State of Indiana

Department of Natural Resources

GEOLOGICAL SURVEY

Sulfur Analyses of Selected Paleozoic Rocks in Indiana

by

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INTRODUCTION

The sulfur data presented in this report are from analyses performed on geologic samples taken from cores, quarrys, and outcrops. Sulfur results are based on two different methods. A combustion method was perfected in the laboratories of the Indiana Geological Survey (Coller and Leininger, 1955) and used to determine the total sulfide, sulfate, and organic sulfur. In 1984 a Leco SC-132 System was added to the instrumentation of the coal laboratory, and samples submitted after that date were analyzed by converting the total sulfur to SO_2 and measuring the gas.

Accuracy for all samples is ± 1 percent of the sulfur content (for most samples) and the detection limit for both methods is 0.001 percent. All of the analyses tabulated in this report were performed by Louis V. Miller.

Each analysis has been checked for accuracy, completeness, and consistency but is not guaranteed to be error free.

M. V. Ennis

REFERENCES

Coller, M. E., and Leininger, R. K., 1955, Determination of total sulfur content of sedimentary rocks by a combustion method: Anal. Chemistry, v. 27, no. 6, p. 949-951, 2 figs.

SULFUR ANALYSIS

Sample No.	Sulfur (wt.%)
CA78-69	0.12
CA78-69	0.13
CA78-70	0.31
CA78-70	0.35
CA78-71	2.15
CA78-71	2.4
CA78-72	4.9
CA78-72	5.00
CA86-71	0.20
CA86-72	3.50
CA86-73	4.27
CA86-74	3.28
CA86-314	1.48
CA86-315	1.13
CA86-316	0.21
CA86-317	0.14
CA86-318	3.22
CA86-319	2.24
J 79-810	0.51
J 79-812	0.80
J 79-813	4.1
J 79-814	10.0
J 79-815	2.60
J 79-816	2.72
J 80-58	0.79
J 80-59	0.24
J 80-61	0.33
J 80-62	3.74
J 80-64	2.25
J 80-324	1.78
J 80-324	1.82
J 80-325	2.69
J 80-395	4.84
J 80-608	2.82
NS80-138	2.9
NS80-139	2.5
NS80-140	3.0
NS80-141	1.5
NS80-142	4.2
NS80-143	6.9
NS81-505	2.09
NS82-1	0.87
NS82-1	1.2
NS82-45	2.33
NS82-71	0.35
NS82-89	2.70
NS82-91	1.99
NS82-102	0.41
NS82-103	0.41
NS82-104	1.89
NS82-105	6.11
NS82-125	1.44
NS82-127	2.66
NS82-138	3.35
NS82-139	1.13
NS82-140	3.32
NS82-148	2.36
NS82-155	4.81
NS82-156	5.76
NS82-159	3.18
NS82-176	0.71
NS82-179	5.92
NS82-180	2.91
NS82-186	1.54
NS82-210	2.54
NS82-210	2.64
NS82-210	2.81
NS82-210	2.97
NS82-211	3.04
NS82-211	3.64
NS82-322	0.32
NS82-323	0.20
NS82-377	4.26
NS82-388	3.44
NS82-398	3.59
NS82-399	2.91
NS82-400	2.56
NS82-458	0.43
NS82-459	3.04
NS82-460	7.40
NS82-461	2.11
NS82-462	2.44
NS82-463	5.3
NS82-464	2.89
NS82-465	0.82
NS82-466	1.86
NS82-483	0.43
NS82-484	0.45
NS82-485	1.06
NS82-486	1.65
NS82-487	4.47
NS82-488	2.80
NS82-489	2.55
NS82-497	2.90
NS82-498	2.84
NS83-8	5.13
NS83-9	2.37
NS83-10	2.40
NS83-11	5.52
NS83-12	6.18
NS83-13	6.15
NS83-14	2.96
NS83-17	2.29
NS83-18	2.31
NS83-19	2.5
NS83-20	2.84
NS83-21	2.51
NS83-22	2.16
NS83-23	2.06
NS83-25	2.06
NS83-26	2.49
NS83-27	2.30
NS83-29	3.14
NS83-36	3.19
NS83-38	2.26
NS83-39	2.60
NS83-41	7.60
NS83-56	1.78
NS83-57	2.60
NS83-58	2.41
NS83-59	4.18
NS83-60	5.66
NS83-61	4.31
NS83-62	13.53
NS83-68	2.68
NS83-70	2.22
NS83-71	1.69
NS83-72	2.38
NS83-73	1.27
NS83-74	1.04
NS83-715	2.57
NS83-715	2.77
NS83-715	2.78
NS83-716	2.56
NS83-716	2.83
NS83-717	8.10
NS83-718	4.41
NS83-719	1.02
NS83-721	3.69
NS83-722	4.84
NS83-723	1.70
NS83-723	1.76
NS83-724	3.48
NS83-725	3.89
NS83-726	5.27
NS83-728	0.40
NS83-758	14.09
NS83-758	14.13
NS83-758	14.45
NS83-759	10.70

Sample No.	Sulfur (wt.%)	Sample No.	Sulfur (wt.%)	Sample No.	Sulfur (wt.%)
NS83-759	9.05	NS84-222	2.89	NS84-451	4.60
NS83-759	9.36	NS84-223	2.03	NS84-452	2.77
NS83-760	7.77	NS84-224	0.42	NS84-491	1.45
NS83-760	7.87	NS84-225	2.30	NS84-492	2.63
NS83-761	2.22	NS84-226	2.18	NS84-507	2.26
NS83-761	2.76	NS84-227	2.08	NS85-35	0.13
NS83-762	2.70	NS84-228	3.44	NS85-37	2.22
NS83-762	2.94	NS84-229	1.96	NS85-38	2.74
NS83-763	2.61	NS84-230	2.39	NS85-39	3.04
NS83-764	1.17	NS84-231	1.34	NS85-42	0.21
NS83-782	3.84	NS84-232	1.29	NS85-43	2.56
NS83-782	4.03	NS84-245	0.68	NS85-45	3.66
NS83-783	3.49	NS84-260	ND	NS85-111	0.71
NS83-783	4.22	NS84-262	ND	NS85-111	0.72
NS83-784	12.60	NS84-264	ND	NS85-112	2.92
NS83-785	1.86	NS84-265	ND	NS85-112	3.22
NS83-785	2.05	NS84-266	0.14	NS85-113	5.
NS83-790	2.95	NS84-268	0.30	NS85-114	2.70
NS83-791	12.97	NS84-270	0.16	NS85-114	2.71
NS83-792	1.71	NS84-306	0.33	NS85-115	0.98
NS83-792	1.93	NS84-307	2.03	NS85-116	2.47
NS83-793	1.22	NS84-308	0.29	NS85-116	2.50
NS83-793	1.27	NS84-309	0.17	NS85-118	2.38
NS83-839	1.29	NS84-310	6.73	NS85-118	2.47
NS83-840	2.24	NS84-311	0.029	NS85-154	2.57
NS83-841	1.67	NS84-312	1.99	NS85-155	2.87
NS84-11	2.59	NS84-314	2.15	NS85-156	6.11
NS84-12	3.25	NS84-315	2.27	NS85-158	3.23
NS84-13	8.94	NS84-316	2.43	NS85-159	1.32
NS84-14	1.88	NS84-317	1.75	NS85-165	10.9
NS84-15	2.92	NS84-318	1.5	NS85-166	2.23
NS84-16	0.11	NS84-335	0.10	NS85-167	3.04
NS84-18	2.80	NS84-359	2.82	NS85-168	0.79
NS84-28	2.71	NS84-360	0.46	NS85-169	3.26
NS84-29	8.45	NS84-361	2.98	NS85-170	0.74
NS84-30	0.91	NS84-362	7.14	NS85-188	0.087
NS84-33	2.85	NS84-363	2.18	NS85-189	1.43
NS84-34	2.38	NS84-366	1.35	NS85-190	0.45
NS84-50	5.36	NS84-367	2.79	NS85-190	0.54
NS84-52	3.64	NS84-368	2.68	NS85-191	3.38
NS84-106	2.55	NS84-370	5.04	NS85-192	6.68
NS84-108	2.78	NS84-371	3.58	NS85-193	3.
NS84-209	0.31	NS84-430	0.54	NS85-194	3.
NS84-210	3.21	NS84-432	0.41	NS85-224	2.63
NS84-212	0.86	NS84-433	0.65	NS85-225	3.78
NS84-213	0.097	NS84-434	2.39	NS85-226	3.35
NS84-214	0.50	NS84-435	1.36	NS85-228	3.15
NS84-216	0.30	NS84-436	7.17	NS85-232	3.58
NS84-218	0.40	NS84-437	2.90	NS85-233	3.19
NS84-219	1.02	NS84-438	7.60	NS85-234	3.03
NS84-220	2.97	NS84-439	3.09		
NS84-221	0.25	NS84-449	1.50		