PCTASH TESTS :		36	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
	MAXIMUM		41.50	149.87	48.92	49.22	11266	2.40	0.541	0.540	39.90	39.14	39.38	9013	1.92	0.433	0.432	
	MINIMUM		8.60	12.04	20.35	15.30	4070	0.01	0.124	0.009	9.64	16.28	12.24	3256	0.01	0.099	0.007	
	RANGE		32.90	137.83	28.57	33.92	7196	2.39	0.417	0.531	30.26	22.86	27.14	5757	1.91	0.334	0.425	
	WEIGHTED MEAN	455	20.35	30.74	35.87	33.39	8030	0.48			24.59	28.69	26.72	6418	0.39			
	(EXCLUDING SERIES 301-399)																	
	ARITHMETIC MEAN	412	20.69	31.32	34.93	33.75	8027	0.51	0.275	0.156	25.05	27.94	27.00	6422	0.41	0.220	0.125	
	(SERIES 1-199)																	
	STANDARD DEVIATION		4.07	10.10	4.47	7.19	1613	0.37	0.087	0.145	8.08	3.57	5.75	1290	0.30	0.070	0.116	
	COEFF. OF VARIATION %		19.68	32.25	12.79	21.29	20.09	71.98			32.25	12.78	21.30	20.09	72.91			

REGRESSION EQUATIONS (DRY BASIS): Y = 80.04 - 0.00607X WHERE Y = PERCENTAGE OF ASH,
 X = 13185.63 - 164.72Y X = GROSS BTU PER POUND.

LINEAR CORRELATION COEFFICIENT = -0.9696

<>> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 412 SAMPLES CONTAINING ASH VALUES < 50.00% HAVE BEEN USED.
 (50.00% DRY ASH = 40.00% ASH AT 20.00% MOISTURE)

- * GROUP 1 DRILL HOLES: DDH 57-008, 009, 010, 011, 012, 013, 014, 015, DDH 59-016, 017, 018, 019, 020, 021 AND 022.
- ** GROUP 2 DRILL HOLES: RH 75-004, DDH 74-023, 025, 026, 039, 041 AND DDH 75-050.
- *** GROUP 3 DRILL HOLES: DDH 74-037, 038, 043, 044, 046, DDH 75-051 AND 053.

MILWAUKEE

SAMPLE TYPE	TOTAL LENGTH	COUNT	MOISTURES										ESTIMATED IN-SITU MOISTURE OF 20.00%					
			GROSS					NET					GROSS			NET		
			%	AS	%	%	%	BTU	%	%	%	%	%	BTU	%	%	%	
SERIES 1-199 :	11826.5	363	EQUIL	RECVD	ASH	V.M.	F.C.	/LB.	SULFR	SCDA	PGTAS	ASH	V.M.	F.C.	/LB.	SULFR	SCDA	POTAS
SERIES 201-299 :	698.5	37	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
SERIES 301-399 :	16453.0	163	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
SODA & POTASH TESTS:		29	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
MAXIMUM			41.50	44.90	48.92	49.22	11266	2.40	0.541	0.468	35.92	39.14	39.38	9013	1.92	0.433	0.374	
MINIMUM			8.60	12.04	22.84	18.18	4070	0.01	0.124	0.009	9.64	18.28	14.55	3256	0.01	0.099	0.007	
RANGE			32.90	32.86	26.08	31.04	7196	2.39	0.417	0.459	26.28	20.86	24.83	5757	1.91	0.334	0.367	
WEIGHTED MEAN		400	20.60	28.71	36.57	34.71	8334	0.47			22.97	29.26	27.77	6664	0.38			
(EXCLUDING SERIES 301-399)																		
ARITHMETIC MEAN		363	20.94	29.15	35.68	35.17	8354	0.51	0.277	0.118	23.32	28.54	28.13	6683	0.40	0.222	0.094	
(SERIES 1-199)																		
STANDARD DEVIATION			4.06	8.72	4.08	6.35	1421	0.38	0.092	0.113	6.97	3.27	5.08	1137	0.31	0.074	0.091	
COEFF. OF VARIATION %			19.39	29.90	11.44	18.07	17.01	74.55			29.90	11.44	18.07	17.01	75.74			

REGRESSION EQUATIONS (DRY BASIS):
 $Y = 78.45 - 0.00590X$ WHERE Y = PERCENTAGE OF ASH,
 $X = 13293.11 - 169.43Y$ X = GROSS BTL PER PCUND.

LINEAR CORRELATION COEFFICIENT = -0.9625

<>> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 363 SAMPLES CONTAINING ASH VALUES < 45.00% HAVE BEEN USED.
 (45.00% DRY ASH = 36.00% ASH AT 20.00% MOISTURE)

* GROUP 1 DRILL HOLES: DDH 57-008, 009, 010, 011, 012, 013, 014, 015, DDH 59-016, 017, 018, 019, 020, 021 AND 022.

** GROUP 2 DRILL HOLES: RH 75-004, DDH 74-023, 025, 026, 039, 041 AND DDH 75-05C.

*** GROUP 3 DRILL HOLES: DDH 74-037, 038, 043, 044, 046, DDH 75-051 AND 053.

SAMPLE TYPE	TOTAL LENGTH	COUNT	MOISTURES			DRY BASIS					ESTIMATED IN-SITU MOISTURE OF 20.00%							
			%	AS	%	%	%	BTU	%	%	%	%	%	%	BTU	%	%	%
SERIES 1-199 :	7007.5	134	EQUIL	RECVD	ASH	V.M.	F.C.	/LB.	SULFR	SCDA	PCTAS	ASH	V.M.	F.C.	/LB.	SULFR	SODA	POTAS
SERIES 201-299 :	1071.0	61	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
SERIES 301-399 :	3799.5	72	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
SODA & PCTASH TESTS:		0	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
	MAXIMUM		41.50	74.59	48.92	47.03	10840	2.28				59.67	39.14	37.62	8672	1.83		
	MINIMUM		7.45	13.69	17.92	3.45	1848	0.01				10.96	14.34	2.79	1479	0.01		
	RANGE		34.05	60.90	31.00	43.54	8992	2.27				48.71	24.80	34.83	7193	1.82		
	WEIGHTED MEAN	195	19.06	33.80	36.50	29.70	7483	0.50				27.04	29.20	23.76	5984	0.40		
	(EXCLUDING SERIES 301-399)																	
	ARITHMETIC MEAN	134	19.21	35.51	35.58	28.91	7276	0.53				28.40	28.46	23.12	5821	0.42		
	(SERIES 1-199)																	
	STANDARD DEVIATION		4.60	13.55	6.07	8.87	2106	0.38				10.84	4.86	7.10	1685	0.30		
	COEFF. OF VARIATION %		23.93	38.16	17.06	30.68	28.95	71.29				38.17	17.06	30.69	28.95	72.04		

REGRESSION EQUATIONS (DRY BASIS):
 $Y = 79.67 - 0.00609X$ WHERE Y = PERCENTAGE OF ASH,
 $X = 13065.45 - 163.98Y$ X = GROSS BTU PER POUND.

LINEAR CORRELATION COEFFICIENT = -0.9606

<>> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 122 SAMPLES CONTAINING ASH VALUES < 55.00% HAVE BEEN USED.
 (55.00% DRY ASH = 44.00% ASH AT 20.00% MOISTURE)

* GROUP 1 DRILL HOLES: DDH 57-008, 009, 010, 011, 012, 013, 014, 015, CCH 59-016, 017, 018, 019, 020, 021 AND 022

SAMPLE TYPE	TOTAL LENGTH	COUNT	MOISTURES				DRY BASIS				ESTIMATED IN-SITU MOISTURE OF 20.00%			
			%	AS	%	%	%	%	%	%	%	%	%	%
SERIES 1-199 :	6615.5	122					GROSS				GROSS			
SERIES 201-299 :	887.5	49	%	AS	%	%	%	BTU	%	%	%	%	%	%
SERIES 301-399 :	3799.5	72	EQUIL	RECVD	ASH	V.M.	F.C.	/LB.	SULFR	SCDA	PCTAS	ASH	V.M.	F.C.
SODA & POTASH TESTS:		0	****	****	****	****	****	****	****	****	****	****	****	****
			41.50	154.91	48.92	47.03	10840	2.28				43.93	39.14	37.62
MAXIMUM			8.71	13.65	24.73	15.30	4070	0.01				10.96	19.78	12.24
MINIMUM			32.79	41.22	24.19	21.73	6770	2.27				32.97	19.36	25.38
RANGE														
WEIGHTED MEAN		171	19.47	31.78	37.10	31.12	7790	0.49				25.43	29.68	24.90
(EXCLUDING SERIES 301-399)														
ARITHMETIC MEAN		122	19.58	32.86	36.53	30.61	7676	0.54				26.29	29.22	24.48
(SERIES 1-199)														
STANDARD DEVIATION			4.44	10.94	5.31	7.24	1723	0.39				8.75	4.25	5.79
COEFF. OF VARIATION %			22.66	33.28	14.55	23.64	22.44	71.35				33.29	14.56	23.64
														22.44
														72.20

REGRESSION EQUATIONS (DRY BASIS): Y = 79.67 - 0.00609X WHERE Y = PERCENTAGE OF ASH,
 X = 13065.45 - 163.98Y X = GROSS BTU PER POUND.

LINEAR CORRELATION COEFFICIENT = -0.9606

<>> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 122 SAMPLES CONTAINING ASH VALUES < 55.00% HAVE BEEN USED.
 (55.00% DRY ASH = 44.00% ASH AT 20.00% MOISTURE)

* GROUP 1 DRILL HOLES: DDH 57-008, 009, 010, 011, 012, 013, 014, 015, DDH 59-016, 017, 018, 019, 020, 021 AND 022

SERIES 1-199 (122) 1-199 (122) 1-199 (122)

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HAT CREEK COAL PROJECT - STATISTICAL ANALYSIS OF PROXIMATE TEST DATA
 COMBINED DRILL HOLES - GROUP 1*
 SAMPLES < 50% DRY ASH

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SAMPLE TYPE	TOTAL LENGTH	COUNT	MOISTURES							CRY BASIS							ESTIMATED IN-SITU MOISTURE OF 20.00%								
			%	AS	%	%	%	%	%	GROSS	BTU	%	%	%	%	%	%	GROSS	BTU	%	%	%			
SERIES 1-199 :	6303.5	115																							
SERIES 201-299 :	824.5	43																							
SERIES 301-399 :	3799.5	72																							
SODA & POTASH TESTS:		0																							
MAXIMUM			41.50	149.70	48.92	47.03	10840	2.28							39.76	39.14	37.62	8672	1.83						
MINIMUM			8.71	13.69	27.12	15.30	4070	0.01							10.96	21.70	12.24	3256	0.01						
RANGE			32.79	36.01	21.80	31.73	6770	2.27							28.80	17.44	25.38	5416	1.82						
WEIGHTED MEAN		158	19.75	30.72	37.57	31.71	7943	0.49							24.57	30.06	25.37	6353	0.39						
(EXCLUDING SERIES 301-399)																									
ARITHMETIC MEAN		115	19.85	31.65	37.09	31.26	7847	0.55							25.32	29.67	25.00	6277	0.43						
(SERIES 1-199)																									
STANDARD DEVIATION			4.37	10.05	4.93	6.94	1624	0.39							8.04	3.94	5.55	1299	0.31						
COEFF. OF VARIATION %			22.03	31.74	13.28	22.19	20.70	71.90							31.75	13.28	22.20	20.70	72.35						

REGRESSION EQUATIONS (DRY BASIS): Y = 77.96 - 0.00590X WHERE Y = PERCENTAGE OF ASH,
 X = 13208.91 - 169.41Y X = GROSS BTU PER POUND.

LINEAR CORRELATION COEFFICIENT = -0.9542

<>> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 115 SAMPLES CONTAINING ASH VALUES < 50.00% HAVE BEEN USED.
 (50.00% DRY ASH = 40.00% ASH AT 20.00% MOISTURE)

* GROUP 1 DRILL HOLES: DDH 57-008, 009, 010, 011, 012, 013, 014, 015, DDH 59-016, 017, 018, 019, 020, 021 AND 022

SAMPLE TYPE	TOTAL LENGTH	COUNT	*****															
			MOISTURES					DRY BASIS					ESTIMATED IN-SITU MOISTURE OF 20.00%					

			%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
			EQUIL	RECVD	ASH	V.M.	F.C.	/LB.	SULFR	SCDA	PCTAS	ASH	V.M.	F.C.	/LB.	SULFR	SODA	POTAS
SODA & POTASH TESTS:			*****															
SERIES 1-199 :	5657.5	101																
SERIES 201-299 :	698.5	37																
SERIES 301-399 :	3799.5	72																
MAXIMUM			41.50	44.40	48.92	47.03	10840	2.28				35.52	39.14	37.62	8672	1.83		
MINIMUM			8.71	13.69	27.12	18.18	4070	0.01				10.96	21.70	14.55	3256	0.01		
RANGE			32.79	30.71	21.80	28.85	6770	2.27				24.56	17.44	23.07	5416	1.82		
WEIGHTED MEAN (EXCLUDING SERIES 301-399)		138	20.08	28.70	38.28	33.02	8246	0.48				22.96	30.62	26.42	6596	0.39		
ARITHMETIC MEAN (SERIES 1-199)		101	20.22	29.47	37.82	32.71	8180	0.55				23.57	30.25	26.17	6544	0.44		
STANDARD DEVIATION			4.45	8.68	4.69	5.99	1439	0.41				6.94	3.75	4.79	1151	0.33		
COEFF. OF VARIATION %			22.00	29.44	12.39	18.31	17.59	74.68				29.45	12.40	18.31	17.59	75.40		

REGRESSION EQUATIONS (DRY BASIS):
 $Y = 75.73 - 0.00565X$ WHERE Y = PERCENTAGE OF ASH,
 $X = 13390.00 - 176.86Y$ X = GROSS BTU PER POUND.

LINEAR CORRELATION COEFFICIENT = -0.9378

<>> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 101 SAMPLES CONTAINING ASH VALUES < 45.00% HAVE BEEN USED.
 (45.00% DRY ASH = 36.00% ASH AT 20.00% MOISTURE)

* GROUP 1 DRILL HOLES: DDH 57-008, 009, 010, 011, 012, 013, 014, 015, CDF 59-016, 017, 018, 019, 020, 021 AND 022

DATE: 3 JUL 75

HAT CREEK COAL PROJECT - STATISTICAL ANALYSIS OF PROXIMATE TEST DATA
 COMBINED DRILL HOLES - GROUP 2** + GROUP 3***
 ALL SAMPLES

PAGE 1

SAMPLE TYPE	TOTAL LENGTH	COUNT	MOISTURES										DRY BASIS										ESTIMATED IN-SITU MOISTURE OF 20.00%									
			%		AS		%		%		%		GROSS		BTU		%		%		GROSS		BTU		%		%					
SODAS & POTASH TESTS:			EQUIL	RECVD	ASH	V.M.	F.C.	/LB.	SULFR	SODA	PTAS	ASH	V.M.	F.C.	/LB.	SULFR	SODA	POTAS	ASH	V.M.	F.C.	/LB.	SULFR	SODA	POTAS							
SERIES 1-199 :	9062.0	409	30.58	82.17	44.16	49.22	11266	2.40	1.118	0.837	65.74	35.33	39.38	9013	1.92	0.894	0.670															
SERIES 201-299 :	0.0	0	1.49	12.04	12.34	2.07	649	0.00	0.124	0.009	9.64	9.87	1.66	519	0.00	0.099	0.007															
SERIES 301-399 :	12653.5	91	29.09	70.13	31.82	47.15	10617	2.40	0.994	0.828	56.10	25.46	37.72	8494	1.92	0.795	0.663															
MAXIMUM			30.58	82.17	44.16	49.22	11266	2.40	1.118	0.837	65.74	35.33	39.38	9013	1.92	0.894	0.670															
MINIMUM			1.49	12.04	12.34	2.07	649	0.00	0.124	0.009	9.64	9.87	1.66	519	0.00	0.099	0.007															
RANGE			29.09	70.13	31.82	47.15	10617	2.40	0.994	0.828	56.10	25.46	37.72	8494	1.92	0.795	0.663															
WEIGHTED MEAN		409	20.41	37.64	31.54	30.82	7122	0.47			30.11	25.23	24.66	5693	0.37																	
(EXCLUDING SERIES 301-399)																																
ARITHMETIC MEAN		409	20.20	39.28	31.07	29.64	6902	0.48	0.320	0.243	31.42	24.85	23.71	5521	0.38	0.256	0.194															
(SERIES 1-199)																																
STANDARD DEVIATION			4.28	16.30	6.35	10.58	2456	0.34	0.174	0.225	13.04	5.08	8.46	1965	0.27	0.139	0.180															
COEFF. OF VARIATION %			21.17	41.50	20.45	35.68	35.59	70.39			41.50	20.45	35.69	35.59	71.39																	

REGRESSION EQUATIONS (DRY BASIS):
 $Y = 82.11 - 0.00627X$ WHERE Y = PERCENTAGE OF ASH,
 $X = 13085.57 - 159.36Y$ X = GROSS BTU PER POUND.

LINEAR CORRELATION COEFFICIENT = -0.9823

<> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 333 SAMPLES CONTAINING ASH VALUES < 55.00% HAVE BEEN USED.
 (55.00% DRY ASH = 44.00% ASH AT 20.00% MOISTURE)

** GROUP 2 DRILL HOLES: RH 75-004, DDH 74-023, 025, 026, 039, 041 AND DDH 75-050.

*** GROUP 3 DRILL HOLES: DDH 74-037, 038, 043, 044, 046, DDH 75-051 AND 053.

SAMPLE TYPE	TOTAL LENGTH	COUNT	MOISTURES			DRY BASIS						ESTIMATED IN-SITU MOISTURE OF 20.00%					
			% AS	% RECVD	% EQUIL	% BTU	% SCLD	% PCTAS	% V.M.	% F.C.	% /LB.	% SULFR	% SODA	% POTAS			
SERIES 1-199 :	7661.5	333															
SERIES 201-299 :	0.0	0															
SERIES 301-399 :	12653.5	91															
SODA & POTASH TESTS:		39															
MAXIMUM			30.58	54.81	44.16	49.22	11266	2.40	1.118	0.672	43.85	35.33	39.38	9013	1.92	0.894	0.527
MINIMUM			8.60	12.04	20.35	12.59	3294	0.11	0.124	0.009	9.64	16.28	10.07	2635	0.09	0.099	0.007
RANGE			21.98	42.77	23.81	26.63	7972	2.29	0.994	0.663	34.21	19.05	29.31	6378	1.83	0.795	0.530
WEIGHTED MEAN		333	20.80	32.86	33.34	33.80	7825	0.47			26.29	26.67	27.04	6257	0.38		
(EXCLUDING SERIES 301-399)																	
ARITHMETIC MEAN		333	20.79	33.50	33.25	33.24	7747	0.49	0.298	0.181	26.79	26.60	26.59	6198	0.39	0.238	0.145
(SERIES 1-199)																	
STANDARD DEVIATION			3.92	11.66	4.52	7.93	1825	0.35	0.159	0.173	9.33	3.61	6.34	1460	0.28	0.127	0.139
Coeff. of Variation %			18.84	34.80	13.58	23.85	23.56	70.24			34.81	13.58	23.85	23.56	71.28		

REGRESSION EQUATIONS (DRY BASIS):
 $Y = 82.11 - 0.00627X$ WHERE Y = PERCENTAGE OF ASH,
 $X = 13085.57 - 159.36Y$ X = GROSS BTU PER POUND.

LINEAR CORRELATION COEFFICIENT = -0.9823

<>> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 333 SAMPLES CONTAINING ASH VALUES < 55.00% HAVE BEEN USED.
 (55.00% DRY ASH = 44.00% ASH AT 20.00% MOISTURE)

** GROUP 2 DRILL HOLES: RH 75-004, DDH 74-023, 025, 026, 039, 041 AND DDH 75-050.

*** GROUP 3 DRILL HOLES: DDH 74-037, 038, 043, 044, 046, DDH 75-051 AND 053.

DATE: 3 JUL 75

HAT CREEK COAL PROJECT - STATISTICAL ANALYSIS OF PROXIMATE TEST DATA
 COMBINED DRILL HOLES - GROUP 2** + GRCLP 3***
 SAMPLES < 50% DRY ASH

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SAMPLE TYPE	TOTAL LENGTH	COUNT	MOISTURES										CRY BASIS										ESTIMATED IN-SITU MOISTURE OF 20.00%																								
			%		AS		ASH		V.M.		F.C.		/LB.		SULFR		SODA		POTAS		ASH		V.M.		F.C.		/LB.		SULFR		SCDA		PCTAS														
SERIES 1-199 :	6926.5	297	*****																																												
SERIES 201-299 :	0.0	0	*****																																												
SERIES 301-399 :	12653.5	91	*****																																												
SODA & POTASH TESTS:		36	*****																																												
MAXIMUM			30.58	49.87	44.16	49.22	11266	2.40	0.541	0.540	39.90	35.33	39.38	9013	1.92	0.433	0.432	8.60	12.04	20.35	18.55	4233	0.11	0.124	0.009	9.64	16.28	14.84	3387	0.09	0.099	0.007	21.98	37.83	23.81	30.67	7033	2.29	0.417	0.531	30.26	19.05	24.54	5626	1.83	0.334	0.425
MINIMUM			*****																																												
RANGE			*****																																												
WEIGHTED MEAN		297	20.98	30.76	34.11	35.13	8141	0.48	*****										24.61	27.29	28.10	6510	0.38																								
(EXCLUDING SERIES 301-399)			*****																																												
ARITHMETIC MEAN		297	21.02	31.19	34.09	34.72	8097	0.50	0.275	0.156	24.94	27.27	27.77	6478	0.40	0.220	0.125	3.91	10.13	3.98	7.06	1606	0.36	0.087	0.145	8.11	3.18	5.65	1285	0.29	0.070	0.116	18.60	32.49	11.67	20.33	19.83	72.20	32.50	11.67	20.34	19.83	73.16				
STANDARD DEVIATION			*****																																												
COEFF. OF VARIATION %			*****																																												

REGRESSION EQUATIONS (DRY BASIS):
 $Y = 81.11 - 0.00616X$ WHERE Y = PERCENTAGE OF ASH,
 $X = 13155.03 - 162.18Y$ X = GROSS BTU PER POUND.

LINEAR CORRELATION COEFFICIENT = -0.9772

<>> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 297 SAMPLES CONTAINING ASH VALUES < 50.00% HAVE BEEN USED.
 (50.00% DRY ASH = 40.00% ASH AT 20.00% MOISTURE)

** GROUP 2 DRILL HOLES: RH 75-004, DDH 74-023, 025, 026, 039, 041 AND DDH 75-050.

*** GROUP 3 DRILL HOLES: DDH 74-037, 038, 043, 044, 046, DDH 75-051 AND 053.

HAT CREEK COAL PROJECT

SAMPLE TYPE	TOTAL LENGTH	COUNT	*****										*****							
			MOISTURES			CRY BASIS							ESTIMATED IN-SITU MOISTURE OF 20.00%							
			%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SERIES 1-199 :	6169.0	262																		
SERIES 201-299 :	0.0	0																		
SERIES 301-399 :	12653.5	91	EQUIL	RECVD	ASH	V.M.	F.C.	/LB.	SULFRI	SCOA	PCTAS	ASH	V.M.	F.C.	/LB.	SULFRI	SCOA	POTAS		
SODA & POTASH TESTS:		29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
MAXIMUM			30.58	44.90	44.16	49.22	11266	2.40	0.541	0.468		35.92	35.33	39.38	9013	1.92	0.433	0.374		
MINIMUM			8.60	12.04	22.84	18.55	4233	0.11	0.124	0.009		9.64	18.28	14.84	3387	0.09	0.099	0.007		
RANGE			21.98	32.86	21.32	20.67	7033	2.29	0.417	0.459		26.28	17.05	24.54	5626	1.83	0.334	0.367		
WEIGHTED MEAN		262	21.13	28.73	34.81	36.45	8446	0.47				22.99	27.85	29.16	6754	C.37				
(EXCLUDING SERIES 301-399)																				
ARITHMETIC MEAN		262	21.21	29.03	34.86	36.11	8421	0.50	0.277	0.118		23.22	27.88	28.89	6737	C.39	0.222	0.094		
(SERIES 1-199)																				
STANDARD DEVIATION			3.87	8.74	3.50	6.24	1411	0.37	0.092	0.113		6.99	2.80	5.00	1129	C.30	0.074	0.091		
COEFF. OF VARIATION %			18.25	30.12	10.05	17.29	16.76	74.80				30.12	10.04	17.29	16.76	75.77				

REGRESSION EQUATIONS (DRY BASIS):
 $Y = 79.83 - 0.00603X$ WHERE Y = PERCENTAGE OF ASH,
 $X = 13232.44 - 165.74Y$ X = GROSS BTU PER POUND.

LINEAR CORRELATION COEFFICIENT = -0.9740

<>> NOTE: IN DERIVING THE ABOVE REGRESSION EQUATIONS FROM THE 1-199 SERIES SAMPLES,
 ONLY THE 262 SAMPLES CONTAINING ASH VALUES < 45.00% HAVE BEEN USED.
 (45.00% DRY ASH = 36.00% ASH AT 20.00% MOISTURE)

** GROUP 2 DRILL HOLES: RH 75-004, DDH 74-023, 025, 026, 039, 041 AND DDH 75-050.

*** GROUP 3 DRILL HOLES: DDH 74-037, 038, 043, 044, 046, DDH 75-C51 AND 053.