PERC
ENGINEERING CO., INC.

Telephone: (205) 384-5553
Facsimile: (205) 295-3114 - Main Building
(205) 295-3115 - Water Lab
Web Address: www.percengineering.com

COMPANY NAME: Shannon LLC

MINE NAME: Shannon No. 4

DRILL HOLE: 1725

COLLECTED BY: client

DATE COLLECTED: 05/17/2011

ANALYZED BY: JR, JK, JC, SR

DATE ANALYZED: 06/27/2011

All analysis is performed according to EPA standards.

INTERVAL		PASTE pH	% SULFUR	MAX. POT. *ACIDITY	NEUT. *POT	A-B *ACCOUNT	ACID FORMING
0.00	5.00	4.170	0.001	0.031	1.000	0.969	N
5.00	10.00	3.880	0.001	0.031	-1.000	-1.031	N
10.00	15.00	3.950	0.001	0.031	0.250	0.219	N
15.00	20.00	4.130	0.001	0.031	0.250	0.219	N
20.00	25.00	4.290	0.001	0.031	1.000	0.969	N
25.00	26.50	4.300	0.001	0.031	1.500	1.469	N
26.50	30.00	5.470	0.001	0.031	5.000	4.969	N
30.00	35.00	6.090	0.001	0.031	8.250	8.219	N
35.00	40.00	6.470	0.001	0.031	7.500	7.469	N
40.00	45.00	6.680	0.001	0.031	7.500	7.469	N
45.00	50.00	7.470	0.001	0.031	11.500	11.469	N
50.00	55.00	7.700	0.001	0.031	9.750	9.719	N
55.00	60.00	5.570	0.090	2.813	14.500	11.688	N
60.00	65.00	7.450	0.030	0.938	14.250	13.313	N
65.00	70.00	7.510	0.100	3.125	29.500	26.375	N
70.00	75.00	7.790	0.070	2.188	17.000	14.813	N
75.00	80.00	7.650	0.030	0.938	73.750	72.813	N
80.00	85.00	7.530	0.090	2.813	15.750	12.938	N
85.00	90.00	7.820	0.001	0.031	110.000	109.969	N
90.00	95.00	7.730	0.010	0.313	33.750	33.438	N
95.00	100.00	7.540	0.020	0.625	28.000	27.375	N
100.00	105.00	7.170	0.210	6.563	20.500	13.938	N
105.00	110.00	7.800	0.001	0.031	52.500	52.469	N
110.00	115.00	7.640	0.240	7.500	62.500	55.000	N
115.00	120.00	7.350	0.370	11.563	23.750	12.188	N
120.00	125.00	7.230	0.620	19.375	27.000	7.625	N
125.00	130.00	7.880	0.001	0.031	31.500	31.469	N
130.00	135.00	8.050	0.001	0.031	21.250	21.219	N
135.00	140.00	7.810	0.020	0.625	17.750	17.125	N
140.00	145.00	7.730	0.001	0.031	18.250	18.219	N
145.00	150.00	7.510	0.240	7.500	91.250	83.750	N
150.00	155.00	7.500	0.460	14.375	65.000	50.625	N
155.00	160.00	7.760	0.280	8.750	29.500	20.750	N
160.00	165.00	7.880	0.070	2.188	22.000	19.813	N
165.00	170.00	7.930	0.060	1.875	22.250	20.375	N
170.00	175.00	7.940	0.080	2.500	20.500	18.000	N
175.00	180.00	7.980	0.100	3.125	20.500	17.375	N
180.00	185.00	8.070	0.020	0.625	22.250	21.625	N
185.00	190.00	8.160	0.060	1.875	21.250	19.375	N
190.00	195.00	8.260	0.060	1.875	33.250	31.375	N
195.00	200.00	8.010	0.030	0.938	50.750	49.813	N
200.00	205.00	8.010	0.110	3.438	72.500	69.063	N
205.00	210.00	8.120	0.090	2.813	62.500	59.688	N
210.00	215.00	8.080	0.070	2.188	32.500	30.313	N
215.00	220.00	8.180	0.020	0.625	21.500	20.875	N
220.00	225.00	7.960	0.090	2.813	25.750	22.938	N
225.00	230.00	7.850	0.080	2.500	28.000	25.500	N
230.00	235.00	7.850	0.270	8.438	26.750	18.313	N
235.00	240.00	7.750	0.160	5.000	46.250	41.250	N
240.00	245.00	7.800	0.090	2.813	24.250	21.438	N
245.00	250.00	7.700	0.100	3.125	23.750	20.625	N
250.00	255.00	7.770	0.120	3.750	23.750	20.000	N
255.00	260.00	7.920	0.090	2.813	22.250	19.438	N

1725

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260.00	265.00		8.080	0.070	2.188		21.250	19.063	N
265.00	270.00		8.180	0.060	1.875		19.500	17.625	N
270.00	275.00		8.260	0.070	2.188		22.750	20.563	N
275.00	280.00		8.400	0.050	1.563		24.250	22.688	N
280.00	285.00		8.510	0.020	0.625		26.000	25.375	N
285.00	290.00		8.470	0.040	1.250		42.000	40.750	N
290.00	295.00		8.390	0.090	2.813		23.750	20.938	N
295.00	300.00		8.400	0.040	1.250		21.750	20.500	N
300.00	305.00		8.210	0.374	11.688		26.250	14.563	N
305.00	310.00		8.140	0.134	4.188		72.750	68.563	N
310.00	315.00		8.210	0.145	4.531		50.750	46.219	N
315.00	320.00		8.020	0.619	19.344		30.250	10.906	N
320.00	325.00		8.430	0.024	0.750		16.750	16.000	N
325.00	330.00		8.540	0.012	0.375		17.250	16.875	N
330.00	335.00		8.420	0.035	1.094		24.750	23.656	N
335.00	340.00		8.650	0.001	0.031		18.250	18.219	N
340.00	345.00		8.180	0.053	1.656		15.000	13.344	N
345.00	350.00		8.210	0.047	1.469		17.250	15.781	N
350.00	352.90		8.180	0.044	1.375		15.500	14.125	N
352.90	354.10	coal		1.280	40.000	coal	COAL		***
354.10	355.00		8.280	0.046	1.438		17.500	16.063	N
355.00	360.00		8.370	0.001	0.031		18.750	18.719	N
360.00	365.00		8.170	0.103	3.219		26.750	23.531	N
365.00	370.00		8.150	0.131	4.094		29.500	25.406	N
370.00	375.00		8.050	0.032	1.000		27.250	26.250	N
375.00	380.00		8.060	0.010	0.313		27.000	26.688	N
380.00	385.00		8.090	0.024	0.750		24.250	23.500	N
385.00	387.90	coal		1.790	55.938	coal	COAL		***
387.90	390.00		7.960	0.393	12.281		18.000	5.719	N
390.00	395.00		8.010	0.058	1.813		24.250	22.438	N
395.00	400.00		8.040	0.030	0.938		24.250	23.313	N
400.00	405.00		8.080	0.273	8.531		20.750	12.219	N
405.00	410.00		7.980	0.001	0.031		47.500	47.469	N
410.00	415.00		8.060	0.013	0.406		52.000	51.594	N
415.00	420.00		8.030	0.039	1.219		24.250	23.031	N
420.00	425.00		8.040	0.036	1.125		22.500	21.375	N
425.00	430.00		8.030	0.055	1.719		24.000	22.281	N
430.00	435.00		7.980	0.039	1.219		40.500	39.281	N
435.00	440.00		7.900	0.005	0.156		39.750	39.594	N
440.00	445.00		8.070	0.006	0.188		38.500	38.313	N
445.00	450.00		7.990	0.036	1.125		11.750	10.625	N
450.00	455.00		8.010	0.268	8.375		10.500	2.125	N
455.00	460.00		7.860	0.020	0.625		15.750	15.125	N
460.00	465.00		8.090	0.001	0.031		11.500	11.469	N
465.00	467.00		7.980	0.001	0.031		16.500	16.469	N
467.00	472.60	coal		0.980	30.625	coal	COAL		***
472.60	475.00		8.030	0.594	18.563		10.000	-8.563	Y
475.00	480.00		8.090	0.131	4.094		16.000	11.906	N
480.00	485.00		7.900	0.151	4.719		15.250	10.531	N
485.00	490.00		7.950	0.098	3.063		14.250	11.188	N
490.00	495.00		8.030	0.062	1.938		15.500	13.563	N
495.00	496.00		8.070	0.059	1.844		12.250	10.406	N
496.00	497.70	coal		1.090	34.063	coal	COAL		***
497.70	500.00		8.150	0.389	12.156		13.500	1.344	N
500.00	505.00		8.200	0.045	1.406		13.000	11.594	N
505.00	510.00		7.820	0.029	0.906		19.250	18.344	N
**AVERAGE			5.325	0.089	2.785		26.897	24.112	N

*Calculated in tons CaCo3 per 1000 tons of material.
**Averages do not include coal seam to be mined or intervals below lowest seam.
***Not analyzed

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COMPANY NAME: Shannon LLC

MINE NAME: Shannon No. 4

DRILL HOLE: 1726

COLLECTED BY: client

DATE COLLECTED: 05/16/2011

ANALYZED BY: JR, JK, JC, SR

DATE ANALYZED: 07/07/2011

All analysis is performed according to EPA standards.

INTERVAL		PASTE pH	% SULFUR	MAX. POT. *ACIDITY	NEUT. *POT	A-B *ACCOUNT	ACID FORMING
0.00	5.00	4.830	0.001	0.031	0.500	0.469	N
5.00	10.00	4.970	0.001	0.031	1.750	1.719	N
10.00	14.00	5.760	0.001	0.031	2.250	2.219	N
14.00	15.00	6.320	0.001	0.031	5.750	5.719	N
15.00	20.00	6.120	0.001	0.031	3.750	3.719	N
20.00	21.00	6.100	0.001	0.031	3.500	3.469	N
21.00	25.00	7.180	0.001	0.031	5.750	5.719	N
25.00	30.00	5.620	0.001	0.031	3.500	3.469	N
30.00	35.00	7.920	0.001	0.031	10.500	10.469	N
35.00	40.00	8.270	0.001	0.031	37.500	37.469	N
40.00	45.00	7.950	0.190	5.938	11.250	5.313	N
45.00	50.00	8.100	0.060	1.875	15.000	13.125	N
50.00	55.00	8.080	0.060	1.875	17.000	15.125	N
55.00	60.00	8.200	0.010	0.313	17.750	17.438	N
60.00	65.00	7.860	0.030	0.938	20.500	19.563	N
65.00	70.00	8.100	0.110	3.438	60.500	57.063	N
70.00	75.00	8.020	0.070	2.188	32.250	30.063	N
75.00	80.00	8.130	0.120	3.750	22.000	18.250	N
80.00	85.00	7.870	0.160	5.000	19.500	14.500	N
85.00	90.00	8.220	0.110	3.438	19.000	15.563	N
90.00	95.00	7.730	0.370	11.563	17.000	5.438	N
95.00	100.00	8.060	0.160	5.000	15.000	10.000	N
100.00	105.00	7.240	0.410	12.813	16.000	3.188	N
105.00	110.00	7.090	0.460	14.375	14.000	-0.375	N
110.00	115.00	7.400	0.610	19.063	15.750	-3.313	N
115.00	120.00	7.430	0.510	15.938	20.000	4.063	N
120.00	125.00	7.880	0.190	5.938	20.000	14.063	N
125.00	130.00	7.850	0.070	2.188	36.250	34.063	N
130.00	135.00	7.730	0.140	4.375	32.750	28.375	N
135.00	140.00	7.760	0.150	4.688	36.750	32.063	N
140.00	145.00	7.990	0.050	1.563	24.000	22.438	N
145.00	150.00	8.040	0.040	1.250	20.500	19.250	N
150.00	155.00	7.910	0.050	1.563	22.000	20.438	N
155.00	160.00	8.110	0.010	0.313	24.250	23.938	N
160.00	165.00	8.130	0.080	2.500	44.750	42.250	N
165.00	170.00	7.890	0.050	1.563	16.250	14.688	N
170.00	175.00	7.980	0.100	3.125	32.750	29.625	N
175.00	180.00	8.040	0.060	1.875	30.500	28.625	N
180.00	185.00	7.790	0.050	1.563	19.000	17.438	N
185.00	190.00	8.060	0.050	1.563	19.500	17.938	N
190.00	195.00	7.960	0.050	1.563	22.000	20.438	N
195.00	200.00	8.050	0.050	1.563	56.250	54.688	N
200.00	205.00	8.440	0.090	2.813	29.750	26.938	N
205.00	210.00	8.460	0.110	3.438	32.500	29.063	N
210.00	215.00	8.320	0.180	5.625	39.750	34.125	N
215.00	220.00	8.270	0.120	3.750	29.250	25.500	N
220.00	225.00	8.320	0.090	2.813	24.750	21.938	N
225.00	230.00	8.240	0.060	1.875	31.750	29.875	N
230.00	235.00	8.480	0.010	0.313	58.750	58.438	N
235.00	240.00	8.730	0.020	0.625	92.500	91.875	N
240.00	245.00	8.810	0.040	1.250	28.250	27.000	N
245.00	250.00	8.540	0.050	1.563	22.250	20.688	N
250.00	255.00	8.620	0.040	1.250	40.500	39.250	N

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255.00	260.00	8.710	0.050	1.563	30.500	28.938	N
260.00	265.00	8.430	0.050	1.563	22.500	20.938	N
265.00	270.00	8.740	0.050	1.563	34.750	33.188	N
270.00	275.00	8.490	0.080	2.500	29.000	26.500	N
275.00	280.00	8.650	0.060	1.875	21.250	19.375	N
280.00	285.00	8.550	0.060	1.875	21.750	19.875	N
285.00	290.00	8.630	0.060	1.875	23.000	21.125	N
290.00	295.00	8.480	0.090	2.813	52.250	49.438	N
295.00	300.00	8.680	0.080	2.500	48.750	46.250	N
300.00	305.00	8.580	0.710	22.188	37.000	14.813	N
305.00	310.00	8.680	0.570	17.813	30.250	12.438	N
310.00	315.00	8.680	0.230	7.188	21.250	14.063	N
315.00	320.00	8.770	0.080	2.500	33.500	31.000	N
320.00	325.00	8.750	0.040	1.250	30.750	29.500	N
325.00	330.00	7.870	0.010	0.313	47.500	47.188	N
330.00	335.00	7.970	0.060	1.875	28.750	26.875	N
335.00	340.00	7.880	0.170	5.313	20.250	14.938	N
340.00	345.80	7.900	0.060	1.875	31.000	29.125	N
345.80	346.80	coal	1.660	51.875	coal	COAL	***
346.80	350.00	7.810	0.020	0.625	26.500	25.875	N
350.00	355.00	7.860	0.020	0.625	22.750	22.125	N
355.00	360.00	7.880	0.020	0.625	24.000	23.375	N
360.00	365.00	7.850	0.030	0.938	25.250	24.313	N
365.00	370.00	7.950	0.010	0.313	23.000	22.688	N
370.00	375.00	7.940	0.020	0.625	59.500	58.875	N
375.00	377.00	7.770	0.010	0.313	73.250	72.938	N
377.00	380.60	coal	1.420	44.375	coal	COAL	***
380.60	383.00	7.400	0.760	23.750	6.760	-16.990	Y
383.00	385.00	7.660	0.140	4.375	16.750	12.375	N
385.00	390.00	7.750	0.190	5.938	20.500	14.563	N
390.00	395.00	7.740	0.090	2.813	20.750	17.938	N
395.00	400.00	7.780	0.130	4.063	22.250	18.188	N
400.00	405.00	7.620	0.130	4.063	19.750	15.688	N
405.00	410.00	8.050	0.060	1.875	42.250	40.375	N
410.00	415.00	8.060	0.050	1.563	34.500	32.938	N
415.00	416.80	7.590	0.360	11.250	18.000	6.750	N
416.80	418.30	coal	1.130	35.313	coal	COAL	***
418.30	420.00	7.860	0.050	1.563	14.250	12.688	N
420.00	425.00	8.220	0.020	0.625	31.750	31.125	N
425.00	430.00	8.440	0.020	0.625	34.250	33.625	N
430.00	435.00	8.590	0.030	0.938	21.250	20.313	N
435.00	439.00	8.460	0.040	1.250	17.750	16.500	N
439.00	442.00	8.060	0.060	1.875	14.250	12.375	N
442.00	445.90	7.920	0.180	5.625	12.250	6.625	N
445.90	452.90	coal	1.030	32.188	coal	COAL	***
452.90	455.00	7.990	0.760	23.750	17.250	-6.500	Y
455.00	460.00	8.320	0.440	13.750	7.250	-6.500	Y
460.00	465.00	8.060	0.080	2.500	5.500	3.000	N
465.00	470.00	8.140	0.180	5.625	8.500	2.875	N
470.00	475.00	8.350	0.260	8.125	8.750	0.625	N
475.00	480.00	8.390	0.090	2.813	11.750	8.938	N
480.00	481.00	8.380	0.060	1.875	12.000	10.125	N
481.00	483.30	coal	1.260	39.375	coal	COAL	***
483.30	485.00	8.330	0.020	0.625	12.250	11.625	N
485.00	490.00	8.390	0.100	3.125	10.000	6.875	N
490.00	495.00	8.440	0.050	1.563	9.500	7.938	N
**AVERAGE		6.476	0.117	3.660	25.729	22.068	N

*Calculated in tons CaCo3 per 1000 tons of material.
**Averages do not include coal seam to be mined or intervals below lowest seam.
***Not analyzed

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COMPANY NAME: Shannon LLC

MINE NAME: Shannon Mine No. 4

DRILL HOLE: 1727

COLLECTED BY: client

DATE COLLECTED: 06/21/2011

ANALYZED BY: JK,MB,JC,SR

DATE ANALYZED: 07/20/2011

All analysis is performed according to EPA standards.

INTERVAL		PASTE pH	% SULFUR	MAX. POT. *ACIDITY	NEUT. *POT	A-B *ACCOUNT	ACID FORMING
0.00	5.00	4.730	0.001	0.031	0.750	0.719	N
5.00	10.00	4.380	0.001	0.031	0.001	-0.030	N
10.00	15.00	4.450	0.001	0.031	-0.500	-0.531	N
15.00	20.00	4.490	0.001	0.031	0.001	-0.030	N
20.00	25.00	4.480	0.001	0.031	1.750	1.719	N
25.00	30.00	4.470	0.001	0.031	1.750	1.719	N
30.00	34.00	5.080	0.001	0.031	2.000	1.969	N
34.00	35.00	4.720	0.150	4.688	2.750	-1.938	N
35.00	40.00	5.270	0.100	3.125	4.500	1.375	N
40.00	45.00	5.880	0.060	1.875	7.000	5.125	N
45.00	50.00	6.290	0.030	0.938	10.000	9.063	N
50.00	55.00	6.510	0.030	0.938	11.750	10.813	N
55.00	60.00	6.840	0.260	8.125	19.250	11.125	N
60.00	65.00	6.720	0.210	6.563	11.500	4.938	N
65.00	70.00	7.070	0.090	2.813	15.750	12.938	N
70.00	75.00	7.380	0.030	0.938	120.000	119.063	N
75.00	80.00	7.290	0.290	9.063	26.750	17.688	N
80.00	85.00	7.130	0.260	8.125	12.000	3.875	N
85.00	90.00	7.080	0.440	13.750	14.500	0.750	N
90.00	95.00	7.350	0.070	2.188	13.000	10.813	N
95.00	100.00	7.590	0.040	1.250	15.250	14.000	N
100.00	105.00	7.950	0.010	0.313	18.750	18.438	N
105.00	110.00	7.900	0.040	1.250	23.500	22.250	N
110.00	115.00	7.940	0.010	0.313	16.500	16.188	N
115.00	120.00	7.480	0.070	2.188	14.500	12.313	N
120.00	125.00	7.480	0.270	8.438	26.750	18.313	N
125.00	130.00	7.800	0.060	1.875	30.500	28.625	N
130.00	135.00	7.750	0.060	1.875	115.000	113.125	N
135.00	140.00	7.750	0.300	9.375	60.250	50.875	N
140.00	145.00	8.160	0.001	0.031	34.250	34.219	N
145.00	150.00	8.190	0.030	0.938	21.750	20.813	N
150.00	155.00	7.840	0.250	7.813	21.250	13.438	N
155.00	160.00	7.920	0.120	3.750	32.250	28.500	N
160.00	165.00	8.030	0.100	3.125	28.000	24.875	N
165.00	170.00	7.950	0.110	3.438	72.500	69.063	N
170.00	175.00	8.150	0.170	5.313	60.000	54.688	N
175.00	180.00	8.040	0.190	5.938	52.500	46.563	N
180.00	185.00	8.170	0.060	1.875	19.000	17.125	N
185.00	190.00	8.240	0.050	1.563	19.250	17.688	N
190.00	195.00	7.820	0.300	9.375	133.750	124.375	N
195.00	200.00	7.970	0.430	13.438	62.500	49.063	N
200.00	205.00	7.720	0.080	2.500	42.250	39.750	N
205.00	210.00	7.910	0.060	1.875	22.250	20.375	N
210.00	215.00	8.100	0.050	1.563	23.000	21.438	N
215.00	220.00	8.200	0.030	0.938	34.500	33.563	N
220.00	225.00	8.420	0.050	1.563	22.500	20.938	N
225.00	230.00	8.400	0.030	0.938	38.250	37.313	N
230.00	235.00	8.450	0.030	0.938	34.750	33.813	N
235.00	240.00	8.130	0.040	1.250	75.000	73.750	N
240.00	245.00	8.140	0.010	0.313	44.750	44.438	N
245.00	250.00	8.440	0.020	0.625	38.750	38.125	N
250.00	255.00	8.410	0.020	0.625	39.750	39.125	N
255.00	260.00	8.300	0.030	0.938	40.750	39.813	N

PERC
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Facsimile: (205) 295-3114 - Main Building
(205) 295-3115 - Water Lab
Web Address: www.percengineering.com

260.00	265.00		8.420	0.020	0.625		37.500	36.875	N
265.00	270.00		8.380	0.030	0.938		42.000	41.063	N
270.00	275.00		8.520	0.050	1.563		42.000	40.438	N
275.00	280.00		8.420	0.080	2.500		44.000	41.500	N
280.00	285.00		8.160	0.030	0.938		41.250	40.313	N
285.00	290.00		7.840	0.630	19.688		55.250	35.563	N
290.00	295.00		8.230	0.110	3.438		26.500	23.063	N
295.00	300.00		8.550	0.001	0.031		33.250	33.219	N
300.00	305.00		8.320	0.001	0.031		16.250	16.219	N
305.00	310.00		8.350	0.001	0.031		16.500	16.469	N
310.00	315.00		9.040	0.001	0.031		18.250	18.219	N
315.00	320.00		8.760	0.001	0.031		20.250	20.219	N
320.00	321.00		8.060	0.560	17.500		14.750	-2.750	N
321.00	321.40	coal		1.470	45.938	coal	COAL		***
321.40	325.00		8.300	0.040	1.250		8.500	7.250	N
325.00	330.00		7.960	0.070	2.188		17.750	15.563	N
330.00	331.00	coal		1.470	45.938	coal	COAL		***
331.00	335.00		8.190	0.030	0.938		14.750	13.813	N
335.00	340.00		8.120	0.020	0.625		15.500	14.875	N
340.00	345.00		8.010	0.010	0.313		19.500	19.188	N
345.00	350.00		8.240	0.020	0.625		20.500	19.875	N
350.00	355.00		8.090	0.020	0.625		19.750	19.125	N
355.00	360.00		8.050	0.001	0.031		18.750	18.719	N
360.00	365.00		8.120	0.010	0.313		21.250	20.938	N
365.00	366.70		7.240	0.040	1.250		15.000	13.750	N
366.70	371.80	coal		0.900	28.125	coal	COAL		***
371.80	375.00		7.500	0.050	1.563		15.250	13.688	N
375.00	380.00		7.440	0.500	15.625		13.000	-2.625	N
380.00	385.00		7.220	1.030	32.188		11.250	-20.938	Y
385.00	390.00		7.470	0.310	9.688		20.250	10.563	N
390.00	395.00		7.600	0.190	5.938		21.000	15.063	N
395.00	400.00		7.940	0.070	2.188		33.000	30.813	N
400.00	405.00		7.860	0.100	3.125		36.000	32.875	N
405.00	410.00		7.770	0.030	0.938		36.500	35.563	N
410.00	415.00		7.540	0.020	0.625		21.250	20.625	N
415.00	417.00		7.740	0.060	1.875		37.500	35.625	N
417.00	422.00	coal		0.900	28.125	coal	COAL		***
422.00	425.00		8.270	0.040	1.250		27.500	26.250	N
425.00	430.00		8.170	0.040	1.250		35.000	33.750	N
430.00	435.00		8.040	0.110	3.438		26.250	22.813	N
435.00	440.00		7.860	0.220	6.875		23.750	16.875	N
440.00	441.00		7.890	0.400	12.500		8.750	-3.750	?
441.00	448.60	coal		0.820	25.625	coal	COAL		***
448.60	450.00		7.950	1.030	32.188		4.750	-27.438	Y
450.00	455.00		8.030	0.200	6.250		7.250	1.000	N
455.00	460.00		8.120	0.080	2.500		3.000	0.500	N
460.00	465.00		7.600	0.040	1.250		18.250	17.000	N
465.00	470.00		7.670	0.090	2.813		16.750	13.938	N
470.00	471.00		7.800	0.090	2.813		13.500	10.688	N
471.00	473.80	coal		1.320	41.250	coal	COAL		***
473.80	475.00		7.810	0.530	16.563		6.750	-9.813	Y
475.00	480.00		7.060	0.001	0.031		13.500	13.469	N
480.00	485.00		6.340	0.020	0.625		12.750	12.125	N
**AVERAGE			5.624	0.109	3.391		27.970	24.578	N

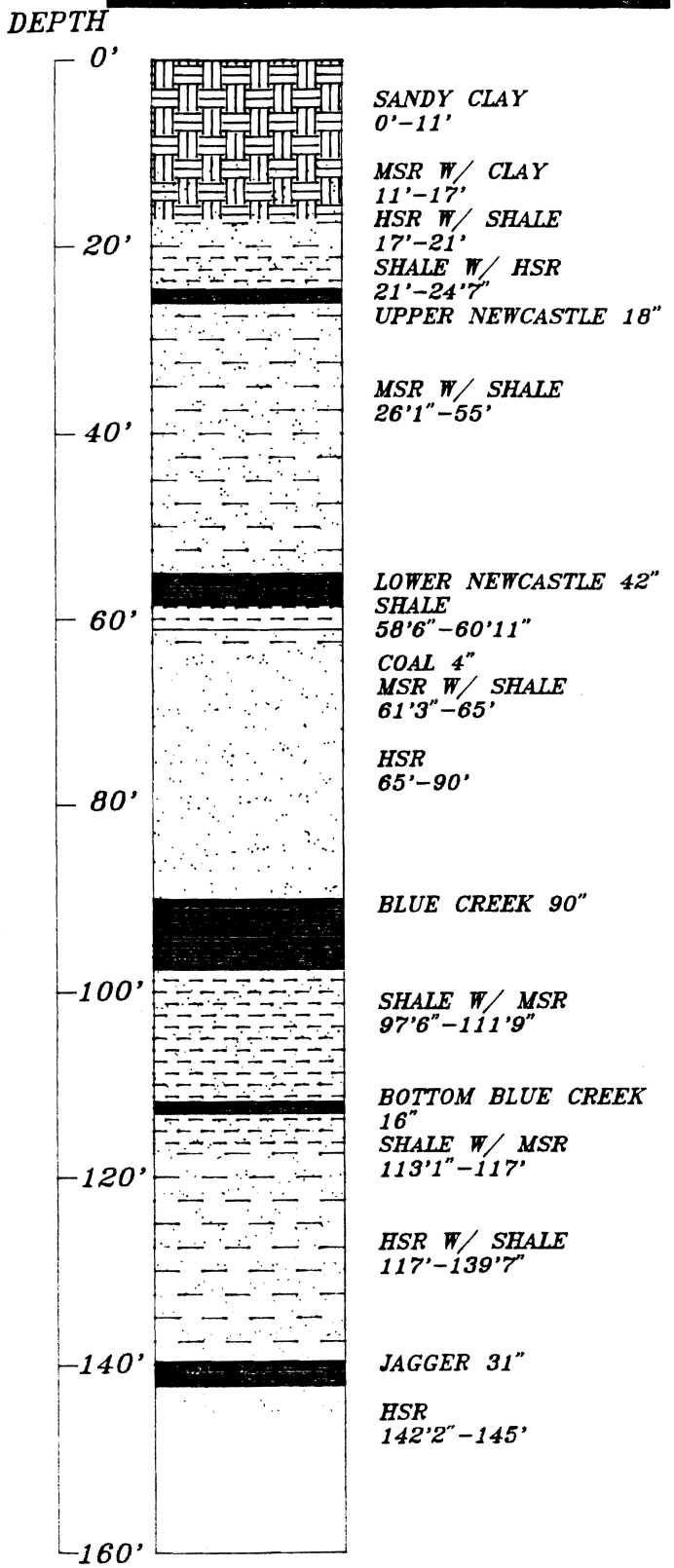
*Calculated in tons CaCo3 per 1000 tons of material.
**Averages do not include coal seam to be mined or intervals below lowest seam.
***Not analyzed

ALABAMA LAND AND MINERAL CORP
AREA 6 MINE

LITHOLOGIC LOG AND
ACID-BASE ACCOUNT
DRILL HOLE 12575

DRAWN BY: TMG	DATE: 11/09/92	FIGURE 13
APPRD BY: GMG	SCALE: 1"=20'	SHEET 1 OF 1

INTERVAL		PASTE pH	% SULFUR	A-B ACCOUNT	ACID FORMING
0.00	5.00	3.760	0.015	-3.969	?
5.00	10.00	4.350	0.007	-0.269	N
10.00	15.00	4.710	0.000	0.498	N
15.00	20.00	4.890	0.014	0.813	N
20.00	24.80	5.210	0.209	-4.531	?
24.80	26.00	COAL	COAL	COAL	***
26.00	30.00	6.750	0.109	2.344	N
30.00	35.00	7.310	0.085	7.094	N
35.00	40.00	7.580	0.086	12.813	N
40.00	45.00	7.700	0.111	11.031	N
45.00	50.00	7.780	0.114	9.938	N
50.00	55.00	7.630	0.125	6.094	N
55.00	58.50	COAL	COAL	COAL	***
58.50	62.00	COAL	COAL	COAL	***
62.00	65.00	7.120	0.520	-5.000	Y
65.00	70.00	7.380	0.460	25.625	N
70.00	75.00	6.940	0.540	13.375	N
75.00	80.00	7.040	0.320	21.250	N
80.00	85.00	7.470	0.206	25.563	N
85.00	89.00	7.520	0.176	13.500	N
89.00	96.30	COAL	COAL	COAL	***
96.30	100.00	COAL	COAL	COAL	***
100.00	105.00	7.560	0.153	1.469	N
105.00	111.75	7.950	0.277	6.844	N
111.75	113.00	COAL	COAL	COAL	***
113.00	115.00	7.740	0.261	1.344	N
115.00	120.00	7.840	0.172	13.125	N
120.00	125.00	8.060	0.096	36.750	N
125.00	130.00	8.140	0.126	7.313	N
130.00	135.00	8.180	0.095	19.531	N
135.00	139.58	8.070	0.120	14.000	N
139.58	142.16	COAL	COAL	COAL	***
AVERAGE		4.966	0.170	9.904	N



ALABAMA LAND AND MINERAL CORP
AREA 6 MINE

LITHOLOGIC LOG AND
ACID-BASE ACCOUNT
DRILL HOLE 12608

DRAWN BY: TMG	DATE: 8/25/92	FIGURE 13
APPRD BY: GMG	SCALE: 1"=20'	SHEET 1 OF

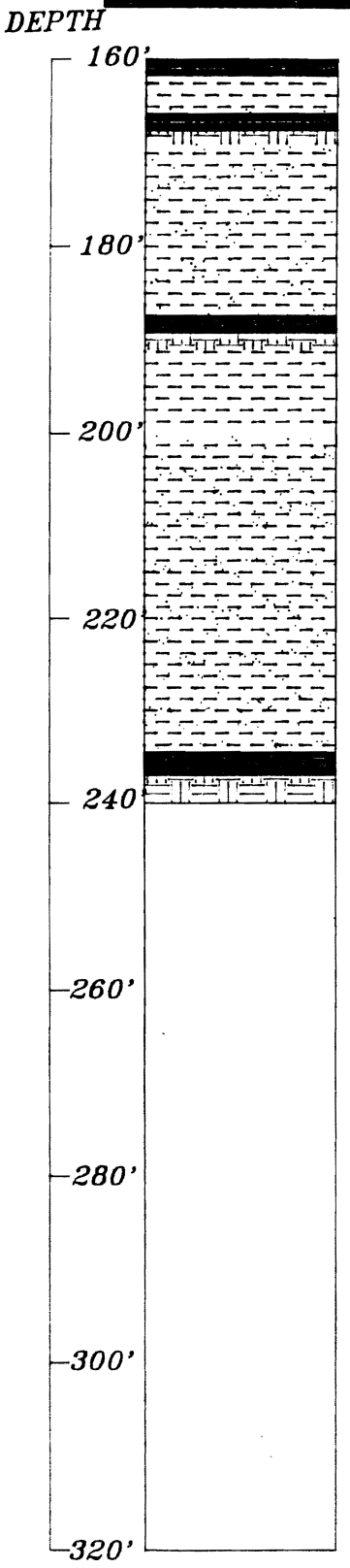
INTERVAL		PASTE pH	% SULFUR	A-B ACCOUNT	ACID FORMING
0.00	5.00	3.710	0.018	-2.063	N
5.00	10.00	4.160	0.004	-0.375	N
10.00	15.00	4.640	0.007	0.438	N
15.00	20.00	5.900	0.220	-0.875	N
20.00	25.00	5.590	0.340	-0.625	N
25.00	30.00	5.040	0.310	-0.938	N
30.00	35.00	5.240	0.185	-1.031	N
35.00	40.00	4.640	0.450	-8.813	Y
40.00	45.00	4.300	0.290	-5.533	Y
45.00	50.00	6.680	0.300	-5.625	Y
50.00	55.00	5.180	0.240	-1.000	N
55.00	60.00	5.050	1.350	-37.638	Y
60.00	65.00	6.690	0.069	3.594	N
65.00	70.00	7.050	0.115	4.906	N
70.00	75.00	6.930	0.092	3.625	N
75.00	80.00	7.320	0.122	9.188	N
80.00	85.00	7.680	0.142	7.313	N
85.00	85.75	7.020	0.410	-5.563	Y
85.75	86.91	COAL	COAL	COAL	***
86.91	90.00	7.000	0.196	3.125	N
90.00	95.00	7.420	0.093	7.635	N
95.00	100.00	7.640	0.107	11.406	N
100.00	105.00	7.590	0.260	5.875	N
105.00	110.00	7.870	0.230	7.563	N
110.00	114.17	7.840	1.570	-40.313	Y
114.17	117.85	COAL	COAL	COAL	***
117.85	120.00	7.250	1.410	-40.313	Y
120.00	125.00	6.440	0.480	-10.000	Y
125.00	130.00	7.060	0.350	17.313	N
130.00	135.00	7.800	0.590	154.063	N
135.00	140.00	8.040	0.250	13.438	N
140.00	145.00	8.000	0.138	10.688	N
145.00	146.83	7.770	0.210	6.938	N
146.83	147.10	COAL	COAL	COAL	***
147.10	148.25	5.970	0.680	-14.750	Y
148.25	150.00	7.430	0.152	3.750	N
150.00	155.00	7.070	0.115	33.906	N
155.00	159.50	7.630	0.470	121.563	N
159.50	160.00	COAL	COAL	COAL	***

ALABAMA LAND AND MINERAL COR
AREA 6 MIN

LITHOLOGIC LOG AND
ACID-BASE ACCOUNT
DRILL HOLE DH12608

DRAWN BY: TMG	DATE: 8/26/92	FIGURE 1
APPRD BY: GMG	SCALE: 1"=20'	SHEET 2 OF

INTERVAL		PASTE pH	% SULFUR	A-B ACCOUNT	ACID FORMING
160.00	161.70	COAL	COAL	COAL	***
161.70	164.70	7.570	0.210	6.688	N
164.70	165.70	7.510	0.350	-34.688	Y
165.70	167.58	COAL	COAL	COAL	***
167.58	170.00	7.510	0.054	2.063	N
170.00	175.00	7.550	0.090	8.938	N
175.00	180.00	7.800	0.370	1.438	N
180.00	185.00	7.960	0.175	16.281	N
185.00	187.30	7.290	0.270	-0.938	N
187.30	189.30	COAL	COAL	COAL	***
189.30	190.00	6.870	0.063	-0.719	N
190.00	195.00	6.650	0.198	-4.188	N
195.00	200.00	6.910	0.185	-2.531	N
200.00	205.00	7.270	0.140	3.875	N
205.00	210.00	7.630	0.100	9.125	N
210.00	215.00	7.820	0.310	4.063	N
215.00	220.00	7.750	0.310	6.563	N
220.00	225.00	7.770	0.180	9.375	N
225.00	230.00	7.860	0.350	12.063	N
230.00	234.50	7.890	0.046	8.563	N
234.50	237.00	COAL	COAL	COAL	***
237.00	240.00	7.830	0.360	1.000	N
AVERAGE		5.017	0.279	7.760	N

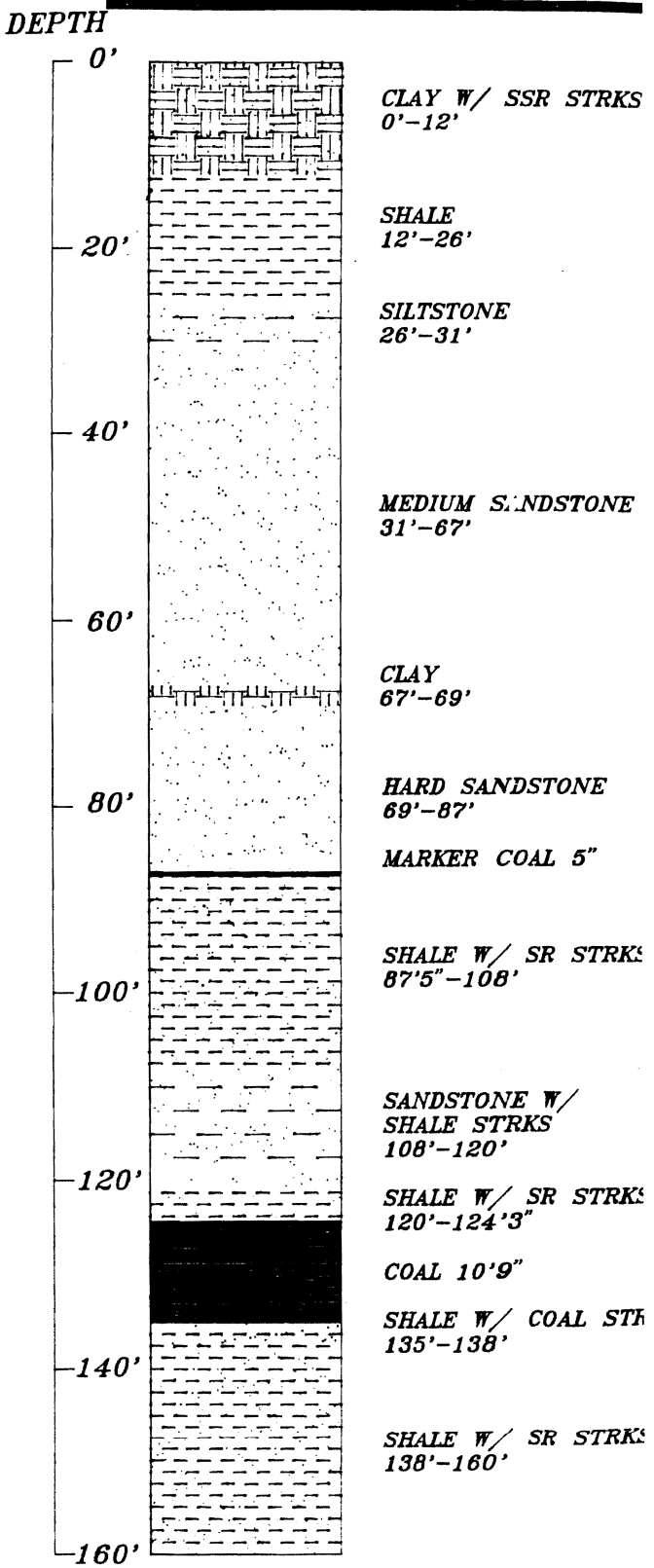


ALABAMA LAND AND MINERAL CO
AREA 6 MIN

LITHOLOGIC LOG AND
ACID-BASE ACCOUNT
DRILL HOLE 12614

DRAWN BY: TMG	DATE: 8/25/92	FIGURE 1
APPRD BY: GMG	SCALE: 1"=20'	SHEET 1 OF

	INTERVAL	PASTE pH	% SULFUR	A-B ACCOUNT	ACID FORMING
0.00	5.00	3.910	0.056	-5.000	Y
5.00	10.00	4.310	0.001	-0.281	N
0.00	15.00	5.260	0.003	2.156	N
5.00	20.00	6.060	0.011	1.906	N
0.00	25.00	5.720	0.029	0.844	N
5.00	30.00	5.310	0.072	2.250	N
0.00	35.00	5.610	0.083	1.656	N
5.00	40.00	6.270	0.105	2.969	N
0.00	45.00	6.110	0.085	3.344	N
5.00	50.00	6.470	0.045	6.094	N
0.00	55.00	6.400	0.109	2.594	N
5.00	60.00	6.380	0.093	7.094	N
0.00	65.00	6.560	0.066	5.938	N
5.00	70.00	6.430	0.070	7.313	N
0.00	75.00	5.400	0.038	3.813	N
5.00	80.00	5.560	0.078	3.813	N
0.00	85.00	5.020	0.063	3.031	N
5.00	90.00	5.080	0.092	2.875	N
0.00	95.00	5.820	0.096	3.750	N
5.00	100.00	6.020	0.055	4.531	N
0.00	105.00	5.920	0.079	8.031	N
5.00	110.00	6.420	0.047	5.701	N
0.00	115.00	6.250	0.117	5.094	N
5.00	120.00	6.110	0.117	5.094	N
0.00	124.00	5.800	0.148	4.625	N
4.00	135.00	COAL	COAL	COAL	***
5.00	140.00	4.510	0.830	-23.438	Y
0.00	145.00	5.650	0.370	-2.813	N
5.00	150.00	6.210	0.350	0.563	N
0.00	155.00	7.480	0.230	10.813	N
5.00	160.00	6.580	0.390	1.563	N

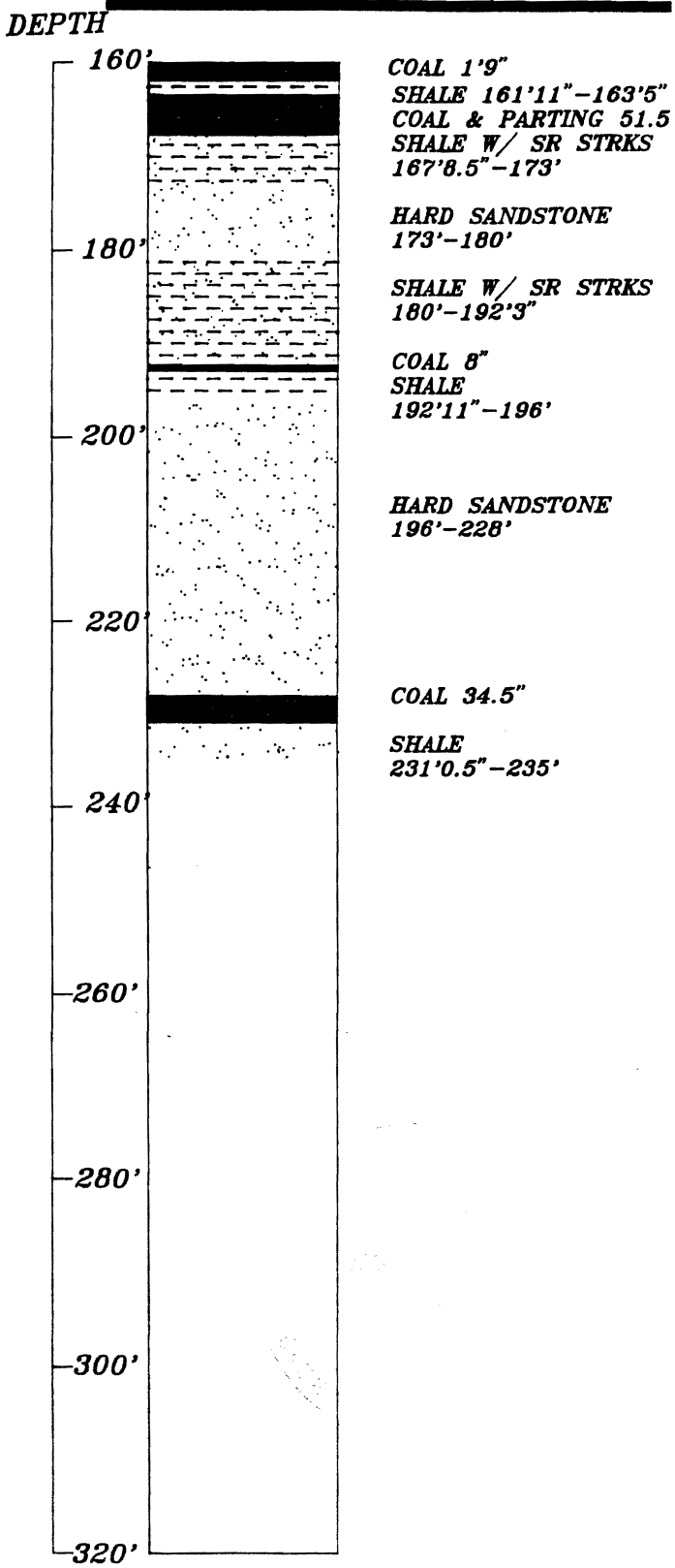


ALABAMA LAND AND MINERAL CORP.
AREA 6 MINE

LITHOLOGIC LOG AND
ACID-BASE ACCOUNT
DRILL HOLE DH12614

DRAWN BY: TMG	DATE: 8/26/92	FIGURE 14
APPRD BY: GMG	SCALE: 1"=20'	SHEET 2 OF 2

INTERVAL		PASTE pH	% SULFUR	A-B ACCOUNT	ACID FORMING
160.00	161.08	COAL	COAL	COAL	***
161.08	163.42	5.210	0.990	-28.438	Y
163.42	167.71	COAL	COAL	COAL	***
167.71	175.00	7.780	0.810	-18.563	Y
175.00	180.00	7.250	0.177	1.969	N
180.00	185.00	7.410	0.144	11.250	N
185.00	190.00	7.300	0.163	8.406	N
190.00	192.40	7.040	0.159	10.531	N
192.40	192.90	COAL	COAL	COAL	***
192.90	195.00	7.440	0.171	-0.344	N
195.00	200.00	7.380	0.076	5.875	N
200.00	205.00	7.570	0.075	5.156	N
205.00	210.00	7.880	0.111	13.531	N
210.00	215.00	8.550	0.078	12.563	N
215.00	220.00	8.170	0.143	17.031	N
220.00	225.00	7.350	0.185	10.219	N
225.00	228.16	7.950	0.131	5.406	N
228.16	231.45	COAL	COAL	COAL	***
231.45	231.49	8.240	0.340	-3.625	N
231.49	232.42	8.330	0.530	-11.313	Y
232.42	233.00	7.580	0.750	-20.188	Y
233.00	235.00	8.310	0.380	-4.373	N
AVERAGE		5.212	0.164	3.053	N



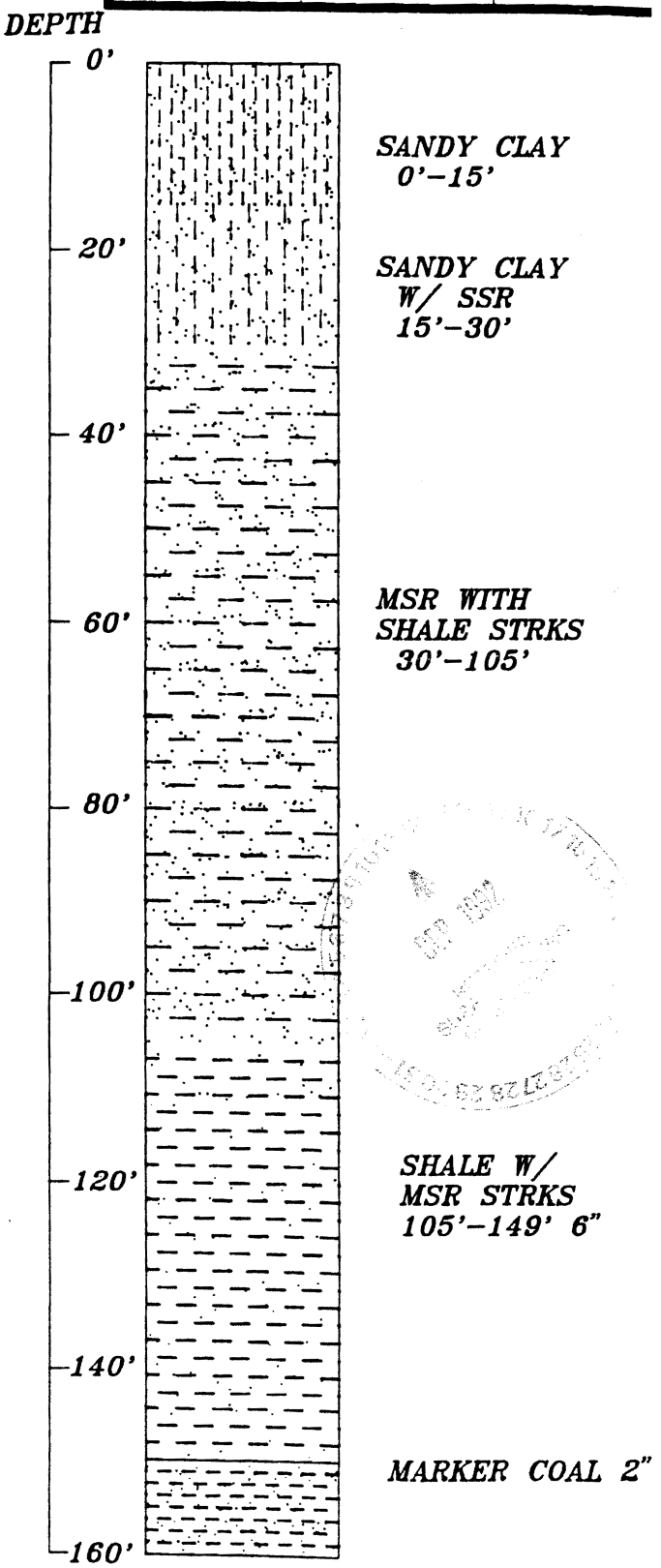
ALABAMA LAND AND MINERAL COR
AREA 6 MIN

LITHOLOGIC LOG AND
ACID-BASE ACCOUNT
DRILL HOLE 14092

DRAWN BY: TMG	DATE: 1/21/92	FIGURE
APPRD BY: GMG	SCALE: 1"=20'	SHEET 1 OF

AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS
CERTIFICATE NUMBER
6467
AIPG
GEORGE M. GRAHAM
CERTIFIED PROFESSIONAL GEOLOGIST

INTERVAL		PASTE pH	% SULFUR	A-B ACCOUNT	ACID FORMING
25.00	30.00	5.350	0.006	2.313	N
30.00	35.00	6.730	0.114	3.438	N
35.00	40.00	7.140	0.166	8.063	N
40.00	45.00	7.540	0.156	8.625	N
45.00	50.00	6.960	0.172	33.425	N
50.00	55.00	7.800	0.136	19.550	N
55.00	60.00	7.790	0.124	15.875	N
60.00	65.00	8.230	0.092	53.425	N
65.00	70.00	8.090	0.146	15.438	N
70.00	75.00	7.890	0.140	15.125	N
75.00	80.00	7.950	0.164	19.875	N
80.00	85.00	8.120	0.167	15.081	N
85.00	90.00	8.140	0.150	15.313	N
90.00	95.00	8.280	0.169	82.219	N
95.00	100.00	8.160	0.202	21.188	N
100.00	105.00	8.080	0.366	48.563	N
105.00	110.00	8.260	0.273	17.769	N
110.00	115.00	8.340	0.456	80.750	N
115.00	120.00	8.230	0.810	9.688	N
120.00	125.00	8.130	0.304	6.500	N
125.00	130.00	8.240	0.054	14.613	N
130.00	135.00	8.550	0.054	10.313	N
135.00	140.00	7.620	0.056	11.750	N
140.00	145.00	7.670	0.114	20.438	N
145.00	150.00	7.550	0.089	10.719	N
150.00	155.00	7.650	0.275	1.706	N
155.00	160.00	7.640	0.736	3.300	N



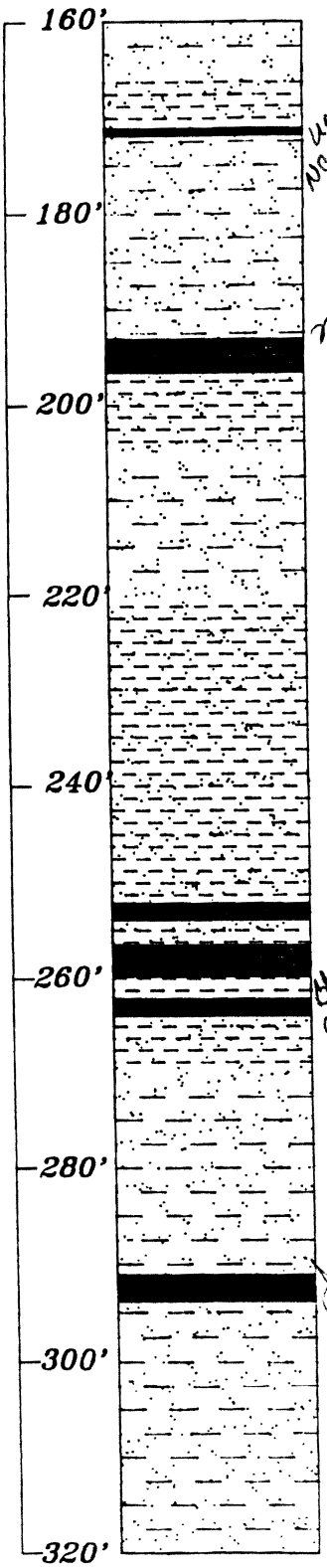
ALABAMA LAND AND MINERAL CO

AREA 6 MIN

LITHOLOGIC LOG AND
ACID-BASE ACCOUNT
DRILL HOLE 14092

DRAWN BY: TMG	DATE: 1/21/92	FIGURE
APPRD BY: GMG	SCALE: 1"=20'	SHEET 2

INTERVAL		PASTE pH	% SULFUR	A-B ACCOUNT	ACID FORMING
60.00	165.00	7.550	0.132	42.175	N
65.00	170.00	7.840	0.103	93.081	N
70.00	171.00	7.720	0.099	20.706	N
71.00	172.00	COAL	COAL	COAL	***
72.00	175.00	7.700	0.092	10.925	N
75.00	180.00	7.910	0.155	13.656	N
80.00	185.00	7.650	0.123	16.156	N
85.00	190.00	7.610	0.228	15.238	N
90.00	193.00	7.800	0.153	15.019	N
93.00	196.90	COAL	COAL	COAL	***
96.90	200.00	7.720	0.363	4.656	N
200.00	205.00	7.700	0.459	-0.813	N
205.00	210.00	7.600	0.330	7.300	N
210.00	215.00	7.790	0.39[illegible]	10.519	N
215.00	220.00	7.800	0.20[illegible]	17.156	N
220.00	225.00	7.440	0.409	8.219	N
225.00	230.00	6.630	0.321	7.469	N
230.00	235.00	6.600	0.281	9.019	N
235.00	240.00	7.190	0.406	6.113	N
240.00	245.00	7.480	0.388	14.375	N
245.00	250.00	7.400	0.354	7.738	N
250.00	252.00	7.350	0.197	11.844	N
252.00	254.00	COAL	COAL	COAL	***
254.00	256.50	7.290	0.425	3.019	N
256.50	260.00	COAL	COAL	COAL	***
260.00	262.00	7.240	0.300	8.625	N
262.00	264.00	COAL	COAL	COAL	***
264.00	270.00	7.540	0.160	0.300	N
270.00	275.00	7.510	0.146	4.438	N
275.00	280.00	7.520	0.083	8.706	N
280.00	285.00	7.320	0.421	-1.856	N
285.00	290.00	7.300	0.076	17.125	N
290.00	291.00	7.430	0.253	2.894	N
291.00	294.00	COAL	COAL	COAL	***
294.00	300.00	6.570	0.154	5.488	N
ERAGE		7.642	0.232	17.628	N

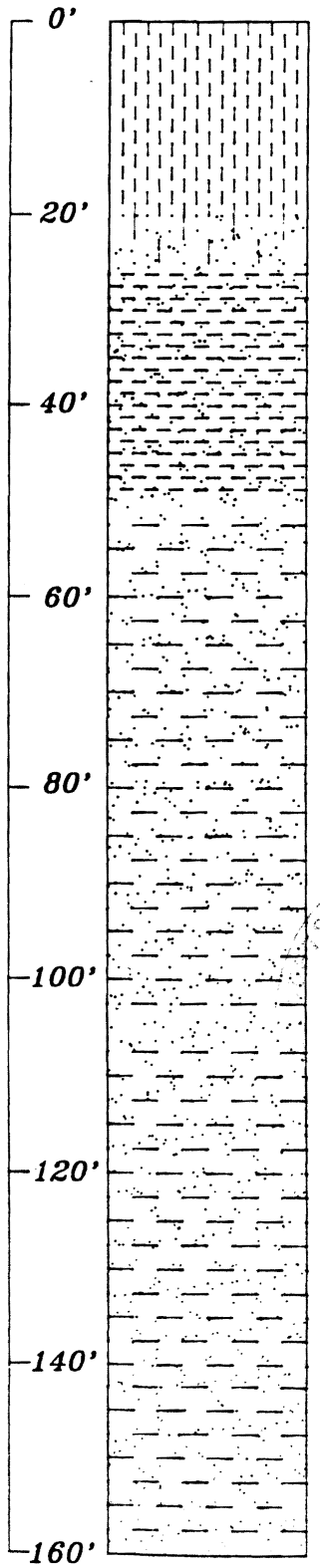


ALABAMA LAND AND MINERAL CORP.
AREA 6 MINE

LITHOLOGIC LOG AND
ACID-BASE ACCOUNT
DRILL HOLE 14095

DRAWN BY: TMG	DATE: 1/21/92	FIGURE 10
APPRD BY: GMG	SCALE: 1"=20'	SHEET 1 OF 3

INTERVAL		PASTE pH	% SULFUR	A-B ACCOUNT	ACID FORMING
30.00	35.00	7.400	0.171	13.036	N
35.00	40.00	7.780	0.400	2.200	N
40.00	45.00	8.130	0.143	36.781	N
45.00	50.00	8.180	0.210	62.188	N
50.00	55.00	7.770	0.360	36.250	N
55.00	60.00	8.160	0.314	10.278	N
60.00	65.00	8.390	0.291	10.016	N
65.00	70.00	8.320	0.292	16.605	N
70.00	75.00	8.480	0.203	13.256	N
75.00	80.00	8.140	0.241	8.639	N
80.00	85.00	8.450	0.154	370.188	N
85.00	90.00	8.380	0.284	391.125	N
90.00	95.00	8.340	0.295	120.781	N
95.00	100.00	8.540	0.411	31.256	N
00.00	105.00	8.590	0.211	17.416	N
05.00	110.00	8.430	0.195	20.616	N
10.00	115.00	8.400	0.186	40.788	N
15.00	120.00	8.230	0.175	13.641	N
20.00	125.00	8.410	0.227	19.856	N
25.00	130.00	8.570	0.193	19.699	N
30.00	135.00	8.650	0.195	24.286	N
35.00	140.00	8.640	0.204	23.275	N
40.00	145.00	8.690	0.169	17.999	N
45.00	150.00	8.580	0.155	15.496	N
50.00	155.00	8.440	0.185	18.969	N
55.00	160.00	7.820	0.193	18.719	N

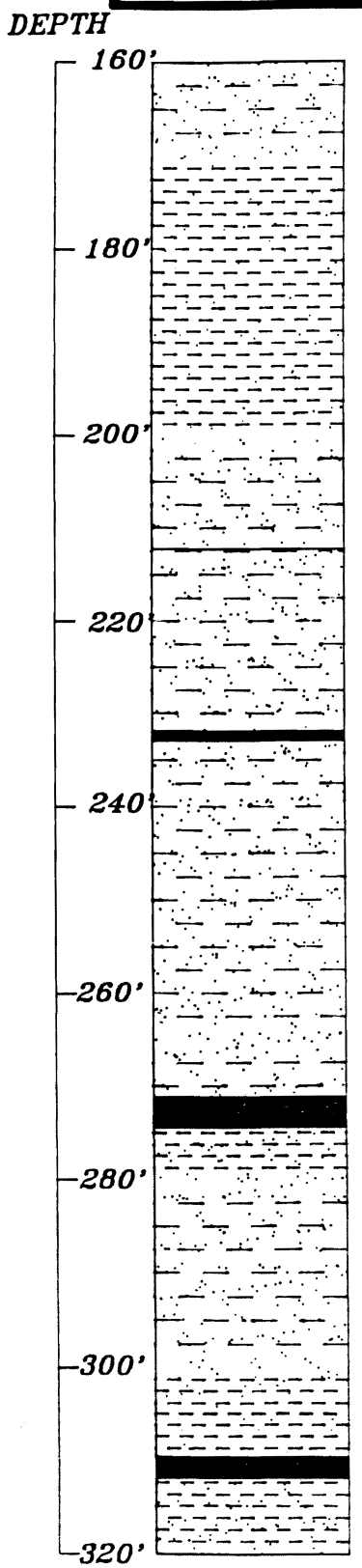


ALABAMA LAND AND MINERAL CORP
AREA 6 MINE

LITHOLOGIC LOG AND
ACID-BASE ACCOUNT
DRILL HOLE 14095

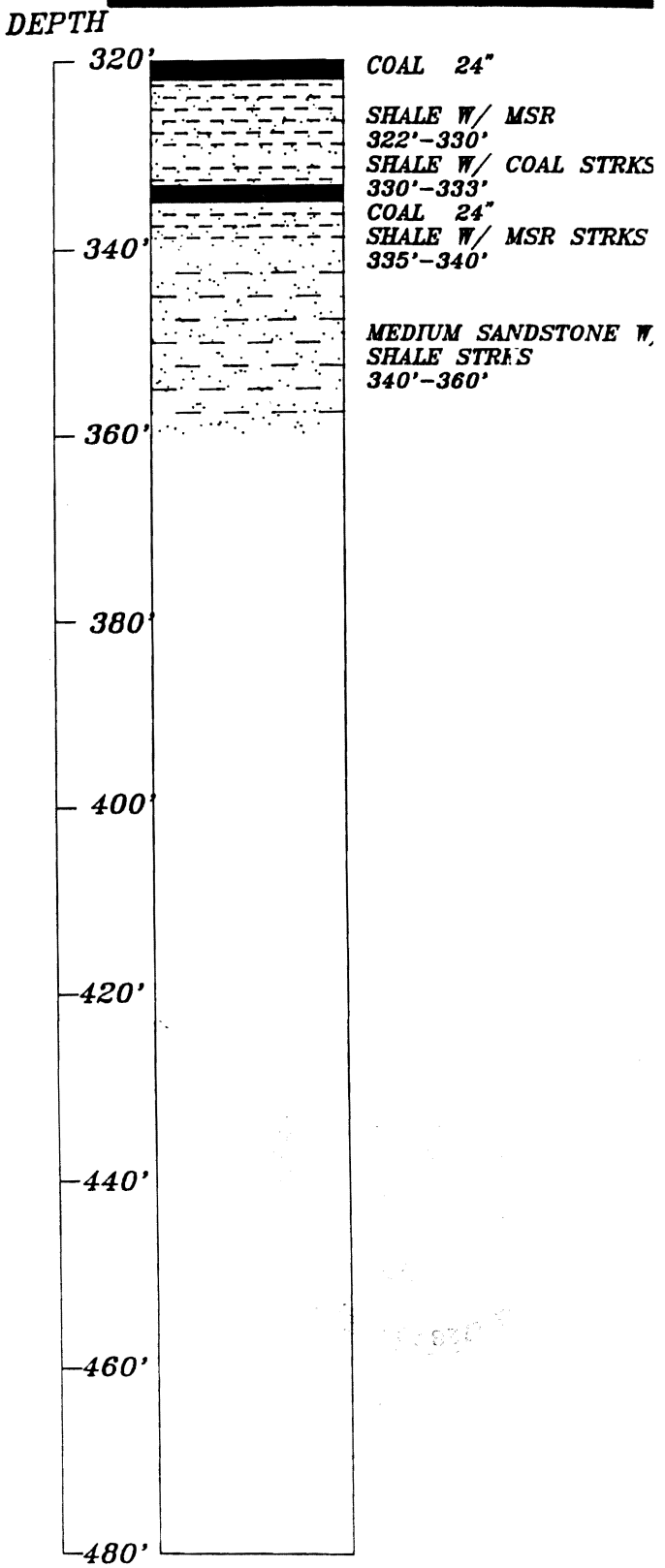
DRAWN BY: TMG	DATE: 1/21/92	FIGURE 10
APPRD BY: GMG	SCALE: 1"=20'	SHEET 2 OF

INTERVAL		PASTE pH	% SULFUR	A-B ACCOUNT	ACID FORMING
160.00	165.00	8.440	0.200	32.500	N
165.00	170.00	8.380	0.169	17.469	N
170.00	175.00	8.360	0.364	12.625	N
175.00	180.00	8.720	0.318	15.563	N
180.00	185.00	8.250	0.840	35.000	N
185.00	190.00	8.110	0.660	-1.125	N
190.00	195.00	8.360	0.074	17.938	N
195.00	200.00	8.220	0.107	13.656	N
200.00	205.00	8.730	0.031	11.531	N
205.00	210.00	8.510	0.069	11.594	N
210.00	215.00	8.350	0.495	-12.969	Y
215.00	220.00	8.440	0.101	9.094	N
220.00	225.00	8.410	0.172	42.125	N
225.00	230.00	8.040	0.171	32.156	N
230.00	235.00	8.110	0.250	7.938	N
235.00	240.00	7.490	0.174	19.063	N
240.00	245.00	7.600	0.168	15.250	N
245.00	250.00	7.710	0.226	33.438	N
250.00	255.00	7.910	0.421	44.344	N
255.00	260.00	8.120	0.225	15.219	N
260.00	265.00	8.260	0.120	14.250	N
265.00	270.00	7.850	0.194	11.188	N
270.00	271.00	8.090	0.261	9.594	N
271.00	275.00	COAL	COAL	COAL	***
275.00	280.00	6.640	2.170	-61.813	Y
280.00	285.00	7.780	0.378	70.688	N
285.00	290.00	8.300	0.519	55.031	N
290.00	295.00	7.970	0.586	40.438	N
295.00	300.00	7.700	0.478	18.063	N
300.00	305.00	8.150	0.391	47.781	N
305.00	310.00	8.230	0.349	45.494	N
310.00	312.00	8.110	0.407	65.531	N
312.00	314.50	COAL	COAL	COAL	***
314.50	320.00	7.950	0.365	4.344	N



ALABAMA LAND AND MINERAL COR
AREA 6 MIN

LITHOLOGIC LOG AND
ACID-BASE ACCOUNT
DRILL HOLE 14095

DRAWN BY: TMG	DATE: 1/21/92	FIGURE
APPRD BY: GMG	SCALE: 1"=20'	SHEET 3 OF

INTERVAL		PASTE pH	% SULFUR	A-B ACCOUNT	ACID FORMING
320.00	322.00	COAL	COAL	COAL	***
322.00	325.00	8.200	0.388	-2.375	N
325.00	330.00	COAL	COAL	COAL	***
330.00	333.00	8.040	0.222	14.313	N
333.00	335.00	COAL	COAL	COAL	***
335.00	340.00	8.090	1.020	-12.125	Y
340.00	345.00	8.340	0.318	-2.938	N
345.00	350.00	8.260	0.262	5.063	N
VERAGE		8.193	0.302	35.008	N